QC Development
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Storrs, CT 06268
860-670-9068
Mark.Roberts@QCDevelopment.net

March 8, 2017

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

Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T) – CT1835
655 Bassett Road, Watertown, CT 06795
N 41-39-26
W 73-08-11

Dear Ms. Bachman:

AT&T currently maintains twelve (12) antennas at the 126-foot level of the existing 130-foot Monopine at 655 Bassett Road, Watertown, CT. The tower is owned by American Tower and the property is owned by Frank E. Gustafson (EST) et al. AT&T now intends to remove three (3) Commscope antennas and replace them with three (3) CCI antennas. AT&T also plans to install three (3) Ericsson remote radio units (RRUS-12 A2) also at the 126-foot level of the tower.

This facility was approved by the Connecticut Siting Council in Docket # 422 on May 10, 2012. This approval included conditions that the tower be constructed as a Monopine and not exceed 130 feet above ground level. Since no modification to the overall facility height or stealth design is proposed, this modification therefore complies with the aforementioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 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 Thomas L. Wynn, Chair of the Watertown Town Council, and the Watertown Planning & Zoning Department as well as the property owner and the tower owner.

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 the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

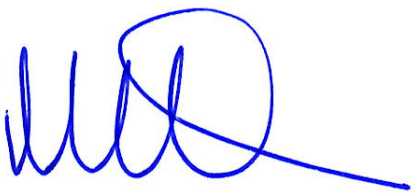
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

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

Please feel free to call me at (860) 670-9068 with any questions regarding this matter. Thank you for your consideration.

Sincerely,



Mark Roberts
QC Development
Consultant for AT&T

Attachments

cc: Thomas L. Wynn - as elected official
Mark Massoud – Planning and Zoning Administrator (via e-mail)
Frank E Gustafson (EST) et al – as property owner
American Tower - as tower owner (via e-mail)

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							0.00%
AT&T GSM	1	500	126	0.0123	880	0.5867	0.21%
AT&T GSM	1	500	126	0.0123	1900	1.0000	0.12%
AT&T UMTS	3	296	126	0.0218	880	0.5867	0.37%
AT&T UMTS	1	497	126	0.0105	1900	1.0000	0.10%
AT&T LTE	1	500	126	0.0123	700	0.4667	0.26%
Site Total							1.07%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							0.00%
AT&T UMTS	2	500	126	0.0246	880	0.5867	0.42%
AT&T LTE	1	1476	126	0.0363	700	0.4667	0.78%
AT&T LTE	1	2421	126	0.0595	1900	1.0000	0.59%
Site Total							1.79%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

WIRELESS COMMUNICATIONS FACILITY
CT1835 - LTE 2C
WATERTOWN
AMERICAN TOWER CO. SITE NO.: 283424
655 BASSETT RD
WATERTOWN, CT 06795

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2016 CONNECTICUT STATE BUILDING CODE, INCLUDING THE TIA–222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2016 CONNECTICUT FIRE SAFETY CODE AND, NATIONAL ELECTRICAL CODE AND LOCAL CODES.
2. THE COMPOUND, TOWER, PRIMARY GROUND RING, ELECTRICAL SERVICE TO THE METER BANK AND TELEPHONE SERVICE TO THE DEMARCATION POINT ARE PROVIDED BY SITE OWNER. AS BUILT FIELD CONDITIONS REGARDING THESE ITEMS SHALL BE CONFIRMED BY THE CONTRACTOR. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD–OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, PLUMBING, ELECTRICAL AND HVAC. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN 'AS–BUILT' SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND 'MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE AT&T CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO 'EXTRA' WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON–SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB–CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1–800–922–4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.
21. CONTRACTOR SHALL COMPLY WITH OWNERS ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.

SITE DIRECTIONS

FROM: 500 ENTERPRISE DRIVE, ROCKY HILL, CONNECTICUT

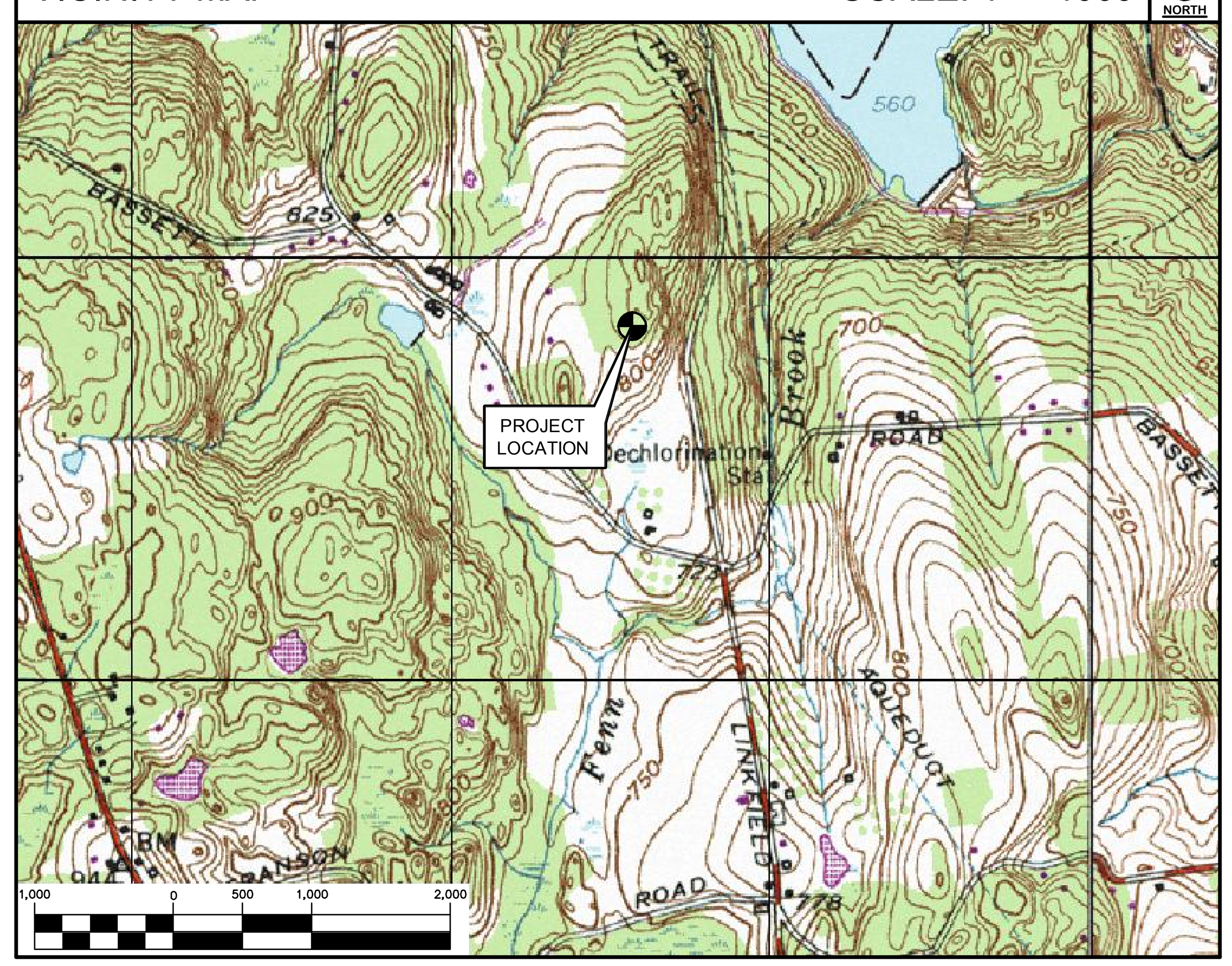
TO: 655 BASSETT ROAD, WATERTOWN, CONNECTICUT

1.	HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD	0.37 MI
2.	TURN LEFT ONTO CAPITAL BLVD	0.27 MI
3.	TURN LEFT ONTO WEST ST	0.30 MI
4.	TURN LEFT TO MERGE ONTO I–91 S TOWARD NEW HAVEN	9.59 MI
5.	TAKE EXIT 18 FOR I–691 W TOWARD MERIDEN/WATERBURY	0.20 MI
6.	CONTINUE ONTO I–691 W	8.70 MI
7.	TAKE EXIT 1 FOR I–84 W TOWARD WATERBURY/DANBURY	11.70 MI
8.	TAKE EXIT 20 TO MERGE ONTO CT–8 N TOWARD TORRINGTON	4.00 MI
9.	TAKE EXIT 37 FOR STATE HWY 262 TOWARD WATERTOWN	0.20 MI
10.	SHARP LEFT ONTO CT–262/STATE HWY 262	1.60 MI
11.	TURN RIGHT ONTO CT–262/BUCKINGHAM STREET	1.40 MI
12.	CONTINUE STRAIGHT ONTO FERN HILL RD AND THEN SMITH POND RD	1.60 MI
13.	TURN RIGHT ONTO LINKFIELD RD	1.20 MI
14.	TURN LEFT ONTO BASSETT RD	0.30 MI

VICINITY MAP

SCALE: 1" = 1000'

NORTH



PROJECT SUMMARY

1. THE PROPOSED SCOPE OF WORK CONSISTS OF A MODIFICATION TO THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING THE FOLLOWING:
   - A. REMOVE AND REPLACE EXISTING POS 4. ANTENNA FOR PROPOSED HEXPORT ANTENNA, (1) PER SECTOR TYP OF 3
   - B. INSTALL (3) NEW RRUS–12+A2 BEHIND EXISTING POSITION 3 ANTENNAS

PROJECT INFORMATION

AT&T SITE NUMBER:	CT1835
AT&T SITE NAME:	WATERTOWN ATC SITE NO.:283424
SITE ADDRESS:	655 BASSETT RD WATERTOWN, CT 06795
LESSEE/APPLICANT:	AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067
ENGINEER:	CENTEK ENGINEERING, INC. 63–2 NORTH BRANFORD RD. BRANFORD, CT 06405
PROJECT COORDINATES:	LATITUDE: 41°–38'–55.7" N LONGITUDE: 73°–6'–40.79" W GROUND ELEVATION: ±834' AMSL SITE COORDINATES AND GROUND ELEVATION REFERENCED FROM GOOGLE EARTH.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T–1	TITLE SHEET	0
N–1	NOTES, SPECIFICATIONS AND DETAILS	0
C–1	PLANS AND ELEVATION	0
C–2	LTE 2C EQUIPMENT DETAILS	0
E–1	LTE SCHEMATIC DIAGRAM AND NOTES	0
E–2	LTE WIRING DIAGRAM	0
E–3	TYPICAL ELECTRICAL DETAILS	0

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	01/17/17	LGL	CAG	CONSTRUCTION DOCUMENTS – ISSUED FOR CONSTRUCTION

PROFESSIONAL ENGINEER SEAL

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

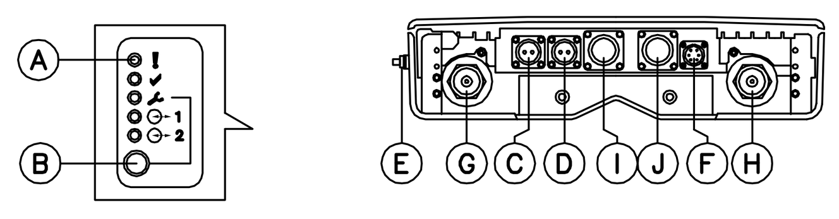
AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY
WATERTOWN
CT1835 - LTE 2C
655 BASSETT RD
WATERTOWN, CT 06795

DATE: 01/17/17
SCALE: AS NOTED
JOB NO. 17010.01

TITLE SHEET

T–1

Sheet No. 1 of 7



SIDE PANEL

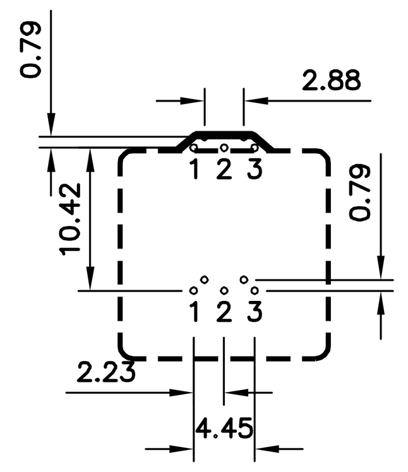
BOTTOM VIEW

CONNECTION INTERFACE

POSITION (ID)	DESCRIPTION	MARKING
A	OPTICAL INDICATORS	!, ✓, 🔧, ⊖-1, ⊖-2
B	MAINTENANCE	🔧
C	−48V DC POWER SUPPLY	POW IN
D	−48V DC POWER SUPPLY TO RRU	POW OUT
E	GROUNDING	⏚
F	RET	RET
G	ANTENNA B	← B
H	ANTENNA A	← A
I	OPTICAL CABLE 1	⊖-1
J	OPTICAL CABLE 2	⊖-2

NOTES:

1. STACKING OF RRU's IS NOT PERMITTED.
2. NO PAINTING OF RRU OR THE SOLAR SHIELD IS ALLOWED.
3. A SINGLE RRUS A2 CAN BE INSTALLED AS A STAND ALONE UNIT OR MOUNTED TO THE BACK OF ITS ASSOCIATED RRU.

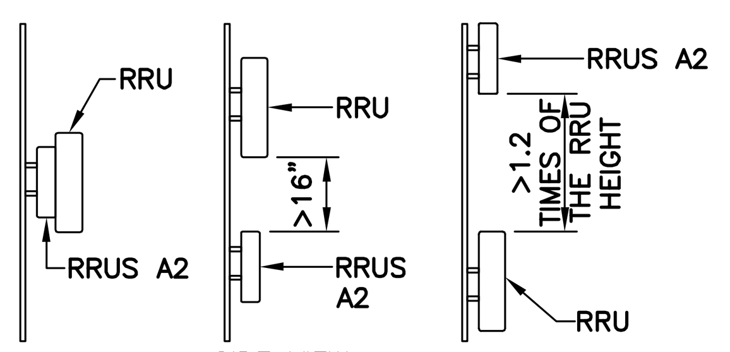


THE NUMBER OF BOLT HOLES DEPENDS ON THE WALL MATERIAL, AS SPECIFIED BY THE SITE ENGINEER. A MINIMUM OF TWO BOLT HOLES ARE RECOMMENDED FOR EACH BRACKET.

ONE OF THE FOLLOWING SOLUTIONS FOR HOLE POSITIONS MUST BE USED:

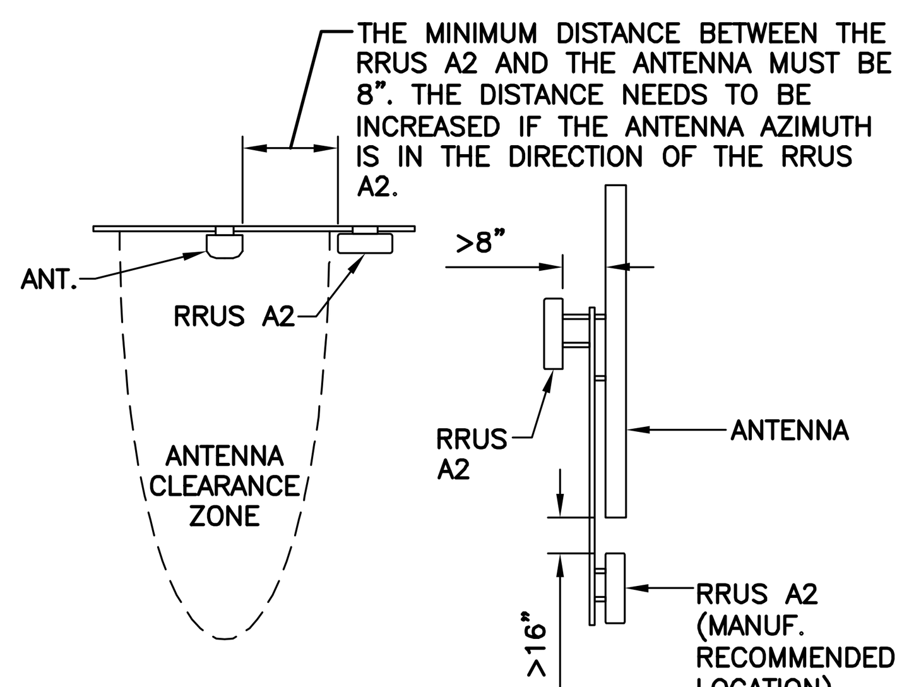
- 1, 3
- 1, 2, 3

WALL MOUNTING BRACKET INSTALLATION



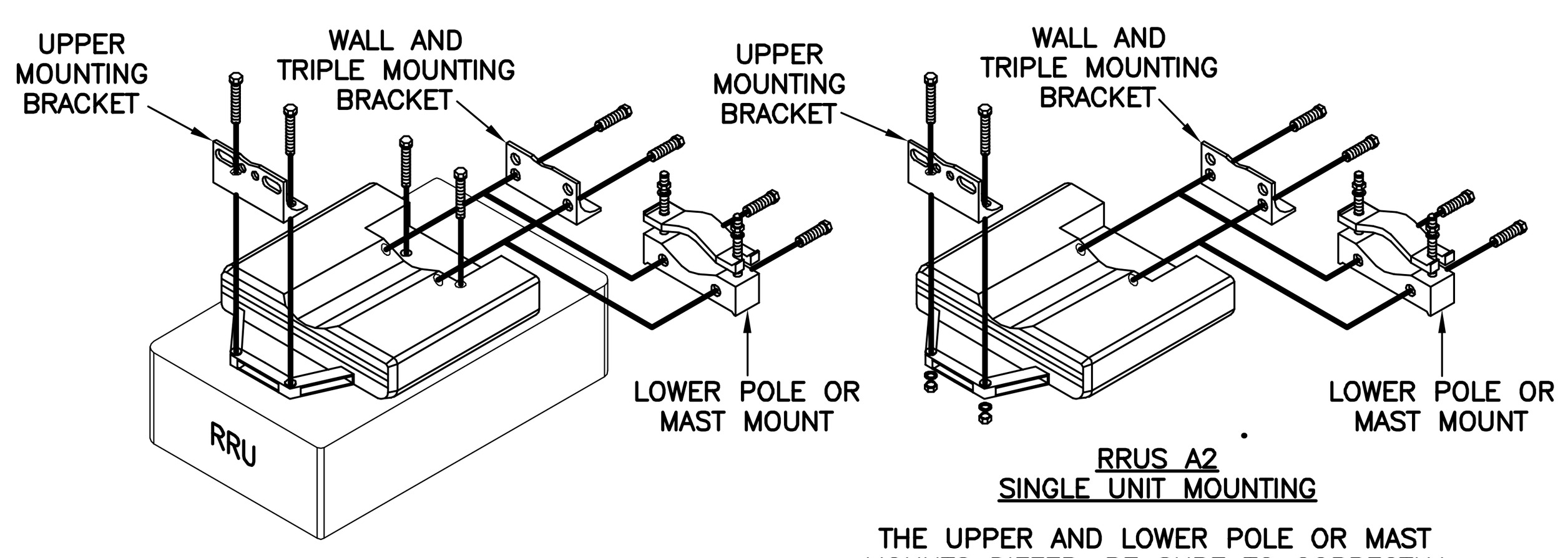
SIDE VIEW

RRUS A2 MANUFACTURER INSTALLATION REQUIREMENTS



TOP VIEW

SIDE VIEW



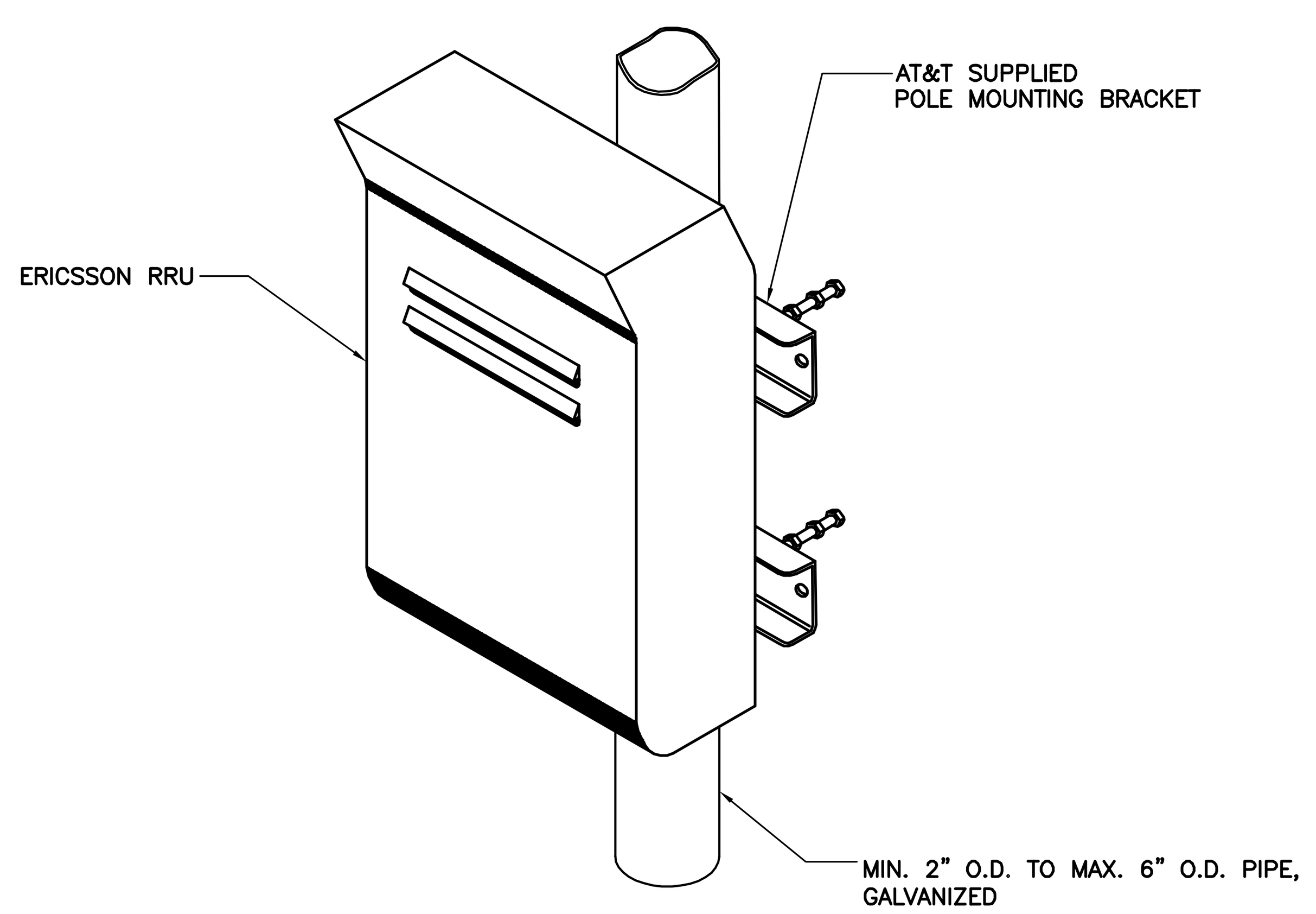
RRUS A2 W/ASSOCIATED RRU MOUNTING

RRUS A2 SINGLE UNIT MOUNTING

THE UPPER AND LOWER POLE OR MAST MOUNTS DIFFER, BE SURE TO CORRECTLY POSITION THE MOUNTS BEFORE INSTALLATION.

1 / N−1 **ERICSSON RRU A2 DETAILS**

NOT TO SCALE



ISOMETRIC VIEW

NOTES:

1. AT&T SHALL SUPPLY RRU, AND RRU POLE-MOUNTING BRACKET. CONTRACTOR SHALL SUPPLY POLE/PIPE AND INSTALL ALL MOUNTING HARDWARE INCLUDING ERICSSON RRU POLE-MOUNTING BRACKET. CONTRACTOR SHALL INSTALLS RRU AND MAKES CABLE TERMINATIONS.
2. NO PAINTING OF THE RRU OR SOLAR SHIELD IS ALLOWED.

2 / N−1 **TYPICAL RRUS MOUNTING DETAILS**

SCALE: NTS

NOTES AND SPECIFICATIONS

DESIGN BASIS:

GOVERNING CODE: 2012 INTERNATIONAL BUILDING (IBC) AS MODIFIED BY THE 2016 CT STATE BUILDING CODE AND AMENDMENTS.

1. DESIGN CRITERIA:

- WIND LOAD: PER TIA 222 G (ANTENNA MOUNTS): 90–105 MPH (3 SECOND GUST)
- RISK CATEGORY: II (BASED ON IBC TABLE 1604.5)
- NOMINAL DESIGN SPEED (OTHER STRUCTURE): 97 MPH (Vasd) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7–10) PER 2012 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2016 CONNECTICUT STATE BUILDING CODE.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7–10 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE GOVERNING BUILDING CODE.
2. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
3. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.
4. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST EXISTING FIELD CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
6. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
7. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.
8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SHORING, BRACING, AND BARRICADES AS MAY BE REQUIRED FOR THE PROTECTION OF EXISTING PROPERTY, CONSTRUCTION WORKERS, AND FOR PUBLIC SAFETY.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING SITE OPERATIONS, COORDINATE WORK WITH NORTHEAST UTILITIES
10. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER FOUNDATION REMEDIATION WORK IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, TEMPORARY BRACING, GUYS OR TIEDOWNS, WHICH MIGHT BE NECESSARY.
11. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
12. SHOP DRAWINGS, CONCRETE MIX DESIGNS, TEST REPORTS, AND OTHER SUBMITTALS PERTAINING TO STRUCTURAL WORK SHALL BE FORWARDED TO THE OWNER FOR REVIEW BEFORE FABRICATION AND/OR INSTALLATION IS MADE. SHOP DRAWINGS SHALL INCLUDE ERECTION DRAWINGS AND COMPLETE DETAILS OF CONNECTIONS AS WELL AS MANUFACTURER'S SPECIFICATION DATA WHERE APPROPRIATE. SHOP DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR AND BEAR THE CHECKER'S INITIALS BEFORE BEING SUBMITTED FOR REVIEW.
13. NO DRILLING WELDING OR TAPING ON EVERSOURCE OWNED EQUIPMENT.
14. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL IS DESIGNED BY ALLOWABLE STRESS DESIGN (ASD)

   A. STRUCTURAL STEEL (W SHAPES)---ASTM A992 (FY = 50 KSI)
   B. STRUCTURAL STEEL (OTHER SHAPES)---ASTM A36 (FY = 36 KSI)
   C. STRUCTURAL HSS (RECTANGULAR SHAPES)---ASTM A500 GRADE B, (FY = 46 KSI)
   D. STRUCTURAL HSS (ROUND SHAPES)---ASTM A500 GRADE B, (FY = 42 KSI)
   E. PIPE---ASTM A53 (FY = 35 KSI)
   F. CONNECTION BOLTS---ASTM A325-N
   G. U-BOLTS---ASTM A36
   H. ANCHOR RODS---ASTM F 1554
   I. WELDING ELECTRODE---ASTM E 70XX

2. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS.
3. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.
4. PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.
5. FIT AND SHOP ASSEMBLE FABRICATIONS IN THE LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.
6. INSTALL FABRICATIONS PLUMB AND LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTIONS OR DEFECTS.
7. AFTER ERECTION OF STRUCTURES, TOUCHUP ALL WELDS, ABRASIONS AND NON-GALVANIZED SURFACES WITH A 95% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 780.
8. ALL STEEL MATERIAL (EXPOSED TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT DIPPED GALVANIZED) COATINGS" ON IRONS AND STEEL PRODUCTS.
9. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE".
10. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.
11. CONNECTION ANGLES SHALL HAVE A MINIMUM THICKNESS OF 1/4 INCHES.
12. STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL HAVE A MINIMUM OF TWO BOLTS, UNLESS OTHERWISE ON THE DRAWINGS.
13. LOCK WASHER ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.
14. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED.
15. MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.
16. FABRICATE BEAMS WITH MILL CAMBER UP.
17. LEVEL AND PLUMB INDIVIDUAL MEMBERS OF THE STRUCTURE TO AN ACCURACY OF 1:500, BUT NOT TO EXCEED 1/4" IN THE FULL HEIGHT OF THE COLUMN.
18. COMMENCEMENT OF STRUCTURAL STEEL WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PRECEDING WORK.
19. INSPECTION AND TESTING OF ALL WELDING AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY.
20. FOUR COPIES OF ALL INSPECTION TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION.

PAINT NOTES

PAINTING SCHEDULE:

1. ANTENNA PANELS:

   A. SHERWIN WILLIAMS POLANE-B
   B. COLOR TO BE MATCHED WITH EXISTING TOWER STRUCTURE.

2. COAXIAL CABLES:

   A. ONE COAT OF DTM BONDING PRIMER (2-5 MILS. DRY FINISH)
   B. TWO COATS OF DTM ACRYLIC PRIMER/FINISH (2.5-5 MILS. DRY FINISH)
   C. COLOR TO BE FIELD MATCHED WITH EXISTING STRUCTURE.

EXAMINATION AND PREPARATION:

1. DO NOT APPLY PAINT IN SNOW, RAIN, FOG OR MIST OR WHEN RELATIVE HUMIDITY EXCEEDS 85%. DO NOT APPLY PAINT TO DAMP OR WET SURFACES.
2. VERIFY THAT SUBSTRATE CONDITIONS ARE READY TO RECEIVE WORK. EXAMINE SURFACE SCHEDULED TO BE FINISHED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY CONDITION THAT MAY POTENTIALLY AFFECT PROPER APPLICATION.
3. TEST SHOP APPLIED PRIMER FOR COMPATIBILITY WITH SUBSEQUENT COVER MATERIALS.
4. PERFORM PREPARATION AND CLEANING PROCEDURE IN STRICT ACCORDANCE WITH COATING MANUFACTURER'S INSTRUCTIONS FOR EACH SUBSTRATE CONDITION.
5. CORRECT DEFECTS AND CLEAN SURFACES WHICH AFFECT WORK OF THIS SECTION. REMOVE EXISTING COATINGS THAT EXHIBIT LOOSE SURFACE DEFECTS.
6. IMPERVIOUS SURFACE: REMOVE MILDEW BY SCRUBBING WITH SOLUTION OF TRI-SODIUM PHOSPHATE AND BLEACH. RINSE WITH CLEAN WATER AND ALLOW SURFACE TO DRY.
7. ALUMINUM SURFACE SCHEDULED FOR PAINT FINISH: REMOVE SURFACE CONTAMINATION BY STEAM OR HIGH-PRESSURE WATER. REMOVE OXIDATION WITH ACID ETCH AND SOLVENT WASHING. APPLY ETCHING PRIMER IMMEDIATELY FOLLOWING CLEANING.
8. FERROUS METALS: CLEAN UNGALVANIZED FERROUS METAL SURFACES THAT HAVE NOT BEEN SHOP COATED; REMOVE OIL, GREASE, DIRT, LOOSE MILL SCALE, AND OTHER FOREIGN SUBSTANCES. USE SOLVENT OR MECHANICAL CLEANING METHODS THAT COMPLY WITH THE STEEL STRUCTURES PAINTING COUNCIL'S (SSPC) RECOMMENDATIONS. TOUCH UP BARE AREAS AND SHOP APPLIED PRIME COATS THAT HAVE BEEN DAMAGED. WIRE BRUSH, CLEAN WITH SOLVENTS RECOMMENDED BY PAINT MANUFACTURER, AND TOUCH UP WITH THE SAME PRIMER AS THE SHOP COAT.
9. GALVANIZED SURFACES: CLEAN GALVANIZED SURFACES WITH NON-PETROLEUM-BASED SOLVENTS SO SURFACE IS FREE OF OIL AND SURFACE CONTAMINANTS. REMOVE PRETREATMENT FROM GALVANIZED SHEET METAL FABRICATED FROM COIL STOCK BY MECHANICAL METHODS.
10. ANTENNA PANELS: REMOVE ALL OIL, DUST, GREASE, DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION. PANELS MUST BE WIPED WITH METHYL ETHYL KETONE (MEK).
11. COAXIAL CABLES: REMOVE ALL OIL, DUST, GREASE. DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION.

CLEANING:

1. COLLECT WASTE MATERIAL, WHICH MAY CONSTITUTE A FIRE HAZARD, PLACE IN CLOSED METAL CONTAINERS AND REMOVE DAILY FROM SITE.

APPLICATION:

1. APPLY PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. DO NOT APPLY FINISHES TO SURFACES THAT ARE NOT DRY.
3. APPLY EACH COAT TO UNIFORM FINISH.
4. APPLY EACH COAT OF PAINT SLIGHTLY DARKER THAN PRECEDING COAT UNLESS OTHERWISE APPROVED.
5. SAND METAL LIGHTLY BETWEEN COATS TO ACHIEVE REQUIRED FINISH.
6. VACUUM CLEAN SURFACES FREE OF LOOSE PARTICLES. USE TACK CLOTH JUST PRIOR TO APPLYING NEXT COAT.
7. ALLOW APPLIED COAT TO DRY BEFORE NEXT COAT IS APPLIED.

COMPLETED WORK:

1. SAMPLES: PREPARE 24" X 24" SAMPLE AREA FOR REVIEW.
2. MATCH APPROVED SAMPLES FOR COLOR, TEXTURE AND COVERAGE. REMOVE REFINISH OR REPAINT WORK NOT IN COMPLIANCE WITH SPECIFIED REQUIREMENTS.

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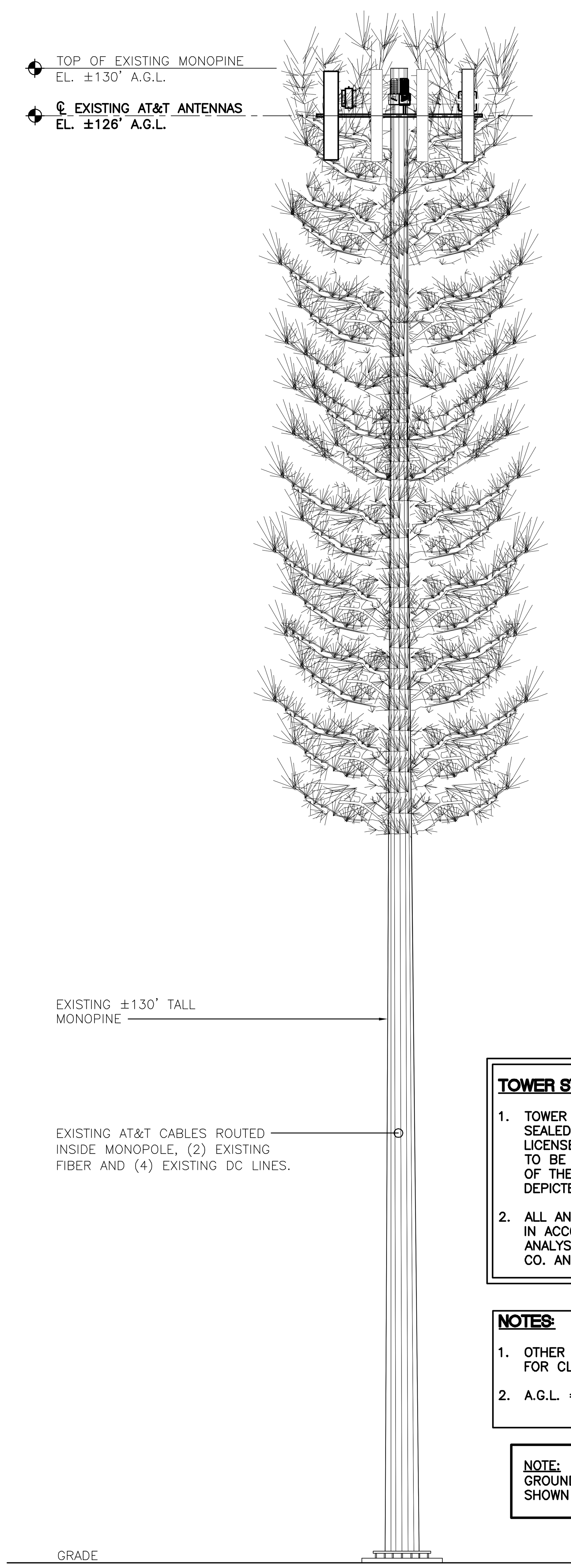
NOTES, SPECIFICATIONS AND DETAILS

N-1



TOWER STRUCTURAL NOTES:

1. TOWER STRUCTURAL ANALYSIS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT TO BE PROVIDED PRIOR TO INSTALLATION OF THE ADDITIONAL TOWER LOADING DEPICTED HEREIN.
2. ALL ANTENNAS AND COAX TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER CO. AND FINAL AT&T RF DATA SHEET.

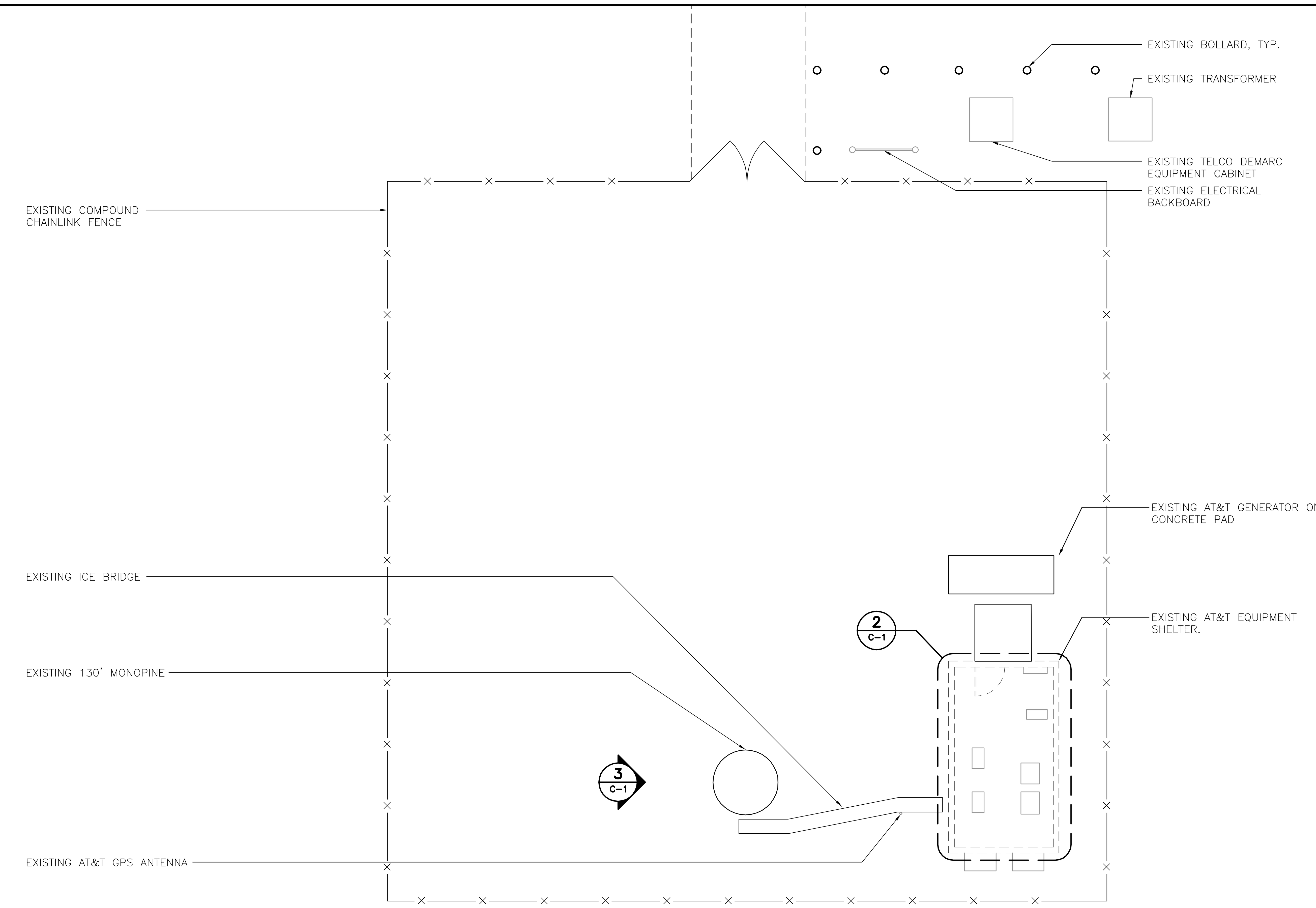
NOTES:

1. OTHER CARRIER EQUIPMENT NOT SHOWN FOR CLARITY
2. A.G.L. = ABOVE GRADE LEVEL

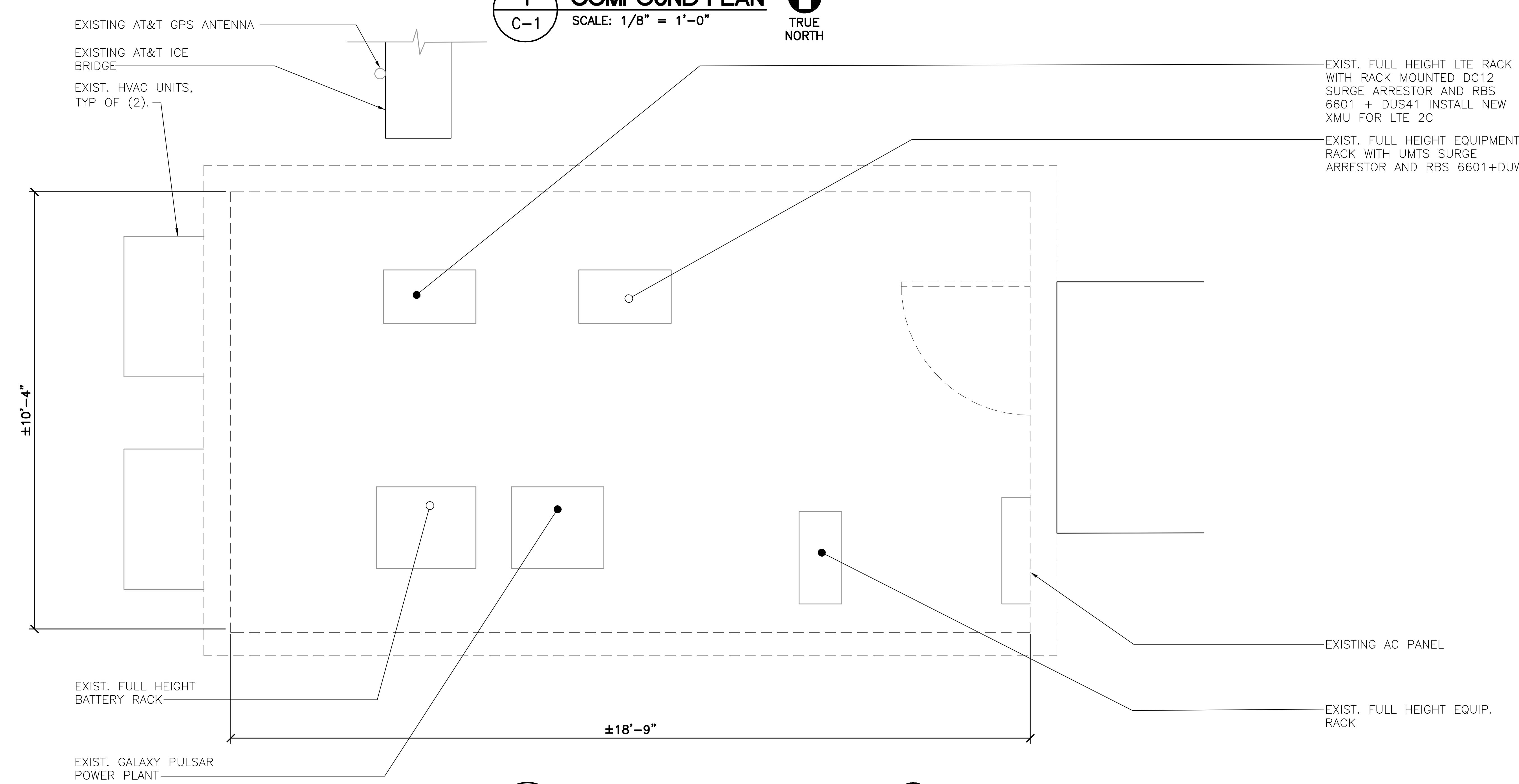
NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY.

3 / C-1 **TOWER ELEVATION**
SCALE: 1/8" = 1'-0"

GRAPHIC SCALE
8 0 4 8 16 32
(IN FEET)
1 inch = 8 ft.



1 / C-1 **COMPOUND PLAN**
SCALE: 1/8" = 1'-0"
TRUE NORTH



2 / C-1 **EQUIPMENT LAYOUT PLAN**
SCALE: 1/2" = 1'-0"
TRUE NORTH

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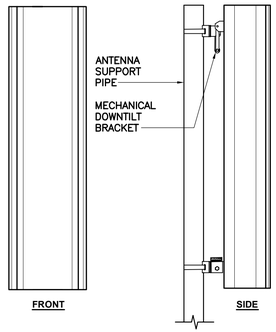
PLANS AND ELEVATION

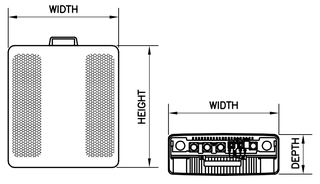
C-1

Sheet No. 3 of 7



ALPHA/BETA/GAMMA ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: CCI MODEL: HPA-65R-BUU-H8	92.4"L x 14.8"W x 7.4"D	68 LBS.

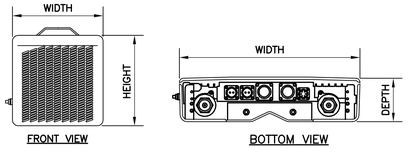
5 C-2 PROPOSED ANTENNA DETAIL
SCALE: 1/2" = 1'-0"



RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS 12	20.4"L x 18.5"W x 7.5"D	50 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.

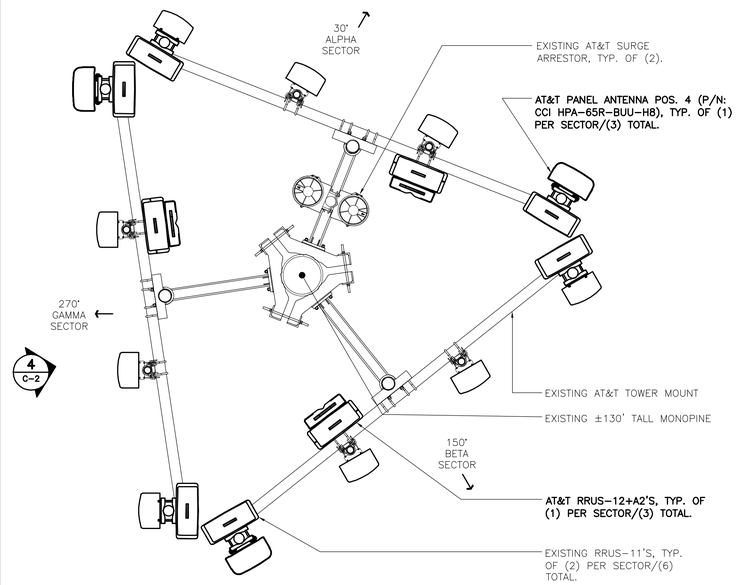
6 C-2 ERICSSON RRUS 12 DETAIL
SCALE: 1" = 1'-0"



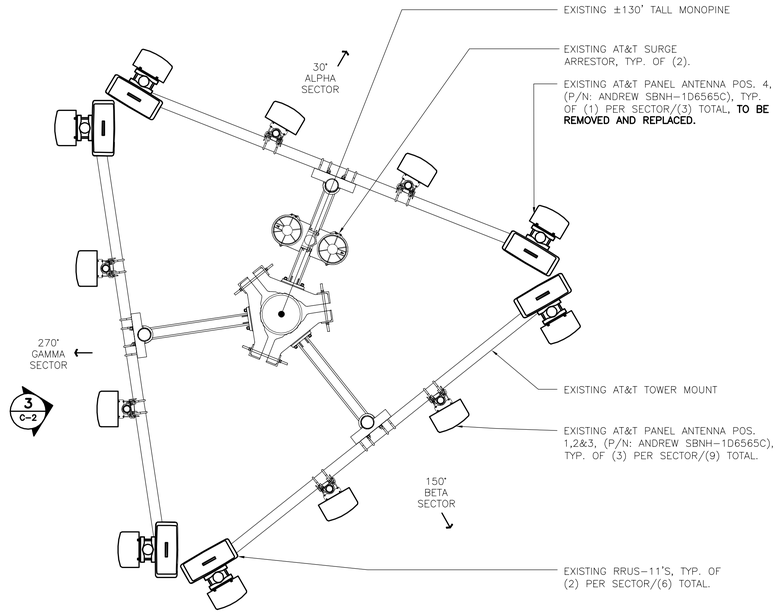
RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS A2	16.42"L x 15.19"W x 3.35"D	22.05 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.

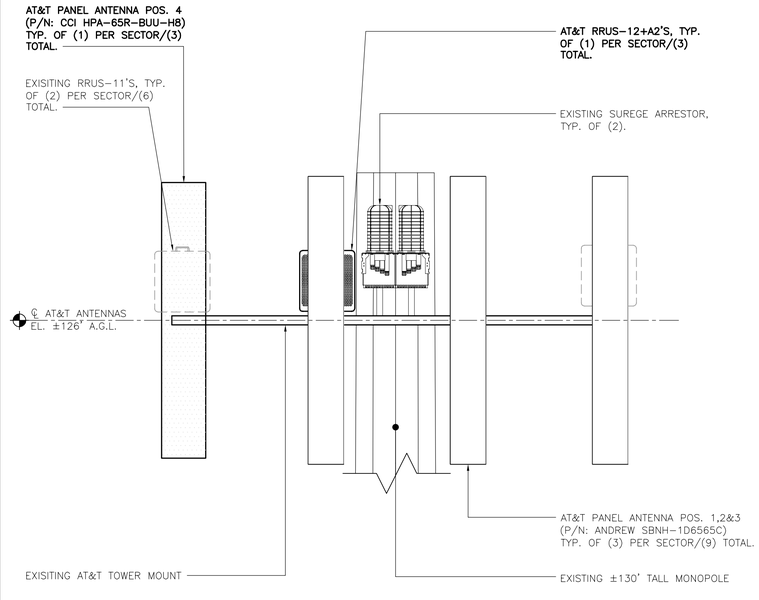
7 C-2 ERICSSON RRUS A2 DETAIL
SCALE: 1" = 1'-0"



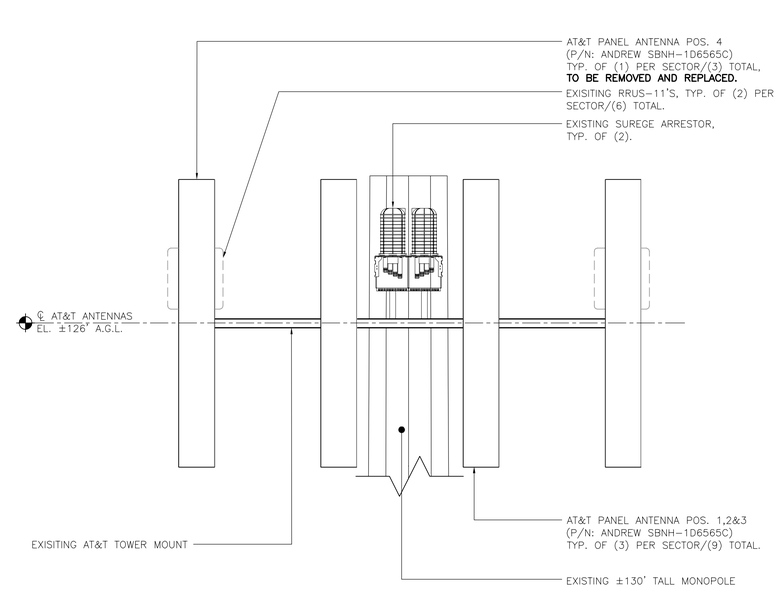
2 C-2 PROPOSED ANTENNA PLAN
SCALE: 1/2" = 1'-0" NORTH



1 C-2 EXISTING ANTENNA PLAN
SCALE: 1/2" = 1'-0" NORTH



4 C-2 PROPOSED ANTENNA ELEVATION
SCALE: 1/2" = 1'-0"



3 C-2 EXISTING ANTENNA ELEVATION
SCALE: 1/2" = 1'-0"

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LTE 2C EQUIPMENT DETAILS

C-2

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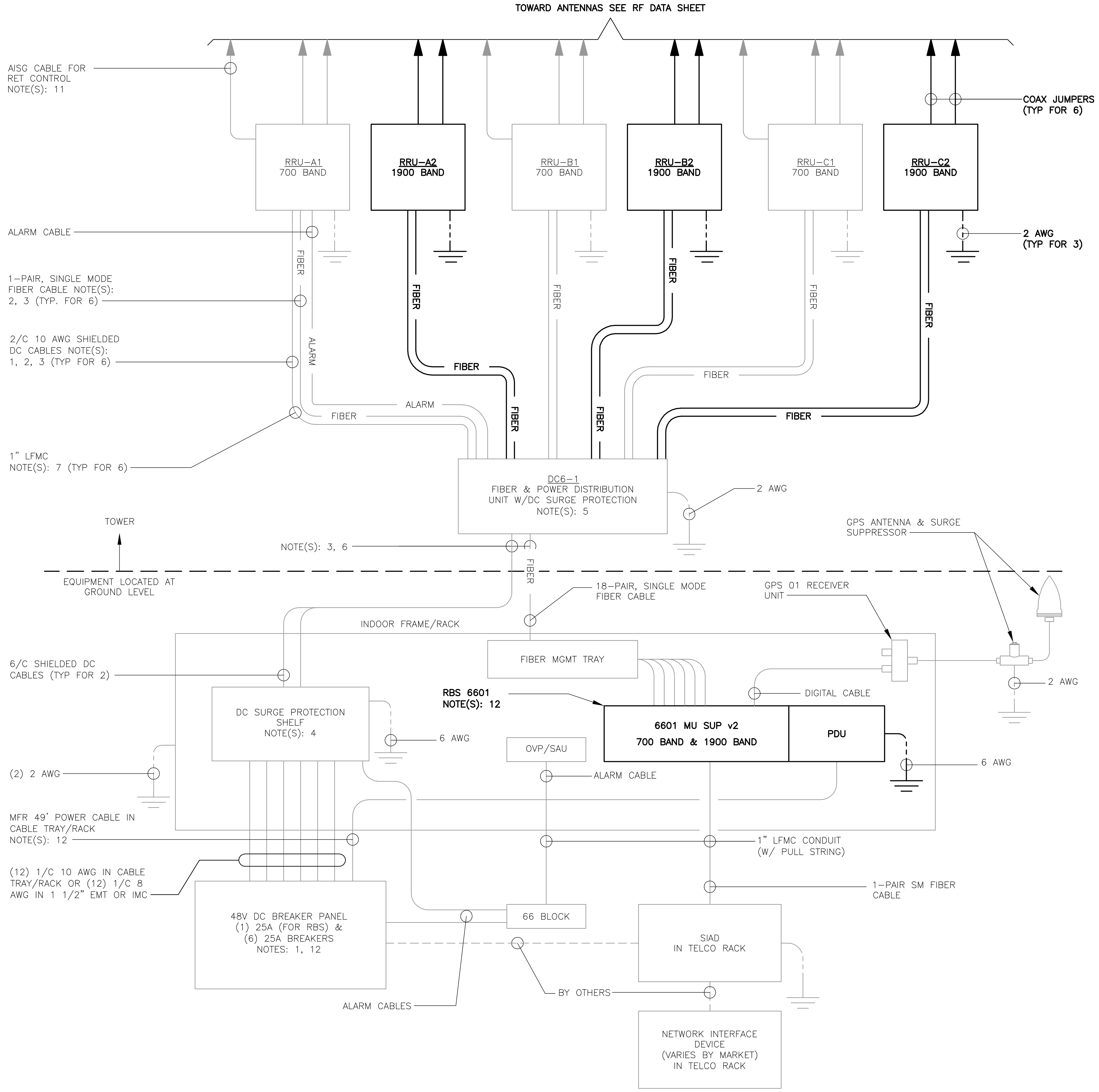

1 / E-1 LTE SCHEMATIC DIAGRAM

NOT TO SCALE

LTE SCHEMATIC DIAGRAM NOTES:

1. BREAKERS TO BE TAGGED AND LOCKED OUT. A 20A (MIN.) OR 30A (MAX.) BREAKER FOR RRUs MAY BE SUBSTITUTED FOR THE RECOMMENDED 25A BREAKER. SIZE 12 CONDUCTORS MAY BE USED ONLY WITH 20A BREAKERS.
2. LEAVE COILED AND PROTECTED UNTIL TERMINATED.
3. DC AND FIBER CABLE SHALL BE ROUTED WITH THE EXISTING COAX CABLE.
4. DC SURGE PROTECTION SHELF SHALL BE RAYCAP DCx-48-60-RM.
5. FIBER & DC DISTRIBUTION BOX W/DC SURGE PROTECTION SHALL BE RAYCAP DC6-48-60-18-8F.
6. SUPPORT FIBER & DC POWER CABLES WITH SNAP-IN HANGERS SPACED NO GREATER THAN 3 FEET APART ON TOWER. SUPPORT FIBER AND DC POWER CABLES INSIDE MONOPOLE WITH CABLE HOISTING GRIPS AT 250 FT MAXIMUM INTERVALS. DRESS CABLES TO PREVENT CONTACT WITH ENTRANCE AND EXIT OPENINGS.
7. CONDUIT TO BE USED ON A TOWER IF THE RRU IS MORE THAN 10' FROM THE DISTRIBUTION UNITS. MAX CABLE LENGTH IS 16 FEET.
8. SINGLE-CONDUCTOR DC POWER CABLES SHALL BE TELCOFLEX® OR KS24194™, COPPER, UL LISTED RHH NON-HALOGEN, LOW SMOKE WITH BRAIDED COVER, TYPE TC (1/0 AND LARGER). UNLESS OTHERWISE NOTED, STRANDING SHALL BE CLASS B (TYPE III) FOR CABLES SIZES 14, 12 & 10 AWG AND CLASS I (TYPE IV) FOR SIZES 8 AWG AND LARGER. CABLES SHALL BE COLOR CODED RED FOR +24V, BLUE FOR -48V AND GRAY FOR 24V AND 48V RETURN CONDUCTORS. MULTI-CONDUCTOR DC POWER CABLES SHALL BE COPPER, CLASS B STRANDING WITH FLAME RETARDANT PVC JACKET, TYPE TC, UL LISTED FOR 90°C DRY/ 75°C WET INSTALLATION.
9. GROUNDING WIRES SHALL BE COPPER, GREEN THHN/THWN UL LISTED FOR 90°C DRY/75°C WET INSTALLATION. MINIMUM SIZE IS 6 AWG UNLESS NOTED OTHERWISE.
10. FIBER OPTIC CABLES SHALL BE INSTALLED IN FLEXIBLE CONDUIT AS SCOPED BY MARKET.
11. RET CONTROL FROM THE RRU IS AN OPTIONAL METHOD OF CONNECTION. REFER TO RF DATA SHEET FOR APPLICABILITY.
12. RBS 6601 VARIANT 2 REQUIRES A 25A BREAKER AND 10 AWG (MIN.) CONDUCTORS. REPLACE EXISTING 15A OR 20A BREAKERS AND 12 AWG CONDUCTORS WHEN UPGRADING AN EXISTING RBS 6601 VARIANT 1.

ELECTRICAL NOTES

1. PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND ALL MANUFACTURER DOCUMENTATION FOR ALL EQUIPMENT TO BE INSTALLED.
2. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
3. CONNECT ALL NEW EQUIPMENT TO EXISTING TELCO AS REQUIRED BY MANUFACTURER.
4. MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
5. PRIOR TO INSTALLATION CONTRACTOR SHALL MEASURE EXISTING ELECTRICAL LOAD AND VERIFY EXISTING AVAILABLE CAPACITY FOR PROPOSED INSTALLATION. IF INADEQUATE CAPACITY IS AVAILABLE, CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRIC UTILITY COMPANY TO UPGRADE EXISTING ELECTRIC SERVICE.
6. CONTRACTOR SHALL INSPECT EXISTING GROUNDING AND LIGHTNING PROTECTION SYSTEM AND ENSURE THAT IT IS IN COMPLIANCE WITH NEC, AND SITE OWNER'S SPECIFICATIONS. THE RESULTS OF THIS INSPECTION SHALL BE PRESENTED TO OWNERS REPRESENTATIVE, AND ANY DEFICIENCIES SHALL BE CORRECTED.
7. ALL TRANSMISSION TOWER SITES CONTAIN AN EXTENSIVE BURIED GROUNDING SYSTEM. ALL GROUNDING WORK MUST BE COORDINATED WITH, AND APPROVED BY, THE TOWER OWNER'S SITE REPRESENTATIVE. ALL OF THE TOWER OWNER'S SPECIFICATIONS MUST BE STRICTLY FOLLOWED.
8. PROVIDE AND INSTALL GROUND KITS FOR ALL NEW COAXIAL CABLES AND BOND TO EXISTING OWNERS GROUNDING SYSTEM PER OWNERS SPECIFICATIONS AND NEC.
9. ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS. #8 AWG AND LARGER SHALL BE SPLICED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS, #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZE(S). CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION:
10. MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
11. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
12. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNER'S REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AS MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS AS MAY BE REQUIRED BY THE LOCAL AUTHORITY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE AND/OR BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
15. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
16. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.
17. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
18. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
19. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122. (MIN. #12 AWG).
20. CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 5 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16960).

TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM

A. CONTRACTOR SHALL RETAIN THE SERVICES OF A LOCAL INDEPENDENT ELECTRICAL TESTING FIRM (WITH MINIMUM 5 YEARS COMMERCIAL EXPERIENCE IN THE ELECTRICAL TESTING INDUSTRY) AS SPECIFIED BY OWNER TO PERFORM:

   TEST 1: RESISTANCE TO GROUND TEST ON THE CELLULAR GROUNDING SYSTEM.

   THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:

   1. TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
   2. CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
   3. GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.

B. TESTING SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF OWNERS CONSTRUCTION REPRESENTATIVE. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.

C. THE CONTRACTOR SHALL FORWARD SIX (6) COPIES OF THE INDEPENDENT ELECTRICAL TESTING FIRM REPORT/ANALYSIS TO ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE JOB TURNOVER.

D. CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

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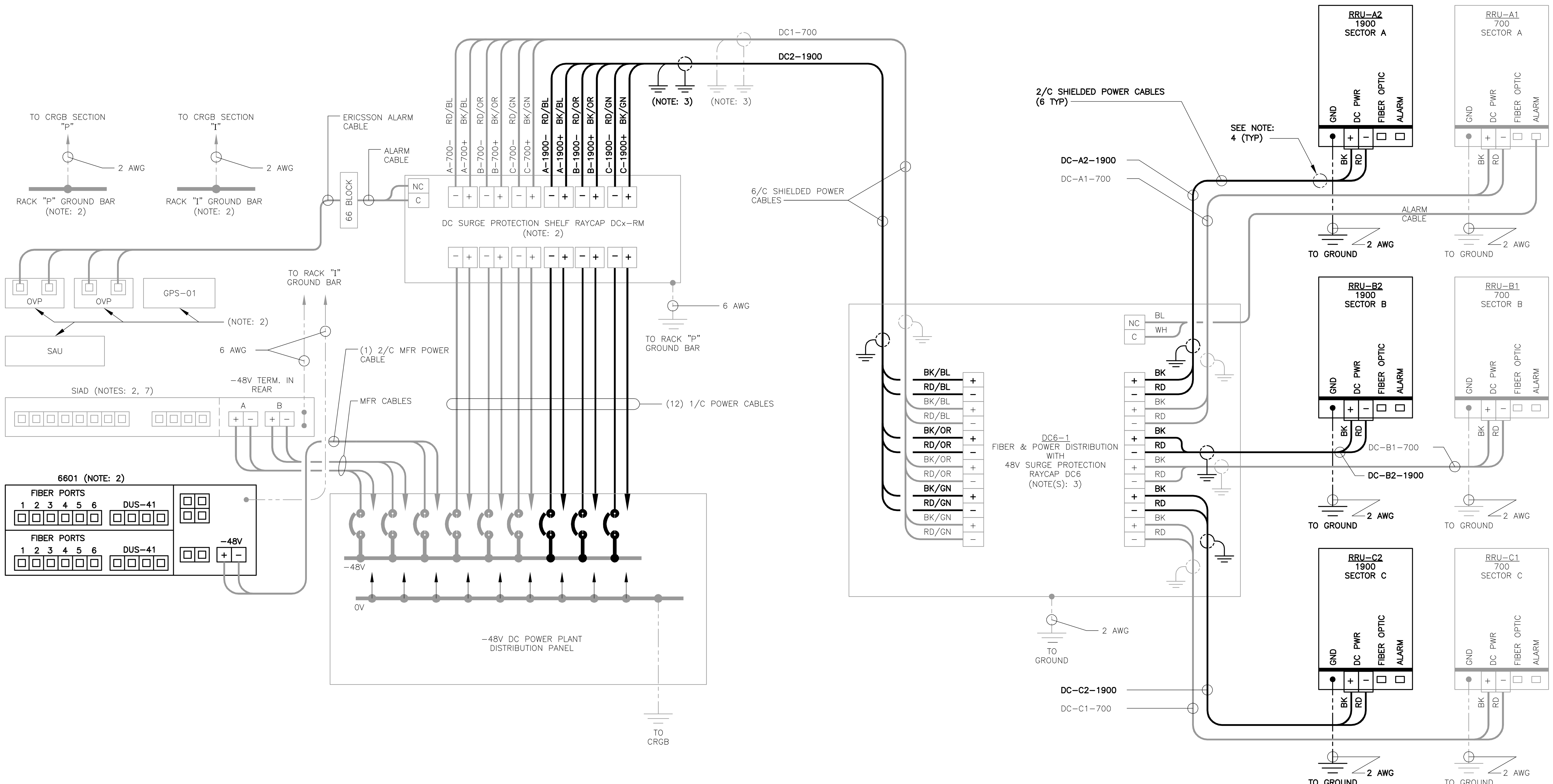
LTE SCHEMATIC DIAGRAM AND NOTES

E-1



LTE WIRING DIAGRAM

1 / E-2

NOT TO SCALE

LTE WIRING DIAGRAM NOTES:

1. LABEL THE DC POWER CABLES AT BOTH ENDS OF EVERY WIRE AND IN ANY PULL BOX IF USED. LABEL SHALL BE DURABLE, SELF ADHESIVE, WRAPPED LONGITUDINALLY ALONG THE CABLE AND STATE THE SECTOR, FREQUENCY BAND AND POLARITY; I.E. "A–1900+". CABLE AND WIRE LABELS SHOWN ARE REPRESENTATIVE AND MAY BE MODIFIED AS DIRECTED BY AT&T.
2. INSTALL ON BASEBAND EQUIPMENT RACK.
3. THE BARE GROUND WIRE OF EACH MULTI–CONDUCTOR CABLE SHALL BE CONNECTED TO THE "P" GROUND BAR ON THE RACK. WHEN A SHIELDED CABLE IS USED, THE DRAIN WIRE ALSO SHALL BE CONNECTED TO THE "P" GROUND BAR.
4. CABLE GROUND WIRE AND SHIELD DRAIN WIRE TO BE LEFT UN–TERMINATED AT RRU AND DC POWER PLANT.
5. SEE LTE SCHEMATIC DIAGRAM DETAIL 1/E–1 FOR BREAKER RATING.

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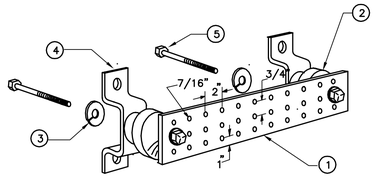
LTE WIRING DIAGRAM

E–2

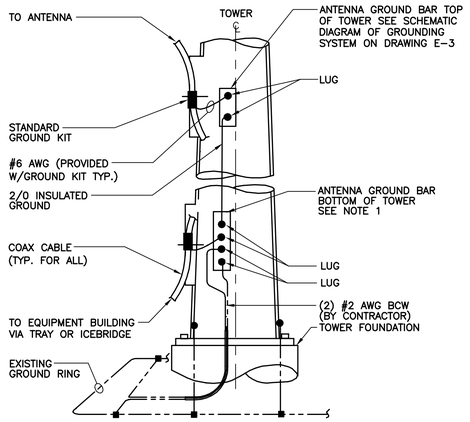
Sheet No. 6 of 7



LEGEND

1. TINNED COPPER GROUND BAR, 1/4"x 4"x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG .
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 2. 3061–4.
3. 3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015–8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. 4. CAT NO. A–6056.
5. STAINLESS STEEL SECURITY SCREWS.

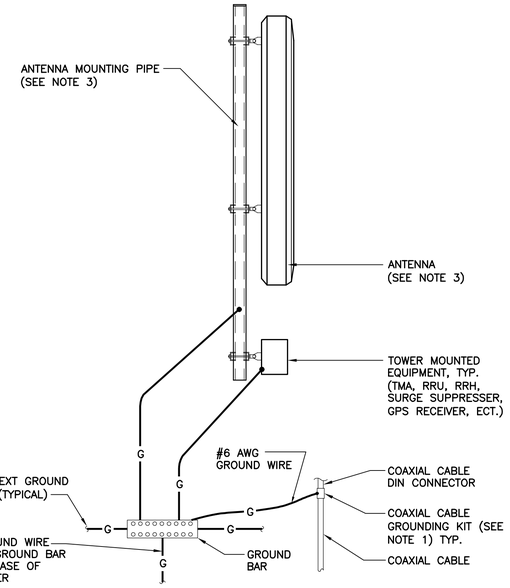
3 E-3 **GROUND BAR DETAIL**
NOT TO SCALE



NOTES:

1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

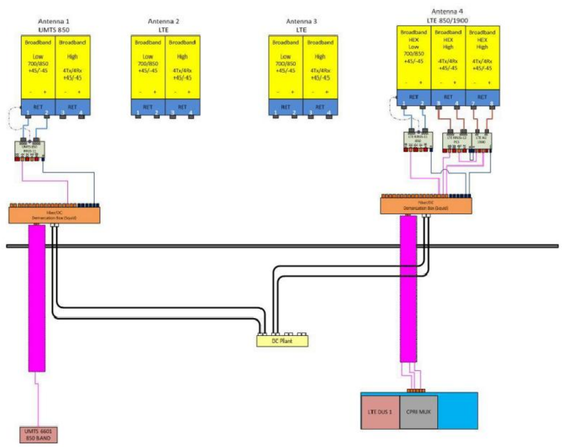
2 E-3 **ANTENNA CABLE GROUNDING - TOWER**
NOT TO SCALE



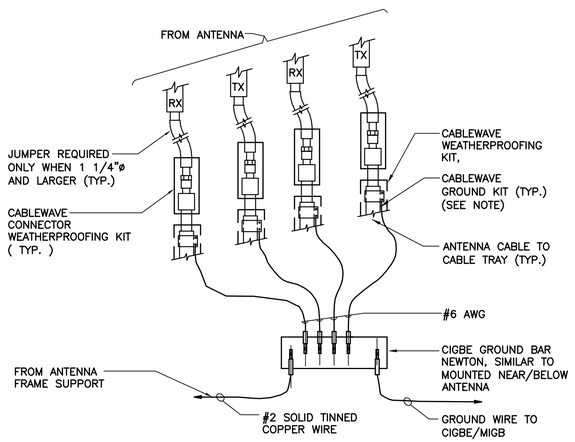
NOTES:

1. BOND COAXIAL CABLE GROUND KITS TO EACH OWNER'S GROUND BAR ALONG ENTIRE COAX RUN FROM ANTENNA TO SHELTER.
2. BOND ALL EQUIPMENT TO GROUND PER NEC AND MANUFACTURERS SPECIFICATIONS.
3. DETAIL IS TYPICAL FOR ALL ANTENNA SECTORS, INCLUDING GPS ANTENNA.

1 E-3 **TYPICAL ANTENNA GROUNDING DETAIL**
NOT TO SCALE



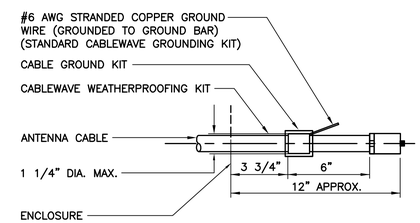
6 E-3 **RF PLUMBING DIAGRAM**
NOT TO SCALE



NOTE:

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

5 E-3 **CONNECTION OF GROUND WIRES TO GROUND BAR**
NOT TO SCALE



NOTE:

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

4 E-3 **ANTENNA CABLE GROUNDING DETAIL**
NOT TO SCALE

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	01/17/17	LGL	CAG	CONSTRUCTION DOCUMENTS – ISSUED FOR CONSTRUCTION

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WATERTOWN
CT1835 - LTE 2C
655 BASSETT RD
WATERTOWN, CT 06795

DATE: 01/17/17
SCALE: AS NOTED
JOB NO. 17010.01

TYPICAL ELECTRICAL DETAILS

E-3

Sheet No. 7 of 7

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**129 ft Monopine**
ATC Site Name	:	**Watertown, CT**
ATC Site Number	:	**283424**
Engineering Number	:	**OAA692891_C3_01**
Proposed Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**Watertown-Bassett Road**
Carrier Site Number	:	**CT1835**
Site Location	:	**655 Bassett Road** **Watertown, CT 06795-1139** **41.657078,-73.136261**
County	:	**Litchfield**
Date	:	**January 13, 2017**
Max Usage	:	**92%**
Result	:	**Pass**

Prepared By:
Nupur Khadilkar
Engineer Intern

Nupur S. Khadilkar

Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 129 ft monopine to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	Larson Camouflage Job #611200, dated September 19, 2002
Foundation Drawing	Larson Camouflage Job #611200, dated September 19, 2002
Geotechnical Report	Berkshire Geo-Technologies, dated July 16, 2012

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/TIA-222.

Basic Wind Speed:	93 mph (3-Second Gust, Vasd) / 120 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	C
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.19, S_1 = 0.06
Site Class:	D - Stiff Soil

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

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
126.0	126.0	3	Raycap DC2-48-60-8-18F-02	T-Arms	(6) 0.78" 8 AWG 6 (3) 0.45" Fiber	AT&T Mobility
		2	Ericsson RRUS 11 (Band 12) (55 lb)			
		9	Commscope SBNH-1D6565C			

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
126.0	126.0	3	Commscope SBNH-16565C	–	(1) 1/2" Fiber	AT&T Mobility

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
126.0	126.0	3	Ericsson RRUS A2 Module (15.1"Height)	T-Arms	(3) 3/8" (0.38") RET Control Cable	AT&T Mobility
		10	Ericsson RRUS 11 (Band 12) (55 lb)			
		3	Ericsson RRUS-12 B2			
		3	CCI HPA-65R-BUU-H8			

[1]Mount 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 inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	69%	Pass
Shaft	92%	Pass
Base Plate	43%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	3,735.0	3,735.0	3,148.5	84%
Shear (Kips)	38.9	38.9	31.8	82%

*** The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1**

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.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
126.0	Ericsson RRUS A2 Module (15.1"Height)	AT&T Mobility	1.636	1.442
	Ericsson RRUS 11 (Band 12) (55 lb)			
	Ericsson RRUS-12 B2			
	CCI HPA-65R-BUU-H8			

***Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

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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:

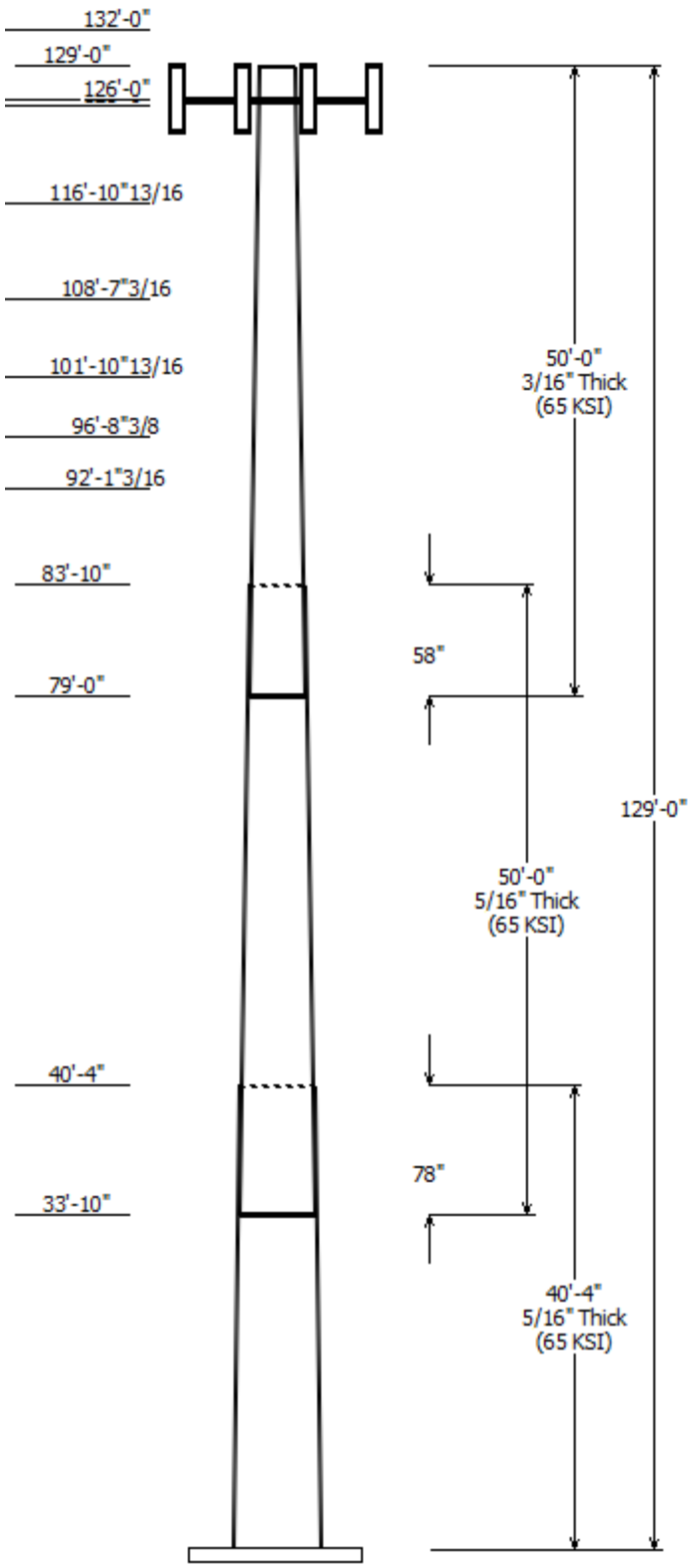
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- 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 A.T. Engineering Service, PLLC 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. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information

Pole :	283424	Code:	ANSI/TIA-222-G
Description :			
Client :	Verizon Wireless	Struct Class :	II
Location :	Watertown, CT		
Shape :	18 Sides	Exposure :	C
Height :	129.00 (ft)	Topo :	1
Base Elev (ft):	0.00		
Taper:	0.280000 (in/ft)		

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	40.333	44.82	56.12	0.313		0.000	0.280000	65
2	50.000	33.27	47.27	0.313	Slip Joint	78.000	0.280000	65
3	50.000	21.00	35.00	0.188	Slip Joint	58.000	0.280000	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
132.000	132.000	1	Top Hat
126.000	126.000	10	Ericsson RRUS 11 (Band 12) (55
126.000	126.000	3	CCI HPA-65R-BUU-H8
126.000	126.000	9	Commscope SBNH-1D6565C
126.000	126.000	2	Ericsson RRUS 11 (Band 12) (55
126.000	126.000	3	Ericsson RRUS-12 B2
126.000	126.000	3	Raycap DC2-48-60-8-18F-02
126.000	126.000	3	Ericsson RRUS A2 Module
126.000	126.000	3	Round T-Arm
125.500	125.500	26	4' Pine Tree Branches
116.900	116.900	24	6' Pine Tree Branches
108.600	108.600	24	6' Pine Tree Branches
101.900	101.900	15	8' Pine Tree Branches
96.700	96.700	15	8' Pine Tree Branches
92.100	92.100	12	10' Pine Tree Branches

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	126.0	0.45" (11.5mm)	No
0.000	126.0	0.78" (19.7mm) 8	No
0.000	126.0	3/8" (0.38",	No

Load Cases

1.2D + 1.6W	93 mph with No Ice
0.9D + 1.6W	93 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

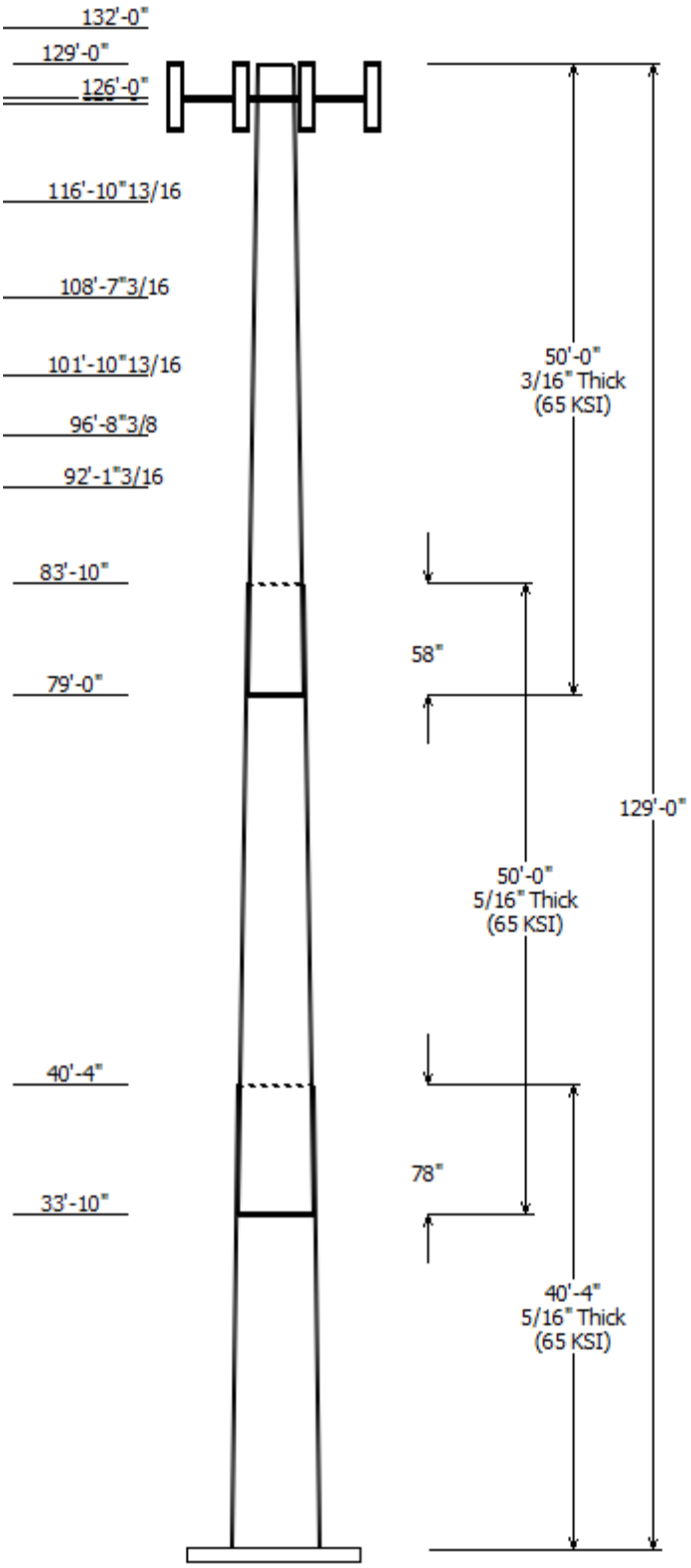
Reactions

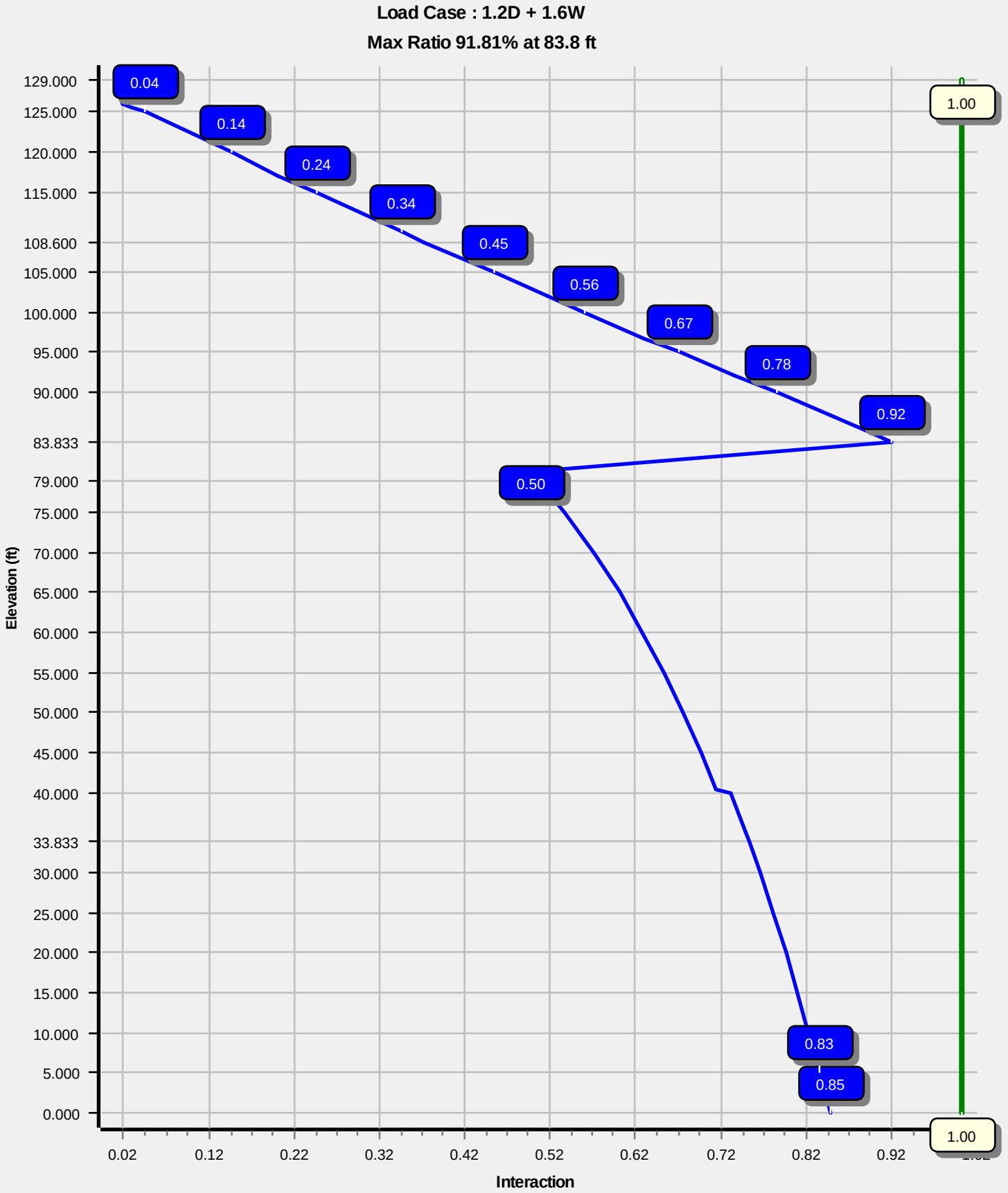
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	3148.55	31.78	36.52
0.9D + 1.6W	3119.89	31.76	27.38
1.2D + 1.0Di + 1.0Wi	505.88	5.29	60.06

(1.2 + 0.2Sds) * DL + E ELFM	140.85	1.32	35.74
(1.2 + 0.2Sds) * DL + E EMAM	236.46	2.15	35.74
(0.9 - 0.2Sds) * DL + E ELFM	139.35	1.32	24.78
(0.9 - 0.2Sds) * DL + E EMAM	233.73	2.15	24.78
1.0D + 1.0W	815.05	8.26	30.48

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000




Load Case : 1.2D + 1.6W
Max Ratio 91.81% at 83.8 ft
Elevation (ft)
129.000
125.000
120.000
115.000
108.600
105.000
100.000
95.000
90.000
83.833
79.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
33.833
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction
0.04
0.14
0.24
0.34
0.45
0.56
0.67
0.78
0.92
0.50
0.83
0.85
1.00
1.00

Site Number:	**283424**	**Code: ANSI/TIA-222-G**	
Site Name:	**Watertown, CT**	**Engineering Number:OAA692891_C3_01**	**1/13/2017 1:47:17 PM**
Customer:	**Verizon Wireless**		

Analysis Parameters

Location:	**Litchfield County, CT**		
Code:	**ANSI/TIA-222-G**	**Height (ft):**	**129**
Shape:	**18 Sides**	**Base Diameter (in):**	**56.12**
Pole Type:	**Taper**	**Top Diameter (in):**	**21.00**
Pole Manfacturer:		**Taper (in/ft) :**	**0.280**

Ice & Wind Parameters

Structure Class:	**II**	**Design Wind Speed Without Ice:**	**93 mph**
Exposure Category:	**C**	**Design Wind Speed With Ice:**	**40 mph**
Topographic Category:	**1**	**Operational Wind Speed:**	**60 mph**
Crest Height:	**0.0 ft**	**Design Ice Thickness:**	**0.75 in**

Seismic Parameters

Analysis Method:	**Equivalent Modal Analysis & Equivalent Lateral Force Methods**				
Site Class:	**D - Stiff Soil**				
Period Based on Rayleigh Method (sec):	**1.98**				
T_L (sec):	**6**	**p:**	**1.3**	**C_s:**	**0.035**
S_s:	**0.188**	**S_1:**	**0.065**	**C_s Max:**	**0.035**
F_a:	**1.600**	**F_v:**	**2.400**	**C_s Min:**	**0.030**
S_{ds}:	**0.201**	**S_{d1}:**	**0.104**		

Load Cases

1.2D + 1.6W	**93 mph with No Ice**
0.9D + 1.6W	**93 mph with No Ice (Reduced DL)**
1.2D + 1.0Di + 1.0Wi	**40 mph with 0.75 in Radial Ice**
(1.2 + 0.2Sds) * DL + E ELFM	**Seismic Equivalent Lateral Forces Method**
(1.2 + 0.2Sds) * DL + E EMAM	**Seismic Equivalent Modal Analysis Method**
(0.9 - 0.2Sds) * DL + E ELFM	**Seismic (Reduced DL) Equivalent Lateral Forces Method**
(0.9 - 0.2Sds) * DL + E EMAM	**Seismic (Reduced DL) Equivalent Modal Analysis Method**
1.0D + 1.0W	**Serviceability 60 mph**

Site Number: 283424 **Code:** ANSI/TIA-222-G

Site Name: Watertown, CT **Engineering Number:**OAA692891_C3_01 **1/13/2017 1:47:17 PM**

Customer: Verizon Wireless

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	40.333	0.3125	65		0.00	6,828	56.12	0.00	55.35	21780.7	30.25	179.58	44.82	40.33	44.15	11053.2	23.88	143.45	0.280000
2-18	50.000	0.3125	65	Slip	78.00	6,743	47.27	33.83	46.58	12976.4	25.26	151.27	33.27	83.83	32.69	4486.7	17.36	106.47	0.280000
3-18	50.000	0.1875	65	Slip	58.00	2,816	35.00	79.00	20.72	3172.1	31.50	186.67	21.00	129.00	12.39	677.8	18.34	112.00	0.280000
				Shaft Weight		16,387													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
132.00	Top Hat	1	711.30	19.800	1.00	760.15	21.160	1.00	0.000	0.000
126.00	CCI HPA-65R-BUU-H8	3	68.00	12.980	0.67	320.98	16.506	0.67	0.000	0.000
126.00	Commscope SBNH-1D6565C	9	60.80	11.450	0.70	286.70	14.639	0.70	0.000	0.000
126.00	Ericsson RRUS 11 (Band 12)	2	55.00	2.520	0.50	121.24	3.543	0.50	0.000	0.000
126.00	Ericsson RRUS 11 (Band 12)	10	55.00	2.520	0.50	121.24	3.543	0.50	0.000	0.000
126.00	Ericsson RRUS A2 Module	3	22.00	2.060	0.50	65.32	2.986	0.50	0.000	0.000
126.00	Ericsson RRUS-12 B2	3	58.00	3.150	0.50	137.64	4.293	0.50	0.000	0.000
126.00	Raycap DC2-48-60-8-18F-02	3	14.50	2.500	0.50	76.63	3.522	0.50	0.000	0.000
126.00	Round T-Arm	3	250.00	9.700	0.67	455.77	17.816	0.67	0.000	0.000
125.50	4' Pine Tree Branches	26	60.79	1.710	1.00	64.96	1.827	1.00	0.000	0.000
116.90	6' Pine Tree Branches	24	84.85	2.430	1.00	90.62	2.595	1.00	0.000	0.000
108.60	6' Pine Tree Branches	24	84.12	2.440	1.00	89.80	2.605	1.00	0.000	0.000
101.90	8' Pine Tree Branches	15	106.96	3.150	1.00	114.14	3.361	1.00	0.000	0.000
96.70	8' Pine Tree Branches	15	106.24	3.160	1.00	113.33	3.371	1.00	0.000	0.000
92.10	10' Pine Tree Branches	12	128.39	3.860	1.00	136.92	4.116	1.00	0.000	0.000
	Totals	153	13530.50			19,038.33			Number of Loadings :	15

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	126.00	3	0.45" (11.5mm) Fiber	0.45	0.08	N	0.45	N	AT&T MOBILITY
0.00	126.00	6	0.78" (19.7mm) 8	0.78	0.59	N	0.78	N	AT&T MOBILITY
0.00	126.00	3	3/8" (0.38", 9.5mm)	0.38	0.23	N	0.38	N	AT&T MOBILITY

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.3125	56.120	55.352	21,780.7	30.25	179.58	65.8	764.4	0.0	0.0
5.00		0.3125	54.720	53.963	20,182.3	29.46	175.10	66.7	726.5	0.0	929.9
10.00		0.3125	53.320	52.575	18,664.1	28.68	170.62	67.7	689.4	0.0	906.3
15.00		0.3125	51.920	51.186	17,224.0	27.89	166.14	68.6	653.4	0.0	882.7
20.00		0.3125	50.520	49.798	15,859.9	27.10	161.66	69.5	618.3	0.0	859.1
25.00		0.3125	49.120	48.409	14,569.8	26.31	157.18	70.5	584.2	0.0	835.4
30.00		0.3125	47.720	47.021	13,351.7	25.52	152.70	71.4	551.1	0.0	811.8
33.83	Bot - Section 2	0.3125	46.647	45.956	12,465.2	24.91	149.27	72.1	526.3	0.0	606.4
35.00		0.3125	46.320	45.632	12,203.4	24.73	148.22	72.3	518.9	0.0	366.1
40.00		0.3125	44.920	44.243	11,122.9	23.94	143.74	73.2	487.7	0.0	1,539.7
40.33	Top - Section 1	0.3125	45.452	44.771	11,525.4	24.24	145.45	72.9	499.4	0.0	101.0
45.00		0.3125	44.145	43.475	10,553.2	23.50	141.26	73.8	470.9	0.0	700.7
50.00		0.3125	42.745	42.086	9,573.9	22.71	136.78	74.7	441.2	0.0	727.9
55.00		0.3125	41.345	40.698	8,657.2	21.92	132.30	75.6	412.4	0.0	704.2
60.00		0.3125	39.945	39.309	7,801.0	21.13	127.82	76.6	384.7	0.0	680.6
65.00		0.3125	38.545	37.920	7,003.1	20.34	123.34	77.5	357.9	0.0	657.0
70.00		0.3125	37.145	36.532	6,261.6	19.55	118.86	78.4	332.0	0.0	633.4
75.00		0.3125	35.745	35.143	5,574.4	18.76	114.38	79.3	307.2	0.0	609.7
79.00	Bot - Section 3	0.3125	34.625	34.032	5,062.3	18.13	110.80	80.1	288.0	0.0	470.8
80.00		0.3125	34.345	33.755	4,939.4	17.97	109.90	80.3	283.3	0.0	185.5
83.83	Top - Section 2	0.1875	33.647	19.912	2,816.4	30.23	179.45	65.8	164.9	0.0	697.2
85.00		0.1875	33.320	19.717	2,734.7	29.92	177.71	66.2	161.7	0.0	78.7
90.00		0.1875	31.920	18.884	2,402.5	28.61	170.24	67.8	148.2	0.0	328.4
92.10		0.1875	31.332	18.534	2,271.4	28.05	167.10	68.4	142.8	0.0	133.7
95.00		0.1875	30.520	18.051	2,098.3	27.29	162.77	69.3	135.4	0.0	180.5
96.70		0.1875	30.044	17.768	2,001.1	26.84	160.23	69.8	131.2	0.0	103.6
100.0		0.1875	29.120	17.218	1,821.0	25.97	155.31	70.9	123.2	0.0	196.4
101.9		0.1875	28.588	16.901	1,722.4	25.47	152.47	71.4	118.7	0.0	110.3
105.0		0.1875	27.720	16.385	1,569.2	24.66	147.84	72.4	111.5	0.0	175.6
108.6		0.1875	26.712	15.785	1,403.1	23.71	142.46	73.5	103.5	0.0	197.0
110.0		0.1875	26.320	15.552	1,341.8	23.34	140.37	73.9	100.4	0.0	74.6
115.0		0.1875	24.920	14.718	1,137.5	22.02	132.91	75.5	89.9	0.0	257.5
116.9		0.1875	24.388	14.402	1,065.7	21.52	130.07	76.1	86.1	0.0	94.1
120.0		0.1875	23.520	13.885	955.1	20.71	125.44	77.0	80.0	0.0	149.2
125.0		0.1875	22.120	13.052	793.3	19.39	117.97	78.6	70.6	0.0	229.2
125.5		0.1875	21.980	12.969	778.2	19.26	117.23	78.7	69.7	0.0	22.1
126.0		0.1875	21.840	12.885	763.3	19.13	116.48	78.9	68.8	0.0	22.0
129.0		0.1875	21.000	12.386	677.8	18.34	112.00	79.8	63.6	0.0	129.0
											16,387.3

Site Number: 283424 **Code:** ANSI/TIA-222-G

Site Name: Watertown, CT **Engineering Number:**OAA692891_C3_01 **1/13/2017 1:47:17 PM**

Customer: Verizon Wireless

Load Case: 1.2D + 1.6W 93 mph with No Ice 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		239.8	0.0					0.0	0.0	239.8	0.0	0.0	0.0
5.00		473.5	1,115.9					0.0	26.8	473.5	1,142.7	0.0	0.0
10.00		461.4	1,087.6					0.0	26.8	461.4	1,114.4	0.0	0.0
15.00		456.3	1,059.2					0.0	26.8	456.3	1,086.0	0.0	0.0
20.00		463.1	1,030.9					0.0	26.8	463.1	1,057.7	0.0	0.0
25.00		472.2	1,002.5					0.0	26.8	472.2	1,029.3	0.0	0.0
30.00		421.0	974.2					0.0	26.8	421.0	1,001.0	0.0	0.0
33.83	Bot - Section 2	239.8	727.7					0.0	20.6	239.8	748.2	0.0	0.0
35.00		298.9	439.3					0.0	6.3	298.9	445.5	0.0	0.0
40.00		258.5	1,847.6					0.0	26.8	258.5	1,874.4	0.0	0.0
40.33	Top - Section 1	241.3	121.2					0.0	1.8	241.3	122.9	0.0	0.0
45.00		464.5	840.8					0.0	25.0	464.5	865.8	0.0	0.0
50.00		475.8	873.4					0.0	26.8	475.8	900.3	0.0	0.0
55.00		469.6	845.1					0.0	26.8	469.6	871.9	0.0	0.0
60.00		462.1	816.7					0.0	26.8	462.1	843.6	0.0	0.0
65.00		453.5	788.4					0.0	26.8	453.5	815.2	0.0	0.0
70.00		443.9	760.0					0.0	26.8	443.9	786.9	0.0	0.0
75.00		391.1	731.7					0.0	26.8	391.1	758.5	0.0	0.0
79.00	Bot - Section 3	214.4	564.9					0.0	21.5	214.4	586.4	0.0	0.0
80.00		204.7	222.7					0.0	5.4	204.7	228.0	0.0	0.0
83.83	Top - Section 2	210.5	836.7					0.0	20.6	210.5	857.3	0.0	0.0
85.00		252.9	94.4					0.0	6.3	252.9	100.7	0.0	0.0
90.00		288.2	394.1					0.0	26.8	288.2	420.9	0.0	0.0
92.10		197.9	160.4					0.0	11.3	197.9	171.7	0.0	0.0
95.00		179.7	216.6					0.0	15.6	179.7	232.2	0.0	0.0
96.70		191.1	124.3					0.0	9.1	191.1	133.4	0.0	0.0
100.00		196.1	235.7					0.0	17.7	196.1	253.4	0.0	0.0
101.90		184.0	132.4					0.0	10.2	184.0	142.5	0.0	0.0
105.00		241.3	210.7					0.0	16.6	241.3	227.3	0.0	0.0
108.60		176.7	236.4					0.0	19.3	176.7	255.8	0.0	0.0
110.00		217.9	89.6					0.0	7.5	217.9	97.1	0.0	0.0
115.00		231.5	309.0					0.0	26.8	231.5	335.8	0.0	0.0
116.90		161.4	113.0					0.0	10.2	161.4	123.2	0.0	0.0
120.00		252.6	179.0					0.0	16.6	252.6	195.7	0.0	0.0
125.00		168.3	275.0					0.0	26.8	168.3	301.8	0.0	0.0
125.50	Appertunance(s)	29.7	26.6	2,185.2	0.0	0.0	1,896.6	0.0	2.7	2,214.9	1,925.9	0.0	0.0
126.00	Appertunance(s)	102.0	26.4	5,634.7	0.0	0.0	2,933.6	0.0	2.7	5,736.7	2,962.7	0.0	0.0
129.00		87.1	154.8					0.0	0.0	87.1	154.8	0.0	0.0
								Totals:		18,794.3	25,170.9	0.00	0.00

Site Number: 283424 **Code:** ANSI/TIA-222-G

Site Name: Watertown, CT **Engineering Number:**OAA692891_C3_01 **1/13/2017 1:47:17 PM**

Customer: Verizon Wireless

Load Case: 1.2D + 1.6W 93 mph with No Ice 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-36.52	-31.78	0.00	-3,148.55	0.00	3,148.55	3,278.74	1,639.37	7,535.50	3,773.35	0.00	0.00	0.846
5.00	-35.27	-31.43	0.00	-2,989.65	0.00	2,989.65	3,241.61	1,620.80	7,262.23	3,636.51	0.11	-0.20	0.833
10.00	-34.04	-31.09	0.00	-2,832.51	0.00	2,832.51	3,202.16	1,601.08	6,988.20	3,499.30	0.43	-0.41	0.820
15.00	-32.85	-30.74	0.00	-2,677.08	0.00	2,677.08	3,160.39	1,580.19	6,713.81	3,361.90	0.97	-0.62	0.807
20.00	-31.68	-30.39	0.00	-2,523.38	0.00	2,523.38	3,116.29	1,558.15	6,439.47	3,224.52	1.73	-0.83	0.793
25.00	-30.54	-30.02	0.00	-2,371.45	0.00	2,371.45	3,069.88	1,534.94	6,165.58	3,087.37	2.72	-1.05	0.778
30.00	-29.45	-29.68	0.00	-2,221.38	0.00	2,221.38	3,021.14	1,510.57	5,892.53	2,950.65	3.94	-1.27	0.763
33.83	-28.65	-29.48	0.00	-2,107.62	0.00	2,107.62	2,982.20	1,491.10	5,684.03	2,846.24	5.03	-1.45	0.750
35.00	-28.13	-29.24	0.00	-2,073.23	0.00	2,073.23	2,970.08	1,485.04	5,620.75	2,814.55	5.39	-1.51	0.746
40.00	-26.20	-28.98	0.00	-1,927.04	0.00	1,927.04	2,916.69	1,458.35	5,350.63	2,679.29	7.10	-1.74	0.729
40.33	-26.03	-28.79	0.00	-1,917.38	0.00	1,917.38	2,937.24	1,468.62	5,452.99	2,730.55	7.22	-1.76	0.711
45.00	-25.07	-28.40	0.00	-1,783.02	0.00	1,783.02	2,886.14	1,443.07	5,201.96	2,604.85	9.05	-1.98	0.694
50.00	-24.07	-27.99	0.00	-1,641.02	0.00	1,641.02	2,829.15	1,414.58	4,935.22	2,471.28	11.25	-2.21	0.673
55.00	-23.11	-27.58	0.00	-1,501.08	0.00	1,501.08	2,769.84	1,384.92	4,671.17	2,339.06	13.68	-2.44	0.650
60.00	-22.17	-27.17	0.00	-1,363.18	0.00	1,363.18	2,708.20	1,354.10	4,410.22	2,208.39	16.37	-2.68	0.626
65.00	-21.27	-26.77	0.00	-1,227.32	0.00	1,227.32	2,644.24	1,322.12	4,152.76	2,079.47	19.30	-2.91	0.599
70.00	-20.40	-26.37	0.00	-1,093.49	0.00	1,093.49	2,577.97	1,288.98	3,899.22	1,952.51	22.48	-3.15	0.568
75.00	-19.57	-26.00	0.00	-961.66	0.00	961.66	2,509.36	1,254.68	3,649.98	1,827.70	25.90	-3.38	0.534
79.00	-18.95	-25.79	0.00	-857.65	0.00	857.65	2,452.81	1,226.40	3,453.96	1,729.55	28.82	-3.57	0.504
80.00	-18.68	-25.61	0.00	-831.86	0.00	831.86	2,438.44	1,219.22	3,405.45	1,705.26	29.57	-3.62	0.496
83.83	-17.79	-25.38	0.00	-733.69	0.00	733.69	1,179.95	589.98	1,625.89	814.15	32.55	-3.79	0.918
85.00	-17.62	-25.18	0.00	-704.08	0.00	704.08	1,174.85	587.42	1,602.96	802.67	33.48	-3.84	0.894
90.00	-17.12	-24.93	0.00	-578.17	0.00	578.17	1,151.52	575.76	1,504.37	753.30	37.68	-4.18	0.784
92.10	-15.21	-22.50	0.00	-525.81	0.00	525.81	1,141.03	570.52	1,462.89	732.53	39.55	-4.31	0.733
95.00	-14.94	-22.34	0.00	-460.56	0.00	460.56	1,125.87	562.94	1,405.59	703.84	42.23	-4.49	0.669
96.70	-13.04	-19.82	0.00	-422.58	0.00	422.58	1,116.62	558.31	1,372.04	687.04	43.84	-4.59	0.628
100.00	-12.76	-19.64	0.00	-357.16	0.00	357.16	1,097.90	548.95	1,307.02	654.48	47.08	-4.78	0.559
101.90	-10.86	-17.09	0.00	-319.85	0.00	319.85	1,086.67	543.33	1,269.71	635.80	49.01	-4.88	0.514
105.00	-10.61	-16.86	0.00	-266.87	0.00	266.87	1,067.61	533.81	1,209.07	605.43	52.22	-5.03	0.452
108.60	-8.19	-13.68	0.00	-206.18	0.00	206.18	1,044.36	522.18	1,139.14	570.42	56.07	-5.18	0.370
110.00	-8.08	-13.47	0.00	-187.03	0.00	187.03	1,035.00	517.50	1,112.13	556.89	57.60	-5.24	0.344
115.00	-7.74	-13.22	0.00	-119.69	0.00	119.69	1,000.06	500.03	1,016.61	509.06	63.17	-5.40	0.244
116.90	-5.46	-10.01	0.00	-94.57	0.00	94.57	986.18	493.09	980.77	491.11	65.33	-5.45	0.199
120.00	-5.28	-9.75	0.00	-63.53	0.00	63.53	962.80	481.40	922.91	462.14	68.88	-5.52	0.143
125.00	-4.99	-9.55	0.00	-14.80	0.00	14.80	923.22	461.61	831.45	416.34	74.69	-5.58	0.041
125.50	-3.29	-7.16	0.00	-10.02	0.00	10.02	919.14	459.57	822.44	411.83	75.28	-5.58	0.028
126.00	-0.90	-1.16	0.00	-6.44	0.00	6.44	915.03	457.51	813.46	407.34	75.86	-5.58	0.017
129.00	0.00	-1.07	0.00	-2.95	0.00	2.95	889.89	444.94	760.16	380.64	79.36	-5.58	0.008

Load Case: 0.9D + 1.6W — 93 mph with No Ice (Reduced DL) — 23 Iterations

Gust Response Factor :1.10 — Wind Importance Factor :1.00
Dead Load Factor :0.90
Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		239.8	0.0					0.0	0.0	239.8	0.0	0.0	0.0
5.00		473.5	836.9					0.0	20.1	473.5	857.1	0.0	0.0
10.00		461.4	815.7					0.0	20.1	461.4	835.8	0.0	0.0
15.00		456.3	794.4					0.0	20.1	456.3	814.5	0.0	0.0
20.00		463.1	773.2					0.0	20.1	463.1	793.3	0.0	0.0
25.00		472.2	751.9					0.0	20.1	472.2	772.0	0.0	0.0
30.00		421.0	730.6					0.0	20.1	421.0	750.7	0.0	0.0
33.83	Bot - Section 2	239.8	545.8					0.0	15.4	239.8	561.2	0.0	0.0
35.00		298.9	329.5					0.0	4.7	298.9	334.1	0.0	0.0
40.00		258.5	1,385.7					0.0	20.1	258.5	1,405.8	0.0	0.0
40.33	Top - Section 1	241.3	90.9					0.0	1.3	241.3	92.2	0.0	0.0
45.00		464.5	630.6					0.0	18.8	464.5	649.4	0.0	0.0
50.00		475.8	655.1					0.0	20.1	475.8	675.2	0.0	0.0
55.00		469.6	633.8					0.0	20.1	469.6	653.9	0.0	0.0
60.00		462.1	612.6					0.0	20.1	462.1	632.7	0.0	0.0
65.00		453.5	591.3					0.0	20.1	453.5	611.4	0.0	0.0
70.00		443.9	570.0					0.0	20.1	443.9	590.1	0.0	0.0
75.00		391.1	548.8					0.0	20.1	391.1	568.9	0.0	0.0
79.00	Bot - Section 3	214.4	423.7					0.0	16.1	214.4	439.8	0.0	0.0
80.00		204.7	167.0					0.0	4.0	204.7	171.0	0.0	0.0
83.83	Top - Section 2	210.5	627.5					0.0	15.4	210.5	642.9	0.0	0.0
85.00		252.9	70.8					0.0	4.7	252.9	75.5	0.0	0.0
90.00		288.2	295.5					0.0	20.1	288.2	315.7	0.0	0.0
92.10		197.9	120.3					0.0	8.4	197.9	128.8	0.0	0.0
95.00		179.7	162.5					0.0	11.7	179.7	174.1	0.0	0.0
96.70		191.1	93.2					0.0	6.8	191.1	100.1	0.0	0.0
100.00		196.1	176.8					0.0	13.3	196.1	190.1	0.0	0.0
101.90		184.0	99.3					0.0	7.6	184.0	106.9	0.0	0.0
105.00		241.3	158.0					0.0	12.5	241.3	170.5	0.0	0.0
108.60		176.7	177.3					0.0	14.5	176.7	191.8	0.0	0.0
110.00		217.9	67.2					0.0	5.6	217.9	72.8	0.0	0.0
115.00		231.5	231.8					0.0	20.1	231.5	251.9	0.0	0.0
116.90		161.4	84.7					0.0	7.6	161.4	92.4	0.0	0.0
120.00		252.6	134.3					0.0	12.5	252.6	146.7	0.0	0.0
125.00		168.3	206.2					0.0	20.1	168.3	226.4	0.0	0.0
125.50	Appertunance(s)	29.7	19.9	2,185.2	0.0	0.0	1,422.5	0.0	2.0	2,214.9	1,444.4	0.0	0.0
126.00	Appertunance(s)	102.0	19.8	5,634.7	0.0	0.0	2,200.2	0.0	2.0	5,736.7	2,222.0	0.0	0.0
129.00		87.1	116.1					0.0	0.0	87.1	116.1	0.0	0.0
								Totals:		18,794.3	18,878.1	0.00	0.00

Site Number: 283424 **Code:** ANSI/TIA-222-G

Site Name: Watertown, CT **Engineering Number:**OAA692891_C3_01 **1/13/2017 1:47:18 PM**

Customer: Verizon Wireless

Load Case: 0.9D + 1.6W 93 mph with No Ice (Reduced DL) 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-27.38	-31.76	0.00	-3,119.89	0.00	3,119.89	3,278.74	1,639.37	7,535.50	3,773.35	0.00	0.00	0.836
5.00	-26.41	-31.38	0.00	-2,961.08	0.00	2,961.08	3,241.61	1,620.80	7,262.23	3,636.51	0.11	-0.20	0.823
10.00	-25.47	-31.01	0.00	-2,804.18	0.00	2,804.18	3,202.16	1,601.08	6,988.20	3,499.30	0.42	-0.40	0.810
15.00	-24.54	-30.63	0.00	-2,649.15	0.00	2,649.15	3,160.39	1,580.19	6,713.81	3,361.90	0.96	-0.61	0.796
20.00	-23.64	-30.25	0.00	-2,495.98	0.00	2,495.98	3,116.29	1,558.15	6,439.47	3,224.52	1.71	-0.82	0.782
25.00	-22.76	-29.85	0.00	-2,344.74	0.00	2,344.74	3,069.88	1,534.94	6,165.58	3,087.37	2.69	-1.04	0.767
30.00	-21.92	-29.49	0.00	-2,195.48	0.00	2,195.48	3,021.14	1,510.57	5,892.53	2,950.65	3.90	-1.26	0.752
33.83	-21.31	-29.28	0.00	-2,082.43	0.00	2,082.43	2,982.20	1,491.10	5,684.03	2,846.24	4.98	-1.44	0.739
35.00	-20.91	-29.03	0.00	-2,048.27	0.00	2,048.27	2,970.08	1,485.04	5,620.75	2,814.55	5.34	-1.49	0.735
40.00	-19.45	-28.77	0.00	-1,903.14	0.00	1,903.14	2,916.69	1,458.35	5,350.63	2,679.29	7.03	-1.72	0.717
40.33	-19.30	-28.57	0.00	-1,893.55	0.00	1,893.55	2,937.24	1,468.62	5,452.99	2,730.55	7.15	-1.74	0.700
45.00	-18.56	-28.15	0.00	-1,760.25	0.00	1,760.25	2,886.14	1,443.07	5,201.96	2,604.85	8.95	-1.96	0.683
50.00	-17.79	-27.73	0.00	-1,619.48	0.00	1,619.48	2,829.15	1,414.58	4,935.22	2,471.28	11.13	-2.18	0.662
55.00	-17.05	-27.30	0.00	-1,480.85	0.00	1,480.85	2,769.84	1,384.92	4,671.17	2,339.06	13.54	-2.41	0.640
60.00	-16.33	-26.88	0.00	-1,344.36	0.00	1,344.36	2,708.20	1,354.10	4,410.22	2,208.39	16.19	-2.65	0.615
65.00	-15.63	-26.46	0.00	-1,209.98	0.00	1,209.98	2,644.24	1,322.12	4,152.76	2,079.47	19.09	-2.88	0.588
70.00	-14.96	-26.04	0.00	-1,077.70	0.00	1,077.70	2,577.97	1,288.98	3,899.22	1,952.51	22.23	-3.11	0.558
75.00	-14.32	-25.67	0.00	-947.48	0.00	947.48	2,509.36	1,254.68	3,649.98	1,827.70	25.61	-3.34	0.525
79.00	-13.84	-25.46	0.00	-844.79	0.00	844.79	2,452.81	1,226.40	3,453.96	1,729.55	28.49	-3.52	0.495
80.00	-13.64	-25.27	0.00	-819.33	0.00	819.33	2,438.44	1,219.22	3,405.45	1,705.26	29.23	-3.57	0.486
83.83	-12.96	-25.04	0.00	-722.46	0.00	722.46	1,179.95	589.98	1,625.89	814.15	32.17	-3.74	0.900
85.00	-12.82	-24.83	0.00	-693.24	0.00	693.24	1,174.85	587.42	1,602.96	802.67	33.09	-3.79	0.876
90.00	-12.43	-24.57	0.00	-569.09	0.00	569.09	1,151.52	575.76	1,504.37	753.30	37.25	-4.12	0.768
92.10	-11.02	-22.17	0.00	-517.49	0.00	517.49	1,141.03	570.52	1,462.89	732.53	39.09	-4.26	0.718
95.00	-10.81	-22.00	0.00	-453.21	0.00	453.21	1,125.87	562.94	1,405.59	703.84	41.73	-4.43	0.655
96.70	-9.42	-19.51	0.00	-415.81	0.00	415.81	1,116.62	558.31	1,372.04	687.04	43.33	-4.53	0.615
100.00	-9.20	-19.33	0.00	-351.41	0.00	351.41	1,097.90	548.95	1,307.02	654.48	46.52	-4.71	0.547
101.90	-7.82	-16.82	0.00	-314.69	0.00	314.69	1,086.67	543.33	1,269.71	635.80	48.42	-4.81	0.503
105.00	-7.63	-16.58	0.00	-262.56	0.00	262.56	1,067.61	533.81	1,209.07	605.43	51.59	-4.96	0.442
108.60	-5.86	-13.46	0.00	-202.87	0.00	202.87	1,044.36	522.18	1,139.14	570.42	55.39	-5.11	0.362
110.00	-5.78	-13.25	0.00	-184.03	0.00	184.03	1,035.00	517.50	1,112.13	556.89	56.90	-5.17	0.337
115.00	-5.53	-13.00	0.00	-117.81	0.00	117.81	1,000.06	500.03	1,016.61	509.06	62.39	-5.33	0.238
116.90	-3.88	-9.85	0.00	-93.11	0.00	93.11	986.18	493.09	980.77	491.11	64.52	-5.38	0.194
120.00	-3.75	-9.59	0.00	-62.56	0.00	62.56	962.80	481.40	922.91	462.14	68.03	-5.44	0.140
125.00	-3.54	-9.40	0.00	-14.60	0.00	14.60	923.22	461.61	831.45	416.34	73.76	-5.50	0.039
125.50	-2.31	-7.06	0.00	-9.90	0.00	9.90	919.14	459.57	822.44	411.83	74.34	-5.50	0.027
126.00	-0.65	-1.14	0.00	-6.37	0.00	6.37	915.03	457.51	813.46	407.34	74.91	-5.50	0.016
129.00	0.00	-1.07	0.00	-2.95	0.00	2.95	889.89	444.94	760.16	380.64	78.37	-5.51	0.008

Site Number: 283424 Code: ANSI/TIA-222-G

Site Name: Watertown, CT Engineering Number:OAA692891_C3_01 1/13/2017 1:47:18 PM

Customer: Verizon Wireless

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph with 0.75 in Radial Ice 22 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00 Wind Importance Factor :1.00

Dead Load Factor :1.20 Ice Importance Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		53.3	0.0					0.0	0.0	53.3	0.0	0.0	0.0
5.00		105.5	1,521.6					0.0	26.8	105.5	1,548.4	0.0	0.0
10.00		103.3	1,530.1					0.0	26.8	103.3	1,556.9	0.0	0.0
15.00		102.5	1,513.6					0.0	26.8	102.5	1,540.4	0.0	0.0
20.00		104.3	1,488.8					0.0	26.8	104.3	1,515.6	0.0	0.0
25.00		106.7	1,459.8					0.0	26.8	106.7	1,486.6	0.0	0.0
30.00		95.3	1,428.0					0.0	26.8	95.3	1,454.9	0.0	0.0
33.83	Bot - Section 2	54.4	1,073.3					0.0	20.6	54.4	1,093.9	0.0	0.0
35.00		67.9	545.9					0.0	6.3	67.9	552.2	0.0	0.0
40.00		58.7	2,295.5					0.0	26.8	58.7	2,322.3	0.0	0.0
40.33	Top - Section 1	55.0	151.2					0.0	1.8	55.0	153.0	0.0	0.0
45.00		106.0	1,251.8					0.0	25.0	106.0	1,276.8	0.0	0.0
50.00		108.9	1,305.1					0.0	26.8	108.9	1,331.9	0.0	0.0
55.00		107.8	1,267.4					0.0	26.8	107.8	1,294.3	0.0	0.0
60.00		106.4	1,229.2					0.0	26.8	106.4	1,256.0	0.0	0.0
65.00		104.7	1,190.4					0.0	26.8	104.7	1,217.2	0.0	0.0
70.00		102.9	1,151.1					0.0	26.8	102.9	1,177.9	0.0	0.0
75.00		90.9	1,111.5					0.0	26.8	90.9	1,138.3	0.0	0.0
79.00	Bot - Section 3	50.0	861.5					0.0	21.5	50.0	883.0	0.0	0.0
80.00		47.8	297.2					0.0	5.4	47.8	302.6	0.0	0.0
83.83	Top - Section 2	49.2	1,115.0					0.0	20.6	49.2	1,135.6	0.0	0.0
85.00		59.3	178.6					0.0	6.3	59.3	184.8	0.0	0.0
90.00		67.7	741.7					0.0	26.8	67.7	768.5	0.0	0.0
92.10		46.7	304.5					0.0	11.3	46.7	315.8	0.0	0.0
95.00		42.5	411.2					0.0	15.6	42.5	426.8	0.0	0.0
96.70		45.3	237.0					0.0	9.1	45.3	246.1	0.0	0.0
100.00		46.6	448.6					0.0	17.7	46.6	466.3	0.0	0.0
101.90		43.9	253.1					0.0	10.2	43.9	263.3	0.0	0.0
105.00		57.7	402.6					0.0	16.6	57.7	419.2	0.0	0.0
108.60		42.4	452.4					0.0	19.3	42.4	471.7	0.0	0.0
110.00		52.5	172.6					0.0	7.5	52.5	180.1	0.0	0.0
115.00		55.9	591.6					0.0	26.8	55.9	618.4	0.0	0.0
116.90		39.2	218.5					0.0	10.2	39.2	228.7	0.0	0.0
120.00		61.7	345.9					0.0	16.6	61.7	362.5	0.0	0.0
125.00		41.3	530.1					0.0	26.8	41.3	556.9	0.0	0.0
125.50	Appertunance(s)	7.3	52.0	270.0	0.0	0.0	2,935.6	0.0	2.7	277.3	2,990.2	0.0	0.0
126.00	Appertunance(s)	25.2	51.7	893.7	0.0	0.0	7,036.3	0.0	2.7	918.9	7,090.7	0.0	0.0
129.00		21.5	301.3					0.0	0.0	21.5	301.3	0.0	0.0
								Totals:		3,702.03	40,129.1	0.00	0.00

Site Number: 283424 Code: ANSI/TIA-222-G

Site Name: Watertown, CT Engineering Number:OAA692891_C3_01 1/13/2017 1:47:19 PM

Customer: Verizon Wireless

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph with 0.75 in Radial Ice 22 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00 Wind Importance Factor :1.00

Dead Load Factor :1.20 Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-60.06	-5.29	0.00	-505.88	0.00	505.88	3,278.74	1,639.37	7,535.50	3,773.35	0.00	0.00	0.152
5.00	-58.51	-5.22	0.00	-479.43	0.00	479.43	3,241.61	1,620.80	7,262.23	3,636.51	0.02	-0.03	0.150
10.00	-56.95	-5.15	0.00	-453.35	0.00	453.35	3,202.16	1,601.08	6,988.20	3,499.30	0.07	-0.07	0.147
15.00	-55.40	-5.07	0.00	-427.62	0.00	427.62	3,160.39	1,580.19	6,713.81	3,361.90	0.16	-0.10	0.145
20.00	-53.89	-5.00	0.00	-402.26	0.00	402.26	3,116.29	1,558.15	6,439.47	3,224.52	0.28	-0.13	0.142
25.00	-52.40	-4.92	0.00	-377.27	0.00	377.27	3,069.88	1,534.94	6,165.58	3,087.37	0.44	-0.17	0.139
30.00	-50.94	-4.85	0.00	-352.67	0.00	352.67	3,021.14	1,510.57	5,892.53	2,950.65	0.63	-0.20	0.136
33.83	-49.84	-4.81	0.00	-334.08	0.00	334.08	2,982.20	1,491.10	5,684.03	2,846.24	0.81	-0.23	0.134
35.00	-49.29	-4.76	0.00	-328.47	0.00	328.47	2,970.08	1,485.04	5,620.75	2,814.55	0.86	-0.24	0.133
40.00	-46.97	-4.70	0.00	-304.70	0.00	304.70	2,916.69	1,458.35	5,350.63	2,679.29	1.13	-0.28	0.130
40.33	-46.81	-4.66	0.00	-303.13	0.00	303.13	2,937.24	1,468.62	5,452.99	2,730.55	1.15	-0.28	0.127
45.00	-45.53	-4.58	0.00	-281.37	0.00	281.37	2,886.14	1,443.07	5,201.96	2,604.85	1.45	-0.31	0.124
50.00	-44.20	-4.49	0.00	-258.49	0.00	258.49	2,829.15	1,414.58	4,935.22	2,471.28	1.79	-0.35	0.120
55.00	-42.90	-4.40	0.00	-236.04	0.00	236.04	2,769.84	1,384.92	4,671.17	2,339.06	2.18	-0.39	0.116
60.00	-41.65	-4.31	0.00	-214.03	0.00	214.03	2,708.20	1,354.10	4,410.22	2,208.39	2.61	-0.43	0.112
65.00	-40.43	-4.22	0.00	-192.47	0.00	192.47	2,644.24	1,322.12	4,152.76	2,079.47	3.07	-0.46	0.108
70.00	-39.25	-4.14	0.00	-171.35	0.00	171.35	2,577.97	1,288.98	3,899.22	1,952.51	3.58	-0.50	0.103
75.00	-38.11	-4.06	0.00	-150.66	0.00	150.66	2,509.36	1,254.68	3,649.98	1,827.70	4.12	-0.54	0.098
79.00	-37.22	-4.01	0.00	-134.44	0.00	134.44	2,452.81	1,226.40	3,453.96	1,729.55	4.58	-0.56	0.093
80.00	-36.92	-3.97	0.00	-130.42	0.00	130.42	2,438.44	1,219.22	3,405.45	1,705.26	4.70	-0.57	0.092
83.83	-35.78	-3.92	0.00	-115.20	0.00	115.20	1,179.95	589.98	1,625.89	814.15	5.17	-0.60	0.172
85.00	-35.60	-3.88	0.00	-110.63	0.00	110.63	1,174.85	587.42	1,602.96	802.67	5.32	-0.61	0.168
90.00	-34.83	-3.83	0.00	-91.23	0.00	91.23	1,151.52	575.76	1,504.37	753.30	5.99	-0.66	0.151
92.10	-32.64	-3.50	0.00	-83.20	0.00	83.20	1,141.03	570.52	1,462.89	732.53	6.28	-0.68	0.142
95.00	-32.21	-3.47	0.00	-73.03	0.00	73.03	1,125.87	562.94	1,405.59	703.84	6.70	-0.71	0.132
96.70	-28.36	-3.12	0.00	-67.13	0.00	67.13	1,116.62	558.31	1,372.04	687.04	6.96	-0.73	0.123
100.00	-27.89	-3.07	0.00	-56.85	0.00	56.85	1,097.90	548.95	1,307.02	654.48	7.47	-0.76	0.112
101.90	-24.00	-2.71	0.00	-51.02	0.00	51.02	1,086.67	543.33	1,269.71	635.80	7.78	-0.77	0.102
105.00	-23.58	-2.66	0.00	-42.61	0.00	42.61	1,067.61	533.81	1,209.07	605.43	8.29	-0.80	0.092
108.60	-18.53	-2.21	0.00	-33.04	0.00	33.04	1,044.36	522.18	1,139.14	570.42	8.90	-0.82	0.076
110.00	-18.35	-2.16	0.00	-29.95	0.00	29.95	1,035.00	517.50	1,112.13	556.89	9.14	-0.83	0.072
115.00	-17.73	-2.10	0.00	-19.17	0.00	19.17	1,000.06	500.03	1,016.61	509.06	10.02	-0.86	0.055
116.90	-12.89	-1.64	0.00	-15.19	0.00	15.19	986.18	493.09	980.77	491.11	10.36	-0.86	0.044
120.00	-12.53	-1.57	0.00	-10.11	0.00	10.11	962.80	481.40	922.91	462.14	10.93	-0.87	0.035
125.00	-11.97	-1.52	0.00	-2.24	0.00	2.24	923.22	461.61	831.45	416.34	11.85	-0.88	0.018
125.50	-8.99	-1.20	0.00	-1.48	0.00	1.48	919.14	459.57	822.44	411.83	11.94	-0.88	0.013
126.00	-1.91	-0.17	0.00	-0.88	0.00	0.88	915.03	457.51	813.46	407.34	12.03	-0.88	0.004
129.00	0.00	-0.14	0.00	-0.36	0.00	0.36	889.89	444.94	760.16	380.64	12.59	-0.88	0.001

Site Number: 283424 Code: ANSI/TIA-222-G

Site Name: Watertown, CT Engineering Number:OAA692891_C3_01 1/13/2017 1:47:19 PM

Customer: Verizon Wireless

Load Case: 1.0D + 1.0W Serviceability 60 mph 22 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		62.4	0.0					0.0	0.0	62.4	0.0	0.0	0.0
5.00		123.2	929.9					0.0	22.3	123.2	952.3	0.0	0.0
10.00		120.0	906.3					0.0	22.3	120.0	928.7	0.0	0.0
15.00		118.7	882.7					0.0	22.3	118.7	905.0	0.0	0.0
20.00		120.5	859.1					0.0	22.3	120.5	881.4	0.0	0.0
25.00		122.8	835.4					0.0	22.3	122.8	857.8	0.0	0.0
30.00		109.5	811.8					0.0	22.3	109.5	834.2	0.0	0.0
33.83	Bot - Section 2	62.4	606.4					0.0	17.1	62.4	623.5	0.0	0.0
35.00		77.8	366.1					0.0	5.2	77.8	371.3	0.0	0.0
40.00		67.2	1,539.7					0.0	22.3	67.2	1,562.0	0.0	0.0
40.33	Top - Section 1	62.8	101.0					0.0	1.5	62.8	102.5	0.0	0.0
45.00		120.8	700.7					0.0	20.9	120.8	721.5	0.0	0.0
50.00		123.8	727.9					0.0	22.3	123.8	750.2	0.0	0.0
55.00		122.2	704.2					0.0	22.3	122.2	726.6	0.0	0.0
60.00		120.2	680.6					0.0	22.3	120.2	703.0	0.0	0.0
65.00		118.0	657.0					0.0	22.3	118.0	679.3	0.0	0.0
70.00		115.5	633.4					0.0	22.3	115.5	655.7	0.0	0.0
75.00		101.7	609.7					0.0	22.3	101.7	632.1	0.0	0.0
79.00	Bot - Section 3	55.8	470.8					0.0	17.9	55.8	488.7	0.0	0.0
80.00		53.3	185.5					0.0	4.5	53.3	190.0	0.0	0.0
83.83	Top - Section 2	54.8	697.2					0.0	17.1	54.8	714.4	0.0	0.0
85.00		65.8	78.7					0.0	5.2	65.8	83.9	0.0	0.0
90.00		75.0	328.4					0.0	22.3	75.0	350.7	0.0	0.0
92.10		51.5	133.7					0.0	9.4	51.5	143.1	0.0	0.0
95.00		46.7	180.5					0.0	13.0	46.7	193.5	0.0	0.0
96.70		49.7	103.6					0.0	7.6	49.7	111.2	0.0	0.0
100.00		51.0	196.4					0.0	14.8	51.0	211.2	0.0	0.0
101.90		47.9	110.3					0.0	8.5	47.9	118.8	0.0	0.0
105.00		62.8	175.6					0.0	13.9	62.8	189.4	0.0	0.0
108.60		46.0	197.0					0.0	16.1	46.0	213.1	0.0	0.0
110.00		56.7	74.6					0.0	6.3	56.7	80.9	0.0	0.0
115.00		60.2	257.5					0.0	22.3	60.2	279.9	0.0	0.0
116.90		42.0	94.1					0.0	8.5	42.0	102.6	0.0	0.0
120.00		65.7	149.2					0.0	13.9	65.7	163.1	0.0	0.0
125.00		43.8	229.2					0.0	22.3	43.8	251.5	0.0	0.0
125.50	Appertunance(s)	7.7	22.1	568.5	0.0	0.0	1,580.5	0.0	2.2	576.2	1,604.9	0.0	0.0
126.00	Appertunance(s)	26.5	22.0	1,465.8	0.0	0.0	2,444.7	0.0	2.2	1,492.4	2,468.9	0.0	0.0
129.00		22.7	129.0					0.0	0.0	22.7	129.0	0.0	0.0
								Totals:		4,889.26	20,975.7	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 22 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-30.48	-8.26	0.00	-815.05	0.00	815.05	3,278.74	1,639.37	7,535.50	3,773.35	0.00	0.00	0.225
5.00	-29.52	-8.17	0.00	-773.73	0.00	773.73	3,241.61	1,620.80	7,262.23	3,636.51	0.03	-0.05	0.222
10.00	-28.58	-8.07	0.00	-732.90	0.00	732.90	3,202.16	1,601.08	6,988.20	3,499.30	0.11	-0.10	0.218
15.00	-27.67	-7.98	0.00	-692.53	0.00	692.53	3,160.39	1,580.19	6,713.81	3,361.90	0.25	-0.16	0.215
20.00	-26.78	-7.88	0.00	-652.64	0.00	652.64	3,116.29	1,558.15	6,439.47	3,224.52	0.45	-0.21	0.211
25.00	-25.92	-7.78	0.00	-613.23	0.00	613.23	3,069.88	1,534.94	6,165.58	3,087.37	0.70	-0.27	0.207
30.00	-25.07	-7.69	0.00	-574.32	0.00	574.32	3,021.14	1,510.57	5,892.53	2,950.65	1.02	-0.33	0.203
33.83	-24.45	-7.64	0.00	-544.85	0.00	544.85	2,982.20	1,491.10	5,684.03	2,846.24	1.30	-0.38	0.200
35.00	-24.07	-7.57	0.00	-535.94	0.00	535.94	2,970.08	1,485.04	5,620.75	2,814.55	1.40	-0.39	0.199
40.00	-22.51	-7.51	0.00	-498.08	0.00	498.08	2,916.69	1,458.35	5,350.63	2,679.29	1.84	-0.45	0.194
40.33	-22.40	-7.45	0.00	-495.58	0.00	495.58	2,937.24	1,468.62	5,452.99	2,730.55	1.87	-0.45	0.189
45.00	-21.67	-7.35	0.00	-460.79	0.00	460.79	2,886.14	1,443.07	5,201.96	2,604.85	2.34	-0.51	0.184
50.00	-20.92	-7.24	0.00	-424.04	0.00	424.04	2,829.15	1,414.58	4,935.22	2,471.28	2.91	-0.57	0.179
55.00	-20.18	-7.13	0.00	-387.84	0.00	387.84	2,769.84	1,384.92	4,671.17	2,339.06	3.54	-0.63	0.173
60.00	-19.47	-7.02	0.00	-352.18	0.00	352.18	2,708.20	1,354.10	4,410.22	2,208.39	4.23	-0.69	0.167
65.00	-18.79	-6.92	0.00	-317.05	0.00	317.05	2,644.24	1,322.12	4,152.76	2,079.47	4.99	-0.75	0.160
70.00	-18.13	-6.81	0.00	-282.46	0.00	282.46	2,577.97	1,288.98	3,899.22	1,952.51	5.82	-0.81	0.152
75.00	-17.49	-6.72	0.00	-248.40	0.00	248.40	2,509.36	1,254.68	3,649.98	1,827.70	6.70	-0.87	0.143
79.00	-17.00	-6.66	0.00	-221.53	0.00	221.53	2,452.81	1,226.40	3,453.96	1,729.55	7.45	-0.92	0.135
80.00	-16.81	-6.62	0.00	-214.86	0.00	214.86	2,438.44	1,219.22	3,405.45	1,705.26	7.65	-0.93	0.133
83.83	-16.09	-6.56	0.00	-189.50	0.00	189.50	1,179.95	589.98	1,625.89	814.15	8.42	-0.98	0.247
85.00	-16.00	-6.50	0.00	-181.85	0.00	181.85	1,174.85	587.42	1,602.96	802.67	8.66	-0.99	0.240
90.00	-15.65	-6.44	0.00	-149.33	0.00	149.33	1,151.52	575.76	1,504.37	753.30	9.75	-1.08	0.212
92.10	-13.97	-5.81	0.00	-135.81	0.00	135.81	1,141.03	570.52	1,462.89	732.53	10.23	-1.11	0.198
95.00	-13.77	-5.77	0.00	-118.96	0.00	118.96	1,125.87	562.94	1,405.59	703.84	10.92	-1.16	0.181
96.70	-12.08	-5.12	0.00	-109.15	0.00	109.15	1,116.62	558.31	1,372.04	687.04	11.34	-1.19	0.170
100.00	-11.87	-5.07	0.00	-92.26	0.00	92.26	1,097.90	548.95	1,307.02	654.48	12.18	-1.23	0.152
101.90	-10.15	-4.41	0.00	-82.62	0.00	82.62	1,086.67	543.33	1,269.71	635.80	12.68	-1.26	0.139
105.00	-9.96	-4.35	0.00	-68.94	0.00	68.94	1,067.61	533.81	1,209.07	605.43	13.51	-1.30	0.123
108.60	-7.75	-3.53	0.00	-53.27	0.00	53.27	1,044.36	522.18	1,139.14	570.42	14.50	-1.34	0.101
110.00	-7.67	-3.48	0.00	-48.33	0.00	48.33	1,035.00	517.50	1,112.13	556.89	14.90	-1.35	0.094
115.00	-7.39	-3.41	0.00	-30.93	0.00	30.93	1,000.06	500.03	1,016.61	509.06	16.34	-1.40	0.068
116.90	-5.27	-2.59	0.00	-24.45	0.00	24.45	986.18	493.09	980.77	491.11	16.90	-1.41	0.055
120.00	-5.10	-2.52	0.00	-16.43	0.00	16.43	962.80	481.40	922.91	462.14	17.82	-1.43	0.041
125.00	-4.85	-2.47	0.00	-3.83	0.00	3.83	923.22	461.61	831.45	416.34	19.32	-1.44	0.014
125.50	-3.26	-1.85	0.00	-2.59	0.00	2.59	919.14	459.57	822.44	411.83	19.48	-1.44	0.010
126.00	-0.83	-0.30	0.00	-1.67	0.00	1.67	915.03	457.51	813.46	407.34	19.63	-1.44	0.005
129.00	0.00	-0.28	0.00	-0.77	0.00	0.77	889.89	444.94	760.16	380.64	20.53	-1.44	0.002

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.19	
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06	
Long-Period Transition Period (T_L):	6	
Importance Factor (I_E):	1.00	
Site Coefficient F_a:	1.60	
Site Coeffiecient F_v:	2.40	
Response Modification Coefficient (R):	1.50	
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20	
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10	
Seismic Response Coefficient (C_s):	0.03	
Upper Limit C_s	0.03	
Lower Limit C_s	0.03	
Period based on Rayleigh Method (sec):	1.98	
Redundancy Factor (p):	1.30	
Seismic Force Distribution Exponent (k):	1.74	
Total Unfactored Dead Load:	30.48	k
Seismic Base Shear (E):	1.39	k

Load Case (1.2 + 0.2Sds) * DL + E ELFM **Seismic Equivalent Lateral Forces Method**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
37	127.50	129	598	0.009	12	160
36	125.75	24	110	0.002	2	30
35	125.25	24	110	0.002	2	30
34	122.50	252	1,087	0.016	22	312
33	118.45	163	665	0.009	13	202
32	115.95	103	403	0.006	8	127
31	112.50	280	1,043	0.015	21	347
30	109.30	81	287	0.004	6	100
29	106.80	213	726	0.010	14	264
28	103.45	189	610	0.009	12	235
27	100.95	119	367	0.005	7	147
26	98.35	211	623	0.009	12	262
25	95.85	111	314	0.004	6	138
24	93.55	193	523	0.007	10	240
23	91.05	143	369	0.005	7	177
22	87.50	351	844	0.012	17	435
21	84.42	84	190	0.003	4	104
20	81.92	714	1,532	0.022	30	886
19	79.50	190	387	0.006	8	236
18	77.00	489	941	0.013	19	606
17	72.50	632	1,096	0.016	22	784
16	67.50	656	1,004	0.014	20	813
15	62.50	679	910	0.013	18	842

14	57.50	703	814	0.012	16	872
13	52.50	727	718	0.010	14	901
12	47.50	750	623	0.009	12	930
11	42.67	722	497	0.007	10	895
10	40.17	102	64	0.001	1	127
9	37.50	1,562	860	0.012	17	1,937
8	34.42	371	176	0.003	3	460
7	31.92	624	259	0.004	5	773
6	27.50	834	268	0.004	5	1,034
5	22.50	858	194	0.003	4	1,064
4	17.50	881	129	0.002	3	1,093
3	12.50	905	74	0.001	1	1,122
2	7.50	929	31	0.000	1	1,152
1	2.50	952	5	0.000	0	1,181
Top Hat	132.00	711	3,502	0.050	69	882
Ericsson RRUS A2 Mod	126.00	66	300	0.004	6	82
Raycap DC2-48-60-8-1	126.00	43	197	0.003	4	54
Ericsson RRUS 11 (Ba	126.00	110	499	0.007	10	136
Ericsson RRUS 11 (Ba	126.00	550	2,497	0.036	49	682
Ericsson RRUS-12 B2	126.00	174	790	0.011	16	216
Round T-Arm	126.00	750	3,405	0.049	67	930
Commscope SBNH-1D656	126.00	547	2,484	0.035	49	679
CCI HPA-65R-BUU-H8	126.00	204	926	0.013	18	253
4' Pine Tree Branche	125.50	1,581	7,126	0.102	141	1,960
6' Pine Tree Branche	116.90	2,036	8,114	0.116	161	2,525
6' Pine Tree Branche	108.60	2,019	7,076	0.101	140	2,504
8' Pine Tree Branche	101.90	1,604	5,033	0.072	100	1,990
8' Pine Tree Branche	96.70	1,594	4,564	0.065	90	1,976
10' Pine Tree Branch	92.10	1,541	4,053	0.058	80	1,911
		30,481	70,015	1.000	1,386	37,800

Load Case (0.9 - 0.2Sds) * DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
37	127.50	129	598	0.009	12	111
36	125.75	24	110	0.002	2	21
35	125.25	24	110	0.002	2	21
34	122.50	252	1,087	0.016	22	216
33	118.45	163	665	0.009	13	140
32	115.95	103	403	0.006	8	88
31	112.50	280	1,043	0.015	21	241
30	109.30	81	287	0.004	6	70
29	106.80	213	726	0.010	14	183
28	103.45	189	610	0.009	12	163
27	100.95	119	367	0.005	7	102
26	98.35	211	623	0.009	12	182
25	95.85	111	314	0.004	6	96
24	93.55	193	523	0.007	10	166
23	91.05	143	369	0.005	7	123
22	87.50	351	844	0.012	17	302
21	84.42	84	190	0.003	4	72
20	81.92	714	1,532	0.022	30	614
19	79.50	190	387	0.006	8	163
18	77.00	489	941	0.013	19	420
17	72.50	632	1,096	0.016	22	544
16	67.50	656	1,004	0.014	20	564
15	62.50	679	910	0.013	18	584
14	57.50	703	814	0.012	16	604
13	52.50	727	718	0.010	14	625

12	47.50	750	623	0.009	12	645
11	42.67	722	497	0.007	10	620
10	40.17	102	64	0.001	1	88
9	37.50	1,562	860	0.012	17	1,343
8	34.42	371	176	0.003	3	319
7	31.92	624	259	0.004	5	536
6	27.50	834	268	0.004	5	717
5	22.50	858	194	0.003	4	738
4	17.50	881	129	0.002	3	758
3	12.50	905	74	0.001	1	778
2	7.50	929	31	0.000	1	799
1	2.50	952	5	0.000	0	819
Top Hat	132.00	711	3,502	0.050	69	612
Ericsson RRUS A2 Mod	126.00	66	300	0.004	6	57
Raycap DC2-48-60-8-1	126.00	43	197	0.003	4	37
Ericsson RRUS 11 (Ba	126.00	110	499	0.007	10	95
Ericsson RRUS 11 (Ba	126.00	550	2,497	0.036	49	473
Ericsson RRUS-12 B2	126.00	174	790	0.011	16	150
Round T-Arm	126.00	750	3,405	0.049	67	645
Commscope SBNH-1D656	126.00	547	2,484	0.035	49	471
CCI HPA-65R-BUU-H8	126.00	204	926	0.013	18	175
4' Pine Tree Branche	125.50	1,581	7,126	0.102	141	1,359
6' Pine Tree Branche	116.90	2,036	8,114	0.116	161	1,751
6' Pine Tree Branche	108.60	2,019	7,076	0.101	140	1,736
8' Pine Tree Branche	101.90	1,604	5,033	0.072	100	1,380
8' Pine Tree Branche	96.70	1,594	4,564	0.065	90	1,370
10' Pine Tree Branch	92.10	1,541	4,053	0.058	80	1,325
		30,481	70,015	1.000	1,386	26,210

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-35.74	-1.32	0.00	-140.85	0.00	140.85	3,278.74	1,639.37	7,535.50	3,773.35	0.00	0.00	0.048
5.00	-34.58	-1.32	0.00	-134.26	0.00	134.26	3,241.61	1,620.80	7,262.23	3,636.51	0.00	-0.01	0.048
10.00	-33.46	-1.33	0.00	-127.64	0.00	127.64	3,202.16	1,601.08	6,988.20	3,499.30	0.02	-0.02	0.047
15.00	-32.37	-1.33	0.00	-121.01	0.00	121.01	3,160.39	1,580.19	6,713.81	3,361.90	0.04	-0.03	0.046
20.00	-31.30	-1.33	0.00	-114.36	0.00	114.36	3,116.29	1,558.15	6,439.47	3,224.52	0.08	-0.04	0.046
25.00	-30.27	-1.33	0.00	-107.71	0.00	107.71	3,069.88	1,534.94	6,165.58	3,087.37	0.12	-0.05	0.045
30.00	-29.50	-1.33	0.00	-101.06	0.00	101.06	3,021.14	1,510.57	5,892.53	2,950.65	0.18	-0.06	0.044
33.83	-29.04	-1.33	0.00	-95.97	0.00	95.97	2,982.20	1,491.10	5,684.03	2,846.24	0.23	-0.07	0.043
35.00	-27.10	-1.31	0.00	-94.42	0.00	94.42	2,970.08	1,485.04	5,620.75	2,814.55	0.24	-0.07	0.043
40.00	-26.97	-1.31	0.00	-87.87	0.00	87.87	2,916.69	1,458.35	5,350.63	2,679.29	0.32	-0.08	0.042
40.33	-26.08	-1.30	0.00	-87.43	0.00	87.43	2,937.24	1,468.62	5,452.99	2,730.55	0.33	-0.08	0.041
45.00	-25.15	-1.29	0.00	-81.35	0.00	81.35	2,886.14	1,443.07	5,201.96	2,604.85	0.41	-0.09	0.040
50.00	-24.25	-1.28	0.00	-74.88	0.00	74.88	2,829.15	1,414.58	4,935.22	2,471.28	0.51	-0.10	0.039
55.00	-23.37	-1.27	0.00	-68.46	0.00	68.46	2,769.84	1,384.92	4,671.17	2,339.06	0.62	-0.11	0.038
60.00	-22.53	-1.25	0.00	-62.11	0.00	62.11	2,708.20	1,354.10	4,410.22	2,208.39	0.74	-0.12	0.036
65.00	-21.72	-1.24	0.00	-55.84	0.00	55.84	2,644.24	1,322.12	4,152.76	2,079.47	0.87	-0.13	0.035
70.00	-20.93	-1.22	0.00	-49.66	0.00	49.66	2,577.97	1,288.98	3,899.22	1,952.51	1.02	-0.14	0.034
75.00	-20.33	-1.20	0.00	-43.57	0.00	43.57	2,509.36	1,254.68	3,649.98	1,827.70	1.17	-0.15	0.032
79.00	-20.09	-1.19	0.00	-38.77	0.00	38.77	2,452.81	1,226.40	3,453.96	1,729.55	1.31	-0.16	0.031
80.00	-19.21	-1.16	0.00	-37.58	0.00	37.58	2,438.44	1,219.22	3,405.45	1,705.26	1.34	-0.16	0.030
83.83	-19.10	-1.16	0.00	-33.12	0.00	33.12	1,179.95	589.98	1,625.89	814.15	1.48	-0.17	0.057
85.00	-18.67	-1.15	0.00	-31.77	0.00	31.77	1,174.85	587.42	1,602.96	802.67	1.52	-0.17	0.055
90.00	-18.49	-1.14	0.00	-26.04	0.00	26.04	1,151.52	575.76	1,504.37	753.30	1.71	-0.19	0.051
92.10	-16.34	-1.05	0.00	-23.64	0.00	23.64	1,141.03	570.52	1,462.89	732.53	1.79	-0.20	0.047
95.00	-16.20	-1.04	0.00	-20.61	0.00	20.61	1,125.87	562.94	1,405.59	703.84	1.92	-0.20	0.044
96.70	-13.96	-0.93	0.00	-18.85	0.00	18.85	1,116.62	558.31	1,372.04	687.04	1.99	-0.21	0.040
100.00	-13.82	-0.92	0.00	-15.77	0.00	15.77	1,097.90	548.95	1,307.02	654.48	2.14	-0.22	0.037
101.90	-11.59	-0.81	0.00	-14.02	0.00	14.02	1,086.67	543.33	1,269.71	635.80	2.22	-0.22	0.033
105.00	-11.33	-0.79	0.00	-11.52	0.00	11.52	1,067.61	533.81	1,209.07	605.43	2.37	-0.23	0.030
108.60	-8.72	-0.64	0.00	-8.67	0.00	8.67	1,044.36	522.18	1,139.14	570.42	2.54	-0.23	0.024
110.00	-8.38	-0.61	0.00	-7.78	0.00	7.78	1,035.00	517.50	1,112.13	556.89	2.61	-0.24	0.022
115.00	-8.25	-0.61	0.00	-4.70	0.00	4.70	1,000.06	500.03	1,016.61	509.06	2.86	-0.24	0.017
116.90	-5.52	-0.42	0.00	-3.55	0.00	3.55	986.18	493.09	980.77	491.11	2.96	-0.24	0.013
120.00	-5.21	-0.40	0.00	-2.24	0.00	2.24	962.80	481.40	922.91	462.14	3.12	-0.25	0.010
125.00	-3.22	-0.25	0.00	-0.25	0.00	0.25	923.22	461.61	831.45	416.34	3.38	-0.25	0.004
125.50	-3.19	-0.25	0.00	-0.12	0.00	0.12	919.14	459.57	822.44	411.83	3.41	-0.25	0.004
126.00	0.00	0.00	0.00	0.00	0.00	0.00	915.03	457.51	813.46	407.34	3.43	-0.25	0.000
129.00	0.00	0.00	0.00	0.00	0.00	0.00	889.89	444.94	760.16	380.64	3.59	-0.25	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-24.78	-1.32	0.00	-139.35	0.00	139.35	3,278.74	1,639.37	7,535.50	3,773.35	0.00	0.00	0.044
5.00	-23.98	-1.32	0.00	-132.76	0.00	132.76	3,241.61	1,620.80	7,262.23	3,636.51	0.00	-0.01	0.044
10.00	-23.20	-1.32	0.00	-126.16	0.00	126.16	3,202.16	1,601.08	6,988.20	3,499.30	0.02	-0.02	0.043
15.00	-22.44	-1.32	0.00	-119.54	0.00	119.54	3,160.39	1,580.19	6,713.81	3,361.90	0.04	-0.03	0.043
20.00	-21.71	-1.32	0.00	-112.93	0.00	112.93	3,116.29	1,558.15	6,439.47	3,224.52	0.08	-0.04	0.042
25.00	-20.99	-1.32	0.00	-106.31	0.00	106.31	3,069.88	1,534.94	6,165.58	3,087.37	0.12	-0.05	0.041
30.00	-20.45	-1.32	0.00	-99.71	0.00	99.71	3,021.14	1,510.57	5,892.53	2,950.65	0.18	-0.06	0.041
33.83	-20.13	-1.32	0.00	-94.65	0.00	94.65	2,982.20	1,491.10	5,684.03	2,846.24	0.22	-0.06	0.040
35.00	-18.79	-1.30	0.00	-93.12	0.00	93.12	2,970.08	1,485.04	5,620.75	2,814.55	0.24	-0.07	0.039
40.00	-18.70	-1.30	0.00	-86.62	0.00	86.62	2,916.69	1,458.35	5,350.63	2,679.29	0.32	-0.08	0.039
40.33	-18.08	-1.29	0.00	-86.19	0.00	86.19	2,937.24	1,468.62	5,452.99	2,730.55	0.32	-0.08	0.038
45.00	-17.44	-1.28	0.00	-80.16	0.00	80.16	2,886.14	1,443.07	5,201.96	2,604.85	0.40	-0.09	0.037
50.00	-16.81	-1.27	0.00	-73.75	0.00	73.75	2,829.15	1,414.58	4,935.22	2,471.28	0.50	-0.10	0.036
55.00	-16.21	-1.25	0.00	-67.41	0.00	67.41	2,769.84	1,384.92	4,671.17	2,339.06	0.61	-0.11	0.035
60.00	-15.62	-1.24	0.00	-61.13	0.00	61.13	2,708.20	1,354.10	4,410.22	2,208.39	0.73	-0.12	0.033
65.00	-15.06	-1.22	0.00	-54.94	0.00	54.94	2,644.24	1,322.12	4,152.76	2,079.47	0.86	-0.13	0.032
70.00	-14.51	-1.20	0.00	-48.84	0.00	48.84	2,577.97	1,288.98	3,899.22	1,952.51	1.01	-0.14	0.031
75.00	-14.09	-1.18	0.00	-42.84	0.00	42.84	2,509.36	1,254.68	3,649.98	1,827.70	1.16	-0.15	0.029
79.00	-13.93	-1.18	0.00	-38.11	0.00	38.11	2,452.81	1,226.40	3,453.96	1,729.55	1.29	-0.16	0.028
80.00	-13.32	-1.14	0.00	-36.93	0.00	36.93	2,438.44	1,219.22	3,405.45	1,705.26	1.32	-0.16	0.027
83.83	-13.24	-1.14	0.00	-32.54	0.00	32.54	1,179.95	589.98	1,625.89	814.15	1.46	-0.17	0.051
85.00	-12.94	-1.13	0.00	-31.21	0.00	31.21	1,174.85	587.42	1,602.96	802.67	1.50	-0.17	0.050
90.00	-12.82	-1.12	0.00	-25.58	0.00	25.58	1,151.52	575.76	1,504.37	753.30	1.69	-0.19	0.045
92.10	-11.33	-1.03	0.00	-23.22	0.00	23.22	1,141.03	570.52	1,462.89	732.53	1.77	-0.19	0.042
95.00	-11.23	-1.02	0.00	-20.24	0.00	20.24	1,125.87	562.94	1,405.59	703.84	1.89	-0.20	0.039
96.70	-9.68	-0.91	0.00	-18.51	0.00	18.51	1,116.62	558.31	1,372.04	687.04	1.96	-0.21	0.036
100.00	-9.58	-0.91	0.00	-15.49	0.00	15.49	1,097.90	548.95	1,307.02	654.48	2.11	-0.21	0.032
101.90	-8.04	-0.79	0.00	-13.76	0.00	13.76	1,086.67	543.33	1,269.71	635.80	2.19	-0.22	0.029
105.00	-7.85	-0.78	0.00	-11.31	0.00	11.31	1,067.61	533.81	1,209.07	605.43	2.34	-0.22	0.026
108.60	-6.05	-0.62	0.00	-8.51	0.00	8.51	1,044.36	522.18	1,139.14	570.42	2.51	-0.23	0.021
110.00	-5.81	-0.60	0.00	-7.64	0.00	7.64	1,035.00	517.50	1,112.13	556.89	2.57	-0.23	0.019
115.00	-5.72	-0.60	0.00	-4.62	0.00	4.62	1,000.06	500.03	1,016.61	509.06	2.82	-0.24	0.015
116.90	-3.83	-0.41	0.00	-3.49	0.00	3.49	986.18	493.09	980.77	491.11	2.92	-0.24	0.011
120.00	-3.61	-0.39	0.00	-2.20	0.00	2.20	962.80	481.40	922.91	462.14	3.08	-0.24	0.009
125.00	-2.23	-0.24	0.00	-0.24	0.00	0.24	923.22	461.61	831.45	416.34	3.33	-0.25	0.003
125.50	-2.21	-0.24	0.00	-0.12	0.00	0.12	919.14	459.57	822.44	411.83	3.36	-0.25	0.003
126.00	0.00	0.00	0.00	0.00	0.00	0.00	915.03	457.51	813.46	407.34	3.38	-0.25	0.000
129.00	0.00	0.00	0.00	0.00	0.00	0.00	889.89	444.94	760.16	380.64	3.54	-0.25	0.000

Equivalent Modal Forces Analysis

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	1.98
Redundancy Factor (p):	1.30

Load Case (1.2 + 0.2Sds) * DL + E EMAM **Seismic Equivalent Modal Analysis Method**

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
37	127.50	129	1.846	1.757	1.059	0.356	40	160
36	125.75	24	1.796	1.520	0.970	0.323	7	30
35	125.25	24	1.782	1.457	0.946	0.314	7	30
34	122.50	252	1.704	1.139	0.821	0.267	58	312
33	118.45	163	1.594	0.759	0.661	0.204	29	202
32	115.95	103	1.527	0.570	0.575	0.168	15	127
31	112.50	280	1.437	0.359	0.471	0.125	30	347
30	109.30	81	1.357	0.207	0.389	0.089	6	100
29	106.80	213	1.295	0.114	0.332	0.064	12	264
28	103.45	189	1.215	0.020	0.266	0.036	6	235
27	100.95	119	1.157	-0.032	0.224	0.018	2	147
26	98.35	211	1.099	-0.071	0.186	0.002	0	262
25	95.85	111	1.043	-0.096	0.154	-0.011	-1	138
24	93.55	193	0.994	-0.111	0.128	-0.020	-3	240
23	91.05	143	0.942	-0.120	0.104	-0.027	-3	177
22	87.50	351	0.870	-0.121	0.076	-0.032	-10	435
21	84.42	84	0.809	-0.114	0.057	-0.033	-2	104
20	81.92	714	0.762	-0.104	0.044	-0.031	-19	886
19	79.50	190	0.718	-0.092	0.033	-0.027	-4	236
18	77.00	489	0.673	-0.078	0.025	-0.021	-9	606
17	72.50	632	0.597	-0.052	0.014	-0.008	-4	784
16	67.50	656	0.517	-0.023	0.008	0.009	5	813
15	62.50	679	0.444	0.004	0.006	0.025	15	842
14	57.50	703	0.376	0.026	0.007	0.037	23	872
13	52.50	727	0.313	0.042	0.011	0.045	29	901
12	47.50	750	0.256	0.054	0.016	0.049	32	930
11	42.67	722	0.207	0.062	0.022	0.051	32	895
10	40.17	102	0.183	0.065	0.025	0.051	4	127
9	37.50	1,562	0.160	0.067	0.029	0.050	68	1,937
8	34.42	371	0.135	0.069	0.032	0.049	16	460
7	31.92	624	0.116	0.070	0.035	0.049	26	773
6	27.50	834	0.086	0.071	0.039	0.047	34	1,034
5	22.50	858	0.057	0.071	0.041	0.046	34	1,064
4	17.50	881	0.035	0.069	0.041	0.043	33	1,093

3	12.50	905	0.018	0.063	0.037	0.039	31	1,122
2	7.50	929	0.006	0.048	0.027	0.032	25	1,152
1	2.50	952	0.001	0.021	0.011	0.015	12	1,181
Top Hat	132.00	711	1.979	2.483	1.317	0.446	275	882
Ericsson RRUS A2 Mod	126.00	66	1.803	1.553	0.983	0.328	19	82
Raycap DC2-48-60-8-1	126.00	43	1.803	1.553	0.983	0.328	12	54
Ericsson RRUS 11 (Ba	126.00	110	1.803	1.553	0.983	0.328	31	136
Ericsson RRUS 11 (Ba	126.00	550	1.803	1.553	0.983	0.328	156	682
Ericsson RRUS-12 B2	126.00	174	1.803	1.553	0.983	0.328	49	216
Round T-Arm	126.00	750	1.803	1.553	0.983	0.328	213	930
Commscope SBNH-	126.00	547	1.803	1.553	0.983	0.328	155	679
CCI HPA-65R-BUU-H8	126.00	204	1.803	1.553	0.983	0.328	58	253
4' Pine Tree Branche	125.50	1,581	1.789	1.488	0.958	0.319	437	1,960
6' Pine Tree Branche	116.90	2,036	1.552	0.638	0.607	0.182	320	2,525
6' Pine Tree Branche	108.60	2,019	1.339	0.179	0.372	0.082	143	2,504
8' Pine Tree Branche	101.90	1,604	1.179	-0.014	0.240	0.024	34	1,990
8' Pine Tree Branche	96.70	1,594	1.062	-0.089	0.164	-0.007	-9	1,976
10' Pine Tree Branch	92.10	1,541	0.963	-0.117	0.114	-0.024	-32	1,911
		30,481	52.416	24.679	19.561	6.039	2,436	37,800

Load Case (0.9 - 0.2Sds) * DL + E EMAM **Seismic (Reduced DL) Equivalent Modal Analysis Method**

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
37	127.50	129	1.846	1.757	1.059	0.356	40	111
36	125.75	24	1.796	1.520	0.970	0.323	7	21
35	125.25	24	1.782	1.457	0.946	0.314	7	21
34	122.50	252	1.704	1.139	0.821	0.267	58	216
33	118.45	163	1.594	0.759	0.661	0.204	29	140
32	115.95	103	1.527	0.570	0.575	0.168	15	88
31	112.50	280	1.437	0.359	0.471	0.125	30	241
30	109.30	81	1.357	0.207	0.389	0.089	6	70
29	106.80	213	1.295	0.114	0.332	0.064	12	183
28	103.45	189	1.215	0.020	0.266	0.036	6	163
27	100.95	119	1.157	-0.032	0.224	0.018	2	102
26	98.35	211	1.099	-0.071	0.186	0.002	0	182
25	95.85	111	1.043	-0.096	0.154	-0.011	-1	96
24	93.55	193	0.994	-0.111	0.128	-0.020	-3	166
23	91.05	143	0.942	-0.120	0.104	-0.027	-3	123
22	87.50	351	0.870	-0.121	0.076	-0.032	-10	302
21	84.42	84	0.809	-0.114	0.057	-0.033	-2	72
20	81.92	714	0.762	-0.104	0.044	-0.031	-19	614
19	79.50	190	0.718	-0.092	0.033	-0.027	-4	163
18	77.00	489	0.673	-0.078	0.025	-0.021	-9	420
17	72.50	632	0.597	-0.052	0.014	-0.008	-4	544
16	67.50	656	0.517	-0.023	0.008	0.009	5	564
15	62.50	679	0.444	0.004	0.006	0.025	15	584
14	57.50	703	0.376	0.026	0.007	0.037	23	604
13	52.50	727	0.313	0.042	0.011	0.045	29	625
12	47.50	750	0.256	0.054	0.016	0.049	32	645
11	42.67	722	0.207	0.062	0.022	0.051	32	620
10	40.17	102	0.183	0.065	0.025	0.051	4	88
9	37.50	1,562	0.160	0.067	0.029	0.050	68	1,343
8	34.42	371	0.135	0.069	0.032	0.049	16	319
7	31.92	624	0.116	0.070	0.035	0.049	26	536
6	27.50	834	0.086	0.071	0.039	0.047	34	717
5	22.50	858	0.057	0.071	0.041	0.046	34	738
4	17.50	881	0.035	0.069	0.041	0.043	33	758
3	12.50	905	0.018	0.063	0.037	0.039	31	778

2	7.50	929	0.006	0.048	0.027	0.032	25	799
1	2.50	952	0.001	0.021	0.011	0.015	12	819
Top Hat	132.00	711	1.979	2.483	1.317	0.446	275	612
Ericsson RRUS A2 Mod	126.00	66	1.803	1.553	0.983	0.328	19	57
Raycap DC2-48-60-8-1	126.00	43	1.803	1.553	0.983	0.328	12	37
Ericsson RRUS 11 (Ba	126.00	110	1.803	1.553	0.983	0.328	31	95
Ericsson RRUS 11 (Ba	126.00	550	1.803	1.553	0.983	0.328	156	473
Ericsson RRUS-12 B2	126.00	174	1.803	1.553	0.983	0.328	49	150
Round T-Arm	126.00	750	1.803	1.553	0.983	0.328	213	645
Commscope SBNH-	126.00	547	1.803	1.553	0.983	0.328	155	471
CCI HPA-65R-BUU-H8	126.00	204	1.803	1.553	0.983	0.328	58	175
4' Pine Tree Branche	125.50	1,581	1.789	1.488	0.958	0.319	437	1,359
6' Pine Tree Branche	116.90	2,036	1.552	0.638	0.607	0.182	320	1,751
6' Pine Tree Branche	108.60	2,019	1.339	0.179	0.372	0.082	143	1,736
8' Pine Tree Branche	101.90	1,604	1.179	-0.014	0.240	0.024	34	1,380
8' Pine Tree Branche	96.70	1,594	1.062	-0.089	0.164	-0.007	-9	1,370
10' Pine Tree Branch	92.10	1,541	0.963	-0.117	0.114	-0.024	-32	1,325
		30,481	52.416	24.679	19.561	6.039	2,436	26,210

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-35.74	-2.15	0.00	-236.46	0.00	236.46	3,278.74	1,639.37	7,535.50	3,773.35	0.00	0.00	0.074
5.00	-34.58	-2.14	0.00	-225.69	0.00	225.69	3,241.61	1,620.80	7,262.23	3,636.51	0.01	-0.02	0.073
10.00	-33.46	-2.11	0.00	-215.01	0.00	215.01	3,202.16	1,601.08	6,988.20	3,499.30	0.03	-0.03	0.072
15.00	-32.37	-2.09	0.00	-204.43	0.00	204.43	3,160.39	1,580.19	6,713.81	3,361.90	0.07	-0.05	0.071
20.00	-31.30	-2.06	0.00	-193.98	0.00	193.98	3,116.29	1,558.15	6,439.47	3,224.52	0.13	-0.06	0.070
25.00	-30.27	-2.04	0.00	-183.66	0.00	183.66	3,069.88	1,534.94	6,165.58	3,087.37	0.21	-0.08	0.069
30.00	-29.49	-2.02	0.00	-173.47	0.00	173.47	3,021.14	1,510.57	5,892.53	2,950.65	0.30	-0.10	0.069
33.83	-29.03	-2.01	0.00	-165.73	0.00	165.73	2,982.20	1,491.10	5,684.03	2,846.24	0.38	-0.11	0.068
35.00	-27.10	-1.94	0.00	-163.39	0.00	163.39	2,970.08	1,485.04	5,620.75	2,814.55	0.41	-0.12	0.067
40.00	-26.97	-1.94	0.00	-153.69	0.00	153.69	2,916.69	1,458.35	5,350.63	2,679.29	0.54	-0.13	0.067
40.33	-26.07	-1.91	0.00	-153.05	0.00	153.05	2,937.24	1,468.62	5,452.99	2,730.55	0.55	-0.14	0.065
45.00	-25.14	-1.88	0.00	-144.13	0.00	144.13	2,886.14	1,443.07	5,201.96	2,604.85	0.69	-0.15	0.064
50.00	-24.24	-1.86	0.00	-134.71	0.00	134.71	2,829.15	1,414.58	4,935.22	2,471.28	0.86	-0.17	0.063
55.00	-23.37	-1.84	0.00	-125.41	0.00	125.41	2,769.84	1,384.92	4,671.17	2,339.06	1.05	-0.19	0.062
60.00	-22.53	-1.83	0.00	-116.19	0.00	116.19	2,708.20	1,354.10	4,410.22	2,208.39	1.26	-0.21	0.061
65.00	-21.71	-1.83	0.00	-107.02	0.00	107.02	2,644.24	1,322.12	4,152.76	2,079.47	1.50	-0.23	0.060
70.00	-20.93	-1.84	0.00	-97.86	0.00	97.86	2,577.97	1,288.98	3,899.22	1,952.51	1.75	-0.25	0.058
75.00	-20.32	-1.85	0.00	-88.65	0.00	88.65	2,509.36	1,254.68	3,649.98	1,827.70	2.03	-0.27	0.057
79.00	-20.09	-1.86	0.00	-81.23	0.00	81.23	2,452.81	1,226.40	3,453.96	1,729.55	2.26	-0.29	0.055
80.00	-19.20	-1.88	0.00	-79.37	0.00	79.37	2,438.44	1,219.22	3,405.45	1,705.26	2.33	-0.30	0.054
83.83	-19.09	-1.89	0.00	-72.16	0.00	72.16	1,179.95	589.98	1,625.89	814.15	2.57	-0.31	0.105
85.00	-18.66	-1.90	0.00	-69.96	0.00	69.96	1,174.85	587.42	1,602.96	802.67	2.65	-0.32	0.103
90.00	-18.48	-1.91	0.00	-60.46	0.00	60.46	1,151.52	575.76	1,504.37	753.30	3.00	-0.35	0.096
92.10	-16.33	-1.94	0.00	-56.46	0.00	56.46	1,141.03	570.52	1,462.89	732.53	3.16	-0.37	0.091
95.00	-16.19	-1.94	0.00	-50.84	0.00	50.84	1,125.87	562.94	1,405.59	703.84	3.38	-0.39	0.087
96.70	-13.95	-1.94	0.00	-47.54	0.00	47.54	1,116.62	558.31	1,372.04	687.04	3.52	-0.40	0.082
100.00	-13.80	-1.94	0.00	-41.14	0.00	41.14	1,097.90	548.95	1,307.02	654.48	3.80	-0.42	0.075
101.90	-11.58	-1.89	0.00	-37.46	0.00	37.46	1,086.67	543.33	1,269.71	635.80	3.97	-0.43	0.070
105.00	-11.32	-1.88	0.00	-31.61	0.00	31.61	1,067.61	533.81	1,209.07	605.43	4.26	-0.45	0.063
108.60	-8.71	-1.71	0.00	-24.86	0.00	24.86	1,044.36	522.18	1,139.14	570.42	4.60	-0.47	0.052
110.00	-8.36	-1.68	0.00	-22.46	0.00	22.46	1,035.00	517.50	1,112.13	556.89	4.74	-0.47	0.048
115.00	-8.24	-1.66	0.00	-14.08	0.00	14.08	1,000.06	500.03	1,016.61	509.06	5.25	-0.49	0.036
116.90	-5.51	-1.29	0.00	-10.92	0.00	10.92	986.18	493.09	980.77	491.11	5.44	-0.50	0.028
120.00	-5.20	-1.23	0.00	-6.92	0.00	6.92	962.80	481.40	922.91	462.14	5.77	-0.50	0.020
125.00	-3.21	-0.77	0.00	-0.77	0.00	0.77	923.22	461.61	831.45	416.34	6.30	-0.51	0.005
125.50	-3.18	-0.76	0.00	-0.38	0.00	0.38	919.14	459.57	822.44	411.83	6.36	-0.51	0.004
126.00	0.00	0.00	0.00	0.00	0.00	0.00	915.03	457.51	813.46	407.34	6.41	-0.51	0.000
129.00	0.00	0.00	0.00	0.00	0.00	0.00	889.89	444.94	760.16	380.64	6.73	-0.51	0.000

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-24.78	-2.15	0.00	-233.73	0.00	233.73	3,278.74	1,639.37	7,535.50	3,773.35	0.00	0.00	0.070
5.00	-23.98	-2.13	0.00	-222.97	0.00	222.97	3,241.61	1,620.80	7,262.23	3,636.51	0.01	-0.01	0.069
10.00	-23.20	-2.11	0.00	-212.30	0.00	212.30	3,202.16	1,601.08	6,988.20	3,499.30	0.03	-0.03	0.068
15.00	-22.44	-2.08	0.00	-201.77	0.00	201.77	3,160.39	1,580.19	6,713.81	3,361.90	0.07	-0.05	0.067
20.00	-21.71	-2.05	0.00	-191.36	0.00	191.36	3,116.29	1,558.15	6,439.47	3,224.52	0.13	-0.06	0.066
25.00	-20.99	-2.02	0.00	-181.10	0.00	181.10	3,069.88	1,534.94	6,165.58	3,087.37	0.20	-0.08	0.065
30.00	-20.45	-2.00	0.00	-170.99	0.00	170.99	3,021.14	1,510.57	5,892.53	2,950.65	0.30	-0.10	0.065
33.83	-20.13	-1.99	0.00	-163.32	0.00	163.32	2,982.20	1,491.10	5,684.03	2,846.24	0.38	-0.11	0.064
35.00	-18.79	-1.92	0.00	-161.00	0.00	161.00	2,970.08	1,485.04	5,620.75	2,814.55	0.41	-0.11	0.064
40.00	-18.70	-1.92	0.00	-151.39	0.00	151.39	2,916.69	1,458.35	5,350.63	2,679.29	0.53	-0.13	0.063
40.33	-18.08	-1.89	0.00	-150.75	0.00	150.75	2,937.24	1,468.62	5,452.99	2,730.55	0.54	-0.13	0.061
45.00	-17.43	-1.86	0.00	-141.93	0.00	141.93	2,886.14	1,443.07	5,201.96	2,604.85	0.68	-0.15	0.061
50.00	-16.81	-1.84	0.00	-132.63	0.00	132.63	2,829.15	1,414.58	4,935.22	2,471.28	0.85	-0.17	0.060
55.00	-16.20	-1.82	0.00	-123.44	0.00	123.44	2,769.84	1,384.92	4,671.17	2,339.06	1.04	-0.19	0.059
60.00	-15.62	-1.81	0.00	-114.35	0.00	114.35	2,708.20	1,354.10	4,410.22	2,208.39	1.25	-0.21	0.058
65.00	-15.05	-1.80	0.00	-105.32	0.00	105.32	2,644.24	1,322.12	4,152.76	2,079.47	1.48	-0.23	0.056
70.00	-14.51	-1.81	0.00	-96.30	0.00	96.30	2,577.97	1,288.98	3,899.22	1,952.51	1.73	-0.25	0.055
75.00	-14.09	-1.82	0.00	-87.25	0.00	87.25	2,509.36	1,254.68	3,649.98	1,827.70	2.00	-0.27	0.053
79.00	-13.92	-1.83	0.00	-79.96	0.00	79.96	2,452.81	1,226.40	3,453.96	1,729.55	2.23	-0.29	0.052
80.00	-13.31	-1.85	0.00	-78.13	0.00	78.13	2,438.44	1,219.22	3,405.45	1,705.26	2.29	-0.29	0.051
83.83	-13.24	-1.85	0.00	-71.04	0.00	71.04	1,179.95	589.98	1,625.89	814.15	2.53	-0.31	0.098
85.00	-12.94	-1.86	0.00	-68.88	0.00	68.88	1,174.85	587.42	1,602.96	802.67	2.61	-0.31	0.097
90.00	-12.81	-1.87	0.00	-59.56	0.00	59.56	1,151.52	575.76	1,504.37	753.30	2.96	-0.35	0.090
92.10	-11.32	-1.90	0.00	-55.63	0.00	55.63	1,141.03	570.52	1,462.89	732.53	3.11	-0.36	0.086
95.00	-11.22	-1.91	0.00	-50.11	0.00	50.11	1,125.87	562.94	1,405.59	703.84	3.34	-0.38	0.081
96.70	-9.67	-1.91	0.00	-46.87	0.00	46.87	1,116.62	558.31	1,372.04	687.04	3.47	-0.39	0.077
100.00	-9.57	-1.91	0.00	-40.58	0.00	40.58	1,097.90	548.95	1,307.02	654.48	3.75	-0.41	0.071
101.90	-8.03	-1.86	0.00	-36.95	0.00	36.95	1,086.67	543.33	1,269.71	635.80	3.92	-0.42	0.066
105.00	-7.84	-1.85	0.00	-31.19	0.00	31.19	1,067.61	533.81	1,209.07	605.43	4.20	-0.44	0.059
108.60	-6.04	-1.69	0.00	-24.54	0.00	24.54	1,044.36	522.18	1,139.14	570.42	4.54	-0.46	0.049
110.00	-5.80	-1.65	0.00	-22.18	0.00	22.18	1,035.00	517.50	1,112.13	556.89	4.67	-0.47	0.045
115.00	-5.71	-1.64	0.00	-13.91	0.00	13.91	1,000.06	500.03	1,016.61	509.06	5.17	-0.48	0.033
116.90	-3.82	-1.28	0.00	-10.79	0.00	10.79	986.18	493.09	980.77	491.11	5.37	-0.49	0.026
120.00	-3.60	-1.22	0.00	-6.84	0.00	6.84	962.80	481.40	922.91	462.14	5.69	-0.50	0.019
125.00	-2.23	-0.76	0.00	-0.76	0.00	0.76	923.22	461.61	831.45	416.34	6.21	-0.50	0.004
125.50	-2.21	-0.75	0.00	-0.38	0.00	0.38	919.14	459.57	822.44	411.83	6.26	-0.50	0.003
126.00	0.00	0.00	0.00	0.00	0.00	0.00	915.03	457.51	813.46	407.34	6.32	-0.50	0.000
129.00	0.00	0.00	0.00	0.00	0.00	0.00	889.89	444.94	760.16	380.64	6.63	-0.50	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	31.78	0.00	36.52	0.00	0.00	3148.55	83.83	0.92
0.9D + 1.6W	31.76	0.00	27.38	0.00	0.00	3119.89	83.83	0.90
1.2D + 1.0Di + 1.0Wi	5.29	0.00	60.06	0.00	0.00	505.88	83.83	0.17
(1.2 + 0.2Sds) * DL + E ELFM	1.32	0.00	35.74	0.00	0.00	140.85	83.83	0.06
(1.2 + 0.2Sds) * DL + E EMAM	2.15	0.00	35.74	0.00	0.00	236.46	83.83	0.10
(0.9 - 0.2Sds) * DL + E ELFM	1.32	0.00	24.78	0.00	0.00	139.35	83.83	0.05
(0.9 - 0.2Sds) * DL + E EMAM	2.15	0.00	24.78	0.00	0.00	233.73	83.83	0.10
1.0D + 1.0W	8.26	0.00	30.48	0.00	0.00	815.05	83.83	0.25

Base Summary

Reactions

Original Design			Analysis			
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment Design %
3,735.00	63.60	38.90	3,148.55	60.06	31.78	84.30

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
50.0	2.500	69.500	Round	0	0.00	12.723	381.70	894.57	0.43

Anchor Bolts

								Start	Compression			Tension		
Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Angle (deg)	Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
63.50	14	2.25" 18J	2.25	75.00	100.00	Radial	0.00	0.0	174.29	260.00	0.69	165.71	260.00	0.65

Town of Watertown			
Parcel: 3592 Acres: 51.5			
Name:	GUSTAFSON FRANK E (EST) ET AL	Land Value:	280000
Site:	655 BASSETT RD	Improvement Value:	157100
Sale:	$0 on 1999-11-18 Reason= Qual=U	Accessory Value:	3000
Mail:	655 BASSETT RD WATERTOWN, CT 06795-1139	Total Value:	450100

The Town of Watertown makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation. The assessment information is from the last certified taxroll. All data is subject to change before the next certified taxroll.
Date printed: 03/08/17 : 12:01:42

Town of Watertown, CT

Recent Sales in Neighborhood	Previous Parcel	Next Parcel	Field Definitions	Return to Main Search	Watertown Home

Owner and Parcel Information

Owner Name	GUSTAFSON FRANK E (EST) ET AL	**Today's Date**	March 8, 2017
Mailing Address	655 BASSETT RD	**Parcel ID**	3592 (Account #: 3592)
	WATERTOWN, CT 06795-1139		
Location Address	655 BASSETT RD	**Census Tract**	
Map / Block / Lot	15 / 25 / 3	**Acreage**	51.50
Use Class / Description	1010 Single Family	**Parcel Map**	Show Parcel Map Owner List By Radius
Assessing Neighborhood	07A	**Utilities**	Well,

Current Appraised Value Information

Building Value	XF Value	OB Value	Land Value	Special Land Value	Total Appraised Value	Net Appraised Value	Current Assessment
$ 157,100	$ 3,000	$ 10,000	$ 280,000		$ 450,100	$ 450,100	$ 251,200

Assessment History

Year	Building	OB/Misc	Land	Total Assessment
Current	$ 110,000	$ 7,100	$ 132,000	$ 251,200
2015	$ 110,000	$ 7,100	$ 132,000	$ 251,200
2014	$ 110,000	$ 7,100	$ 132,000	$ 251,200

Land Information

Use	Class	Zoning	Area	Value
Single Family	R	R90	1 AC	$ 88,700
Forest	S	R90	26 AC	$ 97,500
Pasture MDL-00	S	R90	23.47 AC	$ 88,000
Cell Tower	I	R90	1.03 AC	$ 5,800

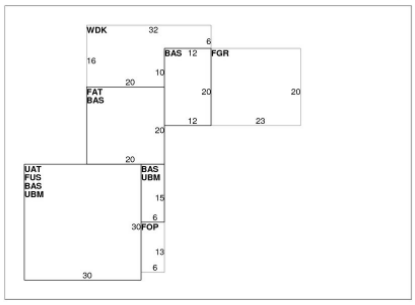
Residential Building Information

Style	Year Built	Eff Year Built	Living Area	Stories	Grade	Exterior Wall	Interior Wall
Old Style	1840	1987	2,610	2	B Avg+20	Vinyl Siding	Plastered
Roof Cover	**Roof Structure**	**Floor Type**	**Heat Type**	**Heat Fuel**	**AC**	**Bedrooms/Full Baths/Half Baths/Total Rooms**	**Basement**
Asphalt	Gable	Carpet	Oil	Hot Air-no Duc	None	4 / 1 / 0 / 9	

Building Sub Areas

Code	Description	Living Area	Gross Area	Effective Area
BAS	First Floor	1,630	1,630	
FAT	Attic, Finished	80	400	
FGR	Garage	0	460	
FOP	Porch, Open	0	78	
FUS	Upper Story, Finished	900	900	
UAT	Attic, Unfinished	0	900	
UBM	Basement, Unfinished	0	990	
WDK	Deck, Wood	0	392	
	Totals	**2,610**	**5,750**	**3,114**

Building Sketch Enlarge



Building Photo Enlarge

Out Buildings / Extra Features

Description	Sub Description	Area	Year Built	Value
Fireplace		1 UNITS	1987	$ 3,000
Pole Barn		770 S.F.	1840	$ 2,100
1st Barn		1,628 S.F.	1880	$ 6,800
Shed Frame		140 S.F.	1980	$ 1,100
RES GENERATOR		1 UNITS	1987	$ 0

Sale Information

Sale Date	Sale Price	Deed Book/Page	Sale Qualification	Reason	Vacant or Improved	Owner
11/18/1999		971/ 118	Unqualified		Improved	GUSTAFSON FRANK E EST/FRANK E JR & ALAN R CO EXEC'S/FRANK E,
11/18/1999		971/ 118	Unqualified		Improved	GUSTAFSON FRANK E (EST) ET AL
01/12/1998		879/ 1	Unqualified		Improved	GUSTAFSON EDWARD & FRANK/EST F&A GUSTAFSON

Permit Information

Permit ID	Issue Date	Type	Description	Amount	Inspection Date	% Complete	Date Complete	Comments

66518	10/22/2013					0		GENERATOR
65000	11/28/2012					0		MECHANICAL SERVICE FOR ANTENNAE
64369	09/12/2012					0		INSTALL 1 ANTENNAE - AT&T
34296	09/24/1998		20'X40' FRAME T			0		
22715	10/01/1990		WOOD DECK			0		

Town of Watertown, CT

Recent Sales in Neighborhood	Previous Parcel	Next Parcel	Field Definitions	Return to Main Search	Watertown Home

Owner and Parcel Information

Owner Name	NORTH ATLANTIC TOWERS & AT&T	**Today's Date**	March 8, 2017
Mailing Address	C/O AMERICAN TOWERS LLC PROP T	**Parcel ID**	185880 (Account #: 185880)
	ATLANTA, GA 31139		
Location Address	655 BASSETT RD	**Census Tract**	
Map / Block / Lot	15 / 25 / 3*	**Acreage**	0.00
Use Class / Description	4340 Cell Tower	**Parcel Map**	
Assessing Neighborhood	0001A	**Utilities**	

Current Appraised Value Information

Building Value	XF Value	OB Value	Land Value	Special Land Value	Total Appraised Value	Net Appraised Value	Current Assessment
$ 0	$ 0	$ 250,000	$ 0		$ 250,000	$ 250,000	$ 175,000

Assessment History

Year	Building	OB/Misc	Land	Total Assessment
Current	0	$ 175,000	0	$ 175,000
2015	0	$ 175,000	0	$ 175,000
2014	0	$ 175,000	0	$ 175,000

Land Information

Use	Class	Zoning	Area	Value
Cell Tower	I		0 SF	

Building Information

No Building Information available for this parcel.

Out Buildings / Extra Features

Description	Sub Description	Area	Year Built	Value
CELL TOWER		1		$ 250,000

Sale Information

Sale Date	Sale Price	Deed Book/Page	Sale Qualification	Reason	Vacant or Improved	Owner
05/01/2013		1851/ 144	Unqualified		Improved	NORTH ATLANTIC TOWERS & AT&T
05/01/2013		1851/ 14	Unqualified		Improved	NORTH ATLANTIC TOWERS & AT&T
11/18/1999		971/ 118	Unqualified		Improved	GUSTAFSON FRANK E EST/FRANK E JR &

Permit Information

Permit ID	Issue Date	Type	Description	Amount	Inspection Date	% Complete	Date Complete	Comments
65000	11/28/2012					0		MECHANICAL SERVICE
64369	09/12/2012					0		INSTALL 1 ANTENNA

Recent Sales in Neighborhood	Previous Parcel	Next Parcel	Field Definitions	Return to Main Search Page	Watertown Home