TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 20, 2011

Mr. Wilder Castillo
American Tower Corporation
16500 Henderson Pass, Suite 309
San Antonio, TX 78232

Re: Edwards Aquifer Protection Program, Comal County

Name of Project: Countryside Tower Site (Site No. SX 3239); Located at 11844 FM 1863, on the south side of FM 1863 about 1,000 feet east of Schoenthal Rd., New Braunfels ETJ, 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. 2962.00; Investigation No. 899351; Regulated Entity No. RN106083132

Dear Mr. Castillo:

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 Medina Consulting Company, Inc. on behalf of American Tower Corporation on February 11, 2011. Final review of the WPAP was completed after additional material was received on April 5, 2011. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

Project Description

The proposed commercial project will have an area of approximately 0.34 acres. It will include the construction of a self-support cellular communications tower and associated equipment building, compound, fence and access road. The impervious cover will be 0.0326 acres (9.59 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, engineered filter strips, 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 29.26 pounds of TSS generated from the 0.0326 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The individual treatment measures will consist of engineered filter strips on the south and west sides of the compound. These filter strips will have a minimum width of 15 feet, a slope of less than 20% and a minimum vegetation coverage of at least 80%. The filter strip will be located outside of the fence but adjacent to the compound.

Geology

According to the geologic assessment included with the application, the site lies on the Del Rio Clay and no geologic or manmade features were located within the project boundaries. The San Antonio Regional Office did not conduct a site assessment.

Special Conditions

1. The engineered filter strips shall be operational with at least 80% vegetation cover prior to the tower becoming operational.

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

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

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

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

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

After Completion of Construction:

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

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

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

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

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

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

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

Sincerely,

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

MRV/CEF/eg

Enclosure: Deed Recordation Affidavit, Form TCEQ-0625

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

cc: Mr. Douglass McGookey, P.G., Medina Consulting Company, Inc.
Mr. James Klein, P.E., City Engineer, City of New Braunfels
Mr. Thomas Hornseth, P.E., County Engineer, Comal County
Mr. Karl Dreher, General Manager, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

Medina Consulting Company, Inc.

To: Charly Fritz
Edwards Aquifer Protection Program – San Antonio Region
TCEQ

From: Douglas McGookey, PG, Medina Consulting Company, Inc.
Cal Chapman, PE, Chapman Engineering, Inc.

Responses to Faxed Comments dated March 21, 2011

Re: Edwards Aquifer Comal County

Name of project: Countryside Tower Site (Site No. SX3239); Located at 11844 FM 1863 on the south side of FM 1863 approximately 1,000 feet east of Schoenthal Road, New Braunfels ETJ, Texas

Plan Type: request for the Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213; San Antonio File No. 2962.00

General information Form

1. Based upon review of the New, Braunfels city and ETJ limits, the site appears to be located within the ETJ of New Braunfels and might be located within the city limits. Confirm the site location in relation to the city limits and update Item #2. Also provide one additional WPAP copy to the San Antonio Regional Office for distribution. The additional copy can be sent immediately or with the NOP response.

The Site is in the ETJ of New Braunfels. Adjustment made to the *General Information Form*.

2. The Lease Agreement states AT&T Mobility Texas, LLC is the tenant. If AT&T Mobility is the tenant, then what is the role of American Tower? Also, with respect to this Lease Agreement, who is responsible for permanent BMP maintenance? AT&T Mobility or American Tower?

The roles of the parties are: AT&T Mobility is the tenant and will place antenna on the tower and an equipment building within the compound. American Tower will own and maintain the tower and compound, and will have the opportunity to lease to others a place on the tower for their equipment. American Tower is responsible for permanent BMP maintenance.

3. Please provide an updated USGS Map. The provided USGS Map, (Attachment B) appears to be at a smaller scale than the stated 1 inch equal to 2,000 feet. Secondly, both the Bat Cave and New Braunfels West Quadrangles are shown.

Adjusted map attached.

4. Revise or update the provided AT&T construction drawings to include the location, details and notes for temporary BMPs and permanent BMPs. Also include the TCEQ WPAP Construction Notes (TCEQ-0592). If the AT&T construction drawings cannot be modified, include these items at the end of the AT&T drawings and confirm the contractor will receive all construction drawings including ones related to the WPAP.

The AT&T construction drawings were the original drawings for the project without the adjustments provided in the temporary and permanent BMPs. The contractor will receive all construction drawings including the drawings to implement the BMPs.

5. The provided AT&T drawings are not shown at the stated scale of inch to 20 feet. Please revise.

Printout adjusted for affected figures.

Geologic Assessment

6. Confirm the geologic assessment included the areas that will be engineered filter strips. If the geologic assessment did not extend to the filter strips please update the GA with a supplemental assessment of the area over the engineered filter strips.

The geologic assessment included the areas that will be engineered filter strips.

7. Based on aerial photographs, there is a stock pond to the west of the site. Was the stock pond evaluated during the assessment? If not, due to the close proximity of the stock pond, please evaluate the stock pond to determine if the pond has any karst origins.

The area identified on the aerial photograph is not a stock pond. The area is a cleared area surrounded by brush and trees and covered in short grass. It may have been a small field in the past, and it is similar in appearance and color to other areas nearby that appear to be fields that are not currently cultivated. In addition, the site is on Del Rio Clay, and from the description of the Del Rio Clay provided on: *Geologic Map of the Edwards Aquifer Recharge Zone, South-Central Texas*, by Blome and others, 2005, "the Del Rio has no recognized cavern development and no significant porosity or permeability". Historical aerial photographs from 1937 through 1987 do not show a surface expression in the shape or location of the clearing. On the basis of this information, it is unlikely the cleared area has a karst origin.

WPAP Form

8. Confirm an aboveground storage tank is not proposed at the site. How will power be obtained? Will there be a backup generator?

An aboveground storage tank and emergency generator are not proposed for the site at this time. Power will be obtained from overhead electric power lines to Power Distribution Center Rack with Drop Pole shown on the drawings. If an emergency generator is installed, it will be powered with natural gas.

9. It appears only the gravel driveway and equipment shelter have been included as impervious cover. Based upon review of the details, the compound will use gravel and subgrade that has been compacted

to 95% standard proctor density. Due to compaction rating, please include the compound area as impervious cover. Revise the Project Description (Attachment C of TCEQ-O587) and Item 4, Impervious Cover Table.

There will NOT be a gravel pad installed over much of the compound surface. Please see revised plans, attached. Therefore, impervious cover will be limited to the driveway and a small parking pad, and the foundation for the building. Once construction is completed, native vegetation (possibly augmented with other seeding/vegetation) will be re-established across most of the compound surface.

Temporary Stormwater Form and Temporary BMPs

10. Update the Spill Response Actions, Attachment A, to include the 24 hour State Emergency Response Commission telephone number: 800-832-8224.

The phone number has been added.

11. Update either Attachment A or Attachment B to include a description of refueling and maintenance practices to limit the possibility of spills while refueling or maintaining construction equipment.

There will be no refueling or maintenance of vehicles or construction equipment performed on-site.

12. Revise Attachment I to include inspection criteria for silt fence and rock berms on when sediment should be removed from the structure (ex. 6 inches in depth).

Attachment has been revised to include sediment removal when a depth of 6 inches has been accumulated.

13. For BMPs on the Recharge Zone, the temporary BMPs proposed should be inspected every seven days. Please revise Attachment I.

The inspection frequency has been updated.

14. Update Attachment J to include the steps or directions for installing the permanent planting, sodding, or seeding measures.

The steps have been included in the revised Attachment J.

15. In accordance with the Edwards Aquifer Technical Guidance Manual (RG-348, 2005), provide details, drawings and notes for the proposed temporary BMPs. Please provide these details on or as part of the construction plan sheets.

Construction details with notes have been included.

Permanent Stormwater Form and Permanent BMPs

16. It appears that greater than 72 feet of impervious Cover is flowing to the engineered filter strips. Please revise the amount of impervious cover, the drainage paths to the filter strips or provide additional filter strips and drainage paths.

There will be much less than 72 feet of impervious cover width flowing to the engineered filter strips. Please refer to revised project description.

17. On a plan sheet, provide construction details and design notes for the engineered filter strips. Refer to RG-348 for specific details.

Construction details with notes have been included.

18. Provide a cross section between the gravel compound and the engineered filter strip. There should not be a drop in elevation between the two areas.

The drawing has been included.

19. Engineered filter strips must have a minimum vegetation cover of 80%. Based upon the photograph in the geologic assessment, there is thick and overgrown vegetation cover at the site. Will the minimum 80% vegetation cover be achieved if no clearing will be done over the filter strips?

Natural vegetation in the filter strip areas will not be disturbed during construction, in order to maintain the minimum required vegetation cover of 80 percent.

20. Flow spreaders are no longer allowed with engineered filter strips. Please remove the reference to a flow spreader in Attachment G.

The reference has been removed.

General information Form

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: Countryside Tower Site (Site No. SX 3239)
COUNTY: Comal STREAM BASIN: Dry Comal Creek

EDWARDS AQUIFER: x RECHARGE ZONE
__ TRANSITION ZONE

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

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Wilder Castillo
Entity: American Tower Corporation
Mailing Address: 16500 Henderson Pass. Suite 309
City, State: San Antonio, Texas Zip: 78232
Telephone: 210 387-6450 FAX: Wilder.Castillo@americantower.com

Agent/Representative (If any):

Contact Person: Douglas McGookey, PG
Entity: Medina Consulting Company, Inc.
Mailing Address: 6391 De Zavala, Suite 113
City, State: San Antonio, Texas Zip: 78239
Telephone: 210 694-4545 FAX: 210 694-4577

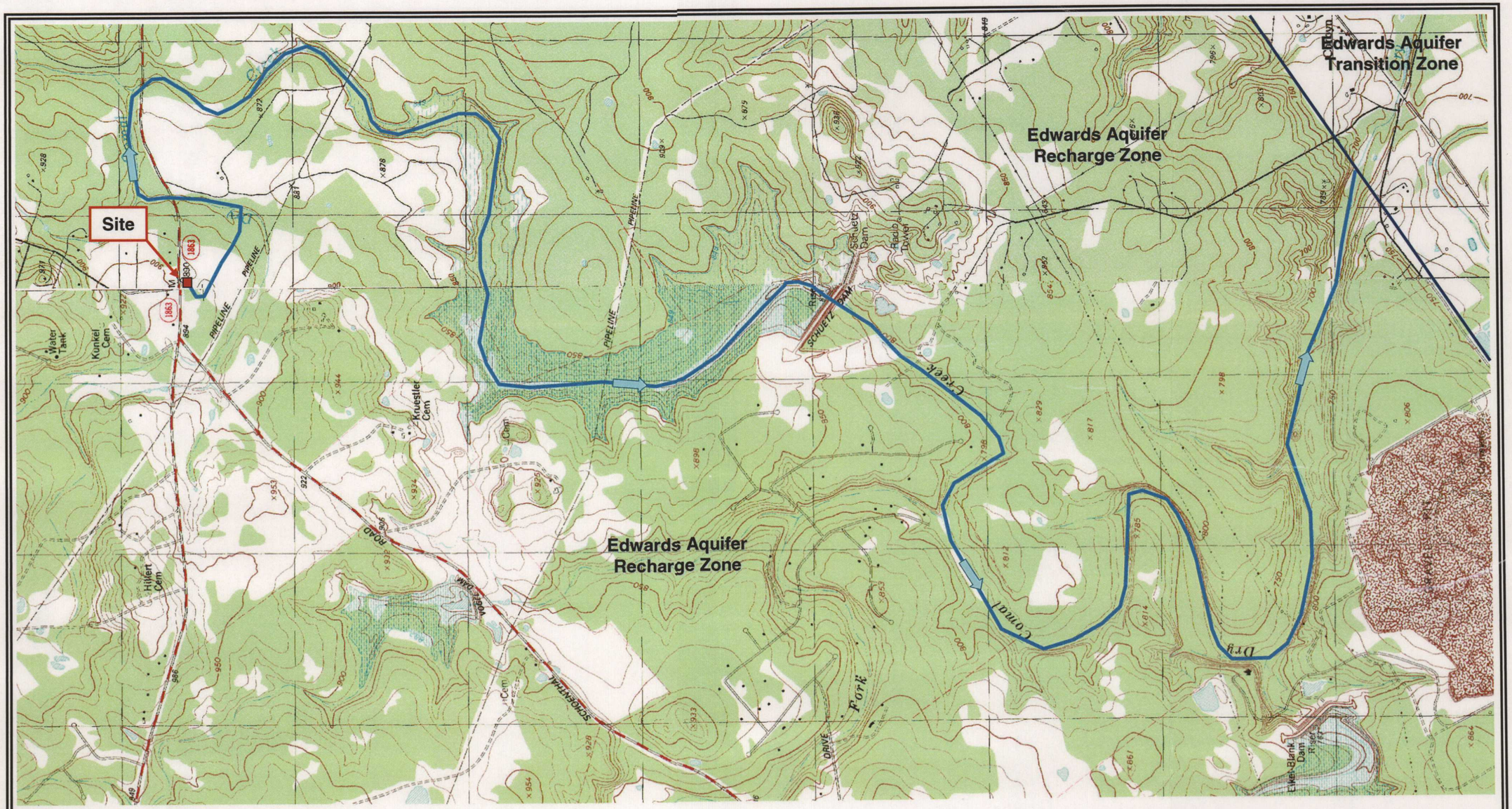
2. __ This project is inside the city limits of _____.
x This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of New Braunfels.
__ This project is not located within any city's limits or ETJ.

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

The Site is located at 11844 FM 1863. The Site lies on the south side of FM 1863 about 1,000 feet east of the intersection of Schoenthal Road and FM 1863.

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:



Source: USGS 7.5 Min Quadrangle Maps for *Bat Cave, Texas* and *New Braunfels West, Texas*
Obtained from TNRIS

Path and direction of surface water from the Site to the transition zone

0 2,000 ft
Scale in Feet

Medina Consulting Company, Inc.	Drawn by: DM Scale: 1 in = 2,000 ft Date: March 2011	N

Attachment B
Edwards Aquifer Map Showing the Site and Drainage to the Transition Zone
Countryside Tower Site (Site No. 3239)
Comal County, Texas

STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 368
LICENSED
PROFESSIONALLY GEOSCIENTIST

ATTACHMENT C: PROJECT DESCRIPTION

Countryside Tower Site (Site No. SX 3239)

The proposed project is the installation of a 195-foot-tall, self-support cellular communications tower and associated equipment building, compound, fence, and access road. The facility name is the Countryside Tower Site (Site No. SX 3239). The proposed cellular communications compound is an approximate 100-foot by 100-foot tract of land at 11844 Farm to Market Road (FM) 1863, which is west of New Braunfels, Texas in Comal County, zip code 78132. The Site is approximately 1,000 feet east of the intersection of Schoenthal Road and FM 1863. The Site is situated along the northern boundary of the parent property that consists of undeveloped land, farmland, and a rural residence. The surrounding area consists of mostly undeveloped or agricultural land with a few rural residential properties.

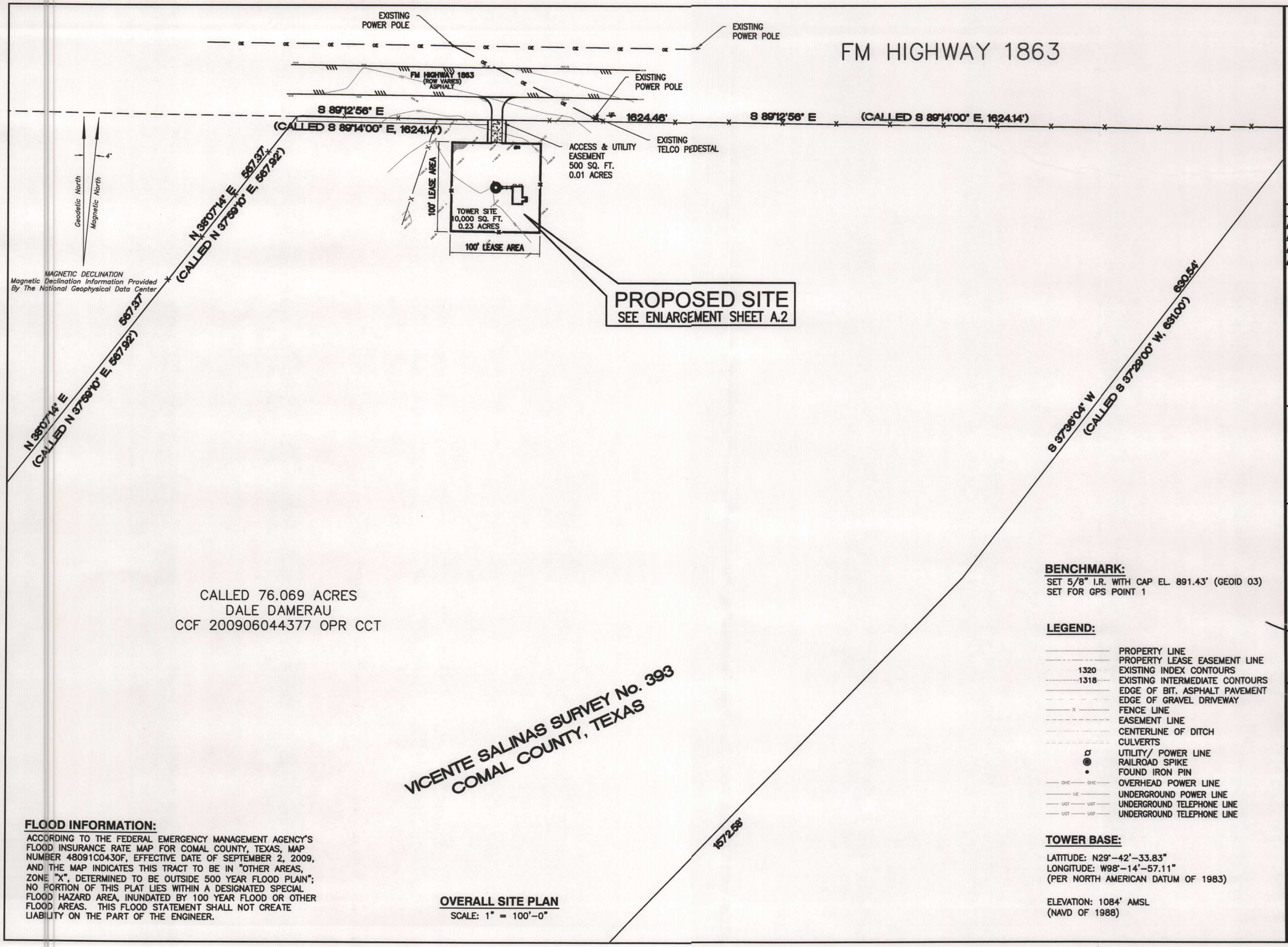
The only structures to be built that will provide impervious cover are the tower foundation, the foundation for the equipment building, and the compacted gravel driveway. The amount of impervious cover will be 1,420.0 square feet, or 0.0326 acre.

Attached are the design plans for the facility provided by Goodman Networks, Inc., and prepared for AT&T Mobility.

Temporary storm-water controls are required during the construction of site improvements. They will include silt fencing, rock berm, and a rock-bedded construction entrance/exit. Specifications and drawings for these temporary "best management practices" (BMPs) are included in this WPAP package. Also to be used during construction are the undisturbed strips of vegetated landscape, referred to as "vegetative filter strips," which serve to detain silt particles which may wash during rain events from disturbed ground. Each vegetative filter strip must be at least 15 feet in width across the "fall line" (the direction of water "sheet flow"), and must be under the direct control of the tower site owner/operator.

The temporary BMPs can be removed from the construction site once all disturbed soils have been revegetated to at least 70 percent of the original vegetative cover.

The permanent BMPs for storm-water control will be vegetative filter strips only, of the design shown on accompanying drawings.



FLOOD INFORMATION:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR COMAL COUNTY, TEXAS, MAP NUMBER 48091C0430F, EFFECTIVE DATE OF SEPTEMBER 2, 2009, AND THE MAP INDICATES THIS TRACT TO BE IN "OTHER AREAS, ZONE "X", DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN"; NO PORTION OF THIS PLAT LIES WITHIN A DESIGNATED SPECIAL FLOOD HAZARD AREA, INUNDATED BY 100 YEAR FLOOD OR OTHER FLOOD AREAS. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE ENGINEER.

OVERALL SITE PLAN
SCALE: 1" = 100'-0"

BENCHMARK:
SET 5/8" I.R. WITH CAP EL. 891.43' (GEOID 03)
SET FOR GPS POINT 1

LEGEND:

	PROPERTY LINE
	PROPERTY LEASE EASEMENT LINE
1320	EXISTING INDEX CONTOURS
1318	EXISTING INTERMEDIATE CONTOURS
	EDGE OF BIT. ASPHALT PAVEMENT
	EDGE OF GRAVEL DRIVEWAY
X	FENCE LINE
	EASEMENT LINE
	CENTERLINE OF DITCH
	CULVERTS
	UTILITY/ POWER LINE
	RAILROAD SPIKE
	FOUND IRON PIN
OHE	OVERHEAD POWER LINE
UE	UNDERGROUND POWER LINE
UGT	UNDERGROUND TELEPHONE LINE
UGT	UNDERGROUND TELEPHONE LINE

TOWER BASE:

LATITUDE: N29°-42'-33.83"
LONGITUDE: W98°-14'-57.11"
(PER NORTH AMERICAN DATUM OF 1983)

ELEVATION: 1084' AMSL
(NAVD OF 1988)

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION

at&t

6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

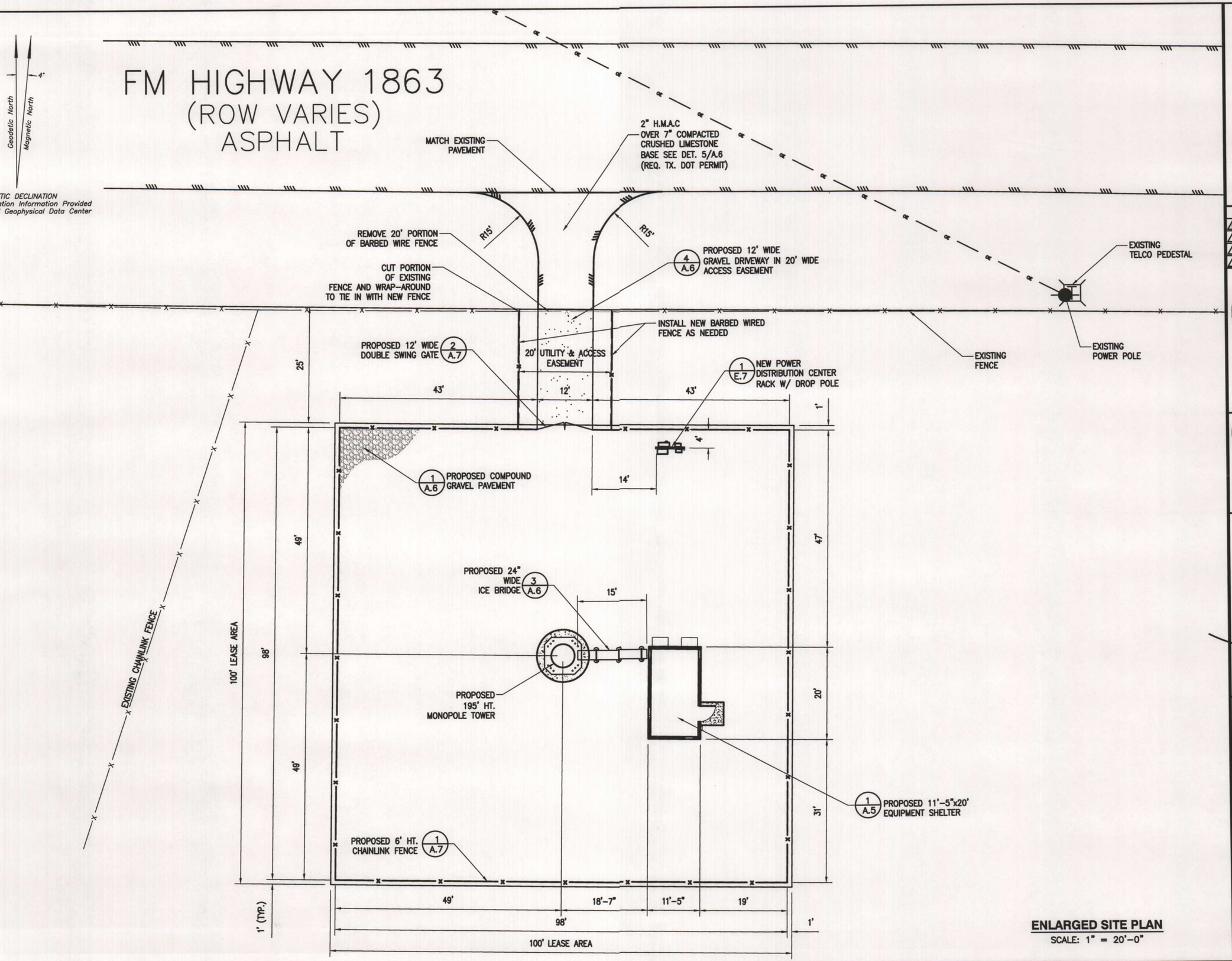
GoodmanNetworks
Network Knowledge... Delivered.

GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 569-5301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863 NEW BRAUNFELS, TX 78132
SHEET NUMBER: A.1
SHEET TITLE: OVERALL SITE PLAN
DRAWN BY: R.F. | CHECK BY: JSA
IED PROJECT NUMBER: 10-150-0079



ENLARGED SITE PLAN

SCALE: 1" = 20'-0"

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION
No. F-11281

REV/DATE	DESCRIPTION
0 07/20/10	ISSUED FOR CONSTRUCTION

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
Network Knowledge . Delivered.
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 569-5301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

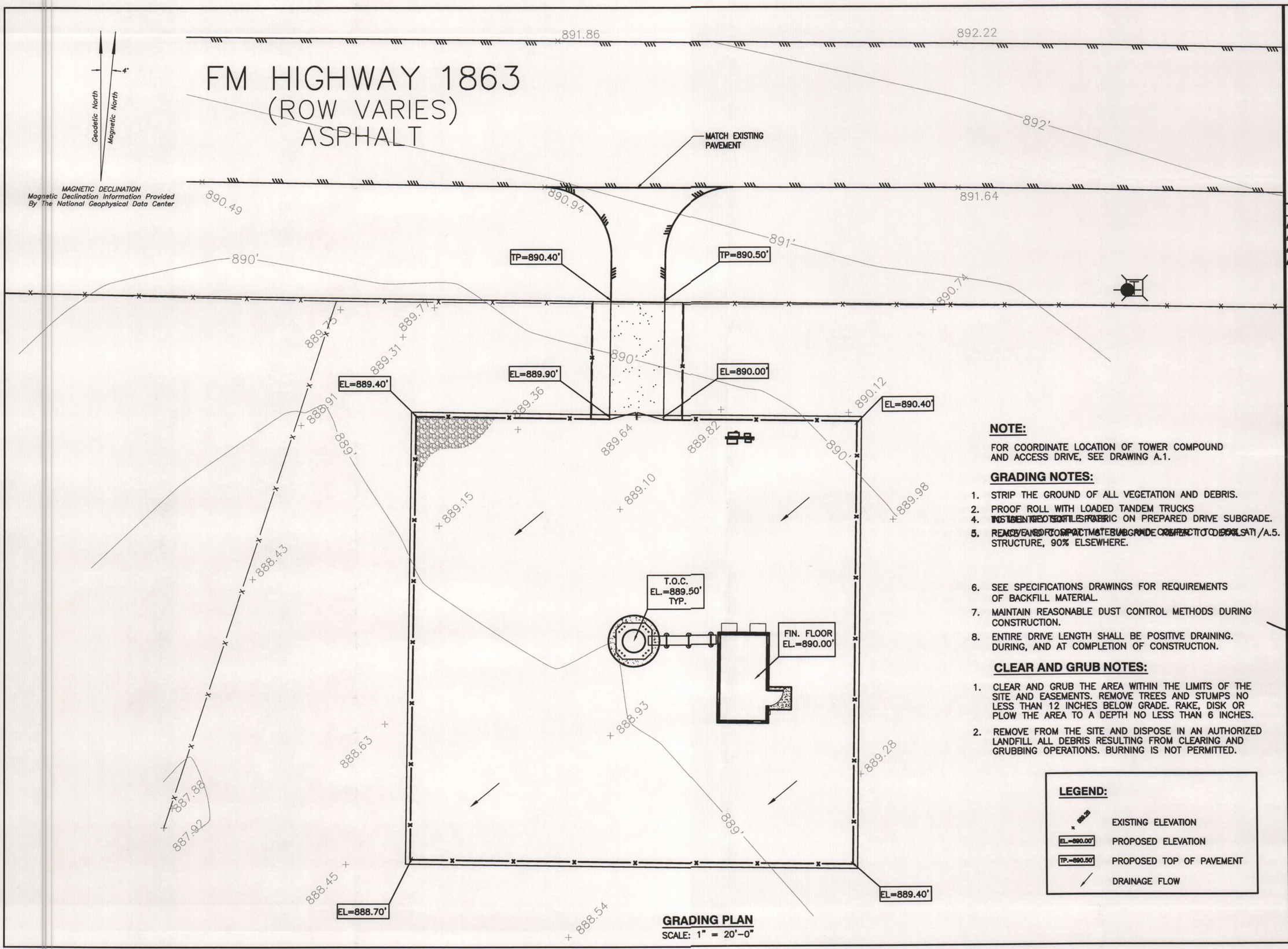
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: A.2

SHEET TITLE: ENLARGED SITE PLAN

DRAWN BY: R.F. | CHECK BY: JSA

IED PROJECT NUMBER: 10-150-0079



GRADING PLAN
SCALE: 1" = 20'-0"

NOTE:

FOR COORDINATE LOCATION OF TOWER COMPOUND AND ACCESS DRIVE, SEE DRAWING A.1.

GRADING NOTES:

1. STRIP THE GROUND OF ALL VEGETATION AND DEBRIS.
2. PROOF ROLL WITH LOADED TANDEM TRUCKS
4. INSTALL TEXTILE FABRIC ON PREPARED DRIVE SUBGRADE.
5. REMOVE AND RECOMPACT MATERIAL BELOW SUBGRADE OR REFER TO DETAIL A1 /A.5. STRUCTURE, 90% ELSEWHERE.
6. SEE SPECIFICATIONS DRAWINGS FOR REQUIREMENTS OF BACKFILL MATERIAL.
7. MAINTAIN REASONABLE DUST CONTROL METHODS DURING CONSTRUCTION.
8. ENTIRE DRIVE LENGTH SHALL BE POSITIVE DRAINING. DURING, AND AT COMPLETION OF CONSTRUCTION.

CLEAR AND GRUB NOTES:

1. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE AND EASEMENTS. REMOVE TREES AND STUMPS NO LESS THAN 12 INCHES BELOW GRADE. RAKE, DISK OR PLOW THE AREA TO A DEPTH NO LESS THAN 6 INCHES.
2. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING IS NOT PERMITTED.

LEGEND:

- EXISTING ELEVATION
- EL.=890.00' PROPOSED ELEVATION
- TP.=890.50' PROPOSED TOP OF PAVEMENT
- DRAINAGE FLOW

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION
No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION

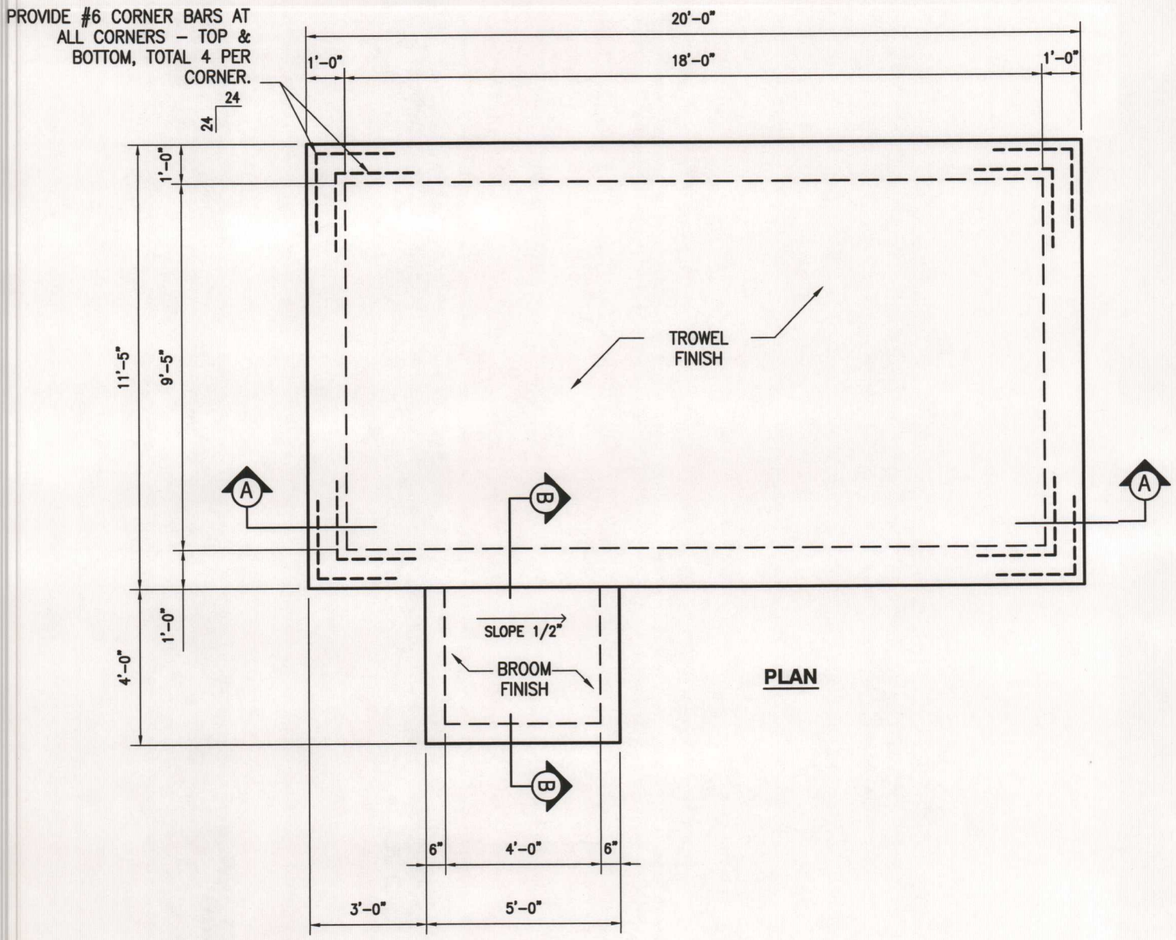
at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 589-5301
Fax : (210) 404-9507

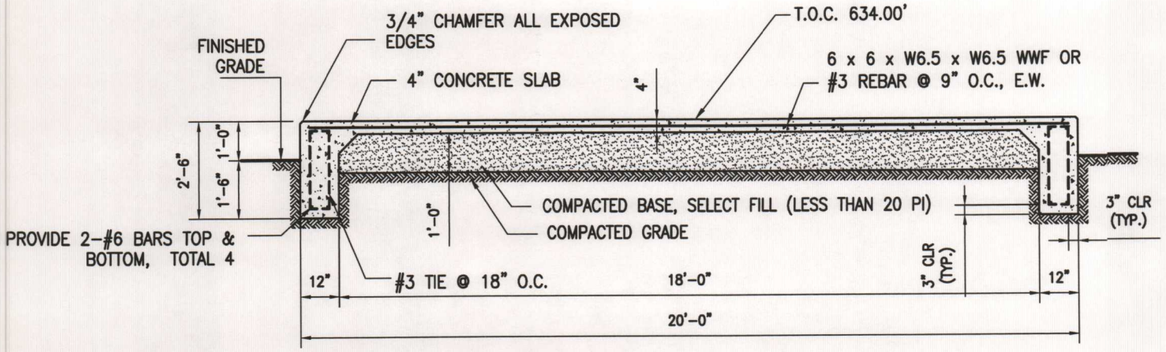
STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

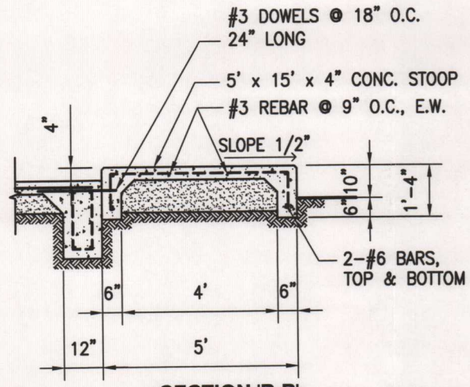
SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863 NEW BRAUNFELS, TX 78132
SHEET NUMBER: A.3
SHEET TITLE: GRADING PLAN
DRAWN BY: R.F. | CHECK BY: JSA
IED PROJECT NUMBER: 10-150-0079



PLAN



SECTION 'A-A'



SECTION 'B-B'

EQUIPMENT SHELTER FOUNDATION (1 / A.8)

SCALE: 1/4" = 1'–0"

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398–7888
Fax : (281) 398–7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
0 07/20/10	ISSUED FOR CONSTRUCTION

at&t

6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
Network Knowledge. Delivered.

GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 569–5301
Fax : (210) 404–9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: A.8

SHEET TITLE: SHELTER FOUNDATION

DRAWN BY: R.F. | CHECK BY: JSA

IED PROJECT NUMBER: 10-150-0079

Water Pollution Abatement Plan Application

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: Countryside Tower Site (Site No. SX 3239)

REGULATED ENTITY INFORMATION

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

2. Total site acreage (size of property): 0.34 acre

3. Projected population: 0

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

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	280.00	÷ 43,560 =	0.0064
Parking	0	÷ 43,560 =	0
Other paved surfaces	1140.00	÷ 43,560 =	0.0262
Total Impervious Cover	1420.00	÷ 43,560 =	0.0326
Total Impervious Cover ÷ Total Acreage x 100 =			9.59

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:

0 % Domestic	0 gallons/day
0 % Industrial	0 gallons/day
0 % Commingled	0 gallons/day
TOTAL	0 gallons/day

15. Wastewater will be disposed of by:

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

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

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

N/A Sewage Collection System (Sewer Lines):

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

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

__ The SCS was previously submitted on _____.

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

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

16. N/A 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" = 100' .

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 Panel #48091C0430F, revised September 2, 2009

19. ___ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.
_X_ 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.):
_X_ 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:
___ All **sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.
_X_ No **sensitive** geologic or manmade features were identified in the Geologic Assessment.
___ **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. N/A The drainage patterns and approximate slopes anticipated after major grading activities.

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

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

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

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

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

ADMINISTRATIVE INFORMATION

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

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

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

Calvin C. Chapman PE — Douglas McCloskey

Print Name of Customer/Agent

Signature of Customer/Agent — Date: 4/4/14

STATE OF TEXAS
C. C. CHAPMAN IV
81268
REGISTERED PROFESSIONAL ENGINEER

Attachment A

FACTORS AFFECTING WATER QUALITY

Factors that could affect surface water and ground water quality are:

1) Fine particles produced during grading and construction activities.

2) Fluids released from construction equipment.

Attachment B

VOLUME AND CHARACTER OF STORMWATER

Storm water passing through the construction activity will be filtered by a combination of silt fences, rock berms and vegetative filter strips before entering existing drainage pathways, in order to maintain storm-water quality at substantially pre-construction levels. Storm-water impact will also be minimized by performing construction activities during the dry winter months.

The tower construction area and access easement are located on generally flat, grassland with small trees, brush, small limestone rocks and stony clay loam soil. During construction, any necessary clearing of trees and brush will be done using techniques that result in minimal soil disturbance. Any disturbed soil, such as that "dislocated" as part of a root ball when it is removed from the ground, must be tamped gently back in place so that vegetation roots suffer as little long-term damage as possible. Grubbing out of mesquite trees will be followed by mowing of native grasses in order to spread seed and accelerate vegetative growth. All construction will be performed with temporary storm-water controls in place on the downslope sides of all disturbed ground.

A tower with anchor supports and one small building will be constructed, and then a 15-foot-wide vegetative filter strip with supporting soils will be improved along the downslope perimeter of the tower site. Compacted gravel will be used for the 12-foot wide driveway into the tower site. The remaining surface cover of the property will be native vegetation.

The pre-construction run-off coefficient is estimated to be in the range of 0.30 to 0.44, whereas the post-construction run-off coefficient for the entire site will fall into the range of 0.36 to 0.50.

The vegetative filter strips in the tower construction area and along the access easement should assure that water quality downslope of the filter strips is maintained at or near pre-construction levels.

Attachment C

SUITABILITY LETTER FROM AUTHORIZED AGENT

Not applicable. The site activities do not generate any wastewater requiring disposal.

Attachment D

EXCEPTION to the REQUIRED GEOLOGIC ASSESSMENT

Not applicable. The Geologic Assessment has been included in this report.

N

STATE OF TEXAS
C. CHAPMAN IV
81268
REGISTERED PROFESSIONAL ENGINEER

1 INCH
100 FEET

General Notes

1. The Site is not located in the floodplain according to FEMA Panel # 48091C0430F, revised September 2, 2009
2. Existing and finished contours will not differ significantly. Existing contours are provided by USGS 7.5 Minute Series Topographic Map, New Braunfels West, Tex. Quadrangle, 1988
3. There are no wells,no surface water and no sensitive geologic or manmade features identified within the boundaries of the site
4. There will be no major grading activities that will disturb drainage patterns
5. There will be no discharges to surface water from the proposed construction activity
6. Aerial image provided by Google™ Earth, dated January 2010

Chapman Engineering
P.O. BOX 1305
BOERNE, TEXAS 78006
(830) 816-3311
(800) 375-7747
FAX (830) 816-1753
A Texas Registered Engineering Firm F-8140

Date Revised: 1/27/2011
Revised By: Amanda Watson
Checked By: Cal Chapman

Key

- Property Boundary
- Proposed Structures
- Areas of Soil Disturbance
- Silt Fence
- Rock Berm
- Vegetative Filter Strip

Countryside Tower

Site No. SX 3239
11844 FM 1863
Comal County, TX

WPAP Site Plan

Temporary Stormwater Form and Temporary BMPs

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: Countryside Tower Site (Site No. SX 3239)

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. _X_ 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: Dry Comal 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 up-gradient 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. _X_ **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:

Print Name of Customer/Agent

Signature of Customer/Agent

Date

Amended
Attachment A

SPILL RESPONSE ACTIONS

***Please note that a release of more than 25 gallons of petroleum products requires immediate reporting to TCEQ (San Antonio 210/490-3096)**

1) In case of any discharge discovery, on-site personnel will begin work to stop the discharge, place barriers to movement of the discharge along the drainage path, clean up the discharged material and notify the proper authorities. General response procedures are listed below.

2) Recovered materials may include fuel, absorbents containing fuel, soils and pavements contaminated by fuel, and water contaminated by fuel. All materials will be handled as hazardous material and stored within proper containment (for instance, liquids placed in drums; soils or other solids placed on heavy plastic sheeting and wrapped to avoid significant vapor loss or stormwater mixing). Once the materials have been sampled or otherwise screened, they may be disposed of to fuel recyclers, qualified landfills, or possibly treated on site to levels below regulatory limits. Consultation with a qualified environmental services company is strongly recommended.

   In the event of a spill or other product release to the environment at the site, the following general procedures are to be followed as applicable:

   1. **STOP** the source of spill or other release as fast as possible, by the most safe and practical means available;
   2. **IF IT IS SAFE TO DO SO, CONTAIN AND CLEAN UP** the product released to prevent further spreading and additional environmental contamination. Containment will be performed with materials from the spill response kit available on site, or with dirt diking, or by any other practical means available;
   3. **CONTACT** company officials immediately with a description of the type and nature of release. If there is a potential for the release to leave the site property or pose an environmental hazard, contact the local fire department and the emergency response center;
   4. **SECURE** the area around the release. Cordon off the area deemed unsafe due to spillage and fumes. Establish a safe area, based on wind direction and other factors, where employees can stage without exposure to spillage and fumes. Minimize flame and spark hazards. Mobilize all available manpower and equipment necessary to respond to the release, to contain and clean up the release in accordance with federal, state and local regulatory agencies' requirements;
   5. **All contaminated materials** generated during the containment process and/or clean-up activities shall be recovered, stored, hauled and disposed of in accordance with federal, state and local regulatory agencies' requirements. For further disposal information and planning for proper disposal, contact Company's environmental contractor(s) or other approved vendors;

6. **Company officials shall notify** TCEQ and other applicable regulatory agencies within 24 hours of the release event's discovery if more than 25 gallons of petroleum product was released;
7. **All required reports** should be filed with appropriate agencies within applicable time frames after the release event's discovery;
8. **Immediate action** will be taken by company officials and/or employees to correct the cause of the release and to prevent the possibility of a reoccurrence;
9. **If fire is involved** – that is, a release leads to ignition of product – the fire will be allowed to burn until all released, flammable product has been burned as completely as possible. Flooding with excessive amounts of water to fight the fire may result in more environmental damage than the fire itself. Water flooding may cause contamination of a wider area, increasing the environmental risk as well as the total cost of cleanup;
10. **A product release may threaten human life**, through potential for fire, explosion and inhalation of fumes or suffocation. If you cannot safely contain and clean up the release, **CLEAR THE AREA AND TAKE PROPER SAFETY MEASURES.** Environmental damage from a product release is bad, but injury or loss of human life is worse.

Emergency Response List

Agency Name	Emergency Phone Number
Local Fire Department	**911**
US EPA, Region VI, Dallas	**214/665-2253** **214/665-6489**
24 Hour State Emergency Response Hotline	**800/832-8224**
Texas Commission on Environmental Quality (TCEQ), Region 13, San Antonio	**210/490-3096**
American Tower Corporation	**210/387-5725**

Amended
Attachment B

POTENTIAL SOURCES OF CONTAMINATION

Other activities or processes which may be a potential source of contamination are fluids that may leak or be released from the construction equipment.

A critical facet of construction equipment use is the fueling, lubrication and other maintenance of equipment while it is on site. Extra care must be taken by fuelers, oilers and mechanics during this work to avoid spillage or other release of fuels, lubricants, etc. There will be **no** refueling or maintenance of construction equipment performed on this site.

Attachment C

SEQUENCE OF MAJOR ACTIVITIES

The major activities which will disturb soils at the site during construction include the following:

- Clearing and grubbing of vegetation within the access easement and tower location where necessary (less than 0.24 acre);
- Installation of temporary BMPs (less than 0.02 acre);
- Excavation, filling and grading for structure foundations and driveway (less than 0.04 acre);
- Trenching, installation of utilities, filling and re-vegetation along trench (less than 0.01 acre);
- Installation or improvement of permanent BMPs (less than 0.11 acre);
- Removal of temporary BMPs (less than 0.02 acre).

Clearing and grubbing of some vegetation is necessary on this project, but the work must be limited to the careful removal of trees and shrubs. Root balls should be removed with the trees and shrubs whenever possible. All reasonable effort should be made to remove soil from the root ball, retaining that soil to be gently repacked in the depression opened by root ball removal. Disturbance of soils and grasses should be kept to the minimum possible extent, so that native grass cover and root zone continue to hold soils in place during rainfall events.

Attachment D

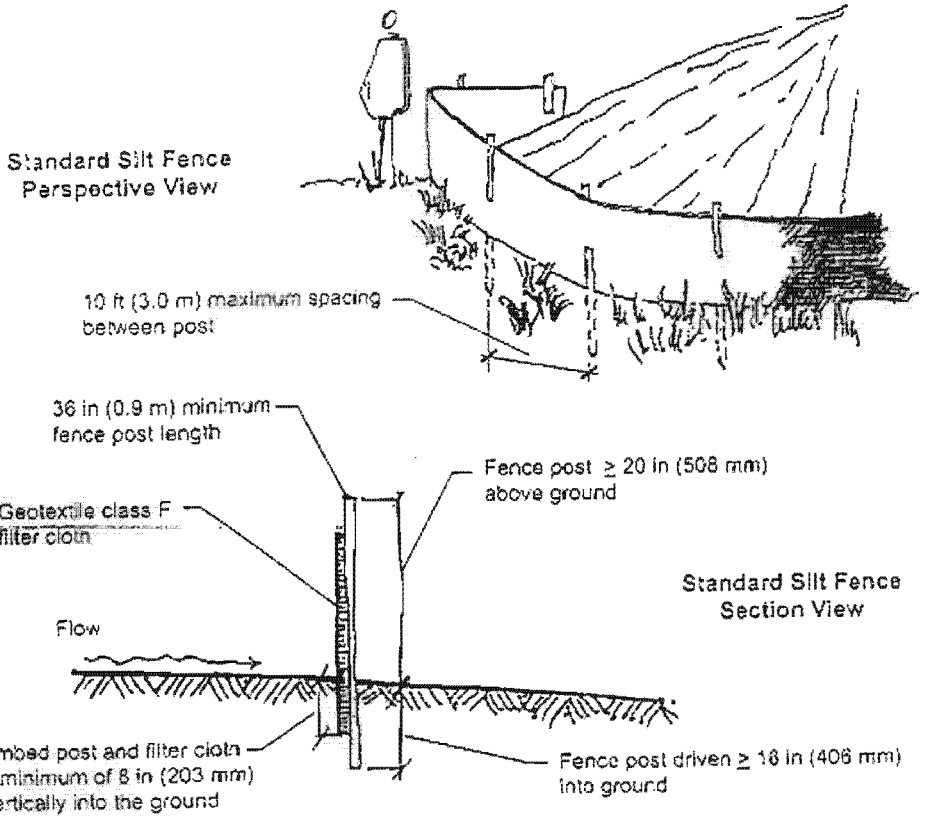
TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

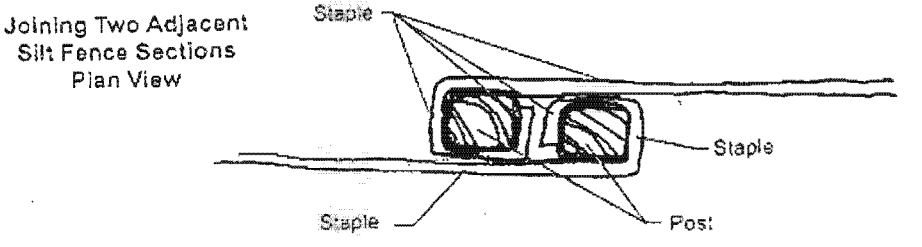
A combination of silt fences, rock berms and a rock-bedded construction entrance/exit will be used in locations shown on the following Temporary BMPs Plan map. The location of the rock berm may be modified based on field conditions observed during construction. The temporary BMPs will be installed on the downslope side of the construction area and the driveway. The silt fences and rock berms will filter out particles mobilized by storm water from the construction site before leaving the property. A construction entrance/exit will be installed for the arresting of soil and mud gathered by vehicles traversing through the construction area. All temporary BMPs will be constructed as described on the attached detail drawings. There are no sensitive geologic features or surface water features located on the property. All temporary BMPs will be installed as the site is cleared, and then removed once the construction has been completed and the soil disturbance is sufficiently stabilized, or when permanent controls are implemented. Below is a list of general notes pertaining to each type of temporary BMP utilized for this site.

Silt Fences are used to intercept sediment while allowing stormwater to percolate through the fence. These fences are not utilized in areas of concentrated flow. Fence posts should be installed with a slight angle towards the uphill side of the fence. Posts shall be made of steel and placed at least one foot into the ground and spaced no more than eight feet apart. The silt fence fabric is to be buried on the toe of the uphill side of the fence to a depth of at least eight inches and backfilled with compacted material. Woven wire backing that supports the fabric will be galvanized wire. Fabric and wire must be securely fastened to posts with three feet of overlap where the fabric ends meet.

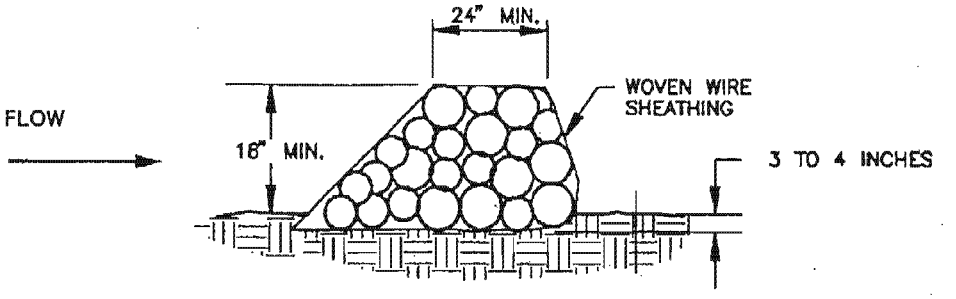
Rock Berms are used in areas with concentrated flow to intercept sediment while allowing stormwater to percolate through the berm. Small, three- to five-inch diameter rock is enclosed within a woven wire mesh to ensure rock berm stability during incidents of stormwater flow. In areas of large flow volume, five- to eight-inch diameter rocks should be used. In areas of low-flow volume, the wire mesh may be omitted. The berm is constructed perpendicular to the anticipated flow of stormwater and is most effective when placed within a three- to four-inch trench with the ends meeting the existing grade. Standard dimensions are indicated on the attached drawing.

A Rock-Bedded Construction Entrance/Exit is utilized to provide a stable entrance/exit for construction vehicles and to limit or eliminate tracking or flow of sediment onto public roadways. Geotextile fabric will line the bottom of the entrance/exit with at least eight inches of compacted, four- to eight-inch diameter coarse aggregate weighing down the fabric. If the slope towards the road exceeds 2%, then a ridge will need to be constructed (as shown in detail drawing) to divert stormwater flow.


Standard Silt Fence
Perspective View
10 ft (3.0 m) maximum spacing
between post
36 in (0.9 m) minimum
fence post length
Fence post ≥ 20 in (508 mm)
above ground
Geotextile class F
filter cloth
Standard Silt Fence
Section View
Flow
Embed post and filter cloth
a minimum of 8 in (203 mm)
vertically into the ground
Fence post driven ≥ 16 in (406 mm)
into ground

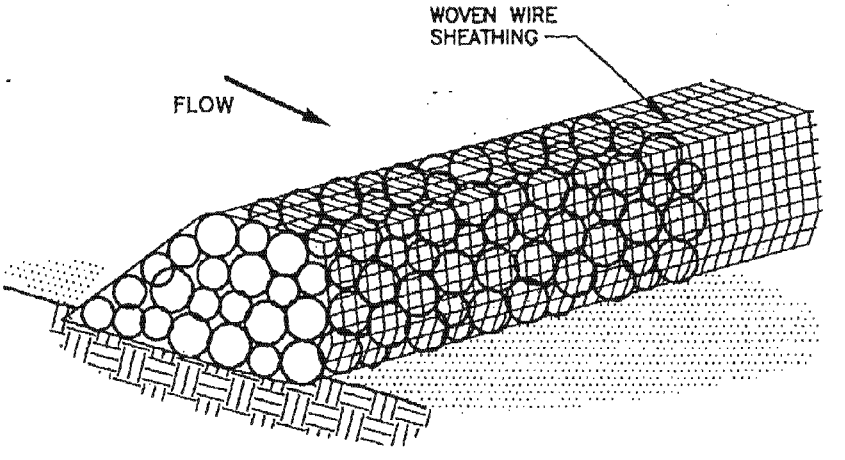

Joining Two Adjacent
Silt Fence Sections
Plan View
Staple
Staple
Staple
Post

Silt Fence



CROSS SECTION

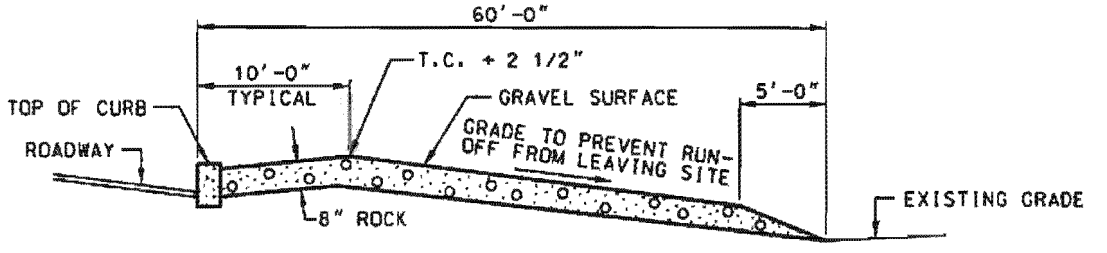
N.T.S.



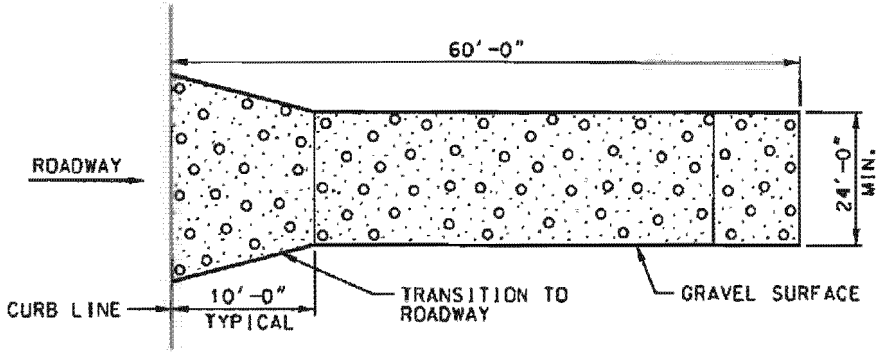
ISOMETRIC PLAN VIEW

N.T.S.

Rock
Berm



PROFILE



PLAN VIEW

Rock-Bedded Construction Entrance/Exit

Attachment E

REQUEST TO TEMPORARILY SEAL A FEATURE

Not applicable. No temporary sealing of naturally occurring sensitive features will occur at the site.

Attachment F

STRUCTURAL PRACTICES

Runoff and the discharge of pollutants from exposed areas of the site will be limited by the following structural control practices:

- Silt fences;
- Rock berms;
- Rock bedding at construction entrance/exit.

These storm-water pollution control features will slow the velocity of runoff and enhance on-site sedimentation and capture of contaminants that may accumulate in storm water runoff exiting this development.

OTHER CONTROLS

Additional erosion, sediment, and pollution control practices include the following:

- Excavation material shall be placed on the uphill side of the trench when possible and/or applicable;
- Loaded haul trucks will be covered with tarpaulins;
- Any excess dirt tracked off-site shall be removed from roads daily;
- Disposal areas, stockpiles, and haul roads shall be constructed in a manner that will minimize and control the amount of sediment that may enter receiving waters.

Attachment G

DRAINAGE AREA MAP

Less than ten acres will be disturbed for this project. The entire site is part of a 3.0-acre drainage area that outfalls into unnamed tributaries of Dry Comal Creek. On-property temporary sediment controls for the drainage area are indicated on the map included in Attachment D.

Attachment H

TEMPORARY SEDIMENT POND(S) PLANS AND CALCULATIONS

No temporary sediment ponds or basins will be constructed at this site. Temporary BMPs for the site include: silt fence; rock berm, and a construction entrance/exit. Design plans for the temporary BMPs are included in Attachment D.

Amended
Attachment I

INSPECTION AND MAINTENANCE FOR BMPS

An inspection will be performed by a qualified inspector every 7 days and/or within 24 hours of every one-half inch or more of rain (as recorded on a non-freezing rain gauge to be provided and installed by the contractor at the project site). An inspection and maintenance report will be completed in writing for each inspection. Based on the inspection results, the controls shall be revised per the inspection report. If repairs are necessary, they shall be initiated within 24 hours of the report.

In the event of flooding or other uncontrollable situations which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable.

If modifications or additional temporary BMPs are necessary, changes must be implemented before the next storm event or as soon as practicable.

Every inspection report must be kept with the WPAP.

Inspection Criteria for erosion and sediment controls are as follows:

- The site preparation and construction-stage erosion and sediment controls are designed to retain sediment on site to the extent practical;
- All control measures must be properly installed and maintained in accordance with manufacturer's specifications and with project specifications;
- If sediment escapes the construction site, off-site accumulations of sediment must be removed immediately;
- Sediment must be removed from sediment traps when design capacity has been reduced by 50%, or sediment is more than 3 inches in depth. Excess sediment should be removed by hand or with flat-bottomed shovels. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level with the bottom of the swale. Sediment removal should be performed periodically, as determined through inspection;
- Litter, construction debris, and construction chemicals exposed to storm water shall be prevented from becoming a pollutant source for storm-water discharges;
- The construction entrance shall be maintained in a condition which will prevent/minimize tracking or flowing of sediments onto public roadways. Sediments spilled, dropped, washed or tracked onto public roadway must be removed immediately;
- Silt fences must be maintained to insure the following:
    - Torn fabric is replaced and loose fabric is properly secured;
    - Loose post supports are plumbed and strengthened;
    - Fabric bottom is buried as anchor for the silt fence face;
- Rock berms shall be cleaned by lifting, dropping and reshaping the stones as required. They should be maintained to insure positive drainage, and so that breaks are promptly repaired
- Rock-bedded construction entrance/exit shall be maintained to insure the following:
    - Sediment does not wash or track onto public road;
    - Foundation is stable but not too compacted, or too silted to hinder effectiveness.

Inspection Record

Date: _____

Pollution Prevention Measure	Condition	Comments/Description
General		
Revegetation		
Silt fences (torn, secured, silt buildup)		
Rock berms (silt buildup, draining, intact)		
Vehicle exits (silt buildup, compacted)		
Material areas		
Equipment areas		
Concrete rinse		
Construction debris		
Dumpsters		
Infrastructure		
Roadway clearing		
Utility clearing		
Roadway grading		
Utility construction		
Drainage construction		
Roadway base		
Site cleanups		
Building		
Clearing for building		
Foundation grading		
Utility construction		
Foundation construction		
Building construction		
Site grading		
Site cleanup		

By my signature below, I certify that all items are acceptable and the project site is in compliance with the WPAP.

_____ _____

Inspector's Name Inspector's Signature

_____ _____

Name of Jobsite Date

Amended
Attachment J

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Permanent on-site stabilization measures will include the following:

- Permanent seeding or sodding;
- Preservation of natural resources.

PERMANENT SEEDING

Permanent seeding is the establishment of permanent, perennial vegetative cover—usually grass—on disturbed areas. The area must be protected from excess runoff as necessary with upgradient diversion berms or ditches. Plant species must be selected on the basis of quick germination, growth, and time of year to be seeded. Fertilizer, lime, seedbed preparation, seed coverage, mulch, and irrigation must be applied as necessary to promote quick plant growth. The following is a list of general procedures for installing permanent seeding:

- Where compacted soils occur, they should be broken up sufficiently to create a favorable rooting depth of 6–8 inches.
- Grade as needed then spread topsoil where needed.
- Install the needed erosion control practices, such as diversion berms and mulch.
- Spread lime and/or fertilizer as needed.
- Work the lime and fertilizer into the soil to a depth of 4 inches. On sloping land, the final operation must be on the contour.
- Apply seed per manufacturer's instruction.
- Water the soil until the grass is firmly established. This is especially needed when seedings are made late in the planting season, in abnormally dry and hot season, or on sites with steep slopes or other adverse conditions.
- Inspect all seeded areas for failures and make necessary repairs, replacements, reseedings, and remulching within the planting season.

SODDING

Sod consists of rectangular strips of live turf grass held together by matted roots laced through an organic, growing medium. The sod should be machine-cut and contain one-half inch to 1 inch of soil, not including roots or shoots or thatch. Avoid planting when subject to frost or hot weather if irrigation is not available. Sod should not be used on slopes steeper than 2H:1V. If it is to be mowed, installation should be on slopes no greater than 3H:1V. The following is a list of general procedures for installing sod:

- The sod must be kept moist and covered during hauling and preparation for placement on the sod bed and installed within 36 hours of harvesting.
- Compacted soils must be broken up sufficiently to create a favorable rooting depth of 6–8 inches.
- Grade as needed and then spread topsoil where needed.

- Apply lime and/or fertilizer as needed.
- Work lime and fertilizer into the soil to a depth of 4 inches.
- Before sodding, the soil surface must be cleared of all trash, debris, and stones larger than 1.5 inches in diameter, and of all roots, brush, wire, and other objects that would interfere with the placing of the sod.
- After the lime and fertilizer have been applied (if applicable) and just before laying the sod, the soil in the area to be sodded must be loosened to a depth of one inch. The soil must be thoroughly dampened immediately after the sod is laid if it is not already in a moist condition. During periods of high temperature, the sod needs to be lightly irrigated prior to installation.
- No sod should be placed when the temperature is below 32° F. No frozen sod must be placed nor should any sod be placed on frozen soil. Sod should not be installed in excessively wet or dry conditions.
- Sod should be carefully placed and pressed together so it will be continuous without any voids between the pieces. Stagger the joints between the ends of strips in a brick-like pattern. Ensure that the edge of the sod at the outer edges of all gutters is sufficiently deep so that the surface water will flow over onto the top of the sod.
- On gutter and channel sodding, carefully place the sod on rows or strips at right angles to the centerline of the channel (i.e., at right angles to the direction of flow).
- On steep, graded channels, stake each strip of sod with at least two stakes not more than 18 inches apart. The stakes should be wooden and approximately 1/2" H 3/4" H 12". Drive in the stakes flush with the top of the sod and with the flat side against the slope.
- On slopes 3:1, or steeper, and areas where erosion could be a problem, roll or tamp the sod and then peg chicken wire, jute, or other netting over the sod for protection in the critical areas. Stake the netting and sod with at least two stakes not more than 18 inches apart. The stakes should be wooden and approximately 1/2" H 3/4" H 12". Drive the stakes with the flat side against the slope and on an angle toward the slope. Staple the netting on the side of each stake within 2 inches of the top of the stake, and then drive the stake flush with the top of the sod.
- The sod should be tamped or rolled after placing and then watered. Watering must consist of a thorough soaking of the sod and of the sod bed to a depth of at least 4 inches. Maintain the sod in a moist condition by watering for a period of 30 days.
- Inspect sod weekly and after each rain event following installation to check on moisture conditions and grass viability. Make any required repairs as soon as practical. Irrigate sod immediately after installation and every few days afterwards if no significant rainfall occurs during the first 2 weeks. Soak the area thoroughly to a depth of 3 inches during irrigation.
- Where sodding does not establish properly, remove the old sod and re-sod the area as soon as possible. Identify the cause of the failure and correct it as soon as possible.
- Once established, initiate a regular maintenance program for fertilization (if needed) and mowing. The first mowing should not be attempted until the roots are firmly established (about 2 – 3 weeks) Cut no more than one third of the grass blade during any mowing event.

Disturbed areas on which construction activity has ceased (temporarily or permanently) shall be stabilized within 14 days unless further activities are scheduled, and resume within 21 days.

Where snow cover or frozen ground conditions hinder the initiation of stabilization measures by the 14th day, the stabilization measures must be initiated as soon as it is practical.

In arid areas, semiarid areas, and areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased, stabilization measures must be initiated as soon as practicable. Where vegetative controls are not feasible due to arid conditions, the operator shall install non-vegetative erosion controls or temporary sediment controls. The operator must document in the WPAP the reason why stabilization measures are not feasible, and must demonstrate that the perimeter controls will retain sediment on site to the maximum practical extent.

Permanent Stormwater Form and Permanent BMPs

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

REGULATED ENTITY NAME: Countryside Tower Site (Site No. SX 3239)

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. ___ 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.**

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

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

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

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

__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. N/A 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:

Carolyn C. Chapman IV — Douglas McGookey

Print Name of Customer/Agent

Signature of Customer/Agent — Date: 4/4/11

STATE OF TEXAS
C. C. CHAPMAN IV
81268
REGISTERED PROFESSIONAL ENGINEER

Attachment A

20% OR LESS IMPERVIOUS COVER WAIVER

The site will not be used for a multi-family residential development, school or small business, and is not eligible for the impervious cover waiver.

Attachment B

BMPs FOR UP-GRADIENT STORMWATER

The site will utilize permanent vegetative filter strips to filter out particles from storm water prior to that water leaving the property. Up-gradient storm water that flows through the property is filtered through these strips as well. Vegetative filter strips are utilized in areas of low-velocity flow for the filtration of fine particles from within storm water. The vegetative filter strip will consist of dense, natural vegetation with a slope of less than five percent. The entirety of vegetative filter strip areas will be under the control of the applicant and maintained as detailed below. The vegetative filter strips will be maintained in the areas indicated on the following Permanent BMP map with a minimum width of 15 feet perpendicular to the flow of storm water. Weeding (if applicable), replanting and general maintenance should be done more frequently in the first couple of years until the site vegetation is well-established. Basic maintenance of the vegetative filter strips includes:

- With native grasses in place, mowing should be performed a minimum of twice a year with a mulching mower;
- Fertilizer, insecticide and herbicide use should be kept to a minimum;
- Debris and litter should be removed no less than four times a year to reduce "floatables" being washed downstream;
- In the event that excess sediment accumulates and interferes with flow patterns, the excess sediment should be removed by hand or with flat-bottomed shovels;
- Bare spots and eroded areas must by filled, compacted, reseeded and restored as quickly as possible with similar native grasses;
- Irrigation may be required during dry periods to maintain vegetative health and site stability.

The required or recommended schedule of inspection for vegetative filter strips is described in Attachment G, below.

Attachment C

BMPs FOR ON-SITE STORMWATER

Vegetative filter strips will be utilized to maintain quality for stormwater originating on-site or flowing through the property. The vegetative filter strips will be constructed as described in Attachment B and placed in the locations indicated on the Permanent BMP map. Once the site has become stabilized and the permanent BMPs are in place, regular operational use, routine maintenance, and inspections by the Applicant are the only activities anticipated. Soils may be disturbed by these typical operations, and the vegetative filter strips are intended to reduce sediment particles leaving the property, long-term. No other contaminant types are expected in the future.

Attachment D

BMPs for Surface Streams

No sensitive features were identified in the Geologic Assessment. Vegetative filter strips described in Attachment B will be utilized to maintain stormwater quality before the stormwater leaves the property and enters the surface stream southeast of the property.

Attachment E

REQUEST TO SEAL FEATURES

Not applicable. No sealing of naturally occurring sensitive features will occur at the site. No sensitive features were identified on the property in the Geologic Assessment.

Amended
Attachment F

CONSTRUCTION PLANS

The site will utilize permanent vegetative filter strips to filter out particles from storm water prior to that water leaving the property. Up-gradient stormwater that flows through the property is filtered through these strips as well. Vegetative filter strips are utilized in areas of low-velocity flow for the filtration of fine particles from within storm water.

The vegetative filter strip will consist of dense, natural vegetation with a slope of less than five percent. The entirety of vegetative filter strip areas will be under the control of the applicant and maintained as detailed below. The vegetative filter strips will be maintained in the areas indicated on the following Permanent BMP map with a minimum width of 15 feet perpendicular to the flow of storm water.

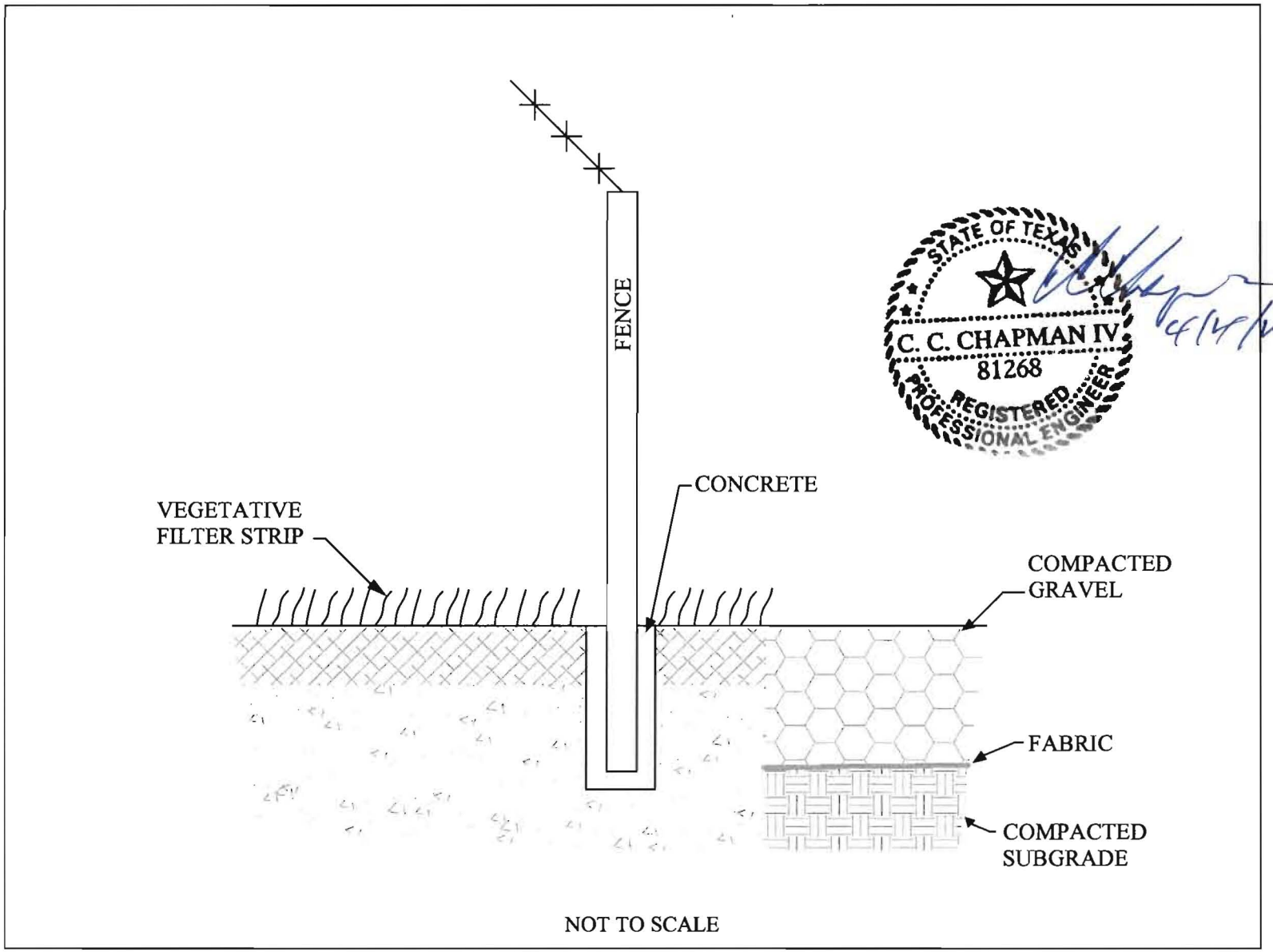
The vegetative filter strip soil surface should be hydro-seeded and fertilized in a single treatment, or amended with native grass seed and composted mulch (one inch, average, of free mulch thickness to be mixed with native soil as available).

Vegetated filter strips require regular inspection to ensure proper distribution of flows, examine for signs of rill formation, and check for and remove accumulated sediment. Weeding, replanting and general maintenance should be done more frequently in the first couple of years until the site is well-established.

Basic maintenance of the vegetative filter strips includes:

- With native grasses in place, mowing should be performed a minimum of twice a year with a mulching mower;
- Fertilizer, insecticide and herbicide use should be kept to a minimum;
- Debris and litter should be removed no less than four times a year to reduce "floatables" being washed downstream;
- In the event that excess sediment accumulates and interferes with flow patterns, the excess sediment should be removed by hand or with flat-bottomed shovels;
- Bare spots and eroded areas must by filled, compacted, reseeded and restored as quickly as possible with similar native grasses;
- Irrigation may be required during dry periods to maintain vegetative health and site stability.

The required or recommended schedule of inspection for vegetative filter strips is described in Attachment G, below.



STATE OF TEXAS
C. C. CHAPMAN IV
81268
REGISTERED
PROFESSIONAL ENGINEER

Chapman
Engineering
P.O. BOX 1305
BOERNE, TEXAS 78006
(830) 816-3311
(800) 375-7747
FAX (830) 816-1753
A Texas Registered Engineering Firm F-8140

Date Revised: 3/28/2011
Revised By: Amanda Watson
Checked By: Cal Chapman

Countryside Tower
Site No. SX 3239
11844 FM 1863
Comal County, TX

Typical Cross-Section: Vegetative Filter Strip and Compacted Gravel

Attachment G

INSPECTION, MAINTENANCE, REPAIR and RETROFIT PLAN

Vegetative filter strips should be inspected at least monthly during the first few months after establishment to identify and repair problems. An additional inspection should be conducted after every heavy rainfall event to determine the effectiveness of the controls. These inspections and maintenance activities should reduce weed production and insect infestation, which will in turn reduce any need for chemical use. Bare spots and erosion concerns should be addressed immediately to prevent further damage. Once the vegetative filter strips are well-established with minimal further attention required according to inspection data, inspections can be reduced to no less than four times a year.

All inspections are to be documented through completion of the attached form. Records should be kept with a copy of the WPAP. The vegetative filter strips should be maintained as described in Attachment B.

Inspection Record

Date: _____

Pollution Prevention Measure	Condition	Comments/Description
General		
Vegetative Growth/Height		
Bare spots		
Weed growth		
Excess sediment		
Insect nuisance		
Animal nuisance		
Debris/trash		
Drainage pathways		

Need to be Scheduled	Yes	No	Comments/Description
Mowing			
Insect pest control (specify type)			
Animal pest control (specify type)			
Removal of sediment			
Removal of debris/trash (specify amount/equipment necessary)			

Additional Comments:_____

_____

_____

By my signature below, I certify that all items are acceptable and the project site is in compliance with the WPAP.

_____ _____

Inspector's Name Inspector's Signature

_____ _____

Name of Jobsite Date

Attachment H

PILOT-SCALE FIELD TESTING PLAN

Not applicable. The TCEQ Technical Guidance Manual was utilized to design the permanent BMPs for this site.

Attachment I

MEASURES for MINIMIZING SURFACE STREAM CONTAMINATION

Vegetative filter strips will be utilized to maintain storm-water quality before that water enters the unnamed tributary of Dry Comal Creek. The installation and maintenance of the vegetative filter strips are described in Attachments B, F and G, with inspection criteria outlined in Attachment G. The use of native grasses allows no change to the existing grade of the property. There will be no grading activities during the construction of the tower site that would alter the flow velocity of storm water flowing through the property once permanent controls have been established. Regular inspections and maintenance of the controls will prevent alteration in drainage pathways on the property. The controls will prevent the property improvements from causing an increase of stream flashing, stronger flows, increased in-stream velocities and other erosion-related effects on the tributary.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 15, 2011

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: Country Side Tower Site sx3239, located approximately 100 feet east of the Schoenthal Road and FM 1863 intersection, New Braunfels, Texas
PLAN TYPE: Application for Approval of a Water Pollution Abatement Plan, 30 Texas Administration Code (TAC) Chapter 213; Edwards Aquifer Protection Program
EAPP File No.: 2962.00

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 March 14, 2011.

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

WATER POLLUTION ABATEMENT PLAN

COUNTRYSIDE TOWER SITE
SITE NO. SX3239
COMAL COUNTY, TEXAS

Prepared for:

Texas Commission on Environmental Quality
14250 Judson Road
San Antonio, Texas 78233

Prepared by:

Medina Consulting Company, Inc.
6391 De Zavala, Suite 113
San Antonio, Texas 78249

and

Chapman Engineering
213 Commerce Avenue
Boerne, TX 78006

Project Nº 221-0042
February 2, 2011

Medina
Consulting
Company, Inc.

February 2, 2011

Mr. Alan Jones
Texas Commission on Environmental Quality
14250 Judson Road
San Antonio, Texas 78233

Water Pollution Abatement Plan
Countryside Tower Site (SX3239)
Comal County, Texas

Dear Mr. Jones:

Medina Consulting Company, Inc. (MCC) in conjunction with Chapman Engineering completed a Water Pollution Abatement Plan (WPAP) for the proposed Countryside Tower Site, which is located at 11844 Farm-to-Market Road 1863 in Comal County, Texas. The Site is approximately 0.5 mile east of the intersection of Farm-to-Market Road 1863 and Countryside Drive and approximately 7.4 miles northwest of downtown New Braunfels. The proposed 195-foot tall monopole cellular tower will be located within a 100-foot by 100-foot tower compound. The tower compound will be accessed by a proposed 500-square foot access road from Farm-to-Market Road 1863. The parent property is an approximate 76.069-acre tract of land that contains the Site and agricultural farmland.

We appreciate your consideration of the submittal and look forward to your response.

Very Truly Yours,
Medina Consulting Company, Inc.

Douglas McGookey, PG
Principal Geologist

Copies Submitted: (6) Mr. Alan Jones; Texas Commission on Environmental Quality

6391 De Zavala Suite 113
San Antonio, Texas 78249

Phone: (210) 694-4545
Fax: (210) 694-4577

Water Pollution Abatement Plan Checklist

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

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

X Water Pollution Abatement Plan Application Form (*TCEQ-0584)*
- ATTACHMENT A - Factors Affecting Water Quality
- ATTACHMENT B - Volume and Character of Stormwater
- ATTACHMENT C - Suitability Letter from Authorized Agent (if OSSF is proposed)
- ATTACHMENT D - Exception to the Required Geologic Assessment (if requesting an exception)
- Site Plan

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

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

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

X Application Fee Form (*TCEQ-0574*)

X Check Payable to the "Texas Commission on Environmental Quality"

X Core Data Form (*TCEQ-10400)*

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

REGULATED ENTITY NAME: Countryside Tower Site (Site No. SX 3239)
COUNTY: Comal STREAM BASIN: Dry Comal Creek

EDWARDS AQUIFER: x RECHARGE ZONE
__ TRANSITION ZONE

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

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: Wilder Castillo
Entity: American Tower Corporation
Mailing Address: 16500 Henderson Pass. Suite 309
City, State: San Antonio, Texas Zip: 78232
Telephone: 210 387-6450 FAX: Wilder.Castillo@americantower.com

Agent/Representative (If any):

Contact Person: Douglas McGookey, PG
Entity: Medina Consulting Company, Inc.
Mailing Address: 6391 De Zavala, Suite 113
City, State: San Antonio, Texas Zip: 78239
Telephone: 210 694-4545 FAX: 210 694-4577

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

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

The Site is located at 11844 FM 1863. The Site lies on the south side of FM 1863 about 1,000 feet east of the intersection of Schoenthal Road and FM 1863.

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:

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: Countryside Tower Site (Site No. SX 3239)
COUNTY: Comal STREAM BASIN: Dry Comal Creek

EDWARDS AQUIFER: x RECHARGE ZONE
__ TRANSITION ZONE

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

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: ~~Castillo~~ Wilder Castillo
Entity: American Tower Corporation
Mailing Address: 16500 Henderson Pass. Suite 309
City, State: San Antonio, Texas Zip: 78232
Telephone: 210-~~387-6725~~ 363-6450 FAX: ____
wilder.castillo@amcantower.com

Agent/Representative (If any):

Contact Person: Douglas McGookey, PG
Entity: Medina Consulting Company, Inc.
Mailing Address: 6391 De Zavala, Suite 113
City, State: San Antonio, Texas Zip: 78239
Telephone: 210-~~694-4545~~ ~~363-6450~~ FAX: 210 694-4577
694-4545

2. __ This project is inside the city limits of ____.
x This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of Comal County.
x This project is not located within any city's limits or ETJ.

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

The Site is located at 11844 FM 1863. The Site lies on the south side of FM 1863 about 1,000 feet east of the intersection of Schoenthal Road and FM 1863.

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)

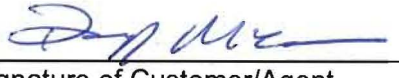
x San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

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

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

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

Douglas McGookey, PG
Print Name of Customer/Agent

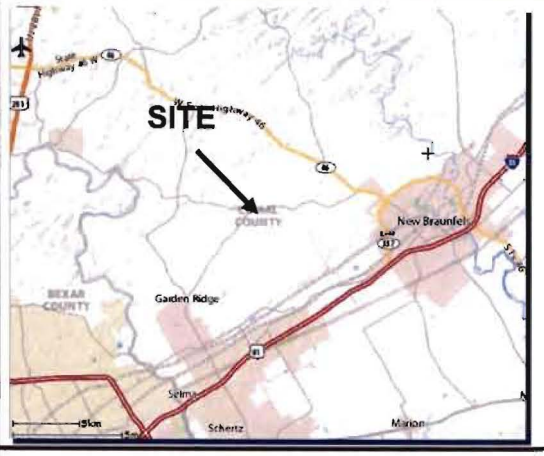


Signature of Customer/Agent

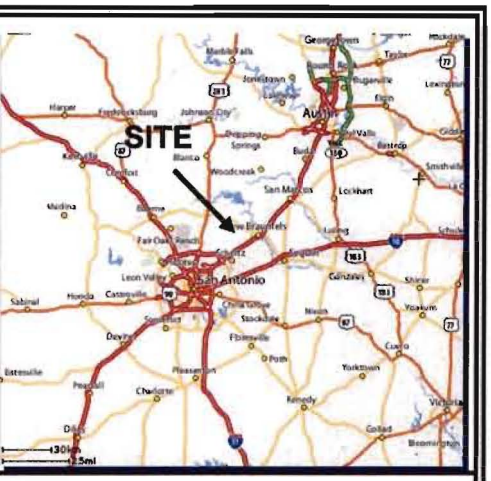
2-1-11
Date

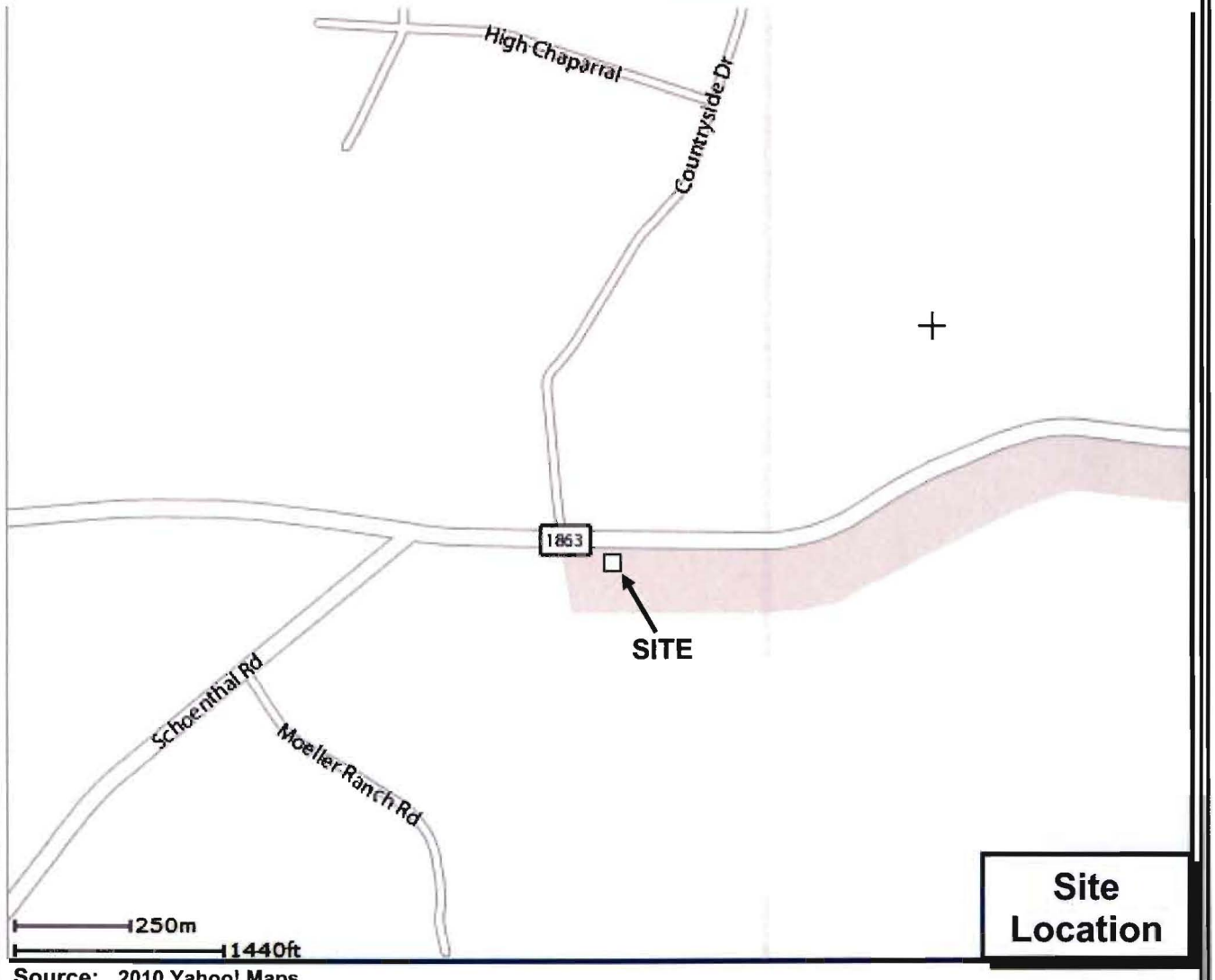
If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

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.



Area Maps





Site Location

Source: 2010 Yahoo! Maps

Medina Consulting Company, Inc.	Drawn By: DM Scale: As Shown Date: December 2010	N	**Attachment A-1** **Site Location Map** **Countryside Tower Site (SX 3239)** **New Braunfels, Comal County, Texas**

Source: 2010 Google Earth

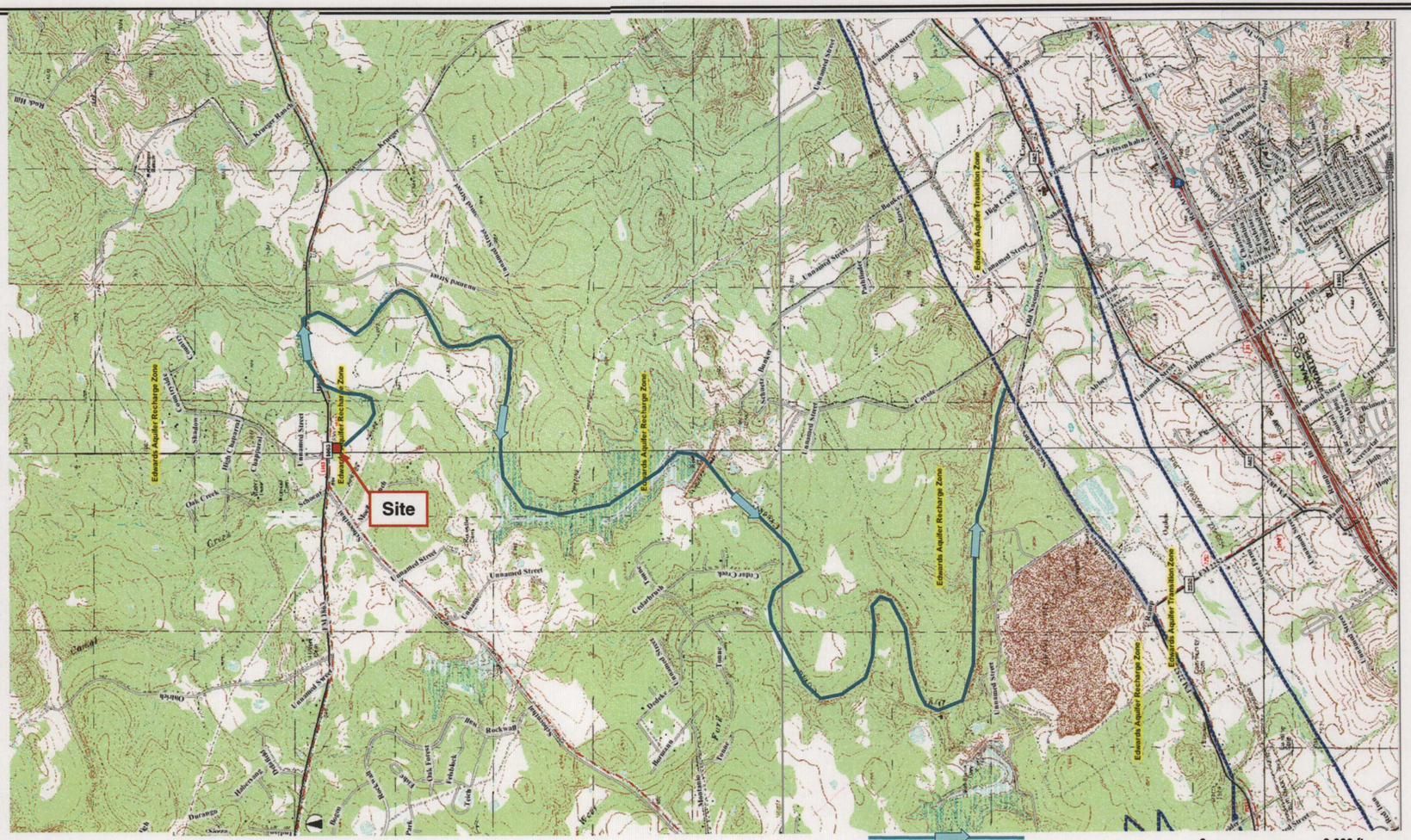
0 300
Scale in Feet

Medina Consulting Company, Inc.

Drawn By:	DM
Scale:	As Shown
Date:	December 2010

N

Attachment A-2
Site and Vicinity Map
Countryside Tower Site
New Braunfels, Comal County, Texas



Source: TCEQ Interactive Edwards Aquifer Viewer
USGS 7.5 Min Quadrangle Map for Bat Cave, Texas

Medina Consulting Company, Inc.

Drawn by:	DM
Scale:	1 in = 2,000 ft
Date:	December 2010

Attachment B
Edwards Aquifer Map Showing the Site and Drainage to the Transition Zone
Countryside Tower Site (Site No. 3239)
Comal County, Texas

ATTACHMENT C: PROJECT DESCRIPTION

Countryside Tower Site (Site No. SX 3239)

The proposed project is the installation of a 195-foot-tall, self-support cellular communications tower and associated equipment building, compound, fence, and access road. The facility name is the Countryside Tower Site (Site No. SX 3239). The proposed cellular communications compound is an approximate 100-foot by 100-foot tract of land at 11844 Farm to Market Road (FM) 1863, which is west of New Braunfels, Texas in Comal County, zip code 78132. The Site is approximately 1,000 feet east of the intersection of Schoenthal Road and FM 1863. The Site is situated along the northern boundary of the parent property that consists of undeveloped land, farmland, and a rural residence. The surrounding area consists of mostly undeveloped or agricultural land with a few rural residential properties.

The only structures to be built that will provide impervious cover are the tower foundation, the foundation for the equipment building, and the compacted gravel driveway. The amount of impervious cover will be 1,420.0 square feet, or 0.0326 acre.

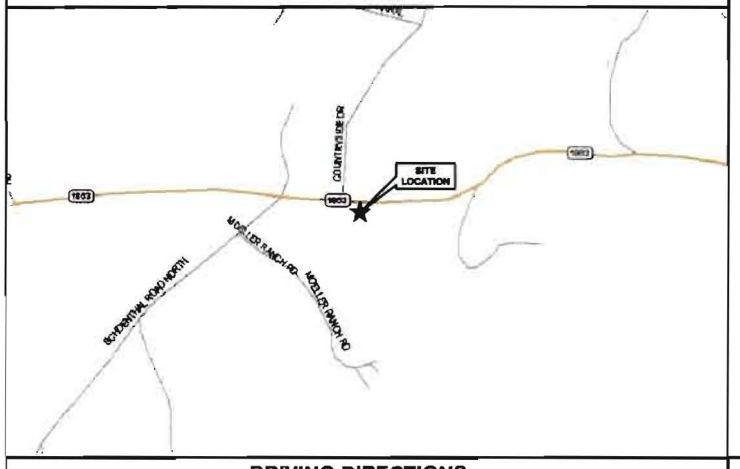
Attached are the design plans for the facility provided by Goodman Networks, Inc., and prepared for AT&T Mobility.

Temporary storm-water controls are required during the construction of site improvements. They will include silt fencing, rock berm, and a rock-bedded construction entrance/exit. Specifications and drawings for these temporary "best management practices" (BMPs) are included in this WPAP package. Also to be used during construction are the undisturbed strips of vegetated landscape, referred to as "vegetative filter strips," which serve to detain silt particles which may wash during rain events from disturbed ground. Each vegetative filter strip must be at least 15 feet in width across the "fall line" (the direction of water "sheet flow"), and must be under the direct control of the tower site owner/operator.

The temporary BMPs can be removed from the construction site once all disturbed soils have been revegetated to at least 70 percent of the original vegetative cover.

The permanent BMPs for storm-water control will be vegetative filter strips only, of the design shown on accompanying drawings.

VICINITY MAP



at&t

6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

DRIVING DIRECTIONS

DIRECTIONS BEGINNING FROM AT&T OFFICE IN SAN ANTONIO: HEAD NORTH ON SAN PEDRO AVE TOWARD W RECTOR DR, TAKE THE EXIT TOWARD I-410 E, MERGE ONTO I-410 ACCESS RD, TAKE THE RAMP ON THE LEFT ONTO I-410 E, TAKE THE EXIT ONTO I-35 N TOWARD AUSTIN, TAKE EXIT 175 TOWARD FARM TO MARKET RD 3009/NATURAL BRIDGE/CAVERNS RD, MERGE ONTO EXCHANGE AVE, TURN LEFT AT FARM-TO-MARKET RD 3009 N/ROY RICHARD DR, CONTINUE TO FOLLOW FARM-TO-MARKET RD 3009 N, TURN RIGHT AT SCHOENTHAL RD N, TURN RIGHT AT FARM-TO-MARKET RD 1863 E, THE PROPOSED LOCATION WILL BE ON THE RIGHT HAND SIDE.

PROJECT INFORMATION

SCOPE OF WORK: INSTALLATION OF NEW AT&T EQUIPMENT IN A 11'-5" X 20'-0" PRE-FAB CONC. SHELTER AND INSTALLATION OF NEW 195' MONOPOLE TOWER WITH NEW ANTENNAS AND COAXIAL CABLES

LATITUDE: N29° 42' 34.03"

LONGITUDE: W98° 14' 59.43"

GROUND ELEVATION: 892' AMSL

JURISDICTION: COMAL COUNTY, TEXAS

CONSTRUCTION TYPE: NEW 195' MONOPOLE TOWER INSIDE OF 100'x100' COMPOUND

PROJECT TEAM

SITE PROPERTY OWNER
DALE DAMERAU
130 N. SOLMS RD.
NEW BRAUNFELS, TEXAS 78132
CONTACT: DALE DAMERAU
TEL: 830-626-6822
FAX: N/A

APPLICANT
AT&T MOBILITY
6500 WEST LOOP SOUTH, 4TH FLOOR
BELLAIRE, TEXAS 77401
CONTACT: SHAWNDRIEA THOMPSON
TEL: (713) 265-4640
FAX: (713) 984-9133

DESIGN ENGINEER
INNOVATIVE ENGINEERING DESIGN
21732 PROVINCIAL BLVD.
KATY, TX 77450
CONTACT: JOSEPH ABBOUD, P.E.
TEL: (281) 398-7888
FAX: (281) 398-7888

SURVEYOR
TOWN & COUNTRY LAND SURVEYING
25307 INTERSTATE HWY 145 N
THE WOODLANDS, TEXAS 77380
TEL: (281) 465-8730
FAX: (281) 465-8731

UTILITIES

UTILITY ONE CALL
CONTRACTOR TO CALL
BEFORE DIGGING!!!!
TEL. 1 (800) 245-4545

POWER COMPANY
NBU ELECTRIC
TEL. (866) 629-8400

TELEPHONE COMPANY
AT&T
TEL. (816) 872-0140

TEXAS ONE CALL SYSTEM 1 800 245 4545 STOP - CALL BEFORE YOU DIG

APPROVALS

PROPERTY OWNER

RF ENGINEER

PROJECT MANAGER

NETWORK ENGINEER

CINGULAR WIRELESS

CONTRACTOR

OPERATIONS

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T.1	TITLE SHEET	0
GN.1	GENERAL NOTES	0
GN.2	GENERAL NOTES	0
GN.3	GENERAL NOTES	0
A.1	OVERALL SITE PLAN	0
A.2	ENLARGED SITE PLAN	0
A.3	GRADING PLAN	0
A.4	TOWER ELEVATION	0
A.5	SHELTER ELEVATION	0
A.6	CONSTRUCTION DETAILS	0
A.7	FENCE DETAILS	0
A.8	SHELTER FOUNDATION	0
E.1	SINGLE LINE DIAGRAM	0
E.2	GROUNDING PLANS	0
E.3	GROUNDING DETAILS	0
E.4	GROUNDING DETAILS	0
E.5	GROUNDING DETAILS	0
E.6	COAXIAL CABLE MARKINGS	0
E.7	POWER FRAME DETAILS	0
E.8	TELCO INSTALLATION DETAILS	0

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7888
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
0 07/20/10	ISSUED FOR CONSTRUCTION

at&t

6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 598-5301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER:	SX3239
SITE NAME:	COUNTRYSIDE
SITE ADDRESS:	11844 FM 1863 NEW BRAUNFELS, TX 78132
SHEET NUMBER:	T.1
SHEET TITLE:	TITLE SHEET
DRAWN BY: R.F.	CHECK BY: JSA
IED PROJECT NUMBER:	10-150-0079

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T MOBILITY
   OEM – ORIGINAL EQUIPMENT MANUFACTURE
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

   ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE OWNER.
9. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING.
10. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. CONTRACTOR SHALL COMPLY WITH SPECIFICATIONS "GEENRAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY GSM SITES". ANY DEVIATION TO FINAL APPROVED DRAWINGS MUST BE REVIEWD AND APPROVED THROUGHT A CHANGE ORDER PROCESS BY THE CONSTRUCTION CONTRACTOR AND OWNER (AT&T MOBILITY)

WOVEN WIRE FENCING NOTES:

(INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F- 900)

1. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 2 7/8"ø SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 8 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2-3/8"ø SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/2"ø SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/4"ø SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 11 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392 CLASS 1.
6. TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. BARBED WIRE: 3 STRANDS OF DOUBLE STRAND 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
9. GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY CINGULAR).
10. LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
11. HEIGHT = 6' VERTICAL
12. ALL WORK SHALL CONFORM WITH THE PROJECT SPECIFICATIONS.

SITE WORK GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
6. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABALIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
12. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

FOUNDATION NOTES:

1. THE SITE SHALL BE STRIPPED OF ALL VEGETATION PRIOR TO FILL OR CONSTRUCTION OF THE FOUNDATION PAD.
2. ALL FILL SAND SHALL BE 0-15 P.I. WITH A COMPACTION TEST RUN ON EACH 8" LIFT – COMPACTED TO 90% MODIFIED PROCTOR.
3. ANY SOFT AREAS (TREE STUMP HOLES, ETC.) SHALL BE CUT OUT AND RECOMPACTED TO SAID PROCTOR.
4. THE CONTRACTOR SHALL KEEP THE SITE SO IT WILL HAVE POSITIVE DRAINAGE AT ALL TIMES.
5. ALL EXCAVATIONS SHALL BE FREE OF WATER BEFORE POURING CONCRETE.
6. MINIMUM SOIL BEARING CAPACITY OF 2,500 PSF IN ALL FOUNDATION AND SLAB AREAS.
7. SEE SHELTER MANUFACTURER DWG. FOR CONNECTION DETAILS AND SHIM REQUIREMENTS.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF.....1 1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....3/4 IN.
   BEAMS AND COLUMNS.....1 1/2 IN.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

   CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (UBC 1905.6.1.3) FOR GREATER THAN 50 CUBIC YARDS THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER:
   (A) RESULTS OF CONCRETE CYLINDER TEST PERFOMED AT THE SUPPLIERS PLANT.
   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION
2	
3	
4	

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 598-5301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863, NEW BRAUNFELS, TX 78132
SHEET NUMBER: GN.1
SHEET TITLE: GENERAL NOTES
DRAWN BY: R.F. | CHECK BY: JSA
ED PROJECT NUMBER: 10-150-0079

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES. 2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
18. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
19. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
20. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
21. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
22. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER)
23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS
24. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) BETTER INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
25. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
28. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
27. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE SUB-CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED.BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.

ABBREVIATIONS

(E)	EXISTING
(NEW)	NEW
PROP.	PROPOSED
DEMO	DEMOLISHED
T.B.D.	TO BE DETERMINE
T.B.R.	TO BE RESOLVED
N.T.S.	NOT TO SCALE
EL	ELEVATION
AGL	ABOVE GRADE LEVEL
DWG	DRAWING
BTS	BASE TRANSCEIVER STATION
RBS	RADIO BASE STATION
SAD	SMART INTEGRATED ACCESS DEVICE
GEN	GENERATOR
PCS	PERSONAL COMMUNICATION SYSTEM
PTS	POWER TRANSFER SWITCH
X-FMR	ELECTRICAL TRANSFORMER BOX
RF	RADIO FREQUENCY
MIN	MINIMUM
REF	REFERENCE
TYP	TYPICAL
REQ	REQUIRED
CND	CONDUIT
GRD	GROUND
EG	EQUIPMENT GROUND
EGR	EQUIPMENT GROUND RING
AWG	AMERICAN WIRE GAUGE
MGB	MASTER GROUND BUS
BCW	BARE COPPER WIRE
BTC	BARE TINNED COPPER
IGR	INTERIOR GROUND (HALO)
IMC	INTERMEDIATE METTALLIC CONDUIT
PVC	RIGID (SCH. 40) POLYVINYL CHLORIDE CONDUIT
RGS	RIGID GALVANIZED STEEL
RWY	RACEWAY

ELECTRICAL SYMBOLS

- S/G — SOLID GROUND BUS BAR
- S/N — SOLID NEUTRAL BUS BAR
- SUPPLEMENTAL GROUND CONDUCTOR
- 2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
- SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
- DISCONNECT SWITCH
- M — METER

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 689-5301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863 NEW BRAUNFELS, TX 78132
SHEET NUMBER: GN.2
SHEET TITLE: GENERAL NOTES
DRAWN BY: R.F. CHECK BY: JSA
IED PROJECT NUMBER: 10-150-0079

8"

12"

INFORMATION

AT&T operates telecommunications antennas of this location.
Remain at least 3 feet away from any antenna and obey all posted signs.
Contact the owner(s) of the antenna(s) before working closer than 3 feet from the antenna(s).

Contact AT&T at 800-636-2822 Option_____prior to performing any maintenance or impairs near AT&T antennas.

This Site#_____
Contact the management office if this door/hatch/gate is found unlocked.

INFORMACION

En esta propiedad se ubican antenas de telecomunicaciones operadas por AT&T. Favor mantener una distancia de no menos de 3 pies y obedecer todos los avisos

Comuniquese con el propietario o los propietarios de las antes de trabajar o caminar de menos de 3 pies de la antena

Comuniquese con AT&T 800-636-2822 Option_____antes de realizar cualquier mantenimiento o reparaciones cerca de las antenas de AT&T.

Esta es la estacion base numero_____

Favor comuniquese con la oficina de la administracion del edificio si esta puerta o compuerta se encuentra sin candado.

at&t

AT&T SIGN #1

8"

12"

CAUTION

Beyond This Point you are entering a controlled area where RF emissions may exceed the FCC Occupational Exposure Limits

Obey all posted signs and site guidelines for working in RF environment

Ref: FCC 47CFR 1.1307(b)

at&t

AT&T SIGN #5

SIGN NOTES:
1. SIGNS ARE PROVIDED AND INSTALLED BY SUBCONTRACTOR
2. ATTACH SIGNS AS PER AT&T PROJECT MANAGER.

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION

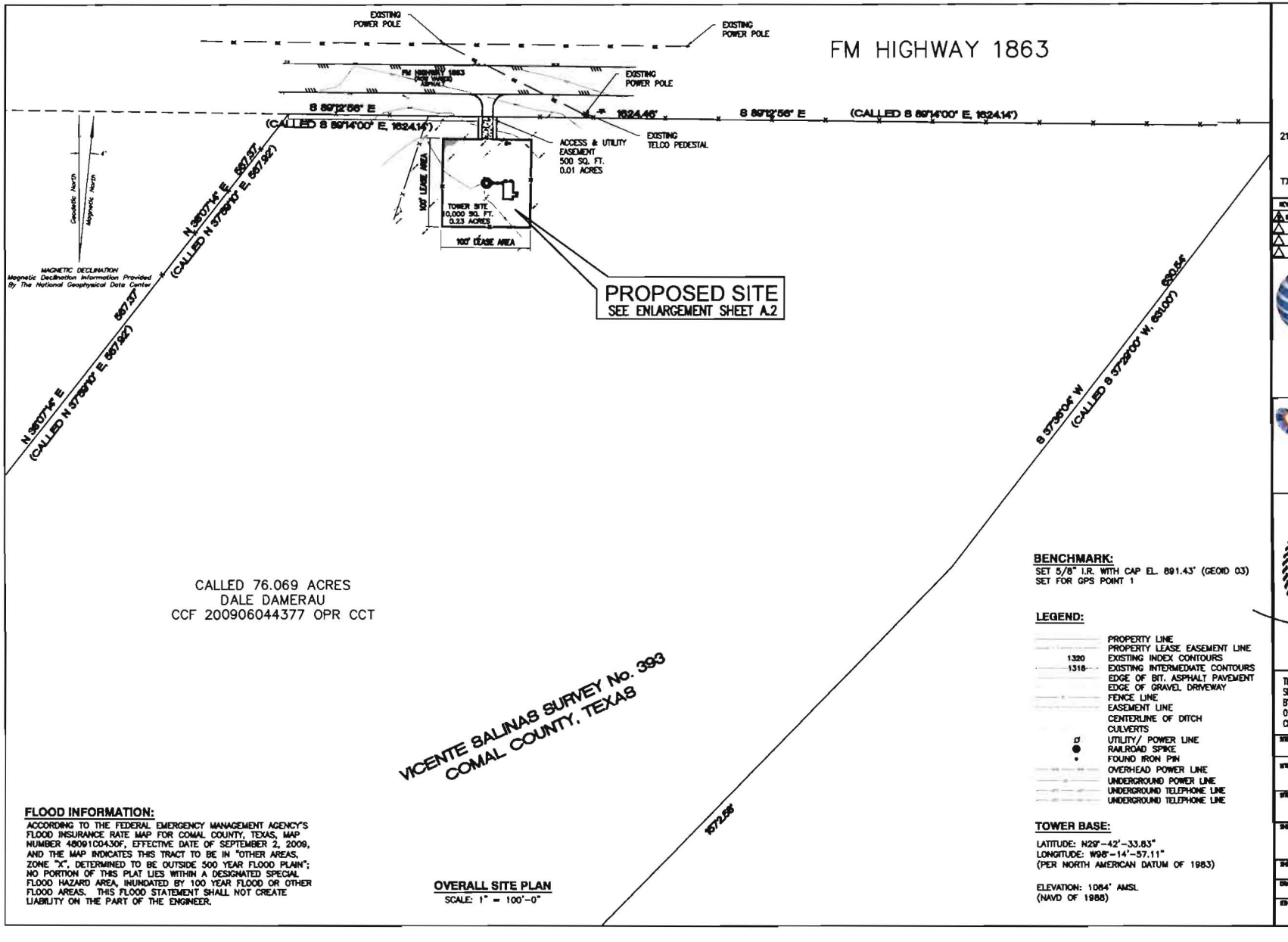
at&t
6500 WEST LOOP SOUTH
6TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599-6301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132
SHEET NUMBER: GN.3
SHEET TITLE: GENERAL NOTES
DRAWN BY: R.F.
CHECK BY: JSA
IEI PROJECT NUMBER: 10-150-0079



FLOOD INFORMATION:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR COMAL COUNTY, TEXAS, MAP NUMBER 48091C0430F, EFFECTIVE DATE OF SEPTEMBER 2, 2009, AND THE MAP INDICATES THIS TRACT TO BE IN "OTHER AREAS, ZONE "X", DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN"; NO PORTION OF THIS PLAT LIES WITHIN A DESIGNATED SPECIAL FLOOD HAZARD AREA, INUNDATED BY 100 YEAR FLOOD OR OTHER FLOOD AREAS. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE ENGINEER.

OVERALL SITE PLAN
SCALE: 1" = 100'-0"

BENCHMARK:
SET 5/8" I.R. WITH CAP EL. 891.43' (GEOID 03)
SET FOR GPS POINT 1

LEGEND:

- PROPERTY LINE
- PROPERTY LEASE EASEMENT LINE
- 1320 EXISTING INDEX CONTOURS
- 1318 EXISTING INTERMEDIATE CONTOURS
- EDGE OF BIT. ASPHALT PAVEMENT
- EDGE OF GRAVEL DRIVEWAY
- FENCE LINE
- EASEMENT LINE
- CENTERLINE OF DITCH
- CULVERTS
- UTILITY/ POWER LINE
- RAILROAD SPIKE
- FOUND IRON PIN
- OVERHEAD POWER LINE
- UNDERGROUND POWER LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND TELEPHONE LINE

TOWER BASE:

LATITUDE: N29°-42'-33.83"
LONGITUDE: W98°-14'-57.11"
(PER NORTH AMERICAN DATUM OF 1983)

ELEVATION: 1064' AMSL
(NAVD OF 1988)

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7888
TX BOARD FIRM REGISTRATION No. F-11281

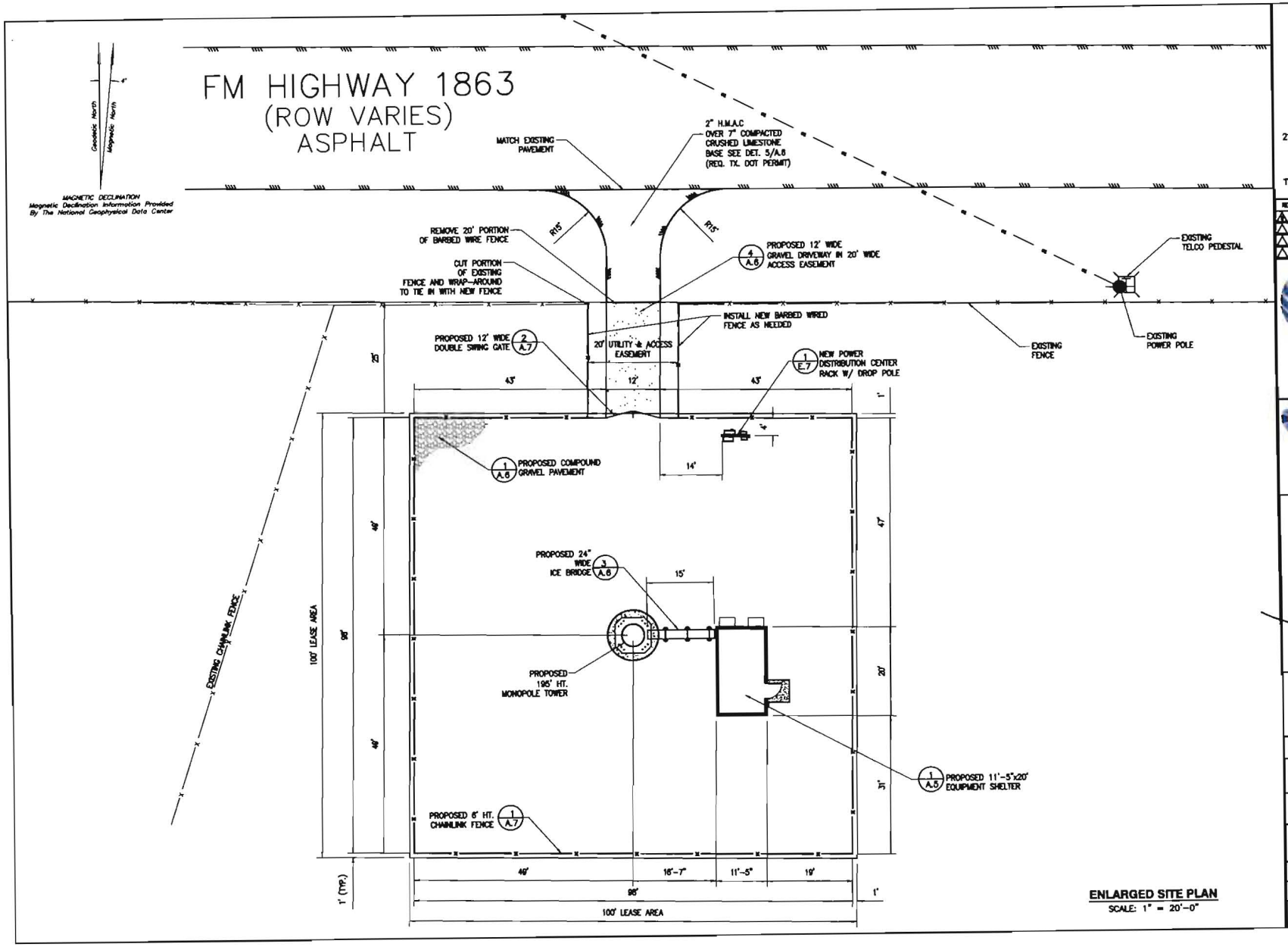
REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 888-5301
Fax : (210) 404-9007

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED PROFESSIONAL ENGINEER
07/20/10

SITE NUMBER:	SX3239
SITE NAME:	COUNTRYSIDE
SITE ADDRESS:	11844 FM 1863 NEW BRAUNFELS, TX 78132
SHEET NUMBER:	A.1
SHEET TITLE:	OVERALL SITE PLAN
DRAWN BY: R.F.	CHECK BY: JSA
ED PROJECT NUMBER:	10-150-0079



ENLARGED SITE PLAN
SCALE: 1" = 20'-0"

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

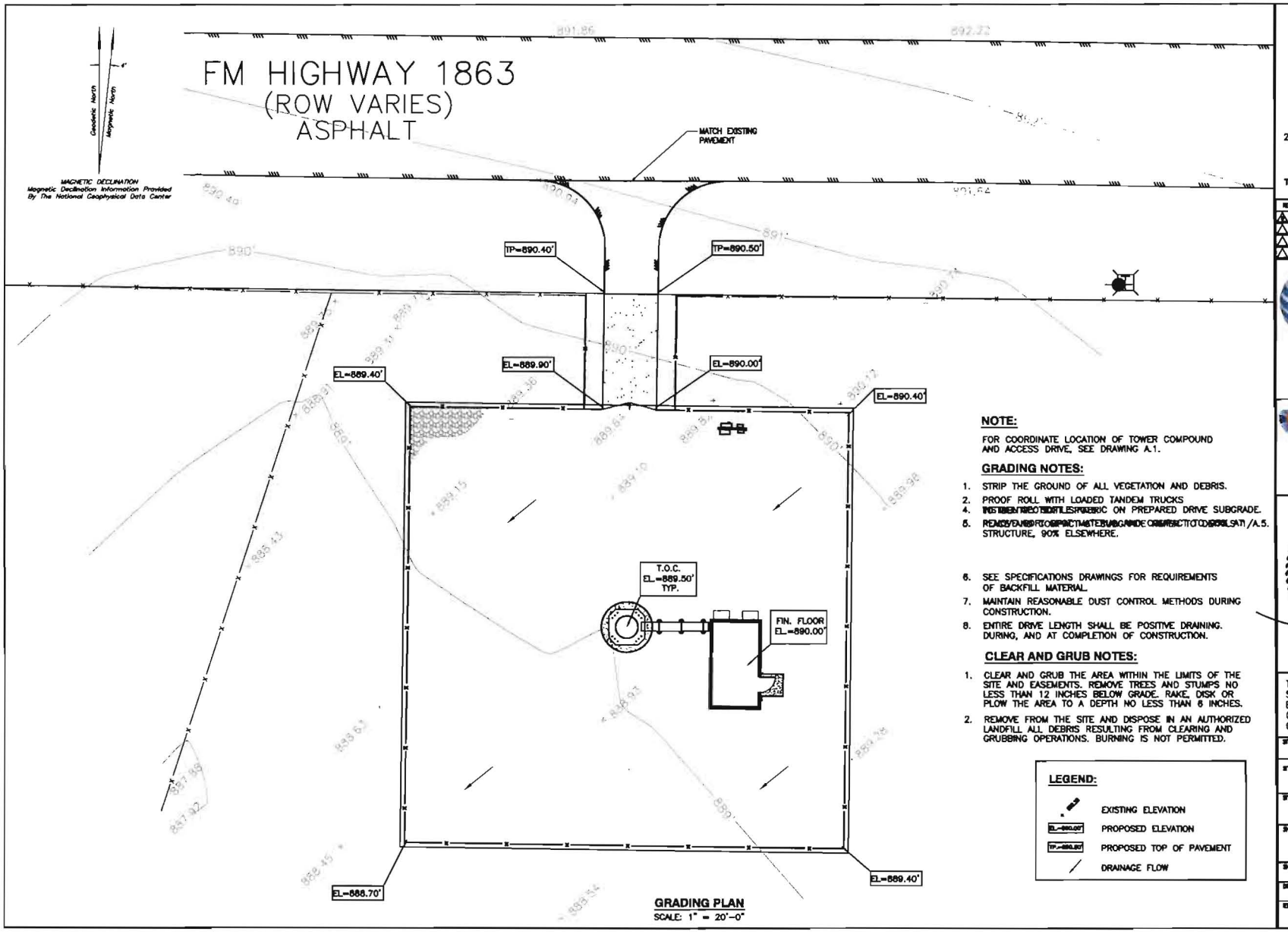
at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599-6301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132
SHEET NUMBER: A.2
SHEET TITLE: ENLARGED SITE PLAN
DRAWN BY: R.F. CHECK BY: JSA
IEI PROJECT NUMBER: 10-150-0079



GRADING PLAN
SCALE: 1" = 20'-0"

NOTE:

FOR COORDINATE LOCATION OF TOWER COMPOUND AND ACCESS DRIVE, SEE DRAWING A.1.

GRADING NOTES:

1. STRIP THE GROUND OF ALL VEGETATION AND DEBRIS.
2. PROOF ROLL WITH LOADED TANDEM TRUCKS
4. [illegible] ON PREPARED DRIVE SUBGRADE.
5. [illegible] STRUCTURE, 90% ELSEWHERE.
6. SEE SPECIFICATIONS DRAWINGS FOR REQUIREMENTS OF BACKFILL MATERIAL.
7. MAINTAIN REASONABLE DUST CONTROL METHODS DURING CONSTRUCTION.
8. ENTIRE DRIVE LENGTH SHALL BE POSITIVE DRAINING. DURING, AND AT COMPLETION OF CONSTRUCTION.

CLEAR AND GRUB NOTES:

1. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE AND EASEMENTS. REMOVE TREES AND STUMPS NO LESS THAN 12 INCHES BELOW GRADE. RAKE, DISK OR PLOW THE AREA TO A DEPTH NO LESS THAN 6 INCHES.
2. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING IS NOT PERMITTED.

LEGEND:

- EXISTING ELEVATION
- EL=[illegible] PROPOSED ELEVATION
- TP=[illegible] PROPOSED TOP OF PAVEMENT
- DRAINAGE FLOW

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

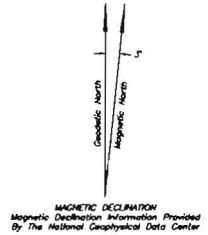
at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 598-5301
Fax : (210) 404-9507

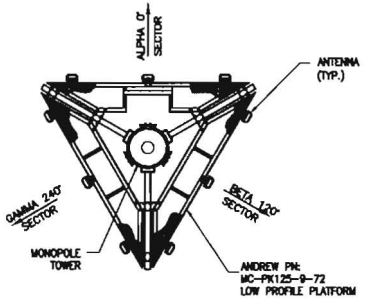
STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER:	SX3239
SITE NAME:	COUNTRYSIDE
SITE ADDRESS:	11844 FM 1863 NEW BRAUNFELS, TX 78132
SHEET NUMBER:	A.3
SHEET TITLE:	GRADING PLAN
DRAWN BY: R.F.	CHECK BY: JSA
IED PROJECT NUMBER:	10-150-0079



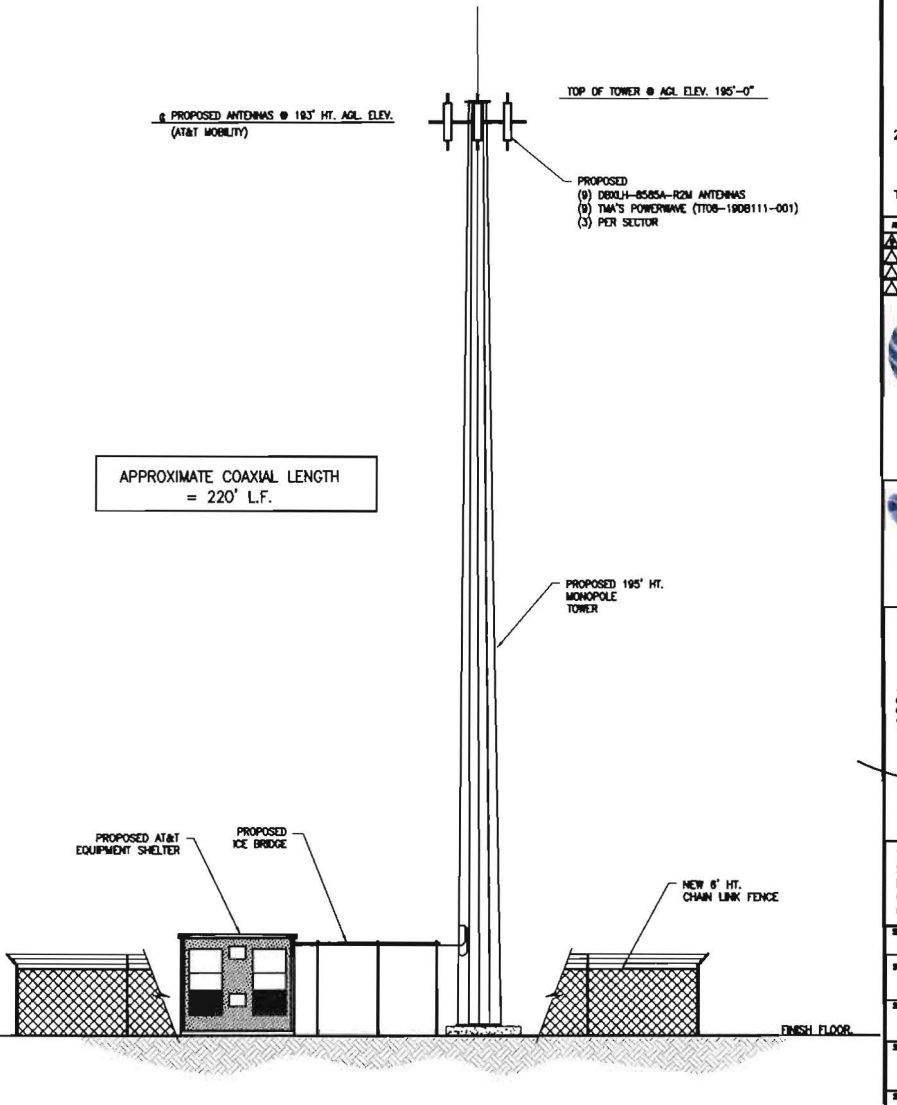
MAGNETIC DECLINATION
Magnetic Declination Information Provided By The National Geophysical Data Center



PLAN VIEW

HORIZONTAL SEPARATION CONFIGURATION TOWER MOUNTING

DETAIL 1 / A.4
NTS



SITE ELEVATION
SCALE: N.T.S.

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION
No. F-11281

REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

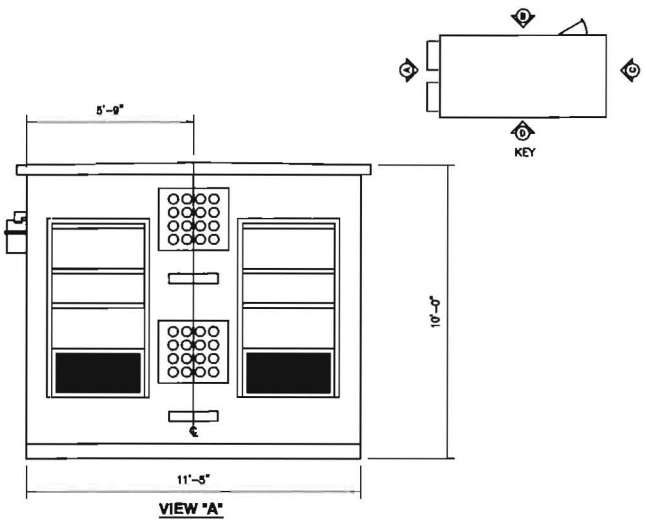
at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 888-6301
Fax : (210) 404-9507

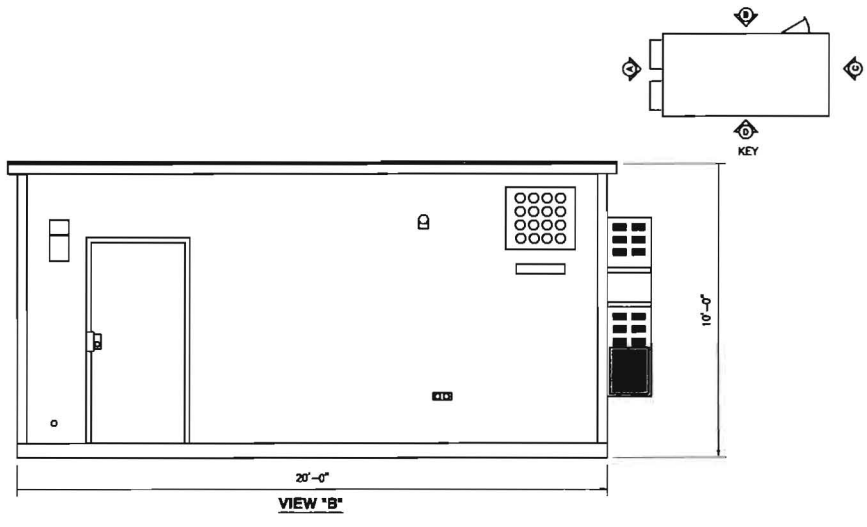
STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

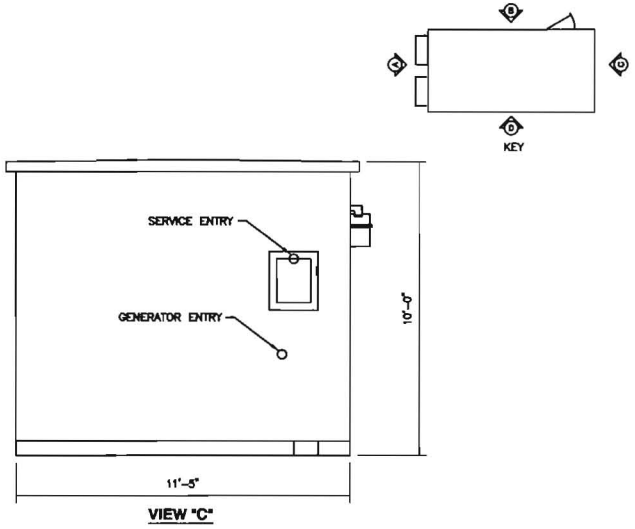
SITE NUMBER:	SX3239
SITE NAME:	COUNTRYSIDE
SITE ADDRESS:	11844 FM 1863 NEW BRAUNFELS, TX 78132
SHEET NUMBER:	A.4
SHEET TITLE:	TOWER ELEVATION
DRAWN BY: R.F.	CHECK BY: JSA
IEI PROJECT NUMBER:	10-150-0079



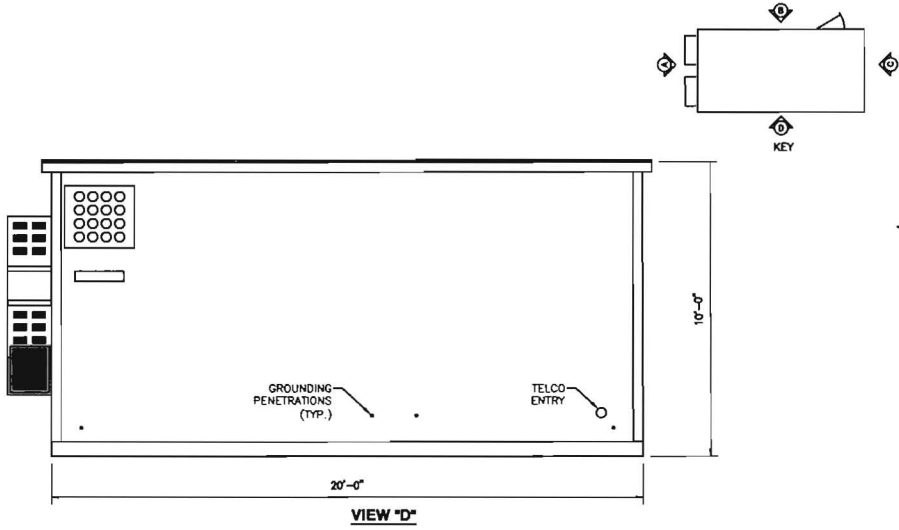
VIEW "A"



VIEW "B"



VIEW "C"



VIEW "D"

EQUIPMENT SHELTER ELEVATION (1/A.5)
SCALE: 1/4" = 1'-0"

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 698-6301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

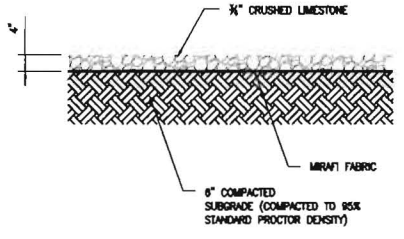
SHEET NUMBER: A.5

SHEET TITLE: SHELTER ELEVATIONS

DRAWN BY: R.F. | CHECK BY: JSA

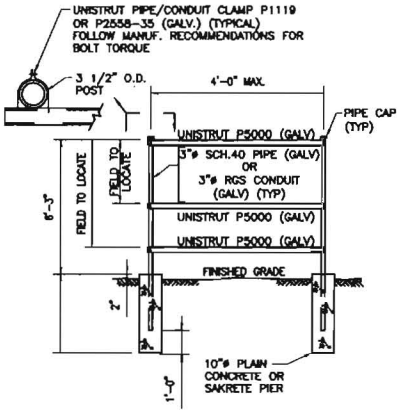
IEI PROJECT NUMBER: 10-150-0079

NOTE:
CLEAR AND GRUB SITE AS REQUIRED



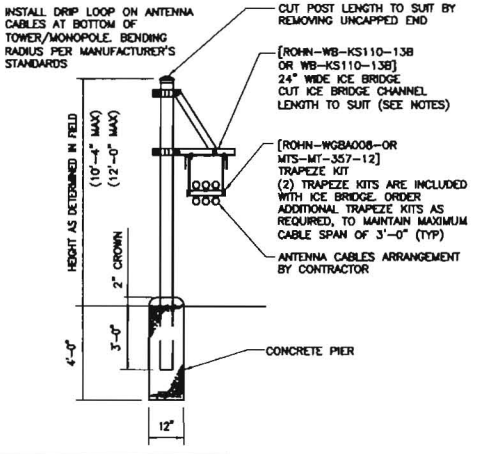
COMPOUND GRAVEL

DETAIL 1 / A.6 NTS



METER AND DISCONNECT SWITCH MOUNTING RACK

DETAIL 2 / A.6 NTS



ROHN PN:	MTS PN:
RN-WB-KS110-138	WB-KS11D-138
RN-WB-KS110-158	MT-C8269
WGBA008	MT-357-12

ICE BRIDGE

DETAIL 3 / A.6 NTS

NOTES:

WHEN USING COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 9 FEET FOR 10 FEET BRIDGE CHANNEL.

WHEN USING COMPONENTS FOR SPLICING BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2 FEET FROM THE SUPPORT.

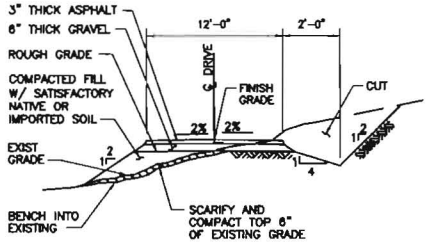
WHEN USING COMPONENTS, SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGES, WITH A MAXIMUM CANTILEVER DISTANCE OF 2 FEET FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.

CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH A MATERIAL TO RESTORE THESE EDGES TO THE ORIGINAL CHANNEL, OR EQUIVALENT, FINISH.

ICE BRIDGES MAY BE CONSTRUCTED WITH COMPONENTS FROM OTHER MANUFACTURERS, PROVIDED THE MANUFACTURER'S INSTALLATION GUIDELINES ARE FOLLOWED.

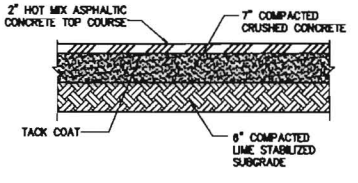
DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.

DEVIATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL.



TYPICAL DRIVE SECTION

DETAIL 4 / A.6 NTS



ASPHALT DRIVE

DETAIL 5 / A.6 NTS

THIS SPACE HAS BEEN INTENTIONALLY LEFT BLANK

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION
2	
3	
4	

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599-6301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: A.6

SHEET TITLE: CONSTRUCTION DETAILS

DRAWN BY: R.F. CHECK BY: JSA

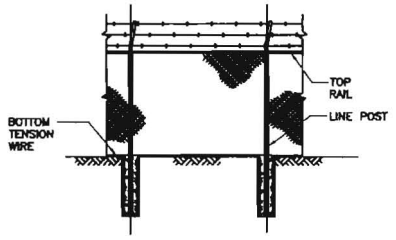
RD PROJECT NUMBER: 10-150-0079

NOTES:
(INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900)

1. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 2 7/8"ø SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 8 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2-3/8"ø SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/2"ø SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/4"ø SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392 CLASS 1.
6. THE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. BARBED WIRE: 3 STRANDS OF DOUBLE STRANDED 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
9. GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY AT&T).
10. LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
11. HEIGHT = 6' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION.
12. ALL WORK SHALL CONFORM WITH THE PROJECT SPECIFICATIONS.

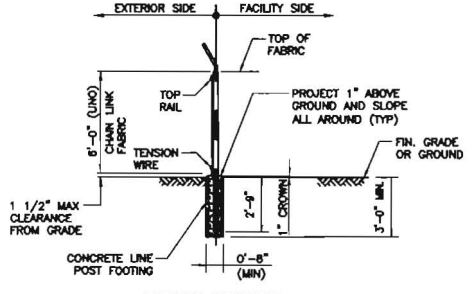
WOVEN WIRE FENCING NOTES

DETAIL 1 / A.7 NTS



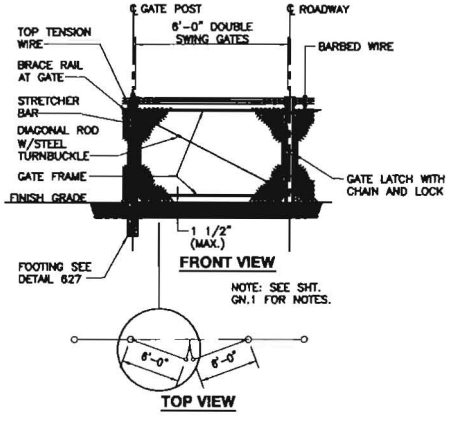
TYPICAL ELEVATION

FENCE POST AND FOOTING DIMENSIONS TABLE		
6' HIGH FENCE	STD. PIPE	FOOTING
LINE POST	3"	12"x52"
CORNER POST	3 1/2"	FOOTING
GATE POST	3 1/2"	FOOTING



TYPICAL SECTION WOVEN WIRE FENCE

DETAIL 4 / A.7 NTS

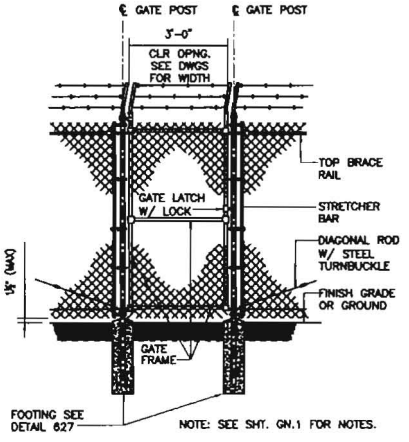


FRONT VIEW

TOP VIEW

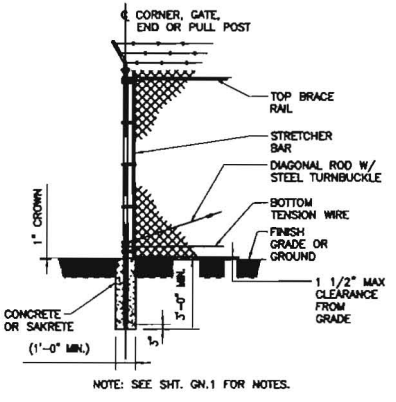
WOVEN WIRE SWING GATE, DOUBLE

DETAIL 2 / A.7 NTS



WOVEN WIRE SWING GATE, SINGLE

DETAIL 3 / A.7 NTS



WOVEN WIRE CORNER, GATE, END OR PULL POST

DETAIL 5 / A.7 NTS

THIS SPACE HAS BEEN
INTENTIONALLY LEFT BLANK

iED
INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

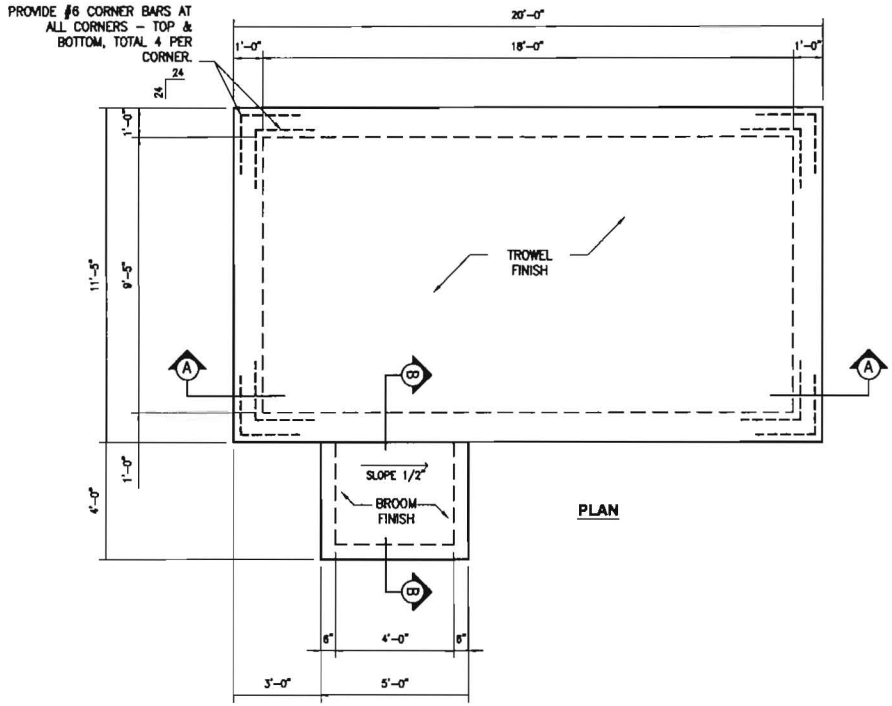
at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 598-5301
Fax : (210) 404-9507

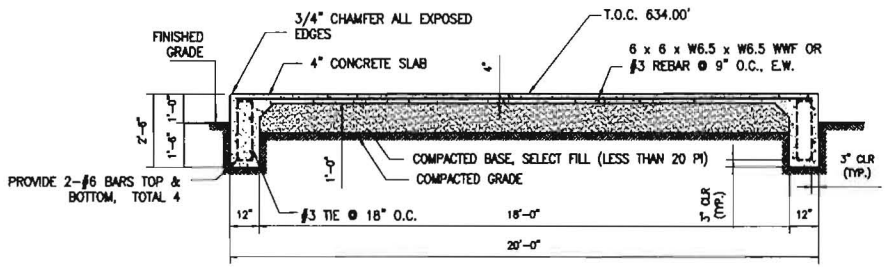
STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

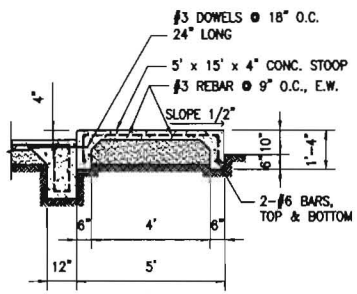
SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132
SHEET NUMBER: A.7
SHEET TITLE: CONSTRUCTION DETAILS
DRAWN BY: R.F. CHECK BY: JSA
ED PROJECT NUMBER: 10-150-0079



PLAN



SECTION 'A-A'



SECTION 'B-B'

EQUIPMENT SHELTER FOUNDATION (1/A.8)
SCALE: 1/4" = 1'-0"

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599-8301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

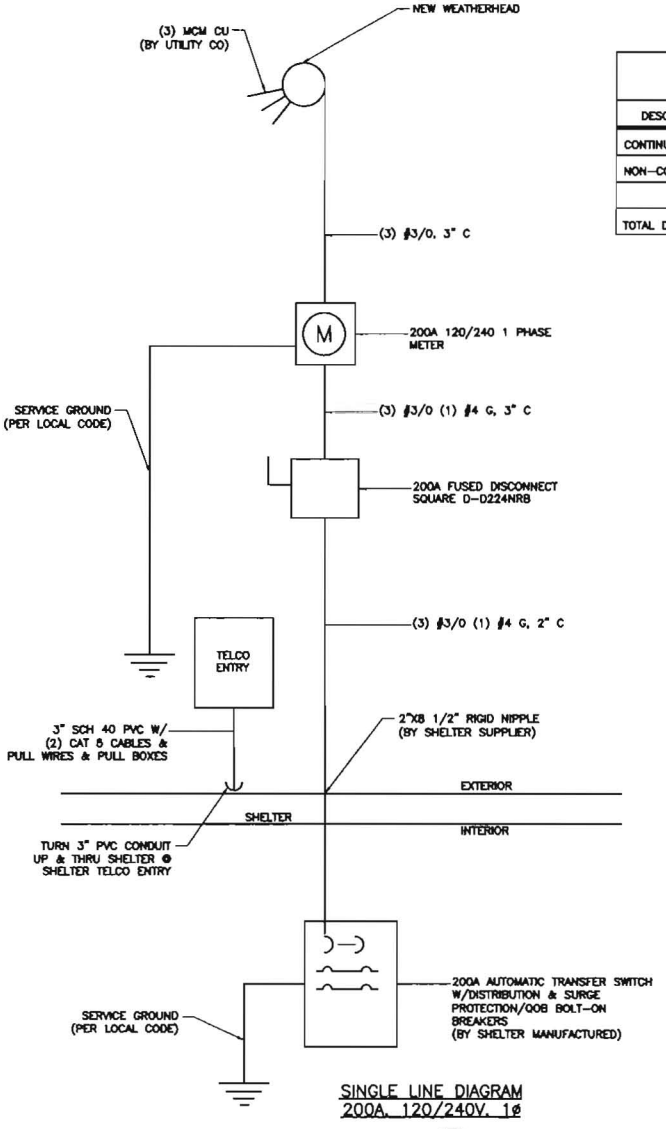
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: A.8

SHEET TITLE: SHELTER FOUNDATION

DRAWN BY:	CHECK BY:
R.F.	JSA

EDI PROJECT NUMBER: 10-150-0079

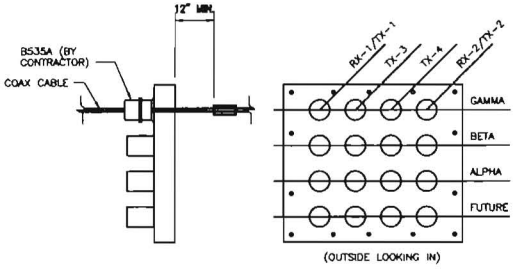


SINGLE LINE DIAGRAM
200A, 120/240V, 1Ø

DETAIL 1 / E.1 (NTS)

ELECTRICAL LOAD SUMMARY 120/240V, 1ø, 3W					
DESCRIPTION	KVA	DF	L1	N	L2
CONTINUOUS LOAD	20.0	1.25	104	104	104
NON-CONTINUOUS LOAD	13.4	1.00	56	56	56
TOTAL DEMAND LOAD @ 120/ 240V, 1ϕ			160	160	160

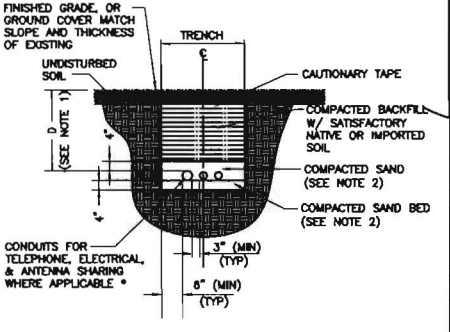
NOTES:
1. THIS DESIGN MAY BE ADJUSTED TO COMPLY WITH SPECIFIC NEC, FEDERAL, STATE, LOCAL CODES AND ORDINANCES.
2. UNLESS SPECIFICALLY INDICATED, CONDUIT TYPE SHALL BE SELECTED IN ACCORDANCE WITH CODE REQUIREMENTS.
3. GAUGE OF ELECTRICAL CONDUCTORS AND CONDUIT DIAMETERS MAY REQUIRE ADJUSTMENT TO COMPESATE FOR CHANGES IN LENGTH.
4. UTILITY TRANSFORMER AND ASSOCIATED GROUND PROVIDED BY THE UTILITY COMPANY.
5. SSC POWER IS PROVIDED AS PART OF THE SSC CABINET. INTERNAL WIRING IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND MAY VARY ACCORDING TO MANUFACTURER.
6. SUBCONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER IS INSTALLED PROPERLY IN THE DISCONNECT AND REMOVED IN THE POWER PANEL.
7. SERVICE METER AND DISCONNECT PLACEMENT MAY VARY ACCORDING TO THE SITE REQUIREMENTS.
8. GENERATOR RECEPTACLE MAY BE ILLUMINATED FROM DESIGN TO CONFORM TO TENANT IMPROVEMENT SITE REQUIREMENTS.
9. SSC AC PANEL IS RATED AS SERVICE ENTRANCE EQUIPMENT.



HATCH PLATE LAYOUT
SCALE: N.T.S.

DETAIL 2 / E.1 (NTS)

NOTES: 1. CONTRACTOR SHALL DETERMINE DEPTH "D" BASED UPON NATIONAL ELECTRICAL CODE, UTILITY REQUIREMENTS OR STATE AND LOCAL CODES.
2. LEAN CONCRETE, RED-COLORED TOP, MAY BE USED IN PLACE OF COMPACTED SAND.



CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

DIRECT BURIED CONDUIT

DETAIL 3 / E.1 (NTS)

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION
2	
3	
4	

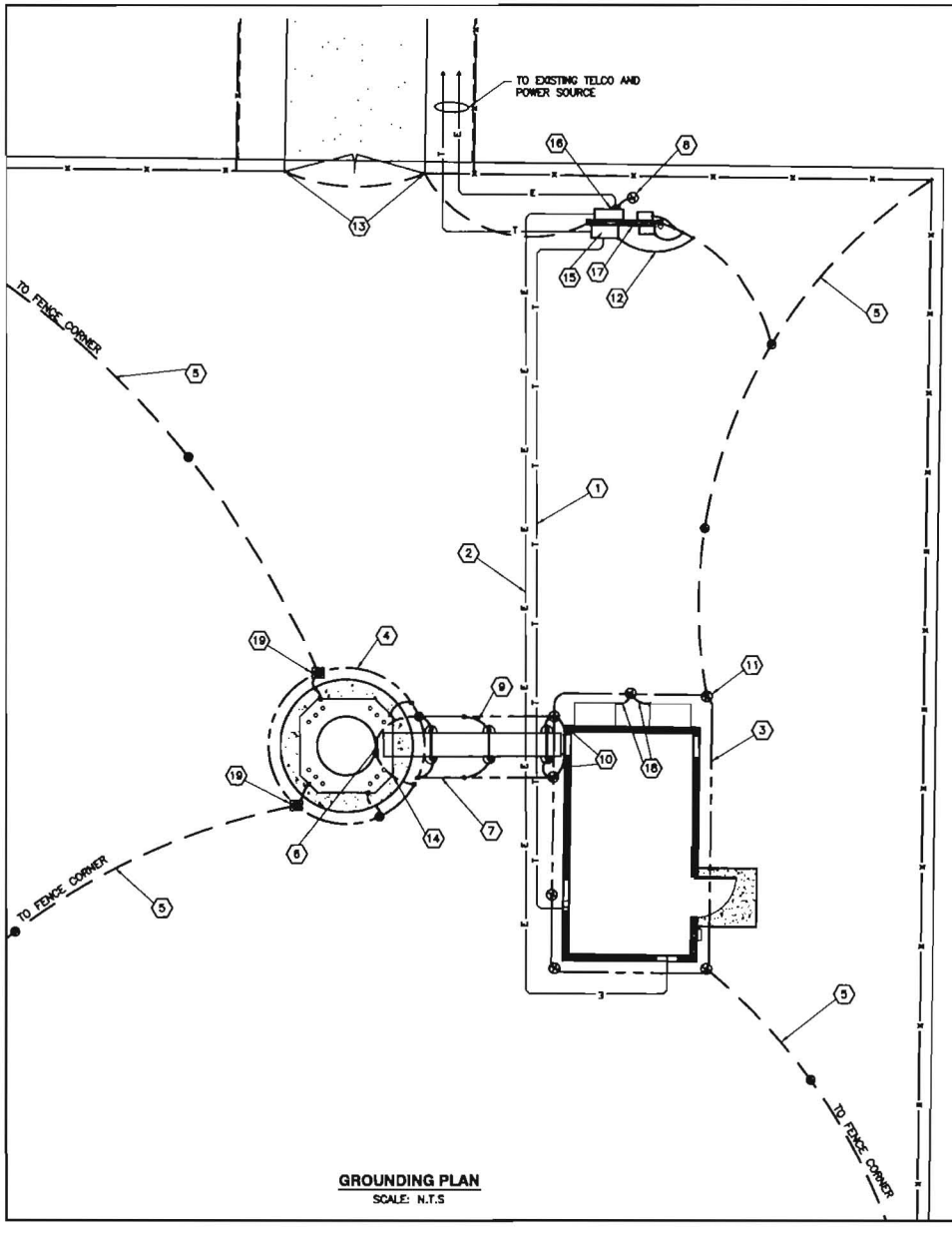
at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599-5301
Fax : (210) 404-9607

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132
SHEET NUMBER: E.1
SHEET TITLE: SINGLE LINE DIAGRAM AND DETAILS
DRAWN BY: R.F. CHECK BY: JSA
IED PROJECT NUMBER: 10-150-0079



GROUNDING PLAN
SCALE: N.T.S

UTILITIES NOTES:

1. TELEPHONE SERVICE CONDUIT: 1 EACH, 3"ø RIGID PVC CONDUIT, SCH. 40, BURIED BELOW GRADE. SEE DETAIL 3, SHEET E.1.
2. ELECTRIC SERVICE CONDUIT: 1 EACH, 3"ø RIGID P.V.C. CONDUIT, SCH. 40, BURIED BELOW GRADE. SEE DETAIL 3, SHEET E.1.
3. SHELTER GROUND RING: #2 TINNED CU WIRE BURIED 18" BELOW, SEE DETAILS SHT. E.3
4. TOWER GROUND RING: #2 AWG SOLID TINNED BCW. NEW TOWER GROUND RING SEE DETAIL 1, SHEET E.3
5. FENCE GROUNDING: GROUND TO GROUND RING WITH #2 SOLID B.T.C. WIRE ATTACHED WITH DOUBLE HOLE LUGS AND CADWELDED TO ⅝"ø x 8' LG. COPPER PLATED GROUND RODS. SEE DETAIL 3, SHEET E3.
6. ANTENNA GROUND BAR: MOUNT ¼" COPPER GROUND BAR DIRECTLY TO TOWER AT TOP OF COAX RUN. SECURE TO TOWER WITH STAINLESS STEEL MOUNTING (2 REQUIRED) MATERIAL SEE DETAIL 3 & 4, SHEET. E.3.
7. TOWER GROUNDING: TIE IN NEW SHELTER GROUND RING TO NEW TOWER GROUND RING WITH #2 B.T.C. WIRE, AND MAKE AN EXOTHERMIC CONNECTION (TYP. 2 PLCS.)
8. UTILITY GROUNDING: GROUNDING AS PER LOCAL UTILITY COMPANY, VERIFY AND INSTALL AS NEEDED.
9. ICE BRIDGE SUPPORT POST GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING/ OR RODS TO ALL ICE BRIDGE SUPPORT POSTS AND EXOTHERMICALLY WELD.
10. SHELTER GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING UP TO THE SHELTER GROUND BAR AND MAKE AN EXOTHERMIC CONNECTION.
11. GROUND ROD: COPPERCLAD STEEL, 5/8 DIA. EIGHT (8) FEET LONG, GROUND ROD (TYP.)
12. SERVICE ENTRANCE GROUNDING: #2 AWG SOLID, TINNED BCW IN 1" PVC TO SERVICE ENTRANCE GROUND ROD.
13. GATE POST GROUND: GROUND WITH #2 SOLID B.T.C WIRE ATTACHED WITH DOUBLE HOLE LUGS AND CADWELDED TO ⅝"ø x 8' LG. COPPER PLATED GROUND RODS. SEE DETAILS 3 SHT. E3
14. ANTENNA GROUNDING: EXTEND #2 TINNED CU WIRE BURRIED GROUND RING UP TO THE TOWER GROUND BAR AND MAKE AN EXOTHERMIC CONNECTION
15. PROPOSED TELCO BOX.
16. PROPOSED METER CENTER, AT&T METER UNIT "A"
17. PROPOSED DISTRIBUTION CENTER UTILITY RACK
18. HVAC GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO THE HVAC UNIT AND MAKE AN EXOTHERMIC CONNECTION.
19. PROPOSED TEST WELL

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
4. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC (CADWELD) CONNECTIONS.
5. SERVICE TO EQUIPMENT CABINETS SHALL BE 120/240 VAC, 200A, 1-PHASE.
6. ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD). ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
7. ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP & HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
8. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
9. ALL EXTERIOR GROUND CONDUCTORS SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
10. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLE UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
11. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
12. MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATION FOR FACILITY GROUNDING, USING FALL OF POTENTIAL METHOD.

GROUNDING LEGEND

SYMBOL	DESCRIPTION
⊗	5/8" x 10' COPPER CLAD STEEL GROUND ROD
⊠	5/8" x 10' COPPER CLAD STEEL GROUND ROD WITH INSPECTION SLEEVE
■	EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)
▣	EXOTHERMIC WELD (CADWELD) WITH INSPECTION SLEEVE
●	MECHANICAL TYPE CONNECTION

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
07/20/10	ISSUED FOR CONSTRUCTION

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 888-6301
Fax : (210) 404-8807

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: E.2

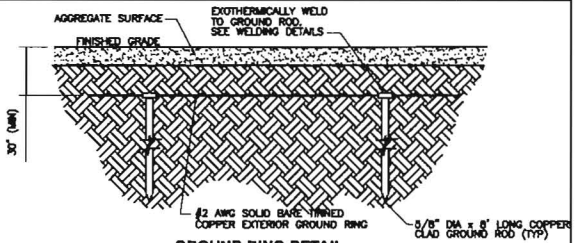
SHEET TITLE: GROUNDING PLANS

DRAWN BY: R.F. | CHECK BY: JSA

IED PROJECT NUMBER: 10-150-0079

GENERAL NOTES:

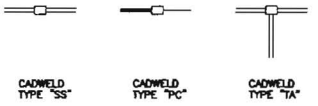
1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SPECIFIC SITE CONDITIONS.
2. ALL EXTERIOR GROUNDING CABLE AND TOP OF GROUNDING RODS SHALL BE BURIED A MINIMUM DEPTH OF 2'-6" BELOW FINISHED GRADE, OR 6" BELOW FROST LINE, WHICHEVER IS DEEPER.
3. ALL GROUNDING CONDUCTORS SHALL BE #2 SOLID TINNED COPPER CABLE.
4. GROUND SYSTEM SHALL BE TESTED PER SPECIFICATIONS AND SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS.
5. NOTIFY ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.



GROUND RING DETAIL

DETAIL 1 / NTS / E.3

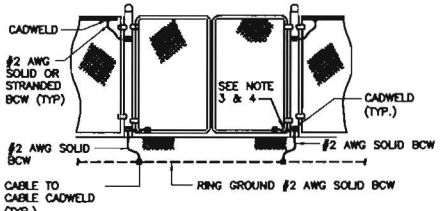
CABLE TO GROUND ROD COMBINATIONS



CABLE TO CABLE COMBINATIONS

EXOTHERMIC WELDING DETAILS

DETAIL 4 / NTS / E.3

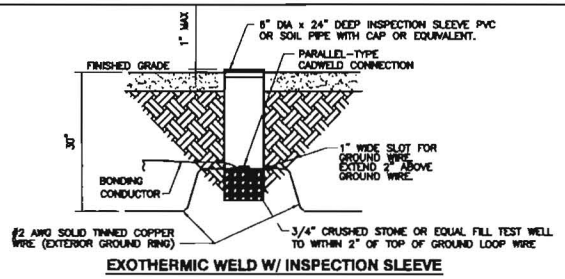


NOTES:

1. THE #2 AWG, BCW, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST ABOVE GRADE.
2. BOND EACH HORIZONTAL POLE/BRACE TO EACH OTHER AND TO EACH VERTICAL POLE BONDED TO THE EXTERIOR GROUND RING
3. GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE COPPER BRAID BURNDY TYPE B WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
4. GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

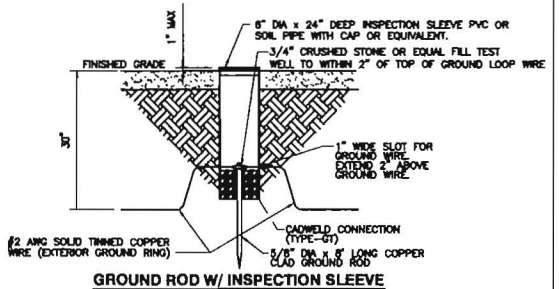
FENCE GATE GROUNDING

DETAIL 5 / NTS / E.3



EXOTHERMIC WELD W/ INSPECTION SLEEVE

DETAIL 2 / NTS / E.3

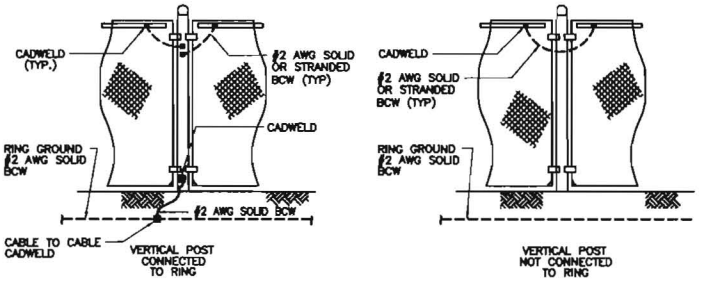


GROUND ROD W/ INSPECTION SLEEVE

DETAIL 3 / NTS / E.3

NOTE:

1. VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FOOT STRAIGHT RUN OF FENCE.
2. HORIZONTAL POLES SHALL BE BONDED TO EACH OTHER.
3. BOND EACH HORIZONTAL POLE / BRACE TO EACH OTHER AND TO EACH VERTICAL POST THAT IS BONDED TO THE EXTERIOR GROUND RING



FENCE GROUNDING

DETAIL 6 / NTS / E.3

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599-5301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

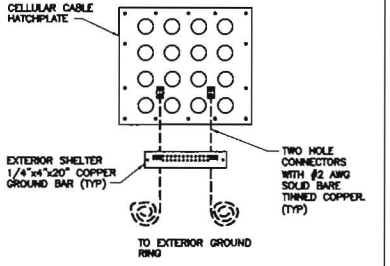
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: E.3

SHEET TITLE: GROUNDING DETAILS

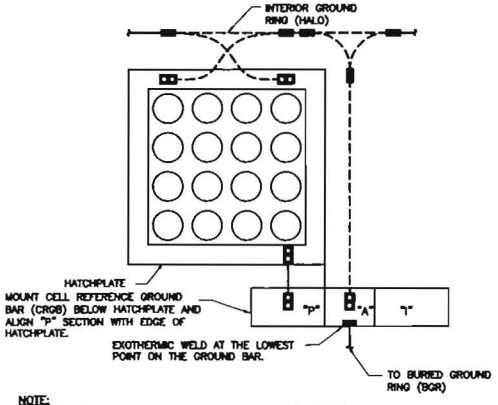
DRAWN BY: R.F. | CHECK BY: JSA

IED PROJECT NUMBER: 10-150-0079



HATCH PLATE GROUNDING AT SHELTER EXTERIOR

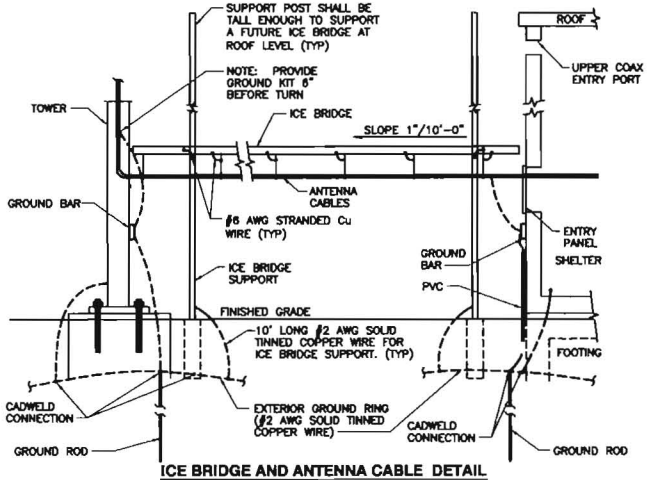
DETAIL 1 / NTS / E.4



NOTE:
IF THERE IS LIMITED SPACE ON THE RIGHT SIDE OF THE HATCHPLATE, THE ABOVE SETUP MAY BE MIRRORED AS LONG AS THE "P" SECTION IS BELOW THE HATCHPLATE.

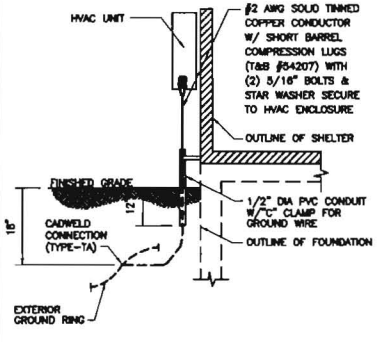
CELL REFERENCE GROUND BAR (CRGB) INSTALLATION DETAIL

DETAIL 2 / NTS / E.4



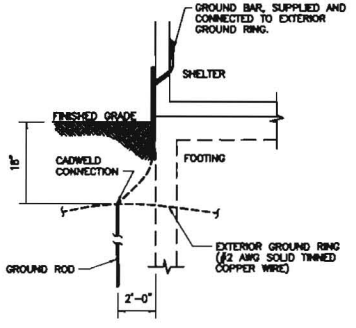
ICE BRIDGE AND ANTENNA CABLE DETAIL

DETAIL 3 / NTS / E.4



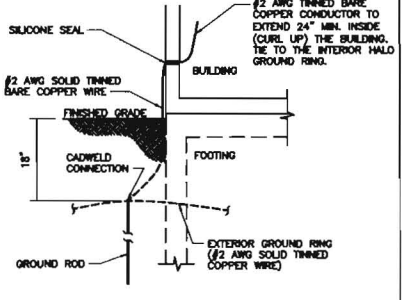
HVAC GROUND DETAIL

DETAIL 4 / NTS / E.4



TELEPHONE GROUND DETAIL

DETAIL 5 / NTS / E.4



BUILDING GROUND DETAIL

DETAIL 6 / NTS / E.4

THIS SPACE HAS BEEN INTENTIONALLY LEFT BLANK

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION
2	
3	
4	

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 588-6301
Fax : (210) 404-9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

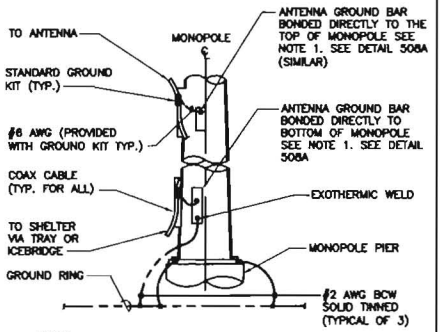
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: E.4

SHEET TITLE: GROUNDING DETAILS

DRAWN BY: R.F. | CHECK BY: JSA

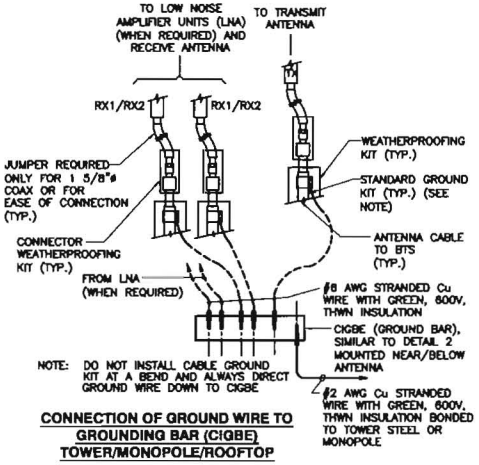
ID PROJECT NUMBER: 10-150-0079



NOTE:
NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF MONOPOLE, ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.

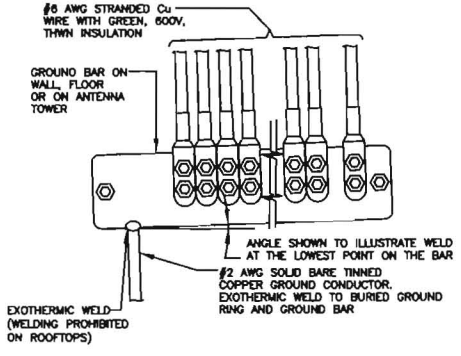
ANTENNA CABLE GROUNDING FOR MONOPOLE TOWER

DETAIL 1 / E.5 NTS



CONNECTION OF GROUND WIRE TO GROUNDING BAR (CIGBE) TOWER/MONOPOLE/ROOFTOP

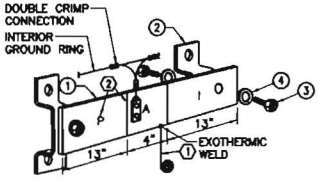
DETAIL 2 / E.5 NTS



INSTALLATION OF GROUND WIRE TO COAX CABLE GROUND BAR

DETAIL 3 / E.5 NTS

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO.	REQ.	PART NO.	DESCRIPTION
①	1	1/4"x4"x30"	SOLID GND. BAR
②	2	A-6056	WALL MTG. BRKT.
③	4	3012-1	5/8"-11x1" H.H.C.S.
④	4	3015-8	5/8 LOCKWASHER



(RGB) REFERENCE GROUND BAR

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PROTECTORS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
TELCO GROUND BAR (#2)
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
+24V POWER SUPPLY RETURN BAR (#2)
–48V POWER SUPPLY RETURN BAR (#2)
RECTIFIER FRAMES.
COAX SUPPRESSION

SECTION "A" – SURGE ABSORBERS

INTERIOR GROUND RING (#2)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
BUILDING STEEL (IF AVAILABLE) (#2)

SECTION "I" – ISOLATED GROUND ZONE

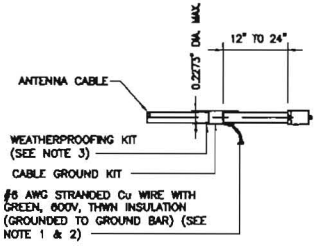
ALL COMMUNICATIONS EQUIPMENT FRAMES.
ISOLATED GROUND BAR – IGB (#2)

DETAIL NOTES:

① EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.

② USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.

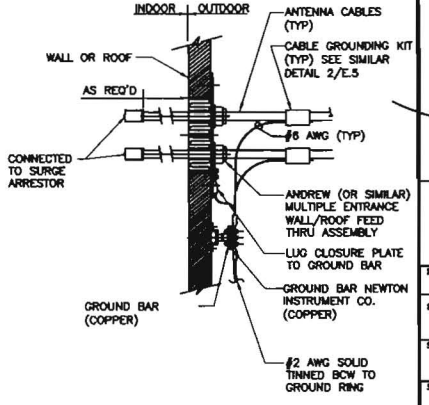
DETAIL 4 / E.5 NTS



CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE

NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

DETAIL 5 / E.5 NTS



CABLE INSTALLATION WITH WALL/ ROOF FEED THRU ASSEMBLY

DETAIL 6 / E.5 NTS

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION
2	
3	
4	

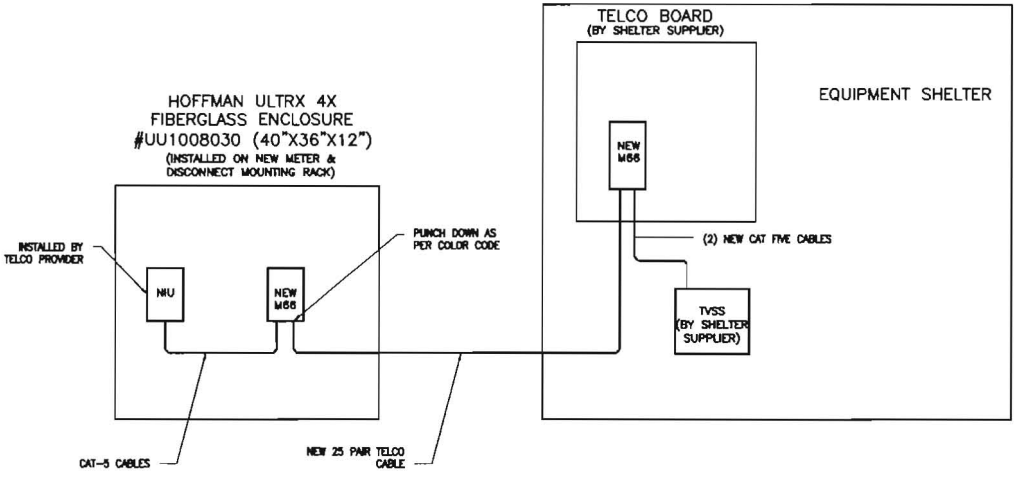
at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599-8301
Fax : (210) 404-9007

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132
SHEET NUMBER: E.5
SHEET TITLE: GROUNDING DETAILS
DRAWN BY: R.F. CHECK BY: JSA
ED PROJECT NUMBER: 10-150-0079

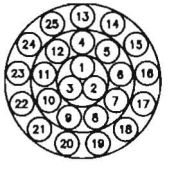


TELCO INSTALLATION RISER

1. INSTALL TWO-12 PORT CATEGORY 5E PATCH PANELS (M66 ELIMINATOR)
2. ONE M66 WILL BE INSTALLED IN THE FIBERGLASS TELCO BOX.
3. ONE M66 WILL BE INSTALLED AT THE TELCO BOARD INSIDE THE SHELTER.
4. ROUTE NEW 25 PAIR CABLE (GENERAL CABLE #7525785) FROM TELCO BOX TO INSIDE THE SHELTER. FOLLOW THE PUNCH DOWN DIAGRAM AND THE COLOR CODE AND PUNCH DOWN CABLE PAIRS ONTO THE NEW PATCH PANELS IN THE TELCO BOX AND THE SHELTER.
5. ROUTE TWO NEW CAT-5 CABLES WITH RJ-45 CONNECTORS FROM THE PATCH PANEL TO THE D-MARK INSIDE THE TELCO BOX.
6. ROUTE TWO NEW CAT-5 CABLES WITH RJ-45 CONNECTORS FROM THE PATCH PANEL INSIDE THE SHELTER, AT THE TELCO BOARD TO THE TVSS.

NEW TELCO INSTALLATION NOTES

PAIR NO.	COLORS
1	W-BL
2	W-O
3	W-G
4	W-BR
5	W-S
6	R-BL
7	R-O
8	R-G
9	R-BR
10	D-S
11	BK-BL
12	BK-O
13	BK-G
14	BK-BR
15	BK-S
16	Y-BL
17	Y-O
18	Y-BR
19	Y-S
20	Y-BL
21	V-BL
22	V-O
23	V-G
24	V-BR
25	V-S



GENERAL CABLE CORPORATION
CORE LAY-UPS FOR TELECOMMUNICATIONS CABLES FULL COLOR CODE

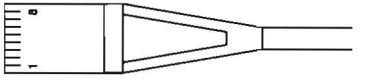
PIN	RJ45	RJ45	PIN	
8			8	
7			7	
6			6	
3	1	2	3	
2			2	green/white
1			1	white/green
4			4	white/brown
5			5	brown/white
blue/white				
white/blue				
white/orange				
orange/white				
8			8	
7			7	
6			6	
3	3	4	3	
2			2	orange/red
1			1	red/orange
4			4	red/green
5			5	green/red
slate/white				
white/slate				
red/blue				
blue/red				
8			8	
7			7	
6			6	
3	5	6	3	
2			2	blue/black
1			1	black/blue
4			4	black/orange
5			5	orange/black
brown/red				
red/brown				
red/slate				
slate/red				
8			8	
7			7	
6			6	
3	7	8	3	
2			2	slate/black
1			1	black/slate
4			4	yellow/blue
5			5	blue/yellow
green/black				
black/green				
black/brown				
brown/black				
8			8	
7			7	
6			6	
3	9	10	3	
2			2	brown/yellow
1			1	yellow/brown
4			4	yellow/slate
5			5	slate/yellow
orange/yellow				
yellow/orange				
yellow/green				
green/yellow				
8			8	
7			7	
6			6	
3	11	12	3	
2			2	green/violet
1			1	violet/green
4			4	violet/brown
5			5	brown/violet
blue/violet				
violet/blue				
violet/orange				
orange/violet				

M66 ELIMINATOR PUNCHDOWN DIAGRAM

VIEW FROM REAR TOP

RJ45 CONNECTIONS

PIN 8 NOT USED
PIN 7 NOT USED
PIN 6 NOT USED
PIN 5 /ORG
PIN 4 ORG/WHT
PIN 3 NOT USED
PIN 2 /BLU
PIN 1 BLU/WHT



RJ45 CONNECTOR VIEWED FROM TOP WITH CLIP DOWN AS THOUGH YOU WERE GOING IN TO PLUG IT IN.

RJ45 CONNECTIONS

DETAIL 1 / E.6
NTS

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11281

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 888-6301
Fax : (210) 404-9607

REV/MARK	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION
2	
3	
4	

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

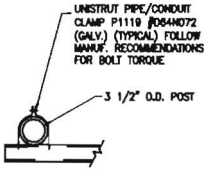
SITE NUMBER: SX3239
SITE NAME: COUNTRYSIDE
SITE ADDRESS: 11844 FM 1863, NEW BRAUNFELS, TX 78132
SHEET NUMBER: E.6
SHEET TITLE: COAXIAL CABLE MARKING
DRAWN BY: R.F. CHECK BY: JSA
ED PROJECT NUMBER: 10-150-0079

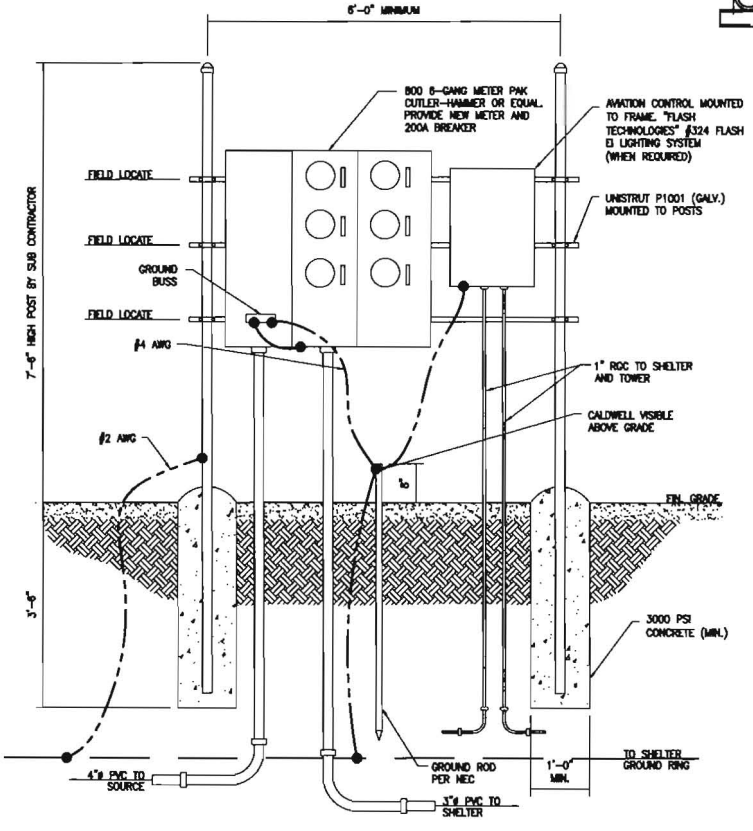
ELECTRICAL NOTES:

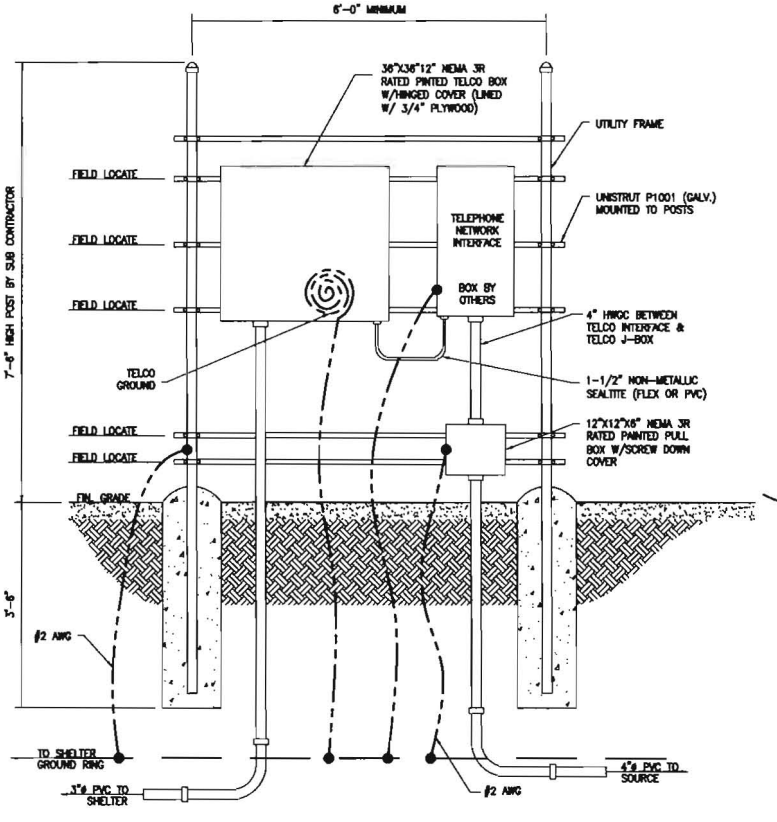
1. ALL ELECTRICAL WORK SHALL CONFORM TO THE NATIONAL ELECTRIC CODE (EDITION ACCEPTED BY LOCAL JURISDICTION) AND APPLICABLE LOCAL CODES.
2. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRIC CODE.
3. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED.
4. POWER WIRES AND CABLES SHALL BE COPPER WITH TYPE XHHW, THWN OR THHN INSULATION. SOLID CONDUCTORS FOR #10 AWG AND SMALLER, STRANDED FOR LARGER THAN #10 AWG. MINIMUM SIZE #12 AWG.
5. POWER WIRES AND CABLES SHALL BE INSTALLED IN GALVANIZED RIGID STEEL CONDUIT OR FLEXIBLE LIQUIDTIGHT CONDUIT AS INDICATED ON DRAWING.
6. CONTRACTOR TO OBTAIN ALL PERMITS, PAY PERMIT FEES AND BE RESPONSIBLE FOR SCHEDULING INSPECTIONS.
7. CONTRACTOR TO OBTAIN LOCAL POWER AND TELEPHONE COMPANY APPROVAL AND COORDINATE WITH UTILITY COMPANIES SERVICE ENTRANCE REQUIREMENTS.
8. PROVIDE ALL LABOR AND MATERIAL DESCRIBED ON THIS DRAWING AND ALL ITEMS INCIDENTAL TO COMPLETING THIS PROJECT AS FULLY OPERATIONAL.
9. CONTRACTOR TO PROVIDE GROUND WIRES, BARS AND CONNECTIONS AS SHOWN ON GROUNDING RISER DIAGRAM. CONTRACTOR SHALL TEST AND VERIFY THAT THE IMPEDANCE DOES NOT EXCEED 5 OHMS TO GROUND BY MEANS OF BIDDLE-MEGGER TESTER. GROUNDING AND OTHER OPERATIONAL TESTING SHALL BE WITNESSED BY THE OWNER'S REPRESENTATIVE.
10. GROUNDING CONDUCTORS SHALL BE COPPER ONLY. EITHER SOLID OR STRANDED CONDUCTORS ARE PERMITTED. #2R AND ALL EXTERNAL CONDUCTORS MUST BE BARE. EQUIPMENT GROUND LEADS IN CABLE TRAYS MUST BE GREEN INSULATED. ALL WIRES MUST BE #2 AWG MINIMUM.

GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, STATE BUILDING CODES AND LOCAL BUILDING CODES.
2. REFER TO SITE LAYOUT PLAN FOR EXACT LOCATION OF H-FRAME. REFER TO AT&T WIRELESS STANDARD CONSTRUCTION DRAWINGS FOR H-FRAME COMPLETE DESIGN.
3. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR METER.
4. CONTRACTOR TO PROVIDE AND INSTALL METER SOCKET.
5. CONTRACTOR TO LOCATE METER RACK TO ENSURE WORKING SPACES REQUIRED BY THE NEC (ART. 110-26), STATE OR LOCAL CODES ARE MAINTAINED BETWEEN FRONT OF ENCLOSURES AND THE COMPOUND FENCE.
6. SHOW LOCATION (INCLUDING DIMENSIONS) OF ALL CAPPED UNDERGROUND CONDUIT ON FINAL AS-BUILT DRAWINGS SUBMITTED TO OWNER.
7. COORDINATE EXACT LOCATION OF UNDERGROUND FEEDERS AND CIRCUITRY WITH THE OWNER.
8. CONTRACTOR SHALL COORDINATE EFFORTS WITH (LOCAL, ELECTRICAL) AUTHORITY HAVING JURISDICTION (AHJ) AND OTHER TRADES TO DETERMINE "FROST" LINE AND TYPES OF RACEWAY REQUIRED FOR INSTALLATION.







FRONT **POWER DISTRIBUTION CENTER** DETAIL 1 / E.7 NTS **BACK**

iED
INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398-7888
Fax : (281) 398-7886
TX BOARD FIRM REGISTRATION No. F-11261

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599-8301
Fax : (210) 404-9907

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER
07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: E.7

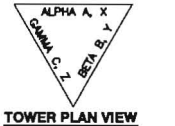
SHEET TITLE: POWER FRAME DETAILS

DRAWN BY: R.F. CHECK BY: JSA

IED PROJECT NUMBER: 10-150-0079

NOTES:

1. SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION TO REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SITE TO DETERMINE THE ANTENNA LOCATION AND FUNCTION OF EACH TOWER SECTOR FACE.
2. THE STANDARD IS BASED ON EIGHT COLORED TAPES–RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE, AND SLATE(GREY). THESE TAPES SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR CONTRACTOR ON SITE.
3. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE".
4. ALL COLOR CODE TAPE SHALL BE 3M–35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
5. ALL COLOR BANDS INSTALLED AT THE TOWER TOP SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" OF SPACING BETWEEN EACH COLOR.
6. ALL COLOR BANDS INSTALLED AT OR NEAR THE GROUND SHALL BE A MINIMUM OF 3/4" WIDE.
7. ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE–TO–SIDE.

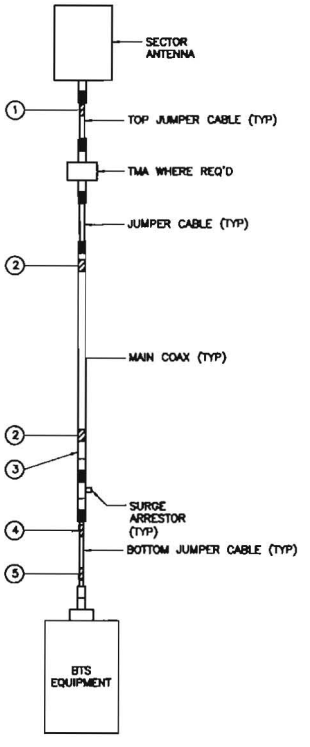


TOWER PLAN VIEW

NOTES:

A. CONTRACTOR SHALL FILL OUT THE CABLE PORT DIAGRAM UPON COAX INSTALLATION. CABLE PORT DIAGRAM WILL BE AFFIXED TO THE INTERIOR SHELTER WALL NEAR THE CABLE ENTRY PORT TO AID IN CABLE IDENTIFICATION. THE CHART IS INTENDED TO BE USED TO RECORD THE LINE AND CORRESPONDING ANTENNA POSITION ON THE TOWER AT THE TIME OF INSTALLATION.

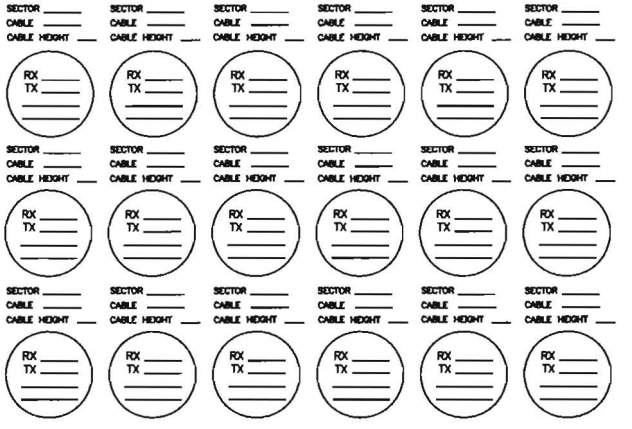
B. ONE COMPLETED COPY PLUS TWO BLANK COPIES OF THE CHART SHOULD BE POSTED IN THE SHELTER IN A PROTECTIVE PLASTIC SLEEVE.



CABLE MARKING LOCATIONS DIAGRAM

CABLE PORT DIAGRAM

CAUTION: HARMFUL RF ENERGY EXISTS ON THESE LINES



ALL RF CABLE SHALL BE MARKED AS PER CABLE MARKING LOCATIONS TABLE BELOW:

CABLE MARKING LOCATIONS TABLE

NO.	TAPE	TAG	LOCATIONS
1.	X		EACH TOP–JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2.	X		EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP–JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.
3.		X	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER. (IF SHELTER IS USED)
4.	X		ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
5.	•	•	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

(• – DENOTES TAG OR TAPE.)

COAX COLOR CODING AND IDENTIFICATION DETAIL FOR GREENFIELDS

DETAIL NTS 1 / E.6

INNOVATIVE ENGINEERING DESIGN
Mason Creek Industrial Park
21732 Provincial Blvd. Suite 130
Katy, Texas 77450
Tel : (281) 398–7888
Fax : (281) 398–7888
TX BOARD FIRM REGISTRATION No. F-11281

REV/DATE	DESCRIPTION
1 07/20/10	ISSUED FOR CONSTRUCTION
2	
3	
4	

at&t
6500 WEST LOOP SOUTH
4TH FLOOR
BELLAIRE, TEXAS 77401
(713) 265 - 4640

GoodmanNetworks
GOODMAN NETWORKS
14701 N. US HWY 281, SUITE 220
SAN ANTONIO, TX 78232
Tel : (210) 599–5301
Fax : (210) 404–9507

STATE OF TEXAS
JOSEPH S. ABBOUD
69894
LICENSED
PROFESSIONAL ENGINEER

07/20/10

SITE NUMBER: SX3239

SITE NAME: COUNTRYSIDE

SITE ADDRESS: 11844 FM 1863
NEW BRAUNFELS, TX 78132

SHEET NUMBER: E.8

SHEET TITLE: TELCO INSTALLATION DETAILS

DRAWN BY: R.F. | CHECK BY: JSA

ED PROJECT NUMBER: 10-150-0079

FIRST AMENDMENT TO OPTION AND LEASE AGREEMENT

THIS FIRST AMENDMENT TO OPTION AND LEASE AGREEMENT ("First Amendment") is entered into on the _____ day of _____, 2011, by and between Dale Damerau and wife, Robbin Damerau, ("Landlord") and AT&T Mobility Texas, LLC, a Delaware limited liability company ("Tenant").

WITNESSETH:

WHEREAS, Landlord and Tenant entered into an Option and Lease Agreement dated as of June 29, 2010 (the "Option and Lease Agreement");

WHEREAS, Landlord and Tenant desire to amend the original Option and Lease Agreement;

NOW, THEREFORE, in consideration of the Option and Lease Agreement and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree that the Option and Lease Agreement is hereby amended and appended to as follows:

1. Paragraph 1(a) is deleted in its entirety and replaced with the following:

   "(a) Landlord grants to Tenant an option (the "**Option**") to lease a certain portion of the Property containing approximately 10,000 square feet including the air space above room/cabinet/ground space as described on attached **Exhibit 1**, as well as a 4,400 square foot Protected Vegetation Area ("PVA") as described on attached **Exhibit 1**. The PVA will be maintained by Tenant in accordance with Regulated Activities on the Edwards Aquifer Recharge & Transition Zones per the Texas Commission on Environmental Quality (TCEQ) and Best Management Practices (RG-348) and Optional Enhanced Measures for the Protection of Water Quality in the Edwards Aquifer: An Appendix to RG-348 (RG-348a). Unrestricted access for Tenant's uses from the nearest public right of way along the Property to the Premises is also described on the attached **Exhibit 1** (collectively, the "**Premises**").

2. Paragraph 4 (a) is deleted in its entirety and replaced with the following:

   "(a) Commencing on the first day of the month following the date that Tenant commences construction (**the "Rent Commencement Date**"), Tenant will pay the Landlord a monthly rental payment of One Thousand and No/100 Dollars ($1000.00) ("**Rent**"), at the address set forth above, on or before the fifth (5th) day of each calendar month in advance. In partial months occurring after the Rent Commencement Date, Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within thirty (30) days after the Rent Commencement Date.

3. Landlord and Tenant desire to replace **Exhibit 1** in its entirety and replace with **Exhibit 1** attached hereto.

4. Landlord and Tenant represent and warrant to each other that as of the date of this execution, there are no uncured defaults under the terms of the Option and Lease Agreement and that the Option and Lease Agreement is in full force and effect.

5. All other terms of the Option and Lease Agreement except as may be amended herein, or as may be in conflict with the provisions of this First Amendment, shall be deemed incorporated into this First Amendment.

6. Except as amended herein, all terms, conditions, provisions, covenants and agreements contained in the Option and Lease Agreement are hereby ratified and confirmed in their entirety. The terms used herein and not otherwise defined in this First Amendment shall have the same meaning as set forth in the Option and Lease Agreement.

SIGNATURES TO FOLLOW

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day first above written.

LANDLORD:

Dale Damerau

Robbin Damerau

Date: 01-27-11

STATE OF Texas

COUNTY OF Comal

Before me, Tammy Dougherty the undersigned, a Notary Public for the State, personally appeared **Dale Damerau and Robbin Damerau,** personally known to me (or proved to me on the basis of satisfactory evidence) to be the persons whose name are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacity, and that by their signature on the instrument, the entity upon behalf of which the persons acted, executed the instrument.

WITNESS my hand and official stamp or seal, this 27 day of January, 2011.

TAMMY DOUGHERTY
Notary Public, State of Texas
My Commission Expires
March 19, 2011

[AFFIX NOTARY SEAL]

Tammy Dougherty
Notary Public

My commission expires: March 19, 2011

TENANT:

New Cingular Wireless PCS, LLC, a Delaware corporation

By: AT&T Mobility Corporation, Its Manager

By: _____

Name: Stawndrea S Thomas

Title: Area Manager

Date: 1-28-2011

STATE OF TEXAS)
) ss:
COUNTY OF HARRIS)

Then, on the 28th day of JANUARY, 2011 personally appeared the STAWNDREA S THOMAS, AREA MANAGER of AT&T as aforesaid, signer and sealer of the foregoing instrument, and acknowledged the same to be his/her free act and deed as MANAGER of AT&T and the free act and deed of said corporation, before me.

Rose M Grant
Notary Public, State of Texas
My Commission Expires:
November 18, 2013

Rose M. Grant
Notary Public
My Commission Expires:

EXHIBIT 1

DESCRIPTION OF THE PREMISES
Page 1 of 3

METES AND BOUNDS
ACCESS & UTILITY EASEMENT
0.01 ACRES (500 SQUARE FEET)
OUT OF A CALLED 76.069 ACRES
VICENTE SALINAS SURVEY No. 393
COMAL COUNTY, TEXAS

Being 0.01 acres (500 square feet) of land, out of a called 76.069 acres, conveyed to Dale Damerau by deeds recorded under County Clerk's File Number (CCF) 200906044377 Official Public Records of Comal County, Texas (OPR CCT), said 0.01 acre tract lying in the Vicente Salinas Survey No. 393 and being more particularly described by metes and bounds as follows;

COMMENCING at a found 1/2 inch iron rod, marking the West corner of said 76.069 acres;

THENCE North 38°26'02" East, a distance of 1,071.14' feet (called 1,070.87') to a found 1/2 inch iron rod, marking an angle point of said 76.069 acres;

THENCE North 38°14'37" East, a distance of 645.69 feet to an angle point of said 76.069 acres;

THENCE North 38°07'14" East (called North 37°59'10" East), a distance of 567.37 feet (called 567.92') to a fence corner in the South right-of-way (ROW) of FM Highway 1863, ROW varies, marking the Northwest corner of said 76.069 acres;

THENCE South 89°12'56" East (called South 89°14'00" East), along said South ROW, a distance of 213.00 feet to a point for corner, marking the Northwest corner of a proposed Access & Utility Easement, also being the POINT OF BEGINNING;

THENCE South 89°12'56" East, along said ROW, a distance of 20.00 feet to a point for corner, marking the Northeast corner of the herein described tract;

THENCE South 00°47'04" West, a distance of 25.00 feet to a point for corner in the North line of a proposed Tower Site, also being the Southeast corner of the herein described tract;

THENCE North 89°12'56" West, along said North line, a distance of 20.00 feet to a point for corner, marking the Southwest corner of the herein described tract;

THENCE North 00°47'04" East, a distance of 25.00 feet to the POINT OF BEGINNING and containing a computed 0.01 acres (500 square feet) of land.

DESCRIPTION OF THE PREMISES
Page 2 of 3

METES AND BOUNDS
TOWER SITE
0.23 ACRES (10,000 SQUARE FEET)
OUT OF A CALLED 76.069 ACRES
VICENTE SALINAS SURVEY No. 393
COMAL COUNTY, TEXAS

nature and does affect the parent located at the time survey.

Being 0.23 acres (10,000 square feet) of land out of a called 76.069 acres, conveyed to Dale Damerau by deeds recorded under County Clerk's File Number (CCF) 200506044377 Official Public Records of Comal County, Texas (OPR CCT), said 0.23 acre tract lying in the Vicente Salinas Survey No. 393 and being more particularly described by metes and bounds as follows;

COMMENCING at a found 1/2 inch iron rod, marking the West corner of said 76.069 acres;

THENCE North 38°25'02" East, a distance of 1,071.14' feet (called 1,070.87') to a found 1/2 inch iron rod, marking an angle point of said 76.069 acres;

THENCE North 38°14'37" East, a distance of 645.69 feet to an angle point of said 76.069 acres;

THENCE North 38°07'14" East (called North 37°59'10" East), a distance of 567.37 feet (called 567.92') to a fence corner on the South right-of-way (ROW) of FM Highway 1863, ROW varies, marking the Northwest corner of said 76.069 acres;

THENCE South 89°12'56" East (called South 89°14'00" East), along said South ROW a distance of 213.00 feet to a point for corner, marking the Northwest corner of a proposed Access & Utility Easement;

THENCE South 89°12'56" East, along said ROW, a distance of 20.00 feet to a point for corner, marking the Northeast corner of said Easement;

THENCE South 00°47'04" West, a distance of 25.00 feet to a point for corner, marking the Southeast corner of said Easement, also being in the North line of proposed Tower Site and the POINT OF BEGINNING;

THENCE South 89°12'56" East, a distance of 40.00 feet to a set 5/8 inch iron rod with cap, marking the Northeast corner of the herein described tract;

THENCE South 00°47'04" West, a distance of 100.00 feet to a set 5/8 inch iron rod with cap, marking the Southeast corner of the herein described tract;

THENCE North 89°12'56" West, a distance of 100.00 feet to a set 5/8 inch iron rod with cap, marking the Southwest corner of the herein described tract;

THENCE North 00°47'04" East, a distance of 100.00 feet to a set 5/8 inch iron rod with cap, marking the Northwest corner of the herein described tract;

THENCE South 89°12'56" East, a distance of 60.00 feet to the POINT OF BEGINNING and containing a computed 0.23 acres, (10,000 square feet) of land.

METES AND BOUNDS
PROTECTED VEGETATION AREA
0.10 ACRES (4,400 SQUARE FEET)
OUT OF A CALLED 76.069 ACRES
VICENTE SALINAS SURVEY No. 393
COMAL COUNTY, TEXAS

Being 0.10 acres (4,400 square feet) of land, out of a called 76.069 acres, conveyed to Dale Domerau by deeds recordec under County Clerk's File Number (CCF) 200906044377 Official Public Records of Comal County, Texas (OPR CCT), said 0.10 acre tract lying in the Vicente Salinas Survey No. 393 and being more particularly described by metes and bounds as follows;

COMMENCING at a found 1/2 inch iron rod, marking the West corner of said 76.069 acres;

THENCE North 38°26'02" East, a distance of 1,071.14' feet (called 1,070.87') to a found 1/2 inch iron rod, marking an angle point of said 76.069 acres;

THENCE North 38°14'37" East, a distance of 645.69 feet to an angle point of said 76.069 acres;

THENCE North 38°07'14" East (called North 37°59'10" East), a distance of 567.37 feet (called 567.92') to a fence corner in the South right-of-way (ROW) of FM Highway 1863, ROW varies, marking the Northwest corner of said 76.069 acres;

THENCE South 89°12'56" East (called South 89°14'00" East), along said South ROW, a distance of 213.00 feet to a point for corner, marking the Northwest corner of a proposed Access & Utility Easement;

THENCE South 00°47'04" West, a distance of 25.00 feet to a point in the North line of a proposed Tower Site;

THENCE North 89°12'56" West, along said North line, a distance of 40.00 feet to a set 5/8 inch iron rod with cap, marking the Northwest corner of said Tower Site, also being the most Westerly Northeast corner of a proposed Protected Vegetation Area and the POINT OF BEGINNING;

THENCE South 00°47'04" West, along the West line of said Tower Site, a distance of 100.00 feet to a set 5/8 inch iron rod with cap, marking the Southwest corner of said Tower Site, also being an internal corner of the herein described tract;

THENCE South 89°12'56" East, along the South line of said Tower Site, a distance of 100.00 feet to a set 5/8 inch iron rod with cap, marking the Southeast corner of said Tower Site, also being the most Southeasterly Northeast corner of the herein described tract;

THENCE South 00°47'04" West, a distance of 20.00 feet to a point for corner, marking the Southeast corner of the herein described tract;

THENCE North 89°12'56" West, a distance of 120.00 feet to a point for corner, marking the Southwest corner of the herein described tract;

THENCE North 00°47'04" East, a distance of 120.00 feet to a point for corner, marking the Northwest corner of the herein described tract;

THENCE South 89°12'56" East, a distance of 20.00 feet to the POINT OF BEGINNING and containing a computed 0.10 acres (4,400 square feet) of land.

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: Countryside Tower Site (Site No. SX 3239)

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

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

PROJECT INFORMATION

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

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

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thickness (feet)
Very cherty clay loam	C	0 to 10 in.
Very cherty clay	C	10 to 14 in.
Extremely stony soil	C	14 to 28 in.
Del Rio Clay	D	28 to 36 in.

* Soil Group Definitions (Abbreviated)

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

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

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

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

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

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

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

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

Applicant's Site Plan Scale 1" = 100 '
Site Geologic Map Scale 1" = 100 '
Site Soils Map Scale (if more than 1 soil type) 1" = One soil type

6. Method of collecting positional data:

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

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

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

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

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

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

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

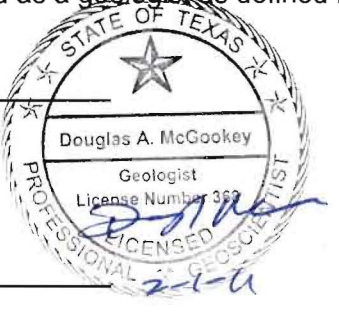
ADMINISTRATIVE INFORMATION

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

Date(s) Geologic Assessment was performed: November 5, 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.

Douglas McGookey, PG
Print Name of Geologist



210 694-4545
Telephone

210 694-4577
Fax

Signature of Geologist

November 17, 2010
Date

Representing: Medina Consulting Company, Inc.
(Name of Company)

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

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

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Big Geronimo Tower Site, Site No. SX3242

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
None																				

* DATUM: WGS84

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

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

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

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

STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 368
LICENSED PROFESSIONAL GEOSCIENTIST

Date November 5, 2010

Sheet 1 of 1

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

GEOLOGIC ASSESSMENT

Site Name: ***Proposed Countryside Tower Site (Site No. SX 3239)***
Address: ***11844 Farm to Market Road 1863, New Braunfels, Texas 78132***
Location: ***South side of Farm to Market Road 1863 approximately 1,250 feet east of the intersection of Schoenthal Road North and Farm to Market Road 1863 in Comal County, Texas***

Soil Description:

The following soils descriptions are taken from the *Soil Survey of Comal and Hays Counties*, US Department of Agriculture, Soil Conservation Service, 1984). The proposed tower Site is on Rumple-Comfort association, undulating. The soil is described below.

Rumple-Comfort association, undulating (RUD in the *Soil Survey of Comal and Hays Counties*). This association consists of shallow and moderately deep soils on uplands in the Edwards Plateau. Slopes are plane or convex and range from 1 to 8 percent. The areas are irregular in shape and range from 50 to several thousand acres in size.

Rumple soils makes up about 60 percent of the association, Comfort soil makes up 20 percent, and other soils, mainly Tarplay soils, makes up 20 percent. The Rumple soil is on broad ridgetops and side slopes. It is mainly gently sloping. The Comfort soil is mainly in the more sloping areas near drainageways and near outcrops of rocks. In places, there are narrow ledges of limestone.

Typically, the surface layer of the Rumple soil is dark reddish brown very cherty clay loam about 10 inches thick. Rounded chert and limestone cobbles and gravel cover about 20 percent of the surface. The subsoil to depth of 14 inches is dark reddish brown very cherty clay, and to a depth of 28 inches it is dark reddish brown extremely stony clay that is about 75 percent, by volume, limestone fragments. The underlying material is indurated fractured limestone. The soil is mildly alkaline and noncalcareous throughout. The texture of the surface layer ranges to very cherty loam and cherty clay.

Typically, the surface layer of the Comfort soil is dark brown, neutral, extremely stony clay about 7 inches thick. The subsoil to a depth of 12 inches is dark reddish brown, mildly alkaline, extremely stony clay. The underlying material is undurated fractured limestone. The soil is noncalcareous throughout.

The soils in this association are well drained. Surface runoff is medium. However, runoff from large areas is much slower than from local areas because some of the streambeds. Permeability is moderately slow in the Rumple soil and slow in the Comfort

soil. The available water capacity is very low. The rooting zone is shallow in Comfort soil and moderately deep in Rumple soil. Water erosion is a moderate hazard.

Table 1.
Rumple Series Soil Profile

Surface to 10 inches	**Very cherty clay loam:** Dark reddish brown, moist, moderate fine subangular blockly structure, hard, friable, common fine roots, about 35 percent, by volume, angular chert fragments mostly 0.5 to 1 inch across, noncalcareous, mildly alkaline, clear smooth boundary.
10 to 14 inches	**Very cherty clay:** Dark reddish brown, moist, moderate very fine subangular blocky structure, hard, friable, common fine roots, patchy clay films on peds, about 35 percent by volume angular chert fragments mostly 0.5 to 1 inch across, noncalcareous, mildly alkaline, abrupt irregular boundary.
14 to 28 inches	**Extremely stony clay:** Dark reddish brown, moist, few fine roots, about 25 percent by volume cherty soil material in vertical and horizontal fractures and solution cavities; 75 percent limestone cobbles and stones and chert pebbles and cobbles; noncalcareous; mildly alkaline, abrupt wavy boundary.
28 to 36 inches	**Del Rio Clay:** Blue-green to yellow brown gypsiferous clay

After *Soil Survey of Comal and Hays Counties.*

Mapped Geology Description:

The Site lies on Del Rio Clay (Upper Cretaceous), which is the primary upper confining unit of the Edwards aquifer. It is described as a blue-green to yellow-brown, variably gypsiferous clay containing iron nodules, abundant pectin-type fossil clams, and the fossil oyster *Ilymatogyra arietina.* Minor, thin lenticular beds of highly calcareous siltstone may also occur. Unweathered Del Rio Clay is composed of kaolinite, illite, and lesser amounts of montmorillonite. Secondary gypsum occurs as fracture fillings in clay-rich exposures near igneous bodies. The Del Rio has no recognized cavern development and no significant porosity or permeability. The Del Rio directly overlies the Lower Cretaceous formation in many areas. The thickness of the formation is about 40 to 110 feet (Description from *Geologic Map of the Edwards Aquifer Recharge Zone, South-Central Texas*, Blone and others, 2005).

Narrative of Site Specific Geology:

The attached figures show both geology of the area from the *Geologic Map of the Edwards Aquifer Recharge Zone, South-Central Texas*, Blone and others, 2005 as well as site-specific geology. The Site is mapped within the outcrop area of the Del Rio Clay, which overlies the Edwards aquifer. The Del Rio Clay in the San Marcos Platform overlies the Georgetown Formation and the Edwards Group, and is an upper confining unit for the Edwards aquifer. No outcrops of the Del Rio Clay were observed on the Site.

The Del Rio Clay is a confining unit for the Edwards aquifer, and the gypsiferous clay and calcareous siltstone that make up most of the Del Rio Clay has no significant porosity or permeability. The overlying soil that is likely mostly composed of Rumple soil is also relatively impermeable, and fine clay fills fractures and crevices in the shallow subsurface that might otherwise allow infiltration. Therefore, there is no recharge to the Edwards aquifer over the Site.

Throughout the Site, the ground surface is covered with grass, brush, and trees. The surface is covered by clay and chert fragments. No karst features were observed, and no evidence of faults or fractures could be identified through the heavy vegetation. No faults were mapped on the *Geologic Map of the Edwards Aquifer Recharge Zone, South-Central Texas*, Blone and others, 2005.

The only area in which soil will be excavated is the tower compound, where a fence, tower foundation, and foundation for an equipment building will be installed. In this area, the ground is covered with small limestone rocks and stony clay loam soil. No features were identified on the Site including the proposed tower compound and proposed access road. Although the surface soil will not be disturbed, the area designated for vegetative strips was also observed. No features were observed in the area designated for vegetative filter strips. The following photographs show the site, and the photograph locations are shown on the *Site Specific Geology* figure.

Photographs:

Photograph 1. View to the southwest from the easement on the south side of Farm to Market Road 1863 showing the fence west of the Site.

Photograph 2: View to the south from Farm to Market Road 1863 showing the fence along the easement, the future access road, and beyond it the Site. There is heavy vegetation consisting of grass, brush, and trees on the Site.

Photograph 3. View to the south from the proposed access road at the ground surface on the Site and access road.

Photograph 4: View to the southwest from the northwest corner of the proposed tower compound.

Photograph 5. View to the north from the northeast corner of the proposed Site.

Photograph 6: View to the southwest from near the center of the Site.

Photograph 7. View to the southeast from near the center of the Site.

Photograph 8: View to the northwest from near the center of the Site.

Photograph 9. View to the northeast from near the southeast corner of the proposed Site.

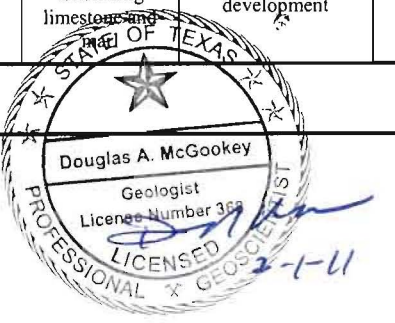
Photograph 10: View to the west from near the eastern side of the proposed Site.

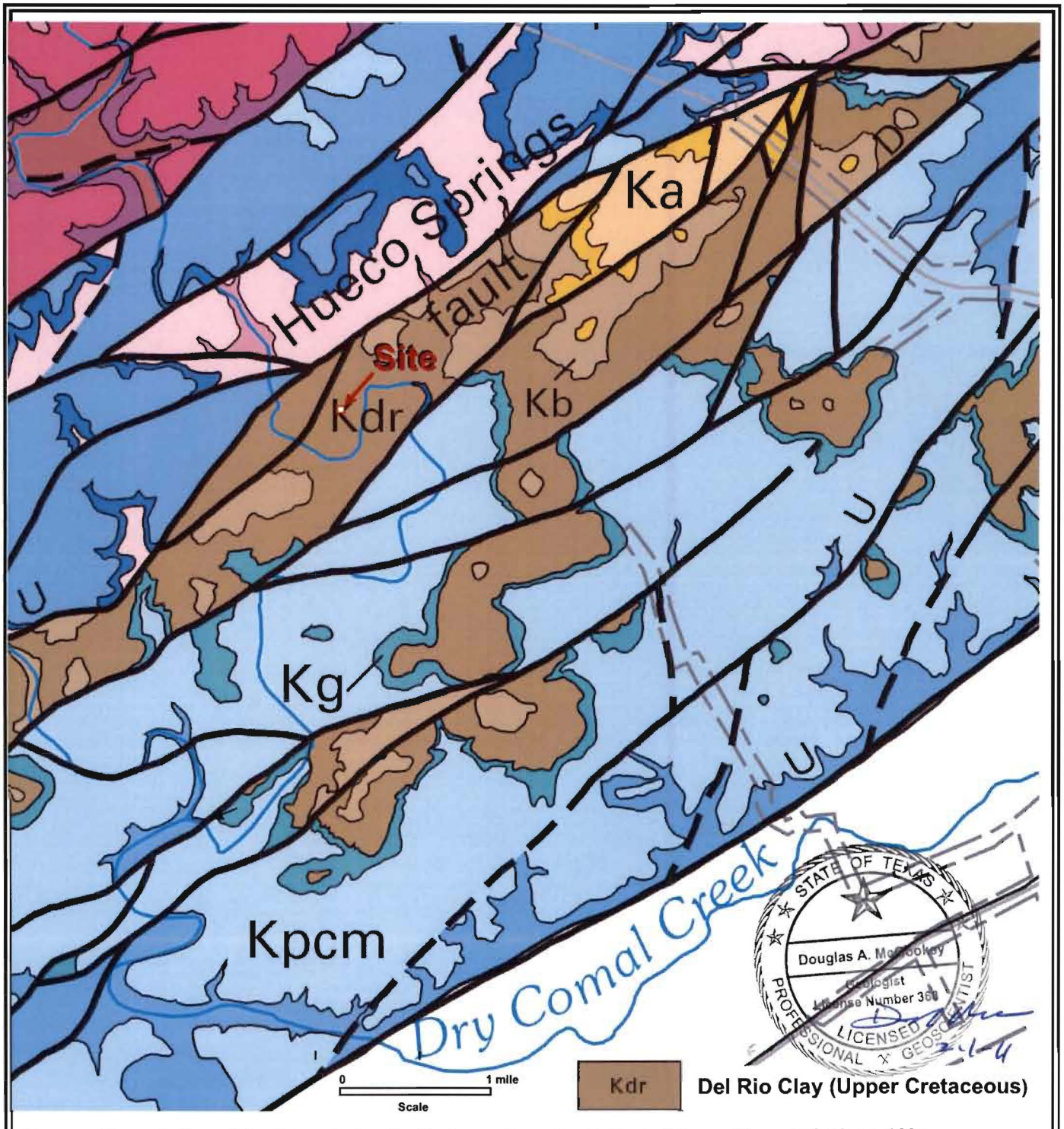
Geologic Column:

The Site lies in an area mapped as Del Rio Clay, which is one of the upper confining units of the Edwards aquifer (Table 2; Source: *Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Recharge Zone, Bexar County, Texas*: US Geological Survey, Water Resource Investigations Report 95-4030.

Table 2. Geologic Column

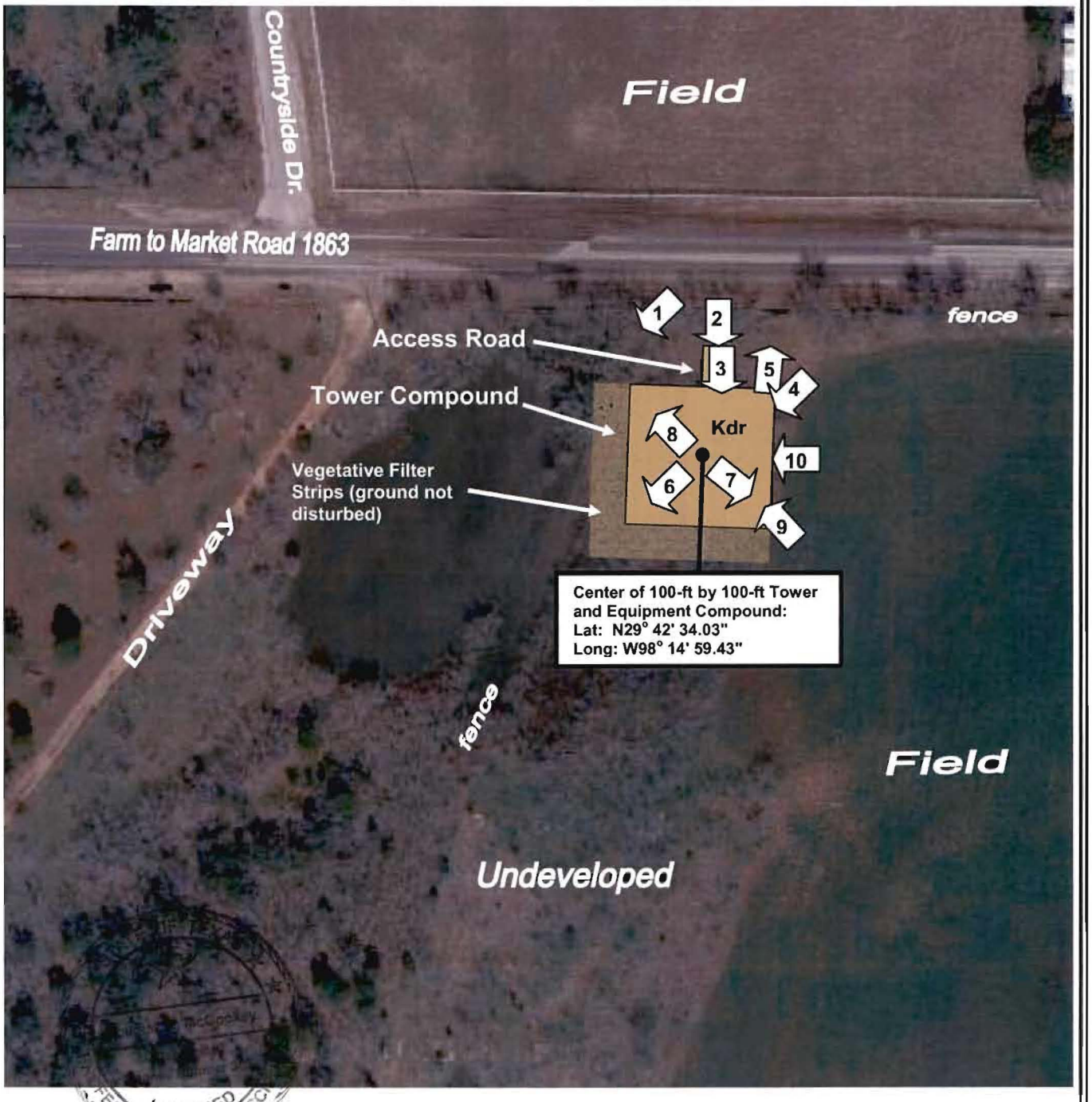
	Hydrologic subdivision	Group/ Formation/ Member		Thickness (ft)	Lithology	Field Identification	Cavern Development	Porosity/Permeability Type
Erosional Surface								
Upper Cretac	Upper Confining Units	Del Rio Clay		40-50	Blue-green to yellow brown clay	Fossiliferous; *Ilymatogyra arietina*	None	None Upper Confining Unit
Lower Cretaceous	Edwards Aquifer	Georgetown Formation		2-20	Reddish-brown, gray to light tan marly limestone	Marker Fossil; *Waconella wacoensis*	None	Low Porosity/ Low Permeability
		Person Formation	Cyclic and marine members, undivided	80-90	Mudstone to packstone; miliolid grainstone, chert	Thin graded cycles; massive beds to relatively thin beds, crossbeds	Many subsurface, might be associated wth earlier karst development	Laterally extensive, both fabric and not fabric water-yielding
			Leached and collapsed members, undivided	70-90	Crystalline limestone, mudstone to grainstone; chert; collapsed breccia	Bioturbated non-stained beds separated by massive limestone beds; stromatolitic limestone	Extensive lateral development; large rooms	Most not fabric/one of the most permeable
			Regional dense member	20-24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
		Kainer Formation	Grainstone member	50-60	Miliolid grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric; recrystallization reduces permeability
			Kirschberg evaporate member	50-60	Highly altered crystalline limestone; chalky mudstone, chert	Boxwork voids, with neospar and travertine frame	Probably extensive cave development	Most fabric/ one of the most permeable
			Dolomitic Member	100-130	Mudstone to grainstone, crystalline limestone, chert	Massively bedded, light gray, *Toucasia* abundant	Caves related to structure or bedding planes	Mostly non fabric, some bedding plane-fabric water-yielding
			Basal Nodular Member	50-60	Shaly, nodular limestone, mudstone, and *miliolid* grainstone	Massive, nodular and mottled, *Exogyra texana*	Large lateral caves at surface, a few caves near Cibolo Creek	Fabric stratigraphically controlled/large conduit flow at surface, no permeability in subsurface
	Lower Confining Unit	Upper Member of the Glen Rose Limestone		350-500	Yellowish tan, thinly bedded limestone and marl	Stairstep topography, alternating limestone and	Some surface cave development	Some water production at evaporate beds/relatively impermeable





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

Medina Consulting Company	Drawn by: DM Scale: As Shown Date: November 2010	N	**Area Geologic Map** **Countryside Tower Site (SX 3239)** **Geologic Assessment** **Comal County, Texas**



LICENSED PROFESSIONAL GEOSCIENTIST

2-1-11

8 Photo Location and Direction

0 100 feet
Scale

Kdr Del Rio Clay (Upper Cretaceous)

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

Medina Consulting Company	Drawn by: DM Scale: As Shown Date: November 2010	N	**Site Specific Geologic Map** **Countryside Tower Site (SX 3239)** **Geologic Assessment** **Comal County, Texas**

Source: *Soil Survey of Comal and Hays Counties, Texas*, US Department of Agriculture, 1984

STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 368
PROFESSIONAL GEOSCIENTIST
LICENSED
2-1-11

0 1/2 mile
Scale

Medina Consulting Company	Drawn by: DM Scale: As Shown Date: November 2010	N

Soil Map
Countryside Tower Site
(Site No. SX 3239)
Geologic Assessment
Comal County, Texas

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: Countryside Tower Site (Site No. SX 3239)

REGULATED ENTITY INFORMATION

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

2. Total site acreage (size of property): 0.34 acre

3. Projected population: 0

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

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	280.00	÷ 43,560 =	0.0064
Parking	0	÷ 43,560 =	0
Other paved surfaces	1140.00	÷ 43,560 =	0.0262
Total Impervious Cover	1420.00	÷ 43,560 =	0.0326
Total Impervious Cover ÷ Total Acreage x 100 =			9.59

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:

0 % Domestic	0 gallons/day
0 % Industrial	0 gallons/day
0 % Commingled	0 gallons/day
TOTAL	0 gallons/day

15. Wastewater will be disposed of by:

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

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

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

N/A Sewage Collection System (Sewer Lines):

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

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

__ The SCS was previously submitted on _____.

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

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

16. N/A 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" = 100' .

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 Panel #48091C0430F, revised September 2, 2009

19. ___ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.
_X_ 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.):
_X_ 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:
__ All **sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.
_X_ No **sensitive** geologic or manmade features were identified in the Geologic Assessment.
__ **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. N/A The drainage patterns and approximate slopes anticipated after major grading activities.

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

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

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

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

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

ADMINISTRATIVE INFORMATION

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

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

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

Douglas McGookey
Print Name of Customer/Agent

Signature of Customer/Agent

2-1-11
Date

Attachment A

FACTORS AFFECTING WATER QUALITY

Factors that could affect surface water and ground water quality are:

1) Fine particles produced during grading and construction activities.

2) Fluids released from construction equipment.

Attachment B

VOLUME AND CHARACTER OF STORMWATER

Storm water passing through the construction activity will be filtered by a combination of silt fences, rock berms and vegetative filter strips before entering existing drainage pathways, in order to maintain storm-water quality at substantially pre-construction levels. Storm-water impact will also be minimized by performing construction activities during the dry winter months.

The tower construction area and access easement are located on generally flat, grassland with small trees, brush, small limestone rocks and stony clay loam soil. During construction, any necessary clearing of trees and brush will be done using techniques that result in minimal soil disturbance. Any disturbed soil, such as that "dislocated" as part of a root ball when it is removed from the ground, must be tamped gently back in place so that vegetation roots suffer as little long-term damage as possible. Grubbing out of mesquite trees will be followed by mowing of native grasses in order to spread seed and accelerate vegetative growth. All construction will be performed with temporary storm-water controls in place on the downslope sides of all disturbed ground.

A tower with anchor supports and one small building will be constructed, and then a 15-foot-wide vegetative filter strip with supporting soils will be improved along the downslope perimeter of the tower site. Compacted gravel will be used for the 12-foot wide driveway into the tower site. The remaining surface cover of the property will be native vegetation.

The pre-construction run-off coefficient is estimated to be in the range of 0.30 to 0.44, whereas the post-construction run-off coefficient for the entire site will fall into the range of 0.36 to 0.50.

The vegetative filter strips in the tower construction area and along the access easement should assure that water quality downslope of the filter strips is maintained at or near pre-construction levels.

Attachment C

SUITABILITY LETTER FROM AUTHORIZED AGENT

Not applicable. The site activities do not generate any wastewater requiring disposal.

Attachment D

EXCEPTION to the REQUIRED GEOLOGIC ASSESSMENT

Not applicable. The Geologic Assessment has been included in this report.

N

1 INCH

100 FEET

General Notes

1. The Site is not located in the floodplain according to FEMA Panel # 48091C0430F, revised September 2, 2009
2. Existing and finished contours will not differ significantly. Existing contours are provided by USGS 7.5 Minute Series Topographic Map, New Braunfels West, Tex. Quadrangle, 1988
3. There are no wells,no surface water and no sensitive geologic or manmade features identified within the boundaries of the site
4. There will be no major grading activities that will disturb drainage patterns
5. There will be no discharges to surface water from the proposed construction activity
6. Aerial image provided by Google™ Earth, dated January 2010

Chapman Engineering
P.O. BOX 1305
BOERNE, TEXAS 78006
(830) 816-3311
(800) 375-7747
FAX (830) 816-1753
A Texas Registered Engineering Firm F-8140

Date Revised: 1/27/2011
Revised By: Amanda Watson
Checked By: Cal Chapman

Key

- Property Boundary
- Proposed Structures
- Areas of Soil Disturbance
- Silt Fence
- Rock Berm
- Vegetative Filter Strip

Countryside Tower

Site No. SX 3239
11844 FM 1863
Comal County, TX

WPAP Site Plan

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: Countryside Tower Site (Site No. SX 3239)

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. _X_ 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: Dry Comal 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 up-gradient 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. _X_ **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:

Douglas McGookey

Print Name of Customer/Agent

Signature of Customer/Agent

2-1-11

Date

Attachment A

SPILL RESPONSE ACTIONS

***Please note that a release of more than 25 gallons of petroleum products requires immediate reporting to TCEQ (San Antonio 210/490-3096)**

1) In case of any discharge discovery, on-site personnel will begin work to stop the discharge, place barriers to movement of the discharge along the drainage path, clean up the discharged material and notify the proper authorities. General response procedures are listed below.

2) Recovered materials may include fuel, absorbents containing fuel, soils and pavements contaminated by fuel, and water contaminated by fuel. All materials will be handled as hazardous material and stored within proper containment (for instance, liquids placed in drums; soils or other solids placed on heavy plastic sheeting and wrapped to avoid significant vapor loss or stormwater mixing). Once the materials have been sampled or otherwise screened, they may be disposed of to fuel recyclers, qualified landfills, or possibly treated on site to levels below regulatory limits. Consultation with a qualified environmental services company is strongly recommended.

   In the event of a spill or other product release to the environment at the site, the following general procedures are to be followed as applicable:

   1. **STOP** the source of spill or other release as fast as possible, by the most safe and practical means available;
   2. **IF IT IS SAFE TO DO SO, CONTAIN AND CLEAN UP** the product released to prevent further spreading and additional environmental contamination. Containment will be performed with materials from the spill response kit available on site, or with dirt diking, or by any other practical means available;
   3. **CONTACT** company officials immediately with a description of the type and nature of release. If there is a potential for the release to leave the site property or pose an environmental hazard, contact the local fire department and the emergency response center;
   4. **SECURE** the area around the release. Cordon off the area deemed unsafe due to spillage and fumes. Establish a safe area, based on wind direction and other factors, where employees can stage without exposure to spillage and fumes. Minimize flame and spark hazards. Mobilize all available manpower and equipment necessary to respond to the release, to contain and clean up the release in accordance with federal, state and local regulatory agencies' requirements;
   5. **All contaminated materials** generated during the containment process and/or clean-up activities shall be recovered, stored, hauled and disposed of in accordance with federal, state and local regulatory agencies' requirements. For further disposal information and planning for proper disposal, contact Company's environmental contractor(s) or other approved vendors;

6. **Company officials shall notify** TCEQ and other applicable regulatory agencies within 24 hours of the release event's discovery if more than 25 gallons of petroleum product was released;
7. **All required reports** should be filed with appropriate agencies within applicable time frames after the release event's discovery;
8. **Immediate action** will be taken by company officials and/or employees to correct the cause of the release and to prevent the possibility of a reoccurrence;
9. **If fire is involved** – that is, a release leads to ignition of product – the fire will be allowed to burn until all released, flammable product has been burned as completely as possible. Flooding with excessive amounts of water to fight the fire may result in more environmental damage than the fire itself. Water flooding may cause contamination of a wider area, increasing the environmental risk as well as the total cost of cleanup;
10. **A product release may threaten human life**, through potential for fire, explosion and inhalation of fumes or suffocation. If you cannot safely contain and clean up the release, **CLEAR THE AREA AND TAKE PROPER SAFETY MEASURES.** Environmental damage from a product release is bad, but injury or loss of human life is worse.

Emergency Response List

Agency Name	Emergency Phone Number
Local Fire Department	**911**
US EPA, Region VI, Dallas	**214/665-2253** **214/665-6489**
Texas Commission on Environmental Quality (TCEQ), Region 13, San Antonio	**210/490-3096**
American Tower Corporation	**210/387-5725**

Attachment B

POTENTIAL SOURCES OF CONTAMINATION

Other activities or processes which may be a potential source of contamination are fluids that may leak or be released from the construction equipment.

A critical facet of construction equipment use is the fueling, lubrication and other maintenance of equipment while it is on site. Extra care must be taken by fuelers, oilers and mechanics during this work to avoid spillage or other release of fuels, lubricants, etc.

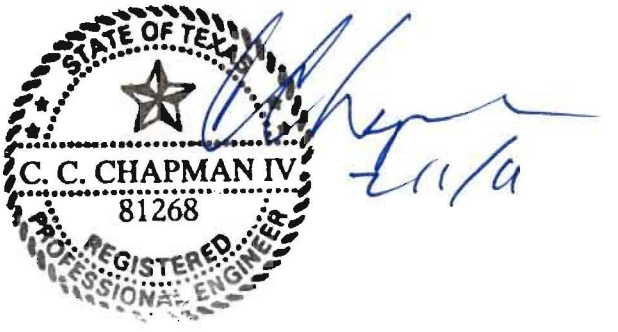
Attachment C

SEQUENCE OF MAJOR ACTIVITIES

The major activities which will disturb soils at the site during construction include the following:

- Clearing and grubbing of vegetation within the access easement and tower location where necessary (less than 0.24 acre);
- Installation of temporary BMPs (less than 0.02 acre);
- Excavation, filling and grading for structure foundations and driveway (less than 0.04 acre);
- Trenching, installation of utilities, filling and re-vegetation along trench (less than 0.01 acre);
- Installation or improvement of permanent BMPs (less than 0.11 acre);
- Removal of temporary BMPs (less than 0.02 acre).

Clearing and grubbing of some vegetation is necessary on this project, but the work must be limited to the careful removal of trees and shrubs. Root balls should be removed with the trees and shrubs whenever possible. All reasonable effort should be made to remove soil from the root ball, retaining that soil to be gently repacked in the depression opened by root ball removal. Disturbance of soils and grasses should be kept to the minimum possible extent, so that native grass cover and root zone continue to hold soils in place during rainfall events.



Attachment D

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

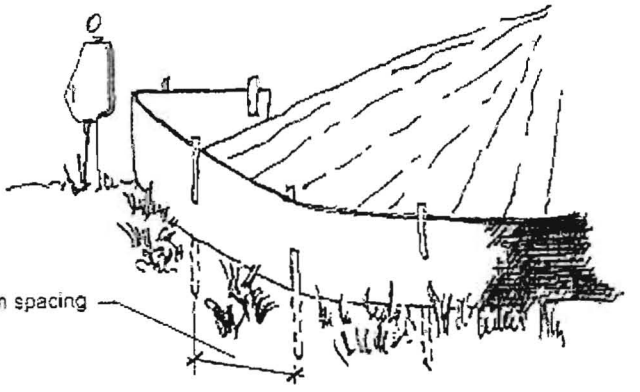
A combination of silt fences, rock berms and a rock-bedded construction entrance/exit will be used in locations shown on the following Temporary BMPs Plan map. The location of the rock berm may be modified based on field conditions observed during construction. The temporary BMPs will be installed on the downslope side of the construction area and the driveway. The silt fences and rock berms will filter out particles mobilized by storm water from the construction site before leaving the property. A construction entrance/exit will be installed for the arresting of soil and mud gathered by vehicles traversing through the construction area. All temporary BMPs will be constructed as described on the attached detail drawings. There are no sensitive geologic features or surface water features located on the property. All temporary BMPs will be installed as the site is cleared, and then removed once the construction has been completed and the soil disturbance is sufficiently stabilized, or when permanent controls are implemented. Below is a list of general notes pertaining to each type of temporary BMP utilized for this site.

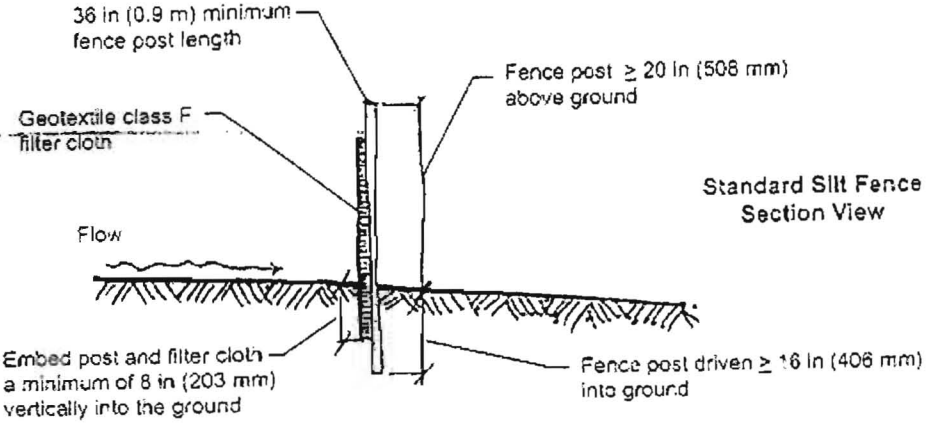
Silt Fences are used to intercept sediment while allowing stormwater to percolate through the fence. These fences are not utilized in areas of concentrated flow. Fence posts should be installed with a slight angle towards the uphill side of the fence. Posts shall be at least one foot into the ground and spaced no more than eight feet apart. The silt fence fabric is to be buried on the toe of the uphill side of the fence to a depth of at least eight inches and backfilled with compacted material.

Rock Berms are used in areas with concentrated flow to intercept sediment while allowing stormwater to percolate through the berm. Small, three- to five-inch diameter rock is enclosed within a woven wire mesh to ensure rock berm stability during incidents of large stormwater flow. In areas of low-flow volume, the wire mesh may be omitted. The berm is constructed perpendicular to the anticipated flow of stormwater and is most effective when placed within a three- to four-inch trench with the ends meeting the existing grade.

A Rock-Bedded Construction Entrance/Exit is utilized to provide a stable entrance/exit for construction vehicles and to limit or eliminate tracking or flow of sediment onto public roadways. Geotextile fabric will line the bottom of the entrance/exit with at least eight inches of compacted, four- to eight-inch diameter stone weighing down the fabric. If the slope towards the road exceeds 2%, then a ridge will need to be constructed (as shown in detail drawing) to divert stormwater flow.

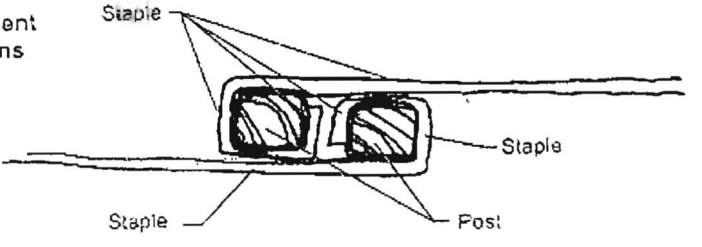
Standard Silt Fence
Perspective View



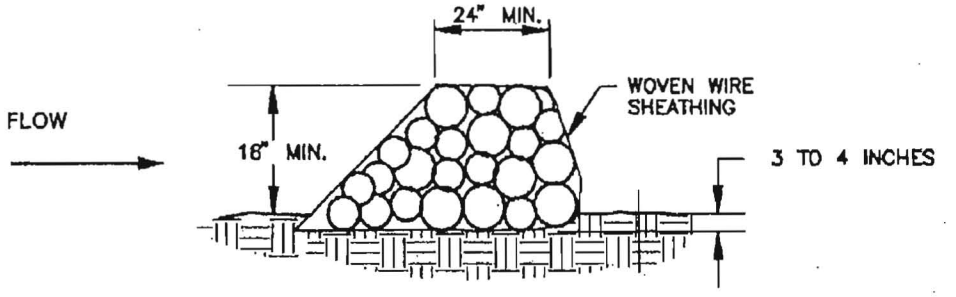


Standard Silt Fence
Section View

Joining Two Adjacent
Silt Fence Sections
Plan View

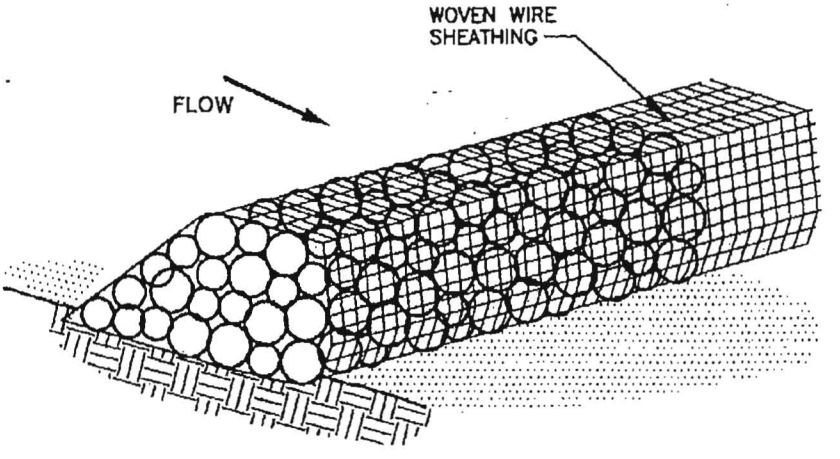


Silt
Fence



CROSS SECTION

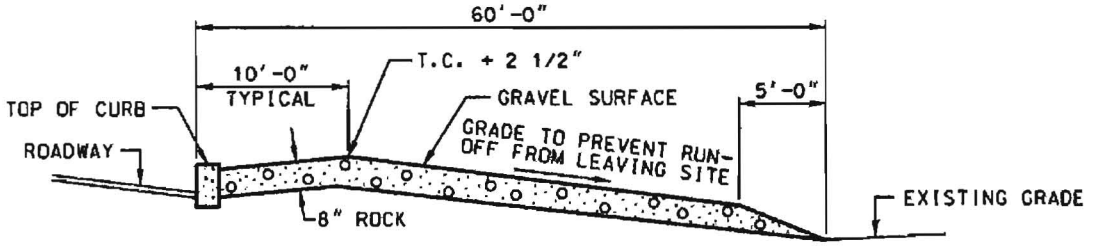
N.T.S.



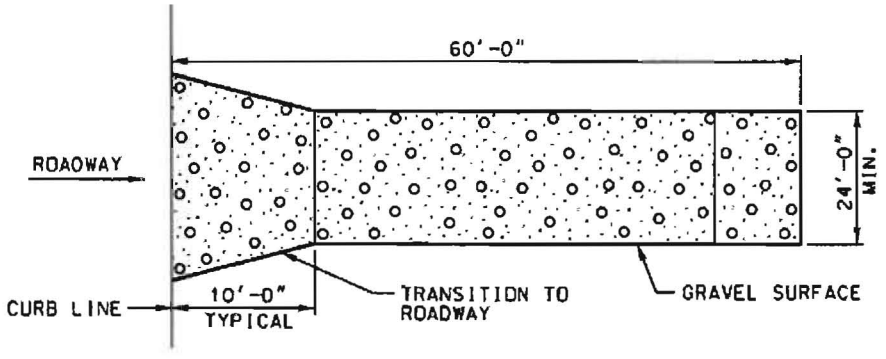
ISOMETRIC PLAN VIEW

N.T.S.

Rock Berm



PROFILE



PLAN VIEW

Rock-Bedded Construction Entrance/Exit

N

1 INCH

100 FEET

Key

- Property Boundary
- Silt Fence
- Rock Berm
- Proposed Structures

STATE OF TEXAS
C. C. CHAPMAN IV
81268
REGISTERED PROFESSIONAL ENGINEER

2/1/11

Chapman Engineering
P.O. BOX 1305
BOERNE, TEXAS 78006
(830) 816-3311
(800) 375-7747
FAX (830) 816-1753
A Texas Registered Engineering Firm F-8140

Date Revised: 1/19/2011
Revised By: Amanda Watson
Checked By: Cal Chapman

Countryside Tower
Site No. SX 3239
11844 FM 1863
Comal County, TX

Temporary BMPs

Attachment E

REQUEST TO TEMPORARILY SEAL A FEATURE

Not applicable. No temporary sealing of naturally occurring sensitive features will occur at the site.

Attachment F

STRUCTURAL PRACTICES

Runoff and the discharge of pollutants from exposed areas of the site will be limited by the following structural control practices:

- Silt fences;
- Rock berms;
- Rock bedding at construction entrance/exit.

These storm-water pollution control features will slow the velocity of runoff and enhance on-site sedimentation and capture of contaminants that may accumulate in storm water runoff exiting this development.

OTHER CONTROLS

Additional erosion, sediment, and pollution control practices include the following:

- Excavation material shall be placed on the uphill side of the trench when possible and/or applicable;
- Loaded haul trucks will be covered with tarpaulins;
- Any excess dirt tracked off-site shall be removed from roads daily;
- Disposal areas, stockpiles, and haul roads shall be constructed in a manner that will minimize and control the amount of sediment that may enter receiving waters.

Attachment G

DRAINAGE AREA MAP

Less than ten acres will be disturbed for this project. The entire site is part of a 3.0-acre drainage area that outfalls into unnamed tributaries of Dry Comal Creek. On-property temporary sediment controls for the drainage area are indicated on the map included in Attachment D.

Attachment H

TEMPORARY SEDIMENT POND(S) PLANS AND CALCULATIONS

No temporary sediment ponds or basins will be constructed at this site. Temporary BMPs for the site include: silt fence; rock berm, and a construction entrance/exit. Design plans for the temporary BMPs are included in Attachment D.

Attachment I

INSPECTION AND MAINTENANCE FOR BMPS

An inspection will be performed by a qualified inspector every 14 days and/or within 24 hours of every one-half inch or more of rain (as recorded on a non-freezing rain gauge to be provided and installed by the contractor at the project site). As an alternative, one inspection will be made every seven days, regardless of rainfall events. An inspection and maintenance report will be completed in writing for each inspection. Based on the inspection results, the controls shall be revised per the inspection report. If repairs are necessary, they shall be initiated within 24 hours of the report.

In the event of flooding or other uncontrollable situations which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable.

If modifications or additional temporary BMPs are necessary, changes must be implemented before the next storm event or as soon as practicable.

Every inspection report must be kept with the WPAP.

Inspection Criteria for erosion and sediment controls are as follows:

- The site preparation and construction-stage erosion and sediment controls are designed to retain sediment on site to the extent practical;
- All control measures must be properly installed and maintained in accordance with manufacturer's specifications and with project specifications;
- If sediment escapes the construction site, off-site accumulations of sediment must be removed immediately;
- Sediment must be removed from sediment traps when design capacity has been reduced by 50%;
- Litter, construction debris, and construction chemicals exposed to storm water shall be prevented from becoming a pollutant source for storm-water discharges;
- The construction entrance shall be maintained in a condition which will prevent/minimize tracking or flowing of sediments onto public roadways. Sediments spilled, dropped, washed or tracked onto public roadway must be removed immediately;
- Silt fences must be maintained to insure the following:
    - Torn fabric is replaced and loose fabric is properly secured;
    - Loose post supports are plumbed and strengthened;
    - Fabric bottom is buried as anchor for the silt fence face;
- Rock berms shall be cleaned by lifting, dropping and reshaping the stones as required. They should be maintained to insure positive drainage, and so that breaks are promptly repaired
- Rock-bedded construction entrance/exit shall be maintained to insure the following:
    - Sediment does not wash or track onto public road;
    - Foundation is stable but not too compacted, or too silted to hinder effectiveness.

STATE OF TEXAS
C. C. CHAPMAN IV
81268
PROFESSIONAL REGISTERED ENGINEER

2/11/16

Inspection Record

Date: _____

Pollution Prevention Measure	Condition	Comments/Description
General		
Revegetation		
Silt fences (torn, secured, silt buildup)		
Rock berms (silt buildup, draining, intact)		
Vehicle exits (silt buildup, compacted)		
Material areas		
Equipment areas		
Concrete rinse		
Construction debris		
Dumpsters		
Infrastructure		
Roadway clearing		
Utility clearing		
Roadway grading		
Utility construction		
Drainage construction		
Roadway base		
Site cleanups		
Building		
Clearing for building		
Foundation grading		
Utility construction		
Foundation construction		
Building construction		
Site grading		
Site cleanup		

By my signature below, I certify that all items are acceptable and the project site is in compliance with the WPAP.

_____ _____

Inspector's Name Inspector's Signature

_____ _____

Name of Jobsite Date

Attachment J

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Permanent on-site stabilization measures will include the following:

- Permanent planting, sodding, or seeding;
- Preservation of natural resources.

Disturbed areas on which construction activity has ceased (temporarily or permanently) shall be stabilized within 14 days unless further activities are scheduled, and resume within 21 days.

Where snow cover or frozen ground conditions hinder the initiation of stabilization measures by the 14th day, the stabilization measures must be initiated as soon as it is practical.

In arid areas, semiarid areas, and areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased, stabilization measures must be initiated as soon as practicable. Where vegetative controls are not feasible due to arid conditions, the operator shall install non-vegetative erosion controls or temporary sediment controls. The operator must document in the WPAP the reason why stabilization measures are not feasible, and must demonstrate that the perimeter controls will retain sediment on site to the maximum practical extent.

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: Countryside Tower Site (Site No. SX 3239)

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. ___ 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.**

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

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

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

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

__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. N/A 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:

Douglas McGookey
Print Name of Customer/Agent

Signature of Customer/Agent

2-1-11
Date

Attachment A

20% OR LESS IMPERVIOUS COVER WAIVER

The site will not be used for a multi-family residential development, school or small business, and is not eligible for the impervious cover waiver.

Attachment B

BMPs FOR UP-GRADIENT STORMWATER

The site will utilize permanent vegetative filter strips to filter out particles from storm water prior to that water leaving the property. Up-gradient storm water that flows through the property is filtered through these strips as well. Vegetative filter strips are utilized in areas of low-velocity flow for the filtration of fine particles from within storm water. The vegetative filter strip will consist of dense, natural vegetation with a slope of less than five percent. The entirety of vegetative filter strip areas will be under the control of the applicant and maintained as detailed below. The vegetative filter strips will be maintained in the areas indicated on the following Permanent BMP map with a minimum width of 15 feet perpendicular to the flow of storm water. Weeding, replanting and general maintenance should be done more frequently in the first couple of years until the site vegetation is well-established. Basic maintenance of the vegetative filter strips includes:

- With native grasses in place, mowing should be performed a minimum of twice a year with a mulching mower;
- Fertilizer, insecticide and herbicide use should be kept to a minimum;
- Debris and litter should be removed no less than four times a year to reduce "floatables" being washed downstream;
- In the event that excess sediment accumulates and interferes with flow patterns, the excess sediment should be removed by hand or with flat-bottomed shovels;
- Bare spots and eroded areas must by filled, compacted, reseeded and restored as quickly as possible with similar native grasses;
- Irrigation may be required during dry periods to maintain vegetative health and site stability.

The required or recommended schedule of inspection for vegetative filter strips is described in Attachment G, below.

N

1 INCH

100 FEET

Key

Property Boundary

Proposed Structures

Vegetative Filter Strip

STATE OF TEXAS
C. C. CHAPMAN IV
81268
REGISTERED PROFESSIONAL ENGINEER

Chapman Engineering
P.O. BOX 1305
BOERNE, TEXAS 78006
(830) 816-3311
(800) 375-7747
FAX (830) 816-1753
A Texas Registered Engineering Firm F-8140

Date Revised: 1/27/2011
Revised By: Amanda Watson
Checked By: Cal Chapman

Countryside Tower
Site No. SX 3239
11844 FM 1863
Comal County, TX

Permanent BMPs

Attachment C

BMPs FOR ON-SITE STORMWATER

Vegetative filter strips will be utilized to maintain quality for stormwater originating on-site or flowing away from the property. The vegetative filter strips will be constructed as described in Attachment B and placed in the locations indicated on the Permanent BMP map. Once the site has become stabilized and the permanent BMPs are in place, regular operational use, routine maintenance, and inspections by the Applicant are the only activities anticipated. Soils may be disturbed by these typical operations, and the vegetative filter strips are intended to reduce sediment particles leaving the property, long-term. No other contaminant types are expected in the future.

Attachment D

BMPs for Surface Streams

No sensitive features were identified in the Geologic Assessment. Vegetative filter strips described in Attachment B will be utilized to maintain stormwater quality before the stormwater leaves the property and enters the surface stream southeast of the property.

Attachment E

REQUEST TO SEAL FEATURES

Not applicable. No sealing of naturally occurring sensitive features will occur at the site. No sensitive features were identified on the property in the Geologic Assessment.

Attachment F

CONSTRUCTION PLANS

The site will utilize permanent vegetative filter strips to filter out particles from storm water prior to that water leaving the property. Up-gradient stormwater that flows through the property is filtered through these strips as well. Vegetative filter strips are utilized in areas of low-velocity flow for the filtration of fine particles from within storm water.

The vegetative filter strip will consist of dense, natural vegetation with a slope of less than five percent. The entirety of vegetative filter strip areas will be under the control of the applicant and maintained as detailed below. The vegetative filter strips will be maintained in the areas indicated on the following Permanent BMP map with a minimum width of 15 feet perpendicular to the flow of storm water.

The vegetative filter strip soil surface should be hydro-seeded and fertilized in a single treatment, or amended with native grass seed and composted mulch (one inch, average, of free mulch thickness to be mixed with native soil as available).

Vegetated filter strips require regular inspection to ensure proper distribution of flows, examine for signs of rill formation, and check for and remove accumulated sediment. Weeding, replanting and general maintenance should be done more frequently in the first couple of years until the site is well-established.

If a concentrated flow path is apparent across any portion of the vegetative filter strip, a "flow spreader" (also called "level spreader") device must be installed across the flow path. This may be rock berm material, with or without wire wrap. The flow spreader will diffuse the water flow and provide "sheet flow" conditions.

Basic maintenance of the vegetative filter strips includes:

- With native grasses in place, mowing should be performed a minimum of twice a year with a mulching mower;
- Fertilizer, insecticide and herbicide use should be kept to a minimum;
- Debris and litter should be removed no less than four times a year to reduce "floatables" being washed downstream;
- In the event that excess sediment accumulates and interferes with flow patterns, the excess sediment should be removed by hand or with flat-bottomed shovels;
- Bare spots and eroded areas must by filled, compacted, reseeded and restored as quickly as possible with similar native grasses;
- Irrigation may be required during dry periods to maintain vegetative health and site stability.

The required or recommended schedule of inspection for vegetative filter strips is described in Attachment G, below.

Attachment G

INSPECTION, MAINTENANCE, REPAIR and RETROFIT PLAN

Vegetative filter strips should be inspected at least monthly during the first few months after establishment to identify and repair problems. An additional inspection should be conducted after every heavy rainfall event to determine the effectiveness of the controls. These inspections and maintenance activities should reduce weed production and insect infestation, which will in turn reduce any need for chemical use. Bare spots and erosion concerns should be addressed immediately to prevent further damage. Once the vegetative filter strips are well-established with minimal further attention required according to inspection data, inspections can be reduced to no less than four times a year.

All inspections are to be documented through completion of the attached form. Records should be kept with a copy of the WPAP. The vegetative filter strips should be maintained as described in Attachment B.

2/9/11

LARRY MCCLUNG
PROJECT MANAGER
AMERICAN TOWER

STATE OF TEXAS
C. C. CHAPMAN IV
81268
REGISTERED
PROFESSIONAL ENGINEER

2/11/11

RECEIVED TCEQ
SAN ANTONIO
REGION
2011 FEB 11 PM 4:24

Attachment G

INSPECTION, MAINTENANCE, REPAIR and RETROFIT PLAN

Vegetative filter strips should be inspected at least monthly during the first few months after establishment to identify and repair problems. An additional inspection should be conducted after every heavy rainfall event to determine the effectiveness of the controls. These inspections and maintenance activities should reduce weed production and insect infestation, which will in turn reduce any need for chemical use. Bare spots and erosion concerns should be addressed immediately to prevent further damage. Once the vegetative filter strips are well-established with minimal further attention required according to inspection data, inspections can be reduced to no less than four times a year.

All inspections are to be documented through completion of the attached form. Records should be kept with a copy of the WPAP. The vegetative filter strips should be maintained as described in Attachment B.

Inspection Record

Date: _____

Pollution Prevention Measure	Condition	Comments/Description
General		
Vegetative Growth/Height		
Bare spots		
Weed growth		
Excess sediment		
Insect nuisance		
Animal nuisance		
Debris/trash		
Drainage pathways		

Need to be Scheduled	Yes	No	Comments/Description
Mowing			
Insect pest control (specify type)			
Animal pest control (specify type)			
Removal of sediment			
Removal of debris/trash (specify amount/equipment necessary)			

Additional Comments: _____

_____

_____

By my signature below, I certify that all items are acceptable and the project site is in compliance with the WPAP.

_____ _____

Inspector's Name Inspector's Signature

_____ _____

Name of Jobsite Date

Attachment H

PILOT-SCALE FIELD TESTING PLAN

Not applicable. The TCEQ Technical Guidance Manual was utilized to design the permanent BMPs for this site.

Attachment I

MEASURES for MINIMIZING SURFACE STREAM CONTAMINATION

Vegetative filter strips will be utilized to maintain storm-water quality before that water enters the unnamed tributary of Dry Comal Creek. The installation and maintenance of the vegetative filter strips are described in Attachments B, F and G, with inspection criteria outlined in Attachment G. The use of native grasses allows no change to the existing grade of the property. There will be no grading activities during the construction of the tower site that would alter the flow velocity of storm water flowing through the property once permanent controls have been established. Regular inspections and maintenance of the controls will prevent alteration in drainage pathways on the property. The controls will prevent the property improvements from causing an increase of stream flashing, stronger flows, increased in-stream velocities and other erosion-related effects on the tributary.

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

I Steven Cockman,
Print Name

Senior Project Manager,
Title - Owner/President/Other

of American Tower Corporation,
Corporation/Partnership/Entity Name

have authorized Douglas McGookey, PG
Print Name of Agent/Engineer

of Medina Consulting Company, Inc.
Print Name of Firm

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

I also understand that:

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

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

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

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

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

SIGNATURE PAGE:

Steven Cockman
Applicant's Signature

12/1/10
Date

THE STATE OF North Carolina §

County of Wake §

BEFORE ME, the undersigned authority, on this day personally appeared Steven Cockman 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 1st day of December, 2010.

Christie L. Fox
NOTARY PUBLIC

Christie L. Fox
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: February 24, 2014

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

NAME OF PROPOSED REGULATED ENTITY: Countryside Tower Site (Site No. SX 3239)
REGULATED ENTITY LOCATION: 11844 Farm to Market Road 1863, New Braunfels, Texas, 78132
NAME OF CUSTOMER: American Tower Corporation
CONTACT PERSON: Douglas McGookey, PG PHONE: 210 694-4545
(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
512/239-1278

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	0.34 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

2-1-11
Date

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

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

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

Water Pollution Abatement Plans and Modifications
Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

PROJECT	FEE
Exception Request	$500

Extension of Time Requests

PROJECT	FEE
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

[X] 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.)*

[X] Yes [ ] No — Countryside Tower Site (Site No. SX 3239) Water Pollution Abatement Plan (WPAP)

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 601401458		RN

SECTION II: Customer Information

5. Effective Date for Customer Information Updates (mm/dd/yyyy): November 30, 2010

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

[X] 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) [X] No Change**

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

8. Type of Customer:			
[ ] City Government	[X] Corporation	[ ] Individual	[ ] Sole Proprietorship- D.B.A
[ ] Other Government	[ ] County Government	[ ] Federal Government	[ ] State Government
	[ ] General Partnership	[ ] Limited Partnership	[ ] Other:

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

American Tower Corporation

10. Mailing Address:

Wilder Castillo
16500 Henderson Pass, Suite 309

City	State	ZIP	ZIP + 4
San Antonio	Texas	78232	

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

12. E-Mail Address *(if applicable)*: wilder.castillo@americantower.com

13. Telephone Number: (210) 387-5725 — 14. Extension or Code — 15. Fax Number *(if applicable)*: ( ) -

16. Federal Tax ID *(9 digits)*	17. TX State Franchise Tax ID *(11 digits)*	18. DUNS Number *(if applicable)*	19. TX SOS Filing Number *(if applicable)*
	17604488084		

20. Number of Employees: [ ] 0-20 [ ] 21-100 [ ] 101-250 [ ] 251-500 [ ] 501 and higher

21. Independently Owned and Operated? [X] 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)*

[X] 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)*

Countryside Tower Site (Site No. 3239)

24. Street Address of the Regulated Entity: *(No P.O. Boxes)*	11844 Farm to Market Road 1863							
	City	New Braunfels	State	Texas	ZIP	78132	ZIP + 4	
25. Mailing Address:	Not Applicable - unmanned facility							
	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)
4812		517210	

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

195-foot tall self support tower, equipment building, fence, and access road for a cellular communication facility

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

35. Description to Physical Location:	The Site is east of the intersection of Farm to Market Road 1863 and Schoenthal Road on the south side Farm to Market Road 1863 across the road from the Countryside subdivision

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

37. Latitude (N) In Decimal:	28.709453		38. Longitude (W) In Decimal:	-98.249842	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	42	34.03	-98	14	59.43

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:	Douglas McGookey, PG	41. Title:	Principal Geologist/Vice President

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(210) 694-4545		(210) 694-4577	dmcgookey@medinacci.com

SECTION V: Authorized Signature

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

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

Company:	Medina Consulting Company, Inc.	Job Title:	Principal Geologist/Vice President
Name *(In Print)*:	Douglas McGookey, PG	Phone:	(210) 694- 4545
Signature:		Date:	November 30, 2010