TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 5, 2012

Ms. Roxi Vanstory
Oakwood Baptist Church
2154 Loop 337
New Braunfels, Texas 78130

Re: Edwards Aquifer, Comal County

Name of Project: Oakwood Baptist Church Expansion; Located at 2152 Loop 337; New Braunfels, Texas

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

Edwards Aquifer Protection Program San Antonio File No. 1085.04; Investigation No. 1002219; Regulated Entity No. RN102744802

Dear Ms. Vanstory:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification for the above-referenced project submitted to the San Antonio Regional Office by The Shultz Group, Inc. on behalf of Oakwood Baptist Church on August 8, 2011. Final review of the WPAP was completed after additional material was received on October 20, and October 27, 2011. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

Background

The above referenced site was originally approved by letter dated November 7, 1983 for the construction of a church on 3.498 acre lot consisting of 1.44 acres of impervious cover. Treatment of stormwater runoff from the 1.44 acres of impervious cover was not required.

Phase II and III of the development were approved by letter dated January 5, 1999 (EAPP No. 1085.00) for the expansion of the site to 7.06 acres containing 4.27 acres of impervious cover. A sand filter basin,

The sedimentation/filtration basin will be constructed and completed as part of the Phase 1 activities to ultimately treat stormwater runoff from impervious cover constructed in Phase 1 and Phase 2, as well as the existing impervious cover currently being treated by the water quality pond previously approved in the August 25, 2008 letter.

Geology

According to the geologic assessment included with the application, the site is located on the Cyclic & Marine Members of the Person Formation. The assessment noted two geologic features (non-karst closed depression and a solution cavity) both assessed as not sensitive. The San Antonio Regional Office site assessment conducted on June 22, 2012 revealed that the site was generally as described in the application.

Special Conditions

1. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letters dated August 25, 2008 and January 5, 1999.

2. The new permanent pollution abatement measure shall be operational prior to occupancy or use of any facility within the abatement measure's respective drainage area.

3. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

4. The existing water quality pond shall remain in place and operational until it is scheduled to go offline during Phase 2 construction. As described in the WPAP, the northern parking lot will be constructed in a manner that will direct stormwater runoff from impervious cover within the 2008 water quality pond's drainage area to the sedimentation/filtration basin during and after construction of Phase 2.

5. Treatment of stormwater runoff from the impervious cover within the 2008 water quality pond's drainage area is required without disruption.

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. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

15. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

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

17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is 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 Mr. Javier Anguiano of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 490-3096.

Sincerely,

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

LMB/JA/eg

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

cc: Mr. Michael G. Short, P.E., The Schultz Group, Inc.
Mr. James C. Klein, P.E., City of New Braunfels
Mr. Thomas H. Hornseth, P.E., Comal County
Mr. Karl J. Dreher, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

THE Schultz Group INC.

CONSULTING ENGINEERS & LAND SURVEYORS

P.O. BOX 310483 • NEW BRAUNFELS, TX 78131-0483

Phone: (830) 606-3913 • Fax: (830) 625-2204

TO: TCEQ

JAVIER ANGUIANO

DATE: 7/4/12

PROJECT: OAKWOOD BAPTIST CHURCH

JOB NO: 10 0410

We are sending you:

- [X] Herewith
- [ ] Under Separate Cover
- [ ] By Mail
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- [ ] Specifications
- [ ] Contracts
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5	1	7/4/12		REVISED SHT 7 TO ADJUST TBL 3-6

These are sent:

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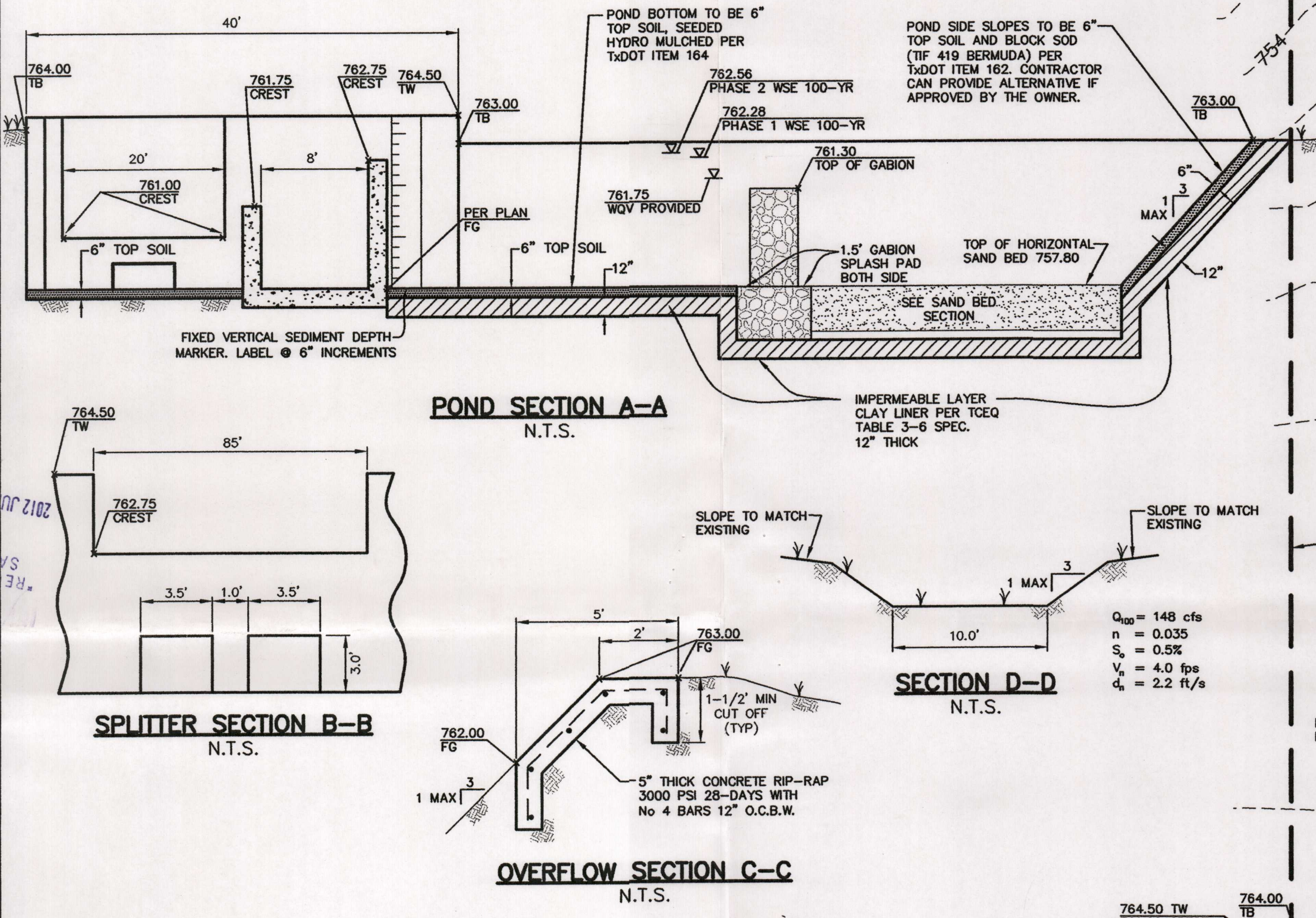
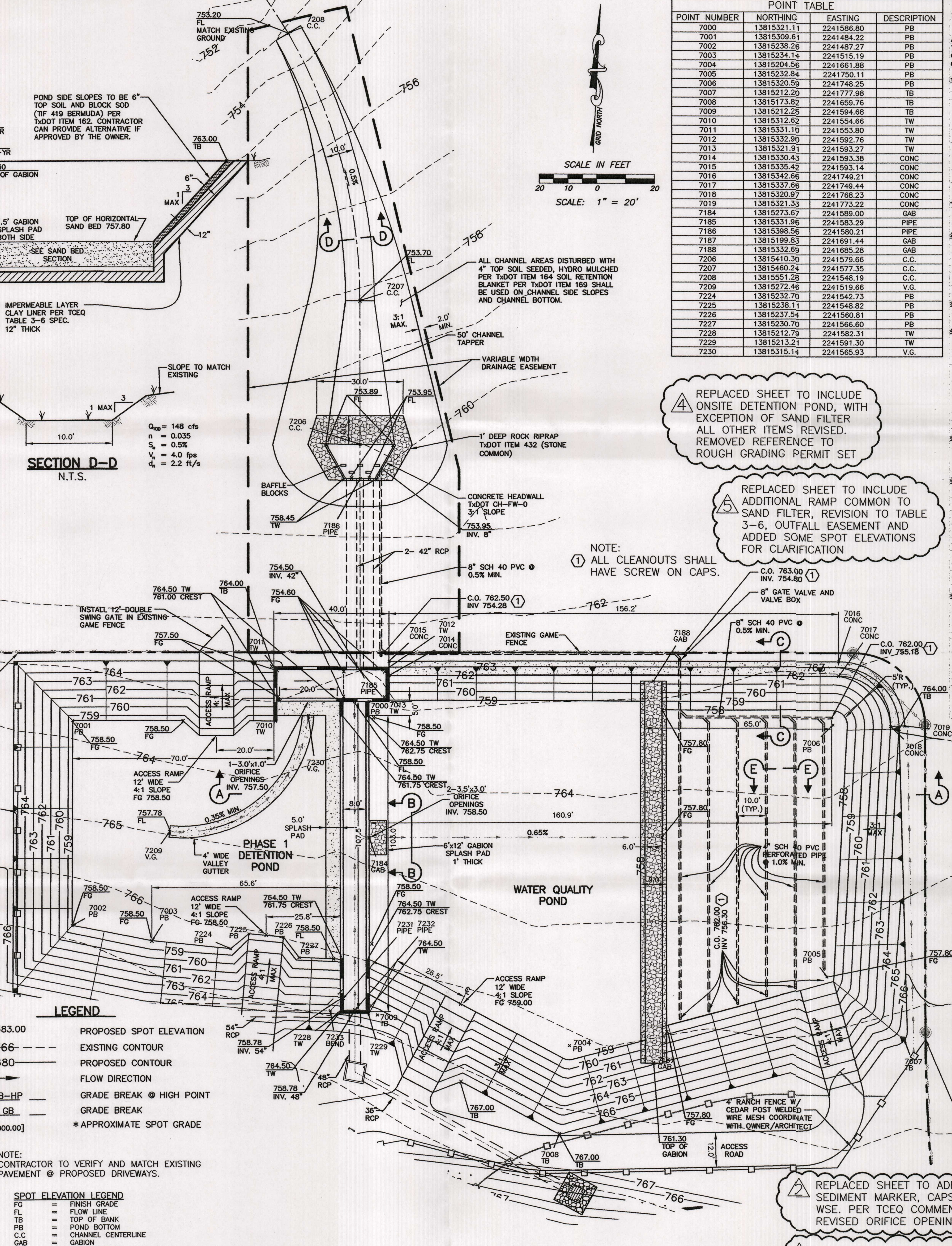
Remarks:

"RECEIVED TCEQ"
SAN ANTONIO REGION
2012 JUL -5 PM 3:29

Copies of: TO:

Received By: Cynthia S. Vega 3:35pm Date: 7/5/12 Submitted By:





NOTE:
ALL CLEANOUTS SHALL HAVE SCREW ON CAPS.

POINT TABLE

POINT NUMBER	NORTHING	EASTING	DESCRIPTION
7000	13815321.11	2241586.80	PB
7001	13815309.61	2241484.22	PB
7002	13815238.26	2241487.27	PB
7003	13815234.14	2241515.19	PB
7004	13815204.56	2241661.88	PB
7005	13815232.84	2241750.11	PB
7006	13815320.59	2241748.25	PB
7007	13815212.20	2241777.98	TB
7008	13815173.82	2241659.76	TB
7009	13815212.25	2241594.68	TB
7010	13815312.62	2241554.66	TW
7011	13815331.10	2241553.80	TW
7012	13815332.90	2241592.76	TW
7013	13815321.91	2241593.27	TW
7014	13815330.43	2241593.38	CONC
7015	13815335.42	2241593.14	CONC
7016	13815342.66	2241749.21	CONC
7017	13815337.66	2241749.44	CONC
7018	13815320.97	2241768.23	CONC
7019	13815321.33	2241773.22	CONC
7184	13815273.67	2241589.00	GAB
7185	13815331.96	2241583.29	PIPE
7186	13815398.56	2241580.21	PIPE
7187	13815199.83	2241691.44	GAB
7188	13815332.69	2241685.28	GAB
7206	13815410.30	2241579.66	C.C.
7207	13815460.24	2241577.35	C.C.
7208	13815551.28	2241548.19	C.C.
7209	13815272.46	2241519.66	V.G.
7224	13815232.70	2241542.73	PB
7225	13815238.11	2241548.82	PB
7226	13815237.54	2241560.81	PB
7227	13815230.70	2241566.60	PB
7228	13815212.79	2241582.31	TW
7229	13815213.21	2241591.30	TW
7230	13815315.14	2241565.93	V.G.

4 REPLACED SHEET TO INCLUDE ONSITE DETENTION POND, WITH EXCEPTION OF SAND FILTER ALL OTHER ITEMS REVISED. REMOVED REFERENCE TO ROUGH GRADING PERMIT SET

5 REPLACED SHEET TO INCLUDE ADDITIONAL RAMP COMMON TO SAND FILTER, REVISION TO TABLE 3-6, OUTFALL EASEMENT AND ADDED SOME SPOT ELEVATIONS FOR CLARIFICATION

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Oakwood Baptist Phase 1
Date Prepared: 1/18/2011

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

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
County = **Comal**
Total project area included in plan * = **24.20** acres
Predevelopment impervious area within the limits of the plan * = **1.44** acres
Total post-development impervious area within the limits of the plan* = **10.57** acres
Total post-development impervious cover fraction * = **0.44**
P = **33** inches

$L_{M\ TOTAL\ PROJECT}$ = **8195** lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = **1**

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area = **21.40** acres
Predevelopment impervious area within drainage basin/outfall area = **1.44** acres
Post-development impervious area within drainage basin/outfall area = **10.29** acres
Post-development impervious fraction within drainage basin/outfall area = **0.48**
$L_{M\ THIS\ BASIN}$ = **7944** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Sand Filter**
Removal efficiency = **89** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C = **21.40** acres
A_I = **10.29** acres
A_P = **11.11** acres
L_R = **10633** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **8195** lbs.

F = **0.77**

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

Rainfall Depth = **0.97** inches
Post Development Runoff Coefficient = **0.35**
On-site Water Quality Volume = **26214** cubic feet

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

Off-site area draining to BMP = **0.00** acres
Off-site Impervious cover draining to BMP = **0.00** acres
Impervious fraction of off-site area = **0**
Off-site Runoff Coefficient = **0.00**
Off-site Water Quality Volume = **0** cubic feet

Storage for Sediment = **5243**
Total Capture Volume (required water quality volume(s) x 1.20) = 31457 cubic feet

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

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin = **31457** cubic feet

Minimum filter basin area = **1456** square feet

Maximum sedimentation basin area = **13107** square feet **For minimum water depth of 2 feet**
Minimum sedimentation basin area = **3277** square feet **For maximum water depth of 8 feet**

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins = **31457** cubic feet

Minimum filter basin area = **2621** square feet

Maximum sedimentation basin area = **10486** square feet **For minimum water depth of 2 feet**
Minimum sedimentation basin area = **655** square feet **For maximum water depth of 8 feet**

Hydraulic Calculations Based on Phase Future Flow

Splitter Section 100-yr Flow Over to Outfall

$Q_{100s} := 212$ Flow over crest Q100 (cfs) $C_w := 3.0$ Weir Coefficient $L := 85$ Length of crest (ft)

Crest := 761.75 OpeningInvert := 758.50

$H := \left(\frac{Q_{100s}}{L \times C_w}\right)^{\frac{2}{3}}$ $H = 0.884$ Height of flow relative to weir crest (ft) $V := \frac{Q_{100s}}{L \times H}$ $V = 2.821$ Velocity (fps)

$WSE_{100overflow} := H + Crest$ $WSE_{100overflow} = 762.63$

Splitter Section 25-yr Flow to Water Quality Pond

$Q_o := 152$ Flow Q25 (cfs) $H := 3$ Height of Opening (ft)

$C_o := .67$ OrificeCoefficient $W := 7$ Width of Opening (ft) $A := H \times W$ $A = 21$ Area (sf)

$h := Crest - \left(\frac{H}{2} + OpeningInvert\right)$ $h = 1.75$ $Q := C_o \times A \times \sqrt{2 \times 32.2 \times h}$ $Q = 149$ Q25 Design (cfs)

Emergency Overflow

$Q_{25e} := 152$ Flow overflow crest Q25 (cfs) $C_w := 3.0$ Weir Coefficient $L := 156$ Length of crest (ft)

ECrest := 763

$H := \left(\frac{Q_{25e}}{L \times C_w}\right)^{\frac{2}{3}}$ $H = 0.472$ Height of flow relative to weir crest (ft) $V := \frac{Q_{25e}}{L \times H}$ $V = 2.062$ Velocity (fps)

$WSE_{emergencyoverflow} := H + ECrest$ $WSE_{emergencyoverflow} = 763.47$

Water Quality Pond Available Storage

Elevation	Area (sf)	Total Storage (cf)
758	7283	0
759	18170	12727
760	19461	31542
761	20784	51665
762	22143	73128
763	23555	95977

Phase 1 Required Storage = 31,457 cf
Phase 2 Required Storage = 58,914 cf
Provided Storage = 67,762 cf

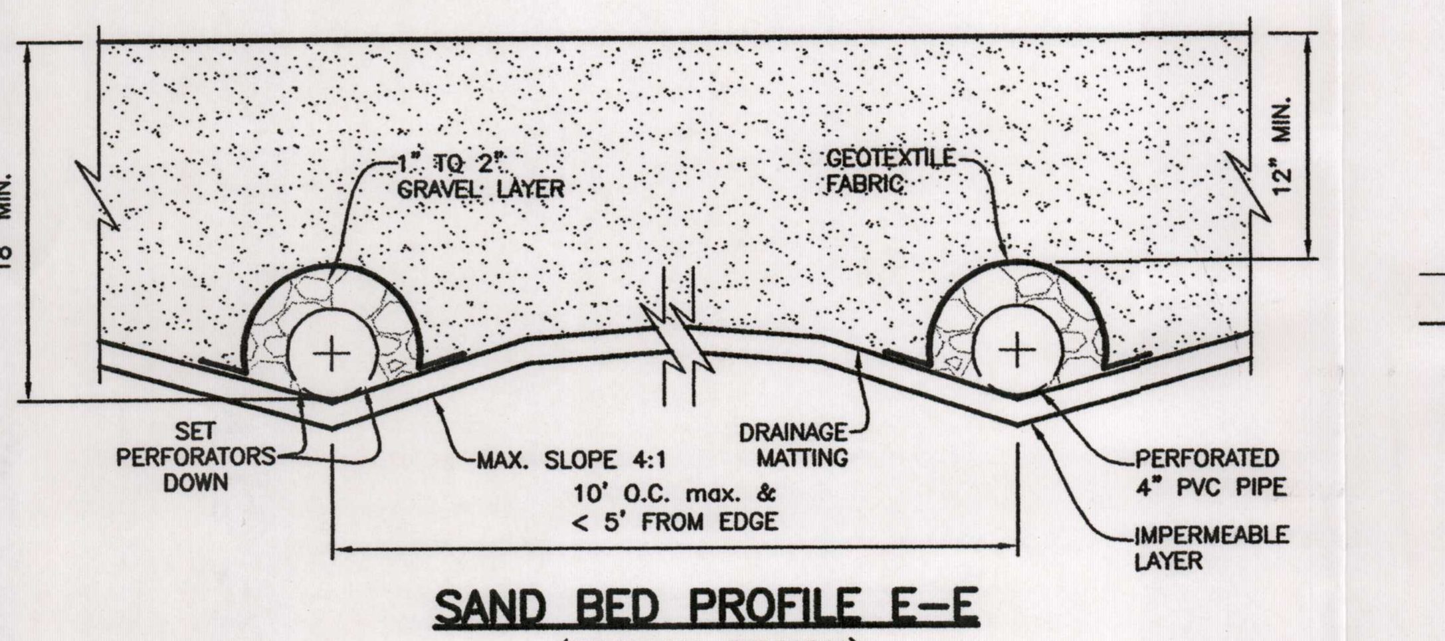
Phase 1 Required Filter Area = 2,621 sf
Phase 2 Required Filter Area = 4,909 sf
Provided Filter Area = 6,159 sf

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

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

NOTE:
CONTRACTOR TO CONTACT OWNER'S GEO-TECH TO INSPECT CLAY LINER MATERIAL PRIOR TO AND DURING INSTALLATION. NOTE CLAY LINER REQUIRED IN WATER QUALITY POND ONLY.

* PERMEABILITY TESTING PER ASTM D-5084



SAND BED PROFILE E–E
(TRENCH DESIGN)
N.T.S.

SAND BED WITH GRAVEL LAYER NOTES:

THE TOP LAYER IS TO BE A MINIMUM OF EIGHTEEN (18) INCHES OF 0.02–0.04 INCH DIAMETER SAND WHICH CORRESPOND WITH ASTM C–33 CONCRETE SAND (SMALLER SAND SIZE IS NOT ACCEPTABLE). UNDER THE SAND SHALL BE A LAYER OF ONE–HALF (0.5) TO ONE AND ONE–HALF (1.5) INCH DIAMETER WASHED, ROUNDED, RIVER GRAVEL WHICH PROVIDES A MINIMUM OF TWO (2) INCHES OF COVER OVER THE TOP OF THE UNDERDRAIN LATERAL PIPES. THE SAND AND GRAVEL MUST BE SEPARATED BY A LAYER OF GEOTEXTILE FABRIC MEETING THE SPECIFICATIONS LISTED IN TABLE 3.6 "GEOTEXTILE FABRIC SPECIFICATIONS (COA, 1997). THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS LISTED IN TABLE 3.6 TAKEN FROM THE TNRCC TECHNICAL GUIDANCE ON BEST MANAGEMENT PRACTICES, JUNE 1999.

LEGEND

x683.00	PROPOSED SPOT ELEVATION
— — 766 — —	EXISTING CONTOUR
—— 680 ——	PROPOSED CONTOUR
→	FLOW DIRECTION
GB-HP	GRADE BREAK @ HIGH POINT
GB	GRADE BREAK
[000.00]	*APPROXIMATE SPOT GRADE

*NOTE:
CONTRACTOR TO VERIFY AND MATCH EXISTING PAVEMENT @ PROPOSED DRIVEWAYS.

SPOT ELEVATION LEGEND

FG	=	FINISH GRADE
FL	=	FLOW LINE
TB	=	TOP OF BANK
PB	=	POND BOTTOM
C.C.	=	CHANNEL CENTERLINE
GAB	=	GABION
TW	=	TOP OF WALL
CONC	=	CONCRETE
C.O.	=	CLEANOUT
INV	=	INVERT
WSE	=	WATER SURFACE ELEVATION
V.G.	=	VALLEY GUTTER

NOTE:
WATER QUALITY POND WILL GO UNCHANGED FROM PHASE 1 TO PHASE 2.

2 REPLACED SHEET TO ADD SEDIMENT MARKER, CAPS, AND WSE. PER TCEQ COMMENTS. REVISED ORIFICE OPENINGS

1 REPLACED SHEET TO REFLECT ADJUSTMENTS TO SPLITTER STRUCTURE AND OUTFALL HEADWALL

NOTE:
CONTRACTOR TO CONTACT ENGINEER OF RECORD TO OBSERVE COMPLETED DRAIN PIPE INSTALLATION PRIOR TO GRAVEL PLACEMENT.

RECEIVED
JUL 12 2012
COUNTY ENGINEER

"RECEIVED TCEQ" SAN ANTONIO REGION 2012 JUL -5 PM 3:29

REVISIONS

	DATE	DESCRIPTION
1	08/09/11	REPLACED SHEET
2	10/19/11	REPLACED SHEET
3	03/02/12	ROUGH GRADING SET
4	04/10/12	REPLACED SHEET
5	06/26/12	REPLACED SHEET

STATE OF TEXAS
MICHAEL G. SHORT
88015
LICENSED PROFESSIONAL ENGINEER
7/5/12

PERMANENT WATER POLLUTION ABATEMENT PLAN & DETAILS (PHASE 1)

OAKWOOD BAPTIST CHURCH

NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410

C17

TCEQ - 7

Thursday, July 05, 2012 10:35 AM

THE Schultz Group INC.

P.O. BOX 310483 • NEW BRAUNFELS, TX 78131-0483 • Phone: (830) 606-3913 • Fax: (830) 625-2204

June 29, 2012

Mr. Javier Anguiano
Texas Commission on Environmental Quality
Region 13/ San Antonio
14250 Judson Road
San Antonio, Texas 78233-4480

Re: Edwards Aquifer Protection Program, Comal County
TYPE OF PLAN: Modification to a Water Pollution Abatement Plan
NAME OF PROJECT: Oakwood Baptist Church Youth Center Modification
Response to Technical Review Comments dated June 20, 2012.

Dear Mr. Anguiano,

Thank you for your technical review of the above referenced project. We have revised portions of the modification application per the Technical Review Comments dated June 20, 2012. The following summary of responses is intended to adequately address your comments. In addition where required amended portions of the modification application are included with this response:

General Concerns Response

1. Agent Authorization Forms from the Owners for the offsite area common to the pond outfall are attached. In addition, an easement is currently being acquired by Oakwood Baptist Church from the affected property owners.

Site Plan and Basin Details Concerns Response

2. The location of the staging area has been indicated on the Phase 2 Site Plan and clarified on the Phase 1 Site Plan.
3. The site grading on the Phase 2 Site Plan did inadvertently show a greater area common to the drives not being captured given the proposed grading. The Phase 2 Site Plan has been revised to minimize the area uncaptured; however, even with the revision an additional 910-sf remains uncaptured. The Phase 2 Water Quality Calculations were revised as well as the application forms where required (see attached).
4. The original intent of the design was to require the removal of a gabion basket segment to provide access to maintain the sand filter with heavy equipment; however, a second access point has been added to water quality pond (WQP) allowing direct access to the

sand filter.

Additional Changes

The WQP Plan Sheet has been revised to reflect a minor modification to the shape of the pending outfall easement, Table 3.6 of the Clay Liner Specification was edited to include reference to the required permeability test and some additional spot elevations were added to the pond bottom for clarification only.

I believe the above represents all changes to the required documents as first submitted. I believe the information is complete and suitable for further review; however, if additional information is required please call.

Sincerely,

6/29/12

Michael G. Short, P.E.
Project Engineer
F-532

TCEQ
Protecting Texas by Reducing and Preventing Pollution

F A X T R A N S M I T T A L

DATE: June ~~19~~ 20, 2012

NUMBER OF PAGES *(including this cover sheet)*: 2

TO: Name **Mr. Michael G. Short, P.E.**
Organization **The Schultz Group, Inc.**
FAX Number **830/625-2204**

TO: Name **Ms. Roxi Vanstory**
Organization **Oakwood Baptist Church**
FAX Number **830/625-1151**

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Name **Javier Anguiano**
Division/Region **EAPP/San Antonio**
Telephone Number **210/403-4019**
FAX Number **210/545-4329**

NOTES:

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Oakwood Baptist Church – Youth Center Modification; Located at 2152 Loop 337; New Braunfels, Texas
TYPE OF PLAN: Request for Modification of an Approved Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer;
Edwards Aquifer Protection Program San Antonio File No. 1085.04; Investigation No. 1002219; Regulated Entity No. RN102744802

Dear Mr. Short:

We are in the process of technically reviewing the Modification application you submitted for the above-referenced project. Before we can proceed with our review, the following comments relating to the application must be addressed:

General Concerns:

1. The out fall channel appears to be located offsite, on the neighboring property. Given the reason for this proposed modification. Does the applicant have the right possess or control this portion of the property, e.g., drainage easement? If not, please provide an authorization from the owner of the off-site area, giving

authorization to The Shultz Group, Inc. to submit this plan on their behalf and for proposed construction.

Site Plan and Basin Details Concerns:

2. Please indicate the location of the basin maintenance staging area.

3. The proposed contours appear to indicate that the uncaptured areas (access drives) may be larger than illustrated, i.e., the northern access drives. Please confirm the boundaries of the uncaptured areas and provide the acreage for each area. Revise the site plan as necessary. If the uncaptured areas are larger than previously reported, please revise the basin sizing calculations and all applicable details as necessary.

4. A service ramp is provided into the sedimentation chamber of the sedimentation/filtration basin but not the filtration chamber. Please explain how access will be gained into the filtration chamber of the basin.

We ask that you submit **one original and four copies** of the amended materials to supplement the Modification application to this office by no later than **14 days from the date of this letter** to avoid denial of the plan. If the response to this notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, a second notice will be sent to you requiring a response within 14 days from the notice date. If the response to the second is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application will be denied unless you provide written notification that the application is being withdrawn. Please note that the application fee will be forfeited if the plan is not withdrawn. If you have any questions or require additional information, please contact Javier Anguiano of the Edwards Aquifer Protection Program of the San Antonio Regional Office at the number listed above. **[END]**

ATTACHMENT B – PROPOSED MODIFICATION (TCEQ-0590)

The exiting Original Site as described by the "Water Pollution Abatement Plan for Oakwood Baptist Church" (Cunningham Allen Inc 1998) was completed in three phases. The Original Phase 1 was approved without the requirement of stormwater pollution abatement (1.44-acres of impervious cover). Original Phase 2 was constructed without the required provisions for water quality (1.13-acres of impervious cover) Phase 3 was improved and provided stormwater pollution abatement for Phase 2 and Phase 3 (totaling 4.27 acres of impervious cover). The Original Phase 3 Improvements provided a partial sedimentation and filtration basin with a capture volume of 8,737-cf.

Oakwood Baptist Church was unable to obtain an areement with the downstream property owners for a drainage easement for the offsite detention pond previously shown. As a result this WPAP Modification is required to move the previously shown offsite detention pond onsite. The overall Phase 1 and Phase 2 plans are for the most part the same. The differences are outline below:

1. The detention pond is now shown onsite.
2. The sedimentation and filtration system (Water quality pond) configuration has changed slightly to allow the detention pond to be adjacent to it. This changed is shown in the revised calculations and construction plans. The water quality pond will be in accordance with the TCEQ's Technical Guidance Manual.
3. There is a minor decrease of impervious cover in Phase 2 as a result of the detention pond being onsite. This is due to a loss of area for paved parking. This is also shown in the revised calculations and construction plans.

Please note that Construction of the children's center, expanded parking facilities and water quality pond (Phase 1) from the Approved Modification Dated October 28, 2011 has begun.

Phase 1 from the Approved Modification Dated August 25, 2008 has been completed. This included a Parking Lot Expansion immediately adjacent to the existing facility along the overall projects western most boundary.

For this WPAP Modification the Oakwood Baptist Church intends to expand its current facility. This expansion will be constructed in two phases.

Phase 1

Phase 1 will consist of a children's center located adjacent to the main worship center, expanded parking facilities, sidewalks, and partial sedimentation and filtration system (Water quality pond). The proposed Phase 1 improvements will have approximately 127,111 square feet of impervious cover. The proposed water quality pond will replace the existing 9,275-cf water quality pond originally intended to serve a portion of the 7.06-acre site (see referenced information for additional detail). The majority of run-off generated onsite given all existing improvements as well as all proposed improvement will be collected through a series of onsite swales and storm drain systems and conveyed to the proposed water quality pond and a permanent onsite detention pond (previously shown offsite). The water quality pond proposed for Phase 1 has been designed to mitigate all flows from the Phase 1 and Phase 2 proposed improvements. The Church in the short term intends to leave the remaining portion of the overall site undeveloped.

There is approximately 2.92 acres of impervious cover proposed for Phase 1 (All onsite) making the total Phase 1 impervious cover 10.57 acres. Of which approximately 10.29 acres will drain to the proposed water quality pond. Approximately 0.28 acres of impervious cover common to the access

drives will drain to Loop 337 uncaptured by the water quality pond. 1.44-acres of the initial phase, part of the "Water Pollution Abatement Plan for Oakwood Baptist Church" (Cunningham Allen Inc 1998) was approved without the requirement of water pollution abatement. This 1.44 acres is shown as existing impervious cover in the water quality pond calculations. The water quality pond has been designed to mitigate the entire 2.92 acre increase in impervious cover per the TCEQ's Technical Guidance Manual.

The water quality pond has been sized to capture the first 0.97 inches of stormwater run-off from 10.57 acres of impervious cover of which 10.29 acres will drain to the proposed water quality pond within a 21.40 acre catchment area, providing a total capture volume of 63,048 cubic feet where only 31,457 cubic feet is needed to treat 8,195 pounds of total suspended solids. A sand filtration system will consist of 6,159 square feet of sand where only 2,621 square feet is needed. The sand will be 18 inches thick, with under drain piping surrounded by gravel. Sand and gravel layers will be separated with filter fabric and contained above an impermeable clay liner per TCEQ Specifications Table 3-6.

Phase 2

The Proposed Phase 2 Improvements will include the construction of a new worship center, chapel, significant parking areas, and modifications to the existing parking areas. The proposed Phase 2 improvements will add approximately 268,704 square feet of impervious cover. Upon the Phase 2 expansion project completion the majority of run-off generated onsite given all existing improvements as well as all proposed improvement will be collected through a series of onsite swales and storm drain systems and conveyed to the water quality pond and a permanent detention pond constructed in Phase 1.

There is approximately 6.17 acres of additional impervious cover proposed for Phase 2. Of which approximately 6.05 acres will drain to the proposed water quality pond. Four new access drives have been proposed for Phase 2 totaling approximately 0.12 acres that will drain offsite and will not be captured by the water quality pond. A new driveway off of Loop 337 has also been proposed for Phase 2. The northern most drive will be removed and the proposed drive will be constructed. The proposed new drive will increase the total impervious cover draining to Loop 337 from approximately 0.28 acres to approximately 0.30 acres. The water quality pond has been designed to mitigate the entire 6.17 acre increase in impervious cover per the TCEQ's Technical Guidance Manual.

The water quality pond has been sized to capture the first 1.16 inches of stormwater run-off from 16.74 acres of impervious cover of which 16.32 acres will drain to the proposed water quality pond within a 24.08 acre catchment area, providing a total capture volume of 67,762 cubic feet where only 58,914 cubic feet is needed to treat 13,733 pounds of total suspended solids. A sand filtration system will consist of 6,159 square feet of sand where only 4,909 square feet is needed. The sand will be 18 inches thick, with under drain piping surrounded by gravel. Sand and gravel layers will be separated with filter fabric and contained above an impermeable clay liner per TCEQ Specifications Table 3-6.

During the Phase 2 construction; the fill material required for the northern parking area will be placed first, in effect, keeping the stormwater runoff from leaving the site prior to treatment from the water quality pond. In addition, prior to Phase 2 construction, all required temporary erosion control measures will be in place.

ATTACHMENT C – PROJECT DESCRIPTION (TCEQ-0587)

Oakwood Baptist Church was unable to obtain an agreement with the downstream property owners for a drainage easement for the offsite detention pond previously shown. As a result this WPAP Modification is required to move the previously shown offsite detention pond onsite. The overall Phase 1 and Phase 2 plans are for the most part the same. The differences are outline below:

1. The detention pond is now shown onsite.
2. The sedimentation and filtration system (Water quality pond) configuration has changed slightly to allow the detention pond to be adjacent to it. This changed is shown in the revised calculations and construction plans. The water quality pond will be in accordance with the TCEQ's Technical Guidance Manual.
3. There is a minor decrease of impervious cover in Phase 2 as a result of the detention pond being onsite. This is due to a loss of area for paved parking. This is also shown in the revised calculations and construction plans.

Please note that Construction of the children's center, expanded parking facilities and water quality pond (Phase 1) from the Approved Modification Dated October 28, 2011 has begun.

Phase 1 from the Approved Modification Dated August 25, 2008 has been completed. This included a Parking Lot Expansion immediately adjacent to the existing facility along the overall projects western most boundary.

For this WPAP Modification the Oakwood Baptist Church intends to expand its current facility. This expansion will be constructed in two phases.

Phase 1

Phase 1 will consist of a children's center located adjacent to the main worship center, expanded parking facilities, sidewalks, and partial sedimentation and filtration system (Water quality pond). The proposed Phase 1 improvements will have approximately 127,111 square feet of impervious cover. The proposed water quality pond will replace the existing 9,275-cf water quality pond originally intended to serve a portion of the 7.06-acre site (see referenced information for additional detail). The majority of run-off generated onsite given all existing improvements as well as all proposed improvement will be collected through a series of onsite swales and storm drain systems and conveyed to the proposed water quality pond and a permanent onsite detention pond (previously shown offsite). The water quality pond proposed for Phase 1 has been designed to mitigate all flows from the Phase 1 and Phase 2 proposed improvements. The Church in the short term intends to leave the remaining portion of the overall site undeveloped.

There is approximately 2.92 acres of impervious cover proposed for Phase 1 (All onsite) making the total Phase 1 impervious cover 10.57 acres. Of which approximately 10.29 acres will drain to the proposed water quality pond. Approximately 0.28 acres of impervious cover common to the access drives will drain to Loop 337 uncaptured by the water quality pond. 1.44-acres of the initial phase, part of the "Water Pollution Abatement Plan for Oakwood Baptist Church" (Cunningham Allen Inc 1998) was approved without the requirement of water pollution abatement. This 1.44 acres is shown as existing impervious cover in the water quality pond calculations. The water quality pond has been designed to mitigate the entire 2.92 acre increase in impervious cover per the TCEQ's Technical Guidance Manual.

The water quality pond has been sized to capture the first 0.97 inches of stormwater run-off from 10.57 acres of impervious cover of which 10.29 acres will drain to the proposed water quality pond within a 21.40 acre catchment area, providing a total capture volume of 63,048 cubic feet where only 31,457 cubic feet is needed to treat 8,195 pounds of total suspended solids. A sand filtration system will consist of 6,159 square feet of sand where only 2,621 square feet is needed. The sand will be 18 inches thick, with under drain piping surrounded by gravel. Sand and gravel layers will be separated with filter fabric and contained above an impermeable clay liner per TCEQ Specifications Table 3-6.

Phase 2

The Proposed Phase 2 Improvements will include the construction of a new worship center, chapel, significant parking areas, and modifications to the existing parking areas. The proposed Phase 2 improvements will add approximately 268,704 square feet of impervious cover. Upon the Phase 2 expansion project completion the majority of run-off generated onsite given all existing improvements as well as all proposed improvement will be collected through a series of onsite swales and storm drain systems and conveyed to the water quality pond and a permanent detention pond constructed in Phase 1.

There is approximately 6.17 acres of additional impervious cover proposed for Phase 2. Of which approximately 6.05 acres will drain to the proposed water quality pond. Four new access drives have been proposed for Phase 2 totaling approximately 0.12 acres that will drain offsite and will not be captured by the water quality pond. A new driveway off of Loop 337 has also been proposed for Phase 2. The northern most drive will be removed and the proposed drive will be constructed. The proposed new drive will increase the total impervious cover draining to Loop 337 from approximately 0.28 acres to approximately 0.30 acres. The water quality pond has been designed to mitigate the entire 6.17 acre increase in impervious cover per the TCEQ's Technical Guidance Manual.

The water quality pond has been sized to capture the first 1.16 inches of stormwater run-off from 16.74 acres of impervious cover of which 16.32 acres will drain to the proposed water quality pond within a 24.08 acre catchment area, providing a total capture volume of 67,762 cubic feet where only 58,914 cubic feet is needed to treat 13,733 pounds of total suspended solids. A sand filtration system will consist of 6,159 square feet of sand where only 4,909 square feet is needed. The sand will be 18 inches thick, with under drain piping surrounded by gravel. Sand and gravel layers will be separated with filter fabric and contained above an impermeable clay liner per TCEQ Specifications Table 3-6.

During the Phase 2 construction; the fill material required for the northern parking area will be placed first, in effect, keeping the stormwater runoff from leaving the site prior to treatment from the water quality pond. In addition, prior to Phase 2 construction, all required temporary erosion control measures will be in place.

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

I T. Dean Word III,
Print Name

Owner,
Title - Owner/President/Other

of Word Borchers Ranch Real Estate Limited Partnership,
Corporation/Partnership/Entity Name

have authorized Michael G. Short, P.E.
Print Name of Agent/Engineer

of The Schultz Group, Inc.
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 for the **Oakwood Baptist Church Youth Center Modification (Onsite Pond)** 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:

J. Dean Ward III
Applicant's Signature

6/19/2012
Date

THE STATE OF Texas §

County of Canal §

BEFORE ME, the undersigned authority, on this day personally appeared J. Dean Ward III 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 19th day of June 2012.

Pamela Bennett
NOTARY PUBLIC

NOTARY PUBLIC STATE OF TEXAS
PAMELA H. BENNETT
My Commission Expires
May 16, 2015

Pamela Bennett
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: May 16, 2015

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

I Georgia B. Duettra,
Print Name

Owner,
Title - Owner/President/Other

of Word Borchers Ranch Real Estate Limited Partnership,
Corporation/Partnership/Entity Name

have authorized Michael G. Short, P.E.
Print Name of Agent/Engineer

of The Schultz Group, Inc.
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 for the **Oakwood Baptist Church Youth Center Modification (Onsite Pond)** 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.

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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:

Georgia B Quettier
Applicant's Signature

6/19/12
Date

THE STATE OF Texas §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared Georgia B. Quettier 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 19th day of June, 2012.

Pamela Bennett
NOTARY PUBLIC

NOTARY PUBLIC STATE OF TEXAS
PAMELA H. BENNETT
My Commission Expires
May 16, 2015

Pamela Bennett
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: May 16, 2015

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

I Bryan C. Word,
Print Name

Owner,
Title - Owner/President/Other

of Word Borchers Ranch Real Estate Limited Partnership,
Corporation/Partnership/Entity Name

have authorized Michael G. Short, P.E.
Print Name of Agent/Engineer

of The Schultz Group, Inc.
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 for the **Oakwood Baptist Church Youth Center Modification (Onsite Pond)** 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

June 14, 2012
Date

THE STATE OF Texas §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared Bryan C. Ward 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 19th day of June, 2012.

Pamela Bennett
NOTARY PUBLIC

PAMELA H. BENNETT
My Commission Expires
May 16, 2015

Pamela Bennett
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: May 16, 2015

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

I Marcia McGlothlin,
Print Name

Owner,
Title - Owner/President/Other

of Word Borchers Ranch Real Estate Limited Partnership,
Corporation/Partnership/Entity Name

have authorized Michael G. Short, P.E.
Print Name of Agent/Engineer

of The Schultz Group, Inc.
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 for the **Oakwood Baptist Church Youth Center Modification (Onsite Pond)** 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:

Marcia L. McClothlin
Applicant's Signature

June 19, 2012
Date

THE STATE OF Texas §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared Marcia McClothlin 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 19th day of June, 2012.

Pamela Bennett
NOTARY PUBLIC

PAMELA H. BENNETT
My Commission Expires
May 16, 2015

Pamela Bennett
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: May 16, 2015

GRID NORTH

SCALE IN FEET

60 30 0 60

SCALE: 1" = 60'

REVISIONS

DATE	DESCRIPTION

STATE OF TEXAS — MICHAEL G. SCHULTZ — 68015 — LICENSED PROFESSIONAL ENGINEER

SITE PLAN (Phase 1)

OAKWOOD BAPTIST CHURCH

NEW BRAUNFELS, TEXAS

LEGEND:

- IMPERVIOUS COVER NOT DRAINING TO WATER QUALITY POND
- PROPOSED BUILDINGS, SIDEWALKS AND PARKING AREAS
- PROPOSED STAGING AREA
- S-0 GEOLOGIC FEATURE (SEE GEOLOGICAL SITE ASSESSMENT)
- GRAVEL FILTER INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- SILT FENCE (PHASING NOTED)
- ROCK BERM (PHASING NOTED)
- TCE TEMPORARY CONSTRUCTION ENTRANCE/EXIT (PHASING NOTED)
- AREAS TO BE DISTURBED w/SOIL STABILIZATION (WITH SITE CONSTRUCTION PLANS)
- PROPOSED DRAINAGE SYSTEM
- Kep SEE GEOLOGICAL ASSESSMENT

*RECEIVED TCEQ SAN ANTONIO REGION
2012 JUN 29 PM 4:07

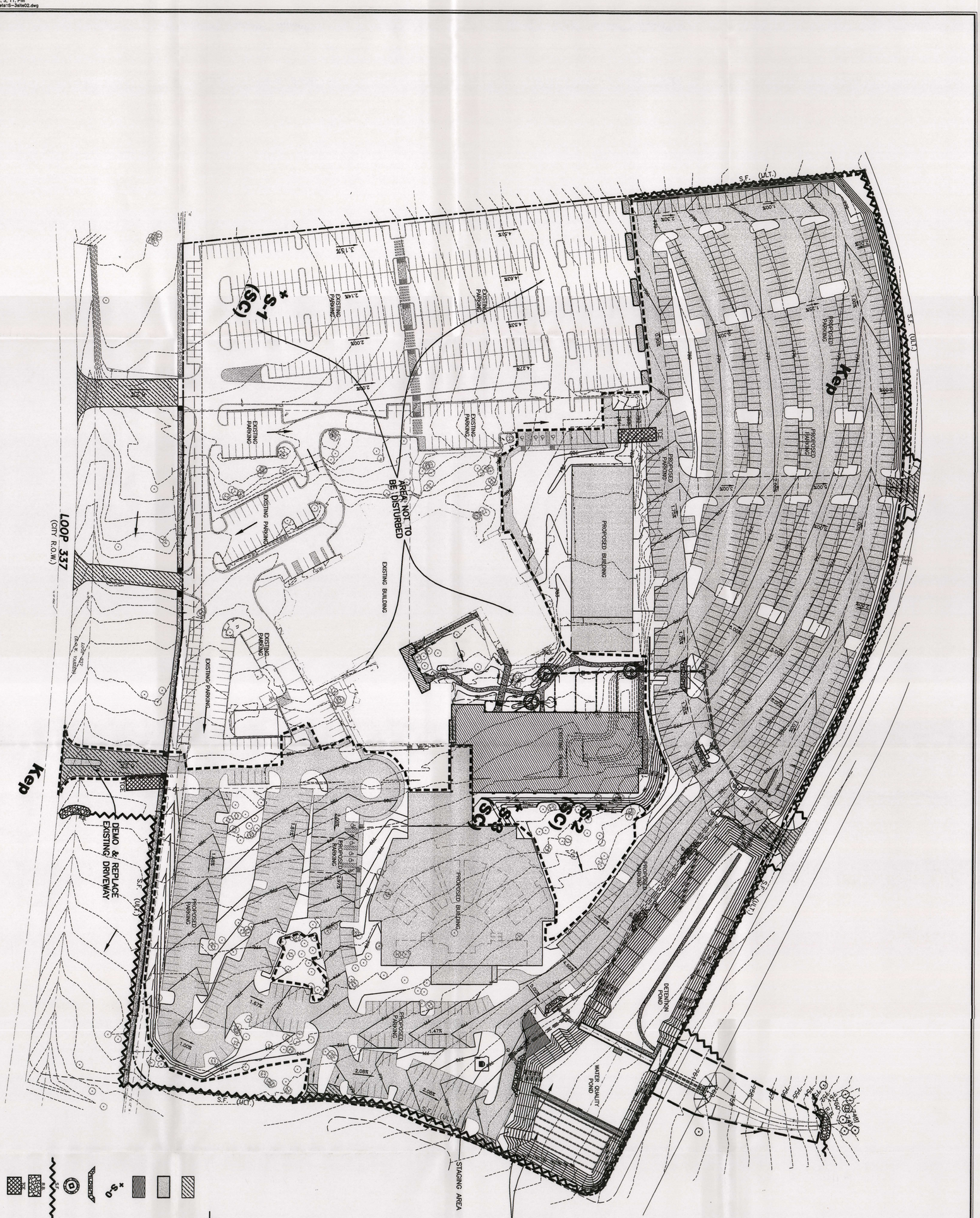
THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY:	D.C.
CHECKED BY:	M.G.S.
DATE:	DECEMBER 2010
JOB NO.:	100410

TCEQ-2

Friday, June 29, 2012, 1:29 PM
File Name: F:\100410\Sheets\S-2sheet02.dwg

Wednesday, June 27, 2012, 3, 11, PM
File Name: F:\100410\Sheets\S-3site02.dwg



LEGEND:

- IMPERVIOUS COVER NOT DRAINING TO WATER QUALITY POND
- PROPOSED BUILDINGS, SIDEWALKS AND PARKING AREAS
- PROPOSED STAGING AREA
- GEOLOGIC FEATURE (SEE GEOLOGICAL SITE ASSESSMENT)
- GRAVEL FILTER CURB-INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- GRAVEL FILTER INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- SILT FENCE (PHASING NOTED)
- ROCK BERM (PHASING NOTED)
- TEMPORARY CONSTRUCTION ENTRANCE/EXIT (PHASING NOTED)
- AREAS TO BE DISTURBED w/SOIL STABILIZATION (WITH SITE CONSTRUCTION PLANS)
- PROPOSED DRAINAGE SYSTEM
- SEE GEOLOGICAL ASSESSMENT

GRID NORTH
SCALE: 1" = 60'
SCALE IN FEET
60 30 0 60

RECEIVED TCEQ SAN ANTONIO REGION
2012 JUN 29 PM 4:07

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

SITE PLAN
(Phase 2)

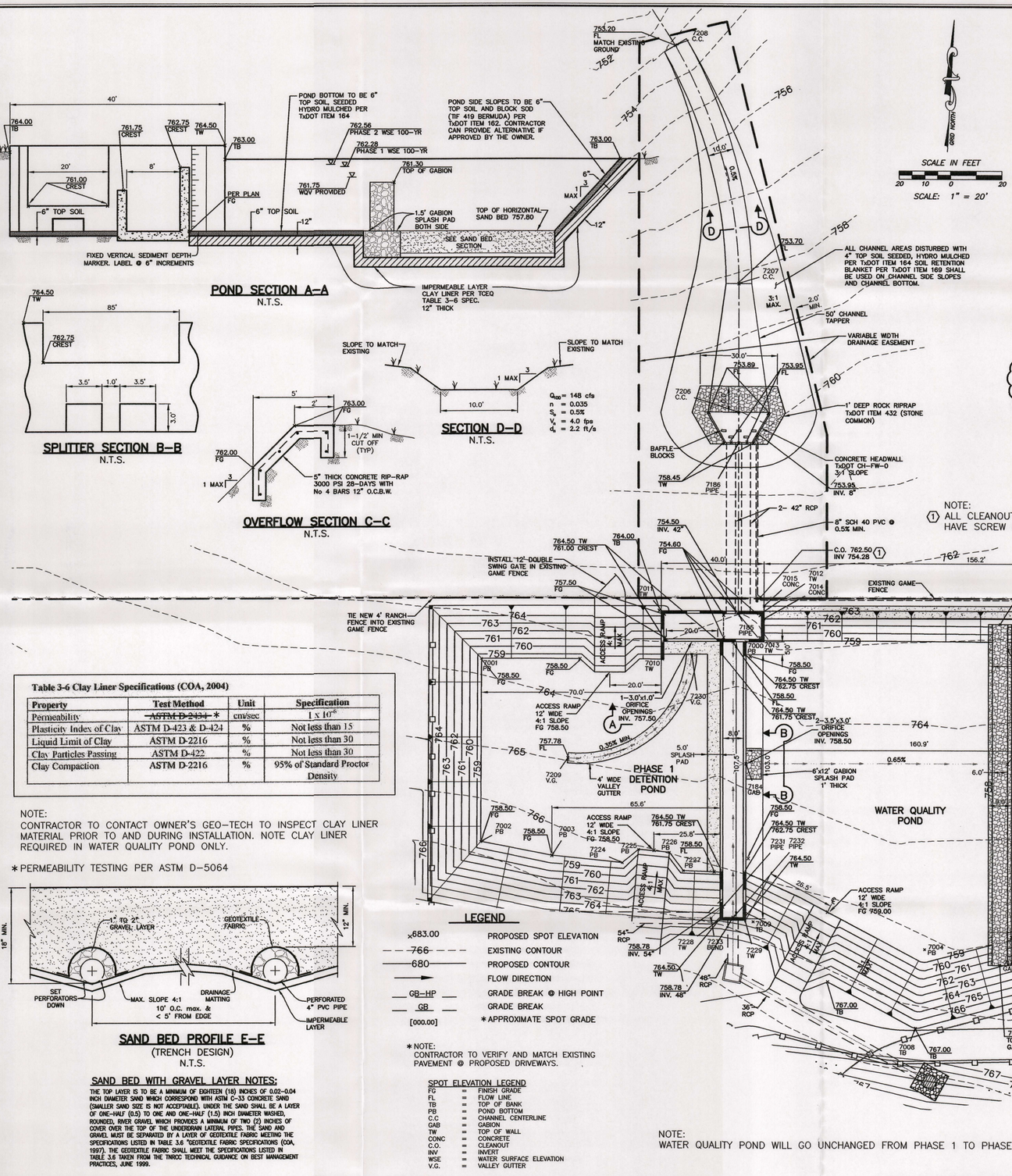
OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

STATE OF TEXAS
MICHAEL G. SHORT
88015
LICENSED PROFESSIONAL ENGINEER

REVISIONS	
DATE	DESCRIPTION

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO: 100410

TCEQ-3



POINT TABLE			
POINT NUMBER	NORTHING	EASTING	DESCRIPTION
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7001	13815309.61	2241484.22	PB
7002	13815238.26	2241487.27	PB
7003	13815234.14	2241515.19	PB
7004	13815204.58	2241661.88	PB
7005	13815232.84	2241750.11	PB
7006	13815320.59	2241748.25	PB
7007	13815212.20	2241777.98	TB
7008	13815173.82	2241659.76	TB
7009	13815212.25	2241594.68	TB
7010	13815312.62	2241554.66	TW
7011	13815331.10	2241553.80	TW
7012	13815332.90	2241592.76	TW
7013	13815321.91	2241593.27	TW
7014	13815330.43	2241593.38	CONC
7015	13815335.42	2241593.14	CONC
7016	13815342.66	2241749.21	CONC
7017	13815337.66	2241749.44	CONC
7018	13815320.97	2241768.23	CONC
7019	13815321.33	2241773.22	CONC
7184	13815273.67	2241589.00	GAB
7185	13815331.96	2241583.29	PIPE
7186	13815398.56	2241580.21	PIPE
7187	13815199.83	2241691.44	GAB
7188	13815332.69	2241685.28	GAB
7206	13815410.30	2241579.66	C.C.
7207	13815460.24	2241577.35	C.C.
7208	13815551.28	2241548.19	C.C.
7209	13815272.46	2241519.66	V.G.
7224	13815232.70	2241542.73	PB
7225	13815238.11	2241548.82	PB
7226	13815237.54	2241560.81	PB
7227	13815230.70	2241566.60	PB
7228	13815212.79	2241582.31	TW
7229	13815213.21	2241591.30	TW
7230	13815315.14	2241565.93	V.G.

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

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

NOTE: CONTRACTOR TO CONTACT OWNER'S GEO–TECH TO INSPECT CLAY LINER MATERIAL PRIOR TO AND DURING INSTALLATION. NOTE CLAY LINER REQUIRED IN WATER QUALITY POND ONLY.

*PERMEABILITY TESTING PER ASTM D–5064

SAND BED WITH GRAVEL LAYER NOTES:

THE TOP LAYER IS TO BE A MINIMUM OF EIGHTEEN (18) INCHES OF 0.02–0.04 INCH DIAMETER SAND WHICH CORRESPOND WITH ASTM C–33 CONCRETE SAND (SMALLER SAND SIZE IS NOT ACCEPTABLE). UNDER THE SAND SHALL BE A LAYER OF ONE–HALF (0.5) TO ONE AND ONE–HALF (1.5) INCH DIAMETER WASHED, ROUNDED, RIVER GRAVEL WHICH PROVIDES A MINIMUM OF TWO (2) INCHES OF COVER OVER THE TOP OF THE UNDERDRAIN LATERAL PIPES. THE SAND AND GRAVEL MUST BE SEPARATED BY A LAYER OF GEOTEXTILE FABRIC MEETING THE SPECIFICATIONS LISTED IN TABLE 3.6 "GEOTEXTILE FABRIC SPECIFICATIONS (COA, 1997). THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS LISTED IN TABLE 3.6 TAKEN FROM THE TRRDC TECHNICAL GUIDANCE ON BEST MANAGEMENT PRACTICES, JUNE 1999.

4 REPLACED SHEET TO INCLUDE ONSITE DETENTION POND, WITH EXCEPTION OF SAND FILTER ALL OTHER ITEMS REVISED. REMOVED REFERENCE TO ROUGH GRADING PERMIT SET

5 REPLACED SHEET TO INCLUDE ADDITIONAL RAMP COMMON TO SAND FILTER, REVISION TO TABLE 3–6, OUTFALL EASEMENT AND ADDED SOME SPOT ELEVATIONS FOR CLARIFICATION

2 REPLACED SHEET TO ADD SEDIMENT MARKER, CAPS, AND WSE. PER TCEQ COMMENTS. REVISED ORIFICE OPENINGS

1 REPLACED SHEET TO REFLECT ADJUSTMENTS TO SPLITTER STRUCTURE AND OUTFALL HEADWALL

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Oakwood Baptist Phase 1
Date Prepared: 1/18/2011

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

1. The Required Load Reduction for the total project: Calculations from RG-348 — Pages 3-27 to 3-30

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
B_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

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

County =	Comal	
Total project area included in plan * =	34.20	acres
Predevelopment impervious area within the limits of the plan * =	1.44	acres
Total post-development impervious area within the limits of the plan* =	10.57	acres
Total post-development impervious cover fraction * =	0.44	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ * =	8195	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 1

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	21.40	acres
Predevelopment impervious area within drainage basin/outfall area =	1.44	acres
Post-development impervious area within drainage basin/outfall area =	10.29	acres
Post-development impervious fraction within drainage basin/outfall area =	0.48	
$L_{M\ TSS\ BASIN}$ * =	7944	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter
Removal efficiency = 80 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_P x 34.6 + A_P x 0.54)

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

A_C =	21.40	acres
A_I =	10.29	acres
A_P =	11.11	acres
L_R =	10833	lbs

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

Desired $L_{M\ TSS\ BASIN}$ * = 8195 lbs.

F = 0.77

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

Rainfall Depth =	0.57	inches
Post Development Runoff Coefficient =	0.35	
On-site Water Quality Volume =	26214	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	5243	
Total Capture Volume (required water quality volume(s) x 1.20) =	31457	cubic feet

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

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =	31457	cubic feet	
Minimum filter basin area =	1456	square feet	
Maximum sedimentation basin area =	13107	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	3277	square feet	For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	31457	cubic feet	
Minimum filter basin area =	2621	square feet	
Maximum sedimentation basin area =	10486	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	655	square feet	For maximum water depth of 8 feet

Hydraulic Calculations Based on Phase Future Flow

Splitter Section 100-yr Flow Over to Outfall

Q_{100} := 212 Flow over crest Q100 (cfs) C_w := 3.0 Weir Coefficient L := 85 Length of crest (ft)

Crest := 761.75 OpeningInvert := 758.50

$H := \left(\frac{Q_{100}}{L \times C_w}\right)^{\frac{2}{3}}$ H = 0.884 Height of flow relative to weir crest (ft) $V := \frac{Q_{100}}{L \times H}$ V = 2.821 Velocity (fps)

$WSE_{100overflow} := H + Crest$ $WSE_{100overflow}$ = 762.63

Splitter Section 25-yr Flow to Water Quality Pond

Q_{25} := 152 Flow Q25 (cfs) H := 3 Height of Opening (ft)

C_o := .67 OrificeCoefficient W := 7 Width of Opening (ft) $A := H \times W$ A = 21 Area (sf)

$h := Crest - \left(\frac{H}{2} + OpeningInvert\right)$ h = 1.75 $Q := C_o \times A \times \sqrt{2 \times 32.2 \times h}$ Q = 149 Q25 Design (cfs)

Emergency Overflow

Q_{25e} := 152 Flow overflow crest Q25 (cfs) C_w := 3.0 Weir Coefficient L := 156 Length of crest (ft)

ECrest := 763

$H := \left(\frac{Q_{25e}}{L \times C_w}\right)^{\frac{2}{3}}$ H = 0.472 Height of flow relative to weir crest (ft) $V := \frac{Q_{25e}}{L \times H}$ V = 2.062 Velocity (fps)

$WSE_{emergencyoverflow} := H + ECrest$ $WSE_{emergencyoverflow}$ = 763.47

Water Quality Pond Available Storage

Elevation	Area (sf)	Total Storage (cf)
758	7283	0
759	18170	12727
760	19461	31542
761	20784	51665
762	22143	73128
763	23555	95977

Phase 1 Required Storage = 31,457 cf
Phase 2 Required Storage = 58,914 cf
Provided Storage = 67,762 cf

Phase 1 Required Filter Area = 2,621 sf
Phase 2 Required Filter Area = 4,909 sf
Provided Filter Area = 6,159 sf

RECEIVED TCEQ SAN ANTONIO REGION
2012 JUN 29 PM 4:07

REVISIONS		
DATE	DESCRIPTION	
08/09/11	REPLACED SHEET	1
10/19/11	REPLACED SHEET	2
03/02/12	ROUGH GRADING SET	3
04/10/12	REPLACED SHEET	4
06/28/12	REPLACED SHEET	5

PERMANENT WATER POLLUTION ABATEMENT PLAN & DETAILS (PHASE 1)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410

C17

Friday, June 29, 2012, 11:1 AM
File Name: P:\100410\Sheets\plan02.dwg

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Oakwood Baptist Phase 2 (Onsite Detention Pond)
Date Prepared: 7/28/2012

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

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

County =	Comal	
Total project area included in plan * =	24.20	acres
Predevelopment impervious area within the limits of the plan * =	1.44	acres
Total post-development impervious area within the limits of the plan* =	16.74	acres
Total post-development impervious cover fraction * =	0.69	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	13733	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	1	

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

Drainage Basin/Outfall Area No. =	1		
Total drainage basin/outfall area =	24.08	acres	*Total Area (24.2) - Onsite Uncaptured (.12)*
Predevelopment impervious area within drainage basin/outfall area =	1.44	acres	
Post-development impervious area within drainage basin/outfall area =	16.32	acres	*Total Impv (16.74) - Uncaptured Imp (.30 + .12)*
Post-development impervious fraction within drainage basin/outfall area =	0.68		
$L_{M\ THIS\ BASIN}$ =	13356	lbs.	

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Sand Filter	
Removal efficiency =	89	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	24.08	acres	*Total Area (24.2) - Onsite Uncaptured (.12)*
A_I =	16.32	acres	*Total Impv (16.74) - Uncaptured Imp (.30 + .12)*
A_P =	7.76	acres	
L_R =	16707	lbs	

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

Desired $L_{M\ THIS\ BASIN}$ =	13733	lbs.
F =	0.82	

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

Rainfall Depth =	1.16	inches
Post Development Runoff Coefficient =	0.48	
On-site Water Quality Volume =	49095	cubic feet

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

Off-site area draining to BMP =		acres
Off-site Impervious cover draining to BMP =		acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	9819	
Total Capture Volume (required water quality volume(s) x 1.20) =	58914	cubic feet

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

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	58914	cubic feet	
Minimum filter basin area =	4909	square feet	
Maximum sedimentation basin area =	19638	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	1227	square feet	For maximum water depth of 8 feet

NOTE:
WATER QUALITY POND WILL GO UNCHANGED FROM PHASE 1 TO PHASE 2.
SEE SHEET TCEQ-4 FOR POND DETAILS AND HYDRAULIC CALCULATIONS.

REVISIONS

DATE	DESCRIPTION

STATE OF TEXAS · MICHAEL G. SHORT · 89015 · LICENSED PROFESSIONAL ENGINEER

PERMANENT WATER POLLUTION ABATEMENT PLAN & DETAILS (PHASE 2)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410

TCEQ-8

Friday, June 29, 2012, 11:34 AM
File Name: P:\100410\Sheets\pp002.dwg

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 26, 2012

RECEIVED
APR 30 2012
COUNTY ENGINEER

Mr. Thomas H. Hornseth, P.E.
Comal County Engineer
195 David Jonas Drive
New Braunfels TX 78132-3710

Re: Edwards Aquifer, Comal County
PROJECT NAME: Oakwood Baptist Church, located at 2154 Loop 337, New Braunfels, Texas
PLAN TYPE: Application for Approval of a Water Pollution Abatement Plan (WPAP) 30 Texas Administration Code (TAC) Chapter 213; Edwards Aquifer Protection Program
EAPP File No.: 1085.04

Dear Mr. Hornseth:

The referenced application is being forwarded to you pursuant to the Edwards Aquifer Rules. The Texas Commission on Environmental Quality (TCEQ) is required by 30 TAC Chapter 213 to provide copies of all applications to affected incorporated cities and underground water conservation districts for their comments prior to TCEQ approval.

Please forward your comments to this office by May 25, 2012.

The Texas Commission on Environmental Quality appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact the San Antonio Region Office at (210) 490-3096.

Sincerely

Todd Jones
Water Section Work Leader
San Antonio Regional Office

TJ/eg

OAKWOOD BAPTIST CHURCH YOUTH CENTER MODIFICATION (ONSITE POND)

April 2012

Prepared for:

Oakwood Baptist Church.
2154 Loop 337
New Braunfels, TX 78130
(830) 625-3913

Project No. 100410

Prepared By:

The Schultz Group Inc.
2461 Loop 337
New Braunfels, TX 78130
(830) 606-3913
F-532

Modification of a Previously Approved Plan Checklist

X General Information Form (*TCEQ-0587)*
- ATTACHMENT A - Road Map
- ATTACHMENT B - USGS / Edwards Recharge Zone Map
- ATTACHMENT C - Project Description

X Geologic Assessment Form (*TCEQ-0585)*
- ATTACHMENT A - Geologic Assessment Table, *TCEQ-0585-Table*
- Comments to the Geologic Assessment Table
- ATTACHMENT B - Soil Profile and Narrative of Soil Units
- ATTACHMENT C - Stratigraphic Column
- ATTACHMENT D - Narrative of Site Specific Geology
- Site Geologic Map(s)
- Table or list for the position of features' latitude/longitude (if mapped using GPS)

X Modification of a Previously Approved Plan (*TCEQ-0590)*
- ATTACHMENT A - Original Approval Letter and Approved Modification Letters
- ATTACHMENT B - Narrative of Proposed Modification
- ATTACHMENT C - Current Site Plan of the Approved Project

X Application Form (appropriate for the modification)
- Aboveground Storage Tank Facility Plan (*TCEQ-0575)*
- Organized Sewage Collection System Plan (*TCEQ-0582)*
- Underground Storage Tank Facility Plan (*TCEQ-0583)*
- Water Pollution Abatement Plan Application Form (*TCEQ-0584)*
- Lift Station / Force Main System Application (*TCEQ-0624)*

X Temporary Stormwater Section (*TCEQ-0602)*, if necessary
- ATTACHMENT A - Spill Response Actions
- ATTACHMENT B - Potential Sources of Contamination
- ATTACHMENT C - Sequence of Major Activities
- ATTACHMENT D - Temporary Best Management Practices and Measures
- ATTACHMENT E - Request to Temporarily Seal a Feature, if sealing a feature
- ATTACHMENT F - Structural Practices
- ATTACHMENT G - Drainage Area Map
- ATTACHMENT H - Temporary Sediment Pond(s) Plans and Calculations
- ATTACHMENT I - Inspection and Maintenance for BMPs
- ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization Practices

X Permanent Stormwater Section (*TCEQ-0600)*, if necessary
- ATTACHMENT A - 20% or Less Impervious Cover Waiver, if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site
- ATTACHMENT B - BMPs for Upgradient Stormwater
- ATTACHMENT C - BMPs for On-site Stormwater
- ATTACHMENT D - BMPs for Surface Streams
- ATTACHMENT E - Request to Seal Features, if sealing a feature
- ATTACHMENT F - Construction Plans
- ATTACHMENT G - Inspection, Maintenance, Repair and Retrofit Plan
- ATTACHMENT H - Pilot-Scale Field Testing Plan, if BMPs not based on *Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs*
- ATTACHMENT I -Measures for Minimizing Surface Stream Contamination

Modification of a Previously Approved Plan Checklist (continued)

- [x] Agent Authorization Form (*TCEQ-0599)*, if application submitted by agent
- [x] Application Fee Form (*TCEQ-0574*)
- [x] Check Payable to the "Texas Commission on Environmental Quality"
- [x] Core Data Form (*TCEQ-10400)*

General Information Form
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

REGULATED ENTITY NAME: Oakwood Baptist Church Youth Center Modification (Onsite Pond)
COUNTY: Comal STREAM BASIN: Bleiders Creek

EDWARDS AQUIFER: X RECHARGE ZONE
__ TRANSITION ZONE

PLAN TYPE: __ WPAP __ AST __ EXCEPTION
__ SCS __ UST X MODIFICATION

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Roxi Vanstory
Entity: Oakwood Baptist Church
Mailing Address: 2154 Loop 337
City, State: New Braunfels, Texas Zip: 78130
Telephone: (830) 625-0267 FAX: (830)625-1151

Agent/Representative (If any):

Contact Person: Michael G. Short, P.E.
Entity: The Schultz Group, Inc.
Mailing Address: 2461 Loop 337
City, State: New Braunfels, Texas Zip: 78130
Telephone: (830) 606-3913 FAX: (830) 625-2204

2. X This project is inside the city limits of New Braunfels, Texas.
__ This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
__ This project is not located within any city's limits or ETJ.

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

The project site is within the City of New Braunfels, Texas and is located approximately 650 LF north east of the Intersection of Loop 337 and Oakwood Blvd. The address of the project site is: 2154 Loop 337, New Braunfels, Texas 78130

4. X **ATTACHMENT A - ROAD MAP**. A road map showing directions to and the location of the project site is attached at the end of this form.

5. X **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 behind this sheet. The map(s) should clearly show:

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

6. X 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. **The TCEQ must be able to inspect the project site or the application will be returned.**

7. X **ATTACHMENT C - PROJECT DESCRIPTION.** Attached at the end of this form is a detailed narrative description of the proposed project.

8. Existing project site conditions are noted below:
X Existing commercial site
__ Existing industrial site
__ Existing residential site
__ Existing paved and/or unpaved roads
X Undeveloped (Cleared)
__ Undeveloped (Undisturbed/Uncleared)
__ Other: _____

PROHIBITED ACTIVITIES

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

(1) waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
(2) new feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
(3) land disposal of Class I wastes, as defined in 30 TAC §335.1;
(4) the use of sewage holding tanks as parts of organized collection systems; and
(5) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

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

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

ADMINISTRATIVE INFORMATION

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

X For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.

__ For an Organized Sewage Collection System Plans and Modifications, the total linear footage of all collection system lines.
__ For a UST Facility Plan or an AST Facility Plan, 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.

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

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

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

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

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:

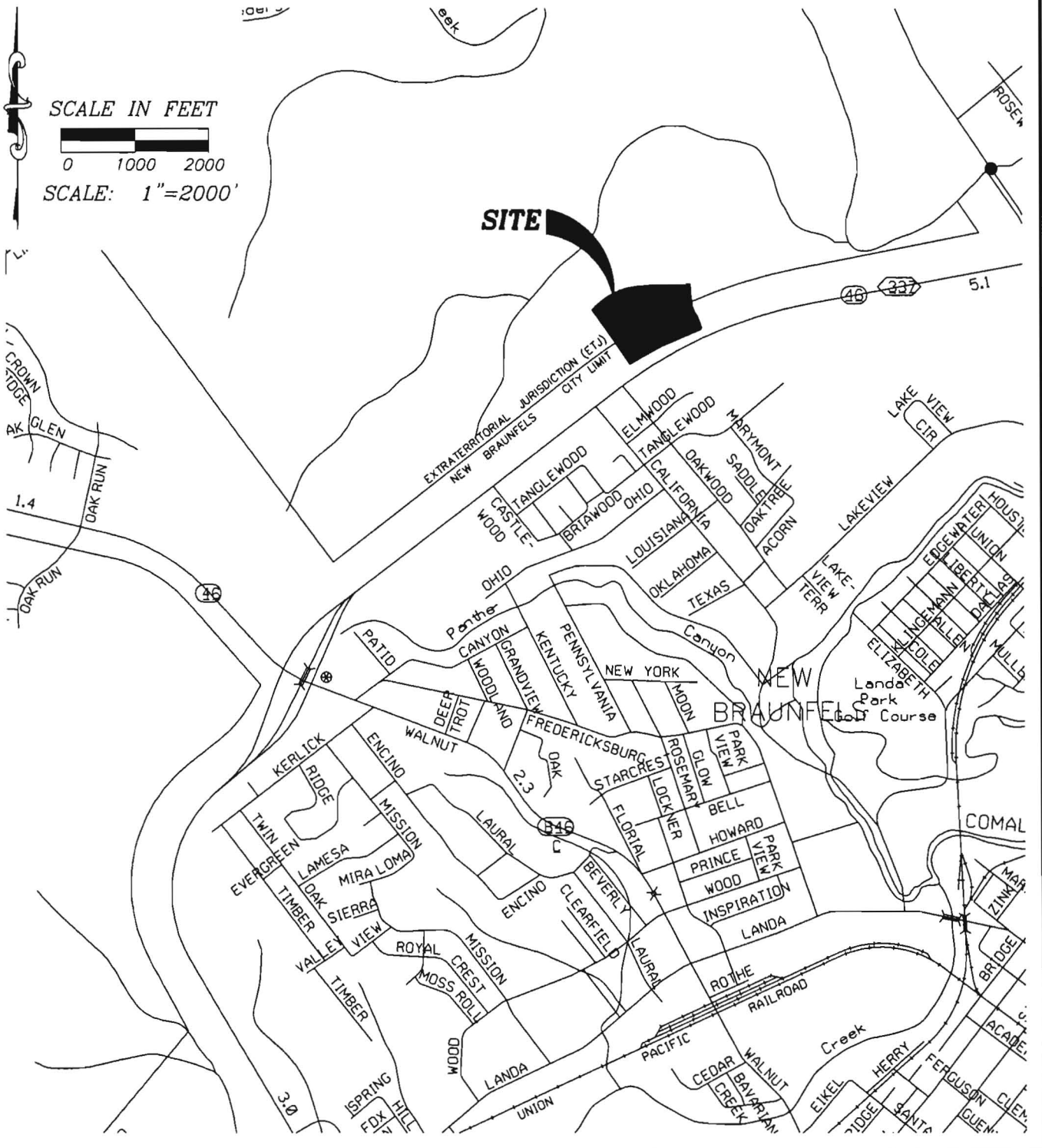
Michael G. Short, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

4/19/12
Date

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.



ATTACHMENT A
ROAD MAP

THE **Schultz Group,** INC.

CONSULTING ENGINEERS LAND SURVEYORS

P.O. BOX 310483 NEW BRAUNFELS, TEXAS 78131 (830) 606-3913

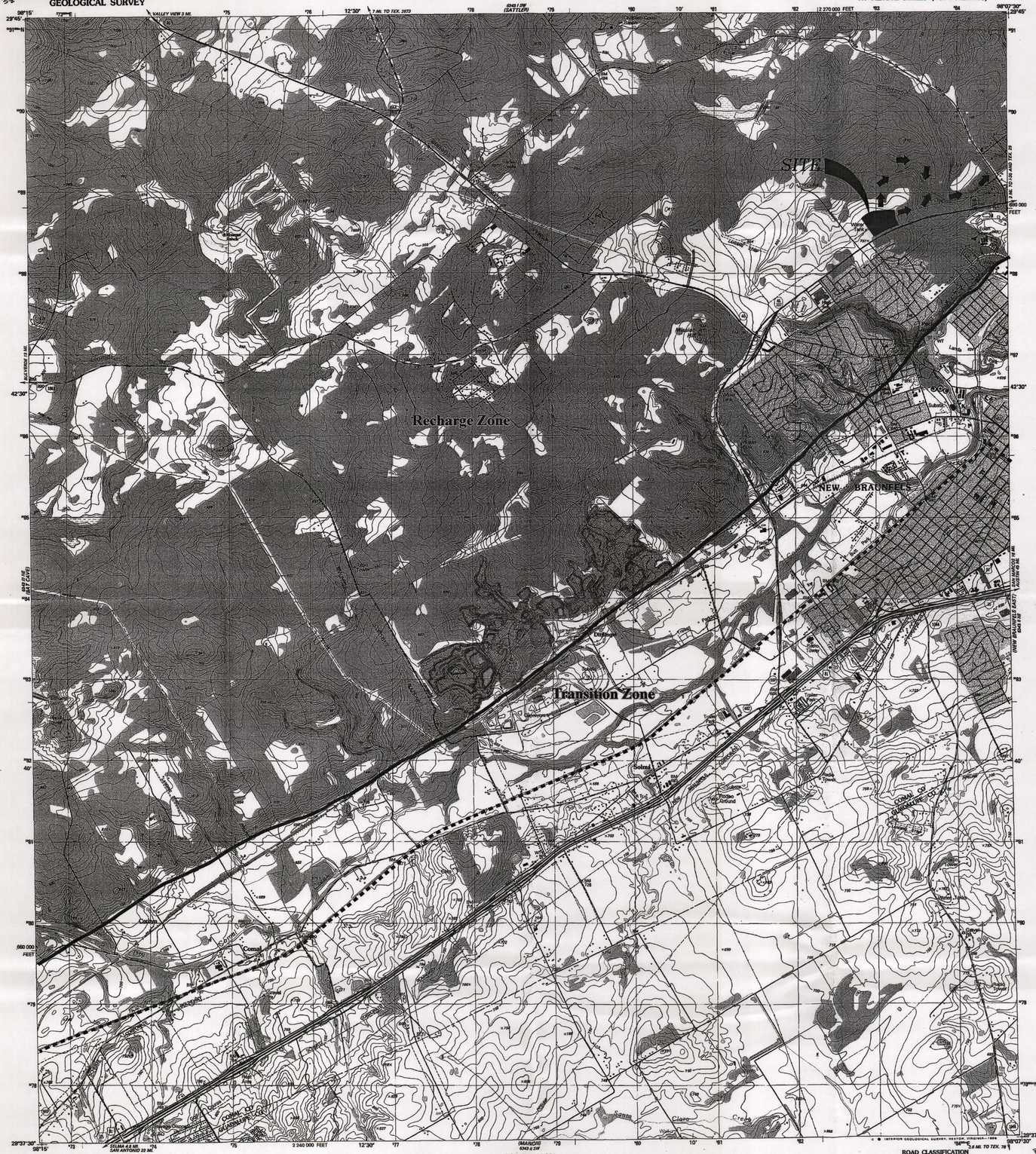
FAX (830) 625-2204

DRAWN BY: S.T.S.	DATE: APRIL 2012
CHECKED BY: M.G.S.	JOB NO.: 100410

Edwards Aquifer Recharge Zone Map
30 Texas Administrative Code Chapter 213
Edwards Aquifer Authority Rule Chapter 713

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NEW BRAUNFELS WEST QUADRANGLE
TEXAS
7.5 MINUTE SERIES (TOPOGRAPHIC)



Produced by the United States Geological Survey
Revised in cooperation with the Texas Water Development Board
Control by USGS, NOS/NOAA, and USCE

Compiled by the Army Map Service by photogrammetric methods from aerial photographs taken 1956. Field checked 1958
Revised from aerial photographs taken 1986. Field checked 1987
Map edited 1988

Projection and 10,000-foot grid ticks: Texas coordinate system, south central zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid, zone 14
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 20 meters south and 28 meters east as shown by dashed corner ticks

Fine red dashed lines indicate selected fence and field lines generally visible on aerial photographs. This information is unchecked

UTM GRID AND 1988 MAGNETIC NORTH DECLINATION AT CENTER OF MAP
DIAGRAM IS APPROXIMATE

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

2998-413

ROAD CLASSIFICATION

Primary highway, hard surface ——— Light-duty road, hard or improved surface - - -
Secondary highway, hard surface —— Unimproved road - - -
Interstate Route U. S. Route State Route

NEW BRAUNFELS WEST, TEX.
29098-F2-TF-024
1988
DMA 6343 II NW-SERIES V832

Last revision date of the Recharge Zone Boundary for this Quadrangle Map: March 1974

ATTACHMENT B USGS RECHARGE ZONE MAP
1 OF 2

Edwards Aquifer Recharge Zone Map
30 Texas Administrative Code Chapter 213
Edwards Aquifer Authority Rule Chapter 713

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NEW BRAUNFELS EAST QUADRANGLE
TEXAS
7.5 MINUTE SERIES (TOPOGRAPHIC)

Produced by the United States Geological Survey in cooperation with the Defense Mapping Agency

Control by USGS and NOS/NOAA and USCE

Compiled from aerial photographs taken 1956. Revisions in purple and woodland compiled from aerial photographs taken 1986 and other sources and has been field checked. Map edited 1994 Conflicts may exist between some updated features and previously mapped contours

North American Datum of 1927 (NAD 27). Projection and 10 000-foot ticks : Texas Coordinate System, south central zone (Lambert Conformal Conic)
Blue 1000-meter Universal Transverse Mercator ticks, zone 14

North American Datum of 1983 (NAD 83) is shown by dashed corner ticks. The values of the shift between NAD 27 and NAD 83 for 7.5-minute intersections are obtainable from National Geodetic Survey NADCON software

UTM GRID AND 1994 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
SUPPLEMENTARY CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

2998-414

ROAD CLASSIFICATION

NEW BRAUNFELS EAST, TEX.
29098-F1-TF-024

1958
REVISED 1994
DMA 6343 II NE-SERIES V882

Last revision date of the Recharge Zone Boundary for this Quadrangle Map: March 1974

ATTACHMENT B USGS RECHARGE ZONE MAP

2 OF 2

ATTACHMENT C – PROJECT DESCRIPTION (TCEQ-0587)

Oakwood Baptist Church was unable to obtain an agreement with the downstream property owners for a drainage easement for the offsite detention pond previously shown. As a result this WPAP Modification is required to move the previously shown offsite detention pond onsite. The overall Phase 1 and Phase 2 plans are for the most part the same. The differences are outline below:

1. The detention pond is now shown onsite.
2. The sedimentation and filtration system (Water quality pond) configuration has changed slightly to allow the detention pond to be adjacent to it. This changed is shown in the revised calculations and construction plans. The water quality pond will be in accordance with the TCEQ's Technical Guidance Manual.
3. There is a minor decrease of impervious cover in Phase 2 as a result of the detention pond being onsite. This is due to a loss of area for paved parking. This is also shown in the revised calculations and construction plans.

Please note that Construction of the children's center, expanded parking facilities and water quality pond (Phase 1) from the Approved Modification Dated October 28, 2011 has begun.

Phase 1 from the Approved Modification Dated August 25, 2008 has been completed. This included a Parking Lot Expansion immediately adjacent to the existing facility along the overall projects western most boundary.

For this WPAP Modification the Oakwood Baptist Church intends to expand its current facility. This expansion will be constructed in two phases.

Phase 1

Phase 1 will consist of a children's center located adjacent to the main worship center, expanded parking facilities, sidewalks, and partial sedimentation and filtration system (Water quality pond). The proposed Phase 1 improvements will have approximately 127,111 square feet of impervious cover. The proposed water quality pond will replace the existing 9,275-cf water quality pond originally intended to serve a portion of the 7.06-acre site (see referenced information for additional detail). The majority of run-off generated onsite given all existing improvements as well as all proposed improvement will be collected through a series of onsite swales and storm drain systems and conveyed to the proposed water quality pond and a permanent onsite detention pond (previously shown offsite). The water quality pond proposed for Phase 1 has been designed to mitigate all flows from the Phase 1 and Phase 2 proposed improvements. The Church in the short term intends to leave the remaining portion of the overall site undeveloped.

There is approximately 2.92 acres of impervious cover proposed for Phase 1 (All onsite) making the total Phase 1 impervious cover 10.57 acres. Of which approximately 10.29 acres will drain to the proposed water quality pond. Approximately 0.28 acres of impervious cover common to the access drives will drain to Loop 337 uncaptured by the water quality pond. 1.44-acres of the initial phase, part of the "Water Pollution Abatement Plan for Oakwood Baptist Church" (Cunningham Allen Inc 1998) was approved without the requirement of water pollution abatement. This 1.44 acres is shown as existing impervious cover in the water quality pond calculations. The water quality pond has been designed to mitigate the entire 2.92 acre increase in impervious cover per the TCEQ's Technical Guidance Manual.

The water quality pond has been sized to capture the first 0.97 inches of stormwater run-off from 10.57 acres of impervious cover of which 10.29 acres will drain to the proposed water quality pond within a 21.40 acre catchment area, providing a total capture volume of 63,048 cubic feet where only 31,457 cubic feet is needed to treat 8,195 pounds of total suspended solids. A sand filtration system will consist of 6,159 square feet of sand where only 2,621 square feet is needed. The sand will be 18 inches thick, with under drain piping surrounded by gravel. Sand and gravel layers will be separated with filter fabric and contained above an impermeable clay liner per TCEQ Specifications Table 3-6.

Phase 2

The Proposed Phase 2 Improvements will include the construction of a new worship center, chapel, significant parking areas, and modifications to the existing parking areas. The proposed Phase 2 improvements will add approximately 268,704 square feet of impervious cover. Upon the Phase 2 expansion project completion the majority of run-off generated onsite given all existing improvements as well as all proposed improvement will be collected through a series of onsite swales and storm drain systems and conveyed to the water quality pond and a permanent detention pond constructed in Phase 1.

There is approximately 6.16 acres of additional impervious cover proposed for Phase 2. Of which approximately 6.06 acres will drain to the proposed water quality pond. Four new access drives have been proposed for Phase 2 totaling approximately 0.10 acres that will drain offsite and will not be captured by the water quality pond. A new driveway off of Loop 337 has also been proposed for Phase 2. The northern most drive will be removed and the proposed drive will be constructed. The proposed new drive will increase the total impervious cover draining to Loop 337 from approximately 0.28 acres to approximately 0.30 acres. The water quality pond has been designed to mitigate the entire 6.16 acre increase in impervious cover per the TCEQ's Technical Guidance Manual.

The water quality pond has been sized to capture the first 1.16 inches of stormwater run-off from 16.74 acres of impervious cover of which 16.34 acres will drain to the proposed water quality pond within a 24.2 acre catchment area, providing a total capture volume of 67,762 cubic feet where only 58,920 cubic feet is needed to treat 13,733 pounds of total suspended solids. A sand filtration system will consist of 6,159 square feet of sand where only 4,910 square feet is needed. The sand will be 18 inches thick, with under drain piping surrounded by gravel. Sand and gravel layers will be separated with filter fabric and contained above an impermeable clay liner per TCEQ Specifications Table 3-6.

During the Phase 2 construction; the fill material required for the northern parking area will be placed first, in effect, keeping the stormwater runoff from leaving the site prior to treatment from the water quality pond. In addition, prior to Phase 2 construction, all required temporary erosion control measures will be in place.

Geologic Site Assessment (WPAP)

for Regulated Activities / Development
on the Edwards Aquifer Recharge / Transition Zone

Oakwood Baptist Church
Onsite Modifications &
Offsite Drainage
New Braunfels, Texas

FROST GEOSCIENCES CONTROL # FGS-E12155

April 20, 2012

Prepared exclusively for

Oakwood Baptist Church
2154 Loop 337 North
New Braunfels, Texas 78130

Frost GeoSciences

Geotechnical ▪ Construction Materials
Forensics ▪ Environmental

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SDVOSB VBE DIBE SBE
TBPE Firm Registration # F-9227
TBPG Firm Registration # 50040

April 20, 2012

Oakwood Baptist Church
2154 Loop 337 North
New Braunfels, Texas 78130

Attn: Mr. Drake Thompson, P.E.

Re: Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
Onsite Modifications & Offsite Drainage
New Braunfels, Texas

Frost GeoSciences, Inc. Control # FGS-E12155

Dear Sir:

Attached is a copy of the Geologic Assessment Report 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). The results of our investigation, along with any recommendations for Best Management Practices (BMP's), are provided in the following report.

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.

Sincerely,
Frost GeoSciences, Inc.

Steve Frost, C.P.G., P.G.
President, Senior Geologist

Distribution: (1) Oakwood Baptist Church
(5) The Schultz Group, Inc.

Table of Contents

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

REGULATED ENTITY NAME: Oakwood Baptist Church

TYPE OF PROJECT: ✓ WPAP __ AST __ SCS __ UST

LOCATION OF PROJECT: ✓ Recharge Zone __ Transition Zone __ Contributing Zone within the Transition Zone

PROJECT INFORMATION

1. ✓ Geologic or manmade features are described and evaluated using the attached **GEOLOGIC ASSESSMENT TABLE.**

2. 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 Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thickness (feet)
Rumple-Comfort Association	C/D	1 to 2
Comfort Rock Outcrop Complex	C/D	0 to 2

* Soil Group Definitions (Abbreviated)

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

3. ✓ A **STRATIGRAPHIC COLUMN** is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.

4. ✓ A **NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY** is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst characteristics of the site.

5. ✓ Appropriate **SITE GEOLOGIC MAP(S)** are attached:

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" = 60 '
Site Geologic Map Scale	1" = 60 '
Site Soils Map Scale (if more than 1 soil type)	1" = 500 '

6. Method of collecting positional data:

✓ Global Positioning System (GPS) technology.
✓ Other method(s). 2009 Aerial Photograph

7. ✓ The project site is shown and labeled on the Site Geologic Map.

8. ✓ Surface geologic units are shown and labeled on the Site Geologic Map.

9. ✓ 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.

10. ✓ The Recharge Zone boundary is shown and labeled, if appropriate.

11. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, 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 Chapter 76.
✓ There are no wells or test holes of any kind known to exist on the project site.

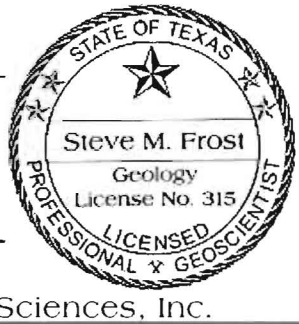
ADMINISTRATIVE INFORMATION

12. ✓ 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.

Date(s) Geologic Assessment was performed: May 27 & June 13, 2011
Date(s)

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.

Steve Frost, C.P.G., P.G.
Print Name of Geologist



(210) 372-1315
Telephone

(210) 372-1318
Fax

Signature of Geologist

April 20, 2012
Date

Representing: Frost GeoSciences, Inc.
(Name of Company)

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

TCEQ-0585 (Rev. 10-01-10) Page 2 of 2

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]

Hydrogeologic subdivision			Group, formation, or member			Hydro-logic function	Thickness (feet)	Lithology	Field identification	Cavern development	Porosity/ permeability type
Upper Cretaceous	Upper confining units		Eagle Ford Group			CU	30 – 50	Brown, flaggy shale and argillaceous limestone	Thin flagstones; petroliferous	None	Primary porosity lost/ low permeability
			Buda Limestone			CU	40 – 50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability
			Del Rio Clay			CU	40 – 50	Blue-green to yellow-brown clay	Fossiliferous; *Ilymatogyra arietina*	None	None/primary upper confining unit
Lower Cretaceous	I	Edwards aquifer	Georgetown Formation			Karst AQ; not karst CU	2 – 20	Reddish-brown, gray to light tan marly limestone	Marker fossil; *Waconella wacoensis*	None	Low porosity/low permeability
	II		Edwards Group	Person Formation	Cyclic and marine members, undivided	AQ	80 – 90	Mudstone to packstone; *miliolid* grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
	III				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	Majority not fabric/one of the most permeable
	IV				Regional dense member	CU	20 – 24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
	V			Kainer Formation	Grainstone member	AQ	50 – 60	*Miliolid* grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability
	VI				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				Dolomitic member	AQ	110 – 130	Mudstone to grainstone; crystalline limestone; chert	Massively bedded light gray, *Toucasia* abundant	Caves related to structure or bedding planes	Mostly not fabric; some bedding plane-fabric/water-yielding
	VIII				Basal nodular member	Karst AQ; not karst CU	50 – 60	Shaly, nodular limestone; mudstone and *miliolid* grainstone	Massive, nodular and mottled, *Exogyra texana*	Large lateral caves at surface; a few caves near Cibolo Creek	Fabric; stratigraphically controlled/large conduit flow at surface; no permeability in subsurface
	Lower confining unit		Upper member of the Glen Rose Limestone			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 NAME: Oakwood Baptist Church — FGS-E12155

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1	2*	3*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11	12
FEATURE	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT²)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						< 40	> 40	<1.6	>1.6	
S-2	29° 43' 29.2"	98° 08' 28.2"	CD	5	Kep	1	1	1.5	-	-	-	-	OFC	7	12	12		X		Hillside
S-3	29° 43' 38.6"	98° 08' 26.9"	SC	20	Kep	2	1	1.5	-	-	-	-	OFC	9	29	29		X		Hillside

* DATUM 1984 North American Datum (NAD83)

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

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

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

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

Signature _____ Date April 20, 2012 Sheet 1 of 1

STATE OF TEXAS — Steve M. Frost — Geology — License No. 315 — LICENSED PROFESSIONAL GEOLOGIST

LOCATION

The project site consists of modifications to the existing Oakwood Baptist Church and an additional proposed offsite drainage easement. The project area is located along and north of Loop 337 near the intersection of Oakwood Blvd. in New Braunfels, Texas. An overall view of the area is shown on copies of the site plan, a street map, the USGS Topographic Map, the Official Edwards Aquifer Recharge Zone Map, the Flood Insurance Rate Map (FIRM), a 1973 aerial photograph at a scale of 1"=500', a geologic map, a 2009 aerial photograph at a scale of 1"=500', and a 2009 aerial photograph at a scale of 1"=100M, Plates 1 through 9 in Appendix A.

METHODOLOGY

The Geologic Assessment was performed by Mr. Steve Frost, C.P.G., President and Senior Geologist with Frost GeoSciences, Inc. Mr. Frost is a Licensed Professional Geoscientist in the State of Texas (License # 315) and is a Certified Professional Geologist with the American Institute of Professional Geologist (Certification # 10176).

Frost GeoSciences, Inc. researched the geology of the area in the immediate vicinity of the project site. The research included, but was not limited to, the Geologic Atlas of Texas, San Antonio Sheet, FIRM maps, Edwards Aquifer Recharge Zone Maps, USGS 7.5 Minute Quadrangle Maps, the Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle, the USGS Water-Resources Investigations Report 94-4117, and the USDA Soil Survey of Comal & Hays County, Texas.

After reviewing the available information, a field investigation was performed to identify any geologic or man-made potential recharge features. A transect spacing of approximately 50 feet or less, depending on vegetation thickness, was used to inspect the project site. A 2009 aerial photograph, in conjunction with a hand held Garmin eTrex Summit Global Positioning System with an Estimated Potential Error ranging from 7 to 10 feet, was used to navigate around

the property and identify the locations of potential recharge features, as recommended in the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04). The locations of any potential recharge features noted in the field were identified 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 in Appendix C of this report. The Site Geologic Map indicating the limits of the project site is included in Appendix C. A copy of a 2009 aerial photograph at an approximate scale of 1"=100M, indicating the locations of the potential recharge features, is included on Plate 8 in Appendix A. The Geologic Assessment Form (Rev. 10-01-10), Stratigraphic Column and the Geologic Assessment Table have been filled with the appropriate information for this project site and are included on pages 1-4 of this report.

RESEARCH & OBSERVATIONS

7.5 Minute Quadrangle Map Review

According to the USGS 7.5 Minute Quadrangle Map, New Braunfels West, Texas Sheet (1988), the elevation of the project site ranges from 755 feet at the northern limits of the offsite portion to 795 feet in the southwestern corner of the site. These elevations are calculated above mean sea level (AMSL). Overall, the surface runoff from the project site flows to the north and northeast into unnamed tributaries of Blieders Creek. Loop 337 is located immediately south of the project site. A water storage tank is located immediately west of the site. A copy of the above referenced USGS 7.5 Minute Quadrangle Map indicating the location of the project site, is included in this report on Plate 3 in Appendix A.

Recharge / Transition Zone

According to Official Edwards Aquifer Recharge Zone Map, New Braunfels West, Texas Sheet (1996), the project site is located within the Recharge Zone of the Edwards Aquifer. A copy of Official Edwards Aquifer Recharge Zone Map, New Braunfels West, Texas Sheet (1996), indicating the location of the project site, is included on Plate 4 in Appendix A.

100-Year Floodplain

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for Comal County, Texas, Community Panel Number 48091C0435F (Revised 9/02/09) was reviewed to determine if the project site is located in areas prone to flooding. A review of the above-mentioned panel indicates that no portion of the project site is located within the 100 year floodplain. 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 Comal County, Texas, FIRM map, indicating the location of the project site, is included in this report on Plate 5 in Appendix A.

Soils

According to the United States Department of Agriculture, Soil Conservation Service, Soil Survey of Comal & Hays County, Texas (1982), the project site is located on the Rumple-Comfort Association (RUD) and the Comfort-Rock Outcrop Complex (CrD). A copy of the 1973 aerial photograph (approximate scale: 1"=500') from the USDA Soil Survey of Comal & Hays County, Texas indicating the location of the project site and the soil types is included on Plate 6 in Appendix A.

The Rumple-Comfort Association (RuD) consists of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. The surface layer of the Rumple Soil is dark reddish brown very cherty clay loam about 10 inches thick. Rounded chert and limestone cobbles and gravel cover about 20 percent of the surface. The subsoil to a depth of 14 inches is dark reddish-brown very cherty clay, and to a depth of 28 inches it is dark reddish-brown extremely stony clay. The underlying material is indurated fractured limestone. The Comfort Soil is dark brown, neutral, extremely stony clay about 7 inches thick. The subsoil to a depth of 12 inches is dark reddish-brown, mildly alkaline, extremely stony clay. The underlying material is indurated fractured limestone. The soil is noncalcareous throughout. The soils in this association are well

drained. Surface runoff is medium, but varies due to the occurrence of caves, fracture zones, and sinks. Permeability is moderately slow. Water erosion is a moderate hazard.

The Comfort-Rock Outcrop Complex consists of shallow, clayey soils and Rock Outcrop on side slopes and on hilltops and ridgetops on uplands in the Edwards Plateau Land Resource Area. The Comfort Extremely Stony Clay makes up 49 to more than 95 percent of the complex, but on the average it makes up 70 percent. Rock Outcrop and areas of soil less than 4 inches deep make up 5 to 36 percent, but the average is 15 percent. Typically, the surface layer of the Comfort soil is dark brown extremely stony clay about 6 inches thick. Cobbles and stones as much as 4 feet across cover about 45 percent of the surface. The subsoil extends to a depth of 13 inches. It is dark reddish brown extremely stony clay. The underlying material is indurated fractured limestone. The soil is mildly alkaline and noncalcareous throughout. The Comfort Soil is well drained. Surface runoff is slow to medium. Permeability is slow, and the available water capacity is very low. Water erosion is a slight hazard. This soil has a USDA Texture Classification of extremely stony clay, stony clay, very stony clay, and weathered bedrock. The Unified Classification is CH, GC, CL, or SC. The AASHO Classification is A-2-7, and A-7-6. This soil has an average permeability from 0.6 to 0.2 inches/hour.

Narrative Description of the Site Geology

The project site consists of an update to the existing Geologic Assessment, FGS-E07421 dated January 9, 2008 and a proposed offsite drainage easement. An asphalt covered parking lot has been developed in the southwestern portion of the property within a portion of the area covered by the original Geologic Assessment. One feature identified within the original Geologic Assessment was located within the parking area and since it is no longer there, it has been removed from this report. The property appears to support a signigicant soil layer as minimal rock outcrops were noted, however, areas of limestone float and some areas of limestone fill material were noted on the site. 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.

Two PRF's were identified during our site inspection. The following is a summary of the features noted during our assessment.

Potential Recharge Feature # S-2 consists of a non-karst closed depression created by the removal of a tree. This is evidenced by roots exposed around the rim of the closed depression. This feature was originally identified as a solution cavity on the 2008 Geologic Assessment, however FGS is of the opinion that there is no evidence of disolution and ample evidence for a tree removal. Frost GeoSciences, Inc., rates the relative infiltration of this feature as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). This feature scores a 12 on the sensitivity scale, column 10 in the Geologic Assessment Table on page 4 of this report. FGS is of the opinion that this is not a sensitive feature.

Potential Recharge Feature #'s S-3 consists of a natural solution cavity that has been occupied by a burrowing animal. A machete was used to probe the depths of the feature and found hard reddish brown clay in the bottom and back of the feature. Based on this, FGS does not believe that rapid infiltration can occur. Frost GeoSciences, Inc., rates the relative infiltration of this feature as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). This feature scores a 29 on the sensitivity scale, column 10 in the Geologic Assessment Table on page 4 of this report. FGS is of the opinion that this is not a sensitive feature.

The project site is covered by a sparse to moderate stand of vegetative cover with isolated areas of dense ash juniper and cactus. The overall vegetative cover on the project site consists of Ashe juniper (*Juniperus ashei*), Live Oak (*Quercus virginiana*) and Texas Persimmon (*Diospyros texana*) with Hackberry (*Celtis sp.*), mesquite, prickly pear cactus, and a sparse to moderate stand of native grasses. The variations in the vegetative cover across the project site are visible in the 2009 aerial photographs on Plates 8 and 9 in Appendix A and in the site visit photographs included in Appendix B.

According to the USGS 7.5 Minute Quadrangle Map, New Braunfels West, Texas Sheet (1988), the elevation of the project site ranges from 755 to 795 feet. These elevations are calculated above mean sea level (AMSL). According to topographic data obtained from

The Schultz Group, the elevations on the project site ranges from 753 feet at the northern end of the offsite portion to 799 feet at the southwestern property corner. A copy of the site plan, indicating the boundary of the project site and the elevations, is included on Plate 1 in Appendix A and on the Site Geologic Map in Appendix C of this report.

According to the Bureau of Economic Geology, Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle (2000), the project site is covered by the Cretaceous Edwards Person Limestone. Based on our site inspection FGS is of the opinion that the western portion of the project site is located on the Cyclic & Marine Member of the Edwards Person Limestone while the eastern and northern portions of the site are located on the Leached and Collapsed Member of the Edwards Person Limestone.

The Cyclic and Marine Member of the Cretaceous Edwards Person Limestone consists of mudstone to packstone and miliolid grainstone with chert. The member is characterized by massive beds of limestone to relatively thin beds of limestone with some crossbedding. The Cyclic and Marine Member forms a few caves some that are laterally extensive. Overall thickness ranges from 80 to 90 feet thick.

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.

A copy of the Bureau of Economic Geology, Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle (2000), indicating the location of the project site, is included on Plate 7 in Appendix A.

BEST MANAGEMENT PRACTICE (BMP)

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 potential always exists to encounter subsurface features that lack a surface expression. Frost GeoSciences, Inc. recommends that construction personnel be informed of the potential to encounter subsurface karst features during excavating activities. Construction personnel should also be informed of the proper protocol to follow in the event that a solution cavity and/or cave is encountered during the excavation and development of the property.

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 and may be relied upon by Oakwood Baptist Church and The Schultz Group. This report is based on available known records, a visual inspection of the project site and the work generally accepted for a Geologic Assessment TAC §213.5(b)(3), effective June 1, 1999.

REFERENCES

1) USGS 7.5 Minute Quadrangle Map, New Braunfels West, Texas Sheet (1988).

2) Official Edwards Aquifer Recharge Zone Map, New Braunfels West, Texas Sheet (1996).

3) Stein, W.G. and Ozuna, G.B., 1995, Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zone, Comal County, Texas. U.S. Geological Survey Water Resources Investigations 94-4117.

4) Collins, Edward, W., 2000, Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle.

5) Federal Emergency Management Agency (FEMA), Bexar County, Texas and Incorporated Areas, Flood Insurance Rate Map (FIRM), Panel 48091C0435F (9/02/09) FEMA, Washington D.C.

7) USDA Soil Conservation Service, Soil Survey of Comal & Hays Counties, Texas (1982).

8) TCEQ-0585-Instructions (Rev. 10-1-04). "Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zone".

Appendix A

Site Location Plates

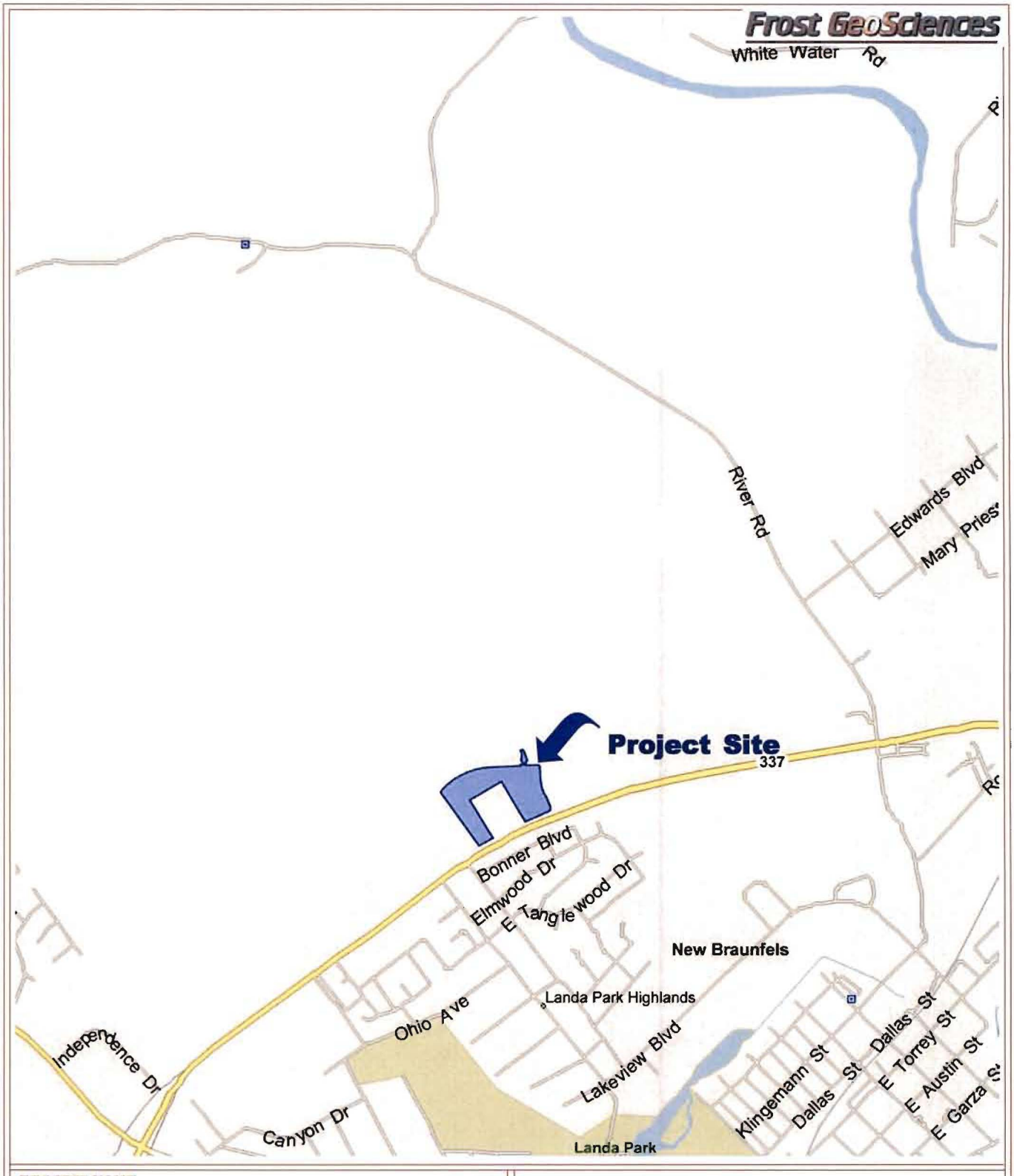
Frost GeoSciences

PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
New Braunfels, Texas

Site Plan

PROJECT NO.: FGS-E12155

DATE: April 20, 2012

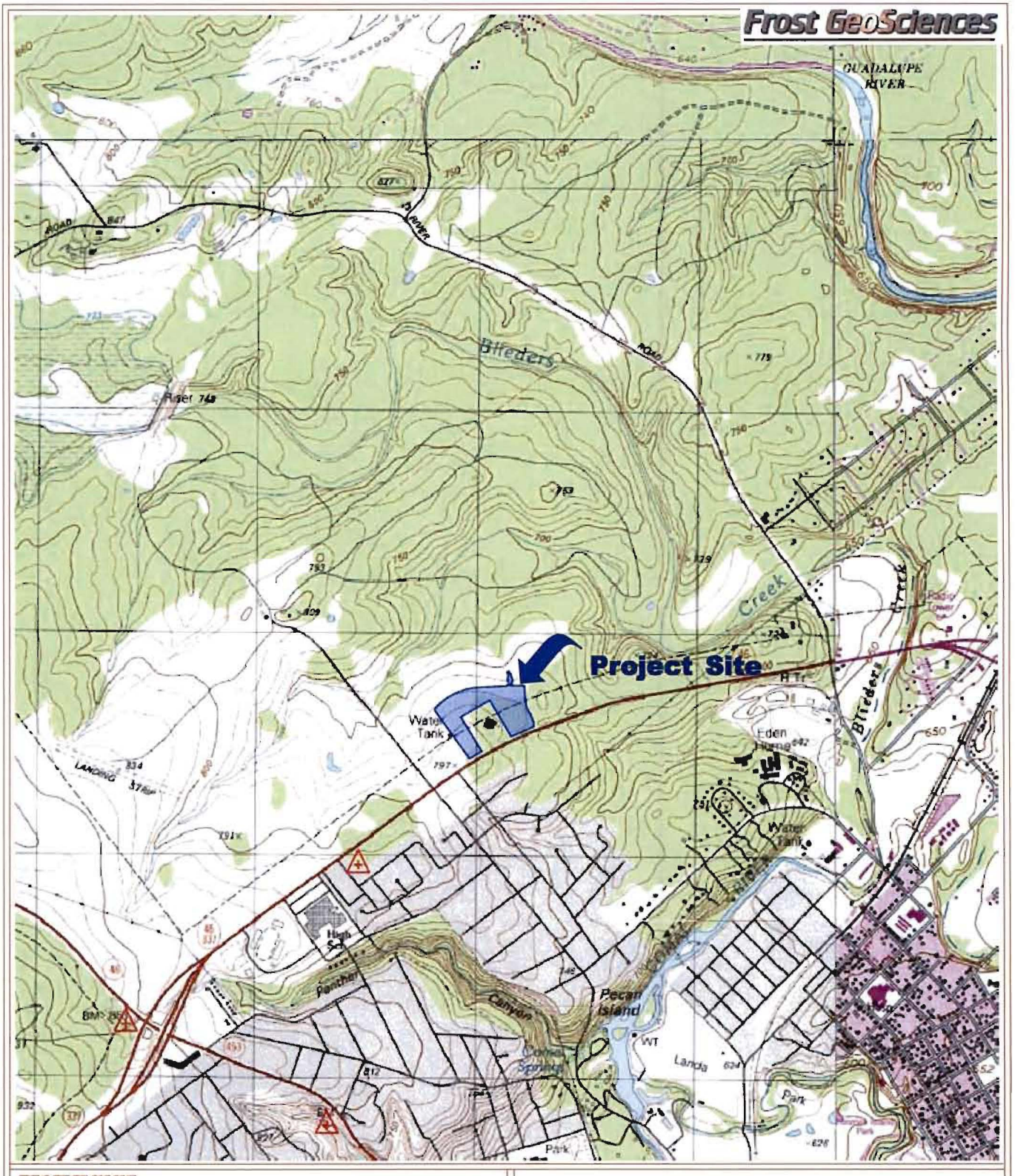


PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
New Braunfels, Texas

Street Map

PROJECT NO.: FGS-E12155

DATE: April 20, 2012

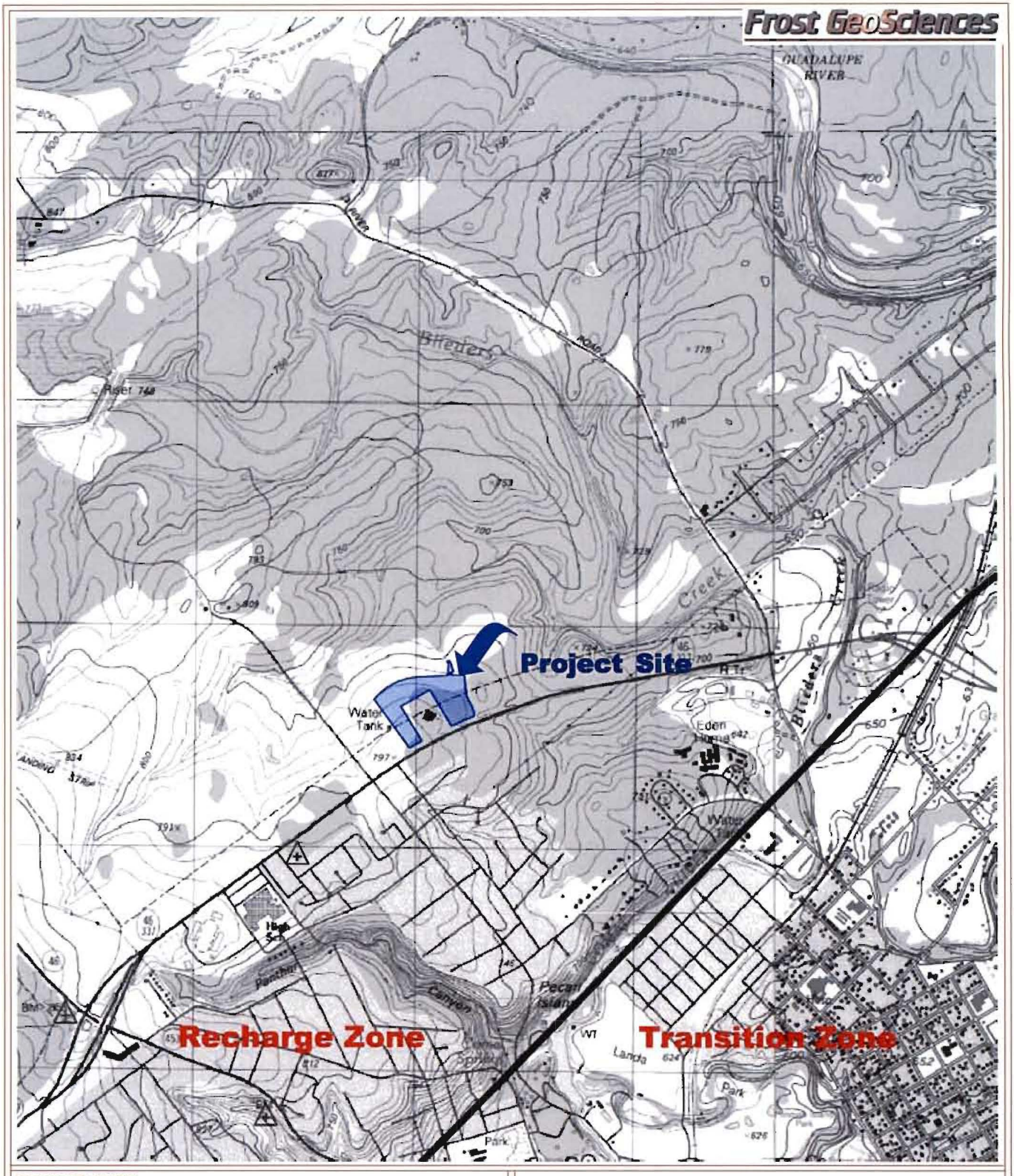


PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
New Braunfels, Texas

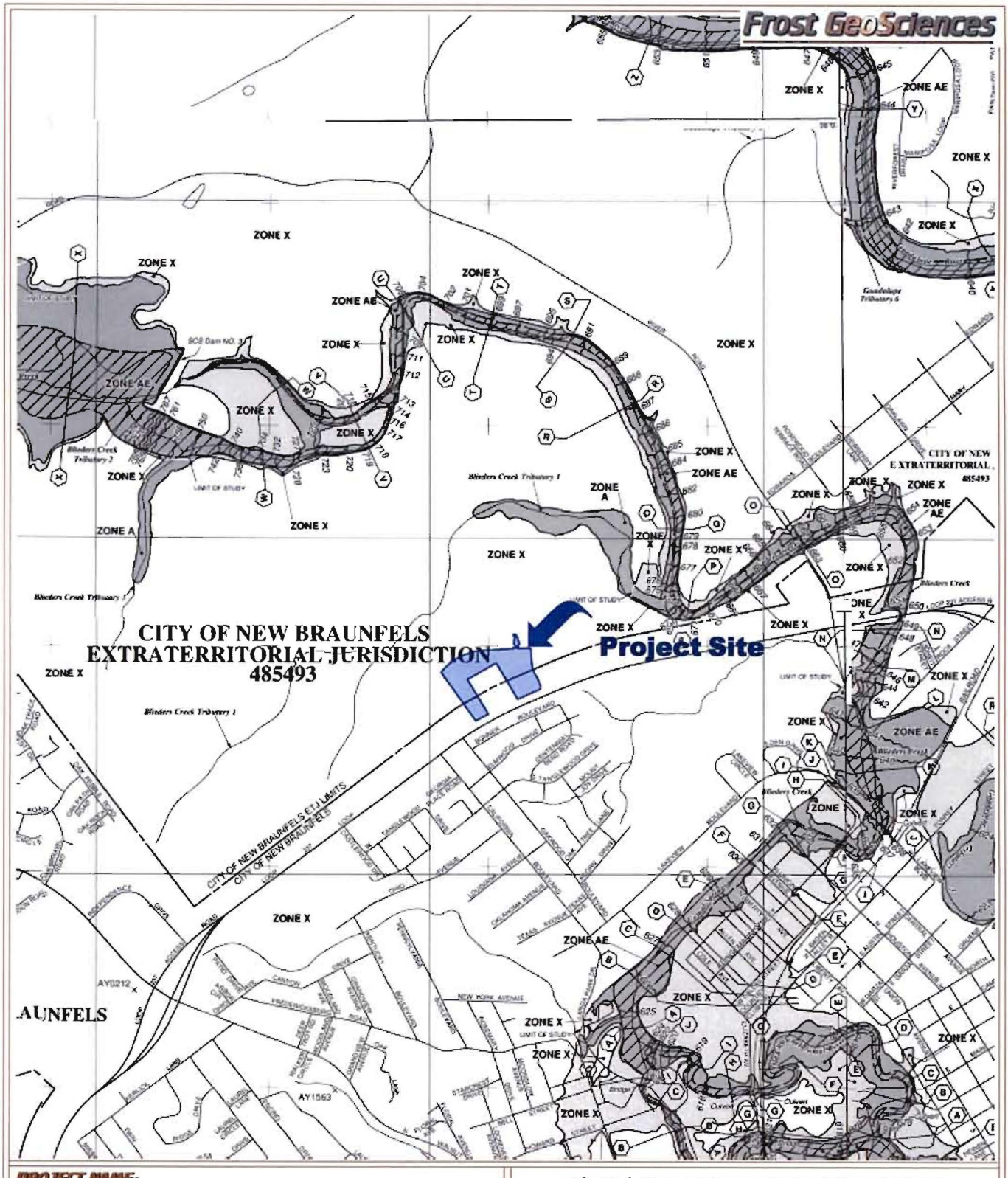
U.S.G.S. 7.5 Minute Quadrangle Map
New Braunfels West, Texas Sheet (1988)

PROJECT NO.: FGS-E12155

DATE: April 20, 2012



PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone Oakwood Baptist Church New Braunfels, Texas	Official Edwards Aquifer Recharge Zone Map New Braunfels West, Texas Sheet (1996)
PROJECT NO.: FGS-E12155	**DATE:** April 20, 2012



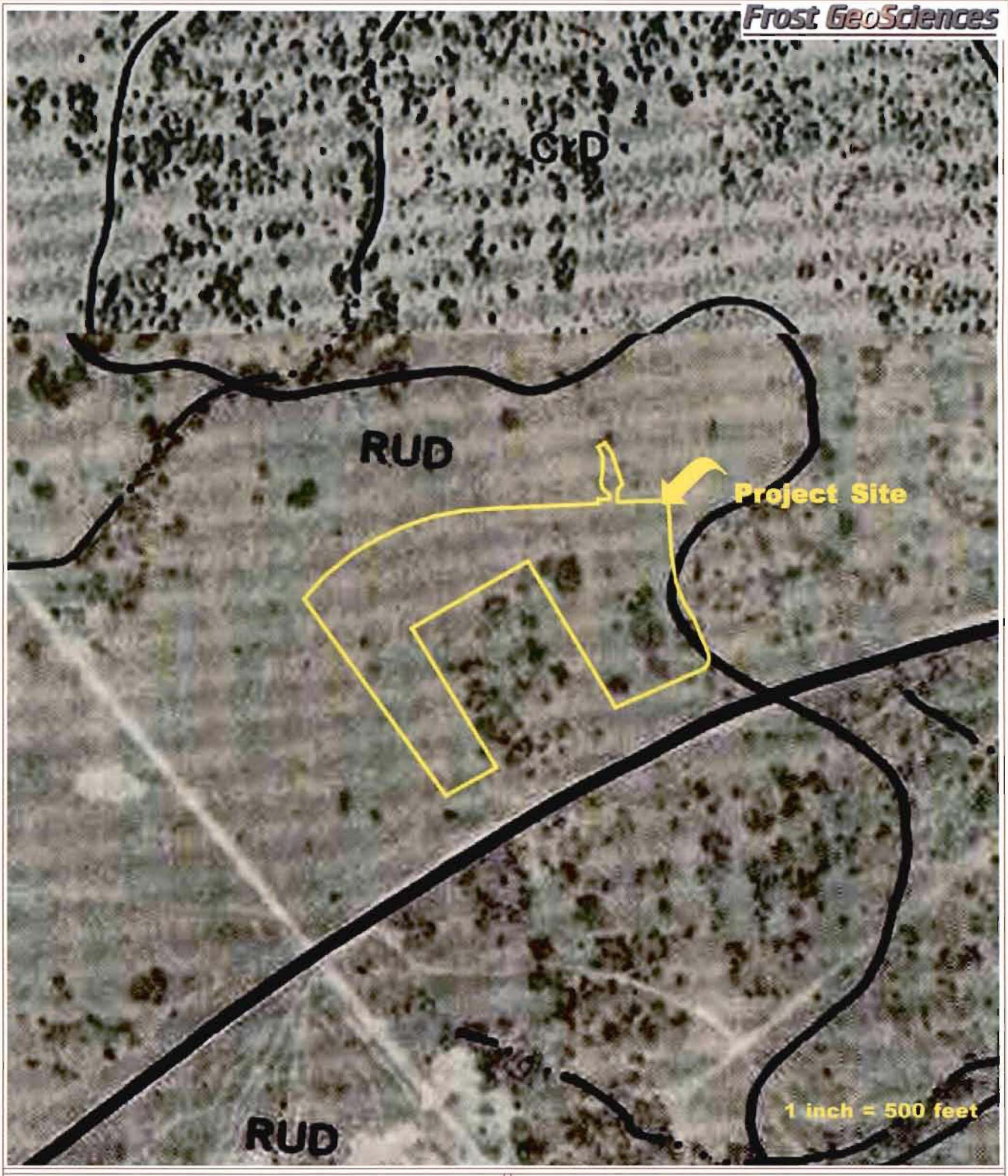
PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
New Braunfels, Texas

Flood Insurance Rate Map (FIRM)
Community Panel # 48091C0435F
(Revised 9/02/09)

PROJECT NO.: FGS-E12155

DATE: April 20, 2012

Frost GeoSciences



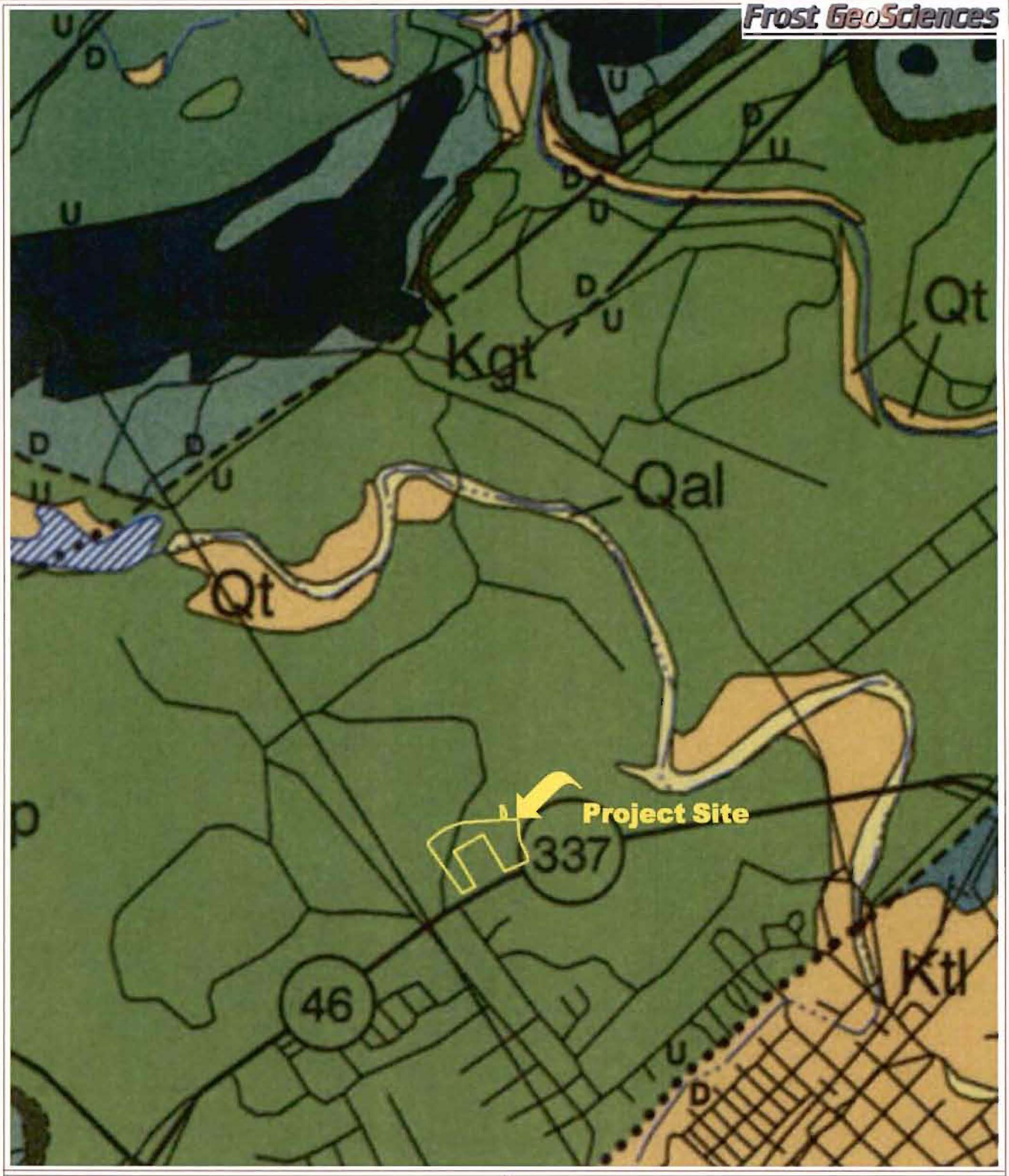
PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
New Braunfels, Texas

1973 Aerial Photograph
United States Department of Agriculture

PROJECT NO.: FGS-E12155

DATE: April 20, 2012

Frost GeoSciences



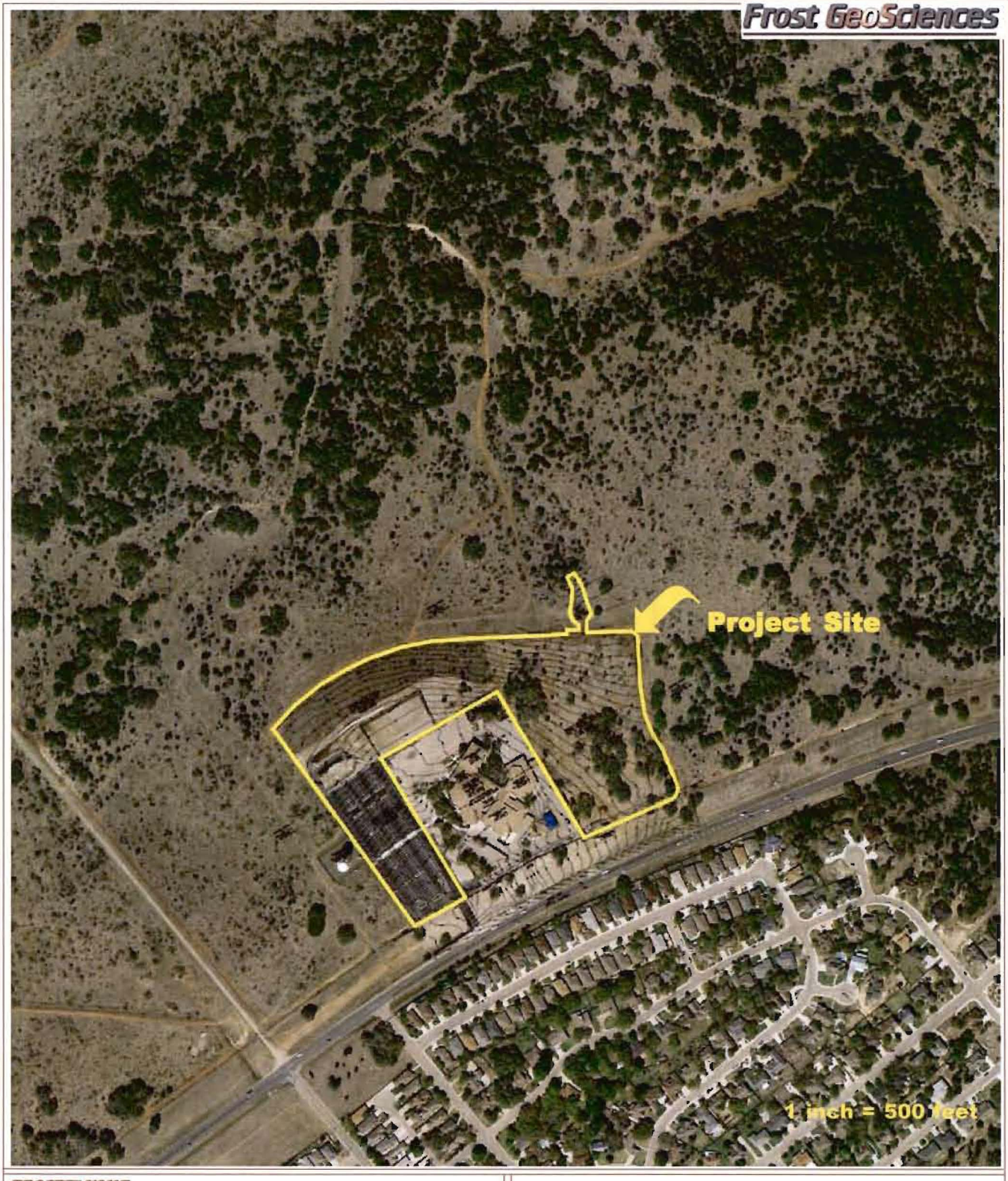
PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
New Braunfels, Texas

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

PROJECT NO.: FGS-E12155

DATE: April 20, 2012

Frost GeoSciences



PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
New Braunfels, Texas

2009 Aerial Photograph
Landiscor Aerial Information

PROJECT NO.:	DATE:
FGS-E12155	April 20, 2012

Frost GeoSciences

PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
Oakwood Baptist Church
New Braunfels, Texas

2009 Aerial Photograph with PRF's
Landiscor Aerial Information

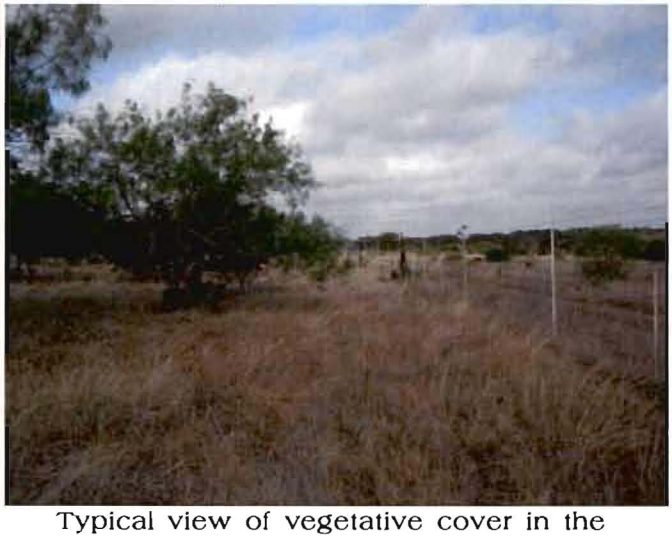
PROJECT NO.:	DATE:
FGS-E12155	April 20, 2012

Appendix B

Site Inspection Photographs

Typical view of vegetative cover in the eastern portion of the project site.

Typical view of vegetative cover in the eastern portion of the project site.



Typical view of vegetative cover in the northern portion of the onsite project site.

Typical view of vegetative cover in the north central portion of the onsite project site.

View of PRF # S-2 showing roots rimming a non karst closed depression.

View of Potential Recharge Feature # S-3

Typical view of vegetative cover in the northwestern portion of the project site.

View of asphalt covered parking lots now located in the western portion of the site.

View to the north, along the offiste portion of the project site.

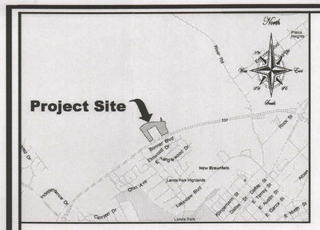
Typical view of vegetative cover in the offsite portion of the project site.

View of the northern limits of the offsite portion of the project site.

Typical view of vegetative cover in the offsite portion of the project site.

Appendix C

Site Geologic Map



Location Map

Frost GeoSciences
Geotechnical • Construction Materials
Environmental & Geologic Consulting
SDVOSB • VBE • DIBE • SBE
13402 Western Oak Dr. • Helotes, Texas 78023
Phone: 210-372-1315 • Fax 210-372-1318

Site Geologic Map

Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
for the
Oakwood Baptist Church
New Braunfels, Texas

Frost GeoSciences, Inc. Control # FGS-E12155

Legend

- Fill - Fill Material
- Qal - Alluvium
- Kau - Austin Chalk
- Kef - Eagle Ford Shale
- Kbu - Buda Limestone
- Kdr - Del Rio Clay
- Kgt - Georgetown Limestone
- Kep - Edwards Person Limestone
- Kek - 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)

Floodplain Information Obtained From
FIRM: Flood Insurance Rate Map
Comal County, Texas: Panel # 48091C0435F, Revised 9/02/2009

Fault Information Obtained From:
Bureau of Economic Geology, Geologic Atlas of Texas, San Antonio Sheet (1983)
U.S. Geological Survey, Water Resources Investigations Report 94-4117 (1994)
Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle (2000)

North
NW NE West East SW SE
South

Graphic Scale
60 0 30 60 120
(In Feet)

1 inch = 60 feet
Representative Fraction 1:720

Contour Interval - 1 foot

STATE OF TEXAS
Steve M. Frost
Geology
License No. 315
LICENSED
PROFESSIONAL GEOSCIENTIST

4/24/12

Signature of Texas Licensed Geoscientist
Steve Frost, TPG# 315, AIPG # 10176

Modification of a Previously Approved Plan
for Regulated Activities on the
Edwards Aquifer Recharge Zone and Transition Zone
and Relating to 30 TAC 213.4(j), Effective June 1, 1999

1. Current Regulated Entity Name: Oakwood Baptist Church Youth Center Modification (Onsite Pond)
Original Regulated Entity Name: Oakwood Baptist Church Expansion WPAP Modification
Assigned Regulated Entity Numbers (RN): 1) RN102744802, 2) RN105621627, 3) _____

X The applicant has not changed and the Customer Number (CN) is: CN CN601399199
The applicant 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 any letters approving modification are found at the end of this form.

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

X 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 Summary	1983 Project	1999 Project
Acres	3.498	7.06
Type of Development	Commercial	Commercial
Number of Residential Lots	0	0
Impervious Cover (acres)	1.44	4.27
Impervious Cover (%)	93.77%	60.48%
Permanent BMPs	None Required	Sand Filters
Other	_____	_____

WPAP Modification Summary	Approved Project	Proposed Mod. (Onsite Pond)
Acres	24.2	24.2
Type of Development	Commercial	Commercial
Number of Residential Lots	0	0
Impervious Cover (acres)	17.13	16.74
Impervious Cover (%)	70.79%	69.17%
Permanent BMPs	Sand Filter	Sand Filters
Other	_____	_____

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

6. X **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 provided at the end of this form. 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.

X 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.

X Acreage has not been added to **or** removed from the approved plan.

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

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 TO A PREVIOUSLY APPROVED PLAN** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Michael G. Short, P.E.
Print Name of Customer/Agent


Signature of Customer/Agent

4/19/12
Date

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 28, 2011

Ms. Roxi Vanstory
Oakwood Baptist Church
2154 Loop 337
New Braunfels, Texas 78130

Re: Edwards Aquifer, Comal County

Name of Project: Oakwood Baptist Church Expansion; Located at 2152 Loop 337; New Braunfels, Texas

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

Edwards Aquifer Protection Program San Antonio File No. 1085.02; Investigation No. 949018; Regulated Entity No. RN102744802

Dear Ms. Vanstory:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Modification for the above-referenced project submitted to the San Antonio Regional Office by The Shultz Group, Inc. on behalf of Oakwood Baptist Church on August 8, 2011. Final review of the WPAP was completed after additional material was received on October 20, and October 27, 2011. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

Background

The above referenced site was originally approved by letter dated November 7, 1983 for the construction of a church on 3.498 acre lot consisting of 1.44 acres of impervious cover. Treatment of stormwater runoff from the 1.44 acres of impervious cover was not required.

Phase II and III of the development were approved by letter dated January 5, 1999 (EAPP No. 1085.00) for the expansion of the site to 7.06 acres containing 4.27 acres of impervious cover. A sand filter basin, designed using the City of Austin Environmental Design Manual, was approved and constructed for the treatment of stormwater runoff.

The plan was subsequently modified by letter dated August 25, 2008. The modification approved the expansion of several buildings and parking lots, including the removal of the sand filter basin previously approved by the January 5, 1999 letter. A new sand filter basin, designed using the Edwards Aquifer Technical Guidance on Best Management Practices (2005), was approved for the treatment of stormwater runoff.

Project Description

The proposed commercial project will have an area of approximately 24.20 acres. It will include the expansion of the church facility that will be completed in two phases. The first phase (Phase 1) will include one additional building with associated parking areas, sidewalks, one water quality pond, and an off-site stormwater detention pond. The impervious cover for the first phase will add approximately 2.92 acres. The second phase (Phase 2) will include two additional buildings with associated parking areas and sidewalks that will add approximately 9.17 acres impervious cover. The overall total impervious cover for the project will be 17.13 acres (70.79 percent). Project wastewater will be disposed of by conveyance to the existing Gruene Road Water Recycling Center owned by the New Braunfels Utility.

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, a partial sedimentation/filtration basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. Approximately 1.44 acres of impervious cover was constructed as part of the November 7, 1983 approval and is not required to meet current water quality standards. The required total suspended solids (TSS) treatment for this project is 14,083 pounds of TSS generated from the 15.69 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The individual treatment measures will consist of a clay-lined, partial sedimentation/filtration basin sized to capture the first 1.16 inches of stormwater run-off from 16.73 acres of impervious cover within a 24.20 acre catchment area, providing a total capture volume of 68,102 cubic feet (60,786 required). The filtration system for the basin will consist of 5,066 square feet of sand (6,159 square feet required) with an ASTM rating of C-33, and will utilize a trench design that will consist of a filter media that is 12 inches thick from the top of the sand to the top of the gravel layer and 18 inches deep to the bottom of the trench, and an underdrain piping system covered with a minimum two inch gravel layer.

The sedimentation/filtration basin will be constructed and completed as part of the Phase 1 activities to ultimately treat stormwater runoff from impervious cover constructed in Phase 1 and Phase 2, as well as the existing impervious cover currently being treated by the water quality pond previously approved in the August 25, 2008 letter. The existing water quality pond shall remain in place and operational until it is scheduled to go offline during Phase 2 construction. As described in the WPAP, the northern parking lot will be constructed in a manner that will direct stormwater runoff from impervious cover within the 2008 water quality pond's drainage area to the sedimentation/filtration basin during and after construction of Phase 2.

Geology

According to the geologic assessment included with the application, the site is located on the Cyclic & Marine Members of the Person Formation. The assessment noted two geologic features (non-karst closed depression and a solution cavity) both assessed as not sensitive. The San Antonio Regional Office did not conduct a site assessment.

Special Conditions

1. This modification is subject to all Special and Standard Conditions listed in the WPAP approval letters dated August 25, 2008 and January 5, 1999.

2. The new permanent pollution abatement measure shall be operational prior to occupancy or use of any facility within the abatement measure's respective drainage area.

3. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

4. Treatment of stormwater runoff from the impervious cover within the 2008 water quality pond's drainage area is required without disruption.

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. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

15. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

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

17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

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

If you have any questions or require additional information, please contact Mr. Javier Anguiano of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 490-3096.

Sincerely,

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

MRV/JA/eg

Enclosures: Deed Recordation Affidavit, Form TCEQ-0625

Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Michael G. Short, P.E., The Schultz Group, Inc.
Mr. James C. Klein, P.E., City of New Braunfels
Mr. Thomas H. Hornseth, P.E., Comal County
Mr. Karl J. Dreher, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 25, 2008

Ms. Roxi Vanstory
Oakwood Baptist Church SBC
2154 Loop 337
New Braunfels, TX 78130

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Oakwood Baptist Church Expansion, Located at 2154 Loop 337, New Braunfels, TX; New Braunfels, Texas
TYPE OF PLAN: Request for Modification of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 1085.01; Investigation No. 683215; Regulated Entity No. RN102744802

Dear Ms. Vanstory:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the request for modification of the approved WPAP for the above-referenced project submitted to the San Antonio Regional Office by The Schultz Group Inc. on behalf of Oakwood Baptist Church SBC on June 9, 2008. Final review of the WPAP was completed after additional material was received on August 18, 2008 and August 22, 2008. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The original approval for the site was issued by the Texas Water Development Board letter dated November 7, 1983. The 3.498 acre lot was approved as a phased development. Phase I consisted of 1.84 acres total and 1.44 acres of impervious cover, which was not required to meet standards for water quality.

Phase II and Phase III were combined in a Texas Natural Resource Conservation Commission approval letter dated January 5, 1999 (EAPP # 1085.00). The site had expanded to 7.06 acres total and was approved for 4.27 acres of impervious cover (as stated in this application, only 4.06 acres of impervious cover was actually constructed). The 1.44 acres of impervious cover associated with the original Phase I

development was considered existing impervious cover. The approved sand filter basin was designed using the City of Austin Environmental Design Manual and sized for the first ½ inch of stormwater from 4.11 acres.

PROJECT DESCRIPTION

This proposed project expands the total site acreage of the site to 24.20 acres and increases the total impervious cover in two phases. Project wastewater will be disposed of by conveyance to the existing Gruene Road Water Recycling Center owned by the New Braunfels Utility.

Phase I will consist of an approximately 3.80 acre parking lot construction at the southern portion of the site. The stormwater runoff will drain to a detention pond and then be released to an interim filter strip. The existing sand filter basin will remain during this phase. Phase I will result in 3.14 acres of impervious cover and increase the total site impervious cover to 8.64 acres (1.44 ac, 4.06 ac, 3.14 ac).

Phase II will expand the parking areas and buildings throughout the 24.20 acre site. A new sand filter basin will be constructed at the start of Phase II before the interim filter strip and the existing sand filter basin are removed. The impervious cover will increase by 9.17 acres to the final total impervious cover for the site, 17.81 acres (73.6 percent).

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, an interim filter strip and a sand filter basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 14,693.7 pounds of TSS generated from the 17.81 acres of impervious cover and 1.44 acres of existing impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The interim filter strip area is approximately 1.6 acres and sized for the 3.14 contributing acres of impervious cover. The stormwater will first be captured by a detention pond and then released to the interim filter strip by a rock gabion spreader berm.

The sand filter basin will be constructed at the beginning of phase II and will be the permanent BMP for the site. The basin sizing requirements are provided in the table below. The basin floor will be sloped to direct stormwater to the underdrain pipes and therefore, the basin will have an 18 inch sand layer and a two inch gravel layer over the four inch Schedule 40 PVC perforated underdrain pipes.

Sand Filter Basin Summary

Catchment Area	Total Area (ac)	Impervious Cover (ac)	Req. TSS Treatment (lb/yr)	Design TSS Treatment (lb/yr)	Req. WQV[C] (ft3)	Design WQV[C] (ft3)	Req. SFA[D] (ft2)	Design SFA[D] (ft2)
Basin	24.18	17.45[E]	14,370.58[E]	14,694.00	64,527	75,856	5,377	7,143
Unc.[A]	2.43[B]	0.36	323.14	---	---	---	---	---
Total	26.61[3]	17.81	14,693.71	14,694.00	---	---	---	---

A: Uncaptured Area; B: This amount includes the area within the right of way (ROW); C: Water Quality Volume; D: Sand Filter Area; E: 1.44 acres existing impervious cover included in the TSS calculation.

GEOLOGY

According to the geologic assessment included with the application, the underlying soil cover for the site is the Cyclic and Marine Members of the Person Formation. Four non-sensitive geologic features were evaluated by the project geologist. The San Antonio Regional Office site assessment conducted on August 6, 2008 revealed the site as described by the geologic assessment. During the site assessment, soil disturbance and vegetation clearing was noted at the site. The project engineer confirmed that the when Oakwood Baptist Church acquired the expansion area, the previous owner moved the fences from around the 7.06 acre site to the new location (around the 24.20 acre site). The disturbed area corresponded to the previous location of the fence and fence construction is not a regulated activity per 30 TAC Chapter 213.

SPECIAL CONDITIONS

I. The interim filter strip shall be operational prior to use (public or staff use) of the parking area. The sand filter basin shall be operational prior to the removal of the interim filter strip and the existing sand filter basin.

II. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

III. The sand filter basin shall have an impermeable liner which conforms to the criteria of RG-348 (2005). When submitting the BMP certification (see Standard Condition 18), include the type of impermeable liner used and confirm the criteria of RG-348 were met.

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 and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, PST) 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.

<u>During Construction:</u>

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. No wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

14. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

15. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

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

17. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

18. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

20. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new

regulated activity by the executive director is required prior to commencement of the new regulated activity

21. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

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

If you have any questions or require additional information, please contact Charly Fritz of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4065.

Sincerely,

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

MRV/CEF/eg

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

cc: Mr. Michael Short, P.E., The Schultz Group, Inc.
Mr. James Klein, P.E., City of New Braunfels
Mr. Tom Homseth, P.E., Comal County Engineers Office
Ms. Velma Danielson, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC212

DOC# 990600101B

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

January 5, 1999

Ms. Roxi Vanstory
Oakwood Baptist Church
2154 Loop 337
New Braunfels, TX 78130

Re: EDWARDS AQUIFER, Comal County
PROJECT: Oakwood Baptist Church, Project number 1085, Located 2154 Loop 337, New Braunfels, Texas
TYPE: Request for Approval of Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) §213.5(b); Edwards Aquifer Protection Program

Dear Ms. Vanstory:

The Texas Natural Resource Conservation Commission (TNRCC) has completed their review of the request for modification of an approved WPAP for the referenced project that was submitted on behalf of Oakwood Baptist Church by Cunningham-Allen, Inc. and received by the San Antonio office on September 18, 1998. Final review was completed after additional material was received on December 14, 1998, and December 16, 1998. The WPAP proposed in the application is in general compliance with 30 TAC § 213.5(b); therefore, approval of the plan is hereby granted subject to applicable state rules and the conditions in this approval letter. *This approval expires two (2) years from the date of this approval unless, prior to the expiration date, construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

As understood, this project has been developed in three phases.

Phase I. By approval letter dated November 7, 1983, and under 30 TAC 213.5(b) [formerly Texas Department of Water Resources Rule No. 156.20.05.008], "...this subdivision will consist of one, 3.498 acre lot containing a church. A septic tank system will be utilized for sewage disposal." As presented in the application submitted on September 18, 1998, "The original phase consisted of 1.84 acres with 1.44 acres of impervious cover."

Phase II: This phase was constructed after the initial WPAP approval. As presented in the application submitted on September 18, 1998, "Phase two of this project consisted of 1.13 acres composed entirely of impervious cover. No water quality provisions were made at the time of construction of the first or second phase. The initial phase of this project was not required to meet standards for water quality. Phase two was inadvertently constructed in non-compliance with current regulations. Phase Three will consist of 3.14 acres of impervious cover. The water quality ponds are designed to treat runoff for phases two and three. The ponds are designed to treat one half inch of runoff from the added impervious cover from phases two and three."

Phase III: As presented in the application submitted on September 18, 1998, "Phase Three will consist of 3.14 acres of impervious cover. The water quality ponds are designed to treat runoff for phases two and three. The ponds are designed to treat one half inch of runoff from the added impervious cover from phases two and three."

The TNRCC understands,

1. Wastewater is being collected and pumped through a force main to an existing offsite gravity sewage collection system owned by New Braunfels Utilities. As understood, a septic tank was never installed and used.

2. Construction of Phase II (1.13 acre parking lot) occurred sometime between 1984 and 1998, and no modification to the approved WPAP was obtained. No modification to the 1983 WPAP is on file in the San Antonio Regional Office for Phase II of construction.

3. The proposed water pollution abatement plan includes stormwater treatment for Phases II and III. Phase I was approved without the requirement of stormwater pollution abatement by letter dated November 7, 1983.

PROJECT DESCRIPTION

The proposed commercial project will have an area of 7.06 acres and will consist of the addition of one 29,500 square foot, one story building and the associated parking. Project wastewater will be disposed of by conveyance to the existing Gruene Sewage Treatment Plant owned by New Braunfels Utilities. The proposed impervious cover for the development is approximately 4.27 acres (60.5%). The site is located within the City of New Braunfels, and must conform with applicable codes and requirements of the City of New Braunfels.

GEOLOGY ON SITE

According to the geologic assessment included with the submittal, there are eleven geologic features located on the project site. All features are closed depressions which are described in the Geologic Assessment to have relative infiltration rates of low to none, and were assessed as "not sensitive."

The San Antonio Regional Office site inspection of November 5, 1998, revealed no features other than those reported in the Geologic Assessment.

GEOLOGY DOWNGRADIENT OF SITE

According to the geologic assessment included with the submittal, there are two geologic features (one closed depression and one vuggy rock outcrop) and one manmade feature (water well and windmill) downgradient of the project site. The geologic features are described in the Geologic Assessment as having relative infiltration rates of low to none, and were assessed as "not sensitive." The manmade feature described in the Geologic Assessment has a high relative infiltration rate, and was assessed as "sensitive."

PERMANENT POLLUTION ABATEMENT MEASURES

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

The partial sedimentation/filtration basin is designed in accordance with the City of Austin Environmental Design Criteria Manual and is sized to capture the first ½-inch of stormwater run-off from 4.11 acres, providing a total capture volume of 8,737 cubic feet. The filtration system will consist of:

1. 749 square feet of sand, which is 18 inches thick,
2. an underdrain piping wrapped with geotextile membrane, and
3. an impervious liner.

The permanent sedimentation/ filtration basin described above will be provided to prevent pollutants from entering downgradient recharge features identified in the geologic assessment while maintaining or enhancing the quantity of water entering the recharge features

SPECIAL CONDITIONS

1. If any potential sensitive features are encountered during construction, a geologist shall evaluate the significance of the features. The evaluation shall include representative

photographs and a description of the feature forwarded to the San Antonio office. Construction in the vicinity of the features may only continue with written approval from the TNRCC.

2. Placement of hydrocarbon or hazardous substance storage facilities regulated pursuant to 213.5(d) and 213.5(e). requires submittal of all appropriate applications with appropriate fees and must receive prior approval from the TNRCC.

3 The sedimentation/filtration basins are designed in accordance with the City of Austin. The basins will incorporate sedimentation and filtration as described above.

4. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of permanent erosion and sedimentation (E&S) control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

5 No wastewater may be pumped from the proposed church addition until ownership of the force main between the church property line and the New Braunfels Utility owned gravity sewage collection system has been resolved. Prior to connection to the existing off-site force main, proof of ownership and responsibility for maintenance of the off-site force main must be presented to the TNRCC in writing.

6. Based on the information provided by Oakwood Baptist Church, Commission records indicate that construction activities related to Phase II were completed sometime between 1984 and 1998 These activities were conducted without the prior approval of the water pollution abatement plan, as required by Commission rules (30 TAC Chapter 213). Therefore, the applicant is hereby advised that the after-the-fact approval of Phase II of construction, as provided by this letter, shall not absolve the applicant of any prior violations of Commission rules related to this project, and shall not necessarily preclude the Commission from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of Commission rules.

STANDARD CONDITIONS

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

2 Any modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a WPAP to amend this approval, including the payment of appropriate fees and all information necessary for its review and approval.

3. Prior to commencing any regulated activity, the applicant or his agent must notify the San Antonio Regional Office in writing of the date on which the regulated activity will begin.

4. The applicant or his agent shall record this WPAP approval in the county deed records within 30 days of receiving this notice of approval. Proof of deed recordation shall be submitted to the San Antonio Regional Office prior to commencing construction. A suggested format that you may use to deed record the approved WPAP is enclosed.

5. All contractors conducting regulated activities at the project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. If any significant recharge feature [sensitive feature] is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potential adverse impacts to water quality.

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

9 Approval of the design of the sewage collection system for this proposed project shall be obtained from the TNRCC prior to commencement of construction of any sewage collection system.

10 No wells exist on the site. Any abandoned wells shall be plugged in accordance with 30 TAC § 338 or an equivalent method, as approved by the Executive Director.

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

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

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program at 210/403-4024. Please reference Project #1085.

Sincerely,

Jeffery A. Saitas, P.E.
Executive Director
Texas Natural Resource Conservation Commission

JAS/JKM/eg

Enclosure: Deed Recordation Affidavit

cc: Andrew Gonzales, P.E., Cunningham-Allen, Inc.
Harry Bennett, City of New Braunfels
Tom Hornseth, Comal County
Greg Ellis, Edwards Aquifer Authority
TNRCC Field Operations, Austin

Doc# 9906001018
Pages: 7
Date : 01-12-1999
Time : 03:33:17 P.M.
Filed & Recorded in
Official Records
of COMAL County, TX.
JOY STREATER
COUNTY CLERK
Rec. $ 21.00

DOC# 9906001018

ATTACHMENT B – PROPOSED MODIFICATION (TCEQ-0590)

The exiting Original Site as described by the "Water Pollution Abatement Plan for Oakwood Baptist Church" (Cunningham Allen Inc 1998) was completed in three phases. The Original Phase 1 was approved without the requirement of stormwater pollution abatement (1.44-acres of impervious cover). Original Phase 2 was constructed without the required provisions for water quality (1.13-acres of impervious cover) Phase 3 was improved and provided stormwater pollution abatement for Phase 2 and Phase 3 (totaling 4.27 acres of impervious cover). The Original Phase 3 Improvements provided a partial sedimentation and filtration basin with a capture volume of 8,737-cf.

Oakwood Baptist Church was unable to obtain an areement with the downstream property owners for a drainage easement for the offsite detention pond previously shown. As a result this WPAP Modification is required to move the previously shown offsite detention pond onsite. The overall Phase 1 and Phase 2 plans are for the most part the same. The differences are outline below:

4. The detention pond is now shown onsite.
5. The sedimentation and filtration system (Water quality pond) configuration has changed slightly to allow the detention pond to be adjacent to it. This changed is shown in the revised calculations and construction plans. The water quality pond will be in accordance with the TCEQ's Technical Guidance Manual.
6. There is a minor decrease of impervious cover in Phase 2 as a result of the detention pond being onsite. This is due to a loss of area for paved parking. This is also shown in the revised calculations and construction plans.

Please note that Construction of the children's center, expanded parking facilities and water quality pond (Phase 1) from the Approved Modification Dated October 28, 2011 has begun.

Phase 1 from the Approved Modification Dated August 25, 2008 has been completed. This included a Parking Lot Expansion immediately adjacent to the existing facility along the overall projects western most boundary.

For this WPAP Modification the Oakwood Baptist Church intends to expand its current facility. This expansion will be constructed in two phases.

Phase 1

Phase 1 will consist of a children's center located adjacent to the main worship center, expanded parking facilities, sidewalks, and partial sedimentation and filtration system (Water quality pond). The proposed Phase 1 improvements will have approximately 127,111 square feet of impervious cover. The proposed water quality pond will replace the existing 9,275-cf water quality pond originally intended to serve a portion of the 7.06-acre site (see referenced information for additional detail). The majority of run-off generated onsite given all existing improvements as well as all proposed improvement will be collected through a series of onsite swales and storm drain systems and conveyed to the proposed water quality pond and a permanent onsite detention pond (previously shown offsite). The water quality pond proposed for Phase 1 has been designed to mitigate all flows from the Phase 1 and Phase 2 proposed improvements. The Church in the short term intends to leave the remaining portion of the overall site undeveloped.

There is approximately 2.92 acres of impervious cover proposed for Phase 1 (All onsite) making the total Phase 1 impervious cover 10.57 acres. Of which approximately 10.29 acres will drain to the proposed water quality pond. Approximately 0.28 acres of impervious cover common to the access

drives will drain to Loop 337 uncaptured by the water quality pond. 1.44-acres of the initial phase, part of the "Water Pollution Abatement Plan for Oakwood Baptist Church" (Cunningham Allen Inc 1998) was approved without the requirement of water pollution abatement. This 1.44 acres is shown as existing impervious cover in the water quality pond calculations. The water quality pond has been designed to mitigate the entire 2.92 acre increase in impervious cover per the TCEQ's Technical Guidance Manual.

The water quality pond has been sized to capture the first 0.97 inches of stormwater run-off from 10.57 acres of impervious cover of which 10.29 acres will drain to the proposed water quality pond within a 21.40 acre catchment area, providing a total capture volume of 63,048 cubic feet where only 31,457 cubic feet is needed to treat 8,195 pounds of total suspended solids. A sand filtration system will consist of 6,159 square feet of sand where only 2,621 square feet is needed. The sand will be 18 inches thick, with under drain piping surrounded by gravel. Sand and gravel layers will be separated with filter fabric and contained above an impermeable clay liner per TCEQ Specifications Table 3-6.

Phase 2

The Proposed Phase 2 Improvements will include the construction of a new worship center, chapel, significant parking areas, and modifications to the existing parking areas. The proposed Phase 2 improvements will add approximately 268,704 square feet of impervious cover. Upon the Phase 2 expansion project completion the majority of run-off generated onsite given all existing improvements as well as all proposed improvement will be collected through a series of onsite swales and storm drain systems and conveyed to the water quality pond and a permanent detention pond constructed in Phase 1.

There is approximately 6.16 acres of additional impervious cover proposed for Phase 2. Of which approximately 6.06 acres will drain to the proposed water quality pond. Four new access drives have been proposed for Phase 2 totaling approximately 0.10 acres that will drain offsite and will not be captured by the water quality pond. A new driveway off of Loop 337 has also been proposed for Phase 2. The northern most drive will be removed and the proposed drive will be constructed. The proposed new drive will increase the total impervious cover draining to Loop 337 from approximately 0.28 acres to approximately 0.30 acres. The water quality pond has been designed to mitigate the entire 6.16 acre increase in impervious cover per the TCEQ's Technical Guidance Manual.

The water quality pond has been sized to capture the first 1.16 inches of stormwater run-off from 16.74 acres of impervious cover of which 16.34 acres will drain to the proposed water quality pond within a 24.2 acre catchment area, providing a total capture volume of 67,762 cubic feet where only 58,920 cubic feet is needed to treat 13,733 pounds of total suspended solids. A sand filtration system will consist of 6,159 square feet of sand where only 4,910 square feet is needed. The sand will be 18 inches thick, with under drain piping surrounded by gravel. Sand and gravel layers will be separated with filter fabric and contained above an impermeable clay liner per TCEQ Specifications Table 3-6.

During the Phase 2 construction; the fill material required for the northern parking area will be placed first, in effect, keeping the stormwater runoff from leaving the site prior to treatment from the water quality pond. In addition, prior to Phase 2 construction, all required temporary erosion control measures will be in place.

LEGEND:

- IMPERVIOUS COVER NOT DRAINING TO WATER QUALITY POND
- PROPOSED BUILDINGS, SIDEWALKS AND PARKING AREAS
- GEOLOGIC FEATURE (SEE GEOLOGICAL SITE ASSESSMENT)
- GRAVEL FILTER INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- SILT FENCE (PHASING NOTED)
- ROCK BERM (PHASING NOTED)
- TEMPORARY CONSTRUCTION ENTRANCE/EXIT (PHASING NOTED)
- AREAS TO BE DISTURBED w/SOIL STABILIZATION (WITH SITE CONSTRUCTION PLANS)
- PROPOSED DRAINAGE SYSTEM
- Kep — SEE GEOLOGICAL ASSESSMENT

* AS APPROVED 10/26/11

REVISIONS

DATE	DESCRIPTION

STATE OF TEXAS — MICHAEL G. SCHULTZ — 80015 — PROFESSIONAL ENGINEER

SITE PLAN * AS APPROVED 10/26/11
(Phase 1)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY:	D.C.
CHECKED BY:	M.G.S.
DATE:	DECEMBER 2010
JOB NO.:	100410

TCEQ-7

TCEQ-10
APR 24 2012
SAN ANTONIO

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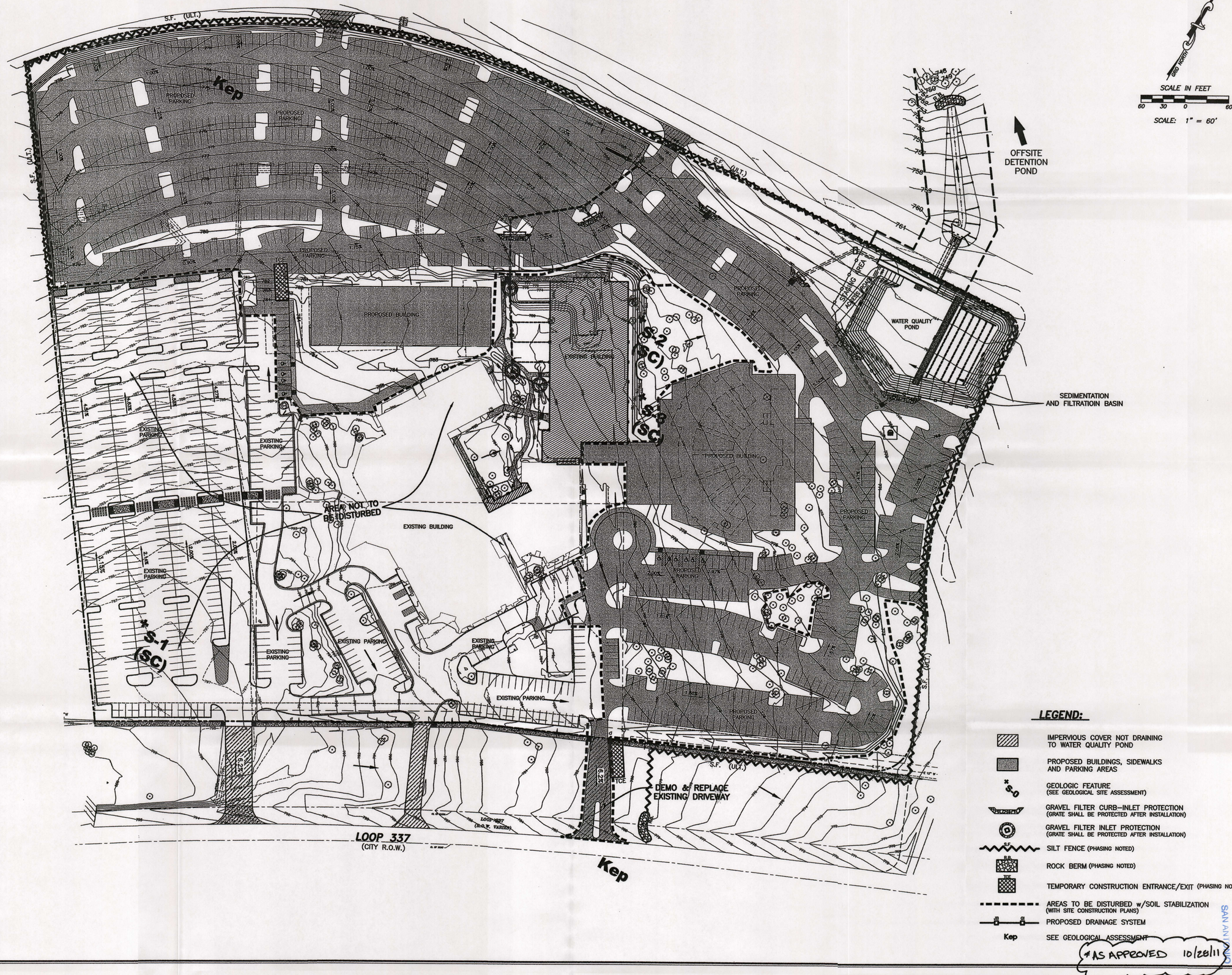

LEGEND:

- IMPERVIOUS COVER NOT DRAINING TO WATER QUALITY POND
- PROPOSED BUILDINGS, SIDEWALKS AND PARKING AREAS
- *S-0 GEOLOGIC FEATURE (SEE GEOLOGICAL SITE ASSESSMENT)
- GRAVEL FILTER CURB-INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- GRAVEL FILTER INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- SILT FENCE (PHASING NOTED)
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- TEMPORARY CONSTRUCTION ENTRANCE/EXIT (PHASING NOTED)
- AREAS TO BE DISTURBED w/SOIL STABILIZATION (WITH SITE CONSTRUCTION PLANS)
- PROPOSED DRAINAGE SYSTEM
- Kep SEE GEOLOGICAL ASSESSMENT

*AS APPROVED 10/28/11

REVISIONS

DATE	DESCRIPTION

STATE OF TEXAS — MICHAEL G. SCHULTZ — 88015 — LICENSED PROFESSIONAL ENGINEER

SITE PLAN *AS APPROVED 10/28/11
(Phase 2)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY:	D.C.
CHECKED BY:	M.G.S.
DATE:	DECEMBER 2010
JOB NO.:	100410

TCEQ 8*

SAN ANTONIO
APR 24 2012
TCEQ

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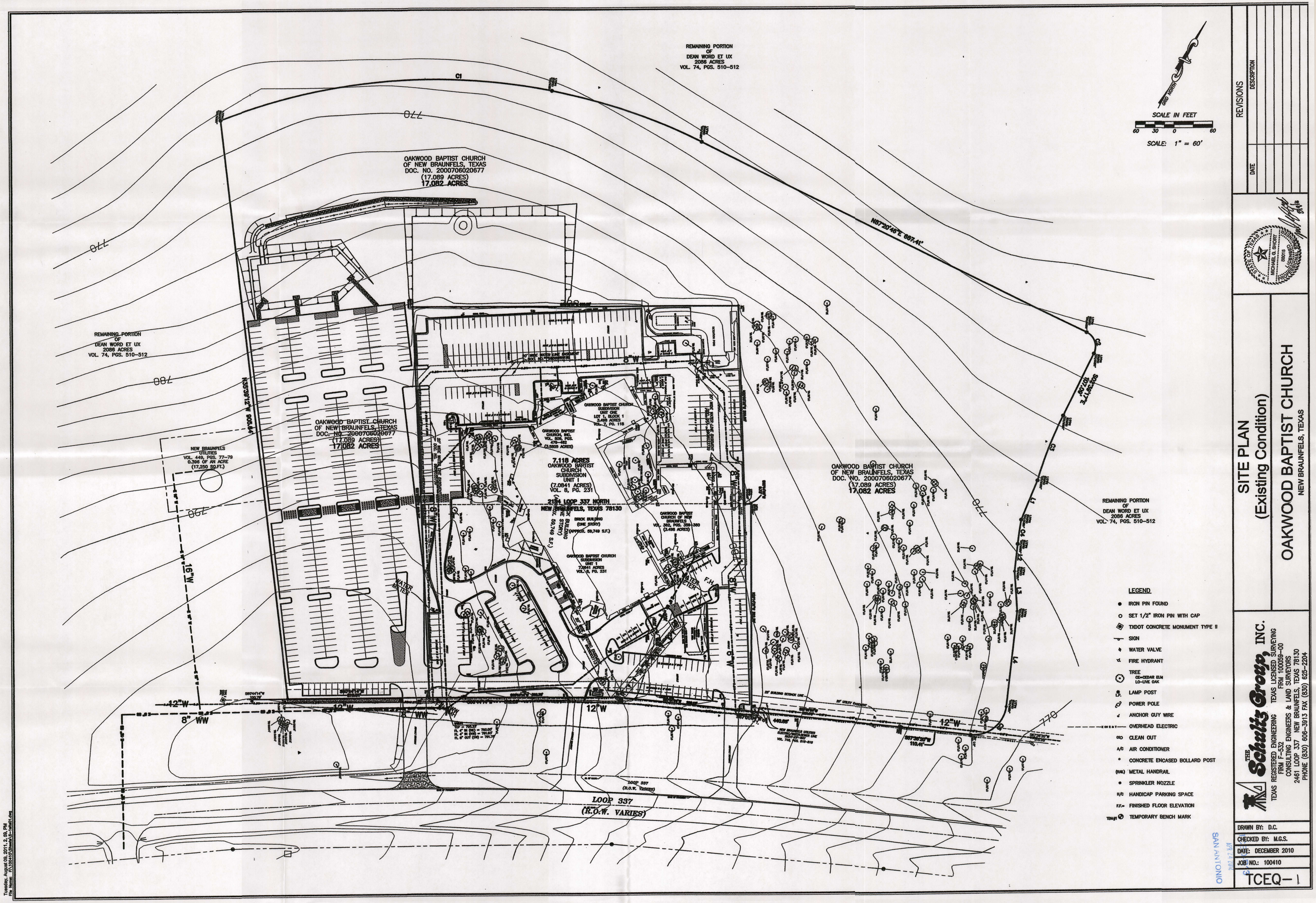
REMAINING PORTION OF DEAN WORD ET UX 2086 ACRES VOL. 74, PGS. 510-512
C1
770
OAKWOOD BAPTIST CHURCH OF NEW BRAUNFELS, TEXAS DOC. NO. 200706020677 (17.089 ACRES) 17.082 ACRES
N87°20'45"E 887.41'
SCALE IN FEET
60 30 0 60
SCALE: 1" = 60'
REMAINING PORTION OF DEAN WORD ET UX 2086 ACRES VOL. 74, PGS. 510-512
780
OAKWOOD BAPTIST CHURCH OF NEW BRAUNFELS, TEXAS DOC. NO. 200706020677 (17.089 ACRES) 17.082 ACRES
NEW BRAUNFELS UTILITIES VOL. 449, PGS. 77-79 0.396 OF AN ACRE (17,250 SQ.FT.)
790
16"W
7.118 ACRES OAKWOOD BAPTIST CHURCH SUBDIVISION UNIT I (7.0841 ACRES) VOL. 8, PG. 231
2154 LOOP 337 NORTH NEW BRAUNFELS, TEXAS 78130
BRICK BUILDING (ONE STORY) (APPROX. 59,749 S.F.)
OAKWOOD BAPTIST CHURCH SUBDIVISION UNIT 1 7.0841 ACRES VOL. 8, PG. 231
OAKWOOD BAPTIST CHURCH OF NEW BRAUNFELS, TEXAS DOC. NO. 200706020677 (17.089 ACRES) 17.082 ACRES
REMAINING PORTION OF DEAN WORD ET UX 2086 ACRES VOL. 74, PGS. 510-512
12"W
8" WW
LOOP 337 (R.O.W. VARIES)
LEGEND
IRON PIN FOUND
SET 1/2" IRON PIN WITH CAP
TXDOT CONCRETE MONUMENT TYPE II
SIGN
WATER VALVE
FIRE HYDRANT
TREE CE=CEDAR ELM LO-LIVE OAK
LAMP POST
POWER POLE
ANCHOR GUY WIRE
OVERHEAD ELECTRIC
CLEAN OUT
AIR CONDITIONER
CONCRETE ENCASED BOLLARD POST
METAL HANDRAIL
SPRINKLER NOZZLE
HANDICAP PARKING SPACE
FINISHED FLOOR ELEVATION
TEMPORARY BENCH MARK
REVISIONS
DATE
DESCRIPTION
SITE PLAN
(Existing Condition)
OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS
THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204
DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410
TCEQ-1
SAN ANTONIO
APR 24 2012

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

REGULATED ENTITY NAME: Oakwood Baptist Church Youth Center Modification (Onsite Pond)

REGULATED ENTITY INFORMATION

1. The type of project is:
   ___ Residential: # of Lots: _____
   ___ Residential: # of Living Unit Equivalents: _____
   X Commercial
   ___ Industrial
   ___ Other: _____

2. Total site acreage (size of property): 24.2 Acres

3. Projected population: 0

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

Phase 1

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	85,919	÷ 43,560 =	1.97
Parking	337,636	÷ 43,560 =	7.75
Other paved surfaces	36,880	÷ 43,560 =	0.85
Total Impervious Cover	460,435	÷ 43,560 =	10.57
Total Impervious Cover ÷ Total Acreage x 100 =			43.68%

Phase 2

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	152,411	÷ 43,560 =	3.50
Parking	539,126	÷ 43,560 =	12.38
Other paved surfaces	37,602	÷ 43,560 =	0.86
Total Impervious Cover	729,139	÷ 43,560 =	16.74
Total Impervious Cover ÷ Total Acreage x 100 =			69.17%

5. X **ATTACHMENT A - Factors Affecting Water Quality.** A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.

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

FOR ROAD PROJECTS ONLY
Complete questions 7-12 if this application is exclusively for a road project.

7. Type of project:
   __ TXDOT road project.
   __ County road or roads built to county specifications.
   __ City thoroughfare or roads to be dedicated to a municipality.
   __ Street or road providing access to private driveways.

8. Type of pavement or road surface to be used:
   __ Concrete
   __ Asphaltic concrete pavement
   __ Other: _____

9. Length of Right of Way (R.O.W.): ____ feet.
   Width of R.O.W.: ____ feet.
   L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = ____ acres.

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

11. __ A rest stop will be included in this project.
    __ A rest stop will **not** be included in this project.

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

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

13. X **ATTACHMENT B - Volume and Character of Stormwater.** A description of the volume and character (quality) of the stormwater runoff which is expected to occur from the proposed project is provided at the end of this form. The estimates of stormwater runoff quality and quantity should be based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

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

100% Domestic	4,200	gallons/day **(Per WPAP Dated 2008)**
__% Industrial	_____	gallons/day
__% Commingled	_____	gallons/day

TOTAL 4,200 gallons/day

15. Wastewater will be disposed of by:
    __ **On-Site** Sewage Facility (OSSF/Septic Tank):
    __ **ATTACHMENT C - Suitability Letter from Authorized Agent.** An on-site

sewage facility will be used to treat and dispose of the wastewater. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.

__ 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.

X Sewage Collection System (Sewer Lines):

X 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 Gruene Road (name) Treatment Plant. The treatment facility is:

X existing.

__ proposed.

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

SITE PLAN REQUIREMENTS

Items 17 through 27 must be included on the Site Plan.

17. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = 60'.

18. 100-year floodplain boundaries

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):
Map Number 48091C0435F, Effective Date September 2, 2009 FIRM

19. X The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.

__ The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.

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.
X 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.
X No **sensitive** geologic or manmade features were identified in the Geologic Assessment.
N/A **ATTACHMENT D - Exception to the Required Geologic Assessment**. An exception to the Geologic Assessment requirement is requested and explained at the end of this form.

22. X The drainage patterns and approximate slopes anticipated after major grading activities.

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

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

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

26. N/A Surface waters (including wetlands).

27. __ Locations where stormwater discharges to surface water or sensitive features.
X There will be no discharges to surface water or sensitive features.

ADMINISTRATIVE INFORMATION

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

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

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:

Michael G. Short, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

4/19/12
Date

ATTACHMENT A – FACTORS AFFECTING WATER QUALITY

The overall construction of this project will consist of site clearing, demolition, site grading, building structures, parking and driveways, etc. for the overall 24.20 acre site. Construction activity and the disturbance of the existing terrain and existing site during construction are factors that could affect surface water and groundwater quality. Some possible sources of contamination during construction would be from machinery or equipment in the form of oil or fuel. Containment and cleanup is addressed in the Temporary Pollution Control section of this submittal. To assist in the preservation of the quality of surface water exiting the site during construction, which in turns assists in the preservation the groundwater quality, temporary pollution controls will be installed.

ATTACHMENT B – VOLUME AND CHARACTER OF STORMWATER RUNOFF

The stormwater runoff generated from Phase 1 of this site will be primarily from the expanded parking lot and new children's center with some being generated from the minimal landscape areas. The runoff from the overall proposed site will be generated from rooftops, driveways, parking lots, sidewalks and landscape areas. The nature of the run-off generated from both phases of improvements may contain small amounts of oil, suspended solids, fertilizers, and pesticides. The site does not receive any significant offsite flow. The average Pre-Construction runoff coefficient for the site is Cpre = 0.28 and the average Phase 2 runoff coefficient for the site is Cpost = 0.51. Permanent BMPs for the proposed phase 1 and phase 2 improvements will be a sand filter system.

SCALE IN FEET
60 30 0 60
SCALE: 1" = 60'

LEGEND:

- IMPERVIOUS COVER NOT DRAINING TO WATER QUALITY POND
- PROPOSED BUILDINGS, SIDEWALKS AND PARKING AREAS
- S-# GEOLOGIC FEATURE (SEE GEOLOGICAL SITE ASSESSMENT)
- GRAVEL FILTER INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- SILT FENCE (PHASING NOTED)
- RB ROCK BERM (PHASING NOTED)
- TCE TEMPORARY CONSTRUCTION ENTRANCE/EXIT (PHASING NOTED)
- AREAS TO BE DISTURBED w/SOIL STABILIZATION (WITH SITE CONSTRUCTION PLANS)
- PROPOSED DRAINAGE SYSTEM
- Kep SEE GEOLOGICAL ASSESSMENT

REVISIONS

DATE	DESCRIPTION

SITE PLAN
(Phase 1)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410

TCEQ-2

TCEQ-R13
APR 24 2012
SAN ANTONIO

Monday, April 23, 2012, 3:46 PM
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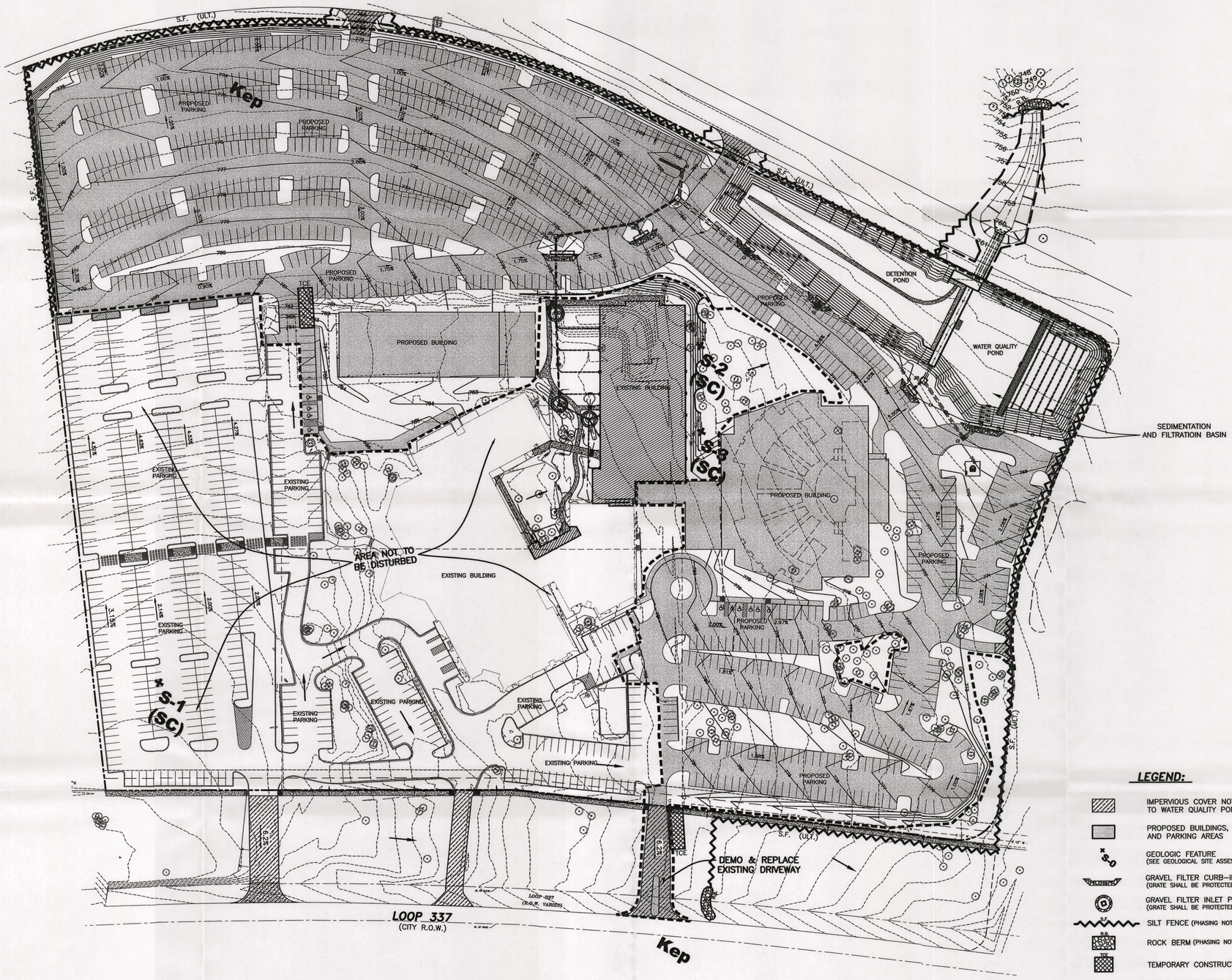

LEGEND:

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- GRAVEL FILTER CURB-INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- GRAVEL FILTER INLET PROTECTION (GRATE SHALL BE PROTECTED AFTER INSTALLATION)
- SILT FENCE (PHASING NOTED)
- ROCK BERM (PHASING NOTED)
- TCE — TEMPORARY CONSTRUCTION ENTRANCE/EXIT (PHASING NOTED)
- AREAS TO BE DISTURBED w/SOIL STABILIZATION (WITH SITE CONSTRUCTION PLANS)
- PROPOSED DRAINAGE SYSTEM
- Kep — SEE GEOLOGICAL ASSESSMENT

REVISIONS

DATE	DESCRIPTION

SITE PLAN
(Phase 2)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY:	D.C.
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JOB NO.:	100410

TCEQ-3

APR 24 2012
SAN ANTONIO

Monday, April 23, 2012 8:38 AM
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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 the site has temporarily or permanently ceased. Where the initiation of stabilization measures by 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

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

12. The holder of any approved 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:

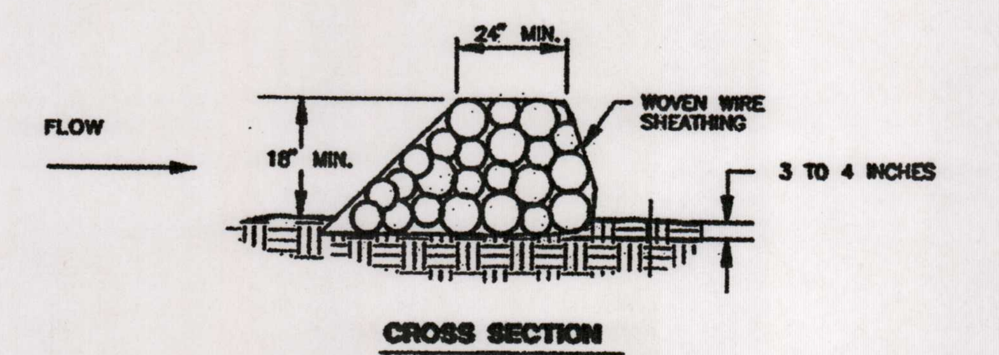
   A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;

   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;

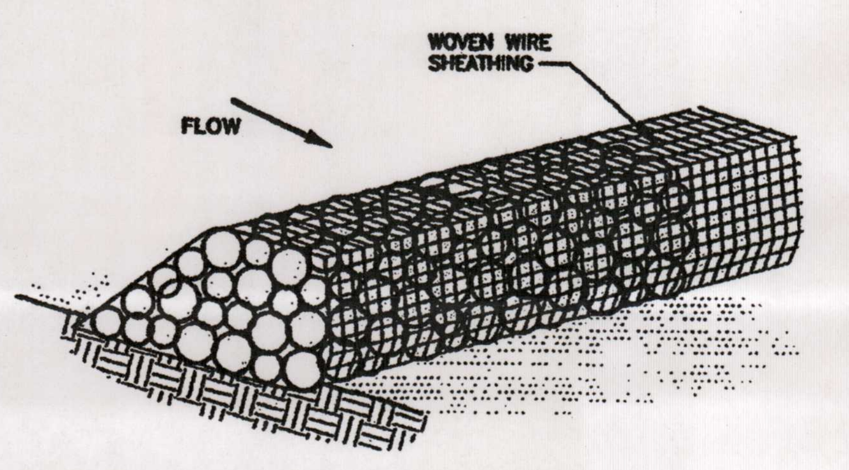
   C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office	San Antonio Regional Office
1921 Cedar Bend, Suite 150	14250 Judson Road
Austin, Texas 78758-5336	San Antonio, Texas 78233-4480
Phone (512) 339-2929	Phone (210) 490-3096
Fax (512) 339-3795	Fax (210) 545-4329

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



CROSS SECTION
N.T.S.



ISOMETRIC PLAN VIEW
N.T.S.

Materials:

(1) The berm structure shall be secured with a woven wire sheathing having maximum opening of 1 inch a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings.

(2) Clean, open graded 3– to 5–inch diameter rock shall be used.

Installation:

(1) Lay out the woven wire sheathing perpendicular to the flow line. The sheathing shall be 20 gauge woven wire mesh with 1 inch opening.

(2) Berm shall have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.

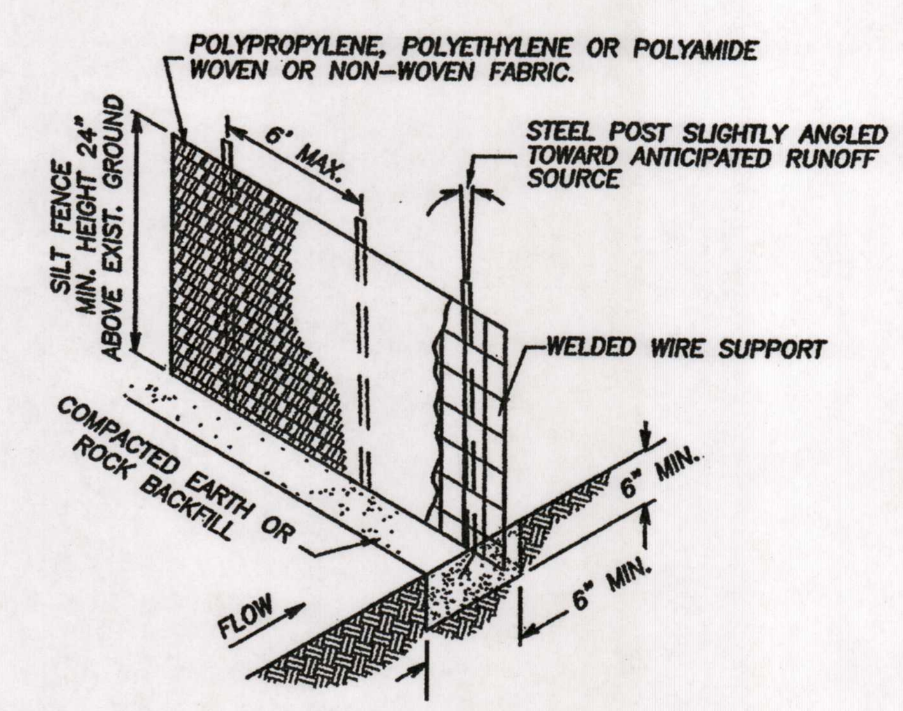
(3) Place the rock along the sheathing as shown in the Rock Berm Detail to a height not less than 18".

(4) Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least 2 inches, and the berm retains its shape when walked upon.

(5) Berm shall be built along the contour at zero percent grade or as near as possible.

(6) The ends of the berm shall be tied into existing upslope grade and the berm shall be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

ROCK BERM DETAIL
N.T.S.



Materials:

(1) Silt fence material shall be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in^2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.

(2) Fence posts shall be made of hot rolled steel, at least 4 feet long with Tee or Y–bar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft , and Brindell hardness exceeding 140.

(3) Welded wire backing to support the fabric shall be galvanized 2" x 4" welded wire, 12 gauge minimum.

Installation:

(1) Steel posts, which support the silt fence, shall be installed on a slight angle toward the anticipated runoff source. Post must be embedded a minimum of 1 foot deep and spaced not more than 6 feet on center.

(2) Lay out fencing down–slope of disturbed area, following the contour as closely as possible. The fence shall be sited so that the maximum drainage area is 1/4 acre/100 feet of fence.

(3) The toe of the silt fence shall be trenched in with a spade or mechanical trencher, so that the down–slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.

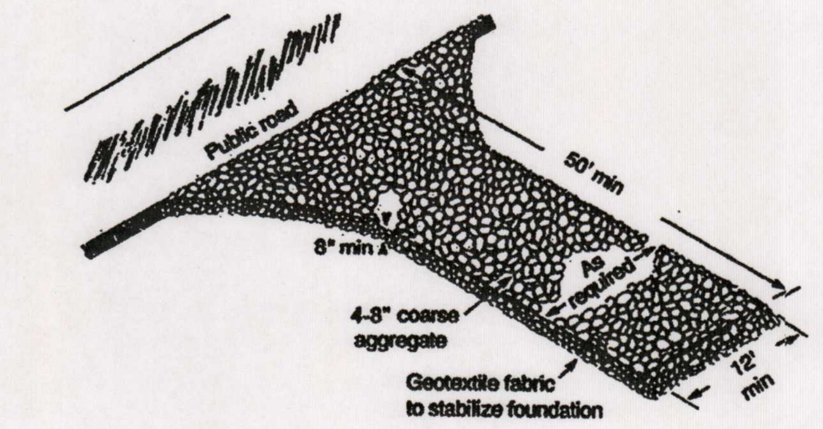
(4) The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.

(5) Silt fence shall be securely fastened to each steel support post or to woven wire,

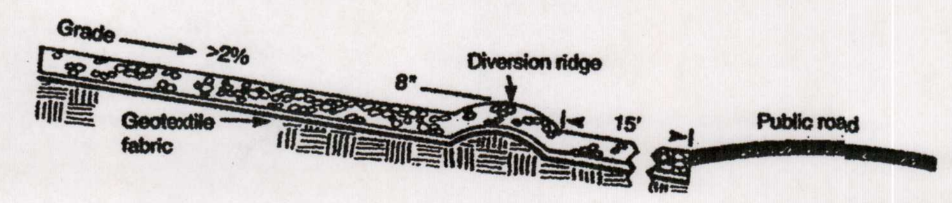
which is in turn attached to the steel fence post. There shall be a 3–foot overlap, securely fastened where ends of fabric meet.

(6) Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow drainage.

SILT FENCE
N.T.S.



Schematic of Temporary Construction Entrance/Exit



Cross-section of a Construction Entrance/Exit

Materials:

(1) The aggregate shall consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan.

(2) The aggregate shall be placed with a minimum thickness of 8 inches.

(3) The geotextile fabric shall be designed specifically for use as a soil filtration media with an approximate weight of 6 oz/yd^2, a mullen burst rating of 140 lb/in^2, and an equivalent opening size greater than a number 50 sieve.

(4) If vehicle(s) require washing, a washing facility with a level area and a minimum of 4 inch washed stone or commercial rack shall be constructed in an approved area. Divert wastewater to sedimentation controlled areas.

Installation:

(1) Remove vegetation and other objectionable material from the foundation area. Grade crown foundation for positive drainage.

(2) The minimum width of the entrance/exit shall be 12 feet or the the full width of exit roadway, whichever is greater.

(3) The construction entrance shall be at least 50 feet long.

(4) If the slope toward the road exceeds 2%, construct a ridge, 6 to 8 inches high with 3 : 1 (H:V) side slopes, across the foundation approximately 15 feet from the entrance to divert runoff away from the public road.

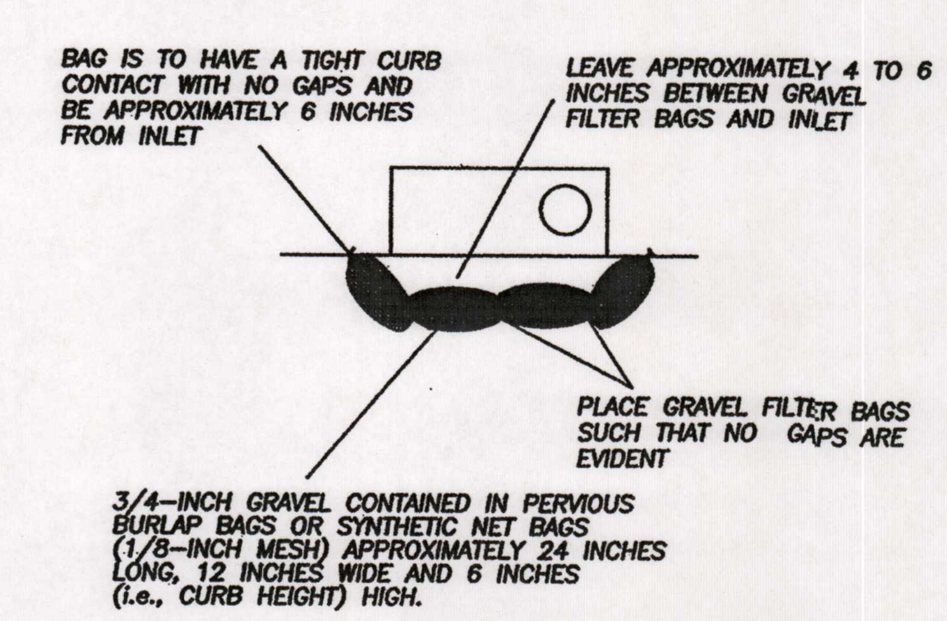
(5) Place geotextile fabric and grade foundation to improve stability, especially where wet conditions are anticipated.

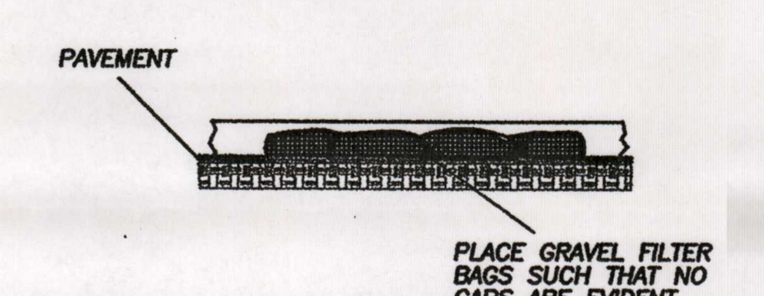
(6) Place stone to dimensions and grade shown on plans. Leave surface smooth and slope for drainage.

(7) Divert all surface runoff and drainage from the stone pad to sedimentation controlled areas.

(8) Top of Temporary Construction Entrance/Exits Shall Project no more than 4" above Natural Ground.

TEMPORARY CONSTRUCTION ENTRANCE/EXIT
N.T.S.





FRONT VIEW

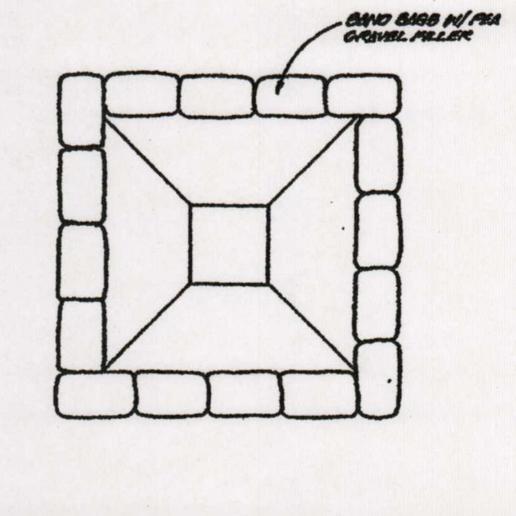
Notes:

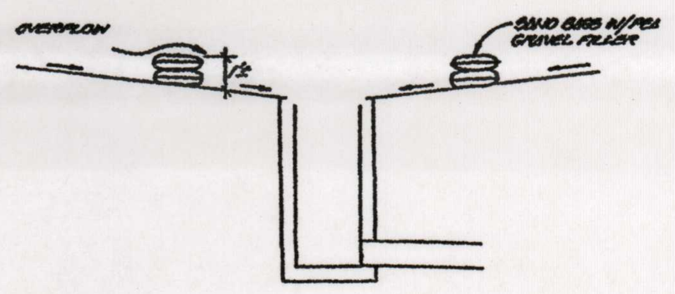
(1) Bags should be filled only 3/4 full gravel filters can be used on pavement or bare ground.

CURB–INLET GRAVEL FILTER DETAIL
N.T.S.

Bagged Gravel Inlet Filter

Sandbags filled with pea gravel can also be used to construct a sediment barrier around curb and drain inlets. The sandbags should be filled with washed pea gravel and stacked to form a continuous barrier about 1 foot high around the inlets. The bags should be tightly abutted against each other to prevent runoff from flowing between the bags. This measure should be installed as shown





GRATE INLET FILTER
N.T.S.

REVISIONS	
DATE	DESCRIPTION

MICHAEL G. SHORT 89015 LICENSED PROFESSIONAL ENGINEER — STATE OF TEXAS

WATER POLLUTION ABATEMENT PLAN
GENERAL NOTES & DETAILS
OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F–532
TEXAS LICENSED SURVEYING FIRM 100059–00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606–3913 FAX (830) 625–2204

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410

TCEQ– 4

Tuesday, August 09, 2011, 3:32 PM
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Temporary Stormwater Section
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

REGULATED ENTITY NAME: Oakwood Baptist Church Youth Center Modification (Onsite Pond)

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:

__ Aboveground storage tanks with a cumulative storage capacity of less that 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.
X Fuels and hazardous substances will not be stored on-site.

2. X **ATTACHMENT A - Spill Response Actions**. A description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is provided at the end of this form.

3. N/A 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. X **ATTACHMENT B - Potential Sources of Contamination.** Describe in an attachment at the end of this form any other activities or processes which may be a potential source of contamination.
__ There are no other potential sources of contamination.

SEQUENCE OF CONSTRUCTION

5. X **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 provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.

6. X 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: Bleider's Creek

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

on the site plan.

7. X **ATTACHMENT D - Temporary Best Management Practices and Measures.** A description of the TBMPs and measures that will be used during and after construction are provided at the end of this form. For each activity listed in the sequence of construction, include appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

   X 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 has been provided in the attachment at the end of this form

   a. A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

   b. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

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

   d. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

   N/A **ATTACHMENT E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is provided at the end of this form. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

   X There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. X **ATTACHMENT F - Structural Practices.** Describe 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. Placement of structural practices in floodplains has been avoided.

10. X **ATTACHMENT G - Drainage Area Map**. A drainage area map is provided at the end of this form to support the following requirements.

   — 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.

X There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

11. N/A **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 has 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 provided as at the end of this form.

12. X **ATTACHMENT I - Inspection and Maintenance for BMPs.** A plan for the inspection of temporary BMPs and measures and for their timely maintenance, repairs, and, if necessary, retrofit is provided at the end of this form. A description of documentation procedures and recordkeeping practices is included in the plan.

13. X 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. X 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. X 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. X 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. X **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 at the end of this form.

18. X Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. X Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

ADMINISTRATIVE INFORMATION

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

21. X If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. X Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

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:

Michael G. Short, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

4/19/12
Date

ATTACHMENT A – SPILL RESPONSE ACTION

The following includes a copy of Section 1.4.16 of TCEQ "Complying with the Edwards Aquifer Rules Technical Guidance on Best Management Practices", Pages 1-118 through 1-121, Spill Prevention and Control. The following is made part of the spill response action plan. In addition in the event of a significant/hazardous spill the contractor/construction personnel shall notify 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 or after hours contact the Environmental Release Hotline at 1-800-832-8224. The contractor shall have available at the construction site all emergency phone numbers.

ATTACHMENT B – POTENTIAL SOURCE OF CONTAMINATION

Potential sources of contamination during construction include vehicle maintenance, vehicle fueling, the use of construction materials and the use of asphalt products.

ATTACHMENT C – SEQUENCE OF MAJOR ACTIVITY

The following is a sequence of major activities which will involve soil disturbance along with an estimate of the area of the site to be disturbed by each activity:

Sequence No.	Description of Soil Disturbing Activity	Estimated Area to be Disturbed by each Activity (Acres) (Total)
1	**Installation of Phase 1 Construction Exit and Erosion Control**	**1/2-acre**
2	**Phase 1 Clearing and Grubbing of Detention Pond and water quality pond**	**2-acres**
3	**Phase 1 Excavation of Detention Pond and water quality pond. Construction of Outfall Structure**	**2-acres**
4	**Abandonment of Existing Water Quality Pond.**	**1/5-acre**
5	**Phase 1 Building Pad Site Preparations**	**3/4-acre**
6	**Phase 1 Parking Lot Excavation, Parking Lot Construction, and drainage improvements**	**2-1/2-acres**
6	**Installation of Phase 2 Construction Exit and Erosion Control**	**1/2-acre**
6	**Phase 2 Parking Lot Excavation, Parking Lot Construction, and drainage improvements**	**9-1/2-acres**
5	**Phase 2 Building Pad Site Preparations**	**2-acres**

Notes:

1. Water quality pond and detention pond will be constructed in phase 1. The water quality pond will go unchanged from phase 1 to phase 2.
2. The water quality pond will be constructed as part of the phase 1 improvements and has been designed to treat runoff from the proposed phase 1 and phase 2 conditions.

ATTACHMENT D – TEMPORARY BEST MANAGEMENT PRACTICES (TBMPS)

The Temporary Best Management Practices (TBMP) that will be used for this project are silt fences, rock berms, gravel filters for inlet protection, and temporary construction entrance/exits. The temporary controls will be installed prior to construction and shall be maintained during construction by the contractor. The controls shall be removed by the contractor when vegetation is established and the construction area is stabilized.

The silt fences, rock berms, gravel filters for inlet protection, and temporary construction entrance/exits shown on the site plan shall be in place prior to any construction activities. These temporary measures will remain in place throughout clearing and grubbing, excavation and grading and underground utility service removal and installation. Upon completion, disturbed areas will be stabilized via hydro mulching.

a. Upgradient stormwater will not pass through the project site.

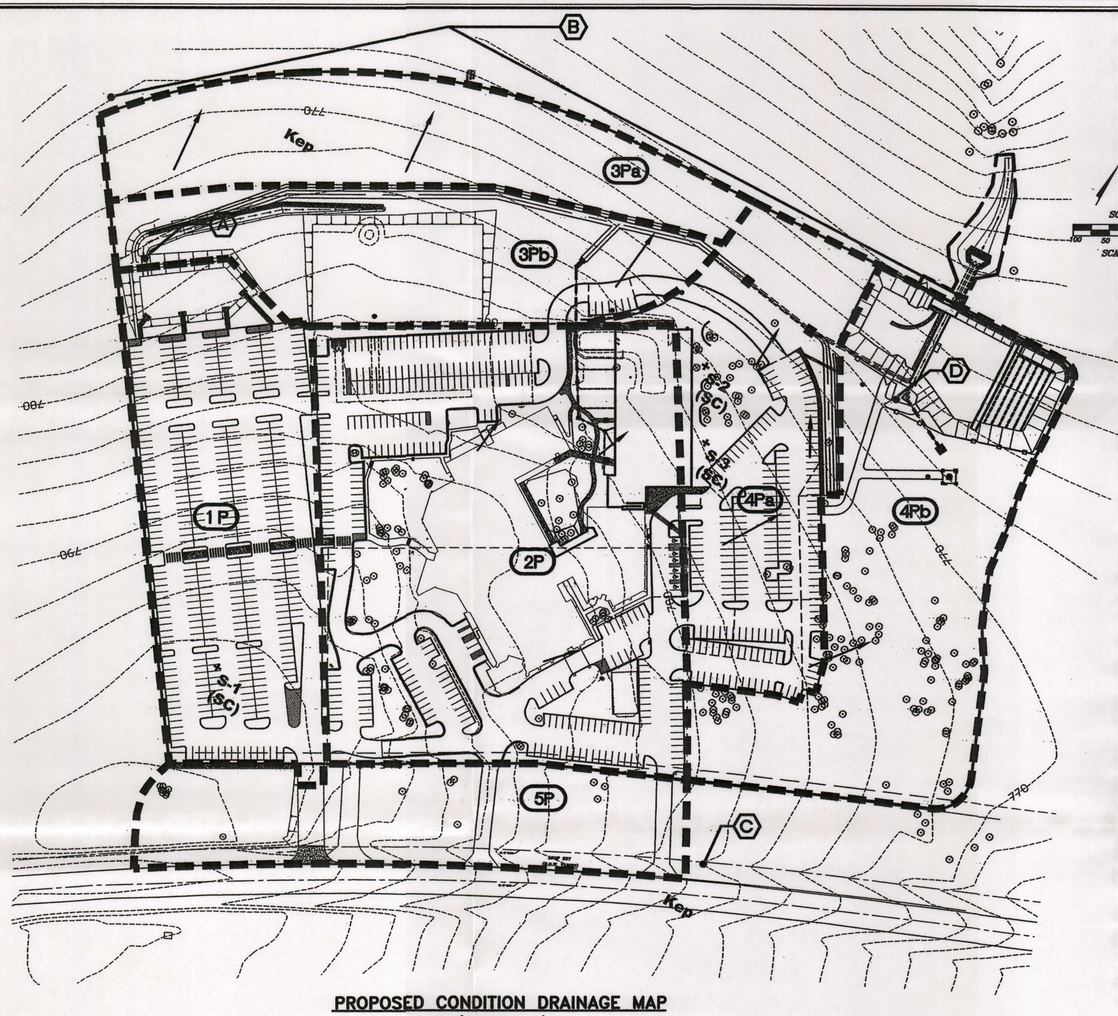
b. Stormwater that originates on site will be filtered by silt fences, gravel filters for inlet protection, and rock berms on the downgradient side of the property. These temporary best management practices will slow the velocity of the water down and the sediment will settle out. It shall be the contractor's responsibility to remove the sediment that builds up after significant rainfall events. There will be no contaminated/polluted runoff coming off this site other than sediment which will be handled with silt fence, rock berms, concrete truck washout pits, and the temporary construction exits.

c. BMP control measures will prevent pollutants from entering surface streams, sensitive features or the aquifer by capturing the silts and sediment before escaping the construction site. The silt fences, gravel filters for inlet protection, and rock berms will slow the velocity of the water down and the sediment will settle out. It shall be the responsibility of the contractor to remove the sediment that builds up after significant rainfall events. The silt fences and rock berms will capture the sediment that would otherwise be conveyed to streams, sensitive features, etc.

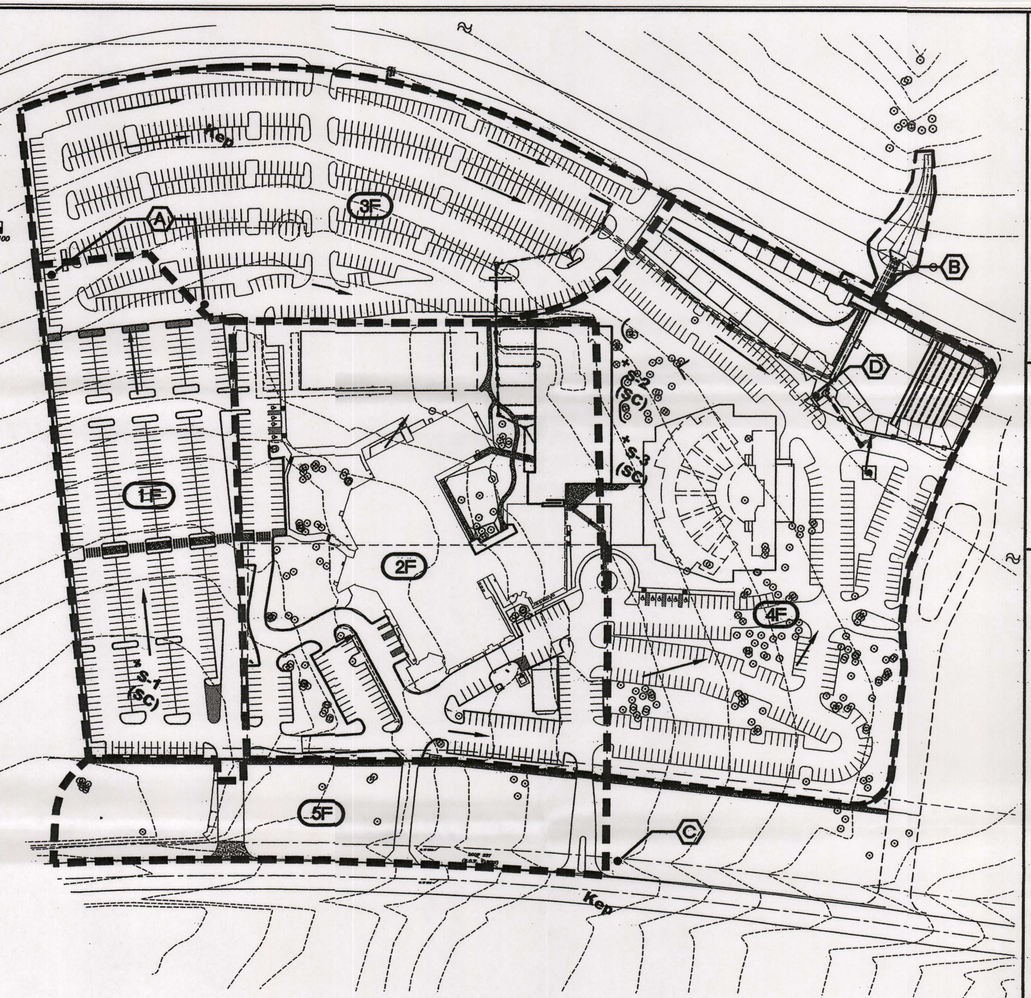
d. There were no sensitive features identified in the geologic assessment. However, if any sensitive features were to be found during construction, all regulated activities near the sensitive feature will be suspended immediately and appropriate action shall be taken per the TCEQ's Water Pollution Abatement Plan General Notes. With regards to measures taken to maintain flow to sensitive features, high service rock berms along with a natural buffer zone around the feature would be implemented in accordance with TCEQ guidelines.

ATTACHMENT F – STRUCTURAL PRACTICES

The structural practices that will be used for this project are silt fences, rock berms, gravel filters for inlet protection, and a temporary construction entrance/exit. The temporary controls will be installed prior to construction and shall be maintained during construction by the contractor for each of the two phases.



PROPOSED CONDITION DRAINAGE MAP
(PHASE 1)



FUTURE CONDITION DRAINAGE MAP
(PHASE 2)

PROPOSED CONDITION NODE SUMMARY				
NODE	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
A	7	10	15	24
B	27	49	71	126
C	3	8	11	17
D	41	82	108	160

PROPOSED DRAINAGE AREA SUMMARY					
LOCATION	AREA (AC.)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
1P	3.8	10	18	23	32
2P	7.1	19	35	45	64
3Pa	2.7	3	9	14	21
3Pb	2.9	3	9	13	20
4Pa	3.2	9	17	22	31
4Pb	4.5	5	14	21	32
5P	2.5	3	8	11	17

FUTURE CONDITION NODE SUMMARY				
NODE	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
A	11	19	24	34
B	26	55	80	148
C	3	8	11	17
D	65	117	152	212

FUTURE DRAINAGE AREA SUMMARY					
LOCATION	AREA (AC.)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
1F	3.8	11	19	24	34
2F	7.1	19	35	45	64
3F	5.6	16	27	35	49
4F	7.7	20	36	47	66
5F	2.5	3	8	11	17

LEGEND

- DRAINAGE AREA BOUNDARY
- (X) DRAINAGE AREA
- PROPOSED DRAINAGE FLOW
- (A) DRAINAGE NODE POINT
- 648 EXISTING CONTOUR

4 REPLACED SHEET TO INCLUDE ONSITE DETENTION POND AND REVISED DRAINAGE AREAS REMOVED ALL REFERENCE TO ROUGH GRADING PERMIT SET AND OFFSITE POND 5

1 REPLACED SHEET TO INCLUDE Q_2 & Q_{25} TO FLOW SUMMARIES

TCEQ-5

REVISIONS

DATE	DESCRIPTION
06/24/11	1 REPLACED SHEET
04/10/12	4 REPLACED SHEET

STATE OF TEXAS — MICHAEL G. SHORT — 80315 — LICENSED PROFESSIONAL ENGINEER

DRAINAGE AREA MAP PROPOSED/FUTURE
(1 OF 2)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

The Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204
SAN ANTONIO

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410

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Wednesday, April 11, 2012, 8:26 AM
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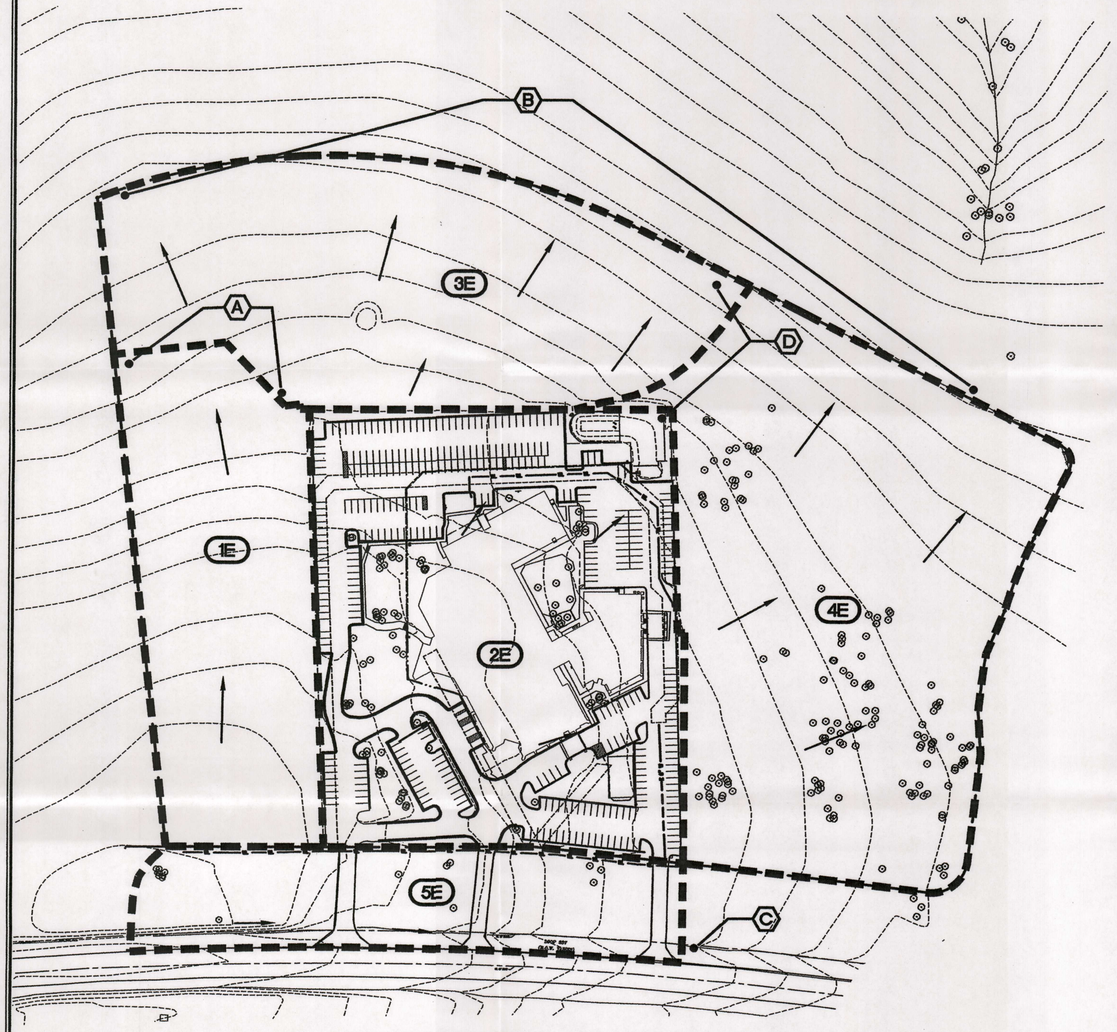
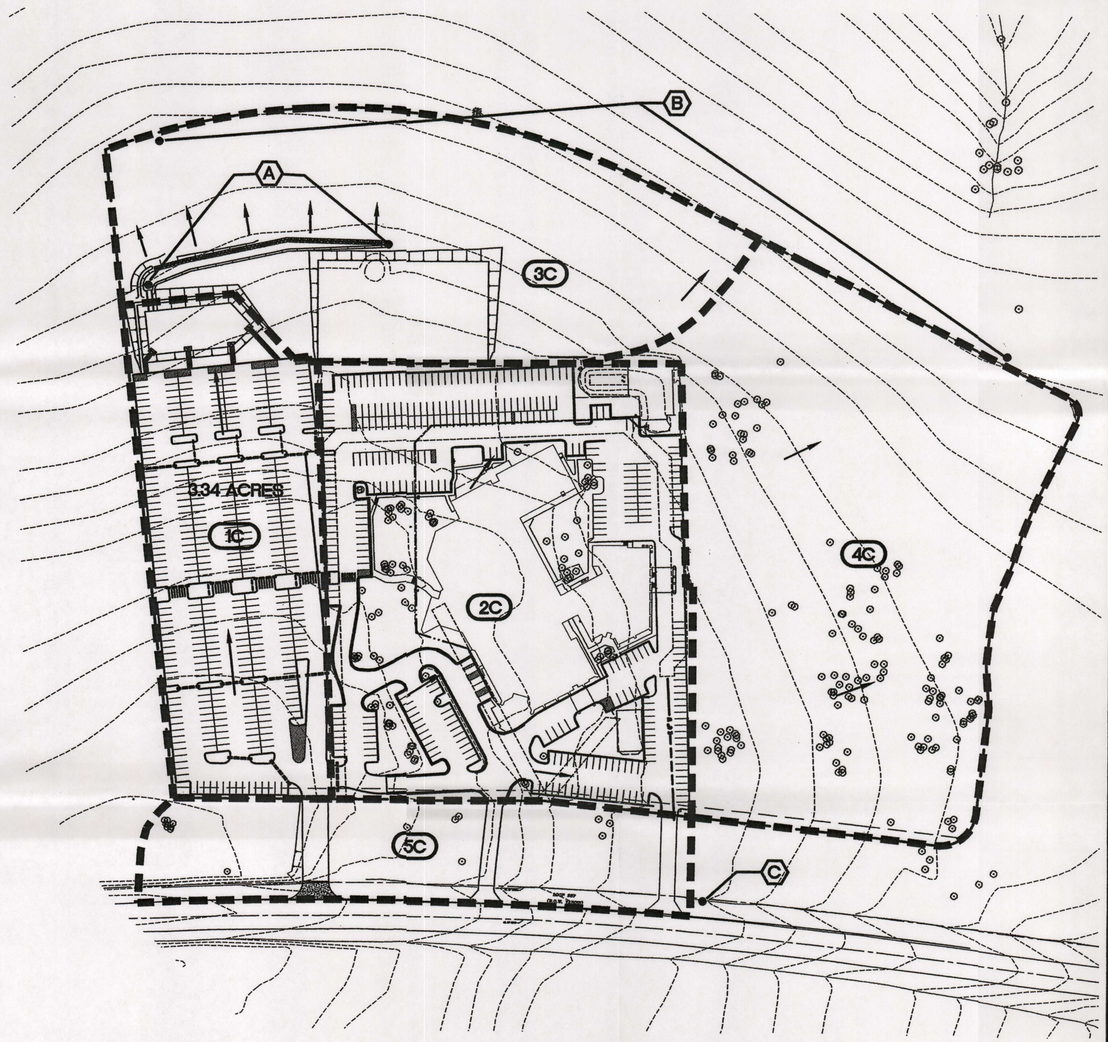


PRE-EXISTING CONDITION DRAINAGE MAP

(PRIOR TO ANY IMPROVEMENTS)



CURRENT CONDITION DRAINAGE MAP

PRE-EXISTING

CONDITION NODE SUMMARY

NODE	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
A	4	11	16	25
B	27	75	108	169
C	3	7	10	15
D	19	51	75	117

PRE-EXISTING

DRAINAGE AREA SUMMARY

LOCATION	AREA (AC.)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{100} (cfs)
1E	3.8	4	11	16	25
2E	7.1	9	23	34	53
3E	5.6	7	18	26	41
4E	7.7	9	23	34	53
5E	2.5	3	7	10	16

SCALE IN FEET

100 50 0 100

SCALE: 1" = 100

LEGEND

- DRAINAGE AREA BOUNDARY
- (X) DRAINAGE AREA
- PROPOSED DRAINAGE FLOW
- (A) DRAINAGE NODE POINT
- 648 EXISTING CONTOUR

4 REPLACED SHEET TO INCLUDE ONSITE DETENTION POND AND REVISED DRAINAGE AREAS REMOVED ALL REFERENCE TO ROUGH GRADING PERMIT SET AND OFFSITE POND 3

1 REPLACED SHEET TO INCLUDE Q_2 & Q_{25} TO FLOW SUMMARIES

APR 24 2012

SAN ANTONIO, TX

TCEQ - 6

REVISIONS

DATE		DESCRIPTION
08/24/11	1	REPLACED SHEET
04/10/12	4	REPLACED SHEET

STATE OF TEXAS — MICHAEL G. SHORT — 80015 — LICENSED PROFESSIONAL ENGINEER

DRAINAGE AREA MAP EXISTING/CURRENT (2 OF 2)

OAKWOOD BAPTIST CHURCH

NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.

TEXAS REGISTERED ENGINEERING FIRM F-532

TEXAS LICENSED SURVEYING FIRM 100059-00

CONSULTING ENGINEERS & LAND SURVEYORS

2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130

PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY: D.C.

CHECKED BY: M.G.S.

DATE: DECEMBER 2010

JOB NO.: 100410

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Wednesday, April 11, 2012, 8:28 AM
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ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BMPS

Silt Fence Inspection and Maintenance Guidelines:

1) Inspect all fencing weekly, 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. If a section of fence is obstructing vehicular access, relocate it to a spot where it will provide equal protection, but will not obstruct vehicles.

Rock Berm Inspection and Maintenance Guidelines:

1) Inspection shall be made weekly and after each rainfall by the contractor.
2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved site and in such a manner as to not contribute to additional siltation.
3) Repair any loose wire sheathing.
4) The berm shall be reshaped as needed during inspection.
5) The berm shall 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 shall be left in place until all upstream areas are stabilized and accumulated silt removed.

Temporary Construction Entrance/Exit:

1) The entrance shall be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way.
2) All sediment spilled, dropped, washed or tracked on to public rights-of-way shall be removed immediately by the contractor.
3) When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way.
4) When washing is required, it shall be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
5) All sediment shall be prevented from entering any storm drain, ditch or water course by using approved methods.

Gravel Bag Inlet Filter Inspection and Maintenance Guidelines:

1) Inspection shall be made weekly and after each rainfall by the contractor. Repair or replacement shall be made promptly as needed by the contractor or deemed necessary by the engineer.
2) Remove sediment when buildup reaches a depth of 3 inches Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
3) Check placement of device to prevent gaps between device and inlet.
4) Structure should be removed and the area stabilized only after the remaining drainage area has been properly stabilized.

RG-348
Revised July 2005

Complying with the Edwards Aquifer Rules

Technical Guidance on Best Management Practices

Field Operations Division

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

printed on
recycled paper

1.4.16 Spill Prevention and Control

The objective of this section is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

(1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.

(2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.

(3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).

(4) Establish a continuing education program to indoctrinate new employees.

(5) Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

(1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.

(2) Store hazardous materials and wastes in covered containers and protect from vandalism.

(3) Place a stockpile of spill cleanup materials where it will be readily accessible.

(4) Train employees in spill prevention and cleanup.

(5) Designate responsible individuals to oversee and enforce control measures.

(6) Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean up activities.

(7) Do not bury or wash spills with water.

(8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.

(9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.

(10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.

(11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.

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

Cleanup

(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 this section 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 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 until 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.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tnrcc.state.tx.us/enforcement/emergency_response.html

TEMPORARY CONSTRUCTION ENTRANCE/EXIT

INSPECTION FORM

GENERAL NOTES

1. STONE SIZE - 4 TO 8 INCHES CRUSHED ROCK.

2. LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.

3. THICKNESS - NOT LESS THAN 8 INCHES.

4. WIDTH - NOT LESS THAN 12 FEET.

5. WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO THAT NO SEDIMENT LEAVES THE SITE. ALL UNFILTERED SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE.

6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.

7. DRAINAGE - ENTRANCE MUST BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

INSPECTION REPORT

DATE:_____

SIGNATURE: _____

DOES MUCH SEDIMENT GET TRACKED ONTO ROAD?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE?

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

SILT FENCE
INSPECTION FORM

GENERAL NOTES

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

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT), WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.

3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED AND COMPACTED.

4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST AND TO WOVEN WIRE, WHICH IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT DOUBLE OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

5. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

INSPECTION REPORT

DATE:_____

SIGNATURE: _____

IS THE BOTTOM OF THE FABRIC STILL BURIED ?	IS THE FABRIC TORN OR SAGGING ?	ARE THE POSTS TIPPED OVER ?	HOW DEEP IS THE SEDIMENT?

MAINTENANCE REQUIRED FOR SILT FENCE:

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

ROCK BERMS
INSPECTION FORM

GENERAL NOTES:

1. WOVEN WIRE SHEATHING SHALL BE PERPENDICULAR TO THE FLOW LINE AND THE SHEATHING SHALL BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.

2. BERM SHALL HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.

3. PLACEMENT OF THE ROCK ALONG THE SHEATHING SHALL NOT BE LESS THAN 18 INCHES.

4. THE WIRE SHEATHING SHALL BE WRAPPED AROUND THE ROCK AND SECURED WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.

5 BERM SHALL BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.

6 THE ENDS OF THE BERM SHALL BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

INSPECTION REPORT

DATE: _____

SIGNATURE: _____

IS THE BERM A MINIMUM OF 18 INCHES HIGH ?	IS LEVEL OF SILT GREATER THAN 6 INCHES DEEP?

MAINTENANCE REQUIRED FOR ROCK BERMS:

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

GRAVEL BAG INLET FILTER
INSPECTION FORM

GENERAL NOTES:

1. SAND BAGS SHALL BE FILLED WITH PEA GRAVEL.
2. GRAVEL FILTER BAGS SHALL BE PLACED COMPLETELY AROUND GRATES.
3. THERE SHOULD BE NO GAPS IN BETWEEN GRAVEL FILTER BAGS.
4. WHEN SILT REACHES A DEPTH EQUAL TO 3 INCHES, THE SILT SHALL BE REMOVED AND DISPOSED OF.

INSPECTION REPORT

DATE: _____

SIGNATURE: _____

ARE GAPS/HOLES EVIDENT BETWEEN BAGS ?	IS LEVEL OF SILT GREATER THAN 3 INCHES DEEP?

MAINTENANCE REQUIRED FOR GRAVEL BAG INLET FILTERS:

_____

_____

_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Temporary Stabilization - No bare ground exposed during construction will be left to stabilize naturally. In any disturbed area where construction activities have ceased, permanently or temporarily, the contractor shall initiate temporary stabilization of the area by the use of seeding and mulching within 14 days, except in areas where construction activities are scheduled to resume within 21 days. The temporary seeding will consist of Green Sprangletop, Buffalograss, and Bermuda Grass with straw or cedar mulch applied on final layer in accordance with TxDOT Item 164- Seeding for Erosion Control. Depending on the growing season at the time of construction, mixture and application rates may be modified by the engineer.

Permanent Stabilization - Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later than 14 days after the last construction activity. The permanent seed mix shall consist of Green Sprangletop, Buffalograss, and Bermuda Grass with straw or cedar mulch applied on final layer in accordance with TxDOT Item 164 - Seeding for Erosion Control. Depending on the growing season at the time of construction, mixture and application rates may be modified by the engineer. It shall be the contractor's responsibility to provide watering bi-weekly for the seeded areas for a period of 30 calendar days.

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

REGULATED ENTITY NAME: Oakwood Baptist Church Youth Center Modification (Onsite Pond)

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

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

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

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

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

   _____

   _____

3. X 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.

4. X 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.

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

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

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

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

N/A **ATTACHMENT A - 20% or Less Impervious Cover Waiver.** This 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 found at the end of this form.

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

___ This 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 identified as **ATTACHMENT B** at the end of this form.

X If no surface water, groundwater or stormwater originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form.

___ If 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, an explanation is provided as **ATTACHMENT B** at the end of this form.

7. **ATTACHMENT C - BMPs for On-site Stormwater.**

X 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 identified as **ATTACHMENT C** at the end of this form.

___ If 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, an explanation is provided as **ATTACHMENT C** at the end of this form.

8. X **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 provided at the end of this form. Each feature identified in the Geologic Assessment as "sensitive" has been addressed.

9. X 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" or "possibly sensitive" feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring "sensitive" or "possibly sensitive" features on this site.

N/A **ATTACHMENT E - Request to Seal Features.** A request to seal a naturally-occurring "sensitive" or "possibly sensitive" feature, that includes a justification as to why no reasonable and practicable alternative exists, is found at the end of this form. A request and justification has been provided for each feature.

10. X **ATTACHMENT F - Construction Plans.** Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ

Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details must be shown on the construction plans.

11. X **ATTACHMENT G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is provided at the end of this form. The plan has been prepared and certified by the engineer designing the permanent BMPs and measures. The plan has been signed by the owner or responsible party. The plan includes procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofits as well as a discussion of record keeping procedures.

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

__ Pilot-scale field testing (including water quality monitoring) may be required for BMPs that are not contained in technical guidance recognized by or prepared by the executive director.

__ **ATTACHMENT H - Pilot-Scale Field Testing Plan.** A plan for pilot-scale field testing is provided at the end of this form.

13. X **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 provided at the end of this form. 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.

Responsibility for maintenance of permanent BMPs and measures after construction is complete.

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

15. X A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

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:

Michael G. Short, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

4/19/12
Date

ATTACHMENT B – BMPS FOR UPGRADIENT STORMWATER

Both Phase 1 and Phase 2 are essentially isolated from upgradient flows given the existing terrain. The proposed improvements will maintain the upstream perimeter drainage patterns around the site (reference the Drainage Area Map provided with the Temporary Stormwater Section).

ATTACHMENT C – BMPS FOR ONSITE STORMWATER (TCEQ-0600)

BMPs for onsite stormwater will be a partial sedimentation and filtration system. All runoff as a result of this modification will be routed to the proposed partial sedimentation and filtration system.

.

ATTACHMENT D – BMPS FOR SURFACE STREAMS

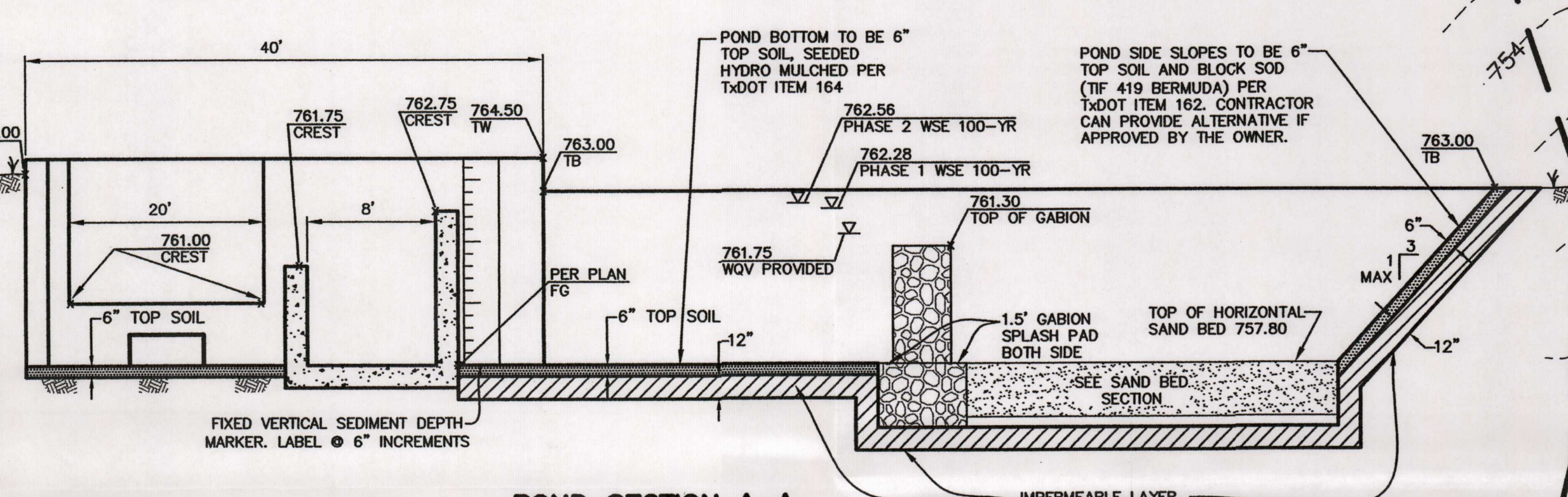
BMPs for surface streams will be a partial sedimentation and filtration system. All runoff as a result of this modification will be routed to the proposed partial sedimentation and filtration system.

.

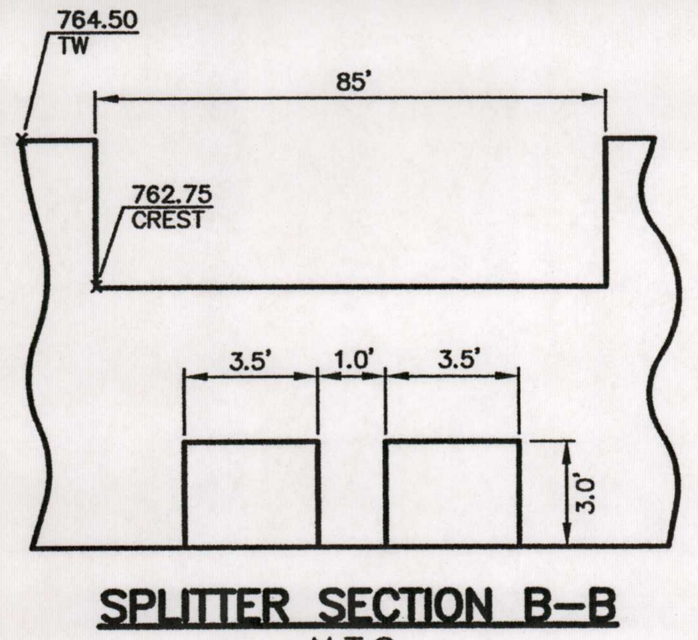
ATTACHMENT I– MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

BMPs measures for minimizing surface stream contamination will be a partial sedimentation and filtration system. All runoff as a result of this modification will be routed to the proposed partial sedimentation and filtration system.

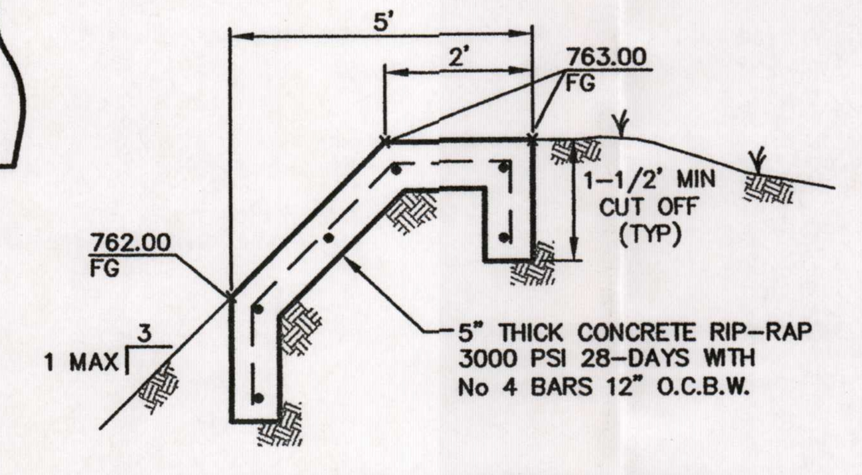
.



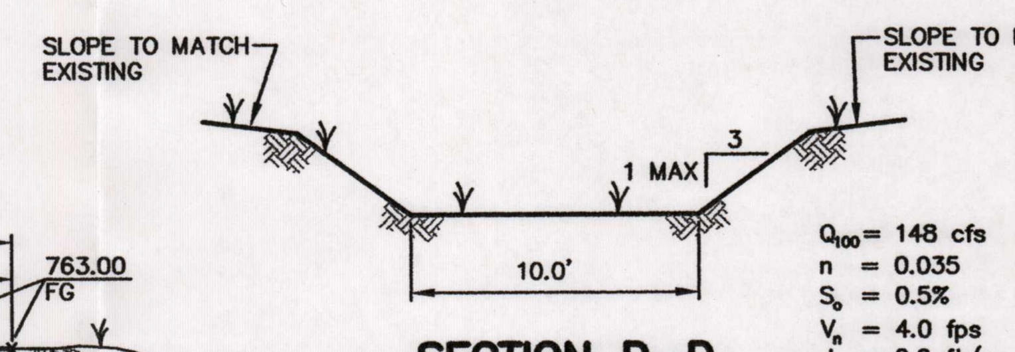
POND SECTION A-A
N.T.S.



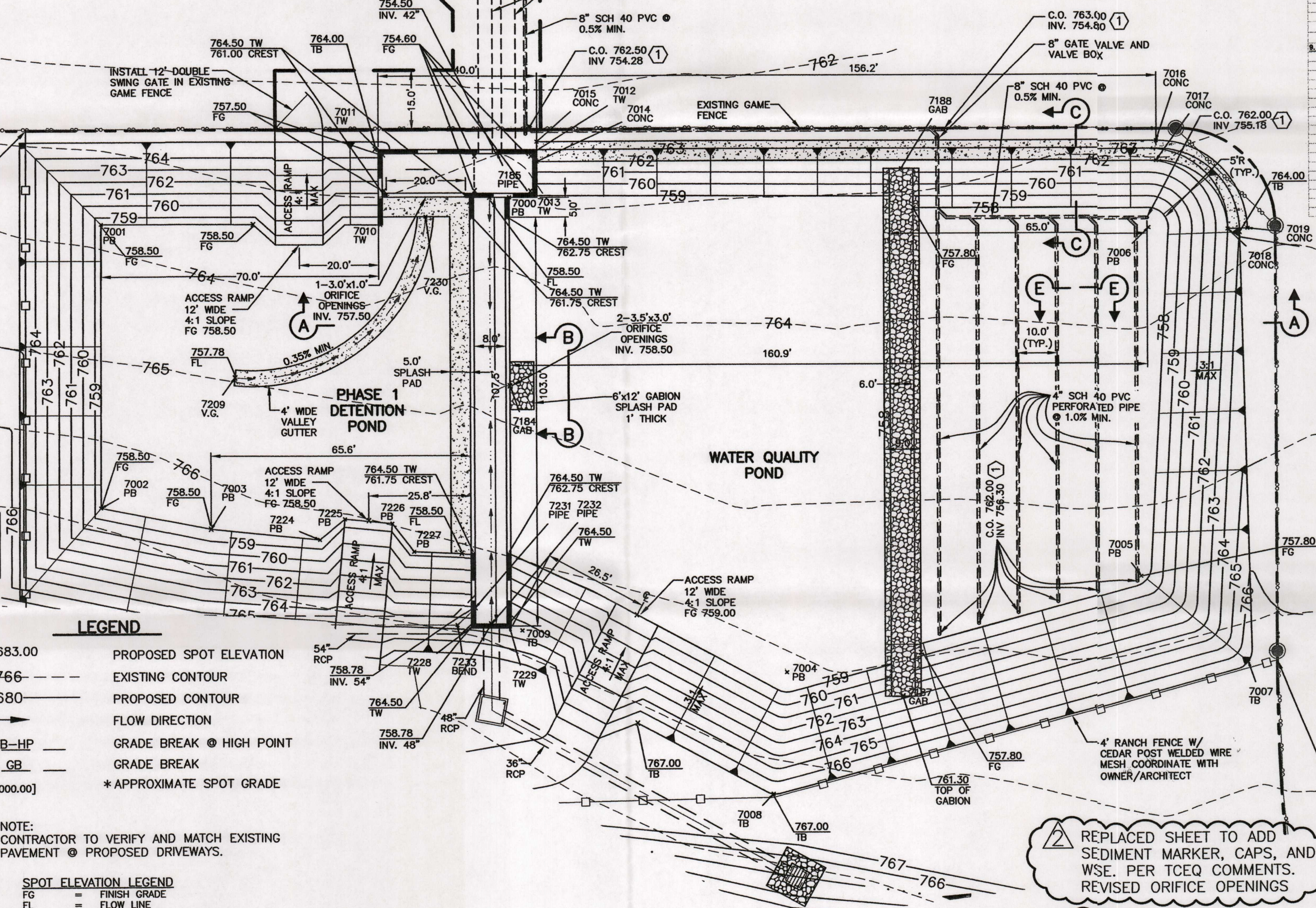
SPLITTER SECTION B-B
N.T.S.



OVERFLOW SECTION C-C
N.T.S.



SECTION D-D
N.T.S.



REPLACED SHEET TO INCLUDE ONSITE DETENTION POND, WITH EXCEPTION OF SAND FILTER ALL OTHER ITEMS REVISED. REMOVED REFERENCE TO ROUGH GRADING PERMIT SET (4)

NOTE:
(1) ALL CLEANOUTS SHALL HAVE SCREW ON CAPS.

REPLACED SHEET TO ADD SEDIMENT MARKER, CAPS, AND WSE. PER TCEQ COMMENTS. REVISED ORIFICE OPENINGS (2)

REPLACED SHEET TO REFLECT ADJUSTMENTS TO SPLITTER STRUCTURE AND OUTFALL HEADWALL (1)

NOTE:
WATER QUALITY POND WILL GO UNCHANGED FROM PHASE 1 TO PHASE 2.

POINT TABLE			
POINT NUMBER	NORTHING	EASTING	DESCRIPTION
7000	13815321.11	2241586.80	PB
7001	13815309.61	2241484.22	PB
7002	13815238.26	2241487.27	PB
7003	13815234.14	2241515.19	PB
7004	13815204.56	2241661.88	PB
7005	13815232.84	2241750.11	PB
7006	13815320.59	2241748.25	PB
7007	13815212.20	2241777.98	TB
7008	13815173.82	2241659.76	TB
7009	13815212.25	2241594.68	TB
7010	13815312.62	2241554.66	TW
7011	13815331.10	2241553.80	TW
7012	13815332.90	2241592.76	TW
7013	13815321.91	2241593.27	TW
7014	13815330.43	2241593.38	CONC
7015	13815335.42	2241593.14	CONC
7016	13815342.66	2241749.21	CONC
7017	13815337.66	2241749.44	CONC
7018	13815320.97	2241768.23	CONC
7019	13815321.33	2241773.22	CONC
7184	13815273.67	2241589.00	GAB
7185	13815331.96	2241583.29	PIPE
7186	13815398.56	2241580.21	PIPE
7187	13815199.83	2241691.44	GAB
7188	13815332.69	2241685.28	GAB
7206	13815410.30	2241579.66	C.C.
7207	13815460.24	2241577.35	C.C.
7208	13815551.28	2241548.19	C.C.
7209	13815272.46	2241519.66	V.G.
7224	13815232.70	2241542.73	PB
7225	13815238.11	2241548.82	PB
7226	13815237.54	2241560.81	PB
7227	13815230.70	2241566.60	PB
7228	13815212.79	2241582.31	TW
7229	13815213.21	2241591.30	TW
7230	13815315.14	2241565.93	V.G.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Oakwood Baptist Phase 1
Date Prepared: 1/18/2011

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

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

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

County =	Comal	
Total project area included in plan * =	24.20	acres
Predevelopment impervious area within the limits of the plan * =	1.44	acres
Total post-development impervious area within the limits of the plan* =	10.57	acres
Total post-development impervious cover fraction * =	0.44	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	8195	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 1

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

Drainage Basin/Outfall Area No. =	1	
Total drainage basin/outfall area =	21.40	acres
Predevelopment impervious area within drainage basin/outfall area =	1.44	acres
Post-development impervious area within drainage basin/outfall area =	10.29	acres
Post-development impervious fraction within drainage basin/outfall area =	0.48	
$L_{M\ THIS\ BASIN}$ =	7944	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter
Removal efficiency = 89 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	21.40	acres
A_I =	10.29	acres
A_P =	11.11	acres
L_R =	10633	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 8195 lbs.
F = 0.77

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

Rainfall Depth =	0.97	inches
Post Development Runoff Coefficient =	0.35	
On-site Water Quality Volume =	26214	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	5243	
Total Capture Volume (required water quality volume(s) x 1.20) =	31457	cubic feet

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

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =	31457	cubic feet	
Minimum filter basin area =	1456	square feet	
Maximum sedimentation basin area =	13107	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	3277	square feet	For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	31457	cubic feet	
Minimum filter basin area =	2621	square feet	
Maximum sedimentation basin area =	10486	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	655	square feet	For maximum water depth of 8 feet

Hydraulic Calculations Based on Phase Future Flow

Splitter Section 100-yr Flow Over to Outfall

Q_{100s} := 212 Flow over crest Q100 (cfs) C_w := 3.0 Weir Coefficient L := 85 Length of crest (ft)

Crest := 761.75 OpeningInvert := 758.50

$H := \left(\frac{Q_{100s}}{L \times C_w}\right)^{\frac{2}{3}}$ H = 0.884 Height of flow relative to weir crest (ft) $V := \frac{Q_{100s}}{L \times H}$ V = 2.821 Velocity (fps)

$WSE_{100overflow}$:= H + Crest $WSE_{100overflow}$ = 762.63

Splitter Section 25-yr Flow to Water Quality Pond

Q_o := 152 Flow Q25 (cfs) H := 3 Height of Opening (ft)

C_o := .67 OrificeCoefficient W := 7 Width of Opening (ft) A := H × W A = 21 Area (sf)

$h := Crest - \left(\frac{H}{2} + OpeningInvert\right)$ h = 1.75 $Q := C_o \times A \times \sqrt{2 \times 32.2 \times h}$ Q = 149 Q25 Design (cfs)

Emergency Overflow

Q_{25e} := 152 Flow overflow crest Q25 (cfs) C_w := 3.0 Weir Coefficient L := 156 Length of crest (ft)

ECrest := 763

$H := \left(\frac{Q_{25e}}{L \times C_w}\right)^{\frac{2}{3}}$ H = 0.472 Height of flow relative to weir crest (ft) $V := \frac{Q_{25e}}{L \times H}$ V = 2.062 Velocity (fps)

$WSE_{emergencyoverflow}$:= H + ECrest $WSE_{emergencyoverflow}$ = 763.47

Water Quality Pond Available Storage

Elevation	Area (sf)	Total Storage (cf)
758	7283	0
759	18170	12727
760	19461	31542
761	20784	51665
762	22143	73128
763	23555	95977

Phase 1 Required Storage = 31,457 cf
Phase 2 Required Storage = 58,920 cf
Provided Storage = 67,762 cf

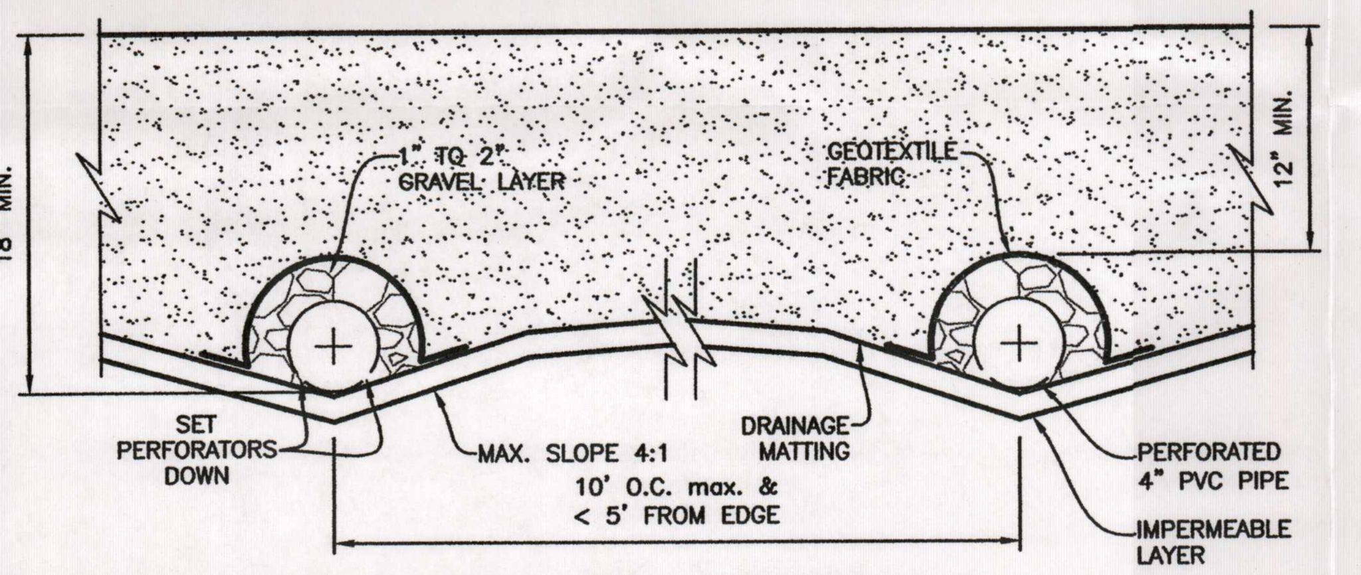
Phase 1 Required Filter Area = 2,621 sf
Phase 2 Required Filter Area = 4,910 sf
Provided Filter Area = 6,159 sf

NOTE:
CONTRACTOR TO CONTACT ENGINEER OF RECORD TO OBSERVE COMPLETED DRAIN PIPE INSTALLATION PRIOR TO GRAVEL PLACEMENT.

Table 3-6 Clay Liner Specifications

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

NOTE:
CONTRACTOR TO CONTACT OWNER'S GEO-TECH TO INSPECT CLAY LINER MATERIAL PRIOR TO AND DURING INSTALLATION. NOTE CLAY LINER REQUIRED IN WATER QUALITY POND ONLY.



SAND BED PROFILE E-E
(TRENCH DESIGN)
N.T.S.

SAND BED WITH GRAVEL LAYER NOTES:

THE TOP LAYER IS TO BE A MINIMUM OF EIGHTEEN (18) INCHES OF 0.02-0.04 INCH DIAMETER SAND WHICH CORRESPOND WITH ASTM C-33 CONCRETE SAND (SMALLER SAND SIZE IS NOT ACCEPTABLE). UNDER THE SAND SHALL BE A LAYER OF ONE-HALF (0.5) TO ONE AND ONE-HALF (1.5) INCH DIAMETER WASHED, ROUNDED, RIVER GRAVEL WHICH PROVIDES A MINIMUM OF TWO (2) INCHES OF COVER OVER THE TOP OF THE UNDERDRAIN LATERAL PIPES. THE SAND AND GRAVEL MUST BE SEPARATED BY A LAYER OF GEOTEXTILE FABRIC MEETING THE SPECIFICATIONS LISTED IN TABLE 3.6 "GEOTEXTILE FABRIC SPECIFICATIONS (COA, 1997). THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS LISTED IN TABLE 3.6 TAKEN FROM THE TNRCC TECHNICAL GUIDANCE ON BEST MANAGEMENT PRACTICES, JUNE 1999.

LEGEND

x683.00	PROPOSED SPOT ELEVATION
---766---	EXISTING CONTOUR
—680—	PROPOSED CONTOUR
→	FLOW DIRECTION
GB-HP	GRADE BREAK @ HIGH POINT
GB	GRADE BREAK
[000.00]	* APPROXIMATE SPOT GRADE

* NOTE:
CONTRACTOR TO VERIFY AND MATCH EXISTING PAVEMENT @ PROPOSED DRIVEWAYS.

SPOT ELEVATION LEGEND

FG	=	FINISH GRADE
FL	=	FLOW LINE
TB	=	TOP OF BANK
PB	=	POND BOTTOM
C.C	=	CHANNEL CENTERLINE
GAB	=	GABION
TW	=	TOP OF WALL
CONC	=	CONCRETE
C.O.	=	CLEANOUT
INV	=	INVERT
WSE	=	WATER SURFACE ELEVATION
V.G.	=	VALLEY GUTTER

REVISIONS		
DATE		DESCRIPTION
08/09/11	1	REPLACED SHEET
10/19/11	2	REPLACED SHEET
03/02/12	3	ROUGH GRADING SET
04/10/12	4	REPLACED SHEET

STATE OF TEXAS — MICHAEL G. SHORT — 88015 — LICENSED PROFESSIONAL ENGINEER

PERMANENT WATER POLLUTION ABATEMENT PLAN & DETAILS (PHASE 1)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

THE Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410

C17[4]

TCEQ-7

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Oakwood Baptist Phase 2 (Onsite Detention Pond)
Date Prepared: 4/16/2012

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

1. The Required Load Reduction for the total project: Calculations from RG-348 — Pages 3-27 to 3-30

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

where:
- $L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
- A_N = Net increase in impervious area for the project
- P = Average annual precipitation, inches

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

County =	Comal	
Total project area included in plan * =	24.20	acres
Predevelopment impervious area within the limits of the plan * =	1.44	acres
Total post-development impervious area within the limits of the plan* =	16.74	acres
Total post-development impervious cover fraction * =	0.69	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	13733	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 1

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	24.20	acres
Predevelopment impervious area within drainage basin/outfall area =	1.44	acres
Post-development impervious area within drainage basin/outfall area =	16.34	acres
Post-development impervious fraction within drainage basin/outfall area =	0.68	
$L_{M\ THIS\ BASIN}$ =	13374	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	Sand Filter	
Removal efficiency =	89	percent

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

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

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

A_C =	24.20	acres
A_I =	16.34	acres
A_P =	7.86	acres
L_R =	16729	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	13733	lbs.
F =	0.82	

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

Rainfall Depth =	1.16	inches
Post Development Runoff Coefficient =	0.48	
On-site Water Quality Volume =	49100	cubic feet

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

Off-site area draining to BMP =		acres
Off-site impervious cover draining to BMP =		acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	9820	
Total Capture Volume (required water quality volume(s) x 1.20) =	58920	cubic feet

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

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =	58920	cubic feet	
Minimum filter basin area =	2728	square feet	
Maximum sedimentation basin area =	24550	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	6138	square feet	For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	58920	cubic feet	
Minimum filter basin area =	4910	square feet	
Maximum sedimentation basin area =	19640	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	1228	square feet	For maximum water depth of 8 feet

NOTE:
WATER QUALITY POND WILL GO UNCHANGED FROM PHASE 1 TO PHASE 2.
SEE SHEET TCEQ-4 FOR POND DETAILS AND HYDRAULIC CALCULATIONS.

REVISIONS

DATE	DESCRIPTION

STATE OF TEXAS — MICHAEL G. SHORT — 88015 — LICENSED PROFESSIONAL ENGINEER

PERMANENT WATER POLLUTION ABATEMENT PLAN & DETAILS (PHASE 2)

OAKWOOD BAPTIST CHURCH
NEW BRAUNFELS, TEXAS

The Schultz Group, INC.
TEXAS REGISTERED ENGINEERING FIRM F-532
TEXAS LICENSED SURVEYING FIRM 100059-00
CONSULTING ENGINEERS & LAND SURVEYORS
2461 LOOP 337 NEW BRAUNFELS, TEXAS 78130
PHONE (830) 606-3913 FAX (830) 625-2204

DRAWN BY: D.C.
CHECKED BY: M.G.S.
DATE: DECEMBER 2010
JOB NO.: 100410

TCEQ-8

MAINTENANCE PLAN AND SCHEDULE FOR SEDIMENTATION AND FILTRATION BASINS

PROJECT NAME: Oakwood Baptist Church Youth Center Modification (Onsite Pond)

ADDRESS: 2154 Loop 337

CITY, STATE ZIP: New Braunfels, Texas 78130

SEDIMENTATION BASIN

Twice a Year: The level of accumulated silt in the inlet structure and basin shall be checked. If depth of silt exceeds 6 inches or when function is impaired, it shall be removed and disposed of "properly". The inlet structure and basin shall be checked for accumulation of debris and trash. The debris and trash shall be removed.

The basin shall be inspected for structural integrity and repaired if necessary. Such items to be inspected include; pipes, concrete walls, floors and baffles, inlets, gabions, etc.

Every 5 Years: Sediment shall be removed from the inlet structure and basin at intervals not to exceed 5 years, regardless of depth.

After Rainfall: The basin shall be checked after each rainfall occurrence to insure that it completely drains within 48 hours after the storm is over. If it does not drain within this time, corrective maintenance is required.

SAND FILTER

Twice a Year: The level of accumulated silt shall be checked. If depth or silt/pollutants exceeds ½", it shall be removed and disposed of "properly".

The accumulation of pollutants/oils shall be checked. If the pollutants have significantly reduced the designed capacity of the sand filter and/or the drawdown time exceeds 48 hours, the upper layer of sand in the filter shall be removed and replaced.

The basin shall be checked for accumulation of debris and litter. Debris and litter accumulated in the facility must be removed during each inspection.

The basin shall be inspected for structural integrity and repaired if necessary. Such items to be inspected include; pipes and cleanouts, gate valve, etc. Under drain piping shall be flushed to remove sediment buildup.

After Rainfall: The basin shall be checked after each rainfall occurrence to insure that it drains within 48 hours. If it does not drain within this time, corrective maintenance is required.

Following any required maintenance, the surface of the sand filter shall be raked and leveled to restore the system to its designed condition. Maintenance of the sand filter may require that a section of gabion be temporarily moved to allow access for equipment into the sand filter area. Upon completion of maintenance the gabion shall be reset into is original position.

Vegetation in and around basin will be maintained to a height of less than 18 inches.

"Proper" disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality guidelines and specifications.

After Inspection/Maintenance

All inspections and maintenance and repair activities shall be well documented by the responsible party. These documents shall include date, time, and a detailed description of each activity. This documentation shall be kept onsite by the responsible party and made available to the TCEQ upon request.

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

Responsible Party:	Oakwood Baptist Church Expansion – Roxi Vanstory (Executive Administrator)			
Mailing Address:	2154 Loop 337.	City, State:	New Braunfels, Texas	Zip: 78130
Telephone:	(830) 625-0267	Fax:	(830) 625-1151	

Roxi Vanstory - Executive Administrator
Signature of Responsible Party

4/11/2012
Date

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

I Roxi Vanstory,
Print Name

Executive Administrator,
Title - Owner/President/Other

of Oakwood Baptist Church,
Corporation/Partnership/Entity Name

have authorized Michael G. Short, P.E.
Print Name of Agent/Engineer

of The Schultz Group, Inc.
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:

Roxi Vanstory
Applicant's Signature

4/19/12
Date

THE STATE OF TEXAS §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared ROXI VANSTORY 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 19th day of APRIL, 2012.

Lois M Schultz
NOTARY PUBLIC

LOIS M. SCHULTZ
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 02-15-2016

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
Application Fee Form

REGULATED ENTITY NAME: Oakwood Baptist Church Youth Center Modification (Onsite Pond)
REGULATED ENTITY LOCATION: 2154 Loop 337, New Braunfels, Texas 78130
NAME OF CUSTOMER: Oakwood Baptist Church
CONTACT PERSON: Michael G. Short, P.E PHONE: (830) 606-3913
(Please Print)

Customer Reference Number (if Issued): CN CN601399199 (nine digits)

Regulated Entity Reference Number (if issued): RN _____ (nine digits)

Austin Regional Office (3373) ☐ Hays ☐ Travis ☐ Willlamson

San Antonio Regional Office (3362) ☐ Bexar ☒ Comal ☐ Medina ☐ Kinney ☐ Uvalde

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

☐ **Austin Regional Office**

☐ **Mailed to TCEQ:**
TCEQ – Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☒ **San Antonio Regional Office**

☐ **Overnight Delivery to TCEQ:**
TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Site Location (Check All That Apply): ☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	Size		Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling		Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks		Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	24.20	Acres	$6,500.00
Sewage Collection System		L.F.	$
Lift Stations without sewer lines		Acres	$
Underground or Aboveground Storage Tank Facility		Tanks	$
Piping System(s)(only)		Each	$
Exception		Each	$
Extension of Time		Each	$

Rod Vanstory - Executive Administrator 4/11/2012
Signature Date

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors

In their information corrected. To review such information, contact us at 512/239-3282.

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

Water Pollution Abatement Plans and Modifications
Contributing Zone Plans and Modifications

PROJECT	PROJECT AREA IN ACRES	FEE
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, Industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

PROJECT	COST PER LINEAR FOOT	MINIMUM FEE MAXIMUM FEE
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

PROJECT	COST PER TANK OR PIPING SYSTEM	MINIMUM FEE MAXIMUM FEE
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

PROJECT	FEE
Exception Request	$500

Extension of Time Requests

PROJECT	FEE
Extension of Time Request	$150

OAKWOOD BAPTIST CHURCH/S.B.C. CHECK DATE CHECK NO.

67269

Pay Date: 4/11/2012 Ck#: 67269 ID#: 21799 T.C.E.Q.

Invoice	* Date	*Description	*	Net
24445	*4/11/2012	*modify app fee for wpap	*	$6,500.00
		* TOTAL	*	$6,500.00

Security features are included. Details on back.

JPMORGAN CHASE BANK, N.A.

32-61-1110

67269

OAKWOOD BAPTIST CHURCH
S.B.C.
2154 LOOP 337 NORTH
NEW BRAUNFELS, TX 78130
(830) 625-0267

CHECK NO.	DATE	AMOUNT
67269	4/11/2012	$6,500.00

PAY Pay Exactly
Six Thousand Five Hundred Dollars And No Cents

TO THE ORDER OF T.C.E.Q.

Roxie Vanstory

MP

⑈067269⑈ ⑆111000614⑆ 058002605 21⑈

THIS DOCUMENT CONTAINS A COLORED BACKGROUND ON WHITE PAPER. MICROPRINT IS LOCATED BELOW THIS WARNING BAND.

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Attachments **Describe Any Attachments:** *(ex. Title V Application, Waste Transporter Application, etc.)*

☒Yes ☐No — Oakwood Baptist Church Youth Center Modification (Onsite Pond)

3. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	4. Regulated Entity Reference Number *(if issued)*
CN 601399199		RN

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy)

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

☐Owner ☐ Operator ☒ Owner & Operator
☐Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐Other: _____

7. General Customer Information

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐Change in Legal Name (Verifiable with the Texas Secretary of State) ☒ No Change**

If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.

8. Type of Customer:	☐ Corporation	☐ Individual	☐ Sole Proprietorship- D.B.A
☐ City Government	☐ County Government	☐ Federal Government	☐ State Government
☐ Other Government	☐ General Partnership	☐ Limited Partnership	☐ Other:

9. Customer Legal Name *(If an individual, print last name first: ex: Doe, John)*	*If new Customer, enter previous Customer below*	*End Date:*

10. Mailing Address:							
	City		State		ZIP		ZIP + 4

11. Country Mailing Information *(if outside USA)*	12. E-Mail Address *(if applicable)*

13. Telephone Number	14. Extension or Code	15. Fax Number *(if applicable)*
( ) -		( ) -

16. Federal Tax ID *(9 digits)*	17. TX State Franchise Tax ID *(11 digits)*	18. DUNS Number *(if applicable)*	19. TX SOS Filing Number *(if applicable)*

20. Number of Employees

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

21. Independently Owned and Operated?

☐ Yes ☐ No

SECTION III: Regulated Entity Information

22. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information ☐ No Change** *(See below)*

If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.

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

Oakwood Baptist Church Youth Center Modification (Onsite Pond)

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*	2154 Loop 337							
	City	New Braunfels	State	TX	ZIP	78130	ZIP + 4	4078
25. Mailing Address:	2154 Loop 337							
	City	New Braunfels	State	TX	ZIP	78130	ZIP + 4	4078

26. E-Mail Address:		
27. Telephone Number	28. Extension or Code	29. Fax Number *(if applicable)*
(830) 625-0267		(830) 625-1151

30. Primary SIC Code (4 digits)	31. Secondary SIC Code (4 digits)	32. Primary NAICS Code (5 or 6 digits)	33. Secondary NAICS Code (5 or 6 digits)
8661		813110	

34. What is the Primary Business of this entity? *(Please do not repeat the SIC or NAICS description.)*

Religious Organization

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:	The project site is within the City of New Braunfels, Texas and is located approximately 650 LF north east of the Intersection of Loop 337 and Oakwood Blvd.

36. Nearest City	County	State	Nearest ZIP Code
New Braunfels, Texas	Comal County	TX	78130

37. Latitude (N) In Decimal:	29.726688		38. Longitude (W) In Decimal:	-98.141921	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	43	36.0762	-98	8	30.915

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. 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	☐ PWS	☐ Sludge
☒ Stormwater	☐ Title V – Air	☐ Tires	☐ Used Oil	☐ Utilities
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☒ Other: File # 1189.00

SECTION IV: Preparer Information

40. Name:	Michael G. Short, P.E.	41. Title:	Senior Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(830) 606-3913		(830) 625-2204	mshort@schultzgroupinc.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 9 and/or as required for the updates to the ID numbers identified in field 39.

(See the Core Data Form instructions for more information on who should sign this form.)

Company:	The Schultz Group, Inc,	Job Title:	Senior Engineer	
Name *(In Print)* :	Michael G. Short, P.E.		Phone:	(830) 606-3913
Signature:			Date:	4/24/12