

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



## TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

*Protecting Texas by Reducing and Preventing Pollution*

December 9, 1996

Mr. Cecil Barcelo  
Gailind Enterprises, Inc.  
Baywind Village, 411 Alabama  
League City, TX 77573

Re: EDWARDS AQUIFER, Comal County  
PROJECT: Oaktree Assisted Living Facility. Proposed project is located at the intersection of Loop 337 and State Highway 46, approximately 1300' northwest of Loop 337 on the northeast side of State Highway 46. New Braunfels, Texas  
TYPE: Request for Approval of Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) §313.4; Edwards Aquifer Protection Program

Dear Mr. Barcelo:

The Texas Natural Resource Conservation Commission (TNRCC) has completed their review of the WPAP application for the referenced project that was submitted on behalf of Gailind Enterprises, Inc. by Stephen E. Schultz of the Schultz Group, Inc. and received by the San Antonio office on September 10, 1996.

### PROJECT DESCRIPTION

The proposed 3.52 acre Oaktree Assisted Living Facility will consist of an elderly living facility which will house approximately 60-70 permanent residents. The project is to be developed as a commercial project and will consist of the construction of a 44,607 square foot building and associated on-site parking. The site is located within the City of New Braunfels, and will conform with applicable codes and requirements of the City of New Braunfels.

The normal population of the development is estimated to be 85 persons. Approximately 8,500 gallons per day of domestic wastewater is to be generated by this project and will be disposed of by conveyance to the existing Gruene Road Sewage Treatment Plant for treatment and disposal.

The proposed impervious cover for the development, approximately 1.59 acres (45.21 %), includes roof tops, driveways, sidewalks, recreational areas, parking lots and streets.

#### GEOLOGY ON SITE

According to the geologic assessment included with the submittal, a zone of sixteen (16) closed depressions were located on the proposed construction site. The features were identified on the geological site map as S-1. The zone was assessed by the geologist as having a moderate significance with respect to their combined potential for relative infiltration.

The site investigation performed by the San Antonio office on October 2, 1996, revealed no additional potential recharge features on the proposed construction site. Additionally, TNRCC is in general agreement with the geological assessment assigned to each of the on-site features.

#### GEOLOGY DOWNGRAIENT OF SITE

According to the geologic assessment included with the submittal, a zone of six (6) closed depressions were identified downgradient from the proposed site. The zone of depressions was identified on the downgradient map as feature A-1 and was assessed by the geologist as having a moderate significance with respect to its combined potential for relative infiltration.

#### POLLUTION ABATEMENT

##### I. During Construction:

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

- A. Stabilized construction entrances shall be installed at all sites of ingress and egress prior to initiation of any other regulated activity.
- B. Temporary erosion and sedimentation controls (silt fences and rock berms) shall be installed prior to initiation of any other regulated activity.

##### II. After Construction:

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

- A. The 1.93 acre vegetative filter strip is designed in accordance with the Lower Colorado River Authority Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:



1. be contiguous with the developed area,
2. be at the same elevation as the developed area,
3. have a level spreading device, and
4. be sized to filter stormwater run-off from 1.59 acres of impervious cover.

### III. Recharge Features:

The following measures will be taken to prevent pollutants from entering recharge features while maintaining or enhancing the quantity of water entering the recharge features identified in the geologic assessment.

1. Each of the on-site closed depressions located within the identified zone of closed depressions (S-1) shall be graded, filled, and compacted with clean clay material.

### APPROVAL

The plan for this project has been reviewed for compliance with 30 TAC §313.4 which sets forth pollution abatement criteria for any development on the recharge zone of the Edwards Aquifer. The proposed water pollution abatement plan is in general agreement with 30 TAC §313.4; therefore, approval of the plan is hereby granted subject to the specific conditions listed below.

**Failure to comply** with any of the following conditions, the deed recordation requirement, or any other specific conditions of approval is a violation of these rules. Pursuant to §26.136 of the Texas Water Code, any violations of the Edwards Aquifer Rules may result in administrative penalties of up to \$10,000 for each act of violation and for each day of violation.

### SPECIAL CONDITIONS OF APPROVAL

1. If any potential recharge features are encountered during construction, a geologist shall evaluate the significance of the features. The evaluation shall include representative photographs and a description of the feature forwarded to the San Antonio office. Construction in the vicinity of the features may only continue with written approval from the TNRCC.
2. Placement of hydrocarbon or hazardous substance storage facilities regulated pursuant to 313.10 and 313.11, requires submittal of all appropriate applications with appropriate fees and must receive prior approval from the TNRCC.

STANDARD CONDITIONS OF APPROVAL

1. Please be reminded that 30 TAC §313.4(c) requires the owner/developer to: (1) record in the county deed records that this property is subject to the approved WPAP; and (2) submit to the Executive Director through the San Antonio office, within 30 days of receiving this written notice of approval of the water pollution abatement plan and prior to commencing construction, proof of application for recordation of notice in the county deed records. Enclosed is a suggested format you may use to deed record your approved WPAP.
2. Prior to commencing construction, the applicant/agent shall submit to the San Antonio office copies of any changes made to the plans and specifications for this project which have been required by the TNRCC review and/or all other permitting authorities.
3. **Please note, following this approval of the regulated activities described in the referenced WPAP submittal, any amendment to these activities required by some other regulating authority or desired by the applicant will require the submittal of a WPAP application to amend this approval. And, as indicated in 30 TAC §313.4 and 30 TAC §313.27, an application to amend any approved regulated activity shall include payment of appropriate fees and all information necessary for its review and Executive Director approval.**
4. Additionally, all contractors conducting regulated activities associated with this proposed regulated project shall be provided with copies of this approval letter and the entire contents of the submitted WPAP so as to convey to the contractors the specific conditions of this approval. During the course of these regulated activities, the contractors shall be required to keep on-site copies of the WPAP and this approval letter.
5. The temporary erosion and sedimentation (E&S) controls for the entire project shall be installed prior to beginning any other construction work on this project.
6. The appropriate E&S control(s) that shall be used during the construction of the project should be determined as follows: (1) **Silt fences** should be used when the drainage area is less than 2 acres and the slope is less than 10%. (2) **Rock berms with filtration** should be used when the drainage areas are greater than two acres or when the slopes are in excess of 10%. The bottom edge of the filter fabric must be buried a minimum of 6 inches below grade.
7. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of the temporary and permanent erosion and sedimentation control measures. Additional protection may be necessary if excessive solids or other contaminants are being discharged from the site.

8. Also, 30 TAC §313.4(d)(2) requires that if any significant recharge features, such as solution openings or sinkholes, are discovered during construction, all regulated activities near the significant recharge feature must be suspended immediately and may not be resumed until the Executive Director has reviewed and approved the methods proposed to protect the aquifer from any potential adverse impacts. Upon discovery of the significant recharge features, the developer shall immediately notify the San Antonio office.
9. Temporary erosion and sedimentation controls must be installed prior to construction, maintained during construction, and removed when vegetation is established and the construction area is stabilized.
10. If any abandoned wells exist on the site or are found during construction of the proposed development, they shall be plugged in accordance with the local underground water conservation district's plugging procedures, if applicable, or 30 TAC §287.50(a) of this title (relating to Standards for Plugging Wells that Penetrate Undesirable Water Zones), or an equivalent method, as approved by the Executive Director. Pursuant to 30 TAC §287.48(e), the person that plugs such a well shall, within 30 days after plugging is complete, submit a Water Well Completion and Plugging Report to the Executive Director, through the San Antonio office and to the Edwards Aquifer Authority.

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

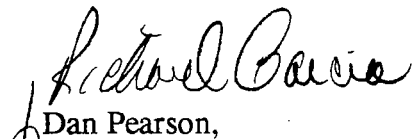
11. No waste-disposal wells, new confined animal feeding operations, land disposal of Class I wastes, or use of sewage holding tanks as parts of organized collection systems shall be allowed on the recharge zone of this regulated development.
12. During the course of the construction related to the referenced regulated project, the owner/developer shall comply with all applicable provisions of 30 TAC §313.4. Construction which is initiated and abandoned, or not completed, shall be returned to a permanent condition such that groundwater in the Edwards Aquifer is protected from potential contamination. Additionally, the applicant, **GAILIND ENTERPRISES, INC.**, shall remain responsible for the provisions and special conditions of this approval until such responsibility is legally transferred to another person or entity, upon which that person or entity shall assume responsibility for all provisions and specific conditions of this approval.
13. **Pursuant to 30 TAC §313.4(d)(1) and prior to commencing regulated activities, the applicant must provide the San Antonio office with the date on which the regulated activity will commence.**

Mr. Cecil Barcelo  
December 9, 1996  
Page 6

14. Please note that 30 TAC §313.4(g) states that this approval expires two years from this date unless, prior to the expiration date, construction has commenced on the regulated project.
15. Approval of the design of the sewage collection system for this proposed subdivision shall be obtained from the Texas Natural Resources Conservation Commission prior to the commencement of construction of any sewage collection system, the design of which shall be in accordance with 30 TAC §313.5 and 30 TAC §317.
16. The developer shall ensure that construction debris, such as but not limited to scrap wood, bricks, paint, adhesives, containers, paper, etc. is disposed of properly at an authorized landfill off of the Edwards Aquifer Recharge Zone.
17. If asphaltic materials such as "seal coat", emulsion or other asphaltic products used for paving, roofing, etc. wash off or leave the project site the developer shall notify the TNRCC immediately and commence clean-up.

Should clarification of this letter be desired or if we may be of any other assistance, please contact Tom Gutierrez of our San Antonio office at 210/490-3096.

Sincerely,

  
Dan Pearson,  
Executive Director

DP/TG/eg

Enclosure: Deed Recordation Form

cc: Stephen E. Schultz, The Schultz Group, Inc.  
Rick Illgner, Edwards Aquifer Authority  
Mike Shands, City of New Braunfels  
Tom Hornseth, Comal County  
TNRCC Field Operations, Austin

**OAKTREE ASSISTED LIVING WPAP MODIFICATION  
FOR  
OAKTREE ASSISTED LIVING FACILITY**

May 2013

**TCEQ-R13**

JUN 05 2013

**SAN ANTONIO**

Prepared for:

**Oaktree Assisted Living.  
1750 Highway 46 West  
New Braunfels, TX. 78132**

**RECEIVED**

JUN 13 2013

**COUNTY ENGINEER**

Project No. 020212

Prepared By:

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

Bryan W. Shaw, Ph.D., *Chairman*  
Carlos Rubinstein, *Commissioner*  
Toby Baker, *Commissioner*  
Zak Covar, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

June 6, 2013

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

Re: Edwards Aquifer, Comal County  
PROJECT NAME: Oaktree Assisted Living, located at 1750 Highway 46, 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.: RN102750692

Dear Mr. Hornseth:

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

Please forward your comments to this office by July 6, 2013.

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

A handwritten signature in blue ink, appearing to read "Todd Jones" with a stylized flourish at the end.

Todd Jones  
Water Section Work Leader  
San Antonio Regional Office

TJ/eg

## Modification of a Previously Approved Plan Checklist



### General Information Form (TCEQ-0587)

- ATTACHMENT A - Road Map
- ATTACHMENT B - USGS / Edwards Recharge Zone Map
- ATTACHMENT C - Project Description



### Geologic Assessment Form (TCEQ-0585)

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



### Modification of a Previously Approved Plan (TCEQ-0590)

- ATTACHMENT A - Original Approval Letter and Approved Modification Letters
- ATTACHMENT B - Narrative of Proposed Modification
- ATTACHMENT C - Current Site Plan of the Approved Project



### Application Form (appropriate for the modification)

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



### Temporary Stormwater Section (TCEQ-0602), if necessary

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



### Permanent Stormwater Section (TCEQ-0600), if necessary

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

**Modification of a Previously Approved Plan Checklist** (continued)



Agent Authorization Form (*TCEQ-0599*), if application submitted by agent



Application Fee Form (*TCEQ-0574*)



Check Payable to the "Texas Commission on Environmental Quality"



Core Data Form (*TCEQ-10400*)



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

REGULATED ENTITY NAME: Oaktree Assisted Living WPAP Modification  
COUNTY: Comal STREAM BASIN: Bleiders Creek

EDWARDS AQUIFER: ☒ RECHARGE ZONE  
☐ TRANSITION ZONE

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

**CUSTOMER INFORMATION**

1. Customer (Applicant):

Contact Person: Cecil Barcelo, CEO  
Entity: Oak Tree Ltd. Partnership  
Mailing Address: 411 Alabama  
City, State: League City, Texas Zip: 77573  
Telephone: 281-332-4189 FAX: 830-625-2204

Agent/Representative (If any):

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

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

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

Located northwest and adjacent to the intersection of SH 46 and Independence Drive  
in New Braunfels, Texas.

4. ☒ **ATTACHMENT A - ROAD MAP.** A road map showing directions to and the location of the project site is attached at the end of this form.
5. ☒ **ATTACHMENT B - USGS / EDWARDS RECHARGE ZONE MAP.** A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:

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

6. ☒ Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. **The TCEQ must be able to inspect the project site or the application will be returned.**
7. ☒ **ATTACHMENT C - PROJECT DESCRIPTION.** Attached at the end of this form is a detailed narrative description of the proposed project.
8. Existing project site conditions are noted below:
- ☒ Existing commercial site
  - ☐ Existing industrial site
  - ☐ Existing residential site
  - ☐ Existing paved and/or unpaved roads
  - ☐ Undeveloped (Cleared)
  - ☐ Undeveloped (Undisturbed/Uncleared)
  - ☐ Other: \_\_\_\_\_

#### PROHIBITED ACTIVITIES

9. ☒ I am aware that the following activities are prohibited on the **Recharge Zone** and are not proposed for this project:
- (1) waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
  - (2) new feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
  - (3) land disposal of Class I wastes, as defined in 30 TAC §335.1;
  - (4) the use of sewage holding tanks as parts of organized collection systems; and
  - (5) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).
10. ☒ I am aware that the following activities are prohibited on the **Transition Zone** and are not proposed for this project:
- (1) waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
  - (2) land disposal of Class I wastes, as defined in 30 TAC §335.1; and
  - (3) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

#### ADMINISTRATIVE INFORMATION

11. The fee for the plan(s) is based on:
- ☒ For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.
  - ☐ For an Organized Sewage Collection System Plans and Modifications, the total linear

footage of all collection system lines.

- ☐ For a UST Facility Plan or an AST Facility Plan, the total number of tanks or piping systems.
- ☐ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- ☐ A request for an extension to a previously approved plan.

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

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

13. ☒ Submit one (1) original and one (4) copies of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

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

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

Shawn T. Schorn, P.E.  
\_\_\_\_\_  
Print Name of Customer/Agent

Shawn T. Schorn  
\_\_\_\_\_  
Signature of Customer/Agent

05/23/13  
\_\_\_\_\_  
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.





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

NEW BRAUNFELS WEST QUADRANGLE  
TEXAS  
7.5 MINUTE SERIES (TOPOGRAPHIC)

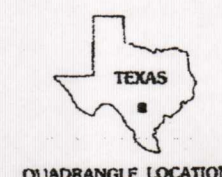
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY



Produced by the United States Geological Survey  
Revised in cooperation with the Texas Water Development Board  
Control by USGS, NOS/NOAA, and USCE  
Compiled by the Army Map Service by photogrammetric methods  
from aerial photographs taken 1956. Field checked 1958  
Revised from aerial photographs taken 1986. Field checked 1987  
Map edited 1988  
Projection and 10,000-foot grid ticks Texas coordinate  
system, south central zone (Lambert conformal conic)  
1000-meter Universal Transverse Mercator grid, zone 14  
1927 North American Datum  
To place on the predicted North American Datum 1983  
move the projection lines 20 meters south and  
20 meters east as shown by dashed corner ticks  
Fine red dashed lines indicate selected fence and field lines  
generally visible on aerial photographs. This information is unchecked

UTM GRID AND 1983 MAGNETIC NORTH  
DECLINATION AT CENTER OF MAP  
DIAGRAM IS APPROXIMATE

SCALE 1:24 000  
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10 000  
FEET  
0 1 2 3 4 5 6 7 8 9 10  
MILES  
0 1 2 3 4 5 6 7 8 9 10  
KILOMETERS  
CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929



2998-413

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

NEW BRAUNFELS WEST, TEX.  
2998-F2-TF-024

1988

DMA 6343 II NW-SERIES V822

ATTACHMENT B  
USGS/EDWARDS RECHARGE  
ZONE MAP

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



**ATTACHMENT C – PROJECT DESCRIPTION (TCEQ-0587)**

Oaktree Assisted living proposes to expand its current facilities in order to increase their resident capacity and to provide better care to its existing residents. The proposed expansion consists of 9,949 square feet of new building space, and 2,033 square feet of sidewalks and additional concrete totaling 11,982 square feet or 0.275 acres. As part of this expansion the existing channel on the north side of the property will be modified per City of New Braunfels Standards within the existing drainage easement and a small detention pond will be installed in the back of the property. This site does take offsite flows that come from an existing TxDOT culvert. Flow from the existing culvert is routed through an existing drainage easement. This flow will be taken underground via a 6'x3' box culvert and will exit the site to another existing drainage easement. The impervious cover percentage for the site will be increased from the originally approved 45.21% to the proposed 55.44%. Temporary BMP's used during construction will be silt fence, rock berms, and a construction entrance/exit. Permanent BMP's for the site will be vegetative filter strips as originally approved.

In addition as part of the State Hwy 46 expansion the ROW adjacent to the property was expanded, thus reducing the total acreage of the site from 3.519 to 3.398 acres.



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

***Oaktree Assisted Living Facility  
1750 Hwy 46 West  
New Braunfels, Texas 78132***

***FROST GEOSCIENCES CONTROL # FGS-E13153***

***May 10, 2013***

---

***Prepared exclusively for***

***Oaktree Assisted Living Facility  
1750 Hwy 46 West  
New Braunfels, Texas 78132***

***Frost GeoSciences***

***Geotechnical ▪ Construction Materials  
Forensics ▪ Environmental***

***13402 Western Oak • Helotes, Texas 78023 • Phone: (210) 372-1315 • Fax: (210) 372-1318***

## **Frost GeoSciences**

**Geotechnical • Construction Materials  
Forensics • Environmental**

**13402 Western Oak**

**Helotes, Texas 78023**

**Phone (210) 372-1315**

**Fax (210) 372-1318**

**[www.frostgeosciences.com](http://www.frostgeosciences.com)**

**TBPE Firm Registration # F-9227**

**TBPE Firm Registration # 50040**

May 10, 2013

Oaktree Assisted Living Facility  
1750 Hwy 46 West  
New Braunfels, Texas 78132

Attn: Mr. Cecil Barcelo, CEO

Re: Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West  
New Braunfels, Texas 78132

Frost GeoSciences, Inc. Control # FGS-E13153

Dear Sir:

Attached is a copy of the Geologic Assessment Report completed for the above referenced project site as it relates to 30 TAC §213.5(b)(3), effective June 1, 1999. Our investigation was conducted and this report was prepared in general accordance with the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04). The results of our investigation, along with any recommendations for Best Management Practices (BMP's), are provided in the following report.

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

*Reza Khaladj Esmaily*

Reza Khaladj Esmaily  
Project Geologist



Sincerely,  
Frost GeoSciences, Inc.

*Steve Frost*

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

Distribution: (6) Schultz Group, Inc  
(1) Oaktree Assisted Living Facility



## Table of Contents

GEOLOGIC ASSESSMENT FORM .....	1
STRATIGRAPHIC COLUMN .....	3
GEOLOGIC ASSESSMENT TABLE .....	4
LOCATION .....	5
METHODOLOGY .....	5
RESEARCH & OBSERVATIONS .....	6
7.5 Minute Quadrangle Map Review .....	6
Recharge/Transition Zone .....	6
100-Year Floodplain .....	6
Soils .....	7
Narrative Description of the Site Geology .....	7
BEST MANAGEMENT PRACTICES .....	9
DISCLAIMER .....	9
REFERENCES .....	10
APPENDIX	
A:    Plate 1:        Site Plan	
Plate 2:        Street Map	
Plate 3:        USGS Topographic Map	
Plate 4:        Official Edwards Aquifer Recharge Zone Map	
Plate 5:        FEMA Flood Map	
Plate 6:        1973 Aerial Photograph, 1"=500'	
Plate 7:        Geologic Map	
Plate 8:        2012 Aerial Photograph, 1"=500'	
Plate 9:        2012 Aerial Photograph with PRF's, 1"=100'	
B:    Site Photographs	
C:    Site Geologic Map	

**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: Oaktree Assisted Living Facility, 1750 Hwy 46 West

TYPE OF PROJECT: ☒ WPAP    ☐ AST    ☐ SCS    ☐ UST

LOCATION OF PROJECT: ☒ Recharge Zone    ☐ Transition Zone    ☐ Contributing Zone within the Transition Zone

**PROJECT INFORMATION**

1. ☒ Geologic or manmade features are described and evaluated using the attached **GEOLOGIC ASSESSMENT TABLE**.
2. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups\* (*Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986*). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

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

**\* Soil Group Definitions (Abbreviated)**

- A. Soils having a high infiltration rate when thoroughly wetted.
- B. Soils having a moderate infiltration rate when thoroughly wetted.
- C. Soils having a slow infiltration rate when thoroughly wetted.
- D. Soils having a very slow infiltration rate when thoroughly wetted.

3. ☒ A **STRATIGRAPHIC COLUMN** is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.
4. ☒ A **NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY** is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst characteristics of the site.
5. ☒ Appropriate **SITE GEOLOGIC MAP(S)** are attached:

The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1" : 400'

Applicant's Site Plan Scale	1" = <u>30</u> '
Site Geologic Map Scale	1" = <u>30</u> '
Site Soils Map Scale (if more than 1 soil type)	1" = <u>500</u> '

6. Method of collecting positional data:

- ☒ Global Positioning System (GPS) technology.  
☒ Other method(s) 2012 Aerial Photograph

7. ☒ The project site is shown and labeled on the Site Geologic Map.
8. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.
9. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.  
☐ Geologic or manmade features were not discovered on the project site during the field investigation.
10. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.
11. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.):  
☐ There are \_\_\_ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)  
☐ The wells are not in use and have been properly abandoned.  
☐ The wells are not in use and will be properly abandoned.  
☐ The wells are in use and comply with 16 TAC Chapter 76.  
☒ There are no wells or test holes of any kind known to exist on the project site.

**ADMINISTRATIVE INFORMATION**

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

Date(s) Geologic Assessment was performed: May 8, 2013  
Date(s)

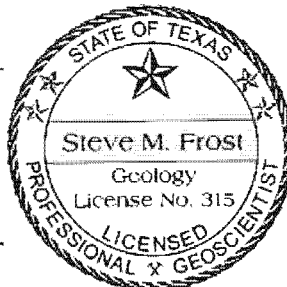
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Steve Frost, C.P.G., P.G.

Print Name of Geologist



Signature of Geologist



(210) 372-1315

Telephone

(210) 372-1318

Fax

May 10, 2013

Date

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

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

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

## Stratigraphic Column

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

Hydrogeologic subdivision		Group, formation, or member	Hydro-logic function	Thickness (feet)	Lithology	Field identification	Cavern development	Porosity/permeability type		
Upper Cretaceous	Upper confining units	Eagle Ford Group	CU	30 – 50	Brown, flaggy shale and argillaceous limestone	Thin flagstones; petroliferous	None	Primary porosity lost/ low permeability		
		Buda Limestone	CU	40 – 50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability		
		Del Rio Clay	CU	40 – 50	Blue-green to yellow-brown clay	Fossiliferous; <i>Ilymatogyra arietina</i>	None	None/primary upper confining unit		
Lower Cretaceous	I	Georgetown Formation	Karst AQ; not karst CU	2 – 20	Reddish-brown, gray to light tan marly limestone	Marker fossil; <i>Waconella wacoensis</i>	None	Low porosity/low permeability		
	II	Edwards Group	Person Formation	Cyclic and marine members, undivided	AQ	80 - 90	Mudstone to packstone; <i>mitiolid</i> grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
	III			Leached and collapsed members, undivided	AQ	70 – 90	Crystalline limestone; mudstone to grainstone; chert; collapsed breccia	Bioturbated iron-stained beds separated by massive limestone beds; stromatolitic limestone	Extensive lateral development; large rooms	Majority not fabric/one of the most permeable
	IV			Regional dense member	CU	20 – 24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
	V			Grainstone member	AQ	50 – 60	<i>Mitiolid</i> grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability
	VI			Kirschberg evaporite member	AQ	50 – 60	Highly altered crystalline limestone; chalky mudstone; chert	Boxwork voids, with neospar and travertine frame	Probably extensive cave development	Majority fabric/one of the most permeable
	VII			Dolomitic member	AQ	110 – 130	Mudstone to grainstone; crystalline limestone; chert	Massively bedded light gray, <i>Toucasia</i> abundant	Caves related to structure or bedding planes	Mostly not fabric; some bedding plane-fabric/water-yielding
	VIII			Basal nodular member	Karst AQ; not karst CU	50 – 60	Shaly, nodular limestone; mudstone and <i>mitiolid</i> grainstone	Massive, nodular and mottled, <i>Exogyra texana</i>	Large lateral caves at surface; a few caves near Cibola Creek	Fabric; stratigraphically controlled/large conduit flow at surface; no permeability in subsurface
	Lower confining unit			Upper member of the Glen Rose Limestone	CU; evaporite beds AQ	350 – 500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development	Some water production at evaporite beds/relatively impermeable

May 10, 2013  
Oaktree Assisted Living Facility  
Page 4

## LOCATION

The project site consists of 3.398 acres of land located at 1750 State Highway 46 W. New Braunfels, Texas 78132. An overall view of the area is shown on copies of the site plan, a street map, the USGS Topographic Map, the Official Edwards Aquifer Recharge Zone Map, the Flood Insurance Rate Map (FIRM), a 1973 aerial photograph at a scale of 1"=500', a geologic map, a 2012 aerial photograph at a scale of 1"=500', and a 2012 aerial photograph at a scale of 1"=100'. Plates 1 through 9 in Appendix A.

## METHODOLOGY

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

Frost GeoSciences, Inc. researched the geology of the area in the immediate vicinity of the project site. The research included, but was not limited to, the Geologic Atlas of Texas, San Antonio Sheet, FIRM maps, Edwards Aquifer Recharge Zone Maps, USGS 7.5 Minute Quadrangle Maps, the Geologic Map of the New Braunfels, Texas 78132 30 X 60 Minute Quadrangle, the USGS Water-Resources Investigations Report 94-4117 and the USDA Soil Survey of Comal & Hays County, Texas.

After reviewing the available information, a field investigation was performed to identify any geologic or man-made potential recharge features. A transect spacing of approximately 50 feet or less, depending on vegetation thickness, was used to inspect the project site. A 2012 aerial photograph, in conjunction with a hand held Garmin 72H Global Positioning System with an Estimated Potential Error ranging from 15 to 18 feet, was used to navigate around the property and identify the locations of potential recharge features, as recommended in the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04). The locations of any potential recharge features noted in the field were identified with blue and white flagging. The flagging is numbered with the

same potential recharge feature I.D. # that is used on the Site Geologic Map in Appendix C of this report. The Site Geologic Map indicating the limits of the project site is included in Appendix C. A copy of a 2012 aerial photograph at an approximate scale of 1"=100', indicating the locations of the potential recharge features, is included on Plate 9 in Appendix A. The Geologic Assessment Form, Stratigraphic Column and the Geologic Assessment Table have been filled with the appropriate information for this project site and are included on pages 1-4 of this report.

## **RESEARCH & OBSERVATIONS**

### **7.5 Minute Quadrangle Map Review**

According to the USGS 7.5 Minute Quadrangle Map, New Braunfels West, Texas Sheet (1988), the elevation across the project site ranges from 860 to 870 feet. This elevation is calculated above mean sea level (AMSL). The surface runoff from the project site flows to the northwest into an unnamed tributary of Blieders Creek. State Highway 46 is located immediately south of the project site. A copy of the above referenced USGS 7.5 Minute Quadrangle Map, indicating the location of the project site, is included in this report on Plate 3 in Appendix A.

### **Recharge / Transition Zone**

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

### **100-Year Floodplain**

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

**May 10, 2013**  
**Oaktree Assisted Living Facility**  
**page 6**



The project site is located within Zone X. According to the panel legend, Zone X represents areas determined to be outside the 0.2% annual chance floodplain. A copy of the Comal County, Texas, FIRM map, indicating the location of the project site, is included in this report on Plate 5 in Appendix A.

### Soils

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

The Rumble-Comfort Association (RuD) consists of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. The surface layer of the Rumble Soil is dark reddish brown very cherty clay loam about 10 inches thick. Rounded chert and limestone cobbles and gravel cover about 20 percent of the surface. The subsoil to a depth of 14 inches is dark reddish-brown very cherty clay, and to a depth of 28 inches it is dark reddish-brown extremely stony clay. The underlying material is indurated fractured limestone. The Comfort Soil is dark brown, neutral, extremely stony clay about 7 inches thick. The subsoil to a depth of 12 inches is dark reddish-brown, mildly alkaline, extremely stony clay. The underlying material is indurated fractured limestone. The soil is noncalcareous throughout. The soils in this association are well drained. Surface runoff is medium, but varies due to the occurrence of caves, fracture zones, and sinks. Permeability is moderately slow. Water erosion is a moderate hazard.

### Narrative Description of the Site Geology

The project site exists as a commercially developed property. The Oaktree Assisted Living Facility is located on the Site. Parking areas are located in front and back of the building. The remainder of the Site is a landscaped lawn with several oak trees. These developments across the project site are visible in the 2012 aerial photographs on Plates 8 and 9 in Appendix



A and in the site visit photographs included in Appendix B.

One potential recharge feature (PRF) was identified during our site inspection. This feature consists of two sanitary sewer manhole covers located adjacent and to the north of the existing building. The following is a summary of the feature observed during our assessment.

Potential Recharge Feature # S-1 is a manmade feature in bedrock. Two sanitary sewer manhole covers are located approximately 5 feet apart. Frost GeoSciences, Inc. rates the relative infiltration of this feature as low on figure I of the TCEQ-0585-Instructions (Rev. 10-01-04). This feature scores a 35 on the sensitivity scale, column 10 in the Geologic Assessment Table on page 4 of this report. Frost GeoSciences, Inc. does not consider this to be sensitive feature.

According to the USGS 7.5 Minute Quadrangle Map, New Braunfels West, Texas Sheet (1988), the elevation of the project site is approximately 870 feet. This elevation is calculated above mean sea level (AMSL). According to topographic data obtained from Schultz Group, Inc., the elevations on the project site range from 859 near the northeastern property corner to 874 feet near the southern property corner. A copy of the site plan, indicating the boundary of the project site and the elevations, is included on Plate I in Appendix A and on the Site Geologic Map in Appendix C of this report.

According to the WRI 94-4117 Geologic Map of Comal County, Texas, and the Geologic Map of the New Braunfels, Texas 78132 30 X 60 Minute Quadrangle, the project site is located on the Cyclic and Marine Member of the Cretaceous Edwards Person Limestone.

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

A copy of the WRI 94-4117 Geologic Map, indicating the location of the project site, is included on Plate 7A in Appendix A. A copy of the Geologic Map of the New Braunfels, Texas 78132 30 X 60 Minute Quadrangle, indicating the location of the project site, is included on Plate 7B in Appendix A.

### BEST MANAGEMENT PRACTICE (BMP)

Based on a visual inspection of the ground surface the overall potential for fluid flow from the project site into the Edwards Aquifer appears to be low. The potential always exists to encounter subsurface features that lack a surface expression. Frost GeoSciences, Inc. recommends that we be included in the pre-construction meeting to inform construction personnel of the potential to encounter subsurface karst features during excavating activities. Construction personnel should also be informed of the proper protocol to follow in the event that a solution cavity and/or cave is encountered during the excavation and development of the property.


### DISCLAIMER

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

This report has been prepared for and may be relied upon by Oaktree Assisted Living Facility. This report is based on available known records, a visual inspection of the project site and the work generally accepted for a Geologic Assessment TAC §213.5(b)(3), effective June 1, 1999.

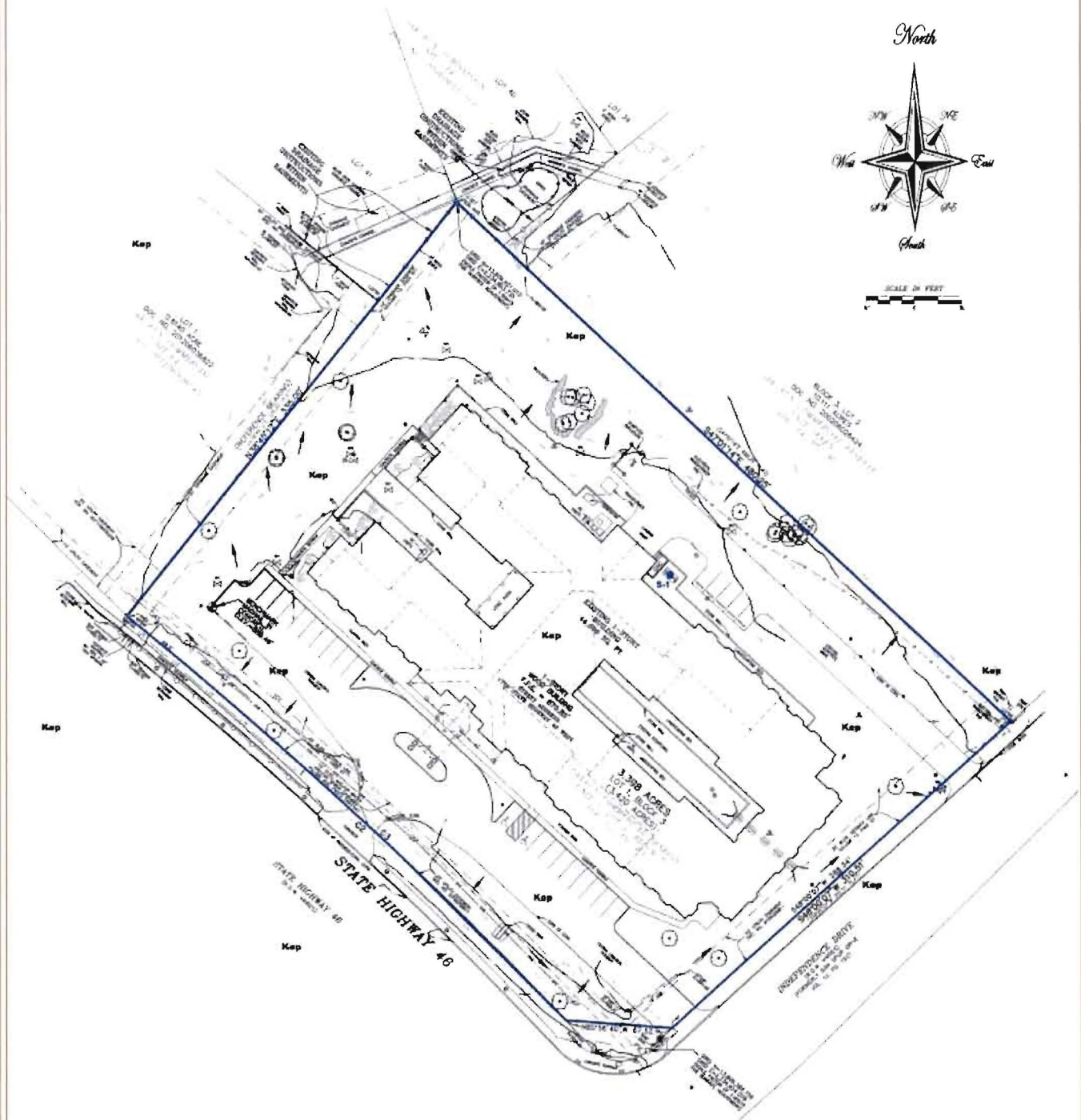
**REFERENCES**

- 1) USGS 7.5 Minute Quadrangle Map, New Braunfels West, Texas Sheet (1988).
- 2) Official Edwards Aquifer Recharge Zone Map 31, New Braunfels West, Texas Sheet (1996).
- 3) Stein, W.G. and Ozuna, G.B., 1995, Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zone, Comal County, Texas. U.S. Geological Survey Water Resources Investigations 94-4117.
- 4) Collins, Edward, W., 2000, Geologic Map of the New Braunfels, Texas 78132 30 X 60 Minute Quadrangle.
- 5) Federal Emergency Management Agency (FEMA), Comal County, Texas and Incorporated Areas, Flood Insurance Rate Map (FIRM), Panel 48091C0435F (9/02/09) FEMA, Washington D.C.
- 7) USDA Soil Conservation Service, Soil Survey of Comal & Hays Counties, Texas (1982).
- 8) TCEQ-0585-Instructions (Rev. 10-1-04). "Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zone".



# Appendix A

## Site Location Plates



**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West New Braunfels, Texas 78132

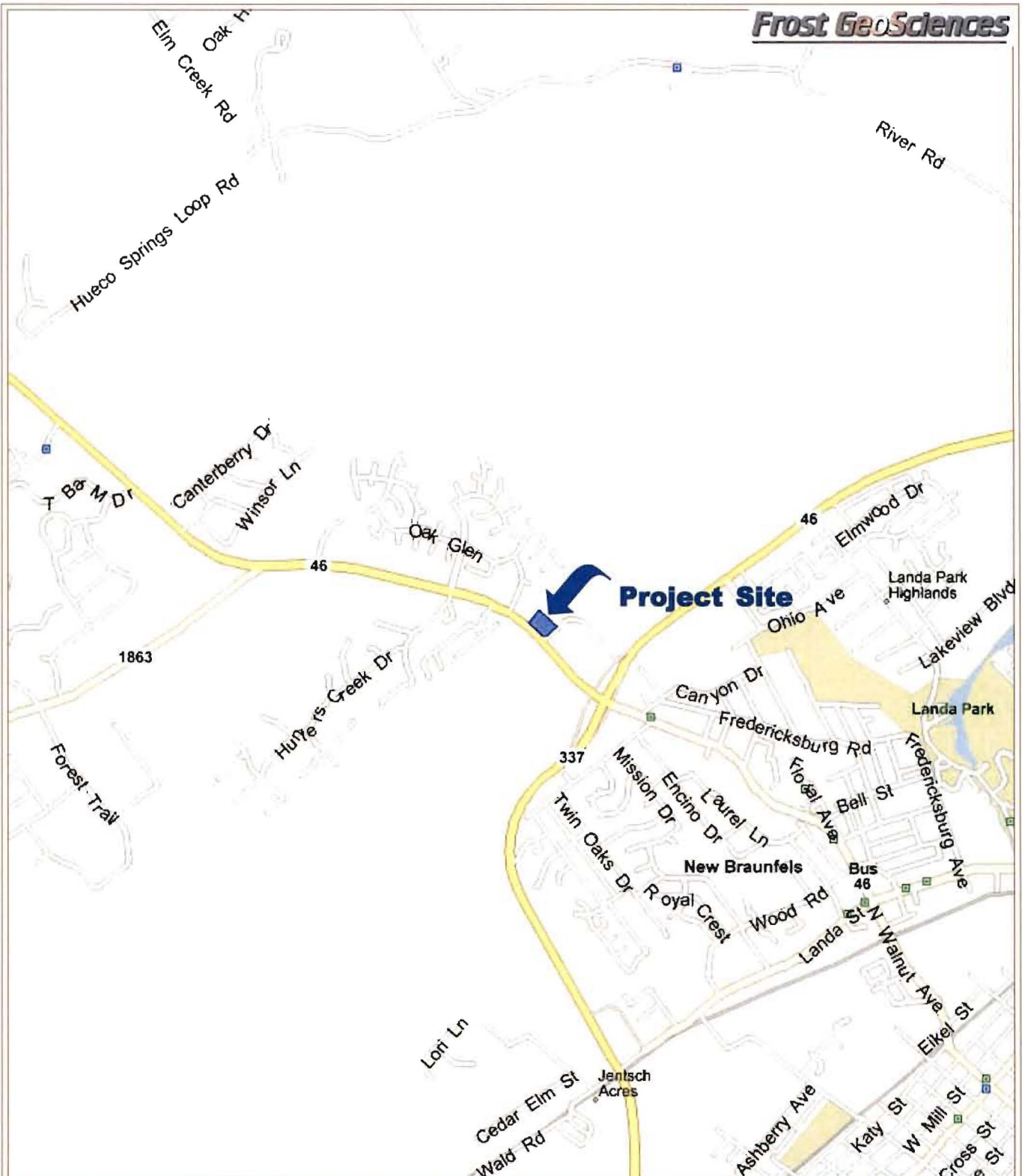
**Site Plan**

**PROJECT NO.:**

FGS-E13153

**DATE:**

May 10, 2013



**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West New Braunfels, Texas 78132

**Street Map**

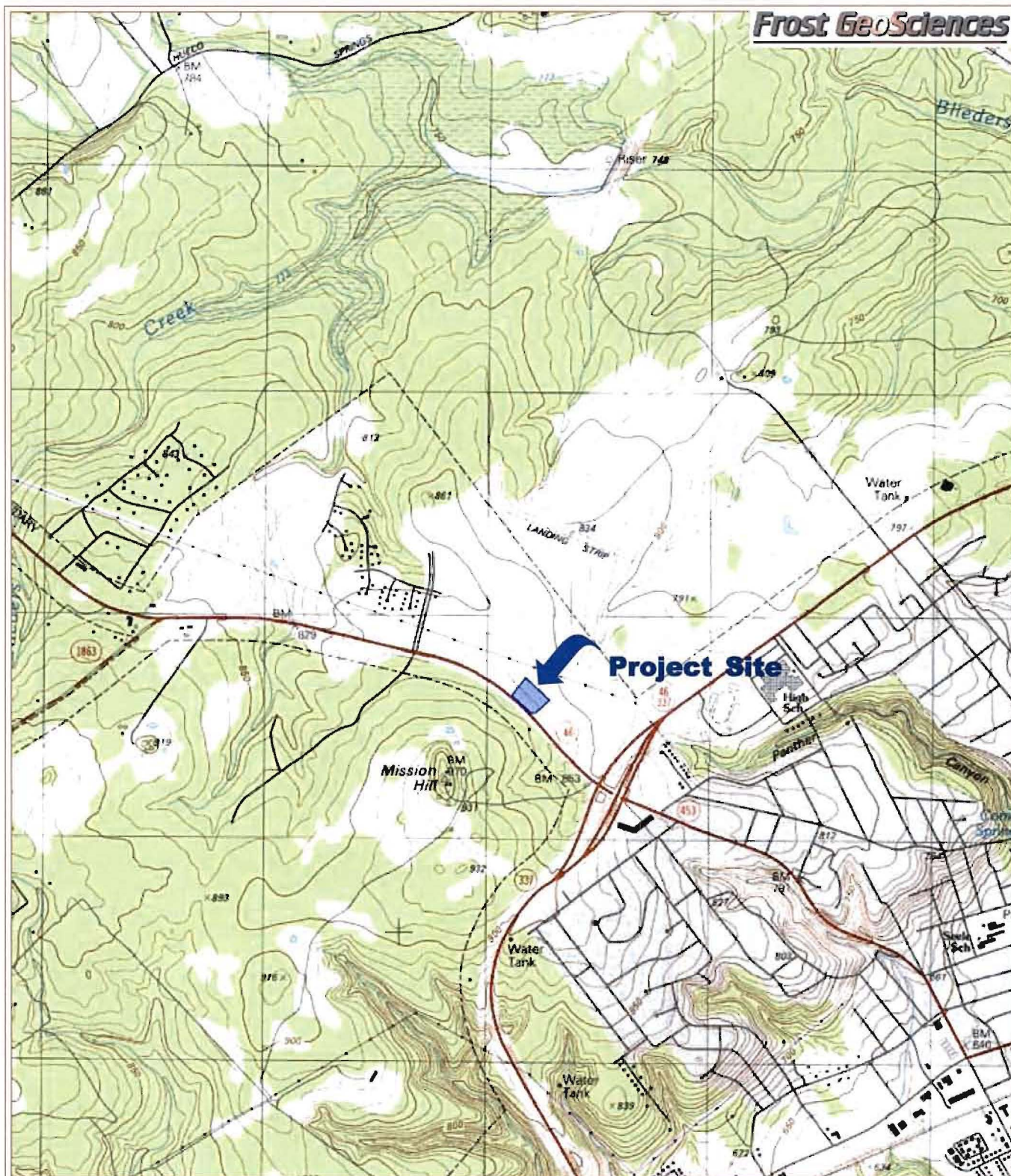
**PROJECT NO.:**

FGS-E13153

**DATE:**

May 10, 2013





**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West New Braunfels, Texas 78132

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

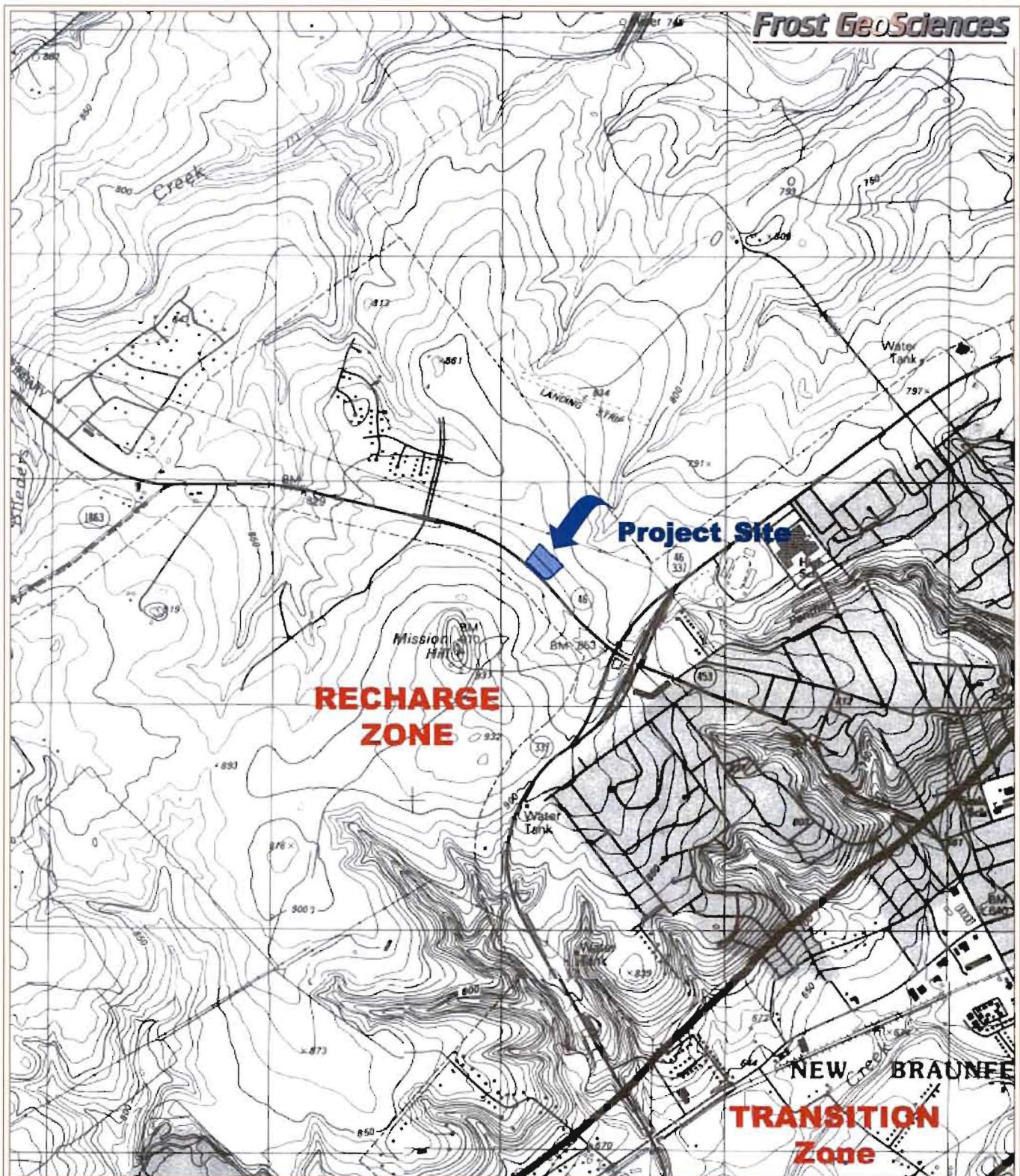
**PROJECT NO.:**

FGS-EI3153

**DATE:**

May 10, 2013





**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West New Braunfels, Texas 78132

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

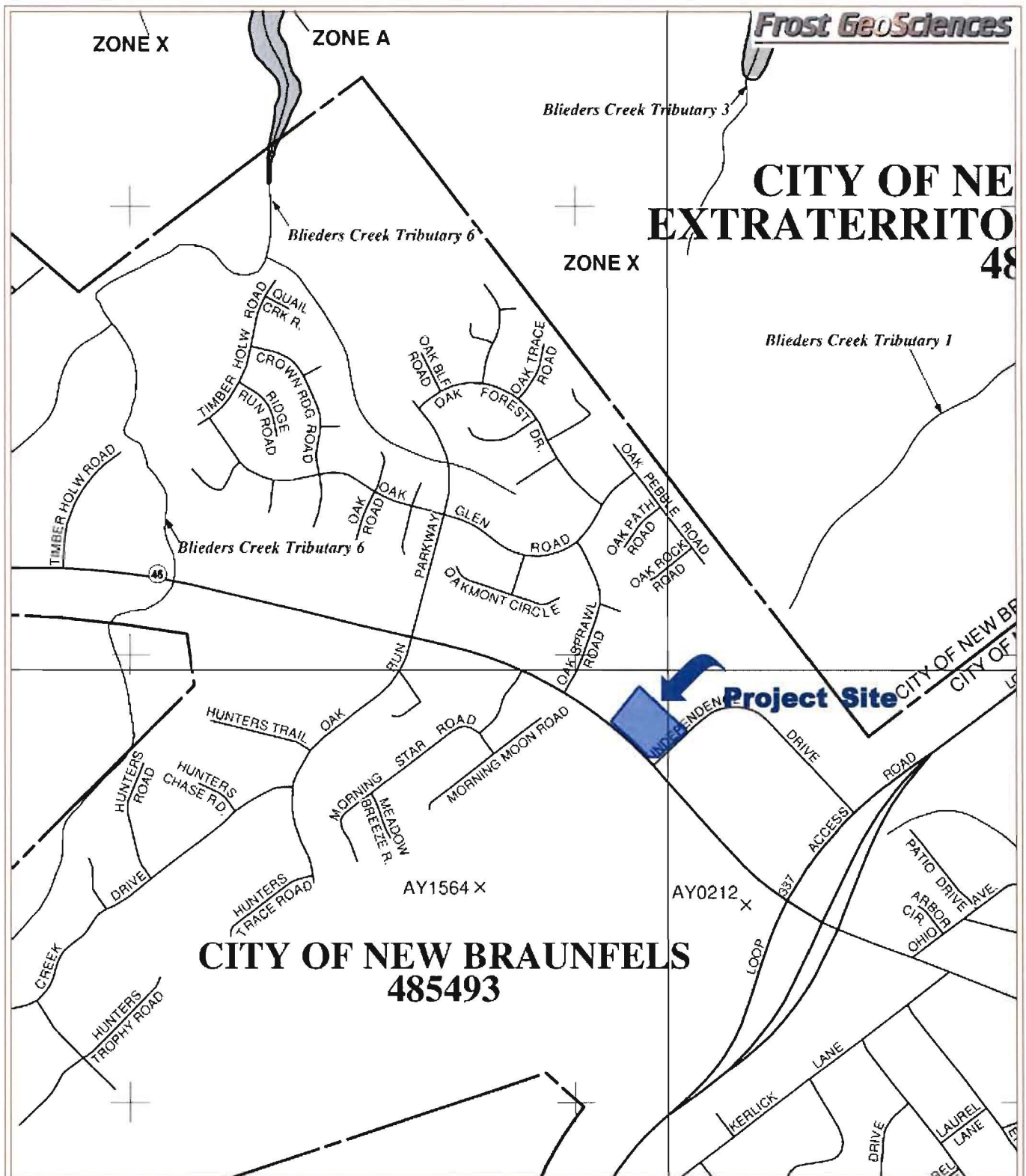
**PROJECT NO.:**

FGS-EI3153

**DATE:**

May 10, 2013





**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West New Braunfels, Texas 78132

**Flood Insurance Rate Map (FIRM)**

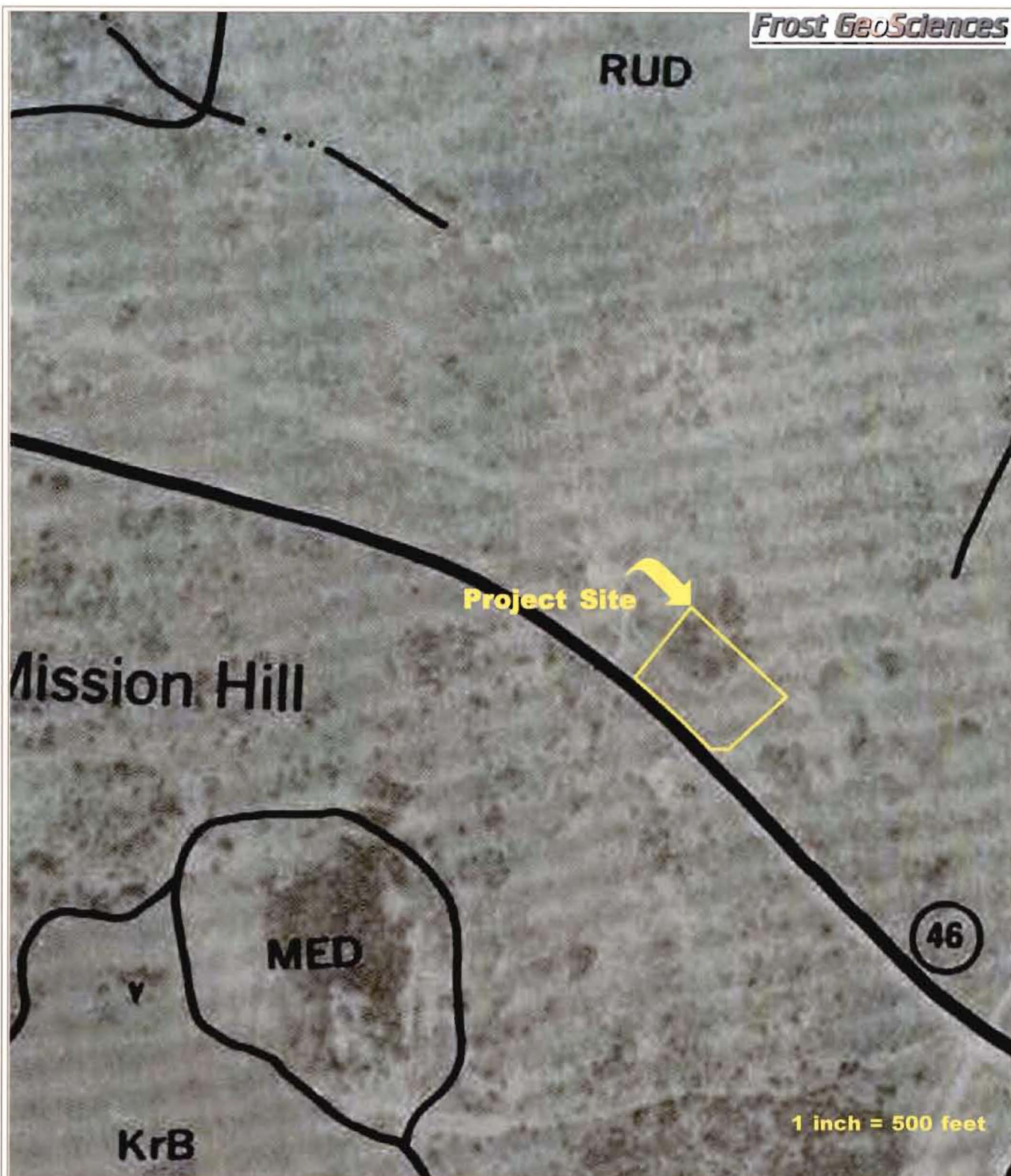
Community Panel # 48091C0435F  
(Revised 9/02/09)

**PROJECT NO.:**

FGS-E13153

**DATE:**

May 10, 2013



**Frost GeoSciences**

**RUD**

**Project Site**

**Mission Hill**

**MED**

**KrB**

**46**

**1 inch = 500 feet**

**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West New Braunfels, Texas 78132

**1973 Aerial Photograph**  
United States Department of Agriculture

**PROJECT NO.:**

FGS-E13153

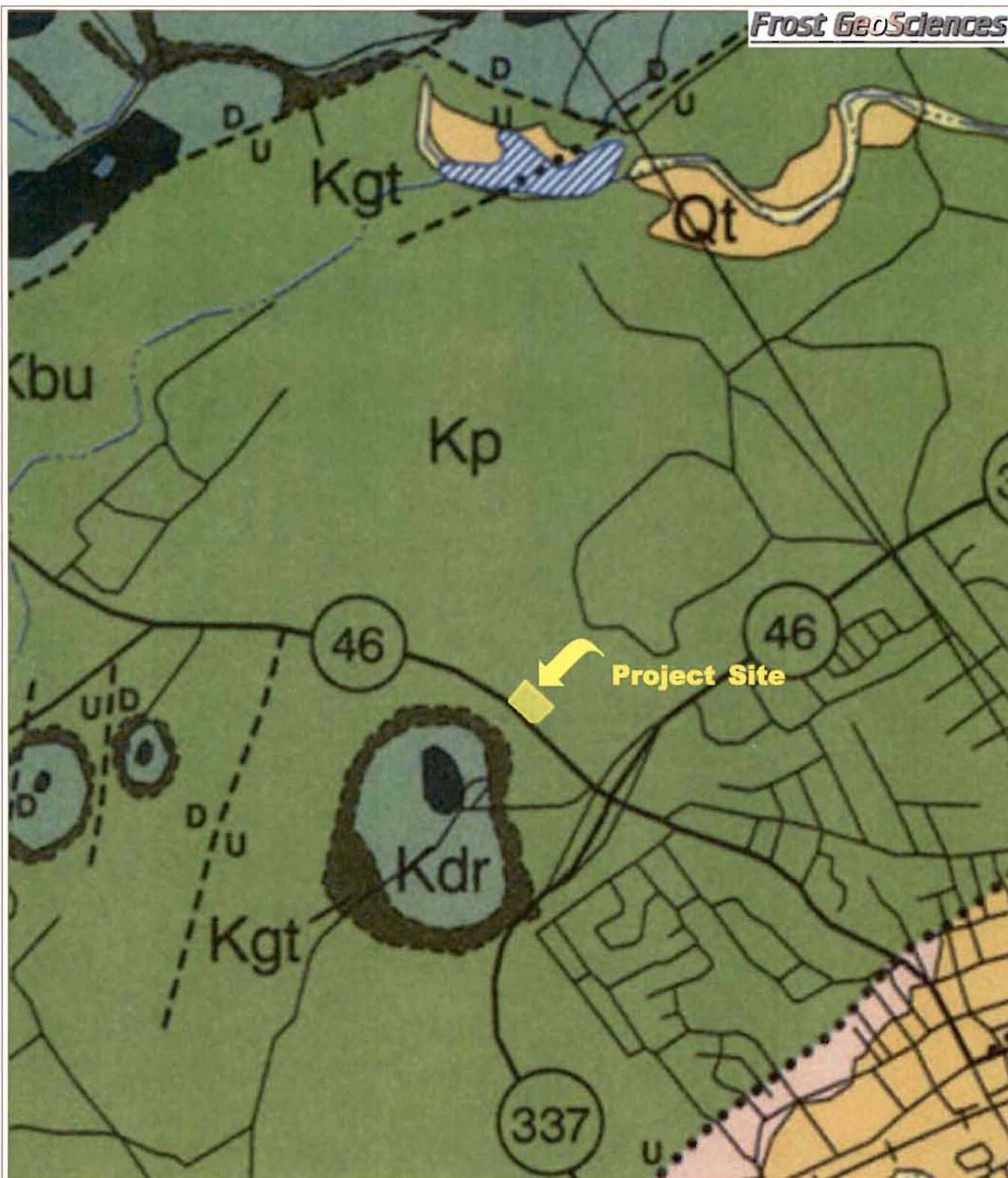
**DATE:**

May 10, 2013









**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility,  
1750 Hwy 46 West New Braunfels, Texas 78132

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

**PROJECT NO.:**

FGS-EI3153

**DATE:**

May 10, 2013





**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West New Braunfels, Texas 78132

2012 Aerial Photograph  
Google Earth

**PROJECT NO.:**

FGS-EI3153

**DATE:**

May 10, 2013





**PROJECT NAME:**

Geologic Site Assessment (WPAP)  
for Regulated Activities / Development on the  
Edwards Aquifer Recharge / Transition Zone  
Oaktree Assisted Living Facility  
1750 Hwy 46 West New Braunfels, Texas 78132

2012 Aerial Photograph with PRF's  
Google Earth

**PROJECT NO.:**

FGS-E13153

**DATE:**

May 10, 2013

## Appendix B

### Site Inspection Photographs





View NE from western corner of the Site.



View SE from western corner of the Site.



View SW from northern corner of the Site.



View of Potential Recharge Feature # S-1.



View NW from eastern corner of the Site

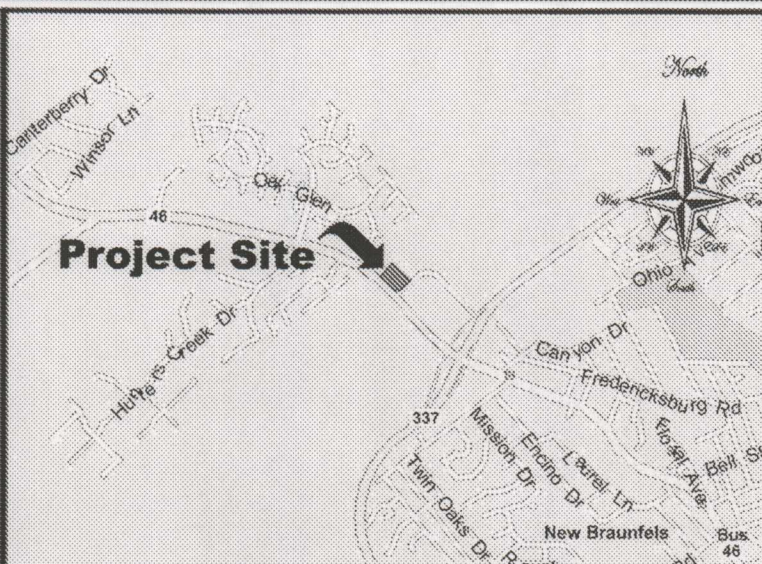


View SW from eastern corner of the Site.

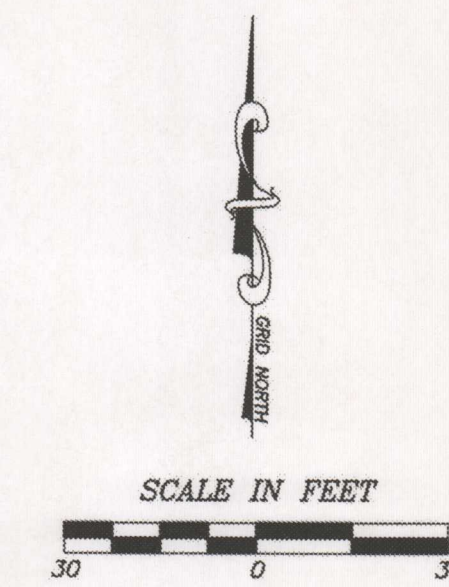
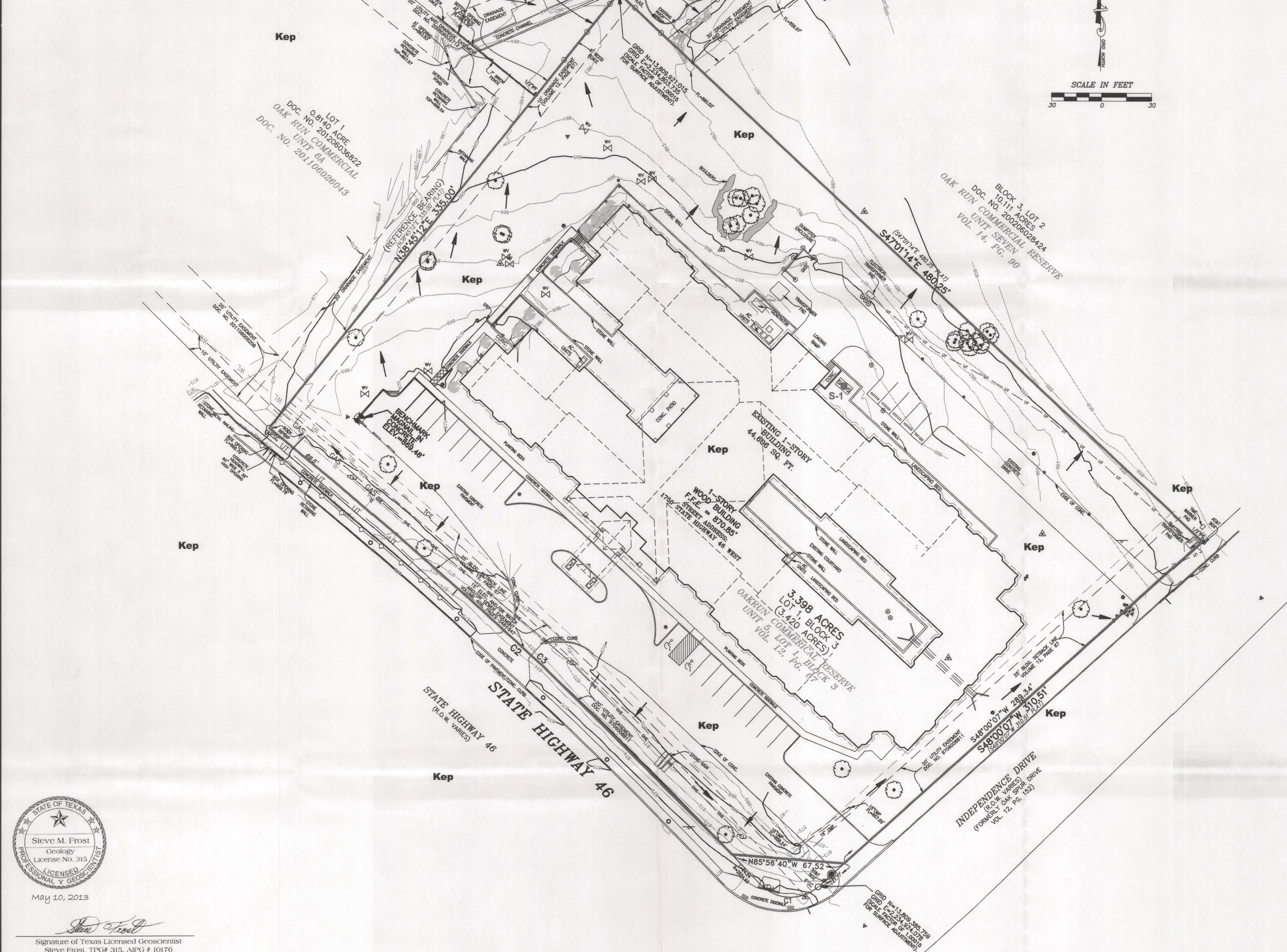
# Appendix C

## Site Geologic Map





Location Map



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

TCEQ-R13  
 JUN 05 2013  
 SAN ANTONIO

# Site Geologic Map

Geologic Site Assessment (WPAP)  
 for Regulated Activities / Development on the  
 Edwards Aquifer Recharge / Transition Zone  
 for  
 Oaktree Assisted Living Facility  
 1750 Hwy 46 West  
 New Braunfels, Texas

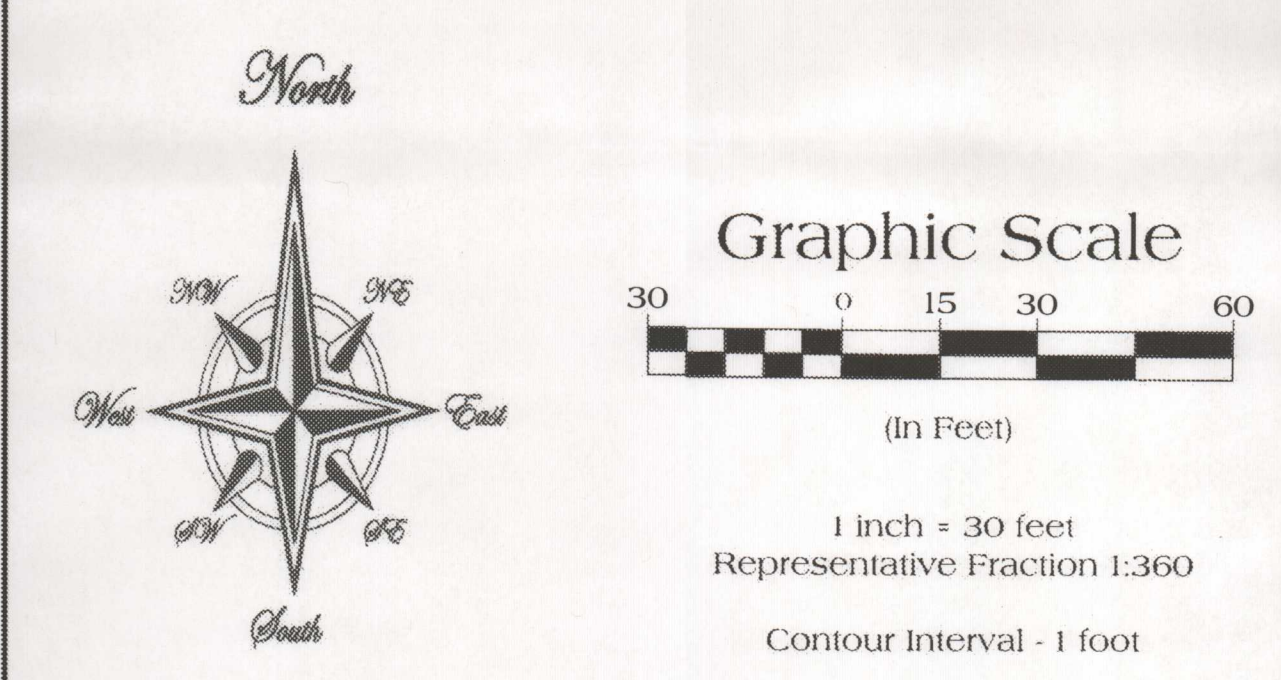
Frost GeoSciences, Inc. Control # FGS-E13153

## Legend

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

Floodplain Information Obtained From:  
 FIRM: Flood Insurance Rate Map  
 Comal County, Texas: Panel # 48091C0435F, Revised 9/02/09

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



May 10, 2013

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



**Modification of a Previously Approved Plan**

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

1. Current Regulated Entity Name: Oaktree Assisted Living WPAP Modification  
Original Regulated Entity Name: Oaktree Assisted Living Facility  
Assigned Regulated Entity Numbers (RN): 1) RN102750692, 2) \_\_\_\_\_, 3) \_\_\_\_\_
- X The applicant has not changed and the Customer Number (CN) is: CN 601401920  
\_\_\_\_\_ The applicant has changed. A new Core Data Form has been provided.
2. X **Attachment A: Original Approval Letter and Approved Modification Letters:** A copy of the original approval letter and copies any letters approving modification are found at the end of this form.
3. A modification of a previously approved plan is requested for (check all that apply):
- X physical or operational modification of any water pollution abatement structure(s) including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;  
\_\_\_\_\_ change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;  
\_\_\_\_\_ development of land previously identified as undeveloped in the original water pollution abatement plan;  
\_\_\_\_\_ physical modification of the approved organized sewage collection system;  
\_\_\_\_\_ physical modification of the approved underground storage tank system;  
\_\_\_\_\_ physical modification of the approved aboveground storage tank system.
4. Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

WPAP Modification Summary	Approved Project	Proposed Modification
Acres	<u>3.519</u>	<u>3.398</u>
Type of Development	<u>Commercial</u>	<u>Commercial</u>
Number of Residential Lots	<u>0</u>	<u>0</u>
Impervious Cover (acres)	<u>1.591</u>	<u>1.884</u>
Impervious Cover (%)	<u>45.21</u>	<u>55.44</u>
Permanent BMPs	<u>Filter Strips</u>	<u>Filter Strips</u>
Other	_____	_____
SCS Modification Summary	Approved Project	Proposed Modification
Linear Feet	_____	_____
Pipe Diameter	_____	_____
Other	_____	_____
AST Modification Summary	Approved Project	Proposed Modification
Number of ASTs	_____	_____
Volume of ASTs	_____	_____
Other	_____	_____

## UST Modification Summary

## Approved Project

## Proposed Modification

Number of USTs

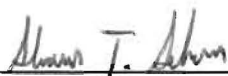
Volume of USTs

Other

5. ☒ **Attachment B: Narrative of Proposed Modification.** A narrative description of the nature of the proposed modification is provided at the end of this form. It discusses what was approved, including previous modifications, and how this proposed modification will change the approved plan.
6. ☒ **Attachment C: Current site plan of the approved project.** A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is provided at the end of this form. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
- ☐ The approved construction has not commenced. The original approval letter, and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
- ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
- ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
- ☒ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
- ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.
7. ☐ The acreage of the approved plan has increased. A Geologic Assessment has been provided for the new acreage.
- ☒ Acreage has not been added to **or** removed from the approved plan. **ACREAGE HAS BEEN REMOVED**
8. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This request for a **MODIFICATION TO A PREVIOUSLY APPROVED PLAN** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Shawn T. Schorn, P.E.  
Print Name of Customer/Agent

  
Signature of Customer/Agent

05/29/13  
Date

Robert J. Huston, *Chairman*  
R. B. "Ralph" Marquez, *Commissioner*  
Kathleen Hartnett White, *Commissioner*  
Margaret Hoffman, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

March 25, 2003

Mr. Cecil Barcelo  
Baywind Village  
411 Alabama Ave.  
League City, TX 77537

Re: EDWARDS AQUIFER, Bexar County  
PROJECT: Oaktree Assisted Living Facility, 1750 State Hwy 46 W, New Braunfels, Texas  
TYPE: Technical Assistance Relating to 30 Texas Administrative Code (TAC) Chapter 213;  
Edwards Aquifer Protection Program File No. 337.01  
Regulated Entity Number: RN102750692

Dear Mr. Barcelo:

The Texas Commission on Environmental Quality (TCEQ) San Antonio office received a request for technical assistance for the referenced project on January 13, 2003. Additional information was received on March 24, 2003.

The water pollution abatement plan (WPAP) for this site was approved by letter dated December 9, 1996. It is the understanding of the commission that the proposed revisions to the site plan will not result in a change in the total amount of impervious cover identified in the approved WPAP. We have updated our files with the revised site plan.

Should clarification of this letter be desired or if we may be of any other assistance, please contact Lynn M. Bumguardner of our San Antonio office at 210/403-4023. Please reference project number 337.01.

Sincerely,

A handwritten signature in cursive script that reads "Bobby D. Caldwell".

Bobby D. Caldwell  
Water Section Manager  
San Antonio Regional Office

BDC/lmb

cc: Mr. Daryl D. Pawelek, P.E., The Schultz Group, Inc.  
Mr. Michael G. Short, P.E., City of New Braunfels  
Mr. John Bohuslav, TXDOT San Antonio District  
Mr. Tom Hornseth, Comal County  
Mr. Greg Ellis, Edwards Aquifer Authority  
TCEQ Central Records MC 212

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



## TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

*Protecting Texas by Reducing and Preventing Pollution*

December 9, 1996

Mr. Cecil Barcelo  
Gailind Enterprises, Inc.  
Baywind Village, 411 Alabama  
League City, TX 77573

Re: EDWARDS AQUIFER, Comal County  
PROJECT: Oaktree Assisted Living Facility. Proposed project is located at the intersection of Loop 337 and State Highway 46, approximately 1300' northwest of Loop 337 on the northeast side of State Highway 46. New Braunfels, Texas  
TYPE: Request for Approval of Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) §313.4; Edwards Aquifer Protection Program

Dear Mr. Barcelo:

The Texas Natural Resource Conservation Commission (TNRCC) has completed their review of the WPAP application for the referenced project that was submitted on behalf of Gailind Enterprises, Inc. by Stephen E. Schultz of the Schultz Group, Inc. and received by the San Antonio office on September 10, 1996.

### PROJECT DESCRIPTION

The proposed 3.52 acre Oaktree Assisted Living Facility will consist of an elderly living facility which will house approximately 60-70 permanent residents. The project is to be developed as a commercial project and will consist of the construction of a 44,607 square foot building and associated on-site parking. The site is located within the City of New Braunfels, and will conform with applicable codes and requirements of the City of New Braunfels.

The normal population of the development is estimated to be 85 persons. Approximately 8,500 gallons per day of domestic wastewater is to be generated by this project and will be disposed of by conveyance to the existing Gruene Road Sewage Treatment Plant for treatment and disposal.

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

P.O. Box 13087 • Austin, Texas 78711-3087 • 512/239-1000



The proposed impervious cover for the development, approximately 1.59 acres (45.21%), includes roof tops, driveways, sidewalks, recreational areas, parking lots and streets.

#### GEOLOGY ON SITE

According to the geologic assessment included with the submittal, a zone of sixteen (16) closed depressions were located on the proposed construction site. The features were identified on the geological site map as S-1. The zone was assessed by the geologist as having a moderate significance with respect to their combined potential for relative infiltration.

The site investigation performed by the San Antonio office on October 2, 1996, revealed no additional potential recharge features on the proposed construction site. Additionally, TNRCC is in general agreement with the geological assessment assigned to each of the on-site features.

#### GEOLOGY DOWNGRADIENT OF SITE

According to the geologic assessment included with the submittal, a zone of six (6) closed depressions were identified downgradient from the proposed site. The zone of depressions was identified on the downgradient map as feature A-1 and was assessed by the geologist as having a moderate significance with respect to its combined potential for relative infiltration.

#### POLLUTION ABATEMENT

##### I. During Construction:

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

- A. Stabilized construction entrances shall be installed at all sites of ingress and egress prior to initiation of any other regulated activity.
- B. Temporary erosion and sedimentation controls (silt fences and rock berms) shall be installed prior to initiation of any other regulated activity.

##### II. After Construction:

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

- A. The 1.93 acre vegetative filter strip is designed in accordance with the Lower Colorado River Authority Lake Travis Nonpoint Source Pollution Control Ordinance Technical Manual. The filter strip will:



1. be contiguous with the developed area,
2. be at the same elevation as the developed area,
3. have a level spreading device, and
4. be sized to filter stormwater run-off from 1.59 acres of impervious cover.

### **III. Recharge Features:**

The following measures will be taken to prevent pollutants from entering recharge features while maintaining or enhancing the quantity of water entering the recharge features identified in the geologic assessment.

1. Each of the on-site closed depressions located within the identified zone of closed depressions (S-1) shall be graded, filled, and compacted with clean clay material.

### **APPROVAL**

The plan for this project has been reviewed for compliance with 30 TAC §313.4 which sets forth pollution abatement criteria for any development on the recharge zone of the Edwards Aquifer. The proposed water pollution abatement plan is in general agreement with 30 TAC §313.4; therefore, approval of the plan is hereby granted subject to the specific conditions listed below.

Failure to comply with any of the following conditions, the deed recordation requirement, or any other specific conditions of approval is a violation of these rules. Pursuant to §26.136 of the Texas Water Code, any violations of the Edwards Aquifer Rules may result in administrative penalties of up to \$10,000 for each act of violation and for each day of violation.

### **SPECIAL CONDITIONS OF APPROVAL**

1. If any potential recharge features are encountered during construction, a geologist shall evaluate the significance of the features. The evaluation shall include representative photographs and a description of the feature forwarded to the San Antonio office. Construction in the vicinity of the features may only continue with written approval from the TNRCC.
2. Placement of hydrocarbon or hazardous substance storage facilities regulated pursuant to 313.10 and 313.11, requires submittal of all appropriate applications with appropriate fees and must receive prior approval from the TNRCC.

STANDARD CONDITIONS OF APPROVAL

1. Please be reminded that 30 TAC §313.4(c) requires the owner/developer to: (1) record in the county deed records that this property is subject to the approved WPAP; and (2) submit to the Executive Director through the San Antonio office, within 30 days of receiving this written notice of approval of the water pollution abatement plan and prior to commencing construction, proof of application for recordation of notice in the county deed records. Enclosed is a suggested format you may use to deed record your approved WPAP.
2. Prior to commencing construction, the applicant/agent shall submit to the San Antonio office copies of any changes made to the plans and specifications for this project which have been required by the TNRCC review and/or all other permitting authorities.
3. Please note, following this approval of the regulated activities described in the referenced WPAP submittal, any amendment to these activities required by some other regulating authority or desired by the applicant will require the submittal of a WPAP application to amend this approval. And, as indicated in 30 TAC §313.4 and 30 TAC §313.27, an application to amend any approved regulated activity shall include payment of appropriate fees and all information necessary for its review and Executive Director approval.
4. Additionally, all contractors conducting regulated activities associated with this proposed regulated project shall be provided with copies of this approval letter and the entire contents of the submitted WPAP so as to convey to the contractors the specific conditions of this approval. During the course of these regulated activities, the contractors shall be required to keep on-site copies of the WPAP and this approval letter.
5. The temporary erosion and sedimentation (E&S) controls for the entire project shall be installed prior to beginning any other construction work on this project.
6. The appropriate E&S control(s) that shall be used during the construction of the project should be determined as follows: (1) Silt fences should be used when the drainage area is less than 2 acres and the slope is less than 10%. (2) Rock berms with filtration should be used when the drainage areas are greater than two acres or when the slopes are in excess of 10%. The bottom edge of the filter fabric must be buried a minimum of 6 inches below grade.
7. The TNRCC may monitor stormwater discharges from the site to evaluate the adequacy of the temporary and permanent erosion and sedimentation control measures. Additional protection may be necessary if excessive solids or other contaminants are being discharged from the site.

8. Also, 30 TAC §313.4(d)(2) requires that if any significant recharge features, such as solution openings or sinkholes, are discovered during construction, all regulated activities near the significant recharge feature must be suspended immediately and may not be resumed until the Executive Director has reviewed and approved the methods proposed to protect the aquifer from any potential adverse impacts. Upon discovery of the significant recharge features, the developer shall immediately notify the San Antonio office.
9. Temporary erosion and sedimentation controls must be installed prior to construction, maintained during construction, and removed when vegetation is established and the construction area is stabilized.
10. If any abandoned wells exist on the site or are found during construction of the proposed development, they shall be plugged in accordance with the local underground water conservation district's plugging procedures, if applicable, or 30 TAC §287.50(a) of this title (relating to Standards for Plugging Wells that Penetrate Undesirable Water Zones), or an equivalent method, as approved by the Executive Director. Pursuant to 30 TAC §287.48(e), the person that plugs such a well shall, within 30 days after plugging is complete, submit a Water Well Completion and Plugging Report to the Executive Director, through the San Antonio office and to the Edwards Aquifer Authority.

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

11. No waste-disposal wells, new confined animal feeding operations, land disposal of Class I wastes, or use of sewage holding tanks as parts of organized collection systems shall be allowed on the recharge zone of this regulated development.
12. During the course of the construction related to the referenced regulated project, the owner/developer shall comply with all applicable provisions of 30 TAC §313.4. Construction which is initiated and abandoned, or not completed, shall be returned to a permanent condition such that groundwater in the Edwards Aquifer is protected from potential contamination. Additionally, the applicant, **GAILIND ENTERPRISES, INC.**, shall remain responsible for the provisions and special conditions of this approval until such responsibility is legally transferred to another person or entity, upon which that person or entity shall assume responsibility for all provisions and specific conditions of this approval.
13. Pursuant to 30 TAC §313.4(d)(1) and prior to commencing regulated activities, the applicant must provide the San Antonio office with the date on which the regulated activity will commence.

Mr. Cecil Barcelo  
December 9, 1996  
Page 6

14. Please note that 30 TAC §313.4(g) states that this approval expires two years from this date unless, prior to the expiration date, construction has commenced on the regulated project.
15. Approval of the design of the sewage collection system for this proposed subdivision shall be obtained from the Texas Natural Resources Conservation Commission prior to the commencement of construction of any sewage collection system, the design of which shall be in accordance with 30 TAC §313.5 and 30 TAC §317.
16. The developer shall ensure that construction debris, such as but not limited to scrap wood, bricks, paint, adhesives, containers, paper, etc. is disposed of properly at an authorized landfill off of the Edwards Aquifer Recharge Zone.
17. If asphaltic materials such as "seal coat", emulsion or other asphaltic products used for paving, roofing, etc. wash off or leave the project site the developer shall notify the TNRCC immediately and commence clean-up.

Should clarification of this letter be desired or if we may be of any other assistance, please contact Tom Gutierrez of our San Antonio office at 210/490-3096.

Sincerely,

  
Dan Pearson,  
Executive Director

DP/TG/eg

Enclosure: Deed Recordation Form

cc: Stephen E. Schultz, The Schultz Group, Inc.  
Rick Illgner, Edwards Aquifer Authority  
Mike Shands, City of New Braunfels  
Tom Hornseth, Comal County  
TNRCC Field Operations, Austin

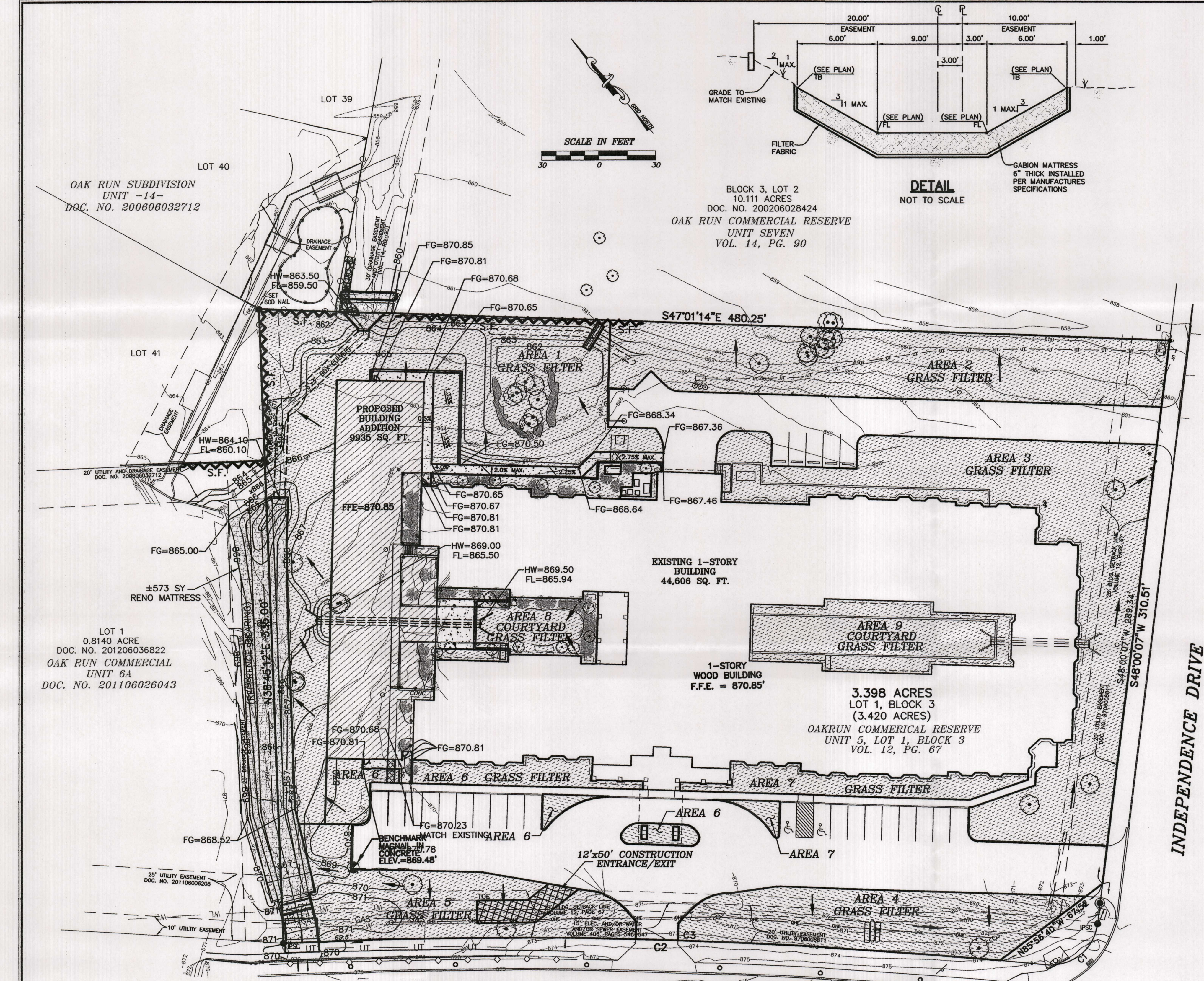


## **ATTACHMENT B – PROPOSED MODIFICATION (TCEQ-0590)**

Oaktree Assisted living proposes to expand its current facilities in order to increase their resident capacity and to provide better care to its existing residents. The proposed expansion consists of 9,949 square feet of new building space, and 2,033 square feet of sidewalks and additional concrete totaling 11,982 square feet or 0.275 acres. As part of this expansion the existing channel on the north side of the property will be modified per City of New Braunfels Standards within the existing drainage easement and a small detention pond will be installed in the back of the property. This site does take offsite flows that come from an existing TxDOT culvert. Flow from the existing culvert is routed through an existing drainage easement. This flow will be taken underground via a 6'x3' box culvert and will exit the site to another existing drainage easement. The impervious cover percentage for the site will be increased from the originally approved 45.21% to the proposed 55.44%. Temporary BMP's used during construction will be silt fence, rock berms, and a construction entrance/exit. Permanent BMP's for the site will be vegetative filter strips as originally approved.

In addition as part of the State Hwy 46 expansion the ROW adjacent to the property was expanded, thus reducing the total acreage of the site from 3.519 to 3.398 acres.





**LEGEND:**

S.F. SILT FENCE  
TCE TEMPORARY CONSTRUCTION ENTRANCE/EXIT  
F.R.B. FILTER ROCK BERM  
DRAINAGE FLOW  
GRASS FILTER

**LEGEND**

1/2" IRON PIN FOUND  
1/2" IRON PIN SET WITH PLASTIC CAP STAMPED "4233"  
AC AIR CONDITIONER PAD  
POST  
OVERHEAD ELECTRIC  
W.L. WATER LINE  
U.T. UNDERGROUND TELEPHONE  
GAS UNDERGROUND GAS LINE  
RECORD CALL  
WATER FAUCET/VALVE  
WATER METER  
WATER SPRINKLER VALVE  
WOOD FENCE  
METAL RAILING  
FIRE HYDRANT  
TREE  
SHRUB  
LIGHT POST  
TEMPORARY BENCH MARK  
MANHOLE  
SEWER CLEANOUT  
POSTED SIGN  
POWER POLE  
EXISTING CONTOURS  
PROPOSED BUILDING ADDITION  
PROPOSED CONTOURS

**REVISED GRASS FILTER AREAS**  
(ADJUSTED TO REFLECT PROPOSED EXPANSION)

AREA NO.	SQUARE FEET	ACRES
1	17,443	0.400
2	10,338	0.237
3	14,284	0.328
4	5,865	0.135
5	5,979	0.137
6	2,896	0.067
7	2,249	0.052
8	2,359	0.054
9	4,564	0.105
<b>TOTAL AREA</b>	<b>65,977</b>	<b>1.515</b>

TOTAL SITE AREA: 3.398 ACRES

**EROSION/SEDIMENTATION CONTROL NOTES:**

EROSION / SEDIMENTATION CONTROLS SHALL CONSIST OF SILT FENCES, ROCK BERMS AND TEMPORARY CONSTRUCTION ENTRANCE/EXIT CONSTRUCTED DOWN GRADIENT FROM THE CONSTRUCTION AREAS. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTROLS SHALL BE REMOVED BY THE CONTRACTOR WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED 31 TAC 313.5 (c)(12). ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER / ENGINEER.

PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE OF THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.

ALL EROSION CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONING PRIOR TO CONSTRUCTION.

CONTRACTOR IS RESPONSIBLE FOR NOI, NOT AND SWPPP AS REQUIRED.

**CONSTRUCTION SEQUENCING:**

1. PLACE ALL EROSION AND SEDIMENTATION CONTROLS PER THE FOLLOWING EROSION AND SEDIMENTATION CONTROL SCHEDULE AND THE STORM WATER POLLUTION PREVENTION PLAN
2. INSTALL IMPROVEMENTS
3. FINAL LOT GRADING AND LANDSCAPING.

**EROSION & SEDIMENTATION CONTROL SCHEDULE:**

PRIOR TO CONSTRUCTION

1. INSTALL CONSTRUCTION ENTRANCE/EXIT, ALL SILT FENCE AND ROCK FILTER DAM.

FINAL EROSION/SEDIMENTATION CONTROL

1. ALL EXPOSED SURFACES NOT LANDSCAPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THIS SHEET

**PERMANENT STABILIZATION NOTES:**

PERMANENT STABILIZATION - DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY UNLESS ACTIVITIES ARE SCHEDULED TO RESUME WITHIN 21 DAYS.

HYDROMULCH SHALL BE IN ACCORDANCE WITH TxDOT ITEM 164 - SEEDING FOR EROSION CONTROL. THE PERMANENT SEED MIX SHALL CONSIST OF GREEN SPRANGLETOP, BUFFALOGRASS, AND BERMUDA GRASS. DEPENDING ON THE GROWING SEASON AT THE TIME OF CONSTRUCTION, MIXTURE AND APPLICATION RATES MAY BE MODIFIED BY THE ENGINEER.

HYDROMULCHING INCLUDES, AS A NON SEPARATE PAY ITEM, SALVAGING TOPSOIL, GRADING SMOOTH, AND CULTIVATING TO A DEPTH OF 4 INCHES.

WATERING SHALL BE CONTINUED UNTILL BOX REVEGETATION IS ESTABLISHED AND SHALL BE IN ACCORDANCE WITH TxDOT ITEM 168 - VEGETATIVE WATERING. VEGETATIVE WATERING IS A NON SEPARATE PAY ITEM AND IS CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.

**STATE HIGHWAY 46**

**CURVE TABLE**

CURVE	CHORD BEARING	CHORD	RADIUS	DELTA	LENGTH	TANGENT
C1	N87°40'59"W (N87°40'59"W)	34.93' (25.00')	25.00' (88°37'50")	38.67' (38.67')	24.41' (24.41')	
C2	N47°18'26"W (N47°18'26"W)	401.89' (401.89')	2924.79' (2924.79')	07°52'45" (07°52'45")	402.21' (402.21')	201.41' (201.42')
C3	N47°32'40"W	377.72'	2924.79'	07°24'16"	377.98'	189.25'

**IMPERVIOUS COVER SUMMARY**

ORIGINAL WPAP FUTURE ADDITIONS = 6,350 sf North End  
6,350 sf South End

\* 1996 PERMITTED EXPANSION = 12,700 sf

\* 2002 PERMITTED EXPANSION = 3,745 sf Reduced Future Addition North End  
8,141 sf Proposed addition South End  
814 sf Proposed Parking Addition  
12,700 sf (= PERMITTED EXPANSION)

\* Based on WPAP'S Approved 1996 And 2002

PROPOSED EXPANSION = 11,982 sf North End  
PROPOSED ADDITIONAL IMPERVIOUS COVER: 11,982-3,745 = 8,237 sf

Texas Commission on Environmental Quality

**TSS Removal Calculations 04-20-2009**

Project Name: Oaktree Assisted Living Expansion  
Date Prepared: 4/30/2013

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell. Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.

Characters shown in red are data entry fields.

Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

Page 3-29 Equation 3.3:  $L_{R1} = 27.2(A_{I1} \times P)$

where:  $L_{R1}$  TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_{I1}$  = Net increase in impervious area for the project  
 $P$  = Average annual precipitation, inches

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

County =	Comal
Total project area included in plan =	3.40 acres
Predevelopment impervious area within the limits of the plan =	0.00 acres
Total post-development impervious area within the limits of the plan =	1.88 acres
Total post-development impervious cover fraction =	0.55
P =	33 inches

$L_{R1}$  TOTAL PROJECT = 1690 lbs.

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

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

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

Drainage Basin/Outfall Area No. =	1
Total drainage basin/outfall area =	3.51 acres
Predevelopment impervious area within drainage basin/outfall area =	0.00 acres
Post-development impervious area within drainage basin/outfall area =	1.92 acres
Post-development impervious fraction within drainage basin/outfall area =	0.55
$L_{R1}$ THIS BASIN =	1723 lbs.

**3. Indicate the proposed BMP Code for this basin.**

Proposed BMP = Vegetated Filter Strips  
Removal efficiency = 85 percent

**4. Calculate Maximum TSS Load Removed (L<sub>R</sub>) for this Drainage Basin by the selected BMP Type.**

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

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

$A_i$ =	3.40 acres
$A_p$ =	1.92 acres
$A_p$ =	1.48 acres
$L_R$ =	1886 lbs.

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

Desired  $L_{R1}$  THIS BASIN = 1643 lbs.

$F = 0.87$

**GRADING AND PERMANENT POLLUTION ABATEMENT PLAN**

**OAK TREE ASSISTED LIVING**

NEW BRAUNFELS, TEXAS

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

**SAVANNAH**

**TCEQ-1**

DRAWN BY: M.H.  
CHECKED BY: S.T.S.  
DATE: JANUARY 2013  
JOB NO.: 020212



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

REVISIONS

DESCRIPTION

DATE



T.C.E.Q. GENERAL NOTES  
FOR

OAK TREE ASSISTED LIVING  
NEW BRAUNFELS, TEXAS



DRAWN BY: D.C.  
CHECKED BY: S.T.S.  
DATE: MAY 2013  
JOB NO.: 020212

C3



**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: Oaktree Assisted Living WPAP Modification

**REGULATED ENTITY INFORMATION**

1. The type of project is:  
☐ Residential: # of Lots: \_\_\_\_\_  
☐ Residential: # of Living Unit Equivalents: \_\_\_\_\_  
☒ Commercial  
☐ Industrial  
☐ Other: \_\_\_\_\_
2. Total site acreage (size of property): 3.398
3. Projected population: 65 Residents + 14 Staff Members per 24 Hour Period.
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	54,555	÷ 43,560 =	1.253
Parking	23,766	÷ 43,560 =	0.546
Other paved surfaces	3,702	÷ 43,560 =	0.085
Total Impervious Cover	82,083	÷ 43,560 =	1.884
Total Impervious Cover ÷ Total Acreage x 100 = 55.44%			

5. ☒ **ATTACHMENT A - Factors Affecting Water Quality.** A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.
6. ☒ Only inert materials as defined by 30 TAC §330.2 will be used as fill material.

**FOR ROAD PROJECTS ONLY Not Applicable**

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<sup>2</sup> ÷ 43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.
10. Length of pavement area: \_\_\_\_\_ feet.  
Width of pavement area: \_\_\_\_\_ feet.  
L x W = \_\_\_\_\_ Ft<sup>2</sup> ÷ 43,560 Ft<sup>2</sup>/Acre = \_\_\_\_\_ acres.  
Pavement area \_\_\_\_\_ acres ÷ R.O.W. area \_\_\_\_\_ acres x 100 = \_\_\_\_\_% impervious cover.
11. \_\_\_ A rest stop will be included in this project.  
\_\_\_ A rest stop will **not** be included in this project.
12. \_\_\_ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

#### STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

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

#### WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

14. The character and volume of wastewater is shown below: **(210 gal/day per resident assumed)**

100% Domestic	16,590	gallons/day
___% Industrial	_____	gallons/day
___% Commingled	_____	gallons/day

TOTAL 16,590 gallons/day

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

connected to a proposed SCS.

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

The sewage collection system will convey the wastewater to the New Braunfels Utilities (Gruene Wastewater Treatment Plant). The treatment facility is:

- ☒ existing.
- ☐ proposed.

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

## SITE PLAN REQUIREMENTS

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

17. The Site Plan must have a minimum scale of 1" = 400'.  
Site Plan Scale: 1" = 30'.
18. 100-year floodplain boundaries
- ☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
  - ☒ No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) source(s):

FEMA Map I.D. 48091C0435F, Effective September 2009

19. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.
- ☐ The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.
20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):
- ☐ There are \_\_\_\_\_ (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)
    - ☐ The wells are not in use and have been properly abandoned.
    - ☐ The wells are not in use and will be properly abandoned.
    - ☐ The wells are in use and comply with 16 TAC §76.
    - ☒ There are no wells or test holes of any kind known to exist on the project site.
21. Geologic or manmade features which are on the site:
- ☐ All **sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.
  - ☒ No **sensitive** geologic or manmade features were identified in the Geologic Assessment.
  - ☐ **ATTACHMENT D - Exception to the Required Geologic Assessment.** An exception to the Geologic Assessment requirement is requested and explained at the end of this form.
22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.



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

#### ADMINISTRATIVE INFORMATION

28. X Submit one (1) original and one (4) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
29. X Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **WATER POLLUTION ABATEMENT PLAN APPLICATION FORM** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Shawn T. Schorn, P.E.  
Print Name of Customer/Agent

Shawn T. Schorn  
Signature of Customer/Agent

05/23/13  
Date



## **ATTACHMENT A – FACTORS AFFECTING WATER QUALITY**

The overall construction of this project will consist of site clearing, demolition, site grading, building structures, etc. for the overall 3.398 acre site. Construction activity and the disturbance of the existing terrain and existing site during construction are factors that could affect surface water and groundwater quality. Some possible sources of contamination during construction would be from machinery or equipment in the form of oil or fuel. Containment and cleanup is addressed in the Temporary Pollution Control section of this submittal. To assist in the preservation of the quality of surface water exiting the site during construction, which in turns assists in the preservation the groundwater quality, temporary pollution controls will be installed.

## **ATTACHMENT B – VOLUME AND CHARACTER OF STORMWATER RUNOFF**

The stormwater runoff generated from the site will be primarily from the expanded building with some being generated from the minimal landscape areas. The runoff from the overall proposed site will be generated from rooftops, driveways, parking lots, sidewalks and landscape areas. The nature of the run-off from the site may contain small amounts of oil, suspended solids, fertilizers, and pesticides. This site does take offsite flows that come from an existing TxDOT culvert. Flow from the existing culvert is routed through an existing drainage easement. This flow will be taken underground via a 6'x3' box culvert and will exit the site to another existing drainage easement. The average Pre-Construction runoff coefficient for the site is  $C_{pre} = 0.62$  and the average Phase 2 runoff coefficient for the site is  $C_{post} = 0.68$ . Permanent BMPs for the site will be vegetative filter strips as originally approved.



CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	TANGENT	DELTA	CHORD	CHORD BEARING
'CA'	25.00'	38.67'	24.41'	88°37'33"	34.93'	N 87°41'07" W
'CB'	2914.79'	400.59'	200.62'	07°52'28"	400.28'	N 47°18'34" W

#### IMPERVIOUS COVER SUMMARY

ORIGINAL WPAP FUTURE ADDITIONS = 6,350 sf North End  
6,350 sf South End  
\* PERMITTED EXPANSION = 12,700 sf

PROPOSED ADDITION = 3,745 sf Reduced Future Addition North End  
8,141 sf Proposed addition South End  
814 sf Proposed Parking Addition  
12,700 sf (= PERMITTED EXPANSION)

\* Based on Original WPAP Approved December 9, 1996

#### PARKING REQUIREMENTS

PROPOSED ADDITION = 12 BEDS x 1 1/2 SPACES  
FUTURE ADDITION = 8 BEDS x 1 1/2 SPACES  
5 SPACES REQUIRED

#### GRASS FILTER AREAS

(ORIGINAL WPAP APPROVED DECEMBER 9, 1996)

AREA NO.	SQUARE FEET	ACRES
1	25,760	0.591
2	10,796	0.248
3	17,299	0.397
4	11,126	0.255
5	6036	0.139
6	2302	0.053
7	2761	0.063
8	3921	0.090
9	4025	0.092
TOTAL AREA	84,026	1.928

TOTAL SITE AREA: 3.519 ACRES

#### REVISED GRASS FILTER AREAS

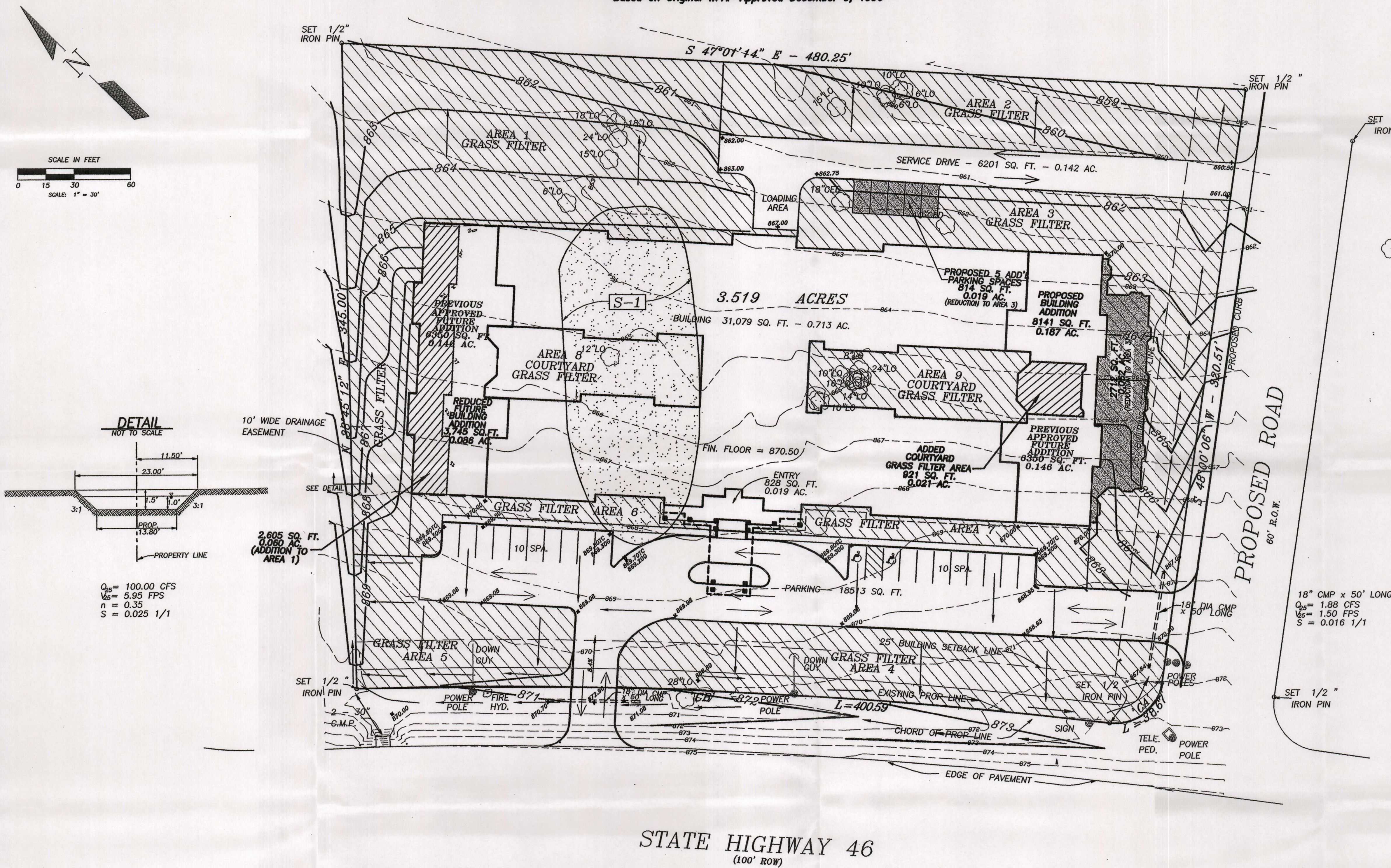
(ADJUSTED TO REFLECT PROPOSED, FUTURE ADDITION AND PARKING)

AREA NO.	SQUARE FEET	ACRES
* 1	28,365	0.651
2	10,796	0.248
* 3	13,773	0.316
4	11,126	0.255
5	6036	0.139
6	2302	0.053
7	2761	0.063
8	3921	0.090
* 9	4946	0.114
TOTAL AREA	84,026	1.928

TOTAL SITE AREA: 3.519 ACRES  
\* AREA MODIFIED

#### LEGEND

- PROPOSED GRADE
- PROPOSED TOP OF CURB AND GUTTER
- EXISTING CONTOURS
- PROPOSED CONTOURS
- SURFACE DRAINAGE FLOW
- EXISTING TREE
- GUY ANCHOR
- POWER POLE
- FIRE HYDRANT
- MINOR CLOSED DEPRESSION SHALL BE FILLED AND COMPACTED WITH A CLEAN CLAY MATERIAL
- PROPOSED BUILDING ADDITION AND PARKING
- PROPOSED ADDED GRASS FILTER



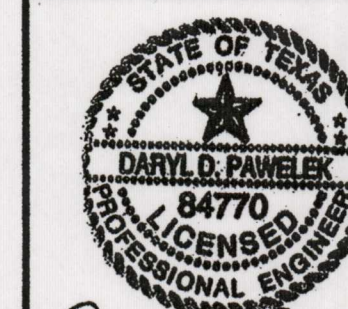
STATE HIGHWAY 46  
(100' ROW)

## REVISED GRADING AND PERMANENT POLLUTION ABATEMENT PLAN OF

### RETIREMENT HOME ON S.H. 46

T.B.M.  
U.S.G.S. T37 - LOCATED AT SOUTHWEST INTERSECTION  
OF LOOP 337 AND STATE HIGHWAY 46. (ELEV. = 851.89')

THESE PLANS ARE FOR PERMITTING PURPOSES ONLY  
\*\*\*NOT FOR CONSTRUCTION\*\*\*



DAVID D. PAWELEK  
1/10/03

SURVEYED BY: DAVID PETEREK 5/9/96

THE Schultz Group, INC.		REVISIONS	
CONSULTING ENGINEERS	LAND SURVEYORS	DATE	DESCRIPTION
P.O. BOX 310483	NEW BRAUNFELS, TEXAS 78131	1/10/03	REVISED BUILDING/PARKING ADDITIONS
(830) 606-3913	FAX (830) 625-2204		
DRAWN BY: M.H.	DATE: JANUARY 2003		
CHECKED BY: D.P.	JOB NO.: 090102/040896		

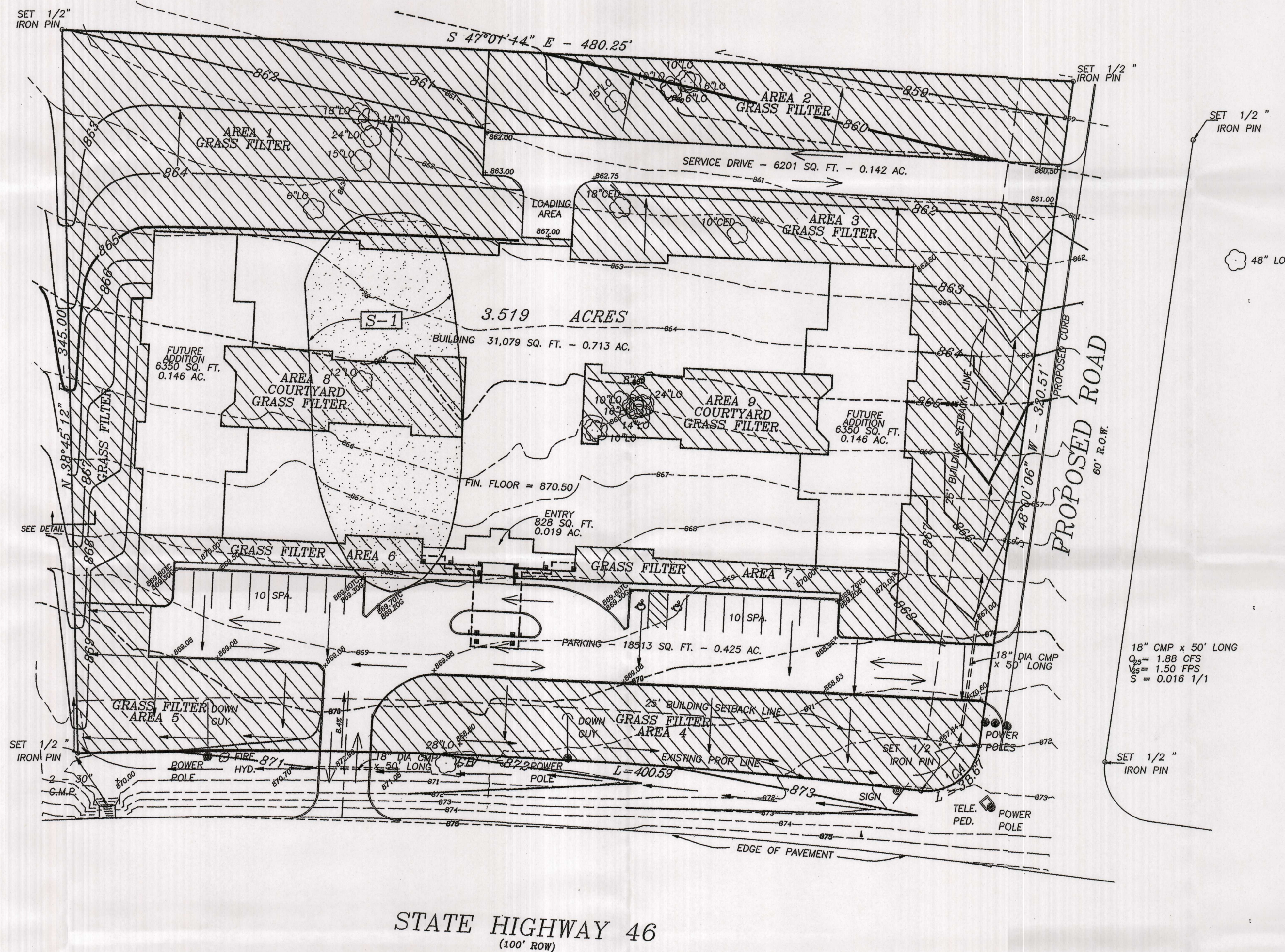
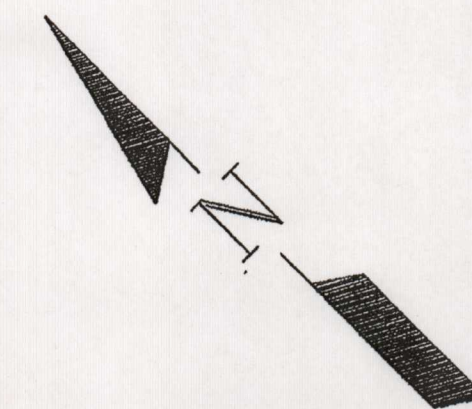
SHEET 1 OF 1



SCALE IN FEET


0 15 30 60

SCALE: 1" = 30'



TOTAL SITE AREA: 3.519 ACRES

### LEGEND

- + 869.70  
+ 869.70TC  
869.20G
- PROPOSED GRADE
- PROPOSED TOP OF CURB  
AND GUTTER
- EXISTING CONTOURS
- 873—
- PROPOSED CONTOURS
- ←
- SURFACE DRAINAGE FLOW
- 
- EXISTING TREE
- ⊥
- GUY ANCHOR
- 
- POWER POLE
- ⊞
- FIRE HYDRANT
- S-1
- MINOR CLOSED DEPRESSION  
SHALL BE FILLED AND COMPACTED  
WITH A CLEAN CLAY MATERIAL

# GRADING AND PERMANENT POLLUTION ABATEMENT PLAN

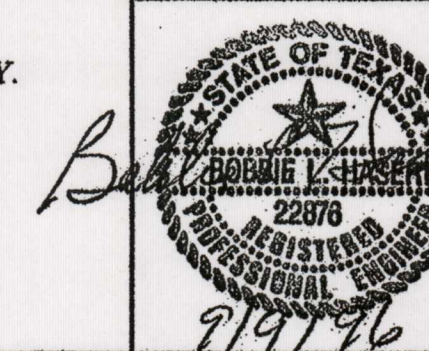
RETIREMENT HOME ON S.H. 46

T.B.M.  
U.S.G.S. T37 - LOCATED AT SOUTHWEST INTERSECTION  
OF LOOP 337 AND STATE HIGHWAY 46. [ELEV. = 851.89']

SURVEYED FOR: CECIL BARCELO

THESE PLANS ARE FOR PERMITTING PURPOSES ONLY  
\*\*\*NOT FOR CONSTRUCTION\*\*\*

SURVEYED BY: DAVID PETEREK 5/9/96



THE **Schultz Group**, INC

E. CONSULTING ENGINEERS LAND SURVEYORS  
P.O. BOX 310483 NEW BRAUNFELS, TEXAS 78131 (210) 606-3913  
FAX (210) 625-2220

DRAWN BY:	J.A.D.	DATE:	09-09-1996
CHECKED BY:	S.E.S.	JOB NO.:	04-08-1996

46

## REVISIONS

DATE	DESCRIPTION
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DATE	DESCRIPTION

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[illegible]

SHEET 2 OF



**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: Oaktree Assisted Living WPAP Modification

**POTENTIAL SOURCES OF CONTAMINATION**

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

1. Fuels for construction equipment and hazardous substances which will be used during construction:
  - ☐ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.
  - ☐ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.
  - ☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An **Aboveground Storage Tank Facility Plan** application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.
  - ☒ Fuels and hazardous substances will not be stored on-site.
2. ☒ **ATTACHMENT A - Spill Response Actions.** A description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is provided at the end of this form.
3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
4. ☒ **ATTACHMENT B - Potential Sources of Contamination.** Describe in an attachment at the end of this form any other activities or processes which may be a potential source of contamination.
  - ☐ There are no other potential sources of contamination.

**SEQUENCE OF CONSTRUCTION**

5. ☒ **ATTACHMENT C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.
6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Bleider's Creek

**TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)**

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



on the site plan.

7. X **ATTACHMENT D - Temporary Best Management Practices and Measures.** A description of the TBMPs and measures that will be used during and after construction are provided at the end of this form. For each activity listed in the sequence of construction, include appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented.
- X TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information has been provided in the attachment at the end of this form
- a. A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
  - b. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
  - c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
  - d. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.
8. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.
- **ATTACHMENT E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is provided at the end of this form. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
- X There will be no temporary sealing of naturally-occurring sensitive features on the site.
9. X **ATTACHMENT F - Structural Practices.** Describe the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains has been avoided.
10. X **ATTACHMENT G - Drainage Area Map.** A drainage area map is provided at the end of this form to support the following requirements.
- For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
  - For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
  - For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.



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

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

#### SOIL STABILIZATION PRACTICES

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

17. X **ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached at the end of this form.
18. X Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
19. X Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

#### ADMINISTRATIVE INFORMATION



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

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

Shawn T. Schorn, P.E.  
Print Name of Customer/Agent

Shawn T. Schorn  
Signature of Customer/Agent

05/23/13  
Date



#### **ATTACHMENT A – SPILL RESPONSE ACTION**

The following includes a copy of Section 1.4.16 of TCEQ “Complying with the Edwards Aquifer Rules Technical Guidance on Best Management Practices”, Pages 1-118 through 1-121, Spill Prevention and Control. The following is made part of the spill response action plan. In addition in the event of a significant/hazardous spill the contractor/construction personnel shall notify TCEQ by telephone as soon as possible and within 24-hours at (512) 339-2929 (Austin) or (210) 490-3096 (San Antonio) between 8 am and 5 pm or after hours contact the Environmental Release Hotline at 1-800-832-8224. The contractor shall have available at the construction site all emergency phone numbers.

#### **ATTACHMENT B – POTENTIAL SOURCE OF CONTAMINATION**

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



### ATTACHMENT C – SEQUENCE OF MAJOR ACTIVITY

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

Sequence No.	Description of Soil Disturbing Activity	Estimated Area to be Disturbed by each Activity (Acres) (Total)
1	Installation of Construction Exit and Erosion Control	1/8-acre
2	Clearing and Grubbing of Detention Pond, channel, and building footprint.	1/2-acres
3	Excavation of Detention Pond and channel/Culvert. Construction of Outfall and Drop Structures	1/2-acres
4	Building Pad Site Preparations and Culvert Installation	1/2-acre
5	Sidewalk Installation	1/8-acre
6	Site Cleanup and Seeding for Erosion Control	1-acre
7	Removal of Construction Exit and Erosion Control	1/8-acre



#### ATTACHMENT D – TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)

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

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

- a. Stormwater that originates on site will be filtered by silt fences and rock berms on the downgradient side of the property. These temporary best management practices will slow the velocity of the water down and the sediment will settle out. It shall be the contractor's responsibility to remove the sediment that builds up after significant rainfall events. There will be no contaminated/polluted runoff coming off this site other than sediment which will be handled with silt fence, rock berms, concrete truck washout pits, and the temporary construction exits.
- b. BMP control measures will prevent pollutants from entering surface streams, sensitive features or the aquifer by capturing the silts and sediment before escaping the construction site. The silt fences and rock berms will slow the velocity of the water down and the sediment will settle out. It shall be the responsibility of the contractor to remove the sediment that builds up after significant rainfall events. The silt fences and rock berms will capture the sediment that would otherwise be conveyed to streams, sensitive features, etc.
- c. There were no sensitive features identified in the geologic assessment. However, if any sensitive features were to be found during construction, all regulated activities near the sensitive feature will be suspended immediately and appropriate action shall be taken per the TCEQ's Water Pollution Abatement Plan General Notes. With regards to measures taken to maintain flow to sensitive features, high service rock berms along with a natural buffer zone around the feature would be implemented in accordance with TCEQ guidelines.



## **ATTACHMENT F – STRUCTURAL PRACTICES**

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

## **ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BMPs**

### **Silt Fence Inspection and Maintenance Guidelines:**

- 1) Inspect all fencing weekly, and after any rainfall.
- 2) Remove sediment when buildup reaches 6 inches, or install a second line of fencing parallel to the old fence.
- 3) Replace any torn fabric or install a second line of fencing parallel to the torn section.
- 4) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, relocate it to a spot where it will provide equal protection, but will not obstruct vehicles.

### **Rock Berm Inspection and Maintenance Guidelines:**

- 1) Inspection shall be made weekly and after each rainfall by the contractor.
- 2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved site and in such a manner as to not contribute to additional siltation.
- 3) Repair any loose wire sheathing.
- 4) The berm shall be reshaped as needed during inspection.
- 5) The berm shall be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- 6) The rock berm shall be left in place until all upstream areas are stabilized and accumulated silt removed.

### **Temporary Construction Entrance/Exit:**

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



Monday, May 13, 2013, 1:16 PM  
File Name: F:\2013\13\_Schultz\AreaMap.dwg

LOT 1  
0.8140 ACRE  
DOC. NO. 201206036822  
OAK RUN COMMERCIAL  
UNIT 6A  
DOC. NO. 201106026043

OAK RUN SUBDIVISION  
UNIT -14-  
DOC. NO. 200606032712

BLOCK 3, LOT 2  
10.111 ACRES  
DOC. NO. 200206028424  
OAK RUN COMMERCIAL RESERVE  
UNIT SEVEN  
VOL. 14, PG. 90

3.398 ACRES  
LOT 1, BLOCK 3  
(3.420 ACRES)  
OAKRUN COMMERCIAL RESERVE  
UNIT 5, LOT 1, BLOCK 3  
VOL. 12, PG. 67

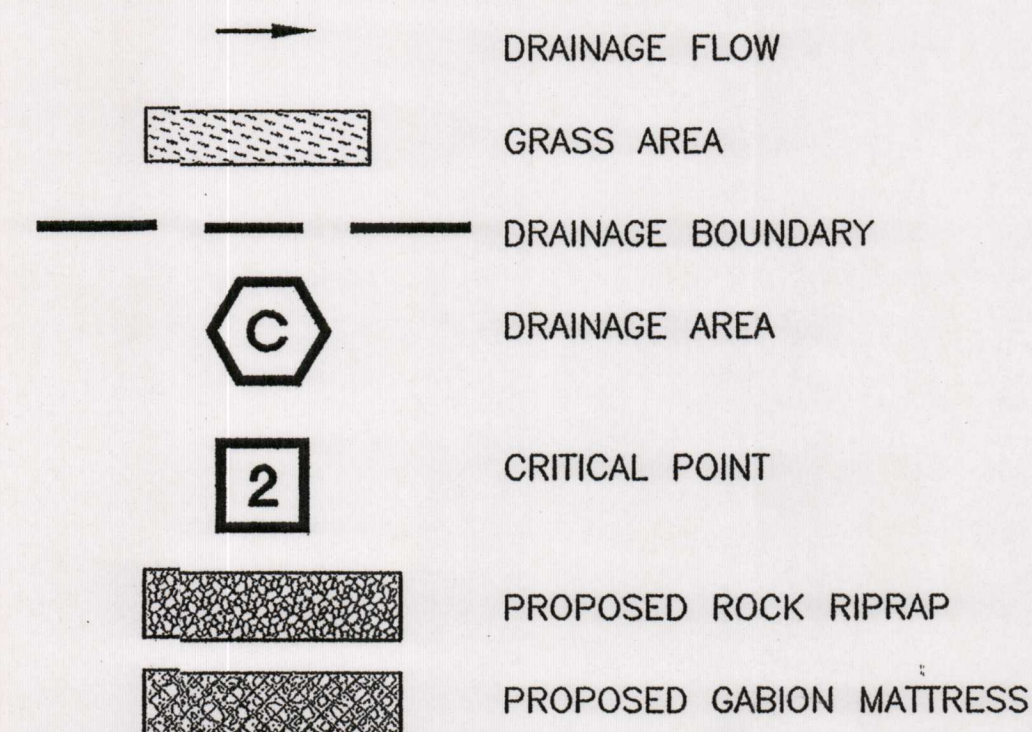
EXISTING 1-STORY  
BUILDING  
44,606 SQ. FT.

1-STORY  
WOOD BUILDING  
F.F.E. = 870.85'

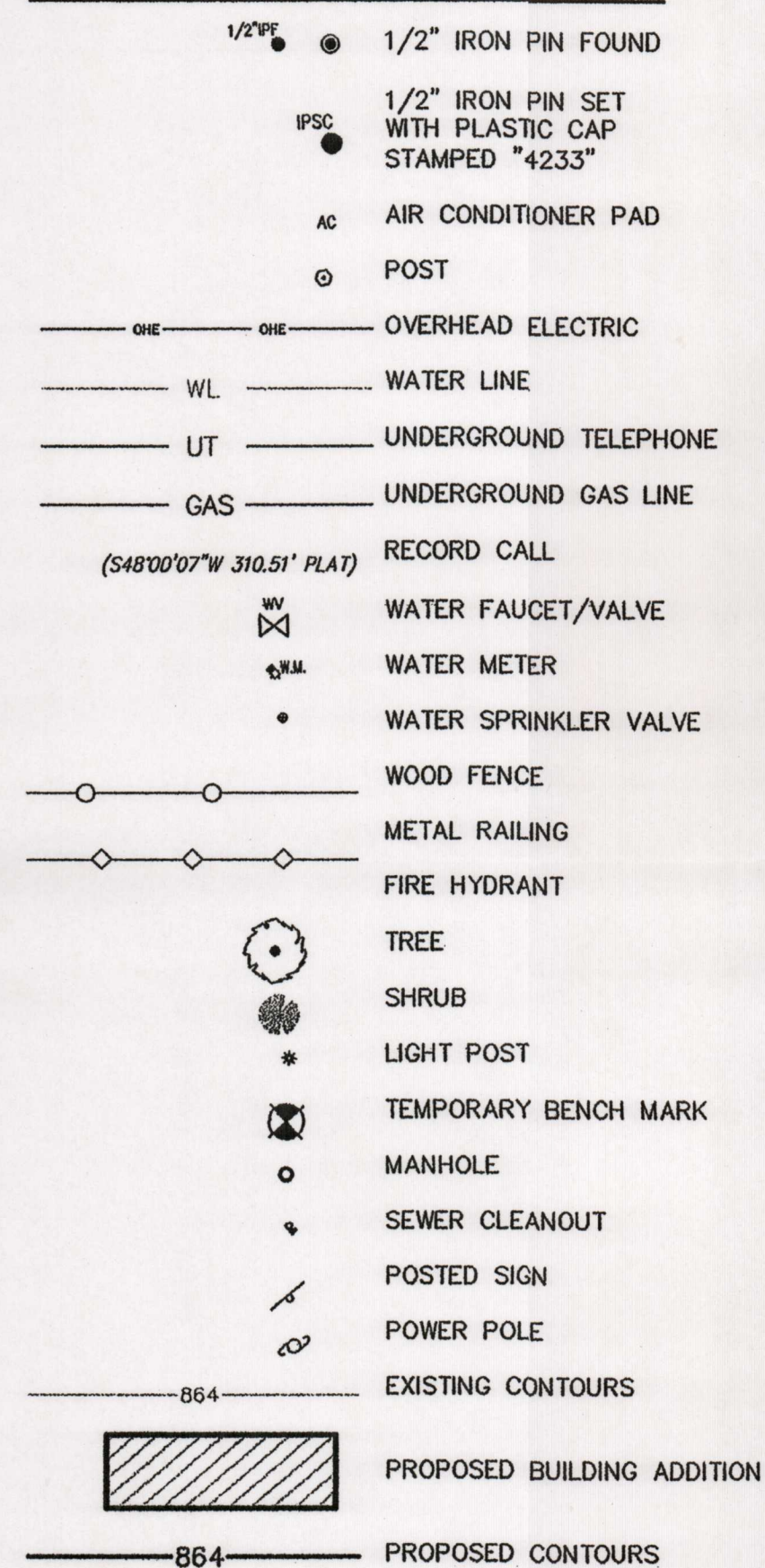
STATE HIGHWAY 46

INDEPENDENCE DRIVE

### EROSION CONTROL LEGEND



### LEGEND



EXISTING CONDITIONS SUMMARY					
DRAINAGE AREA	ACREAGE	2-YEAR (CFS)	10-YEAR (CFS)	25-YEAR (CFS)	100-YEAR (CFS)
A	0.33	1	2	2	3
B	0.42	1	2	3	4
C	0.53	1	3	3	5
D	1.01	3	5	6	9
E	0.89	2	4	5	8
F	0.40	1	2	2	3

PROPOSED CONDITIONS SUMMARY					
DRAINAGE AREA	ACREAGE	2-YEAR (CFS)	10-YEAR (CFS)	25-YEAR (CFS)	100-YEAR (CFS)
A	0.33	1	2	2	3
B	0.42	1	2	3	4
C	0.53	1	3	3	5
D	1.01	3	5	6	9
E	0.89	2	4	5	8
F	0.40	1	2	2	3

EXISTING CONDITIONS CRITICAL POINT SUMMARY				
CRITICAL POINT	2-YEAR (CFS)	10-YEAR (CFS)	25-YEAR (CFS)	100-YEAR (CFS)
1	4	7	9	13
2	3	6	7	10
3	5	10	13	18
4	1	3	3	5
5	1	2	2	3

PROPOSED CONDITIONS CRITICAL POINT SUMMARY				
CRITICAL POINT	2-YEAR (CFS)	10-YEAR (CFS)	25-YEAR (CFS)	100-YEAR (CFS)
1	4	7	9	13
2	3	6	7	11
3	5	9	12	17
4	1	3	3	5
5	1	2	2	3

NOTES:  
1. CALCULATIONS BASED ON ONSITE FLOWS ONLY.

EXISTING COMPOSITE CURVE NUMBER CALCULATIONS						
DRAINAGE AREA	ACREAGE	GRASS CN	IMPERVIOUS CN	GRASS ACREAGE	IMPERVIOUS ACREAGE	COMPOSITE CN
A	0.33	81.5	98	0.10	0.24	95.85
E	0.89	81.5	98	0.61	0.28	86.64
F	0.40	81.5	98	0.31	0.08	82.94

NOTES:  
1. DRAINAGE AREAS B, C, AND D WILL GO UNCHANGED AS A RESULT OF THE PROPOSED EXPANSION.

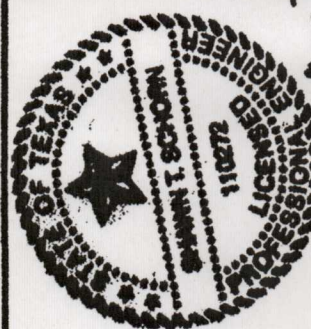
PROPOSED COMPOSITE CURVE NUMBER CALCULATIONS						
DRAINAGE AREA	ACREAGE	GRASS CN	IMPERVIOUS CN	GRASS ACREAGE	IMPERVIOUS ACREAGE	COMPOSITE CN
A	0.33	81.5	98	0.01	0.32	97.50
E	0.89	81.5	98	0.49	0.40	88.93
F	0.40	81.5	98	0.26	0.15	90.95

NOTES:  
1. DRAINAGE AREAS B, C, AND D WILL GO UNCHANGED AS A RESULT OF THE PROPOSED EXPANSION.

Drainage Area				Data			
ID	Existing CN	Proposed CN	Area (ac)	Area (sqm)	Tc (min)	Tc (hr)	Remarks
A	95.85	96.49	0.33	0.0005	10	0.17	Soil Group C & D
B	94.50	94.50	0.42	0.0007	10	0.17	Soil Group C & D
C	94.50	94.50	0.53	0.0008	10	0.17	Soil Group C & D
D	94.50	94.50	1.01	0.0016	10	0.17	Soil Group C & D
E	86.64	88.80	0.89	0.0014	10	0.17	Soil Group C & D
F	82.94	86.05	0.40	0.0006	10	0.17	Soil Group C & D

NOTES:  
Per the Soil Survey of Comal and Hays Counties Texas done by the Soil Conservation Service; the soil group for this property is RUD (Rumple Comfort) which designates soil groups C and D. The average of the two CN numbers both soil groups C and D will be used for this study.

REVISIONS  
DATE  
DESCRIPTION



DRAINAGE AREA MAP

OAK TREE ASSISTED LIVING

NEW BRAUNFELS, TEXAS

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

DRAWN BY: M.H.  
CHECKED BY: S.T.S.  
DATE: JANUARY 2013  
JOB NO.: 020212

C4



**TEMPORARY CONSTRUCTION ENTRANCE/EXIT  
INSPECTION FORM**

GENERAL NOTES

1. STONE SIZE - 4 TO 8 INCHES CRUSHED ROCK.
2. LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN 8 INCHES.
4. WIDTH - NOT LESS THAN 12 FEET.
5. WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO THAT NO SEDIMENT LEAVES THE SITE. ALL UNFILTERED SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE.
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE - ENTRANCE MUST BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

INSPECTION REPORT

DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

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

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_



**SILT FENCE**  
INSPECTION FORM

GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT), WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED AND COMPACTED.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST AND TO WOVEN WIRE, WHICH IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT DOUBLE OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

INSPECTION REPORT

DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

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

MAINTENANCE REQUIRED FOR SILT FENCE:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_



**ROCK BERMS**  
INSPECTION FORM

GENERAL NOTES:

1. WOVEN WIRE SHEATHING SHALL BE PERPENDICULAR TO THE FLOW LINE AND THE SHEATHING SHALL BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERM SHALL HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACEMENT OF THE ROCK ALONG THE SHEATHING SHALL NOT BE LESS THAN 18 INCHES.
4. THE WIRE SHEATHING SHALL BE WRAPPED AROUND THE ROCK AND SECURED WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
5. BERM SHALL BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
6. THE ENDS OF THE BERM SHALL BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

INSPECTION REPORT

DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

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

MAINTENANCE REQUIRED FOR ROCK BERMS:

---

---

---

TO BE PERFORMED BY: \_\_\_\_\_ ON OR BEFORE: \_\_\_\_\_



## ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

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

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





RG-348  
Revised July 2005

# Complying with the Edwards Aquifer Rules Technical Guidance on Best Management Practices

printed on  
recycled paper

Field Operations Division

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



#### 1.4.16 Spill Prevention and Control

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

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

##### ***Education***

- (1) Be aware that different materials pollute in different amounts. Make sure that each employee knows what a “significant spill” is for each material they use, and what is the appropriate response for “significant” and “insignificant” spills. Employees should also be aware of when spill must be reported to the TCEQ. Information available in 30 TAC 327.4 and 40 CFR 302.4.
- (2) Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- (3) Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- (4) Establish a continuing education program to indoctrinate new employees.
- (5) Have contractor’s superintendent or representative oversee and enforce proper spill prevention and control measures.

##### ***General Measures***

- (1) To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- (2) Store hazardous materials and wastes in covered containers and protect from vandalism.
- (3) Place a stockpile of spill cleanup materials where it will be readily accessible.
- (4) Train employees in spill prevention and cleanup.
- (5) Designate responsible individuals to oversee and enforce control measures.
- (6) Spills should be covered and protected from stormwater runoff during rainfall to the extent that it doesn’t compromise clean up activities.
- (7) Do not bury or wash spills with water.



- (8) Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- (9) Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
- (10) Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- (11) Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- (12) Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

#### ***Cleanup***

- (1) Clean up leaks and spills immediately.
- (2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
- (3) Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

#### ***Minor Spills***

- (1) Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- (2) Use absorbent materials on small spills rather than hosing down or burying the spill.
- (3) Absorbent materials should be promptly removed and disposed of properly.
- (4) Follow the practice below for a minor spill:
- (5) Contain the spread of the spill.
- (6) Recover spilled materials.
- (7) Clean the contaminated area and properly dispose of contaminated materials.



### ***Semi-Significant Spills***

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

Spills should be cleaned up immediately:

- (1) Contain spread of the spill.
- (2) Notify the project foreman immediately.
- (3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
- (4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- (5) If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

### ***Significant/Hazardous Spills***

For significant or hazardous spills that are in reportable quantities:

- (1) Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8 AM and 5 PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
- (2) For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
- (3) Notification should first be made by telephone and followed up with a written report.
- (4) The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
- (5) Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sheriff Office, Fire Departments, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: [http://www.tnrcc.state.tx.us/enforcement/emergency\\_response.html](http://www.tnrcc.state.tx.us/enforcement/emergency_response.html)



### ***Vehicle and Equipment Maintenance***

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

### ***Vehicle and Equipment Fueling***

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



**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: Oaktree Assisted Living WPAP Modification

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

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

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3. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.
4. ☒ Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.  
  
☐ This site will be used for low density single-family residential development and has 20% or less impervious cover.  
☐ This site will be used for low density single-family residential development but has more than 20% impervious cover.  
☒ This site will not be used for low density single-family residential development.
5. ☐ N/A The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.



- ☐ **ATTACHMENT A - 20% or Less Impervious Cover Waiver.** This site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is found at the end of this form.
- ☐ This site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- ☐ This site will not be used for multi-family residential developments, schools, or small business sites.

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

- ☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is identified as **ATTACHMENT B** at the end of this form.
- ☐ If no surface water, groundwater or stormwater originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form.
- ☒ If permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form.

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

- ☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is identified as **ATTACHMENT C** at the end of this form.
- ☐ If permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, an explanation is provided as **ATTACHMENT C** at the end of this form.

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

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

- ☒ The permanent sealing of or diversion of flow from a naturally-occurring "sensitive" or "possibly sensitive" feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-occurring "sensitive" or "possibly sensitive" features on this site.

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

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



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

11. X **ATTACHMENT G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is provided at the end of this form. The plan has been prepared and certified by the engineer designing the permanent BMPs and measures. The plan has been signed by the owner or responsible party. The plan includes procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofits as well as a discussion of record keeping procedures.
12. X The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.  
— Pilot-scale field testing (including water quality monitoring) may be required for BMPs that are not contained in technical guidance recognized by or prepared by the executive director.  
— **ATTACHMENT H - Pilot-Scale Field Testing Plan.** A plan for pilot-scale field testing is provided at the end of this form.
13. X **ATTACHMENT I - Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is provided at the end of this form. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity which increase erosion that results in water quality degradation.

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

14. X The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
15. X A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

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

Shawn T. Schorn, P.E.  
Print Name of Customer/Agent

Shawn T. Schorn  
Signature of Customer/Agent

05/23/13  
Date



#### **ATTACHMENT B – BMPs FOR UPGRADIENT STORMWATER**

BMP's for upgradient storm water are not proposed. This site does take offsite flows that come from an existing TxDOT culvert. Flow from the existing culvert is routed through an existing drainage easement. This flow will be taken underground via a 6'x3' box culvert and will exit the site to another existing drainage easement.

#### **ATTACHMENT C – BMPs FOR ONSITE STORMWATER (TCEQ-0600)**

BMPs for onsite stormwater will be vegetative filter strips. All runoff as a result of this modification will be routed to the proposed vegetative filter strips.

#### **ATTACHMENT D – BMPs FOR SURFACE STREAMS**

BMPs for surface streams will be vegetative filter strips. All runoff as a result of this modification will be routed to the proposed vegetative filter strips.

#### **ATTACHMENT I– MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION**

BMPs measures for minimizing surface stream contamination will be vegetative filter strips. All runoff as a result of this modification will be routed to the vegetative filter strips.



Attachment G

Inspection, Maintenance, Repair and Retrofit Plan

Project Name: Oaktree Assisted Living WPAP Modification

Vegetative Filter Strip

Weekly The project site shall be checked for accumulation of debris and trash. The debris and trash shall be removed.

Monthly The vegetation growth in the vegetated filter strip shall be checked. The growth shall not exceed 18 inches in height.

Quarterly The level of accumulated silt shall be checked. If depth of silt exceeds 6 inches, it shall be removed and disposed of "properly".

Annually The vegetation shall be inspected and additional native grasses planted as necessary.

After Rainfall To maintain vegetative cover over this area, the area shall be checked after each rainfall occurrence to insure that the area drains within 6 hours after the storm is over. If it does not drain within this time, corrective measures will be instituted.

Following any required maintenance, the surface areas shall be raked and leveled to restore the system to its designed condition.

"Proper" disposal of accumulated silt shall be accomplished by following the TCEQ guidelines and specifications.

An amended copy of this document shall be provided to the TCEQ within thirty (30) days of any changes to the following information.

Responsible Party for Maintenance:  
Entity  
Address:  
City, State Zip:  
Telephone Number:

Cecil Barcelo  
Oaktree Assisted Living Facility  
411 Alabama  
League City, TX. 77573  
(281) 332-4189

Signature of Responsible Party:



Date:

5/23/12



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

I \_\_\_\_\_ Cecil Barcelo \_\_\_\_\_  
Print Name

\_\_\_\_\_ CEO \_\_\_\_\_  
Title - Owner/President/Other

of \_\_\_\_\_ Oak Tree Ltd. Partnership \_\_\_\_\_  
Corporation/Partnership/Entity Name

have authorized \_\_\_\_\_ Shawn T. Schorn, P.E. \_\_\_\_\_  
Print Name of Agent/Engineer

of \_\_\_\_\_ The Schultz Group, Inc. \_\_\_\_\_  
Print Name of Firm

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

I also understand that:

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



SIGNATURE PAGE:

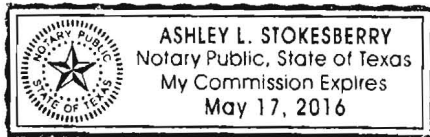
Cecil Barcelo  
Applicant's Signature

6-4-13  
Date

THE STATE OF Texas §  
County of Galveston §

BEFORE ME, the undersigned authority, on this day personally appeared Cecil Barcelo 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 4 day of June, 2013.



Ashley L. Stokesberry  
NOTARY PUBLIC  
Ashley L. Stokesberry  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: May 17, 2016



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

NAME OF PROPOSED REGULATED ENTITY: Oaktree Assisted Living WPAP Modification  
REGULATED ENTITY LOCATION: 1750 W. Hwy 46, New Braunfels, TX. 78130  
NAME OF CUSTOMER: Oaktree Assisted Living  
CONTACT PERSON: Shawn T. Schorn PHONE: (830) 606-3913  
(Please Print)

Customer Reference Number (if issued): CN 601401920 (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**      ☒ **San Antonio Regional Office**  
☐ **Mailed to TCEQ:**      ☐ **Overnight Delivery to TCEQ:**  
TCEQ – Cashier      TCEQ - Cashier  
Revenues Section      12100 Park 35 Circle  
Mail Code 214      Building A, 3rd Floor  
P.O. Box 13088      Austin, TX 78753  
Austin, TX 78711-3088      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	3.398 Acres	\$4,000.00
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Shawn T. Schorn  
Signature

05/23/13  
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	\$1,500
	5 < 10	\$3,000
	10 < 40	\$4,000
	40 < 100	\$6,500
	100 < 500	\$8,000
	≥ 500	\$10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1	\$3,000
	1 < 5	\$4,000
	5 < 10	\$5,000
	10 < 40	\$6,500
	40 < 100	\$8,000
	≥ 100	\$10,000

**Organized Sewage Collection Systems and Modifications**

PROJECT	COST PER LINEAR FOOT	MINIMUM FEE MAXIMUM FEE
Sewage Collection Systems	\$0.50	\$650 - \$6,500

**Underground and Aboveground Storage Tank System Facility Plans and Modifications**

PROJECT	COST PER TANK OR PIPING SYSTEM	MINIMUM FEE MAXIMUM FEE
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500

**Exception Requests**

PROJECT	FEE
Exception Request	\$500

**Extension of Time Requests**

PROJECT	FEE
Extension of Time Request	\$150



OAK TREE ASSISTED LIVING

1750 HIGHWAY 46 WEST PH. 830-608-9222  
NEW BRAUNFELS, TEXAS 78132

FIRST COMMERCIAL BANK  
NEW BRAUNFELS  
830-625-2661

1656 W. STATE HIGHWAY 46  
NEW BRAUNFELS, TEXAS 78132

3478 T

88-1222

1149

Security features  
included.  
Details on back.

PROTECTED 4000 DOLLARS  
P48389A8

PAY

TO THE  
ORDER OF

Texas Commission of Environmental Quality

DATE

CHECK NUMBER

DOLLARS

AMOUNT

5-17-13

3478T

4,000.00

OAK TREE ASSISTED LIVING

Cecilia Bancelo MP

CK253738-11-12

⑈003478⑈ ⑆114912220⑆ 033003726⑈





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)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
2. Attachments Describe Any Attachments: (ex. Title V Application, Waste Transporter Application, etc.)		
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Oaktree Assisted Living WPAP Modification		
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 601401920		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:							
<input checked="" type="checkbox"/> Owner	<input checked="" type="checkbox"/> Operator	<input checked="" type="checkbox"/> Owner & Operator		<input type="checkbox"/> Other: _____			
<input type="checkbox"/> Occupational Licensee	<input type="checkbox"/> Responsible Party	<input type="checkbox"/> Voluntary Cleanup Applicant					
7. General Customer Information							
<input type="checkbox"/> New Customer		<input type="checkbox"/> Update to Customer Information		<input type="checkbox"/> Change in Regulated Entity Ownership			
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State)				<input checked="" type="checkbox"/> No Change**			
**If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.							
8. Type of Customer:		<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	<input type="checkbox"/> Sole Proprietorship- D.B.A			
<input type="checkbox"/> City Government		<input type="checkbox"/> County Government	<input type="checkbox"/> Federal Government	<input type="checkbox"/> State Government			
<input type="checkbox"/> Other Government		<input type="checkbox"/> General Partnership	<input type="checkbox"/> Limited Partnership	<input type="checkbox"/> Other: _____			
9. Customer Legal Name (If an individual, print last name first: ex: Doe, John)				If new Customer, enter previous Customer below		End Date:	
10. Mailing Address:							
City		State		ZIP		ZIP + 4	
11. Country Mailing Information (if outside USA)				12. E-Mail Address (if applicable)			
13. Telephone Number		14. Extension or Code		15. Fax Number (if applicable)			
( ) -				( ) -			
16. Federal Tax ID (9 digits)		17. TX State Franchise Tax ID (11 digits)		18. DUNS Number (if applicable)		19. TX SOS Filing Number (if applicable)	
20. Number of Employees				21. Independently Owned and Operated?			
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher				<input type="checkbox"/> Yes <input type="checkbox"/> 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)			
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information <input type="checkbox"/> 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)			
Oaktree Assisted Living WPAP Modification			



24. Street Address of the Regulated Entity: (No P.O. Boxes)	1750 West State Hwy 46							
	City	New Braunfels	State	TX	ZIP	78130	ZIP + 4	4750
25. Mailing Address:	411 Alabama Ave.							
	City	League City	State	TX	ZIP	77573	ZIP + 4	2615
26. E-Mail Address:								
27. Telephone Number			28. Extension or Code		29. Fax Number (if applicable)			
( 830 ) 608-9222					( ) -			
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)		
8051		8052		623311		623110		
34. What is the Primary Business of this entity? (Please do not repeat the SIC or NAICS description.)								
Assisted Living Facility								

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

35. Description to Physical Location:	Located northwest and adjacent to the intersection of SH 46 and Independence Drive in New Braunfels, Texas.				
36. Nearest City	County		State	Nearest ZIP Code	
New Braunfels	Comal		TX	78132	
37. Latitude (N) In Decimal:	29.718098		38. Longitude (W) In Decimal:	-98.160846	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	43	5.1528	-98	9	39.0456

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.

<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Industrial Hazardous Waste	<input type="checkbox"/> Municipal Solid Waste
		WPAP Modification		
<input type="checkbox"/> New Source Review – Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS	<input type="checkbox"/> Sludge
<input type="checkbox"/> Stormwater	<input type="checkbox"/> Title V – Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil	<input type="checkbox"/> Utilities
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

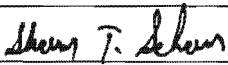
#### SECTION IV: Preparer Information

40. Name:	Shawn T. Schorn, P.E.		41. Title:	Project Engineer	
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address		
( 830 ) 606-3913		( 830 ) 625-2204	shawns@schultzgroupinc.com		

#### SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 9 and/or as required for the updates to the ID numbers identified in field 39.

(See the Core Data Form instructions for more information on who should sign this form.)

Company:	The Schultz Group, Inc.		Job Title:	Project Engineer	
Name (In Print):	Shawn T. Schorn, P.E.			Phone:	( 830 ) 606-3913
Signature:				Date:	05/23/13