TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 7, 2014

Mr. Larry G. Lee
Leeco Energy & Investments, Inc.
3501 Billy Hext Road
Odessa, Texas 79765-8939

RECEIVED
OCT [illegible] 2014
COUNTY ENGINEER

Re: Edwards Aquifer, Comal County

Name of Project: McAlister's Deli – New Braunfels; Located near the southeast corner of State Highway 46 and Independence Drive within the city of New Braunfels, Texas

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

Investigation No. 1183930; Regulated Entity No. RN107547747; Additional ID No. 13-14070901

Dear Mr. Lee,

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the above-referenced project submitted to the San Antonio Regional Office by KFW Engineers and Surveying, Inc. on behalf of Leeco Energy & Investments, Inc. on July 9, 2014. Final review of the WPAP was completed after additional material was received on September 24 and September 30, 2014. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were selected and prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. The planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed project is a single phase commercial development that will encompass 1.546 acres. A majority of the commercial site is undeveloped; however, there are two small areas of existing impervious cover within the site boundaries, totaling 0.17 acres. The existing impervious cover consists of concrete pavement with concrete curbing for the joint access drive between the adjacent

adjacent Security Service Federal Credit Union and the adjacent tunnel carwash. The proposed project will add an additional 1.118 acres of impervious cover. Overall, the 1.546 acre single phase development will result in a total of 1.285 acres (82.12 percent) of impervious cover. Project wastewater will be disposed of by conveyance to the existing NBU Gruene Wastewater Treatment Plant owned by New Braunfels Utilities (NBU).

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, one (1) Jellyfish Filter System (Model JF6-5-1), designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 1,004 pounds of TSS generated from the 1.285 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 measure will consist of the Jellyfish Filter System. It contains five (5) Hi-Flo cartridges and one (1) Draindown cartridge. Each typical cartridge is composed of eleven (11) tentacles that are 54 inches long, with a surface area of 382 square feet. The JF6-5-1 being implemented has a treatment flow rate of 0.98 cubic feet per second.

This particular Jellyfish Filter System model is housed within a manhole structure that is seven (7) feet-two (2) inches in diameter (6-foot inner diameter). It is designed to remove 1,014 pounds of TSS (1,004 pounds required) generated from 1.285 acres of impervious cover. This treatment includes 31 pounds of TSS generated from the 0.036 acres of untreated impervious cover.

GEOLOGY

According to the geologic assessment included with the application, the site is located over the Edwards Group. The unit outcropping at the site is the Cyclic and marine member of the Person Formation, part of the Edwards Group. The geologic assessment indicated that there were three (3) manmade features within the project site but none of the features were assessed as sensitive. The San Antonio Regional Office site assessment conducted on September 10, 2014 revealed that the site was generally as described in the application.

SPECIAL CONDITIONS

I. Each permanent pollution abatement measure shall be operational prior to occupancy of the facility.

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

STANDARD CONDITIONS

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

and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.

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

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

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

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

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

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

After Completion of Construction:

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

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

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. Ricardo Macias of the Edwards Aquifer Protection Program, San Antonio Regional Office at (210) 403-4065.

Sincerely,

Lynn M. Bumguardner, Water Section Manager
San Antonio Regional Office
Texas Commission on Environmental Quality

LMB/RAM/eg

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

cc: Ms. Craig Fletcher, P.E., KFW Engineers & Surveying, Inc.
Mr. Thomas H. Hornseth, P.E., Comal County Engineer
Mr. Roland Ruiz, Edwards Aquifer Authority
Mr. James C. Klein, P.E., New Braunfels City Engineer
TCEQ Central Records, Building F, MC 212

~~Bexar~~ Comal County
F9513

STATE OF TEXAS
CRAIG P. FLETCHER
90940
LICENSED
PROFESSIONAL ENGINEER
9/30/2014

Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: McAlister's Deli-New Braunfels
Date Prepared: 9/29/2014

1. The Required Load Reduction for the total project:

Calculations from RG-348 Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$
Pages 3-27 to 3-30

$L_{M\ TOTAL\ PROJECT}$ = 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 * =	**1.546**	acres
Predevelopment impervious area within the limits of the plan * =	**0.167**	acres
Total post-development impervious area within the limits of the plan* =	**1.285**	acres
Total post-development impervious cover fraction * =	**0.83**	
P =	**33**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**1004**	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	**2**	

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

Drainage Basin/Outfall Area No. =	**1**	
Total drainage basin/outfall area =	**1.334**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.115**	acres
Post-development impervious area within drainage basin/outfall area =	**1.197**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.90**	
$L_{M\ THIS\ BASIN}$ =	**971**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**CS**	abbreviation
Removal efficiency =	**86**	percent

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

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

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

A_C =	**1.334**	acres
A_I =	**1.197**	acres
A_P =	**0.137**	acres
L_R =	**1177**	lbs.

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

Desired $L_{M\ THIS\ BASIN}$ =	**1004**	lbs.
F =	**0.85**	

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

Calculations from RG-348
Pages Section 3.2.22

Rainfall Intensity =	**0.85**	inches per hour
Effective Area =	**1.08**	acres
Cartridge Length =	**54**	inches
Peak Treatment Flow Required =	**0.93**	cubic feet per second

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

Flow Through Jellyfish Size		
Jellyfish Size for Flow-Based Configuration =	**JF6-5-1**	
Jellyfish Treatment Flow Rate =	**0.98**	cfs

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2014

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: McAlister's Deli – New Braunfels, located at 1680 W State Highway 46, New Braunfels, Texas

PLAN TYPE: Application for Approval of Water Pollution Abatement Plan (WPAP) 30 Texas Administration Code (TAC) Chapter 213; Edwards Aquifer Protection Program
EAPP Additional ID: 13-14070901

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. More information regarding this project may be obtained from the TCEQ Central Registry website at http://www.tceq.state.tx.us/permitting/central_registry/.

Please forward your comments to this office by August 10, 2014.

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

Comal County.

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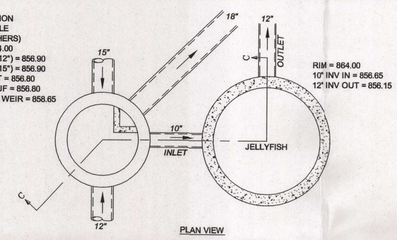
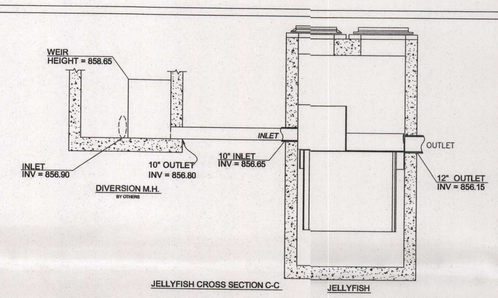
Treatment Flow Rate (cfs)	0.96
Drainage Area (acres)	1.332
% Impervious	89.6%
# of Hi-Flo Cartridges	5
# of Drawdown Cartridges	1
Model	JF6-5-1

DIVERSION MANHOLE (BY OTHERS)
RIM=864.00
INV IN (12") = 856.90
INV IN (15") = 856.90
INV OUT = 856.80
INV TO JF = 856.80
TOP OF WEIR = 858.65



PLAN VIEW



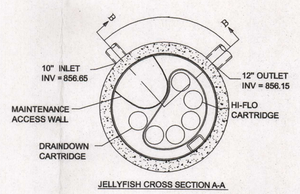
DIVERSION M.H.
BY OTHERS

JELLYFISH CROSS SECTION C-C

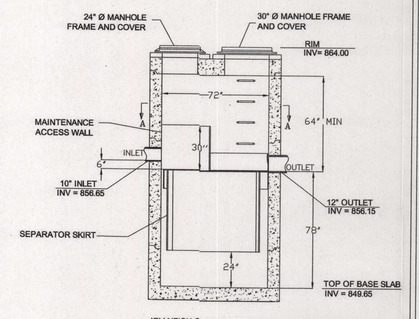
JELLYFISH

GENERAL NOTES:
1. UNLESS OTHERWISE NOTED, BYPASS INFRASTRUCTURE, SUCH AS ALL UPSTREAM DIVERSION STRUCTURES, CONNECTING STRUCTURES, OR PIPE CONDUITS CONNECTING TO COMPLETE THE JELLYFISH SYSTEM SHALL BE PROVIDED AND ADDRESSSED SEPARATELY.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. WWW.ContechES.COM
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20, ASSUMING EARTH COVER OF 0' - 5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. IF MINIMUM DEPTH FROM TOP OF CARTRIDGE DECK TO BOTTOM OF STRUCTURAL TOP SLAB (5.5 FT) CANNOT BE ACHIEVED DUE TO PIPING INVERT ELEVATIONS OR OTHER SITE CONSTRAINTS, ALTERNATIVE CUSTOM TOP SLAB DESIGN AND HATCH CONFIGURATIONS MAY BE AVAILABLE. HATCH DOORS SHOULD BE SIZED TO PROVIDE ACCESS ABOVE THE CARTRIDGES TO ACCOMMODATE MAINTENANCE.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SEPCIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING CLUTCHES PROVIDED)
C. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT)
D. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
E. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION AT (866) 740-3318.



JELLYFISH CROSS SECTION A-A



JELLYFISH CROSS SECTION B-B

DRAWING NOT TO BE USED FOR CONSTRUCTION

JELLYFISH
MODEL JF6
CONTECH ENGINEERED SOLUTIONS LLC

SCALE 1/4" = 1' - 0"

REV	Y	M	D	DRN	CHK	DESCRIPTION

Jellyfish Filter

FILE: JF6.dwg
DRAWN BY:
DATE: 10/10/13
REV.: 0

1 OF 1

"RECEIVED TCEQ"
SAN ANTONIO
REGION
2014 SEP 24 AM 10:37

Date: Sep 23, 2014, 3:00pm User ID: mrichards
File: P:\327\03\01\Design\Civil\WQDT3270301.dwg

KFW ENGINEERS & SURVEYING
FIRM# 9512
14603 HUEBNER RD. BLDG. 40
SAN ANTONIO, TEXAS 78230
PHONE (210) 979-8444
FAX (210) 979-8441

REVISIONS

ISSUE DATE

STATE OF TEXAS
CRAIG P. FLETCHER
90940
LICENSED
PROFESSIONAL ENGINEER
9/23/2014

MCALISTER'S DELI - NEW BRAUNFELS
WATER POLLUTION ABATEMENT PLAN
WATER QUALITY PLAN DETAILS

JOB NO. 327-03-01
DATE: JANUARY, 2014
DRAWN: J.W. CHECKED: C.F.

SHEET NUMBER:
EX - 3B

KFW ENGINEERS

WATER POLLUTION ABATEMENT PLAN

MCALISTER'S DELI - NEW BRAUNFELS

1680 W STATE HWY 46
NEW BRAUNFELS, TX 78132

KFW JOB NO. 327-03-01

FEBRUARY 2014

FIRM #: 9513

6/27/2014

BY: Craig Fletcher, P.E.

14603 Huebner, Bldg. 40 San Antonio, Texas 78230 • Phone: (210) 979-8444 • Fax: (210) 979-8441 • www.kfwengineers.com

June 27, 2014

KFW ENGINEERS

Mrs. Lynn Bumguardner
TCEQ Region 13
14250 Judson Rd.
San Antonio, Texas 78233-4480

Re: McAlister's Deli – New Braunfels
Water Pollution Abatement Plan

Dear Ms. Bumguardner:

Attached are one (1) original and four (4) copies of the Water Pollution Abatement Plan Application for McAlister's Deli – New Braunfels, including the appropriate review fees ($4,000). This application has been prepared according to the guidelines set forth in 30 TAC Chapter 213 Subchapter A. Please review the application for completeness and compliance with the applicable regulations for development over the Recharge Zone of the Edwards Aquifer. Upon acceptance, we request that written approval be provided to our office.

Thank you for your time and consideration in this matter. Should you have any questions or need further information please feel free to contact our office.

Sincerely,
KFW Engineers,

Craig Fletcher, P.E.
Principal

Attachments:
1 – Original Water Pollution Abatement Plan
4 – Copies of Water Pollution Abatement Plan

Table of Contents

KFW
ENGINEERS

SECTION 1
GENERAL INFORMATION

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: McAlister's Deli – New Braunfels
COUNTY: Comal County STREAM BASIN: Comal River

EDWARDS AQUIFER: ☒ RECHARGE ZONE
☐ TRANSITION ZONE

PLAN TYPE: ☒ WPAP ☐ AST ☐ EXCEPTION
☐ SCS ☐ UST ☐ MODIFICATION

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Larry G. Lee
Entity: Leeco Energy & Investments, Inc.
Mailing Address: 3501 Billy Hext Road
City, State: Odessa, Texas Zip: 79765
Telephone: 432-550-0073 FAX: 432-366-4606

Agent/Representative (If any):

Contact Person: Craig Fletcher, P.E.
Entity: KFW Engineers and Surveying, Inc.
Mailing Address: 14603 Huebner Road Bldg. 40
City, State: San Antonio, Texas Zip: 78230-5513
Telephone: (210) 979-8444 FAX: (210) 979-8441

2. ☒ This project is inside the city limits of New Braunfels.
☐ 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.

From San Antonio regional office, head south on Judson Road toward I-35. Travel north on I-35 and exit TX-337 Loop. Turn left on TX-337 Loop and exit TX-46 W/TX-46 Business. Turn left on TX 46 and continue for approximately ¼ mile. Destination will be on the right, between a carwash and bank.

4. ☒ **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. ☒ **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:
☒ Project site.

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

6. ☒ 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. ☒ **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:
   ☐ Existing commercial site
   ☐ Existing industrial site
   ☐ Existing residential site
   ☒ Existing paved and/or unpaved roads
   ☐ Undeveloped (Cleared)
   ☒ Undeveloped (Undisturbed/Uncleared)
   ☐ Other: _____

PROHIBITED ACTIVITIES

9. ☒ 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. ☒ 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:

    ☒ 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:

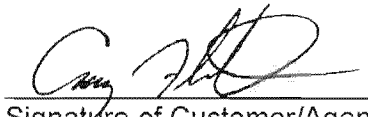
☐ TCEQ cashier
☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
☒ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

13. ☒ 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. ☒ 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:

Craig Fletcher, P.E.
Print Name of Customer/Agent



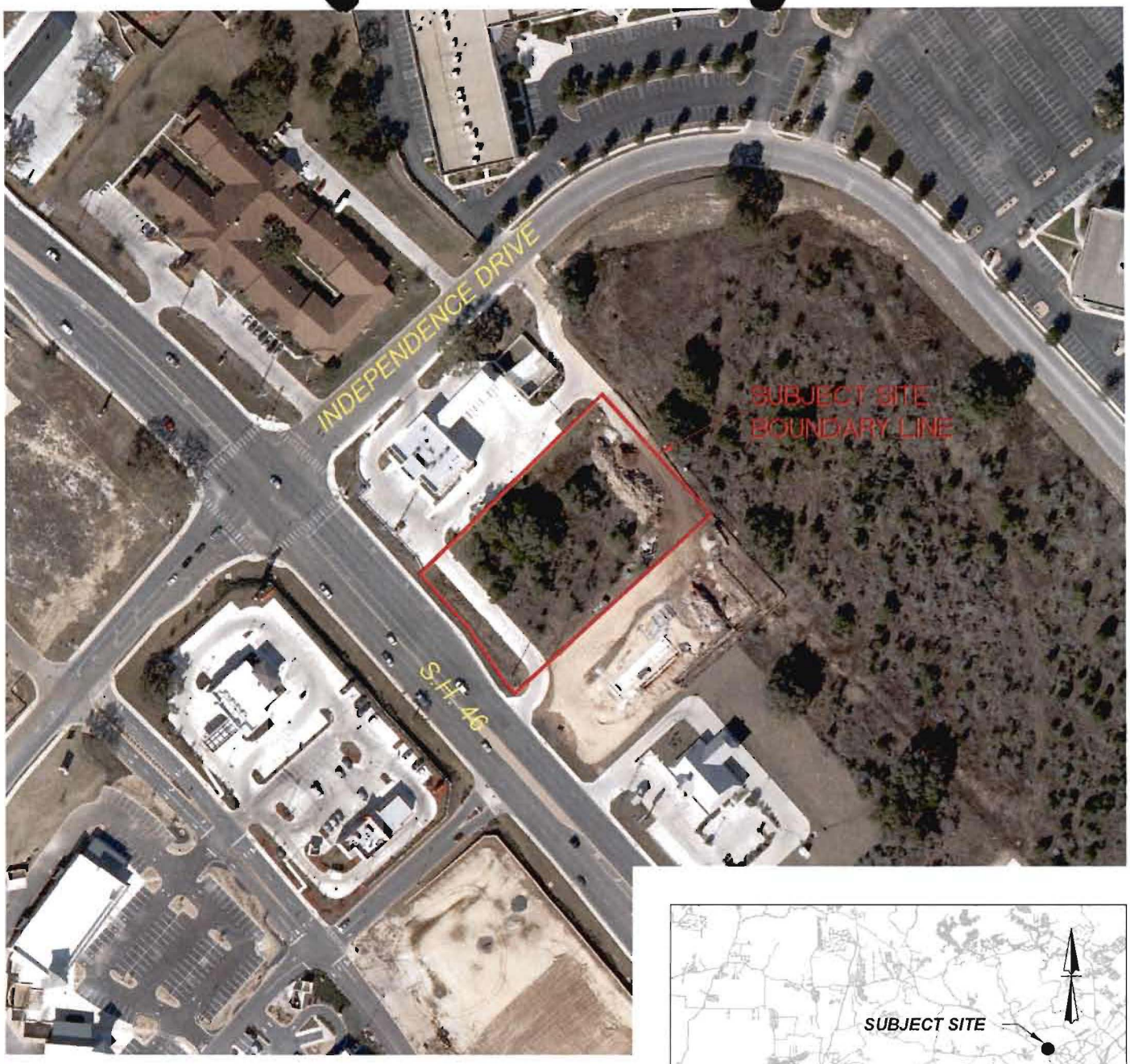
Signature of Customer/Agent

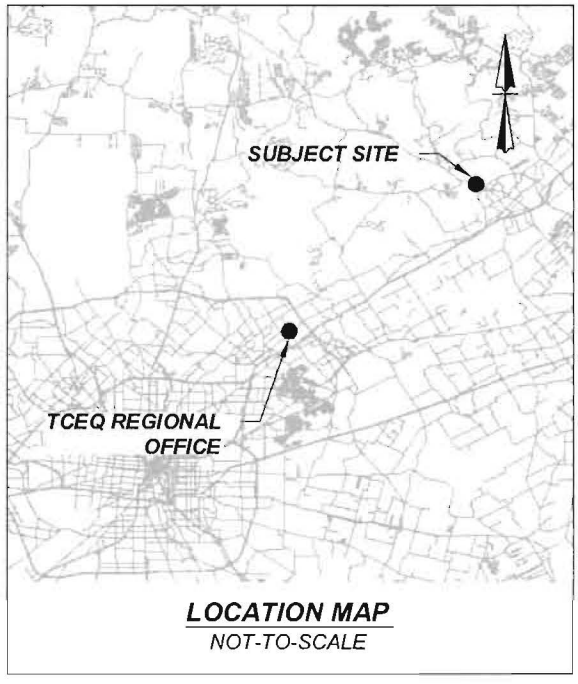
6/27/2014
Date

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

AERIAL AND LOCATION MAP





LOCATION MAP
NOT-TO-SCALE

SCALE: 1"= 200'

0' 200' 600'

400'

KFW ENGINEERS & SURVEYING
Firm # 9513
14603 HUEBNER RD. BLDG. 40
SAN ANTONIO, TEXAS 78230
PHONE (210) 979-8444
FAX (210) 979-8441

WATER POLLUTION ABATEMENT PLAN
GENERAL INFORMATION
AERIAL AND LOCATION MAP

REVISIONS.	ISSUE DATE.
JOB NO. 171-05-01	
DATE. OCTOBER 2012	DESIGNER. N.F.
DRAWN. N.F.	CHECKED. C.F.

SHEET: ATT A

Date: Jan 08, 2014, 11:41am User ID: jwarren
File: P:\327\03\01\Design\Exhibits\Water Quality\EX140108 -LOCATION MAP.dwg

USGS/EDWARDS RECHARGE ZONE MAP

PROJECT DESCRIPTION

McAlister's Deli – New Braunfels is located near the southeast corner of State Highway 46 and Independence Drive within the city limits of New Braunfels, Comal County, Texas. A majority of the commercial site is currently undeveloped: however, there are two small areas of existing impervious cover within the site boundaries, totaling 0.17 acres. These existing impervious areas consist of concrete pavement with concrete curbing for the joint access drive between the adjacent Security Service Federal Credit Union and the adjacent tunnel carwash. The total project area consists of the 1.546-acre subject site, being entirely within the Edwards Aquifer Recharge Zone. In addition, the property is not located within the 100-yr floodplain per the Flood Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) #48091C0435F, dated September 2, 2009.

The project will be a single phase development resulting in 1.285 acres of impervious cover. The site currently consists of 0.167 acres of impervious cover; therefore there is an increase of 72.3% impervious cover from existing conditions. The proposed impervious cover will consist of approximately 1.128 acres of parking and drive aisles, 0.058 acres of sidewalk, and 0.099 acres of structures/rooftops. Due to the increase of impervious cover proposed for the subject site, permanent BMP's will be implemented.

The Jellyfish Filter System will be installed to provide the necessary TSS load removal generated by the proposed impervious cover. Approximately 1.082 acres of impervious cover will be treated by the Jellyfish Filter System. The remaining 0.036 acres of impervious cover will exit the site untreated, however, this has been compensated for by providing overtreatment with the Jellyfish Filter.

The entire 1.546 acre project area will be disturbed by construction activities. These activities will be subject to TPDES requirements. A Storm Water Pollution Prevention Plan will be maintained for the site and temporary BMP's will be implemented to prevent erosion and sedimentation until completion of construction. All areas not covered by the building footprint, sidewalks, or pavement will be stabilized with either sod or landscaping when construction is complete and before the removal of temporary BMPs.

There will not be any storage of regulated quantities of hazardous materials. Potable water will be supplied by New Braunfels Utilities (NBU). Wastewater will also be collected and treated by NBU.

KFW
ENGINEERS

SECTION 2
GEOLOGIC ASSESSMENT

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: McAlister's Deli - New Braunfels

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

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

PROJECT INFORMATION

1. X 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, 1-8 percent slopes	C	0 - 1.0

* 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. X 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. X 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. X 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" = 20 '
Site Geologic Map Scale	1" = 20 '
Site Soils Map Scale (if more than 1 soil type)	1" = NA '

6. Method of collecting positional data:

X Global Positioning System (GPS) technology.
__ Other method(s).

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

8. X 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.
X Geologic or manmade features were not discovered on the project site during the field investigation.

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

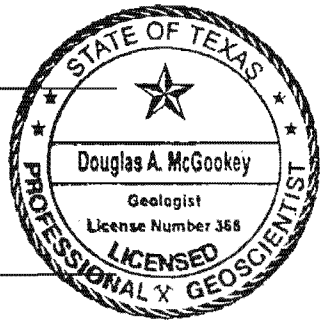
ADMINISTRATIVE INFORMATION

12. 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.

Date(s) Geologic Assessment was performed: December 10, 2013
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.

Douglas McGookey, P.G.
Print Name of Geologist



210 694-4545
Telephone

210 694-4577
Fax

Signature of Geologist

June 20, 2013
Date

Representing: Medina Consulting Company, 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.

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: McAlister's Deli - New Braunfels

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
	Deg Min Sec	Deg Min Sec				X	Y	Z		10						<40	>40	<1.6	>1.6	
MB-1	29 43 1.65	98 9 32.57	MB	30	Person	15	15	4	NA	0	1	15	X	0	30	x		x		Drainage
MB-2	29 43 2.22	98 9 33.10	MB	30	Person	0	0	0	NA	0	0	0	X	0	30	x		x		Hillside
MB-3	29 43 0.75	98 9 35.01	MB	30	Person	0	0	0	NA	0	0	0	X	0	30	x		x		Hillside

* DATUM: WGS84

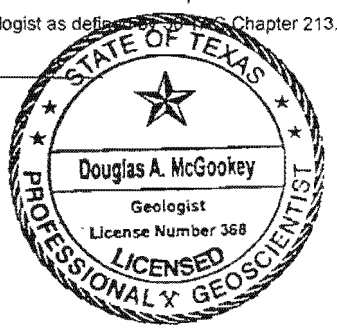
2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

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

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

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

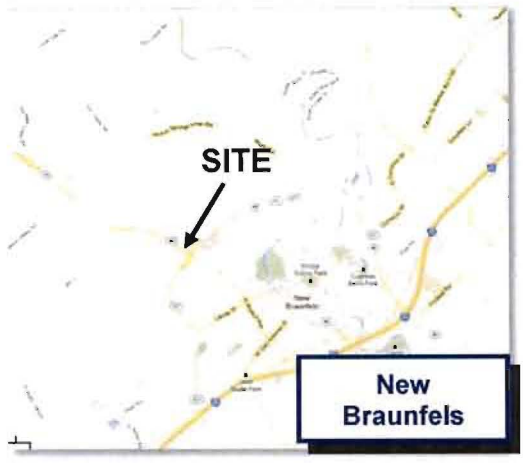
My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.



Date December 11, 2013

Sheet 1 of 1

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

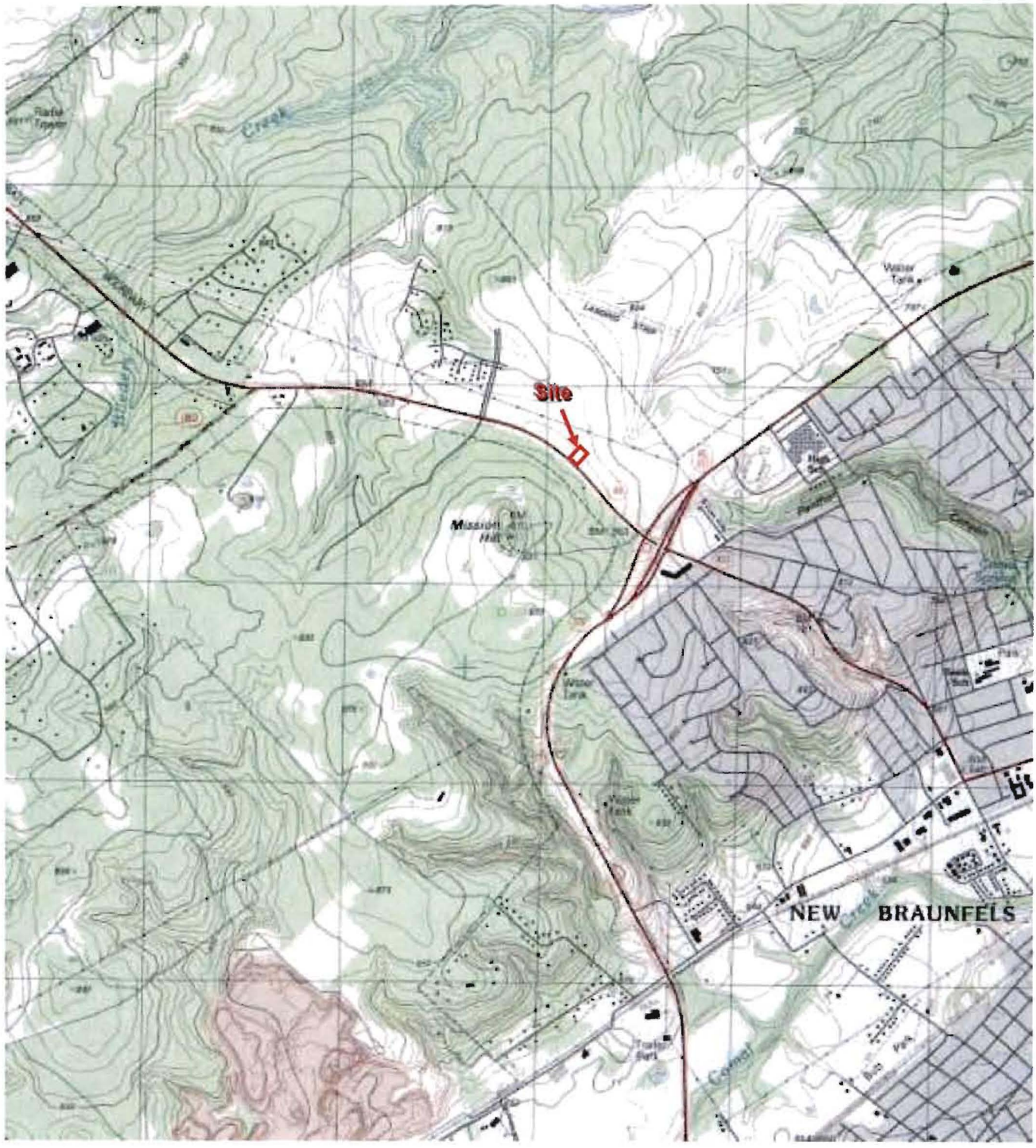


Source: Google 2013

Medina Consulting Company, Inc.	Drawn By: DM Scale: As Shown Date: December 2013	N	Site Location Map McAlister's Deli – New Braunfels New Braunfels, Comal County, Texas

Source: Google Earth 2013

Medina Consulting Company, Inc.	Drawn By: DM Scale: As Shown Date: May 2013	N	**Site and Vicinity Map** **McAlister's Deli – New Braunfels** **New Braunfels, Comal County, Texas**



Source: *New Braunfels West, Texas,*
US Geological Survey Map obtained from TNRIS, 2008

0 — 1 Mile

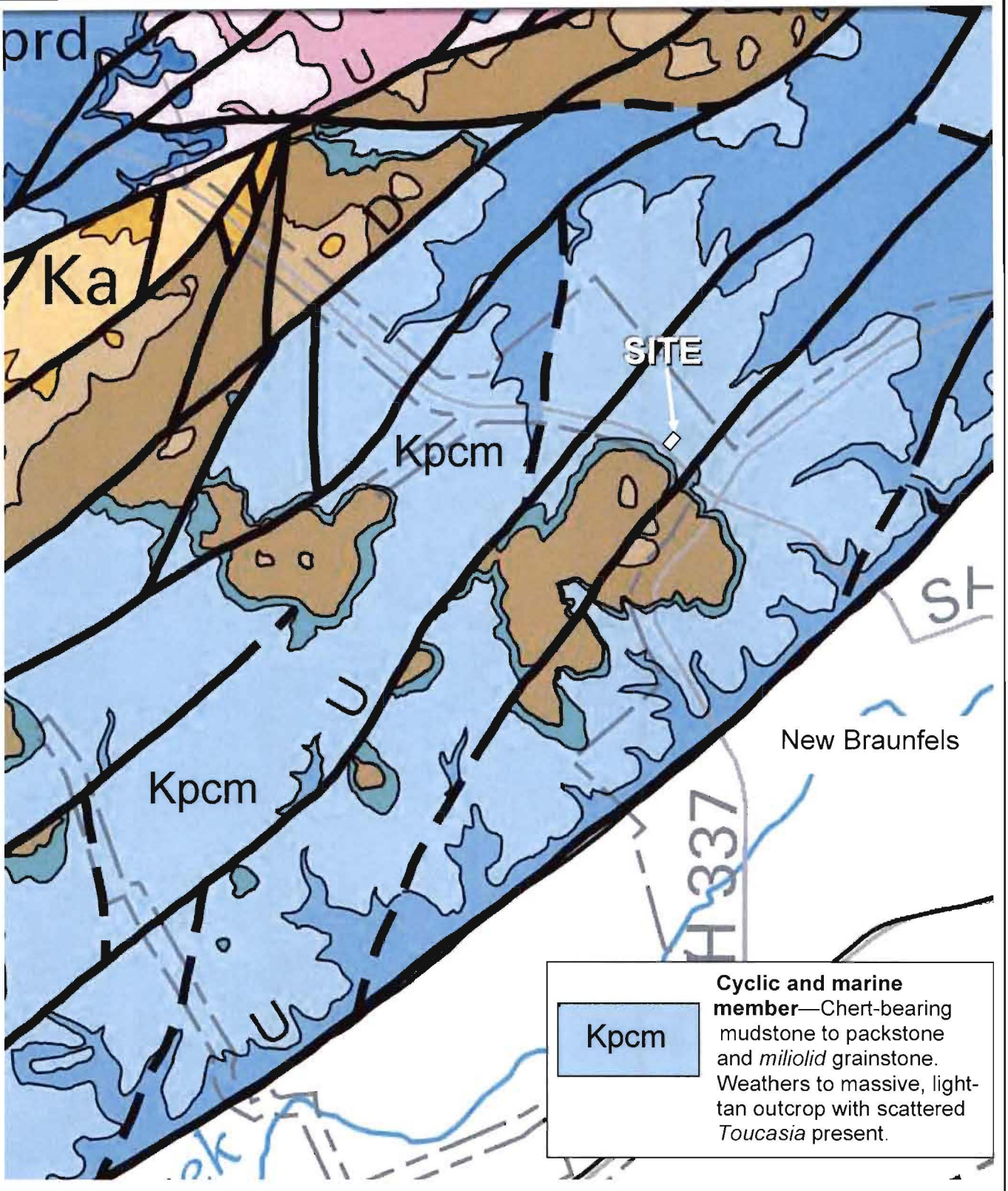
Scale

Medina Consulting Company, Inc.

Drawn By:	DM
Scale:	As Shown
Date:	December 2013

N

Topographic Map
McAlister's Deli – New Braunfels
New Braunfels, Comal County, Texas



Source: Blome and Others, ***Geologic Map of the Edwards Aquifer Recharge Zone, South-Central Texas*, 2005**

Medina Consulting Company, Inc.	Drawn By: DM Scale: None Date: December 2013	N	**Figure 4** **Geology Map** **McAlister's Deli – New Braunfels** **New Braunfels, Comal County, Texas**

SOIL NARRATIVE

McAlister's Deli – New Braunfels
1.546 Acres Located East of Independence Drive
and North of State Highway 46
New Braunfels, Texas

Native soils at the surface of the Site consist of reddish brown to light brown silty clay loam with about 20% of the surface area covered with rounded limestone and chert gravel and small rocks. The soil is very organic where the surface is wooded. This is likely Rumple soil that is dark reddish brown very cherty clay loam about 10 inches thick. 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 that is about 75 percent, by volume, limestone fragments.

Surface soils are mapped as Rumple-Comfort Complex soils (USDA, *Soil Survey of Comal and Hays Counties).* This association consists of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. Rumple soil makes up about 60 percent of the association, Comfort soil makes up 20 percent, and other soils, mainly Tarpley soils, make up 20 percent.

The Rumple soil makes up 39 to 82 percent of the individual areas, the Comfort soil makes up 5 to 42 percent, and the other soils make up less than 5 to 34 percent. The Rumple soil is on broad ridgetops and side slopes. It is mainly gently sloping. The Comfort soil is mainly in the more sloping areas near drainageways and near outcrops of rock. In places, there are narrow ledges of limestone. The mapped areas of this association are much larger and more variable than areas of the other map units in the survey area.

Typically, 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 that is about 75 percent, by volume, limestone fragments. The underlying material is indurated fractured limestone. The soil is mildly alkaline and noncalcareous throughout. The texture of the surface layer ranges from very cherty loam to cherty clay.

Typically, the surface layer of 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. However, runoff from large areas is much slower than from local areas because some of the water enters caves, sinkholes, rock crevices, and streambeds. Permeability is moderately slow in the Rumple soil and slow in the Comfort soil. The available water capacity is very low. The rooting zone is shallow in Comfort soil and moderately deep in Rumple soil. Water erosion is a moderate hazard.

Soil Map—Comal and Hays Counties, Texas

Map Scale: 1:2,330 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Comal and Hays Counties, Texas
Survey Area Data: Version 8, Sep 21, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 6, 2011—Feb 12, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Comal and Hays Counties, Texas (TX604)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
RUD	Rumple-Comfort association, 1 to 8 percent slopes	19.1	100.0%
Totals for Area of Interest		**19.1**	**100.0%**

Comal and Hays Counties, Texas

RUD—Rumple-Comfort association, 1 to 8 percent slopes

Map Unit Setting

Elevation: 1,000 to 2,300 feet
Mean annual precipitation: 23 to 36 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 210 to 265 days

Map Unit Composition

Rumple and similar soils: 60 percent
Comfort and similar soils: 20 percent
Minor components: 20 percent

Description of Rumple

Setting

Landform: Plains
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Very low (about 1.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: Gravelly Redland 29-35" PZ (R081CY359TX)

Typical profile

0 to 10 inches: Very gravelly clay loam
10 to 28 inches: Very gravelly clay
28 to 36 inches: Bedrock

Description of Comfort

Setting

Landform: Ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex

Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Properties and qualities

Slope: 1 to 8 percent
Surface area covered with cobbles, stones or boulders: 30.0 percent
Depth to restrictive feature: 9 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Available water capacity: Very low (about 1.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: Low Stony Hill 29-35" PZ (R081CY360TX)

Typical profile

0 to 7 inches: Extremely stony clay
7 to 12 inches: Extremely stony clay
12 to 20 inches: Bedrock

Minor Components

Unnamed, minor components

Percent of map unit: 20 percent

Data Source Information

Soil Survey Area: Comal and Hays Counties, Texas
Survey Area Data: Version 8, Sep 21, 2012

STRATIGRAPHIC COLUMN

McAlister's Deli – New Braunfels
1.546 Acres Located East of Independence Drive
and North of State Highway 46
New Braunfels, Texas

STRATIGRAPHIC COLUMN

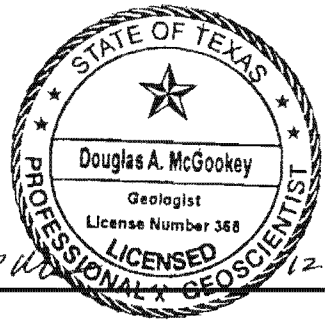
Hydrogeologic subdivision			Group	formation or member	Hydrologic fuction	Thickness (feet)	Lithology	Cavern development	Porosity / permeability type
Erosional Surface									
Lower Cretaceous	II	Edwards aquifer	Edwards Group	Person Fm.	Cyclic & marine members undivided	AQ	80-100	Mudstone to packstone; miliolid grainstone; chert	Many subsurface	Laterally extensive; water yielding
	III				Leached & collapsed members	AQ	80-100	Crystalline limestone; mudstone to grainstone; chert collapsed breccia	Extensive lateral development; large rooms	Majority not fabric / one of the most permeable
	IV				Regional dense member	CU	20-24	Dense, argillaceous mudstone	Very few; only vertical fracture enlargement	Not fabric / low permeability; vertical barrier
	V			Kainer Fm.	Grainstone member	AQ	50-60	Miliolid grainstone; mudstone to wackestone; chert	Few	Not fabric / recrystallization reduces permeability
	VI				Kirschberg evaporite member	AQ	50-60	Highly altered crystalline limestone; chalky mudstone; chert	Probably extensive cave devel.	Majority fabric / one of the most permeable
	VII				Dolomitic member	AQ	110-130	Mudstone to grainstone; crystaline limestone; chert	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	Large lateral caves at surface	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	Some surface cave development	Some water production at evaporite beds / relatively impermeable

Reference: U.S.G.S. Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County, Texas; Water-Resources Investigations Report 94-4117

Note: CU = Confining Unit; AQ = Aquifer

▬ ▬ Indicates Upper Most Surface Bedrock Formation

Source: *Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zone, Bexar County, Texas*: US Geological Survey, Water Resource Investigations Report 95-4030.



12-27-13

GEOLOGY NARRATIVE

McAlister's Deli – New Braunfels
1.546 Acres Located East of Independence Drive
and North of State Highway 46
New Braunfels, Texas

The property proposed for McAlister's Deli – New Braunfels (the "Site") is located on Oak Run Commercial Unit 7B, Lot 1, which is east of Independence Drive and north of State Highway 46 in New Braunfels, Texas. The Site is mostly level with a slight slope towards the northwest towards a manmade drainage culvert that underlies the private road north of the Site. Much of the Site is covered by thick brush and woods, with some areas that have been previously cleared and are now covered with short grass, weeds, and forbs.

The Site lies over the Cretaceous age Edwards Group, and lies over the Recharge Zone of the Edwards Aquifer (TCEQ *Edwards Aquifer Map Viewer*). The unit outcropping at the Site is the Cyclic and marine member of the Person Formation, which is part of the Edwards Group (Blome and others, 2005). The Cyclic and marine members (undivided) consist of chert-bearing mudstone to packstone and *miliolid* grainstone. Exposed surfaces weather to massive, light-tan outcrops with scattered *Toucasia* present. This unit is one of the most productive hydrologically because of the large number of subsurface caverns associated with incipient karstification. The formation is very permeable with laterally extensive fabric and nonfabric porosity.

The limestone bedrock of the Cyclic and marine members of the Person Formation was observed in several small outcrops on the Site. Several rocks with smooth surfaces and irregular shapes up to two feet in diameter were observed on the Site. No solution features were discovered on the Site. Two manmade features in bedrock were identified: MB-1 is a drainage culvert that drains storm water from the Site, and the second is an underground sanitary sewer that lies along the north side of the property in a sanitary sewer easement identified on the site survey (Mawyer Land Surveying, 2013). A vertical pipe identifying the location of the sanitary sewer was observed along the easement on the north side of the property. No structural features such as faults or fractures were noted in the reviewed literature sources, and no evidence of faults or fractures were observed on the Site during the site reconnaissance. Photographs showing the Site are attached.

The potential for water to recharge the aquifer at the Site is low due to absence of karst and structural features and the relatively low permeability soil cover.

Location

Photograph 1. View to the north across the east side of the Site from near the southeast corner of the Site. The ground surface is covered in grass, brush, and trees. The private road north of the Site is in the background. The surface soil is organic reddish to light brown clay.

Location

Photograph 2. View to the north from the southeast corner of the Site. Tall grass, heavy brush, cactus, and trees cover the ground. The surface soil is organic reddish to light brown clay.

Location

Photograph 3. View from near the southeast corner of the Site toward State Highway 46. Tall grass, heavy brush, cactus, and trees cover the ground. The surface soil is organic reddish to light brown clay.

Location

Photograph 4. A drainage culvert goes under the private road on the northeast corner of the Site. This is manmade feature in bedrock MB-1 on the Geologic Assessment Table.

Location

Photograph 5. View to the northwest from near the northeast corner of the Site. The area has been cleared and is largely covered with gravelly reddish brown clay loam. Some of the surface material may be from clearing activities in the area.

Location

Photograph 6. Small limestone outcrops occur in the north corner of the Site, but no karst features were observed.

Location

Photograph 7. View to the southwest from near the north corner of the Site. The ground is covered by grass, weeds, forbs, brush and trees. Small rock outcrops are present but no features were observed.

Location

Photograph 8. Limestone rocks were observed in piles where they had been placed.

Location

Photograph 9. The center of the Site is thickly wooded. The surface soil is organic gravelly reddish brown clay loam.

Location

Photograph 10. Small limestone rock outcrops were observed in the wooded areas but no features were observed.

REFERENCES

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SECTION 3
WATER POLLUTION ABATEMENT PLAN

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: McAlister's Deli – New Braunfels

REGULATED ENTITY INFORMATION

1. The type of project is:
   - ☐ Residential: # of Lots: _____
   - ☐ Residential: # of Living Unit Equivalents: _____
   - ☒ Commercial
   - ☐ Industrial
   - ☐ Other: _____

2. Total site acreage (size of property): 1.546 Acres

3. Projected population: 150 seats

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

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	4,299	÷ 43,560 =	0.099
Parking	49,153	÷ 43,560 =	1.128
Other paved surfaces	2,530	÷ 43,560 =	0.058
Total Impervious Cover	55,982	÷ 43,560 =	1.285
Total Impervious Cover ÷ Total Acreage x 100 =			83.12%

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

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

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

8. Type of pavement or road surface to be used:
   - ☐ Concrete
   - ☐ Asphaltic concrete pavement

☐ Other:

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

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

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

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

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

13. ☒ **ATTACHMENT B - Volume and Character of Stormwater.** A 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	3,000 gallons/day
____ % Industrial	____ gallons/day
____ % Commingled	____ gallons/day

TOTAL 3,000 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.
    ☒ Sewage Collection System (Sewer Lines):
    ☒ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.
    ☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.
    ☐ The SCS was previously submitted on _____.
    ☐ The SCS was submitted with this application.
    ☐ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

The sewage collection system will convey the wastewater to the NBU Gruene Waste Water Treatment Plant. The treatment facility is:

☒ existing.
☐ proposed.

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

SITE PLAN REQUIREMENTS

Items 17 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" = 20 '.

18. 100-year floodplain boundaries
☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
☒ No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):
FEMA Firm Panel #48091C0435F dated September 2, 2009

19. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. 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.
☒ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:
☐ All **sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☒ No **sensitive** geologic or manmade features were identified in the Geologic Assessment.
☐ **ATTACHMENT D - Exception to the Required Geologic Assessment.** An exception to the Geologic Assessment requirement is requested and explained at the end of this form.

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

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

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

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

26. ☒ Surface waters (including wetlands).

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

ADMINISTRATIVE INFORMATION

28. ☒ 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. ☒ 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:

Craig Fletcher, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

6/27/2014
Date

FACTORS AFFECTING WATER QUALITY

Materials that are anticipated to be used on site that could be a potential source of contamination include the following:

During Construction:

1. Concrete and Masonry Materials
2. Wood, plastic, and metal Materials
3. Tar and hydrocarbons from paving operations
4. Oil, Grease, fuel, and hydraulic fluid from construction equipment and vehicle drippings
5. Fertilizers, Herbicides, and Pesticides
6. Cleaning solutions and detergents
7. Miscellaneous construction trash and debris
8. Soil erosion and sedimentation due to construction activity

Ultimate Use:

1. Pollutants generated from vehicles utilizing the site
2. Fertilizers, Herbicides, and pesticides used to maintain landscaping
3. Miscellaneous trash and debris generated from the public

(This is not intended to be an all-inclusive list)

All practical management practices will be used to reduce the risk of spills and other exposure of any contaminant to surface or groundwater.

VOLUME AND CHARACTER OF STORM WATER

Existing Conditions

The existing storm water runoff for the subject site consists of two (2) separate drainage areas. Drainage Area 1 consists of a majority of the site, encompassing 1.494 acres. The remaining 0.052 acres, labeled as Drainage Area 2, consist of a portion of the existing concrete drive aisle connecting the adjacent sites. Due to the existing impervious drive aisle within Drainage Area 1, a weighted runoff coefficient of 0.40 was calculated using the runoff coefficients found in Table 5-2 of the City of New Braunfels Drainage and Erosion Control Design Manual. With this information, the Time of Concentration (T_C) for Area 1 was calculated to be 20 minutes. Since Drainage Area 2 only consists of the existing concrete drive aisle, a runoff coefficient of 0.83 was used, resulting in a T_C of 5 minutes. Calculations and results are provided on the Existing Condition Drainage Map provided at the end of this report within **Exhibit 2**.

Proposed Conditions

The proposed storm water runoff for the subject site consists of two (2) drainage areas for the 1.546-acre site. Due to a majority of Drainage Area 1 consisting of impervious cover, a runoff coefficient of 0.83 was used. In addition, a weighted runoff coefficient of 0.56 was calculated for Drainage Area 2, due to a majority of Area 2 consisting of pervious cover. The time of concentration for each proposed drainage area was 5 minutes. Calculations and results are provided on the Proposed Condition Drainage Map within **Exhibit 2.**

SUITABILITY LETTER FROM AUTHORIZED AGENT

An on-site sewage facility will **not** be used to treat and dispose of the wastewater. Therefore, the appropriate licensing authority's (authorized agent) written approval is not required.

EXCEPTION TO THE REQUIRED GEOLOGIC ASSESSMENT

A Geologic Assessment was conducted for this project, and has been included in Section 2 of this report. Therefore, an exception to the Geologic Assessment requirement will not be requested.

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SECTION 4
TEMPORARY STORMWATER

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: McAlister's Deli - New Braunfels

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 than 250 gallons will be stored on the site for less than one (1) year.
   ☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
   ☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An **Aboveground Storage Tank Facility Plan** application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
   ☒ Fuels and hazardous substances will not be stored on-site.

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

4. ☒ **ATTACHMENT B - Potential Sources of Contamination.** 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. ☒ **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. ☒ 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: Comal River

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

7. ☒ **ATTACHMENT D - Temporary Best Management Practices and Measures.** 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.

   ☒ 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.

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

9. ☒ **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. ☒ **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.

☒ 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. ☒ **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. ☒ **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. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

SOIL STABILIZATION PRACTICES

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

17. ☒ **ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached at the end of this form.

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

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

ADMINISTRATIVE INFORMATION

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

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

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

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:

Craig Fletcher, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

6/27/2014
Date

SPILL RESPONSE ACTIONS

If there is an accidental spill on site, the contractor shall respond with appropriate action. The contractor will be required to contact the owner and in turn the owner will contact the TCEQ in the event of a spill on site. In addition to the following guidance, reference the latest version of TCEQ's Technical Guidance Manual (TGM) RG-348 Section 1.4.16.

The following steps help reduce the storm water 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 is 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, and 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 storm water run-on during rainfall to the extent that it doesn't compromise cleanup activities.
7. Do not bury or wash spills with water.

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:
   - Contain the spread of the spill.
   - Recover spilled materials.
   - Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills 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 not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

Vehicle And Equipment Maintenance

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

Vehicle and Equipment Fueling

1. If fueling must occur on site, use designated areas, located away from drainage courses, to prevent the runoff of stormwater and the runoff of spills.
2. Discourage "topping off" of fuel tanks.
3. Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

POTENTIAL SOURCES OF CONTAMINATION

Potential Source: Oil, grease, fuel, and hydraulic fluid contamination from construction equipment and vehicle dripping.

Preventative Measures: Vehicle maintenance when possible will be performed within the construction staging area or a local maintenance shop.

Potential Source: Miscellaneous trash and litter from construction workers and material wrappings.

Preventative Measures: Trash containers will be placed throughout the site to encourage proper disposal of trash.

Potential Source: Silt leaving the site.

Preventative Measures: Contractor will install all temporary best management practices prior to start of construction including the stabilized construction entrance to prevent tracking onto adjoining streets.

Potential Source: Construction Debris.

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

Potential Source: Soil and Mud from Construction Vehicle tires as they leave the site.

Preventative Measures: A stabilized construction exit shall be utilized as vehicles leave the site. Any soil, mud, etc. carried from the project onto public roads shall be cleaned up within 24 hours.

Potential Source: Sediment from soil, sand, gravel and excavated materials stock piled on site.

Preventative Measures: Silt fence shall be installed on the down gradient side of the stock piled materials. Reinforced rock berms shall be installed at all downstream discharge locations.

Potential Source: Portable toilet spill.

Preventative Measures: Toilets on the site will be emptied on a regular basis by the contracted toilet company.

SEQUENCE OF MAJOR ACTIVITIES

Intended Schedule or Sequence of Major Activities:

1. Installation of BMPs (0.103 Acres)
2. Site clearing Activities (1.379 Acres)
3. Rough Subgrade Preparation (earthwork, grading, street and drainage excavation and embankment) (1.413 Acres)
4. Wet and Dry Utility Construction (0.104 Acres)
5. Final Subgrade Preparation (1.413 Acres)
6. Installation of Base Materials (1.413 Acres)
7. Concrete (foundations, curbs, flatwork) (0.157 Acres)
8. Building Construction (0.099 Acres)
9. Paving Activities (0.995 Acres)
10. Topsoil, Irrigation and Landscaping (0.261 Acres)
11. Site cleanup and Removal of BMPs (1.546 Acres)

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

A: Surface and ground water do not originate up-gradient from the site. Therefore, additional Temporary Best Management Practices and Measures to prevent pollution of surface and ground water will not be required.

Perimeter swales, dikes and slope drains will not be required due to the fact that no storm water originates up-gradient from the site. Existing trees and vegetation will be protected to help maintain a stable ground surface and prevent loss of valuable topsoil. Stabilizing measures will be applied, to the maximum extent practicable, after the removal of any vegetative cover and/or altering the soil structure by clearing, grading, and compacting.

B: Surface and ground water do not originate from on-site or flows off-site. Therefore, additional Temporary Best Management Practices and Measures to prevent pollution of surface and ground water will not be required.

Temporary Best Management Practices and Measures will be installed prior to soil disturbing construction activity to prevent pollution caused by contaminated storm water runoff from the site. Silt fencing will be placed along the down-gradient sides of the property to prevent silt from escaping the construction area. Inlet protection will be placed on all inlets. A temporary construction entrance will be placed on site to reduce vehicle "tracking" onto adjoining streets. A concrete washout pit will be used to collect all excess concrete during construction. A construction staging area will be used for equipment storage and vehicle maintenance.

Practices may also be implemented on site for interim and permanent stabilization. Stabilization practices may include but are not limited to: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, and other similar measures.

C: As identified in the Geologic Assessment three (3) features were found within the boundaries of the project. However, because their sensitivity rating is less than 40, the features were considered to not be sensitive. Therefore, Temporary Best Management Practices and Measures to prevent pollutants from entering sensitive features will not be required. The temporary on-site Temporary Best Management Practices and Measures will be used to treat stormwater runoff before it leaves the project and prevent pollutants from entering into surface streams or any sensitive features off-site.

D: According to the Geologic Assessment three (3) geologic features were identified during the geologic assessment. However, because their sensitivity rating is less than 40, the features were considered to not be sensitive. Therefore, Temporary Best Management Practices and Measures used for maintaining flow to naturally-occurring sensitive features identified in the geologic assessment will not be required. The owner, geologist and engineer of record shall be notified immediately if any naturally-occurring sensitive features identified in either an executive director review, or during excavation, blasting, or construction. A Solution Feature Discovery Notification Form will then be submitted to the Texas Commission of Environmental Quality for review.

REQUEST TO TEMPORARILY SEAL A FEATURE

As identified in the Geologic Assessment three (3) geologic features, a drainage culvert (MB-1), an existing sanitary sewer line (MB-2), and a utility easement (MB-3) were found within the boundaries of the project. MB-1 is surrounded by rocks, sticks and leaves. However, because their sensitivity rating is less than 40, the features are considered to not be sensitive. Therefore, a request to temporarily seal a naturally-occurring sensitive feature will not be required.

STRUCTURAL PRACTICES

Structural practices will be installed to prevent pollution caused by contaminated storm water runoff discharge from exposed areas of the site. All structural practices will be installed prior to the removal of any vegetative cover and/or altering the soil structure by clearing, grading, and compacting. The location of all structural practices for the subject site is shown on the Erosion Control Plan *(**Exhibit 1-A**)*. Details and specifications for the selected structural practices are also provided in **Exhibit 1-A**. The following describes the structural practices used.

Concrete Washout Areas

The purpose of concrete washout areas is to prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors.

The following steps will help reduce storm water pollution from concrete wastes:

1. Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
2. Avoid mixing excess amounts of fresh concrete.
3. Perform washout of concrete trucks in designated areas only.
4. Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
5. Do not allow excess concrete to be dumped onsite, except in designated areas.

For onsite washout:

1. Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
2. Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.

Below grade concrete washout facilities are typical. These consist of a lined excavation sufficiently large to hold expected volume of washout material. Above grade facilities are used if excavation is not practical. Temporary concrete washout facility (type above grade) should be constructed as shown on the details at the end of this section, with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

Silt Fence

A silt fence is a barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. When properly used, silt fences can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond, allowing heavier solids to settle out. If not properly installed, silt fences are not likely to be effective.

The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent. Silt fence is used during the period of construction near the perimeter

of a disturbed area to intercept sediment while allowing water to percolate through. This fence should remain in place until the disturbed area is permanently stabilized. Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow.

Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

Materials:

1. Silt fence material should 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/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
2. Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding 140.
3. Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

Installation:

1. Steel posts, which support the silt fence, should 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 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet.
2. Lay out fencing down-slope of disturbed area, following the contour as closely as possible. The fence should be sited so that the maximum drainage area is ¼ acre/100 feet of fence.
3. The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
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 should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.
6. Silt fence should be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.

Common Trouble Points:

1. Fence not installed along the contour causing water to concentrate and flow over the fence.
2. Fabric not seated securely to ground (runoff passing under fence)
3. Fence not installed perpendicular to flow line (runoff escaping around sides)
4. Fence treating too large an area, or excessive channel flow (runoff overtops or collapses fence)

TEMPORARY CONSTRUCTION ENTRANCE/EXIT

The purpose of a temporary gravel construction entrance is to provide a stable entrance/exit condition from the construction site and keep mud and sediment off public roads. A stabilized construction entrance is a stabilized pad of crushed stone located at any point traffic will be entering or leaving the construction site from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking or flowing of sediment onto public rights-of-way. This practice should be used at all points of construction ingress and egress.

Excessive amounts of mud can also present a safety hazard to roadway users. To minimize the amount of sediment loss to nearby roads, access to the construction site should be limited to as few points as possible and vegetation around the perimeter should be protected were access is not necessary. A rock stabilized construction entrance should be used at all designated access points.

Materials:

1. The aggregate should consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan.
2. The aggregate should be placed with a minimum thickness of 8 inches.
3. The geotextile fabric should be designed specifically for use as a soil filtration media with an approximate weight of 6 oz/yd2, a mullen burst rating of 140 lb/in2, and an equivalent opening size greater than a number 50 sieve.
4. If a washing facility is required, a level area with a minimum of 4 inch diameter washed stone or commercial rack should be included in the plans. Divert wastewater to a sediment trap or basin.

Installation: (North Carolina, 1993)

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

Common trouble points:

1. Inadequate runoff control – sediment washes onto public road.
2. Stone too small or geotextile fabric absent, results in muddy condition as stone is pressed into soil.

3. Pad too short for heavy construction traffic – extend pad beyond the minimum 50 foot length as necessary.
4. Pad not flared sufficiently at road surface, results in mud being tracked on to road and possible damage to road edge.
5. Unstable foundation – use geotextile fabric under pad and/or improve foundation drainage.

INLET PROTECTION

Storm sewers that are made operational prior to stabilization of the associated drainage areas can convey large amounts of sediment to natural drainage ways. In case of extreme sediment loading, the storm sewer itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets. The following guidelines for inlet protection are based primarily on recommendations by the Virginia Dept. of Conservation and Recreation (1992) and the North Central Texas Council of Governments (NCTCOG, 1993b).

In developments for which drainage is to be conveyed by underground storm sewers (i.e., streets with curbs and gutters), all inlets that may receive storm runoff from disturbed areas should be protected. Temporary inlet protection is a series of different measures that provide protection against silt transport or accumulation in storm sewer systems. This clogging can greatly reduce or completely stop the flow in the pipes. The different measures are used for different site conditions and inlet types.

Care should be taken when choosing a specific type of inlet protection. Field experience has shown that inlet protection that causes excessive ponding in an area of high construction activity may become so inconvenient that it is removed or bypassed, thus transmitting sediment-laden flows unchecked. In such situations, a structure with an adequate overflow mechanism should be utilized.

It should also be noted that inlet protection devices are designed to be installed on construction sites and not on streets and roads open to the public. When used on public streets these devices will cause ponding of runoff, which can cause minor flooding and can present a traffic hazard. An example of appropriate siting would be a new subdivision where the storm drain system is installed before the area is stabilized and the streets open to the general public. When construction occurs adjacent to active streets, the sediment should be controlled on site and not on public thoroughfares. Occasionally, roadwork or utility installation will occur on public roads. In these cases, inlet protection is an appropriate temporary BMP.

The following inlet protection devices are for drainage areas of one acre or less. Runoff from larger disturbed areas should be routed to a temporary sediment trap or basin. Filter barrier protection using silt fence is appropriate when the drainage area is less than one acre and the basin slope is less than five percent. This type of protection is not applicable in paved areas.

Block and gravel protection is used when flows exceed 0.5 cubic feet per second and it is necessary to allow for overtopping to prevent flooding. This form of protection is also useful for curb type inlets as it works well in paved areas.

Wire mesh and gravel protection is used when flows exceed 0.5 cubic feet per second and construction traffic may occur over the inlet. This form of protection may be used with both curb and drop inlets.

Excavated impoundment protection around a drop inlet may be used for protection against sediment entering a storm drain inlet. With this method, it is necessary to install weep holes to allow the impoundment to drain completely. If this measure is implemented, the impoundment should be sized such that the volume of excavation is 3,600 cubic feet per acre (equivalent to 1 inch of runoff) of disturbed area entering the inlet.

Materials:

1. Filter fabric should be a nylon reinforced polypropylene fabric which meets the following minimum criteria: Tensile Strength, 90 lbs.; Puncture Rating, 60 lbs.; Mullen Burst Rating, 280 psi; Apparent Opening Size, U.S. Sieve No. 70.
2. Posts for fabric should be 2" x 4" pressure treated wood stakes or galvanized steel, tubular in cross-section or they may be standard fence "T" posts.
3. Concrete blocks should be standard 8" x 8" x 16" concrete masonry units.
4. Wire mesh should be standard hardware cloth or comparable wire mesh with an opening size not to exceed 1/2 inch.

Guidelines for installation:

Silt Fence Drop Inlet Protection

1. Silt fence should conform to the specifications listed above and should be cut from a continuous roll to avoid joints.
2. For stakes, use 2 x 4-inch wood or equivalent metal with a minimum length of 3 feet.
3. Space stakes evenly around the perimeter of the inlet a maximum of 3 feet apart, and securely drive them into the ground, approximately 18 inches deep.
4. To provide needed stability to the installation, a frame with 2 x 4- inch wood strips around the crest of the overflow area at a maximum of 1½ feet above the drop inlet crest should be provided.
5. Place the bottom 12 inches of the fabric in a trench and backfill the trench with 12 inches of compacted soil.
6. Fasten fabric securely by staples or wire to the stakes and frame. Joints must be overlapped to the next stake.
7. It may be necessary to build a temporary dike on the down slope side of the structure to prevent bypass flow.

If the drop inlet is above the finished grade, the grate may be completely covered with filter fabric. The fabric should be securely attached to the entire perimeter of the inlet using 1"x 2" wood strips and appropriate fasteners.

Gravel and Wire Mesh Drop Inlet Sediment Filter

1. Wire mesh should be laid over the drop inlet so that the wire extends a minimum of 1 foot beyond each side of the inlet structure. Wire mesh with 1/2-inch openings should be used. If more than one strip of mesh is necessary, the strips should be overlapped.
2. Coarse aggregate should be placed over the wire mesh. The depth of stone should be at least 12 inches over the entire inlet opening. The stone should extend beyond the inlet opening at least 18 inches on all sides.

3. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stones must be pulled away from the inlet, cleaned and/or replaced.

Note: This filtering device has no overflow mechanism; therefore, ponding is likely especially if sediment is not removed regularly. This type of device should never be used where overflow may endanger an exposed fill slope. Consideration should also be given to the possible effects of ponding on traffic movement, nearby structures, working areas, adjacent property, etc.

Block and Gravel Drop Inlet Sediment Filter

1. Place concrete blocks lengthwise on their sides in a single row around the perimeter of the inlet, with the ends of adjacent blocks abutting. The height of the barrier can be varied, depending on design needs, by stacking combinations of 4-inch, 8-inch and 12- inch wide blocks. The barrier of blocks should be between 12 and 24 inches high.
2. Wire mesh should be placed over the outside vertical face (webbing) of the concrete blocks to prevent stone from being washed through the holes in the blocks. Wire mesh with 1/2-inch openings should be used.
3. Stone should be piled against the wire to the top of the block barrier.
4. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stone must be pulled away from the blocks, cleaned and replaced.

Block and Gravel Curb Inlet Sediment Filter

1. Two concrete blocks should be placed on their sides abutting the curb at either side of the inlet opening.
2. A 2- inch x 4- inch stud should be cut and placed through the outer holes of each spacer block to help keep the front blocks in place.
3. Concrete blocks should be placed on their sides across the front of the inlet and abutting the spacer blocks.
4. Wire mesh should be placed over the outside vertical face (webbing) of the concrete blocks to prevent stone from being washed through the holes in the blocks. Wire mesh with 1/2-inch openings should be used.
5. Coarse aggregate should be piled against the wire to the top of the barrier.
6. If the stone filter becomes clogged with sediment so that it no longer adequately performs its function, the stone must be pulled away from the blocks, cleaned and/or replaced.

Excavated Drop Inlet Sediment Trap

1. The excavated trap should be sized to provide a minimum storage capacity calculated at 3,600 cubic feet per acre of drainage area. A trap should be no less than 1-foot nor more than 2 feet deep measured from the top of the inlet structure. Side slopes should not be steeper than 2:1.
2. The slope of the basin may vary to fit the drainage area and terrain. Observations must be made to check trap efficiency and modifications should be made as necessary to ensure satisfactory trapping of sediment. Where an inlet is located so as to receive concentrated flows, such as in a highway median, it is recommended

that the basin have a rectangular shape in a 2:1 (length/width) ratio, with the length oriented in the direction of the flow.

3. Sediment should be removed and the trap restored to its original dimensions when the sediment has accumulated to one- half the design depth of the trap. Removed sediment should be deposited in a suitable area and in a manner such that it will not erode.

Curb Inlet Protection with 2-inch x 4-inch Wooden Weir

1. Attach a continuous piece of wire mesh (30-inch minimum width x inlet throat length plus 4 feet) to the 2-inch x 4-inch wooden weir (with a total length of throat length plus 2 feet). Wood should be "construction grade" lumber.
2. Place a piece of approved filter cloth of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2- inch x 4- inch weir.
3. Securely nail the 2-inch x 4-inch weir to the 9-inch long vertical spacers which are to be located between the weir and inlet face at a maximum 6- foot spacing.
4. Place the assembly against the inlet throat and nail 2-foot (minimum) lengths of 2-inch x 4- inch board to the top of the weir at spacer locations. These 2- inch x 4-inch anchors should extend across the inlet tops and be held in place by sandbags or alternate weight.
5. The assembly should be placed so that the end spacers are a minimum 1 foot beyond both ends of the throat opening.
6. Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place coarse aggregate over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection should be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

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.

Common Trouble Points:

1. Gaps between the inlet protection and the curb (flows bypass around side of filter).
2. Filter fabric skirt not anchored to pavement (flows pass under filter).

DRAINAGE AREA MAP

There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. The Existing and Proposed Condition Drainage Maps are provided at the end of this form, in **Exhibit 2**. Silt fencing will be used in combination with other erosion and sediment controls within each disturbed drainage area as discussed in **Attachment D.**

TEMPORARY SEDIMENT POND(S) PLANS AND CALCULATIONS

The proposed development will not disturb areas over 10 acres. Therefore, temporary sediment pond(s) plans and calculations will not be required.

INSPECTION AND MAINTENANCE FOR BMPS

MAINTENANCE

All temporary and sediment control BMPs will be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repair of BMPs will be conducted in accordance with manufacturers' specifications.

All temporary erosion and sediment control BMPs will be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment will be removed or stabilized on site. Disturbed soil areas resulting from removal of BMPs or vegetation will be permanently stabilized as soon as possible.

Erosion and sediment controls are designed to prevent soil erosion and sediment migration offsite, to the extent practicable, which may result from construction activity. This design considers local topography, soil type, and rainfall.

Control measures must be installed and maintained according to the manufacturer's specifications. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the permitee must replace or modify the control for site situations.

If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts, and whenever feasible, prior to the next rain event.

The controls must be installed, maintained, and operated in a manner that will limit, to the extent practicable, offsite transport of litter, construction debris, and construction materials.

INSPECTIONS

An inspection will be performed by the qualified personnel, as designated by the permitee, on a weekly basis and after any rainfall event. An inspection and maintenance report shall be made per inspection. An inspection form has been included in this report and in the SWPPP. Based on the inspection results, the controls shall be corrected before the next scheduled inspection.

A log of inspection results will be maintained on-site and will include the name of the inspector, date, major observations, and necessary corrective measures. Reports of maintenance and inspection activities will be maintained on-site, in conformance with the TPDES permit conditions. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWPPP. This report must be signed by the responsible party.

Major observations shall, at a minimum, include the following:

- The locations of discharges of sediment or other pollutants from the site;
- Locations of BMPs that need to be maintained;
- Locations of BMPs that failed to operate as designed or proved inadequate for a particular location; and
- Location where additional BMPs are needed.

All needed repairs or modifications will be reported to the contractors to permit the timely implementation of required actions. Necessary repairs of modifications will be implemented

within seven days of inspection. The SWPPP will be modified within seven days to reflect any modifications to measures as a result of inspection.

The SWPPP must be amended whenever there is a change in design, construction, operation or maintenance that has a significant effect on the discharge of pollutants to the waters of the United States that was not addressed in the SWPPP.

The SWPPP must be amended when inspections or investigations by site operations, local, state or federal officials indicate that the SWPPP is proving ineffective in eliminating or significantly minimizing pollutants from the construction site or otherwise is not achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity.

McAlister's Deli - New Braunfels
Water Pollution Abatement Plan

INSPECTION FORM

Project Name: **Owner (s)/Operator (s):** **Permit Numbers(s):** **Inspection Date:**	*NOT APPLICABLE*	*IN COMPLIANCE*	*NEEDS CORRECTION*	*COMMENTS*
RECORD KEEPING				
SWP3 Current				
NOI and Permit Posted				
BEST MANAGEMENT PRACTICES (BMPs)				
Vegetative Buffers				
Soil Covering(Including mulch and temporary vegetation)				
Outlet Protection				
Sediment Control Basins				
Silt Fence				
Stabilized Entrances/Exits				
Construction Staging Areas				
Inlet Protection				
Gravel Filter Bags				
Vegetated Filter Strip				
Concrete Truck Washout Pit				
Trash Receptacles				
General Site Cleanliness				
Other				
Other				
Other				

MAJOR OBSERVATIONS

_____

_____

_____

CERTIFICATION

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

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

INSPECTOR NAME/SIGNATURE:_____ DATE:_____
(Inspector must attach a brief summary of qualifications to this report.)

OWNER NAME/SIGNATURE:_____ DATE:_____
(Inspector must attach a brief summary of qualifications to this report.)

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION

Construction practices shall disturb the minimal amount of existing ground cover as required for land clearing, grading, and construction activity for the shortest amount of time possible to minimize the potential of erosion and sedimentation from the site. Existing vegetation shall be maintained and left in place until it is necessary to disturb for construction activity. For this project the following stabilization practices will be implemented:

1. Hydraulic Mulch and Seeding: Disturbed areas subject to erosion shall be stabilized with hydraulic mulch and/or seeded and watered to provide interim stabilization. For areas that are not to be sodded as per the project landscaping plan, a minimum of 85% vegetative cover will be established to provide permanent stabilization.

2. Sodding and Wood Mulch: As per the project landscaping plan, Sodding and wood mulch will be applied to landscaped areas to provide permanent stabilization prior to project completion.

Records of the following shall be maintained by the permitee in the attached Project Timeline:

a) The dates when major grading activities occur;

b) The dates when construction activities temporarily or permanently cease on a portion of the site; and

c) The dates when stabilization measures are initiated.

Stabilization measures must be initiated as soon as practical in portions of the site where construction activities have temporarily or permanently ceased, and except as provided in the following, must be initiated no more that fourteen (14) days after the construction activity in that portion of the site has temporarily or permanently ceased:

Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practical.

Where construction activity on a portion of the site is temporarily ceased and earth disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures do not have to be initiated on that portion of the site.

In arid areas (areas with an average rainfall of 0-10 inches), semiarid areas (areas with an average annual rainfall of 10 to 20 inches), and areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practical.

PROJECT TIMELINE

DATES WHEN MAJOR GRADING ACTIVITIES OCCUR	
Date	Construction Activity

DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE	
Date	Construction Activity

DATES WHEN STABILIZATION MEASURES ARE INITIATED	
Date	Stabilization Activity

KFW
ENGINEERS

SECTION 5
PERMANENT STORMWATER

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: McAlister's Deli - New Braunfels

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

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

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

   ☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
   ☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is provided below:

   _____

   _____

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

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

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

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

☐ **ATTACHMENT A - 20% or Less Impervious Cover Waiver.** 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.

☐ 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.**

☒ 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. ☒ **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. ☒ 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.

   ☐ **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. ☒ **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. ☒ **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. ☒ 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. ☒ **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. ☒ 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. ☒ 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:

Craig Fletcher, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

6/27/2014
Date

20% OR LESS IMPERVIOUS COVER WAIVER

The site will be used for commercial development with greater than 20% impervious cover. Therefore, a 20% or less impervious cover waiver will not be requested for this project.

BMPS FOR UP-GRADIENT STORMWATER

Surface and ground water do not originate up-gradient from the site. Therefore, additional Permanent Best Management Practices and Measures used to prevent pollution of surface and ground water will not be required.

BMPS FOR ON-SITE STORMWATER

Storm water originating onsite will be treated by one permanent BMP proposed for this site. The Jellyfish Filter System will treat the 1.082 acres of proposed impervious cover, which includes overtreatment for the 0.036 acres of untreated impervious cover exiting the site. The permanent BMP will provide the required overall 80% removal of TSS for the increased impervious cover.

The Jellyfish Filter System, model JF6-5-1, selected for this project is housed within a manhole structure that is seven (7) feet-two (2) inches in diameter (6-foot inner diameter). This particular model contains one (1) Hi-Flo cartridge and four (5) Draindown cartridge. Each typical cartridge is composed of eleven (11) tentacles that are 54 inches long, with a surface area of 381 SF. The JF6-5-1 being implemented has a treatment flow rate of 0.98 cfs.

Furthermore, the Effective Area provided within the Jellyfish Compensation Worksheet is used to determine the TSS treatment of the selected Jellyfish model. The flow rate of the selected Jellyfish system model is divided by the Effective Area to determine the rainfall intensity for the drainage area. Once the rainfall intensity is obtained, it can be used to determine the fraction of annual runoff treated, which in turn, determines the TSS treatment of the Jellyfish system.

Please reference **Attachment F** of this section for design calculations. Construction plans and specifications are provided in **Exhibit 3,** located at the end of this report under the appropriate tab.

BMPS FOR SURFACE STREAMS

As identified in the Geologic Assessment three (3) features were found within the boundaries of the project. However, because their sensitivity rating is less than 40, the features are considered to not be sensitive. On-site Permanent Best Management Practices have been designed to prevent pollution caused by contaminated storm water runoff from entering surface streams and/or the aquifer. All permanent BMP's have been designed to remove 80% of the increase in Total Suspended Solids as per current TCEQ requirements.

REQUEST TO SEAL A FEATURE

As identified in the Geologic Assessment three (3) geologic features, a drainage culvert (MB-1) an existing sanitary sewer line (MB-2), and a utility easement (MB-3) were found within the boundaries of the project. The drainage culvert is surrounded by rocks, stick and dirt. However, because their sensitivity rating is less than 40, the features are considered to not be sensitive. Therefore, 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.

The owner, geologist and engineer of record shall be notified immediately if any naturally-occurring sensitive features identified in either an executive director review, or during excavation, blasting, or construction. A Solution Feature Discovery Notification Form will then be submitted to the Texas Commission of Environmental Quality for review.

CONSTRUCTION PLANS

Calculations to meet the load removal requirements for the project and the load removal provided by the permanent BMP's are provided in the attached spreadsheet which have been signed and sealed by a professional engineer licensed in the state of Texas. The load removal requirements are derived from the equations from the technical guidance manual addendum based upon project area and increase in impervious cover. All stormwater runoff from impervious areas will be treated by the proposed permanent BMP's, removing the required 80% of the increase in Total Suspended Solids. Provided within the calculations is a summary of the amount of pollutant load required to be removed from the drainage areas and the amount of removal provided by the permanent BMP's.

The table provided below outlines the proposed permanent BMP information for ease of understanding.

Drainage Basin	Proposed BMP	Total Area (Ac)	Pre Development Impervious Area (Ac)	Post Development Impervious Area (Ac)	Lm (lbs)	Lr (lbs)
1	Jellyfish Filter	1.334	0.115	1.197	971	1014
2	Untreated	0.212	0.052	0.088	33	0
TOTAL		1.546	0.167	1.285	1004	1014

Construction plans, details, specifications, and construction notes are provided in **Exhibit 3** which is attached at the end of this report under the appropriate tab.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: McAlister's Deli-New Braunfels
Date Prepared: 2/3/2014

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 * =	1.55	acres
Predevelopment impervious area within the limits of the plan * =	0.17	acres
Total post-development impervious area within the limits of the plan* =	1.29	acres
Total post-development impervious cover fraction * =	0.83	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	1004	lbs.

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

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

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

Drainage Basin/Outfall Area No. =	1	
Total drainage basin/outfall area =	1.33	acres
Predevelopment impervious area within drainage basin/outfall area =	0.12	acres
Post-development impervious area within drainage basin/outfall area =	1.20	acres
Post-development impervious fraction within drainage basin/outfall area =	0.90	
$L_{M\ THIS\ BASIN}$ =	971	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Jellyfish Filter
Removal efficiency = 86 percent

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: McAlister's Deli-New Braunfels
Date Prepared: 2/3/2014

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

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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 * =	1.55	acres
Predevelopment impervious area within the limits of the plan * =	0.17	acres
Total post-development impervious area within the limits of the plan* =	1.29	acres
Total post-development impervious cover fraction * =	0.83	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	1004	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 2

Total drainage basin/outfall area =	0.21	acres
Predevelopment impervious area within drainage basin/outfall area =	0.05	acres
Post-development impervious area within drainage basin/outfall area =	0.09	acres
Post-development impervious fraction within drainage basin/outfall area =	0.42	
$L_{M\ THIS\ BASIN}$ =	32	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Untreated
Removal efficiency = N/A percent

Jellyfish® Filter

VERSION 2.91

EAPP JELLYFISH COMPENSATION WORKSHEET

PROJECT INFORMATION

PROJECT NAME	**McAlister's Deli-New Braunfels**
LOCATION (COUNTY)	**Comal**
DATE	**2/3/2014**

SITE INFORMATION

AVERAGE ANNUAL RAINFALL = 33 inches

CATCHMENTS

AREA	IMPERVIOUS AREA (AC)	PERVIOUS AREA (AC)	TOTAL AREA (AC)	EXISTING IMPERVIOUS AREA (AC)	SELECT MODEL
1	**1.197**	**0.137**	**1.334**	**0.115**	**JF6-5-1**
2	**0.088**	**0.124**	**0.212**	**0.052**	**No Treatment**
C			**N/A**		
D			**N/A**		
E			**N/A**		
F			**N/A**		
G			**N/A**		
H			**N/A**		
I			**N/A**		
J			**N/A**		

TREATMENT SUMMARY

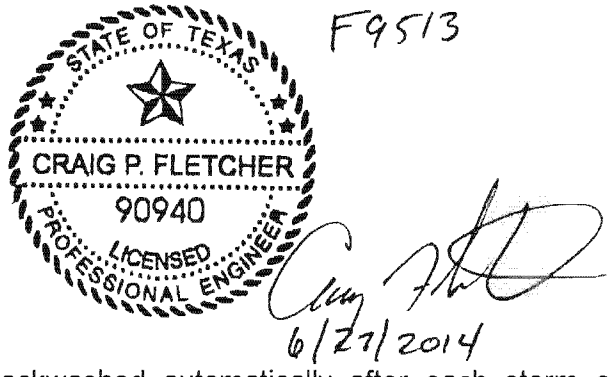
	Effective Area (acres)	REQUIRED TSS REMOVAL (LB/YR)	TSS TREATMENT BY BMP (LB/YR)	PASS OR FAIL
ENTIRE SITE	**1.0814**	**1004**	**1014**	**PASS**

INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

Maintenance of Jellyfish Filter System

As per the latest addendum to TCEQ RG-348 "Complying with the Edward's Aquifer Rules" released on July 2012, the Imbrium Jellyfish has been approved for usage over the Recharge Zone. This product has very specific inspection and maintenance procedures that are detailed in the addendum. The engineer of record is not responsible for the specific method to follow while maintaining the product as it is a proprietary device that has been preapproved by TCEQ with specific usage and maintenance procedures. No deviation from the plan that has been approved by TCEQ should be allowed; however, the engineer of record is responsible for putting forth an inspection and maintenance plan for the property owner to use in servicing the device. The maintenance plan below has been spelled out specifically by TCEQ for that purpose, and should be used on this project.

Engineer of Record Certification



Jellyfish cartridges are passively backwashed automatically after each storm event, which removes accumulated sediment from the membranes and significantly extends the service life of the cartridges and the maintenance interval. If required, the cartridges can be easily manually backwashed without removing the cartridges. Additionally, the lightweight cartridges can be removed by hand and externally rinsed and then reinstalled. These simple maintenance options allow for cartridge regeneration, thereby minimizing cartridge replacement costs and life-cycle treatment costs while ensuring long-term treatment performance.

Regular inspection and maintenance are proven, cost-effective ways to maximize water resource protection for all stormwater pollution control practices, and are required to insure proper protection for all stormwater pollution control practices, and are required to insure proper functionality of the Jellyfish filter. Inspection of the Jellyfish filter is performed from the surface, while proper maintenance requires a combination of procedures conducted from the surface and with worker entry into the structure.

- Inspections. Post Construction inspection is required prior to putting the Jellyfish Filter into service. Routine inspections are recommended quarterly during the first year of operation to accurately assess the sediment and floatable pollutant accumulation, and to ensure that the automatic backwash feature is functioning properly. Inspection frequency in subsequent years is based on maintenance plan developed in the first year, but must occur annually at minimum. Inspections should be conducted immediately after oil, fuel, or other chemical spill.

- Maintenance. The unit must be cleaned annually. This cleaning includes removal and appropriate disposal of all water, sediment, oil, grease, and debris that has accumulated within the unit. The jellyfish filter is inspected and maintained by professional vacuum cleaning service providers with experience in the maintenance of underground tanks, sewers and catch basins. Since some of the maintenance service providers trained in confined space entry procedures should enter the vessel. Service provider companies typically have personnel who are trained and certified in confined space entry procedures according to local, state, and federal standards. Filter cartridges should be tested for adequate flow rates, every 12 months and cleaned and re-commissioned, or replaced if necessary. A manual back flush must be performed on a single drain down cartridge using a jellyfish cartridge back flush pipe. If time required to drain 14 gallons of back flush water from back flush pipe exceeds 15 seconds, it is recommended to perform a manual back flush on each of the cartridges. After the manual back flush, the drain down test should be repeated on a single cartridge to determine if the cartridge can drain 14 gallons of water in 15 seconds. If the cartridge still does not achieve the design flow rate, it must be replaced. The unit should be cleaned out immediately after an oil, fuel, or chemical spill.

- External Rinsing. This cartridge cleaning procedure is performed by removing the cartridge from the cartridge deck and externally rinsing the filtration tentacles using a low-pressure water sprayer. If this procedure is performed within the structure, the cartridge should be rinsed while safely suspended over the maintenance access wall opening in the cartridge deck, such that rinsate flows into the lower chamber of the Jellyfish. If the rinsing procedure is performed outside the structure, the cartridge should be rinsed in a suitable basin such as a plastic barrel, and rinsate subsequently poured into the maintenance access wall opening in the cartridge deck. Sediment is subsequently removed from the lower chamber by standard vacuum service.

Signature

This inspection and maintenance plan outlines the procedures necessary to maintain the performance of the Permanent Best Management Practices for this project. It should be noted that the plan provides guidelines that may have to be adjusted dependent on site specific and weather related conditions.

It is the responsibility of the owner to contract with a representative to provide the inspections and maintenance as outlined in the plan for the duration of the project. The owner will maintain this responsibility until it is assumed or transferred to another entity in writing. If the property is leased or sold, the responsibility for the maintenance will be required to be transferred through the lease agreement, binding covenants, closing documents, or other binding legal instrument.

I, the owner, have read and understand the requirements of the Inspection and Maintenance Plan for the proposed Permanent Best Management Practices for my project. I acknowledge that I will maintain responsibility for the implementation and execution of the plan until the responsibility is transferred to or assumed by another party in writing through a binding legal instrument.

Owner: Larry G. Lee
President
Leeco Energy & Investments, Inc.

6/25/14
Date

PILOT-SCALE FIELD TESTING PLAN

Both the TCEQ Technical Guidance Manual (TGM) and an addendum to the TCEQ TGM was used to design permanent BMPs and measures for this site; therefore pilot-scale field testing is not required.

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

A majority of contaminated Stormwater runoff from the site will enter the water quality device proposed for this project. Storm water will be filtered and allow the cleansed water to be released at a point consistent with existing hydrology conditions. Therefore, there will be no changes in the way in which water enters a stream as a result of the construction and development.

KFW
ENGINEERS

SECTION 6
ADDITIONAL FORMS

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

I Larry G. Lee,
Print Name

President,
Title - Owner/President/Other

of Leeco Energy & Investments, Inc.,
Corporation/Partnership/Entity Name

have authorized Craig Fletcher, P.E.
Print Name of Agent/Engineer

of KFW Engineers
Print Name of Firm

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

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

6/25/14
Date

THE STATE OF Texas §

County of Ector §

BEFORE ME, the undersigned authority, on this day personally appeared Larry G. Lee 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 25th day of June, 2014

NOTARY PUBLIC

TAMMY R. BROWN
My Commission Expires
November 25, 2014

Tammy R. Brown
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: NOV. 25, 2014

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
Application Fee Form

NAME OF PROPOSED REGULATED ENTITY: McAlister's Deli - New Braunfels
REGULATED ENTITY LOCATION: 1680 W. State Highway 46, New Braunfels, TX 78132
NAME OF CUSTOMER: Leeco Energy & Investments, Inc.
CONTACT PERSON: Larry G. Lee PHONE: 432-550-0073
(Please Print)

Customer Reference Number (if issued): CN 602242315 (nine digits)

Regulated Entity Reference Number (if issued): RN _____ (nine digits)

Austin Regional Office (3373) ☐ Hays ☐ Travis ☐ Williamson

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	**1.546 Acres**	**$ 4,000**
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature

10/25/14
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

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 n/a

2. Attachments — Describe Any Attachments: *(ex. Title V Application, Waste Transporter Application, etc.)*

☒ Yes ☐ No — Water Pollution Abatement Plan

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 602242315		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)*

McAlister's Deli - New Braunfels

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*	1680 W State H[redacted]6							
	City	New Braunfels	State	TX	ZIP	78132	ZIP + 4	4737
25. Mailing Address:	N/A							
	City		State		ZIP		ZIP + 4	

26. E-Mail Address:			
27. Telephone Number	28. Extension or Code	29. Fax Number *(if applicable)*	
( )		( )	

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)
5812	5461	722513	445291

34. What is the Primary Business of this entity? *(Please do not repeat the SIC or NAICS description.)*

Restaurant

Questions 34 – 37 address geographic location. Please refer to the instructions for applicability.

35. Description to Physical Location:	Near east corner of Texas SH 46 & Independence Drive

36. Nearest City	County	State	Nearest ZIP Code
New Braunfels	Comal	Texas	78132

37. Latitude (N) In Decimal:	29.7169		38. Longitude (W) In Decimal:	98.1596	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	43	1.00	98	9	34.73

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:

SECTION IV: Preparer Information

40. Name:	Craig Fletcher, PE	41. Title:	Principal

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210)979-8444	14	(210)979-8441	cfletcher@kfwengineers.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:	Leeco Energy & Investments, Inc.	Job Title:	President
Name *(In Print)*:	Larry G. Lee	Phone:	(432) 550-0073
Signature:		Date:	6/25/14

KFW
ENGINEERS

SECTION 7
EXHIBITS

KFW
ENGINEERS

EXHIBIT 1

WPAP SITE PLAN & DETAILS

SITE GEOLOGIC MAP
MCALISTER'S DELI - NEW BRAUNFELS

LOCATION MAP
NOT TO SCALE

SCALE : 1" = 20'

0' 20' 60'
40'

PERSON FORMATION
CYCLIC AND MARINE MEMBER

S42°22'12"E 207.52

ARED ACCESS EASEMENT
OC. NO. 201006029630.
DICATED TO THE PUBLIC)

UTILITY EASEMENT
. NO. 201006029630

MB-2 - SANITARY SEWER

MB-1 - CULVERT

20' NBU SANITARY SEWEI
DOC. NO. 201006028679

RESIDUE OF 55.47 ACRES
HENRY L. LUSKEY, ET AL
TO
NEW BRAUNFELS INVESTMENT JOINT
VENTURE
VOL. 449, PG. 161

LOT 1
1.546 AC

N45°58'46"E 330.00

S47°57'04"W 341.97

LOT 1
OAK RUN COMMERCIAL RESERVE
UNIT 7
DOC. NO. 201006029630

LOT 1
OAK RUN COMMERCIAL
UNIT 7A
DOC. NO. 201206028062

MB-3 - UTILITY EASEMENTS

SHARED ACCESS EASEMENT
DOC. NO. 201006029630

SHARED ACCESS EASEI
DOC. NO. 2010060296

10' UTILITY EASEMEN
DOC. NO. 201206028

25' NBU EASEME
DOC. NO. 201206

25' NBU EASI
VOL. 406, P(

70' NBU ELECT. AND
WATERLINE EASEMENT
DOC. NO. 20006020301

25' N.B.U. EASEMENT

25.0'

(S41°57'58"E)
(135.74')

N42°02'41"W
93.12'

N34°42'09"W
86.03'

(S42°02'56"E)
(137.23')

TXDOT R.O.W.
DOC. NO. 200806037917

25' NBU EASEMENT
VOL. 406, PG. 546

N42°02'56"W

TXDOT R.O.W.

SITE GEOLOGIC MAP
PREPARED BY DOUGLAS MCGOOKEY, P.G.
DECEMBER 2013

STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 3
LICENSED
PROFESSIONAL GEOSCIENTIST
6-26-14

BASE MAP BY:

D·A·MAWYER
LAND SURVEYING
2700 ROLLING CREEK
SPRING BRANCH, TX 78070
PH: (210)325-0858
dmawyer@dcm-tx.com
FIRM #10191500

OAK RUN COMMERCIAL UNIT 7B

BEING 1.546 ACRE TRACT OF LAND SITUATED IN THE CITY OF NEW BRAUNFELS, COMAL COUNTY, TEXAS AND BEING OUT OF THE ANDRES SANCHES SURVEY NO. 286, ABSTRACT NO. 528 AND BEING A PORTION OF A 55.47 ACRE TRACT OF LAND DESCRIBED IN VOLUME 449, PAGES 161-175 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS.

DISCLAIMER:
THE EXISTING TOPOGRAPHIC AND BOUNDARY SURVEY WAS PERFORMED BY OTHERS AND WAS PROVIDED TO KFW BY THE CLIENT. THE ACCURACY OF THE EXISTING TOPOGRAPHY HAS NOT BEEN VERIFIED BY KFW. NO WARRANTIES TO ITS ACCURACY ARE EXPRESSED OR IMPLIED. THE CONTRACTOR SHALL VERIFY THE EXISTING TOPOGRAPHY PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE CLIENT AND ENGINEER OF ANY DISCREPANCIES IMMEDIATELY AND PRIOR TO CONSTRUCTION.

LEGAL DESCRIPTION
BEING 1.546 ACRE TRACT OF LAND SITUATED IN THE CITY OF NEW BRAUNFELS, COMAL COUNTY, TEXAS AND BEING OUT OF THE ANDRES SANCHES SURVEY NO. 286, ABSTRACT NO. 528, AND BEING A PORTION OF A 55.47 ACRE TRACT OF LAND DESCRIBED IN VOL. 449, PGS. 161 - 175 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS

BENCHMARKS
TBM - A: ELEV. 859.34
TBM - B: ELEV. 872.11

BOTH BENCHMARKS SET BY D. A. MAWYER LAND SURVEYING

COORDINATION NOTE:

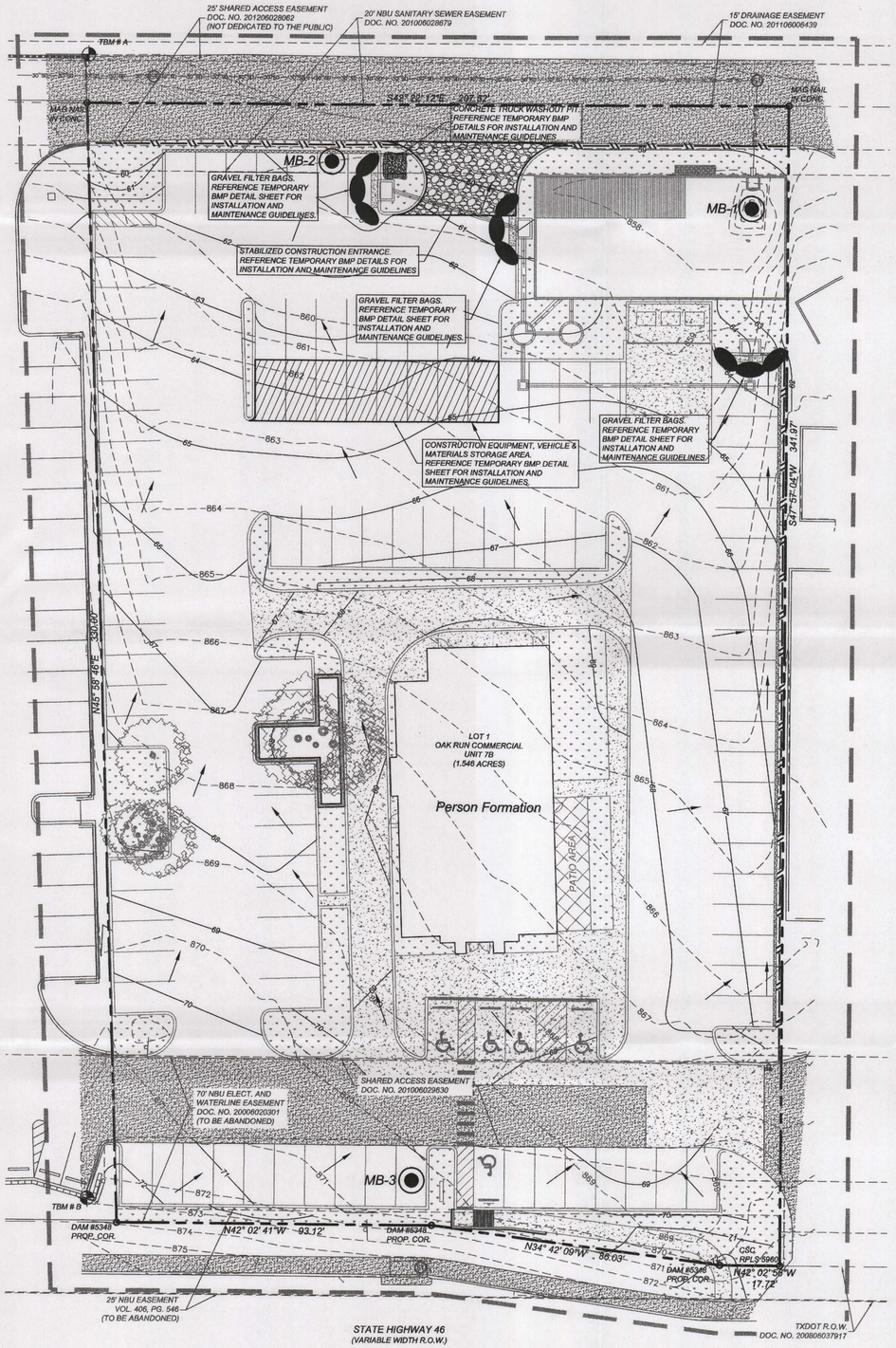
1. CONTACT TWC (TIME WARNER CABLE) TO COORDINATE CABLE TV SERVICE. (210)-244-0500.
2. CONFIRM REQUIREMENTS AND COORDINATE WITH NBU (NEW BRAUNFELS UTILITIES) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (830) 629-8400.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH NBU (NEW BRAUNFELS UTILITIES) TO PLAN GAS SERVICES. (830) 629-8400.
5. CONTRACTOR TO COORDINATE WITH NBU (NEW BRAUNFELS UTILITIES) TO PLAN SANITARY SEWER AND WATER SERVICES. (830) 629-8400.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

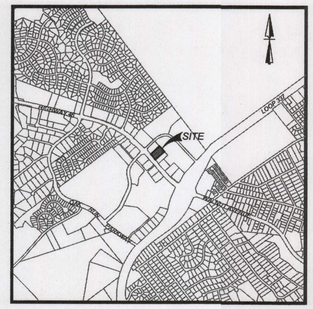
TCEQ-0592 (Rev. 3/15/07)
Texas Commission on Environmental Quality
Water Pollution Abatement Plan
General Construction Notes

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 the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.
11. The following records shall be maintained and made available to the TCEQ upon request: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; and the dates when stabilization measures are initiated.
12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
    A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
    B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
    C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office
2800 S. IH 35, Suite 100
Austin, Texas 78704-5712
Phone(512) 339-2929
Fax (512) 339-3795

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





SCALE : 1" = 20'
0' 20' 60'
40'

LEGEND

- LIMITS OF SOIL DISTURBANCE/ LIMITS OF CONSTRUCTION
- EXISTING CONTOURS — 1009 —
- PROPOSED CONTOURS — 03 —
- SOIL STABILIZATION AREAS
- STABILIZED CONSTRUCTION ENTRANCE/EXIT
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA.
- CONCRETE TRUCK WASHOUT PIT
- SILT FENCE
- FLOW ARROW
- GRAVEL FILTER BAGS
- PERSON FORMATION CYCLIC AND MARINE MEMBER — Person Formation
- MANMADE FEATURE IN BEDROCK — MB-1

GENERAL:

1. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT. IN ADDITION, OWNERS/OPERATORS MUST COMPLY WITH ALL REGULATIONS PERTAINING TO THE APPROVED WATER POLLUTION ABATEMENT PLAN SPECIFIC TO THIS PROJECT.

INSTALLATION:

1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

MAINTENANCE AND INSPECTION:

1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

PROJECT COMPLETION:

1. ALL DISTURBED AREAS ARES NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

TEMPORARY VEGETATION:

THE PREFERRED OPTION DURING THE CURRENT DROUGHT WITH REGARDS TO RE-VEGETATION IS TO PREPARE THE SEEDBED, ADDING TOPSOIL/COMPOST AS REQUIRED, PLACE FERTILIZER AND PERMANENT SEED MIX, AND THEN CORRECTLY INSTALL A SOIL RETENTION BLANKET (SRB) OR CHANNEL LINER, WHICHEVER IS REQUIRED FOR THE LOCATION. NO WATERING TO ESTABLISH VEGETATION WOULD BE REQUIRED. INFORMATION ON APPROVED SRB AND CHANNEL LINERS FOR THE SLOPE AND SOIL TYPE FOR A SPECIFIC LOCATION CAN BE FOUND AT http://www.dot.state.tx.us/business/doing_business/product_evaluation/erosion_control.htm
INSTALLATION SHOULD BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATION WHICH SHOULD BE PROVIDED TO THE UTILITY INSPECTOR.

KFW ENGINEERS & SURVEYING
FIRM# 9513
14603 HUEBNER RD, BLDG. 40
SAN ANTONIO, TEXAS 78230
PHONE (210) 979-8444
FAX (210) 979-8441

ISSUE DATE

REVISIONS

STATE OF TEXAS
CRAIG P. FLETCHER
90940
LICENSED
PROFESSIONAL ENGINEER
7/8/2014

MCALISTER'S DELI - NEW BRAUNFELS
WATER POLLUTION ABATEMENT PLAN
WPAP SITE PLAN

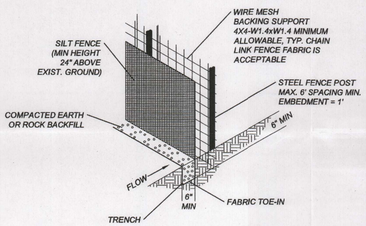
JOB NO. 327-03-01
DATE: JANUARY, 2014
DRAWN: J.W. CHECKED: C.F.
SHEET NUMBER:
EX -1A

Date: Jul 08, 2014, 10:08am User ID: mrichards
File: P:\327\03\01\Design\Exhibits\WPAP\WPAP SITE PLAN.dwg

KFW
ENGINEERS

EXHIBIT 2

EXISTING & PROPOSED DRAINAGE AREA MAPS



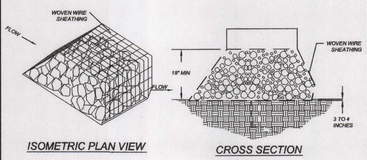
ISOMETRIC PLAN VIEW

Materials:
(1) Silt fence material should 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/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
(2) Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding 140.
(3) Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

Installation:
(1) Steel posts, which support the silt fence, should 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 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet.
(2) Lay out fencing down-slope of disturbed area, following the contour as closely as possible. The fence should be sited so that the maximum drainage area is ¼ acre@ 00 feet of fence.
(3) The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down- slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
(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 should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.
(6) Silt fence should be removed when the site is completely stabilized so as not to block or impede stone flow or drainage.

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

SILT FENCE



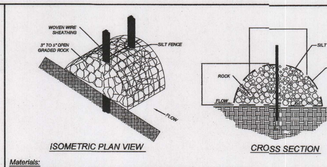
ISOMETRIC PLAN VIEW — CROSS SECTION

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

Installation:
(1) Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch openings.
(2) Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.
(3) Place the rock along the sheathing as shown in the diagram Figure 1-28), 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 should be built along the contour at zero percent grade or as near as possible.
(6) The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

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

ROCK BERM



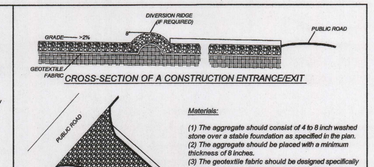
ISOMETRIC PLAN VIEW — CROSS SECTION

Materials:
(1) Silt fence material should 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/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
(2) Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft2, and Brindell hardness exceeding 140. Rebar (either #5 or #6) may also be used to anchor the berm.
(3) Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.
(4) The berm structure should be secured with a woven wire sheathing having maximum opening of 1 inch, and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings.
(5) Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

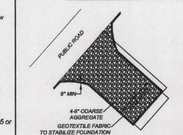
Installation:
(1) Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1-inch openings.
(2) Install the silt fence along the center of the proposed berm placement, as with a normal silt fence described in Section 2.4.3.
(3) Place the rock along the sheathing on both sides of the silt fence as shown in the diagram (figure 1-29), to a height not less than 24 inches. Clean, open graded 3- 5" diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rock may be used.
(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) The high service rock berm should be removed when the site is revegetated or otherwise stabilized or it may remain in place as a permanent BMP if drainage is adequate.

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

HIGH SERVICE ROCK BERM



CROSS-SECTION OF A CONSTRUCTION ENTRANCE/EXIT



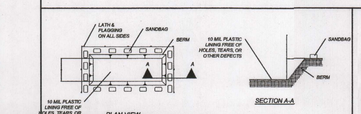
TEMPORARY CONSTRUCTION ENTRANCE/EXIT

Materials:
(1) The aggregate should consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan.
(2) The aggregate should be placed with a minimum thickness of 8 inches.
(3) The geotextile fabric should be designed specifically for use as a soil filtration media with an approximate weight of 6 oz/yd2, a mullen burst rating of 140 lb/in2, and an equivalent opening size greater than a number 50 sieve.
(4) If a washing facility is required, a level area with a minimum of 4 inch diameter washed stone or commercial rack should be included in the plans. Divert wastewater to a sediment trap or basin.

Installation: (North Carolina, 1993)
(1) Avoid curves on public roads and steep slopes. Remove vegetation and other objectionable material from the foundation area. Grade crown foundation for positive drainage.
(2) The minimum width of the entrance/exit should be 12 feet or the full width of exit roadway, whichever is greater.
(3) The construction entrance should be at least 50 feet long.
(4) If the slope toward the road exceeds 2%, construct a ridge, 6 to 8 inches high with 3:1 (H:V) side slopes, across the foundation approximately 15 feet from the entrance to divert runoff away from the public road.
(5) Place geotextile fabric and grade foundation to improve stability, especially where wet conditions are anticipated.
(6) Place stone to dimensions and grade shown on plans. Leave surface smooth and slope for drainage.
(7) Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.
(8) Install pipe under pad as needed to maintain proper public road drainage.

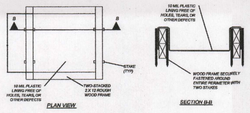
Inspection and Maintenance Guidelines:
(1) The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used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

STABILIZED CONSTRUCTION ENTRANCE / EXIT



PLAN VIEW — SECTION A-A

TYPE "BELOW GRADE"

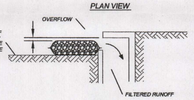


PLAN VIEW — SECTION B-B

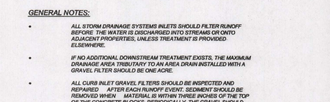
TYPE "ABOVE GRADE"

GENERAL NOTES:
- *DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.*
- *WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.*
- *WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF AND AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.*

CONCRETE TRUCK WASHOUT PIT



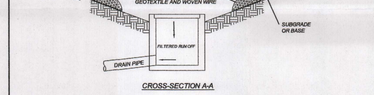
PLAN VIEW



SECTION A-A

GENERAL NOTES:
- *ALL STORM DRAINAGE SYSTEMS INLETS SHOULD FILTER RUNOFF BEFORE THE WATER IS DISCHARGED INTO STREAMS OR ONTO ADJACENT PROPERTIES, UNLESS TREATMENT IS PROVIDED ELSEWHERE.*
- *IF NO ADDITIONAL DOWNSTREAM TREATMENT EXISTS, THE MAXIMUM DRAINAGE AREA TRIBUTARY TO AN AREA DRAIN INSTALLED WITH A GRAVEL FILTER SHOULD BE ONE ACRE.*
- *ALL CURB INLET GRAVEL FILTERS SHOULD BE INSPECTED AND REPAIRED AFTER EACH RUNOFF EVENT. SEDIMENT SHOULD BE REMOVED WHEN MATERIAL IS WITHIN THREE INCHES OF THE TOP OF THE CONCRETE BLOCKS. PERIODICALLY, THE GRAVEL SHOULD BE RAKED TO INCREASE INFILTRATION AND FILTERING OF RUNOFF WATERS.*

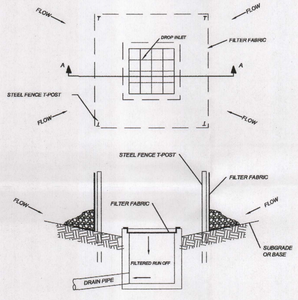
CURB INLET PROTECTION GRAVEL FILTER BAGS



PLAN VIEW — CROSS-SECTION A-A

GENERAL NOTES:
- *USE OPEN GRADED CLEAN STONE.*
- *THE ROCK SHOULD BE ENCLOSED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE AND WRAPPED IN GEOTEXTILE WITH 300 PSI BURST STRENGTH FILTER FABRIC.*
- *INSPECTION SHOULD BE MADE FREQUENTLY ON SEVERE SERVICE ROCK BERMS. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 4 INCHES OR MORE.*
- *WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHOULD BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.*

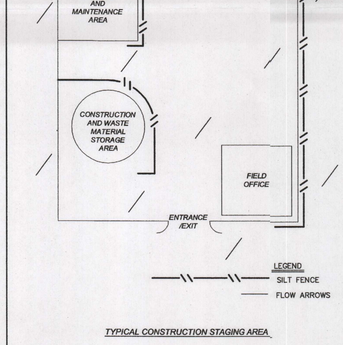
GRATE INLET PROTECTION



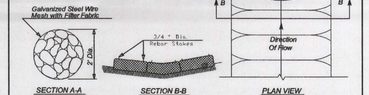
PLAN VIEW — CROSS-SECTION A-A

GENERAL NOTES:
- *ALL MATERIALS AND ERECTION PROCEDURES WILL BE THE SAME AS DESCRIBED IN THE STANDARD SILT FENCE REQUIREMENTS.*

GRATE INLET PROTECTION (ALRTERNATE)



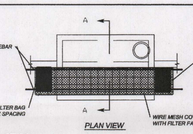
TYPICAL CONSTRUCTION STAGING AREA



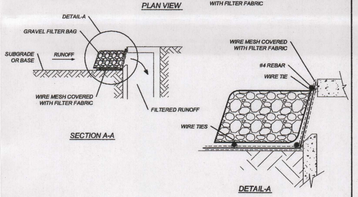
TYPE 4 SACK GABIONS — SECTION A-A — SECTION B-B — PLAN VIEW

GENERAL NOTES:
- *THE TOP OF THE SACK GABIONS SHOULD BE LEVEL AND ORIENTED PERPENDICULAR TO THE DIRECTION OF FLOW.*
- *FILTER FABRIC MATERIAL SHALL BE FASTENED TO WOVEN WIRE SUPPORT.*
- *FILTER FABRIC MATERIAL SHOULD MEET THE FOLLOWING SPECIFICATIONS: RESISTANT TO ULTRAVIOLET LIGHT, FABRIC SHOULD BE NON-WOVEN GEOTEXTILE WITH MINIMUM WEIGHT OF 3.5 OUNCES PER SQUARE YARD, MINIMUM MULLEN BURST STRENGTH OF 350 POUNDS PER SQUARE INCH AND A FLOW THRU RATE OF 120 GALLONS PER MINUTE PER SQUARE FOOT OF FRONTAL AREA.*
- *STONE SIZE: ±4"-6" OPEN GRADED CRUSHED LIMESTONE.*
- *INSPECT WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACE AS NEEDED.*
- *WHEN SILT REACHES A DEPTH OF 6 INCHES OR MORE ABOVE NATURAL GROUND, SILT SHALL BE REMOVED AND DISPOSED IN AN APPROVED MANNER THAT WILL NOT CONTRIBUTE TO RESILTATION. CONTAMINATED SEDIMENT MUST BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.*

TYPE 4 SACK GABIONS

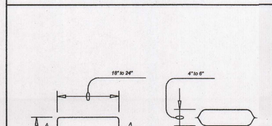


PLAN VIEW



SECTION A-A — DETAIL-A

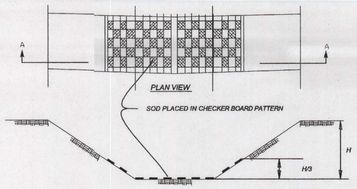
CURB INLET PROTECTION (ALRTERNATE)



SECTION A-A

GENERAL NOTES:
- *THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN UNIT WEIGHT OF 4 OUNCES/SSY, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.*
- *THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).*

GRAVEL FILTER BAG DETAIL



PLAN VIEW — SECTION A-A

- *CHANNEL TO BE STABILIZED WITH SOD PLACED IN A CHECKER BOARD PATTERN TON THE CHANNEL BOTTOM AND ON THE SIDES UP TO 1/3 THE DEPTH OF CHANNEL.*

CHANNEL LINING

KFW ENGINEERS & SURVEYING
PHONE (210) 979-8444
FAX (210) 979-8441
FIRM# 991/3
5383 HOSBROOK RD. BLDG. 40
SAN ANTONIO, TEXAS 78233

ISSUE DATE

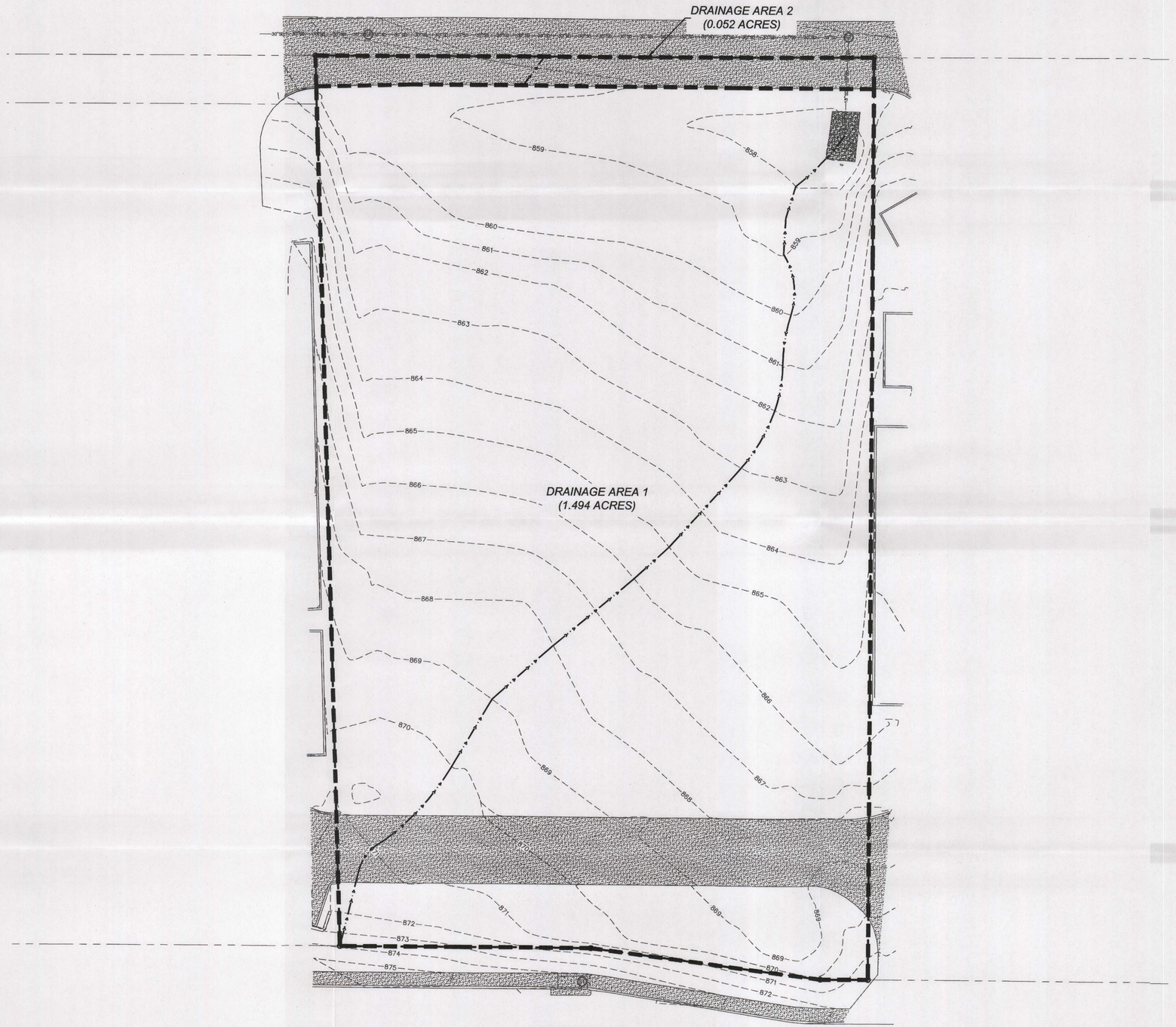
REVISIONS

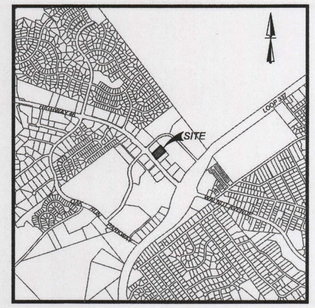
STATE OF TEXAS
CRAIG P. FLETCHER
90940
LICENSED
PROFESSIONAL ENGINEER
7/8/2014

MCALISTER'S DELI - NEW BRAUNFELS
WATER POLLUTION ABATEMENT PLAN
WPAP SITE PLAN DETAILS

JOB NO. 327-03-01
DATE: JANUARY, 2014
DRAWN: J.W. CHECKED: C.F.
SHEET NUMBER:
EX - 1B

Date: Jul 08, 2014, 10:06am User ID: mrichards
File: P:\327\03\01\Design\Civil\E0T3270301.dwg





LOCATION MAP
NOT TO SCALE

SCALE: 1" = 20'

0' 20' 60'

40'

LEGEND

- SUBJECT SITE PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING 1' CONTOUR (774)
- DRAINAGE AREA BOUNDARY
- TOC FLOW PATH
- EXISTING IMPERVIOUS COVER

DRAINAGE AREA 1

Existing Flow Rates

Storm Event (Yr)	Area (Ac)	Intensity (in/hr.)	C Value	K Value	Q (cfs)
10	1.494	5.44	0.40	1.00	**3.25**
25	1.494	6.51	0.40	1.10	**4.28**
100	1.494	8.51	0.40	1.25	**6.36**

DRAINAGE AREA 2

Existing Flow Rates

Storm Event (Yr)	Area (Ac)	Intensity (in/hr.)	C Value	K Value	Q (cfs)
10	0.052	9.61	0.83	1.00	**0.41**
25	0.052	11.58	0.83	1.10	**0.55**
100	0.052	15.31	0.83	1.25	**0.83**

KFW ENGINEERS & SURVEYING
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SAN ANTONIO, TEXAS 78232
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FAX (210) 979-8441

ISSUE DATE

REVISIONS

STATE OF TEXAS
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90940
LICENSED
PROFESSIONAL ENGINEER
7/8/2014

MCALISTER'S DELI - NEW BRAUNFELS
WATER POLLUTION ABATEMENT PLAN
EXISTING CONDITION DRAINAGE MAP

JOB NO327-03-01
DATE: FEBRUARY 2014
DRAWN: M.R. CHECKED: C.F.

SHEET NUMBER:

EX-2A

Date: Jul 08, 2014, 8:54am User ID: mrichards
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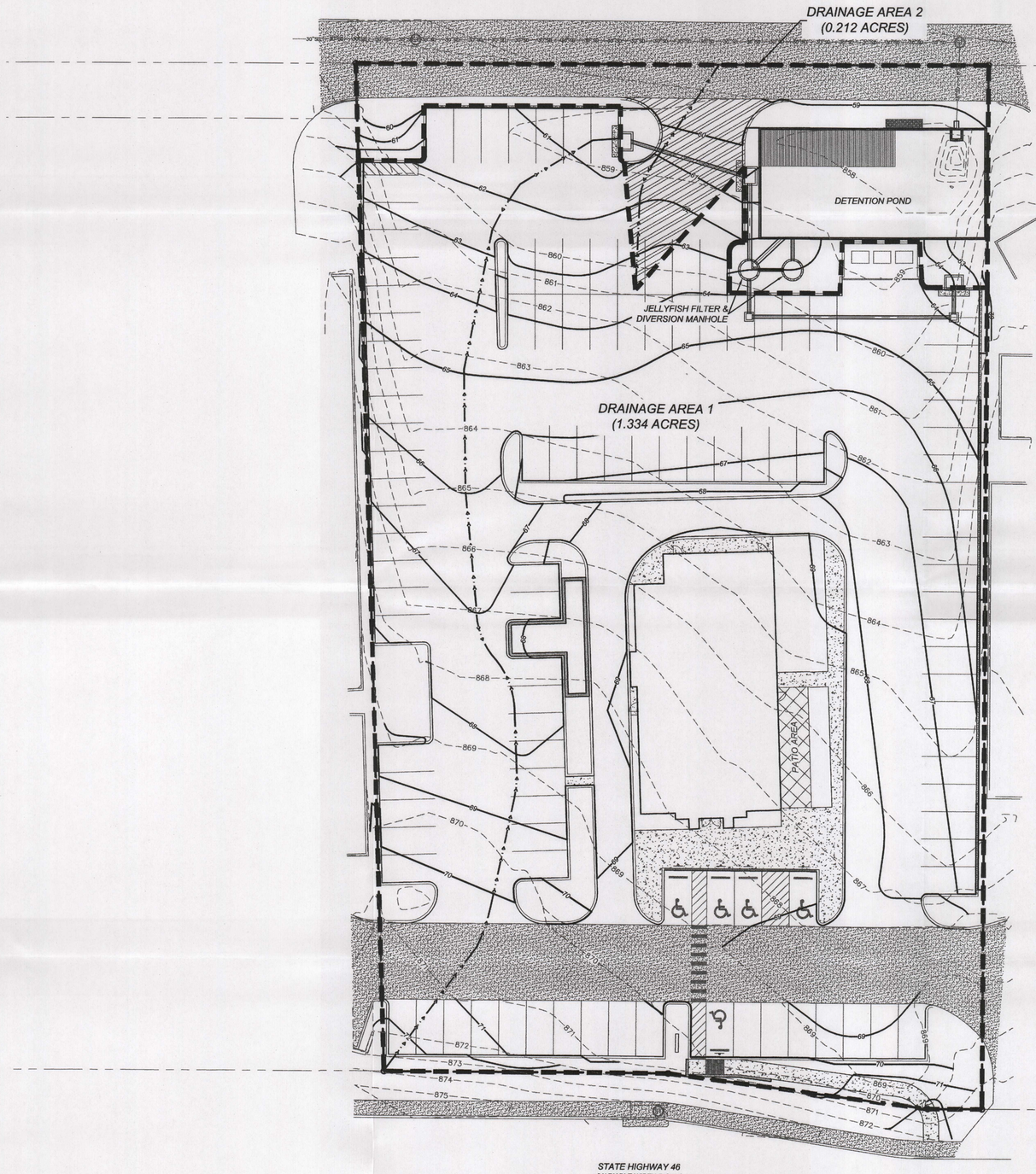
KFW
ENGINEERS

EXHIBIT 3

WATER QUALITY PLAN & DETAILS



LOCATION MAP
NOT TO SCALE

SCALE: 1" = 20'

0' 20' 60'

40'

LEGEND

- SUBJECT SITE PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING 1' CONTOUR 774
- EXISTING 1' CONTOUR 774
- DRAINAGE AREA BOUNDARY
- TOC FLOW PATH
- EXISTING IMPERVIOUS COVER
- UNCAPTURED IMPERVIOUS COVER

DRAINAGE AREA 1

Proposed Pond Flow Rates

Storm Event (Yr)	Contributing Area (Ac)	Storage (cf)	Q (cfs)
10	1.334	5,481	**2.47**
25	1.334	7,623	**2.95**
100	1.334	12,330	**3.79**

DRAINAGE AREA 2

Proposed Flow Rates

Storm Event (Yr)	Area (Ac)	Intensity (in/hr.)	C Value	K Value	Q (cfs)
10	0.212	9.61	0.56	1.00	**1.14**
25	0.212	11.58	0.56	1.10	**1.51**
100	0.212	15.31	0.56	1.25	**2.27**

Total Existing vs Proposed Flow Rates

	10-Year	25-Year	100-Year
Existing Q (cfs) - Total	3.67	4.83	7.18
Proposed Q (cfs) - Total	3.61	4.46	6.06
Difference (cfs)	**-0.06**	**-0.37**	**-1.12**

***Note: A negative sign denotes a decrease in flow rate from existing to proposed conditions**

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14603 HUEBNER RD, BLDG. 40
SAN ANTONIO, TEXAS 78230
FIRM# 9513

ISSUE DATE

REVISIONS

STATE OF TEXAS
CRAIG P. FLETCHER
90940
LICENSED
PROFESSIONAL ENGINEER
7/8/2014

MCALISTER'S DELI - NEW BRAUNFELS
WATER POLLUTION ABATEMENT PLAN
PROPOSED CONDITION DRAINAGE MAP

JOB NO.327-03-01
DATE: FEBRUARY 2014
DRAWN: M.R. CHECKED: C.F.

SHEET NUMBER:

EX-2B

Date: Jul 08, 2014, 8:54am User ID: mrichards
File: P:\327\03\01\Design\Exhibits\WPAP\DRAINAGE AREAS.dwg

DISCLAIMER:
THE EXISTING TOPOGRAPHIC AND BOUNDARY SURVEY WAS PERFORMED BY OTHERS AND WAS PROVIDED TO KFW BY THE CLIENT. THE ACCURACY OF THE EXISTING TOPOGRAPHY HAS NOT BEEN VERIFIED BY KFW. NO WARRANTIES TO ITS ACCURACY ARE EXPRESSED OR IMPLIED. THE CONTRACTOR SHALL VERIFY THE EXISTING TOPOGRAPHY PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE CLIENT AND ENGINEER OF ANY DISCREPANCIES IMMEDIATELY AND PRIOR TO CONSTRUCTION.

LEGAL DESCRIPTION
BEING 1.546 ACRE TRACT OF LAND SITUATED IN THE CITY OF NEW BRAUNFELS, COMAL COUNTY, TEXAS AND BEING OUT OF THE ANDRES SANCHES SURVEY NO. 286, ABSTRACT NO. 528, AND BEING A PORTION OF A 55.47 ACRE TRACT OF LAND DESCRIBED IN VOL. 449, PGS. 161 - 175 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS

BENCHMARKS
TBM - A: ELEV. 859.34
TBM - B: ELEV. 872.11

BOTH BENCHMARKS SET BY D. A. MAWYER LAND SURVEYING

COORDINATION NOTE:

1. CONTACT TWC (TIME WARNER CABLE) TO COORDINATE CABLE TV SERVICE. (210)-244-0500.

2. CONFIRM REQUIREMENTS AND COORDINATE WITH NBU (NEW BRAUNFELS UTILITIES) FOR INSPECTIONS AND CONDUIT SIZES FOR PRIMARY AND SECONDARY ELECTRICAL SERVICES. (830) 629-8400.

3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.

4. CONTRACTOR TO COORDINATE WITH NBU (NEW BRAUNFELS UTILITIES) TO PLAN GAS SERVICES. (830) 629-8400.

5. CONTRACTOR TO COORDINATE WITH NBU (NEW BRAUNFELS UTILITIES) TO PLAN SANITARY SEWER AND WATER SERVICES. (830) 629-8400.

6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

TCEQ-0592 (REV. 3/15/07)
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 THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARY OR PERMANENTLY CEASE IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE. IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SEASONAL ARID CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.*
11. *THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.*
12. *THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:*
    - A. *ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;*
    - B. *ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;*
    - C. *ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.*

AUSTIN REGIONAL OFFICE
2800 S. IH 35, SUITE 100
AUSTIN, TEXAS 78704-5712
PHONE (512) 339-2929
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SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
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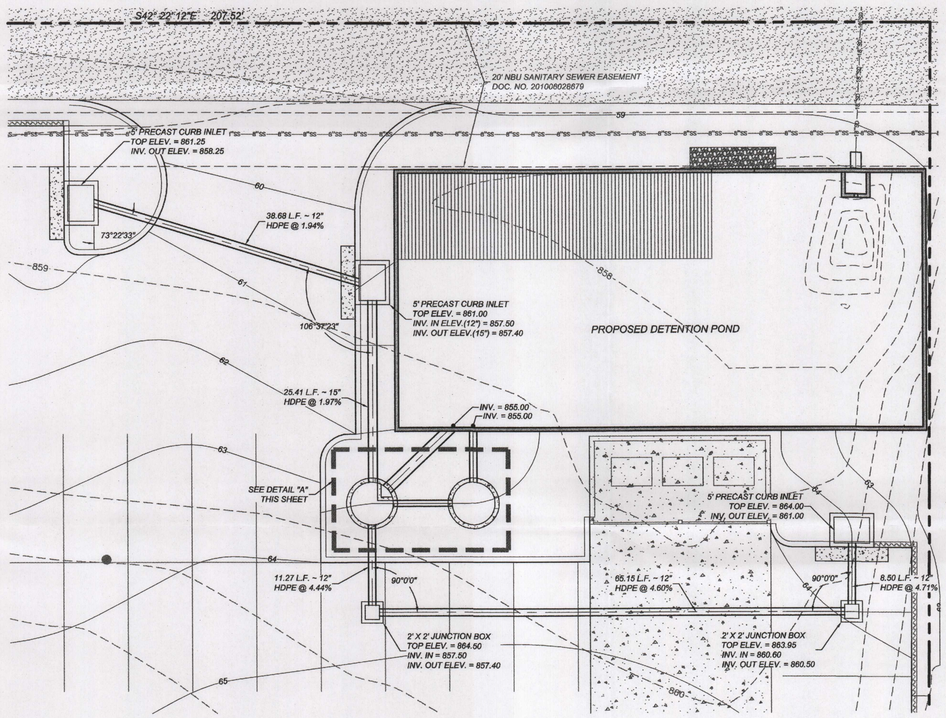
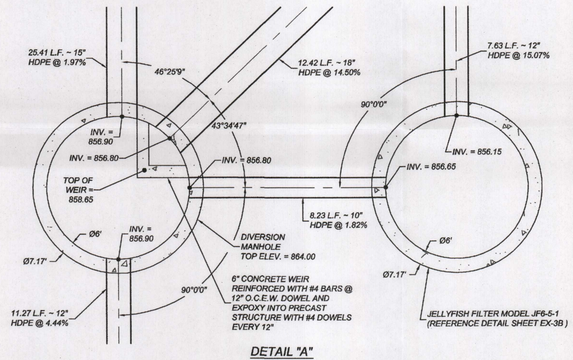
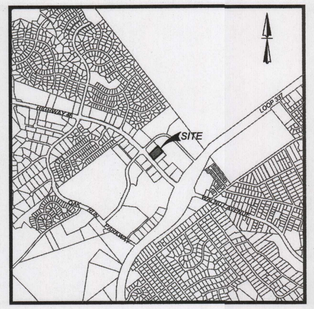
FAX (210) 545-4329





DETAIL "A"
SCALE: 1" = 3'



SCALE: 1" = 10'
0' 10' 30'
20'

KFW ENGINEERS & SURVEYING
FIRM# 9513
PHONE (210) 979-8444
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ISSUE DATE

REVISIONS

STATE OF TEXAS
CRAIG P. FLETCHER
90940
LICENSED
PROFESSIONAL ENGINEER
7/8/2014

MCALISTER'S DELI - NEW BRAUNFELS
WATER POLLUTION ABATEMENT PLAN
WATER QUALITY PLAN

JOB NO. 327-03-01
DATE: JANUARY, 2014
DRAWN: J.W. CHECKED: C.F.

SHEET NUMBER:
EX - 3A

Date: Jul 08, 2014, 10:23am User ID: mrivera
File: P:\327-03-01\Design Consults\WPAP\WATER QUALITY PLAN.dwg