TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 13, 2009

Mr. Brandon Namken
Stamken, LLC
1551 N. Walnut, Suite 40
New Braunfels, Texas 78132

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Hunters Creek Lot 14; Located 400 feet south of Highway 46 and Oak Run; 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
Edwards Aquifer Protection Program ID No.: 2888.00; Investigation No. 776607
Regulated Entity No. RN105804520

Dear Mr. Namken:

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 M & S Engineering, LLC on behalf of Stamken, LLC on September 11, 2009. Final review of the WPAP was completed after additional material was received on November 5, 2009. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 1.72 acres. It will include a commercial/retail, office building and parking lots. In addition, the owner will be developing the access roads in the adjacent easement. The impervious cover will be 0.92 acres (56 percent) onsite and 0.03 acres offsite. Project wastewater will be disposed of by conveyance to the existing New Braunfels Utilities Treatment Water Recycling Center owned by the City of New Braunfels.

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, Vortech Model 11000, 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 861 pounds of TSS generated from the 0.92 acres of impervious cover onsite and 0.03 acres impervious cover offsite. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The individual treatment measures will consist of one Vortech Model 11000. The Vortech Model is produced by Contech Stormwater Solutions and will follow the specifications provided in the plan sheets. The drainage area to the unit will be 1.72 acres total with 0.96 acres of impervious cover. The units will be accounting for 861 pounds of TSS generated from 0.96 acres of impervious cover and provide over treatment of 144 pounds of TSS generated from 0.03 acres uncaptured impervious cover.

GEOLOGY

The site is located in the Rumple-Comfort association consisting of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. According to the geologic assessment included with the application, three non-sensitive features and no sensitive features were found at the site. The San Antonio Regional Office did not conduct a site assessment.

SPECIAL CONDITIONS

I. The permanent pollution abatement measure shall be operational prior to occupancy or public use of facility within the related watershed.

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.

<u>During Construction:</u>

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

11. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 6, above.

12. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the San Antonio Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

13. No wells exits on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and

Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

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

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

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

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

After Completion of Construction:

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

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

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

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

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

If you have any questions or require additional information, please contact Stacy Tanner of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4078.

Sincerely,

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

MRV/SMT/eg

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

cc: Mr. Keith Strimple, P.E., M & S Engineering, LLC
Mr. Jim Klein, P.E., City of New Braunfels
Mr. Tom Hornseth, P.E., Comal County
Ms. Velma Danielson, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC212

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If you have any questions or require additional information, please contact Stacy Tanner of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4078.

Sincerely,

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

MRV/SMT/eg

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

cc: Mr. Keith Strimple, P.E., M & S Engineering, LLC
Mr. Jim Klein, P.E., City of New Braunfels
Mr. Tom Hornseth, P.E., Comal County
Ms. Velma Danielson, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC212

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 15, 2009

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

R Re: Edwards Aquifer, Comal County
PROJECT NAME: Hunters Creek Lot 14, located 400 feet south of Highway 46 and Oak Run Parkway intersection, New Braunfels, Texas
PLAN TYPE: Application for Approval of a Water Pollution Abatement Plan (WPAP) 30 Texas Administration Code (TAC) Chapter 213; Edwards Aquifer Protection Program
EAPP File No.: 2888.00

Dear Mr. Hornseth:

The enclosed WPAP application received on September 11, 2009, 2009, is being forwarded to you pursuant to the Edwards Aquifer Rules. The Texas Commission on Environmental Quality (TCEQ) is required by 30 TAC Chapter 213 to provide copies of all applications to affected incorporated cities and underground water conservation districts for their comments prior to TCEQ approval.

Please forward your comments to this office by October 10, 2009.

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

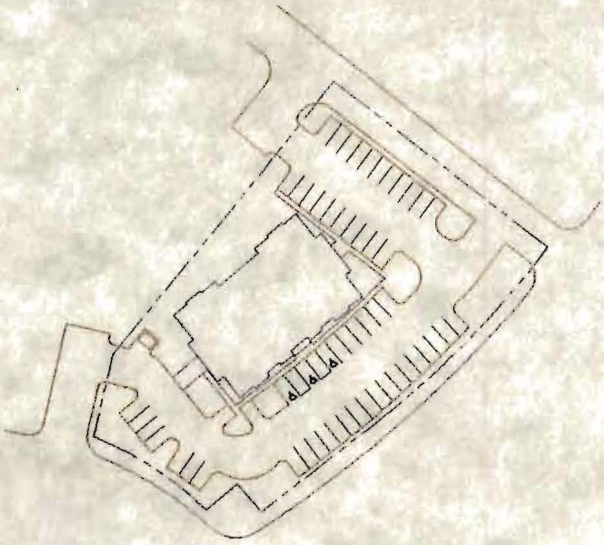
Joy Thurston-Cook

Lynn M. Bumguardner
Water Section Work Leader
San Antonio Regional Office

LMB/eg

WATER POLUTION ABATEMENT PLAN

FOR



HUNTERS CREEK LOT 14

Prepared for:

Brandon Namken
689 Labahia Loop
New Braunfels, TX 78132

Prepared by:

M & S

ENGINEERING, L.L.C.
Engineers, Planners, Surveyors

Main Office:
P. O. Box 970
Spring Branch, Texas 78070
830/228-5446
830-885-2170 FAX

Branch Office:
P. O. Box 391
McQueeney, Texas 78123
830-560-3200
830-560-3203 FAX

September 2009

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

RECEIVED

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)* OCT 0 8 2009

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other COUNTY ENGINEER

2. Attachments ☒ Yes ☐ No — **Describe Any Attachments:** *(ex. Title V Application, Waste Transporter Application, etc.)* Water Polution 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		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:

RECEIVED TCEQ SAN ANTONIO REGION 2009 SEP 32 AM 9: 25

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:*

STAMKEN, LLC

10. Mailing Address: 1551 N. Walnut, Suite 40

City	New Braunfels	State	TX	ZIP	78130	ZIP + 4	6047

11. Country Mailing Information *(if outside USA)*

12. E-Mail Address *(if applicable)*

13. Telephone Number (830) 237-2573

14. Extension or Code

15. Fax Number *(if applicable)* (210) 247-9358

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)*
26-065890	32033477186		800853175

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)*

Hunters Creek Lot 14

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*								
	City		**State**		**ZIP**		**ZIP + 4**	
25. Mailing Address:	1551 N. Walnut, Suite 40							
	City	New Braunfels	**State**	TX	**ZIP**	78130	**ZIP + 4**	6047

26. E-Mail Address:		
27. Telephone Number	**28. Extension or Code**	**29. Fax Number** *(if applicable)*
(830) 237-2573		(210) 247-9358

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)
1542		236220	

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

Office space for lease

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

35. Description to Physical Location:	From the intersection of Highway 46 and Oak Run Parkway proceed 400 feet south. The proposed development will be on your right.

36. Nearest City	**County**	**State**	**Nearest ZIP Code**
New Braunfels	Comal	TX	78130

37. Latitude (N) In Decimal:	29.719047		**38. Longitude (W) In Decimal:**	98.167678	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	43	8.57	98	10	3.64

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
		WPAP		
☐ 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:	Stephen Jackson	**41. Title:**	Hydrologist

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(830) 228-5446		(830) 885-2170	sjackson@msengr.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:	M&S Engineering, L.L.C.	**Job Title:**	Agent - Engineer
Name *(In Print)* :	Keith Strimple, P.E.	**Phone:**	(830) 228-5446
Signature:		**Date:**	9/10/09

In This Section

TCEQ-0587
General Information Form

Attachment A
Road Map

Attachment B
USGS/Edwards Recharge Zone Map

Attachment C
Project Description

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: HUNTERS CREEK LOT 14
COUNTY: COMAL STREAM BASIN: BLIEDERS CREEK

EDWARDS AQUIFER: _X_ RECHARGE ZONE
___ TRANSITION ZONE

PLAN TYPE: _X_ WPAP ___ AST ___ EXCEPTION
___ SCS ___ UST ___ MODIFICATION

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Brandon Namken
Entity: STAMKEN, LLC
Mailing Address: 1551 N. Walnut, Suite 40
City, State: New Braunfels, Tx Zip: 78132
Telephone: (830) 237-2573 FAX: (830) 629-2558

Agent/Representative (If any):

Contact Person: Keith Strimple, P.E.
Entity: M&S ENGINEERING, LLC.
Mailing Address: P.O. Box 970
City, State: Spring Branch, Texas Zip: 78070
Telephone: (830) 228-5446 FAX: (512) 847-9414

2. _X_ 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 the intersection of Highway 46 and Oak Run Parkway proceed 400 feet south. The proposed development will be on your right.

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

5. _X_ **ATTACHMENT B - USGS / EDWARDS RECHARGE ZONE MAP**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:

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

6. X Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. **The TCEQ must be able to inspect the project site or the application will be returned.**

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

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

PROHIBITED ACTIVITIES

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

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

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

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

ADMINISTRATIVE INFORMATION

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

X For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.
___ For an Organized Sewage Collection System Plans and Modifications, the total linear footage of all collection system lines.
___ For a UST Facility Plan or an AST Facility Plan, the total number of tanks or piping systems.
___ A Contributing Zone Plan.

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

___ A request for an extension to a previously approved plan.

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

___ TCEQ cashier

___ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)

_X_ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

13. _X_ Submit one (1) original and three (3) copies of the completed application to the appropriate regional office for distribution by the TCEQ to the local municipality or county, groundwater conservation districts, and the TCEQ's Central Office.

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

_X_ No person shall commence any regulated activity until the Contributing Zone Plan for the activity has been filed with 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:

Keith Strimple, P.E.
Print Name of Agent

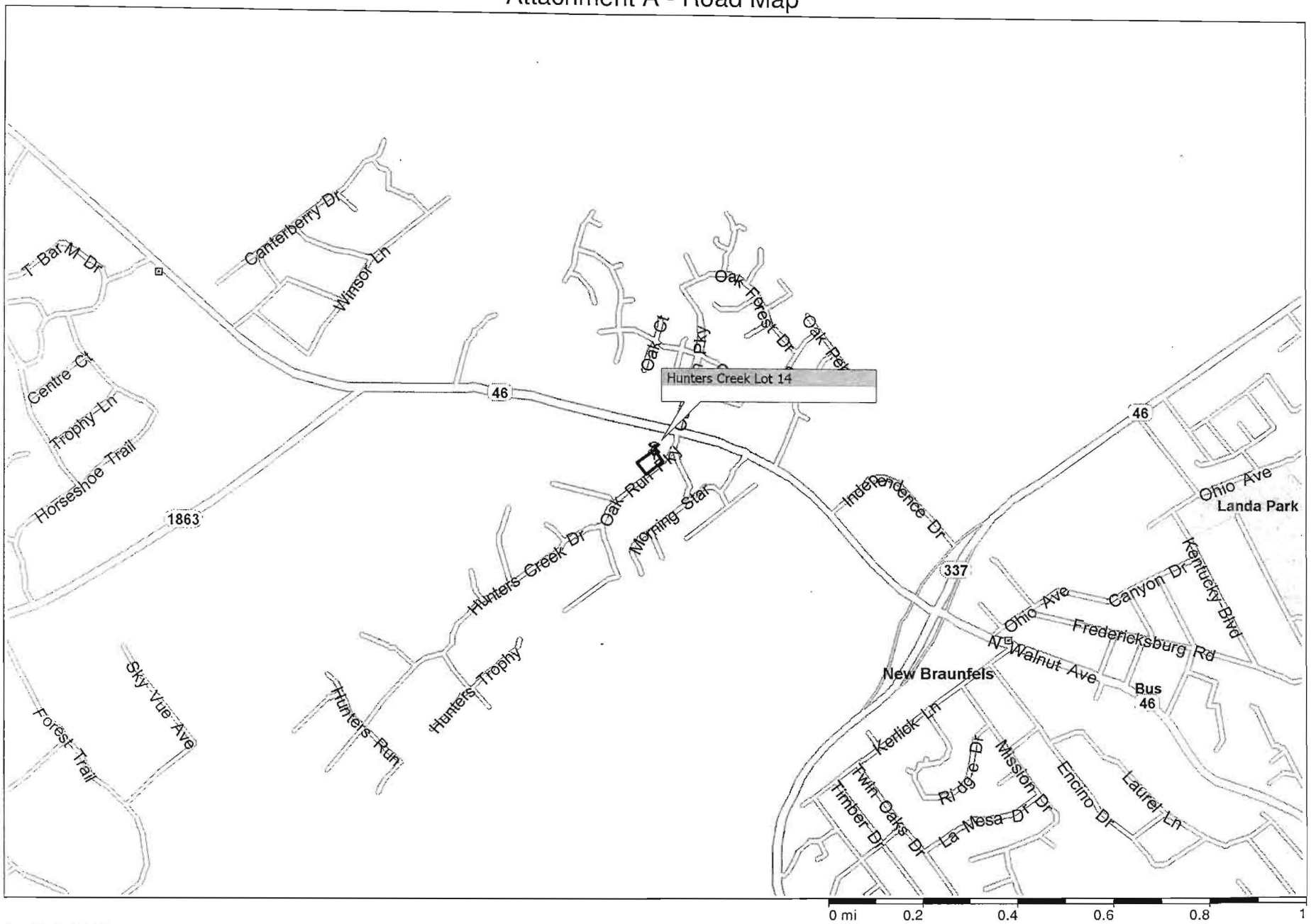
Signature of Agent

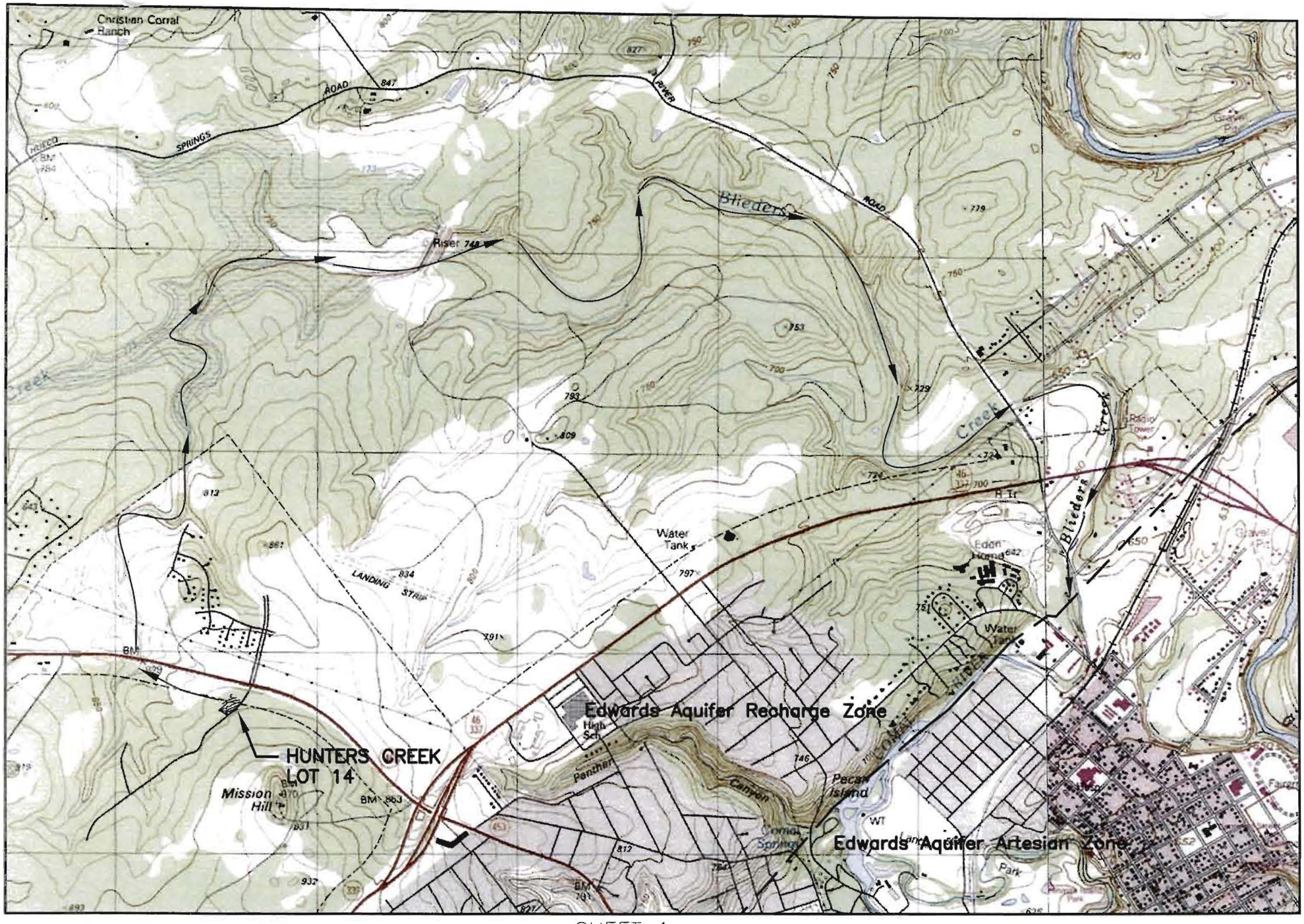
9/1/09
Date

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

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

Attachment A - Road Map





SHEET 1

HUNTERS CREEK LOT 14

Scale: 1" = 2000'

USGS / Edwards Aquifer Recharge Zone Map
New Braunfels East and New Braunfels West Quad Sheets

ATTACHMENT C - PROJECT DESCRIPTION

The project is proposed to be a commercial development located on 1.09 acres on Oak Run Parkway in the City of New Braunfels. The project also includes grading and constructing a shared access driveway in easement with 0.63 acres for a total project area of 1.72 acres. The site is located in the Edwards Aquifer Recharge Zone. The property is not located in the FEMA 100-Year floodplain.

The site will include a commercial retail and office building and parking lot. In addition, the owner will be developing the access roads in the adjacent easements. A Contech Stormwater Treatment System will be installed to treat the stormwater from all proposed improvements.

The project is made up of a single drainage area with no off-site area. The basin drains to the north-western border of the property towards an adjoining easement. Stormwater will be collected into storm sewer system, treated, and discharged by way of a graded earthen channel to the Highway 46 ROW.

The amount of existing impervious cover is 0 acres. The amount of impervious cover expected after construction is complete is 1.03 acres. See chart below for details. The total project area including the adjacent easements is 1.30 acres.

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	8,150	÷ 43,560 =	0.19
Parking	24,913	÷ 43,560 =	0.57
Other paved surfaces *Access Road, Concrete Improvements*	8,709	÷ 43,560 =	0.20
Total Impervious Cover	41,772	÷ 43,560 =	0.96
Total Impervious Cover ÷ Total Acreage x 100 =			56 %

In This Section

Information To Build On
Engineering • Consulting • Testing

October 2, 2008

M&S Engineering, Ltd.
6477 F.M. 311, P.O. Box 970
Spring Branch, Texas 78070

Attn: Mr. Keith Strimple, P.E.

Re: Geologic Assessment
Approximate 1-Acre Tract
Oak Run Parkway & Hunter's Village
New Braunfels, Comal County, Texas
PSI Project No. PO-435-8G033

Dear Mr. Strimple:

In accordance with our agreement dated August 28, 2008, Professional Service Industries, Inc. (PSI) has performed a geologic assessment (GA) for the above referenced project. Please find one bound and three unbound copies of the report enclosed.

Thank you for choosing PSI as your consultant on this project. If you have any questions, or if we can be of additional service please call us at (210) 342-9377.

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.

John Langan, P.G.
Environmental Department Manager

Kathleen T Moore
for
Ed Pruske
Business Development Manager

Enclosures

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: Approximate 1-Acre Tract; Oak Run Parkway & Hunters Village, New Braunfels, TX

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 Assoc., undulating	B	1-2

* Soil Group Definitions (Abbreviated)

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

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

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

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

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" = 40 '
Site Geologic Map Scale 1" = 40 '
Site Soils Map Scale (if more than 1 soil type) 1" = _____ '

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. X Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
__ Geologic or manmade features were not discovered on the project site during the field investigation.

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

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

__ There are __(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
__ The wells are not in use and have been properly abandoned.
__ The wells are not in use and will be properly abandoned.
__ The wells are in use and comply with 16 TAC Chapter 76.
X There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

12. X One (1) original and three (3) copies of the completed assessment has been provided.

Date(s) Geologic Assessment was performed: September 17, 2008
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.

John Langan
Print Name of Geologist

(210) 342-9377
Telephone

(210) 342-5727
Fax

Signature of Geologist

10/2/08
Date

Representing: Professional Service Industries, Inc. (PSI)
(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.

STATE OF TEXAS
John Langan
Geology
4871
LICENSED
PROFESSIONAL GEOSCIENTIST

GEOLOGIC ASSESSMENT TABLE — PROJECT NAME: 1.094-Acre Tract-Hunters Village & Oak Run Parkway

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	6A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIP	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	≥40	<1.8	≥1.8	
S-1	29-43-8.2	98-10-2.7	CD	5	Kep	4	4	1					O	15	20	X				hillside
S-2	29-43-8.8	98-10-3.1	CD	5	Kep	3	3	1					O	15	20	X				hillside
S-3	29-43-8.7	98-10-3.1	CD	5	Kep	3	3	1					O	15	20	X				hillside

* DATUM:

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

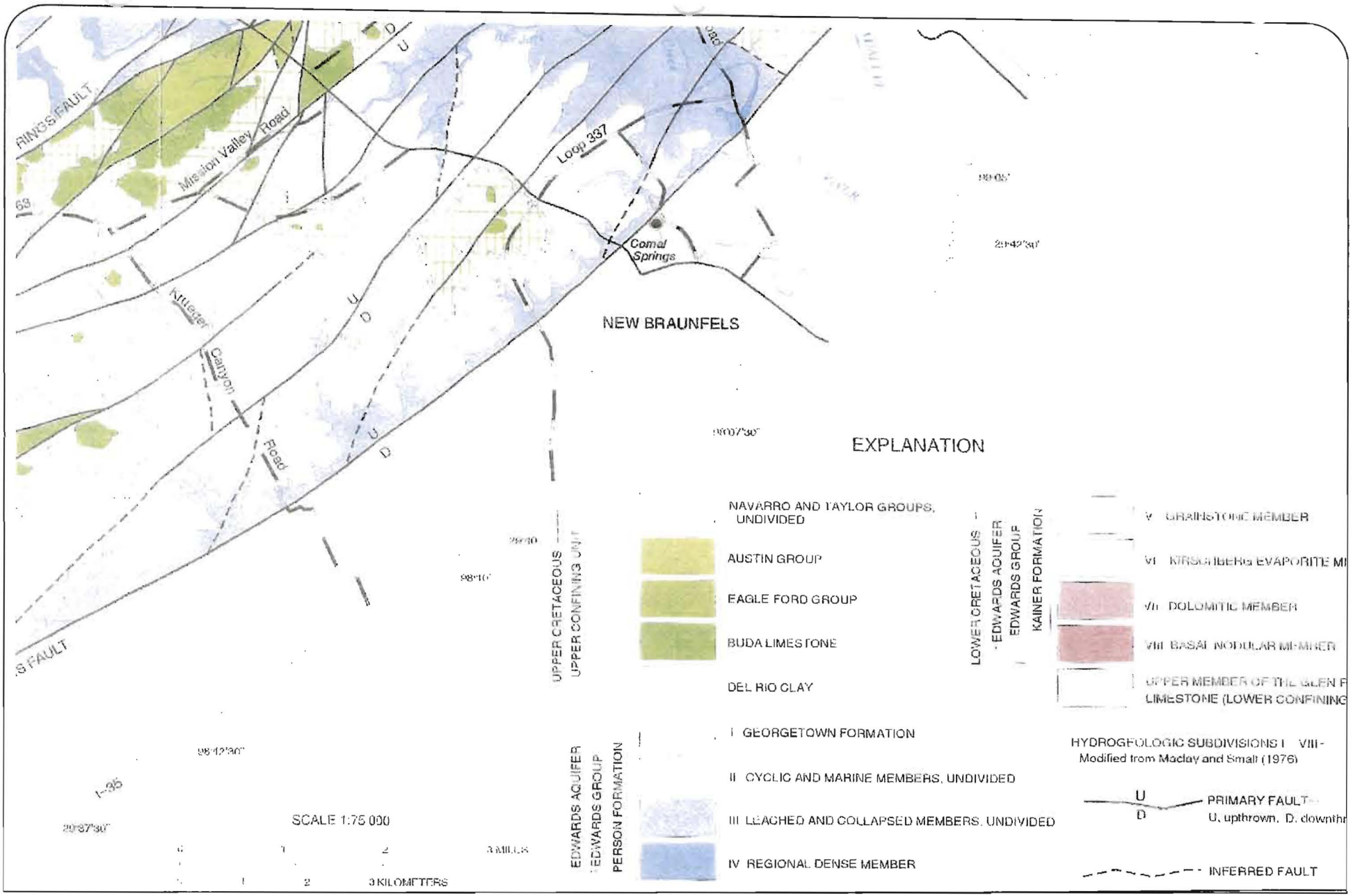
I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

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

Date 10/2/08

Sheet 1 of 1

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



psi Information To Build On
Engineering • Consulting • Testing
THREE BURWOOD LANE
SAN ANTONIO, TEXAS 78216

REGIONAL GEOLOGIC MAP

APPROXIMATE 1 ACRE TRACT

OAK RUN PARKWAY & HUNTER'S VILLAGE
NEW BRAUNFELS, TEXAS

DATE:	09/26/08
DRAWN BY:	J. LEAL
PROJECT #:	435- 8G033
DRAWING NAME:	435- 8G003-02

SOILS NARRATIVE

According to the Soil Survey of Comal County, published by the United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Extension Service, issued in 1984, indicated the soils beneath the subject property have been classified as Rumple-Comfort association, undulating (RUD).

Rumple-Comfort association consists of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. The surface layer of Rumple soil is a dark reddish brown, very cherty loam about 10 inches thick. The stoniness increases with depth, becoming about 75% cobbles and stones between 14 and 28 inches in depth. The surface layer of Comfort soil is a dark brown extremely stony soil about 6 inches thick. Cobbles, stones and "float" rock comprise approximately 45% of the surface layer. The subsoil extends to about 13 inches, and overlies the fractured limestone parent material. This association is well drained, with medium surface runoff, slow permeability and very low water capacity. These soils are best suited for range or wildlife habitat.

STRATIGRAPHIC COLUMN

Approximate 1.094-Acre Tract
Hunters Village & Oak Run Parkway
New Braunfels, Comal County, Texas

FORMATION	THICKNESS	LITHOLOGIC DESCRIPTION
Georgetown Formation	2-10'	Light tan limestone identified by proximity to Del Rio clay and diagnostic marker fossil: *waconella wacoensis* brachiopod; low porosity and permeability development.
Person Formation	180-224'	Limestones and dolomites, extensive porosity development in "honeycomb sections, interbedded with massive recrystallized limestones with more limited permeabilities (especially Regional Dense Member separating the Person and Kainer Formations.
Kainer Formation	200-250'	Hard, miliolid limestones, overlying calcified dolomites and dolomite. Leached evaporitic "Kirschberg" zone of very porous and permeable collapse breccia formed by the dissolution of gypsum. Overlies the basal nodular (Walnut) bed.
Glen Rose Limestone (upper)	350-500	Yellowish-tan thinly bedded limestone and marl. Alternating beds of varying hardness erodes to "stairstep" topography. Marine fossils common.

Information To Build On
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October 2, 2008

M&S Engineering, Ltd.
6477 F.M. 311, P.O. Box 970
Spring Branch, Texas 78070

Attn: Mr. Keith Strimple, P.E.

Re: Geologic Assessment
Approximate 1-Acre Tract
Oak Run Parkway & Hunter's Village
New Braunfels, Comal County, Texas
PSI Project No. PO-435-8G033

Dear Mr. Parker:

Professional Service Industries, Inc. (PSI) has completed a geologic recharge assessment for the above referenced project in compliance with the Texas Commission on Environmental Quality (TCEQ) requirements for regulated developments located on the Edwards Aquifer Recharge Zone (EARZ). The purpose of this report is to describe surficial geologic units and identify the locations and extent of significant recharge features present in the development area.

AUTHORIZATION

Authorization to perform this assessment was given by a signed copy of PSI Proposal No. PO-435-8G0119 between M&S Engineering, Ltd. and PSI dated August 28, 2008.

PROJECT DESCRIPTION

The subject site is located at the northwest corner of Hunters Village and Oak Run Parkway in New Braunfels, Comal County, Texas. The tract is an approximate 1.094 acre, rectangular shaped parcel of undeveloped land. The southeast corner of the tract has a landscaped area with a sign, and some man-made soil/rock fill piles. The site vegetation consisted of native grasses, oak and juniper trees with prickly pear and desert willow shrubs.

REGIONAL GEOLOGY

Physiography

From northwest to southeast, the three physiographic provinces in Comal County are: the

Edwards Plateau, the Blackland Prairie, and the West Gulf Coastal Plain. The Edwards Plateau terrain is rugged and hilly, with elevations ranging from 1,000 feet to 1,900 feet above sea level. This area is underlain by beds of limestone that dip gently to the southeast. South of the Edwards Plateau is the Balcones Fault Zone, which is also the northernmost limit of the Blackland Prairie. The Balcones Fault Zone extends northeast-southwest across Comal County and is composed of fault blocks of limestone, chalk, shale and marl. The undulating, hilly topography of the Blackland Prairie ranges in elevation from about 700 feet to 1100 feet above sea level. The faults are predominantly normal, down-to-the Gulf Coast, with near vertical throws. The West Gulf Coastal Plain lies southeast of the Blackland Prairie, and is composed of relatively flat-lying beds of marl, clay and sandy clay. Elevations at the subject site are approximately 875 feet above mean sea level.

Stratigraphy and Structure

Underlying rocks at the site are members of the Lower Cretaceous Edwards Person Formation. According to "The Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County Texas" written by the USGS, the Person Formation ranges between 180 and 224 feet thick and forms the upper member of the Edwards Group, beneath the Georgetown Formation and above the Kainer Formation, which compromises the Edwards Aquifer, a federally-designated sole source aquifer for the region.

SITE INVESTIGATION

The site investigation was performed by systematically traversing the subject tract, and mapping fractured or vuggy rock outcrops, closed depressions, sinkholes, caves, or indications of fault/fracture zones. The purpose of the site investigation was to delineate features with recharge potential that may warrant special protection or consideration. The results of the site investigation are included in the attached TCEQ report format.

SUMMARY

No sensitive features were noted on the subject tract. Please note that subtle features, buried or obscured from view, may be present on the tract. It is possible that clearing/construction activities will reveal the presence of features currently hidden. If caves, sinkholes, or solution cavities are

encountered during future clearing/construction activities, please contact our office for additional assistance.

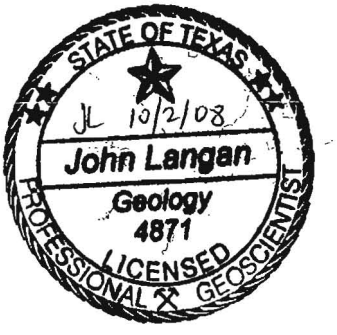
We appreciate this opportunity to be of service to you. If you have any questions, please do not hesitate to contact our office.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Scott Kuykendall, P.G.
Project Manager

John Langan, P.G.
Environmental Department Manager



WARRANTY

The field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for a general geological recharge assessment of this site. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted geologic methods, only for the site described in this report. These methods have been developed to provide the client with information regarding apparent indications of existing or potential conditions relating to the subject site and are necessarily limited to the conditions observed at the time of the site visit and research. This report is also limited to the information available at the time it was prepared. In the event additional information is provided to PSI following the report, it will be forwarded to the client in the form received for evaluation by the client. There is a possibility that conditions may exist which could not be identified within the scope of the assessment or which were not apparent during the site visit. PSI believes that the information obtained from others during the review of public information is reliable; however, PSI cannot warrant or guarantee that the information provided by others is complete or accurate.

This report has been prepared for the exclusive use of The M&S Engineering, Ltd. for the site discussed herein. Reproductions of this report cannot be made without the expressed approval M&S Engineering, Ltd. The general terms and conditions under which this assessment was prepared apply solely to M&S Engineering, Ltd. No other warranties are implied or expressed.

SCALE: 1" = 40'

NORTH

LOT 14
1.094 ACRES
(47,668 SQ. FT.)

Kep

1
47,668 sq. ft.
1.094 acres

S-2

S-3

S-1

MM

EM

HUNTERS VILLAGE

OAK RUN PARKWAY
(80.00' R.O.W.)

STATE OF TEXAS
JL 10/2/08
John Langa
Geology
4871
LICENSED
PROFESSIONAL GEOSCIENTIST

Kep - CRETACEOUS EDWARDS PERSON FORMATION

psi Information To Build On
Engineering Consulting Testing
THREE BURWOOD LANE
SAN ANTONIO, TEXAS 78216

GEOLOGIC ASSESSMENT

APPROXIMATE 1 ACRE TRACT

OAK RUN PARKWAY & HUNTER'S VILLAGE
NEW BRAUNFELS, TEXAS

DATE:	09/26/08
DRAWN BY:	J. LEAL
PROJECT #:	435- 8G033
DRAWING NAME:	435- 8G033-01

1. View east-southeast along the south property line of Lot 14, 1.094 acres at the northwest corner of Hunters Village and Oak Run Parkway, New Braunfels, Comal County, Texas.

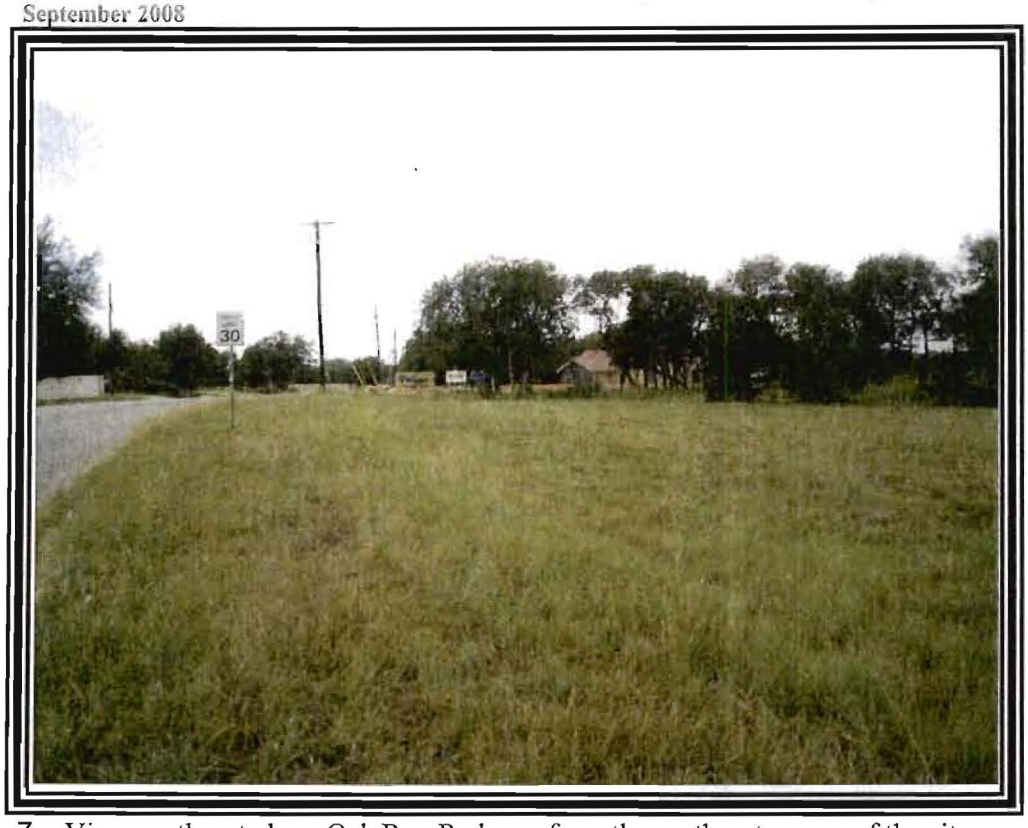
2. View east of the site interior from the southwest corner of the tract.

3. View southwest along the west property line from the northwest corner of the tract.

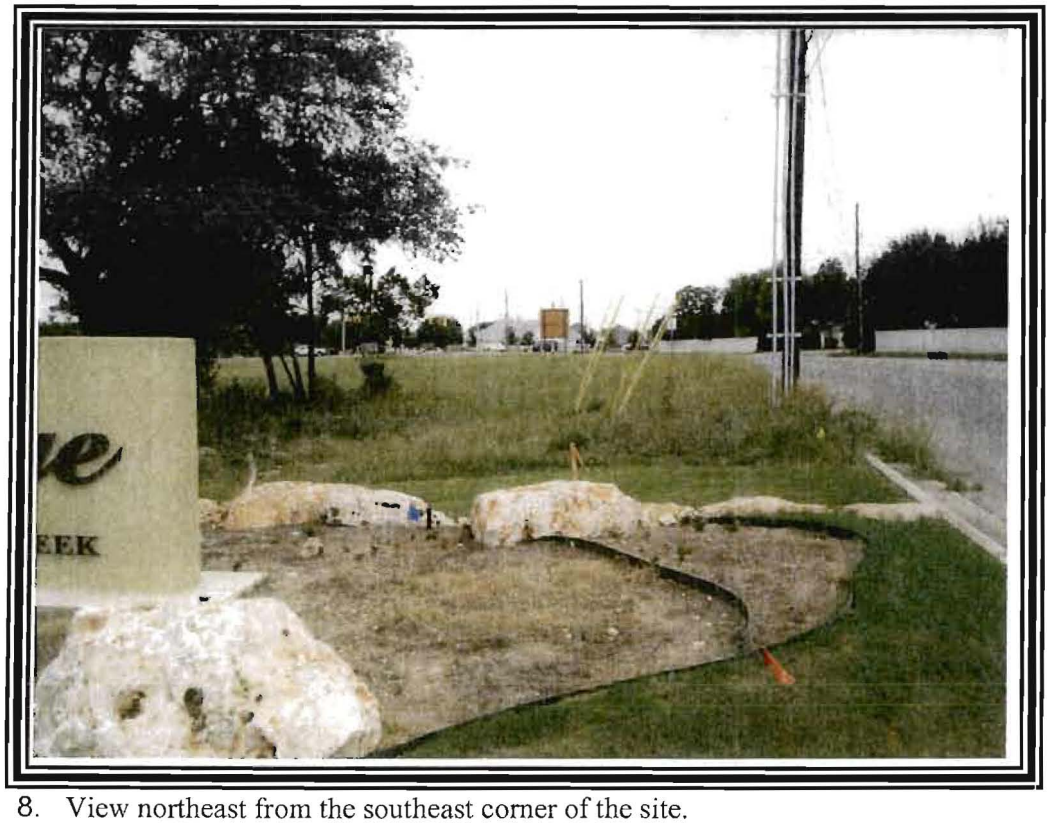
4. View south of the site interior from the northwest corner of the site.

5. View of closed depression S-1 located at 29-43-8.2; 98-10-2.7, near the southeast corner of the tract.

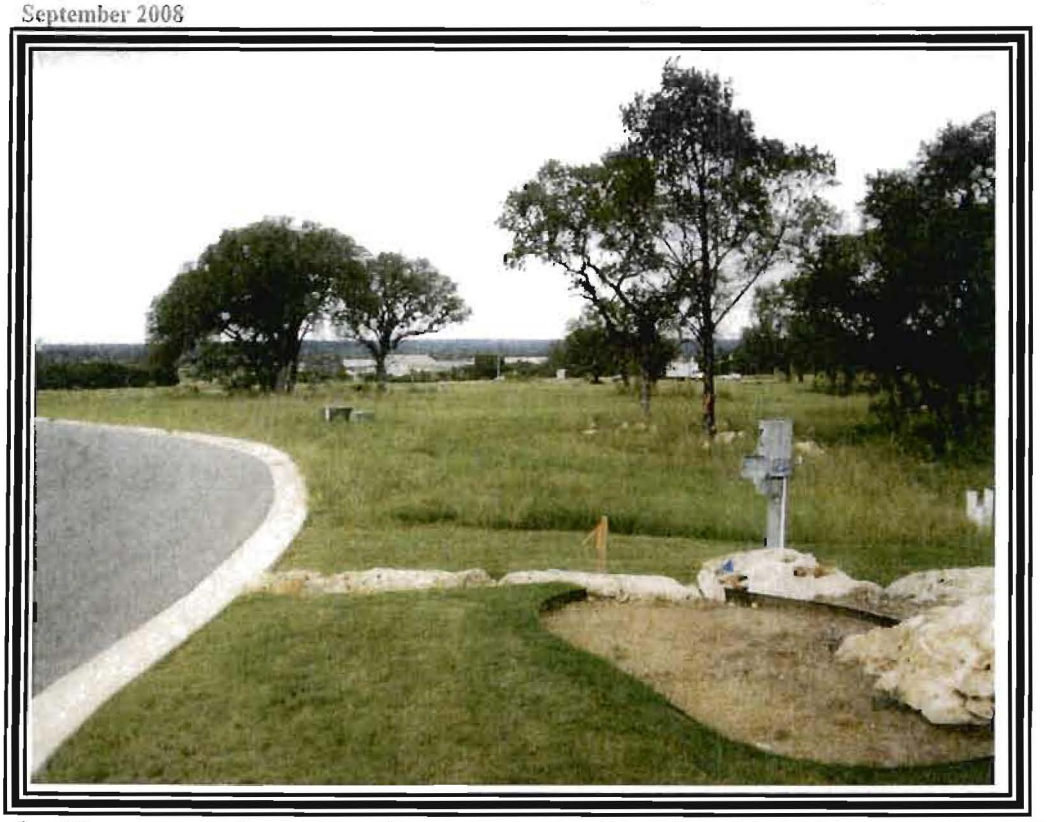
6. View northwest along the north property line from the northeast corner of the tract.



7. View southeast along Oak Run Parkway from the northeast corner of the site.



8. View northeast from the southeast corner of the site.



9. View east-southeast along the south property line of Lot 14, 1.094 acres at the northwest corner of Hunters Village and Oak Run Parkway, New Braunfels, Comal County, Texas.

10. View east of the site interior from the southwest corner of the tract.

In This Section

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: HUNTERS CREEK LOT 14

REGULATED ENTITY INFORMATION

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

2. Total site acreage (size of property): 1.72
   (Includes 0.63 acres of adjacent easements to be developed as access roads)

3. Projected population: 0

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	8,150	÷ 43,560 =	0.19
Parking	24,913	÷ 43,560 =	0.57
Other paved surfaces *Access Road, Concrete Improvements*	8,709	÷ 43,560 =	0.20
Total Impervious Cover	41,772	÷ 43,560 =	0.96
Total Impervious Cover ÷ Total Acreage x 100 =			56%

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

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

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

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

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

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

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

11. N/A A rest stop will be included in this project.
    ___ A rest stop will **not** be included in this project.

12. N/A 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	_____ gallons/day
____ % Industrial	_____ gallons/day
____ % Commingled	_____ gallons/day
TOTAL	_____ gallons/day

15. Wastewater will be disposed of by:
    N/A **On-Site** Sewage Facility (OSSF/Septic Tank):
    ATTACHMENT C - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.
    ___ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

X Sewage Collection System (Sewer Lines):

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

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

___ The SCS was previously submitted on _____.

___ The SCS was submitted with this application.

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

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

X existing.

___ proposed.

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

SITE PLAN REQUIREMENTS

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

17. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = 40'.

18. 100-year floodplain boundaries

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):
Comal County GIS Proposed FEMA Floodplain © 2004 accessed 9/24/2008

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

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

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

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

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

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

___ The wells are in use and comply with 30 TAC §238.

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

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

___ All **sensitive and possibly sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.

X No **sensitive and possibly 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 in ATTACHMENT D provided at the end of this form. Geologic or manmade features were found and are shown and labeled.

___ **ATTACHMENT D - Exception to the Required Geologic Assessment.** An exception to the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. No geologic or manmade features were found.

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

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

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

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

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

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

ADMINISTRATIVE INFORMATION

28. X One (1) original and three (3) copies of the completed application have been provided.

29. X Any modification of this WPAP will require TCEQ 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:

Keith Strimple, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent — Date: 9/1/09

Attachment A
Factors Affecting Water Quality

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

- Soil erosion due to clearing of site.
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings.
- Hydrocarbons from asphalt paving.
- Trash and litter from construction workers and material wrappings.
- Concrete truck washout.
- Tar, fertilizers, cleaning solvents, detergents, and petroleum based products.

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

- Oil, grease fuel and hydraulic fluid contamination from vehicle drippings.
- Dirt and dust from vehicles.
- Trash and litter.

Attachment B
Volume and Character of Stormwater

The overall contributing drainage area for this project is 1.01 acres. This has been divided into two drainage basins based on the drainage pattern to the proposed storm sewer inlets. There is no off site area draining to this site. The stormwater runoff for the pre-project conditions would be across rocky soil, with native grasses. The site has an average slope ranging from 1% to 5%. Peak discharges were calculated using the Rational Method.

Peak Discharge Summary

Hunters Creek Lot 14 Site Design

HYDROLOGY - RATIONAL METHOD

	C	A	CA	10 Year		25 Year		50 Year		100 Year	
		(acres)		I (in/hr)	Q (cfs)	I (in/hr)	Q (cfs)	I (in/hr)	Q (cfs)	I (in/hr)	Q (cfs)
Existing Basin 1	0.37	1.59	0.59	2.44	1.4	2.94	1.9	3.38	2.2	3.87	2.9
Proposed Basin 1	0.78	0.85	0.66	7.10	4.7	8.50	6.2	9.74	7.1	11.15	9.2
Proposed Basin 2	0.76	0.20	0.15	7.22	1.1	8.64	1.4	9.90	1.6	11.33	2.1
	The increase in runoff due to development =				4.3		5.7		6.5		8.4

Basin 1 Existing T_c (minutes) =	73
Basin 1 Proposed T_c (minutes) =	12
Basin 2 Proposed T_c (minutes) =	11

The characteristics of the post-project stormwater generated onsite will be influenced by site features that generate non-point pollution. This non-point pollution will include oil and grease from the paved areas, suspended solids, sedimentation, and nutrients for lawn care, and possible pesticides and herbicides. The stormwater runoff will flow across asphalt and pervious areas of rocky soil, with native grasses into a storm sewer system and through a Contech stormwater filter designed to remove 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site before discharge into the adjacent right of way.

Attachment C

Suitability Letter From Authorized Agent

NOT APPLICABLE

Private service laterals from the wastewater facilities will be connected to the existing NBU sewage collection system.

Attachment D

Exception To The Required Geologic Assessment

NOT APPLICABLE

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.

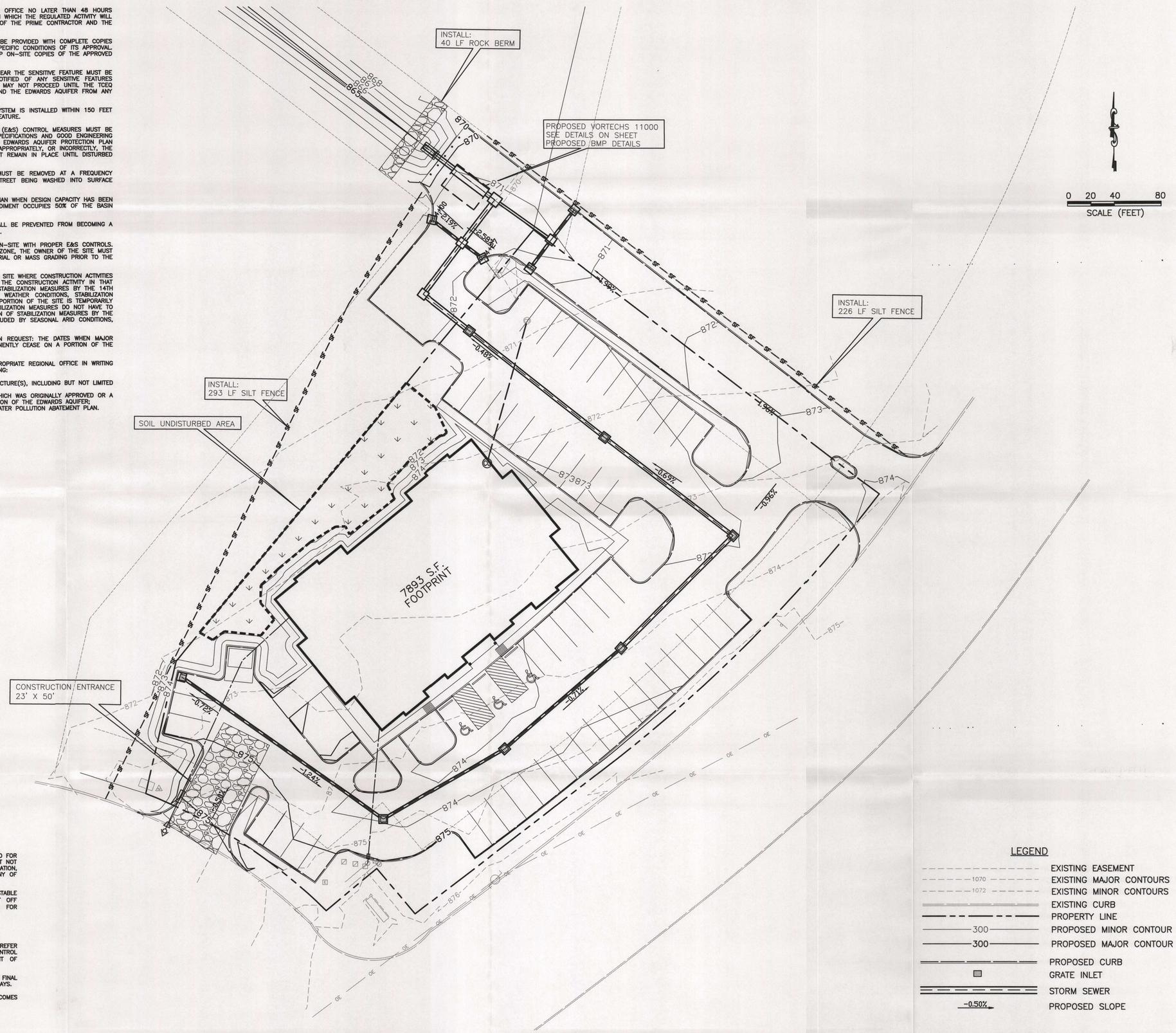
12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:

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

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



SOIL DISTURBANCE NOTE

SOIL DISTURBANCES WILL OCCUR TO CLEARING, GRUBBIN, AND GRADING OF AREAS TO BE USED FOR THE BUILDING, PARKING, AND SAND FILTER. THESE DISTURBANCES CAN BE ATTRIBUTED TO, BUT NOT LIMITED TO, CLEARING AND GRUBBING RELATED TO BUILDING PAD, DRIVEWAY, UTILITY INSTILATION, AND LANDSCAPE PREPARATION. THE REMAINING PORTIONS OF THE SITE NOT INVOLVED IN ANY OF THESE ACTIVITES WILL REMAIN UNDISTURBED.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE INSTALLED TO PROVIDE A STABLE ENTRANCE/EXIT CONDITION FROM THE CONSTRUCTION SITE TO KEEP MUD AND SEDIMENT OFF PUBLIC ROADWAYS (REFER TO THE EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL FOR CONSTRUCTION INFORMATION).

SOIL STABILIZATION NOTE

TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO STABILIZE DISTURBED AREAS (REFER TO EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL FOR CONSTRUCTION OF EROSION CONTROL MEASURES). TRAFFIC WILL BE ROUTED AROUND THESE AREAS TO REDUCE THE EXTENT OF DISTURBED AREAS BY REDUCING SEDIMENT LOADS TO SURFACE WATER.

BARE SOILS SHOULD BE SEEDED OR OTHERWISE STABILIZED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED FOR MORE THAN 21 DAYS.

MULCHING/MATS CAN BE USED TO PROTECT THE DISTURBED AREAS WHILE VEGETATION BECOMES ESTABLISHED.

LEGEND

- EXISTING EASEMENT
- 1070 EXISTING MAJOR CONTOURS
- 1072 EXISTING MINOR CONTOURS
- EXISTING CURB
- PROPERTY LINE
- 300 PROPOSED MINOR CONTOUR
- 300 PROPOSED MAJOR CONTOUR
- PROPOSED CURB
- GRATE INLET
- STORM SEWER
- -0.50% PROPOSED SLOPE

REVISIONS

BRANCH OFFICE
P.O. BOX 391
McQUEENEY, TEXAS 78123

M&S ENGINEERING, L.L.C.
ENGINEERS, PLANNERS AND SURVEYORS
TEXAS REGISTERED ENGINEERING FIRM F-1394

MAIN OFFICE
P.O. BOX 970
SPRING BRANCH, TEXAS 78070
PHONE # (830) 228-5446
FAX # (830) 885-2170

STATE OF TEXAS
KEITH C. STRIMPLE
66212
REGISTERED
PROFESSIONAL ENGINEER
10/1/09

HUNTERS CREEK LOT 14

PROPOSED SITE PLAN

JOB: 8NAMKEN002
DATE: 10-01-2009
SCALE: 1" = 20'

INTERNAL REVIEW:
DESIGN:
PEER:
PM:
DM:
OTHER:

SHEET: 01 OF 03

Date: Oct 01, 2009, 9:07am User ID: jmott
File: S:\Active Projects\8NAMKEN002 Hunters Creek Site Design for Lot 14\dwg\8NAMKEN002-WPAP-SPN-001.dwg

HUNTERS CREEK LOT 14

DRAINAGE AREA MAP

JOB: 8NAMKEN002
DATE: 09-01-2009
SCALE: 1" = 20'
INTERNAL REVIEW:
DESIGN:
PEER:
PM:
DM:
OTHER:
SHEET: 02 OF 03

REVISIONS

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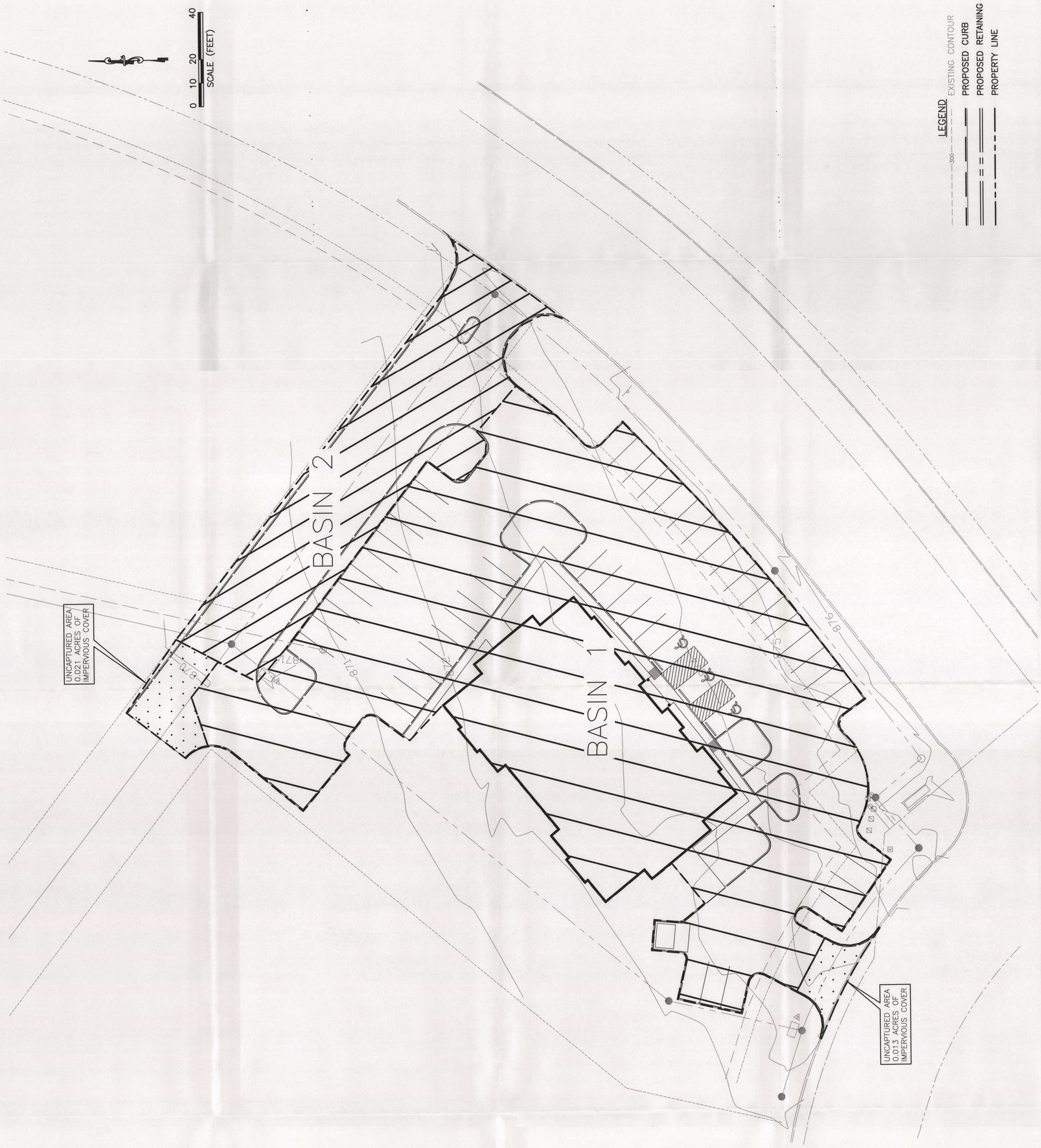
STATE OF TEXAS
KEITH C. STRIMPLE
86212
REGISTERED PROFESSIONAL ENGINEER
10/1/09



Date: Oct 01, 2009, 9:05am User ID: jmott
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In This Section

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: HUNTERS CREEK LOT 14

POTENTIAL SOURCES OF CONTAMINATION

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

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

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

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

___ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An **Aboveground Storage Tank Facility Plan** application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

X Fuels and hazardous substances will not be stored on-site.

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

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

4. X **ATTACHMENT B - Potential Sources of Contamination.** Describe in an attachment at the end of this form any other activities or processes which may be a potential source of contamination.

___ There are no other potential sources of contamination.

SEQUENCE OF CONSTRUCTION

5. X **ATTACHMENT C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.

6. X Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Blieders Creek

TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)

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

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

_X_ TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information has been provided in the attachment at the end of this form

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

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

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

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

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

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

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

9. _X_ **ATTACHMENT F - Structural Practices.** Describe the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains has been avoided.

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

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

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

11. N/A **ATTACHMENT H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure has been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are provided as at the end of this form.

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

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

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

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

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

SOIL STABILIZATION PRACTICES

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

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

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

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

ADMINISTRATIVE INFORMATION

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

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

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

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

Keith Strimple, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

9/1/09
Date

Attachment A

Spill Response Action

Spill Prevention and Control

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

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

Education

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

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

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

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

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

General Measures

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

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

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

(4) Train employees in spill prevention and cleanup.

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

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

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

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

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

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

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

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

Cleanup

(1) Clean up leaks and spills immediately.

(2) Use a rag for small spills on paved surfaces, a damp mop for general 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 as 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 material on small spills rather than hosing down or burying the spill.

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

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

(6) Recover spilled material.

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

Semi-Significant Spills

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

Spills should be cleaned up immediately:

(1) Contain spread of the spill

(2) Notify the project foreman immediately.

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

(4) If the spill occurs in dirt areas, immediately contain the spill be 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.

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

Vehicle and Equipment Fueling

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

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

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

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

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

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

(7) Promptly transfer used fluids to the proper waste or recycle 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 runon of stormwater and the runoff of spills.

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

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

Attachment B

Potential Sources of Contamination

1. Oil, grease, fuel and hydraulic contamination from construction equipment and vehicle leakage.
   Remedy: Lubrication and fueling will be preformed in a designated area. This area will be monitored daily for contamination.

2. Miscellaneous trash and litter form construction workers.
   Remedy: Designated receptacles will be strategically located and workers will be directed to deposit trash there.

3. Construction debris.
   Remedy: Debris will be collected weekly and deposited in bins for offsite disposal. Situations requiring immediate attention will be handled on a case by case basis.

4. Asphalt products.
   Remedy: After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to maintain and asphalt wash-off should and unexpected rain occurs. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.

Attachment C

Sequence of Major Activities

1. Install erosion and sedimentation controls (i.e. Silt Fences and Stabilized Construction Entrances) as indicated on the approved construction plans
2. Begin site clearing
3. Construct site utilities
4. Install Contech Stormwater Treatment System
5. Construct building and parking
5. Install Landscaping or hydromulch to disturbed areas
6. Re-vegetate disturbed areas
7. Receive operating permit and city clearance for occupancy
8. Remove temporary erosion and sedimentation controls

Attachment D

Temporary Best Management Practices and Measures

All TBMPs will be installed prior to the beginning of site preparation and construction activities as per the Storm Water Pollution Prevention Plan. The TBMPs will remain in place and will be maintained until all construction has ceased and a perennial vegetative cover with a density of 70 percent has been established.

a. Silt fences and rock berms will be used to protect disturbed soils during construction in order to 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.

b. A construction entrance will be used to provide a stable entrance/exit condition from the construction site and to prevent sediment and pollution from leaving the site.

Attachment E

Request to Temporarily Seal a Feature

NOT APPLICABLE

Attachment F
Structural Practices

The structural practices that will limit runoff discharge of pollutants form exposed areas of the site will be the use of rock berms, silt fences, and stabilized construction entrance to prevent the excavated material from leaving the site.

Attachment G

Drainage Area Map

Attachment H

Temporary Sediment Pond(s) Plans and Calculations

NOT APPLICABLE

Inspection and Maintenance for BMPs

The BMPs for the construction of this project will be the use of rock berms, silt fencing, and stabilized construction entrance. The following inspection and maintenance procedures will be implemented:

1. Sift fencing, rock berms, and construction entrances must be in place prior to the start of construction and will remain in place until construction has been complete and the site stabilized from further erosion.

2. The contractor will inspect the rock berms, silt fencing and construction entrance at least once a week and within 24 hours of a storm of 0.5 inches or more in depth. The contractor will repair or replace any damaged TBMPs. The contractor shall correct damage or deficiencies as soon as practical after the inspection but no later than 7 days after the inspection.

3. Contractor will place trench excavation on the upgradient side of the trench.

4. All soil, sand, gravel, and excavated material stockpiled on-site will have appropriately sized silt fencing placed upgradient and down gradient.

5. The contractor will keep a record of the weekly inspections, noting the condition of the rock berms, silt fencing and construction entrance and any corrective action taken to maintain the erosion control structures. In addition to the inspection and maintenance reports, the operator should keep records of the construction activity on-site, in particular, the following information should be kept.

    A. The dates when major grading activities occur in a particular area.

    B. The dates when construction activities cease in an area, temporarily or permanently.

    C. The dates when an area is stabilized, temporarily or permanently.

    D. Records to be maintained in SWPPP.

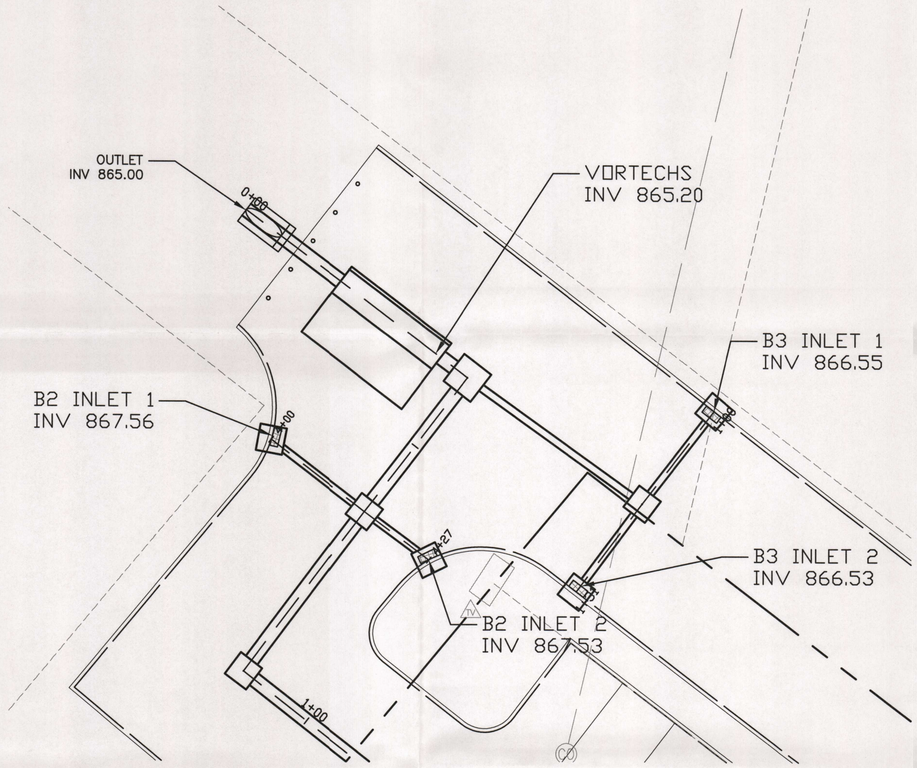
Schedule of Interim and Permanent Soil Stabilization Practices

The schedule of interim and permanent soil stabilization will be as follows:

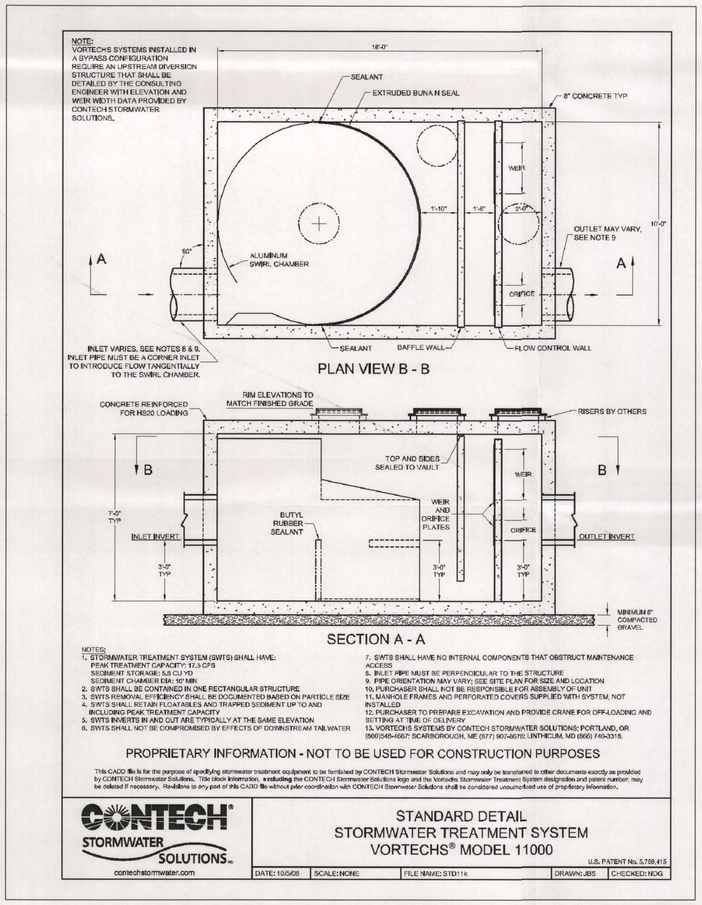
1. Once construction of the project has commenced, the construction activity is planned to continue until the project is complete. The water, electrical, cable TV and telephone trenches will be excavated. The trenches will then be re-excavated and the water, electrical, cable TV and telephone lines will be installed. This work is intended to continue until all the lines are installed. The utility lines are located within the project boundaries as shown on the site plan. As soon as the underground utilities are installed, the road base will be installed and compacted providing the interim soil stabilization for the paved area and the permanent soil stabilization for the parking areas. Once the individual residential buildings are built and landscaped this will provide permanent soil stabilization for the building areas.

2. Much of the excavation for this project will be in solid rock, helping to minimize the amount of loose soil which has the potential to become suspended in runoff and washed downstream.

3. 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 temporary or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease in 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.



0 5 10 20
SCALE (FEET)



NOTES:
1. STORMWATER TREATMENT SYSTEM (SWTS) SHALL HAVE:
   PEAK TREATMENT CAPACITY: 17.3 CFS
   SEDIMENT STORAGE: 5.0 CU YD
   SEDIMENT CHAMBER DIA: 10' MIN
2. SWTS SHALL BE CONTAINED IN ONE RECTANGULAR STRUCTURE.
3. SWTS REMOVAL EFFICIENCY SHALL BE DOCUMENTED BASED ON PARTICLE SIZE
4. SWTS SHALL RETAIN FLOATABLES AND TRAPPED SEDIMENT UP TO AND INCLUDING PEAK TREATMENT CAPACITY
5. SWTS INVERTS IN AND OUT ARE TYPICALLY AT THE SAME ELEVATION
6. SWTS SHALL NOT BE COMPROMISED BY EFFECTS OF DOWNSTREAM TAILWATER
7. SWTS SHALL HAVE NO INTERNAL COMPONENTS THAT OBSTRUCT MAINTENANCE ACCESS
8. INLET PIPE MUST BE PERPENDICULAR TO THE STRUCTURE
9. PIPE ORIENTATION MAY VARY; SEE SITE PLAN FOR SIZE AND LOCATION
10. PURCHASER SHALL NOT BE RESPONSIBLE FOR ASSEMBLY OF UNIT
11. MANHOLE FRAMES AND PERFORATED COVERS SUPPLIED WITH SYSTEM, NOT INSTALLED
12. PURCHASER TO PREPARE EXCAVATION AND PROVIDE CRANE FOR OFF-LOADING AND SETTING AT TIME OF DELIVERY
13. VORTECHS SYSTEMS BY CONTECH STORMWATER SOLUTIONS: PORTLAND, OR (800)548-4667; SCARBOROUGH, ME (877) 907-4670; LINTHICUM, MD (866) 740-3318.

PROPRIETARY INFORMATION - NOT TO BE USED FOR CONSTRUCTION PURPOSES

CONTECH STORMWATER SOLUTIONS
contechstormwater.com

STANDARD DETAIL
STORMWATER TREATMENT SYSTEM
VORTECHS® MODEL 11000

U.S. PATENT No. 5,788,415

DATE: 10/5/05	SCALE: NONE	FILE NAME: STD11x	DRAWN: JBS	CHECKED: NDG

VORTECHS STORMWATER TREATMENT SYSTEM DESIGN CALCULATIONS

Design Parameters		
Model	11000	
AN:	0.92	ac
AI:	0.92	ac
AP:	0.08	ac
ANU:	0.03	ac
P:	33.00	in
I:	1.10	in/hr
A:	78.50	ft2

Calculated Values		
LM:	830.23	lbs
*LM = 27.2(AN * P)*		
EA:	0.83	ac
*EA = (0.9 * AI) + (0.03 * AP)*		
VOR:	0.0117	ft/s
*VOR = (EA * I) / A*		
E	0.85	
From Table 2		
LR:	898.92	lbs
*LR = E * P * [(AI * 34.6) + (AP * 0.54)]*		
LC:	68.69	lbs
LC = LR - LM		
LMU:	30.52	lbs
*LMU = 27.2(ANU * P)*		

Total Project Summary		
Total Project Area:	1.72	acres
Existing Impervious Cover:	0.00	acres
Proposed Impervious Cover:	0.96	acres
Captured Impervious Cover	0.92	acres
Uncaptured Impervious Cover	0.03	acres
Required TSS Removal:	860.75	lbs
Proposed TSS Removal:	898.92	lbs

AN:	Increase in Impervious Cover
AI:	Impervious Area
AP:	Pervious Area
ANU:	Increase in Impervious Cover for Uncaptured Area
P:	Precipitation
I:	Design Storm Intensity
A:	Surface Area of Unit
LM:	Required TSS Removal
EA:	Effective Area
VOR:	Overflow Rate
E:	BMP Efficiency
LR:	Maximum Load Removal
LC:	TSS Load Credit
LMU:	Required TSS Removal from Uncaptured Area

NOTE: VORTECHS DESIGN CALCULATIONS BASED ON TCEQ TECHNICAL GUIDANCE MANUAL ADDENDUM SHEET

REVISIONS

M & S ENGINEERING, L.L.C.
ENGINEERS, PLANNERS, AND SURVEYORS
TBPE REGISTERED ENGINEERING FIRM F-1384
MAIN OFFICE
P.O. BOX 970
SPRING BRANCH, TEXAS 78070
PHONE # (830) 228-5446
FAX # (830) 885-2170
BRANCH OFFICE
P.O. BOX 391
McQUEENEY, TEXAS 78123

STATE OF TEXAS
KEITH C. STRIMPLE
66212
REGISTERED
PROFESSIONAL ENGINEER
10/1/09

HUNTERS CREEK LOT 14
PROPOSED BMP DETAILS

JOB: 8NAMKEN002
DATE: 10-01-2009
SCALE: 1" = 10'

INTERNAL REVIEW:
DESIGN: JAM
PEER: SAT
PM:
DM:
OTHER:

SHEET: 03 OF 03

In This Section

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: HUNTERS CREEK LOT 14

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

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

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

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

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

   _____

   _____

   _____

   _____

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

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

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

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

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

5. X The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover

increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

___ **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.

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

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

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

___ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is identified as **ATTACHMENT B** at the end of this form.

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

___ If permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form .

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

_X_ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is identified as **ATTACHMENT C** at the end of this form.

___ If permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, an explanation is provided as **ATTACHMENT C** at the end of this form.

8. _X_ **ATTACHMENT D - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is provided at the end of this form. Each feature identified in the Geologic Assessment as "sensitive" or "possibly sensitive" has been addressed.

9. _X_ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

_X_ 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. X **ATTACHMENT F - Construction Plans.** Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details must be shown on the construction plans.

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

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

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

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

13. X **ATTACHMENT I -Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is provided at the end of this form. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity which increase erosion that results in water quality degradation.

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

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

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

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

KEITH C. STRIMPLE
Print Name of Customer/Agent

Signature of Customer/Agent Date 9/1/09

Attachment A

20% Or Less Impervious Cover Waiver

NOT APPLICABLE

Attachment B
BMPs for Upgradient Stormwater

There is no upgradient stormwater for this site.

Attachment C

BMPs for On-Site Stormwater

A Vortechs Model 11000 Stormwater Treatment System will be installed to prevent pollution of surface water or groundwater that originates on-site. All stormwater from the site and the adjacent access roads will be directed to a storm sewer system through a number of grate inlets. The Vortechs System will be installed in-line with the storm sewer prior to discharge into a graded earthen channel. This channel will serve to transport water to the Highway 46 ROW until neighboring property owners extend the access road, at which time to storm sewer will be extended.

The Vortechs System is designed so 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. There is no untreated drainage area as part of this project. See calculations on sheet Proposed BMP Details. The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

Attachment D

BMPs for Surface Streams

The Contech Stormwater Treatment System described in Attachment C will prevent pollutants from entering surface streams.

Attachment E

Request To Seal Features

NOT APPLICABLE

Attachment F

Construction Plans

Attachment G

Inspection, Maintenance, Repair and Retrofit Plan

Inspection Schedule:

- BMP facilities will be inspected at least quarterly to evaluate facility operation and sediment accumulation. Additional inspections will be conducted as needed. Pollutant deposition and transport may vary from year to year and quarterly inspections ensure that systems are cleaned out at the appropriate time.
- All accumulated sediment, trash, litter, and debris must be removed from the system annually or when the sediment fills more than 25% of the space between the permanent water surface and the bottom of the swirl chamber, whichever occurs first.

Maintenance Guidelines:

Maintaining the Vortechs is easiest when there is no flow entering the system. For this reason, it is best to schedule the cleanout during dry weather. Cleanout of the Vortechs system with a vacuum truck is generally the most effective and convenient method of excavating pollutants from the system. Accumulated sediment is typically evacuated through the manhole over the swirl chamber. Simply remove the cover and insert the vacuum hose into the swirl chamber. As water is evacuated, the water level outside of the swirl chamber will drop to the same level as the crest of the lower aperture of the swirl chamber. It will not drop below this level due to the fact that the bottom and sides of the swirl chamber are sealed to the tank floor and walls. This "water lock" feature prevents water from migrating into the swirl chamber, exposing the bottom of the baffle wall. Floating pollutants will decant into the swirl chamber as the water level is drawn down. This allows most floating material to be withdrawn from the same access point above the swirl chamber.

In installations where the risk of large petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, an oil or gasoline spill should be cleaned out immediately. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use adsorbent pads since they are usually cheaper to dispose of than the oil water emulsion that may be created by vacuuming the oily layer.

Trash can be netted out if you wish to separate it from the other pollutants. If maintenance is not performed as recommended, sediment may accumulate outside the swirl chamber. If this is the case, it may be necessary to pump out all chambers. It is a good idea to check for accumulation in all chambers during each maintenance event to prevent sediment buildup there.

Manhole covers should be securely seated following cleaning activities, to ensure that surface runoff does not leak into the unit from above.

Documentation:

The property owners association will keep all inspection and maintenance records in their files for review at TCEQ request. The attached form will be used to document inspection, maintenance, repairs, and, if necessary, retrofits.

BMP Access:
Access to the BMPs by TCEQ or other designated inspectors will be granted via the access road which the BMP is located under.

Sediment Disposal:
Stormwater pollutants include a variety of substances that are deposited on pervious and impervious surfaces and then transported by the next rainfall. In addition, there may be connections to the stormwater system that should go to the sanitary sewer system in older urbanized areas. Consequently, a variety of contaminants that may be classified as hazardous or toxic may enter stormwater management systems. These contaminants include heavy metals, petroleum hydrocarbons, pesticides, and a variety of organic chemicals. Consequently, several federal and state laws and regulations may apply to the disposal of sediments which accumulate in stormwater systems or which are captured by street sweepers (Livingston et al., 1997).
Maintenance of BMPs frequently requires disposal of accumulated sediment and other material. These materials are normally classified as special wastes when disposed of in municipal landfills. A Type 1 Municipal Solid Waste (MSW) landfill can accept household waste—anything else is a special waste as defined in 30 TAC 330.2 (137). Special waste is a waste that requires special handling at a Type I MSW landfill. Labeling a filter media or sediment as a special waste is not a waste characterization. The process to obtain authorization to dispose of a special waste begins with a request for approval called the "Request for Authorization for Disposal of Special Waste TCEQ Form 0152." The request is completed by the generator and submitted to the MSW permits section of the TCEQ for Executive Director review/approval. The MSW permits section performs the review described in.30 TAC 330.136 (reviews the request and either approves, disapproves, or requires additional information).

Responsibility of Maintenance

I Brandon Nanklow,
Print Name

President
Title - Owner/President/Other

of Nanklow Construction, Inc
Corporation/Partnership/Entity Name

Agree to assume the responsibility of maintaining the permanent BMPs constructed as part of the Hunters Creek Lot 14 in accordance with the rules and regulations of the Texas Commission on Environmental Quality (TCEQ).

I also understand that:

1. I am 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.

2. 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.

Applicant's Signature

9/2/09
Date

Contact Person: _____
Entity: _____
Mailing Address: _____
City, State: _____ Zip: _____
Telephone: _____ FAX: _____

Vortechs BMP Records

☐ Inspection Date: _____

Type of Inspection: _____

Comments: _____

_____

_____

_____

Signature: _____ (Inspector)

☐ Maintenance Date: _____

Work Performed: _____

Comments: _____

_____

_____

_____

Signature: _____ (Maintenance Personnel)

☐ Other Date: _____

Comments: _____

_____

_____

_____

_____

_____

Signature: _____ (Title:) _____

Attachment H

Pilot-Scale Field Testing Plan

NOT APPLICABLE

Attachment I

Measures For Minimizing Surface Stream Contamination

The stormwater flowing through the outlet pipe of the Vortech system is non-erosive as per the velocity requirements stated in the City of New Braunfels Drainage and Erosion Control Design Manual.

Agent Authorization

In This Section

TCEQ-0599
Agent Authorization Form

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

I Brandon Namken,
Print Name

Partner/Member
Title - Owner/President/Other

Of STAMKEN, LLC
Corporation/Partnership/Entity Name

have authorized Keith Strimple, P.E.
Print Name of Agent/Engineer

of M&S Engineering, LLC
Print Name of Firm

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

I also understand that:

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

2. For applicants 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.

Applicant's Signature — Date: 9/2/09

THE STATE OF Texas §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared Brandon Nanker 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 2 day of September, 2009

NOTARY PUBLIC

Leona Montez Laijas
Typed or Printed Name of Notary

LEONA MONTEZ LAIJAS
Notary Public, State of Texas
My Commission Expires
December 19, 2012

MY COMMISSION EXPIRES: 12/19/2012

Fee Form

In This Section

TCEQ-0574
Application Fee Form

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

NAME OF PROPOSED REGULATED ENTITY: HUNTERS CREEK LOT 14

REGULATED ENTITY LOCATION: NEW BRANFELS
NAME OF CUSTOMER: STAMKEN, LLC
CONTACT PERSON: Brandon Namken PHONE: (830) 237-2573
(Please Print)

Customer Reference Number (if issued): CN _____ (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	1.72 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

10/1/09
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

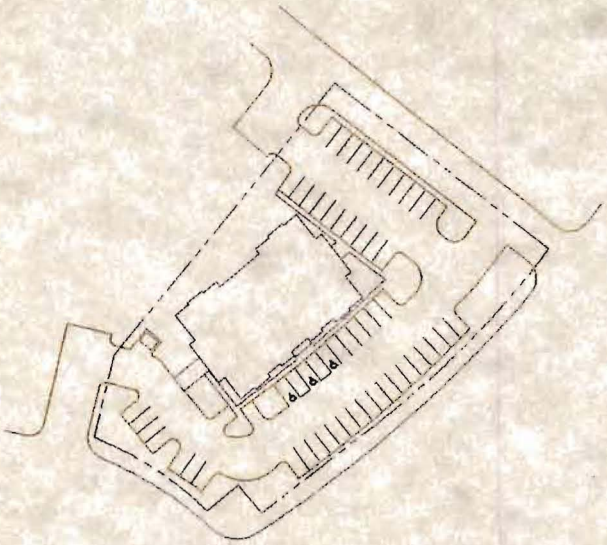
PROJECT	FEE
Exception Request	$500

Extension of Time Requests

PROJECT	FEE
Extension of Time Request	$150

WATER POLUTION ABATEMENT PLAN

FOR



HUNTERS CREEK LOT 14

Prepared for:

Brandon Namken
689 Labahia Loop
New Braunfels, TX 78132

Prepared by:

M & S

ENGINEERING, L.L.C.
Engineers, Planners, Surveyors

Main Office:
P. O. Box 970
Spring Branch, Texas 78070
830/228-5446
830-885-2170 FAX

Branch Office:
P. O. Box 391
McQueeney, Texas 78123
830-560-3200
830-560-3203 FAX

September 2009

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

☒ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

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

☒Yes ☐No — Water Polution 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		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:*

STAMKEN, LLC

10. Mailing Address: 1551 N. Walnut, Suite 40

City	New Braunfels	State	TX	ZIP	78130	ZIP + 4	6047

11. Country Mailing Information *(if outside USA)*

12. E-Mail Address *(if applicable)*

13. Telephone Number (830) 237-2573

14. Extension or Code

15. Fax Number *(if applicable)* (210) 247-9358

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)*
26-065890	32033477186		800853175

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)*

Hunters Creek Lot 14

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*							
	City		**State**		**ZIP**	**ZIP + 4**	
25. Mailing Address:	1551 N. Walnut, Suite 40						
	City	New Braunfels	**State**	TX	**ZIP**	78130	**ZIP + 4** 6047
26. E-Mail Address:							

27. Telephone Number	**28. Extension or Code**	**29. Fax Number** *(if applicable)*
(830) 237-2573		(210) 247-9358

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)
1542		236220	

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

Office space for lease

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

35. Description to Physical Location:	From the intersection of Highway 46 and Oak Run Parkway proceed 400 feet south. The proposed development will be on your right.

36. Nearest City	**County**	**State**	**Nearest ZIP Code**
New Braunfels	Comal	TX	78130

37. Latitude (N) In Decimal:	29.719047		**38. Longitude (W) In Decimal:**	98.167678	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	43	8.57	98	10	3.64

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
		WPAP		
☐ 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:	Stephen Jackson	**41. Title:**	Hydrologist

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(830) 228-5446		(830) 885-2170	sjackson@msengr.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:	M&S Engineering, L.L.C.	**Job Title:**	Agent - Engineer
Name *(In Print)* :	Keith Strimple, P.E.	**Phone:**	(830) 228-5446
Signature:	Keith Strimple	**Date:**	9/10/09

In This Section

TCEQ-0587
General Information Form

Attachment A
Road Map

Attachment B
USGS/Edwards Recharge Zone Map

Attachment C
Project Description

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: HUNTERS CREEK LOT 14
COUNTY: COMAL STREAM BASIN: BLIEDERS CREEK

EDWARDS AQUIFER: _X_ RECHARGE ZONE
___ TRANSITION ZONE

PLAN TYPE: _X_ WPAP ___ AST ___ EXCEPTION
___ SCS ___ UST ___ MODIFICATION

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Brandon Namken
Entity: STAMKEN, LLC
Mailing Address: 1551 N. Walnut, Suite 40
City, State: New Braunfels, Tx Zip: 78132
Telephone: (830) 237-2573 FAX: (830) 629-2558

Agent/Representative (If any):

Contact Person: Keith Strimple, P.E.
Entity: M&S ENGINEERING, LLC.
Mailing Address: P.O. Box 970
City, State: Spring Branch, Texas Zip: 78070
Telephone: (830) 228-5446 FAX: (512) 847-9414

2. _X_ 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 the intersection of Highway 46 and Oak Run Parkway proceed 400 feet south. The proposed development will be on your right.

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

5. _X_ **ATTACHMENT B - USGS / EDWARDS RECHARGE ZONE MAP**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:

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

6. X Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. **The TCEQ must be able to inspect the project site or the application will be returned.**

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

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

PROHIBITED ACTIVITIES

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

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

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

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

ADMINISTRATIVE INFORMATION

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

X For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.
___ For an Organized Sewage Collection System Plans and Modifications, the total linear footage of all collection system lines.
___ For a UST Facility Plan or an AST Facility Plan, the total number of tanks or piping systems.
___ A Contributing Zone Plan.

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

___ A request for an extension to a previously approved plan.

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

___ TCEQ cashier

___ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)

_X_ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

13. _X_ Submit one (1) original and three (3) copies of the completed application to the appropriate regional office for distribution by the TCEQ to the local municipality or county, groundwater conservation districts, and the TCEQ's Central Office.

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

_X_ No person shall commence any regulated activity until the Contributing Zone Plan for the activity has been filed with 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:

Keith Strimple, P.E.
Print Name of Agent

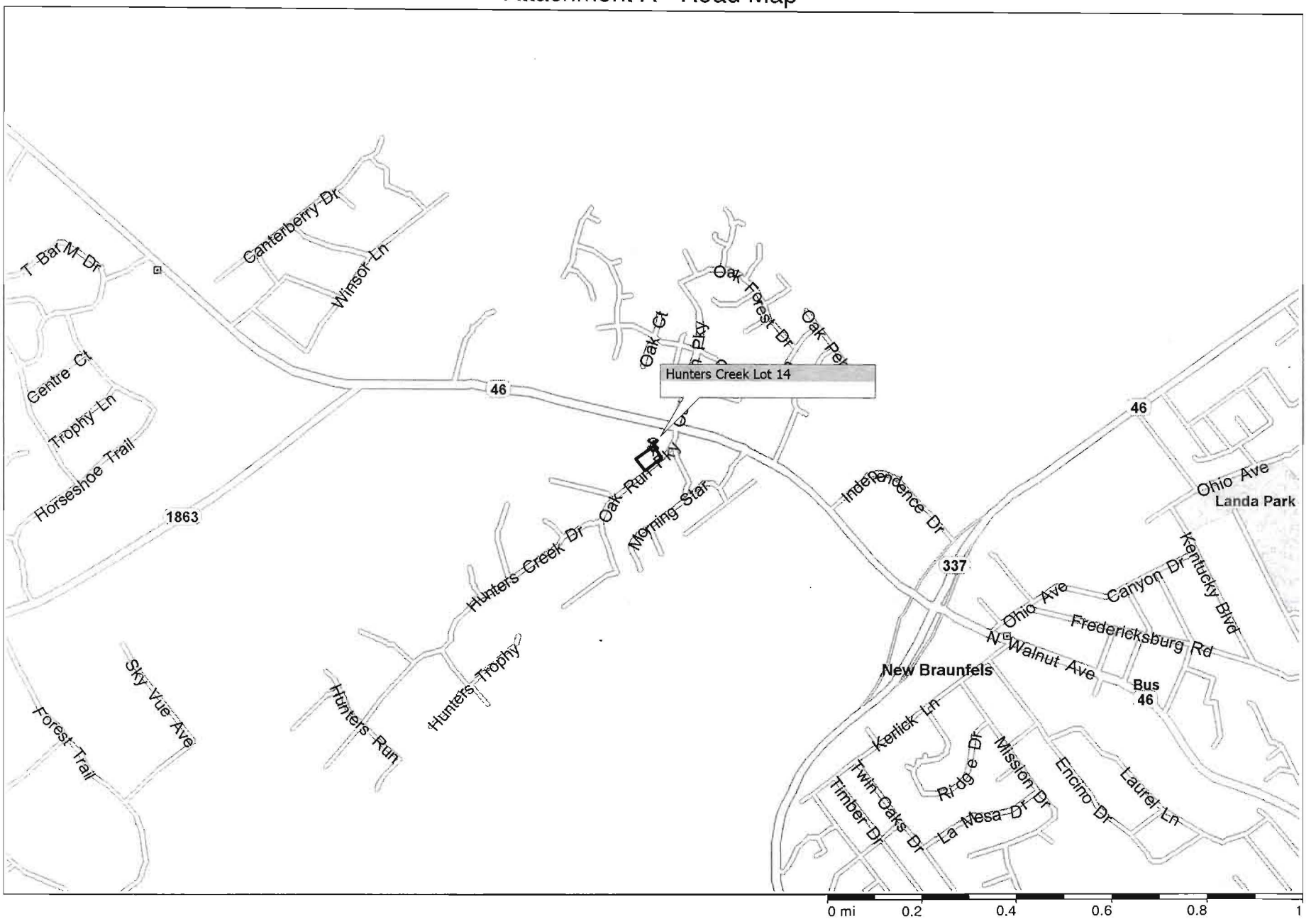
Signature of Agent

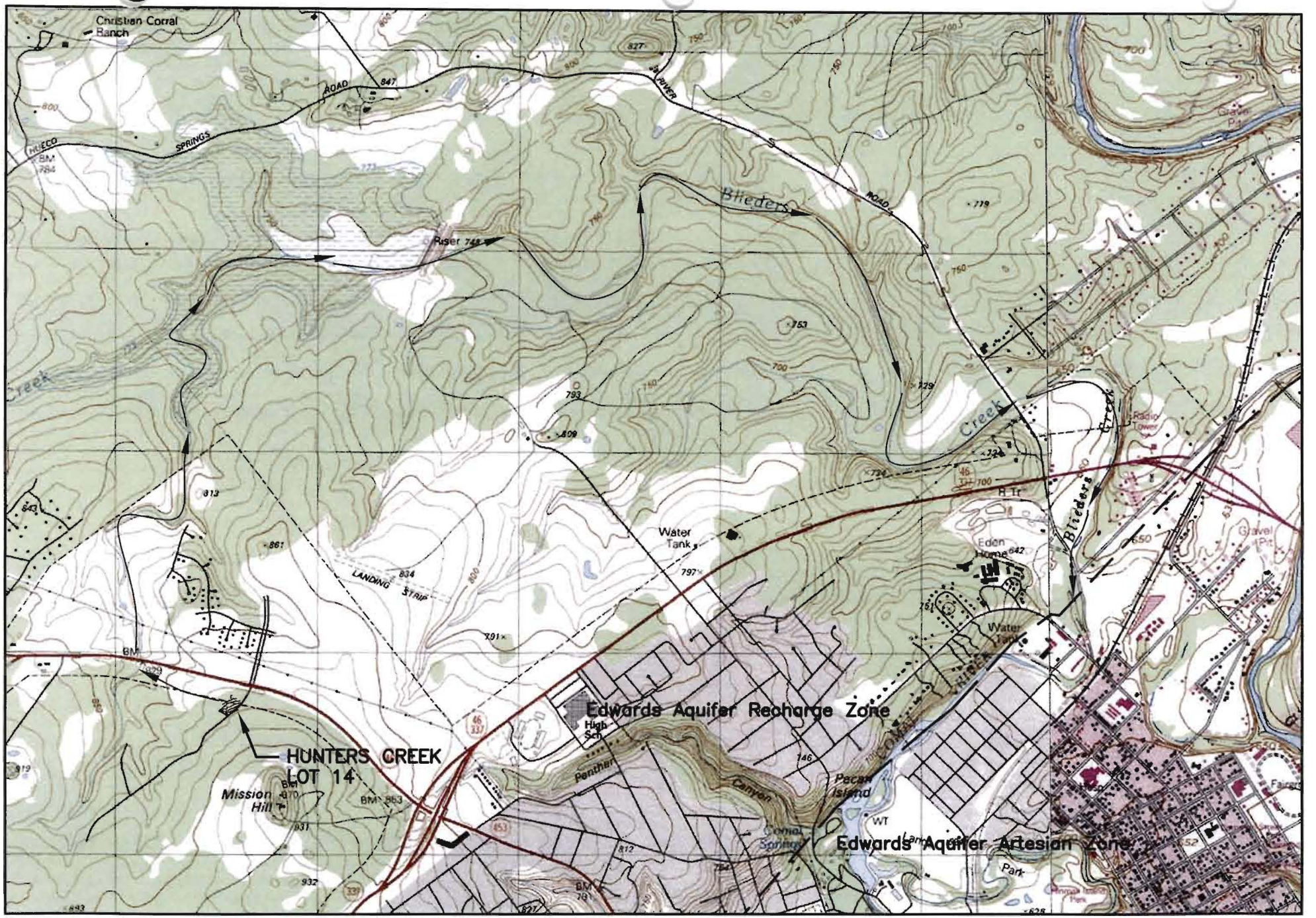
9/1/09
Date

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

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

Attachment A - Road Map





SHEET 1

HUNTERS CREEK LOT 14

Scale: 1" = 2000'

USGS / Edwards Aquifer Recharge Zone Map
New Braunfels East and New Braunfels West Quad Sheets

ATTACHMENT C - PROJECT DESCRIPTION

The project is proposed to be a commercial development located on 1.09 acres on Oak Run Parkway in the City of New Braunfels. The site is located in the Edwards Aquifer Recharge Zone. The project is not located in the FEMA 100-Year floodplain.

The site will include a commercial retail and office building and parking lot. In addition, the owner will be developing the access roads in the adjacent easements. A Contechs Stormwater Treatment System will be installed to treat the stormwater from all proposed improvements.

The project is made up of a single drainage area with no off-site area. The basin drains to the north-western border of the property towards an adjoining easement. Stormwater will be collected into storm sewer system, treated, and discharged by way of a graded earthen channel to the Highway 46 ROW.

The amount of existing impervious cover is 0 acres. The amount of impervious cover expected after construction is complete is 1.03 acres. See chart below for details. The total project area including the adjacent easements is 1.30 acres.

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	9,945	÷ 43,560 =	0.23
Parking	34,469	÷ 43,560 =	0.79
Other paved surfaces *Access Road, Concrete Improvements*	479	÷ 43,560 =	0.01
Total Impervious Cover	44,893	÷ 43,560 =	1.03
Total Impervious Cover ÷ Total Acreage x 100 =			79 %

In This Section

Information To Build On
Engineering • Consulting • Testing

October 2, 2008

M&S Engineering, Ltd.
6477 F.M. 311, P.O. Box 970
Spring Branch, Texas 78070

Attn: Mr. Keith Strimple, P.E.

Re: Geologic Assessment
Approximate 1-Acre Tract
Oak Run Parkway & Hunter's Village
New Braunfels, Comal County, Texas
PSI Project No. PO-435-8G033

Dear Mr. Strimple:

In accordance with our agreement dated August 28, 2008, Professional Service Industries, Inc. (PSI) has performed a geologic assessment (GA) for the above referenced project. Please find one bound and three unbound copies of the report enclosed.

Thank you for choosing PSI as your consultant on this project. If you have any questions, or if we can be of additional service please call us at (210) 342-9377.

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.

John Langan, P.G.
Environmental Department Manager

Kathleen T Moore
for
Ed Pruske
Business Development Manager

Enclosures

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: Approximate 1-Acre Tract; Oak Run Parkway & Hunters Village, New Braunfels, TX

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 Assoc., undulating	B	1-2

* Soil Group Definitions (Abbreviated)

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

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

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

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

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" = 40 '
Site Geologic Map Scale 1" = 40 '
Site Soils Map Scale (if more than 1 soil type) 1" = _____ '

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. X Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.
__ Geologic or manmade features were not discovered on the project site during the field investigation.

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

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

__ There are ___(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
__ The wells are not in use and have been properly abandoned.
__ The wells are not in use and will be properly abandoned.
__ The wells are in use and comply with 16 TAC Chapter 76.
X There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

12. X One (1) original and three (3) copies of the completed assessment has been provided.

Date(s) Geologic Assessment was performed: September 17, 2008
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.

John Langan
Print Name of Geologist

(210) 342-9377
Telephone

(210) 342-5727
Fax

Signature of Geologist

10/2/08
Date

Representing: Professional Service Industries, Inc. (PSI)
(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.

STATE OF TEXAS
John Langan
Geology
4871
LICENSED
PROFESSIONAL GEOSCIENTIST

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: 1.094-Acre Tract-Hunters Village & Oak Run Parkway

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)	DIP	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	≥40	<1.6	≥1.6	
S-1	29-43-8.2	98-10-2.7	CD	5	Kep	4	4	1					O	15	20	X				hillside
S-2	29-43-8.8	98-10-3.1	CD	5	Kep	3	3	1					O	15	20	X				hillside
S-3	29-43-8.7	98-10-3.1	CD	5	Kep	3	3	1					O	15	20	X				hillside

* DATUM:

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.

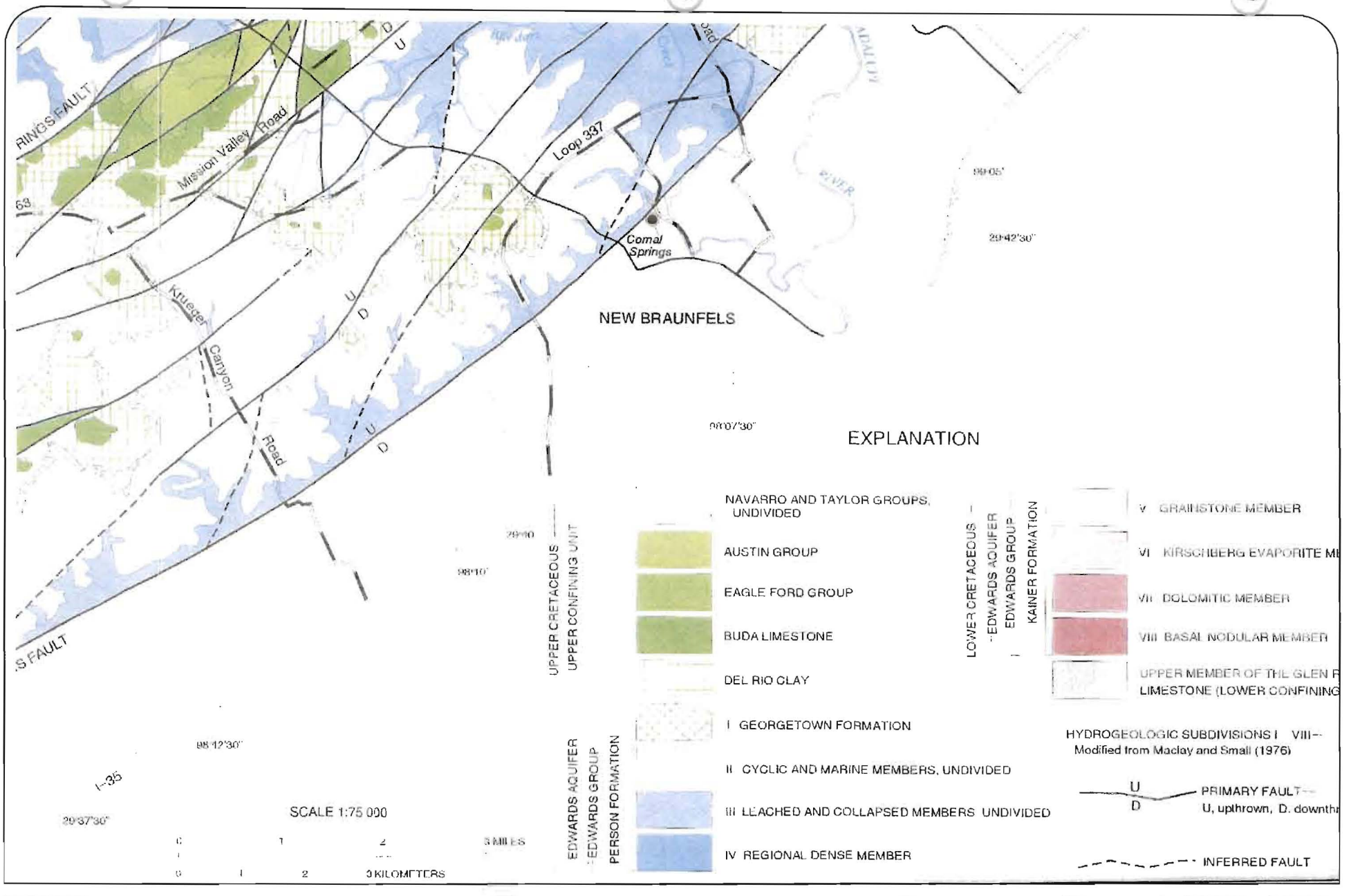
My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Date 10/2/09

Sheet 1 of 1

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

STATE OF TEXAS
John Langan
Geology
4871
LICENSED
PROFESSIONAL GEOSCIENTIST



psi Information To Build On
Engineering • Consulting • Testing
THREE BURWOOD LANE
SAN ANTONIO, TEXAS 78216

REGIONAL GEOLOGIC MAP

APPROXIMATE 1 ACRE TRACT

OAK RUN PARKWAY & HUNTER'S VILLAGE
NEW BRAUNFELS, TEXAS

DATE:	09/26/08
DRAWN BY:	J. LEAL
PROJECT #:	435- 8G033
DRAWING NAME:	435- 8G003-02

SOILS NARRATIVE

According to the Soil Survey of Comal County, published by the United States Department of Agriculture, Soil Conservation Service, in cooperation with the Texas Agricultural Extension Service, issued in 1984, indicated the soils beneath the subject property have been classified as Rumple-Comfort association, undulating (RUD).

Rumple-Comfort association consists of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. The surface layer of Rumple soil is a dark reddish brown, very cherty loam about 10 inches thick. The stoniness increases with depth, becoming about 75% cobbles and stones between 14 and 28 inches in depth. The surface layer of Comfort soil is a dark brown extremely stony soil about 6 inches thick. Cobbles, stones and "float" rock comprise approximately 45% of the surface layer. The subsoil extends to about 13 inches, and overlies the fractured limestone parent material. This association is well drained, with medium surface runoff, slow permeability and very low water capacity. These soils are best suited for range or wildlife habitat.

STRATIGRAPHIC COLUMN

Approximate 1.094-Acre Tract
Hunters Village & Oak Run Parkway
New Braunfels, Comal County, Texas

FORMATION	THICKNESS	LITHOLOGIC DESCRIPTION
Georgetown Formation	2-10'	Light tan limestone identified by proximity to Del Rio clay and diagnostic marker fossil: *waconella wacoensis* brachiopod; low porosity and permeability development.
Person Formation	180-224'	Limestones and dolomites, extensive porosity development in "honeycomb sections, interbedded with massive recrystallized limestones with more limited permeabilities (especially Regional Dense Member separating the Person and Kainer Formations.
Kainer Formation	200-250'	Hard, miliolid limestones, overlying calcified dolomites and dolomite. Leached evaporitic "Kirschberg" zone of very porous and permeable collapse breccia formed by the dissolution of gypsum. Overlies the basal nodular (Walnut) bed.
Glen Rose Limestone (upper)	350-500	Yellowish-tan thinly bedded limestone and marl. Alternating beds of varying hardness erodes to "stairstep" topography. Marine fossils common.

PSI Information To Build On
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October 2, 2008

M&S Engineering, Ltd.
6477 F.M. 311, P.O. Box 970
Spring Branch, Texas 78070

Attn: Mr. Keith Strimple, P.E.

Re: Geologic Assessment
Approximate 1-Acre Tract
Oak Run Parkway & Hunter's Village
New Braunfels, Comal County, Texas
PSI Project No. PO-435-8G033

Dear Mr. Parker:

Professional Service Industries, Inc. (PSI) has completed a geologic recharge assessment for the above referenced project in compliance with the Texas Commission on Environmental Quality (TCEQ) requirements for regulated developments located on the Edwards Aquifer Recharge Zone (EARZ). The purpose of this report is to describe surficial geologic units and identify the locations and extent of significant recharge features present in the development area.

AUTHORIZATION

Authorization to perform this assessment was given by a signed copy of PSI Proposal No. PO-435-8G0119 between M&S Engineering, Ltd. and PSI dated August 28, 2008.

PROJECT DESCRIPTION

The subject site is located at the northwest corner of Hunters Village and Oak Run Parkway in New Braunfels, Comal County, Texas. The tract is an approximate 1.094 acre, rectangular shaped parcel of undeveloped land. The southeast corner of the tract has a landscaped area with a sign, and some man-made soil/rock fill piles. The site vegetation consisted of native grasses, oak and juniper trees with prickly pear and desert willow shrubs.

REGIONAL GEOLOGY

Physiography

From northwest to southeast, the three physiographic provinces in Comal County are: the

Edwards Plateau, the Blackland Prairie, and the West Gulf Coastal Plain. The Edwards Plateau terrain is rugged and hilly, with elevations ranging from 1,000 feet to 1,900 feet above sea level. This area is underlain by beds of limestone that dip gently to the southeast. South of the Edwards Plateau is the Balcones Fault Zone, which is also the northernmost limit of the Blackland Prairie. The Balcones Fault Zone extends northeast-southwest across Comal County and is composed of fault blocks of limestone, chalk, shale and marl. The undulating, hilly topography of the Blackland Prairie ranges in elevation from about 700 feet to 1100 feet above sea level. The faults are predominantly normal, down-to-the Gulf Coast, with near vertical throws. The West Gulf Coastal Plain lies southeast of the Blackland Prairie, and is composed of relatively flat-lying beds of marl, clay and sandy clay. Elevations at the subject site are approximately 875 feet above mean sea level.

Stratigraphy and Structure

Underlying rocks at the site are members of the Lower Cretaceous Edwards Person Formation. According to "The Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County Texas" written by the USGS, the Person Formation ranges between 180 and 224 feet thick and forms the upper member of the Edwards Group, beneath the Georgetown Formation and above the Kainer Formation, which compromises the Edwards Aquifer, a federally-designated sole source aquifer for the region.

SITE INVESTIGATION

The site investigation was performed by systematically traversing the subject tract, and mapping fractured or vuggy rock outcrops, closed depressions, sinkholes, caves, or indications of fault/fracture zones. The purpose of the site investigation was to delineate features with recharge potential that may warrant special protection or consideration. The results of the site investigation are included in the attached TCEQ report format.

SUMMARY

No sensitive features were noted on the subject tract. Please note that subtle features, buried or obscured from view, may be present on the tract. It is possible that clearing/construction activities will reveal the presence of features currently hidden. If caves, sinkholes, or solution cavities are

encountered during future clearing/construction activities, please contact our office for additional assistance.

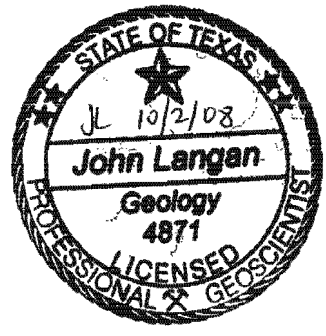
We appreciate this opportunity to be of service to you. If you have any questions, please do not hesitate to contact our office.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Scott Kuykendall, P.G.
Project Manager

John Langan, P.G.
Environmental Department Manager

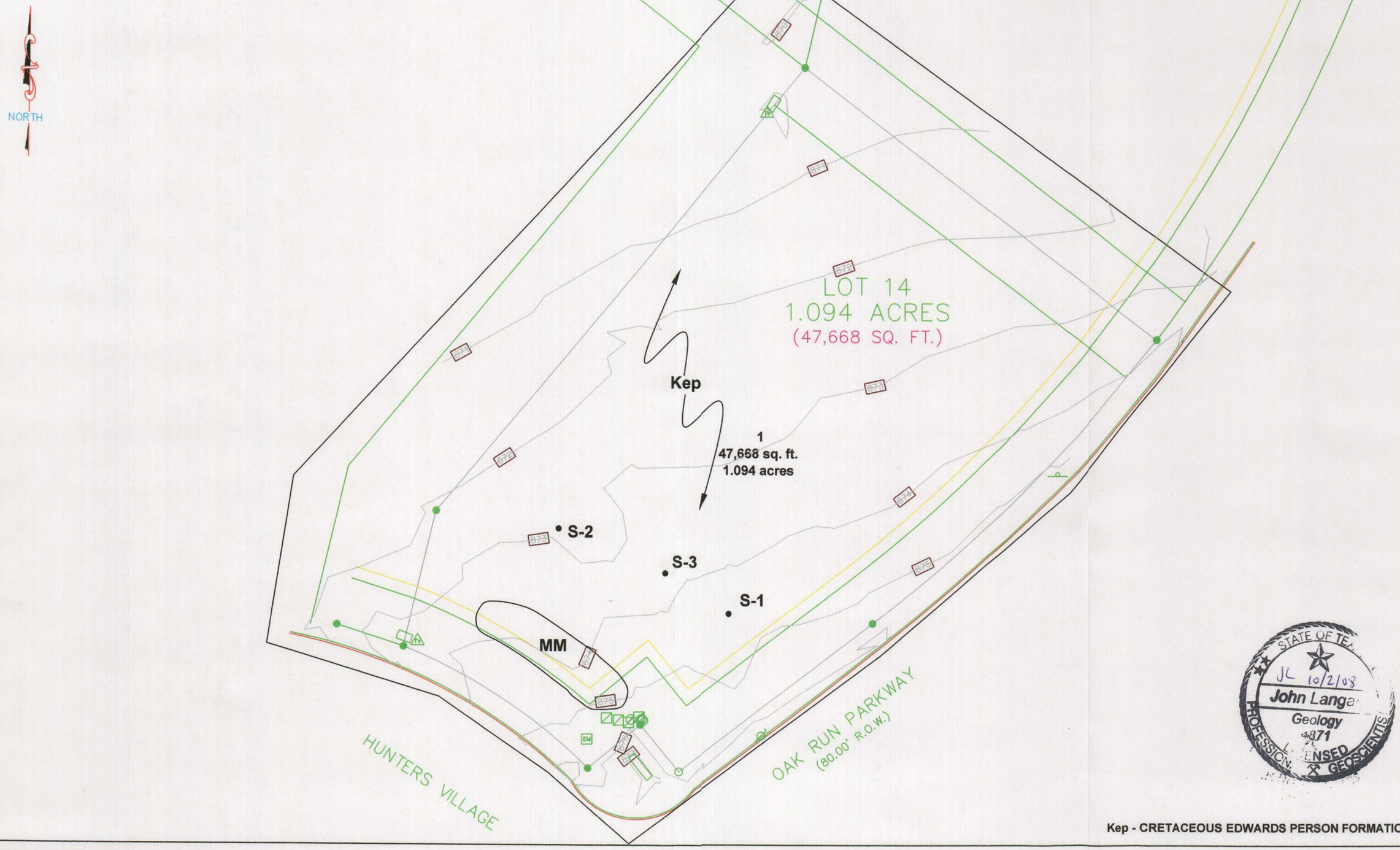


WARRANTY

The field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for a general geological recharge assessment of this site. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted geologic methods, only for the site described in this report. These methods have been developed to provide the client with information regarding apparent indications of existing or potential conditions relating to the subject site and are necessarily limited to the conditions observed at the time of the site visit and research. This report is also limited to the information available at the time it was prepared. In the event additional information is provided to PSI following the report, it will be forwarded to the client in the form received for evaluation by the client. There is a possibility that conditions may exist which could not be identified within the scope of the assessment or which were not apparent during the site visit. PSI believes that the information obtained from others during the review of public information is reliable; however, PSI cannot warrant or guarantee that the information provided by others is complete or accurate.

This report has been prepared for the exclusive use of The M&S Engineering, Ltd. for the site discussed herein. Reproductions of this report cannot be made without the expressed approval M&S Engineering, Ltd. The general terms and conditions under which this assessment was prepared apply solely to M&S Engineering, Ltd. No other warranties are implied or expressed.

SCALE: 1" = 40'



STATE OF TEXAS
JL 10/2/08
John Langa
Geology
4871
LICENSED
PROFESSIONAL GEOSCIENTIST

Kep - CRETACEOUS EDWARDS PERSON FORMATION

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SAN ANTONIO, TEXAS 78216

GEOLOGIC ASSESSMENT

APPROXIMATE 1 ACRE TRACT

OAK RUN PARKWAY & HUNTER'S VILLAGE
NEW BRAUNFELS, TEXAS

DATE:	09/26/08
DRAWN BY:	J. LEAL
PROJECT #:	435- 8G033
DRAWING NAME:	435- 8G033-01

1. View east-southeast along the south property line of Lot 14, 1.094 acres at the northwest corner of Hunters Village and Oak Run Parkway, New Braunfels, Comal County, Texas.

2. View east of the site interior from the southwest corner of the tract.

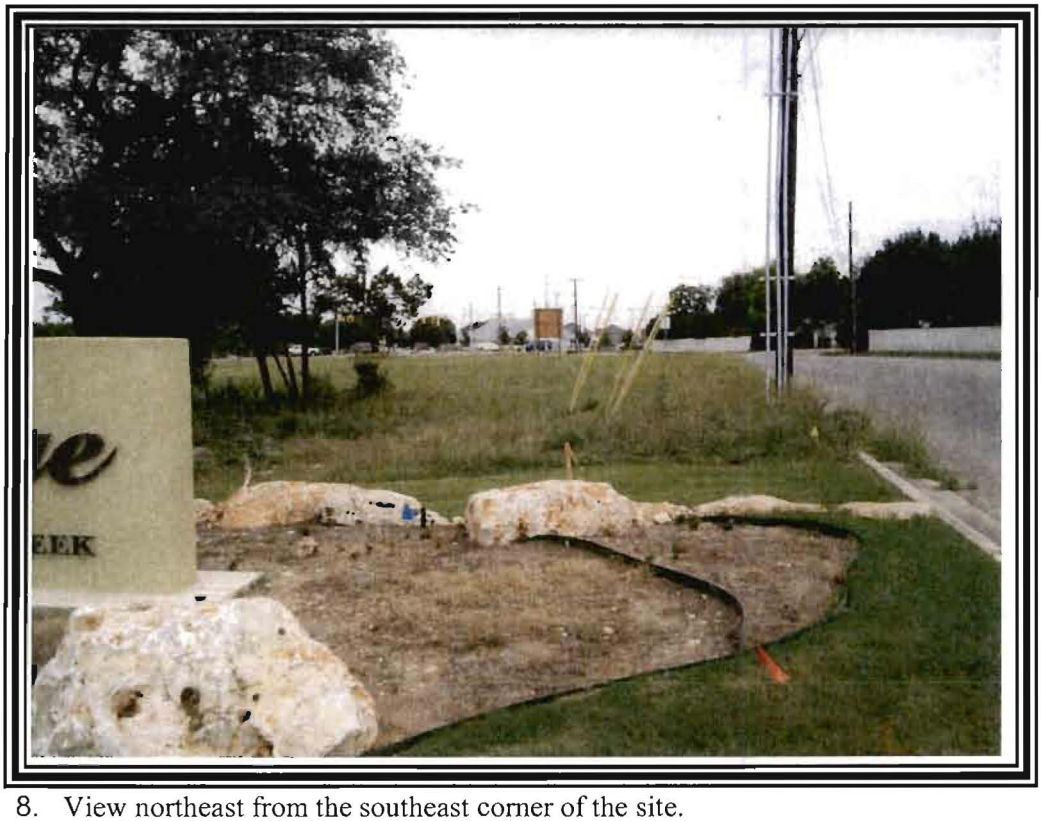
3. View southwest along the west property line from the northwest corner of the tract.

4. View south of the site interior from the northwest corner of the site.

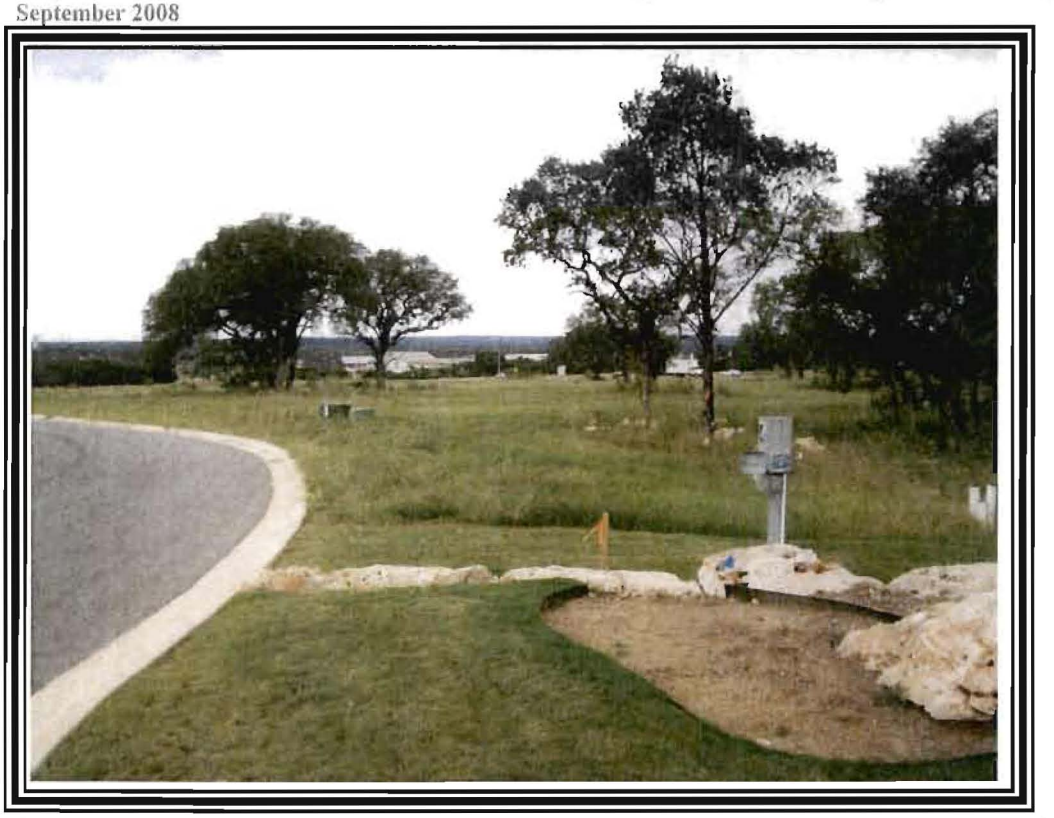
5. View of closed depression S-1 located at 29-43-8.2; 98-10-2.7, near the southeast corner of the tract.

6. View northwest along the north property line from the northeast corner of the tract.

7. View southeast along Oak Run Parkway from the northeast corner of the site.



8. View northeast from the southeast corner of the site.



9. View east-southeast along the south property line of Lot 14, 1.094 acres at the northwest corner of Hunters Village and Oak Run Parkway, New Braunfels, Comal County, Texas.

10. View east of the site interior from the southwest corner of the tract.

In This Section

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: HUNTERS CREEK LOT 14

REGULATED ENTITY INFORMATION

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

2. Total site acreage (size of property): 1.30
   (Includes 0.21 acres of adjacent easements to be developed as access roads)

3. Projected population: 0

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	9,945	÷ 43,560 =	0.23
Parking	34,469	÷ 43,560 =	0.79
Other paved surfaces *Access Road, Concrete Improvements*	479	÷ 43,560 =	0.01
Total Impervious Cover	44,893	÷ 43,560 =	1.03
Total Impervious Cover ÷ Total Acreage x 100 =			79%

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

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

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

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

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

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

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

11. N/A A rest stop will be included in this project.
    ___ A rest stop will **not** be included in this project.

12. N/A 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	_____ gallons/day
____ % Industrial	_____ gallons/day
____ % Commingled	_____ gallons/day
TOTAL	_____ gallons/day

15. Wastewater will be disposed of by:
    N/A **On-Site** Sewage Facility (OSSF/Septic Tank):
    ATTACHMENT C - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.
    ___ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

_X_ Sewage Collection System (Sewer Lines):

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

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

___ The SCS was previously submitted on _____.

___ The SCS was submitted with this application.

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

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

_X_ existing.

___ proposed.

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

SITE PLAN REQUIREMENTS

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

17. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = 40'.

18. 100-year floodplain boundaries

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

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):
Comal County GIS Proposed FEMA Floodplain © 2004 accessed 9/24/2008

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

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

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

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

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

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

___ The wells are in use and comply with 30 TAC §238.

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

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

___ All **sensitive and possibly sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.

X No **sensitive and possibly 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 in ATTACHMENT D provided at the end of this form. Geologic or manmade features were found and are shown and labeled.

___ **ATTACHMENT D - Exception to the Required Geologic Assessment.** An exception to the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. No geologic or manmade features were found.

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

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

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

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

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

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

ADMINISTRATIVE INFORMATION

28. X One (1) original and three (3) copies of the completed application have been provided.

29. X Any modification of this WPAP will require TCEQ 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:

Keith Strimple, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent — Date: 9/1/09

Attachment A
Factors Affecting Water Quality

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

- Soil erosion due to clearing of site.
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings.
- Hydrocarbons from asphalt paving.
- Trash and litter from construction workers and material wrappings.
- Concrete truck washout.
- Tar, fertilizers, cleaning solvents, detergents, and petroleum based products.

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

- Oil, grease fuel and hydraulic fluid contamination from vehicle drippings.
- Dirt and dust from vehicles.
- Trash and litter.

Attachment B
Volume and Character of Stormwater

The overall contributing drainage area for this project is 1.30 acres. This has been divided into three drainage basins based on the drainage pattern to the proposed storm sewer inlets. There is no off site area draining to this site. The stormwater runoff for the pre-project conditions would be across rocky soil, with native grasses. The site has an average slope ranging from 1% to 5%. Peak discharges were calculated using the Rational Method.

Peak Discharge Summary

Hunters Creek Lot 14 Site Design

HYDROLOGY - RATIONAL METHOD

	C	A	CA	10 Year		25 Year		50 Year		100 Year	
				I	Q	I	Q	I	Q	I	Q
		(acres)		(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
Existing Basin 1	0.37	1.48	0.55	2.44	1.3	2.94	1.8	3.38	2.1	3.87	2.7
Proposed Basin 1	0.69	0.84	0.58	7.10	4.1	9.01	5.8	10.32	6.6	11.82	8.6
Proposed Basin 2	0.81	0.20	0.16	7.22	1.2	8.64	1.6	9.90	1.8	11.33	2.3
Proposed Basin 3	0.73	0.26	0.19	7.52	1.4	9.01	1.9	10.32	2.2	11.82	2.8
The increase in runoff due to development =					**5.4**		**7.4**		**8.5**		**11.1**

Basin 1 Existing T_c (minutes) =	73
Basin 1 Proposed T_c (minutes) =	12
Basin 2 Proposed T_c (minutes) =	11
Basin 3 Proposed T_c (minutes) =	10

The characteristics of the post-project stormwater generated onsite will be influenced by site features that generate non-point pollution. This non-point pollution will include oil and grease from the paved areas, suspended solids, sedimentation, and nutrients for lawn care, and possible pesticides and herbicides. The stormwater runoff will flow across asphalt and pervious areas of rocky soil, with native grasses into a storm sewer system and through a Contech stormwater filter designed to remove 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site before discharge into the adjacent right of way.

Attachment C

Suitability Letter From Authorized Agent

NOT APPLICABLE

Private service laterals from the wastewater facilities will be connected to the existing NBU sewage collection system.

Attachment D

Exception To The Required Geologic Assessment

NOT APPLICABLE

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.

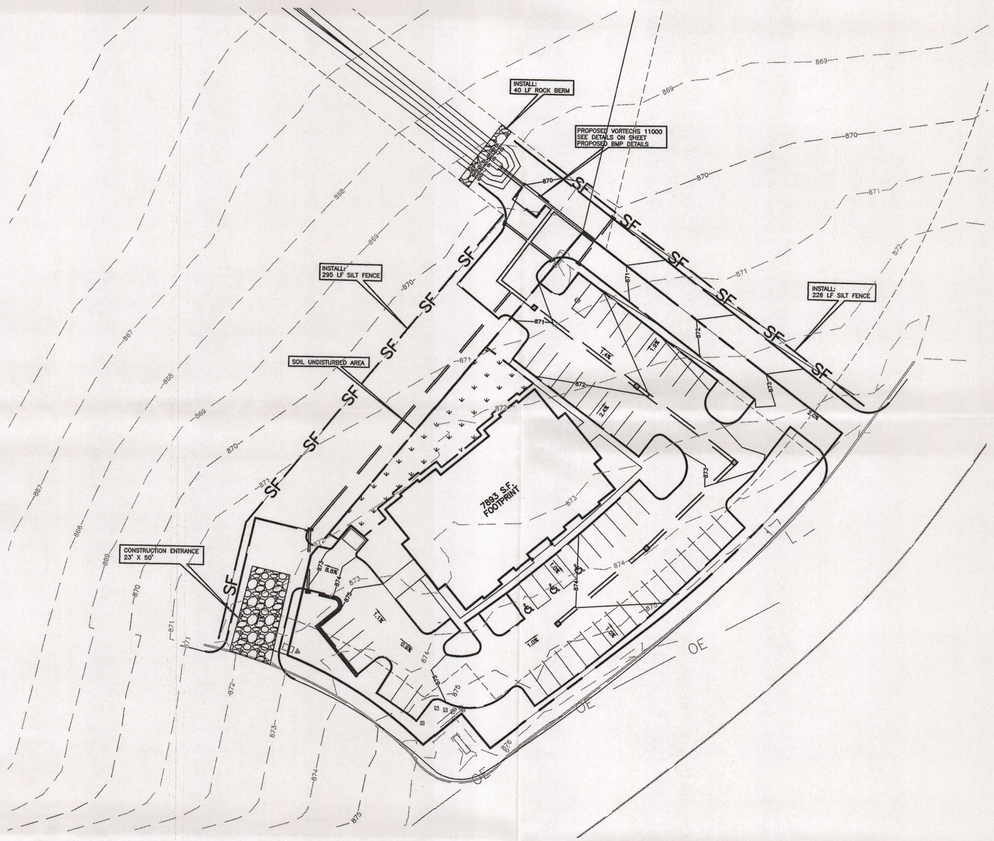
12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:

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

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



0 20 40 80
SCALE (FEET)

SOIL DISTURBANCE NOTE

SOIL DISTURBANCES WILL OCCUR TO CLEARING, GRUBBIN, AND GRADING OF AREAS TO BE USED FOR THE BUILDING, PARKING, AND SAND FILTER. THESE DISTURBANCES CAN BE ATTRIBUTED TO, BUT NOT LIMITED TO, CLEARING AND GRUBBING RELATED TO BUILDING PAD, DRIVEWAY, UTILITY INSTILATION, AND LANDSCAPE PREPARATION. THE REMAINING PORTIONS OF THE SITE NOT INVOLVED IN ANY OF THESE ACTIVITES WILL REMAIN UNDISTURBED.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE INSTALLED TO PROVIDE A STABLE ENTRANCE/EXIT CONDITION FROM THE CONSTRUCTION SITE TO KEEP MUD AND SEDIMENT OFF PUBLIC ROADWAYS (REFER TO THE EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL FOR CONSTRUCTION INFORMATION).

SOIL STABILIZATION NOTE

TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO STABILIZE DISTURBED AREAS (REFER TO EDWARDS AQUIFER TECHNICAL GUIDANCE MANUAL FOR CONSTRUCTION OF EROSION CONTROL MEASURES). TRAFFIC WILL BE ROUTED AROUND THESE AREAS TO REDUCE THE EXTENT OF DISTURBED AREAS BY REDUCING SEDIMENT LOADS TO SURFACE WATER.

BARE SOILS SHOULD BE SEEDED OR OTHERWISE STABILIZED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED FOR MORE THAN 21 DAYS.

MULCHING/MATS CAN BE USED TO PROTECT THE DISTURBED AREAS WHILE VEGETATION BECOMES ESTABLISHED.

LEGEND

- EXISTING EASEMENT
- 1070 EXISTING MAJOR CONTOURS
- 1072 EXISTING MINOR CONTOURS
- EXISTING CURB
- PROPERTY LINE
- 1070 PROPOSED CONTOURS
- PROPOSED CURB
- PROPOSED RETAINING WALL
- GRATE INLET
- STORM SEWER

REVISIONS

BRANCH OFFICE
P.O. BOX 391
McQUEENEY, TEXAS 78123

M&S ENGINEERING, L.L.C.
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PHONE # (830) 885-5446
FAX # (830) 885-2170

STATE OF TEXAS
KEITH C. STRIMPLE
66212
REGISTERED PROFESSIONAL ENGINEER
9/10/09

HUNTERS CREEK LOT 14

PROPOSED SITE PLAN

JOB: 8NAMKEN002
DATE: 09-01-2009
SCALE: 1" = 40'

INTERNAL REVIEW:
DESIGN:
PEER:
PM:
DM:
OTHER:

SHEET:
01 OF 03

Date: Sep 10, 2009, 8:30am User ID: clalpa
File: S:\Active Projects\8NAMKEN002 Hunters Creek Site Design for Lot 14\dwg\8NAMKEN002-WPAP-SPN-001.dwg

In This Section

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: HUNTERS CREEK LOT 14

POTENTIAL SOURCES OF CONTAMINATION

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

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

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

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

___ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An **Aboveground Storage Tank Facility Plan** application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

X Fuels and hazardous substances will not be stored on-site.

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

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

4. X **ATTACHMENT B - Potential Sources of Contamination.** Describe in an attachment at the end of this form any other activities or processes which may be a potential source of contamination.

___ There are no other potential sources of contamination.

SEQUENCE OF CONSTRUCTION

5. X **ATTACHMENT C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.

6. X Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Blieders Creek

TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)

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

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

_X_ TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information has been provided in the attachment at the end of this form

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

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

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

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

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

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

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

9. _X_ **ATTACHMENT F - Structural Practices.** Describe the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains has been avoided.

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

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

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

11. N/A **ATTACHMENT H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure has been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are provided as at the end of this form.

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

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

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

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

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

SOIL STABILIZATION PRACTICES

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

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

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

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

ADMINISTRATIVE INFORMATION

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

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

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

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

Keith Strimple, P.E.
Print Name of Customer/Agent

Signature of Customer/Agent

9/1/09
Date

Attachment A

Spill Response Action

Spill Prevention and Control

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

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

Education

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

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

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

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

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

General Measures

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

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

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

(4) Train employees in spill prevention and cleanup.

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

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

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

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

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

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

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

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

Cleanup

(1) Clean up leaks and spills immediately.

(2) Use a rag for small spills on paved surfaces, a damp mop for general 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 as 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 material on small spills rather than hosing down or burying the spill.

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

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

(6) Recover spilled material.

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

Semi-Significant Spills

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

Spills should be cleaned up immediately:

(1) Contain spread of the spill

(2) Notify the project foreman immediately.

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

(4) If the spill occurs in dirt areas, immediately contain the spill be 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.

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

Vehicle and Equipment Fueling

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

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

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

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

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

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

(7) Promptly transfer used fluids to the proper waste or recycle 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 runon of stormwater and the runoff of spills.

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

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

Attachment B

Potential Sources of Contamination

1. Oil, grease, fuel and hydraulic contamination from construction equipment and vehicle leakage.
   Remedy: Lubrication and fueling will be preformed in a designated area. This area will be monitored daily for contamination.

2. Miscellaneous trash and litter form construction workers.
   Remedy: Designated receptacles will be strategically located and workers will be directed to deposit trash there.

3. Construction debris.
   Remedy: Debris will be collected weekly and deposited in bins for offsite disposal. Situations requiring immediate attention will be handled on a case by case basis.

4. Asphalt products.
   Remedy: After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to maintain and asphalt wash-off should and unexpected rain occurs. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.

Attachment C

Sequence of Major Activities

1. Install erosion and sedimentation controls (i.e. Silt Fences and Stabilized Construction Entrances) as indicated on the approved construction plans
2. Begin site clearing
3. Construct site utilities
4. Install Contech Stormwater Treatment System
5. Construct building and parking
5. Install Landscaping or hydromulch to disturbed areas
6. Re-vegetate disturbed areas
7. Receive operating permit and city clearance for occupancy
8. Remove temporary erosion and sedimentation controls

Attachment D

Temporary Best Management Practices and Measures

All TBMPs will be installed prior to the beginning of site preparation and construction activities as per the Storm Water Pollution Prevention Plan. The TBMPs will remain in place and will be maintained until all construction has ceased and a perennial vegetative cover with a density of 70 percent has been established.

a. Silt fences and rock berms will be used to protect disturbed soils during construction in order to 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.

b. A construction entrance will be used to provide a stable entrance/exit condition from the construction site and to prevent sediment and pollution from leaving the site.

Attachment E

Request to Temporarily Seal a Feature

NOT APPLICABLE

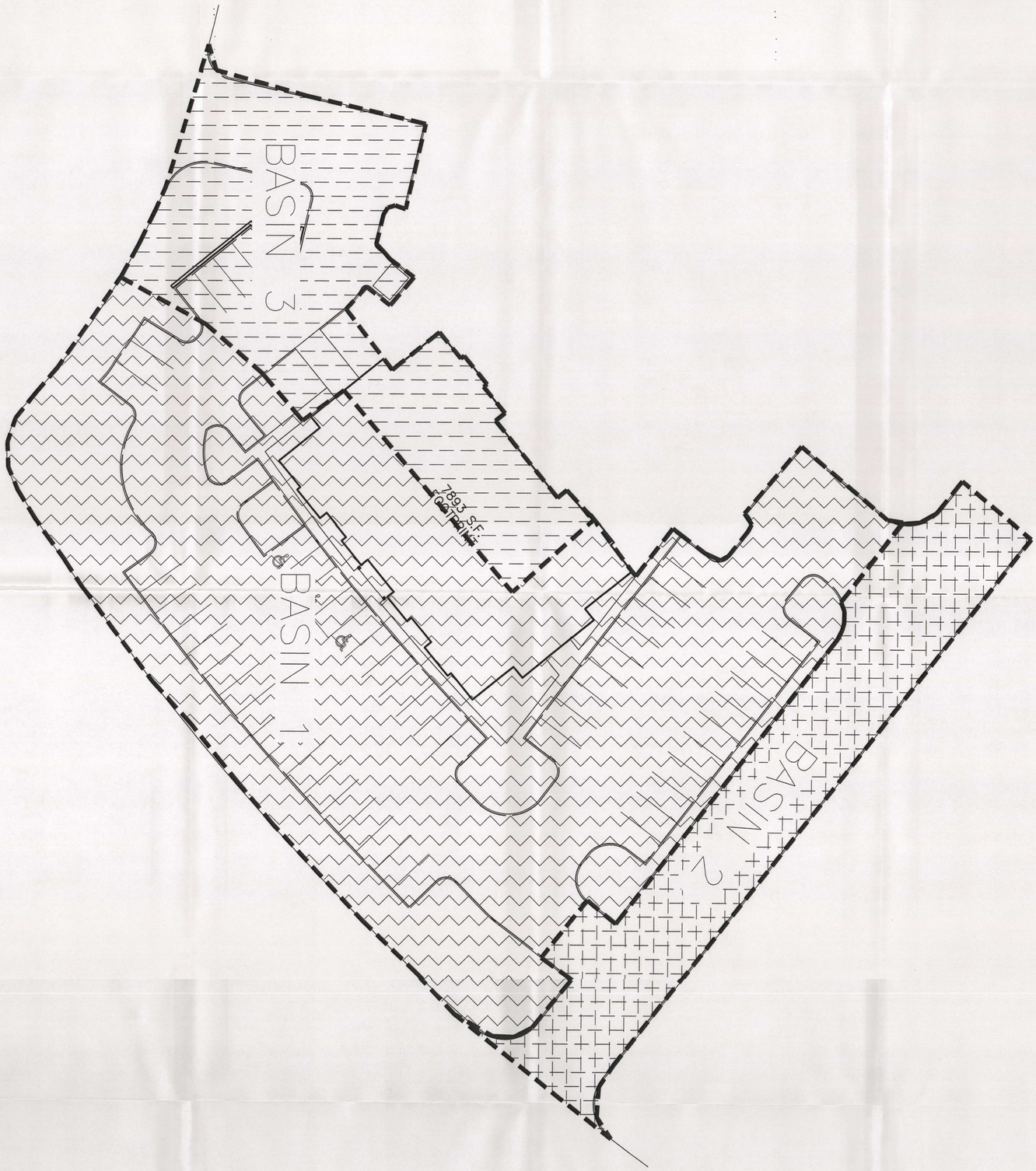
Attachment F
Structural Practices

The structural practices that will limit runoff discharge of pollutants form exposed areas of the site will be the use of rock berms, silt fences, and stabilized construction entrance to prevent the excavated material from leaving the site.

Attachment G

Drainage Area Map

Date: Sep 01, 2009, 8:52am User ID: claijas
File: S:\Active Projects\BNAMKEN002 Hunters Creek Site Design for Lot 14\dwg\BNAMKEN002-WPAP-DA-001.dwg



0 10 20 40
SCALE (FEET)

LEGEND

PROPOSED CURB
PROPOSED RETAINING WALL
PROPERTY LINE

HUNTERS CREEK LOT 14

DRAINAGE AREA MAP

JOB: BNAMKEN002
DATE: 09-01-2009
SCALE: 1" = 20'
INTERNAL REVIEW:
DESIGN:
PEER: SRT
PM:
DM:
OTHER:
SHEET: 02 OF 03

KEITH C. STRIMPLE 66312 STATE OF TEXAS REGISTERED PROFESSIONAL ENGINEER
9/1/09

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McQUEENEY, TEXAS 78123

REVISIONS

Attachment H

Temporary Sediment Pond(s) Plans and Calculations

NOT APPLICABLE

Inspection and Maintenance for BMPs

The BMPs for the construction of this project will be the use of rock berms, silt fencing, and stabilized construction entrance. The following inspection and maintenance procedures will be implemented:

1. Sift fencing, rock berms, and construction entrances must be in place prior to the start of construction and will remain in place until construction has been complete and the site stabilized from further erosion.

2. The contractor will inspect the rock berms, silt fencing and construction entrance at least once a week and within 24 hours of a storm of 0.5 inches or more in depth. The contractor will repair or replace any damaged TBMPs. The contractor shall correct damage or deficiencies as soon as practical after the inspection but no later than 7 days after the inspection.

3. Contractor will place trench excavation on the upgradient side of the trench.

4. All soil, sand, gravel, and excavated material stockpiled on-site will have appropriately sized silt fencing placed upgradient and down gradient.

5. The contractor will keep a record of the weekly inspections, noting the condition of the rock berms, silt fencing and construction entrance and any corrective action taken to maintain the erosion control structures. In addition to the inspection and maintenance reports, the operator should keep records of the construction activity on-site, in particular, the following information should be kept.

    A. The dates when major grading activities occur in a particular area.

    B. The dates when construction activities cease in an area, temporarily or permanently.

    C. The dates when an area is stabilized, temporarily or permanently.

    D. Records to be maintained in SWPPP.

Schedule of Interim and Permanent Soil Stabilization Practices

The schedule of interim and permanent soil stabilization will be as follows:

1. Once construction of the project has commenced, the construction activity is planned to continue until the project is complete. The water, electrical, cable TV and telephone trenches will be excavated. The trenches will then be re-excavated and the water, electrical, cable TV and telephone lines will be installed. This work is intended to continue until all the lines are installed. The utility lines are located within the project boundaries as shown on the site plan. As soon as the underground utilities are installed, the road base will be installed and compacted providing the interim soil stabilization for the paved area and the permanent soil stabilization for the parking areas. Once the individual residential buildings are built and landscaped this will provide permanent soil stabilization for the building areas.

2. Much of the excavation for this project will be in solid rock, helping to minimize the amount of loose soil which has the potential to become suspended in runoff and washed downstream.

3. 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 temporary or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease in 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.

In This Section

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: HUNTERS CREEK LOT 14

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

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

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

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

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

   _____

   _____

   _____

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

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

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

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

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

5. X The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover

increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

__ **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.

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

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

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

__ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is identified as **ATTACHMENT B** at the end of this form.

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

__ If permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form .

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

X A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is identified as **ATTACHMENT C** at the end of this form.

__ If permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, an explanation is provided as **ATTACHMENT C** at the end of this form.

8. X **ATTACHMENT D - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is provided at the end of this form. Each feature identified in the Geologic Assessment as "sensitive" or "possibly sensitive" has been addressed.

9. X The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

X 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. X **ATTACHMENT F - Construction Plans.** Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details must be shown on the construction plans.

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

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

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

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

13. X **ATTACHMENT I - Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is provided at the end of this form. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity which increase erosion that results in water quality degradation.

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

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

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

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

KEITH C. STRIMPLE

Print Name of Customer/Agent

Signature of Customer/Agent Date 9/1/09

Attachment A

20% Or Less Impervious Cover Waiver

NOT APPLICABLE

Attachment B
BMPs for Upgradient Stormwater

There is no upgradient stormwater for this site.

Attachment C

BMPs for On-Site Stormwater

A Vortechs Model 11000 Stormwater Treatment System will be installed to prevent pollution of surface water or groundwater that originates on-site. All stormwater from the site and the adjacent access roads will be directed to a storm sewer system through a number of grate inlets. The Vortechs System will be installed in-line with the storm sewer prior to discharge into a graded earthen channel. This channel will serve to transport water to the Highway 46 ROW until neighboring property owners extend the access road, at which time to storm sewer will be extended.

The Vortechs System is designed so 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. There is no untreated drainage area as part of this project. See calculations on sheet Proposed BMP Details. The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

Attachment D

BMPs for Surface Streams

The Contech Stormwater Treatment System described in Attachment C will prevent pollutants from entering surface streams.

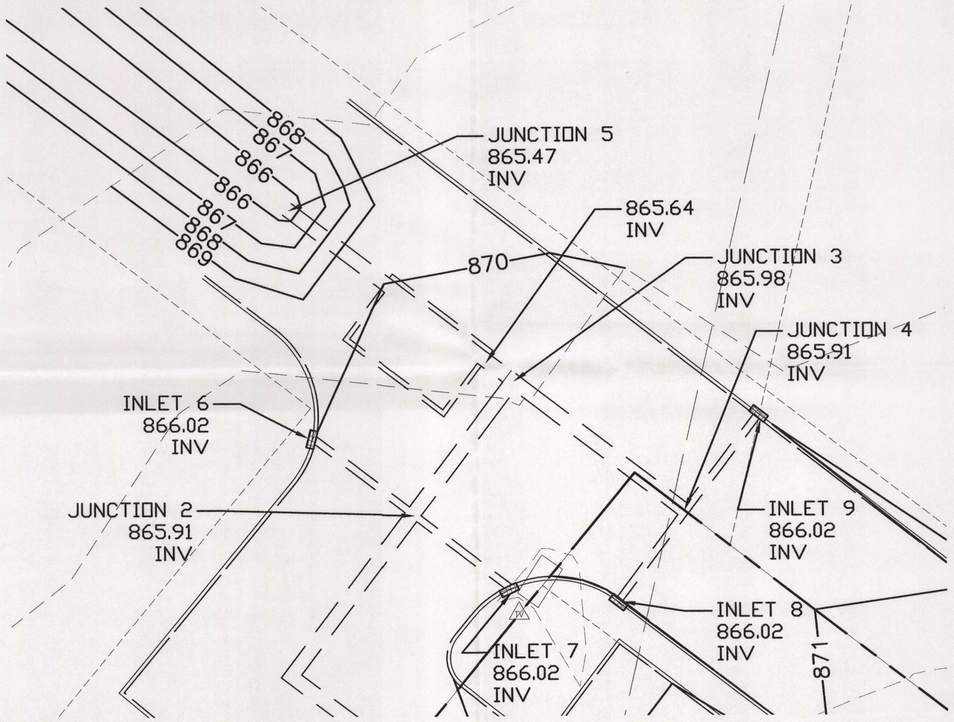
Attachment E

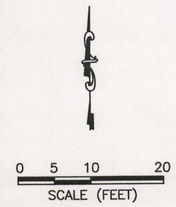
Request To Seal Features

NOT APPLICABLE

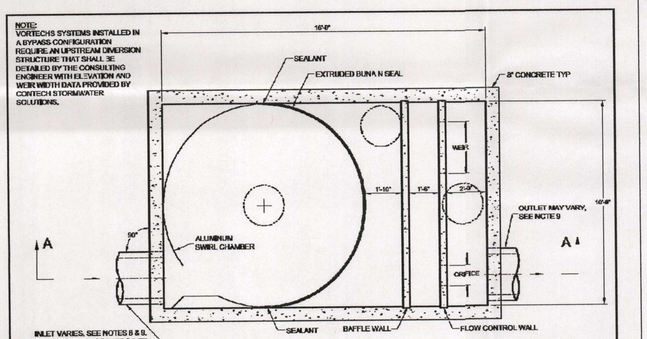
Attachment F

Construction Plans

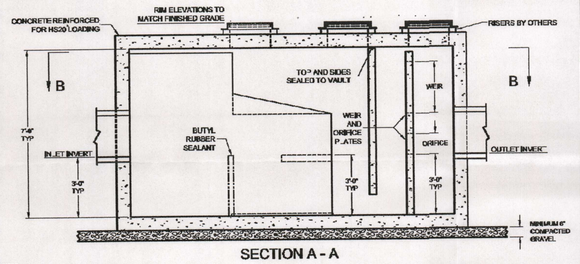




NOTE:
VORTECHS SYSTEMS INSTALLED IN A BYPASS CONFIGURATION REQUIRE AN UPSTREAM DIVERSION STRUCTURE THAT SHALL BE DETAILED BY THE CONSULTING ENGINEER WITH ELEVATION AND WEIR WIDTH DATA PROVIDED BY CONTECH STORMWATER SOLUTIONS.



PLAN VIEW B - B



SECTION A - A

NOTES:
1. STORMWATER TREATMENT SYSTEM (SWTS) SHALL HAVE:
PEAK TREATMENT CAPACITY: 97.5 CFS
SEDIMENT STORAGE: 5.8 CU YD
SEDIMENT CHAMBER DIA: 12' MIN
2. SWTS SHALL BE CONTAINED IN ONE RECTANGULAR STRUCTURE
3. SWTS REMOVAL EFFICIENCY SHALL BE DOCUMENTED BASED ON PARTICLE SIZE
4. SWTS SHALL RETAIN FLOATABLES AND TRAPPED SEDIMENT UP TO AND INCLUDING PEAK TREATMENT CAPACITY
5. SWTS INVERTS IN AND OUT ARE TYPICALLY AT THE SAME ELEVATION
6. SWTS SHALL NOT BE COMPROMISED BY EFFECTS OF DOWNSTREAM TAILWATER
7. SWTS SHALL HAVE NO INTERNAL COMPONENTS THAT OBSTRUCT MAINTENANCE ACCESS
8. INLET PIPE MUST BE PERPENDICULAR TO THE STRUCTURE
9. PIPE ORIENTATION MAY VARY; SEE SITE PLAN FOR SIZE AND LOCATION
10. PURCHASER SHALL NOT BE RESPONSIBLE FOR ASSEMBLY OF UNIT
11. MANHOLE FRAMES AND PERFORATED COVERS SUPPLIED WITH SYSTEM, NOT INSTALLED
12. PURCHASER TO PREPARE EXCAVATION AND PROVIDE CRANE FOR OFF-LOADING AND SETTING AT TIME OF DELIVERY
13. VORTECHS SYSTEMS BY CONTECH STORMWATER SOLUTIONS; PORTLAND, OR (800)548-4667; SCARBOROUGH, ME (877) 907-4670; LINTHICUM, MD (866) 748-2516.

PROPRIETARY INFORMATION - NOT TO BE USED FOR CONSTRUCTION PURPOSES

CONTECH STORMWATER SOLUTIONS
contechstormwater.com

STANDARD DETAIL
STORMWATER TREATMENT SYSTEM
VORTECHS® MODEL 11000

U.S. PATENT No. 5,759,415

DATE: 10/5/06 | SCALE: NONE | FILE NAME: STD11k | DRAWN: JBS | CHECKED: NDG

VORTECHS STORMWATER TREATMENT SYSTEM DESIGN CALCULATIONS

Design Parameters		
Model	11000	
AN:	1.01	ac
AI:	1.01	ac
AP:	0.27	ac
ANU:	0.02	ac
P:	33.00	in
I:	1.10	in/hr
A:	78.50	ft2

Calculated Values		
LM:	908.55	lbs
*LM = 27.2(AN * P)*		
EA:	0.92	ac
*EA = (0.9 * AI) + (0.03 * AP)*		
VOR:	0.0129	ft/s
*VOR = (EA * I) / A*		
E	0.83	
From Table 2		
LR:	963.31	lbs
*LR = E * P * [(AI * 34.6) + (AP * 0.54)]*		
LC:	54.75	lbs
LC = LR - LM		
LMU:	16.52	lbs
*LMU = 27.2(ANU * P)*		

Total Project Summary		
Total Project Area:	1.30	acres
Existing Impervious Cover:	0.00	acres
Proposed Impervious Cover:	1.03	acres
Captured Impervious Cover	1.01	acres
Uncaptured Impervious Cover	0.02	acres
Required TSS Removal:	925.07	lbs
Proposed TSS Removal:	963.31	lbs

AN:	Increase in Impervious Cover
AI:	Impervious Area
AP:	Pervious Area
ANU:	Increase in Impervious Cover for Uncaptured Area
P:	Precipitation
I:	Design Storm Intensity
A:	Surface Area of Unit
LM:	Required TSS Removal
EA:	Effective Area
VOR:	Overflow Rate
E:	BMP Efficiency
LR:	Maximum Load Removal
LC:	TSS Load Credit
LMU:	Required TSS Removal from Uncaptured Area

NOTE: VORTECHS DESIGN CALCULATIONS BASED ON TCEQ TECHNICAL GUIDANCE MANUAL ADDENDUM SHEET

REVISIONS

M&S ENGINEERING, L.L.C.
ENGINEERS, PLANNERS AND SURVEYORS
TEXAS REGISTERED ENGINEERING FIRM F-1394
BRANCH OFFICE
P.O. BOX 391
McQUEENEY, TEXAS 78123
MAIN OFFICE
P.O. BOX 970
SPRING BRANCH, TEXAS 78070
PHONE # (830) 228-5446
FAX # (830) 885-2170

STATE OF TEXAS
KEITH C. STRIMPLE
68212
REGISTERED PROFESSIONAL ENGINEER
9/1/09

HUNTERS CREEK LOT 14

PROPOSED BMP DETAILS

JOB: BNAMKEN002
DATE: 01-09-2009
SCALE: 1" = 10'

INTERNAL REVIEW:
DESIGN:
PEER: SRS
PM:
DM:
OTHER:

SHEET:
03 OF 03

Date: Sep 01, 2009, 9:43am User ID: cicijos
File: S:\Active Projects\BNAMKEN002 Hunters Creek Site Design for Lot 14\dwg\BNAMKEN002-WPAP--BMP--DTLS-001.dwg

Attachment G

Inspection, Maintenance, Repair and Retrofit Plan

Inspection Schedule:

- BMP facilities will be inspected at least quarterly to evaluate facility operation and sediment accumulation. Additional inspections will be conducted as needed. Pollutant deposition and transport may vary from year to year and quarterly inspections ensure that systems are cleaned out at the appropriate time.
- All accumulated sediment, trash, litter, and debris must be removed from the system annually or when the sediment fills more than 25% of the space between the permanent water surface and the bottom of the swirl chamber, whichever occurs first.

Maintenance Guidelines:

Maintaining the Vortechs is easiest when there is no flow entering the system. For this reason, it is best to schedule the cleanout during dry weather. Cleanout of the Vortechs system with a vacuum truck is generally the most effective and convenient method of excavating pollutants from the system. Accumulated sediment is typically evacuated through the manhole over the swirl chamber. Simply remove the cover and insert the vacuum hose into the swirl chamber. As water is evacuated, the water level outside of the swirl chamber will drop to the same level as the crest of the lower aperture of the swirl chamber. It will not drop below this level due to the fact that the bottom and sides of the swirl chamber are sealed to the tank floor and walls. This "water lock" feature prevents water from migrating into the swirl chamber, exposing the bottom of the baffle wall. Floating pollutants will decant into the swirl chamber as the water level is drawn down. This allows most floating material to be withdrawn from the same access point above the swirl chamber.

In installations where the risk of large petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, an oil or gasoline spill should be cleaned out immediately. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use adsorbent pads since they are usually cheaper to dispose of than the oil water emulsion that may be created by vacuuming the oily layer.

Trash can be netted out if you wish to separate it from the other pollutants. If maintenance is not performed as recommended, sediment may accumulate outside the swirl chamber. If this is the case, it may be necessary to pump out all chambers. It is a good idea to check for accumulation in all chambers during each maintenance event to prevent sediment buildup there.

Manhole covers should be securely seated following cleaning activities, to ensure that surface runoff does not leak into the unit from above.

Documentation:

The property owners association will keep all inspection and maintenance records in their files for review at TCEQ request. The attached form will be used to document inspection, maintenance, repairs, and, if necessary, retrofits.

BMP Access:

Access to the BMPs by TCEQ or other designated inspectors will be granted via the access road which the BMP is located under.

Sediment Disposal:

Stormwater pollutants include a variety of substances that are deposited on pervious and impervious surfaces and then transported by the next rainfall. In addition, there may be connections to the stormwater system that should go to the sanitary sewer system in older urbanized areas. Consequently, a variety of contaminants that may be classified as hazardous or toxic may enter stormwater management systems. These contaminants include heavy metals, petroleum hydrocarbons, pesticides, and a variety of organic chemicals. Consequently, several federal and state laws and regulations may apply to the disposal of sediments which accumulate in stormwater systems or which are captured by street sweepers (Livingston et al., 1997).

Maintenance of BMPs frequently requires disposal of accumulated sediment and other material. These materials are normally classified as special wastes when disposed of in municipal landfills. A Type 1 Municipal Solid Waste (MSW) landfill can accept household waste—anything else is a special waste as defined in 30 TAC 330.2 (137). Special waste is a waste that requires special handling at a Type I MSW landfill. Labeling a filter media or sediment as a special waste is not a waste characterization. The process to obtain authorization to dispose of a special waste begins with a request for approval called the "Request for Authorization for Disposal of Special Waste TCEQ Form 0152." The request is completed by the generator and submitted to the MSW permits section of the TCEQ for Executive Director review/approval. The MSW permits section performs the review described in.30 TAC 330.136 (reviews the request and either approves, disapproves, or requires additional information).

Responsibility of Maintenance

I Brandon Namken,
Print Name

President
Title - Owner/President/Other

of Namken Construction Inc
Corporation/Partnership/Entity Name

Agree to assume the responsibility of maintaining the permanent BMPs constructed as part of the Hunters Creek Lot 14 in accordance with the rules and regulations of the Texas Commission on Environmental Quality (TCEQ).

I also understand that:

1. I am 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.

2. 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.

Applicant's Signature

9/2/09
Date

Contact Person: _____
Entity: _____
Mailing Address: _____
City, State: _____ Zip: _____
Telephone: _____ FAX: _____

Vortechs BMP Records

☐ Inspection Date: _____

Type of Inspection: _____

Comments: _____

_____

_____

_____

Signature: _____ (Inspector)

☐ Maintenance Date: _____

Work Performed: _____

Comments: _____

_____

_____

_____

Signature: _____ (Maintenance Personnel)

☐ Other Date: _____

Comments: _____

_____

_____

_____

_____

_____

Signature: _____ (Title:) _____

Attachment H

Pilot-Scale Field Testing Plan

NOT APPLICABLE

Attachment I

Measures For Minimizing Surface Stream Contamination

The stormwater flowing through the outlet pipe of the Vortech system is non-erosive as per the velocity requirements stated in the City of New Braunfels Drainage and Erosion Control Design Manual.

Agent Authorization

In This Section

TCEQ-0599
Agent Authorization Form

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

I Brandon Namken,
Print Name

Partner/Member
Title - Owner/President/Other

Of STAMKEN, LLC
Corporation/Partnership/Entity Name

have authorized Keith Strimple, P.E.
Print Name of Agent/Engineer

of M&S Engineering, LLC
Print Name of Firm

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

I also understand that:

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

2. For applicants 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.

Applicant's Signature — Date: 9/2/09

THE STATE OF Texas §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared Brandon Nanker 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 2 day of September, 2009

NOTARY PUBLIC

LEONA MONTEZ LAIJAS
Notary Public, State of Texas
My Commission Expires
December 19, 2012

Leona Montez Laijas
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 12/19/2012

Fee Form

In This Section

TCEQ-0574
Application Fee Form

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

NAME OF PROPOSED REGULATED ENTITY: HUNTERS CREEK LOT 14

REGULATED ENTITY LOCATION: NEW BRANFELS
NAME OF CUSTOMER: STAMKEN, LLC
CONTACT PERSON: Brandon Namken PHONE: (830) 237-2573
(Please Print)

Customer Reference Number (if issued): CN _____ (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	1.09 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

9/10/09
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