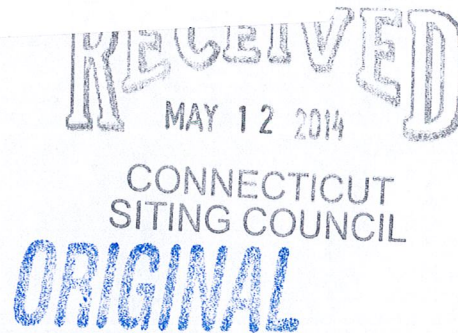




EM-CING-135-140512

May 9, 2014

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051



Re: Notice of Exempt Modification – Antenna Swap
Property Address: 168 Catoonah Lane, Stamford, CT 06902
(the “Property”)
Applicant: New Cingular Wireless PCS, LLC (“AT&T”)

Dear Ms. Bachman:

AT&T dba New Cingular Wireless PCS, LLC currently maintains nine (9) wireless telecommunication antennas, all at the 235 foot level on and existing 300 foot tower at the above referenced address. The tower is owned by American Towers, Inc.. The Council approved AT&T's/New Cingular Wireless use of the tower in the following prior decisions; Dockets No. EM-AT&T-135-990721, EM-CING-135-080729, EM-CING-135-081031 and EM-CING-135-110517. AT&T now intends to replace three (3) KMW AM-X-CD-14-00T-RET panel antennas and three (3) Powerwave 7770 panel antennas with model Andrews no. SBNHH-1D65A and add an additional three (3) Andrews, no.SBNHH-1D65A while retaining three (3) Powerwave 7770 (for a total of twelve panel antennas) at the 235 foot level. Included in Attachment 1 are specifications for the replacement antennas.

Please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72(b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to David R. Martin, Mayor for the town of Stamford, CT. A copy of this letter is also being sent to American Tower, Inc., the owner of the property where the tower is located.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in height of the existing tower. AT&T's replacement antennas will be installed at the 235 foot level of the 300 foot tower.



2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require an extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative worst-case RF emissions calculation for AT&T's modified facility is provided in the General Power Density table included in Attachment 2.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Attachment 3).

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above referenced telecommunications facility constitutes an exempt modification under R.C.S.A. §16-50j-72(b)(2).

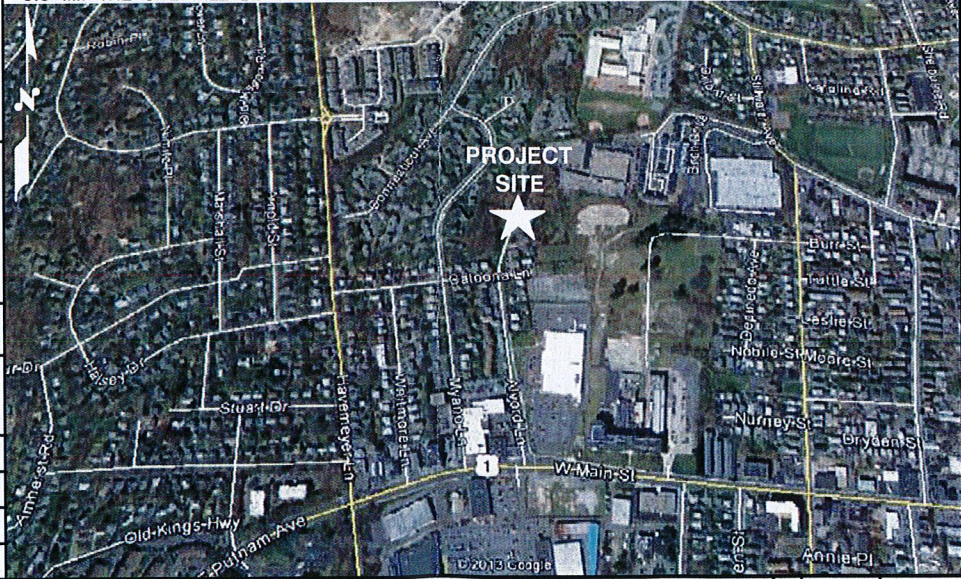
Sincerely,

Adam F. Braillard

cc: American Tower Inc., 10 Presidential Way, Woburn, MA 01801

David R. Martin, Mayor Stamford Government Center, 888 Washington Blvd, 10th Floor, Stamford, CT 06901

33 Boston Post Road West, Marlborough, Massachusetts 01752
p: 508.954.7702 • adam.braillard@smartlinkllc.com
www.smartlinkllc.com

PROJECT INFORMATION			 FA NUMBER: 10034997 SITE NUMBER: CT2135 SITE NAME: STAMFORD WEST		PROJECT TEAM																																				
SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING TOWER: - NEW SECTOR FRAMES TO REPLACE EXISTING SECTOR FRAMES - NEW AT&T ANTENNAS: (3) ANTENNAS PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (9) ANTENNAS - NEW AT&T RRU'S: (5) RRU'S PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (15) RRU'S - NEW AT&T SURGE SUPPRESSOR: (3) RAYCAP SURGE SUPPRESSORS ITEMS TO BE INSTALLED AT AT&T EQUIPMENT AREA: (1) (850) RX/AT & (2) 850 LLC IN PROPOSED 23" RACK (1) GE INFINITY DC POWER PLANT (6) NEW AT&T DIPLEXERS TO REPLACE EXISTING (12) DIPLEXERS ITEMS TO REMAIN: (3) GSM/UMTS ANTENNAS, (3) TMA'S, & (3) RRU'S TO BE RELOCATED ON NEW SECTOR FRAMES SITE ADDRESS: 168 CATOONA LANE STAMFORD, CT 06902 LATITUDE: 41.052751 N LONGITUDE: -73.563079 W USID: 60419 TOWER MANAGER/ PROPERTY OWNER: AMERICAN TOWERS INC. 10 PRESIDENTIAL WAY WOBBURN, MA 018101 TYPE OF SITE: LATTICE TOWER/INDOOR EQUIPMENT TOWER HEIGHT: 300'-0"± RAD CENTER: 235'-0"± CURRENT USE: TELECOMMUNICATIONS FACILITY PROPOSED USE: TELECOMMUNICATIONS FACILITY					CLIENT REPRESENTATIVE COMPANY: SMARTLINK, LLC ADDRESS: 1997 ANNAPOLIS EXCHANGE PARKWAY, SUITE 200 ANNAPOLIS, MD 21401 CITY, STATE, ZIP: ANNAPOLIS, MD 21401 CONTACT: TIM BOYCE PHONE: (980) 333-3640 E-MAIL: tboyce@smartlinkllc.com SITE ACQUISITION COMPANY: SMARTLINK, LLC ADDRESS: 33 BOSTON POST ROAD WEST, SUITE 210 MARLBOROUGH, MA 01752 CITY, STATE, ZIP: MARLBOROUGH, MA 01752 CONTACT: TODD OLIVER PHONE: (774) 369-3618 E-MAIL: todd.oliver@smartlinkllc.com ENGINEERING COMPANY: HUDSON DESIGN GROUP, LLC. ADDRESS: 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090 NORTH ANDOVER, MA 01845 CITY, STATE, ZIP: NORTH ANDOVER, MA 01845 CONTACT: DANIEL P. HAMM, PE PHONE: (978) 557-5553 X222 E-MAIL: daniel.hamm@hudsondesigngroupllc.com RF ENGINEER COMPANY: AT&T MOBILITY -NEW ENGLAND ADDRESS: 550 COCHITUATE ROAD SUITE 550 13 AND 14 FRAMINGHAM, MA 01701 CITY, STATE, ZIP: FRAMINGHAM, MA 01701 CONTACT: CAMERON SYME PHONE: (508) 596-7146 E-MAIL: cs6970@att.com CONSTRUCTION MANAGER COMPANY: SMARTLINK, LLC. ADDRESS: 33 BOSTON POST ROAD WEST SUITE 210 MARLBOROUGH, MA 01752 CITY, STATE, ZIP: MARLBOROUGH, MA 01752 CONTACT: JERRY BRUNO PHONE: (508) 920-7349 E-MAIL: jerry.bruno@smartlinkllc.com																																				
DRAWING INDEX		REV	VICINITY MAP		GENERAL NOTES																																				
T-1 TITLE SHEET		0	DIRECTIONS FROM 550 COCHITUATE ROAD, FRAMINGHAM MA: DEPART RT-30 W / COCHITUATE RD TOWARD BURR ST. 0.3 MI. TURN BACK ON RT-30 E / COCHITUATE RD. 0.3 MI. TAKE RAMP RIGHT FOR I-90 WEST TOWARD WORCESTER / SPRINGFIELD. TOLL ROAD. 38.9 MI. AT EXIT 9, TAKE RAMP RIGHT FOR I-84 TOWARD NEW YORK CITY / HARTFORD. STOP FOR TOLL BOOTH. ENTERING CONNECTICUT. 41.7 MI. AT EXIT 57, TAKE RAMP LEFT FOR CT-15 SOUTH TOWARD CHARTER OAK BRIDGE / NY CITY. 1.1 MI. KEEP STRAIGHT ONTO US-5 S / CT-15 S. 0.8 MI. AT EXIT 86, TAKE RAMP RIGHT FOR I-91 S TOWARD NEW HAVEN / NY CITY. 17.1 MI. AT EXIT 17, TAKE RAMP RIGHT FOR CT-15 SOUTH TOWARD W. CROSS PKWY / E. MAIN ST. 30.2 MI. AT EXIT 52, TAKE RAMP RIGHT FOR CT-8 SOUTH TOWARD BRIDGEPORT. 2.6 MI. KEEP STRAIGHT ONTO CT-8 S / CT-25 S / COLONEL HENRY MUCCI HWY. 3.3 MI. TAKE RAMP RIGHT FOR I-95 SOUTH TOWARD N. Y. CITY. 22.3 MI. AT EXIT 6, TAKE RAMP RIGHT FOR GRENHART RD TOWARD WEST AVE. 0.2 MI. TURN RIGHT ONTO WEST AVE. 0.2 MI. TURN LEFT ONTO US-1 / W MAIN ST. 0.3 MI. TURN RIGHT ONTO MYANO LN. 0.3 MI. THE SITE WILL BE ON YOUR LEFT. 		1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.																																				
GN-1 GENERAL NOTES		0			2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.																																				
A-1 COMPOUND & EQUIPMENT PLANS		0			3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.																																				
A-2 ANTENNA LAYOUTS & ELEVATIONS		0																																							
A-3 DETAILS		0																																							
G-1 GROUNDING, ONE-LINE DIAGRAM & DETAILS		0																																							
			72 HOURS BEFORE YOU DIG  CALL TOLL FREE 800-922-4455 UNDERGROUND SERVICE ALERT																																						
APPROVALS																																									
THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.																																									
DISCIPLINE:	SIGNATURE:	DATE:																																							
SMARTLINK SITE ACQUISITION:																																									
SMARTLINK CONSTRUCTION MANAGER:																																									
AT&T PROJECT MANAGER:																																									
 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090 N. ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586	 1997 ANNAPOLIS EXCHANGE PKWY SUITE 200 ANNAPOLIS, MD 21401	SITE NUMBER: CT2135 SITE NAME: STAMFORD WEST 168 CATOONA LANE STAMFORD, CT 06902 FAIRFIELD COUNTY	 550 COCHITUATE ROAD FRAMINGHAM, MA 01701	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>0</td><td>04/25/14</td><td>ISSUED FOR REVIEW</td><td>AP</td><td>TH</td><td>DPH</td></tr><tr><td>A</td><td>03/06/14</td><td>ISSUED FOR REVIEW</td><td>SG</td><td>TH</td><td>DPH</td></tr><tr><td>NO.</td><td>DATE</td><td>REVISIONS</td><td>BY</td><td>CHK</td><td>APP'D</td></tr><tr><td colspan="2">SCALE: AS SHOWN</td><td>DESIGNED BY: TH</td><td colspan="2">DRAWN BY: SG</td><td></td></tr></table>							0	04/25/14	ISSUED FOR REVIEW	AP	TH	DPH	A	03/06/14	ISSUED FOR REVIEW	SG	TH	DPH	NO.	DATE	REVISIONS	BY	CHK	APP'D	SCALE: AS SHOWN		DESIGNED BY: TH	DRAWN BY: SG			AT&T TITLE SHEET (LTE-2C) <table><tr><td>JOB NUMBER</td><td>DRAWING NUMBER</td><td>REV</td></tr><tr><td>2135.01</td><td>T-1</td><td>0</td></tr></table>	JOB NUMBER	DRAWING NUMBER	REV	2135.01	T-1	0
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GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. 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.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OFF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. 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.
5. 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.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
- CONTRACTOR - SMARTLINK
SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR 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. SUBCONTRACTOR 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 BE SCALED 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.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR 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 SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR 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. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 ($F_y = 36$ ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E ($F_y = 36$ ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
- SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
- BUILDING CODE: 2003 IBC WITH 2005 CT SUPPLEMENT & 2009 CT AMENDMENTS
ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS
- SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
- AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
- MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL
- ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.
- FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS					
AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE	TYP	TYPICAL
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED		



SITE NUMBER: CT2135
SITE NAME: STAMFORD WEST

168 CATOONA LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY



O	04/25/14	ISSUED FOR REVIEW		AP	TH	DPH			
A	03/06/14	ISSUED FOR REVIEW		SG	TH	DPH			
NO.	DATE	REVISIONS		BY	CHK	APP'D			
SCALE: AS SHOWN		DESIGNED BY: TH		DRAWN BY: SG					

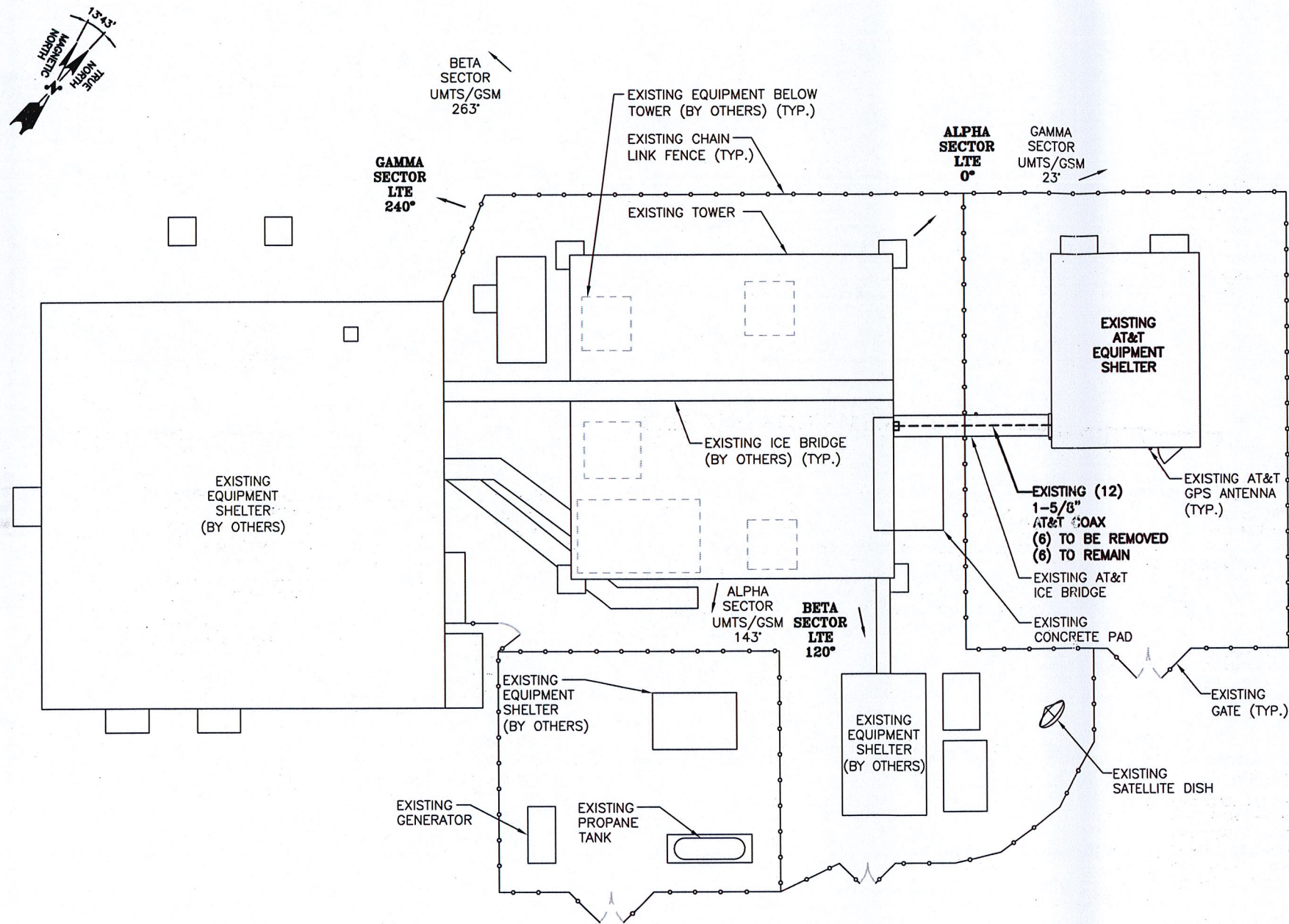
AT&T	
GENERAL NOTES (LTE-2C)	
JOB NUMBER	DRAWING NUMBER
2135.01	GN-1

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

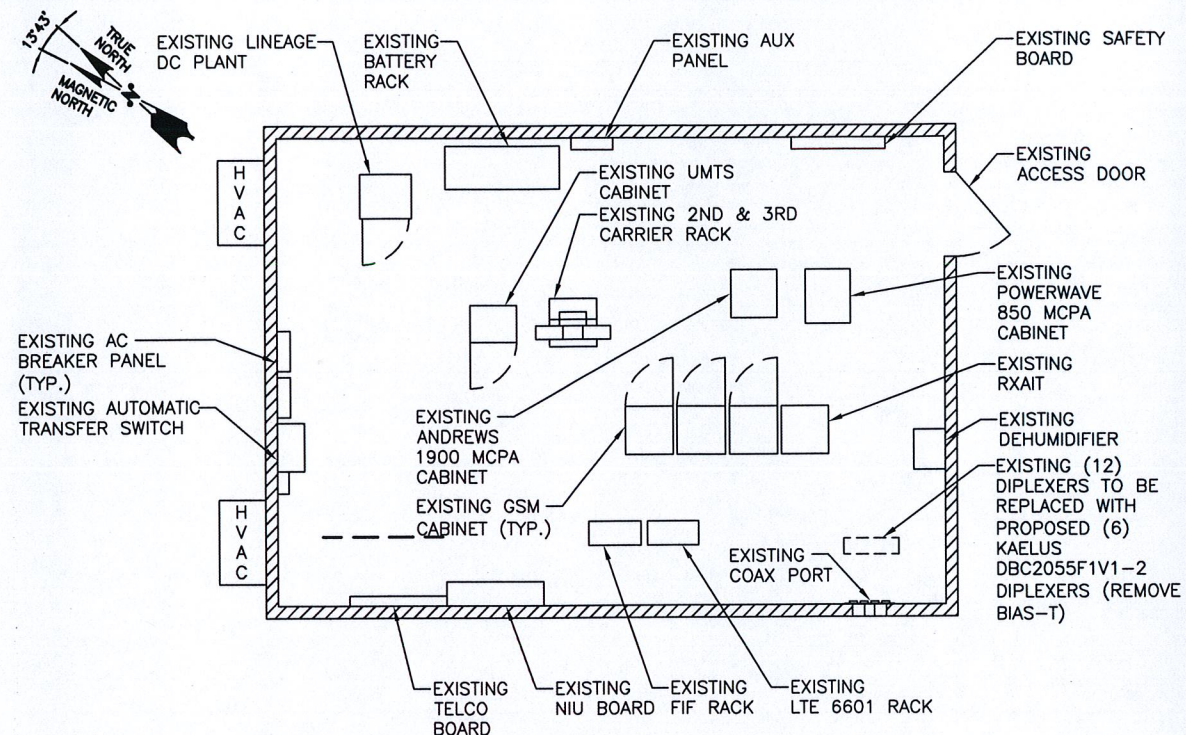
NOTE:

*RF DATA BASED ON PRELIMINARY RFDS. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



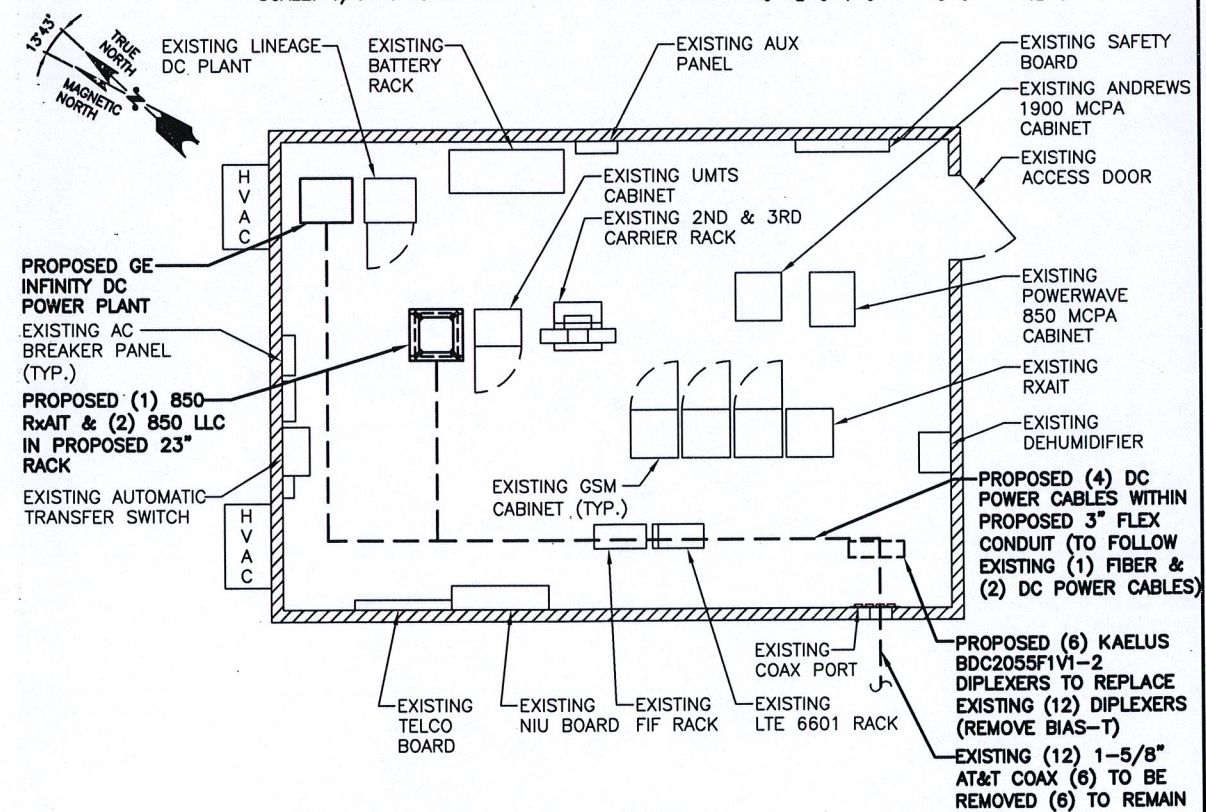
COMPOUND PLAN

SCALE: 1"=10'-0"



EXISTING EQUIPMENT PLAN

SCALE: 1/4"=1'-0"



PROPOSED EQUIPMENT PLAN

SCALE: 1/4"=1'-0"



1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



1997 ANNAPOLIS EXCHANGE PKWY
SUITE 200
ANNAPOLIS, MD 21401

SITE NUMBER: CT2135
SITE NAME: STAMFORD WEST

168 CATOONA LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY



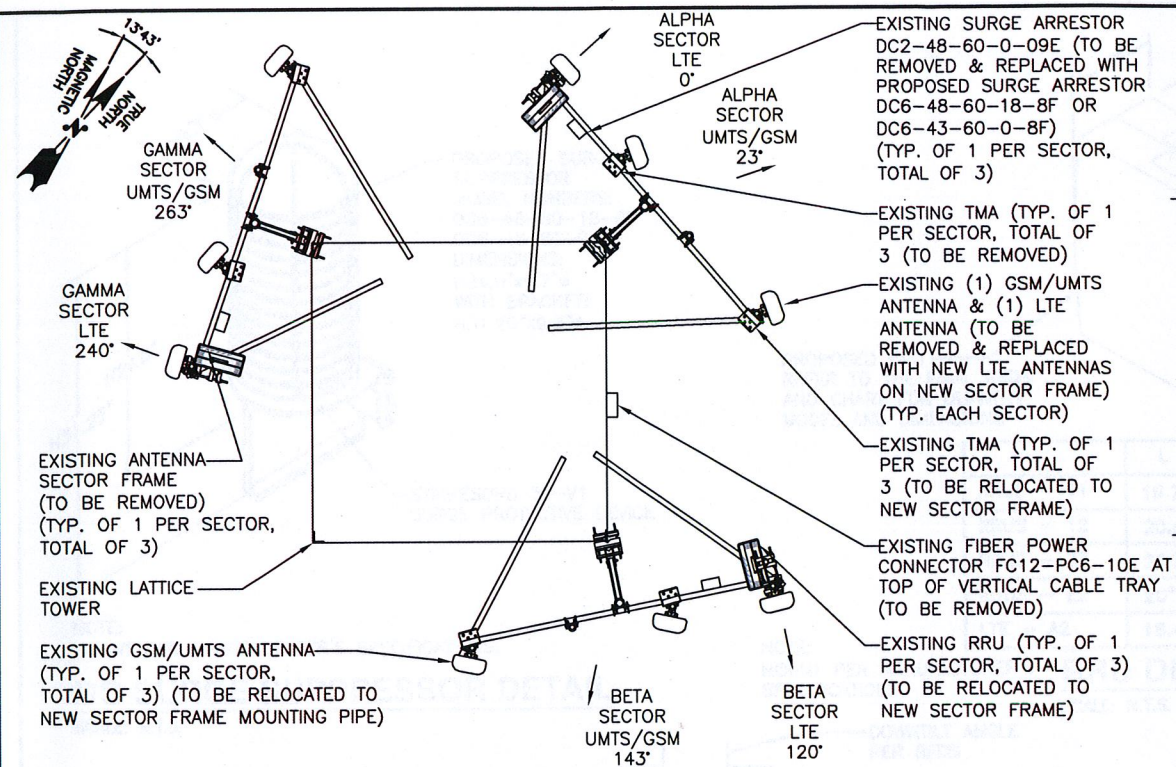
550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	04/25/14	ISSUED FOR REVIEW	AP	TH	DPH
A	03/06/14	ISSUED FOR REVIEW	SG	TH	DPH
SCALE: AS SHOWN DESIGNED BY: TH DRAWN BY: SG					

AT&T

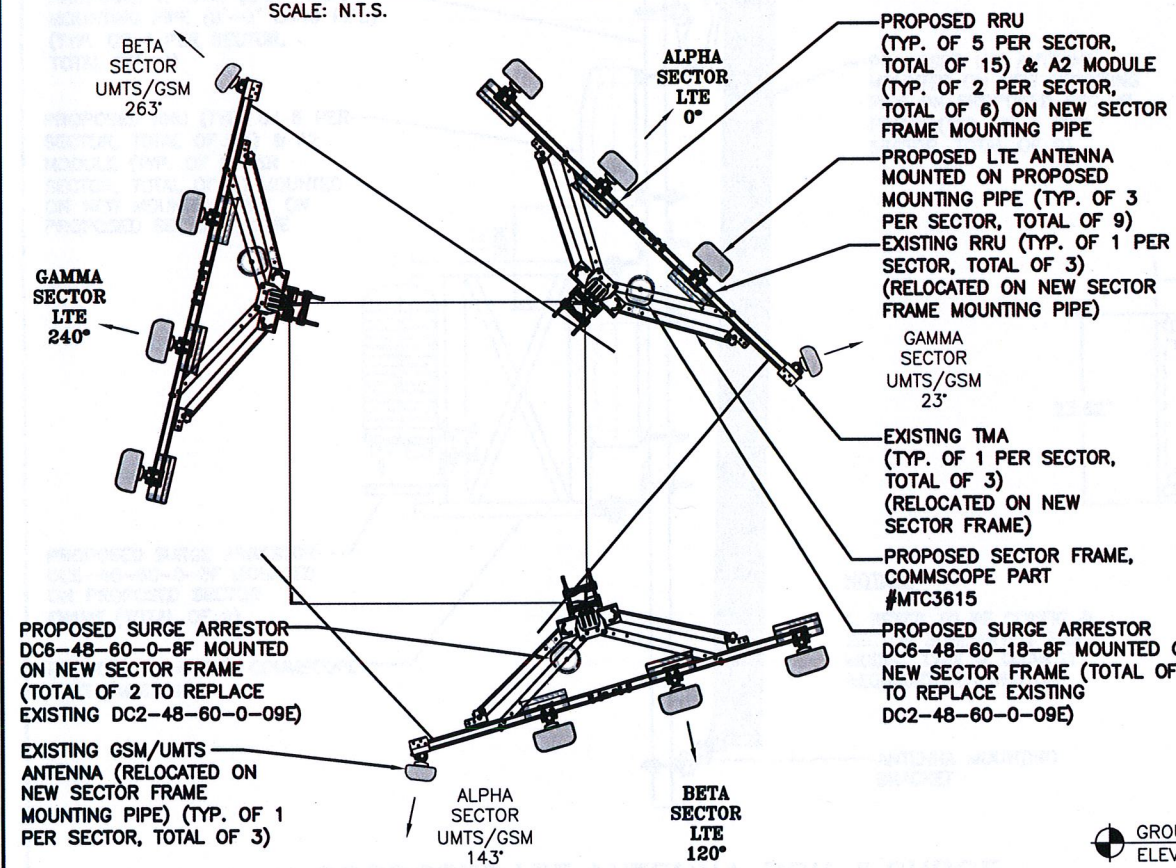
COMPOUND & EQUIPMENT PLAN
(LTE-2C)

JOB NUMBER	DRAWING NUMBER	REV
2135.01	A-1	0



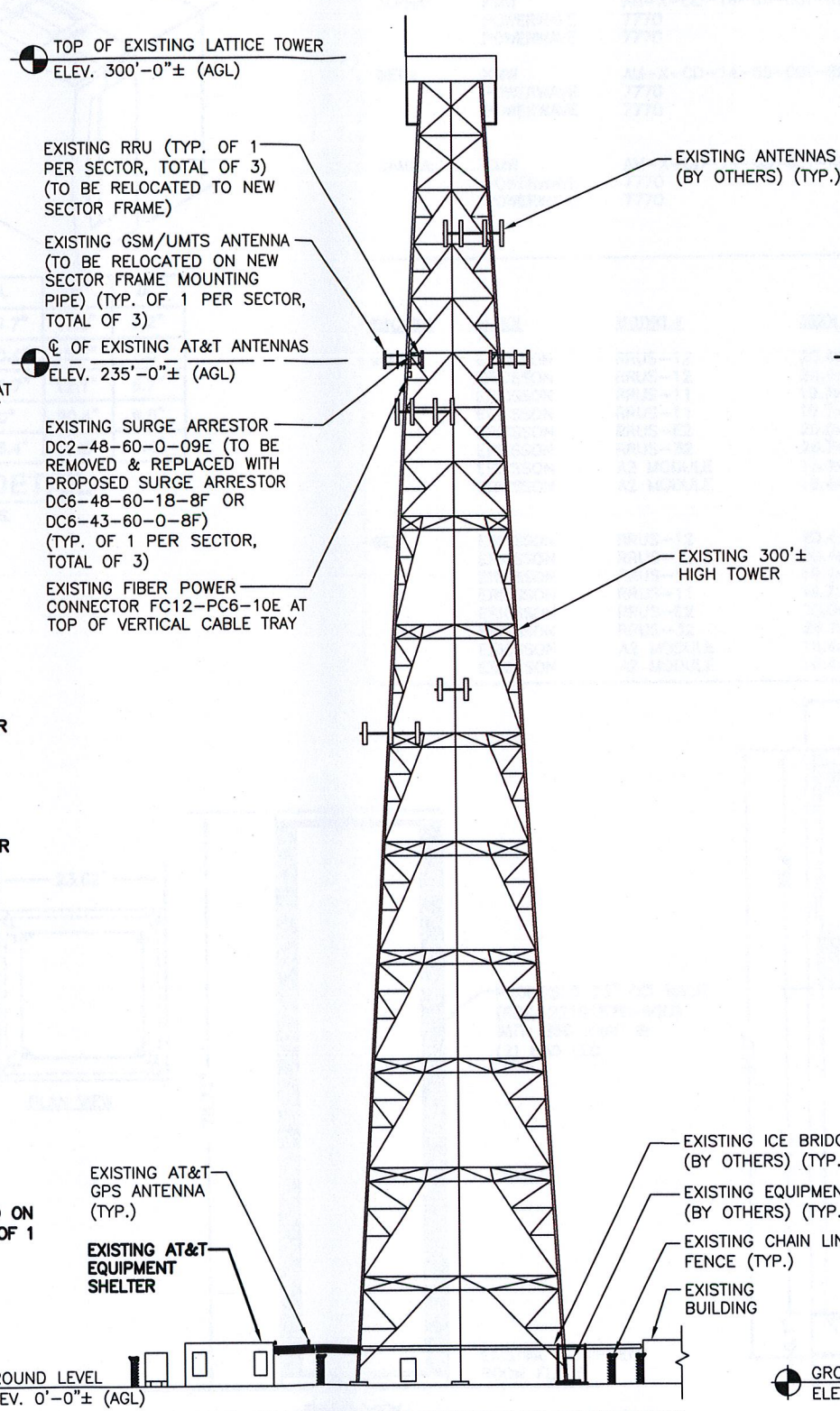
EXISTING ANTENNA LAYOUT

SCALE: N.T.S.



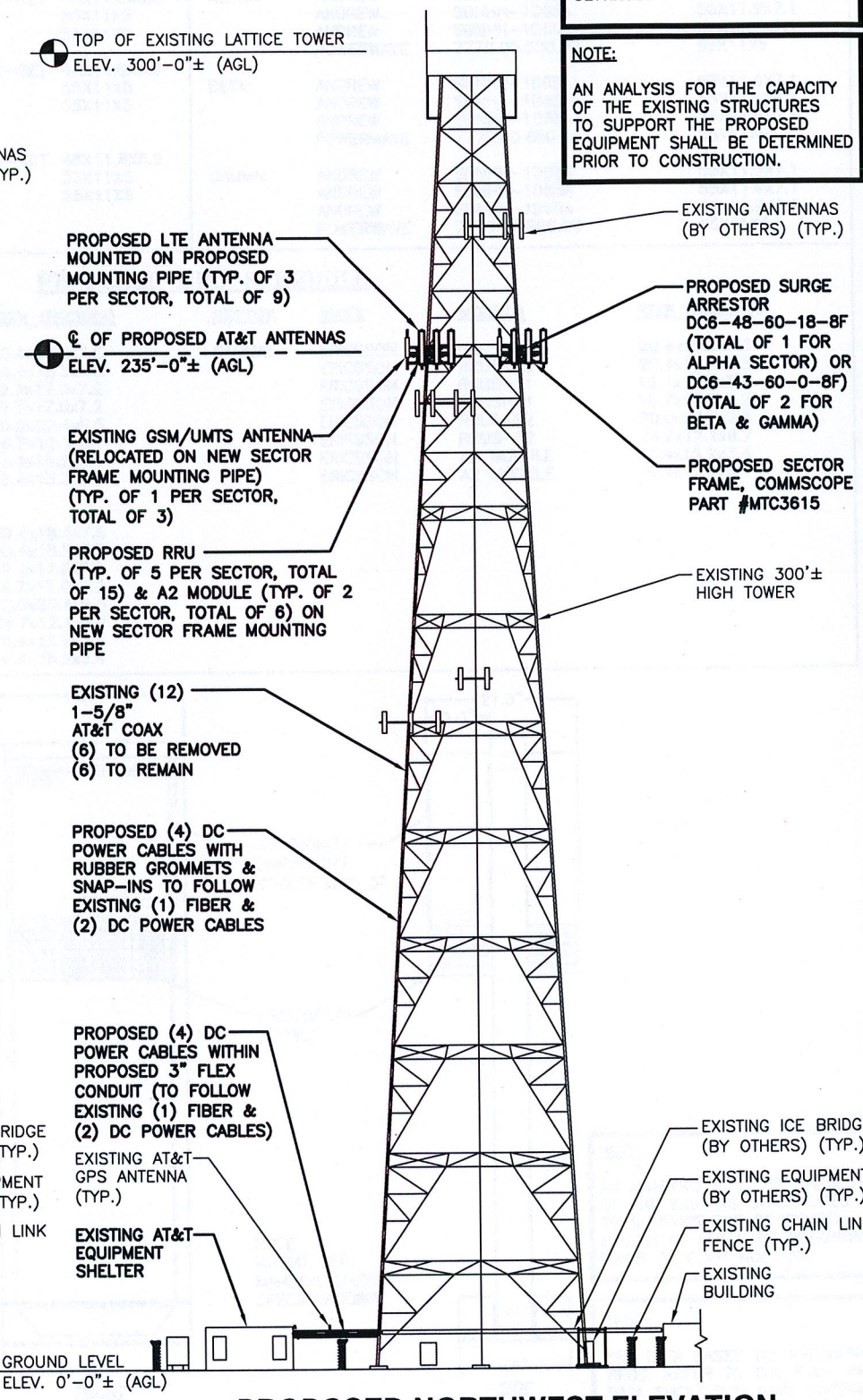
PROPOSED ANTENNA LAYOUT

SCALE: N.T.S.



EXISTING NORTHWEST ELEVATION

SCALE: 1"=20'-0"



PROPOSED NORTHWEST ELEVATION

SCALE: 1"=20'-0"

NOTE:
*RF DATA BASED ON PRELIMINARY RFDS. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

Hudson Design Group

1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5386

smartlink

1997 ANNAPOLIS EXCHANGE PKWY
SUITE 200
ANNAPOLIS, MD 21401

SITE NUMBER: CT2135
SITE NAME: STAMFORD WEST

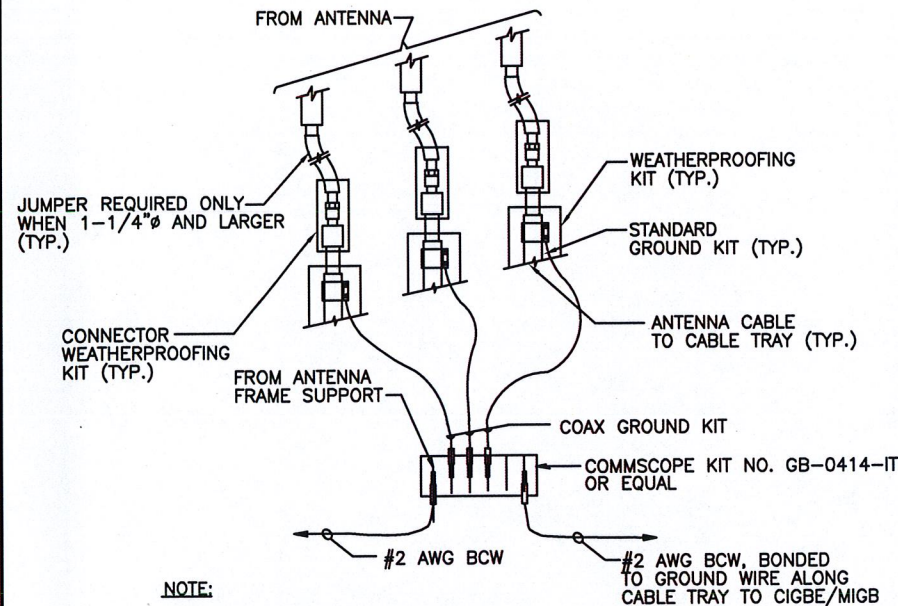
168 CATOONA LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY

at&t

550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

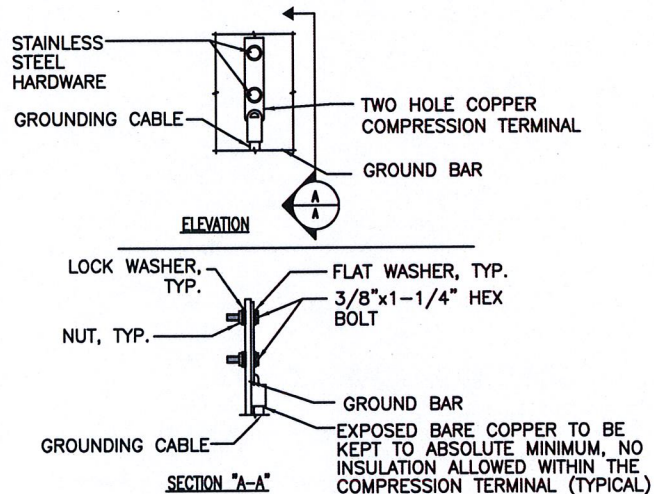
NO.	DATE	REVISIONS	BY	CHK	APP'D
0	04/25/14	ISSUED FOR REVIEW	AP	TH	DPH
A	03/06/14	ISSUED FOR REVIEW	SG	TH	DPH
SCALE: AS SHOWN DESIGNED BY: TH DRAWN BY: SG					

AT&T		
ANTENNA LAYOUT AND ELEVATION (LTE-2C)		
JOB NUMBER	DRAWING NUMBER	REV
2135.01	A-2	0



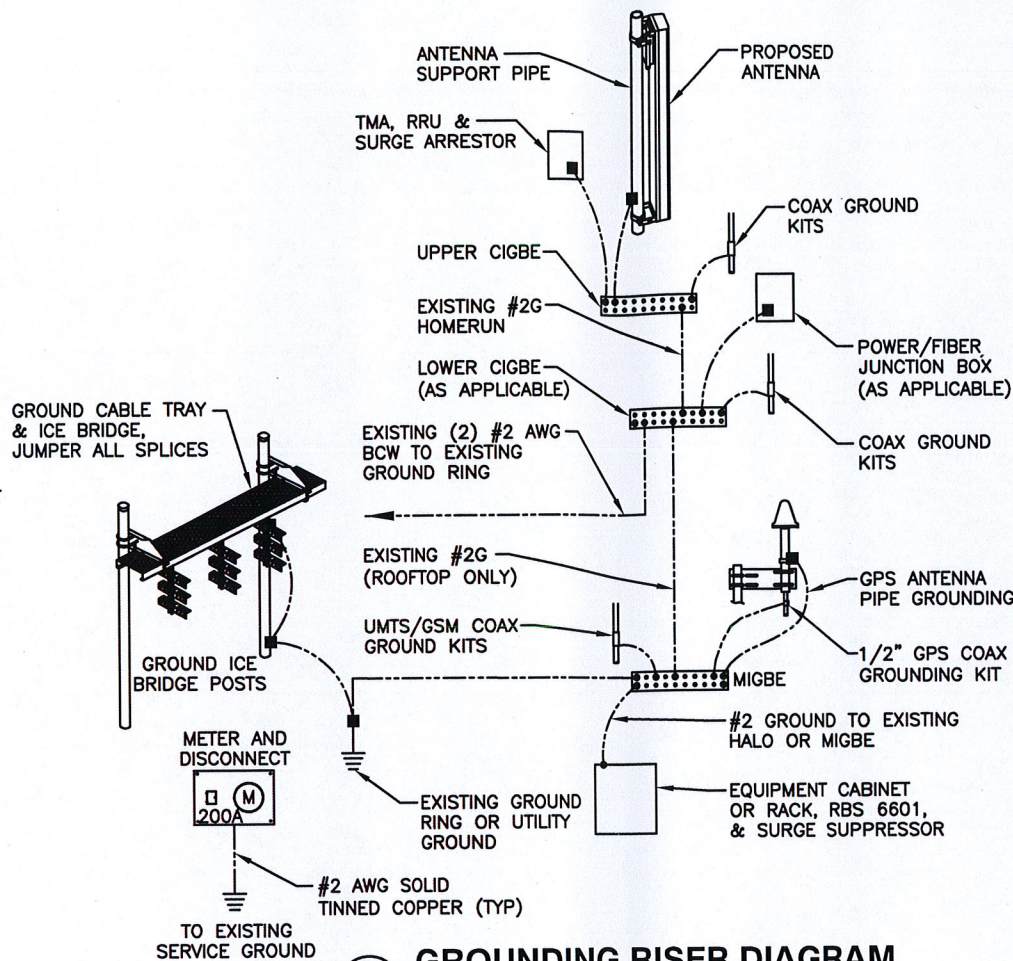
GROUND WIRE TO GROUND BAR CONNECTION DETAIL

1
—
N.T.S.



TYPICAL GROUND BAR CONNECTION DETAIL

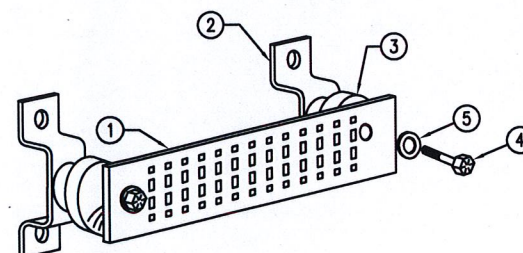
4
—
N.T.S.



GROUNDING RISER DIAGRAM

2
—
N.T.S.

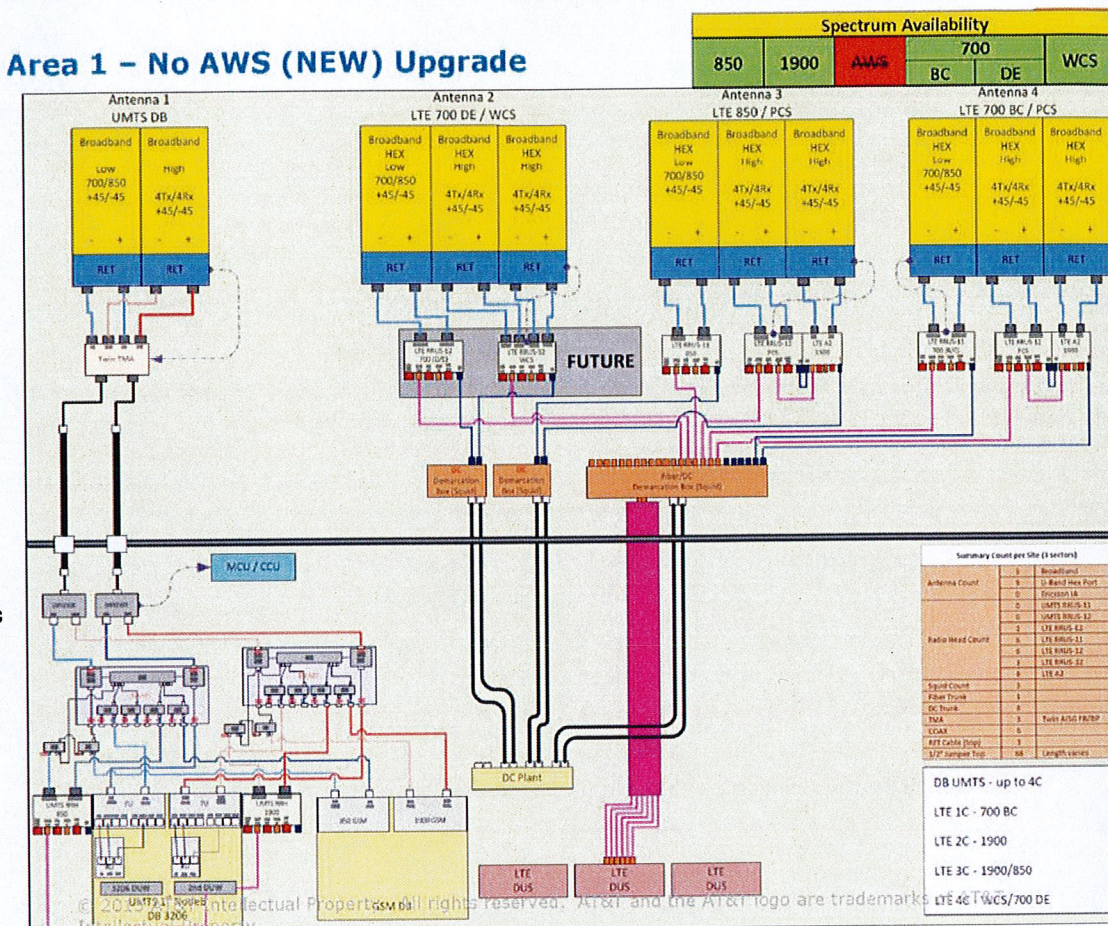
WIRELESS SOLUTIONS INC.				
NO.	REQ.	PART NO.	DESCRIPTION	
①	1	HLGB-0420-IS	SOLID GND. BAR (20"x4"x1/4")	
②	2	—	WALL MTG. BRKT.	
③	2	—	INSULATORS	
④	4	—	5/8"-11x1" H.H.C.S.	
⑤	4	—	5/8 LOCKWASHER	



GROUND BAR - DETAIL

5
—
N.T.S.

Area 1 - No AWS (NEW) Upgrade



PLUMBING DIAGRAM

3
—
N.T.S.

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 PRODUCERS

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

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)

Hudson
Design Group

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NO.	DATE	REVISIONS	BY	CHK	APP'D
0	04/25/14	ISSUED FOR REVIEW	AP	TH	DPH
A	03/06/14	ISSUED FOR REVIEW	SG	TH	DPH
SCALE: AS SHOWN DESIGNED BY: TH DRAWN BY: SG					

AT&T

PLUMBING DIAGRAM & DETAILS
(LTE-2C)

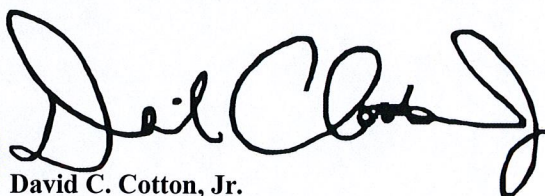
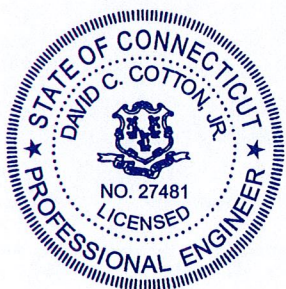
JOB NUMBER	DRAWING NUMBER	REV
2135.01	G-1	0

Todd Oliver
Smartlink, LLC
Market Manager, NE
33 Boston Post Road, Suite 210
Marlborough, MA 01752

Reference: Smartlink LLC Site, Stamford West, 168 Catoona Lane, Stamford, CT

Date: 18 April 2014

1. This letter will address the additional RF impact that adding AT&T antennas to the referenced site. Attached are two documents which cover the modeled RF emissions from the site.
2. The first report, "RF Emissions Compliance Report," for the site complied by Sitesafe, uses the antenna patterns for the antennas at the site to calculate the General Public Maximum Permissible Exposure (MPE) on the ground. The total MPE of all the carriers is 1.827% (based on the General Public MPE) based on this modeling, with AT&T antennas emitting a maximum of 0.463% of the General Public MPE on the ground.
3. The second attachment has the calculations, used by the Connecticut Siting Council, which assumes the maximum antenna gain transmits in a spherical pattern where the worst case results would be at the base of the tower. That calculation, based on the existing antennas, gives a result of 44.41% of the General Public MPE, with the AT&T antennas emitting 10.70% of the General Public MPE on the ground, using the modeling predictions used by Connecticut Siting Council.
4. In either case, the site is compliant with FCC guidelines. If you have any questions regarding this site, the compliance report, please contact me at 719-434-0700 or dcotton@sitesafe.com.



David C. Cotton, Jr.
Licensed Professional Engineer (Electrical)
State of Connecticut, PEN.0027481
Date: 2014-April-21

Director, RF Compliance



RF EMISSIONS COMPLIANCE REPORT

Smartlink LLC on behalf of AT&T Mobility, LLC

**AT&T Mobility, LLC Site FA: 10034997
AT&T Mobility, LLC Site USID: 60419
AT&T Mobility, LLC Site ID: CT2135
AT&T Mobility, LLC Site Name: Stamford West
168 Catoona Lane
Stamford, CT
4/16/2014**

Report Status:

AT&T Mobility, LLC Is Compliant

Prepared By:

Sitesafe, Inc.

200 North Glebe Road, Suite 1000

Arlington, VA 22203

Voice 703-276-1100
Fax 703-276-1169

Engineering Statement in Re:
Electromagnetic Energy Analysis
AT&T Mobility, LLC
Stamford, CT

My signature on the cover of this document indicates:

That I am registered as a Professional Engineer in the jurisdiction indicated; and

That I have extensive professional experience in the wireless communications engineering industry; and

That I am an employee of Sitesafe, Inc. in Arlington, Virginia; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission ("the FCC" and "the FCC Rules") both in general and specifically as they apply to the FCC's Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; and

That the technical information serving as the basis for this report was supplied by AT&T Mobility, LLC (See attached Site Summary and Carrier documents), and that AT&T Mobility, LLC's installations involve communications equipment, antennas and associated technical equipment at a location referred to as the "Stamford West" ("the site"); and

That AT&T Mobility, LLC proposes to operate at the site with transmit antennas listed in the carrier summary and with a maximum effective radiated power as specified by AT&T Mobility, LLC and shown on the worksheet, and that worst-case 100% duty cycle have been assumed; and

That in addition to the emitters specified in the worksheet, there are additional collocated point-to-point microwave facilities on this structure and, the antennas used are highly directional oriented at angles at or just below the horizontal and, that the energy present at ground level is typically so low as to be considered insignificant and have not been included in this analysis. The antennas and contribution that is expected is noted in the "site summary" for identification purposes only. A complete list of microwave antennas is included at the end of this report; and

That this analysis has been performed with the assumption that the ground immediately surrounding the tower is primarily flat or falling; and

That at this time, the FCC requires that certain licensees address specific levels of radio-frequency energy to which workers or members of the public might possibly be exposed (at §1.1307(b) of the FCC Rules); and

That such consideration of possible exposure of humans to radio-frequency radiation must utilize the standards set by the FCC, which is the Federal Agency having jurisdiction over communications facilities; and

That the FCC rules define two tiers of permissible exposure guidelines: 1) "uncontrolled environments," defined as situations in which persons may not be aware of (the "general public"), or may not be able to control their exposure to a transmission facility; and (2) "controlled environments," which defines situations in which persons are aware of their potential for exposure (industry personnel); and

That this statement specifically addresses the uncontrolled environment (which is more conservative than the controlled environment) and the limit set forth in the FCC rules for licensees of AT&T Mobility, LLC's operating frequency as shown on the attached antenna worksheet; and

That when applying the uncontrolled environment standards, the predicted Maximum Power Density at two meters above ground level from the proposed AT&T Mobility, LLC operation is no more than 0.463% of the maximum in any accessible area on the ground and

That it is understood per FCC Guidelines and OET65 Appendix A, that regardless of the existent radio-frequency environment, only those licenses whose contributions exceed five percent of the exposure limit pertinent to their operation(s) bear any responsibility for bringing any non-compliant area(s) into compliance; and

That when applying the uncontrolled environment standards, the cumulative predicted energy density from the proposed operation is no more than 1.827% of the maximum in any accessible area up to two meters above the ground per OET-65; and

That the calculations provided in this report are based on data provided by the client and antenna pattern data supplied by the antenna manufacturer, in accordance with FCC guidelines listed in OET-65. Horizontal and vertical antenna patterns are combined for modeling purposes to accurately reflect the energy two meters above ground level where on-axis energy refers to maximum energy two meters above the ground along the azimuth of the antenna and where area energy refers to the maximum energy anywhere two meters above the ground regardless of the antenna azimuth, accounting for cumulative energy from multiple antennas for the carrier and frequency range indicated; and

That the Occupational Safety and Health Administration has policies in place which address worker safety in and around communications sites, thus individual companies will be responsible for their employees' training regarding Radio Frequency Safety.

In summary, it is stated here that the proposed operation at the site would not result in exposure of the Public to excessive levels of radio-frequency energy as defined in the FCC Rules and Regulations, specifically 47 CFR 1.1307 and that AT&T Mobility, LLC's proposed operation is completely compliant.

Finally, it is stated that access to the tower should be restricted to communication industry professionals, and approved contractor personnel trained in radio-frequency safety; and that the instant analysis addresses exposure levels at two meters above ground level and does not address exposure levels on the tower, or in the immediate proximity of the antennas.

Note: The following sources noted below were utilized in creating this report. Where there are discrepancies in data, the "Structural Analysis Report" document created on behalf of the tower management company "American Tower Corporation" will be used. The "Structural Analysis Report" has been signed and certified by a licensed professional engineer licensed by the State of Connecticut". The "Structural Analysis Report" is believed to be the most accurate professional legal document at the site. Sitesafe has also conducted additional research at the site that may be utilized in this study. Antenna elevations on the "Structural Analysis Report" are referenced to the mount height. Sitesafe modeling software uses the antenna centerline with the manufacturer antenna patterns whenever possible. Half the elevation of the antenna height may have been added when appropriate "primarily with the Omni directional antennas" that are mounted from the bottom of the antenna below the radiating elements.

Structural Analysis Report: 1 ATC Collo Prj_567758_Structural CT2135_2014-02-21

AT&T Mobility, LLC Construction Drawing: 10034997.AE201.140306 (CT2135)
Hudson.Rev.A KPB MD Comments

Connecticut Siting Council Data: AlphaExMPowDens 4-16-14

^[1] *This Power Density information was taken from the Connecticut Siting Council database dated April 16, 2014.*

^[2] *This Power Density information is based on worse case assumptions from AT&T's radio frequency engineers.*

AT&T Mobility, LLC (Proposed) Stamford West Site Summary

Carrier	Area Maximum Percentage MPE
AT&T Mobility, LLC (Future)	0 %
AT&T Mobility, LLC (Future)	0 %
AT&T Mobility, LLC (Future)	0 %
AT&T Mobility, LLC (Proposed)	0.037 %
AT&T Mobility, LLC (Proposed)	0.125 %
AT&T Mobility, LLC (Proposed)	0.301 %
Clearwire	0.016 %
Marcus (Microwave)	0 %
MediaFLO (Qualcom) – Not Active	0 %
MetroPCS	0.276 %
Sensus - (CL&P) Connecticut Light & Power Company	0.017 %
Sprint-Nextel	0.015 %
Sprint-Nextel	0.179 %
Sprint-Nextel	0.022 %
Sprint-Nextel (Decommissioned iDEN)	0 %
T-Mobile	0.009 %
T-Mobile	0.027 %
US Treasury	0.178 %
US Treasury	0.053 %
US Treasury (DDF - Digital Direction Finder)	0.064 %
USA Mobility	0.182 %
USA Mobility "Satellite Rx Only" (Microwave)	0 %
Unknown (Microwave)	0 %
WPHK438-State of CT (Lojack)	0.038 %
WPTX996-Marcus	0.27 %
WQNM711-Clearwire/Path 2 (Microwave)	0 %
WQNM711-Clearwire/Path 3 (Microwave)	0 %
WQNM711-Clearwire/Path 4 (Microwave)	0 %
XM Satellite Radio	0.018 %
XM Satellite Radio "Satellite Rx Only" (Microwave)	0 %
Composite Site MPE:	1.827 %

Control Number	Site	Carrier	#Channels	ERP/Ch	Ant Ht	Power Density (mW/cm2)	MHz	S	%MPE	Site Total
TS-XM-135-001016	Stamford - 168 Catoona Lane	XM Sat Radio	2	389	260	0.0041	2337.49	1.0000	0.41%	
TS-Sensus-135-081231A	Stamford - 168 Catoona Lane	Sensus (CL&P)	1	200	142	0.0036	940.1125	0.6267	0.57%	
EM-Mediaflo-135-080219	Stamford - 168 Catoona Lane	MediaFLO			289		716		4.20%	
EM-CING-135-110517	Stamford - 168 Catoona Lane	AT&T GSM	18	296	236	0.0344	880	0.5867	5.86%	
EM-CING-135-110517	Stamford - 168 Catoona Lane	AT&T GSM	12	427	236	0.0331	1900	1.0000	3.31%	
EM-CING-135-110517	Stamford - 168 Catoona Lane	AT&T UMTS	1	500	236	0.0032	880	0.5867	0.55%	
EM-CING-135-110517	Stamford - 168 Catoona Lane	AT&T UMTS	1	500	236	0.0032	1900	1.0000	0.32%	
EM-CING-135-110517	Stamford - 168 Catoona Lane	AT&T LTE	1	500	236	0.0032	740	0.4933	0.65%	
EM-T-Mobile-135-121221	Stamford - 168 Catoona Lane	T-Mobile LTE	2	24	267	0.0002	2100	1.0000	0.02%	
EM-T-Mobile-135-121221	Stamford - 168 Catoona Lane	T-Mobile GSM/UMTS	2	12	267	0.0001	1950	1.0000	0.01%	
EM-T-Mobile-135-121221	Stamford - 168 Catoona Lane	T-Mobile UMTS	2	12	267	0.0001	2100	1.0000	0.01%	
EMI SMART 3/21/94	Stamford - 168 Catoona Lane	Nextel	9	100	195	0.0085	851	0.5673	1.50%	
EM-Marcus-135-020214	Stamford - 168 Catoona Lane	Marcus	5	100	189	0.0050	450	0.3000	1.68%	
EM-Marcus-135-020214	Stamford - 168 Catoona Lane	Marcus	5	100	209	0.0041	450	0.3000	1.37%	
EM-Marcus-135-020214	Stamford - 168 Catoona Lane	Marcus	5	100	209	0.0041	450	0.3000	1.37%	
EM-Marcus-135-020214	Stamford - 168 Catoona Lane	Marcus	1	0.1	300	0.0000	5.8GHz	1.0000	0.00%	
EM-Clearwire-135-100119	Stamford - 168 Catoona Lane	Clearwire	2	153	167	0.0039	2496	1.0000	0.39%	
EM-Clearwire-135-100119	Stamford - 168 Catoona Lane	Clearwire	1	211	300	0.0008	11 GHz	1.0000	0.08%	
EM-Sprint-135-140328	Stamford - 168 Catoona Lane	Sprint CDMA/LTE	6	693	150	0.0664	1900	1.0000	6.64%	
EM-Sprint-135-140328	Stamford - 168 Catoona Lane	Sprint CDMA/LTE	1	390	150	0.0062	850	0.5667	1.10%	
EM-Sprint-135-140328	Stamford - 168 Catoona Lane	Sprint CDMA/LTE	2	390	150	0.0125	2500	1.0000	1.25%	
EM Sprint 10/10/97	Stamford - 168 Catoona Lane	SNET Paging	2	1500	315	0.0109	931.1875	0.6208	1.75%	
EM-Skytel-135-040923	Stamford - 168 Catoona Lane	Skytel	receive only - no RF emissions							
EM-USCG-008-061-135-060712	Stamford - 168 Catoona Lane	Rescue 21	5	158.5	199	0.0072	165.313	0.2000	3.60%	
EM-USCG-008-061-135-060712	Stamford - 168 Catoona Lane	Rescue 21	1	158.5	199	0.0014	412.975	0.2753	0.52%	
TS-MetroPCS-135-071129	Stamford - 168 Catoona Lane	MetroPCS	7	734	160	0.0722	2310	1.0000	7.22%	44.41%



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 300 ft Self Supported Tower
ATC Site Name : Stamford (Katoona), CT
ATC Site Number : 88018
Engineering Number : 56775821
Proposed Carrier : AT&T Mobility
Carrier Site Name : Stamford West
Carrier Site Number : CTL02135 / FA #10034997
Site Location : 83 Catoona Lane
Stamford, CT 06902-4573
41.052825, -73.563047
County : Fairfield
Date : February 21, 2014
Max Usage : 99%
Result : Pass

Michael B. Davenport
Structural Engineer III

Michael B. Davenport

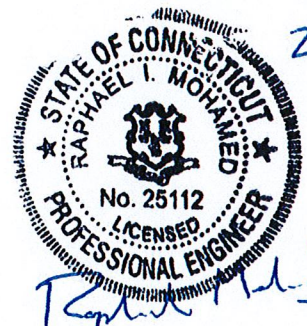


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Calculations	Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 300 ft self supported tower to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	CSEI Analysis, ATC Eng. #73123451, dated September 29, 2005
Foundation Drawing	Rose, Chulkoff, and Rose Job #C67229, dated August 9, 1967
Geotechnical Report	Rose, Chulkoff, and Rose Job #C67229, dated August 9, 1967
Modifications	ATC Eng. #42439132, dated September 26, 2008 ATC Eng. #44209632, dated December 2, 2009

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/EIA-222.

Basic Wind Speed:	85 mph (Fastest Mile)
Basic Wind Speed w/ Ice:	74 mph (Fastest Mile)w/ 1/2" radial ice concurrent
Code:	ANSI/TIA/EIA-222-F / 2003 IBC , Sec. 1609.1.1, Exception (4) & Sec. 3108.4 w/ 2005 CT Supplement & 2009 CT Amendment

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Mount Elev. ¹ (ft)	Qty.	Antenna	Mount Type	Lines	Carrier
300.0	1	Radio/ODU	Platform w/ Handrails	(2) 1 1/4" Coax	Marcus Comm.
	1	TX RX Systems 101-68-10-X-03N			
	1	4' Standard Dish		(3) 1/2" Coax	Clearwire
	3	DragonWave Horizon Compact			
	3	DragonWave A-ANT-18G-2-C		(1) 1 5/8" Coax	Lojack
	1	RFS 200		(1) 1/2" Coax	-
	1	3' HP Dish		(1) 3 1/8" HL	Qualcomm
289.0	1	Dielectric TLP-08M-2E	Side Arm	(2) 7/8" Coax	US Treasury
269.0	1	Rohde & Schwarz ADD090	Side Arm	(12) 1 5/8" Coax (1) 1 1/4" (1.25") Fiber	T-Mobile
265.0	3	RFS ATMAA1412D-1A20	Sector Frame	(1) EW20 (1) 1 5/8" Coax	XM Satellite
	3	Ericsson AIR 21, 1.3 M, B2A B4P			
	3	Ericsson AIR 21, 1.3M, B4A B2P		(2) 7/8" Coax	US Treasury
	2	Til-Tek TA-2350-DAB			
240.0	1	Sinclair SC381-HL	Sector Frame	(2) 7/8" Coax	US Treasury
	1	Sinclair SC281-L			
235.0	6	LGP Allgon LGP21903	Sector Frame	(2) 0.74" 8 AWG 7 (1) 0.28" RG-6	AT&T Mobility
	3	Raycap DC2-48-60-0-9E			
	6	Powerwave LGP21401			
	1	Raycap FC12-PC6-10E			
	6	Ericsson RRUS-11			
218.0	12	Decibel DB844H90E-XY	Sector Frame	(15) 1 5/8" Coax	Sprint Nextel
200.0	2	TX RX Systems 101-68-10-X-03N	Side Arm	(2) 1 1/4" Coax	Marcus Comm.
	1	Sinclair SC281-L		(1) 7/8" Coax	US Treasury
189.0	1	30" x 30" Reflector	Side Arm	-	Town Of Stanford
178.0	3	Antel BCD-87010	Side Arm	(3) 7/8" Coax	USA Mobility
171.0	3	NextNet BTS-2500	T-Arm	(6) 5/16" (0.31") Coax (2) 2" conduit	Clearwire
	3	Argus LLPX310R			
	1	24" x 24" Junction Box			
160.0	18	RCU	Leg	(12) 1 5/8" Coax (2) 3/8" Coax	Metro PCS
	6	Kathrein Scala 800 10504			
150.0	3	Alcatel-Lucent ALU 800MHz External Notch Filter	Sector Frame	(4) 1 1/4" Hybriflex	Sprint Nextel
	3	RFS IBC1900HB-2			
	3	Alcatel-Lucent 800 MHz RRH			
	6	Alcatel-Lucent 1900MHz RRH			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXVTM14-C-I20			
	3	RFS APXVSP18-C-A20			
	1	Channel Master Type 120		(1) 1/2" Coax	USA Mobility
137.0	1	Antel BCD-87010 ____ 4°	Stand-Off	(1) 7/8" Coax	Sensus Metering Systems
100.0	1	TX RX Systems 101-68-10-X-03N	Side Arm	(1) 1 1/4" Coax	Marcus Comm.
24.0	1	Til-Tek TA-2324-LHCP	Leg	(1) 7/8" Coax	XM Satellite

Proposed Equipment

Elevation ¹ (ft)		Qty.	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
235.0	235.0	6	Ericsson RRUS A2	Sector Frame	(12) 1 5/8" Coax	AT&T Mobility
		3	Ericsson RRUS E2 B29			
		6	Ericsson RRUS 12 w/ Solar Shield			
		3	Ericsson RRUS-32			
		9	Andrew SBNHH-1D65A			

¹Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax alongside existing AT&T Mobility coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	91%	Pass
Diagonals	99%	Pass
Horizontals	98%	Pass
Anchor Bolts	88%	Pass

Foundations

Reaction Component	Analysis Reactions
Uplift (Kips)	403.7
Axial (Kips)	501.5
Shear (Kips)	74.8

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Standard Conditions

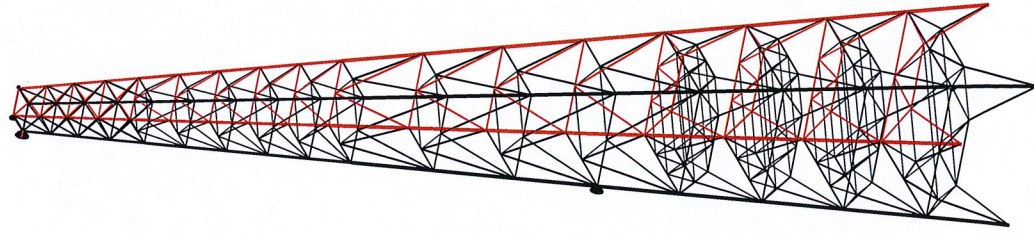
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Project Name : 88018 Stamford (Katoona), CT
Project Notes: 300' Type 'H' AT&T Tag Tower
Project File : C:\Users\michael.davenport\Desktop\88018-L2-AT&T Mobility-2_21_14.tow
Date run : 10:56:51 AM Friday, February 21, 2014
by : Tower Version 12.30
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

Member check option: TIA/EIA 222-F
Connection rupture check: Not Checked
Crossing diagonal check: Fixed
Included angle check: None
Climbing load check: None
Redundant members checked with: Actual Force
Loads from file: c:\users\michael.davenport\Desktop\88018-loads-at&t mobility-2_21_14.eia

*** Analysis Results:

Maximum element usage is 99.38% for Angle "D 2X" in load case "W -90"

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Trans. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Trans. Moment (ft-k)	Long. Moment (ft-k)	Vert. Moment (ft-k)	Bending Moment (ft-k)	Found. Usage %
W 0	OP	-44.61	-23.82	-327.95	50.57	-0.41	-5.44	-2.19	5.45	0.00
W 0	OX	-42.70	24.64	-320.95	49.31	0.04	-5.09	2.20	5.09	0.00
W 0	OXY	-36.09	-17.08	231.82	39.93	0.58	-5.55	2.03	5.58	0.00
W 180	OP	37.70	16.01	233.93	40.98	-0.32	-5.90	-1.99	5.90	0.00
W 180	OX	36.11	-16.94	229.60	39.89	0.59	-5.60	-2.04	5.95	0.00
W 180	OXY	42.72	24.50	-318.73	49.25	0.04	5.15	-2.21	5.63	0.00
W 45	OP	-52.74	-53.02	-501.45	50.39	-0.42	5.48	2.20	5.50	0.00
W 45	OX	-19.92	-12.86	-41.49	23.71	4.37	-4.30	-0.00	6.13	0.00
W 45	OXY	-46.17	-46.08	403.47	65.23	4.89	-4.91	-0.01	6.93	0.00
W 45	OP	-12.40	-19.99	-43.69	23.52	4.10	-4.65	-3.40	6.20	0.00
W 45	OX	-21.37	13.33	-47.93	25.19	-4.97	-4.36	-3.38	6.61	0.00
W 45	OXY	-11.44	19.33	-494.81	74.02	-4.61	-4.06	0.01	6.15	0.00
W 45	OP	-47.16	45.38	403.67	65.45	-3.93	-4.41	3.42	5.91	0.00
W 90	OP	-23.82	-44.94	-329.68	50.86	5.49	0.45	2.18	5.51	0.00
W 90	OX	16.24	-37.98	235.72	41.31	5.95	0.30	1.99	5.95	0.00
W 90	OXY	-17.26	-36.11	232.81	40.02	5.53	-0.61	-2.04	5.57	0.00
W 90	OP	24.85	-42.73	-322.02	49.43	5.08	-0.01	-2.21	5.08	0.00
W 90	OX	16.03	37.94	232.77	41.19	-5.97	0.30	-1.99	5.98	0.00
W 90	OXY	-23.62	44.73	-326.72	50.59	-5.51	0.45	-2.20	5.53	0.00
W 90	OP	24.67	42.70	-319.59	49.32	-5.13	-0.01	2.21	5.13	0.00
W 90	OX	-17.08	36.09	230.38	39.92	-5.58	-0.61	2.04	5.61	0.00
W 0 Ice	OP	-41.48	-22.60	-321.65	47.24	-1.53	-3.74	-1.96	4.04	0.00
W 0 Ice	OX	-39.60	23.38	-314.13	45.99	1.16	-3.41	1.96	3.60	0.00
W 0 Ice	OXY	-32.11	-15.01	191.98	35.45	1.67	-6.13	1.83	6.36	0.00
W 180 Ice	OP	33.56	13.92	189.47	36.34	-1.43	6.53	1.81	6.68	0.00
W 180 Ice	OX	32.14	-14.81	188.89	35.39	1.67	6.21	-1.84	6.43	0.00
W 180 Ice	OXY	39.63	23.17	-311.05	45.91	-1.16	3.49	-1.98	3.67	0.00
W 45 Ice	OP	-49.13	-49.37	-479.87	69.65	2.84	-2.77	-0.00	3.97	0.00
W 45 Ice	OX	-18.88	-10.98	-58.88	21.84	5.46	-2.62	3.14	6.06	0.00
W 45 Ice	OXY	-41.53	-41.45	348.48	58.68	5.60	-5.62	-0.01	7.94	0.00
W 45 Ice	OP	-20.52	11.46	-60.46	21.69	-2.60	-5.40	-3.14	5.99	0.00
W 45 Ice	OX	-47.71	49.70	-472.82	68.89	-3.09	-2.54	0.00	4.00	0.00
W 45 Ice	OXY	-9.75	18.31	-60.04	20.74	-2.46	-5.17	3.16	5.73	0.00
W 90 Ice	OP	-42.41	40.81	347.89	58.86	-5.46	-5.85	0.03	8.00	0.00
W 90 Ice	OX	-22.59	-41.75	-323.03	47.47	3.78	1.56	1.95	4.09	0.00
W 90 Ice	OXY	14.21	-33.78	194.36	36.65	6.51	-1.42	1.79	6.66	0.00
W 90 Ice	OP	-15.15	-32.12	192.72	35.52	6.12	-1.69	-1.84	6.35	0.00
W 90 Ice	OX	23.54	-39.60	-314.79	46.07	3.40	-1.13	-1.97	3.58	0.00
W 90 Ice	OXY	13.94	33.76	190.64	36.52	-6.55	1.42	-1.80	6.70	0.00
W 90 Ice	OP	-22.32	41.56	-319.32	47.18	-3.83	1.57	-1.97	4.14	0.00
W 90 Ice	OX	23.32	39.60	-311.70	45.96	-3.46	-1.13	1.98	3.64	0.00
W 90 Ice	OXY	-14.93	32.12	189.64	35.42	-6.19	-1.69	1.85	6.41	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case Support Origin		Leg Force In Residual Shear		Residual Shear		Residual Shear		Residual Shear		Total	
Joint		Member		Leg Dir.		Perpendicular		Horizontal		Total	

282.84-291.42 291.420 282.840 8 16 10.06 11.12 90.84 1.2150 1.2150 1.215 1.215
272.67-282.84 282.840 272.670 8 16 11.12 12.37 119.43 1.1960 1.1960 1.196 1.196
262.5-272.67 272.670 262.500 12 24 12.37 13.63 132.19 1.2030 1.2030 1.203 1.203
250-262.5 262.500 250.000 16 24 13.63 15.17 179.95 1.2010 1.2010 1.201 1.201
237.5-250.000 237.500 16 24 15.17 16.71 199.22 1.2070 1.2070 1.207 1.207
225-237.5 237.500 225.000 16 24 16.71 18.25 218.49 1.2130 1.2130 1.213 1.213
212.5-225.000 212.500 16 24 18.25 19.79 237.76 1.2190 1.2190 1.219 1.219
200-212.5 212.500 200.000 16 24 19.79 21.33 257.03 1.2250 1.2250 1.225 1.225
175-200 200.000 175.000 16 24 21.33 24.42 271.87 1.2540 1.2540 1.254 1.254
150-175 175.000 150.000 16 24 24.42 27.50 286.96 1.2570 1.2570 1.257 1.257
125-150 150.000 125.000 16 24 27.50 30.58 296.04 1.2660 1.2660 1.266 1.266
100-125 125.000 100.000 20 32 30.58 33.67 303.13 1.2790 1.2790 1.279 1.279
75-100 100.000 75.000 36 76 33.67 36.75 310.21 1.2320 1.2320 1.232 1.232
50-75 75.000 50.000 36 76 36.75 39.83 317.29 1.2320 1.2320 1.232 1.232
25-50 50.000 25.000 32 68 39.83 42.92 324.38 1.2340 1.2340 1.234 1.234
0-25 25.000 0.000 20 40 42.92 46.00 331.46 1.2520 1.2520 1.252 1.252

*** Overall summary for all load cases - Usage = Maximum Stress / Allowable Stress
Printed capacities do not include EIA allowable stress increase for wind load cases.
Printed capacities do not include the strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage
which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength	Max Usage Cont-rol	Max Use Comp.	Comp. Force Control	Comp. Load Case	L/R Capacity (kips)	Comp. Shear Capacity (kips)	Comp. Bearing Connect.	RLX	RLZ	L/R	KL/R Length Member	Curve No.	No. Of Bolts Comp.
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0 91.02	Comp 91.02	L 1P	-430.960	W 45	300.572	0.000	0.000	0.281	0.281	54.28	54.28 25.095	1	0
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0 87.58	Comp 87.58	L 2P	-374.158	W 45	300.572	0.000	0.000	0.281	0.281	54.28	54.28 25.095	1	0
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0 80.17	Comp 80.17	L 3P	-321.289	W 45	300.572	0.000	0.000	0.281	0.281	54.28	54.28 25.095	1	0
Leg S4	L 8" x 8" x 1"	SAE	8X8X1	36.0 74.36	Comp 74.36	L 4P	-267.179	W 45	269.490	0.000	0.000	0.281	0.281	54.28	54.28 25.095	1	0
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0 64.69	Comp 64.69	L 5P	-254.655	W 45	225.521	0.000	0.000	0.333	0.333	63.93	63.93 25.095	1	0
Leg S6	L 8" x 8" x 0.75"	SAE	8X8X0.88	36.0 61.34	Comp 61.34	L 6P	-205.477	W 45	225.521	0.000	0.000	0.333	0.333	63.93	63.93 25.095	1	0
Leg S7	L 8" x 8" x 0.625"	SAE	8X8X0.75	36.0 51.36	Comp 51.36	L 7P	-159.922	W 45	195.467	0.000	0.000	0.333	0.333	63.93	63.93 25.095	1	0
Leg S8	L 8" x 6" x 0.75"	SAE	6X8X0.63	36.0 53.85	Comp 53.85	L 8P	-117.894	W 45	164.199	0.000	0.000	0.333	0.333	63.93	63.93 25.095	1	0
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0 40.32	Comp 40.32	L 10P	-97.151	W 45	143.521	0.000	0.000	0.500	0.500	64.35	64.35 25.095	1	0
Leg S10	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0 40.32	Comp 40.32	L 11P	-77.154	W 45	143.521	0.000	0.000	0.500	0.500	64.35	64.35 25.095	1	0
Leg S11	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0 26.61	Comp 26.61	L 12P	-44.343	W 45	109.689	0.000	0.000	0.500	0.500	64.35	64.35 25.095	1	0
Leg S12	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0 26.61	Comp 26.61	L 13P	-30.714W	45 Ice	86.587	0.000	0.000	0.500	0.500	63.80	63.80 12.547	1	0
Leg S13	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0 26.61	Comp 26.61	L 14P	-23.649	W 45	86.587	0.000	0.000	0.500	0.500	63.80	63.80 12.547	1	0
Leg S14	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0 26.61	Comp 26.61	L 15P	-15.774W	45 Ice	71.997	0.000	0.000	0.500	0.500	63.26	63.26 12.547	1	0
Leg S15	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0 16.43	Comp 16.43	L 16P	-8.780W	45 Ice	54.905	0.000	0.000	0.500	0.500	62.12	62.12 10.209	1	0
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0 11.99	Comp 11.99	L 17P	-4.058W	45 Ice	54.905	0.000	0.000	0.500	0.500	51.99	51.99 8.613	1	0
Leg S17	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0 11.99	Comp 11.99	L 18P	-1.574W	45 Ice	35.918	0.000	0.000	0.333	0.333	135.47	131.93 21.788	5	0
Diag S1	B/B L3"x4"x0.3125"	DAS	4X3X0.31	36.0 99.38	Comp 99.38	D 2X	-47.591	W -90	40.032	0.000	0.000	0.333	0.333	101.48	101.48 20.919	1	0
Diag S2	B/B L3"x3"x0.25"	DAS	3.5X3X0.25	36.0 98.78	Comp 98.78	D 4X	-52.723	W -90	32.896	0.000	0.000	0.333	0.333	111.84	111.84 20.553	1	0
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0 63.21	Comp 63.21	D 6X	-52.924	W -90	32.896	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S4	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0 62.86	Comp 62.86	D 8X	-53.726	W -90	30.309	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S5	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0 89.19	Comp 89.19	D 9P	-36.042	W 90	31.411	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S6	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0 86.10	Comp 86.10	D 11X	-36.058	W -90	31.411	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S7	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0 72.80	Comp 72.80	D 13X	-31.521	W -90	31.411	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S8	B/B L3.5"x3.5"x0.25"	DAS	3.5X3.5X0.25	36.0 67.15	Comp 67.15	D 15X	-30.023	W -90	31.411	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0 78.39	Comp 78.39	D 17X	-16.907	W -90	31.411	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0 70.10	Comp 70.10	D 19X	-15.759	W -90	31.411	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0 96.00	Comp 96.00	D 21X	-14.339	W -90	31.411	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0 96.00	Comp 96.00	D 23X	-10.599	W -90	12.156	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0 65.74	Comp 65.74	D 25X	-10.655	W -90	12.156	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S14	B/B L2.5"x2"x0.25"	DAE	2.5X2X0.25	36.0 30.51	Comp 30.51	D 28X	-5.108	W -90	12.156	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S15	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0 23.56	Comp 23.56	D 30X	-3.516	W -90	13.822	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0 22.05	Comp 22.05	D 32X	-3.314	W -90	13.822	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Diag S17	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0 14.33	Comp 14.33	D 34X	-2.370	W -90	12.402	0.000	0.000	0.333	0.333	134.71	129.05 30.178	6	0
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0 97.28	Comp 97.28	H 2Y	-40.650	W -45	31.342	0.000	0.000	0.520	0.520	188.50	141.76 16.516	5	0
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0 66.14	Comp 66.14	H 4Y	-40.905	W -45	31.342	0.000	0.000	0.520	0.520	188.50	141.76 16.516	5	0
Horiz 3	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0 61.75	Comp 61.75	H 6Y	-39.584	W -45	46.387	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 4	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0 98.49	Comp 98.49	H 7P	-35.920	W 90	27.353	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 5	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0 96.01	Comp 96.01	H 9X	-18.328	W 90	14.318	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 6	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0 76.08	Comp 76.08	H 11P	-16.891	W 90	13.318	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 7	B/B L2.5"x2.5"x0.25"	DAL	2.5X2.5X0.25	36.0 76.05	Comp 76.05	H 13P	-13.504	W -90	16.651	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0 58.13	Comp 58.13	H 15P	-12.479	W -90	16.102	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0 42.94	Comp 42.94	H 17P	-10.210	W -90	17.834	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0 34.17	Comp 34.17	H 19P	-9.049	W -90	19.961	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0 28.05	Comp 28.05	H 21P	-8.322	W -90	22.557	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0 16.00	Comp 16.00	H 23P	-5.342	W -90	25.037	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 13	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0 13.04	Comp 13.04	H 25P	-5.031	W -90	28.949	0.000	0.000	0.500	0.500	175.76	135.12 15.638	5	0
Horiz 14	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0 10.46	Comp 10.46	H 28X	-0.973	W 90	6.977	0.000	0.000	0.500	0.500	167.14	127.371 6.813	1	0

Horiz 15	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	1.62	Tens	1.43	H 30X	-0.529	W 90	27.773	0.000	0.000	0.500	1.000	118.05	118.05	11.116	1
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	2.44	Tens	1.20	H 32X	-0.149	W 90	9.333	0.000	0.000	0.500	1.000	160.29	144.78	10.058	6
Horiz 17	C8x11.5	CHN	8X8x11.5	36.0	0.97	Comp	0.30	H 34P	-0.279	W 180	21.711	0.000	0.000	0.500	1.000	172.80	152.47	9.000	6
LD 1	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	0.825	Comp	0.85	LD 1X	-23.838	W -45	18.198	0.000	0.000	0.880	0.880	152.11	139.75	12.834	6
LD 2	B/B L4"x3"x0.25"	DAL	4X3X0.25	36.0	0.8510	Comp	0.8510	LD 3X	-26.930	W -45	44.434	0.000	0.000	0.820	0.820	98.67	98.67	12.834	1
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	0.674	Comp	0.674	LD 7X	-56.930	W -45	16.111	0.000	0.000	0.870	0.870	153.35	140.51	11.516	6
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	0.761	Comp	0.761	LD 9X	-34.565	W -45	26.560	0.000	0.000	0.830	0.830	103.97	103.97	8.184	1
LD 6	B/B L3"x3"x0.23"	DAE	3X3X0.25	36.0	0.8081	Comp	0.8081	LD 11P	-38.312	W -90	35.559	0.000	0.000	0.840	0.840	104.91	104.91	9.679	1
LD 7	B/B L3"x3"x0.23"	DAE	3X3X0.25	36.0	0.7104	Comp	0.7104	LD 13X	-34.588	W -45	27.075	0.000	0.000	0.865	0.865	122.11	121.30	10.941	6
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	0.9587	Comp	0.9587	LD 15X	-34.588	W -90	27.060	0.000	0.000	0.830	0.830	102.15	102.15	10.941	1
LD 9	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	0.6682	Comp	0.6682	LD 17P	-37.929	W -45	29.171	0.000	0.000	0.840	0.840	105.60	105.60	9.334	1
LD 10	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	0.6686	Comp	0.6686	LD 19X	-28.119	W -45	31.544	0.000	0.000	0.860	0.860	115.25	115.25	10.386	1
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	0.9639	Comp	0.9639	LD 21X	-34.955	W -90	27.199	0.000	0.000	0.840	0.840	101.64	101.64	7.905	1
LD 12	B/B L2.5"x2"x0.375"	DAE	2.5X2.5X0.38	36.0	0.8021	Comp	0.8021	LD 23P	-37.509	W -90	35.071	0.000	0.000	0.850	0.850	121.98	121.22	9.005	6
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	0.5315	Comp	0.5315	LH 2P	-11.523	W 90	16.260	0.000	0.000	1.000	1.000	177.59	155.42	21.458	6
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	0.6518	Comp	0.6518	LH 3P	-30.677	W -45	16.927	0.000	0.000	1.000	1.000	178.86	156.20	10.806	6
LH 3	B/B L2.5"x3"x0.375"	DAE	3X2.5X0.38	36.0	0.8557	Comp	0.8557	LH 4X	-30.426	W -15	26.667	0.000	0.000	1.000	1.000	163.32	146.64	10.003	6
LH 4	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	0.7655	Comp	0.7655	LH 7X	-29.840	W -45	29.236	0.000	0.000	0.998	1.000	138.53	131.39	9.200	6
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00	Comp	0.00	BR 11X1	-1.290	W 45	0.215	0.000	0.000	1.000	1.000	2.33	2.33	19.445	1

Group Summary (Tension Portion):

Group Label	Group Angle Desc. Type	Angle Size	Steel Strength	Max Usage Cont-rol	Max Tension Use In Member	Tension Force Control	Section Capacity	Net Tension Shear Capacity	Tension Connect. Bearing Capacity	Tension Connect. Rupture Member Capacity	Tension Length Tens.	No. Of Bolts	Hole Diameter	
			(ksi)	%	Tens. %	(kips)	(kips)	(kips)	(kips)	(kips)	(ft)	(in)		
Leg S1	L 8" x 8" x 1.125"	SAE	8x8x11.3	36.0	91.02	Comp	70.91	L 1XY 341.666	W 45	361.367	0.000	0.000	25.095	0.000
Leg S2	L 8" x 8" x 1.125"	SAE	8x8x11.3	36.0	87.58	Comp	61.77	L 2XY 297.609	W 45	361.367	0.000	0.000	25.095	0.000
Leg S3	L 8" x 8" x 1.125"	SAE	8x8x11.3	36.0	80.17	Comp	53.05	L 3XY 255.616	W 45	361.367	0.000	0.000	25.095	0.000
Leg S4	L 8" x 8" x 0.875"	SAE	8x8x11.3	36.0	74.36	Comp	49.46	L 4XY 213.677	W 45	323.999	0.000	0.000	25.095	0.000
Leg S5	L 8" x 8" x 0.875"	SAE	8x8x0.88	36.0	84.69	Comp	54.22	L 5XY 206.581	W 45	285.768	0.000	0.000	25.095	0.000
Leg S6	L 8" x 8" x 0.875"	SAE	8x8x0.88	36.0	68.34	Comp	43.63	L 6XY 166.221	W 45	285.768	0.000	0.000	25.095	0.000
Leg S7	L 8" x 8" x 0.75"	SAE	8x8x0.75	36.0	61.36	Comp	39.12	L 7XY 128.871	W 45	247.104	0.000	0.000	25.095	0.000
Leg S8	L 8" x 8" x 0.625"	SAE	8x8x0.63	36.0	53.85	Comp	33.50	L 8XY 92.708	W 45	207.576	0.000	0.000	25.095	0.000
Leg S9	L 6" x 6" x 0.75"	SAE	6x6x0.75	36.0	50.77	Comp	31.17	L 9XY 75.766	W 45	182.304	0.000	0.000	12.547	0.000
Leg S10	L 6" x 6" x 0.5625"	SAE	6x6x0.75	36.0	40.32	Comp	24.39	L 10XY 59.280	W 45	182.304	0.000	0.000	12.547	0.000
Leg S11	L 6" x 6" x 0.5625"	SAE	6x6x0.56	36.0	40.32	Comp	23.73	L 11XY 43.942	W 45	138.888	0.000	0.000	12.547	0.000
Leg S12	L 6" x 6" x 0.4375"	SAE	6x6x0.56	36.0	30.32	Comp	16.66	L 12XY 30.858	W 45	138.888	0.000	0.000	12.547	0.000
Leg S13	L 6" x 6" x 0.4375"	SAE	6x6x0.44	36.0	26.61	Comp	12.93	L 13XY 18.843	W 45	109.296	0.000	0.000	10.209	0.000
Leg S14	L 5" x 5" x 0.4375"	SAE	5x5x0.44	36.0	24.64	Comp	12.36	L 14Y 14.880	W 45	90.288	0.000	0.000	10.209	0.000
Leg S15	L 5" x 5" x 0.3125"	SAE	5x5x0.44	36.0	16.43	Comp	6.73	L 15Y 8.103	W 45	65.448	0.000	0.000	8.613	0.000
Leg S16	L 5" x 5" x 0.3125"	SAE	5x5x0.31	36.0	11.99	Comp	3.92	L 16Y 4.292	W 45	65.448	0.000	0.000	8.613	0.000
Leg S17	L 5" x 5" x 0.3125"	SAE	5x5x0.31	36.0	9.54	Comp	3.03	L 17XY 4.292	W 45	65.448	0.000	0.000	8.613	0.000
Diag S1	B/B L3"x4"x0.3125"	DAS	4x3x0.31	36.0	98.38	Comp	36.01	D 2P 43.347	W 90	90.288	0.000	0.000	21.788	0.000
Diag S2	B/B L3"x3.5"x0.25"	DAS	3.5x3x0.25	36.0	98.78	Comp	52.21	D 4P 47.064	W 90	67.608	0.000	0.000	20.919	0.000
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	3.5x2.5x0.25	36.0	63.21	Comp	57.38	D 6P 47.593	W 90	62.208	0.000	0.000	20.553	0.000
Diag S4	B/B L2.5"x3.5"x0.25"	DAS	3.5x2.5x0.25	36.0	62.86	Comp	57.60	D 8P 47.778	W 90	62.208	0.000	0.000	20.207	0.000
Diag S5	B/B L3"x4"x0.25"	DAS	4x3x0.25	36.0	89.19	Comp	35.04	D 9X 34.111	W 90	73.008	0.000	0.000	20.178	0.000
Diag S6	B/B L3"x4"x0.25"	DAS	4x3x0.25	36.0	86.10	Comp	35.04	D 11P 34.111	W 90	73.008	0.000	0.000	20.178	0.000
Diag S7	B/B L3"x3.5"x0.25"	DAS	3.5x3x0.25	36.0	72.80	Comp	30.65	D 13P 29.838	W 90	73.008	0.000	0.000	20.178	0.000
Diag S8	B/B L3"x3.5"x0.25"	DAS	3.5x3x0.25	36.0	67.15	Comp	29.68	D 15P 28.893	W 90	73.008	0.000	0.000	20.178	0.000
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	78.39	Comp	23.44	D 17P 16.063	W 90	51.408	0.000	0.000	15.962	0.000
Diag S10	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	70.10	Comp	21.92	D 19P 15.024	W 90	51.408	0.000	0.000	15.962	0.000
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5x2x0.25	36.0	96.00	Comp	22.35	D 21P 13.708	W 90	46.008	0.000	0.000	13.455	0.000
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5x2x0.25	36.0	68.06	Comp	16.36	D 23P 10.035	W 90	46.008	0.000	0.000	13.455	0.000
Diag S13	B/B L2.5"x2"x0.25"	DAL	2.5x2x0.25	36.0	65.74	Comp	16.53	D 25P 10.140	W 90	46.008	0.000	0.000	13.455	0.000
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5x3.5x0.25	36.0	30.51	Comp	9.08	D 28X 4.420	W 90	36.504	0.000	0.000	14.641	0.000
Diag S15	L 3.5" x 3.5" x 0.25"	SAE	3.5x3.5x0.25	36.0	23.56	Comp	7.68	D 30X 3.736	W 90	36.504	0.000	0.000	14.641	0.000
Diag S16	L 3" x 3" x 0.25"	SAE	3x3x0.25	36.0	22.05	Comp	6.88	D 32X 2.855	W 90	31.104	0.000	0.000	12.834	0.000
Diag S17	L 3" x 3" x 0.25"	SAE	3x3x0.25	36.0	14.33	Comp	4.69	D 34X 1.944	W 90	31.104	0.000	0.000	12.834	0.000
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5x2.5x0.25	36.0	97.28	Comp	52.19	H 1X 43.283	W 45	62.208	0.000	0.000	12.458	0.000
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5x2.5x0.25	36.0	66.14	Comp	53.40	H 3X 44.295	W 45	62.208	0.000	0.000	12.458	0.000
Horiz 3	B/B L3.5"x2.5"x0.25"	DAL	3.5x2.5x0.25	36.0	61.75	Comp	52.40	H 5X 43.458	W 45	62.208	0.000	0.000	13.278	0.000
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3x2.5x0.25	36.0	96.49	Comp	50.71	H 7P 38.409	W 90	56.808	0.000	0.000	12.250	0.000
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3x2.5x0.25	36.0	96.01	Comp	24.78	H 9X 18.768	W 90	56.808	0.000	0.000	11.222	0.000
Horiz 6	B/B L3"x2.5"x0.25"	DAL	3x2.5x0.25	36.0	76.08	Comp	22.52	H 11P 17.053	W 90	56.808	0.000	0.000	15.292	0.000
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	76.05	Comp	19.78	H 13P 13.555	W 90	56.808	0.000	0.000	13.750	0.000
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	58.13	Comp	18.51	H 15P 12.688	W 90	51.408	0.000	0.000	12.708	0.000
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	42.94	Comp	15.08	H 17P 10.339	W 90	51.408	0.000	0.000	10.667	0.000
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	34.17	Comp	13.48	H 19X 9.238	W 90	51.408	0.000	0.000	9.896	0.000
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	28.05	Comp	12.16	H 21P 8.334	W 90	51.408	0.000	0.000	9.125	0.000
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	16.00	Comp	8.03	H 23X 5.502	W 90	51.408	0.000	0.000	8.354	0.000
Horiz 13	B/B L2.5"x2.5"x0.25"	DAE	2.5x2.5x0.25	36.0	13.04	Comp	7.82	H 25P 5.360	W 90	51.408	0.000	0.000	7.583	0.000
Horiz 14	L 3" x 2.5" x 0.25"	SAU	3x2.5x0.25	36.0	10.46	Comp	5.05	H 28P 1.905W	90 Ice	28.296	0.000	0.000	6.813	0.000
Horiz 15	B/B L3"x2.5"x0.25"	SAU	3x2.5x0.25	36.0	1.62	Tens	1.62	H 30P 1.224W	45 Ice	28.296	0.000	0.000	12.371	0.000
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3x2.5x0.25	36.0	2.44	Tens	2.44	H 31P 0.922W	45 Ice	28.296	0.000	0.000	11.116	0.000
Horiz 17	L 3" x 2.5" x 0.25"	CHN	CBx11.5	36.0	0.97	Comp	0.43	H 34P 0.417 W	45 Ice	28.296	0.000	0.000	10.058	0.000

LD 1	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	98.25	Comp	34.62	LD 2Y	23.731W	-45 Ic	51.408	0.000	0.000	0.000	12.834	0
LD 2	B/B L4"x3"x0.25"	DAL	4X3X0.25	36.0	85.10	Comp	48.89	LD 3P	47.590	W -90	73.008	0.000	0.000	0.000	12.834	0
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	56.74	Comp	41.23	LD 8Y	25.289	W -45	46.008	0.000	0.000	0.000	11.516	0
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	97.61	Comp	50.78	LD 9P	31.147	W -90	46.008	0.000	0.000	0.000	8.184	0
LD 6	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	80.81	Comp	47.19	LD 11X	39.144	W -90	62.208	0.000	0.000	0.000	9.679	0
LD 7	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	71.04	Comp	30.82	LD 14Y	25.564	W -45	62.208	0.000	0.000	0.000	10.941	0
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	95.87	Comp	51.44	LD 15P	31.555	W -90	46.008	0.000	0.000	0.000	8.040	0
LD 9	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	86.86	Comp	56.39	LD 17X	38.553	W -90	51.408	0.000	0.000	0.000	9.334	0
LD 10	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	96.39	Comp	31.08	LD 20Y	23.779	W -45	46.008	0.000	0.000	0.000	10.386	0
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	80.21	Comp	51.47	LD 21P	38.167	W -90	74.952	0.000	0.000	0.000	9.005	0
LD 12	B/B L2.5"x2.5"x0.375"	DAE	2.5X2.5X0.38	36.0	53.15	Comp	17.34	LH 2X	13.137W	90 Ice	56.808	0.000	0.000	0.000	21.458	0
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	65.18	Comp	37.32	LH 4Y	28.267	W -45	56.808	0.000	0.000	0.000	10.806	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	85.57	Comp	25.15	LH 6Y	27.811	W -45	82.944	0.000	0.000	0.000	10.003	0
LH 3	B/B L2.5"x3"x0.375"	DAS	3X2.5X0.38	36.0	76.55	Comp	27.70	LH 8Y	25.965	W -45	73.008	0.000	0.000	0.000	9.200	0
LH 4	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	0.00	Comp	0.00	BR 11X	1.093	W -45	0.216	0.000	0.000	0.000	19.445	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1													

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

Load Case	Maximum Element	Usage %	Label	Type

W 0	98.27	D 1P	Angle	
W 180	98.79	D 1Y	Angle	
W 45	95.61	LD 1P	Angle	
W -45	98.25	LD 1X	Angle	
W 90	99.19	D 2P	Angle	
W -90	99.38	D 2X	Angle	
W 0 Ice	91.65	D 3P	Angle	
W 180 Ice	92.37	D 3Y	Angle	
W 45 Ice	88.76	H 2XY	Angle	
W -45 Ice	92.31	H 2Y	Angle	
W 90 Ice	92.54	D 4P	Angle	
W -90 Ice	92.94	D 4X	Angle	

*** Weight of structure (lbs):
Weight of Angles*Section DLF: 119944.4
Weight of Equipment: 570.0
Total: 120514.4

*** End of Report

[illegible]

Legs

Site No.:	88018
Engineer:	BD
Date:	01/21/2014
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter or Length (in)	Thickness ^[2] (in)	F _y (ksi)
1	0.000-25.00	L	8	1.125	36
2	25.00-50.00	L	8	1.125	36
3	50.00-75.00	L	8	1.125	36
4	75.00-100.0	L	8	1	36
5	100.0-125.0	L	8	0.875	36
6	125.0-150.0	L	8	0.875	36
7	150.0-175.0	L	8	0.75	36
8	175.0-200.0	L	8	0.625	36
9	200.0-212.5	L	6	0.75	36
10	212.5-225.0	L	6	0.75	36
11	225.0-237.5	L	6	0.5625	36
12	237.5-250.0	L	6	0.5625	36
13	250.0-262.5	L	6	0.4375	36
14	262.5-272.7	L	5	0.4375	36
15	272.7-282.8	L	5	0.4375	36
16	282.8-291.4	L	5	0.3125	36
17	291.4-300.0	L	5	0.3125	36

Notes:

^[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifflerized Angle. **L** = Even Leg

^[2] For Solid Round Leg Shapes Thickness Equals Zero.

^[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.: 88018
 Engineer: BD
 Date: 01/21/2014
 Carrier: AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-25.00	2L		3	4	0.3125	36	
2	25.00-50.00	2L		3	3.5	0.25	36	
3	50.00-75.00	2L		2.5	3.5	0.25	36	
4	75.00-100.0	2L		2.5	3.5	0.25	36	
5	100.0-125.0	2L		3	4	0.25	36	
6	125.0-150.0	2L		3	4	0.25	36	
7	150.0-175.0	2L		3	4	0.25	36	
8	175.0-200.0	2L		3.5	3.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2	0.25	36	
12	237.5-250.0	2L		2.5	2	0.25	36	
13	250.0-262.5	2L		2.5	2	0.25	36	
14	262.5-272.7	L		3.5	3.5	0.25	36	
15	272.7-282.8	L		3.5	3.5	0.25	36	
16	282.8-291.4	L		3	3	0.25	36	
17	291.4-300.0	L		3	3	0.25	36	

Notes:

^[1] Type of Diagonal Shape: R = Round, L = Single-Angle or 2L = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88018
Engineer:	BD
Date:	01/21/2014
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	
1	0.000-25.00	2L		3.5	2.5	0.25	36	
2	25.00-50.00	2L		3.5	2.5	0.25	36	
3	50.00-75.00	2L		3.5	2.5	0.25	36	
4	75.00-100.0	2L		3	2.5	0.25	36	
5	100.0-125.0	2L		3	2.5	0.25	36	
6	125.0-150.0	2L		3	2.5	0.25	36	
7	150.0-175.0	2L		2.5	2.5	0.25	36	
8	175.0-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2.5	0.25	36	
12	237.5-250.0	2L		2.5	2.5	0.25	36	
13	250.0-262.5	2L		2.5	2.5	0.25	36	
14	262.5-272.7	L		3	2.5	0.25	36	
15	272.7-282.8	2L		3	2.5	0.25	36	
16	282.8-291.4	L		3	2.5	0.25	36	
17	291.4-300.0	C		8	11.5		36	

Notes:

^[1] Type of Horizontal Shape: R = Round, L = Single-Angle, 2L = Double-Angle, C = Channel, W = W Shape

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88018
1/21/2014	BD
Date:	01/21/2014
Carrier:	AT&T Mobility

When inputting thickness values, include all decimal places.

Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)
1	0.000-25.00	2L		3	2	0.25	36
2	0.000-25.00	2L		4	3	0.25	36
3	25.00-50.00	2L		2.5	2	0.25	36
4	25.00-50.00	2L		2.5	2	0.25	36
5	25.00-50.00	2L		3	3	0.25	36
6	50.00-75.00	2L		3	3	0.25	36
7	50.00-75.00	2L		2.5	2	0.25	36
8	50.00-75.00	2L		3	2	0.25	36
9	75.00-100.0	2L		3	3	0.25	36
10	75.00-100.0	2L		2.5	2	0.25	36
11	75.00-100.0	2L		2.5	2.5	0.375	36

Notes:

^[1] Type of Diagonal Shape: R = Round, L = Single-Angle or 2L = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

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Engineer:	BD
Date:	01/21/2014
Carrier:	AT&T Mobility

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Horiz. Tension Only? (Y/N)
1	0.000-25.00	2L		2.5	3	0.25	36	Y
2	25.00-50.00	2L		2.5	3	0.25	36	
3	50.00-75.00	2L		2.5	3	0.375	36	
4	75.00-100.0	2L		3.5	3.5	0.25	36	

[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.
 [2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.
 [3] Applies to Single-Angle and Double-Angle Shapes only.
 [4] Applies to Double-Angle Shapes only.
 [5] Applies to Single-Angle Shapes only.

Coax & Dishes

Dish Types			
S	Standard	XY	Y
R	Standard w/ Radome		
H	High Performance		90°
G	Grid	X	P

Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation
311	4	90	R	X
25	2	180	R	P
158	4	90	S	X
300	2	90	H	XY
300	2	0	H	Y
300	2	270	H	X
300	3	180	H	P
6	4	180	S	P

Description	From (ft)	To (ft)	Quantity	Shape	Width or Diameter (in)	Perimeter (in)	Unit Weight (lb/ft)	Part of Face Solidity Ratio (Yes/No)	Include in Wind Load (Yes/No)
Marcus-311	265	300	1	Round	1.55	4.87	0.66	Yes	Yes
Bell-303	265	300	1	Round	1.11	3.49	0.33	Yes	Yes
Lojack-302	265	300	1	Round	1.98	6.22	0.82	Yes	Yes
Marcus-300	265	300	1	Round	1.55	4.87	0.66	Yes	Yes
Qualcomm-289	265	289	1	Round	4	12.57	5.39	No	No
USCG-269	265	269	2	Round	1.11	3.49	0.33	No	No
XM-263	265	269	1	Round	5.02	15.77	5.39	No	No
Weight-265	5	265	20	Round	1.98	6.22	0.82	No	No
T-Mobile-265	5	265	12	Round	1.98	6.22	2.16	Yes	Yes
T-Mobile-265b	5	265	1	Round	1.55	4.87	1.00	No	No
USCG-240	5	240	2	Round	1.11	3.49	0.33	No	No
AT&T-235	5	235	12	Round	1.98	6.22	0.82	No	No
AT&T-235B	5	235	1	Round	0.28	0.88	0.03	No	No
AT&T-235C	5	235	2	Round	0.74	2.32	0.49	No	No
Sprint-224	5	218	12	Round	1.98	6.22	0.82	Yes	Yes
Lojack-216	5	216	1	Round	0.44	1.38	0.08	No	No
USCG-200	5	200	1	Round	1.11	3.49	0.33	No	No
Marcus-200	5	200	2	Round	1.55	4.87	0.66	No	No
USA Mob-178	5	178	3	Round	1.11	3.49	0.33	Yes	Yes
Metro-160	5	160	12	Round	1.98	6.22	0.82	No	No
MetroB-160	5	160	2	Round	0.44	1.38	0.08	No	No
Clearwire-171A	5	171	6	Round	0.3125	0.98	0.06	No	No
Sprint-150B	5	150	4	Round	1.55	4.87	0.66	No	No
Sensus-137	5	137	1	Round	1.11	3.49	0.33	No	No
Marcus-100	5	100	1	Round	1.55	4.87	0.66	No	No
XM-25	5	25	1	Round	1.11	3.49	0.33	No	No
Lojack-10	5	10	1	Round	0.44	1.38	0.08	No	No
USA Mob-150	5	150	1	Round	0.63	1.98	0.14	No	No
Clearwire-171	5	171	2	Round	2.375	7.46	3.65	No	No
Clearwire-300	5	300	3	Round	0.63	1.98	0.14	Yes	Yes
Unk-300	5	300	1	Round	0.63	1.98	0.14	No	No
USA Mob-6b	3	6	1	Round	0.63	1.98	0.14	No	No
USA Mob-6	3	6	1	Round	0.3	0.94	0.06	No	No

Coax	Dia. (in)	Weight(lb/ft)
1/4"	0.3	0.064
3/8"	0.44	0.084
1/2"	0.63	0.144
7/8"	1.09	0.33
1"	1.11	0.33
EW90	1.32	0.32
1-1/4"	1.55	0.664
1-5/8"	1.98	0.82
EW63	2.01	0.51
EW52	2.25	0.59
Ladder	3	6

Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle (deg)
4' RAD 1 @ 311'	17X	4 ft RAD Dish	90
2' RAD 2 @ 25'	1P	2 ft RAD Dish	180
4' STD 3 @ 158'	6X	4 ft STD Dish	90
2' HP 4 @ 300'	17XY	2 ft HP Dish	90
2' HP 6 @ 300'	17Y	2 ft HP Dish	0
2' HP 7 @ 300'	17X	2 ft HP Dish	270
3' HP 8 @ 300'	17P	3 ft HP Dish	180
4' STD 9 @ 6'	0P	4 ft STD Dish	180

Site #: 88018
Name: AT&T Mobility

Engineer: BD
Date: 01/21/14

Section Label	Section Color	Joint Defining Bottom Section	Dead 494.6 396.9 Factor					Adj. Factor Flat	Adj. Factor Round	Area Multiplier	Weight Multiplier
0.000-25.00		0P	1.252247635					1.252247635	1.252247635	1	1
25.00-50.00		1P	1.234111691					1.234111691	1.234111691	1	1
50.00-75.00		2P	1.229416005					1.229416005	1.229416005	1	1
75.00-100.0		3P	1.223885326					1.223885326	1.223885326	1	1
100.0-125.0		4P	1.27902213					1.27902213	1.27902213	1	1
125.0-150.0		5P	1.265796191					1.265796191	1.265796191	1	1
150.0-175.0		6P	1.257221541					1.257221541	1.257221541	1	1
175.0-200.0		7P	1.232462312					1.232462312	1.232462312	1	1
200.0-212.5		8P	1.224988662					1.224988662	1.224988662	1	1
212.5-225.0		9P	1.219135835					1.219135835	1.219135835	1	1
225.0-237.5		10P	1.213172057					1.213172057	1.213172057	1	1
237.5-250.0		11P	1.207111155					1.207111155	1.207111155	1	1
250.0-262.5		12P	1.200971445					1.200971445	1.200971445	1	1
262.5-272.7		13P	1.203142146					1.203142146	1.203142146	1	1
272.7-282.8		14P	1.196497816					1.196497816	1.196497816	1	1
282.8-291.4		15P	1.214686271					1.214686271	1.214686271	1	1
291.4-300.0		16P	1.167358428					1.167358428	1.167358428	1	1

Group Label	Group Description	Angle Type	Angle 494.6	Material Type	Element Type	Group Type	Optimize Group
Leg S1	L 8" x 8" x 1.125"	SAE	396.9	A 36	Beam	Leg	None
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	A 36	Beam	Leg	None
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	A 36	Beam	Leg	None
Leg S4	L 8" x 8" x 1"	SAE	8X8X1	A 36	Beam	Leg	None
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	A 36	Beam	Leg	None
Leg S6	L 8" x 8" x 0.875"	SAE	8X8X0.88	A 36	Beam	Leg	None
Leg S7	L 8" x 8" x 0.75"	SAE	8X8X0.75	A 36	Beam	Leg	None
Leg S8	L 8" x 8" x 0.625"	SAE	8X8X0.63	A 36	Beam	Leg	None
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	A 36	Beam	Leg	None
Leg S10	L 6" x 6" x 0.75"	SAE	6X6X0.75	A 36	Beam	Leg	None
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	A 36	Beam	Leg	None
Leg S12	L 6" x 6" x 0.5625"	SAE	6X6X0.56	A 36	Beam	Leg	None
Leg S13	L 6" x 6" x 0.4375"	SAE	6X6X0.44	A 36	Beam	Leg	None
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	A 36	Beam	Leg	None
Leg S15	L 5" x 5" x 0.4375"	SAE	5X5X0.44	A 36	Beam	Leg	None
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	A 36	Beam	Leg	None
Leg S17	L 5" x 5" x 0.3125"	SAE	5X5X0.31	A 36	Beam	Leg	None
Diag S1	B/B L3"x4"x0.3125"	DAS	4X3X0.31	A 36	Beam	Other	None
Diag S2	B/B L3"x3.5"x0.25"	DAS	3.5X3X0.25	A 36	Beam	Other	None
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	A 36	Beam	Other	None
Diag S4	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	A 36	Beam	Other	None
Diag S5	B/B L3"x4"x0.25"	DAS	4X3X0.25	A 36	Beam	Other	None
Diag S6	B/B L3"x4"x0.25"	DAS	4X3X0.25	A 36	Beam	Other	None
Diag S7	B/B L3"x4"x0.25"	DAS	4X3X0.25	A 36	Beam	Other	None
Diag S8	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	A 36	Beam	Other	None
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Diag S10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
Diag S13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	A 36	Beam	Other	None
Diag S15	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	A 36	Beam	Other	None
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	A 36	Beam	Other	None
Diag S17	L 3" x 3" x 0.25"	SAE	3X3X0.25	A 36	Beam	Other	None
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	A 36	Beam	Other	None
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	A 36	Beam	Other	None
Horiz 3	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	A 36	Beam	Other	None
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	A 36	Beam	Other	None
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	A 36	Beam	Other	None
Horiz 6	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	A 36	Beam	Other	None
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 13	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	A 36	Beam	Other	None
Horiz 14	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	A 36	Beam	Other	None
Horiz 15	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	A 36	Beam	Other	None
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	A 36	Beam	Other	None
Horiz 17	C8x11.5	CHN	C8x11.5	A 36	Beam	Other	None
LD 1	B/B L3"x2"x0.25"	DAL	3X2X0.25	A 36	Beam	Other	None
LD 2	B/B L4"x3"x0.25"	DAL	4X3X0.25	A 36	Beam	Other	None
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
LD 6	B/B L3"x3"x0.25"	DAE	3X3X0.25	A 36	Beam	Other	None
LD 7	B/B L3"x3"x0.25"	DAE	3X3X0.25	A 36	Beam	Other	None
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
LD 9	B/B L3"x2"x0.25"	DAL	3X2X0.25	A 36	Beam	Other	None
LD 10	B/B L3"x3"x0.25"	DAE	3X3X0.25	A 36	Beam	Other	None
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	A 36	Beam	Other	None
LD 12	B/B L2.5"x2.5"x0.375"	DAE	2.5X2.5X0.38	A 36	Beam	Other	None
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	A 36	T-Only	Other	None
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	A 36	Beam	Other	None

Group Label	Group Description	Angle Type	Angle 494.6	Material Type	Element Type	Group Type	Optimize Group
LH 3	B/B L2.5"x3"x0.375"	DAS	3X2.5X0.38	A 36	Beam	Other	None
LH 4	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	A 36	Beam	Other	None
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	A 36	Beam	Fictitious	None

Group Label	Group Description	Angle Type	Angle 494.6	Material Type	Element Type	Group Type	Optimize Group
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Site #: 188018
Name: AT&T Mobility

Engineer: BD
Date: 01/21/14

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
L 1	Leg S1		396.9 OP	1P		1	4	0.2812	0.2812	0.2812
L 2	Leg S2	XY-Symmetry	1P	2P		1	4	0.2812	0.2812	0.2812
L 3	Leg S3	XY-Symmetry	2P	3P		1	4	0.2812	0.2812	0.2812
L 4	Leg S4	XY-Symmetry	3P	4P		1	4	0.2812	0.2812	0.2812
L 5	Leg S5	XY-Symmetry	4P	5P		1	4	0.333333333	0.333333333	0.333333333
L 6	Leg S6	XY-Symmetry	5P	6P		1	4	0.333333333	0.333333333	0.333333333
L 7	Leg S7	XY-Symmetry	6P	7P		1	4	0.333333333	0.333333333	0.333333333
L 8	Leg S8	XY-Symmetry	7P	8P		1	4	0.333333333	0.333333333	0.333333333
L 9	Leg S9	XY-Symmetry	8P	9P		1	4	0.5	0.5	0.5
L 10	Leg S10	XY-Symmetry	9P	10P		1	4	0.5	0.5	0.5
L 11	Leg S11	XY-Symmetry	10P	11P		1	4	0.5	0.5	0.5
L 12	Leg S12	XY-Symmetry	11P	12P		1	4	0.5	0.5	0.5
L 13	Leg S13	XY-Symmetry	12P	13P		1	4	0.5	0.5	0.5
L 14	Leg S14	XY-Symmetry	13P	14P		1	4	0.5	0.5	0.5
L 15	Leg S15	XY-Symmetry	14P	15P		1	4	0.5	0.5	0.5
L 16	Leg S16	XY-Symmetry	15P	16P		1	4	0.5	0.5	0.5
L 17	Leg S17	XY-Symmetry	16P	17P		1	4	0.5	0.5	0.5

D 1	Diag S1	XY-Symmetry	0P	H2P		1	5	0.333333333	1	0.333333333
D 2	Diag S1	XY-Symmetry	0P	H1P		1	5	0.333333333	1	0.333333333
D 3	Diag S2	XY-Symmetry	1P	H6P		1	5	0.333333333	0.667	0.333333333
D 4	Diag S2	XY-Symmetry	1P	H5P		1	5	0.333333333	0.667	0.333333333
D 5	Diag S3	XY-Symmetry	2P	H10P		1	5	0.333333333	0.667	0.333333333
D 6	Diag S3	XY-Symmetry	2P	H9P		1	5	0.333333333	0.667	0.333333333
D 7	Diag S4	XY-Symmetry	3P	H14P		1	5	0.333333333	0.667	0.333333333
D 8	Diag S4	XY-Symmetry	3P	H13P		1	5	0.333333333	0.667	0.333333333
D 9	Diag S5	XY-Symmetry	4P	A9P		1	6	0.333333333	0.666666667	0.333333333
D 10	Diag S5	XY-Symmetry	4P	A10P		1	6	0.333333333	0.666666667	0.333333333
D 11	Diag S6	XY-Symmetry	5P	A11P		1	6	0.333333333	0.666666667	0.333333333
D 12	Diag S6	XY-Symmetry	5P	A12P		1	6	0.333333333	0.666666667	0.333333333
D 13	Diag S7	XY-Symmetry	6P	A13P		1	6	0.333333333	0.666666667	0.333333333
D 14	Diag S7	XY-Symmetry	6P	A14P		1	6	0.333333333	0.666666667	0.333333333
D 15	Diag S8	XY-Symmetry	7P	A15P		1	6	0.32	0.59	0.32
D 16	Diag S8	XY-Symmetry	7P	A16P		1	6	0.32	0.59	0.32
D 17	Diag S9	XY-Symmetry	8P	A17P		1	6	0.5	1	0.5
D 18	Diag S9	XY-Symmetry	8P	A18P		1	6	0.5	1	0.5
D 19	Diag S10	XY-Symmetry	9P	A19P		1	6	0.5	1	0.5
D 20	Diag S10	XY-Symmetry	9P	A20P		1	6	0.5	1	0.5
D 21	Diag S11	XY-Symmetry	10P	A21P		1	6	0.5	1	0.5
D 22	Diag S11	XY-Symmetry	10P	A22P		1	6	0.5	1	0.5

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
D 23	Diag S12		XY-Symmetry	11P	A23P	1	6	0.5	1	0.5
D 24	Diag S12		XY-Symmetry	11P	A24P	1	6	0.5	1	0.5
D 25	Diag S13		XY-Symmetry	12P	A25P	1	6	0.5	1	0.5
D 26	Diag S13		XY-Symmetry	12P	A26P	1	6	0.5	1	0.5
D 27	Diag S14		XY-Symmetry	13P	14Y	1	5	0.52	0.75	0.52
D 28	Diag S14		XY-Symmetry	13P	14X	1	5	0.52	0.75	0.52
D 29	Diag S15		XY-Symmetry	14P	15Y	1	5	0.52	0.75	0.52
D 30	Diag S15		XY-Symmetry	14P	15X	1	5	0.52	0.75	0.52
D 31	Diag S16		XY-Symmetry	15P	16Y	1	5	0.52	0.75	0.52
D 32	Diag S16		XY-Symmetry	15P	16X	1	5	0.52	0.75	0.52
D 33	Diag S17		XY-Symmetry	16P	17Y	1	5	0.52	0.75	0.52
D 34	Diag S17		XY-Symmetry	16P	17X	1	5	0.52	0.75	0.52

H 1	Horiz 1		XY-Symmetry	1P	A1P	1	6	0.49	0.49	0.49
H 2	Horiz 1		XY-Symmetry	1P	A2P	1	6	0.49	0.49	0.49
H 3	Horiz 2		XY-Symmetry	2P	A3P	1	6	0.5	0.5	0.5
H 4	Horiz 2		XY-Symmetry	2P	A4P	1	6	0.5	0.5	0.5
H 5	Horiz 3		XY-Symmetry	3P	A5P	1	6	0.5	0.5	0.5
H 6	Horiz 3		XY-Symmetry	3P	A6P	1	6	0.5	0.5	0.5
H 7	Horiz 4		XY-Symmetry	4P	A7P	1	6	0.5	1	0.5
H 8	Horiz 4		XY-Symmetry	4P	A8P	1	6	0.5	1	0.5

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
H 9	Horiz 5		XY-Symmetry	5P	A9P	1	6	1	1	1
H 10	Horiz 5		XY-Symmetry	5P	A10P	1	6	1	1	1
H 11	Horiz 6		XY-Symmetry	6P	A11P	1	6	1	1	1
H 12	Horiz 6		XY-Symmetry	6P	A12P	1	6	1	1	1
H 13	Horiz 7		XY-Symmetry	7P	A13P	1	6	1	1	1
H 14	Horiz 7		XY-Symmetry	7P	A14P	1	6	1	1	1
H 15	Horiz 8		XY-Symmetry	8P	A15P	1	6	1	1	1
H 16	Horiz 8		XY-Symmetry	8P	A16P	1	6	1	1	1
H 17	Horiz 9		XY-Symmetry	9P	A17P	1	6	1	1	1
H 18	Horiz 9		XY-Symmetry	9P	A18P	1	6	1	1	1
H 19	Horiz 10		XY-Symmetry	10P	A19P	1	6	1	1	1
H 20	Horiz 10		XY-Symmetry	10P	A20P	1	6	1	1	1
H 21	Horiz 11		XY-Symmetry	11P	A21P	1	6	1	1	1
H 22	Horiz 11		XY-Symmetry	11P	A22P	1	6	1	1	1
H 23	Horiz 12		XY-Symmetry	12P	A23P	1	6	1	1	1
H 24	Horiz 12		XY-Symmetry	12P	A24P	1	6	1	1	1
H 25	Horiz 13		XY-Symmetry	13P	A25P	1	6	1	1	1
H 26	Horiz 13		XY-Symmetry	13P	A26P	1	6	1	1	1
H 27	Horiz 14		Y-Symmetry	14P	14X	1	6	0.5	1	0.5
H 28	Horiz 14		X-Symmetry	14P	14Y	1	6	0.5	1	0.5
H 29	Horiz 15		Y-Symmetry	15P	15X	1	6	0.5	1	0.5
H 30	Horiz 15		X-Symmetry	15P	15Y	1	6	0.5	1	0.5
H 31	Horiz 16		Y-Symmetry	16P	16X	1	6	0.5	1	0.5
H 32	Horiz 16		X-Symmetry	16P	16Y	1	6	0.5	1	0.5
H 33	Horiz 17		Y-Symmetry	17P	17X	1	6	0.5	1	0.5
H 34	Horiz 17		X-Symmetry	17P	17Y	1	6	0.5	1	0.5

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
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H 37	Horiz 2		Y-Symmetry	A3P	A3X	1	5	1	1	1
H 38	Horiz 2		X-Symmetry	A4P	A4Y	1	5	1	1	1
H 39	Horiz 3		Y-Symmetry	A5P	A5X	1	5	1	1	1
H 40	Horiz 3		X-Symmetry	A6P	A6Y	1	5	1	1	1
H 41	Horiz 4		Y-Symmetry	A7P	A7X	1	5	1	1	1
H 42	Horiz 4		X-Symmetry	A8P	A8Y	1	5	1	1	1

LH 1	LH 1		Y-Symmetry	H1P	H1X	1	6	0.5	1	0.5
LH 2	LH 1		X-Symmetry	H2P	H2Y	1	6	0.5	1	0.5
LH 3	LH 2		XY-Symmetry	H5P	H7P	1	6	1	2	1
LH 4	LH 2		XY-Symmetry	H6P	H8P	1	6	1	2	1
LH 5	LH 3		XY-Symmetry	H9P	H11P	1	6	1	2	1
LH 6	LH 3		XY-Symmetry	H10P	H12P	1	6	1	2	1
LH 7	LH 4		XY-Symmetry	H13P	H15P	1	6	0.998	1.995	0.998
LH 8	LH 4		XY-Symmetry	H14P	H16P	1	6	0.998	1.995	0.998

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
LD 1	LD 1		XY-Symmetry	H1P	1P	1	6	0.88	0.88	0.88
LD 2	LD 1		XY-Symmetry	H2P	1P	1	6	0.88	0.88	0.88
LD 3	LD 2		XY-Symmetry	H1P	A1P	1	6	0.82	0.82	0.82
LD 4	LD 2		XY-Symmetry	H2P	A2P	1	6	0.82	0.82	0.82
LD 7	LD 4		XY-Symmetry	H5P	2P	1	6	0.87	0.87	0.87
LD 8	LD 4		XY-Symmetry	H6P	2P	1	6	0.87	0.87	0.87
LD 9	LD 5		XY-Symmetry	H5P	A3P	1	6	0.83	0.83	0.83
LD 10	LD 5		XY-Symmetry	H6P	A4P	1	6	0.83	0.83	0.83
LD 11	LD 6		XY-Symmetry	A3P	H7P	1	6	0.84	0.84	0.84
LD 12	LD 6		XY-Symmetry	A4P	H8P	1	6	0.84	0.84	0.84
LD 13	LD 7		XY-Symmetry	H9P	3P	1	6	0.865	0.865	0.865
LD 14	LD 7		XY-Symmetry	H10P	3P	1	6	0.865	0.865	0.865
LD 15	LD 8		XY-Symmetry	H9P	A5P	1	6	0.83	0.83	0.83
LD 16	LD 8		XY-Symmetry	H10P	A6P	1	6	0.83	0.83	0.83
LD 17	LD 9		XY-Symmetry	A5P	H11P	1	6	0.84	0.84	0.84
LD 18	LD 9		XY-Symmetry	A6P	H12P	1	6	0.84	0.84	0.84
LD 19	LD 10		XY-Symmetry	H13P	4P	1	6	0.86	0.86	0.86
LD 20	LD 10		XY-Symmetry	H14P	4P	1	6	0.86	0.86	0.86
LD 21	LD 11		XY-Symmetry	H13P	A7P	1	6	0.84	0.84	0.84
LD 22	LD 11		XY-Symmetry	H14P	A8P	1	6	0.84	0.84	0.84
LD 23	LD 12		XY-Symmetry	A7P	H15P	1	6	0.85	0.85	0.85
LD 24	LD 12		XY-Symmetry	A8P	H16P	1	6	0.85	0.85	0.85

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
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BR 1	DUM 1		XY-Symmetry	A1P	A2P		1	4	1	1	1
BR 3	DUM 1		XY-Symmetry	A3P	A4P		1	4	1	1	1
BR 4	DUM 1		XY-Symmetry	A3P	A4XY		1	4	1	1	1
BR 5	DUM 1		XY-Symmetry	A5P	A6P		1	4	1	1	1
BR 6	DUM 1		XY-Symmetry	A5P	A6XY		1	4	1	1	1
BR 7	DUM 1		XY-Symmetry	A7P	A8P		1	4	1	1	1
BR 8	DUM 1		XY-Symmetry	A7P	A8XY		1	4	1	1	1
BR 9	DUM 1		XY-Symmetry	A9P	A10P		1	4	1	1	1
BR 11	DUM 1		XY-Symmetry	A11P	A12P		1	4	1	1	1
BR 13	DUM 1		XY-Symmetry	A13P	A14P		1	4	1	1	1
BR 15	DUM 1		XY-Symmetry	A15P	A16P		1	4	1	1	1
BR 17	DUM 1		XY-Symmetry	A17P	A18P		1	4	1	1	1
BR 19	DUM 1		XY-Symmetry	A19P	A20P		1	4	1	1	1
BR 21	DUM 1		XY-Symmetry	A21P	A22P		1	4	1	1	1
BR 23	DUM 1		XY-Symmetry	A23P	A24P		1	4	1	1	1
BR 25	DUM 1		XY-Symmetry	A25P	A26P		1	4	1	1	1

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
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BR 61	DUM 1	XY-Symmetry	H1P	H2P		1	4	1	1	1
BR 62	DUM 1	XY-Symmetry	H1P	H2XY		1	4	1	1	1
BR 64	DUM 1	XY-Symmetry	H5P	H6P		1	4	1	1	1
BR 65	DUM 1	XY-Symmetry	H5P	H6XY		1	4	1	1	1
BR 66	DUM 1	XY-Symmetry	H7P	H8P		1	4	1	1	1
BR 67	DUM 1	XY-Symmetry	H9P	H10P		1	4	1	1	1
BR 68	DUM 1	XY-Symmetry	H9P	H10XY		1	4	1	1	1
BR 69	DUM 1	XY-Symmetry	H11P	H12P		1	4	1	1	1
BR 70	DUM 1	XY-Symmetry	H13P	H14P		1	4	1	1	1
BR 71	DUM 1	XY-Symmetry	H13P	H14XY		1	4	1	1	1
BR 72	DUM 1	XY-Symmetry	H15P	H16P		1	4	1	1	1

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
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Point Loads

Tower Height:	300
Gh:	1.09
Wind Speed:	85.00
Wind Speed (Ice):	73.61
Radial Ice Diameter:	0.5

Site No.:	88018
Engineer:	BD
Date:	01/21/2014
Carrier:	AT&T Mobility

KS-15676 Horn Antennas: ~128 ft²

No.	Carrier	Elevation (ft)	Quantity	Number of Azimuths	Model	Height (in)	Width (in)	Depth (in)	Weight (lbs/ea)	Flat/Round (F/R)	Reduction Factor	C _A (ft ² /ea)	Weight (k/ea)	C _A (psf)	q _z (psf)	q _z (Ice) (psf)
1		300	2	4	15' Omni & 16' Grid Omni Platform	186	4	4	50	R	1.000	55.00	4.00	1.20	34.75	26.06
2		283	1	4	-	0.01	0.01	0.01	0.01	R	0.001	55.00	4.00	-	-	-
3		212.5	1	3	Catwalk	0.01	0.01	0.01	0.01	R	0.001	40.00	2.75	1.00	34.18	25.63
4		100	1	3	Platform	0.01	0.01	0.01	0.01	R	0.001	50.00	3.00	1.00	31.49	23.62
5		303	1	3	Platform	0.01	0.01	0.01	0.01	R	0.001	50.00	3.00	1.00	25.39	19.04
6	Lojack	302	1	1	RFS 200 Side Arm	249.6	2.4	2.4	20	R	1.000	0.00	0.00	1.20	34.82	26.11
7	Marcus Comm. Marcus Comm.	300	1	1	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	1.20	34.75	26.06
8	Marcus Comm. Marcus Comm.	311	1	1	ODU	16	12	8	30	F	0.500	0.00	0.00	1.40	35.11	26.33
9	Qualcomm Qualcomm	289	1	1	-	0.01	0.01	0.01	0.01	R	0.001	22.75	0.23	1.00	34.38	25.78
10	USCG	269	1	1	Dielectric TLP	0.01	0.01	0.01	0.01	R	0.001	22.75	0.23	1.00	33.68	25.26
11	XM Satellite XM Satellite	262.5	2	1	Rohde & Schwarz ADD090 Til Tek TA-2350-DAB	70	2.3	2.3	15	R	1.000	20.76	0.20	1.20	33.45	25.09
12	T-Mobile T-Mobile	265	3	3	RFS ATMAA1412D-1A20 Sector Frame	12	10	4	13	F	0.500	17.90	0.40	1.20	33.54	25.15
13	XM Satellite XM Satellite	265	2	2	Til-Tek TA-2350-DAB	70	2.3	2.3	15	R	1.000	0.00	0.00	1.20	33.54	25.15
14	USCG	240	1	1	Same Mounts as Above Sinclair SC381-HL	148.3	4.5	4.5	47	R	1.000	3.00	0.20	1.20	32.60	24.45
15	USCG	240	1	1	Sinclair SC281-L	251	5	5	79	R	1.000	3.00	0.20	1.20	32.60	24.45
16	Sprint Nextel Sprint Nextel	150	3	3	Alcatel-Lucent TD-RRH8-20-25 w/ SS	26.1	18.6	6.7	70	F	0.670	0.00	0.00	1.40	28.51	21.38
17	Sprint Nextel Sprint Nextel	150	3	3	RFS APXVTM14-C-120	56.3	12.6	6.3	52.9	F	0.780	0.00	0.00	1.40	28.51	21.38
18	Sprint Nextel Sprint Nextel	218	12	3	Decibel DB844H90E-XY	48	8.5	6	10	F	0.860	0.00	0.00	1.40	31.72	23.79
19	Lojack Lojack	215.5	1	1	8' Omni Side Arm	96	3	3	30	R	1.000	17.90	0.40	1.20	31.62	23.71
20	USCG	200	1	1	Sinclair SC281-L	251	5	5	79	R	1.000	3.00	0.20	1.20	30.95	23.21
21	Marcus Comm. Marcus Comm.	200	2	2	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	1.20	30.95	23.21
22	USA Mobility USA Mobility	178	3	3	Antel BCD-87010 Side Arm	134	2.6	2.6	26.5	R	1.000	3.00	0.20	1.20	29.94	22.45
23	Metro PCS Metro PCS	160	6	3	Kathrein 800 10504 Sector Frame	54	6.1	2.7	17.6	F	0.780	17.90	0.40	1.46	29.04	21.78
24																
25	Sensus Metering Sensus Metering	137	1	1	Antel BCD-87010_4 Side Arm	134	2.6	2.6	26.5	R	1.000	3.00	0.20	1.20	27.78	20.83
26	Marcus Comm. Lojack	100	1	1	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	1.20	25.39	19.04
27	Lojack Lojack	10	1	1	GPS Unit Pipe	12	6	6	10	R	1.000	0.00	0.00	0.80	18.50	13.87
28	USCG	271	1	1	TIA	12	6	6	20	F	1.000	0.00	0.00	1.40	33.76	25.32
29	AT&T Mobility AT&T Mobility	235	6	3	Powerwave LGP21903 Sector Frame	4.4	6.3	3	25	F	0.670	14.40	0.40	1.40	32.41	24.31
30	AT&T Mobility AT&T Mobility	235	6	3	Ericsson RRUS 11 Raycap FC12-PC6-10E	25	18.2	6.7	55	F	0.670	2.46	0.03	1.40	32.41	24.31

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
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BR 61	DUM 1	XY-Symmetry	H1P	H2P	1	4	1	1	1
BR 62	DUM 1	XY-Symmetry	H1P	H2XY	1	4	1	1	1
BR 64	DUM 1	XY-Symmetry	H5P	H6P	1	4	1	1	1
BR 65	DUM 1	XY-Symmetry	H5P	H6XY	1	4	1	1	1
BR 66	DUM 1	XY-Symmetry	H7P	H8P	1	4	1	1	1
BR 67	DUM 1	XY-Symmetry	H9P	H10P	1	4	1	1	1
BR 68	DUM 1	XY-Symmetry	H9P	H10XY	1	4	1	1	1
BR 69	DUM 1	XY-Symmetry	H11P	H12P	1	4	1	1	1
BR 70	DUM 1	XY-Symmetry	H13P	H14P	1	4	1	1	1
BR 71	DUM 1	XY-Symmetry	H13P	H14XY	1	4	1	1	1
BR 72	DUM 1	XY-Symmetry	H15P	H16P	1	4	1	1	1

Member Label	Group Label	Section Label	Symmetry 494.6	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
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Point Loads

Tower Height:	300
Gh:	1.09
Wind Speed:	85.00
Wind Speed (Ice):	73.61
Radial Ice Diameter:	0.5

ft
in

Site No.:	88018
Engineer:	BD
Date:	01/21/2014
Carrier:	AT&T Mobility

KS-15676 Horn Antennas: ~128 ft²

No.	Carrier	Elevation (ft)	Quantity	Number of Azimuths	Model	Height (in)	Width (in)	Depth (in)	Weight (lbs/ea)	Flat/Round (F/R)	Reduction Factor	C _A A _C (ft ² /ea)	Weight (k/ea)	H/W	C _A	q _Z (psf)	q _Z (Ice) (psf)
1		300	2	2	15' Omni & 16' Grid Omni Platform	186	4	4	50	R	1.000	55.00	4.00	46.50	1.20	34.75	26.06
2		283	1	4	-	0.01	0.01	0.01	0.01	R	0.001			-	-	-	-
3		212.5	1	3	Catwalk	0.01	0.01	0.01	0.01	R	1.000	40.00	2.75	1.00	0.80	34.18	25.63
4		100	1	3	Platform	0.01	0.01	0.01	0.01	R	0.001	50.00	3.00	1.00	0.80	31.49	23.62
5		303	1	3	Platform	0.01	0.01	0.01	0.01	R	0.001	50.00	3.00	1.00	0.80	25.39	19.04
6	Lojack	302	1	1	-	0.01	0.01	0.01	0.01	R	1.000	0.00	0.00	1.00	0.80	34.85	26.14
7	Marcus Comm.	300	1	1	RFS 200 Side Arm	249.6	2.4	2.4	20	R	1.000	3.00	0.20	104.00	1.20	34.82	26.11
8	Marcus Comm.	311	1	1	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	54.17	1.20	34.75	26.06
9	Qualcomm	289	1	1	ODU	16	12	8	30	F	0.500	0.00	0.00	1.33	1.40	35.11	26.33
10	USCG	269	1	1	-	0.01	0.01	0.01	0.01	R	0.001			1.00	0.80	34.38	25.78
11	XM Satellite	262.5	2	1	Dielectric TLP	0.01	0.01	0.01	0.01	R	1.000	22.75	0.23	1.00	0.80	33.68	25.26
12	XM Satellite	265	2	1	Rohde & Schwarz ADD090 TII Tek TA-2350-DAB Side Arm	70	2.3	2.3	15	R	1.000	20.76	0.20	30.43	1.20	33.45	25.09
13	XM Satellite	265	2	3	RFS ATMAA1412D-1A20 Sector Frame	12	10	4	13	F	0.500	3.00	0.20	1.20	1.40	33.54	25.15
14	USCG	240	1	1	TII-Tek TA-2350-DAB Side Arm	70	2.3	2.3	15	R	1.000	17.90	0.40	30.43	1.20	33.54	25.15
15	USCG	240	1	1	Same Mounts as Above	148.3	4.5	4.5	47	R	1.000	0.00	0.00	32.96	1.20	32.60	24.45
16	Sprint Nextel	150	3	3	Sinclair SC381-HL Side Arm	251	5	5	79	R	1.000	3.00	0.20	50.20	1.20	32.60	24.45
17	Sprint Nextel	150	3	3	Alcatel-Lucent TD-RRH8x20-25 w/ SS	26.1	18.6	6.7	70	F	0.670	0.00	0.00	1.40	1.40	28.51	21.38
18	Sprint Nextel	218	3	3	RFS APXVTM14-C-120	56.3	12.6	6.3	52.9	F	0.780	0.00	0.00	4.47	1.40	28.51	21.38
19	Lojack	215.5	1	1	Decibel DB844H90E-XY Sector Frame	48	8.5	6	10	F	0.860	17.90	0.40	5.65	1.40	31.72	23.79
20	USCG	200	1	1	8' Omni Side Arm	96	3	3	30	R	1.000	3.00	0.20	32.00	1.20	31.62	23.71
21	Marcus Comm.	200	2	2	Sinclair SC281-L Side Arm	251	5	5	79	R	1.000	3.00	0.20	50.20	1.20	30.95	23.21
22	USA Mobility	178	3	3	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	54.17	1.20	30.95	23.21
23	Metro PCS	160	6	3	Antel BCD-87010 Side Arm	134	2.6	2.6	26.5	R	1.000	3.00	0.20	51.54	1.20	29.94	22.45
24	Metro PCS		3	3	Kathrein 800 10504 Sector Frame	54	6.1	2.7	17.6	F	0.780	17.90	0.40	8.85	1.46	29.04	21.78
25	Sensus Metering	137	1	1	Antel BCD-87010_4 Side Arm	134	2.6	2.6	26.5	R	1.000	3.00	0.20	51.54	1.20	27.78	20.83
26	Marcus Comm.	100	1	1	TX RX 101-68-10-X-03N Side Arm	189.6	3.5	3.5	70	R	1.000	3.00	0.20	54.17	1.20	25.39	19.04
27	Lojack	10	1	1	GPS Unit Pipe	12	6	6	10	R	1.000	0.00	0.00	2.00	0.80	18.50	13.87
28	USCG	271	1	1	TTA	12	6	6	20	F	1.000	0.00	0.00	2.00	1.40	33.76	25.32
29	AT&T Mobility	235	6	3	Powerwave LGP21903 Sector Frame	4.4	6.3	3	25	F	0.670	14.40	0.40	0.70	1.40	32.41	24.31
30	AT&T Mobility	235	6	3	Ericsson RRUS 11	25	18.2	6.7	55	F	0.670			1.37	1.40	32.41	24.31

No.	Elevation (ft)	C _u A _c (ft ²)	C _u A _c (Ice) (ft ²)	Force (k)	Force (Ice) (k)	Weight (k)	Weight (Ice) (k)	Σ Force (k)	Σ Force (Ice) (k)	Σ Weight (k)	Σ Weight (Ice) (k)
1	300	12.40	15.58	0.469	0.442	0.100	0.210	2.55	2.55	4.10	5.41
2	283	55.00	74.25	2.079	2.105	4.000	5.200	1.49	1.51	2.75	3.58
3	212.5	0.00	0.00	0.000	0.000	0.000	0.000	1.71	1.73	3.00	3.90
4	100	50.00	67.50	1.713	1.734	3.000	3.900	1.38	1.40	3.00	3.90
5	303	0.00	0.01	0.000	1.998	0.000	0.000	0.00	0.00	0.00	0.00
6	302	4.99	7.10	0.000	0.000	0.000	0.000	0.30	0.32	0.22	0.33
7	300	5.53	7.15	0.209	0.203	0.070	0.120	0.32	0.32	0.27	0.38
8	311	0.93	1.07	0.036	0.031	0.030	0.045	0.04	0.03	0.03	0.04
9	289	0.00	0.00	0.000	0.000	0.000	0.000	0.85	0.86	0.23	0.30
10	269	22.75	30.71	0.851	0.861	0.230	0.299	0.76	0.77	0.20	0.26
11	262.5	0.00	0.00	0.000	0.000	0.000	0.000	0.32	0.33	0.43	0.58
12	265	2.68	3.91	0.098	0.107	0.030	0.056	1.53	1.54	1.24	1.62
13	265	6.00	8.10	0.218	0.221	0.400	0.520	0.10	0.11	0.03	0.06
14	240	1.75	2.09	0.064	0.057	0.039	0.062	0.30	0.29	0.25	0.36
15	240	40.28	54.37	1.469	1.488	1.200	1.560	0.48	0.44	0.28	0.43
16	150	2.68	3.91	0.098	0.107	0.030	0.056	0.29	0.24	0.21	0.29
17	150	9.49	10.38	0.294	0.241	0.210	0.291	0.50	0.41	0.16	0.28
18	218	16.14	17.73	0.500	0.412	0.159	0.277	2.80	2.62	1.32	2.00
19	215.5	0.00	0.00	0.000	0.000	0.000	0.000	0.19	0.19	0.23	0.31
20	200	10.46	12.60	0.352	0.318	0.079	0.170	0.45	0.42	0.28	0.43
21	200	3.00	4.05	0.101	0.102	0.200	0.260	0.57	0.57	0.54	0.76
22	178	11.06	14.30	0.372	0.361	0.140	0.240	0.58	0.59	0.68	0.94
23	160	6.00	8.10	0.202	0.205	0.400	0.520	1.77	1.73	1.31	1.77
24		8.71	12.15	0.284	0.297	0.080	0.162				
25	137	15.65	18.55	0.494	0.439	0.600	0.780				
26	100	40.28	54.37	1.272	1.288	1.200	1.560	0.18	0.18	0.23	0.31
27	10	2.90	4.05	0.088	0.092	0.027	0.054	0.24	0.23	0.27	0.38
28	271	5.53	7.15	0.153	0.148	0.070	0.120	0.01	0.01	0.01	0.02
29	235	3.00	4.05	0.083	0.084	0.200	0.260	0.03	0.02	0.02	0.03
30	235	0.40	0.51	0.008	0.008	0.010	0.017	1.18	1.20	1.35	1.72
		0.00	0.00	0.000	0.000	0.000	0.000	0.71	0.60	0.36	0.52
		0.70	0.88	0.026	0.024	0.020	0.027				
		1.08	1.54	0.038	0.041	0.150	0.164				
		32.40	43.74	1.142	1.156	1.200	1.560				
		17.78	19.51	0.627	0.516	0.330	0.485				
		2.46	3.32	0.087	0.088	0.025	0.033				

Site: 80218			Engineer: RD								
Carrier: AT&T Mobility			Date: 03/21/14								
Load Case Description	Dead Load Factor	Wind Load Factor	494.6 396.9	Strength Factor	Allowable Stress Inc. Factor	Basic Wind Speed	Wind Dir.	Ice Thick.	Ice Density	Temp.	Point Loads
W 0	1.1	1	1	1	1.333333333	85	0	0	56	50	
W 180	1.1	1	1	1	1.333333333	85	180	0	56	50	
W 45	1.1	1	1	1	1.333333333	85	45	0	56	50	
W -45	1.1	1	1	1	1.333333333	85	-45	0	56	50	
W 90	1.1	1	1	1	1.333333333	85	90	0	56	50	
W -90	1.1	1	1	1	1.333333333	85	-90	0	56	50	
W 0 Ice	1.1	1	1	1	1.333333333	73.61	0	0.5	56	10	
W 180 Ice	1.1	1	1	1	1.333333333	73.61	180	0.5	56	10	
W 45 Ice	1.1	1	1	1	1.333333333	73.61	45	0.5	56	10	
W -45 Ice	1.1	1	1	1	1.333333333	73.61	-45	0.5	56	10	
W 90 Ice	1.1	1	1	1	1.333333333	73.61	90	0.5	56	10	
W -90 Ice	1.1	1	1	1	1.333333333	73.61	-90	0.5	56	10	

Angle: -90

No Ice

Joint Label	Force X-Dir (lbs)	Force Y-Dir (lbs)	Force Vertical (lbs)	Moment X-Axis (ft-lbs)	Moment Y-Axis (ft-lbs)	Moment Z-Axis (ft-lbs)
17P	0.00	-754.10	1050			
17X	0.00	-754.10	1050			
17Y	0.00	-519.74	1000			
17XY	0.00	-519.74	1000			
15P	0.00	-371.75	687.5025			
15X	0.00	-371.75	687.5025			
15Y	0.00	-371.75	687.5025			
15XY	0.00	-371.75	687.5025			
9P	0.00	-570.88	1000.003333			
9X	0.00	-570.88	1000.003333			
9Y	0.00	-570.88	1000.003333			
9XY	0.00	0.00	0			
4P	0.00	-460.27	1000.003333			
4X	0.00	-460.27	1000.003333			
4Y	0.00	-460.27	1000.003333			
4XY	0.00	0.00	0			
17P	0.00	0.00	0.01			
17X	0.00	0.00	0			
17Y	0.00	0.00	0			
17XY	0.00	0.00	0			
17P	0.00	-302.67	220			
17X	0.00	0.00	0			
17Y	0.00	0.00	0			
17XY	0.00	0.00	0			
17P	0.00	0.00	0			
17X	0.00	0.00	0			
17Y	0.00	0.00	0			
17XY	0.00	0.00	0			
17P	0.00	-35.84	30			
17X	0.00	0.00	0			
17Y	0.00	0.00	0			
17XY	0.00	0.00	0			
16P	0.00	-850.81	230.01			
16X	0.00	0.00	0			
16Y	0.00	0.00	0			
16XY	0.00	0.00	0			
14P	0.00	-760.64	200.01			
14X	0.00	0.00	0			
14Y	0.00	0.00	0			
14XY	0.00	0.00	0			
13P	0.00	-315.94	430			
13X	0.00	0.00	0			
13Y	0.00	0.00	0			
13XY	0.00	0.00	0			
13P	0.00	-511.07	413			
13X	0.00	-511.07	413			
13XY	0.00	0.00	0			
13P	0.00	-48.95	15			
13X	0.00	-48.95	15			
13Y	0.00	0.00	0			
13XY	0.00	0.00	0			
11P	0.00	-303.62	247			
11X	0.00	0.00	0			
11Y	0.00	0.00	0			
11XY	0.00	0.00	0			
11P	0.00	-477.30	279			
11X	0.00	0.00	0			
11Y	0.00	0.00	0			
11XY	0.00	0.00	0			
6P	0.00	-98.06	70			
6X	0.00	-98.06	70			
6Y	0.00	-98.06	70			
6XY	0.00	0.00	0			
6P	0.00	-166.81	52.9			
6X	0.00	-166.81	52.9			
6Y	0.00	-166.81	52.9			
6XY	0.00	0.00	0			
10P	0.00	-934.03	440			
10X	0.00	-934.03	440			
10Y	0.00	-934.03	440			
10XY	0.00	0.00	0			
9P	0.00	-185.71	230			
9X	0.00	0.00	0			
9Y	0.00	0.00	0			
9XY	0.00	0.00	0			
8P	0.00	-453.07	279			
8X	0.00	0.00	0			
8Y	0.00	0.00	0			
8XY	0.00	0.00	0			
8P	0.00	-287.16	270			
8X	0.00	-287.16	270			
8Y	0.00	0.00	0			
8XY	0.00	0.00	0			
7P	0.00	-192.23	226.5			
7X	0.00	-192.23	226.5			
7Y	0.00	-192.23	226.5			
7XY	0.00	0.00	0			
6P	0.00	-588.79	435.2			
6X	0.00	-588.79	435.2			
6Y	0.00	-588.79	435.2			
6XY	0.00	0.00	0			

With Ice

Joint Label	Force X-Dir (lbs)	Force Y-Dir (lbs)	Force Vertical (lbs)
17P	0.00	-747.09	1405.060185
17X	0.00	-747.09	1405.060185
17Y	0.00	-526.21	1300
17XY	0.00	-526.21	1300
15P	0.00	-376.37	893.7608473
15X	0.00	-376.37	893.7608473
15Y	0.00	-376.37	893.7608473
15XY	0.00	-376.37	893.7608473
9P	0.00	-577.98	1300.014463
9X	0.00	-577.98	1300.014463
9Y	0.00	-577.98	1300.014463
9XY	0.00	0.00	0
4P	0.00	-466.00	1300.014463
4X	0.00	-466.00	1300.014463
4Y	0.00	-466.00	1300.014463
4XY	0.00	0.00	0
17P	0.00	-0.16	0.043389352
17X	0.00	0.00	0
17Y	0.00	0.00	0
17XY	0.00	0.00	0
17P	0.00	-316.69	327.2901852
17X	0.00	0.00	0
17Y	0.00	0.00	0
17XY	0.00	0.00	0
17P	0.00	-317.43	379.8118056
17X	0.00	0.00	0
17Y	0.00	0.00	0
17XY	0.00	0.00	0
17P	0.00	-30.77	44.68055556
17X	0.00	0.00	0
17Y	0.00	0.00	0
17XY	0.00	0.00	0
16P	0.00	-863.40	299.0433894
16X	0.00	0.00	0
16Y	0.00	0.00	0
16XY	0.00	0.00	0
14P	0.00	-770.11	260.0433894
14X	0.00	0.00	0
14Y	0.00	0.00	0
14XY	0.00	0.00	0
13P	0.00	-327.58	576.1132407
13X	0.00	0.00	0
13Y	0.00	0.00	0
13XY	0.00	0.00	0
13P	0.00	-514.90	540.6157407
13X	0.00	-514.90	540.6157407
13Y	0.00	-514.90	540.6157407
13XY	0.00	0.00	0
13P	0.00	-53.42	28.05662037
13X	0.00	-53.42	28.05662037
13Y	0.00	0.00	0
13XY	0.00	0.00	0
11P	0.00	-289.72	356.0405093
11X	0.00	0.00	0
11Y	0.00	0.00	0
11XY	0.00	0.00	0
11P	0.00	-442.84	429.6435185
11X	0.00	0.00	0
11Y	0.00	0.00	0
11XY	0.00	0.00	0
6P	0.00	-80.46	97.13634259
6X	0.00	-80.46	97.13634259
6Y	0.00	-80.46	97.13634259
6XY	0.00	0.00	0
6P	0.00	-137.43	92.42569444
6X	0.00	-137.43	92.42569444
6Y	0.00	-137.43	92.42569444
6XY	0.00	0.00	0
10P	0.00	-871.83	665.0648148
10X	0.00	-871.83	665.0648148
10Y	0.00	-871.83	665.0648148
10XY	0.00	0.00	0
9P	0.00	-187.85	312.2962963
9X	0.00	0.00	0
9Y	0.00	0.00	0
9XY	0.00	0.00	0
8P	0.00	-420.36	429.6435185
8X	0.00	0.00	0
8Y	0.00	0.00	0
8XY	0.00	0.00	0
8P	0.00	-282.70	379.8118056
8X	0.00	-282.70	379.8118056
8Y	0.00	0.00	0
8XY	0.00	0.00	0
7P	0.00	-197.80	313.8440741
7X	0.00	-197.80	313.8440741
7Y	0.00	-197.80	313.8440741
7XY	0.00	0.00	0
6P	0.00	-575.79	591.2026852
6X	0.00	-575.79	591.2026852
6Y	0.00	-575.79	591.2026852
6XY	0.00	0.00	0

6P	0.00	-178.37	226.5	6P	0.00	-183.55	313.8440741
6X	0.00	0.00	0	6X	0.00	0.00	0
6Y	0.00	0.00	0	6Y	0.00	0.00	0
6XY	0.00	0.00	0	6XY	0.00	0.00	0
4P	0.00	-235.57	270	4P	0.00	-231.91	379.8118056
4X	0.00	0.00	0	4X	0.00	0.00	0
4Y	0.00	0.00	0	4Y	0.00	0.00	0
4XY	0.00	0.00	0	4XY	0.00	0.00	0
0P	0.00	-8.05	10	0P	0.00	-7.63	16.64351852
0X	0.00	0.00	0	0X	0.00	0.00	0
0Y	0.00	0.00	0	0Y	0.00	0.00	0
0XY	0.00	0.00	0	0XY	0.00	0.00	0
14P	0.00	-25.70	20	14P	0.00	-24.36	26.64351852
14X	0.00	0.00	0	14X	0.00	0.00	0
14Y	0.00	0.00	0	14Y	0.00	0.00	0
14XY	0.00	0.00	0	14XY	0.00	0.00	0
11P	0.00	-393.45	450	11P	0.00	-399.04	574.83
11X	0.00	-393.45	450	11X	0.00	-399.04	574.83
11Y	0.00	-393.45	450	11Y	0.00	-399.04	574.83
11XY	0.00	0.00	0	11XY	0.00	0.00	0
11P	0.00	-295.68	135	11P	0.00	-259.74	194.0498148
11X	0.00	-208.96	110	11X	0.00	-171.94	161.5498148
11Y	0.00	-208.96	110	11Y	0.00	-171.94	161.5498148
11XY	0.00	0.00	0	11XY	0.00	0.00	0

Foundation

Design Loads (Unfactored)

Compression/Leg:	501.50 k
Uplift/Leg:	403.70 k

Face Width @ Top of Pier (d_1):	4.00 ft
Face Width @ Bottom of Pier (d_2):	8.00 ft
Total Length of Pier (l):	8.00 ft
Height of Pedestal Above Ground (h):	0.50 ft
Width of Pad (W):	18.00 ft
Length of Pad (L):	18.00 ft
Thickness of Pad (t):	3.00 ft
Water Table Depth (w):	99 ft
Unit Weight of Concrete:	150.0 pcf
Unit Weight of Soil (Above Water Table):	100.0 pcf
Unit Weight of Soil (Below Water Table):	50.0 pcf
Friction Angle of Uplift (A):	20 °
Allowable Compressive Bearing Pressure:	20000 psf
Cohesion:	3000

Volume Pier (Total):	298.67	ft ³
Volume Pad (Total):	972.00	ft ³
Volume Soil (Total):	2935.41	ft ³
Volume Pier (Buoyant):	0.00	ft ³
Volume Pad (Buoyant):	0.00	ft ³
Volume Soil (Buoyant):	0.00	ft ³
Weight Pier:	44.80	k
Weight Pad:	145.80	k
Weight Soil:	293.54	k

Uplift Check

TIA Case 1: $\frac{\text{Wt. Soil} + \text{Wt. Concrete}}{1.5}$

TIA Case 2: $\frac{\text{Wt. Soil} + \text{Wt. Concrete}}{2.0 \quad 1.25}$

	Allowable Uplift (k)	Ratio	Result
TIA Case 1:	432.11	0.93	OK
TIA Case 2:	408.60	0.99	OK

Axial Check

Allowable Axial: $\frac{\text{Allowable Bearing Pressure} * W * L}{1.5}$

	Allowable Axial (k)	Ratio	Result
	6480.00	0.08	OK

Anchor Bolt Check

Bolt Description	Allowable Uplift (k)	Ratio	Result
(6) 2 1/4" A36	456.61	0.88	OK

Site No.:	88018
Engineer:	BD
Date:	01/21/14
Carrier:	AT&T Mobility

