



City of Farmington
354 W. Main Street
P.O. Box 150
Farmington, AR 72730
479-267-3865
479-267-3805 (fax)

SPECIAL PLANNING COMMISSION AGENDA
April 16, 2012

**A special meeting of the Farmington Planning Commission will be held on
Monday, April 16, 2012 at 6:00 p.m. at City Hall
354 W. Main Street, Farmington, Arkansas.**

1. Roll Call
2. New Business
 - A. **Telecommunications Permit: CRB Companies, LLC (AT&T)**
Property Location: 12381 Jimmy Devault Rd.
Owner: SBA Communications
Presented by: Stephanie Wilson

City of Farmington
Application for a Telecommunications Permit

Please fill out this form completely, supply all necessary information to support your request. Your application will not be placed on the agenda for Planning Commission until all information is furnished.

CRB Companies, LLC
Applicant: Stephanie Wilson Day Phone: 918-949-4551 X10
Address: 1511/2 S. Boston Ave ^{ST-115 74119 Tulsa OK} Fax: 918-949-4557
Representative: Stephanie Wilson Day Phone: 918-633-3174 cell
Address: same Fax: same
Property Owner: _____ Day Phone: _____
Address: _____ Fax: _____

Indicate where correspondence should be sent (circle one): Applicant Representative -- Owner

Fee: A non-refundable review fee of **\$2500** for co-location request and **\$5000** for a new tower is required at the time the application is accepted.

Fee paid \$ _____ Date _____ Receipt # _____

Describe Proposed Property (Attach additional pages if necessary)

Property Description

Site Address -- 12381 Jimmy Devault Rd

Current Zoning -- _____

Property size (acres, square feet) -- _____

Attach legal description:

Financial Interests

The following entities or people have a financial interest in this project:

AT&T mobility

Applicant/Representative: I certify under penalty of perjury that the foregoing statements and answers herein made, all data, information and evidence herewith submitted are in all respects, to the best of my knowledge and belief, true and correct. I understand that submittal of incomplete, incorrect or false information is grounds for invalidation of the application. I understand that the City of Farmington may not approve my application or may set conditions on approval.

Stephanie Wilson Date 4/9/12
Applicant Signature

Property Owner/Authorized Agent: I certify under penalty of perjury that I am the owner of the property that is the subject of this application and that I have read this application and consent to its filing. (If signed by the authorized agent, a letter from the property owner must be provided indicating that the agent is authorized to act on his behalf.)

see attached consent Date _____
Owner/Agent Signature

State of Arkansas
County of Washington

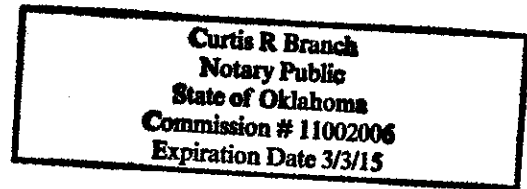
On this the 9th day of April, 2012, the undersigned notary, personally appeared Stephanie Wilson known to me (or satisfactorily proven) to be the person whose name(s) is/are subscribed to the within instrument and acknowledged that he/she/they executed the same for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.



Notary Public

My Commission expires: 3/3/15





T + 561.995.7670
F + 561.995.7626

sbsite.com

April 8, 2012

City of Farmington
Attn: Melissa McCarville

RE: Application for Telecommunications Permit

To Whom It May Concern:

AT&T has applied for additional equipment placement on the following structures owned by SBA Communications. AT&T's intent is to add to their existing loading on the tower to enhance cellular communications in the surrounding area. AT&T will comply with all requests made by SBA, in order to gain approval to perform the work requested. AT&T will be required to comply with all regulations set forth by the City of Farmington, in order for the approval by SBA to be released. The following tower locations that AT&T will be performing work are listed below in site name/site number format. The specific location information can be found on AT&T's application.

- AR21828-A-01 Jimmy Devault Rd Tower

If any questions arise with consent to perform the work by SBA, please feel free to contact me.

Thank you,

Sincerely,

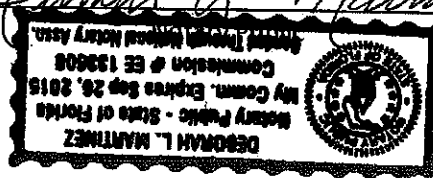
Brian Allen
Vice President, Site Marketing
SBA Structures, Inc.

:da

On this 9th day of April, 2012, the undersigned notary, personally appeared Brian Allen known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained.

In Witness whereof I hereunto set my hand and official seal.

My Commission expires: _____



Telecommunications Permit Application Checklist:

Yes No N/A, why?

1. Completed application form which includes: name and address of person preparing application, name and address of property owner, including written, notarized documentation to verify that the applicant has permission to locate on property, zoning district, size of property, postal address and tax parcel number.	X		
2. Payment of application fee.	X		
3. A descriptive statement of the objective(s) for the new facility or material modification and the need for the type of facility and/or capacity requirements.	X		
4. The applicant shall provide documentation that substantiates the need for the new wireless telecommunications facility or a material modification of an existing facility to provide service. Such documentation shall include propagation studies of the proposed site and all adjoining planned, proposed, in-service sites and existing sites out of service that demonstrate a significant gap in coverage. If additional capacity is the objective, applicants shall include an analysis of current and projected usage. Such propagation studies (including all backup data and assumptions used) shall show signal propagation at the height of the proposed antenna(s) and at each increment of ten (10) feet lower, to require verification at each increment of the applicant's need for the proposed height.			N/A existing
5. Fifteen (15) copies of the site plan folded to a size of no greater than 10" X 10 1/2".	X		
6. List of adjacent property owners and copy of notification letter sent.			N/A
7. White receipts from post office and green cards from registered letters (at least 7 days prior to the meeting).			N/A
8. Proof of publication of public hearing notice, should be published a minimum of 10 days prior to planning commission meeting (proof must be provided at least 7 days prior to the meeting).			N/A
The Following Shall Appear on the Site Plan:			
1. Names, addresses and telephone numbers of the record owners, applicant, surveyor, architect, engineer and person preparing the plat.	X		
2. Names, addresses and property lines and zoning of all property owners adjacent to the exterior boundaries of the project including across streets and rights of way shall be located at the general location of their property.*			N/A
3. North arrow, graphic scale, acreage, date of preparation, zoning classification and proposed use.	X		
4. Complete and accurate legend.	X		
5. Title block located in the lower right hand corner indicating the name and type of project, scale, firm or individual preparing drawings, date and revision.	X		
6. Note regarding wetlands determination, if any. Note if Army Corps of Engineers determination is in progress.			N/A none
7. Written legal description. (If the project is in more than one tract the legal for each individual tract must be provided.)	X		
8. P.O.B. from a permanent well-defined reference point, P.O.B. must be clearly labeled.	X		

9. Clear representation of the FEMA Designated 100-year Floodplain and or Floodway and base flood elevations. Reference the FIRM panel number and effective date and the Corps of Engineers Flood Hazard Study.			N/A existing
10. Status of regulatory permits:			N/A
a. NPDES Storm water Permit			
b. 404 Permit			
c. Other			
11. Provide a benchmark, clearly defined with a precision of 1/100 th of a foot. This benchmark must be tied to NAVD 88 datum; Benchmarks include but are not limited to, the following: fire hydrant, manhole rim, drainage structure abutment, etc.			N/A
12. Spot elevations at grade breaks along the flow line of drainage swales.			NA
13. A general vicinity map of the project at a scale of 1" = 2000'			NA
14. The location of all existing structures. Dimensions of buildings and setbacks from the building to property lines.			NA
15. Street right-of-way lines clearly labeled. The drawing shall depict any future ROW needs as determined by the AHTD and/or Master Street Plan. Future ROW as well as existing ROW and center lines should be shown and dimensioned.			NA
16. Existing topographic information with source of the information noted. Show:			NA
a. Two foot contour for ground slope between level and ten percent.			NA
b. Four foot contour interval for ground slope exceeding 10%.			NA
17. Preliminary grading plan.			NA
Existing Utilities and Drainage Improvements (Copy of the Drainage Criteria Manual can be obtained from the City of Farmington)			
1. Show all known on site and off-site existing utilities, drainage improvements and easements (dimensioned) and provide the structures, locations, types and condition and note them as "existing" on the plat.			N/A existing
2. Existing easements shall show the name of the easement holder, purpose of the easement, and book and page number for the easement. If an easement is blanket or indeterminate in nature, a note to this effect should be placed on the plan.			N/A existing
Proposed Utilities			
1. Regarding all proposed storm sewer structures and drainage structures:			NA
a. Provide structure location and types.			NA
b. Provide pipe types and sizes.			NA
2. Regarding all proposed sanitary sewer systems			NA
a. Provide pipe locations, sizes and types.			NA
b. Manhole locations.			NA
3. Note the occurrence of any previous sanitary sewer overflow problems on-site or in the proximity of the site			NA
4. If a septic system is to be utilized, note that on the plat. Show the location and test data for all percolation tests.			NA
5. Regarding all proposed water systems on or near the site:			NA
a. Provide pipe locations, sizes and types.			NA
b. Note the static pressure and flow of the nearest hydrant.			NA

c. Show the location of proposed fire hydrants, meters, valves, backflow preventers and related appurtenances.			N/A
6. All proposed underground or surface utility lines if determined: (this category includes but is not limited to telephone, electrical, natural gas and cable.)			N/A
a. Locations of all related structures.			N/A
b. Locations of all lines above and below ground.			N/A
c. A note shall be placed where streets will be placed under the existing overhead facilities and the approximate change in the grade for the proposed street.			N/A
7. The width, approximate locations and purposes of all proposed easements or rights-of-way for utilities, drainage, sewers, flood control, ingress/egress or other public purposes within and adjacent to the project.			N/A
Proposed and Existing Streets, Rights-of-way and Easements			
1. The location, widths and names (avoid using first names of people for new streets) of all existing and proposed streets, allies, paths and other rights-of-way, whether public or private within and adjacent to the project; private easements within and adjacent to the project; and the centerline curve data; and all curb return radii. Private streets shall be clearly identified and named.			N/A
2. A Layout of adjoining property sufficient detail to show the affect of proposed and existing streets (including those on the master street plan), adjoining lots and off-site easements. This information can be obtained from the Master Street Plan.			N/A
3. The location of all existing and proposed street lights (at every intersection, cul-de-sac and every 300 feet, and associated easements to serve each light.)			N/A
Site Specific Information			
1. Provide a note describing any off site improvements.			N/A
2. The location of known existing or abandoned water wells, sumps, cesspools, springs, water impoundments and underground structures within the project.			N/A
3. The location of known existing or proposed ground leases or access agreements, if known. (e.g. shared parking lots, drives, areas of land that will be leased.)			N/A
4. The location of all known potentially dangerous areas, including areas subject to flooding, slope stability, settlement, excessive noise, previously filled areas and the means of mitigating the hazards (abatement wall, signage, etc.)			N/A
5. The boundaries, acreage and use of existing and proposed public area in and adjacent to the project. If land is to be offered for dedication for park and recreation purposes it shall be designated.			N/A
6. For large scale residential development, indicate the use and list in a table the number of units and bedrooms.			N/A
7. For non-residential use, indicate the gross floor area and if for multiple uses, the floor area devoted to each type of use. (Large Scale Developments only.)			N/A
8. The location and size of existing and proposed signs, if any.			N/A
9. Location and width of curb cuts and driveways. Dimension all driveways and curb cuts from side property line and surrounding intersections.			N/A
10. Location, size, surfacing, landscaping and arrangement of			N/A

parking and loading areas. Indicate pattern of traffic flow; include a table showing required, provided and handicapped accessible parking spaces. (Large Scale Developments only.)			
11. Location of buffer strips, fences or screen walls, where required (check the zoning ordinance).			NA
12. Location of existing and purposed sidewalks.			NA
13. Finished floor elevation of existing and purposed structures.			NA
14. Indicate location and type of garbage service (Large Scale Developments only.) Dimension turnaround area at dumpster location.			NA
15. A description of commonly held areas, if applicable.			NA
16. Draft of covenants, conditions and restrictions, if any.			NA
17. Draft POA agreements, if any.			NA
18. A written description of requested variances and waivers from any city requirements.			NA
19. Show required building setbacks for large scale developments. Provide a note on the plat of the current setback requirements for the subdivision. A variance is necessary from the Board of Adjustment for proposed setbacks less than those set forth in the zoning district.			NA
20. Preliminary drainage plan as required by the consulting engineer.			NA
Telecommunications Structure Specific Information			
1. Location, size and height of all existing and proposed structures.	X		
2. The type, locations and dimensions of all proposed and existing landscaping, and fencing.	X		
3. The number and azimuth, size and center line height location of all proposed and existing antennas on the supporting structure.	X		
4. The number and type of the antenna(s) proposed with a copy of the specification sheet.	X		
5. The make, model, type and manufacturer of the tower and design plan stating the tower's capacity to accommodate multiple users.			NA / existing
6. A site plan describing the proposed tower and antenna(s) and all related fixtures, structures, appurtenances and apparatus, including height above preexisting grade, materials, color and lighting.			NA existing
7. The frequency, modulation and class of service of radio or other transmitting equipment.			NA existing
8. The actual intended transmission power stated as the maximum effective radiated power in watts.			NA existing
9. Verified documentation which proves that the wireless telecommunication facility with the proposed installation or modifications will be in full compliance with current RF emissions guidelines established by the FCC. If the new facility or proposed modifications are not categorically excluded (i.e., likely to cause exposure in excess of the FCC's			NA existing

guidelines), a complete RF emissions study is required to provide verification.			
10. A copy of the FCC license applicable for the intended use of the wireless telecommunications facilities if the applicant is not licensed by the FCC.			N/A
11. A copy of the geotechnical sub-surface soils investigation, evaluation report and foundation recommendation for a proposed or existing tower site and if existing tower or water tank site, a copy of the installed foundation design.			N/A existing
12. A copy of the City of Farmington business license.			

**All applicants submitting preliminary plats and Large Scale Developments before the Farmington Planning Commission shall provide written notice of the time and place of the regular or special meeting to the owners of all real property adjacent to the project. The notice shall include the name and address of the applicant, location of the project, and the time and place of the scheduled meeting. Notices shall be sent by certified mail, return receipt requested, to the last known address shown on the most recent tax records at the Washington County Tax Collector's Office. (A sample notification and affidavit is attached.) Applicants must submit a verified affidavit attesting to the delivery of the notice to all owners of real property adjacent to the project, a copy of the notice to each property owner, and copies of receipts evidencing pre-paid postage for each notice. The affidavit and supporting documents referred to above must be submitted seven (7) days prior to the regular or special meeting of the planning commission.*

April 12, 2012

Ms. Melissa McCarville
City Business Manager
354 W. Main
P.O. Box 150
Farmington, AR. 72730

Re: AT&T Mobility Cell Tower Modification Review
Farmington, Arkansas
MWY Project No. F-25AWE

Dear Melissa:

Pursuant to your request, we have reviewed the application for a telecommunications permit submitted by AT&T Mobility for the site at 12377 Jimmy Devault Road, and our comments are summarized below:

General Application Review:

We reviewed the submitted application for general compliance with the requirements of Ordinance No. 2009-06, and we have noted the following with corresponding sections of the Ordinance for reference:

1. Section 7 (E) – The survey attached to the application may illustrate rights-of-way or easements pertinent to the requirement of this section. However, the scale and resolution of the survey copy was not legible and we could not confirm the information.
2. Section 7 (F) - Written statements regarding intent for maintenance described in this ordinance section were not found in the application.
3. Section 7 (H) 6 – The Farmington zoning district was not found in the application.
4. Section 7 (H) 12 – The specification sheet of the proposed antenna was not found in the application
5. Section 7 (H) 15 – The frequency, modulation and class of service of radio or other transmitting equipment was not found in the application.
6. Section 7 (H) 16 – The actual intended transmission power stated as the maximum effective radiated power in watts was not found in the application.
7. Section 7 (H) 18 – A copy of the FCC permit was not found in the application.

8. Section 7 (H) 20 – Copy of the City of Farmington Business License was not provided.
9. Section 7 (M) – Signed documentation of the condition of the existing tower was not found in the application.
10. Section 21 – A performance bond in the amount of \$5,000 for a telecommunication co-location was not found or referenced in the application.
11. Section 23 – Proof of public liability insurance for personal injuries, death and property damage was not found in the application. Required policy limits are at least \$1,000,000 per occurrence and \$3,000,000 aggregate.
12. The application was not signed by the property owner. However a letter has been provided by the owner confirming consent to perform work.

Review of Plans and Structural Calculations:

We reviewed the plans and structural calculations for general compliance with the requirements of Ordinance No. 2009-06 and found them to be in general compliance. The plans and calculations also appear to be within the standards of engineering practice.

Limitations of our Review:

Please note that the scope of our work was limited to a review of the application for general compliance with the city's Ordinance. The detailed design of the improvements is the responsibility of the professional engineers that seal the plans and calculations. By reviewing the application and attachments, McGoodwin, Williams, and Yates accepts no responsibility for the design of the facility and makes no warranties or guarantees regarding the adequacy of the design.

As always, we appreciate the opportunity to be of service to the city of Farmington. If you have any questions or comments, please do not hesitate to contact us.

Sincerely,

Brad B. Hammond, P.E.
President

BBH:bh



FDH Engineering, Inc., 2730 Rowland Rd. Raleigh, NC 27615, Ph. 919.755.1012, Fax 919.755.1031

**Structural Analysis for
SBA Network Services, Inc.**

300' Self-Support Tower

**SBA Site Name: Jimmy Devault Rd
SBA Site ID: AR21828-A
AT&T Site ID: AR2705
AT&T Site Name: AWE - Farmington**

FDH Project Number 12-01202E S1

Analysis Results

Tower Components	104.9%	Sufficient
Foundation	85.4%	Sufficient

Prepared By:

Bradley Smith, EI
Project Engineer

Reviewed By:

Christopher M Murphy, PE
President
AR PE License No. 11912

FDH Engineering, Inc.
2730 Rowland Rd.
Raleigh, NC 27615
(919) 755-1012
info@fdh-inc.com



January 10, 2012

Prepared pursuant to TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

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EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed a structural analysis of the existing self-supported tower located in Farmington, AR to determine whether the tower is structurally adequate to support both the existing and proposed loads pursuant to the *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, TIA/EIA-222-F*. Information pertaining to the existing/proposed antenna loading, soil parameters, current tower geometry, the member sizes, and foundation dimensions was obtained from:

- Stellar Communications Inc. (Job No. 5113) original design drawings dated November 24, 2000
- GeoSystems Engineering, Inc. (Job No. 3005269) Subsurface Exploration and Geotechnical Report dated November 21, 2000
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards is 70 mph without ice and 19 mph with 1" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from AT&T in place at 250 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundations were designed and constructed to support the original design reactions (see Stellar Job No. 5113), the foundations should have the necessary capacity to support the existing and proposed loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH Engineering, Inc. is accurate (i.e., the steel data, tower layout, existing antenna loading, and proposed antenna loading) and that the tower has been properly erected and maintained per the original design drawings.

Recommendations

To ensure the requirements of the *TIA/EIA-222-F* standards are met with the existing and proposed loading in place, we have the following recommendations:

1. Coax lines must be installed as shown in **Figure 1**.
2. The proposed RRUs should be installed directly behind the existing and proposed panel antennas.

APPURTENANCE LISTING

The proposed and existing antennas with their corresponding cables/coax lines are shown in **Table 1**. *If the actual layout determined in the field deviates from the layout, FDH Engineering, Inc. should be contacted to perform a revised analysis.*

Table 1 - Appurtenance Loading

Existing Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
296	(6) Celwave APL868013 (3) Antel BXA-70063/4CF-2	(12) 1-5/8"	Verizon	294	(3) T-Frames
280	(6) Andrew TMBXX-6517-R2M (6) Andrew ETT19V2S12UB TMAs	(12) 1-5/8"	T-Mobile	280	(3) T-Frames
250	(6) Kathrein 800 10123 (6) Decibel DB980H90T2 (12) Powerwave LGP 17205 TMAs (12) Kathrein 860-10025 RCUs	(12) 1-5/8" (1) 3/8"	AT&T	250	(3) T-Frames

Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
250	(6) Kathrein 800 10123 (3) Powerwave P65-17-XLH-RR (12) Powerwave LGP17205 TMAs (12) Powerwave 7020.00 RETs (3) Ericsson RBS6000 RRUs (12) Powerwave CM1007-DBPXBC-003 Diplexers (1) Raycap DC6-48-60-18-8F Surge Arrestor	(12) 1-5/8" (1) 3/8" RET Cable (3) 3/8" Fiber Cables (1) 1/2" Power Cable	AT&T	250	(3) T-Frames

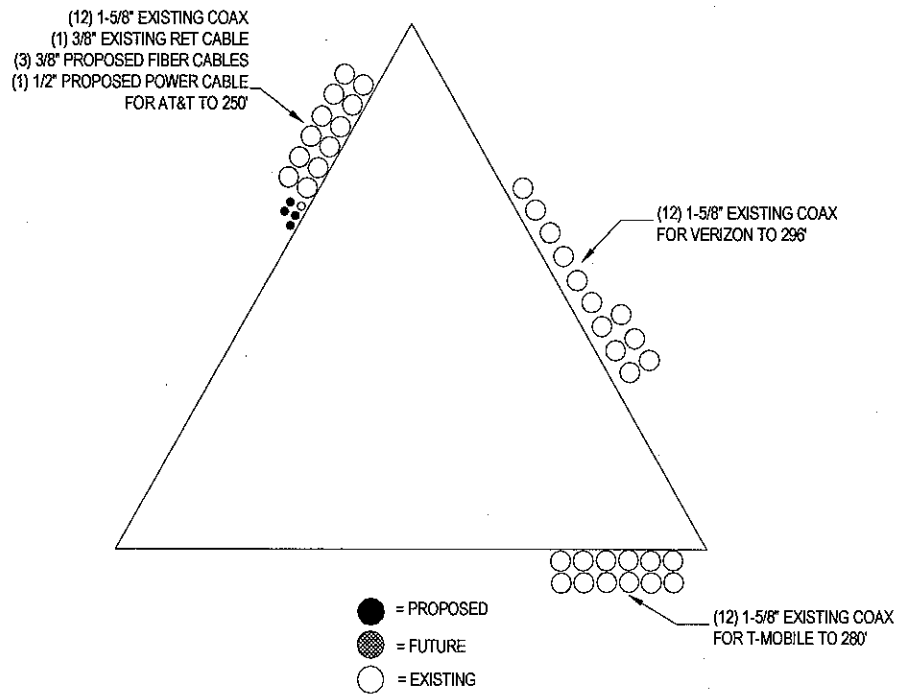


Figure 1 - Coax Layout

RESULTS

The following yield strength of steel for individual members was used for analysis:

Table 2 - Material Strength

Member Type	Yield Strength
Legs	50 ksi
Bracing	36 ksi

Table 3 displays the summary of the ratio (as a percentage) of force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. *Note: Capacities up to 105% are considered acceptable.* **Table 4** displays the maximum foundation reactions.

If the assumptions outlined in this report differ from actual field conditions, FDH Engineering, Inc. should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the existing or proposed appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information

Table 3 - Summary of Working Percentage of Structural Components

Section No.	Elevation ft	Component Type	Size	% Capacity	Pass Fail
T1	300 - 280	Leg	1 3/4	34.3	Pass
		Diagonal	L1 3/4x1 3/4x3/16	16.5 29.1 (b)	Pass
		Top Girt	L1 3/4x1 3/4x3/16	0.7	Pass
T2	280 - 260	Leg	2 1/4	54.9	Pass
		Diagonal	L1 3/4x1 3/4x3/16	36.9 66.3 (b)	Pass
T3	260 - 240	Leg	2 1/2	64.9	Pass
		Diagonal	L1 3/4x1 3/4x3/16	49.6 71.3 (b)	Pass
		Top Girt	L1 3/4x1 3/4x3/16	6.6	Pass
T4	240 - 220	Leg	2 3/4	67.6	Pass
		Diagonal	L1 3/4x1 3/4x3/16	62.4 67.6 (b)	Pass
		Leg	3	65.5 66.3 (b)	Pass
T5	220 - 200	Diagonal	L1 3/4x1 3/4x3/16	83.1	Pass
		Leg	3	77.5 78.3 (b)	Pass
T6	200 - 180	Diagonal	L2x2x3/16	74.9	Pass
		Leg	3 1/4	71.4	Pass
T7	180 - 160	Diagonal	L2x2x3/16	100.8	Pass
		Leg	3 3/4	67.9	Pass
T8	160 - 140	Diagonal	L2 1/2x2 1/2x3/16	78.0	Pass
		Leg	3 3/4	75.5	Pass
T9	140 - 120	Diagonal	L2 1/2x2 1/2x3/16	100.4	Pass
		Leg	4	69.0	Pass
T10	120 - 100	Diagonal	L3x3x3/16	73.3 76.3 (b)	Pass
		Leg	4	75.4	Pass
T11	100 - 80	Leg	4	75.4	Pass

Section No.	Elevation ft	Component Type	Size	% Capacity	Pass Fail
T12	80 - 60	Diagonal	L3x3x3/16	92.1	Pass
		Leg	4	81.9	Pass
T13	60 - 40	Diagonal	L3x3x3/16	104.9	Pass
		Leg	4 1/4	74.7	Pass
T14	40 - 20	Diagonal	L3 1/2x3 1/2x1/4	66.7 76.0 (b)	Pass
		Leg	4 1/2	68.9 73.2 (b)	Pass
T15	20 - 0	Diagonal	L3 1/2x3 1/2x1/4	78.9	Pass
		Leg	4 1/2	73.6	Pass
		Diagonal	L4x4x1/4	63.1	Pass

Table 4 - Maximum Base Reactions

Load Type	Direction	Current Analysis (TIA/EIA-222-F)	Original Design (TIA/EIA-222-F)
Individual Foundation	Horizontal	24 k	--
	Uplift	266 k	330 k
	Compression	327 k	383 k
Overturing Moment	--	6,313 k-ft	7,409 k-ft

GENERAL COMMENTS

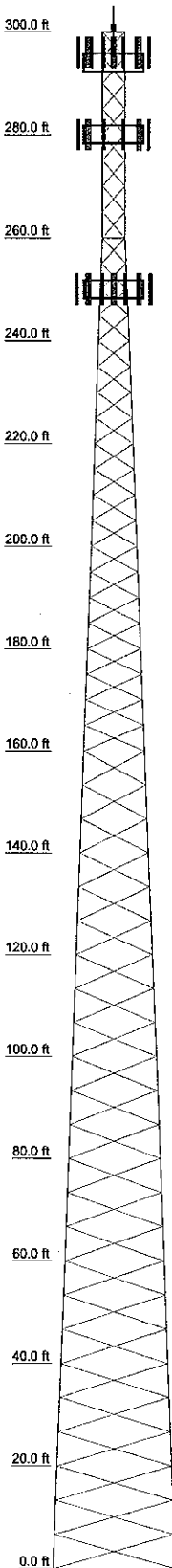
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Engineering, Inc. should be notified immediately to perform a revised analysis.

LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Engineering, Inc.

APPENDIX

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15
Legs	SR 1 3/4	SR 2 1/4	SR 2 1/2	SR 2 3/4	SR 3	SR 3 1/4	SR 3 1/4	SR 3 3/4	SR 3 3/4	SR 4	SR 4 1/4	SR 4 1/2	SR 4 1/4	SR 4 1/2	SR 4 1/2
Leg Grade	A572-50														
Diagonals	L1 3/4x1 3/4x3/16														
Diagonal Grade	A36														
Top Chords	N.A.														
Face Width (ft)	4.5	6	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5	21	22.5	24
# Panels @ (ft)	28 @ 5														
Weight (K)	0.9	1.2	1.4	1.5	1.8	2.1	2.4	3.1	3.7	3.8	3.9	5.1	5.8	6.1	45.9



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	300	(2) 800 10123 W/Mount Pipe (ATI)	250
Beacon	300	(2) 800 10123 W/Mount Pipe (ATI)	250
(2) APL868013 w/Mount Pipe (Verizon)	294	P65-17-XLH-RR w/Mount Pipe (ATI)	250
(2) APL868013 w/Mount Pipe (Verizon)	294	P65-17-XLH-RR w/Mount Pipe (ATI)	250
(2) APL868013 w/Mount Pipe (Verizon)	294	P65-17-XLH-RR w/Mount Pipe (ATI)	250
BXA-70063/4CF W/ Mount Pipe (Verizon)	294	(4) LGP17205 TMA (ATI)	250
BXA-70063/4CF W/ Mount Pipe (Verizon)	294	(4) LGP17205 TMA (ATI)	250
BXA-70063/4CF W/ Mount Pipe (Verizon)	294	(4) LGP17205 TMA (ATI)	250
(3) T-Frames (Verizon)	294	(4) 7020.00 RET (ATI)	250
(2) TMBXX-6517-R2M W/Mount Pipe (T-Mobile)	280	RBS6000 RRU (ATI)	250
(2) TMBXX-6517-R2M W/Mount Pipe (T-Mobile)	280	RBS6000 RRU (ATI)	250
(2) TMBXX-6517-R2M W/Mount Pipe (T-Mobile)	280	(4) CM1007-DBPXBC-003 Diplexer (ATI)	250
(2) ETT19V2S12UB TMA (T-Mobile)	280	(4) CM1007-DBPXBC-003 Diplexer (ATI)	250
(2) ETT19V2S12UB TMA (T-Mobile)	280	(4) CM1007-DBPXBC-003 Diplexer (ATI)	250
(2) ETT19V2S12UB TMA (T-Mobile)	280	DC6-48-60-18-6F Surge Arrestor (ATI)	250
(3) T-Frames (T-Mobile)	280	(3) T-Frames (ATI)	250
(2) 800 10123 W/Mount Pipe (ATI)	250		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L1 3/4x1 3/4x3/16		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

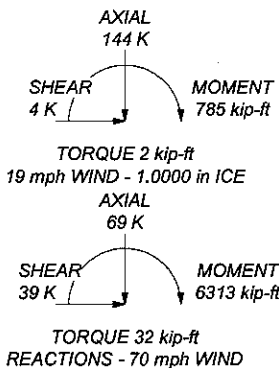
TOWER DESIGN NOTES

1. Tower is located in Washington County, Arkansas.
2. Tower designed for a 70 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 19 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 104.9%

MAX. CORNER REACTIONS AT BASE:

DOWN: 327 K
SHEAR: 24 K

UPLIFT: -266 K
SHEAR: 20 K



TORQUE 2 kip-ft
19 mph WIND - 1.0000 in ICE

TORQUE 32 kip-ft
REACTIONS - 70 mph WIND

<p>FDH Engineering, Inc. 2730 Rowland Road Raleigh, NC 27615 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p>Job: Jimmy Devault Rd Tower, AR21828-A</p>
	<p>Project: 12-01202E S1</p>
	<p>Client: SBA Network Services, Inc.</p>
	<p>Code: TIA/EIA-222-F</p>
	<p>Path: _____</p>
<p>Drawn by: Bradley Smith</p>	<p>App'd: _____</p>
<p>Date: 01/10/12</p>	<p>Scale: NTS</p>
<p>Dwg No. E-1</p>	

PROPERTY DESCRIPTION

Part of the Southwest Quarter of the Southwest Quarter of Section 27, Township 16 North, Range 31 West, Washington County, Arkansas being more particularly described as follows

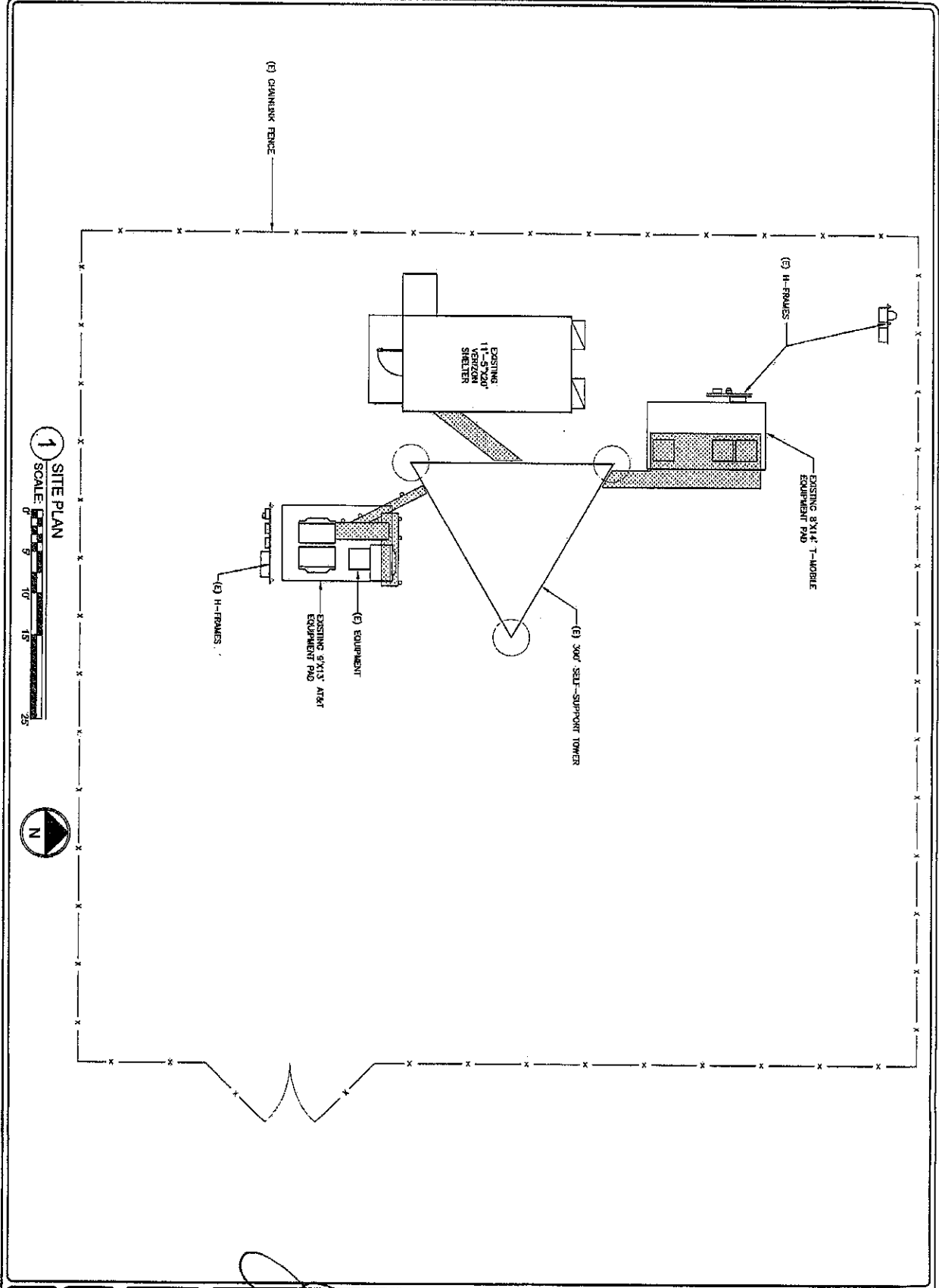
Commencing at an existing nail marking the Southwest Corner of the Southwest Quarter of the Southwest Quarter. Thence along the West line of said Forty North 00 degrees 54 minutes 01 second East, 664.63 feet to a set rebar and the Point of Beginning. Thence continue along said West line, North 00 degrees 54 minutes 01 second East, 100.00 feet to a set rebar. Thence South 89 degrees 11 minutes 13 seconds East, 100.00 feet to a set rebar. Thence South 00 degrees 54 minutes 01 second West, 100.00 feet to a set rebar. Thence North 89 degrees 11 minutes 13 seconds West, 100.00 feet to the Point of Beginning, containing 2,999.99 square feet and subject to Easements of Record.

Also a 30.00 foot utility easement in part of the Southwest Quarter of the Southwest Quarter of Section 27, Township 16 North, Range 31 West, Washington County, Arkansas being more particularly described as follows:

Commencing at an existing nail marking the Southwest Corner of the Southwest Quarter of the Southwest Quarter. Thence along the West line of said Forty, North 00 degrees 54 minutes 01 second East, 764.63 feet to a set rebar and the Point of Beginning. Thence continue along said West line, North 00 degrees 54 minutes 01 second East, 542.61 feet. Thence South 89 degrees 39 minutes 21 seconds East, 30.00 feet. Thence South 00 degrees 54 minutes 01 second West, 543.02 feet. Thence North 89 degrees 11 minutes 13 seconds West, 30.00 feet to the Point of Beginning.

Also a 30.00 foot road easement for ingress and egress in part of the Southwest Quarter of the Southwest Quarter of Section 27, Township 16 North, Range 31 West, Washington County, Arkansas being more particularly described as follows:

Commencing at an existing nail marking the Southwest Corner of the Southwest Quarter of the Southwest Quarter. Thence along the West line of said Forty, North 00 degrees 54 minutes 01 second East, 664.63 feet to a set rebar. Thence leaving said West line, South 89 degrees 11 minutes 13 seconds East, 100.00 feet to a set rebar and the Point of Beginning. Thence North 00 degrees 54 minutes 01 second East, 30.00 feet to a set rebar. Thence South 89 degrees 11 minutes 13 seconds East, 181.88 feet to a set rebar. Thence North 05 degrees 08 minutes 02 seconds East, 612.98 feet to a set rebar on the South right of way line of a County Road. Thence along said right of way line, South 89 degrees 34 minutes 08 seconds East, 30.02 feet to a set rebar. Thence South 05 degrees 08 minutes 02 seconds West, 643.27 feet to a set rebar. Thence North 89 degrees 11 minutes 13 seconds West, 189.66 feet to the Point of Beginning.



1 SITE PLAN
 SCALE: 0 5 10 15 25



B&T
ENGINEERING

1717 S Boulder Suite 300
 Tulsa, OK 74119
 P.O. (918) 587-4838

at&t
 Global Communications
 11800 Executive Ctr., Dr., Ste. 208
 Lake Park, AK 72211
 P.O. (505) 215-4481
 Fax: (505) 215-8333

GoodmanNetworks
 6202 N. Marden Ave
 Oklahoma City, OK 73112
 (405) 841-5517 Office

PROJECT NO: 84151.004
 DRAWN BY: RCM
 CHECKED BY: SAJ

ISSUED FOR:

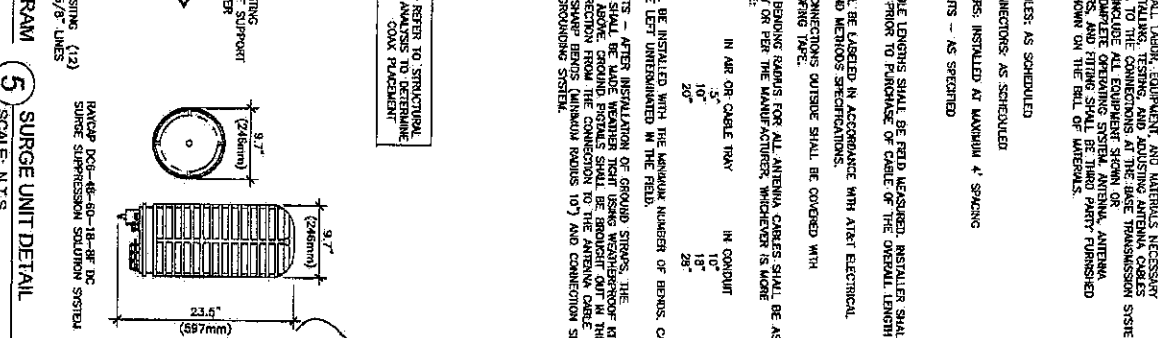
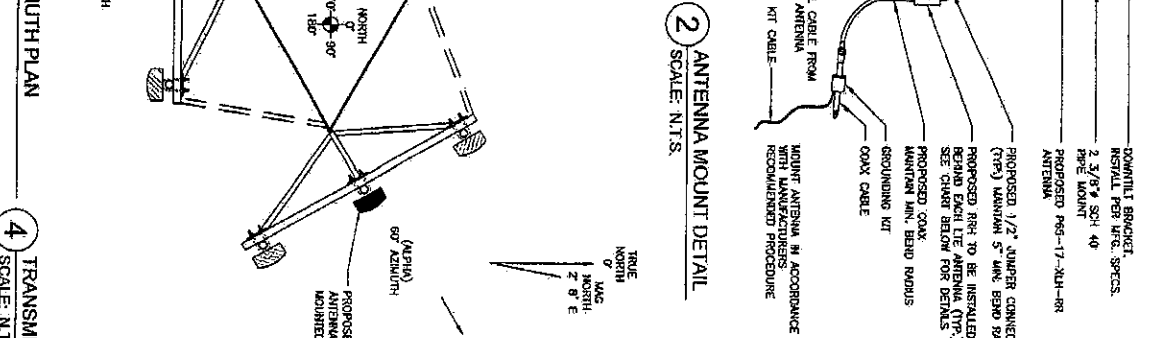
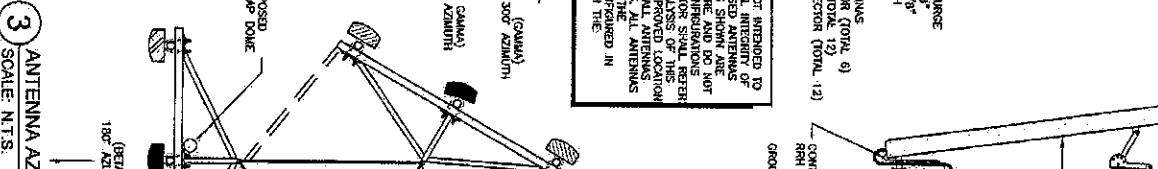
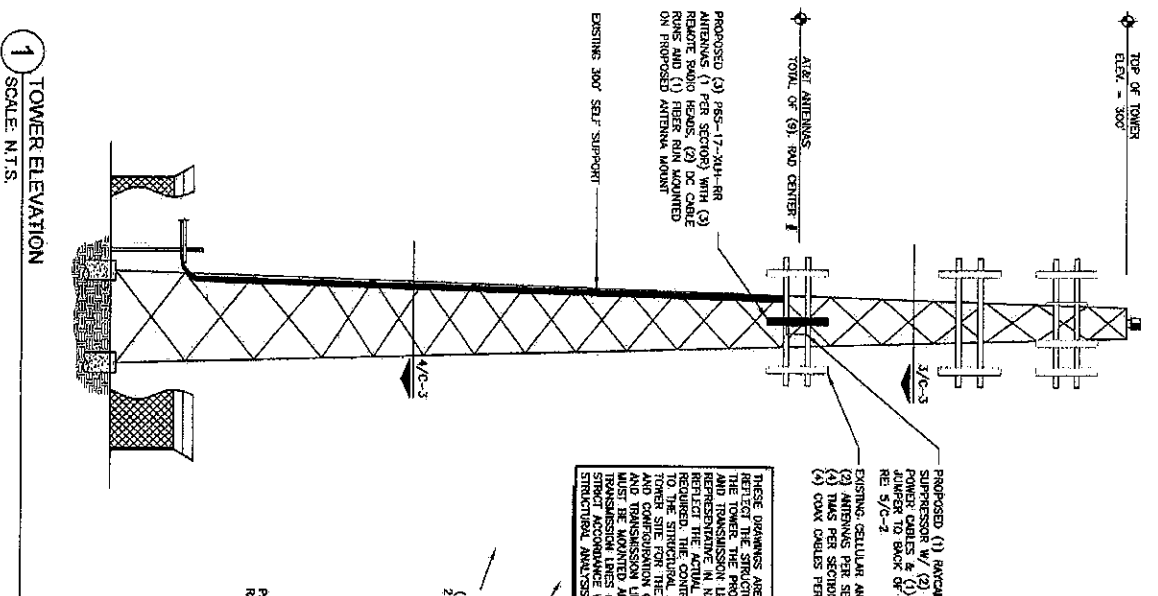
REV	DATE	DESCRIPTION
0	3/15/12	ISSUED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
 STATE OF OKLAHOMA
 No. 10718D
GRAND E. TUTTLE
 Expires 12/31/15

AWZ705
 AWE - FARMINGTON
 FARMINGTON, AR 72730
 EXISTING
 SELF SUPPORT

SHEET TITLE
 SITE PLAN

SHEET NUMBER: C-1
 REVISION: 0



2 ANTENNA MOUNT DETAIL
SCALE: N.T.S.

3 ANTENNA AZIMUTH PLAN
SCALE: N.T.S.

4 TRANSMISSION LINE DIAGRAM
SCALE: N.T.S.

5 SURGE UNIT DETAIL
SCALE: N.T.S.

THESE DRAWINGS ARE NOT INTENDED TO REFLECT THE STRUCTURAL INTEGRITY OF THE ANTENNA MOUNTING SYSTEMS. ALL ANTENNAS AND TRANSMISSION LINES SHOWN ARE REPRESENTATIVE IN NATURE AND DO NOT REFLECT THE ACTUAL CONFIGURATIONS TO BE INSTALLED. THE STRUCTURAL ANALYSIS OF THE TOWER SITE FOR THE APPROVED LOCATION AND CONFIGURATION OF ALL ANTENNAS AND TRANSMISSION LINES, AND TRANSMISSION LINES COMPARED IN STRICT ACCORDANCE WITH THE STRUCTURAL ANALYSIS.

- ANTENNA, CABLE, AND ACCESSORY NOTES AND REQUIREMENTS**
1. GENERAL: PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY FOR RECEIVING, INSTALLING, TESTING, AND ADJUSTING ANTENNA CABLES FROM THE ANTENNA TO THE CONNECTORS AT THE FACE TRANSMISSION SYSTEM REQUIRED FOR A COMPLETE OPERATING SYSTEM. ANTENNA, ANTENNA CABLES, CONNECTORS, AND FITTING SHALL BE THIRD PARTY FURNISHED COMPONENTS AS SHOWN ON THE BILL OF MATERIALS.
 2. MEMBERS
 - A. ANTENNA CABLES: AS SCHEDULED
 - B. ANTENNA CONNECTORS: AS SCHEDULED
 - C. CABLE HANGERS: INSTALLED AT MAXIMUM 4' SPACING
 - D. GROUNDING KITS - AS SPECIFIED
 3. INSTALLATION
 - A. ANTENNA CABLE LENGTHS SHALL BE FIELD MEASURED. INSTALLER SHALL NOTIFY A-BT PRIOR TO PURCHASE OF CABLE OF THE OVERALL LENGTH REQUIRED.
 - B. CABLES SHALL BE LABELED IN ACCORDANCE WITH A-BT ELECTRICAL MATERIALS AND METHOD SPECIFICATIONS.
 - C. ALL CABLE CONNECTIONS OUTSIDE SHALL BE COVERED WITH WEATHERPROOFING TAPE.
 - D. THE MAXIMUM BENDING RADIUS FOR ALL ANTENNA CABLES SHALL BE AS SHOWN BELOW FOR THE MAXIMUM ALLOWABLE WHICHEVER IS MORE CONSERVATIVE:

CABLE	IN AIR OR CABLE TRAY	IN CONDUIT
1/2"	3'	10'
5/8"	5'	15'
3/4"	7'	20'
1"	10'	25'
 - E. CABLES SHALL BE INSTALLED WITH THE MAXIMUM NUMBER OF BENDS. CABLE SHALL NOT BE LEFT UNINSULATED IN THE FIELD.
 - F. GROUNDING KITS - AFTER INSTALLATION OF GROUND STRIPS, THE CONNECTORS SHALL BE MADE WEATHER TIGHT USING WEATHER-ROOF TAPE AS MENTIONED ABOVE. GROUND STRIPLES SHALL BE BROUGHT OUT IN THE SAME MANNER AS THE ANTENNA CABLES WITHOUT ANY SHARP BENDS (MINIMUM RADIUS 10') AND CONNECTION SHALL BE MADE TO GROUNDING SYSTEM.

REFER TO STRUCTURAL ANALYSIS TO DETERMINE COAX PLACEMENT

1177 S Boulder, Suite 300
Tulsa, OK 74149
PH: (918) 597-4550

GoodmanNetworks
1177 S Boulder Ave
Suite 300
Tulsa, OK 74149
(918) 597-4550

ISSUED FOR:
REV: DATE: DESCRIPTION
0: 3/13/12: REVISED FOR CONSTRUCTION
1: 3/13/12: REVISED FOR CONSTRUCTION

PROJECT NO: 84151-004
DESIGNER: JCA
CHECKED BY: JCA

SHEET NUMBER: C-2
REVISION: 0

SHEET TITLE:
ELEVATION AND AZIMUTH PLAN

482705
AWE - FORMINGLAN
ADDRESS: FORMINGLAN, AR 72730
EXISTING SELF SUPPORT