



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

September 19, 2014

Adam Brailard  
Smartlink  
33 Boston Post Road West  
Marlborough, MA 01752

RE: **EM-CING-038-140902** – New Cingular Wireless PCS, LLC (AT&T) notice of intent to modify an existing telecommunications facility located at 143R Old Blue Hills Road, Durham, Connecticut.

Dear Mr. Brailard:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by New Cingular Wireless shall be removed within 60 days of the date the antenna ceased to function.
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated August 29, 2014. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and Environmental Protection pursuant to Connecticut General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below state and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such

notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

A handwritten signature in black ink, appearing to read "Melanie A. Bachman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Melanie A. Bachman  
Acting Executive Director

MAB/CDM/cm

c: The Honorable Laura L. Francis, First Selectman, Town of Durham  
Geoffrey Colegrove, Town Planner, Town of Durham  
Crown Atlantic Company



RECEIVED  
SEP 02 2014

CONNECTICUT  
SITING COUNCIL

August 29, 2014

EM-CING-038-140902

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

ORIGINAL

**Re:** Notice of Exempt Modification  
Proposal to Add Three (3) Remote Radio Heads  
**Property Address:** 143R (aka 101R) Old Blue Hills Road, Durham, CT 06422 (the  
"Property")  
**Applicant:** New Cingular Wireless PCS, LLC ("AT&T")

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 120-foot Monopole tower location on the Property, owned by Crown Atlantic Company (the "Tower"). AT&T's facility consists of nine (9) wireless telecommunication antennas at a height of 75 feet.

The Connecticut Siting Council (the "Council") approved AT&T's use of the tower in the following prior decisions; EM-AT&T-038-020626, EM-CING-038-081103 and EM-CING-038-120816. In its decision dated May 18, 2012, (the "Decision"), the Council approved AT&T to install six (6) Remote Radio Heads ("RRUs"), but AT&T installed only three (3) RRUs. AT&T now intends to install the remaining RRUs to complete the installation. This exempt modification notification is necessary because the Decision is over one year old. Please refer to Tab 1 for further specifications of the RRUs.

Please accept this correspondence 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 Laura A. Francis, First Selectman, Town of Durham, 30 Townhouse Road, Durham, CT 06422 and to the land owner, Crown Atlantic Company, LLC, 2000 Corporate Drive Canonsburg, PA 15317.

The planned modifications to AT&T's 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 the height of the Tower. AT&T's new RRUs will be installed at or below the height of its existing antennas currently on the Tower.

33 Boston Post Road West, Marlborough, Massachusetts 01752  
p: 508.954.7702 • [adam.brillard@smartlinkllc.com](mailto:adam.brillard@smartlinkllc.com)  
[www.smartlinkllc.com](http://www.smartlinkllc.com)



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 RF emissions calculation for AT&T's modified facility was provided in the application which led to the - Decision. See Tab 2 attached.
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 Tab 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: Laura A. Francis, First Selectman, Town of Durham, 30 Townhouse Road, Durham, CT 06422  
Crown Atlantic Company, LLC, 2000 Corporate Drive Canonsburg, PA 15317 (#806364)

**PROJECT INFORMATION**

SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:  
 • NEW AT&T RRU'S: (1) RRU'S PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) RRU'S

ITEMS TO BE INSTALLED AT THE EXISTING AT&T EQUIPMENT AREA:  
 • (1) (DUAL-BAND) RXAIT AND (1) (GAMMA) LLC MOUNTED IN PROPOSED RXAIT CABINET  
 • (6) NEW AT&T DIPLEXERS TO REPLACE EXISTING (12) DIPLEXERS

ITEMS TO REMAIN:  
 • (9) GSM/UMTS/LTE ANTENNAS, (3) RRU'S, (6) TMA'S, (6) DIPLEXERS, (1) SURGE SUPPRESSOR, & (1) WHIP ANTENNA

SITE ADDRESS: 143R OLD BLUE HILLS ROAD  
 DURHAM, CT 06422

LATITUDE: 41.4594919 N 41° 27' 34.17084" N  
 LONGITUDE: -72.662699 W 72° 39' 45.71604" W

USID: 27078

PROPERTY OWNER: BELL ATLANTIC NYNEX BEHRENS, FRANCIS E. JR, CASTANO, MARIE C. TOWER MANAGER: CROWN CASTLE INTERNATIONAL 500 WEST CUMMINGS PARK ROAD SUITE #3600 WOBURN, MA 01801

TYPE OF SITE: MONOPOLE/OUTDOOR EQUIPMENT

TOWER HEIGHT: 120'-0"±  
 RAD CENTER: 75'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY  
 PROPOSED USE: TELECOMMUNICATIONS FACILITY



**FA NUMBER: 10071003**  
**SITE NUMBER: CT5841**  
**SITE NAME:**  
**DURHAM CENTRAL**

**PROJECT TEAM**

CLIENT REPRESENTATIVE

COMPANY: SMARTLINK, LLC  
 ADDRESS: 1997 ANNAPOLIS EXCHANGE PARKWAY, SUITE 200  
 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  
 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  
 CITY, STATE, ZIP: NORTH ANDOVER, MA 01845  
 CONTACT: DANIEL P. HAMM, PE  
 PHONE: (978) 557-5553  
 E-MAIL: info@hudsondesigngroupllc.com

RF ENGINEER

COMPANY: AT&T MOBILITY -NEW ENGLAND  
 ADDRESS: 550 COCHITUATE ROAD SUITE 550 13 AND 14  
 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  
 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
- GN-1 GENERAL NOTES
- A-1 COMPOUND & EQUIPMENT PLANS
- A-2 ANTENNA LAYOUTS & ELEVATIONS
- A-3 DETAILS
- G-1 GROUNDING, ONE-LINE DIAGRAM & DETAILS

- Q
- Q
- Q
- Q
- Q
- Q

DIRECTIONS TO SITE:  
 FROM FRAMINGHAM, MA:  
 DEPART RT-30 W/COCHITUATE RD TOWARD CALDOR RD 0.3 MI. KEEP RIGHT ONTO RT-30/COCHITUATE RD 0.5 MI. BEAR RIGHT ONTO RT-9 W/RT-30W/WORCESTER RD 0.8 MI. KEEP LEFT ONTO RT-9W/WORCSTER RD 2.4 MI. TAKE RAMP RIGHT FOR I-90 WEST TOWARD WORCESTER/SPRINGFIELD 33.5 MI. AT EXIT 9, TAKE RAMP RIGHT FOR I-84 TOWARD NY CITY/HARTFORD 41.7 MI. AT EXIT 57, TAKE RAMP LEFT FOR T-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 SOUTH TOWARD NEW HAVEN/NY CITY. 8.9 MI. AT EXIT 22S, TAKE RAMP LEFT FOR CT-9 SOUTH TOWARD SAYBROOK/MIDDLETOWN 5.5 MI. KEEP STRAIGHT ONTO CT-9 S/CT-17 S 0.8 MI. AT EXIT 13, TAKE RAMP RIGHT FOR CT-17 SOUTH TOWARD NEW HAVEN 0.5 MI. BEAR LEFT ONTO CT-17/SOUTH MAIN STREET 6.4 MI. KEEP LEFT ONTO CT-79/MADISON RD 0.9 MI. TURN LEFT ONTO OLD BLUE HILLS ROAD 0.7 MI. THE SITE WILL BE ON YOUR RIGHT.



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.
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.
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.

**CROWN SITE ID:** 806364  
**CROWN SITE NAME:** HRT 106 (B) 943202

**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:		

72 HOURS  
 BEFORE YOU DIG

CALL TOLL FREE 1-800-922-4455

**UNDERGROUND SERVICE ALERT**

*Daniel P. Hamm*  
 LICENSED PROFESSIONAL ENGINEER  
 No. 24178

AT&T

TITLE SHEET  
 (LTE-2C)

SITE NUMBER: CT5841  
 SITE NAME: DURHAM CENTRAL  
 CCI SITE ID: 806364  
 143R OLD BLUE HILLS RD  
 DURHAM, CT 06422  
 MIDDLESEX COUNTY

550 COCHITUATE ROAD  
 FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	08/08/14	REDESIGN PER RFDS	MAM	TH	DPH
1	04/22/14	ISSUED FOR CONSTRUCTION	AP	TH	DPH

SCALE: AS SHOWN    DESIGNED BY: TH    DRAWN BY: MAM

JOB NUMBER	DRAWING NUMBER	REV
5841.01	T-1	Q

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

**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) LIGHTNING 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-OF-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 1/2" OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID 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 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 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		

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: CT5841**  
**SITE NAME: DURHAM CENTRAL**  
**CCI SITE ID: 806364**  
 143R OLD BLUE HILLS RD  
 DURHAM, CT 06422  
 MIDDLESEX COUNTY

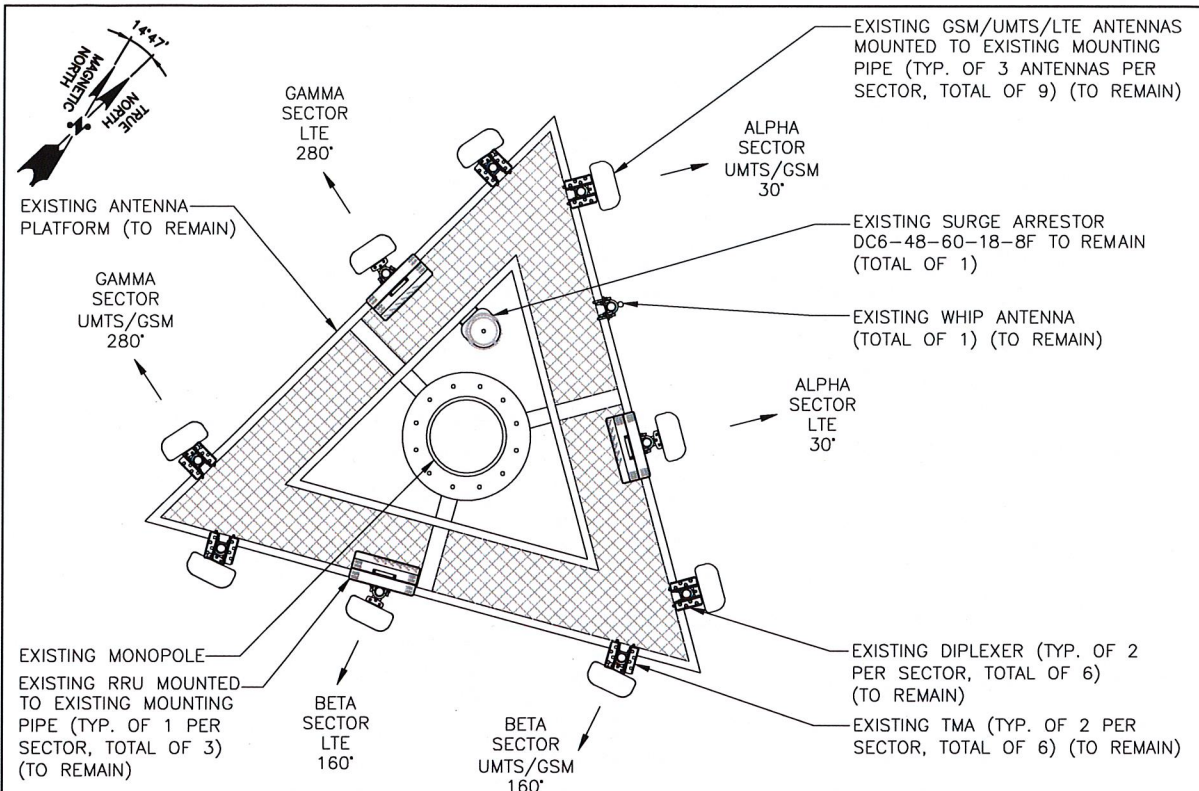
550 COCHITUATE ROAD  
 FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
0	08/08/14	REDESIGN PER RFDS	MAM	TH	DPH
1	04/22/14	ISSUED FOR CONSTRUCTION	AP	TH	DPH
SCALE: AS SHOWN		DESIGNED BY: TH	DRAWN BY: MAM		

AT&T  
 GENERAL NOTES  
 (LTE-2C)

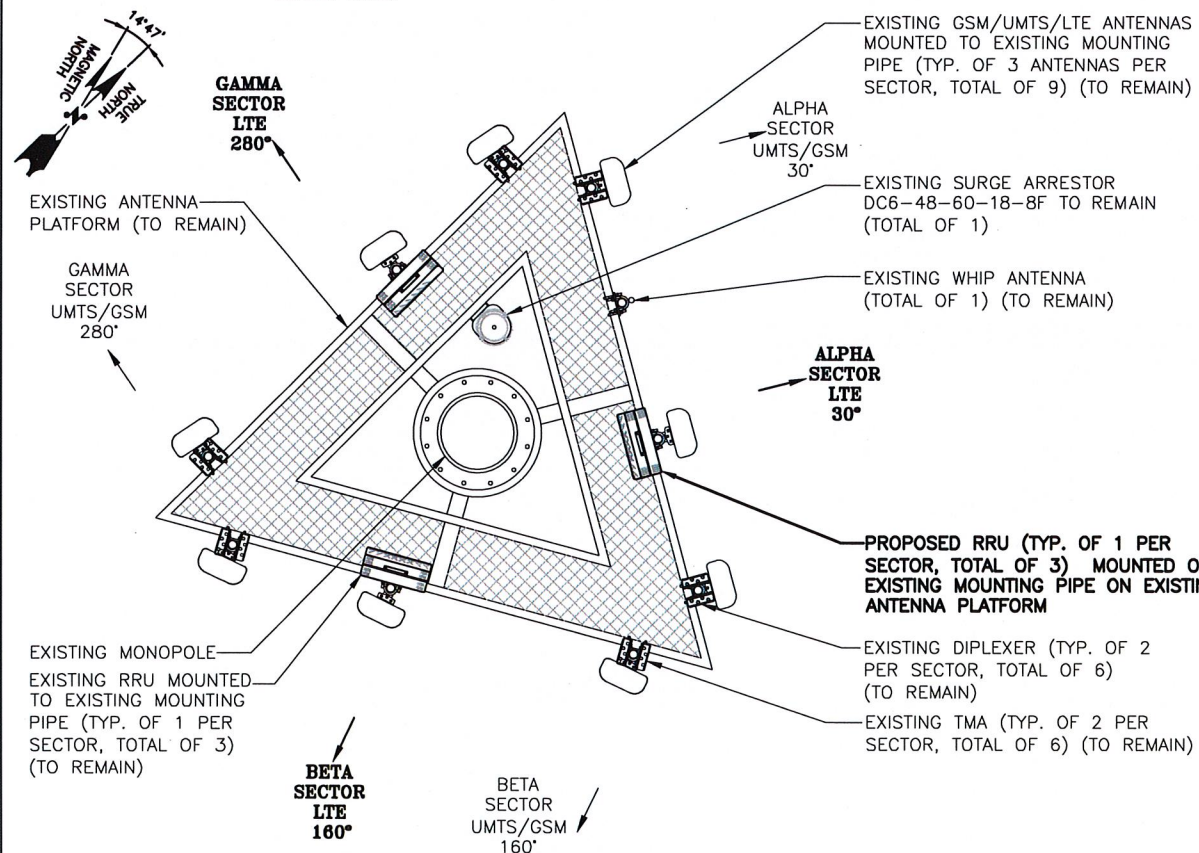
JOB NUMBER	DRAWING NUMBER	REV
5841.01	GN-1	Q





**EXISTING ANTENNA LAYOUT**

SCALE: N.T.S.



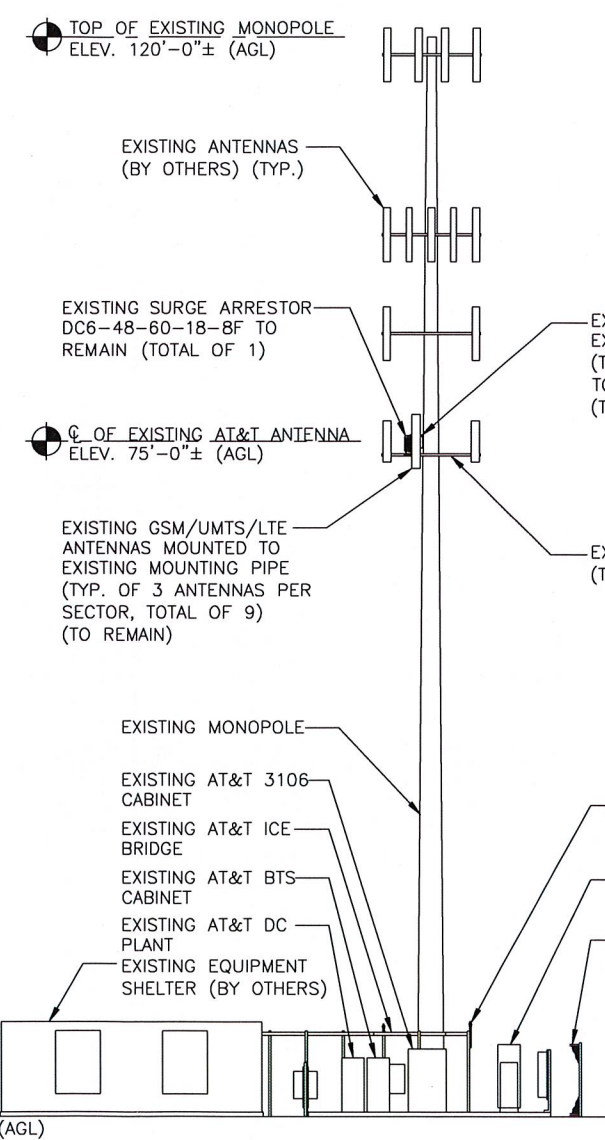
**PROPOSED ANTENNA LAYOUT**

SCALE: N.T.S.

**NOTE:**  
ALL ANTENNAS AND COAX TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY CROWN CASTLE AND FINAL RF DATA SHEET.

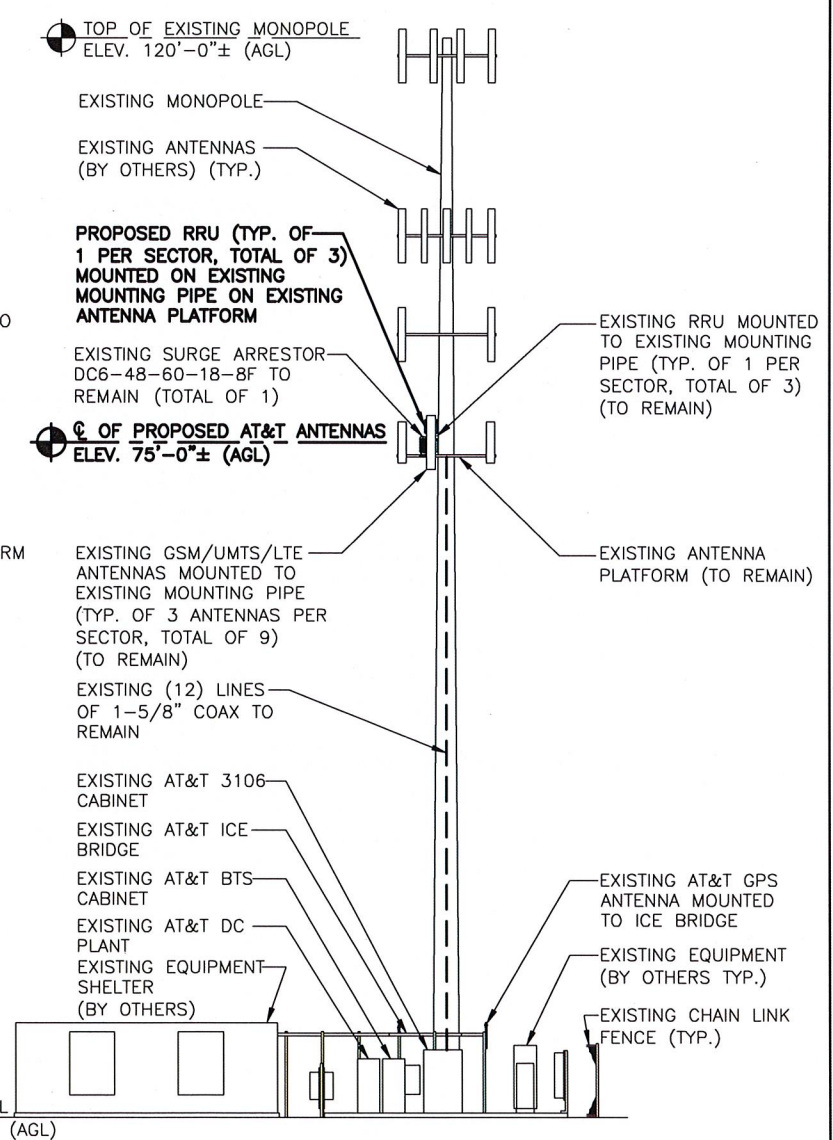
**NOTE:**  
\*RF DATA BASED ON PRELIMINARY RFDS. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

**NOTE:**  
CONTRACTOR SHALL ADJUST MOUNTING LOCATION OF SURGE ARRESTOR & RRU'S AS REQUIRED TO AVOID OBSTRUCTING EXISTING CLIMBING LADDER/PEG.



**EXISTING SOUTHWEST ELEVATION**

SCALE: 3/32"=1'-0"



**PROPOSED SOUTHWEST ELEVATION**

SCALE: 3/32"=1'-0"



**Hudson Design Group**  
1400 OSGOOD STREET  
BUILDING 20 NORTH, SUITE 3090  
N. ANDOVER, MA 01845  
TEL: (978) 557-5553  
FAX: (978) 336-5586

**smartlink**  
1997 ANNAPOLIS EXCHANGE PKWY  
SUITE 200  
ANNAPOLIS, MD 21401

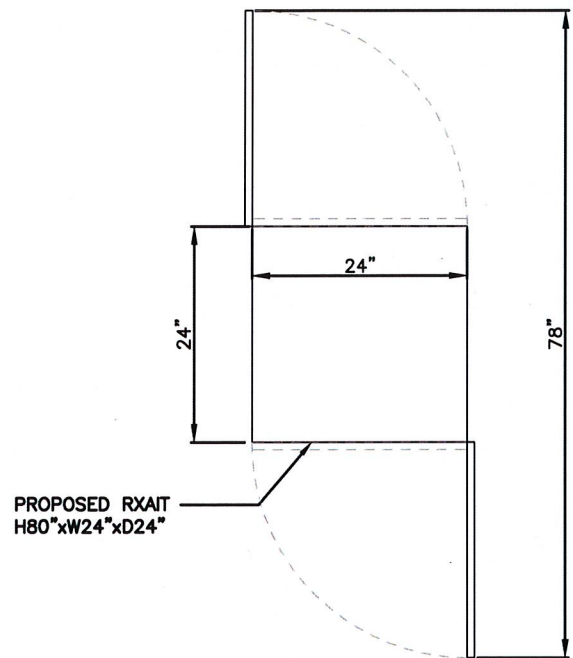
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**SITE NAME: DURHAM CENTRAL**  
**CCI SITE ID: 806364**  
143R OLD BLUE HILLS RD  
DURHAM, CT 06422  
MIDDLESEX COUNTY

**at&t**  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

Q	08/08/14	REDESIGN PER RFDS	MAM	TH	DPH
1	04/22/14	ISSUED FOR CONSTRUCTION	AP	TH	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'V
SCALE: AS SHOWN		DESIGNED BY: TH	DRAWN BY: MAM		

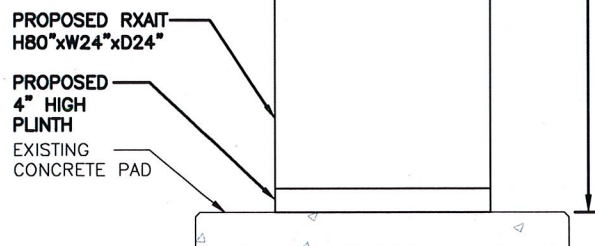
*Daniel P. Hamm*  
AT&T  
ANTENNA LAYOUT AND ELEVATIONS (LTE-2C)  
JOB NUMBER: 5841.01  
DRAWING NUMBER: A-2  
REV: Q





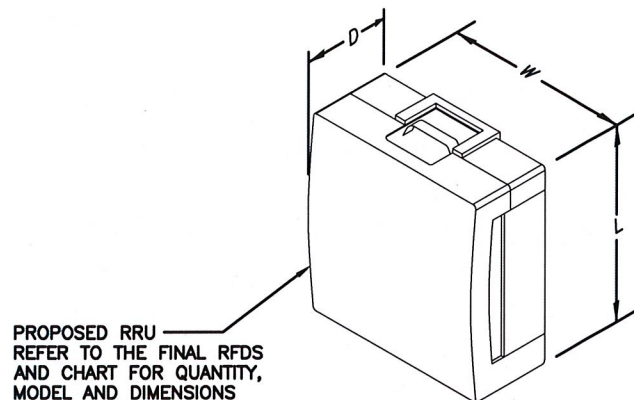
PROPOSED RXAIT  
H80"xW24"xD24"

NOTE:  
MOUNT PROPOSED  
EQUIPMENT PER  
MANUFACTURER'S  
SPECIFICATIONS



PROPOSED RXAIT DETAIL

SCALE: N.T.S.



PROPOSED RRU  
REFER TO THE FINAL RFDS  
AND CHART FOR QUANTITY,  
MODEL AND DIMENSIONS

	L	W	D
RRUS - 11	19.7"	17.0"	7.2"
RRUS - 12	20.4"	18.5"	7.5"
RRUS - 32	26.7"	12.1"	6.7"
RRUS - E2	20"	20.4"	9.5"
LTE - A2	16.4"	15.2"	3.4"

RRU DETAIL

SCALE: N.T.S.

NOTE:  
MOUNT PER MANUFACTURER'S  
SPECIFICATIONS.

EXISTING & PROPOSED ANTENNA SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	POWERWAVE	7770	55X11X5
	UNKNOWN	WHIP ANTENNA	UNKNOWN
	KMW	AM-X-CD-16-65-00T-RET	72X11.8X5.9
	POWERWAVE	7770	55X11X5
BETA:	POWERWAVE	7770	55X11X5
	KMW	AM-X-CD-16-65-00	72.0X11.8X5.9
	POWERWAVE	7770	55X11X5
GAMMA:	POWERWAVE	7770	55X11X5
	KMW	AM-X-CD-16-65-00	72.0X11.8X5.9
	POWERWAVE	7770	55X11X5

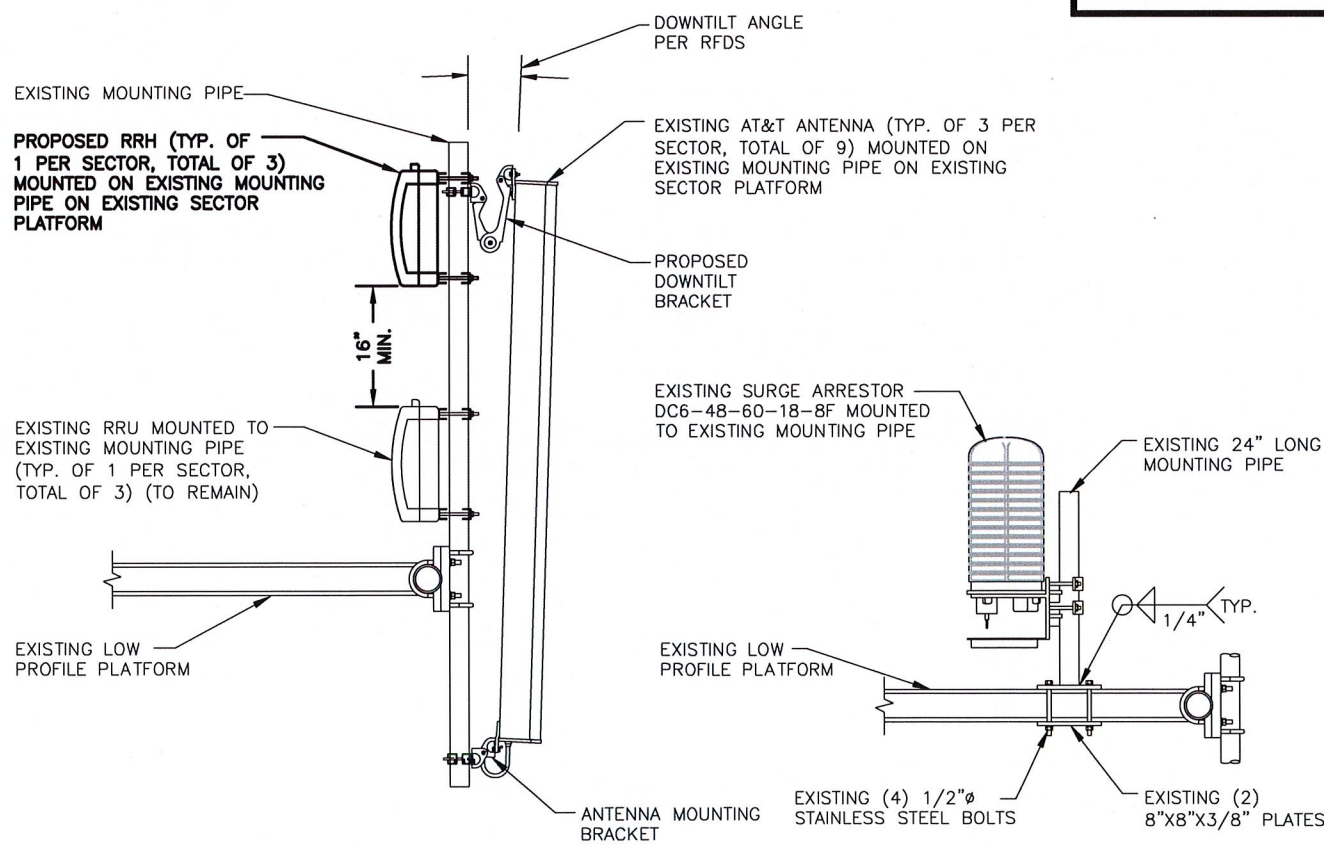
EXISTING RRU SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	ERICSSON	RRUS-11	19.7x17.0x7.2
BETA:	ERICSSON	RRUS-11	19.7x17.0x7.2
GAMMA:	ERICSSON	RRUS-11	19.7x17.0x7.2

NOTE:  
CONTRACTOR SHALL ADJUST  
MOUNTING LOCATION OF SURGE  
ARRESTOR & RRU'S AS  
REQUIRED TO AVOID OBSTRUCTING  
EXISTING CLIMBING LADDER/PEG.

NOTE:  
ALL ANTENNAS AND COAX TO BE  
INSTALLED IN ACCORDANCE WITH  
STRUCTURAL ANALYSIS PROVIDED  
BY CROWN CASTLE AND FINAL  
RF DATA SHEET.

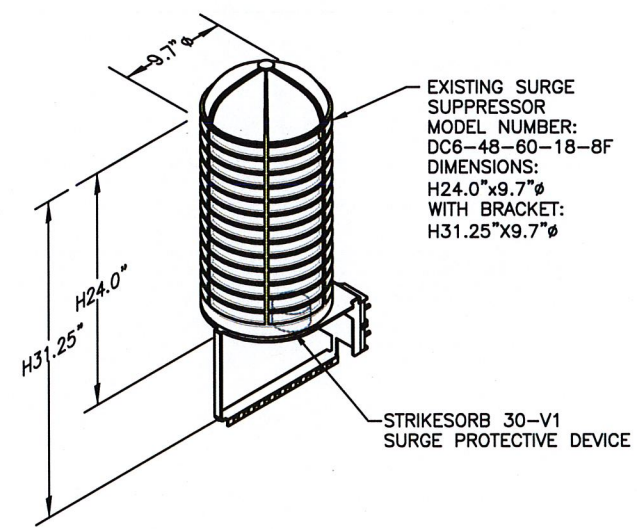
PROPOSED RRU SCHEDULE			
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	ERICSSON	RRUS-11	19.7x17.0x7.2
BETA:	ERICSSON	RRUS-11	19.7x17.0x7.2
GAMMA:	ERICSSON	RRUS-11	19.7x17.0x7.2

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



PROPOSED LTE ANTENNA, RRU, & SURGE  
ARRESTOR MOUNTING DETAIL

SCALE: N.T.S.



NOTE:  
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S.

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

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SITE NUMBER: CT5841  
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MIDDLESEX COUNTY

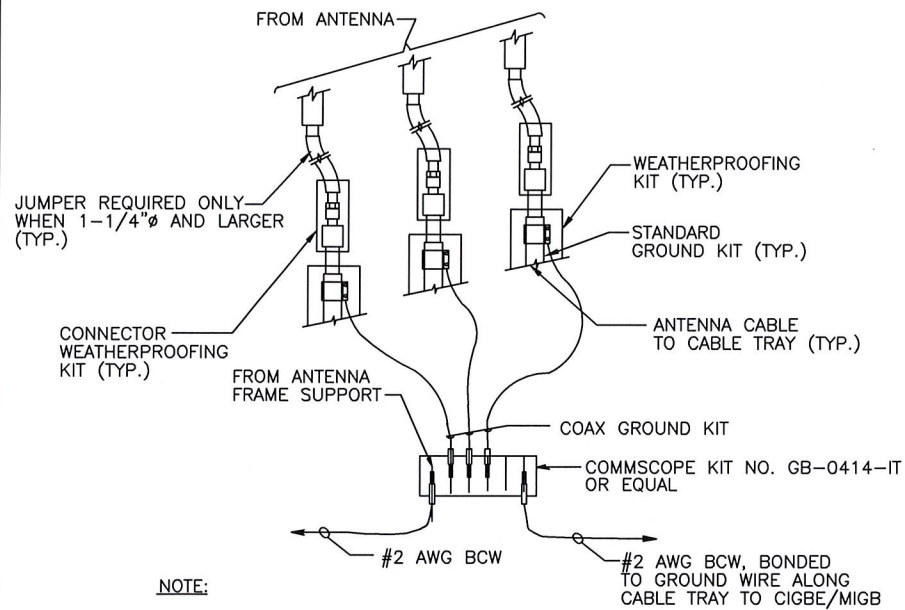
**at&t**  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

NO.	DATE	REVISIONS	BY	CHK	APP
0	08/08/14	REDESIGN PER RFDS	MAM	TH	DPH
1	04/22/14	ISSUED FOR CONSTRUCTION	AP	TH	DPH

SCALE: AS SHOWN    DESIGNED BY: TH    DRAWN BY: MAM

*Daniel P. Hamm*  
STATE OF CONNECTICUT  
DANIEL P. HAMM  
No. 24178  
LICENSED PROFESSIONAL ENGINEER

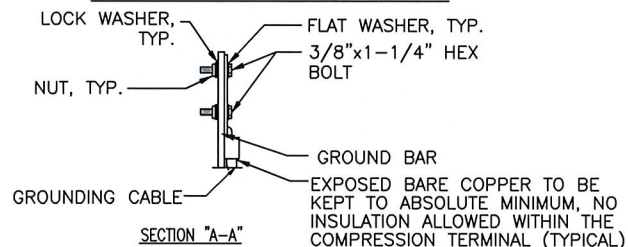
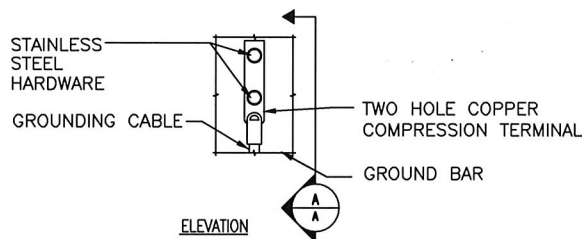
AT&T	
DETAILS (LTE-2C)	
JOB NUMBER 5841.01	DRAWING NUMBER A-3
	REV Q



NOTE:  
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

**GROUND WIRE TO GROUND BAR CONNECTION DETAIL**

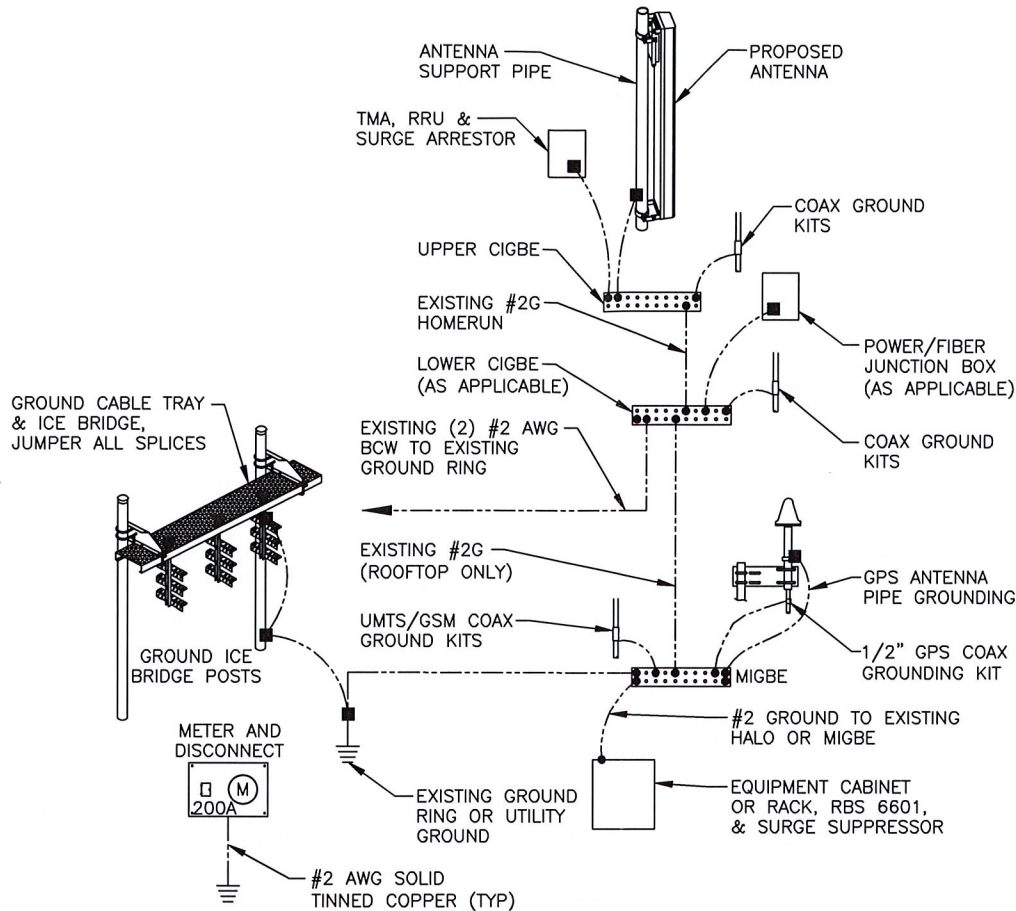
1  
N.T.S.



NOTE:  
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.  
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.  
3. CADWELDED DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

**TYPICAL GROUND BAR CONNECTION DETAIL**

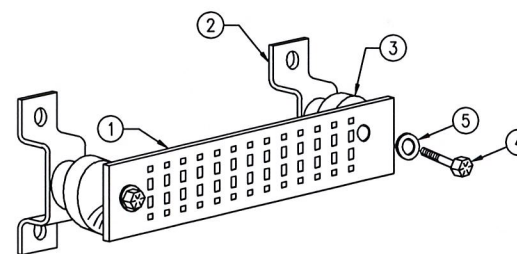
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N.T.S.



**GROUNDING RISER DIAGRAM**

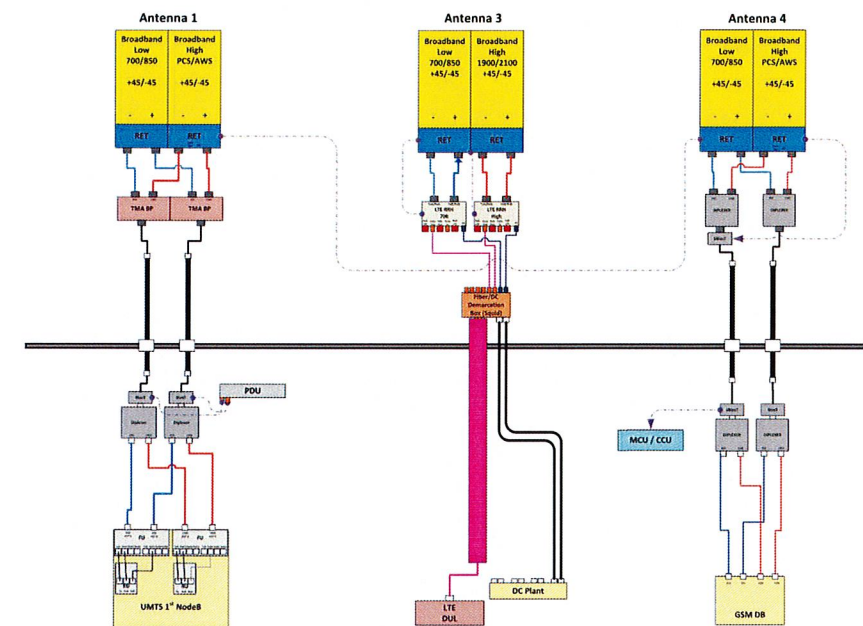
2  
N.T.S.

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.



**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)

Power Density Calculations

Control Number	Site	Carrier	#Channels	ERP/Ch	Ant Ht	Power Den	MHz	S	%MPE	Site Total
EM-CING-038-120501	Durham - 101R (143) Old Blue Hills Road	AT&T UMTS	2	875	74	0.1149	1900	1.0000	1.15%	
EM-CING-038-120501	Durham - 101R (143) Old Blue Hills Road	AT&T UMTS	2	565	74	0.0742	880	0.5867	1.26%	
EM-CING-038-120501	Durham - 101R (143) Old Blue Hills Road	AT&T GSM	1	283	74	0.0186	880	0.5867	0.32%	
EM-CING-038-120501	Durham - 101R (143) Old Blue Hills Road	AT&T GSM	4	525	74	0.1379	1900	1.0000	1.38%	
EM-CING-038-120501	Durham - 101R (143) Old Blue Hills Road	AT&T LTE	1	1313	74	0.0862	734	0.4893	1.76%	
EM-VER-038-111108	Durham - 143R Old Blue Hills Road	Verizon cellular	9	358	100	0.1159	869	0.5793	2.00%	
EM-VER-038-111108	Durham - 143R Old Blue Hills Road	Verizon PCS	7	275	100	0.0692	1970	1.0000	0.69%	
EM-VER-038-111108	Durham - 143R Old Blue Hills Road	Verizon AWS	1	687	100	0.0247	2145	1.0000	0.25%	
EM-VER-038-111108	Durham - 143R Old Blue Hills Road	Verizon LTE	2	741	100	0.0533	698	0.4653	1.15%	
Petition 697	Durham - 143R Old Blue Hills Road	Nextel	12	100	120	0.0300	851	0.5673	5.28%	
EM-AI&T-038-020626	Durham - 143R Old Blue Hills Road	Town	4	400	75	0.1023	450	0.3000	34.09%	
EM-AI&T-038-020626	Durham - 143R Old Blue Hills Road	Sprint	11	250	90	0.1221	1950	1.0000	12.21%	61.54%



PAUL J. FORD AND COMPANY  
 STRUCTURAL ENGINEERS  
 250 East Broad Street • Suite 1500 • Columbus, Ohio 43215

Date: April 19, 2012

Veronica Harris  
 Crown Castle USA Inc.  
 1200 McArthur Blvd  
 Mahwah, NJ 07430  
 201.236.9094

Paul J. Ford and Company  
 250 East Broad St., Suite 1500  
 Columbus, OH 43215  
 (614) 221-6679  
 mclopez@pjfweb.com

**Subject: Structural Analysis Report**

**Carrier Designation:** AT&T Mobility Co-Locate  
 Carrier Site Number: CT5841  
 Carrier Site Name: AWE-Durham Central

**Crown Castle Designation:** Crown Castle BU Number: 806364  
 Crown Castle Site Name: HRT 106(B) 943202  
 Crown Castle JDE Job Number: 183531  
 Crown Castle Work Order Number: 484363

**Engineering Firm Designation:** Paul J. Ford and Company Project Number: 37512-1067

**Site Data:** 101 R OLD BLUE HILL ROAD, DURHAM, Middlesex County, CT  
 Latitude 41° 27' 33.67", Longitude -72° 39' 45.83"  
 120 Foot - Monopole Tower

Dear Veronica Harris,

Paul J. Ford and Company is pleased to submit this "Structural Analysis Report" to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 459698, in accordance with application 145195, revision 1.


The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

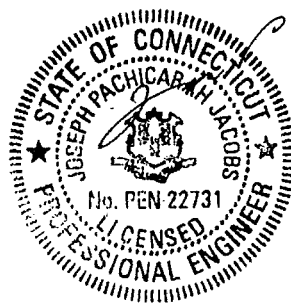
LC7: Existing + Reserved + Proposed Equipment **Sufficient Capacity**  
 Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

The analysis has been performed in accordance with the TIA/EIA-222-F standard and 2005 CT State Building Code based upon a wind speed of 85 mph fastest mile.

We at Paul J. Ford and Company appreciate the opportunity of providing our continuing professional services to you and Crown Castle USA Inc.. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:

  
 Maria C. Lopez  
 Project Manager





APR 19 2012



PAUL J. FORD AND COMPANY  
STRUCTURAL ENGINEERS  
250 East Broad Street • Suite 1500 • Columbus, Ohio 43215

Date: **April 19, 2012**

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(614) 221-6679  
mclopez@pjfweb.com

**Subject: Structural Analysis Report**

**Carrier Designation:**

**AT&T Mobility Co-Locate**

**Carrier Site Number:**

CT5841

**Carrier Site Name:**

AWE-Durham Central

**Crown Castle Designation:**

**Crown Castle BU Number:**

806364

**Crown Castle Site Name:**

HRT 106(B) 943202

**Crown Castle JDE Job Number:**

183531

**Crown Castle Work Order Number:**

484363

**Engineering Firm Designation:**

**Paul J. Ford and Company Project Number: 37512-1067**

**Site Data:**

**101 R OLD BLUE HILL ROAD, DURHAM, Middlesex County, CT**

**Latitude 41° 27' 33.67", Longitude -72° 39' 45.83"**

**120 Foot - Monopole Tower**

Dear Veronica Harris,

*Paul J. Ford and Company* is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 459698, in accordance with application 145195, revision 1.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Existing + Reserved + Proposed Equipment

**Sufficient Capacity**

Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

The analysis has been performed in accordance with the TIA/EIA-222-F standard and 2005 CT State Building Code based upon a wind speed of 85 mph fastest mile.

We at *Paul J. Ford and Company* appreciate the opportunity of providing our continuing professional services to you and Crown Castle USA Inc.. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:

Maria C. Lopez  
Project Manager

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### 7) APPENDIX C

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**1) INTRODUCTION**

This tower is a 120 ft Monopole tower designed by VALMONT in March of 1994. The tower was originally designed for a wind speed of 90 mph per TIA/EIA-222-E.

**2) ANALYSIS CRITERIA**

The structural analysis was performed for this tower in accordance with the requirements of TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 85 mph with no ice, 38 mph with 0.75 inch ice thickness and 50 mph under service loads.

**Table 1 - Proposed Antenna and Cable Information**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
73.0	74.0	6	ericsson	RRUS-11	2 1	3/4 3/8	-
		3	kmw communications	AM-X-CD-16-65-00T-RET w/ Mount Pipe			
		1	raycap	DC6-48-60-18-8F			
74.0	74.0	1	Tower mount	Collar mount MT C3335			

**Table 2 - Existing and Reserved Antenna and Cable Information**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note			
118.0	125.0	1	decibel	DB809MT3-XT	2	7/8	1			
	123.0	1	decibel	DB201-A						
	118.0	2	tower mounts	Side Arm Mount [SO 701-1]						
115.0	115.0	12	decibel	DB844H90 w/ Mount Pipe	12	1-1/4	1			
		1	tower mounts	Platform Mount [LP 304-1]						
107.0	107.0	1	gabriel electronics	GLF6-450	1	7/8	1			
		1	tower mounts	Pipe Mount [PM 601-1]						
98.0	100.0	3	antel	BXA-70063/6CF-2 w/ Mount Pipe	18	1-5/8	2			
		6	antel	LPA-171063-12CF-EDIN-2 w/ Mount Pipe						
		6	antel	LPA-80080/6CF w/ Mount Pipe				-	-	1
		6	decibel	DB950F85T2E-M w/ Mount Pipe				16	7/8	3
		3	swedcom	ALP 9212-N w/ Mount Pipe						
98.0	98.0	1	tower mounts	Platform Mount [LP 602-1]	-	-	1			
87.0	89.0	6	decibel	DB980H90E-M w/ Mount Pipe	6	1-1/4	1			
	87.0	1	tower mounts	Platform Mount [LP 602-1]						

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
73.0	79.0	1	decibel	DB636-C	12	7/8	1
	74.0	6	powerwave technologies	7770.00 w/ Mount Pipe			
		6	powerwave technologies	LGP21401			
		6	powerwave technologies	LGP21903			
	73.0	1	tower mounts	Platform Mount [LP 712-1]			
50.0	57.0	1	rfs celwave	PD1142-1	3	1/2 7/8	1
	54.0	1	decibel	ASP-655			
	53.0	1	celwave	PD1121-6			
	50.0	1	decibel	DB492A			
		1	tower mounts	Side Arm Mount [SO 701-3]			
40.0	41.0	1	tekelec systemes	EPSILON GPS ANTENNA 35 DB	1	1/2	1
		1	tower mounts	Side Arm Mount [SO 701-1]			

- Notes:  
 1) Existing Equipment  
 2) Reserved Equipment  
 3) Equipment to be Removed

### 3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Dr. Clarence Welti, P.E., P.C.	262150	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	SAC Engineering, Inc	297341	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Valmont	262153	CCISITES
4-TOWER STRUCTURAL ANALYSIS REPORTS	Valmont	942187	CCISITES

#### 3.1) Analysis Method

tnxTower (version 6.0.3.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.



### 3.2) Assumptions

- 1) Tower and structures were built in accordance with the manufacturer's specifications.
- 2) The tower and structures have been maintained in accordance with the manufacturer's specification.
- 3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 4) When applicable, transmission cables are considered as structural components for calculating wind loads as allowed by TIA/EIA-222-F.

This analysis may be affected if any assumptions are not valid or have been made in error. Paul J. Ford and Company should be notified to determine the effect on the structural integrity of the tower.

### 4) ANALYSIS RESULTS

**Table 4 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail	
L1	120 - 100	Pole	TP20.263x15.0403x0.1875	1	-2.46	630.11	29.6	Pass	
L2	100 - 47.0833	Pole	TP33.127x20.263x0.2813	2	-13.44	1490.13	98.6	Pass	
L3	47.0833 - 0	Pole	TP44x31.3693x0.375	3	-25.26	2738.53	95.0	Pass	
							Summary		
							Pole (L2)	98.6	Pass
							<b>RATING =</b>	<b>98.6</b>	Pass

**Table 5 - Tower Component Stresses vs. Capacity – LC7**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	98.1	Pass
1	Base Plate	0	51.3	Pass
1	Base Foundation Steel	0	10.4	Pass
1	Base Foundation Soil Interaction	0	31.1	Pass
1	Flange Connection	100	78.7	Pass

<b>Structure Rating (max from all components) =</b>	<b>98.6%</b>
---	--------------

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
- 2) Capacities up to 100% are considered acceptable based on analysis methods used.

### 4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the existing and proposed loads. No modifications are required at this time.

**APPENDIX A**  
**TNXTOWER OUTPUT**

### Tower Input Data

There is a pole section.

This tower is designed using the TIA/EIA-222-F standard.

The following design criteria apply:

- 1) Tower is located in Middlesex County, Connecticut.
- 2) Basic wind speed of 85 mph.
- 3) Nominal ice thickness of 0.7500 in.
- 4) Ice thickness is considered to increase with height.
- 5) Ice density of 56.00 pcf.
- 6) A wind speed of 38 mph is used in combination with ice.
- 7) Deflections calculated using a wind speed of 50 mph.
- 8) A non-linear (P-delta) analysis was used.
- 9) Pressures are calculated at each section.
- 10) Stress ratio used in pole design is 1.333.
- 11) Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

### Options

Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification ✓ Use Code Stress Ratios ✓ Use Code Safety Factors - Guys ✓ Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) Add IBC .6D+W Combination	Distribute Leg Loads As Uniform Assume Legs Pinned ✓ Assume Rigid Index Plate ✓ Use Clear Spans For Wind Area ✓ Use Clear Spans For KL/r Retension Guys To Initial Tension ✓ Bypass Mast Stability Checks ✓ Use Azimuth Dish Coefficients ✓ Project Wind Area of Appurt. Autocalc Torque Arm Areas SR Members Have Cut Ends Sort Capacity Reports By Component Triangulate Diamond Inner Bracing	Treat Feedline Bundles As Cylinder Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation ✓ Consider Feedline Torque Include Angle Block Shear Check Poles ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets
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### Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	120.00-100.00	20.00	0.00	12	15.0403	20.2630	0.1875	0.7500	A607-65 (65 ksi)
L2	100.00-47.08	52.92	4.92	12	20.2630	33.1270	0.2813	1.1250	A607-65 (65 ksi)
L3	47.08-0.00	52.00		12	31.3693	44.0000	0.3750	1.5000	A607-65 (65 ksi)

### Tapered Pole Properties

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	I/Q in <sup>2</sup>	w in	w/t
L1	15.5709	8.9674	252.5039	5.3173	7.7909	32.4102	511.6414	4.4135	3.5283	18.818
	20.9778	12.1206	623.5083	7.1870	10.4962	59.4030	1263.3968	5.9654	4.9280	26.283
L2	20.9778	18.0960	922.2208	7.1535	10.4962	87.8621	1868.6694	8.9063	4.6767	16.628

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	I/Q in <sup>2</sup>	w in	w/t
L3	34.2956	29.7459	4096.1127	11.7588	17.1598	238.7042	8299.8349	14.6400	8.1243	28.886
	33.7122	37.4256	4588.9856	11.0959	16.2493	282.4117	9298.5290	18.4197	7.4020	19.739
	45.5522	52.6772	12796.152	15.6177	22.7920	561.4318	25928.474	25.9261	10.7870	28.765
			6				3			

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A <sub>r</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals
ft	ft <sup>2</sup>	in					in	in
L1 120.00-100.00				1	1	1		
L2 100.00-47.08				1	1	1		
L3 47.08-0.00				1	1	1		

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement	Total Number		C <sub>A</sub> A <sub>A</sub>	Weight
				ft			ft <sup>2</sup> /ft	k/lf
LDF5-50A(7/8")	C	No	Inside Pole	118.00 - 0.00	2	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
**								
LDF6-50A(1-1/4")	C	No	Inside Pole	115.00 - 0.00	12	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
**								
VXL5-50(7/8")	C	No	Inside Pole	107.00 - 0.00	1	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
**								
HJ7-50A(1-5/8")	C	No	Inside Pole	98.00 - 0.00	18	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
**								
LDF6-50A(1-1/4")	C	No	Inside Pole	87.00 - 0.00	6	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
**								
LDF5-50A(7/8")	C	No	Inside Pole	73.00 - 0.00	12	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
**								
VXL5-50(7/8")	C	No	Inside Pole	73.00 - 0.00	1	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
**								
FB-L98B-002-75000(3/8")	C	No	Inside Pole	73.00 - 0.00	1	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		$C_A A_A$ $ft^2/ft$	Weight kif
WR-VG86ST-BRD(3/4)	C	No	Inside Pole	73.00 - 0.00	2	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
** LDF4-50A(1/2")	C	No	Inside Pole	50.00 - 0.00	1	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
LDF5-50A(7/8")	C	No	Inside Pole	50.00 - 0.00	3	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00
** LDF4-50A(1/2")	C	No	Inside Pole	40.00 - 0.00	1	No Ice	0.00	0.00
						1/2" Ice	0.00	0.00
						1" Ice	0.00	0.00
						2" Ice	0.00	0.00
						4" Ice	0.00	0.00

### Feed Line/Linear Appurtenances Section Areas

Tower Sectio n	Tower Elevation ft	Face	$A_R$ $ft^2$	$A_F$ $ft^2$	$C_A A_A$ In Face $ft^2$	$C_A A_A$ Out Face $ft^2$	Weight K
L1	120.00-100.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.13
L2	100.00-47.08	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	1.73
L3	47.08-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	1.80

### Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Sectio n	Tower Elevation ft	Face or Leg	Ice Thickness in	$A_R$ $ft^2$	$A_F$ $ft^2$	$C_A A_A$ In Face $ft^2$	$C_A A_A$ Out Face $ft^2$	Weight K
L1	120.00-100.00	A	0.866	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.13
L2	100.00-47.08	A	0.824	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	1.73
L3	47.08-0.00	A	0.750	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	1.80

### Feed Line Center of Pressure

Section	Elevation ft	$CP_x$ in	$CP_z$ in	$CP_x$ Ice in	$CP_z$ Ice in
L1	120.00-100.00	0.0000	0.0000	0.0000	0.0000

Section	Elevation	CP <sub>x</sub>	CP <sub>z</sub>	CP <sub>x</sub>	CP <sub>z</sub>
	ft	in	in	Ice in	Ice in
L2	100.00-47.08	0.0000	0.0000	0.0000	0.0000
L3	47.08-0.00	0.0000	0.0000	0.0000	0.0000

**Discrete Tower Loads**

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement  ft	C <sub>A</sub> A <sub>A</sub> Front  ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Side  ft <sup>2</sup>	Weight  K	
DB201-A	A	From Leg	4.00 0.00 5.00	0.00	118.00	No Ice	1.10	1.10	0.03
						1/2" Ice	1.98	1.98	0.03
						Ice	2.86	2.86	0.04
						1" Ice	4.62	4.62	0.06
						2" Ice	8.14	8.14	0.09
DB809MT3-XT	C	From Leg	4.00 0.00 7.00	0.00	118.00	No Ice	2.84	2.84	0.03
						1/2" Ice	4.29	4.29	0.05
						Ice	5.75	5.75	0.08
						1" Ice	8.72	8.72	0.17
						2" Ice	12.90	12.90	0.46
Side Arm Mount [SO 701-1]	A	None		0.00	118.00	No Ice	0.85	1.67	0.07
						1/2" Ice	1.14	2.34	0.08
						Ice	1.43	3.01	0.09
						1" Ice	2.01	4.35	0.12
						2" Ice	3.17	7.03	0.18
Side Arm Mount [SO 701-1]	C	None		0.00	118.00	No Ice	0.85	1.67	0.07
						1/2" Ice	1.14	2.34	0.08
						Ice	1.43	3.01	0.09
						1" Ice	2.01	4.35	0.12
						2" Ice	3.17	7.03	0.18
** (4) DB844H90 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	115.00	No Ice	3.30	4.92	0.03
						1/2" Ice	3.69	5.60	0.07
						Ice	4.12	6.28	0.11
						1" Ice	5.01	7.71	0.22
						2" Ice	6.92	10.83	0.55
(4) DB844H90 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.00	115.00	No Ice	3.30	4.92	0.03
						1/2" Ice	3.69	5.60	0.07
						Ice	4.12	6.28	0.11
						1" Ice	5.01	7.71	0.22
						2" Ice	6.92	10.83	0.55
(4) DB844H90 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.00	115.00	No Ice	3.30	4.92	0.03
						1/2" Ice	3.69	5.60	0.07
						Ice	4.12	6.28	0.11
						1" Ice	5.01	7.71	0.22
						2" Ice	6.92	10.83	0.55
Platform Mount [LP 304-1]	C	None		0.00	115.00	No Ice	17.46	17.46	1.35
						1/2" Ice	22.44	22.44	1.62
						Ice	27.42	27.42	1.90
						1" Ice	37.38	37.38	2.45
						2" Ice	57.30	57.30	3.55
** Pipe Mount [PM 601-1]	C	None		0.00	107.00	No Ice	3.00	0.90	0.07
						1/2" Ice	3.74	1.12	0.08
						Ice	4.48	1.34	0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft	C <sub>A</sub> A <sub>A</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Side ft <sup>2</sup>	Weight K	
						1" Ice	5.96	1.78	0.12
						2" Ice	8.92	2.66	0.18
						4" Ice			
** (2) LPA-80080/6CF w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	4.56	10.73	0.05
						1/2" Ice	5.11	11.99	0.11
						Ice	5.61	12.97	0.19
						1" Ice	6.65	14.98	0.36
						2" Ice	8.83	19.22	0.86
						4" Ice			
BXA-70063/6CF-2 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	7.97	5.40	0.04
						1/2" Ice	8.61	6.55	0.10
						Ice	9.22	7.41	0.17
						1" Ice	10.46	9.18	0.33
						2" Ice	13.07	12.93	0.79
						4" Ice			
(2) LPA-171063-12CF- EDIN-2 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	6.23	7.75	0.04
						1/2" Ice	6.80	8.97	0.10
						Ice	7.35	9.91	0.17
						1" Ice	8.44	11.79	0.34
						2" Ice	10.99	15.99	0.82
						4" Ice			
(2) LPA-80080/6CF w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	4.56	10.73	0.05
						1/2" Ice	5.11	11.99	0.11
						Ice	5.61	12.97	0.19
						1" Ice	6.65	14.98	0.36
						2" Ice	8.83	19.22	0.86
						4" Ice			
BXA-70063/6CF-2 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	7.97	5.40	0.04
						1/2" Ice	8.61	6.55	0.10
						Ice	9.22	7.41	0.17
						1" Ice	10.46	9.18	0.33
						2" Ice	13.07	12.93	0.79
						4" Ice			
(2) LPA-171063-12CF- EDIN-2 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	6.23	7.75	0.04
						1/2" Ice	6.80	8.97	0.10
						Ice	7.35	9.91	0.17
						1" Ice	8.44	11.79	0.34
						2" Ice	10.99	15.99	0.82
						4" Ice			
(2) LPA-80080/6CF w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	4.56	10.73	0.05
						1/2" Ice	5.11	11.99	0.11
						Ice	5.61	12.97	0.19
						1" Ice	6.65	14.98	0.36
						2" Ice	8.83	19.22	0.86
						4" Ice			
BXA-70063/6CF-2 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	7.97	5.40	0.04
						1/2" Ice	8.61	6.55	0.10
						Ice	9.22	7.41	0.17
						1" Ice	10.46	9.18	0.33
						2" Ice	13.07	12.93	0.79
						4" Ice			
(2) LPA-171063-12CF- EDIN-2 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.00	98.00	No Ice	6.23	7.75	0.04
						1/2" Ice	6.80	8.97	0.10
						Ice	7.35	9.91	0.17
						1" Ice	8.44	11.79	0.34
						2" Ice	10.99	15.99	0.82
						4" Ice			
Platform Mount [LP 602-1]	C	None		0.00	98.00	No Ice	32.03	32.03	1.34
						1/2" Ice	38.71	38.71	1.80
						Ice	45.39	45.39	2.26
						1" Ice	58.75	58.75	3.17
						2" Ice	85.47	85.47	5.00
						4" Ice			

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>A</sub> A <sub>A</sub>		Weight	
			Horz	Lateral			Front	Side		
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K	
(2) DB980H90E-M w/ Mount Pipe	A	From Leg	4.00	0.00	0.00	87.00	No Ice	4.04	3.62	0.03
			0.00				1/2"	4.50	4.48	0.06
			2.00				Ice	4.95	5.22	0.11
							1" Ice	5.87	6.74	0.22
							2" Ice	8.05	10.00	0.55
(2) DB980H90E-M w/ Mount Pipe	B	From Leg	4.00	0.00	0.00	87.00	No Ice	4.04	3.62	0.03
			0.00				1/2"	4.50	4.48	0.06
			2.00				Ice	4.95	5.22	0.11
							1" Ice	5.87	6.74	0.22
							2" Ice	8.05	10.00	0.55
(2) DB980H90E-M w/ Mount Pipe	C	From Leg	4.00	0.00	0.00	87.00	No Ice	4.04	3.62	0.03
			0.00				1/2"	4.50	4.48	0.06
			2.00				Ice	4.95	5.22	0.11
							1" Ice	5.87	6.74	0.22
							2" Ice	8.05	10.00	0.55
Platform Mount [LP 602-1]	C	None			0.00	87.00	No Ice	32.03	32.03	1.34
							1/2"	38.71	38.71	1.80
							Ice	45.39	45.39	2.26
							1" Ice	58.75	58.75	3.17
							2" Ice	85.47	85.47	5.00
5' x 2' Pipe Mount	A	From Leg	4.00	0.00	0.00	87.00	No Ice	1.00	1.00	0.03
			0.00				1/2"	1.39	1.39	0.04
			0.00				Ice	1.70	1.70	0.05
							1" Ice	2.35	2.35	0.08
							2" Ice	3.78	3.78	0.20
5' x 2' Pipe Mount	B	From Leg	4.00	0.00	0.00	87.00	No Ice	1.00	1.00	0.03
			0.00				1/2"	1.39	1.39	0.04
			0.00				Ice	1.70	1.70	0.05
							1" Ice	2.35	2.35	0.08
							2" Ice	3.78	3.78	0.20
5' x 2' Pipe Mount	C	From Leg	4.00	0.00	0.00	87.00	No Ice	1.00	1.00	0.03
			0.00				1/2"	1.39	1.39	0.04
			0.00				Ice	1.70	1.70	0.05
							1" Ice	2.35	2.35	0.08
							2" Ice	3.78	3.78	0.20
** DB636-C	A	From Leg	4.00	0.00	0.00	73.00	No Ice	2.51	2.51	0.03
			0.00				1/2"	3.59	3.59	0.05
			6.00				Ice	4.68	4.68	0.07
							1" Ice	6.30	6.30	0.15
							2" Ice	8.97	8.97	0.38
(4) 7770.00 w/ Mount Pipe	A	From Leg	4.00	0.00	0.00	73.00	No Ice	6.12	4.25	0.06
			0.00				1/2"	6.63	5.01	0.10
			1.00				Ice	7.13	5.71	0.16
							1" Ice	8.16	7.16	0.29
							2" Ice	10.36	10.41	0.66
(6) LGP21401	A	From Leg	4.00	0.00	0.00	73.00	No Ice	1.29	0.23	0.01
			0.00				1/2"	1.45	0.31	0.02
			1.00				Ice	1.61	0.40	0.03
							1" Ice	1.97	0.61	0.05
							2" Ice	2.79	1.12	0.14
(4) LGP21903	A	From Leg	4.00	0.00	0.00	73.00	No Ice	0.27	0.18	0.01
			0.00				1/2"	0.34	0.25	0.01
			1.00				Ice	0.43	0.32	0.02
							1" Ice	0.62	0.49	0.03



Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>A</sub> A <sub>1</sub> Front	C <sub>A</sub> A <sub>2</sub> Side	Weight	
			Horz Lateral	Vert						
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K	
(2) RRUS-11	A	From Leg	4.00	0.00	0.00	73.00	2" Ice	1.10	0.94	0.07
							4" Ice			
							No Ice	4.42	1.63	0.06
							1/2" Ice	4.71	1.84	0.08
							Ice	5.00	2.06	0.11
							1" Ice	5.61	2.52	0.18
AM-X-CD-16-65-00T-RET w/ Mount Pipe	A	From Leg	4.00	0.00	0.00	73.00	2" Ice	6.94	3.55	0.37
							4" Ice			
							No Ice	8.50	6.30	0.07
							1/2" Ice	9.15	7.48	0.14
							Ice	9.77	8.37	0.21
							1" Ice	11.03	10.18	0.38
DC6-48-60-18-8F	A	From Leg	4.00	0.00	0.00	73.00	2" Ice	13.68	14.02	0.87
							4" Ice			
							No Ice	1.27	1.27	0.02
							1/2" Ice	1.46	1.46	0.04
							Ice	1.66	1.66	0.05
							1" Ice	2.09	2.09	0.10
(2) 7770.00 w/ Mount Pipe	B	From Leg	4.00	0.00	0.00	73.00	2" Ice	3.10	3.10	0.21
							4" Ice			
							No Ice	6.12	4.25	0.06
							1/2" Ice	6.63	5.01	0.10
							Ice	7.13	5.71	0.16
							1" Ice	8.16	7.16	0.29
(2) LGP21903	B	From Leg	4.00	0.00	0.00	73.00	2" Ice	10.36	10.41	0.66
							4" Ice			
							No Ice	0.27	0.18	0.01
							1/2" Ice	0.34	0.25	0.01
							Ice	0.43	0.32	0.02
							1" Ice	0.62	0.49	0.03
(2) RRUS-11	B	From Leg	4.00	0.00	0.00	73.00	2" Ice	1.10	0.94	0.07
							4" Ice			
							No Ice	4.42	1.63	0.06
							1/2" Ice	4.71	1.84	0.08
							Ice	5.00	2.06	0.11
							1" Ice	5.61	2.52	0.18
AM-X-CD-16-65-00T-RET w/ Mount Pipe	B	From Leg	4.00	0.00	0.00	73.00	2" Ice	6.94	3.55	0.37
							4" Ice			
							No Ice	8.50	6.30	0.07
							1/2" Ice	9.15	7.48	0.14
							Ice	9.77	8.37	0.21
							1" Ice	11.03	10.18	0.38
(2) RRUS-11	C	From Leg	4.00	0.00	0.00	73.00	2" Ice	13.68	14.02	0.87
							4" Ice			
							No Ice	4.42	1.63	0.06
							1/2" Ice	4.71	1.84	0.08
							Ice	5.00	2.06	0.11
							1" Ice	5.61	2.52	0.18
AM-X-CD-16-65-00T-RET w/ Mount Pipe	C	From Leg	4.00	0.00	0.00	73.00	2" Ice	6.94	3.55	0.37
							4" Ice			
							No Ice	8.50	6.30	0.07
							1/2" Ice	9.15	7.48	0.14
							Ice	9.77	8.37	0.21
							1" Ice	11.03	10.18	0.38
Platform Mount [LP 712-1]	C	None			0.00	73.00	2" Ice	13.68	14.02	0.87
							4" Ice			
							No Ice	24.53	24.53	1.34
							1/2" Ice	29.94	29.94	1.65
							Ice	35.35	35.35	1.96
							1" Ice	46.17	46.17	2.58
Collar Mount (MTC3335)	C	None			0.00	74.00	2" Ice	67.81	67.81	3.82
							4" Ice			
							No Ice	6.00	6.00	0.15
							1/2" Ice	7.22	7.22	0.19
							Ice	8.44	8.44	0.23

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>A</sub> A <sub>A</sub> Front	C <sub>A</sub> A <sub>A</sub> Side	Weight	
			Horz	Lateral						ft
						1" Ice	10.88	10.88	0.32	
						2" Ice	15.76	15.76	0.50	
						4" Ice				
** ASP-655	B	From Leg	4.00		0.00	50.00	No Ice	0.56	0.56	0.00
			0.00				1/2"	1.02	1.02	0.01
			4.00				Ice	1.30	1.30	0.01
							1" Ice	1.88	1.88	0.04
							2" Ice	3.19	3.19	0.13
							4" Ice			
DB492A	A	From Leg	4.00		0.00	50.00	No Ice	1.10	1.10	0.01
			0.00				1/2"	1.98	1.98	0.01
			0.00				Ice	2.86	2.86	0.01
							1" Ice	4.62	4.62	0.01
							2" Ice	8.14	8.14	0.02
							4" Ice			
PD1142-1	A	From Leg	4.00		0.00	50.00	No Ice	1.32	1.32	0.01
			0.00				1/2"	3.21	3.21	0.02
			7.00				Ice	5.12	5.12	0.05
							1" Ice	8.99	8.99	0.14
							2" Ice	16.94	16.94	0.46
							4" Ice			
PD1121-6	C	From Leg	4.00		0.00	50.00	No Ice	0.23	0.23	0.00
			0.00				1/2"	0.41	0.41	0.00
			3.00				Ice	0.60	0.60	0.00
							1" Ice	0.97	0.97	0.01
							2" Ice	1.70	1.70	0.01
							4" Ice			
Side Arm Mount [SO 701-3]	C	None			0.00	50.00	No Ice	2.83	2.83	0.20
							1/2"	3.92	3.92	0.24
							Ice	5.01	5.01	0.28
							1" Ice	7.19	7.19	0.36
							2" Ice	11.55	11.55	0.53
							4" Ice			
** EPSILON GPS ANTENNA 35 DB	A	From Leg	4.00		0.00	40.00	No Ice	0.13	0.13	0.00
			0.00				1/2"	0.19	0.19	0.00
			1.00				Ice	0.25	0.25	0.00
							1" Ice	0.39	0.39	0.01
							2" Ice	0.79	0.79	0.05
							4" Ice			
Side Arm Mount [SO 701-1]	A	None			0.00	40.00	No Ice	0.85	1.67	0.07
							1/2"	1.14	2.34	0.08
							Ice	1.43	3.01	0.09
							1" Ice	2.01	4.35	0.12
							2" Ice	3.17	7.03	0.18
							4" Ice			

### Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				Horz	Lateral							ft
GLF6-450	B	Grid	From Leg	1.00		0.00		107.00	6.40	No Ice	32.17	0.20
				0.00						1/2" Ice	33.01	0.37
				0.00						1" Ice	33.86	0.54
										2" Ice	35.54	0.88

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight
				ft	°	°	ft	ft	ft <sup>2</sup>	K
								4" Ice	38.92	1.56

### Tower Pressures - No Ice

$G_H = 1.690$

Section Elevation	z	$K_z$	$q_z$	$A_G$	Face	$A_F$	$A_R$	$A_{leg}$	Leg %	$C_A A_A$ In Face	$C_A A_A$ Out Face
ft	ft		ksf	ft <sup>2</sup>	e	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>
L1 120.00-100.00	109.51	1.409	0.03	29.419	A	0.000	29.419	29.419	100.00	0.000	0.000
					B	0.000	29.419		100.00	0.000	0.000
					C	0.000	29.419		100.00	0.000	0.000
L2 100.00-47.08	72.10	1.25	0.02	117.718	A	0.000	117.718	117.718	100.00	0.000	0.000
					B	0.000	117.718		100.00	0.000	0.000
					C	0.000	117.718		100.00	0.000	0.000
L3 47.08-0.00	22.47	1	0.02	150.203	A	0.000	150.203	150.203	100.00	0.000	0.000
					B	0.000	150.203		100.00	0.000	0.000
					C	0.000	150.203		100.00	0.000	0.000

### Tower Pressure - With Ice

$G_H = 1.690$

Section Elevation	z	$K_z$	$q_z$	$t_z$	$A_G$	Face	$A_F$	$A_R$	$A_{leg}$	Leg %	$C_A A_A$ In Face	$C_A A_A$ Out Face
ft	ft		ksf	in	ft <sup>2</sup>	e	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>
L1 120.00-100.00	109.51	1.409	0.01	0.8661	32.306	A	0.000	32.306	32.306	100.00	0.000	0.000
						B	0.000	32.306		100.00	0.000	0.000
						C	0.000	32.306		100.00	0.000	0.000
L2 100.00-47.08	72.10	1.25	0.00	0.8237	124.983	A	0.000	124.983	124.983	100.00	0.000	0.000
						B	0.000	124.983		100.00	0.000	0.000
						C	0.000	124.983		100.00	0.000	0.000
L3 47.08-0.00	22.47	1	0.00	0.7500	156.667	A	0.000	156.667	156.667	100.00	0.000	0.000
						B	0.000	156.667		100.00	0.000	0.000
						C	0.000	156.667		100.00	0.000	0.000

### Tower Pressure - Service

$G_H = 1.690$

Section Elevation	z	$K_z$	$q_z$	$A_G$	Face	$A_F$	$A_R$	$A_{leg}$	Leg %	$C_A A_A$ In Face	$C_A A_A$ Out Face
ft	ft		ksf	ft <sup>2</sup>	e	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>
L1 120.00-100.00	109.51	1.409	0.01	29.419	A	0.000	29.419	29.419	100.00	0.000	0.000
					B	0.000	29.419		100.00	0.000	0.000
					C	0.000	29.419		100.00	0.000	0.000
L2 100.00-47.08	72.10	1.25	0.01	117.718	A	0.000	117.718	117.718	100.00	0.000	0.000
					B	0.000	117.718		100.00	0.000	0.000
					C	0.000	117.718		100.00	0.000	0.000
L3 47.08-0.00	22.47	1	0.01	150.203	A	0.000	150.203	150.203	100.00	0.000	0.000
					B	0.000	150.203		100.00	0.000	0.000
					C	0.000	150.203		100.00	0.000	0.000

### Load Combinations

Comb. No.	Description
1	Dead Only
2	Dead+Wind 0 deg - No Ice
3	Dead+Wind 30 deg - No Ice
4	Dead+Wind 60 deg - No Ice
5	Dead+Wind 90 deg - No Ice
6	Dead+Wind 120 deg - No Ice
7	Dead+Wind 150 deg - No Ice
8	Dead+Wind 180 deg - No Ice
9	Dead+Wind 210 deg - No Ice
10	Dead+Wind 240 deg - No Ice
11	Dead+Wind 270 deg - No Ice
12	Dead+Wind 300 deg - No Ice
13	Dead+Wind 330 deg - No Ice
14	Dead+Ice
15	Dead+Wind 0 deg+Ice
16	Dead+Wind 30 deg+Ice
17	Dead+Wind 60 deg+Ice
18	Dead+Wind 90 deg+Ice
19	Dead+Wind 120 deg+Ice
20	Dead+Wind 150 deg+Ice
21	Dead+Wind 180 deg+Ice
22	Dead+Wind 210 deg+Ice
23	Dead+Wind 240 deg+Ice
24	Dead+Wind 270 deg+Ice
25	Dead+Wind 300 deg+Ice
26	Dead+Wind 330 deg+Ice
27	Dead+Wind 0 deg - Service
28	Dead+Wind 30 deg - Service
29	Dead+Wind 60 deg - Service
30	Dead+Wind 90 deg - Service
31	Dead+Wind 120 deg - Service
32	Dead+Wind 150 deg - Service
33	Dead+Wind 180 deg - Service
34	Dead+Wind 210 deg - Service
35	Dead+Wind 240 deg - Service
36	Dead+Wind 270 deg - Service
37	Dead+Wind 300 deg - Service
38	Dead+Wind 330 deg - Service

### Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	120 - 100	Pole	Max Tension	24	0.00	0.00	-0.00
			Max. Compression	14	-5.15	-0.49	-0.41
			Max. Mx	5	-2.48	-74.15	-0.67
			Max. My	8	-2.50	-1.08	-72.69
			Max. Vy	5	5.76	-74.15	-0.67
			Max. Vx	8	5.56	-1.08	-72.69
			Max. Torque	11			
L2	100 - 47.0833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-23.54	-1.93	3.49
			Max. Mx	5	-13.48	-927.08	-5.00
			Max. My	2	-13.46	5.72	926.46
			Max. Vy	5	22.95	-927.08	-5.00
			Max. Vx	8	23.23	-9.65	-924.36
			Max. Torque	6			
L3	47.0833 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-36.42	-1.97	3.75
			Max. Mx	5	-25.27	-2255.01	-13.06

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	2	-25.27	13.87	2268.30
			Max. Vy	11	-27.94	2253.38	11.45
			Max. Vx	8	28.22	-20.02	-2266.91
			Max. Torque	6			4.01

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	36.42	3.67	5.96
	Max. H <sub>x</sub>	11	25.30	27.91	0.11
	Max. H <sub>z</sub>	2	25.30	0.15	28.17
	Max. M <sub>x</sub>	2	2268.30	0.15	28.17
	Max. M <sub>z</sub>	5	2255.01	-27.91	-0.15
	Max. Torsion	6	4.00	-24.30	-14.31
	Min. Vert	1	25.30	0.00	0.00
	Min. H <sub>x</sub>	5	25.30	-27.91	-0.15
	Min. H <sub>z</sub>	8	25.30	-0.20	-28.19
	Min. M <sub>x</sub>	8	-2266.91	-0.20	-28.19
	Min. M <sub>z</sub>	11	-2253.38	27.91	0.11
	Min. Torsion	12	-4.00	24.23	14.27

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overtuning Moment, M <sub>x</sub> kip-ft	Overtuning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	25.30	0.00	0.00	-1.62	-0.82	0.00
Dead+Wind 0 deg - No Ice	25.30	-0.15	-28.17	-2268.30	13.88	2.24
Dead+Wind 30 deg - No Ice	25.30	13.77	-24.18	-1942.33	-1109.34	-0.08
Dead+Wind 60 deg - No Ice	25.30	24.03	-13.93	-1119.32	-1938.67	-1.78
Dead+Wind 90 deg - No Ice	25.30	27.91	0.15	13.06	-2255.01	-3.17
Dead+Wind 120 deg - No Ice	25.30	24.30	14.31	1154.08	-1966.13	-4.00
Dead+Wind 150 deg - No Ice	25.30	14.09	24.57	1979.58	-1140.61	-3.76
Dead+Wind 180 deg - No Ice	25.30	0.20	28.19	2266.91	-20.02	-2.21
Dead+Wind 210 deg - No Ice	25.30	-13.64	24.26	1946.92	1094.04	0.09
Dead+Wind 240 deg - No Ice	25.30	-23.99	13.95	1119.00	1933.12	1.76
Dead+Wind 270 deg - No Ice	25.30	-27.91	-0.11	-11.45	2253.38	3.09
Dead+Wind 300 deg - No Ice	25.30	-24.23	-14.27	-1152.81	1956.65	4.00
Dead+Wind 330 deg - No Ice	25.30	-14.05	-24.60	-1985.31	1134.76	3.84
Dead+Ice	36.42	0.00	-0.00	-3.75	-1.97	0.00
Dead+Wind 0 deg+Ice	36.42	-0.39	-6.92	-590.93	42.12	0.19
Dead+Wind 30 deg+Ice	36.42	3.31	-5.81	-491.86	-280.17	0.01
Dead+Wind 60 deg+Ice	36.42	5.83	-3.35	-285.06	-494.87	-0.44
Dead+Wind 90 deg+Ice	36.42	6.78	0.03	-1.36	-576.38	-0.82
Dead+Wind 120 deg+Ice	36.42	5.93	3.47	290.83	-505.28	-1.18
Dead+Wind 150 deg+Ice	36.42	3.41	5.95	499.45	-291.30	-1.22
Dead+Wind 180 deg+Ice	36.42	0.06	6.80	569.76	-8.37	-0.74
Dead+Wind 210 deg+Ice	36.42	-3.30	5.82	484.65	275.50	-0.01
Dead+Wind 240 deg+Ice	36.42	-6.10	3.12	251.56	521.51	0.98
Dead+Wind 270 deg+Ice	36.42	-6.92	-0.25	-31.28	587.81	1.32
Dead+Wind 300 deg+Ice	36.42	-6.05	-3.55	-306.64	515.52	1.18
Dead+Wind 330 deg+Ice	36.42	-3.67	-5.96	-507.87	316.71	0.72
Dead+Wind 0 deg - Service	25.30	-0.05	-9.75	-786.91	4.26	0.78
Dead+Wind 30 deg - Service	25.30	4.76	-8.37	-673.96	-384.85	-0.03
Dead+Wind 60 deg - Service	25.30	8.31	-4.82	-388.85	-672.17	-0.62
Dead+Wind 90 deg - Service	25.30	9.66	0.05	3.44	-781.78	-1.10
Dead+Wind 120 deg - Service	25.30	8.41	4.95	398.75	-681.72	-1.39
Dead+Wind 150 deg -	25.30	4.87	8.50	684.74	-395.72	-1.31

Load Combination	Vertical	Shear <sub>x</sub>	Shear <sub>z</sub>	Overturing Moment, M <sub>x</sub>	Overturing Moment, M <sub>z</sub>	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Service						
Dead+Wind 180 deg - Service	25.30	0.07	9.75	784.27	-7.48	-0.77
Dead+Wind 210 deg - Service	25.30	-4.72	8.39	673.38	378.46	0.03
Dead+Wind 240 deg - Service	25.30	-8.30	4.83	386.57	669.15	0.61
Dead+Wind 270 deg - Service	25.30	-9.66	-0.04	-5.05	780.12	1.08
Dead+Wind 300 deg - Service	25.30	-8.38	-4.94	-400.47	677.33	1.39
Dead+Wind 330 deg - Service	25.30	-4.86	-8.51	-688.89	392.59	1.34

### Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-25.30	0.00	0.00	25.30	0.00	0.000%
2	-0.15	-25.30	-28.17	0.15	25.30	28.17	0.000%
3	13.77	-25.30	-24.18	-13.77	25.30	24.18	0.000%
4	24.03	-25.30	-13.93	-24.03	25.30	13.93	0.000%
5	27.91	-25.30	0.15	-27.91	25.30	-0.15	0.000%
6	24.30	-25.30	14.31	-24.30	25.30	-14.31	0.000%
7	14.09	-25.30	24.57	-14.09	25.30	-24.57	0.000%
8	0.20	-25.30	28.19	-0.20	25.30	-28.19	0.000%
9	-13.64	-25.30	24.26	13.64	25.30	-24.26	0.000%
10	-23.99	-25.30	13.95	23.99	25.30	-13.95	0.000%
11	-27.91	-25.30	-0.11	27.91	25.30	0.11	0.000%
12	-24.23	-25.30	-14.27	24.23	25.30	14.27	0.000%
13	-14.05	-25.30	-24.60	14.05	25.30	24.60	0.000%
14	0.00	-36.42	0.00	-0.00	36.42	0.00	0.000%
15	-0.39	-36.42	-6.92	0.39	36.42	6.92	0.000%
16	3.31	-36.42	-5.81	-3.31	36.42	5.81	0.000%
17	5.83	-36.42	-3.35	-5.83	36.42	3.35	0.000%
18	6.78	-36.42	0.03	-6.78	36.42	-0.03	0.000%
19	5.93	-36.42	3.47	-5.93	36.42	-3.47	0.000%
20	3.41	-36.42	5.95	-3.41	36.42	-5.95	0.000%
21	0.06	-36.42	6.80	-0.06	36.42	-6.80	0.000%
22	-3.30	-36.42	5.82	3.30	36.42	-5.82	0.000%
23	-6.10	-36.42	3.12	6.10	36.42	-3.12	0.000%
24	-6.92	-36.42	-0.25	6.92	36.42	0.25	0.000%
25	-6.05	-36.42	-3.55	6.05	36.42	3.55	0.000%
26	-3.67	-36.42	-5.96	3.67	36.42	5.96	0.000%
27	-0.05	-25.30	-9.75	0.05	25.30	9.75	0.000%
28	4.76	-25.30	-8.37	-4.76	25.30	8.37	0.000%
29	8.31	-25.30	-4.82	-8.31	25.30	4.82	0.000%
30	9.66	-25.30	0.05	-9.66	25.30	-0.05	0.000%
31	8.41	-25.30	4.95	-8.41	25.30	-4.95	0.000%
32	4.87	-25.30	8.50	-4.87	25.30	-8.50	0.000%
33	0.07	-25.30	9.75	-0.07	25.30	-9.75	0.000%
34	-4.72	-25.30	8.39	4.72	25.30	-8.39	0.000%
35	-8.30	-25.30	4.83	8.30	25.30	-4.83	0.000%
36	-9.66	-25.30	-0.04	9.66	25.30	0.04	0.000%
37	-8.38	-25.30	-4.94	8.38	25.30	4.94	0.000%
38	-4.86	-25.30	-8.51	4.86	25.30	8.51	0.000%

### Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
------------------	------------	------------------	------------------------	-----------------

1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00073472
3	Yes	5	0.00000001	0.00031666
4	Yes	5	0.00000001	0.00031612
5	Yes	4	0.00000001	0.00031751
6	Yes	5	0.00000001	0.00031122
7	Yes	5	0.00000001	0.00034711
8	Yes	5	0.00000001	0.00003588
9	Yes	5	0.00000001	0.00030392
10	Yes	5	0.00000001	0.00031512
11	Yes	4	0.00000001	0.00050990
12	Yes	5	0.00000001	0.00034240
13	Yes	5	0.00000001	0.00030181
14	Yes	4	0.00000001	0.00000001
15	Yes	4	0.00000001	0.00025597
16	Yes	4	0.00000001	0.00080820
17	Yes	4	0.00000001	0.00073363
18	Yes	4	0.00000001	0.00010002
19	Yes	4	0.00000001	0.00074936
20	Yes	5	0.00000001	0.00006316
21	Yes	4	0.00000001	0.00034186
22	Yes	4	0.00000001	0.00064105
23	Yes	4	0.00000001	0.00057468
24	Yes	4	0.00000001	0.00047336
25	Yes	5	0.00000001	0.00006342
26	Yes	4	0.00000001	0.00093094
27	Yes	4	0.00000001	0.00018317
28	Yes	4	0.00000001	0.00090063
29	Yes	4	0.00000001	0.00088714
30	Yes	4	0.00000001	0.00008607
31	Yes	4	0.00000001	0.00086546
32	Yes	5	0.00000001	0.00003763
33	Yes	4	0.00000001	0.00021104
34	Yes	4	0.00000001	0.00081822
35	Yes	4	0.00000001	0.00087282
36	Yes	4	0.00000001	0.00009443
37	Yes	5	0.00000001	0.00003628
38	Yes	4	0.00000001	0.00083071

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 100	28.55	38	2.00	0.01
L2	100 - 47.0833	20.32	38	1.89	0.01
L3	52 - 0	5.32	38	0.96	0.00

### Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
118.00	DB201-A	38	27.71	1.99	0.01	20095
115.00	(4) DB844H90 w/ Mount Pipe	38	26.46	1.98	0.01	20095
107.00	GLF6-450	38	23.14	1.95	0.01	7728
98.00	(2) LPA-80080/6CF w/ Mount Pipe	38	19.53	1.87	0.01	4763
87.00	(2) DB980H90E-M w/ Mount Pipe	38	15.40	1.71	0.01	3643
74.00	Collar Mount (MTC3335)	38	11.02	1.45	0.01	2858
73.00	DB636-C	38	10.71	1.43	0.01	2811
50.00	ASP-655	38	4.92	0.92	0.00	2185
40.00	EPSILON GPS ANTENNA 35 DB	38	3.28	0.71	0.00	2714

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 100	82.12	6	5.76	0.02
L2	100 - 47.0833	58.45	13	5.45	0.02
L3	52 - 0	15.32	13	2.77	0.01

### Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
118.00	DB201-A	6	79.70	5.75	0.02	7165
115.00	(4) DB844H90 w/ Mount Pipe	6	76.09	5.72	0.02	7165
107.00	GLF6-450	13	66.56	5.61	0.02	2754
98.00	(2) LPA-80080/6CF w/ Mount Pipe	13	56.19	5.39	0.02	1693
87.00	(2) DB980H90E-M w/ Mount Pipe	13	44.30	4.93	0.02	1287
74.00	Collar Mount (MTC3335)	13	31.73	4.19	0.02	1003
73.00	DB636-C	13	30.84	4.13	0.02	986
50.00	ASP-655	13	14.19	2.64	0.01	762
40.00	EPSILON GPS ANTENNA 35 DB	13	9.45	2.05	0.01	946

### Compression Checks

### Pole Design Data

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	F <sub>a</sub> ksi	A in <sup>2</sup>	Actual P K	Allow. P <sub>a</sub> K	Ratio P P <sub>a</sub>
L1	120 - 100 (1)	TP20.263x15.0403x0.1875	20.00	0.00	0.0	39.00	12.1206	-2.46	472.70	0.005
L2	100 - 47.0833 (2)	TP33.127x20.263x0.2813	52.92	0.00	0.0	39.00	28.6635	-13.44	1117.88	0.012
L3	47.0833 - 0 (3)	TP44x31.3693x0.375	52.00	0.00	0.0	39.00	52.6772	-25.26	2054.41	0.012

### Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M <sub>x</sub> kip-ft	Actual f <sub>bx</sub> ksi	Allow. F <sub>bx</sub> ksi	Ratio f <sub>bx</sub> F <sub>bx</sub>	Actual M <sub>y</sub> kip-ft	Actual f <sub>by</sub> ksi	Allow. F <sub>by</sub> ksi	Ratio f <sub>by</sub> F <sub>by</sub>
L1	120 - 100 (1)	TP20.263x15.0403x0.1875	75.00	15.15	39.00	0.388	0.00	0.00	39.00	0.000
L2	100 - 47.0833 (2)	TP33.127x20.263x0.2813	936.68	50.73	39.00	1.301	0.00	0.00	39.00	0.000
L3	47.0833 - 0 (3)	TP44x31.3693x0.375	2286.7 2	48.88	39.00	1.253	0.00	0.00	39.00	0.000

### Pole Shear Design Data



Section No.	Elevation ft	Size	Actual V K	Actual $f_v$ ksi	Allow. $F_v$ ksi	Ratio $\frac{f_v}{F_v}$	Actual T kip-ft	Actual $f_{vt}$ ksi	Allow. $F_{vt}$ ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
L1	120 - 100 (1)	TP20.263x15.0403x0.1875	5.87	0.48	26.00	0.038	0.32	0.03	26.00	0.001
L2	100 - 47.0833 (2)	TP33.127x20.263x0.2813	23.38	0.82	26.00	0.064	3.59	0.09	26.00	0.004
L3	47.0833 - 0 (3)	TP44x31.3693x0.375	28.35	0.54	26.00	0.042	3.84	0.04	26.00	0.001

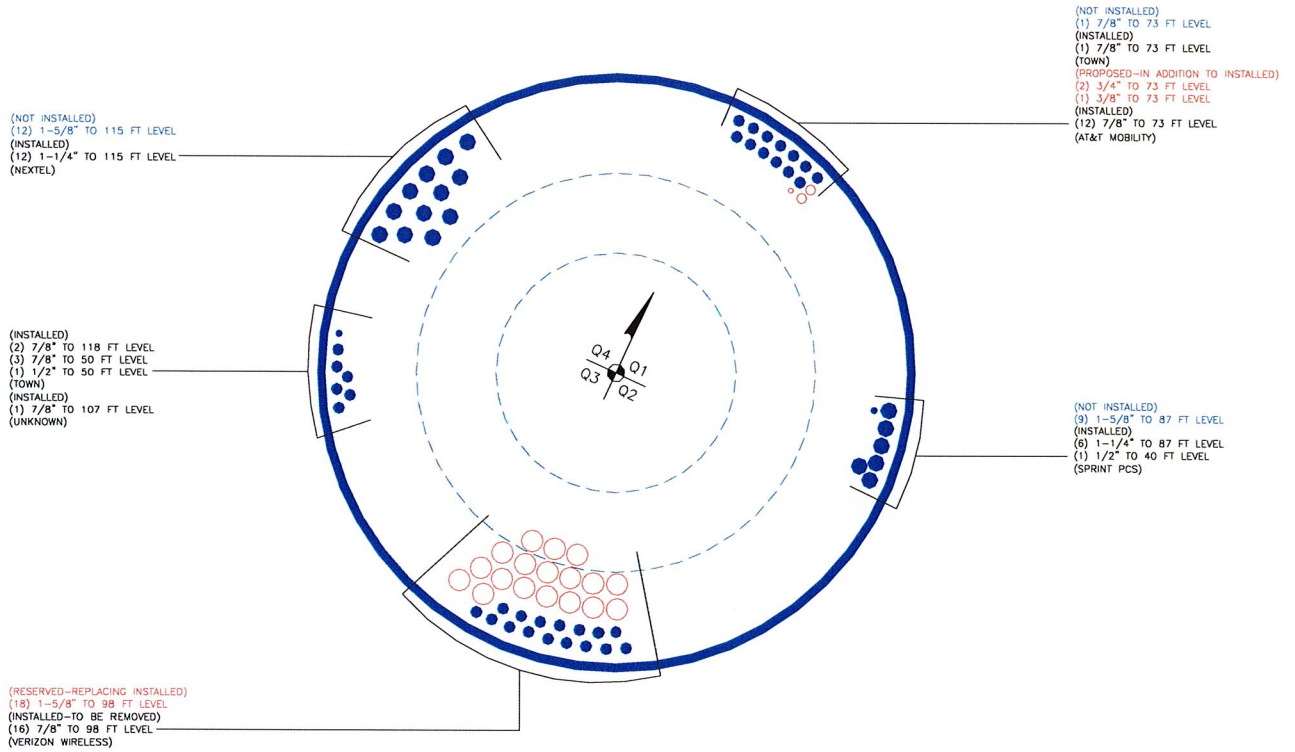
### Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	120 - 100 (1)	0.005	0.388	0.000	0.038	0.001	0.394 ✓	1.333	H1-3+VT ✓
L2	100 - 47.0833 (2)	0.012	1.301	0.000	0.064	0.004	1.314 ✓	1.333	H1-3+VT ✓
L3	47.0833 - 0 (3)	0.012	1.253	0.000	0.042	0.001	1.266 ✓	1.333	H1-3+VT ✓

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF * P_{allow}$ K	% Capacity	Pass Fail
L1	120 - 100	Pole	TP20.263x15.0403x0.1875	1	-2.46	630.11	29.6	Pass
L2	100 - 47.0833	Pole	TP33.127x20.263x0.2813	2	-13.44	1490.13	98.6	Pass
L3	47.0833 - 0	Pole	TP44x31.3693x0.375	3	-25.26	2738.53	95.0	Pass
Summary								
Pole (L2)							98.6	Pass
<b>RATING =</b>							<b>98.6</b>	<b>Pass</b>

**APPENDIX B**  
**BASE LEVEL DRAWING**

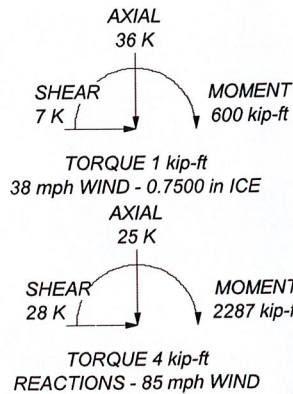
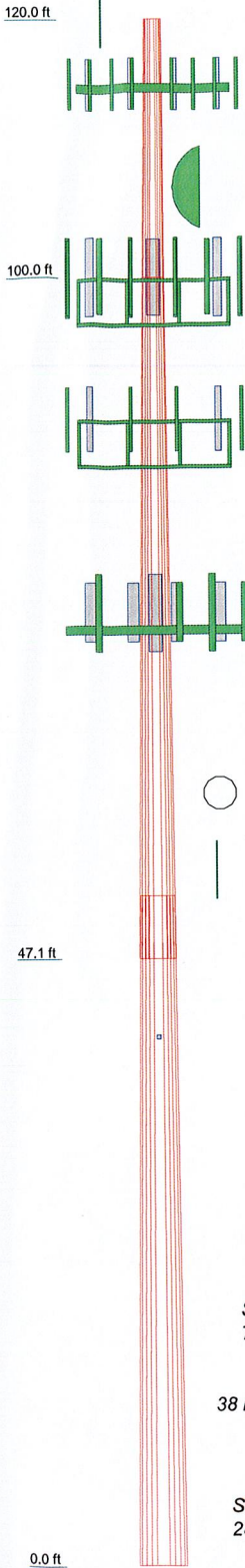


**APPENDIX C**  
**ADDITIONAL CALCULATIONS**

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Program Version 6.0.3.0 - 12/7/2011 File:G:/TOWER/375\_Crown\_Castle/2012/37512-1067 BU 806364/37512-1067.eri

Section	3	52.00	52.92	20.00	120.0 ft
Length (ft)	12	12	12	12	
Number of Sides	0.3750	0.2813	0.1875	0.1875	
Thickness (in)	31.3693	4.92	15.0403	15.0403	
Socket Length (ft)	44.0000	33.1270	20.2630	20.2630	
Top Dia (in)	8.0	4.3	0.7	0.7	
Bot Dia (in)					
Grade					
Weight (K)	13.0				



### DESIGNED APPURTENANCE LOADING


TYPE	ELEVATION	TYPE	ELEVATION
DB201-A	118	5' x 2' Pipe Mount	87
DB809MT3-XT	118	(2) DB980H90E-M w/ Mount Pipe	87
Side Arm Mount [SO 701-1]	118	Collar Mount (MTC3335)	74
Side Arm Mount [SO 701-1]	118	(6) LGP21401	73
(4) DB844H90 w/ Mount Pipe	115	(4) LGP21903	73
(4) DB844H90 w/ Mount Pipe	115	(2) RRUS-11	73
(4) DB844H90 w/ Mount Pipe	115	AM-X-CD-16-65-00T-RET w/ Mount Pipe	73
Platform Mount [LP 304-1]	115		
Pipe Mount [PM 601-1]	107	DC6-48-60-18-8F	73
GLF6-450	107	(2) 7770.00 w/ Mount Pipe	73
BXA-70063/6CF-2 w/ Mount Pipe	98	(2) LGP21903	73
(2) LPA-171063-12CF-EDIN-2 w/ Mount Pipe	98	(2) RRUS-11	73
(2) LPA-80080/6CF w/ Mount Pipe	98	AM-X-CD-16-65-00T-RET w/ Mount Pipe	73
BXA-70063/6CF-2 w/ Mount Pipe	98	(2) RRUS-11	73
(2) LPA-171063-12CF-EDIN-2 w/ Mount Pipe	98	AM-X-CD-16-65-00T-RET w/ Mount Pipe	73
(2) LPA-80080/6CF w/ Mount Pipe	98	Platform Mount [LP 712-1]	73
BXA-70063/6CF-2 w/ Mount Pipe	98	(4) 7770.00 w/ Mount Pipe	73
(2) LPA-171063-12CF-EDIN-2 w/ Mount Pipe	98	DB636-C	73
Platform Mount [LP 602-1]	98	DB492A	50
(2) LPA-80080/6CF w/ Mount Pipe	98	PD1142-1	50
(2) DB980H90E-M w/ Mount Pipe	87	PD1121-6	50
(2) DB980H90E-M w/ Mount Pipe	87	Side Arm Mount [SO 701-3]	50
Platform Mount [LP 602-1]	87	ASP-655	50
5' x 2' Pipe Mount	87	Side Arm Mount [SO 701-1]	40
5' x 2' Pipe Mount	87	EPSILON GPS ANTENNA 35 DB	40

### MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-65	65 ksi	80 ksi			

### TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 98.6%

 <b>Paul J. Ford and Company</b> 250 East Broad St., Suite 1500 Columbus, OH 43215 Phone: (614) 221-6679 FAX: (614) 448-4105	Job: <b>BU#806364</b>		
	Project: <b>PJF 37512-1067</b>		
	Client: CCI	Drawn by: Maria C Lopez	App'd:
	Code: TIA/EIA-222-F	Date: 04/19/12	Scale: N
Path: g:\TOWER\375 Crown_Castle\2012\37512-1067_BU_806364\37512-1067.dwg	Dwg No.		

# Stiffened or Unstiffened, Ungrouted, Circular Base Plate - Any Rod Material

**TIA Rev F**

**Site Data**

BU#: 806364
Site Name:
App #:
Pole Manufacturer: <i>Other</i>

Reactions		
Moment:	2287	ft-kips
Axial:	25	kips
Shear:	28	kips

Anchor Rod Data		
Qty:	12	
Diam:	2.25	in
Rod Material:	A615-J	
Strength (Fu):	100	ksi
Yield (Fy):	75	ksi
Bolt Circle:	52.05	in

If No stiffeners, Criteria: **AISC ASD** <-Only Applicable to Unstiffened Cases

**Anchor Rod Results**

Maximum Rod Tension: 173.7 Kips  
 Allowable Tension: 195.0 Kips  
 Anchor Rod Stress Ratio: 89.1% **Pass**

Rigid
Service, ASD
Fty*ASIF

Plate Data		
Diam:	58.05	in
Thick:	2.75	in
Grade:	60	ksi
Single-Rod B-eff:	11.79	in

**Base Plate Results**

Base Plate Stress: 30.8 ksi  
 Allowable Plate Stress: 60.0 ksi  
 Base Plate Stress Ratio: 51.3% **Pass**

Flexural Check

Rigid
Service ASD
0.75*Fy*ASIF
Y.L. Length:
27.81

Stiffener Data (Welding at both sides)		
Config:	0	*
Weld Type:	Both	
Groove Depth:	0.25	in **
Groove Angle:	45	degrees
Fillet H. Weld:	0.3125	in
Fillet V. Weld:	0.3125	in
Width:	5	in
Height:	18	in
Thick:	0.75	in
Notch:	0.5	in
Grade:	50	ksi
Weld str.:	70	ksi

n/a

**Stiffener Results**

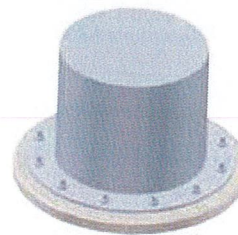
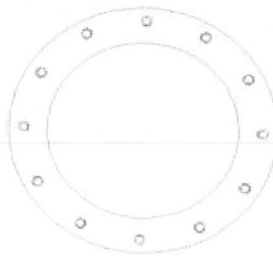
Horizontal Weld : n/a  
 Vertical Weld: n/a  
 Plate Flex+Shear, fb/Fb+(fv/Fv)^2: n/a  
 Plate Tension+Shear, ft/Ft+(fv/Fv)^2: n/a  
 Plate Comp. (AISC Bracket): n/a

**Pole Results**

Pole Punching Shear Check: n/a

Pole Data		
Diam:	44	in
Thick:	0.375	in
Grade:	65	ksi
# of Sides:	12	"0" IF Round
Fu	80	ksi
Reinf. Fillet Weld	0	"0" if None

Stress Increase Factor	
ASIF:	1.333



\* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

\*\* Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

# Stiffened or Unstiffened, Exterior Flange Plate - Any Bolt Material TIA Rev F

## Site Data

BU#: 806364  
 Site Name:  
 App #:

Pole Manufacturer: Other

## Bolt Data

Qty:	4		
Diameter (in.):	1	Bolt Fu:	120
Bolt Material:	A325	Bolt Fy:	92
N/A:	75	<-- Disregard	Bolt Fty:
N/A:	55	<-- Disregard	44.00
Circle (in.):	24.41		

## Plate Data

Diam:	26.91	in
Thick, t:	1.5	in
Grade (Fy):	60	ksi
Strength, Fu:	75	ksi
Single-Rod B-eff:	9.30	in

## Stiffener Data (Welding at Both Sides)

Config:	0	*
Weld Type:	Fillet	
Groove Depth:	0.25	<-- Disregard
Groove Angle:	45	<-- Disregard
Fillet H. Weld:	0.25	in
Fillet V. Weld:	0.25	in
Width:	3	in
Height:	8	in
Thick:	0.5	in
Notch:	0.375	in
Grade:	36	ksi
Weld str.:	70	ksi

## Pole Data

Diam:	20.26	in
Thick:	0.1875	in
Grade:	65	ksi
# of Sides:	12	"0" IF Round
Fu	80	ksi
Reinf. Fillet Weld	0	"0" if None

## Stress Increase Factor

ASIF: 1.333

## Reactions

Moment:	75	ft-kips
Axial:	2.46	kips
Shear:	5.87	kips
Elevation:	100	feet

If No stiffeners, Criteria: AISC ASD <-Only Applicable to Unstiffened Cases

## Flange Bolt Results

Bolt Tension Capacity, B:	46.07 kips
Max Bolt directly applied T:	36.26 Kips
Min. PL "tc" for B cap. w/o Pry:	0.883 in
Min PL "treq" for actual T w/ Pry:	0.655 in
Min PL "t1" for actual T w/o Pry:	0.784 in
T allowable w/o Prying:	46.07 kips
Prying Force, Q:	0.00 kips
Total Bolt Tension=T+Q:	36.26 kips
Non-Prying Bolt Stress Ratio, T/B:	78.7% <b>Pass</b>

Rigid
Service, ASD
Fty*ASIF

$\alpha' < 0$  case

## Exterior Flange Plate Results

Flexural Check	
Compression Side Plate Stress:	15.2 ksi
Allowable Plate Stress:	60.0 ksi
Compression Plate Stress Ratio:	25.4% <b>Pass</b>
<b>No Prying</b>	
Tension Side Stress Ratio, (treq/t)^2:	19.1% <b>Pass</b>

Rigid
Service ASD
0.75*Fy*ASIF
Comp. Y.L. Length:
13.62

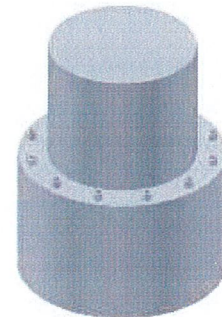
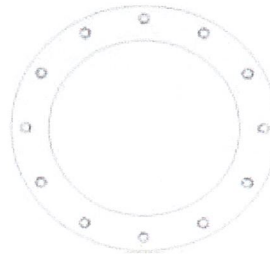
n/a

## Stiffener Results

Horizontal Weld :	n/a
Vertical Weld:	n/a
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	n/a
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	n/a
Plate Comp. (AISC Bracket):	n/a

## Pole Results

Pole Punching Shear Check: n/a



\* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

\*\* Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

foundation loads

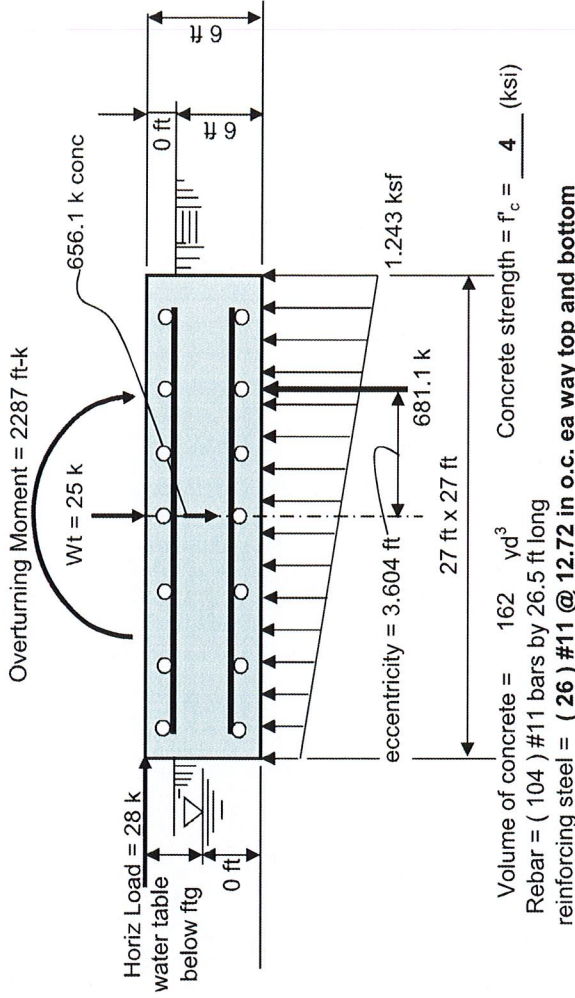
Tower or Pole Weight = 25 kips  
 Total Horizontal Force = 28 kips  
 Overturning Moment = 2287 ft-kips

soil properties

Safety factor against overturning = 1  
 Soil density = 125 pcf  
 Allowable soil bearing = 4 ksf  
 Depth to water table = 99 ft

mat dimensions

depth to bottom of footing = 6 ft  
 Footing thickness = 6 ft  
 Footing Width = 27 ft  
 Footing Length = 27 ft  
 Tower/Pole Center Offset = 0 ft



Summary of analysis results

Overturning Moment: (Stress Ratio = 0.267 )  
 Calculated Overturning Moment = 2455 ft-kips  
 Resisting Moment = 9194.9 ft-kips  
 Factor of Safety against overturning = 3.745 > 1 okay

Soil Bearing (Stress Ratio = 0.311 ) < **CONTROLLING CRITERIA**  
 Net Soil Bearing Resistance = 4 ksf  
 Calculated Soil Bearing Pressure = 1.243 ksf < 4 ksf okay

Bending Moment (Stress Ratio = 0.104 )  
 Ultimate Bending Moment Resistance = 11833 ft-kips  
 Calculated Ultimate Bending Moment = 1228 ft-kips < 11833 ft-kips okay

Bending Shear (Stress Ratio = 0.077 )  
 Ultimate Bending Shear Resistance = 2297 kips  
 Calculated Ultimate Bending Shear = 177 kips < 2297 kips okay

Rebar strength = F<sub>y</sub> = 60 (ksi)  
 minimum cover over rebar = 4 inches





# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

December 29, 2015

Daniel M. Laub, Esq.  
Cuddy & Feder LLP  
445 Hamilton Avenue, 14<sup>th</sup> Floor  
White Plains, NY 10601

RE: **EM-CING-023-140617; EM-AT&T-054-140625; EM-AT&T-007-140709**  
**EM-AT&T-094-140709; EM-AT&T-162-140709; EM-AT&T-143-140730**  
**EM-AT&T-163-140730; EM-CING-017-140818; EM-CING-166-140826**  
**EM-CING-038-140902; EM-CING-115-140902; EM-CING-155-140902**  
**EM-CING-086-140909; TS-CING-128-140506-Request to Revise**  
**EM-CING-074-141003; EM-CING-096-141003; EM-CING-116-141003**  
**EM-CING-128-141003; EM-CING-130-141003; EM-CING-025-141015**  
**EM-CING-015-141202; EM-CING-078-141202; EM-AT&T-083-141208**  
**EM-AT&T-163-141208; EM-AT&T-083-141209**

Dear Attorney Laub:

The Connecticut Siting Council (Council) is in receipt of your letter dated December 24, 2015, submitted on behalf of New Cingular Wireless PCS, LLC (AT&T), requesting an extension of time to submit notices of completion of construction and associated post modification inspection reports for the period of July 1, 2014 through September 30, 2014. Please be advised that the Council is in receipt of notices of completion for some of the exempt modifications referenced in your December 24, 2015 correspondence. According to the Council's records the remaining above-referenced exempt modifications reflect deficiencies in notices of completion of construction and associated post modification inspection reports.

The Council hereby grants an extension of time until June 30, 2016 to submit notices of completion of construction and associated post modification inspection reports for the above-referenced exempt modifications.

This extension is granted with the understanding that the Council will be notified should New Cingular Wireless PCS, LLC (AT&T) need additional time to submit notices of completion and associated post modification inspection reports or decides not to proceed with construction.

Thank you for your attention to this matter.

Sincerely,

Melanie A. Bachman  
Acting Executive Director

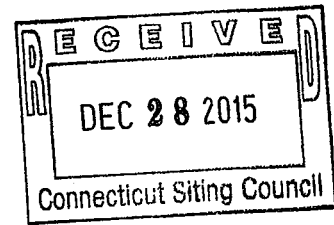
MAB/cm



December 24, 2015

**VIA EMAIL & FIRST CLASS MAIL**

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



Re: New Cingular Wireless PCS, LLC (AT&T)  
Exempt Modification/Tower Share Conditions  
Notification of Completion-Extension Request

Dear Executive Director Bachman:

On behalf of our client, New Cingular Wireless PCS, LLC ("AT&T"), we are in receipt of your November 9, 2015 letter requesting AT&T provide written notification of completion of construction and/or written notice of compliance with site specific conditions for various exempt modification filings made by AT&T and its vendors for the period of July 1, 2014 through September 30, 2014.

AT&T continues to audit its files internally to be able to provide the CSC with certifications and status on the sites listed. As you are aware, some of AT&T's vendors who filed the regulatory notices are no longer on the AT&T project and the confirmation process is taking longer than anticipated. As such, we respectfully request an extension of time to June 30, 2016 for AT&T and its vendors to provide a status update. Additionally, we respectfully request the same extension for all of the remaining sites listed on the attached.

Thank you in advance for your consideration of this request.

Very truly yours,

A handwritten signature in black ink, appearing to read "D. Laub".

Daniel M. Laub  
Enclosures

cc: Michele Briggs, AT&T

EM/TS #	Address	Town	Council Additional Conditions	Notice of Completion Received	Decision Date	CSC Extension Granted Until
EM-CING-023-140617	14 Canton Springs Road	Canton	no		7/7/2014	
TS-AT&T-043-140401	100 Sunset Ridge	East Hartford	No		7/10/2014	
EM-AT&T-054-140625	Birch Mountain Road	Glastonbury	yes		7/11/2014	
EM-CING-038-140703	Durham Agricultural Fair	Durham	no		7/25/2014	
EM-AT&T-007-140709	260 Beckley Road	Berlin	No		8/4/2014	
EM-AT&T-015-140709	2 Kaechele Place	Bridgeport	yes		8/4/2014	
EM-AT&T-033-140709	Christian Hill Road (100 Berlin Road)	Cromwell	No		8/4/2014	
EM-AT&T-089-140709	723 Farmington Avenue	New Britain	yes		8/4/2014	
EM-AT&T-094-140709	99 Cedarwood Lane	Newington	yes		8/4/2014	
EM-AT&T-162-140709	15 Oakdale Avenue	Winsted	yes		8/4/2014	
EM-AT&T-164-140709	99 Day Hill Road	Windsor	No		8/4/2014	
EM-AT&T-143-140730	1210 Highland Avenue	Torrington	yes		8/15/2014	
EM-AT&T-163-140730	83 Windham Street	Willimantic	yes		8/15/2014	
EM-CING-017-140818	790 Willis Street	Bristol	no		9/5/2014	
EM-CING-096-140819	33 Boardman Road	New Milford	no		9/5/2014	
EM-CING-166-140826	1233 Wolcott Road	Wolcott	yes		9/12/2014	
EM-CING-038-140902	143R Old Blue Hills Road	Durham	no		9/19/2014	
EM-CING-115-140902	151 Waterbury Road	Prospect	no		9/19/2014	
EM-CING-155-140902	471 South Quaker Lane	West Hartford	no		9/19/2014	
EM-CING-086-140909	57 Cook Drive	Montville	yes		9/26/2014	
TS-CING-128-140506 Request to Revise	345 Bushy Hill Road	Simsbury	yes		10/3/2014	
EM-CING-074-141003	383 Torrington Road	Litchfield	no		10/31/2014	
EM-CING-096-141003	4 Elkington Farm Road	New Milford	yes		10/31/2014	
EM-CING-116-141003	154 Sayle Avenue	Putnam	yes		10/31/2014	
EM-CING-128-141003	225 Grist Mill Road	Simsbury	yes		10/31/2014	
EM-CING-130-141003	459 Burr Road	Southbury	no		10/31/2014	
EM-CING-025-141015	751 Higgins Road	Cheshire	yes		10/31/2014	
EM-CING-015-141202	1069 Connecticut Avenue	Bridgeport	no		12/19/2014	
EM-CING-078-141202	60 North Eagleville Road	Mansfield	yes		12/19/2014	
EM-AT&T-083-141208	90 Industrial Park Road	Middletown	yes		12/29/2014	

EM-AT&T-163-141208	10 North Ridge Road	Windham	no	12/29/2014
EM-AT&T-083-141209	1969 Old Saybrook Road	Middletown	no	12/29/2014