TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 15, 2010

RECEIVED
DEC 2 0 2010
COUNTY ENGINEER

Mr. Dwayne Kostiha
Austaco, LTD.
500 N. Capital of Texas Hwy, Bldg 2
Austin, Texas 78746

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Taco Bell; Located 1838 Highway 46 West; New Braunfels, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer
Edwards Aquifer Protection Program ID No. 2948.00; Investigation No. 870155;
Regulated Entity No. RN1060125537

Dear Mr. Kostiha:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Application for the above-referenced project submitted to the San Antonio Regional Office by Hagood Engineering Associates on behalf of Austaco, LTD on October 6, 2010. Final review of the WPAP was completed after additional material was received on November 30, 2010, and December 9, 2010. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately .97 acres. It will include a taco bell, right-of-way, driveway and a water quality pond. The impervious cover will be 0.75 acres (77.3 percent). Project wastewater will be disposed of by conveyance to the existing Gruene Water Recycling Center owned by the City of New Braunfels.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a sedimentation/filtration basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer

Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 673 pounds of TSS generated from the 0.75 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

Drainage Area/Basin	Total Area (acres)	Imp. Cover (acres)	Calc. Min. Capture Volume (ft^3)	Design Capture Volume (ft^3)	Calc. Min. Filter Area (ft^2)	Design Filter Area (ft^2)	Min. TSS Removal (lb/yr)	Design TSS Removal (lb/yr)
Basin	0.97	0.75	3107	4163	311	494	673	766
Open Space	0.220	-	-	-	-	-	-	-
Uncaptured	0.029	0.029	133	-	-	-	-	-
Totals	0.999	0.779	3,240				673	766

The one sedimentation/filtration basins will utilize a clay liner. The filtration systems of Basin 1 will consist of 3,000 square feet of sand (2,319 square feet required) with an ASTM rating of C-33, which is 18 inches thick, and an underdrain piping system covered with a minimum two inch gravel layer.

GEOLOGY

According to the geologic assessment included with the application, the site is located on the Edwards Aquifer recharge zone, specifically on the Person Formation of the Edwards Group. According to the geologic assessment no sensitive man-made or geologic features were found on-site. The San Antonio Regional Office site assessment conducted on November 16, 2010 revealed no new features and is in general agreement with the submitted geologic assessment.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

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

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of

the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

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

6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

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

9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

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

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

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

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

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

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

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

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

<u>After Completion of Construction:</u>

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

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

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

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

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

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

Sincerely,

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

MRV/SMT/eg

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

cc: Mr. Erickson Mendoza, Hagood Engineering Associates
Mr. Jim Klein, P.E., City of New Braunfels
Mr. Tom Hornseth, P.E., Comal County
Mr. Karl J. Dreher, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

For Comm'l Co.

From: "John Moy" <johnmoy711@sbcglobal.net>
To: "John Barry" <jbarry@tceq.state.tx.us>
Date: 12/13/2010 3:09 PM
Subject: Oak Run Commercial, Unit 2 - SCS - Revised Sheet.
Attachments: F-0582_SCS_application-Sheet2.pdf; 2947.00 PAP-approval.pdf

Mr. Barry,

Attached is a .pdf of the revised Sheet 2 of Form 0582, which now reflects the approved WPAP date of 11/24/2010 for Item No. 6. I also enclosed the approval letter just because it requested it to be attached.

Please let me know that you received this info. Thanks Mr. Barry.

John J. Moy Jr., P.E.

Pawelek & Moy, Inc.

130 W. Jahn Street

New Braunfels, Texas 78130

phone: 830-629-2563

fax: 830-629-2564

email: <mailto:johnmoy711@sbcglobal.net> johnmoy711@sbcglobal.net

website: <http://www.pm-engineers.com/> pm-engineers.com

5. Existing and anticipated infiltration/inflow is 4,725 gallons/day. This will be addressed by utilizing watertight manholes, rubber gaskets, PVC compression joints or high compression polyurethane connectors to prevent infiltration in accordance with TCEQ and NBU guidelines.

6. A Water Pollution Abatement Plan (WPAP) is required for construction of any associated commercial, industrial or residential project located on the Recharge Zone.

X The WPAP application for this development was approved by letter dated 11/24/10. A copy of the approval letter is attached at the end of this application.
__ The WPAP application for this development was submitted to the TCEQ on _____, but has not been approved.
__ A WPAP application is required for an associated project, but it has not been submitted.
__ There is no associated project requiring a WPAP application.

7. Pipe description:

Pipe Diameter (Inches)	Linear Feet[1]	Pipe Material[2]	Specifications[3]
8"	667.14	PVC, SDR 26	ASTM D3034 &
			ASTM D3212
			PVC Cell Cl.12454
			Per ASTM 1754
Total Linear Feet			

1) Include stub-outs. Do not include private service laterals.
2) If PVC, state SDR value.
3) ASTM / ANSI / AWWA specification and class numbers should be included.

8. The following Wastewater Treatment Plant (WWTP) Gruene Wastewater Treatment Plant (name) will receive project wastewater for treatment and disposal. This WWTP is an **EXISTING/PROPOSED** (circle one) facility.

9. All components of this sewage collection system will comply with:

X The ~~City of~~ New Braunfels Utilities standard specifications. (See Spec's Attached)
__ Other. Specifications are provided directly behind this page.

10. X No force main(s) and/or lift station(s) are associated with this sewage collection system.
__ A force main(s) and/or lift station(s) is associated with this sewage collection system and the Lift Station/Force Main System application is included with this application.

ALIGNMENT

11. X There are no deviations from uniform grade in this sewage collection system without manholes and with open cut construction.

12. N/A Joint Deflection - The maximum allowable joint deflection is the lesser of the following three alternatives:
__ equal to 5°; or
__ 80% of the manufacturer's recommended maximum deflection; or
__ 80% of the appropriate ASTM, AWWA, ANSI or nationally-established standard for joint deflection.

13. X There are no deviations from straight alignment in this sewage collection system without manholes.
N/A **ATTACHMENT B - Justification and Calculations for Deviation in Straight Alignment Without Manholes.** Justification for deviations from straight alignment in this sewage collection system without manholes is provided in **ATTACHMENT B** at the

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 24, 2010

Mr. Edward Badouh, Jr.
New Braunfels Joint Venture
P.O. Box 311240
New Braunfels, TX 78131-1240

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Oak Run Commercial Unit 2 Infrastructure; Located on the northeast side of US Highway 46 and Oak Sprawl; New Braunfels, Texas
TYPE OF PLAN: Request for the Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer;
Edwards Aquifer Protection Program San Antonio File No. 2947.00; Investigation No. 865394; Regulated Entity No. RN106003163

Dear Mr. Badouh:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP Application for the above-referenced project submitted to the San Antonio Regional Office by Pawelek & Moy, Inc. on behalf of New Braunfels Joint Venture on September 17, 2010. Final review of the WPAP was completed after additional material was received on November 24, 2010. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 6.278 acres. It will include the construction of a cross access drive, a storm water detention pond with associated stormdrains, and utility lines. The impervious cover will be 0.13 acres (2.07 percent). No wastewater is generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a vegetated filter strip, designed

using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 117 pounds of TSS generated from the 0.13 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The vegetated filter strip will consist of the following:

- The engineered vegetated filter strips will extend along the entire length of the contributing area;
- The slope will not exceed 20%;
- The minimum dimension of the filter strip (in the direction of the flow) will not be less than 15 feet;
- The maximum width of (in the direction of the flow) of the contributing impervious area will not exceed 72 feet;
- The minimum vegetated cover will be 80%;
- The contributing area to the filter strip will be relatively flat so that runoff is distributed evenly to the vegetated areas without the use of a level spreader;
- The vegetated filter strip will be free of gullies or rills that can concentrate overland flow.

GEOLOGY

According to the geologic assessment included with the application, the site is within the Cyclic and Marine Member of the Person Formation. One man-made feature was reported and assessed as not sensitive. The San Antonio Regional Office site assessment conducted on November 16, 2010 revealed no additional features and that the site is generally as described by the geologic assessment.

SPECIAL CONDITIONS

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

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

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.

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

Prior to Commencement of Construction:

4. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

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

6. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

7. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

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

9. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

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

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

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

13. Zero wells exist on site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

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

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

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

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

After Completion of Construction:

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

19. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without

limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

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

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

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

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

Sincerely,

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

MRV/JA/eg

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

cc: Mr. John J. Moy, Jr., P.E., Pawelek & Moy, Inc.
Mr. James C. Klein, P.E., City of New Braunfels
Mr. Thomas H. Hornseth, P.E., Comal County
Mr. Karl J. Dreher, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 13, 2010

Mr. Edward Badouh III
New Braunfels Investment Joint Venture
P.O. Box 311240
New Braunfels, Texas 78131

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Oak Run Commercial Unit 2; Located on the northeast corner of Highway 46 and Oak Sprawl, New Braunfels, Texas
TYPE OF PLAN: Request for the Approval of an Organized Sewer Collection System (SCS) Plan; 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer and Chapter 217 Design Criteria for Domestic Wastewater Systems;
Edwards Aquifer Protection Program (EAPP) San Antonio File No. 2947.01
Regulated Entity No: RN106003163
Investigation No. 870160
Additional ID No. 13-10100701

Dear Mr. Badouh:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the organized sewage collection system plans and specifications of the referenced project submitted to this office on behalf of New Braunfels Investment Joint Venture by Pawelek & Moy, Inc. (P & M) on October 7, 2010. Final review of the SCS was completed after additional material was received on December 9, 2010, and December 13, 2010. As presented to the TCEQ, the construction documents were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213 and Chapter 217. Therefore, based on the Texas Licensed Professional Engineer's concurrence of compliance, the planning materials for construction of the proposed sewage collection system and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The EAPP water pollution abatement plan (WPAP) for this site (EAPP San Antonio File No. 2947.00) was approved on November 24, 2010.

PROJECT DESCRIPTION

The proposed SCS consists of approximately 667 linear feet of 8-inch diameter PVC SDR 26 115-psi stiffness, pipe and joints (ASTM D3034, ASTM D3212), manholes, laterals, and appropriate appurtenances. The proposed sewage collection system will provide disposal service for commercial development.

The SCS will be connected to existing New Braunfels Utilities wastewater lines for conveyance to the Gruene Wastewater Treatment Plant for treatment and disposal. The project is located within the City of New Braunfels and will conform to all applicable codes, ordinances, and requirements of the City of New Braunfels and NBU.

GEOLOGY

The geologic assessment states that the site is covered by the Cyclic and Marine Member of the Cretaceous Edwards Person Limestone. Two manmade features, a sanitary sewer manhole and a storm drain collector, were identified within 50 feet of the proposed SCS location and assessed as not sensitive.

A site investigation was conducted on December 13, 2010, by John Barry of the San Antonio Regional Office, accompanied by John Moy of P & M. The site of the proposed SCS was found generally as described in the application.

SPECIAL CONDITIONS

I. It is emphasized that where wastewater lines must bridge faults, caverns, sinkholes, or solution features the lines shall be constructed in a manner that will maintain the structural integrity of the pipe. When such sensitive features are encountered, 30 TAC §213.5(f)(2) requires that, all regulated activities near the feature must be immediately suspended and the owner/developer shall immediately notify the San Antonio Regional Office. Additionally, when such geologic features are encountered which are bridged by construction, the location and extent of those features must be assessed by a geologist and must be reported to the San Antonio Regional Office in writing within two working days of discovery as required by 30 TAC §213.5(c)(3)(K). Construction may not resume in the area of the feature until the executive director has reviewed and approved the methods proposed to protect the aquifer from any potential adverse impacts. See Standard Condition 10 below.

II. By the responsible Engineer's dated signature and seal on the submitted Engineering Design Report attached to this application, all the information therein accurately reflects the information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer in accordance with the requirements of 30 TAC §213.5(c) and Chapter 217.

III. Because this proposed SCS may be subject to further review by other entities, any resulting change to the SCS as hereby approved must be addressed to the TCEQ as a possible plan modification. See Standard Condition 5 below.

IV. The applicant shall provide all contractors with a copy of pages 1-35 through 1-60 of TCEQ TGM RG-348 (2005) as a guide for soil stabilization practices and assure that any temporary soil stabilization is performed in accordance with these practices.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.

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

Prior to Commencement of Construction:

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

5. Modification to the activities described in the referenced SCS application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved application, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213 and Chapter 217. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity, upon which that person or entity shall assume responsibility for all provisions and conditions of this approval.

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

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

11. The following records shall be maintained by the applicant and made available to the executive director upon request: the dates trenching 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 and completed.

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

13. Intentional discharges of sediment laden stormwater during construction are not allowed. If dewatering of excavated areas becomes necessary, the discharge will be filtered through appropriately selected temporary best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.

14. No part of the system shall be used as a holding tank for a pump-and-haul operation.

After Completion of Construction:

15. Certification by a Texas Licensed Professional Engineer of the testing of sewage collection systems required by 30 TAC Chapter 213 and Chapter 217 shall be submitted to the San Antonio Regional Office within 30 days of test completion and prior to the new sewage collection system being put into service. The certification should include the project name as it appeared on the approved application, the program ID number, and

two copies of a site plan sheet(s) indicating the wastewater lines that were tested and are being certified as complying with the appropriate regulations.

16. Every five years after the initial certification, the sewage collection system shall be retested. Any lines that fail the test must be repaired and retested. Certification that the system continues to meet the requirements of 30 TAC Chapter 213 and Chapter 217 shall be submitted to the San Antonio Regional Office. The certification should include the project name as it appeared on the approved application, the program ID number and two copies of a site plan sheet(s) indicating the wastewater lines that were tested and are being certified as complying with the appropriate regulations.

17. If ownership of this organized sewage collection system is legally transferred (e.g., developer to city or Municipal Utility District), the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

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

If you have any questions or require additional information, please contact John Barry of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4057.

Sincerely,

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

MRV/JB/eg

cc: Mr. John J. Moy, Pawelek & Moy, Inc.
Mr. Ian Taylor, New Braunfels Utilities
Mr. Thomas Hornseth, P.E., Comal County Engineer
Mr. Karl Dreher, Edwards Aquifer Authority
TCEQ Central Records, MC 212

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 13, 2010

Mr. Edward Badouh III
New Braunfels Investment Joint Venture
P.O. Box 311240
New Braunfels, Texas 78131

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Oak Run Commercial Unit 2; Located on the northeast corner of Highway 46 and Oak Sprawl, New Braunfels, Texas
TYPE OF PLAN: Request for the Approval of an Organized Sewer Collection System (SCS) Plan; 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer and Chapter 217 Design Criteria for Domestic Wastewater Systems;
Edwards Aquifer Protection Program (EAPP) San Antonio File No. 2947.01
Regulated Entity No: RN106003163
Investigation No. 870160
Additional ID No. 13-10100701

Dear Mr. Badouh:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the organized sewage collection system plans and specifications of the referenced project submitted to this office on behalf of New Braunfels Investment Joint Venture by Pawelek & Moy, Inc. (P & M) on October 7, 2010. Final review of the SCS was completed after additional material was received on December 9, 2010, and December 13, 2010. As presented to the TCEQ, the construction documents were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213 and Chapter 217. Therefore, based on the Texas Licensed Professional Engineer's concurrence of compliance, the planning materials for construction of the proposed sewage collection system and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The EAPP water pollution abatement plan (WPAP) for this site (EAPP San Antonio File No. 2947.00) was approved on November 24, 2010.

PROJECT DESCRIPTION

The proposed SCS consists of approximately 667 linear feet of 8-inch diameter PVC SDR 26 115-psi stiffness, pipe and joints (ASTM D3034, ASTM D3212), manholes, laterals, and appropriate appurtenances. The proposed sewage collection system will provide disposal service for commercial development.

The SCS will be connected to existing New Braunfels Utilities wastewater lines for conveyance to the Gruene Wastewater Treatment Plant for treatment and disposal. The project is located within the City of New Braunfels and will conform to all applicable codes, ordinances, and requirements of the City of New Braunfels and NBU.

GEOLOGY

The geologic assessment states that the site is covered by the Cyclic and Marine Member of the Cretaceous Edwards Person Limestone. Two manmade features, a sanitary sewer manhole and a storm drain collector, were identified within 50 feet of the proposed SCS location and assessed as not sensitive.

A site investigation was conducted on December 13, 2010, by John Barry of the San Antonio Regional Office, accompanied by John Moy of P & M. The site of the proposed SCS was found generally as described in the application.

SPECIAL CONDITIONS

I. It is emphasized that where wastewater lines must bridge faults, caverns, sinkholes, or solution features the lines shall be constructed in a manner that will maintain the structural integrity of the pipe. When such sensitive features are encountered, 30 TAC §213.5(f)(2) requires that, all regulated activities near the feature must be immediately suspended and the owner/developer shall immediately notify the San Antonio Regional Office. Additionally, when such geologic features are encountered which are bridged by construction, the location and extent of those features must be assessed by a geologist and must be reported to the San Antonio Regional Office in writing within two working days of discovery as required by 30 TAC §213.5(c)(3)(K). Construction may not resume in the area of the feature until the executive director has reviewed and approved the methods proposed to protect the aquifer from any potential adverse impacts. See Standard Condition 10 below.

II. By the responsible Engineer's dated signature and seal on the submitted Engineering Design Report attached to this application, all the information therein accurately reflects the information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer in accordance with the requirements of 30 TAC §213.5(c) and Chapter 217.

III. Because this proposed SCS may be subject to further review by other entities, any resulting change to the SCS as hereby approved must be addressed to the TCEQ as a possible plan modification. See Standard Condition 5 below.

IV. The applicant shall provide all contractors with a copy of pages 1-35 through 1-60 of TCEQ TGM RG-348 (2005) as a guide for soil stabilization practices and assure that any temporary soil stabilization is performed in accordance with these practices.

STANDARD CONDITIONS

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8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213 and Chapter 217. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity, upon which that person or entity shall assume responsibility for all provisions and conditions of this approval.

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14. No part of the system shall be used as a holding tank for a pump-and-haul operation.

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If you have any questions or require additional information, please contact John Barry of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4057.

Sincerely,

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

MRV/JB/eg

cc: Mr. John J. Moy, Pawelek & Moy, Inc.
Mr. Ian Taylor, New Braunfels Utilities
Mr. Thomas Hornseth, P.E., Comal County Engineer
Mr. Karl Dreher, Edwards Aquifer Authority
TCEQ Central Records, MC 212

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 7, 2010

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: Taco Bell, located 1838 Highway 46 West, 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.: 2948.00

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 November 6, 2010.

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

Sincerely

Todd Jones
Water Section Work Leader
San Antonio Regional Office

TJ/eg

№2948 00

HAGOOD
ENGINEERING ASSOCIATES

Registration No. F-12709

WATER POLLUTION ABATEMENT PLAN

FOR

TACO BELL

1838 State Hwy 46 West
New Braunfels, Texas 78132

APPLICANT:
AUSTACO, Inc.
500 N. Capital of Texas Hwy, Bldg 2
Austin, Texas 78746

Submitted To:
Texas Commission on Environmental Quality
Region 13 Office
14250 Judson Road
San Antonio, Texas 78233

October 2010

TCEQ

TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

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

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

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

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

☐ Yes ☒ No

3. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	4. Regulated Entity Reference Number *(if issued)*
CN		RN

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy)

6. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check only one of the following:*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

7. General Customer Information

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State) ☐ No Change**

If "No Change" and Section I is complete, skip to Section III – Regulated Entity Information.

8. Type of Customer:	☐ Corporation	☐ Individual	☐ Sole Proprietorship- D.B.A
☐ City Government	☐ County Government	☐ Federal Government	☐ State Government
☐ Other Government	☐ General Partnership	☐ Limited Partnership	☒ Other: Limited Company

9. Customer Legal Name *(If an individual, print last name first: ex: Doe, John)* *If new Customer, enter previous Customer below* *End Date:*

Austaco, LTD.

10. Mailing Address: 500 N. Capital of Texas Hwy, Bldg 2

City	State	ZIP	ZIP + 4
Austin	TX	78746	3334

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

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

DKostiha@austaco.com

13. Telephone Number	14. Extension or Code	15. Fax Number *(if applicable)*
(512) 327-4654		(512) 327-4027

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)*
174160911	17416091175		0800534453

20. Number of Employees

☐ 0-20 ☐ 21-100 ☒ 101-250 ☐ 251-500 ☒ 501 and higher

21. Independently Owned and Operated?

☐ Yes ☒ No

SECTION III: Regulated Entity Information

22. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information ☐ No Change** *(See below)*

**If "NO CHANGE" is checked and Section I is complete, skip to Section IV, Preparer Information.

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

Taco Bell @ 1838 State Hwy 46

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*	1838 State Hwy 46 West							
	City	New Braunfels	**State**	TX	**ZIP**	78132	**ZIP + 4**	UND
25. Mailing Address:								
	City		**State**		**ZIP**		**ZIP + 4**	

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

30. Primary SIC Code (4 digits)	**31. Secondary SIC Code** (4 digits)	**32. Primary NAICS Code** (5 or 6 digits)	**33. Secondary NAICS Code** (5 or 6 digits)
5812		722211	

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

Fast Food (Restaurant)

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

35. Description to Physical Location:	Located on north side of State Hwy 46 between Oak Run Pkwy and Oak Sprawl

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

37. Latitude (N) In Decimal:	29.718		**38. Longitude (W) In Decimal:**	-98.162			
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
29	43	4.7994	-98	9	43.2		

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form or the updates may not be made. If your Program is not listed, check other and write it in. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Industrial Hazardous Waste	☐ Municipal Solid Waste
☐ New Source Review – Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS	☐ Sludge
☐ Stormwater	☐ Title V – Air	☐ Tires	☐ Used Oil	☐ Utilities
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Erickson Mendoza	**41. Title:**	Project Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 244-1546		(512) 388-3698	ericksonm@hea.eng.pro

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:	Hagood Engineering Associates	**Job Title:**	Project Manager
Name *(In Print)*:	Erickson Mendoza	**Phone:**	(512) 244-1546
Signature:	Erickson Mendoza	**Date:**	10/5/2010

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: Taco Bell @ 1838 State Hwy 46
COUNTY: Comal STREAM BASIN: Blieders Creek

EDWARDS AQUIFER: _X_ RECHARGE ZONE
__ TRANSITION ZONE

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

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Dwayne Kostiha
Entity: Austaco, LTD.
Mailing Address: 500 N. Capital of Texas Hwy, Bldg 2
City, State: Austin, TX Zip: 78746
Telephone: 512/327-4654 FAX: 512/327-4027

Agent/Representative (If any):

Contact Person: Erickson Mendoza
Entity: Hagood Engineering Associates
Mailing Address: One Chisholm Trail, Suite 5200
City, State: Round Rock, TX Zip: 78681
Telephone: 512/244-1546 FAX: 512/388-3698

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

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

Located North side of State Hwy 46 between Oak Run Pkwy and Oak Sprawl

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

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

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

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

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

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

PROHIBITED ACTIVITIES

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

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

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

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

ADMINISTRATIVE INFORMATION

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

   X For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.
   For an Organized Sewage Collection System Plans and Modifications, the total linear

footage of all collection system lines.

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

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

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

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

__ TCEQ cashier

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

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

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

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

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:

Erickson Mendoza

Print Name of Customer/Agent

Signature of Customer/Agent

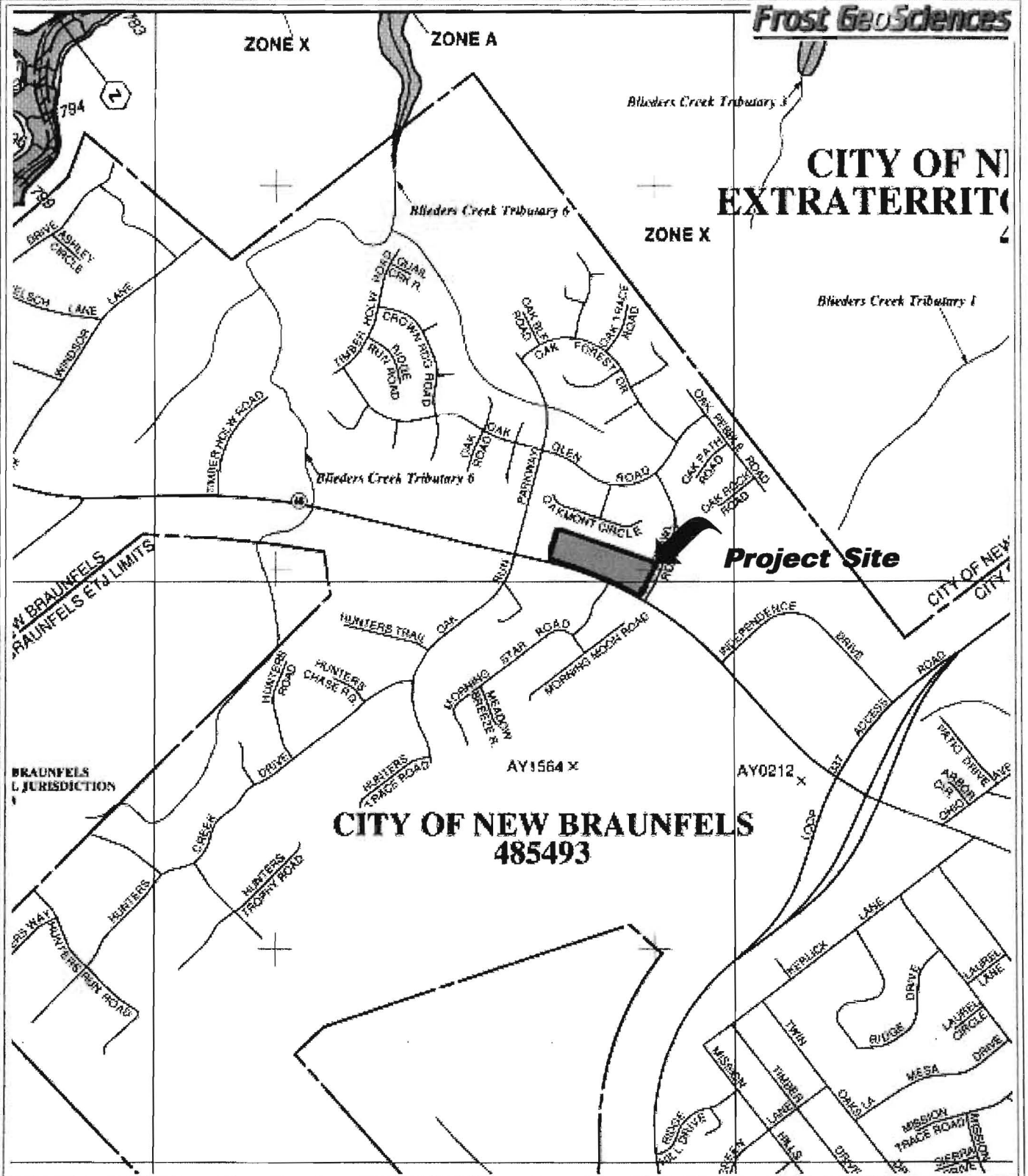
10/05/2010

Date

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

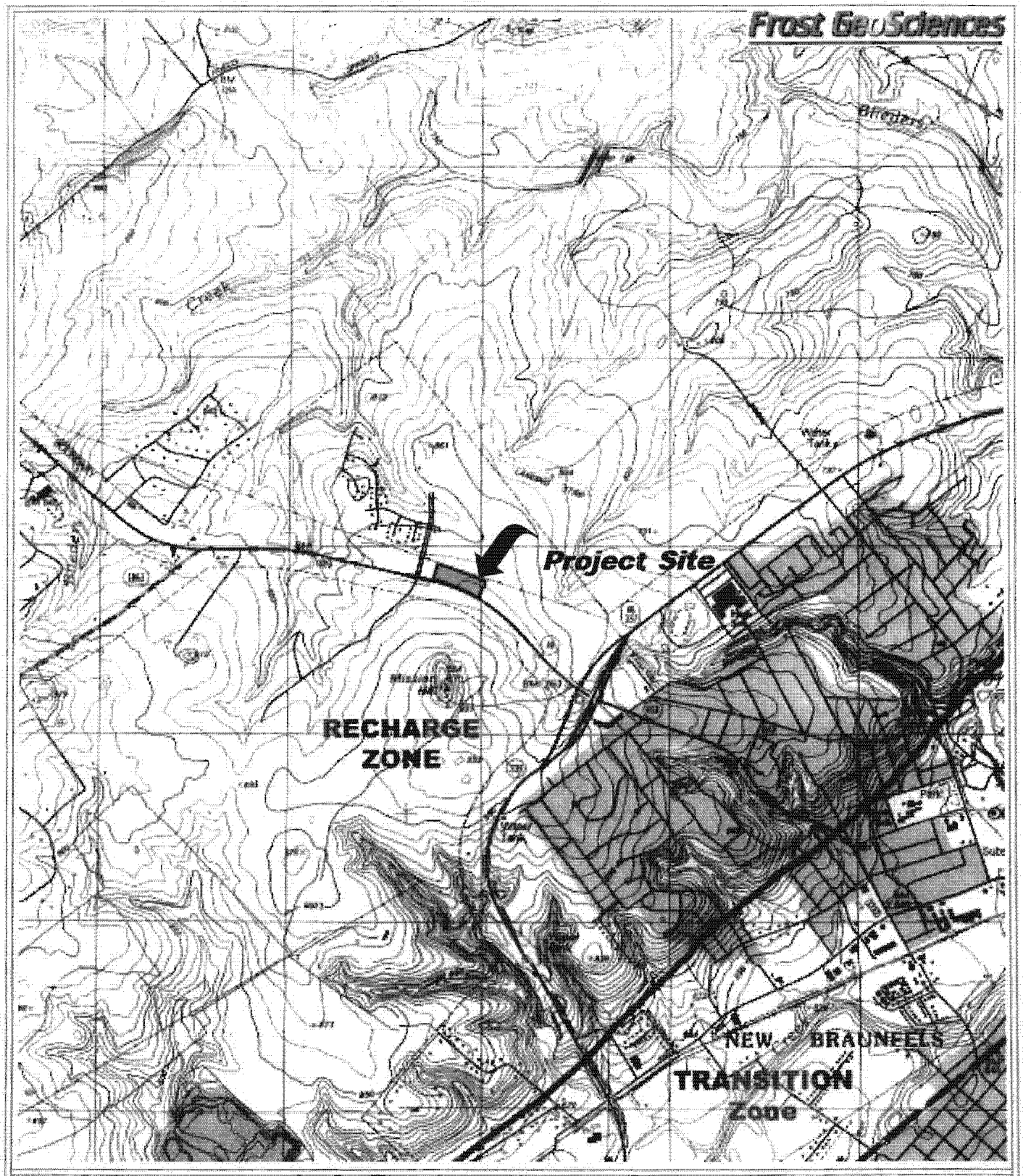
Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

ATTACHMENT A



PROJECT NAME:	Flood Insurance Rate Map (FIRM) Community Panel # 48091C0435F (Revised 9/02/09)	
Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	PROJECT NO.: FGS-E10154	DATE: August 30, 2010

ATTACHMENT B



PROJECT NAME:	Official Edwards Aquifer Recharge Zone Map New Braunfels West, Texas Sheet (1996)
Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	PROJECT NO.: FGS-E10154 / DATE: August 30, 2010

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

PROJECT NAME: Taco Bell @ 1838 State Hwy 46

ATTACHMENT C - PROJECT DESCRIPTION

The project site is located on north side of State Hwy 46 between Oak Run Pkwy and Oak Sprawl. The project site area is approximately 0.92 acres which includes the frontage right-of-way area and proposed driveway on State Hwy 46. The project site topography drains from south to north. The total impervious cover for the site is 0.74 acres. The total water quality volume required is 3786 cubic feet and provided is 3790 cubic feet.

The proposed project is designed to capture the stormwater runoff from the site which drains to a splitter box. The splitter box isolates the water quality volume and bypass the 25-yr peak flow. The water quality volume is then drain to partial sedimentation/filtration pond. The water quality pond is sized per TSS Removal Calculations spreadsheet, see sheet C42. The water quality pond designed and details are shown on sheet C42.

Geologic Site Assessment (WPAP)

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

The Oak Run Commercial Reserve
Unit 2, 6.27 Acres
New Braunfels, Texas

FROST GEOSCIENCES CONTROL # FGS-E10154

August 30, 2010

Prepared exclusively for

New Braunfels Investment Joint Venture
2501 Oak Run Parkway
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

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Geotechnical • Construction Materials
Forensics • Environmental

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

August 30, 2010

New Braunfels Investment Joint Venture
2501 Oak Run Parkway
New Braunfels, Texas 78132

Attn: Mr. Rob Eversberg

Re: Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
The Oak Run Commercial Reserve
Unit 2, 6.27 Acres
New Braunfels, Texas

Frost GeoSciences, Inc. Control # FGS-E10154

Dear Sir:

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

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

Sincerely,
Frost GeoSciences, Inc.

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

Distribution: (5) Pawelek & Moy, Inc.
(1) New Braunfels Investment Joint Venture

Table of Contents

Geologic Assessment

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

REGULATED ENTITY NAME: The Oak Run Commercial Reserve, Unit 2, 6.27 Acres

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" = 40 '
Site Geologic Map Scale	1" = 40 '
Site Soils Map Scale (if more than 1 soil type)	1" = 500 '

6. Method of collecting positional data:

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

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

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

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

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

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

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

ADMINISTRATIVE INFORMATION

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

Date(s) Geologic Assessment was performed: August 26, 2010
Date(s)

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

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

(210) 372-1315
Telephone

(210) 372-1318
Fax

Signature of Geologist

August 30, 2010
Date

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

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

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3088 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	Hydrologic 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
Upper Cretaceous – Upper confining units	Buda Limestone	CU	40 – 50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability
Upper Cretaceous – Upper confining units	Del Rio Clay	CU	40 – 50	Blue-green to yellow-brown clay	Fossiliferous; *Ilymatogyra arietina*	None	None/primary upper confining unit
Lower Cretaceous – Edwards aquifer – I	Georgetown Formation	Karst AQ; not karst CU	2 – 20	Reddish-brown, gray to light tan marly limestone	Marker fossil: *Waconella wacoensis*	None	Low porosity/low permeability
Lower Cretaceous – Edwards aquifer – II	Edwards Group – Person Formation – Cyclic and marine members, undivided	AQ	80 – 90	Mudstone to packstone; *miliolid* grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
Lower Cretaceous – Edwards aquifer – III	Edwards Group – Person Formation – 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
Lower Cretaceous – Edwards aquifer – IV	Edwards Group – Person Formation – 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
Lower Cretaceous – Edwards aquifer – V	Edwards Group – Kainer Formation – Grainstone member	AQ	50 – 60	*Miliolid* grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability
Lower Cretaceous – Edwards aquifer – VI	Edwards Group – Kainer Formation – 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
Lower Cretaceous – Edwards aquifer – VII	Edwards Group – Kainer Formation – Dolomitic member	AQ	110 – 130	Mudstone to grainstone; crystalline limestone; chert	Massively bedded light gray, *Toucasia* abundant	Caves related to structure or bedding planes	Mostly not fabric; some bedding plane-fabric/water-yielding
Lower Cretaceous – Edwards aquifer – VIII	Edwards Group – Kainer Formation – Basal nodular member	Karst AQ; not karst CU	50 – 60	Shaly, nodular limestone; mudstone and *miliolid* grainstone	Massive, nodular and mottled, *Exogyra texana*	Large lateral caves at surface; a few caves near Cibolo Creek	Fabric; stratigraphically controlled/large conduit flow at surface; no permeability in subsurface
Lower Cretaceous – Lower confining unit	Upper member of the Glen Rose Limestone	CU; evaporite beds AQ	350 – 500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development	Some water production at evaporite beds/relatively impermeable

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: The Oak Run Commercial Reserve FGS-E10154

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1	2*	3*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10			11		12
FEATURE	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT²)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY			CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						< 40	> 40		<1.6	>1.6	
S-1	29° 43.208'	98° 09.835'	MB	30	Kep	30	40	5		-	-	-	-	7	37	37				X	Hillside

* DATUM 1984 North American Datum (NAD83)

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

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

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

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

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

Signature Steve Frost Date August 30, 2010 Sheet 1 of 1

LOCATION

The project site consists of 6.27 acres of land located along and north of State Highway 46 near the northeastern corner of the intersection of Oak Run Parkway and State Highway 46 in New Braunfels, Texas. An overall view of the area is shown on copies of the site plan, a street map, the USGS Topographic Map, the Official Edwards Aquifer Recharge Zone Map, the Flood Insurance Rate Map (FIRM), a geologic map, a 2009 aerial photograph at a scale of 1"=500', a 2009 aerial photograph at a scale of 1"=200', and a 1973 aerial photograph at a scale of 1"=500', Plates 1 through 9 in Appendix A.

METHODOLOGY

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

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

After reviewing the available information, a field investigation was performed to identify any geologic or man-made potential recharge features. A transect spacing of approximately 50 feet or less, depending on vegetation thickness, was used to inspect the project site. A 2009 aerial photograph, in conjunction with a hand held Garmin eTrex Summit Global Positioning System with an Estimated Potential Error ranging from 10 to 15 feet, was used to navigate around the property and identify the locations of potential recharge features, as recommended in the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04). The locations of any potential recharge features noted in the field were identified with blue and white flagging. The flagging is

numbered with the same potential recharge feature I.D. # that is used on the Site Geologic Map in Appendix C of this report. The Site Geologic Map indicating the limits of the project site is included in Appendix C. A copy of a 2009 aerial photograph at an approximate scale of 1"=200', indicating the locations of the potential recharge features, is included on Plate 8 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 of the project site is approximately 870 feet. This elevation is calculated above mean sea level (AMSL). The surface runoff from the project site flows to the west into an unnamed tributary of Blieders Creek. State Highway 46 is located immediately south of the project site. Oak Run Parkway is located west 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 31, 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 31, indicating the location of the project site, is included on Plate 4 in Appendix A.

100-Year Floodplain

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for Comal County, Texas, Community Panel Number 48091C0435F (Revised 9/02/09) was reviewed to determine if the project site is located in areas prone to flooding. A review of the above-

mentioned panel indicates that no portion of the project site is located within the 100 year floodplain. The project site is located within Zone X. According to the panel legend, Zone X represents areas determined to be outside the 0.2% annual chance floodplain. A copy of the Comal County, Texas, FIRM map, indicating the location of the project site, is included in this report on Plate 5 in Appendix A.

Soils

According to the United States Department of Agriculture, Soil Conservation Service, Soil Survey of Comal & Hays County, Texas (1982), the project site is located on the Rumple-Comfort Association (RUD). 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 9 in Appendix A.

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

Narrative Description of the Site Geology

The project site exists as undeveloped land. The site was mowed and supported only minor amounts of vegetative cover with a thick stand of cut native grasses. No areas of natural rock outcrops were noted during the on-site inspection. The site appears to support a

thick soil cover. The variations in the vegetative cover across the project site are visible in the 2009 aerial photographs on Plates 7 and 8 in Appendix A and in the site visit photographs included in Appendix B. One PRF's was identified during our site inspection.

S-1 consists of a manmade feature in bedrock (MB) located along the northern fence line. This feature is a storm drain collector consisting of an area of internal drainage approximately 30 feet wide and 40 feet long. The feature is approximately 5 feet deep and empties into a storm drain pipe. The feature is lined with course boulder rubble to prevent erosion into the storm drain collector. This feature is not considered sensitive by FGS. These feature scores a 37 on the feature assessment table on page 4.

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 Pawelek & Moy, Inc., the elevations on the project site range from 860 near the northwestern property corner to 875 feet near the southeastern property corner. A copy of the site plan, indicating the boundary of the project site and the elevations, is included on Plate 1 in Appendix A and on the Site Geologic Map in Appendix C of this report.

According to the WRI 94-4117 Geologic Map of Comal County, Texas, and the Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle, the project site is covered by 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 6a in Appendix A. A copy of the Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle, indicating the location of the project site, is included on Plate 6b 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 New Braunfels Investment Joint Venture, and Pawelek & Moy, Inc. 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.

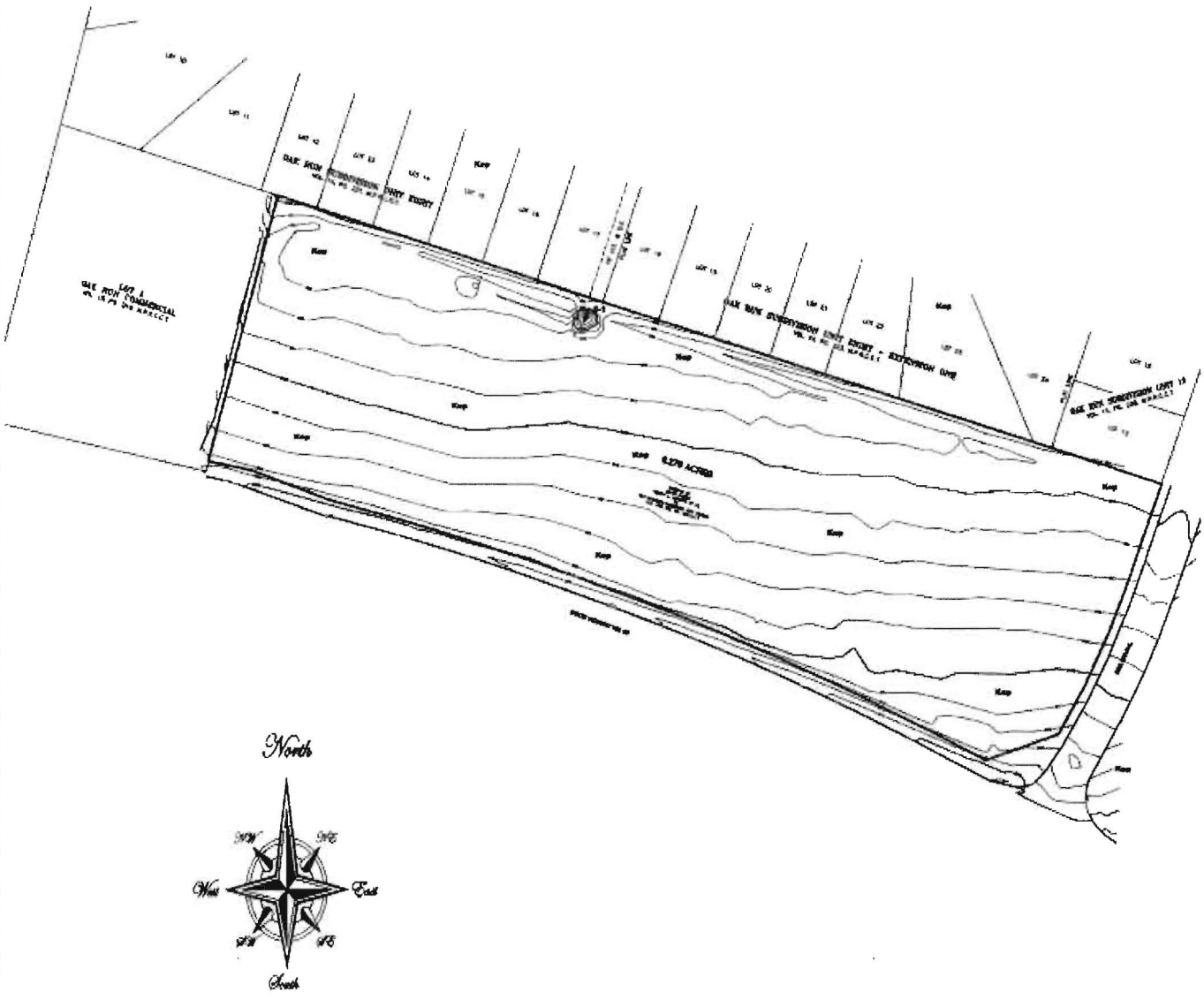
4) Collins, Edward, W., 2000, Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle.

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

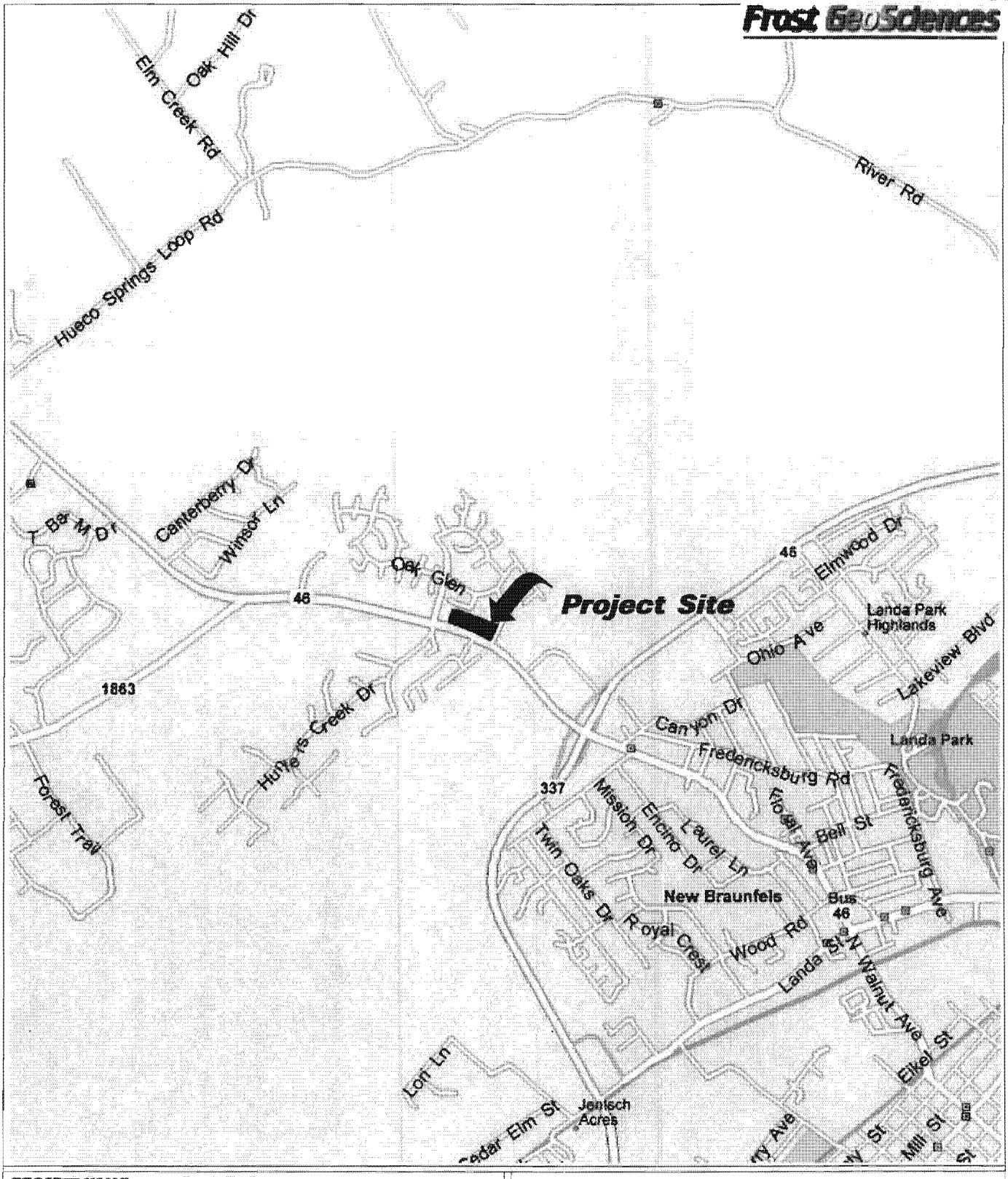
7) USDA Soil Conservation Service, Soil Survey of Comal & Hays Counties, Texas (1982).

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

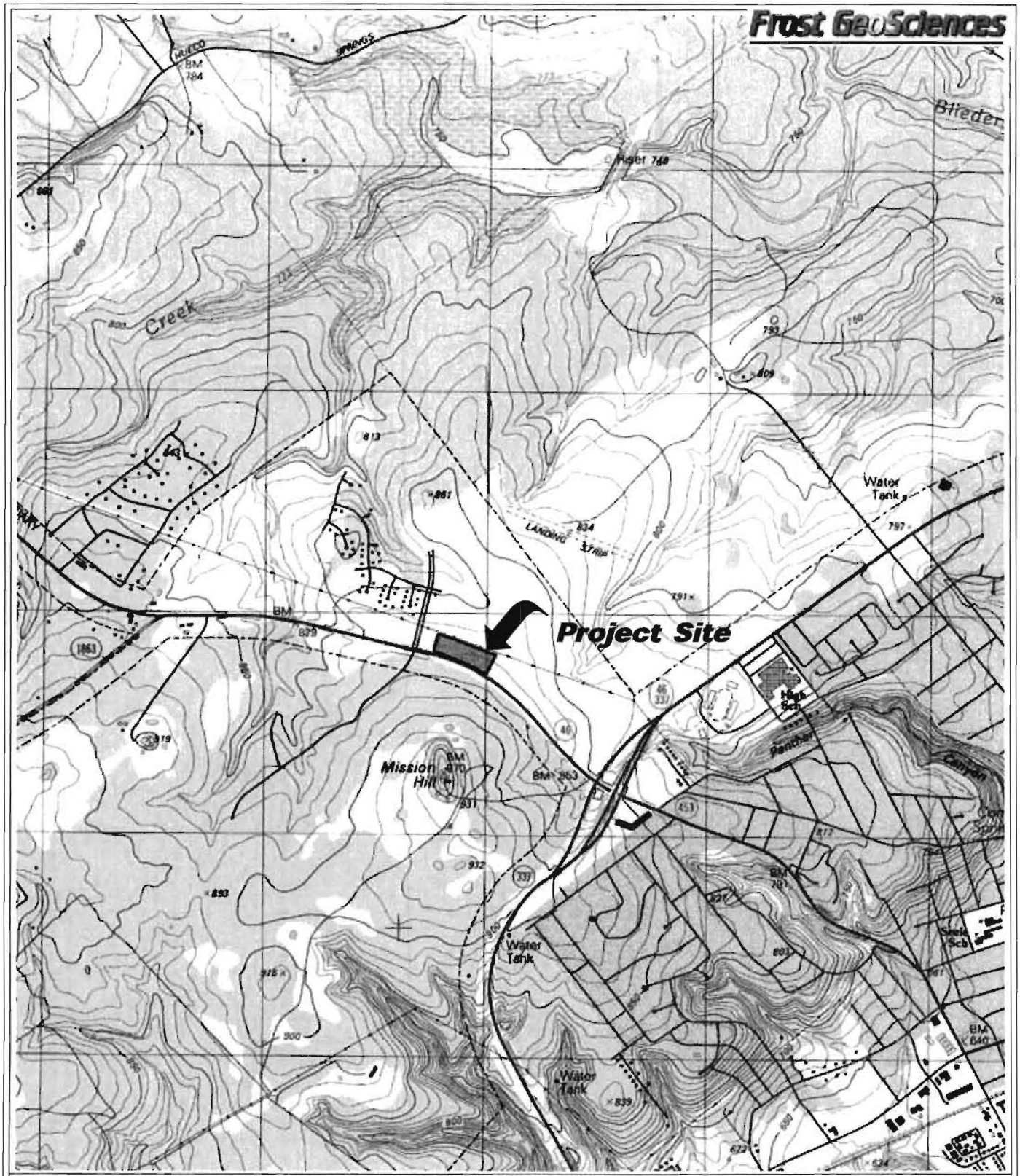
Frost GeoSciences



PROJECT NAME:	Site Plan	
Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	PROJECT NO.: FGS-E10154	DATE: August 30, 2010



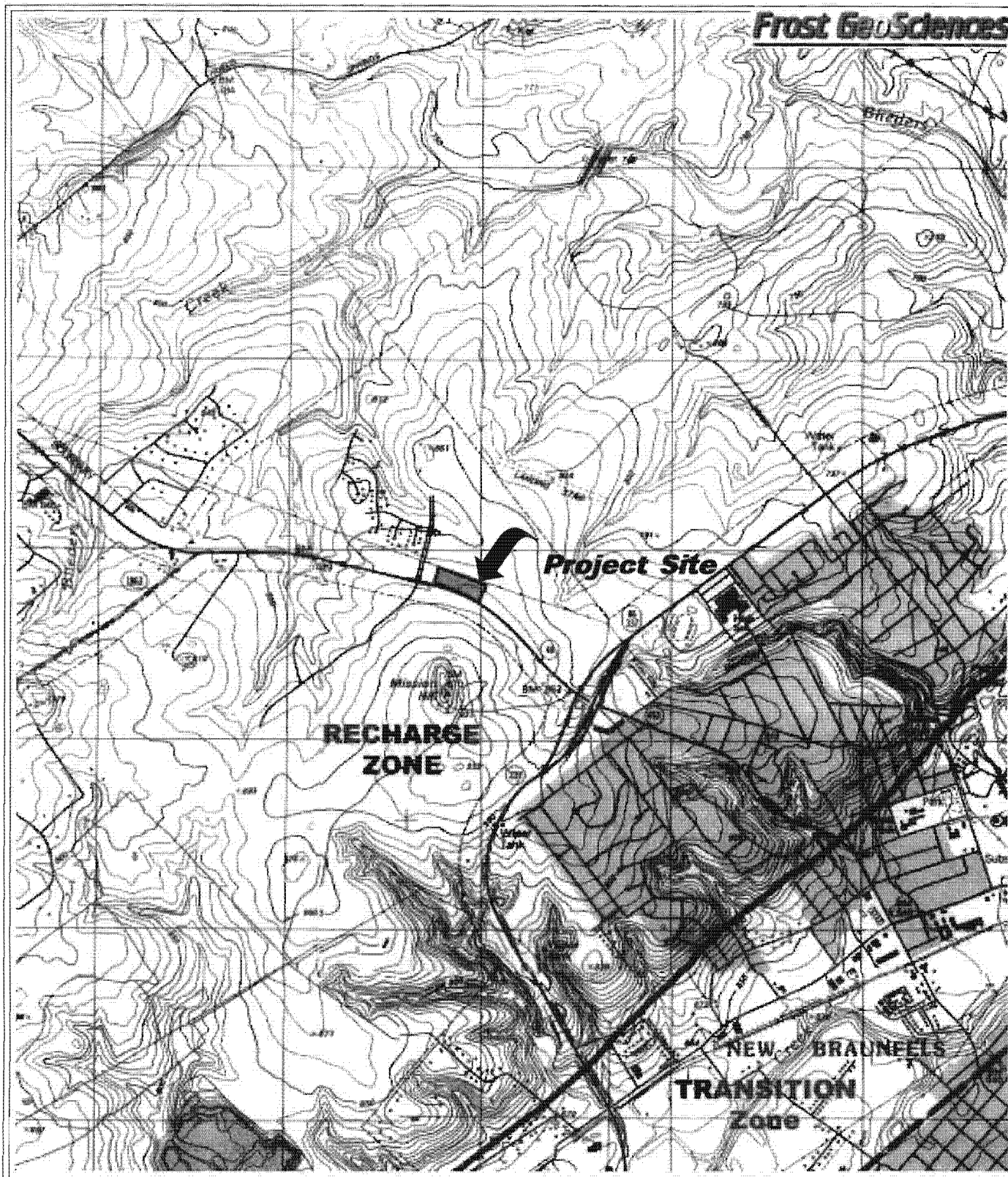
PROJECT NAME:	Street Map
Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	
PROJECT NO.: FGS-E10154	**DATE:** August 30, 2010



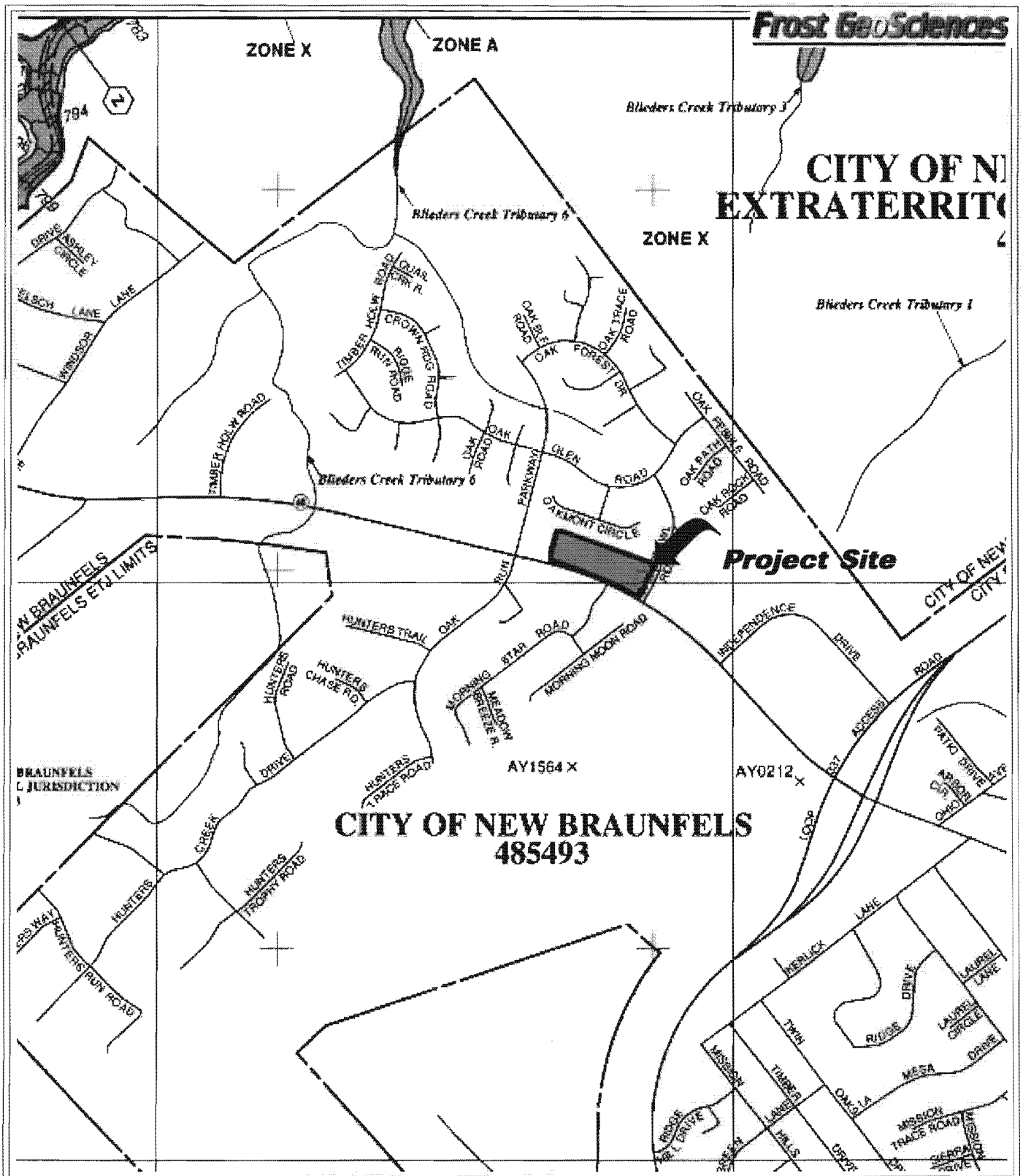
PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone
The Oak Run Commercial Reserve, 6.27 Acres
New Braunfels, Texas

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

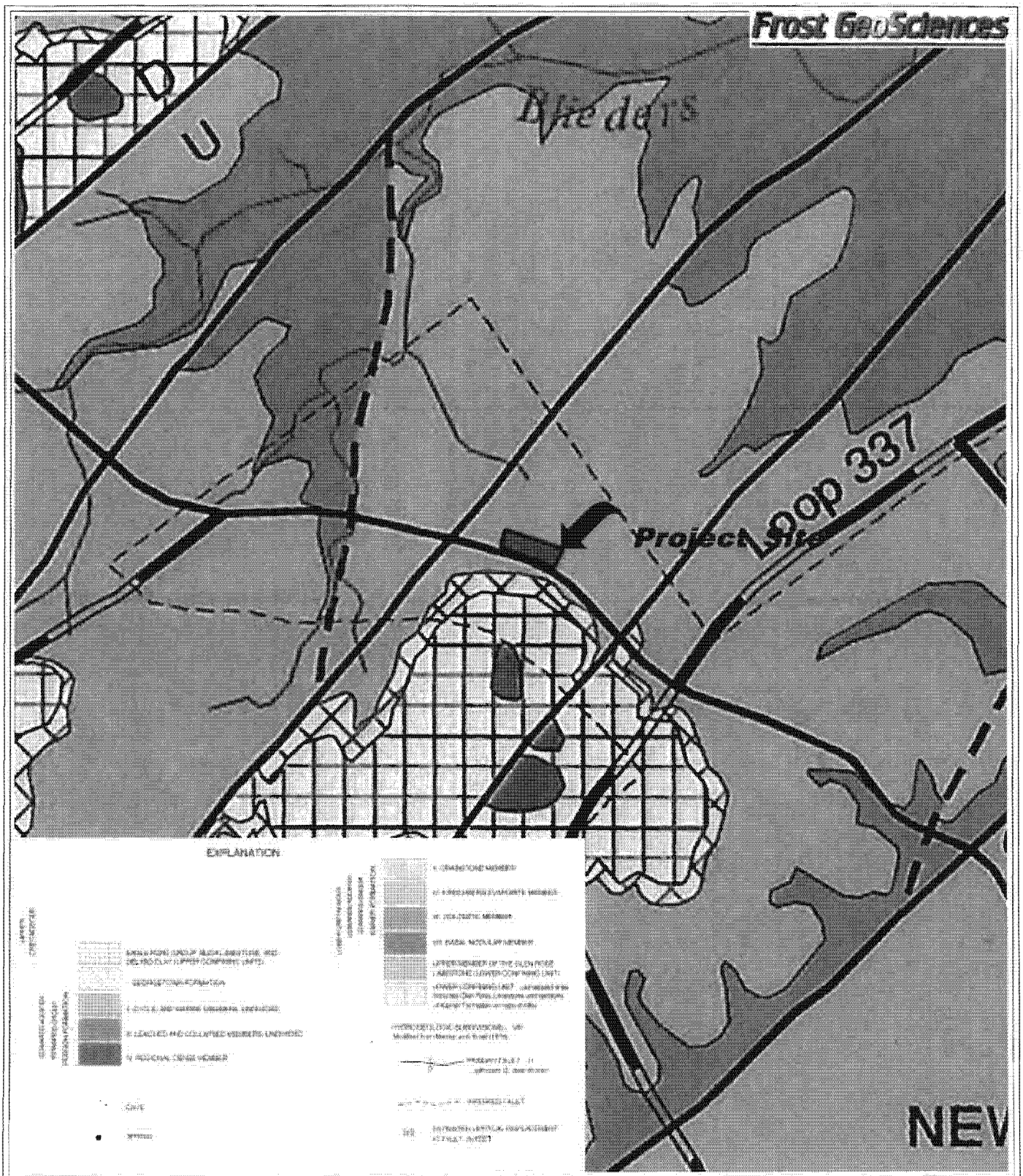
PROJECT NO.:	**DATE:**
FGS-E10154	August 30, 2010



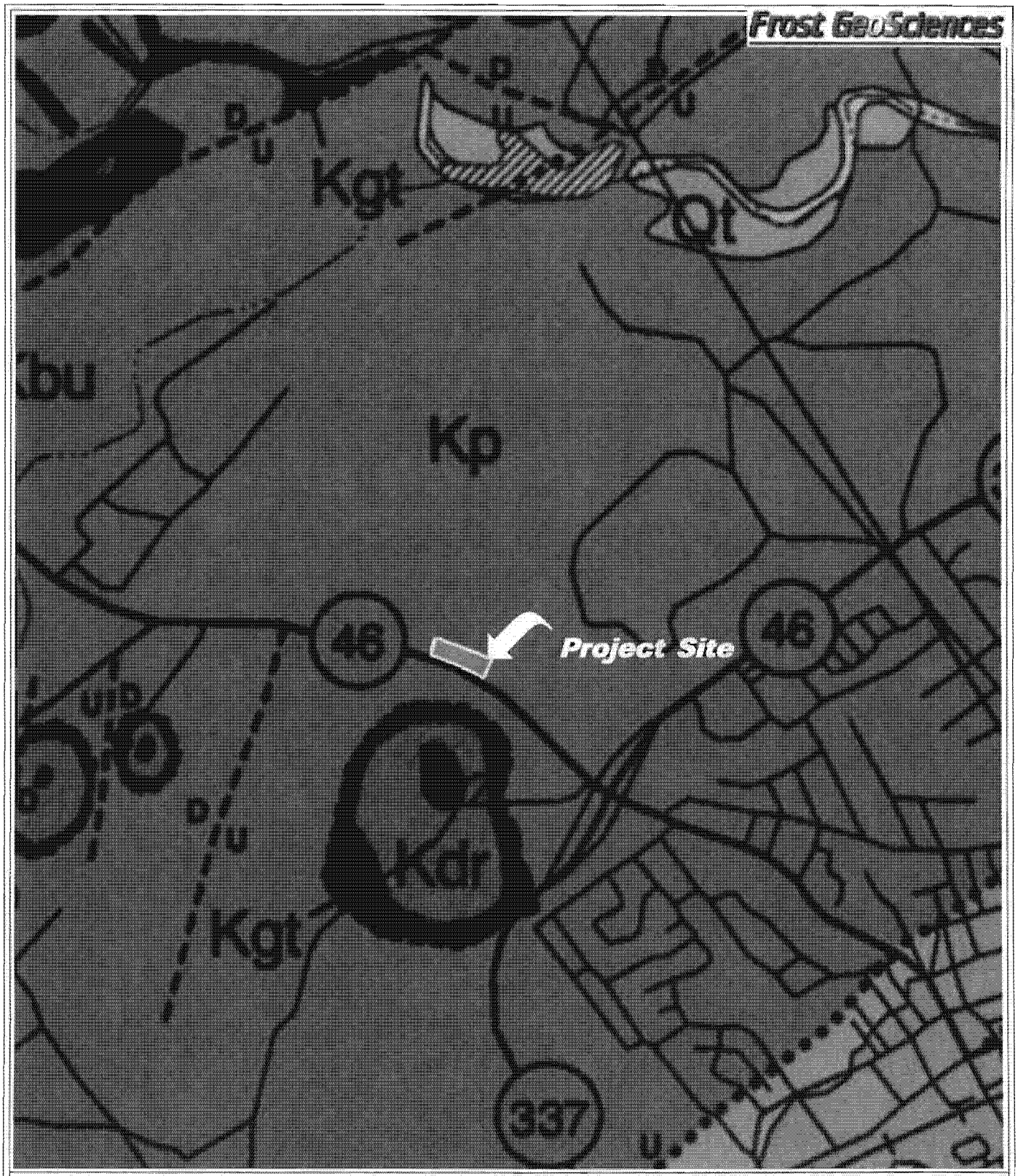
PROJECT NAME:	Official Edwards Aquifer Recharge Zone Map New Braunfels West, Texas Sheet (1996)
Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	PROJECT NO.: FGS-E10154 DATE: August 30, 2010



PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	Flood Insurance Rate Map (FIRM) Community Panel # 48091C0435F (Revised 9/02/09)
PROJECT NO.: FGS-E10154	**DATE:** August 30, 2010

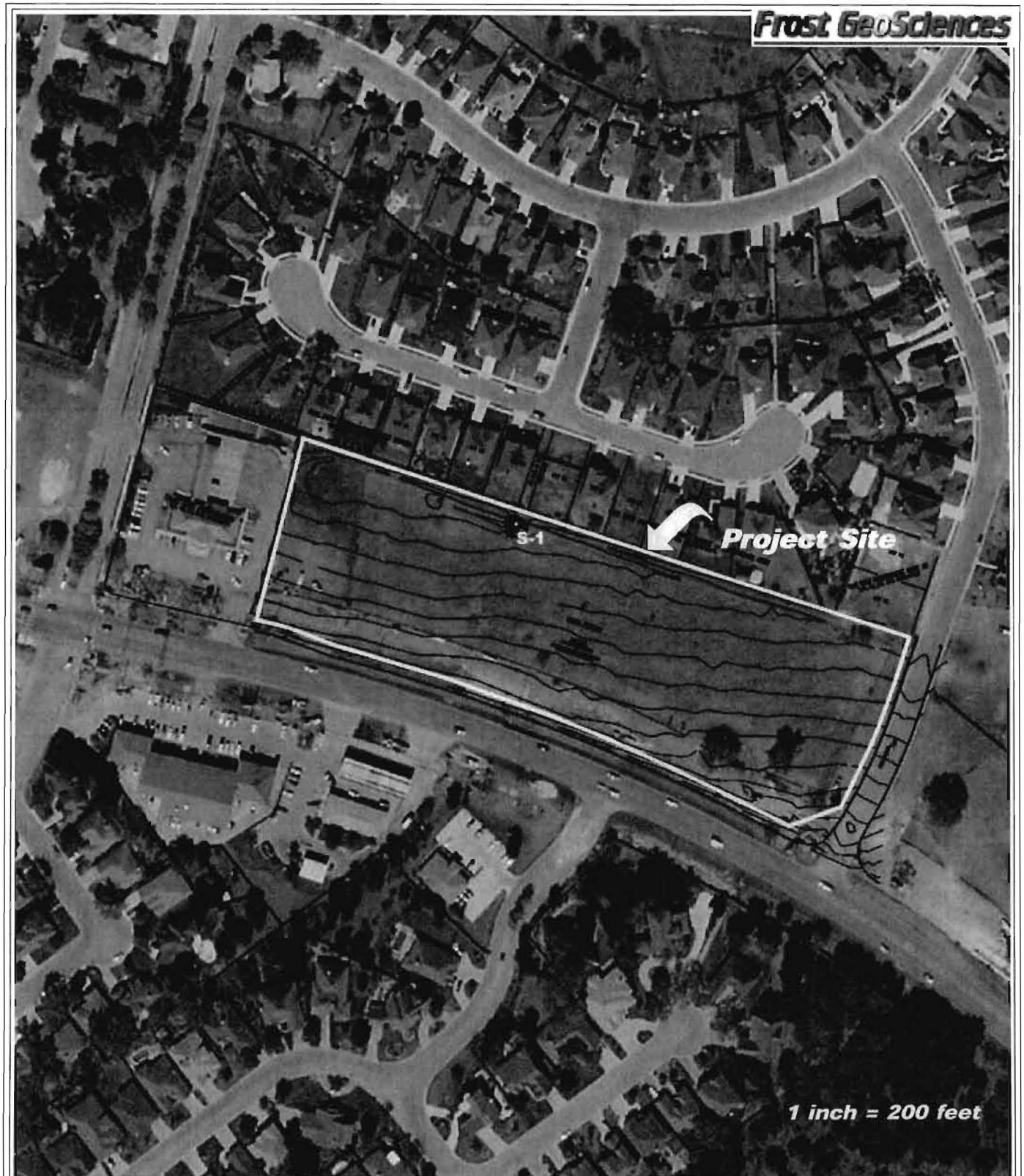


PROJECT NAME:	United States Geologic Survey Water Resources Investigations #94-4117 Geologic Map of Comal County, Texas	
Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	PROJECT NO.: FGS-E10154	DATE: August 30, 2010

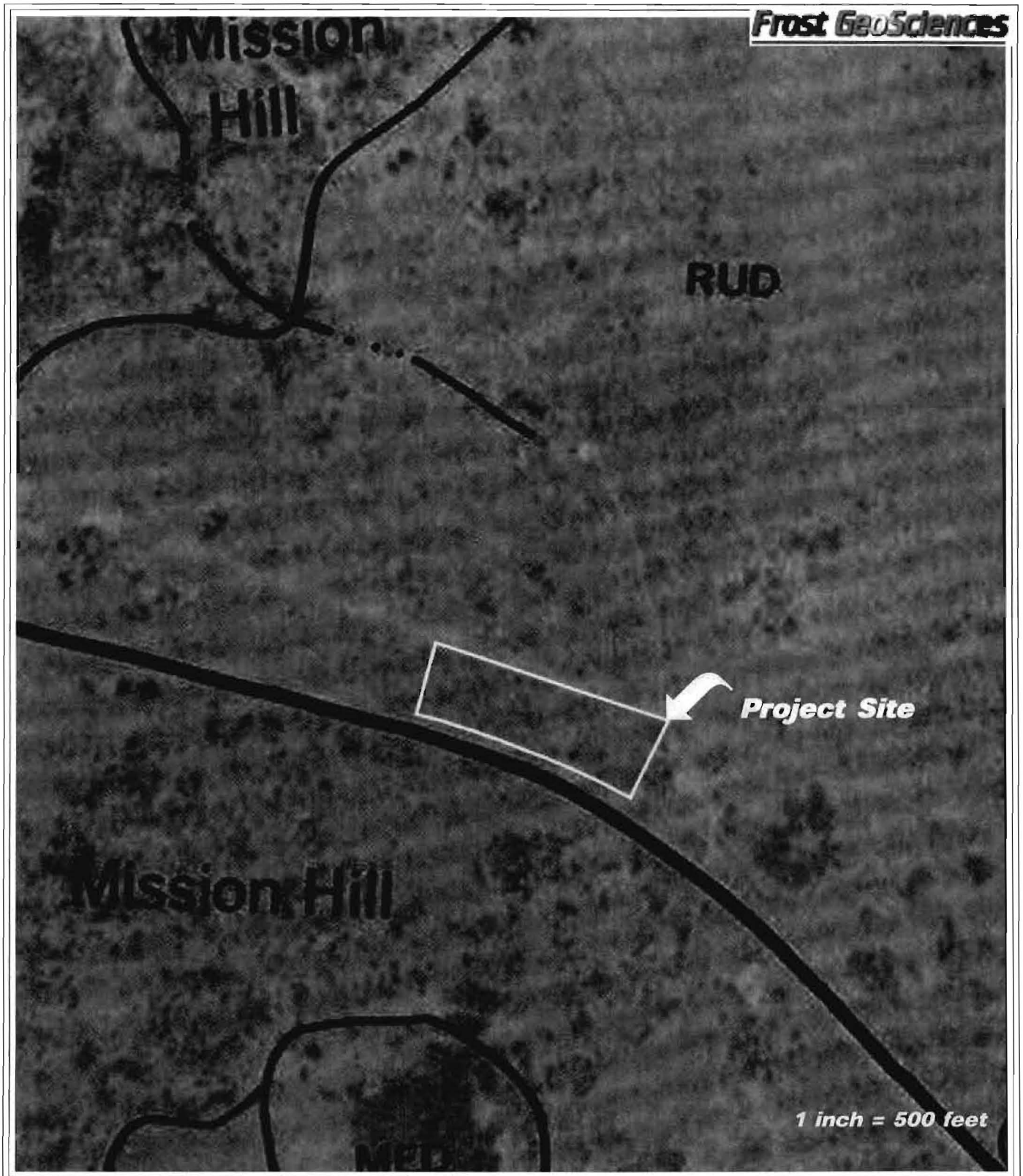


PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	Bureau of Economic Geology Geologic Mapof the New Braunfels, Texas 30 X 60 Minute Quadrangle (2000)
PROJECT NO.: FGS-E10154	DATE: August 30, 2010

PROJECT NAME:	2009 Aerial Photograph Landiscor Aerial Information	
Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	PROJECT NO.: FGS-E10154	DATE: August 30, 2010



PROJECT NAME:	2009 Aerial Photograph with PRF's Landiscor Aerial Information	
Geologic Site Assessment (WPAP) for Regulated Activities / Development on the Edwards Aquifer Recharge / Transition Zone The Oak Run Commercial Reserve, 6.27 Acres New Braunfels, Texas	PROJECT NO.: FGS-E10154	DATE: August 30, 2010

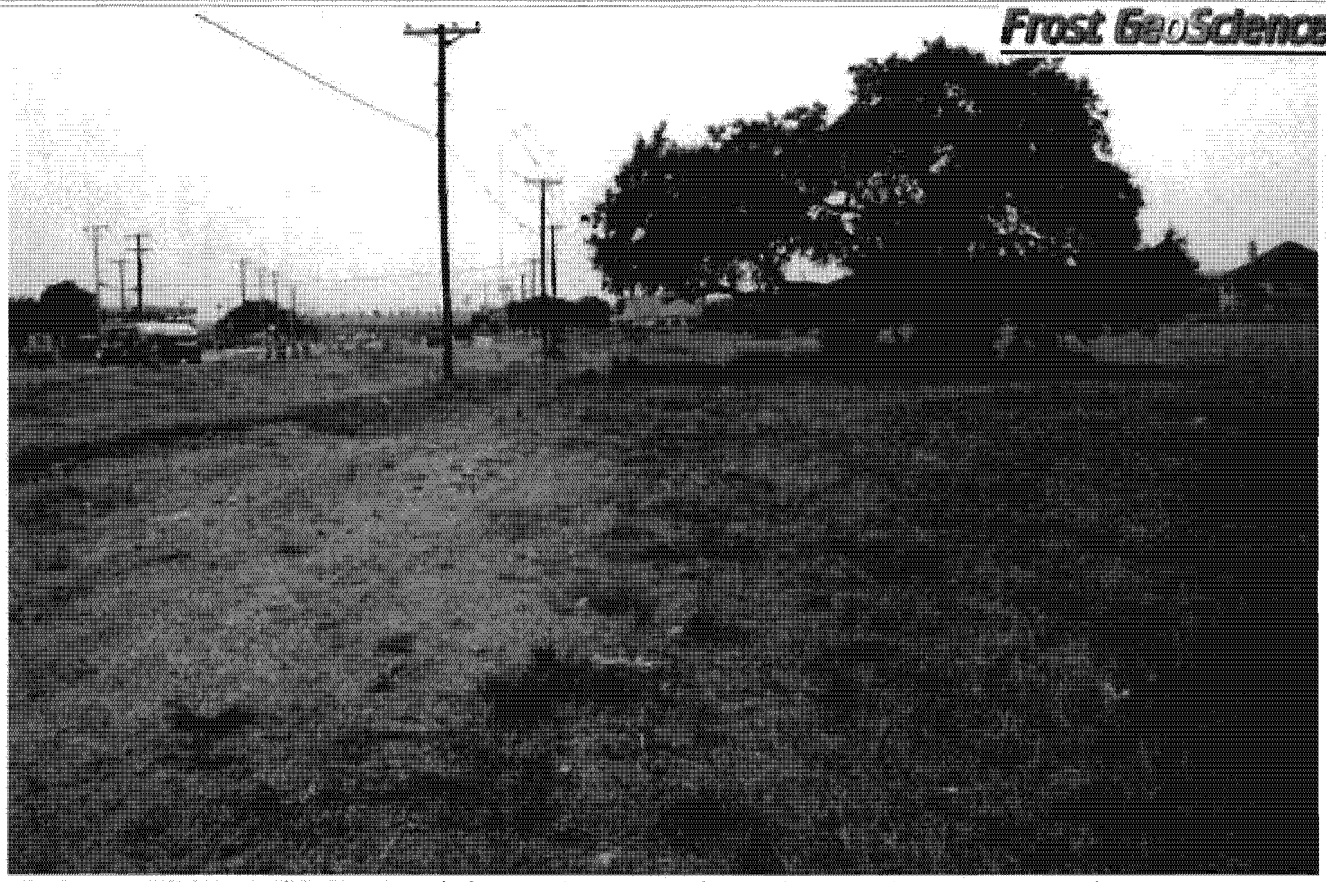


PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
The Oak Run Commercial Reserve, 6.27 Acres
New Braunfels, Texas

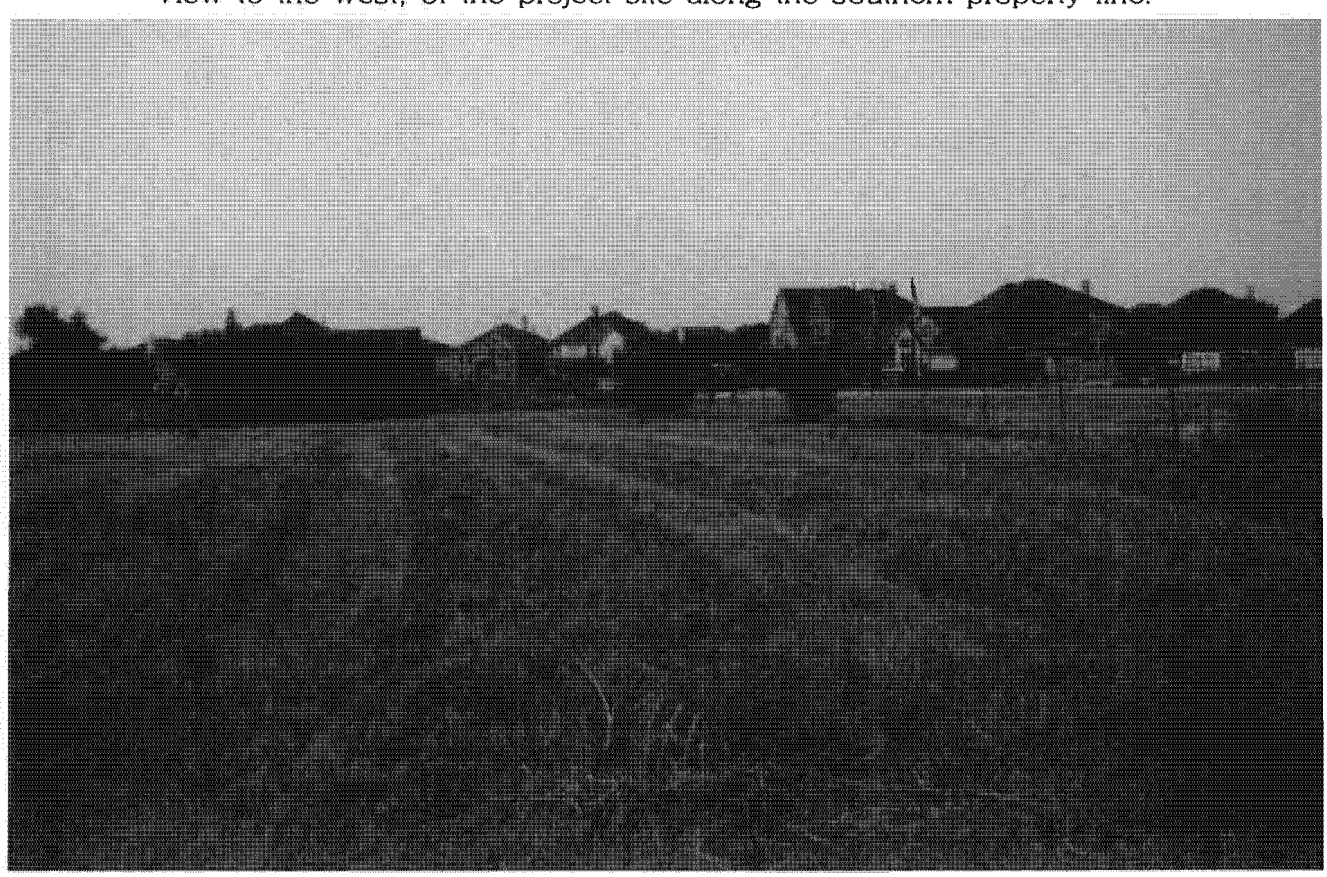
1973 Aerial Photograph

United States Department of Agriculture

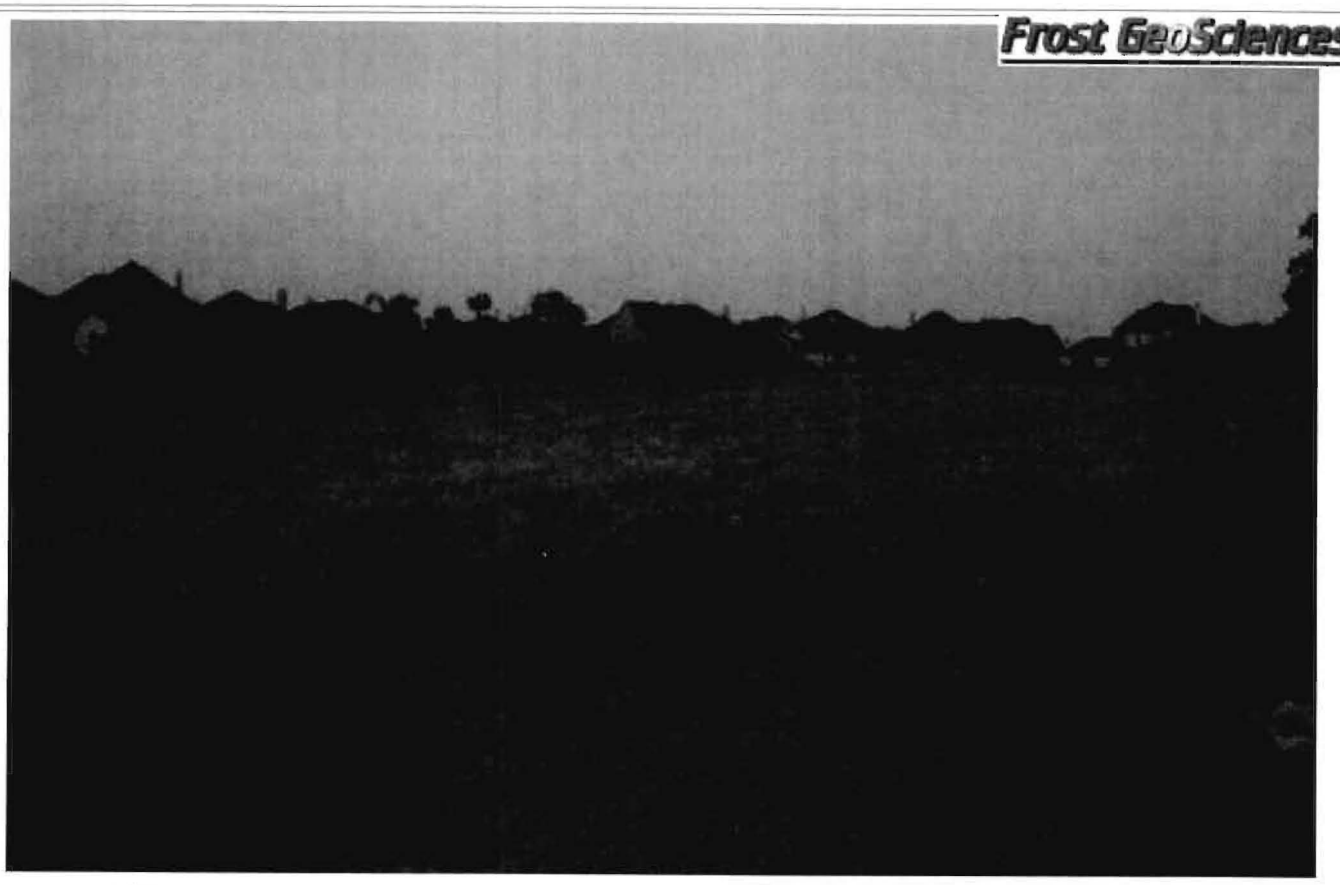
PROJECT NO.:	DATE:
FGS-E10154	August 30, 2010



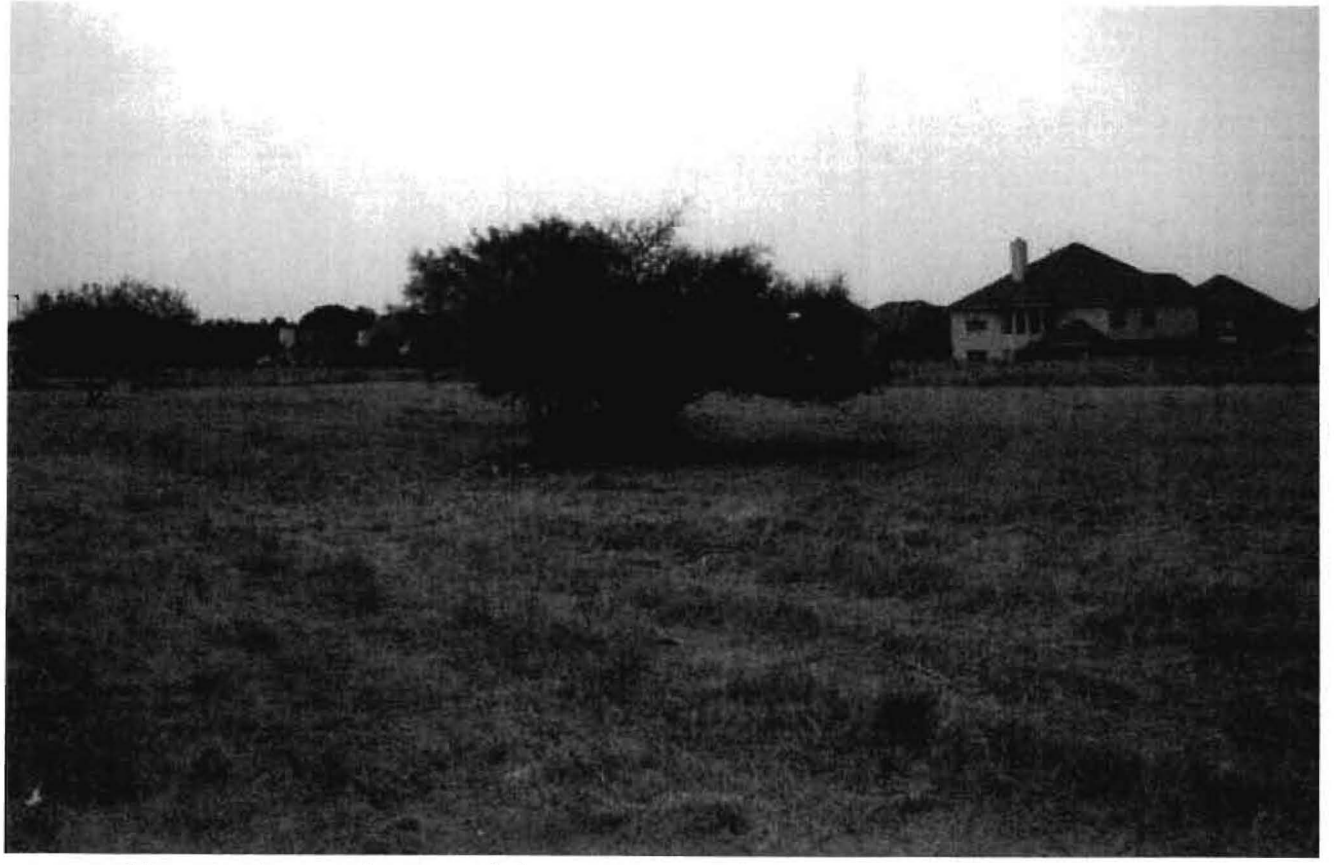
View to the west, of the project site along the southern property line.



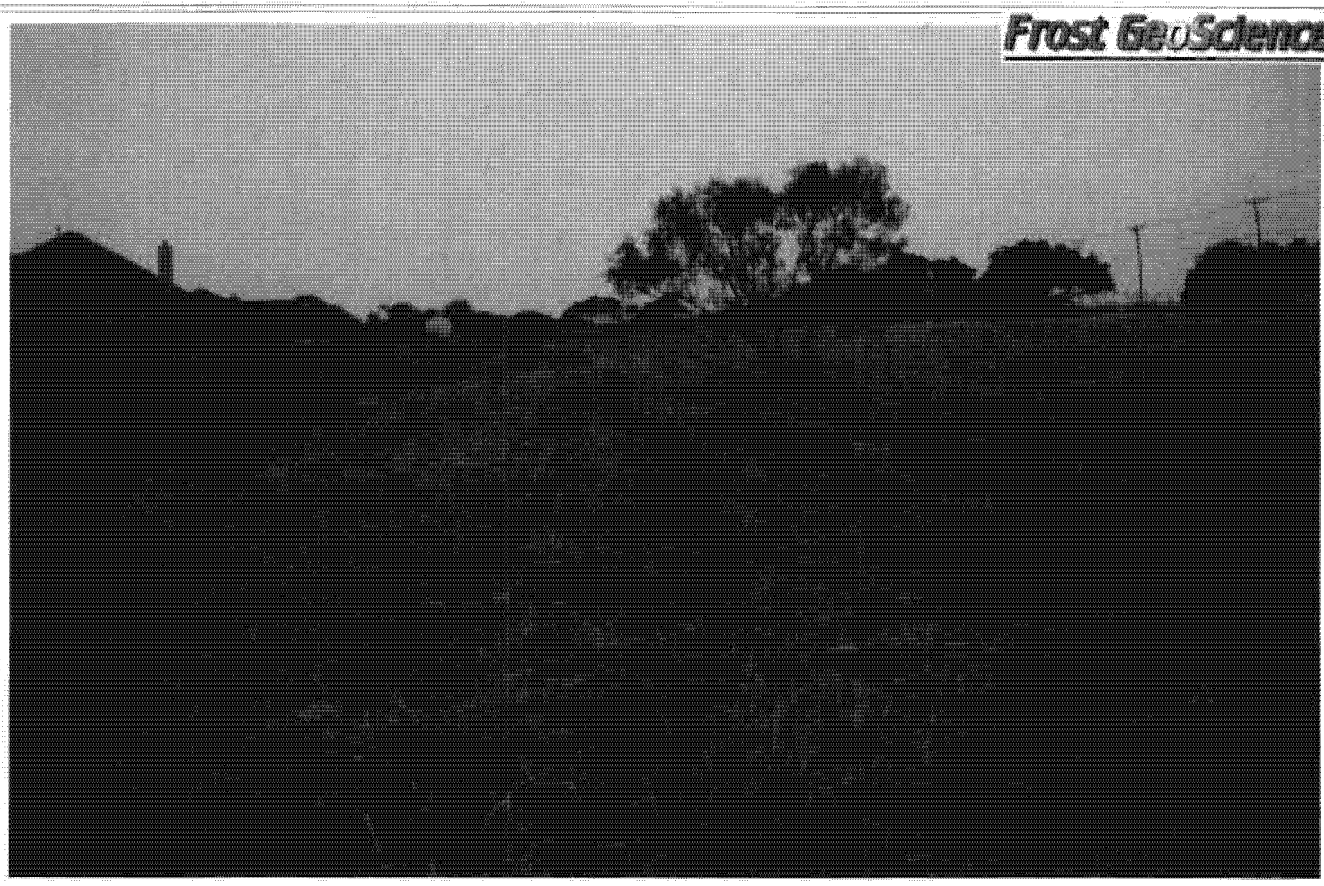
View to the north, of the project site along the eastern property line.



View to the northeast, of the project site from the southern property line.



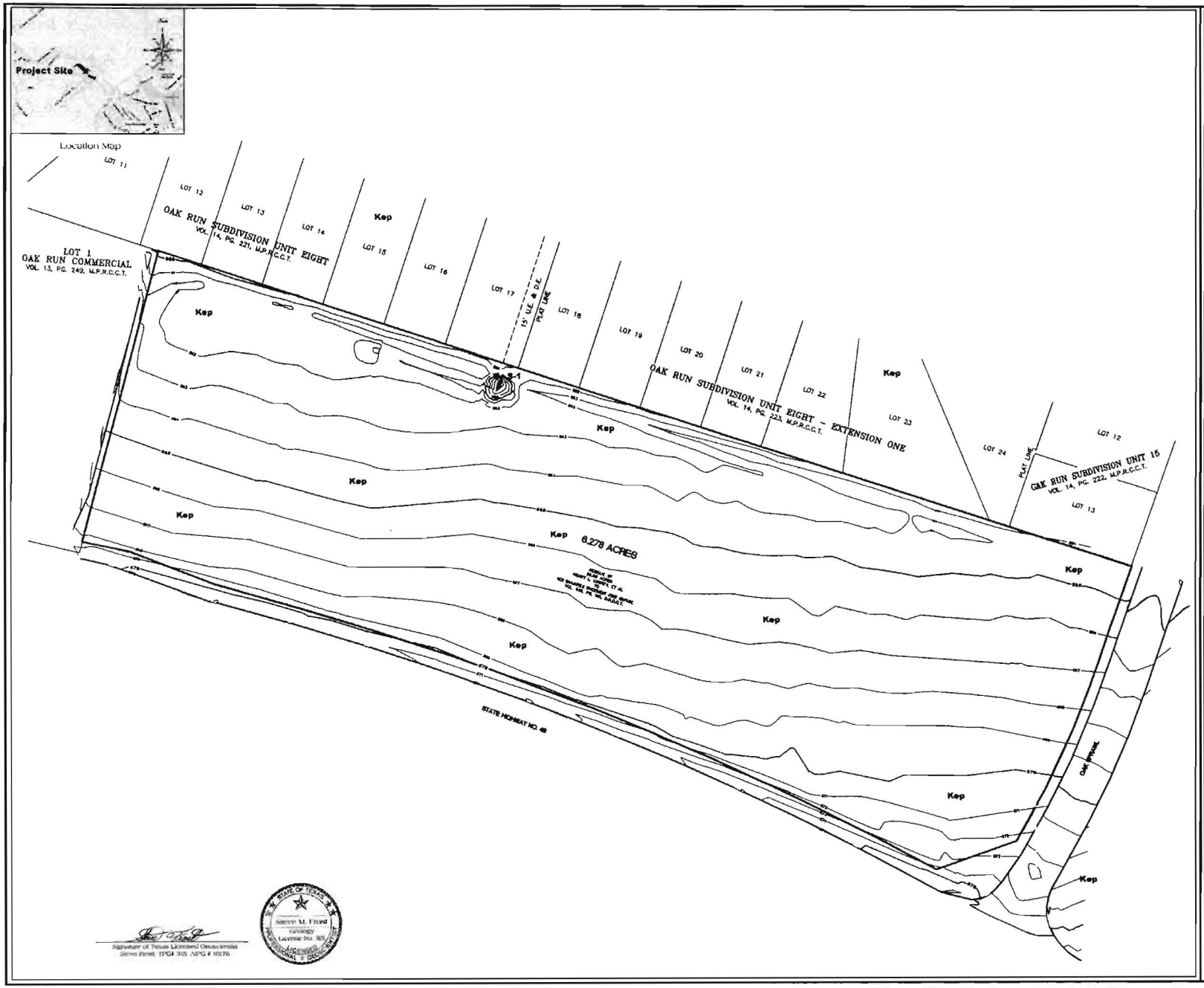
View to the northwest, of the project site from the southern property line.



View to the east, of the project site along the northern property line.

View to the west, of the project site along the northern property line.

View of Potential Recharge Feature # S-1.



Signature of Texas Licensed Geoscientist
Steven Fried, TPGS 3176 APG # 3176

Frost GeoSciences
Geotechnical • Construction Materials
Forensics • Environmental
13402 Western Oak Dr. • Houston, Texas 77023
Phone: (210) 372-1715 Fax: (210) 372-1308

Site Geologic Map

Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
for
The Oak Run Commercial Reserve
Unit 2, 6.27 Acres
New Braunfels, Texas

Frost GeoSciences, Inc. Control # FGS E10154

Legend

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

Floodplain information Obtained From
FIRM - Flood Insurance Rate Map
Comal County, Texas, Panel # 48091C0435F, Revised 04/2/08

Fault information Obtained From
Bureau of Economic Geology, Geologic Atlas of Texas, San Antonio Sheet (1981)
U.S. Geological Survey, Water Resources Investigations Report 94-4117 (1994)
Geologic Map of the New Braunfels, Texas 30 X 60 Minute Quadrangle (2006)

North

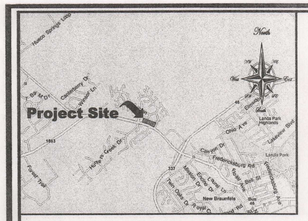
Graphic Scale

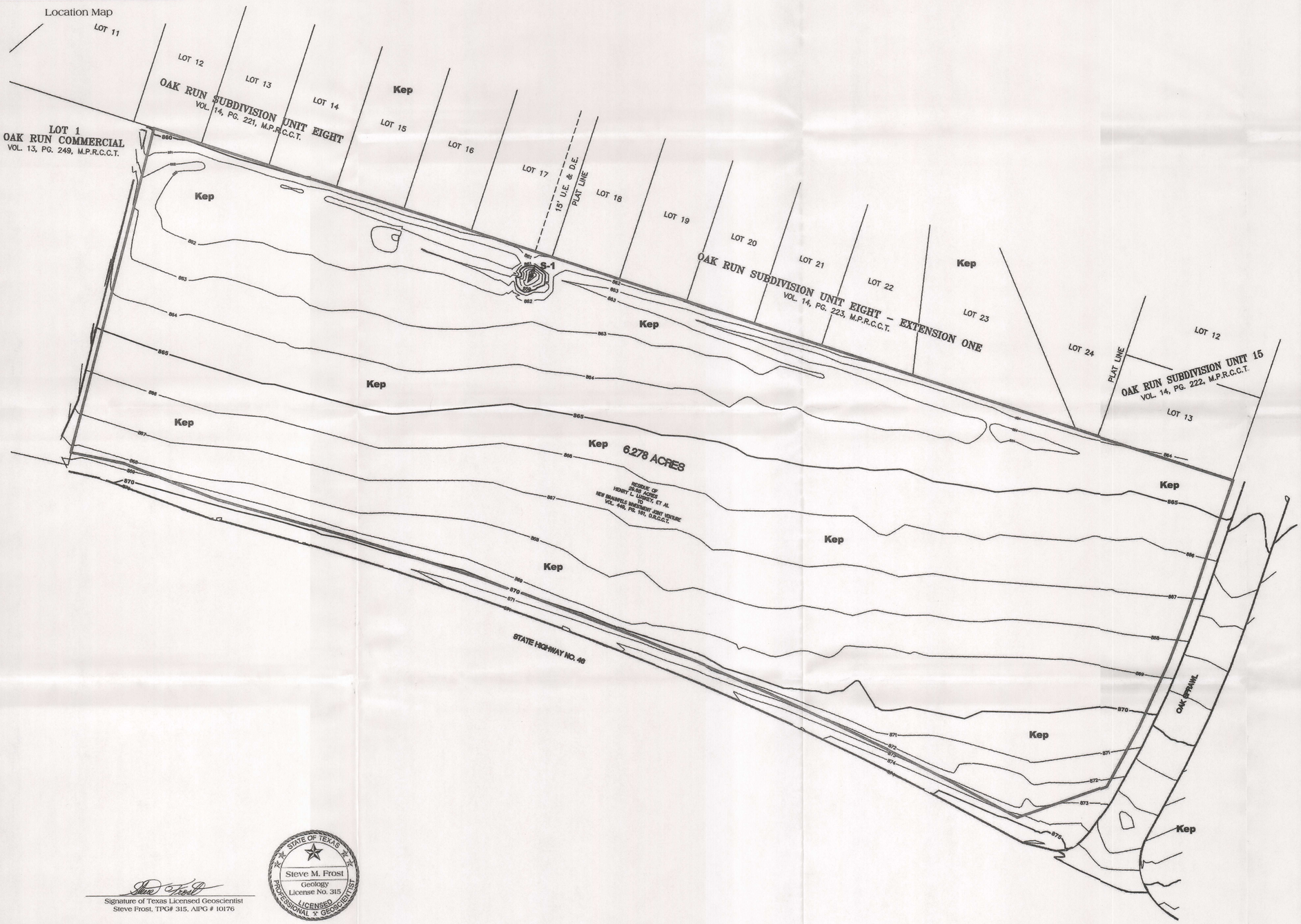
40 0 20 40 80

(in Feet)

1 inch = 40 feet
Representative Fraction 1:480

Contour Interval - 1 foot





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

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

Frost GeoSciences
Geotechnical • Construction Materials
Forensics • Environmental
13402 Western Oak Dr. • Helotes, Texas 78023
Phone: (210) 372-1315 Fax: (210) 372-1318

Site Geologic Map

Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
for
The Oak Run Commercial Reserve
Unit 2, 6.27 Acres
New Braunfels, Texas

Frost GeoSciences, Inc. Control # FGS-E10154

Legend

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

- S-# - Potential Recharge Feature (PRF)
- Formation Contact
- 100-Year Floodplain - Zone A
- 100-Year Floodplain - Zone AE
- Other Flood Hazard Area - Zone X (shaded)

Floodplain Information Obtained From
FIRM: Flood Insurance Rate Map
Bexar 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)

North
NW NE
West East
SW SE
South

Graphic Scale
40 0 20 40 80
(In Feet)

1 inch = 40 feet
Representative Fraction 1:480

Contour Interval - 1 foot

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: Taco Bell @ 1838 State Hwy 46

REGULATED ENTITY INFORMATION

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

2. Total site acreage (size of property): 0.92 acres

3. Projected population: 30

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	2,949	÷ 43,560 =	0.07
Parking	29,127	÷ 43,560 =	0.67
Other paved surfaces		÷ 43,560 =	
Total Impervious Cover		÷ 43,560 =	0.74
Total Impervious Cover ÷ Total Acreage x 100 =			80.43%

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

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

FOR ROAD PROJECTS ONLY

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

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

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

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

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

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

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

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

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

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

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

100 % Domestic	72,000 gallons/day
__% Industrial	_____ gallons/day
__% Commingled	_____ gallons/day

TOTAL 72,000 gallons/day

15. Wastewater will be disposed of by:

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

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

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

_X_ Sewage Collection System (Sewer Lines):

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

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

__ The SCS was previously submitted on _____.

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

The sewage collection system will convey the wastewater to the GRUENE WWTP _____(name) Treatment Plant. The treatment facility is:
_X_ existing.
__ proposed.

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

SITE PLAN REQUIREMENTS

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

17. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = _40_'.

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

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):
FEMA Map Community Panel No. 48091C0435 F, Dated September 2, 2009 for City of New Braunfels, Comal County, Texas.

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

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):
__ There are __0__(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)
__ The wells are not in use and have been properly abandoned.
__ The wells are not in use and will be properly abandoned.
__ The wells are in use and comply with 16 TAC §76.
_X_ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:
_X_ 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. _X_ The drainage patterns and approximate slopes anticipated after major grading activities.

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

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

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

26. _N/A_ Surface waters (including wetlands).

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

ADMINISTRATIVE INFORMATION

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

29. _X_ Any modification of this WPAP will require 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:

Erickson Mendoza
Print Name of Customer/Agent

Signature of Customer/Agent

10/5/2010
Date

ATTACHMENT A – Factors Affecting Water Quality

There are several factors that could affect surface and ground water quality. During construction, fuels and hazardous substances could spill. These spills shall be contained on-site and immediately cleaned up and properly discarded. Any spills or discharges of oil, petroleum products and used oil onto land having a volume greater than 25 gallons also, spills or discharges directly into waters of the state having a quantity sufficient enough to create a sheen, shall be reported immediately to TCEQ at (512) 339-2929 or the State Emergency Response Center at 1-800-832-8224. There are no significant factors proposed which could affect surface and ground water quality relating to the permanent use of the facility.

ATTACHMENT B – Volume and Character of Stormwater

The character of the storm water leaving the site shall be filtered and all pollutants will remain onsite. The proposed permanent BMP is Partial Sedimentation and Filtration Pond. The stormwater runoff from the site will be captured and routed through a splitter box. The splitter box will capture the water quality volume required to remove 80% of TSS. The outflows from the water quality pond will be released in a manner, which will not adversely impact the environment down stream. For TSS Load Removal calculation, see Sheet C42.

The pre-construction and post-construction composite runoff coefficient is 0.42 and 0.88 respectively.

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: Taco Bell @ 1838 State Hwy 46

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

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

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

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

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

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

SEQUENCE OF CONSTRUCTION

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

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

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

on the site plan.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

12. X **ATTACHMENT I - Inspection and Maintenance for BMPs.** A plan for the inspection of temporary BMPs and measures and for their timely maintenance, 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:

Erickson Mendoza
Print Name of Customer/Agent

Signature of Customer/Agent

10/05/2010
Date

ATTACHMENT A

SPILL PREVENTION AND CONTROL
§§327.1 - 327.5, 327.31
Effective September 23, 1999

§327.1. Applicability.

(a) This chapter applies to discharges or spills that result in a release to the environment within the territorial limits of the State of Texas, including the coastal waters of this state.

(b) This chapter does not apply to:

(1) discharges or spills of oil that enter or threaten to enter coastal waters of the State. Except for spills of oil of 240 barrels or less for which the Railroad Commission of Texas is the on-scene coordinator, such discharges or spills are regulated by the Texas General Land Office under the Oil Spill Prevention and Response Act of 1991, the Texas Natural Resources Code, Chapter 40, Subchapters C, D, E, F, and G;

(2) spills or discharges from activities subject to the jurisdiction of the Railroad Commission of Texas under the Texas Water Code, §26.131;

(3) releases only to air;

(4) the lawful placement of waste or accidental discharge of material into a solid waste management unit registered or permitted under Chapter 335, Subchapter A of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste in General);

(5) units and activities regulated under the authority of the Texas Water Code, Chapter 26, Subchapter I (relating to Underground and Aboveground Storage Tanks);

(6) the lawful application of materials, including but not limited to fertilizers and pesticides, to land or water;

(7) discharges that are authorized by a permit, order, or rule issued under federal law or any other law of the State of Texas; provided, however, that discharges not so authorized shall be reported under this chapter unless the permit, order, or another commission rule provides an applicable reporting requirement;

(8) discharges or spills that are continuous and stable in nature, and are reported to the United States Environmental Protection Agency (EPA) under 40 Code of Federal Regulations (CFR) §302.8; and

(9) discharges or spills occurring during the normal course of rail transportation.

Adopted December 4, 1996 Effective December 26, 1996

§327.2. **Definitions.**

The following words and terms when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise.

(1) **Agency on-scene coordinator** - The official designated by the executive director to coordinate and direct agency responses, or to oversee private responses to discharges or spills.

(2) **Coastal waters** - The definition of Coastal waters as it appears in Title 31, Texas Administrative Code, §19.2 (relating to Definitions) of the Texas General Land Office rules.

(3) **Discharge or spill** - An act or omission by which oil, hazardous substances, waste, or other substances are spilled, leaked, pumped, poured, emitted, entered, or dumped onto or into waters in the State of Texas or by which those substances are deposited where, unless controlled or removed, they may drain, seep, run, or otherwise enter water in the State of Texas.

(4) **Emergency response team** - A unit of the agency that is responsible for the coordination of response to spills and discharges under the agency's jurisdiction.

(5) **Environment** - Waters in the state, land surface or subsurface strata, for purposes of this chapter only.

(6) **Facility** - Any structure or building, including contiguous land, or equipment, pipe or pipeline, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, aircraft, or any site or area where a discharge or spill has occurred or may occur.

(7) **Hazardous substance** - Any substance designated as such by the administrator of the United States Environmental Protection Agency under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601 - 9675, regulated under the Clean Water Act, §311, 33 U.S.C. 1321, or designated by the commission.

(8) **Industrial solid waste** - Solid waste, as defined in §335.1 of this title (relating to Definitions), resulting from or incidental to any process of industry or manufacturing, or mining, or agricultural operations, which may include hazardous waste as defined in §335.1 of this title.

(9) **Oil** - Oil of any kind or in any form including but not limited to petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include used oil, petroleum product, or oil designated as a hazardous substance in 40 CFR §302.4.

(10) **Other substances** - Substances that may be useful or valuable and therefore are not ordinarily considered to be waste, but that will cause pollution if discharged into water in the state.

(11) **Petroleum product** - A petroleum substance obtained from distilling and processing crude oil that is liquid at standard conditions of temperature and pressure, and that is capable of being used as a fuel for the propulsion of a motor vehicle or aircraft, including but not necessarily limited to motor gasoline, gasohol, other alcohol blended fuels, aviation gasoline, kerosene, distillate fuel oil, and #1 and #2 diesel. The term does not include naphtha-type jet fuel, kerosene-type jet fuel, or a petroleum product destined for use in chemical manufacturing or feedstock of that manufacturing.

(12) **Petroleum storage tank (PST) exempted facilities** - Electric service facilities including generation, transmission, distribution equipment and transformers; petrochemical plants; petroleum refineries; bulk loading facilities; and pipelines that are exempted from the Aboveground Storage Tank (AST) program under §334.123(a)(9) and §334.123(b) of this title (relating to Statutory Exemptions for ASTs), and §334.124(a)(4) of this title (relating to Commission Exclusions for ASTs).

(13) **Pipeline** - A pipeline is:

(A) an interstate pipeline facility, including gathering lines and any aboveground storage tank connected to such facility, if the pipeline facility is regulated under:

(i) the Natural Gas Pipeline Safety Act of 1968 (49 United States Code §1671, et seq.); or

(ii) the Hazardous Liquid Pipeline Safety Act of 1979 (49 United States Code §2001, et seq.).

(B) an intrastate pipeline facility or any aboveground storage tank connected to such a facility, if the pipeline facility is regulated under one of the following state laws:

(i) the Natural Resources Code, Chapter 111;

(ii) the Natural Resources Code, Chapter 117; or

(iii) Texas Civil Statutes, Article 6053-1 and 6053-2.

(14) **Pollution** - The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

(15) **Responsible person** - A person who is:

(A) the owner, operator, or demise charterer of a vessel from which a discharge or spill emanates; or

(B) the owner or operator of a facility from which a discharge or spill emanates; or

(C) any other person who causes, suffers, allows, or permits a discharge or spill.

(16) **Used oil** - Oil that has been refined from crude oil, or synthetic oil, that as a result of use has been contaminated by physical or chemical impurities.

(17) **Vessel** - Every description of watercraft, used or capable of being used as a means of transportation on the water.

(18) **Water or water in the state** - Groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface waters, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.

Adopted April 24, 1996 Effective May 23, 1996

§327.3. **Notification Requirements.**

(a) Reportable discharge or spill. A reportable discharge or spill is a discharge or spill of oil, petroleum product, used oil, hazardous substances, industrial solid waste, or other substances into the environment in a quantity equal to or greater than the reportable quantity listed in §327.4 of this title (relating to Reportable Quantities) in any 24-hour period.

(b) Initial notification. Upon the determination that a reportable discharge or spill has occurred, the responsible person shall notify the agency as soon as possible but not later than 24 hours after the discovery of the spill or discharge.

(c) Method of notification. The responsible person shall notify the agency in any reasonable manner including by telephone, in person, or by any other method approved by the agency. In all cases, the initial notification shall provide, to the extent known, the information listed in subsection (d) of this section. Notice provided under this section satisfies the federal requirement to notify the State Emergency Response Commission in the State of Texas. The responsible person shall notify one of the following:

(1) the State Emergency Response Center at 1-800-832-8224;

(2) during normal business hours only, the regional office for the agency region in which the discharge or spill occurred; or

(3) the agency at the agency 24-hour spill reporting number

(d) Information required in initial notification. The initial notification shall provide, to the extent known, the information in the following list. Copies of spill reports prepared for other governmental agencies shall satisfy this requirement if they contain, or are supplemented to contain, all the information required by this subsection. The initial notification shall contain:

(1) the name, address and telephone number of the person making the telephone report;

(2) the date, time, and location of the spill or discharge;

(3) a specific description or identification of the oil, petroleum product, hazardous substances or other substances discharged or spilled;

(4) an estimate of the quantity discharged or spilled;

(5) the duration of the incident;

(6) the name of the surface water or a description of the waters in the state affected or threatened by the discharge or spill;

(7) the source of the discharge or spill;

(8) a description of the extent of actual or potential water pollution or harmful impacts to the environment and an identification of any environmentally sensitive areas or natural resources at risk;

(9) if different from paragraph (1) of this subsection, the names, addresses, and telephone numbers of the responsible person and the contact person at the location of the discharge or spill;

(10) a description of any actions that have been taken, are being taken, and will be taken to contain and respond to the discharge or spill;

(11) any known or anticipated health risks;

(12) the identity of any governmental representatives, including local authorities or third parties, responding to the discharge or spill; and

(13) any other information that may be significant to the response action.

(e) Update notification. The responsible person shall notify the agency as soon as possible whenever necessary to provide information that would trigger a change in the response to the spill or discharge.

(f) Correction of records. Notifying the agency that a reportable discharge or spill has occurred shall not be construed as an admission that pollution has occurred. Furthermore, if the responsible person determines, after notification, that a reportable discharge or spill did not occur, the responsible person may send a letter to the agency documenting that determination. If the executive director agrees with that determination, the executive director will note the determination in commission records. If the executive director disagrees with that determination, the executive director will notify the responsible person within 30 days.

(g) Notification of local governmental authorities. If the discharge or spill creates an imminent health threat, the responsible person shall immediately notify and cooperate with local emergency authorities (fire department, fire marshall, law enforcement authority, health authority, or Local Emergency Planning Committee (LEPC), as appropriate). The responsible party will cooperate with the local emergency authority in providing support to implement appropriate notification and response actions. The local emergency authority, as necessary, will implement its emergency management plan, which may include notifying and evacuating affected persons. In the absence of a local emergency authority, the responsible person shall take reasonable measures to notify potentially affected persons of the imminent health threat.

(h) Notification to property owner and residents. As soon as possible, but no later than two weeks after discovery of the spill or discharge, the responsible person shall reasonably attempt to notify the owner (if identifiable) or occupant of the property upon which the discharge or spill occurred as well as the occupants of any property that the responsible person reasonably believes is adversely affected.

(i) Additional notification required.

(1) Except as noted in paragraph (2) of this subsection, complying with the notification requirements set forth in this section does not relieve, satisfy, or fulfill any other notification requirements imposed by permit or other local, state, or federal law.

(2) Notice provided under this section satisfies the federal requirement to notify the State Emergency Response Commission in the State of Texas.

(j) Alternative notification plans.

(1) Responsible persons in charge of activities and facilities may submit and implement an alternative notification plan. This alternative notification plan shall comply with the Texas Water Code, §26.039. Responsible persons shall obtain the agency's written approval before implementing any alternative notification plan.

(2) Upon approval of the agency regional manager, responsible persons may provide the initial notification by facsimile to the regional office during normal business hours.

Adopted April 24, 1996 Effective May 23, 1996

§327.4. **Reportable Quantities.**

(a) Hazardous substances. The reportable quantities for hazardous substances shall be:

(1) for spills or discharges onto land - the quantity designated as the Final Reportable Quantity (RQ) in Table 302.4 in 40 CFR §302.4; or

(2) for spills or discharges into waters in the state - the quantity designated as the Final RQ in Table 302.4 in 40 CFR §302.4, except where the Final RQ is greater than 100 pounds in which case the RQ shall be 100 pounds.

(b) Oil, petroleum product, and used oil.

(1) The RQ for crude oil and oil other than that defined as petroleum product or used oil shall be:

(A) for spills or discharges onto land - 210 gallons (five barrels); or

(B) for spills or discharges directly into water in the state - quantity sufficient to create a sheen.

(2) The RQ for petroleum product and used oil shall be:

(A) except as noted in subparagraph (B) of this paragraph, for spills or discharges onto land - 25 gallons;

(B) for spills or discharges to land from PST exempted facilities - 210 gallons (five barrels); or

(C) for spills or discharges directly into water in the state - quantity sufficient to create a sheen.

(c) Industrial solid waste or other substances. The RQ for spills or discharges into water in the state shall be 100 pounds.

Adopted April 24, 1996 Effective May 23, 1996

§327.5. **Actions Required.**

(a) The responsible person shall immediately abate and contain the spill or discharge and cooperate fully with the executive director and the local incident command system. The responsible person shall also begin reasonable response actions which may include, but are not limited to, the following actions:

(1) arrival of the responsible person or response personnel hired by the responsible person at the site of the discharge or spill;

(2) initiating efforts to stop the discharge or spill;

(3) minimizing the impact to the public health and the environment;

(4) neutralizing the effects of the incident;

(5) removing the discharged or spilled substances; and

(6) managing the wastes.

(b) Upon request of the local government responders or the executive director, the responsible person shall provide a verbal or written description, or both, of the planned response actions and all actions taken before the local governmental responders or the executive director arrive. When the agency on-scene coordinator requests this information, it is subject to possible additional response action requirements by the executive director. The information will serve as a basis for the executive director to determine the need for:

(1) further response actions by the responsible person;

(2) initiating state funded actions for which the responsible person may be held liable to the maximum extent allowed by law; and

(3) subsequent reports on the response actions.

(c) Except for discharges or spills occurring during the normal course of transportation about which carriers are required to file a written report with the U.S. Department of Transportation under 49 CFR §171.16, the responsible person shall submit written information, such as a letter, describing the details of the discharge or spill and supporting the adequacy of the response action, to the appropriate TNRCC regional manager within 30 working days of the discovery of the reportable discharge or spill. The regional manager has the discretion to extend the deadline. The documentation shall contain one of the following items:

(1) A statement that the discharge or spill response action has been completed and a description of how the response action was conducted. The statement shall include the initial report information required by §327.3(c) of this title (relating to Notification Requirements). The executive director may request additional information. Appropriate response actions at any time following the discharge or spill include use of the Texas Risk Reduction Program rules in Chapter 350 of this title (relating to Texas Risk Reduction Program).

(2) A request for an extension of time to complete the response action, along with the reasons for the request. The request shall also include a projected work schedule outlining the time required to complete the response action. The executive director may grant an extension up to six months from the date the spill or discharge was reported. Unless otherwise notified by the appropriate regional manager or the Emergency Response Team, the responsible person shall proceed according to the terms of the projected work schedule.

(3) A statement that the discharge or spill response action has not been completed nor is it expected to be completed within the maximum allowable six month extension. The statement shall explain why completion of the response action is not feasible and include a projected work schedule outlining the remaining tasks to complete the response action. This information will also serve as notification that the response actions to the discharge or spill will be conducted under the Texas Risk Reduction Program rules in Chapter 350 of this title (relating to Texas Risk Reduction Program).

Adopted September 2, 1999 Effective September 23, 1999

§327.31. Natural Resource Damage Assessment for Oil Spills in Coastal Waters.

Pursuant to a joint negotiated rulemaking mandated under Senate Bill 1049, 73rd Legislature, 1993, the Texas Natural Resource Conservation Commission incorporates by reference the provisions of 31 TAC §§20.1-20.4, 20.10, 20.20-20.23, 20.30-20.36, and 20.40-20.44, concerning Natural Resource Damage Assessment, as adopted by the Texas General Land Office, effective October 19, 1994.

Adopted December 21, 1994 Effective January 11, 1995

TEMPORARY STORMWATER SECTION (TCEQ-0602)

ATTACHMENT B

Potential Sources of Contamination:

1. Soil disturbance during construction.
2. Hydrocarbon-based fluids from Vehicle and Construction Traffic.
3. Landscaping – Fertilizer and Pesticides.

ATTACHMENT C

Sequence of major activities for each phase is as follows:

1. The installation of Erosion/Sedimentation Controls – 0.3 Ac. Disturbed
2. Clearing, grubbing, and removal of topsoil from entire site – 0.92Ac. Disturbed
3. Rough grading and building pad excavation – 0.08 Ac. Disturbed
4. Establishing subgrade – 0.67 Ac. Disturbed
5. Excavating for utilities – 0.25 Ac. Disturbed
6. Finish grading, paving and landscaping – 0.67 Ac. Disturbed

ATTACHMENT D

The Temporary Best Management Practices (TBMP) for this project will consist of:

1. A stabilized construction entrance.
2. Silt fencing around low sides of site.
3. Inlet protection

All TBMP's will be in place prior to any regulated activities commencing. The stabilized construction entrance will remove excess spoils from construction vehicles leaving the site. The silt fencing will collect silt runoff and debris during construction activities. The inlet protection will prevent sediment from entering the storm sewer system. These controls will be maintained during construction and will remain until after all construction activities are complete and permanent re-vegetation is established.

ATTACHMENT F

This site will be developed with asphalt paving and stormwater pipes designed to route the majority of flows and pollutants to the existing water quality pond located at the southwest corner of the site.

ATTACHMENT G

Refer to the drawings, sheets C41, and C42.

ATTACHMENT I

The contractor is required to inspect the controls and fences at weekly intervals and after any rainfall events to insure that they are functioning properly. The person(s) responsible for maintenance of controls and fences shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches.

ATTACHMENT J

Schedule of Interim Soil Stabilization Practices:

1. Erosion and sediment control measures including perimeter sediment controls must be in place before vegetation is disturbed and must remain in place and be maintained and repaired.
2. Temporary stabilization or covering of soil stockpiles and protection of stockpile located away from construction activity must be maintained
3. Should construction activities cease for fifteen (15) days or more on any significant portion of the construction site, temporary stabilization is required for that portion of the site to prevent soil and wind erosion until work resumes on that portion of the site.
4. Should all construction activities cease for thirty days or more, the entire site must be temporarily stabilized using vegetation or a heavy mulch layer, temporary seeding or other method.

Schedule of Permanent Soil Stabilization Practices:

1. Stabilized any unpaved area that is final grade or remain unpaved for the next two weeks. Permanent stabilization may consist of sodding, seeding, or mulching that must be maintained to prevent erosion from the site until re-vegetation has achieved 70% coverage
2. Once construction is complete, remove all the pollution prevention measures that were temporary.

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

REGULATED ENTITY NAME: Taco Bell @ 1838 State Hwy 46

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

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

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

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

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

   _____

   _____

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

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

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

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

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

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

__ **ATTACHMENT A - 20% or Less Impervious Cover Waiver.** This site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is found at the end of this form.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Erickson Mendoza
Print Name of Customer/Agent

Signature of Customer/Agent

10/05/2010
Date

PERMANENT STORMWATER SECTION (TCEQ -0600)

ATTACHMENT A
Not Applicable

ATTACHMENT B
There is no stormwater that originates up-gradient from the site and flows across the site. The stormwater from State Hwy 46 does not flow into the site.

ATTACHMENT C
An proposed partial sedimentation/sand filtration pond will be used to treat the stormwater and prevent pollution of surface water originating on-site of flows off the site. The objective of the sedimentation and filtration pond is to remove sediment and pollutants from the first flush of the pavement and impervious area runoff. The stormwater runoff from the site drains into the existing sedimentation and filtration pond. There is an existing basin inlet with rock rubble for energy dissipation of flow entering the basin. This should help the flows be distributed uniformly at low velocity to encourage settlement of solids. The sedimentation chamber allows sediment in the runoff to settle at the bottom of the chamber, then stormwater travels thru gabion rock structure and then into the filtration chamber. The filtration chamber is composed of sand and gravel media layer and then a perforated pvc pipe is used to drain captured flows from the gravel layer. An impermeable layer is constructed below the pvc pipe to prevent the stormwater from leaving the filtration chamber without being treated.

ATTACHMENT D
All flows from the water quality pond is discharge to storm pipe which then drains to a detention pond.

ATTACHMENT F
Refer to attached construction plans. Please see sheet C10-TCEQ General Construction Notes; sheet C41 and C42 for existing and proposed drainage area map and drainage calculations and TCEQ TSS Load Removal calculations.

ATTACHMENT G
Refer to attached Maintenance Plan and Schedule for Sedimentation and Filtration Basins.

ATTACHMENT I
All flows from the water quality pond will be discharged into public storm sewer system that will drain to a detention pond (designed and built by others).

SUGGESTED MAINTENANCE PLAN AND SCHEDULE FOR SEDIMENTATION AND FILTRATION BASINS

PROJECT NAME: Taco Bell

ADDRESS: 1838 State Hwy 46 W

CITY, STATE ZIP: New Braunfels, TX 78132

SEDIMENTATION BASIN

Monthly: The vegetative growth in the basin buffer 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/pollutants exceeds 6 inches, it shall be removed and disposed of "properly".

The accumulation of pollutants/oils shall be checked. If the pollutants have significantly reduced the designed capacity of the sand filter, the pollutants shall be removed.

The basin shall be checked for accumulation of debris and trash. The debris and trash shall be removed if excessive. All debris and trash shall be removed at least every six months.

Annually: The basin and gabion shall be inspected for structural integrity and repaired if necessary.

After Rainfall: The basin shall be checked after each rainfall occurrence to insure that it drains within 48 hours after the sedimentation basin has been emptied. If it does not drain within this time, corrective maintenance will be accomplished.

FILTRATION BASIN

Monthly: The vegetative growth shall be checked. Vegetation in the basin shall not exceed 18 inches in height.

Quarterly: The level of accumulated silt shall be checked. If depth of silt/pollutants exceeds ½ inch, it shall be removed and disposed of "properly".

The accumulation of pollutants/oils shall be checked. If the pollutants have significantly reduced the designed capacity of the sand filter, the pollutants shall be removed.

The basin shall be checked for accumulation of debris and trash. The debris and trash shall be removed if excessive. All debris and trash shall be removed at least every six months.

Annually: The basin and gabion shall be inspected for structural integrity and repaired if necessary.

After Rainfall: The basin shall be checked after each rainfall occurrence to insure that it drains within 48 hours after the sedimentation basin has been emptied. If it does not drain within this time, corrective maintenance will be accomplished.

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

"Proper" disposal of accumulated silt shall be accomplished following Texas Commission on Environmental Quality.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days of any changes in the following information.

Responsible Party: Dwayne Kostiha

Mailing Address: 1Austaco, LTD. 500 N. Capital of Texas Hwy, Bldg 2

City, State: Austin, Texas Zip: 78746

Telephone: (512) 327-4654 FAX: (512) 327-4027

Signature of Responsible Party AGENT

10/05/2010
Date

TNRCC-0589 (1/1/96)

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

I Dwayne Kostiha,
Print Name

Director of Operations,
Title - Owner/President/Other

of Austaco, LTD.,
Corporation/Partnership/Entity Name

have authorized Erickson Mendoza (Hagood Engineering Associates)
Print Name of Agent/Engineer

of Hagood Engineering Associates
Print Name of Firm

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

I also understand that:

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

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

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

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

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

SIGNATURE PAGE:

Applicant's Signature

9-27-10
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared _____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 27th day of Sept 2010.

NOTARY PUBLIC

Typed or Printed Name of Notary

JUDY C. MOFFETT
MY COMMISSION EXPIRES
August 16, 2011

MY COMMISSION EXPIRES

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

NAME OF PROPOSED REGULATED ENTITY: TACO BELL - 1838 State Hwy 46
REGULATED ENTITY LOCATION: 1838 State Hwy 46 New Braunfels, TX 78132
NAME OF CUSTOMER: Austaco, LTD
CONTACT PERSON: Dwayne Kostiha PHONE: 512/327-4654
(Please Print)

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

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

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

San Antonio Regional Office (3362) ☐ Bexar ☒ Comal ☐ Medina ☐ Kinney ☐ Uvalde

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment.** This payment is being submitted to (Check One):

☐ **Austin Regional Office**

☐ **Mailed to TCEQ:**
TCEQ – Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☒ **San Antonio Regional Office**

☐ **Overnight Delivery to TCEQ:**
TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Site Location (Check All That Apply): ☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	Size	Fee Due
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	0.92 Acres	$ 3,000.00
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	$

Signature

9-27-10
Date

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

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

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program
Application Fee Schedule
30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications
Contributing Zone Plans and Modifications

PROJECT	PROJECT AREA IN ACRES	FEE
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

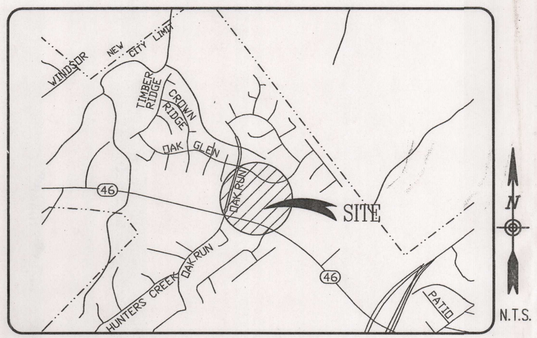
Exception Requests

PROJECT	FEE
Exception Request	$500

Extension of Time Requests

PROJECT	FEE
Extension of Time Request	$150

SITE LOCATION MAP



SITE DEVELOPMENT PLANS

SUBMITTED

FOR

TACO BELL

1838 STATE HIGHWAY 46 WEST

NEW BRAUNFELS, TEXAS 78132

SHEET INDEX

#	SHEET	DESCRIPTION
1	CVR	COVER SHEET
2	C10	GENERAL CONSTRUCTION NOTES
3	C21	EROSION/SEDIMENTATION CONTROL PLAN
4	C31	DIMENSION CONTROL & PAVING SITE PLAN
5	C41	GRADING/DRAINAGE SITE PLAN
6	C42	WATER QUALITY POND SECTIONS & DETAILS
7	C61	UTILITY PLAN
8	C70	GENERAL CONSTRUCTION DETAILS
9	C71	UTILITY DETAILS
10	L1	LANDSCAPE PLAN

TCEQ-R13 RECEIVED
OCT 06 2010 OCT 11 2010
SAN ANTONIO COUNTY ENGINEER

BENCHMARK

B.M.#1 – SQUARE TOP CURB
ELEV. = 864.18
B.M.#2 – SQUARE TO CURB
ELEV. = 867.85

PLAN SUBMITTALS

NO.	DATE	COMMENTS
1	09/27/2010	SUBMITTED TO THE CITY OF NEW BRAUNFELS AND NBU FOR REVIEW
2	10/05/2010	SUBMITTED TO TCEQ
.	.	.
.	.	.
.	.	.

OWNER
AUSTACO III, INC.
500 N. CAPITAL OF TEXAS HWY.
BUILDING 2
AUSTIN, TX 78746
(512) 327-4654
DIRK DOZIER

ARCHITECT
HOOVER & ASSOCIATES, INC.
4105 MEDICAL PKWY., SUITE 201
AUSTIN, TX 78756
(512) 467-2626
MORRIS HOOVER, A.I.A

ENGINEER
HAGOOD ENGINEERING ASSOCIATES
ONE CHISHOLM TRAIL
SUITE 5200
ROUND ROCK, TEXAS 78681
(512) 244-1546
ERICKSON B. MENDOZA, P.E.

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER

STATE OF TEXAS ★
COUNTY OF COMAL ★

I, Erickson B. Mendoza , do hereby certify that the public works and drainage improvements described herein have been designed in compliance with the (Subdivision, Building Regulation) ordinances and storm water drainage policy adopted by the City of New Braunfels, Texas.

STATE OF TEXAS ★ ERICKSON B. MENDOZA 98086 REGISTERED PROFESSIONAL ENGINEER

Erickson B. Mendoza 10/05/2010
Erickson B. Mendoza
Registered Professional Engineer

ACCEPTED FOR CONSTRUCTION BY:

Engineering and Development Services Department Date
City of New Braunfels, Texas

NOTES:

1. NO PORTION OF THIS PROJECT TRACT IS WITHIN THE 100-YR FLOOD HAZARD AREA AS DESIGNATED BY F.E.M.A. MAP ON THE COMMUNITY PANEL NO.48091C0435 F, DATED SEPTEMBER 2, 2009 FOR THE CITY OF NEW BRAUNFELS, COMAL COUNTY, TEXAS.
2. SEE SHEET C10 FOR GENERAL CONSTRUCTION NOTES.
3. DETENTION POND DESIGN AND CONSTRUCTION BY OTHERS.
4. PROJECT SITE IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AND WATER POLLUTION ABATEMENT PLAN IS REQUIRED WITH THIS PROJECT.

REVISIONS

NO.	DATE	DESCRIPTION	APPROVED BY

HAGOOD ENGINEERING ASSOCIATES
One Chisholm Trail, Suite 5200
Round Rock, Texas 78681
Phone (512) 244-1546
Fax (512) 388-3698
www.hea-eng.pro
TBPE Registration No. F-12709

JOB NO.:	H10-002
DRAWN BY:	R.W.
CHECKED BY:	E.B.M.
P.I.C.:	T.R.H.
FILE NO:	H10-002CVR
DATE:	OCTOBER 2010
SHEET:	1 OF 10

Oct 01,2010-4:30pm T:\HEA Projects\Projects 10-000\H10-002 TACO BELL HWY 46\Drawings\Civil\H10-002CVR.dwg

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES

General Notes Approved 12/9/03

Appendix/Appendix B Revised 10/26/09 Page 1 of 3

General Notes:

1. All materials and construction procedures within the scope of the project shall be approved by New Braunfels Utilities and comply with the current "New Braunfels Utilities Water Systems Connection/Construction Policy".
2. Contractor shall not proceed with any pipe installation work until they obtain a copy of the plans from the Consultant or Engineer and notify NBU Water Systems Engineering at 830-608-8971 with at least two (2) working days (48 hours) notice. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
3. The Developer dedicates the water / wastewater mains upon completion by the Contractor and acceptance by the New Braunfels Utilities Water System. NBU will own and maintain said water / wastewater mains which are located within platted utility easements or public ROW of proposed developments. (As applicable).
4. Contractor agrees to assume sole and complete responsibility for job site conditions during the construction of the project, including safety of all persons and property. This requirement shall apply continuously and not be limited to normal working hours. The contractor shall defend, indemnify and hold the owners and the engineer and his employees, partners officers, directors, or consultants harmless from any and all liability, real or alleged, in connection with the performance of the work on this project, excepting from liability arising from sole negligence of the owner or engineer, engineer's directors, officers, employees, or consultants.
5. Contractor to contact the engineer-of-record (EOR) for any field changes. Any revisions or changes to the approved construction plans will require additional approval by NBU in writing.
6. Contractor and / or contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavation.
7. Contractor shall be responsible for restoring to its original or better condition, any damages done to existing fences, curbs, streets, driveways, landscaping and structures, and existing utilities (not adjusted on plans). Cost of Restorations, if any, shall be the contractor's entire expense.
8. The Contractor shall avoid cutting roots larger than one inch in diameter when excavating near existing trees. Excavation in vicinity of trees shall proceed with caution.
9. Contractor shall procure all permits and licenses, pay all charges, fees and taxes and give all notices necessary and incidental to the due and lawful prosecution of the work.

General Notes Approved 12/9/03

Appendix/Appendix B Revised 10/26/09 Page 2 of 3

10. No extra payment shall be allowed for work called for on the plans but not included on the bid schedule. This incidental work will be required and shall be included under the pay item to which it relates.
11. Contractor is responsible for removal of all waste materials upon project completion. The contractor shall not permanently place any waste materials in the 100-year flood plain without first obtaining an approved flood plain development permit.
12. The contractor shall not place any materials on the recharge zone of the Edwards aquifer without an approved water pollution abatement plan from the TCEQ 31 TAC 313.4 and 31 TAC 313.9.
13. Barricades and warning signs shall conform to the "Texas manual on uniform traffic control devices"and shall be located to provide maximum protection to the public as well as construction personnel and equipment while providing continuous traffic flow at all times during construction. The contractor is responsible for maintaining all devices during construction.
14. Contractor is required to verify project elevations. The term "match existing" shall be understood to signify both horizontal and vertical alignment.
15. The location of utilities, either underground or overhead, shown within the right of way are approximate and shall be verified by the contractor before beginning construction operations.
16. OSHA regulations prohibit operations that will bring persons or equipment within 10 feet of an energized line. Where workmen and/or equipment have to work close to an energized electrical line, the contractor shall notify the electrical power company involved and make whatever adjustments necessary to ensure the safety of those workmen.
17. It shall be the contractor's responsibility to locate utility service lines as required for construction. Contractors shall call the One Call System for water/wastewater location.
18. Due to federal regulations Title 49, part 192 (8), Gas companies must maintain access to gas valves at all times. The contractor must protect and work around any gas valves that are in the project area.
19. The contractor is fully responsible for the traffic control and will be responsible for furnishing all traffic control devices, and flaggers. The construction methods shall be conducted to provide the least possible interference to traffic so as to permit the continuous movement of the traffic in one direction at all times. The contractor shall clean up and remove from the work area any loose material resulting from contract operations at the end of each workday.
20. Prior to ordering materials to be used in construction, contractor shall provide the engineer with four (4) copies of the source, type, gradation, material specification data and / or shop drawings, as applicable, to satisfy the requirements of the following items and all material items referred to in these listed items:
a. Water mains and services
b. Wastewater mains and services

General Notes Approved 12/9/03

Appendix/Appendix B Revised 10/26/09 Page 3 of 3

21. Thrust blocks will not be allowed on the system without special approval. Joints will be restrained with restraining systems approved by NBU and restraint length shall be submitted to NBU at the time of plan submittal.
22. Water jetting the backfill within a street will not be permitted. Wastewater trenches subject to traffic shall conform to NBU Connection and Construction Policy Manual.
23. Where the minimum 9 foot separation distance between wastewater lines and water lines / mains cannot be maintained, the installation of wastewater lines shall be in strict accordance with TCEQ.
24. Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures. The Contractor's implementation of the systems, programs and/or procedures shall provide for adequate trench excavation safety protection that complies with as a minimum, OSHA Standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA Standards governing the presence and activities of individuals working in and around trench excavation.
25. Utility Trench Compaction with street R.O.W.
a. All utility trench compaction test within the street pavement section shall be the responsibility of the developer's Geo-technical engineer.
b. Fill material shall be placed in uniform layers not to exceed twelve inches (12") loose.
c. Each layer of material shall be compacted as specified and tested for density and moisture in accordance with Text Methods TEX-113-E, TEX-114-E, TEX-115-E.
d. The number and location of required tests shall be determined by the Geotechnical Engineer and approved by the City of New Braunfels Street Inspector.
e. Upon completion of testing the Geo-technical Engineer shall provide the City of New Braunfels Street inspector with all testing documentation and a certification stating that the placement of fill material has been completed in accordance with the plans.
26. After construction, inspection will be completed by the Contractor with a TV camera and observed by the assigned NBU Inspector. No inspection will be performed prior to 30 days from complete installation of the wastewater lines. As the camera is run through the lines, any abnormalities found, such as broken pipe or misaligned joints, must be replaced by the Contractor at his expense. Contractor to provide TV tapes or digital files to NBU for review prior to final inspection of the project.

Wastewater Notes Approved 12/9/03

Appendix/Appendix B Revised 11/02/09 Page 1 of 2

WASTEWATER NOTES:

1. The contractor shall maintain service to existing wastewater system at all times during construction.
2. All 8" wastewater pipe and fittings in this project are P.V.C. SDR-26, ASTM D-3034, D-3212, F-477. At waterline crossings and where water and wastewater mains or laterals are parallel and separation distance can not be achieved as per 30 TAC §217.13, pressure rated pipe P.V.C. SDR-26, ASTM D-2241, ASTM D-3139 is used instead.
3. At all waterline crossings and where water and sewer mains are parallel and separation distance can not be achieved as per 30 TAC §217.13, pressure rated pipe P.V.C. SDR-26, ASTM D-2241, ASTM D-3139 is used instead.
4. All residential wastewater service laterals shall be extended to the property line and a cleanout shall be installed at the property line. Services to lots will extend four (4) feet past the underground electric conduit if electric is installed in the front easement.
5. Pipe bedding of wastewater lines shall be manufactured sand or pea gravel as per NBU specifications.
6. Secondary backfill of wastewater lines shall generally consist of materials removed from the trench and shall be free from brush, debris and trash, no rocks or stones having any dimension larger than 6 inches at the largest dimension.
7. All wastewater pipes shall have compression or mechanical joints as per 30 TAC §217.53 (c) (2).
8. For wastewater lines less than 24"in diameter, select initial backfill material shall be placed in two lifts.
a. The first lift shall be spread uniformly and simultaneously on each side and under the shoulders of the pipe to the mid point or spring line of the pipe.
b. The second lift shall be placed to a depth as shown on the pipe backfill detail. For pipes larger than 24", 12" maximum lifts shall be used.
9. All manholes must be water tight, either monolithic, cast-in-place concrete structures or prefabricated manholes specifically approved by NBU. The manholes shall have water-tight rings and covers. Wherever they are within the 100 year floodplain, the manhole covers shall be bolted. Every third manhole in sequence shall have an alternate means of venting. 30 TAC §213.5 (c) (3) (A) and 30 TAC §217.55 (o).
10. All manholes shall be constructed so that the top of the ring is two inches (2") above surrounding ground except when located in paved area. In paved areas, the manhole ring shall be flush with pavement.
11. All new manholes, unless approved by NBU Engineering, are to have covers with 32" openings.
12. Wastewater pipe connections to pre-cast manholes will be compression joints or mechanical "boot type" joint as approved by NBU.
13. Wastewater lines shall be tested from manhole to manhole.

Wastewater Notes Approved 12/9/03

Appendix/Appendix B Revised 11/02/09 Page 2 of 2

14. In areas where a new wastewater manhole is to be constructed over an existing wastewater system, it shall be the contactor's responsibility to test the existing manholes before construction. After the proposed manhole(s) has been built, the contractor shall re-test the existing system to the satisfaction of the construction inspector. (no separate pay item).
15. Where the minimum 9 foot separation distance between wastewater lines and water lines / mains cannot be maintained, the installation of wastewater lines shall be in strict accordance with TCEQ. The wastewater line shall be constructed of cast iron, ductile iron or PVC meeting the ASTM specification for both pipes and joints of 150 psi and shall be in accordance with 30 TAC §217.53 (d) (3) (A) (i).
16. No testing will be performed prior to 30 days from complete installation of the wastewater lines. The following sequence will be strictly adhered to:
a. Pull mandrel
b. Perform Air test
c. Cleaning of any debris
d. Flushing of system
e. TV Inspection (within 72 hours of flushing)
17. A minimum of 3 feet of cover is to be maintained over the wastewater main and laterals at subgrade, otherwise concrete encasement will be required.
18. Wastewater main connections made directly to existing manholes will require successful testing of the manhole in accordance with NBU Connection & Construction Policy Manual.
19. TCEQ and EPA require erosion and sedimentation control for construction of wastewater collection systems. Developer or authorized representative shall provide erosion and sedimentation control as notes on the project's plan and profile sheets. All temporary erosion and sedimentation controls shall be removed by the Contractor at final acceptance of the project by NBU Water Systems.
20. All manholes not within paved streets shall have locking concrete collar to secure ring and cover to manhole cone per NBU Detail drawing #329.
21. All manholes over the Edwards Aquifer Recharge Zone shall have locking concrete collar to secure ring and cover to manhole cone per NBU detail drawing #329.

Water Notes Approved 12/9/03

Appendix/Appendix B Revised 10/26/09 Page 1 of 1

WATER NOTES:

1. All water mains shall be AWWA C900.
2. Water services shall be single 1" copper tubing.
3. Water line is to be constructed in accordance with the NBU Systems Connection & Construction Policy.
4. Water main shall have a minimum of 42 inches of cover, otherwise concrete encasement will be required.
5. Each unit in a duplex, triplex, fourplex, or condominium shall be provided with an individual water meter. A master meter can be considered for separate buildings, however, those buildings must be plumbed to allow separate meters for future consideration.
6. Contractor will keep the area on top of and around the water meter box free of all objects and debris.
7. Initial backfill of water lines shall be manufactured sand or pea gravel as per NBU Systems Connection & Construction Policy.
8. Secondary backfill of water lines shall generally consist of material removed from the trench and shall be free from brush, debris and trash or stones having any dimension larger than 6 inches at the largest dimension.
9. Hydrostatic testing from valve to valve.
10. No meter boxes to be set in driveways. Any meter boxes set in driveways will be relocated at contractor's and/or developer's expense.
11. Meter boxes must be set at the proposed grade. Any meter boxes that are not set at the final grade will be adjusted at contractor's and/or developer's expense.

TCEQ WPAP NOTES

(Rev. 3/15/07)

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

1. WRITTEN CONSTRUCTION NOTIFICATION MUST BE GIVEN TO THE APPROPRIATE TCEQ REGIONAL OFFICE NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF THE REGULATED ACTIVITY. INFORMATION MUST INCLUDE THE DATE ON WHICH THE REGULATED ACTIVITY WILL COMMENCE, THE NAME OF THE APPROVED PLAN FOR THE REGULATED ACTIVITY, AND THE NAME OF THE PRIME CONTRACTOR AND THE NAME AND TELEPHONE NUMBER OF THE CONTACT PERSON.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
3. IF ANY SENSITIVE FEATURE IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
4. NO TEMPORARY ABOVEGROUND HYDROCARBON AND HAZARDOUS SUBSTANCE STORAGE TANK SYSTEM IS INSTALLED WITHIN 150 FEET OF A DOMESTIC, INDUSTRIAL, IRRIGATION, OR PUBLIC WATER SUPPLY WELL, OR OTHER SENSITIVE FEATURE.
5. PRIOR TO COMMENCEMENT OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. CONTROLS SPECIFIED IN THE TEMPORARY STORM WATER SECTION OF THE APPROVED EDWARDS AQUIFER PROTECTION PLAN ARE REQUIRED DURING CONSTRUCTION. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THE CONTROLS MUST REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.
6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS TO WATER QUALITY (E.G., FUGITIVE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).
7. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS NOT LATER THAN WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%. A PERMANENT STAKE MUST BE PROVIDED THAT CAN INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME.
8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES (E.G., SCREENING OUTFALLS, PICKED UP DAILY).
9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
10. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY 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

SEQUENCE OF CONSTRUCTION:

1. A. INSTALL EROSION CONTROLS AS INDICATED ON APPROVED SITE PLAN.
   B. SCHEDULE PRECONSRUCTION COORDINATION MEETING.
   C. BEGIN SITE CLEARING.
   D. ROUGH GRADESITE. INSPECT AND MAINTAIN ALL CONTROLS AS PER GENERAL NOTES.
   E. WATER QUALITY POND.
   F. CONTSRUCT SITE UTILITIES.
   G. CONSTRUCT PAVING & PARKING.
   H. COMPLETE CONSTRUCTION.
   I. REVEGETATE DISTURBED AREAS OR COMPLETE A DEVELOPERS CONTRACT FOR THE RE-VEGETATION ALONG WITH THE ENGINEERS CONCURRENCE LETTER.
   J. PROJECT ENGINEER INSPECTS JOB AND WRITES CONCURRENCE LETTER TO THE CITY. FINAL INSPECTION IS SCHEDULED UPON RECEIPT OF LETTER.
   K. RECEIVE CITY CLEARANCE FOR OCCUPANCY.
   L. REMOVE TEMPORARY EROSION/SEDIMENTATION CONTROLS.

LEGEND

- 1/2" IRON ROD FOUND
- 1/2" IRON ROD SET
- WASTEWATER MANHOLE
- STORMWATER MANHOLE
- JUNCTION BOX
- FIRE HYDRANT
- GATE VALVE
- WATER METER
- BACKFLOW PREVENTER
- 649.0 — EXISTING CONTOUR
- 735.00 — NEW SPOT ELEVATION
- 735 — NEW CONTOUR
- CURB & GUTTER
- WASTEWATER LINE
- STORM SEWER LINE
- WATER LINE
- EXISTING UTILITY LINES
- BOUNDARY
- RIGHT OF WAY (R.O.W.)
- EASEMENT
- LIMITS OF CONSTRUCTION
- SF SF SF SF SILT FENCE
- RB RB RB RB ROCK BERM
- TP TP TP TP TREE PROTECTION
- X X X X X EXISTING FENCE
- O O O O O PROPOSED FENCE
- OE OE OE OE OE OVERHEAD ELECTRIC
- DOWN GUY
- N45°00'E 230.01' PER CALLS METES & BOUNDS
- BUILDING LINE
- WATER METER BOX SINGLE SERVICE
- DOUBLE SERVICE
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- BENCHMARK LOCATION

GENERAL CONSTRUCTION NOTES

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF AUSTIN MUST RELY UPON THE ADEQUANCE OF THE WORK OF THE DESIGN ENGINEER.

HAGOOD ENGINEERING ASSOCIATES
One Chisholm Trail, Suite 5200
Round Rock, TX 78681
Phone (512) 244-1546
Fax (512) 388-3698
www.hea-eng.pro
TBPE Registration No. F-12709

JOB NO. 2010-002

DATE ISSUED: 10/05/2010
ISSUED FOR: AGENCY REVIEW

STATE OF TEXAS
ERICKSON B. MENDOZA
98086
REGISTERED PROFESSIONAL ENGINEER
10/05/2010

HOOVER & ASSOCIATES, INC.
ARCHITECTS & PLANNERS
4105 Medical Parkway, Suite 201
Austin, TX. 78756
512/467-2626
FAX 512/467-2655

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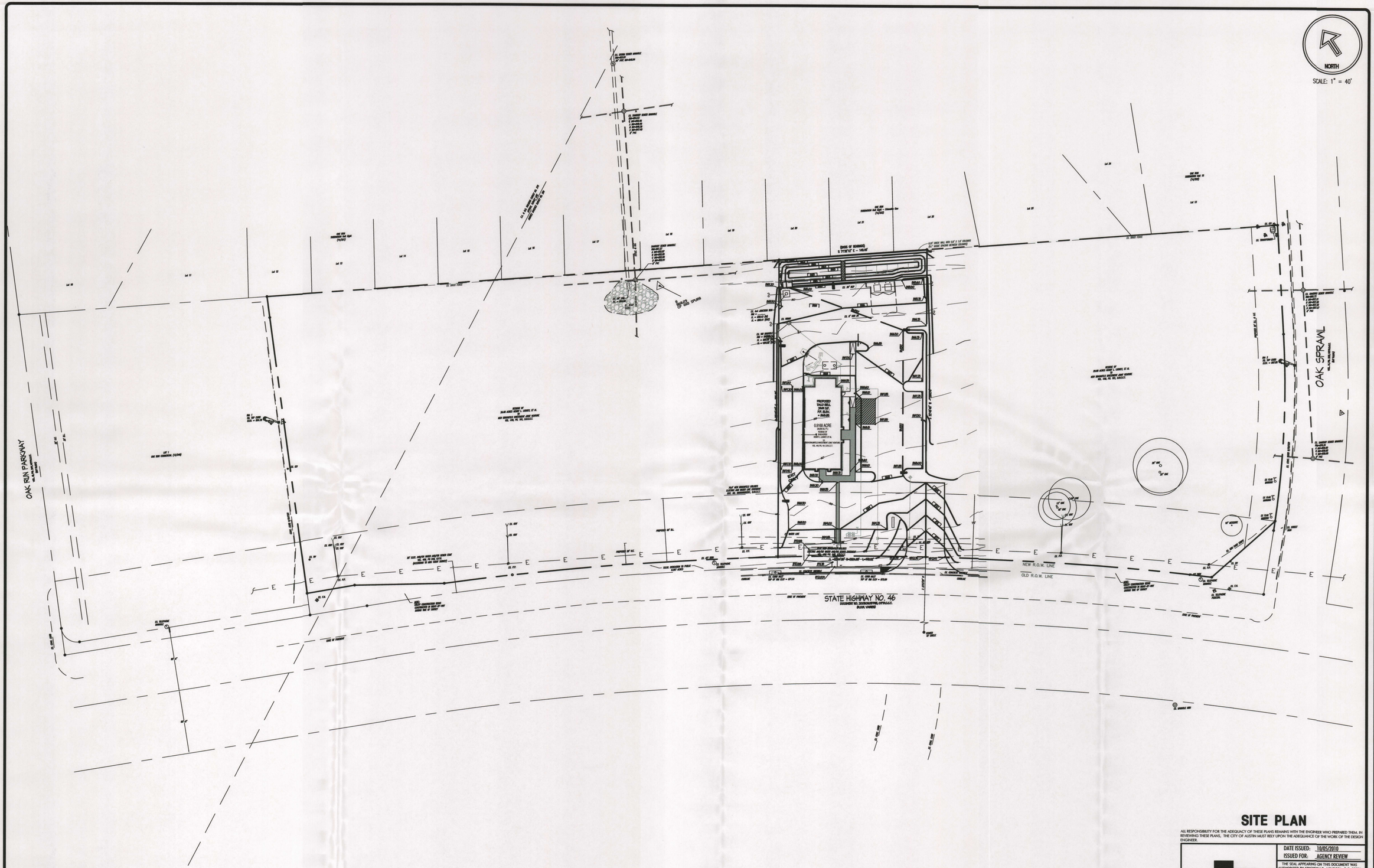

SITE PLAN

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One Chisholm Trail, Suite 5200
Round Rock, TX 78681
Phone (512) 244-1546
Fax (512) 388-3698
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ERICKSON B. MENDOZA
98086
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10/05/2010

HOOVER & ASSOCIATES, INC.
ARCHITECTS & PLANNERS
4105 Medical Parkway, Suite 201 512/467-2626
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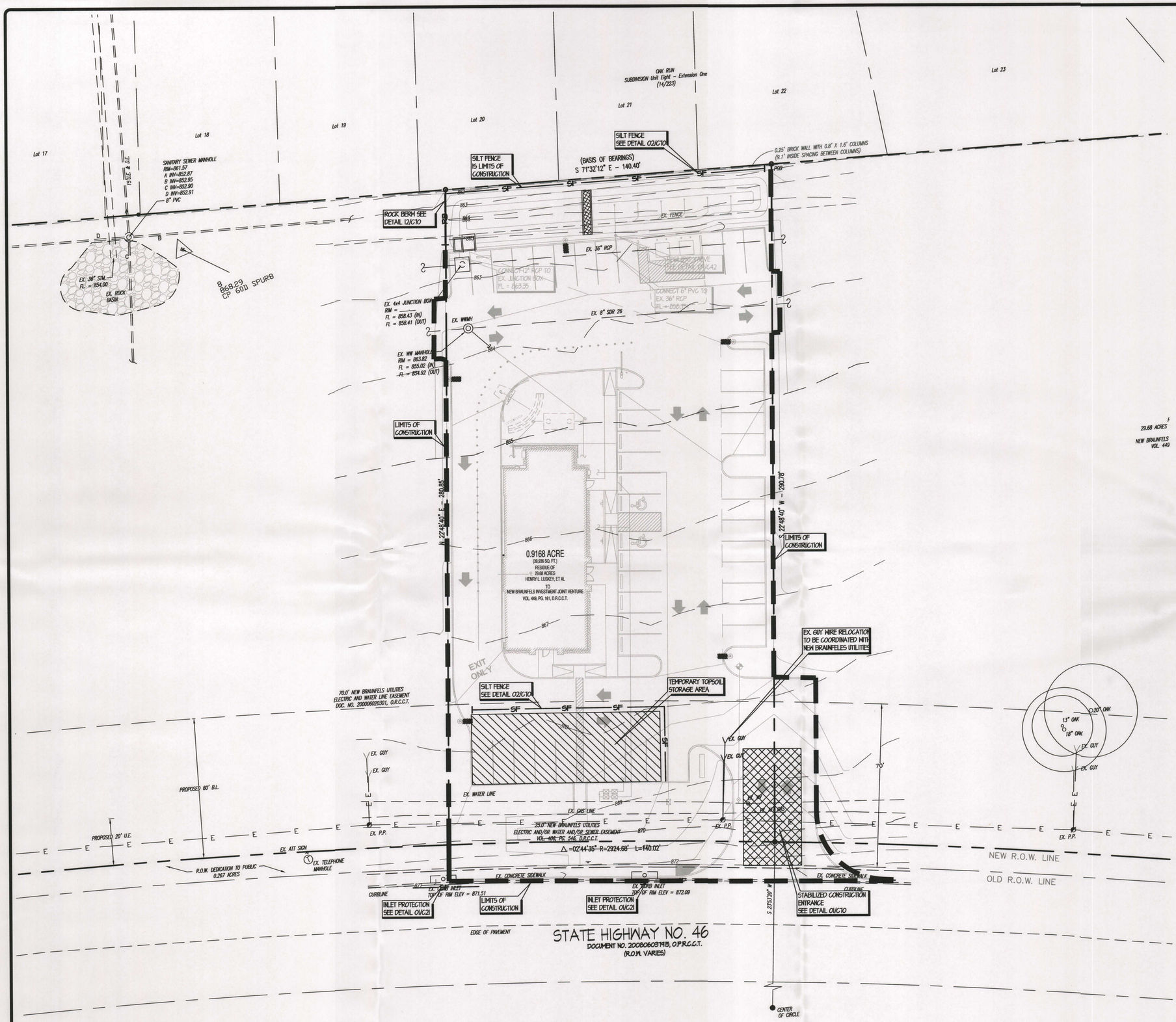
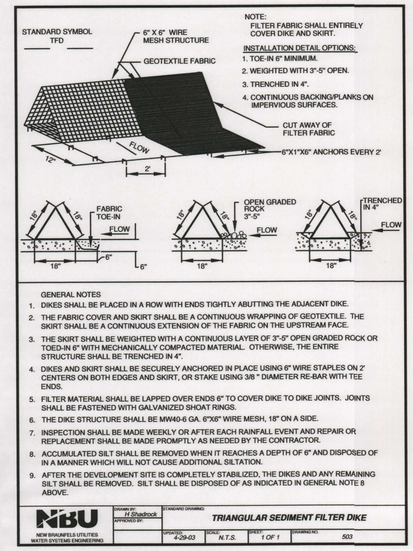


NORTH

SCALE: 1" = 20'



GENERAL NOTES

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 3"-5" OPEN GRADED ROCK OR TOED-IN 6" WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 4".
4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 6" WIRE STAPLES ON 2' CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 3/8 " DIAMETER RE-BAR WITH TEE ENDS.
5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
6. THE DIKE STRUCTURE SHALL BE MW40-6 GA. 6"X6" WIRE MESH, 18" ON A SIDE.
7. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6" AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
9. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

DRAWN BY: H Shadrock
CHECKED BY:
STANDARD DRAWING: TRIANGULAR SEDIMENT FILTER DIKE
UPDATED: 4-29-03 SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO. 503

01 | INLET PROTECTION DETAIL
NTS

NOTES:

1. CONTRACTOR TO ENSURE AT ALL TIMES, CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THROUGH A STABILIZED CONSTRUCTION ENTRANCE. ANY DIRT, MUD, DEBRIS, ETC. SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS AND DRIVES SHALL BE IMMEDIATELY CLEANED UP.
2. CONTRACTOR TO IMPLEMENT TRAFFIC CONTROL MEASURES AS REQUIRED WHEN NECESSARY.
3. EROSION CONTROLS SHALL BE IN PLACE PRIOR TO ANY DEMOLITION OR CONSTRUCTION.
4. THE CONTRACTOR SHALL CONSTRUCT AN ALL WEATHER SURFACE ACCESS DRIVE PRIOR TO GOING VERTICAL WITH THE BUILDING STRUCTURE. DIRT WORK AND FOUNDATION WORK MAY BE DONE PRIOR TO THE CONSTRUCTION OF THIS REQUIREMENT. ALL WEATHER SURFACE IS DEFINED AS ASPHALT, CONCRETE OR CHIP SEAL OVER AN ENGINEERED COMPACTED BASE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTAINMENT AND PROPER DISPOSAL OF ALL LIQUID AND SOLID WASTE ASSOCIATED WITH THIS PROJECT.
6. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO PREVENT THE OCCURRENCE OF WIND BLOWN LITTER FROM THE PROJECT SITE.
7. THE ENTIRE 0.92 ACRE SITE WILL HAVE SOIL DISTURBANCE. THE LIMITS OF CONSTRUCTION IS THE LIMITS OF SOIL DISTURBANCE AS SHOWN ON THIS SHEET.

EROSION/SEDIMENTATION CONTROL PLAN

HAGOOD ENGINEERING ASSOCIATES
One Chisholm Trail, Suite 5200
Round Rock, TX 78681
Phone (512) 244-1546
Fax (512) 388-3698
www.hea.eng.pro
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ERICKSON B. MENDOZA
98086
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10/07/2010

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ARCHITECTS & PLANNERS
4105 Medical Parkway, Suite 201 Austin, TX. 78756
512/467-2626
FAX 512/467-2655

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PROJECT NO. 2010-002
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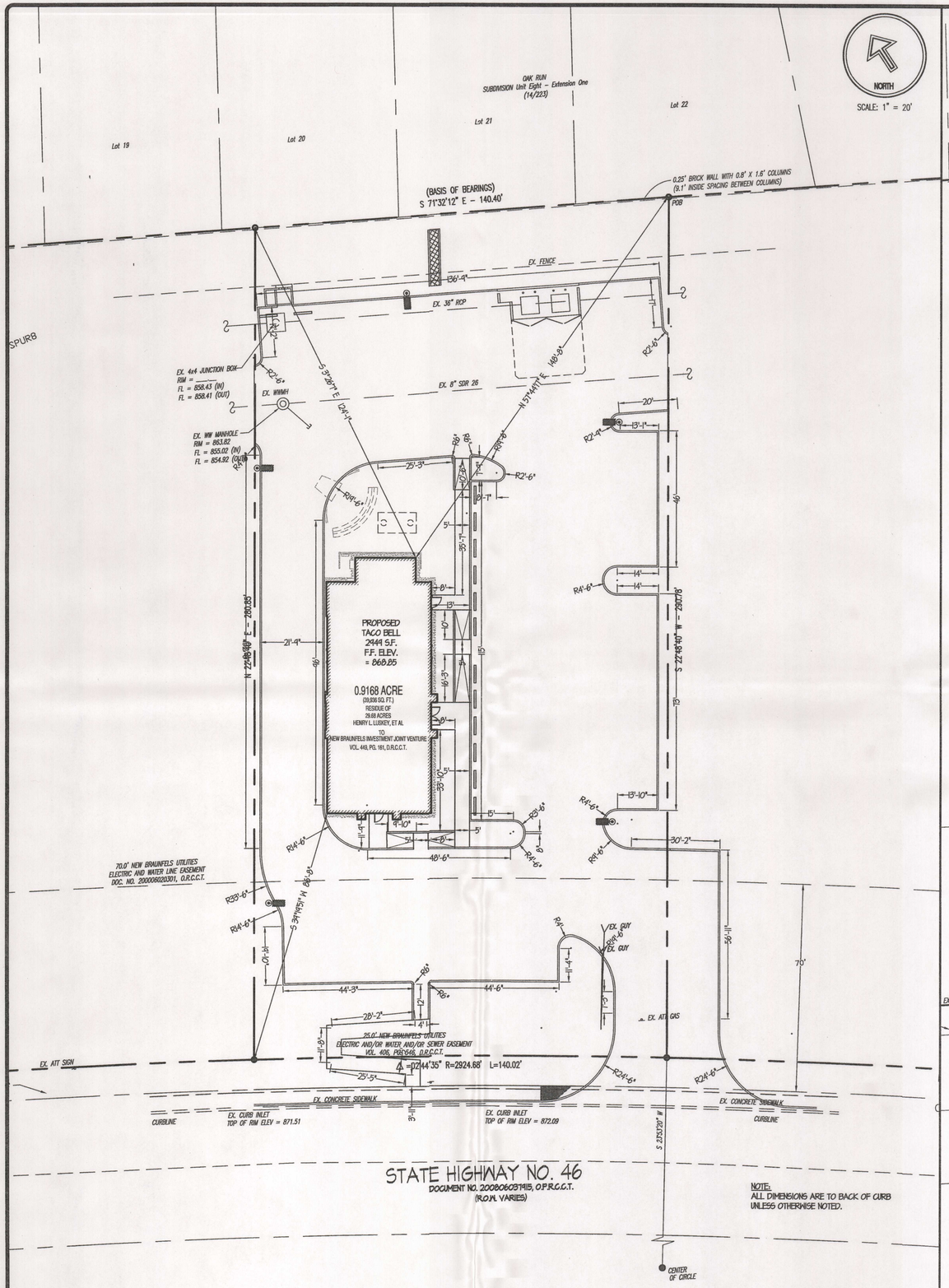
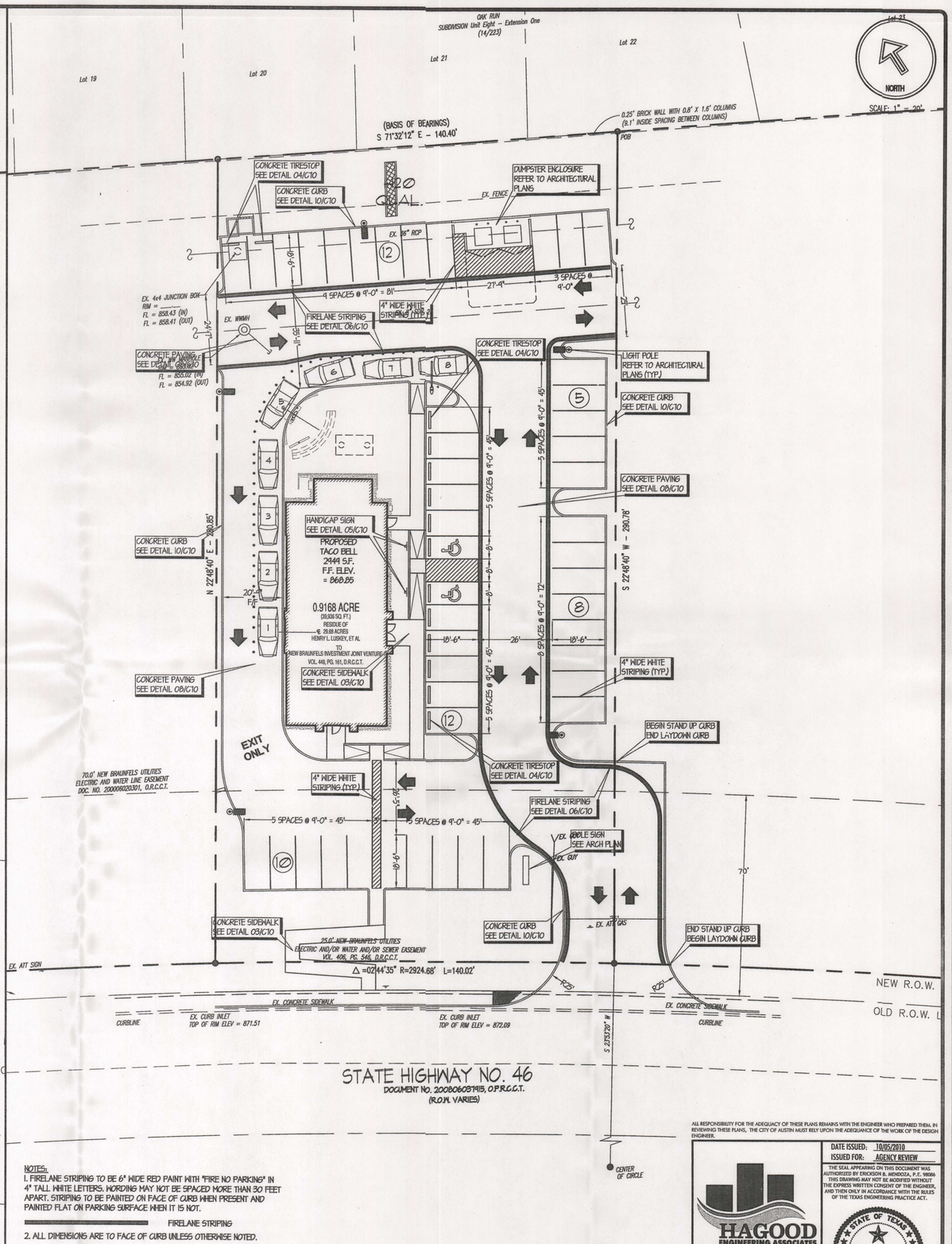


NOTE:
ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.

01 DIMENSION CONTROL PLAN

1" = 20'



NOTES:
1. FIRELANE STRIPING TO BE 6" WIDE RED PAINT WITH "FIRE NO PARKING" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED MORE THAN 30 FEET APART. STRIPING TO BE PAINTED ON FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON PARKING SURFACE WHEN IT IS NOT.

FIRELANE STRIPING

2. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

02 PAVING PLAN

1" = 20'

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One Chisholm Trail, Suite 5200
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98086
REGISTERED
PROFESSIONAL ENGINEER
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ARCHITECTS & PLANNERS
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PROJECT NO. 2010-002
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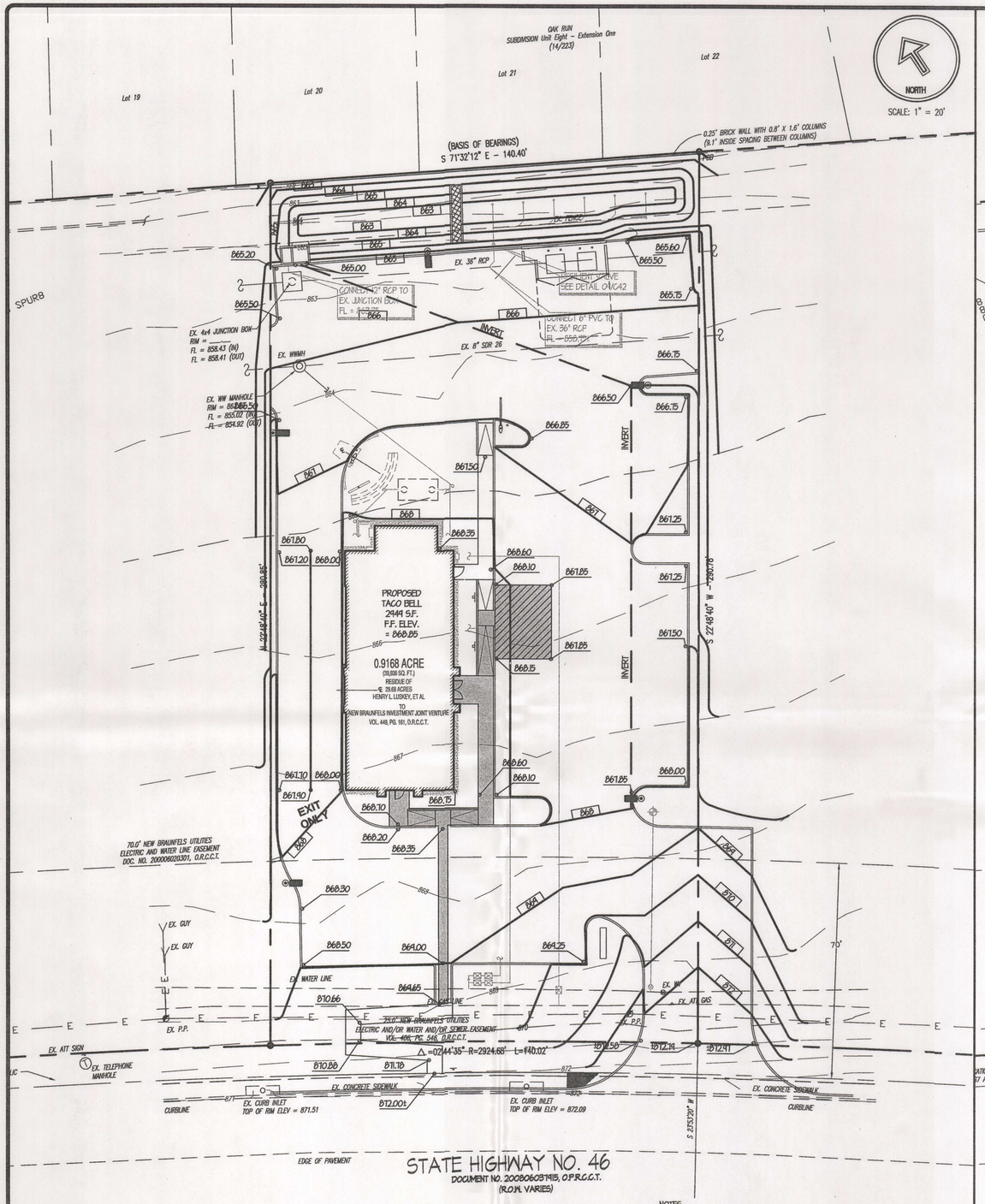


NOTES:

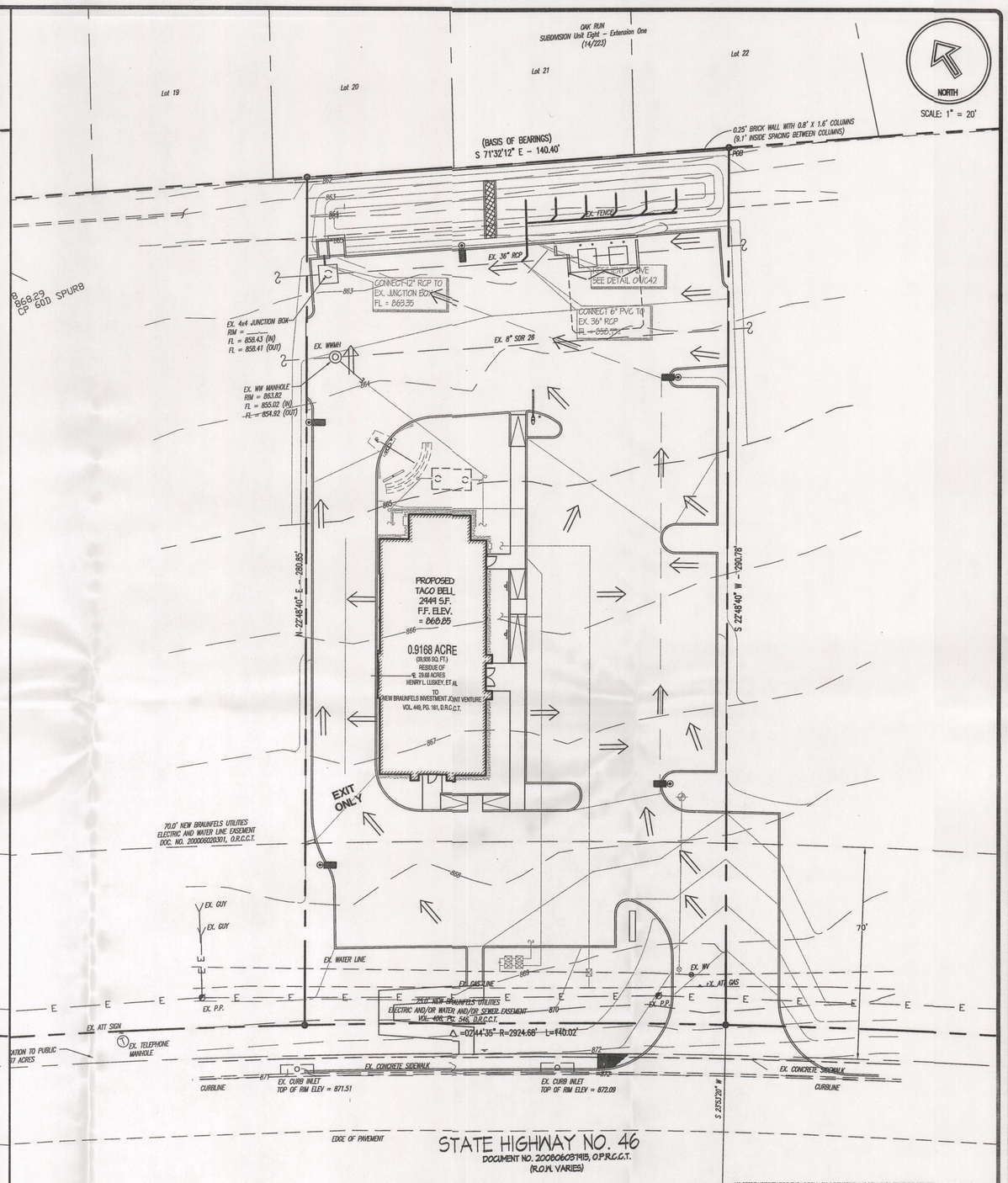
- SLOPES OF ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP.
- THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 in. HANDRAILS SHALL BE PROVIDED IN ACCORDANCE WITH TDLR REQUIREMENTS FOR ALL RAMPS.
- ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50.
- GROUND SURFACE ALONG ACCESSIBLE ROUTES MUST BE STABLE, FIRM AND SLIP RESISTANT.

HANDICAP ACCESSIBLE ROUTE

NO SLOPES GREATER THAN 2% ANY DIRECTION IN THIS AREA.

01 GRADING PLAN

1" = 20'



02 DRAINAGE PLAN

1" = 20'

HAGOOD ENGINEERING ASSOCIATES
One Chisholm Trail, Suite 5200
Round Rock, TX 78681
Phone (512) 244-1546
Fax (512) 388-3698
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JOB NO. 2010-002

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98086
REGISTERED
PROFESSIONAL ENGINEER
10/5/2010

HOOVER & ASSOCIATES, INC.
ARCHITECTS & PLANNERS
4105 Medical Parkway, Suite 201
Austin, TX. 78756
512/467-2626
FAX 512/467-2655

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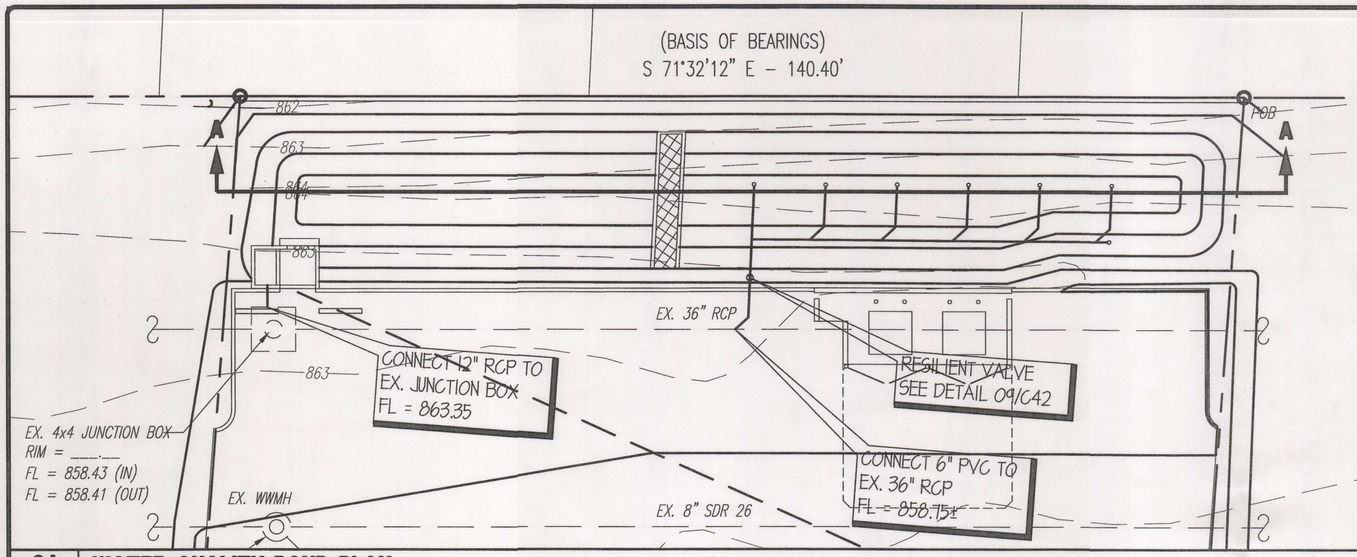
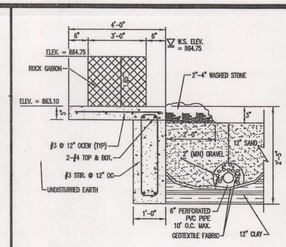


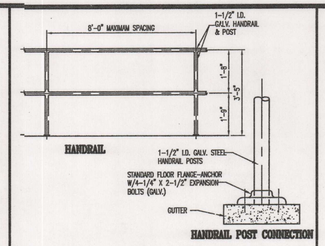
01 WATER QUALITY POND PLAN

1"=10'



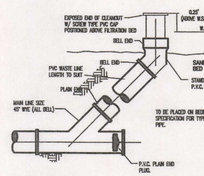
02 GABION DETAIL

NTS



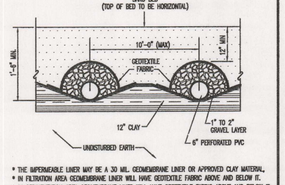
03 HANDRAIL DETAIL

NTS



04 FILTRATION BED CLEANOUT DETAIL

NTS



* THE IMPERMEABLE LINER MAY BE A 30 MIL. GEOMEMBRANE LINER OR APPROVED CLAY MATERIAL.
* IN FILTRATION AREA GEOMEMBRANE LINER WILL HAVE GEOTEXTILE FABRIC ABOVE AND BELOW IT.
* IN SEDIMENTATION AREA GEOMEMBRANE LINER WILL HAVE GEOTEXTILE FABRIC ABOVE AND BELOW IT. THE CONTRACTOR MAY USE WHICHEVER LINER IS MOST COST EFFECTIVE TO PLACE.

05 FILTRATION BED DETAIL

NTS

The top layer shall be 12-18 inches of 0.02-0.04 inch diameter sand (smaller sand size is acceptable). Laterals shall be placed in trenches with a covering of 1/2 to two (2) inch gravel and geotextile fabric.

The laterals shall be underlain by a layer of drainage matting. The geotextile fabric is needed to prevent the filter media from infiltrating into the lateral piping. The drainage matting is needed to provide for adequate vertical and horizontal hydraulic conductivity to the laterals. The geotextile fabric specifications are listed in Section 1.8.5 D 3 (a Basin Liner). the drainage matting specifications are listed below.

Property	Test Method	Unit	Specification
Material	Nonwoven geotextile fabric		
Unit Weight		Oz/Sq.Yd.20	20
Flow Rate (fabric)		GPM/Ft²	100 (min.)
Permeability (fabric)	ASTM D-2434	Cm/Sec	12.4 X 10⁻²
Grab Strength (fabric)	ASTM D-1682	Lb.	Dry Lg.90 Dry Wd.70 Wet Lg.95 Wet Wd.70
Puncture Strength (fabric)	COE SW-02215	Lb.	42 (min.)
Mullen Burst Strength	ASTM D-1117	Psi	140 (min.)
Equiv. Opening Size	US Standard Sieve	No.	100 (70-120)
Flow Rate (drainage core)	Drexel Univ. Test Method	GPM/ft.width14	14

CLAY LINER SPECIFICATION

Property	Test Method	Unit	Specification
Permeability	ASTM D-2434	Cm/Sec	c1 x 10⁻⁶
Plasticity Index of Clay	ASTM D-423 & D-424	%	Not less than 15
Liquid Limit of Clay	ASTM D-2216	%	Not less than 30
Clay Particles Passing	ASTM D-422	%	95% of Standard
Clay Compaction	ASTM D-2216	%	Proctor Density

Source: City of Austin

The clay liner shall have a minimum thickness of 12 inches.

If a geomembrane liner is used it shall have a minimum thickness of 30 mils and be ultraviolet resistant.

The geotextile fabric (for protection of geomembrane) shall meet the following specifications:

Property	Test Method	Unit	Specification
Material	Nonwoven geotextile fabric		
Unit Weight		Oz/Sq. Yd.	8 (min.)
Filtration Rate		In/Sec	0.08 (min.)
Puncture Strength	ASTM D-751 (Modified)	Lb.	125 (min.)
Mullen Burst Strength	ASTM D-751	Psi	400 (min.)
Tensile Strength	ASTM D-1682	Lb.	300 (min.)
Equiv. Opening Size	US Standard Sieve	No.	80 (min.)

GABION

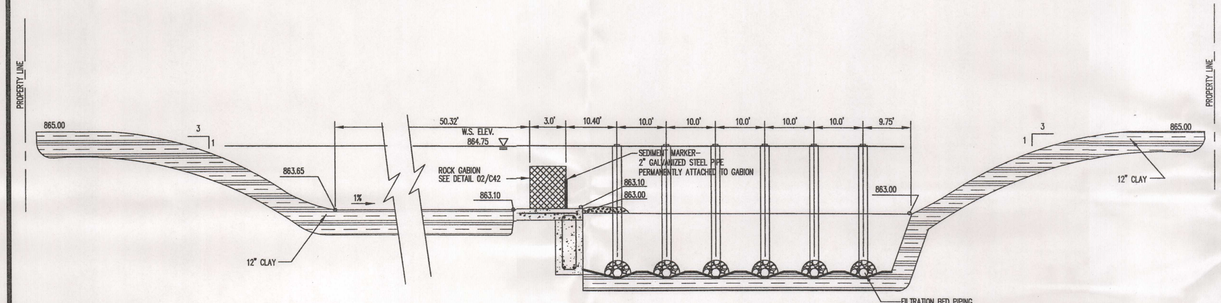
1. Prepare site for placement of basket by excavating to smooth line, grade and cross-section, as required to meet design dimensions.
2. Compact any fills required to meet grade requirements to reduce differential settlement.
3. All removed earth that is not used to build fills for the structure will be disposed of at an approved spoils site in such a manner as to reduce the likelyhood of erosion.
4. Materials and methods of construction for gabions shall be in accordance with Item 594 of the City of Austin Specifications for Public Works Construction.

Materials:

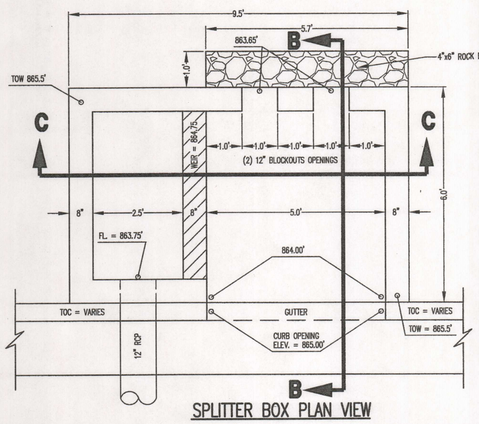
The wire mesh shall consist of plastic-coated (polyvinyl chloride) galvanized wire with a diameter of 0.0843 inches for rock mattress and 0.155 inch for all other applications. The wire for selvages and corners shall be plastic-coated galvanized wire with a diameter of 0.1305 inch. Tie and connecting wire shall be plstic-coated wire with a diameter of 0.084.

06 SPECIFICATIONS

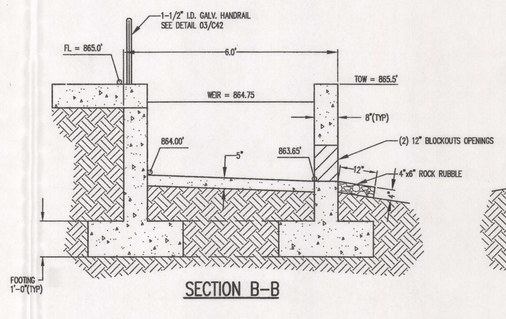
NTS



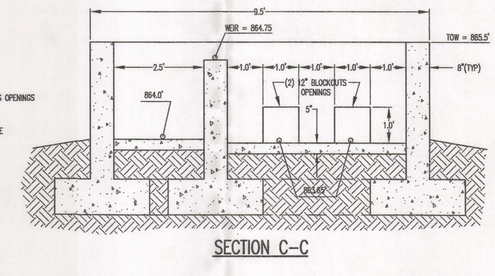
SECTION A-A



SPLITTER BOX PLAN VIEW



SECTION B-B



SECTION C-C

07 WATER QUALITY & SPLITTER BOX SECTIONS

N.T.S.

Splitter Box Calculations

Splitter Box Entrance				
Allowable head =	0.50		c =	2.60
wier length =	**10.00**		Elev =	865.50
Q=c(L-.2h)h^1.5	Broad crested with end contractions			
Q100(req)	8.32			
Q(calc)				
Splitter Box Orifices to Water Quality				
WS elev	864.75		C =	0.60
bottom	863.65		g =	32.20
			H =	0.60
Q=cA(2gh)^.5			AREA	1.00
Q25(req)	6.15	cfs	length =	**1.00**
Q (single)	3.73	cfs	height =	**1.00**
Q(total)	7.46	cfs	quantity =	**2.00**
Splitter Box Wier to Detention				
Allowable head =	0.50		c =	3.30
wier length =	**5.00**		Wier Elev	864.75
Q=c(L-.2h)h^1.5	Sharp Crested with end contractions			
Q100(req)	8.32	cfs		
Q(calc)	11.43	cfs		

Sedimentation Pond Depth v. Storage

Elevation	Depth	Accumul. Depth	Area	Volume	Accumul. Volume	Remarks
863	0	0	455.00	0.00	0.00	
864	1	1	926.00	926.00	926.00	
864.75	1.75	1.75		1759.50	1759.50	> WQ Volume
865	1	2	1420.00	1420.00	2346.00	

Filtration Pond Depth v. Storage

Elevation	Depth	Accumul. Depth	Area	Volume	Accumul. Volume	Remarks
863	0	0	550.00	0.00	0.00	
864	1	1	1046.00	1046.00	1046.00	
864.75	1.75	1.75		2031.00	2031.00	> WQ Volume
865	1	2	1662.00	1662.00	2708.00	

Combined sed/fil volume less gabion	**3790.50** Provided

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Taco Bell-Hwy 46
Date Prepared: 9/20/2010

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

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

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

where:
L_M = TOTAL PROJECT = Required TSS removal resulting from the proposed development = 80% of increased load
N_A = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project
County = Williamson
Total project Area included in plan = 0.92 acres
Predevelopment impervious area within the limits of the plan = 0.00 acres
Total post-development impervious area within the limits of the plan = 0.74 acres
Total post-development impervious cover fraction = 0.80
32 inches
L_M TOTAL PROJECT = 644 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 = 0.92 acres
Predevelopment impervious area within drainage basin/outfall area = 0.00 acres
Post-development impervious area within drainage basin/outfall area = 0.74 acres
Post-development impervious fraction within drainage basin/outfall area = 0.80
L_M TSS BASIN = 644 lbs.

3. Indicate the proposed BMP Code for this basin:

Proposed BMP = Sand Filter
Removal efficiency = 89 percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

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

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

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

A_C = 0.92 acres
A_I = 0.74 acres
A_P = 0.18 acres
L_R = 732 lbs

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

Desired $L_{R\ TSS\ BASIN}$ = 644 lbs.
F = 0.88

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-38

Rainfall Depth = 1.00 inches
Post Development Runoff Coefficient = 0.83
On-site Water Quality Volume = 3185 cubic feet

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

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

Storage for Sediment = 631 cubic feet
Total Capture Volume (required water quality volume(s) x 1.20) = 3788 cubic feet
The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = NA cubic feet

Irrigation Area Calculations:
Soil Infiltration/permeability rate = 0.1 in/hr Enter determined permeability rate or assumed value of 0.1
Irrigation area = NA square feet
NA acres

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-49 to 3-51

Required Water Quality Volume for extended detention basin = NA cubic feet

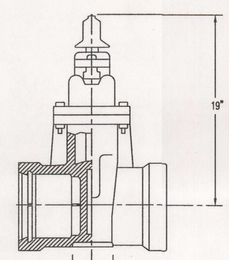
9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-56 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin = 3785 cubic feet
Minimum filter basin area = 1375 square feet
Maximum sedimentation basin area = 1578 square feet For minimum water depth of 2 feet
Minimum sedimentation basin area = 394 square feet For maximum water depth of 8 feet

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins = 3785 cubic feet
Minimum filter basin area = 316 square feet
Maximum sedimentation basin area = 1262 square feet For minimum water depth of 2 feet
Minimum sedimentation basin area = 79 square feet For maximum water depth of 8 feet



PUSH-ON FOR SDR PVC

CLOW/KENNEDY/M&H RESILIENT WEDGE VALVES

09 RESILIENT VALVE DETAIL

NTS

WATER QUALITY SECTION & DETAILS

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STATE OF TEXAS
ERICKSON B. MENDOZA
98086
REGISTERED
PROFESSIONAL ENGINEER
10/05/2010

HAGOOD ENGINEERING ASSOCIATES

One Chisholm Trail, Suite 5200
Round Rock, TX 78681
Phone (512) 244-1546
Fax (512) 388-3698
www.hea.eng.pro
TBPE Registration No. F-12709

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ARCHITECTS & PLANNERS
4105 Medical Parkway, Suite 201
Austin, TX. 78756
512/467-2626
FAX 512/467-2655

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New Braunfels, TX 78132

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PROJECT NO. 2010-002
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C42

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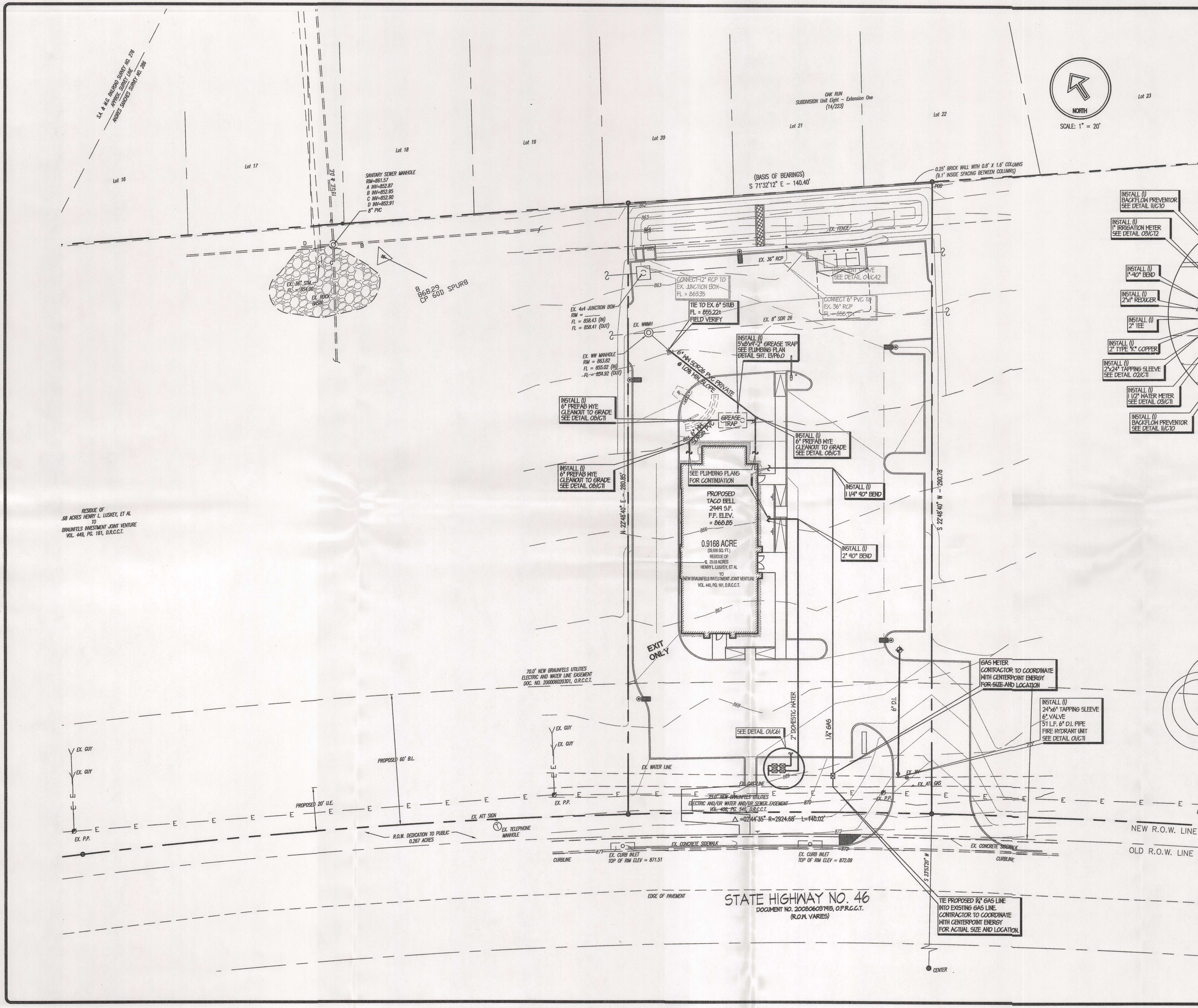

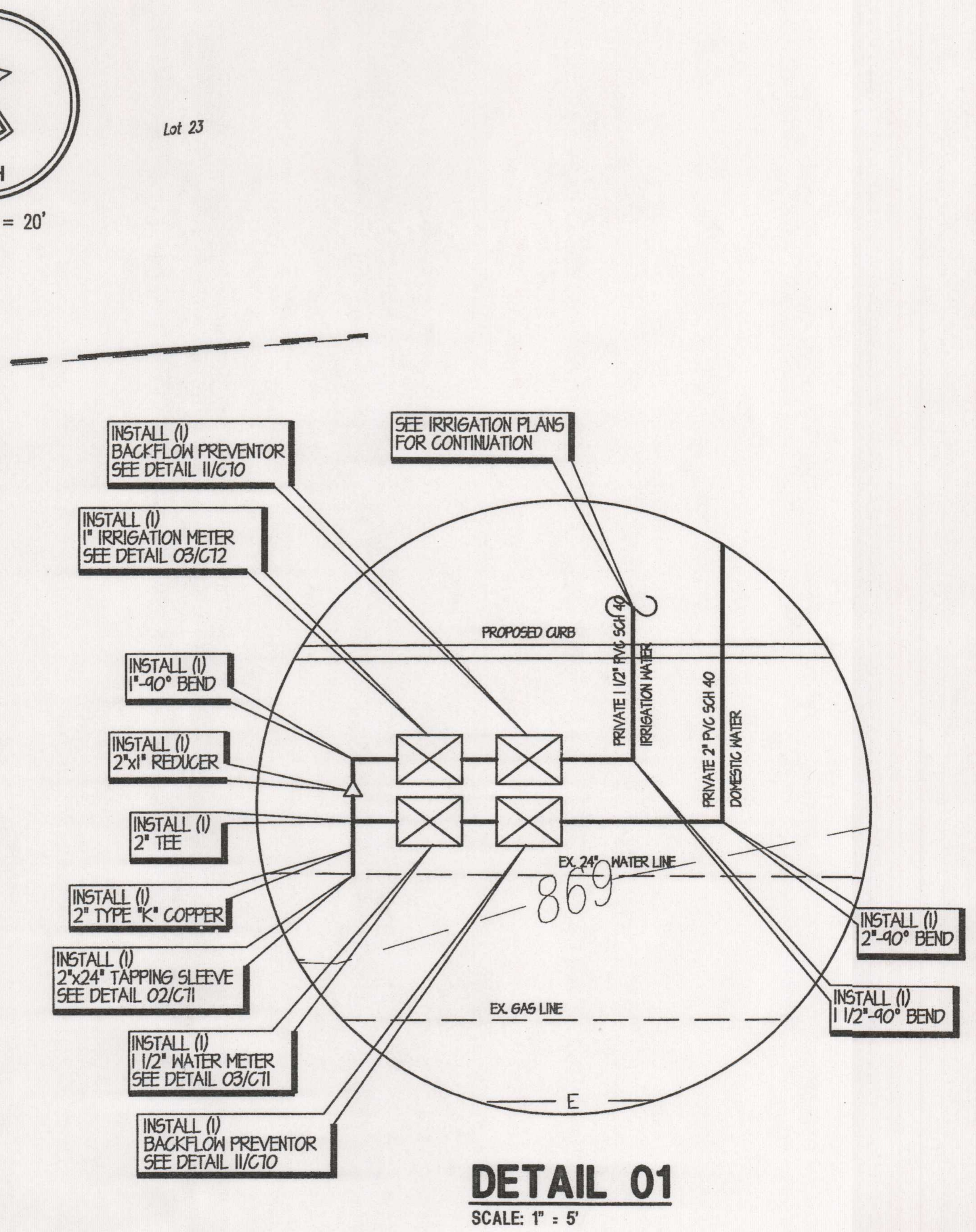

<u>UTILITY SERVICE PROVIDERS:</u>

New Braunfels Utilities
(830) 629-8400

Centerpoint Energy (natural gas)
(800) 472-7142

<u>Note:</u>

1. Ensure all driveway approaches are built in general accordance with A.D.A. specifications. No valves, hydrants, etc. shall be constructed within curbs, sidewalks, or driveways.

2, Water Meter size for domestic and irrigation depends on the City of New Braunfels Utilities flow test results. Meter sizes will be finalized once the City flow test results is received.

<u>Utility Trench Compaction Note:</u>

All utility trench compaction tests within the street pavement section shall be the responsibility of the developer's Geo-technical engineer. Fill material shall be placed in uniform layers not to exceed twelve inches (12") loose. Each layer of material shall be

CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

UTILITY PLAN

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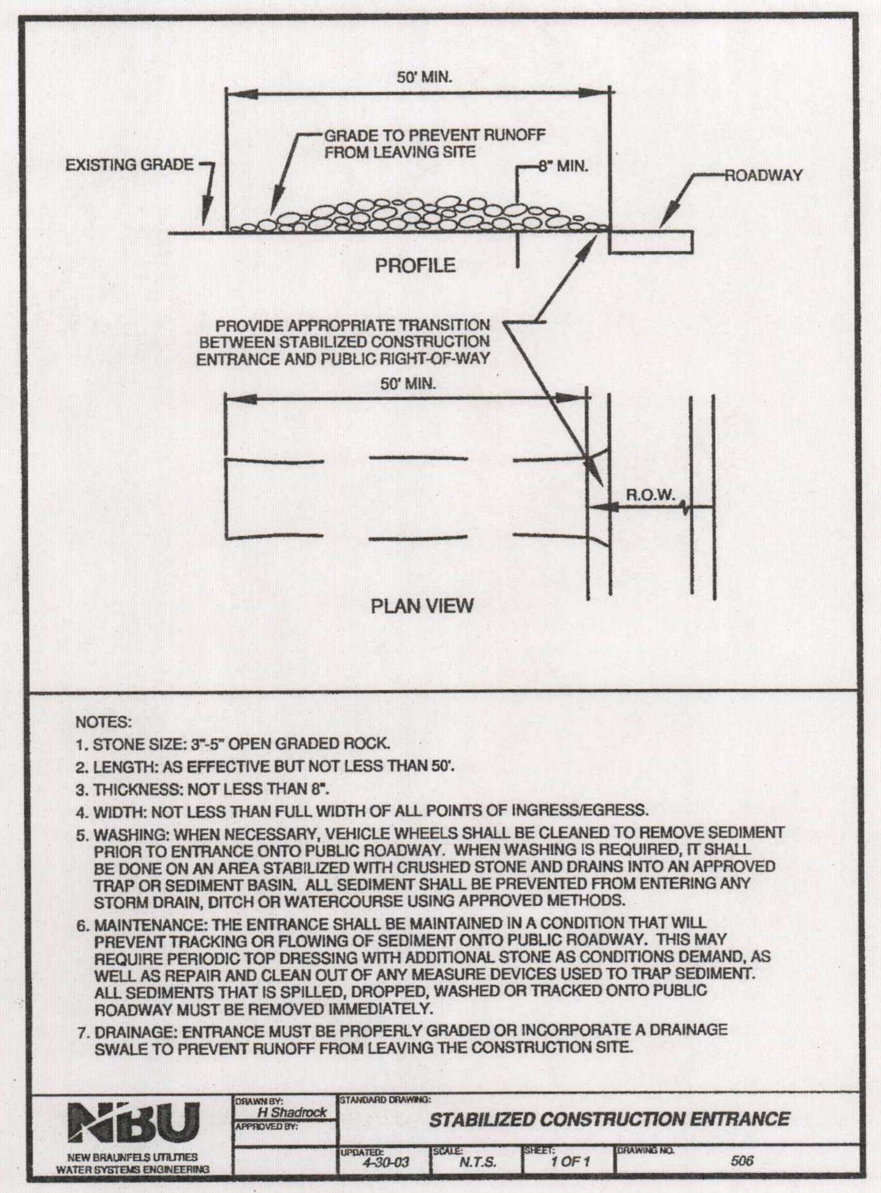
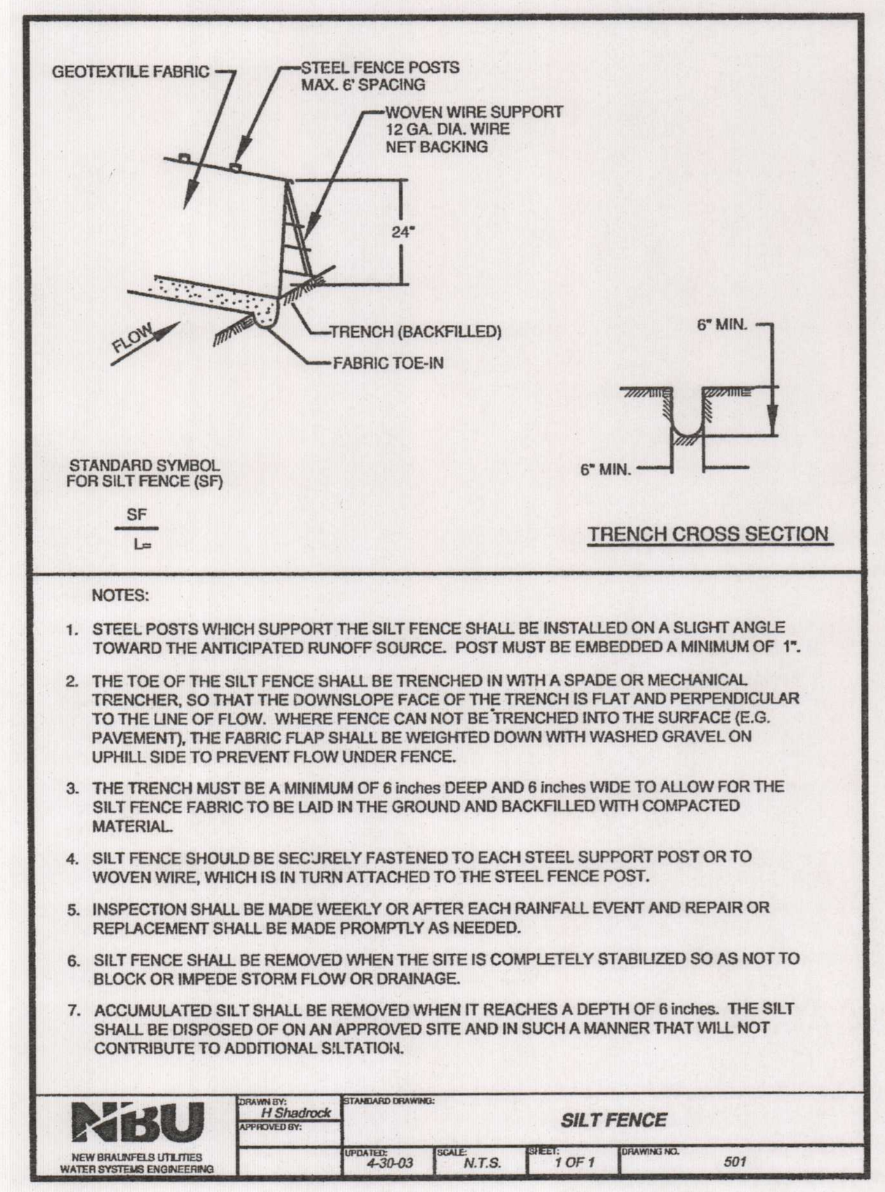


01 STABILIZED CONSTRUCTION ENTRANCE DETAIL

NTS



02 SILT FENCE DETAIL

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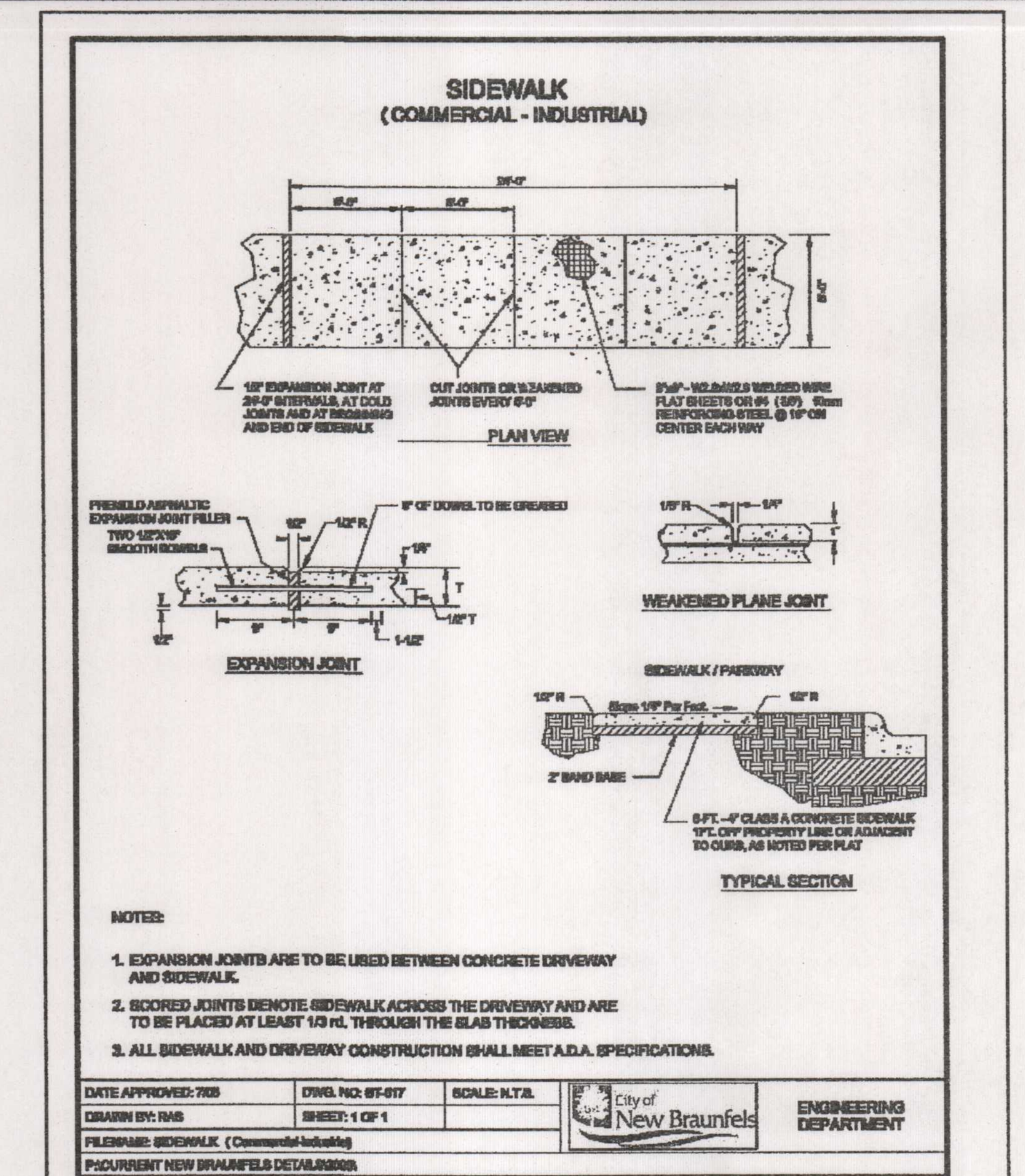

03 SIDEWALK DETAIL

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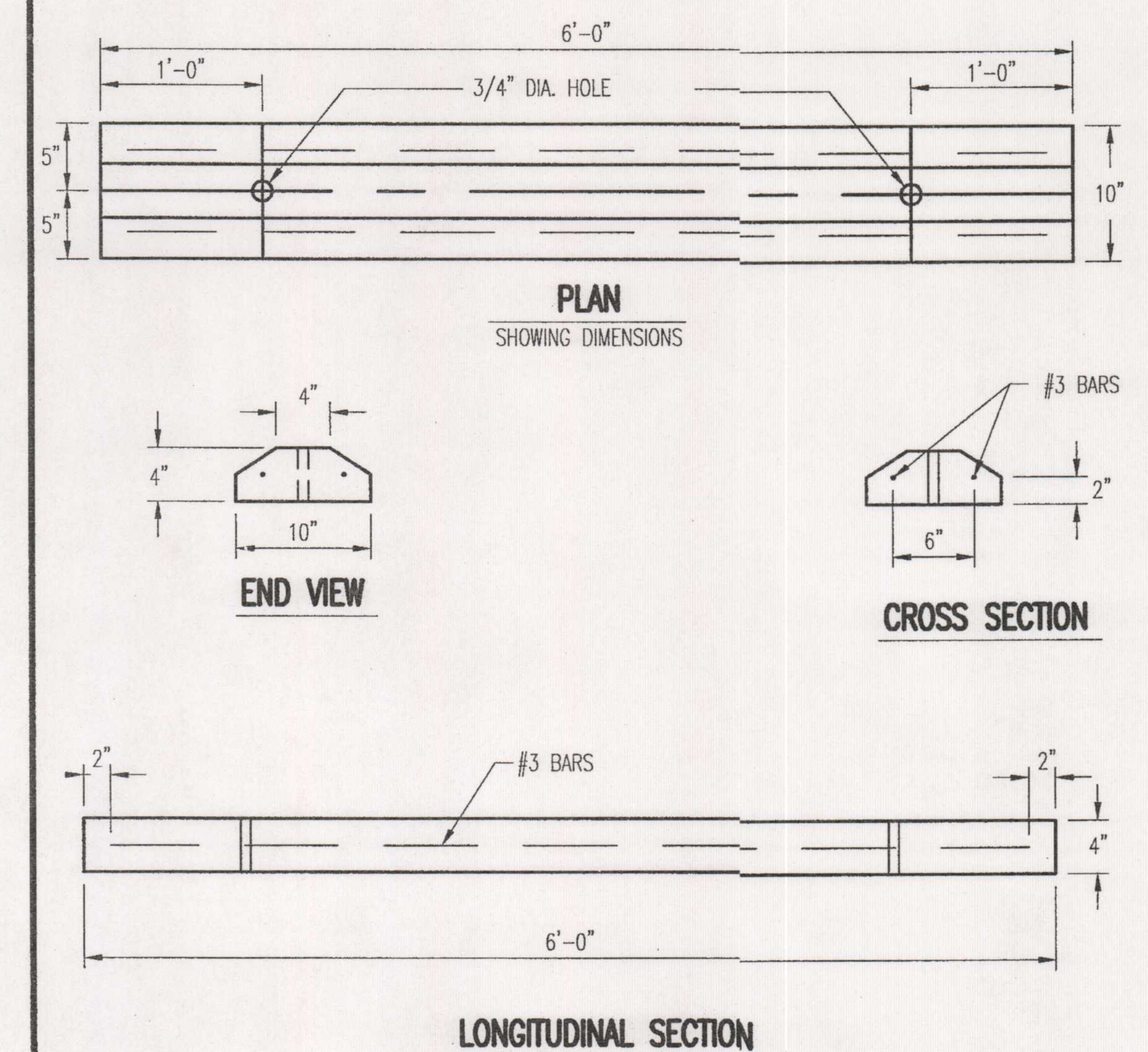
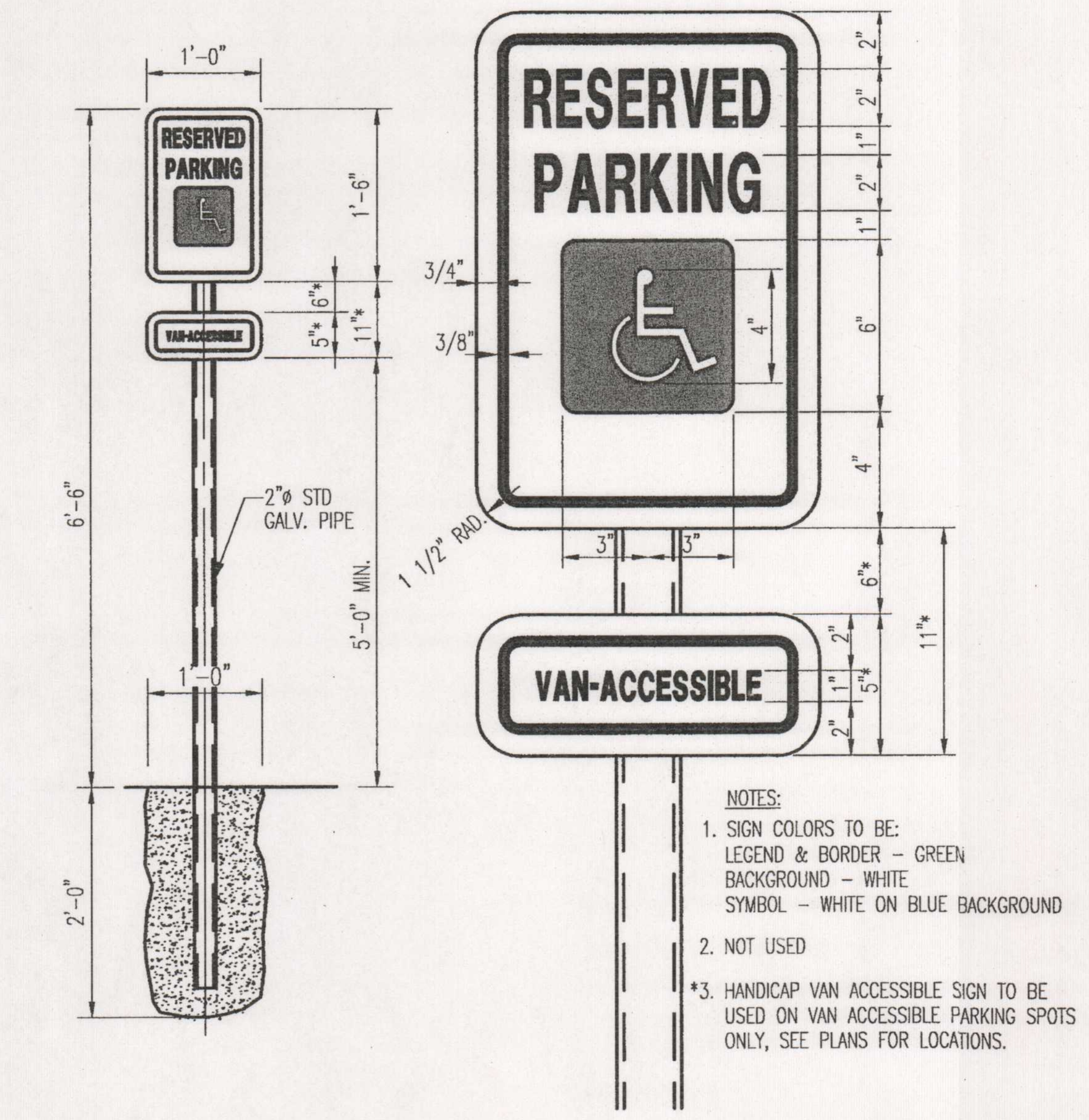


ALL CONCRETE SHALL BE CLASS "A" IN ACCORDANCE WITH ITEM 403.

04 CONCRETE TIRE STOP DETAIL

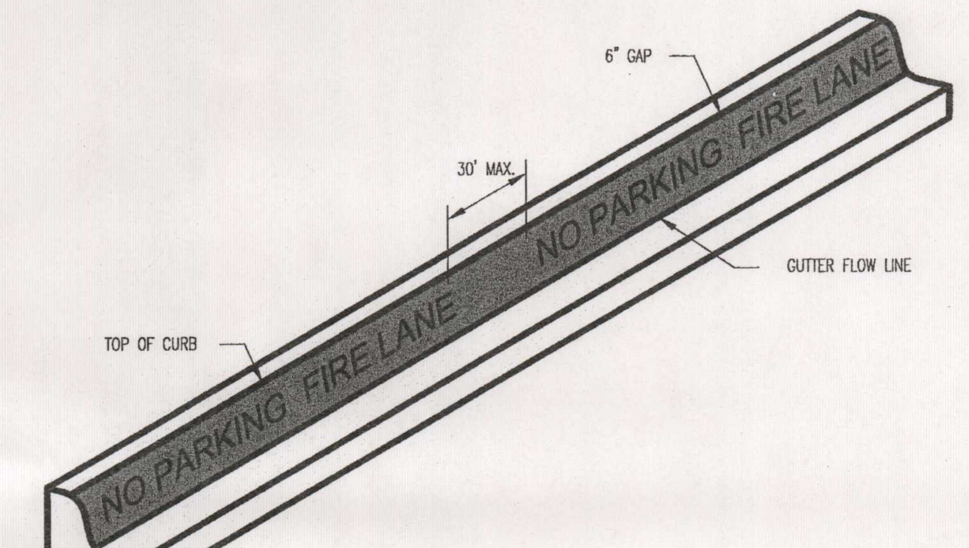
NTS



NOTES:
1. SIGN COLORS TO BE: LEGEND & BORDER – GREEN; BACKGROUND – WHITE; SYMBOL – WHITE ON BLUE BACKGROUND
2. NOT USED
*3. HANDICAP VAN ACCESSIBLE SIGN TO BE USED ON VAN ACCESSIBLE PARKING SPOTS ONLY, SEE PLANS FOR LOCATIONS.

05 HANDICAP SIGN DETAIL

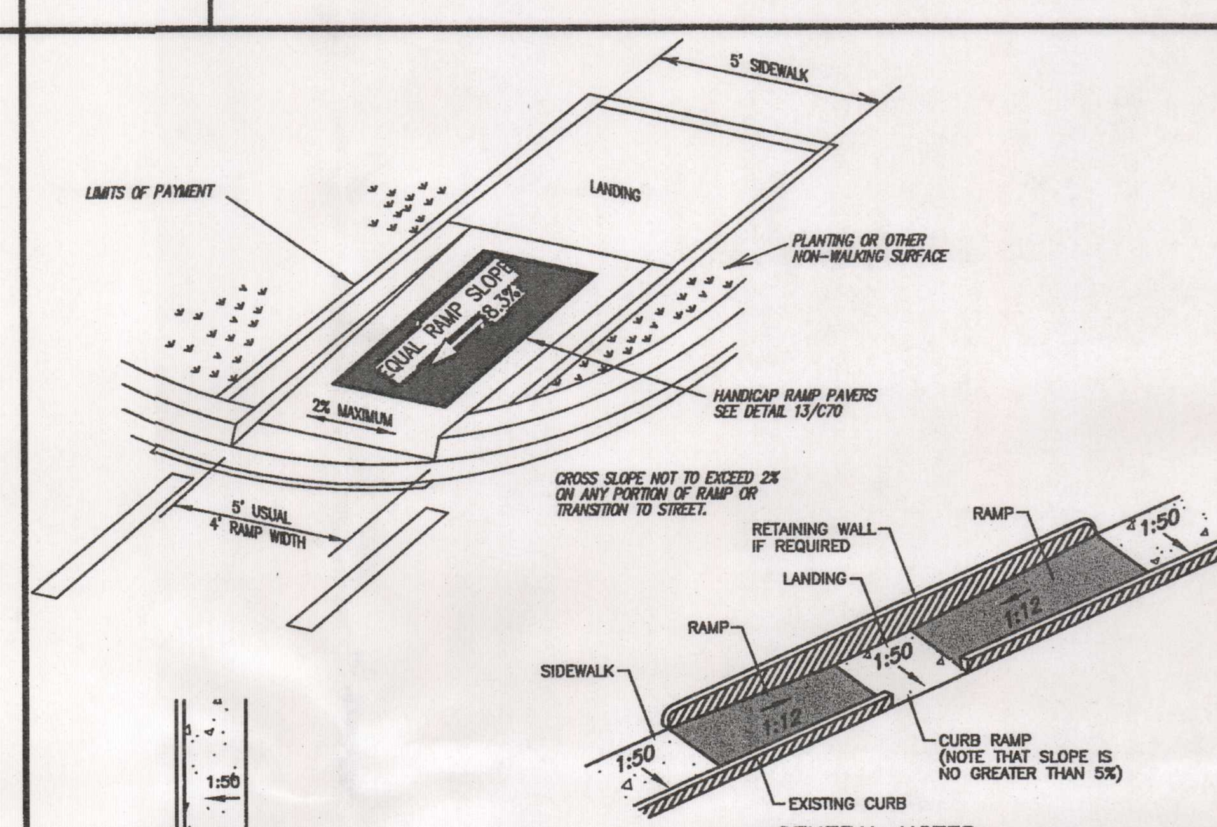
NTS

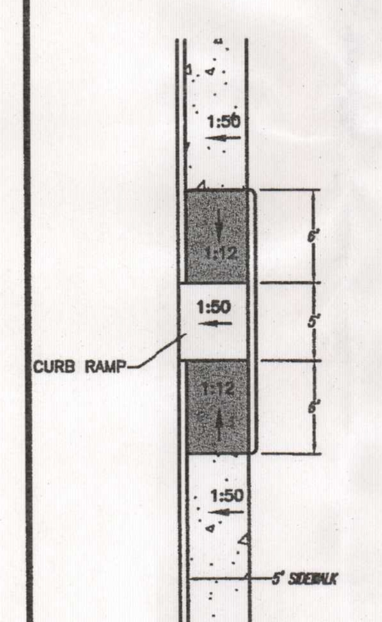


NOTES:
FIRE LANE STRIPING TO BE 6" WIDE RED PAINT WITH "NO PARKING FIRE LANE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 30' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

06 FIRELANE MARKING DETAIL

NTS





GENERAL NOTES

All slopes are maximum allowable. Flatter slopes that will still drain properly are encouraged.

For purposes of warning, the curb ramps shall have a light reflective value and texture that significantly contrasts with that of adjoining pedestrian routes.

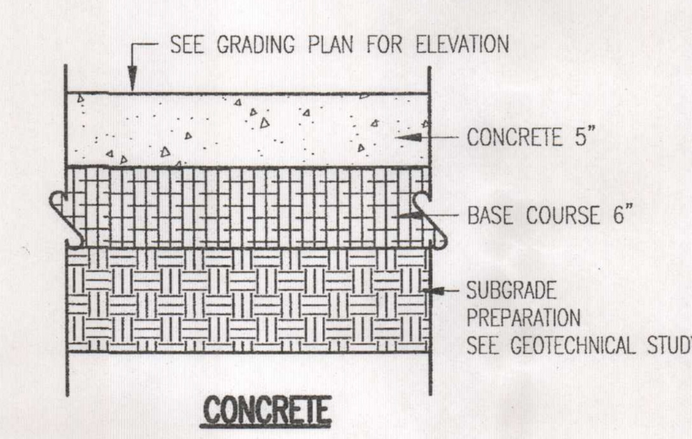
Textures shall consist of pavers with truncated domed surfaces. Textures are required to be detectable underfoot. Surfaces that would allow water to accumulate are prohibited.

Color contrast shall be accomplished with colored concrete pavers that have truncated domes.

Additional information on curb ramp location, design, visibility and texture may be found in the current edition of the Texas Accessibility Standards (TAS) prepared and administered by the Texas Department of Licensing and Regulation (TDLR).

07 HANDICAP RAMP DETAIL A

NTS



CONCRETE

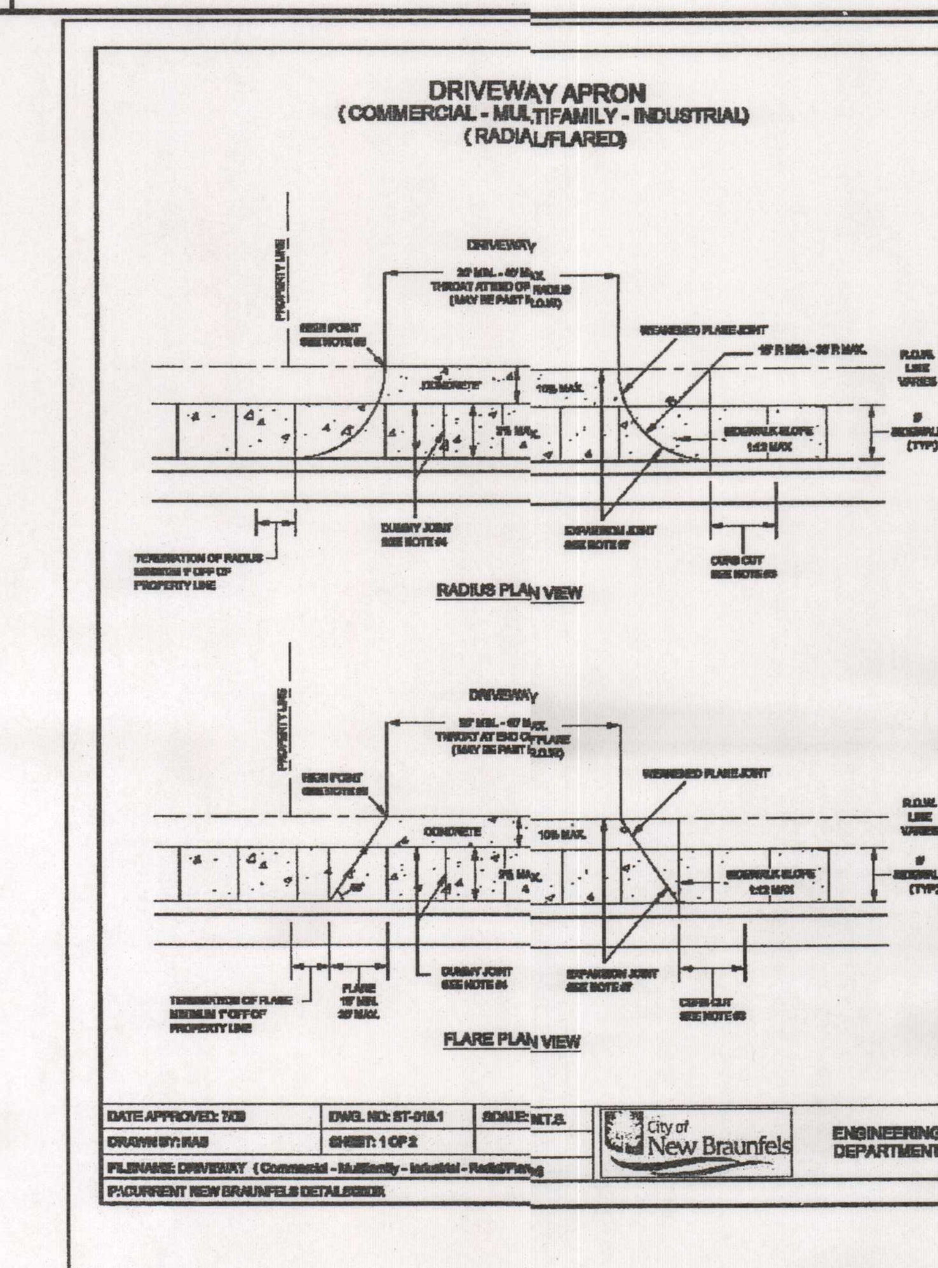
TRAFFIC AREA	PCCP CONCRETE PAVEMENT (INCHES)	BASE COURSE (INCHES)
LIGHT DUTY	5	6
HEAVY DUTY	6	6

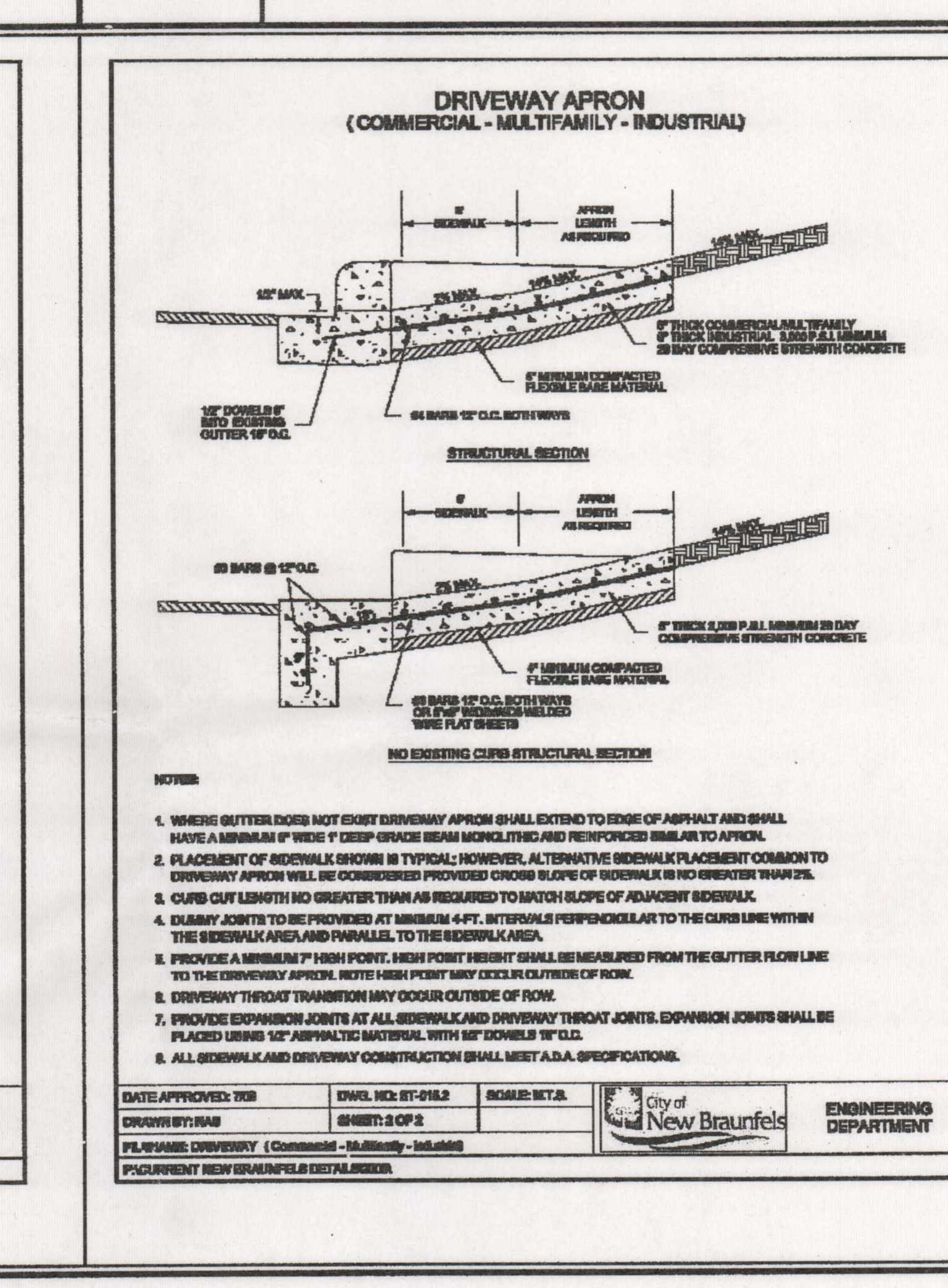
GEOTECHNICAL ENGINEERING STUDY PROVIDED BY:
KLEINFELDER CENTRAL, INC. TBPE REG. No. F-5592 (DATED SEPTEMBER 2010)

THE CONCRETE SHOULD CONFORM TO TXDOT ITEM 360 AND ITEM 421, CLASS P. A FLEXIBLE BASE MATERIAL MEETING TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) ITEM 247, TYPE A, GRADE 1 OR BETTER, CAN BE USED AS THE GRANULAR BASE. THE BASE COURSE SHOULD BE TEX-113E MINIMUM OF 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY (STANDARD PROCTOR). JOINTING AND REINFORCEMENT SHOULD CONFORM TO THE AMERICAN CONCRETE INSTITUTE GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS, ACI REPORT 330. THE GRADIENT OF PAVED SURFACES SHOULD ENSURE POSITIVE DRAINAGE. WATER SHOULD NOT POND IN AREAS DIRECTLY ADJOINING PAVED SECTIONS.

08 CONCRETE PAVING DETAIL

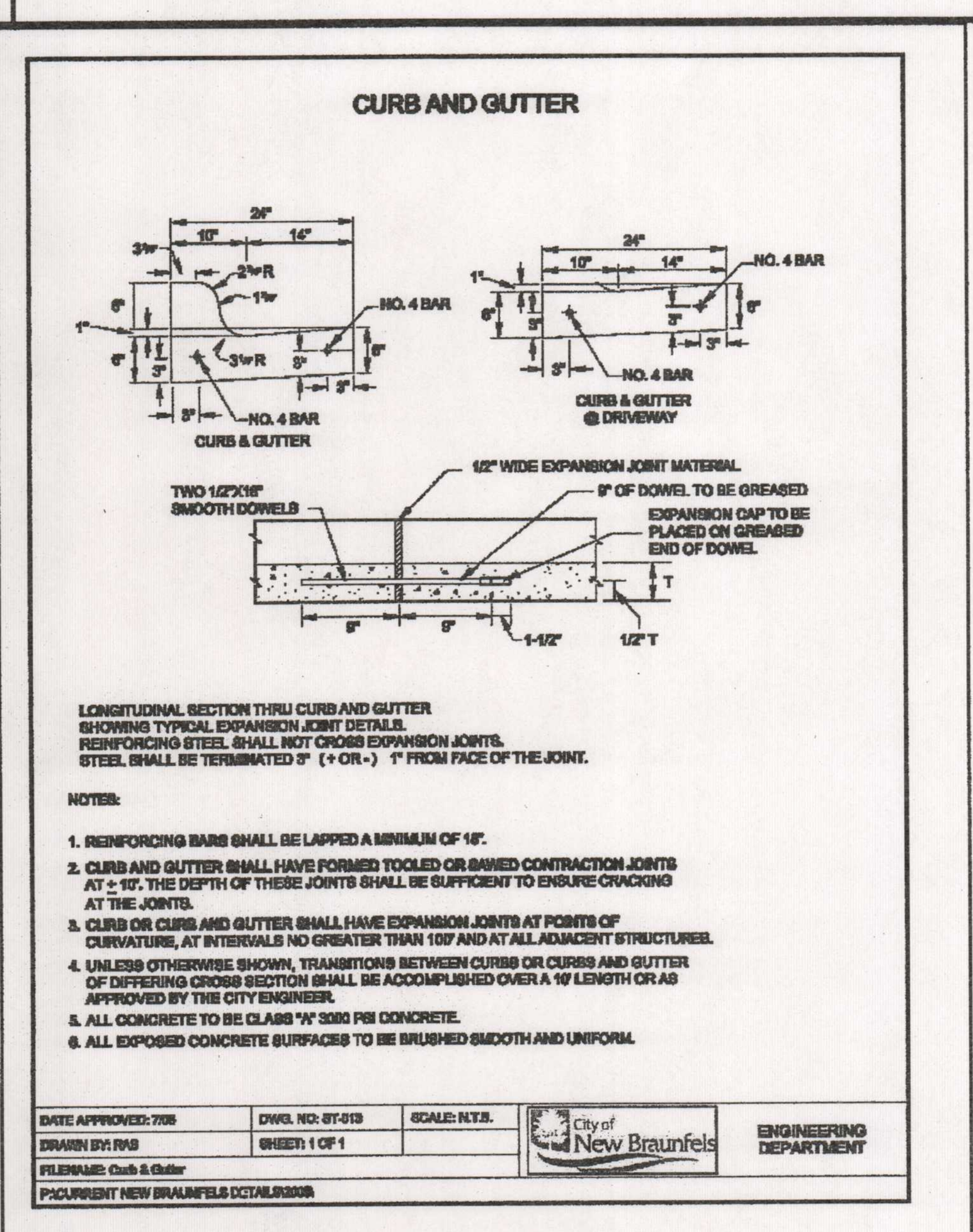
NTS





09 DRIVEWAY DETAIL

NTS

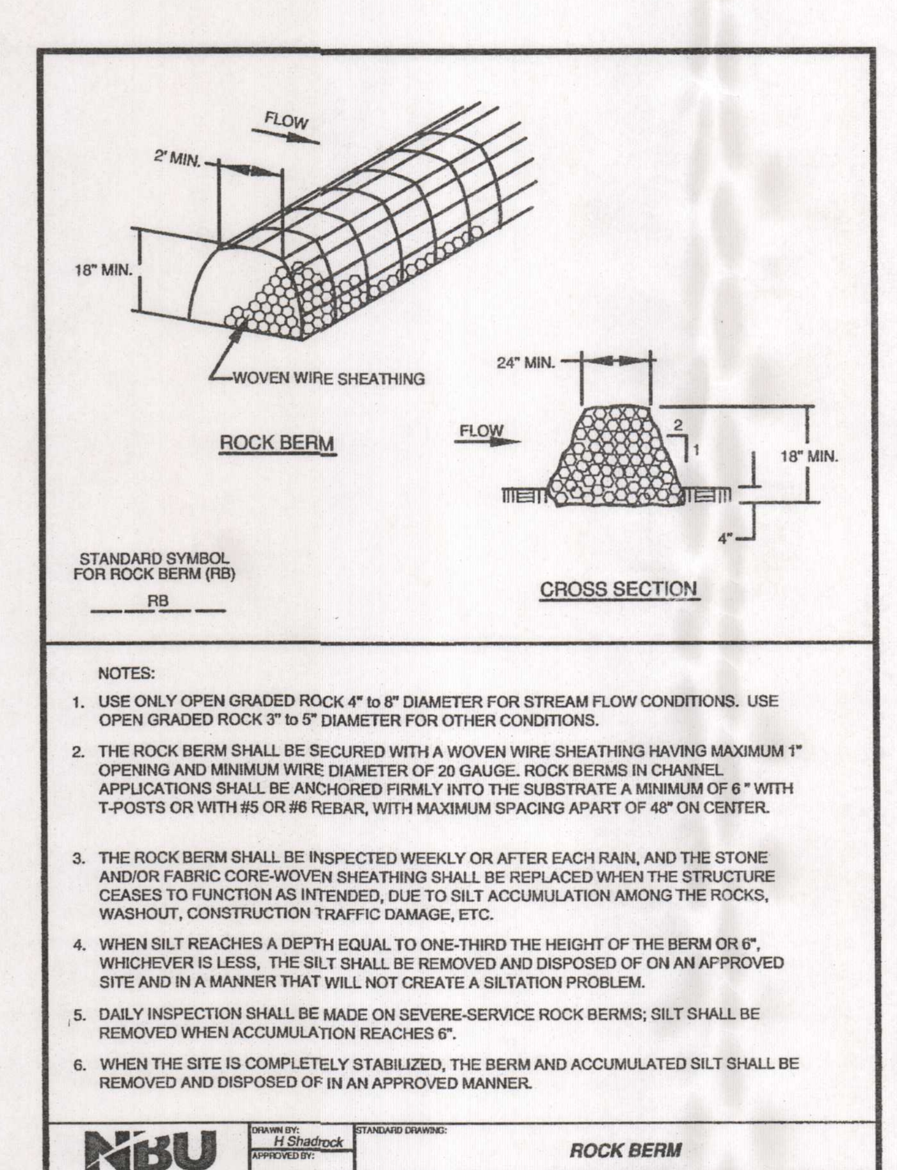


10 CURB AND GUTTER DETAIL

NTS

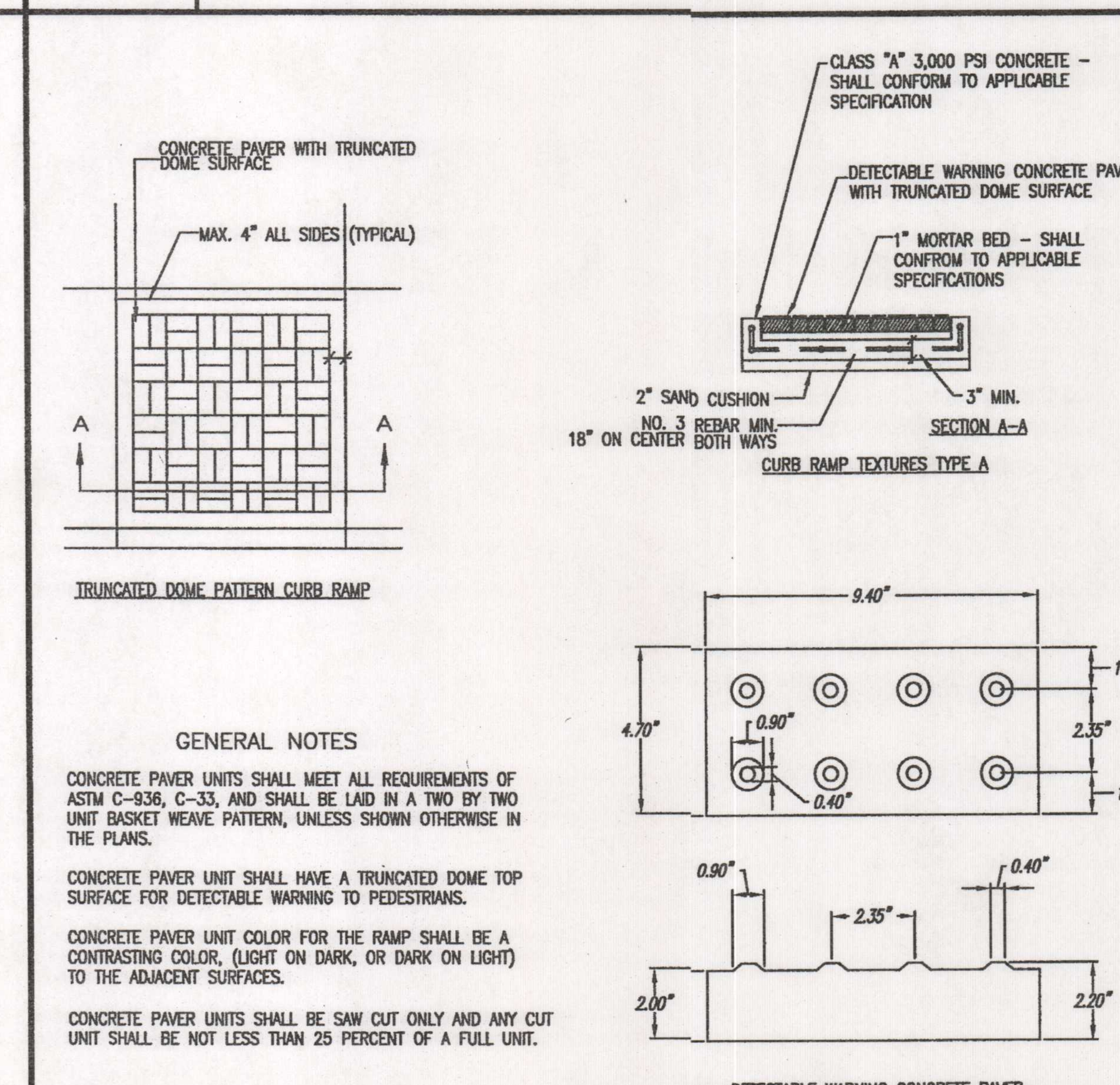
11 BACKFLOW PREVENTOR DETAIL

NTS



12 ROCK BERM DETAIL

NTS



GENERAL NOTES

CONCRETE PAVER UNITS SHALL MEET ALL REQUIREMENTS OF ASTM C-936, C-33, AND SHALL BE LAID IN A TWO BY TWO UNIT BASKET WEAVE PATTERN, UNLESS SHOWN OTHERWISE IN THE PLANS.

CONCRETE PAVER UNIT SHALL HAVE A TRUNCATED DOME TOP SURFACE FOR DETECTABLE WARNING TO PEDESTRIANS.

CONCRETE PAVER UNIT COLOR FOR THE RAMP SHALL BE A CONTRASTING COLOR, (LIGHT ON DARK, OR DARK ON LIGHT) TO THE ADJACENT SURFACES.

CONCRETE PAVER UNITS SHALL BE SAW CUT ONLY AND ANY CUT UNIT SHALL BE NOT LESS THAN 25 PERCENT OF A FULL UNIT.

13 HANDICAP RAMP PAVER

NTS

GENERAL CONSTRUCTION DETAIL

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JOB NO. 2010-002

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New Braunfels, TX 78132

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C70

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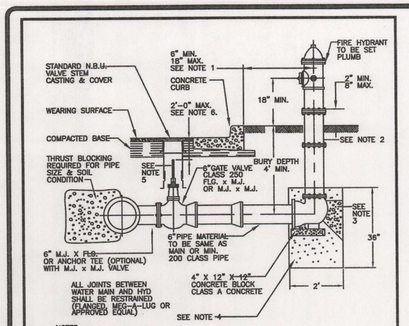
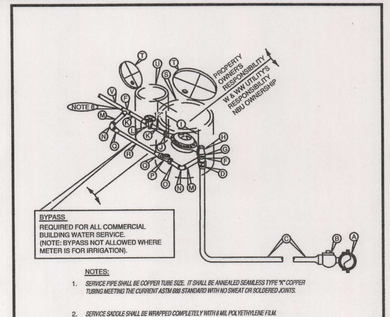


NOTES:

1. DIMENSIONS SHOWN ARE APPLICABLE IN SPACE BETWEEN CURB AND SIDEWALK. WHERE WALK ABUTS CURB, AND IN PUBLIC OR COMMERCIAL AREAS, DIMENSION FROM BACK OF CURB SHALL BE 3' TO 9'. HYDRANTS ARE NOT TO BE PLACED IN SIDEWALK AREAS. SEE NEW BRAUNFELS UTILITIES STANDARD SPECIFICATIONS FOR LOCATION OF HYDRANT.
2. FOR BURY DEPTHS GREATER THAN 5', ONE BARREL EXTENSION NOT EXCEEDING 2' LENGTH SHALL BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT.
3. CONCRETE BLOCKING WITH A MIN. 1 1/2 FT BEARING AREA. CLASS A CONCRETE. DO NOT BLOCK DRAIN HOLES.
4. CRUSHED STONE OR GRAVEL SHALL BE PLACED AROUND THE BOTTOM OF THE HYDRANT FOR A RADIUS OF AT LEAST 1'0" AND EXTEND AT LEAST 12" ABOVE THE OUTLET. DO NOT BLOCK DRAIN HOLES.
5. WELD SOCKET 2 1/2" X 2" DEEP TO 1" SCH. 40 ROUND STEM EXTENSION, FITTED ON OPERATING NUT, SCH. 80 FOR LENGTHS OVER 10'.
6. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 18" AND 24" FROM FINISHED GRADE.

NBU — NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING | DRAWN BY: H.Shadrock | STANDARD DRAWING | STANDARD INSTALLATION DETAIL FOR 1 1/2", & 2" METER | APPROVED BY: | UPDATED: 4-24-03 | SCALE: N.T.S. | SHEET: 1 OF 1 | DRAWING NO.: 203

01 FIRE HYDRANT DETAIL — NTS

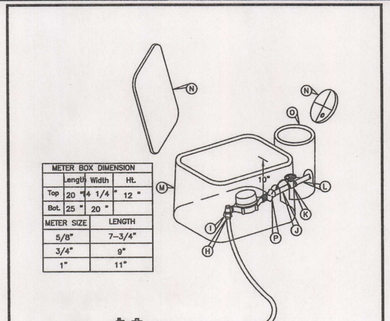


NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 8 MIL POLYETHYLENE FILM.
3. TOP OF BOXES SHOULD BE 1" ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. IF TWO METERS ARE INSTALLED WITH A SINGLE SERVICE LINE, THEY SHALL BE INSTALLED IN SEPARATE BOXES WITH PIPING AS SHOWN FROM A TEE. THE COMMON SERVICE LINE TO THE TEE SHALL BE 2" FOR TWO 1-1/2" METERS, OR 4" DUCTILE IRON PIPE FOR TWO 4" METERS. CUT OFF VALVE SHALL BE INSTALLED PRIOR TO TEE.
5. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SPECIFICATIONS.
6. BOX CONSISTENTLY SPACED BEHIND CURB WITH A MAXIMUM OF 12" AND/OR SIDEWALK (6" FROM PROPERTY LINE) AND OUT OF VEHICULAR TRAFFIC AREA.
7. ANGLE STOP PLACED A MAXIMUM OF 4" FROM BACK OF BOX THAT FACES CURB.
8. FOR ALL IRRIGATION OR COMMERCIAL: DUAL CHECK BACKFLOW DEVICE PER BACKFLOW PREVENTION POLICY.

NBU — NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING | DRAWN BY: H.Shadrock | STANDARD DRAWING | STANDARD INSTALLATION DETAIL FOR 1 1/2", & 2" METER | APPROVED BY: | UPDATED: 4-24-03 | SCALE: N.T.S. | SHEET: 1 OF 1 | DRAWING NO.: 203

02 1 1/2" & 2" WATER METER DETAIL — NTS



MATERIAL LIST:

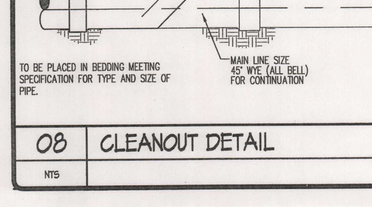
- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC & ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 12" AND SMALLER.
- (B) 1" CORPORATION STOP – SERVICE PIPE OUTLET.
- (C) 1" SERVICE PIPE.
- (D) 1" COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTINGS)
- (H) 1" COUPLING: SERVICE PIPE TO MALE I.P. THREAD, (COMPRESSION FITTING)
- (I) 1" ANGLE METER STOP; SERVICE PIPE INLET X SWIVEL COUPLING NUT OUTLET, AND 1" X 3/4" BRASS BUSHING. A 1" X 3/4" METER BUSHING IS REQUIRED AT THE ANGLE STOP FOR ALL 5/8" AND 3/4" METERS.
- (J) 12" SCHEDULE 80 PVC THREADED NIPPLE
- (K) 1" BRASS GATE VALVES.
- (L) 1" PIPE MEETING CITY OF NEW BRAUNFELS PLUMBING CODE REQUIREMENTS.
- (M) METER BOX – EAST JORDAN IRON WORKS, MODEL 15P, NBU# 89004000001.
- (N) LID
- (O) CUSTOMERS' CUT-OFF VALVE BOX (CONCRETE). MAY BE 12" PIECE SCH 36, 6" PVC.
- (P) DUAL CHECK BACKFLOW DEVICE – 1" DUAL CHECK CONBRACO, MN 40-3565A

NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 8 MIL POLYETHYLENE FILM.
3. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
4. TOP OF BOXES SHOULD BE 1" ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
5. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY THE SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SPECIFICATIONS.
6. BOX CONSISTENTLY SPACED BEHIND CURB WITH A MAXIMUM OF 12" AND/OR SIDEWALK (6" FROM PROPERTY LINE) AND OUT OF VEHICULAR TRAFFIC AREA.
7. ANGLE STOP PLACED A MAXIMUM OF 4" FROM BACK OF BOX THAT FACES CURB.

NBU — NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING | DRAWN BY: H.Shadrock | STANDARD DRAWING | STANDARD INSTALLATION FOR 3/4", 1" & 1" METER | APPROVED BY: | UPDATED: 4-24-03 | SCALE: N.T.S. | SHEET: 1 OF 1 | DRAWING NO.: 202

03 1 " WATER METER DETAIL — NTS



REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS
6"-12" PIPE #5
14"-30" PIPE #6 @ 6"
36"-48" PIPE #7

VERTICAL DOWN BEND

TABLE A
UPWARD THRUST GRAVITY BLOCKS

PIPE DIA	MIN. TOP WIDTH W1	ANGLE (degrees)	BOTTOM WIDTH W2 (min)
6"	6"	0-5	NOTE 2
		5-15	24
		15-25	48
		> 25	NOTE 1
8"	6"	0-5	NOTE 2
		5-9	30
		9-15	36
		>15	NOTE 1
12"	6"	0-5	NOTE 2
		5-15	48
		>15	NOTE 1
16"	12"	0-5	NOTE 2
		5-10	60
		10-15	96
		> 15	NOTE 1
24" THRU 36"	36" DIA	> 5.0	NOTE 1
42" THRU 48"	48" DIA	> 5.0	NOTE 1

NOTES

1- FOR ANGLES GREATER THAN THOSE INDICATED RESTRAINED JOINTS SHALL BE INSTALLED

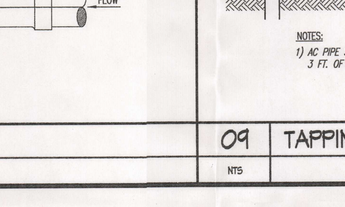
2- FOR JOINT DEFLECTIONS LESS THAN 5 DEGREES, NO HORIZONTAL OR VERTICAL THRUST RESTRAINT IS REQUIRED FOR PIPES LESS THAN 42" IN DIAMETER.

THRUST BLOCK DESIGN AS FOLLOWS
A. PRESSURE OF 150 P. S. I. (ACTUAL IF HIGHER) + 50 % SURGE ALLOWANCE
B. MAXIMUM SOIL BEARING SEE TABLE BELOW

SOIL TYPES	PRESSURE
LOOSE OR SPONGY SOIL	1500 Lb/Sq Ft.
UNDISTURBED SOIL, CALICHE	2000 Lb/Sq Ft.
LIMESTONE ROCK	4000 Lb/Sq Ft.

THRUST BLOCK

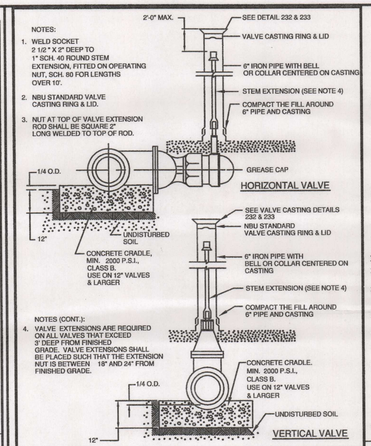
NBU — NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING | DRAWN BY: H.Shadrock | STANDARD DRAWING | THRUST BLOCK | APPROVED BY: | UPDATED: 4-24-03 | SCALE: N.T.S. | SHEET: 1 OF 2 | DRAWING NO.:



* THE DIMENSION FOR "H" MUST BE GREATER THAN DIAMETER OF THE PIPE
** LENGTH "L" ALONG THE BEND MUST BE GREATER THAN "H" AND LESS THAN 2 TIMES "H"

NBU — NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING | DRAWN BY: H.Shadrock | STANDARD DRAWING | THRUST BLOCK | APPROVED BY: | UPDATED: 4-24-03 | SCALE: N.T.S. | SHEET: 2 OF 2 | DRAWING NO.:

04 THRUST BLOCKING DETAIL — NTS



NOTES:

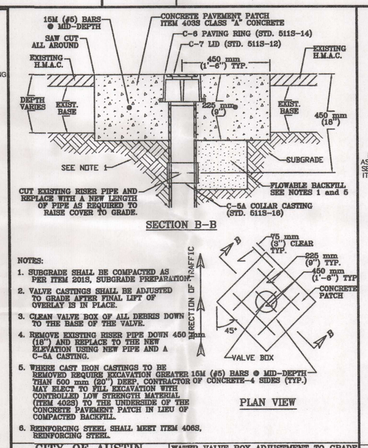
1. WELD SOCKET 2 1/2" X 2" DEEP TO 1" SCH. 40 ROUND STEM EXTENSION, FITTED ON OPERATING NUT, SCH. 80 FOR LENGTHS OVER 10'.
2. NBU STANDARD VALVE CASTING RING & LID.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 2" LONG WELDED TO TOP OF ROD.

NOTES (CONT.):

4. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 18" AND 24" FROM FINISHED GRADE.

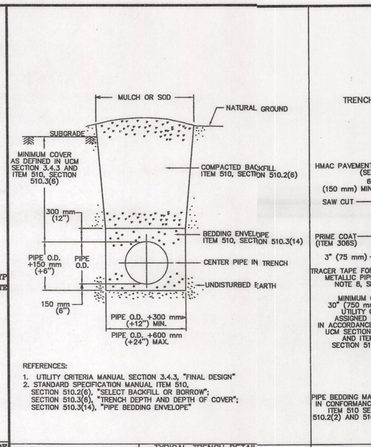
NBU — NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING | DRAWN BY: H.Shadrock | STANDARD DRAWING | TYPICAL GATE VALVE | APPROVED BY: | UPDATED: 4-24-03 | SCALE: N.T.S. | SHEET: 1 OF 1 | DRAWING NO.: 230

05 GATE VALVE DETAIL — NTS



CITY OF AUSTIN WATER AND WASTEWATER UTILITY	WATER VALVE BOX ADJUSTMENT TO GRADE W/ FULL DEPTH CONCRETE	STANDARD NO.
RECORD COPY SIGNED BY KATHI K. PAYNE 4/6/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	511S-13A

06 VALVE BOX ASSEMBLY DETAIL — NTS

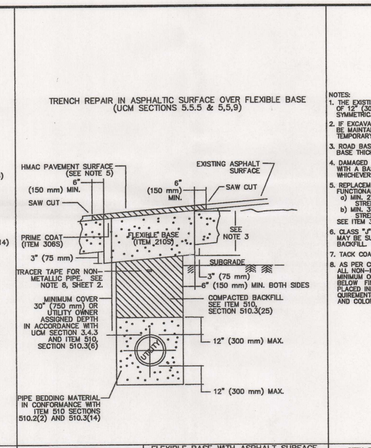


REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	STANDARD NO.
RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	510S-5

07 TYPICAL TRENCH DETAIL — NTS

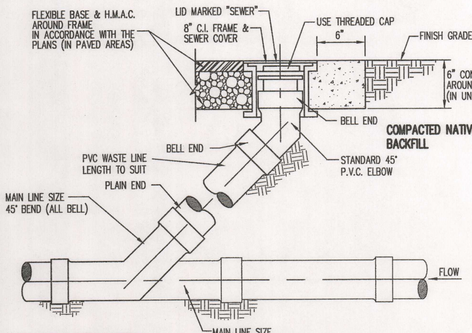


NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" (300 mm) WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
3. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3" (75 mm), BUT IN NO CASE LESS THAN 12" (300 mm).
4. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" (250 mm) OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
5. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   a) MIN. 2" (50 mm) HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   b) MIN. 3" (75 mm) HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
   SEE ITEM 340S, SECTION 340S.4.
6. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MAY BE SUBSTITUTED IN THESE REPAIRS FOR THE FLEXIBLE BASE AND COMPACTED BACKFILL. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
7. TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 307S).
8. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(6)(K)(5), FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" (300 mm) BELOW THE SUBGRADE, OR A MINIMUM OF 18" (450 mm) BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

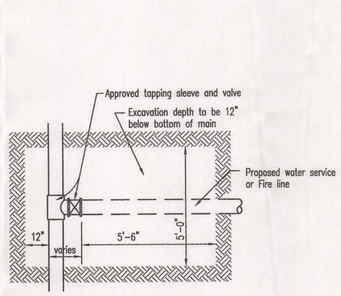
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR–EXISTING PAVEMENT	STANDARD NO.
RECORD COPY SIGNED BY BILL GARDNER 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	1100S-2 1 OF 2

08 CLEANOUT DETAIL — NTS



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR–EXISTING PAVEMENT	STANDARD NO.
RECORD COPY SIGNED BY BILL GARDNER 9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	1100S-2 2 OF 2

09 TAPPING SLEEVE DETAIL — NTS



NOTES:

1) AC PIPE SHALL NOT BE TAPPED WITHIN 3 FT. OF ANY EXISTING PIPE JOINT.

10 NOT USED — NTS

11 NOT USED — NTS

UTILITY DETAIL

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF AUSTIN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

DATE ISSUED: 10/05/2010
ISSUED FOR: AGENCY REVIEW

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ERICKSON B. MENDOZA, P.E. 98086

THIS DRAWING MAY NOT BE MODIFIED WITHOUT THE EXPRESS WRITTEN CONSENT OF THE ENGINEER, AND THEN ONLY IN ACCORDANCE WITH THE RULES OF THE TEXAS ENGINEERING PRACTICE ACT.

STATE OF TEXAS — ERICKSON B. MENDOZA — 98086 — REGISTERED PROFESSIONAL ENGINEER — 10/05/2010

HAGOOD ENGINEERING ASSOCIATES
One Chisholm Trail, Suite 5200
Round Rock, TX 78681
Phone (512) 244-1546
Fax (512) 388-3698
www.hea.eng.pro
TBPE Registration No. F-12709

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ARCHITECTS & PLANNERS
4105 Medical Parkway, Suite 201 Austin, TX. 78756
512/467-2626
FAX 512/467-2655

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TACO BELL
1838 State Highway 46 West
New Braunfels, TX 78132

REVISIONS	DATE

PROJECT NO. 2010-002
CAD FILE H10-002C71
DRAWN BY RB/RW
CHECKED BY EBM
DATE: 10-05-2010
SCALE: AS NOTED

C71
DWG 9 OF 10

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