



**QC Development**

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April 14, 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)**  
**353 Pumpkin Hill Road, Ashford, CT 06278**  
**N 41-50-52.38**  
**W 72-07-17.82**

Dear Ms. Bachman:

The Connecticut Siting Council previously acknowledged EM-CING-003-160519 on June 13, 2016, however these modifications were never implemented and AT&T now intends to use a different antenna for this modification project.

AT&T previously maintained six (6) antennas at the 197-foot level of the existing 300-foot Guyed Tower at 353 Pumpkin Hill Road, Ashford, CT. Pursuant to CSC Petition #1121, these antennas are to be moved over to the same level of the new 240-foot Self-Support replacement tower, which is now owned by American Tower. The property is owned by Irene D. Bunte and co-owned by American Tower. AT&T now intends to install three (3) new CCI HPA-65R-BUU-H8 antennas. These antennas would be installed at the 196-foot level of the replacement tower along with the six (6) relocated antennas from the Guyed Tower. AT&T also intends to install six (6) Ericsson RRUS-11 B4 remote radio units and one Raycap surge arrester.

This facility was approved as Petition #1121 by the Connecticut Siting Council on January 8, 2015. This approval included no condition(s) that could feasibly be violated by this modification, including total facility height or mounting restrictions. 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 Michael J. Zambo, First Selectman of the Town of Ashford and the Land Use Department, as well as to the tower and property owners.

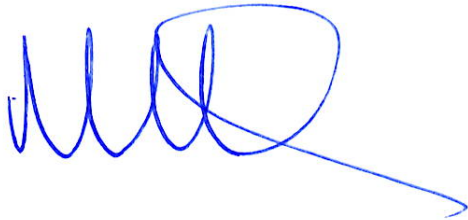
The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

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,

A handwritten signature in blue ink, consisting of several loops and a long tail that ends in a small arrowhead pointing to the right.

Mark Roberts  
QC Development  
Consultant for AT&T

Attachments

cc: Michael J. Zambo - as elected official  
Michael Gardner – Land Use Administrator (via e-mail)  
Irene D. Bunte – as property owner  
American Tower – as tower owner and property co-owner (via e-mail)

## Power Density

### Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm <sup>2</sup> )	Freq. Band (MHz <sup>**</sup> )	Limit S (mW/cm <sup>2</sup> )	%MPE
Other Carriers*							0.84%
AT&T UMTS	1	283	197.5	0.0028	880	0.5867	0.05%
AT&T UMTS	4	525	197.5	0.0206	1900	1.0000	0.21%
AT&T GSM	2	565	197.5	0.0111	880	0.5867	0.19%
Site Total							1.29%

\*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

Note: Existing values exclude LTE loading previously proposed (EM-CING-003-130214) but never installed.

### Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm <sup>2</sup> )	Freq. Band (MHz <sup>**</sup> )	Limit S (mW/cm <sup>2</sup> )	%MPE
Other Carriers*							0.84%
AT&T LTE	2	1771	196	0.0176	734	0.4893	0.36%
AT&T LTE	2	875	196	0.0174	1900	1.0000	0.17%
AT&T UMTS	1	283	196	0.0028	880	0.5867	0.05%
AT&T UMTS	4	525	196	0.0209	1900	1.0000	0.21%
AT&T GSM	2	565	196	0.0113	880	0.5867	0.19%
Site Total							1.82%

\*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

Note: Proposed Loading may also include corrections to certain Existing Loading values



# WIRELESS COMMUNICATIONS FACILITY

## CT1068 - LTE 1C

### ASHFORD - 363 PUMPKIN HILL RD

### AMERICAN TOWER SITE NO.: 411217

### 353 PUMPKIN HILL ROAD

### ASHFORD, CT 06278

#### 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.

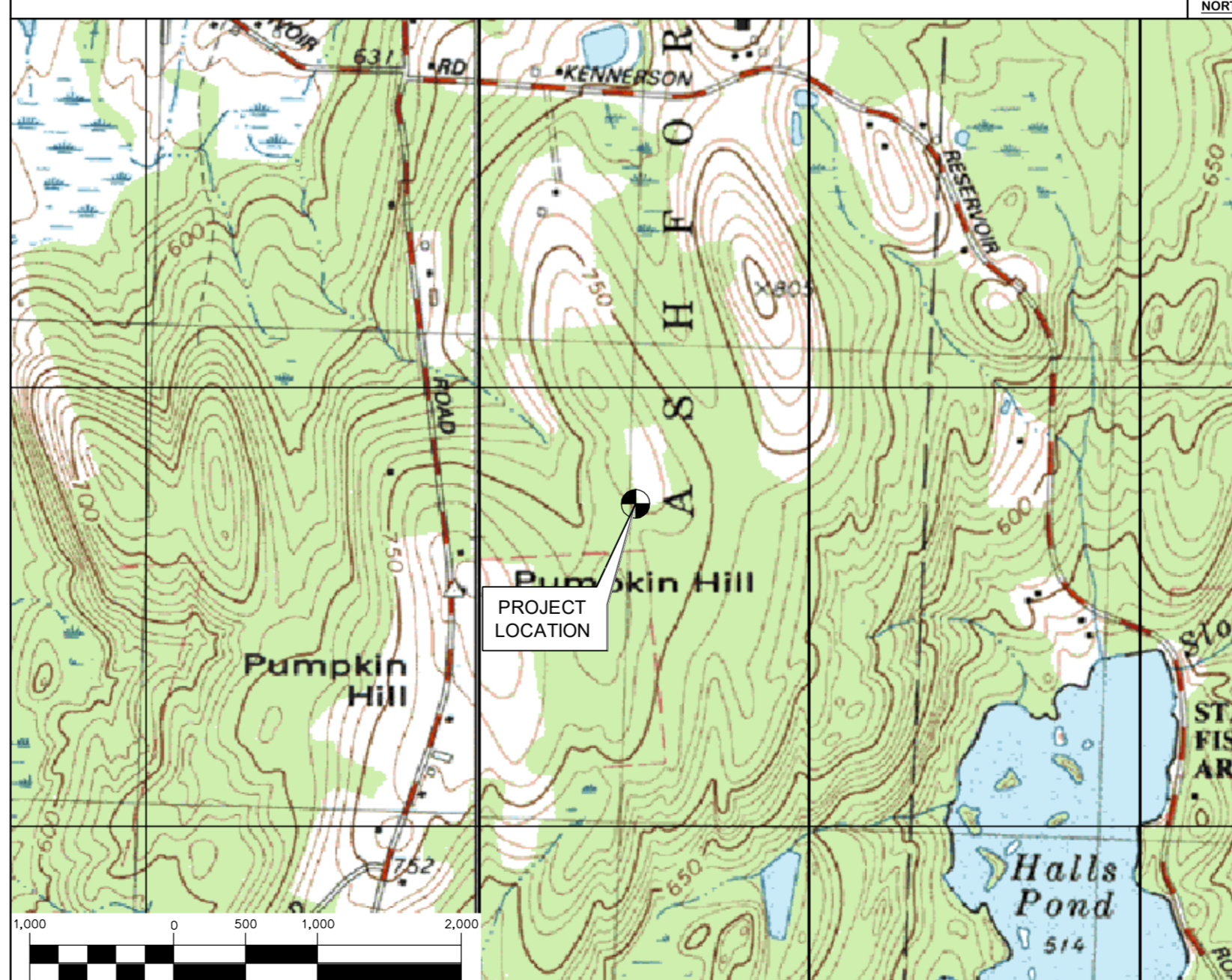
#### SITE DIRECTIONS

<b>FROM:</b> 500 ENTERPRISE DRIVE ROCKY HILL, CONNECTICUT	<b>TO:</b> 353 PUMPKIN HILL ROAD ASHFORD, CONNECTICUT
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1. HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD 0.4 MI
2. TURN LEFT ONTO CAPITAL BLVD 0.2 MI
3. TURN LEFT ONTO WEST ST. 0.2 MI
4. TURN LEFT TO MERGE ONTO I-91 N 7.8 MI
5. TAKE EXIT 29 TO MERGE ONTO CT-15 N/US-5 N TOWARD I-84 E/E HARTFORD/BOSTON 2.1 MI
6. CONTINUE ONTO CT-15 N 1.5 MI
7. USE THE LEFT 2 LANES TO MERGE ONTO I-84 E TOWARD BOSTON 17.4 MI
8. TAKE EXIT 69 FOR CONNECTICUT 74 TOWARD U.S. 44/WILLINGTON/PUTNAM 0.3 MI
9. TURN RIGHT ONTO CT-74 E 7.5 MI
10. TURN LEFT ONTO US-44 E 3.1 MI
11. TURN RIGHT ONTO PUMPKIN HILL RD, DESTINATION WILL BE ON THE LEFT 1.7 MI

#### VICINITY MAP

SCALE: 1" = 1000'



#### PROJECT SUMMARY

1. THE PROPOSED SCOPE OF WORK CONSISTS OF A MODIFICATION TO THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING THE FOLLOWING:
  - A. RELOCATE EXISTING UMS ANTENNAS FROM POSITION 1 TO POSITION 3 AND INSTALL (3) NEW LTE HEXPORT ANTENNAS AT POSITION 1, (1) PER SECTOR.
  - B. INSTALL (3) NEW RRUS-11 BEHIND PROPOSED POSITION 1 ANTENNA.
  - C. INSTALL NEW DUS 41 UNIT WITHIN EXISTING EQUIPMENT RACK LOCATED INSIDE EXISTING EQUIPMENT SHELTER.
  - D. INSTALL (1) AT&T SURGE ARRESTOR.
  - E. INSTALL ONE (1) PROPOSED FIBER TRUNK CABLE AND TWO (2) DC CONDUCTOR CABLES FROM EQUIPMENT AT GRADE TO ANTENNA SECTORS.

#### PROJECT INFORMATION

AT&T SITE NUMBER:	CT1068
AT&T SITE NAME:	ASHFORD - 363 PUMPKIN HILL RD
SITE ADDRESS:	AMERICAN TOWER SITE NO.: 411217 353 PUMPKIN HILL ROAD ASHFORD, CT 06278
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°-50'-52.136" N LONGITUDE: 72°-07'-17.777" W GROUND ELEVATION: ±760.8' A.M.S.L.

(COORDINATES AND GROUND ELEVATION BASED ON FAA 1-A SURVEY CERTIFICATION AS PREPARED BY MARTINEZ COUCH AND ASSOCIATES; DATED SEPTEMBER 05, 2014. REVISED MARCH 25, 2015.)

#### SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
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C-1	PLANS AND ELEVATION	3
C-2	LTE 1C EQUIPMENT DETAILS	3
E-1	LTE SCHEMATIC DIAGRAM AND NOTES	3
E-2	LTE WIRING DIAGRAM	3
E-3	TYPICAL ELECTRICAL DETAILS	3

REV.	DATE	BY	CHK'D	DESCRIPTION
3	04/07/17	CAG	TUL	CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION
2	04/29/16	RAW	CAG	CONSTRUCTION DOCUMENTS - REVISED PER CLIENT REVIEW
1	12/15/15	CTP	CAG	CONSTRUCTION DOCUMENTS - REVISED PER CLIENT REVIEW
0	11/17/15	CTP	DMD	CONSTRUCTION DOCUMENTS - ISSUED FOR CLIENT REVIEW



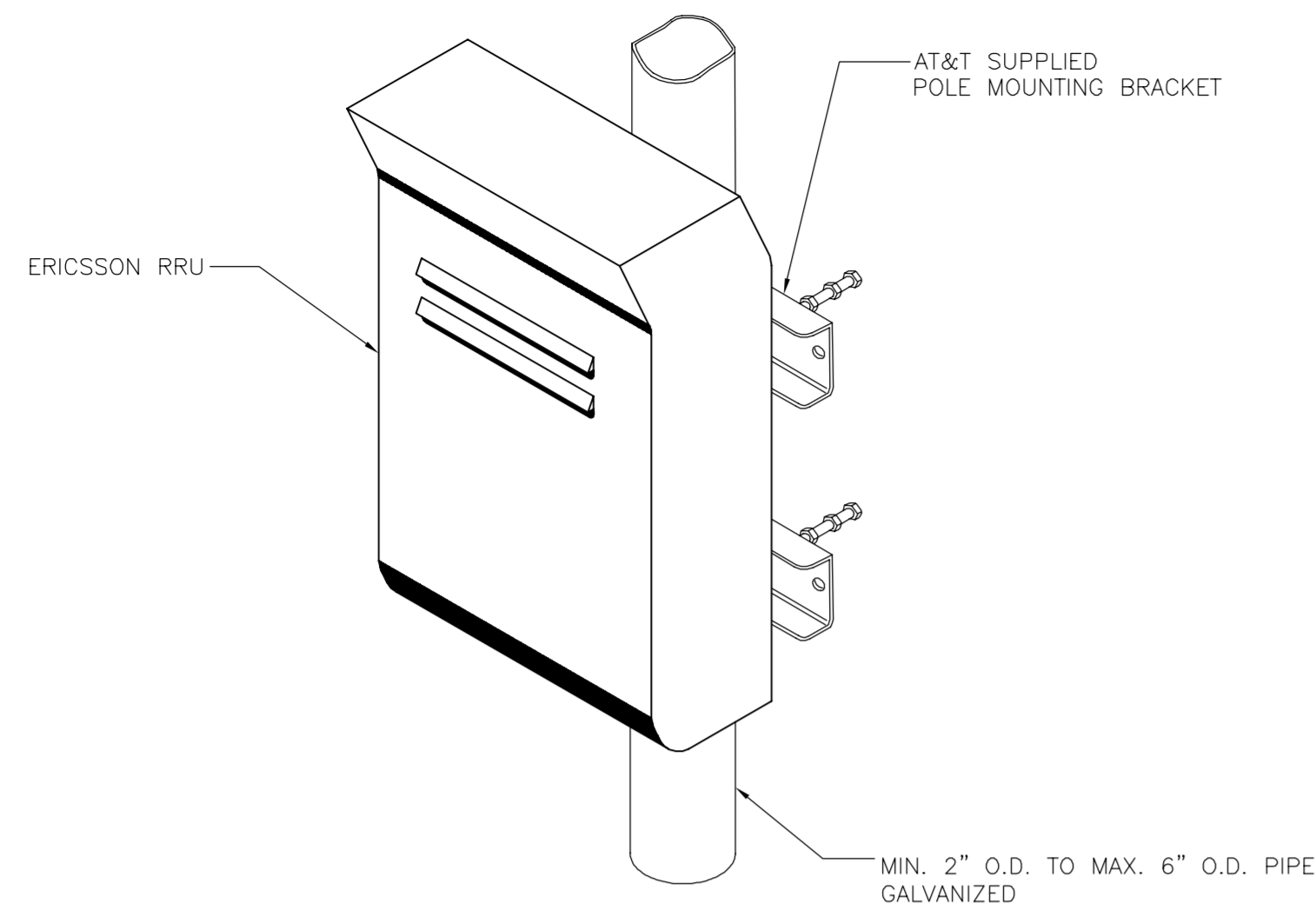
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**AT&T MOBILITY**  
WIRELESS COMMUNICATIONS FACILITY  
**ASHFORD - 363 PUMPKIN HILL RD**  
**CT1068 - LTE 1C**  
**353 PUMPKIN HILL ROAD**  
**ASHFORD, CT 06278**

DATE: 03/03/17  
SCALE: AS NOTED  
JOB NO. 17010.06

TITLE SHEET

**T-1**

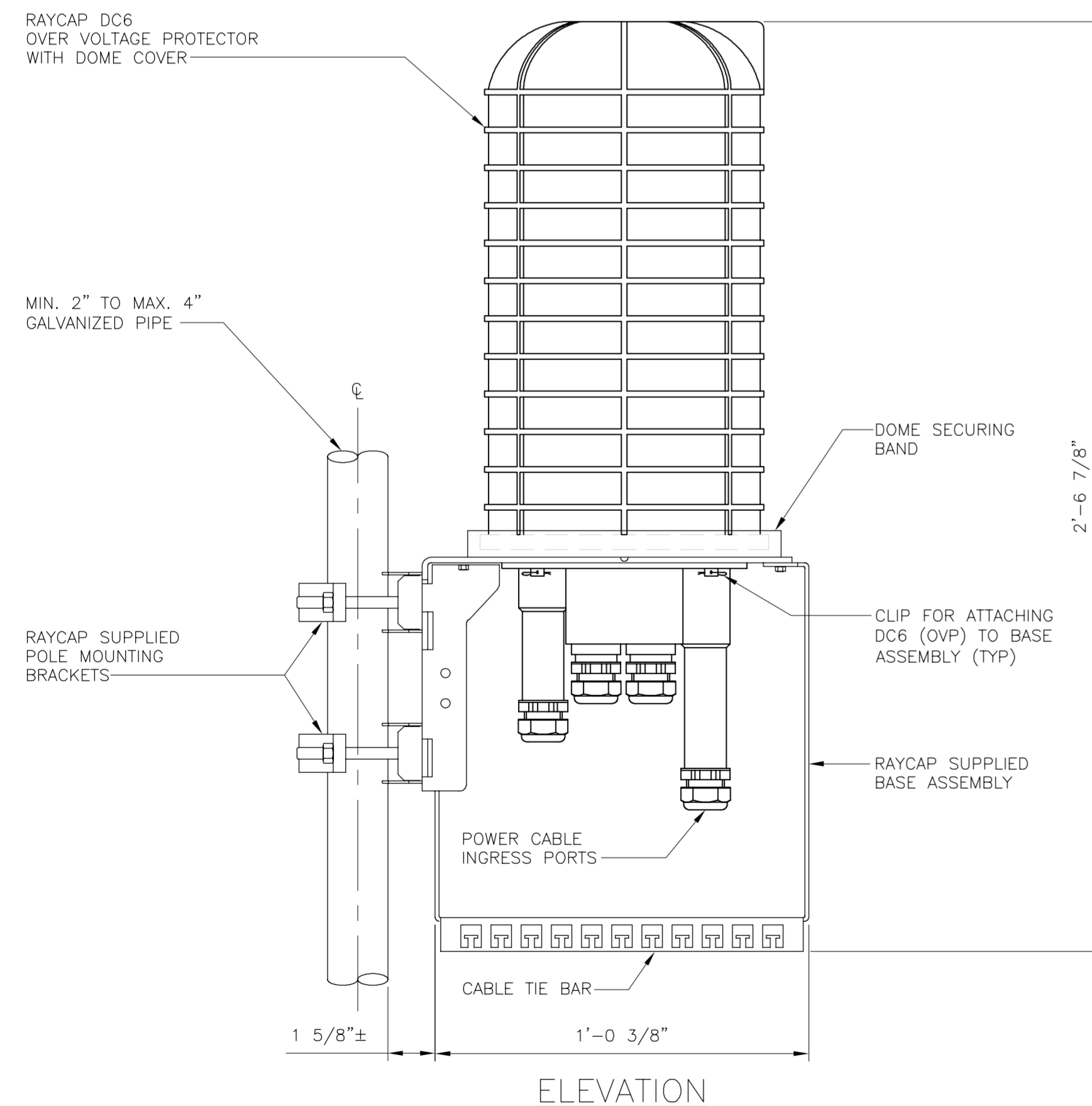


ISOMETRIC VIEW

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.

**1 TYPICAL RRUS MOUNTING DETAILS**  
SCALE: NTS



ELEVATION

NOTES:

1. RAYCAP VIA AT&T SUPPLIES THE DC6 OVER VOLTAGE PROTECTOR AND PIPE MOUNTING BRACKETS. SUBCONTRACTOR SHALL SUPPLY THE PIPE.

**2 RAYCAP DC6 MOUNTING DETAIL**  
SCALE: 3" = 1'-0"

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): 100-110 MPH (3 SECOND GUST)
  - RISK CATEGORY: II (BASED ON IBC TABLE 1604.5)
  - NOMINAL DESIGN SPEED (OTHER STRUCTURE): 101 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.

CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION	TUL		
CONSTRUCTION DOCUMENTS - REVISED PER CLIENT REVIEW	CAG		
CONSTRUCTION DOCUMENTS - REVISED PER CLIENT REVIEW	RAW		
CONSTRUCTION DOCUMENTS - REVISED PER CLIENT REVIEW	CIP		
CONSTRUCTION DOCUMENTS - ISSUED FOR CLIENT REVIEW	DND		
CONSTRUCTION DOCUMENTS - ISSUED FOR CLIENT REVIEW	CIP		
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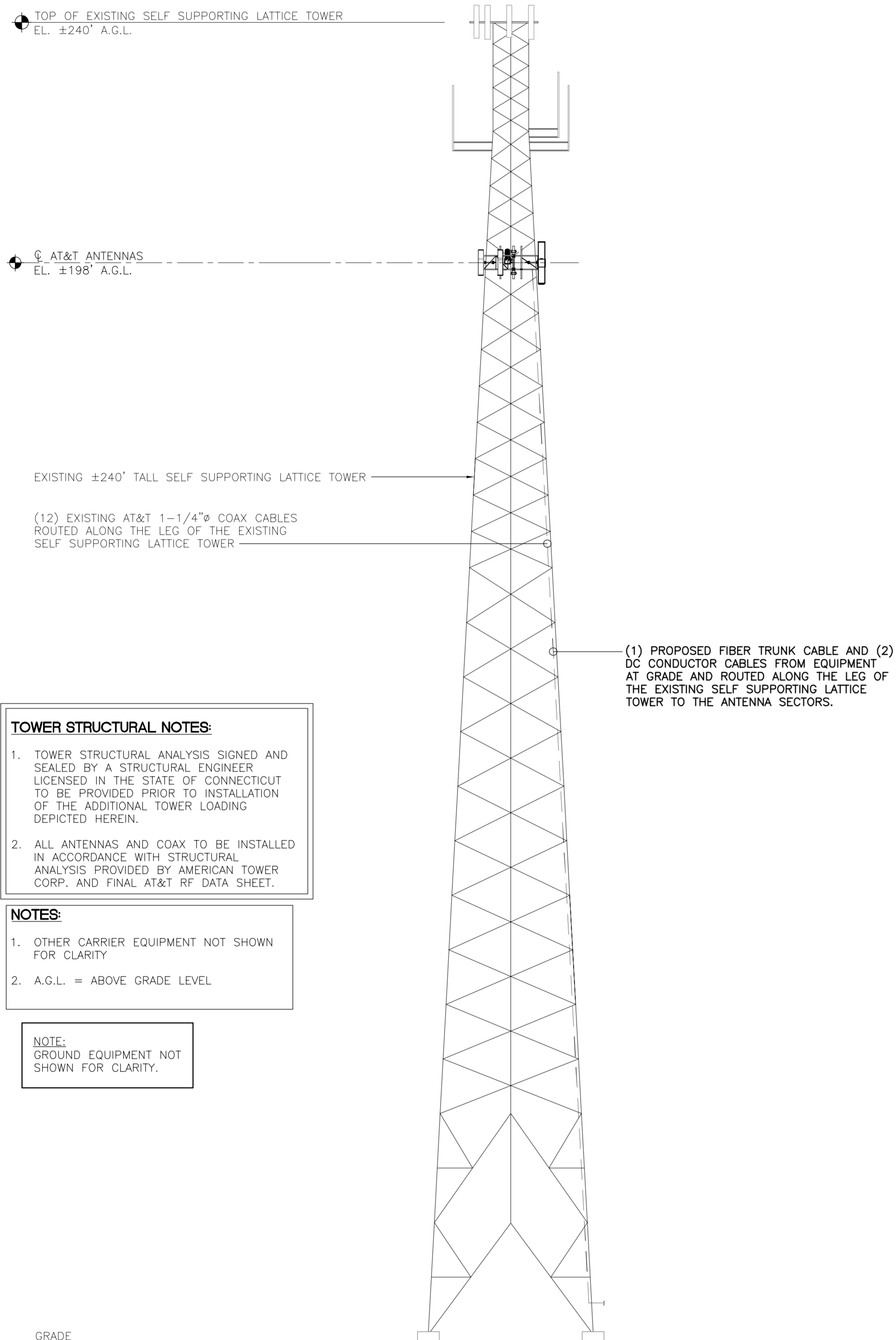
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NOTES, SPECIFICATIONS AND DETAILS

**N-1**

Sheet No. 2 of 7



**TOWER STRUCTURAL NOTES:**

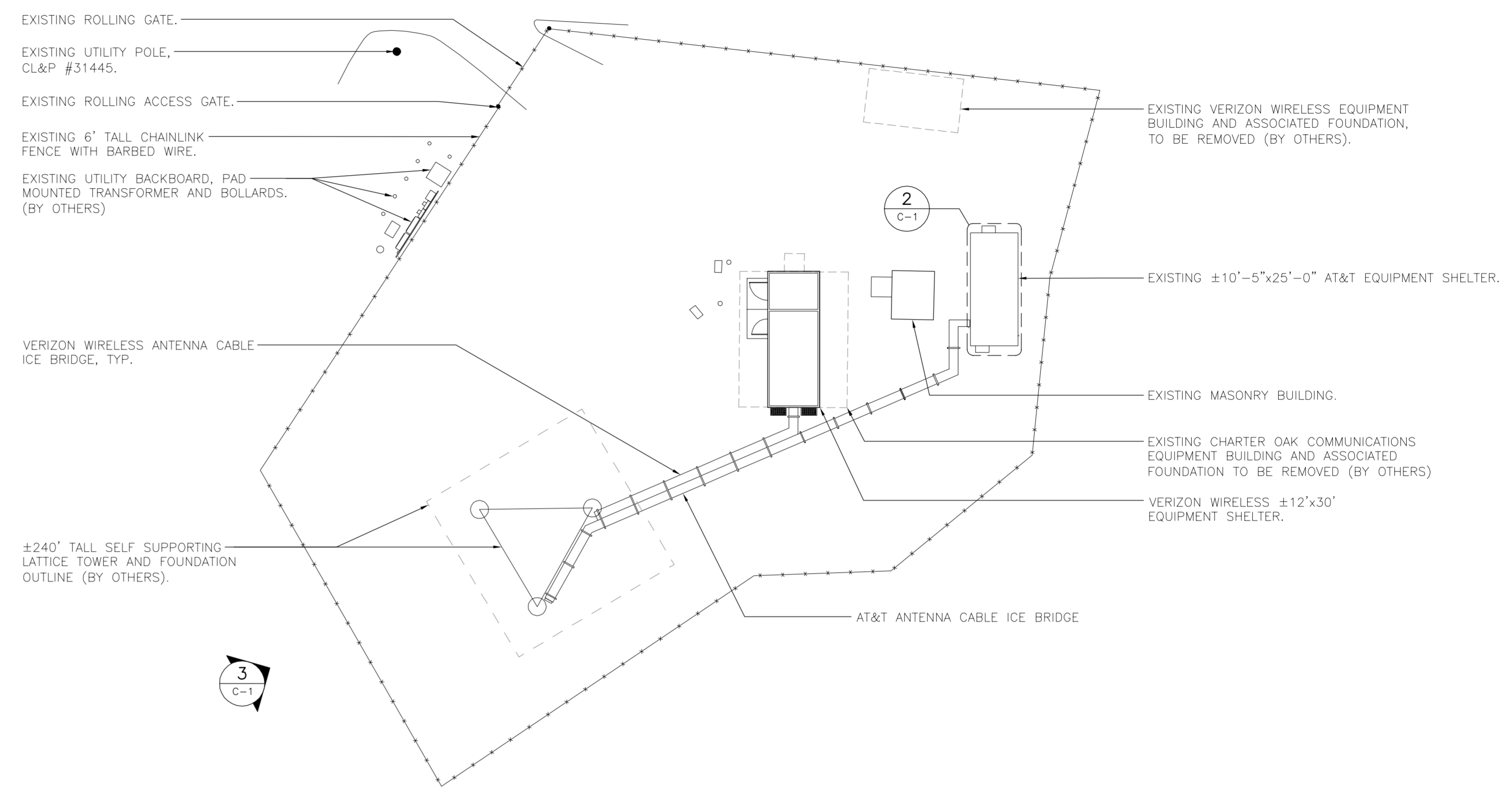
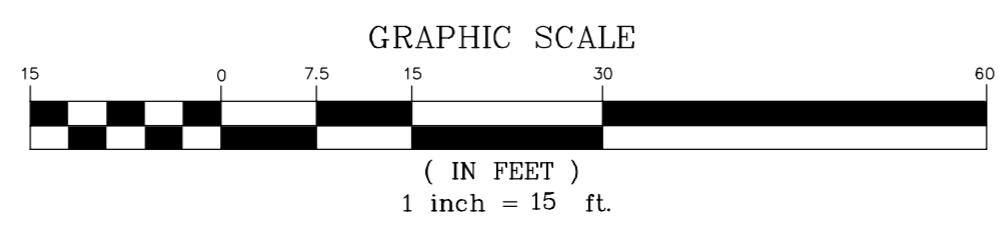
- TOWER STRUCTURAL ANALYSIS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT TO BE PROVIDED PRIOR TO INSTALLATION OF THE ADDITIONAL TOWER LOADING DEPICTED HEREIN.
- ALL ANTENNAS AND COAX TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY AMERICAN TOWER CORP.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

**NOTES:**

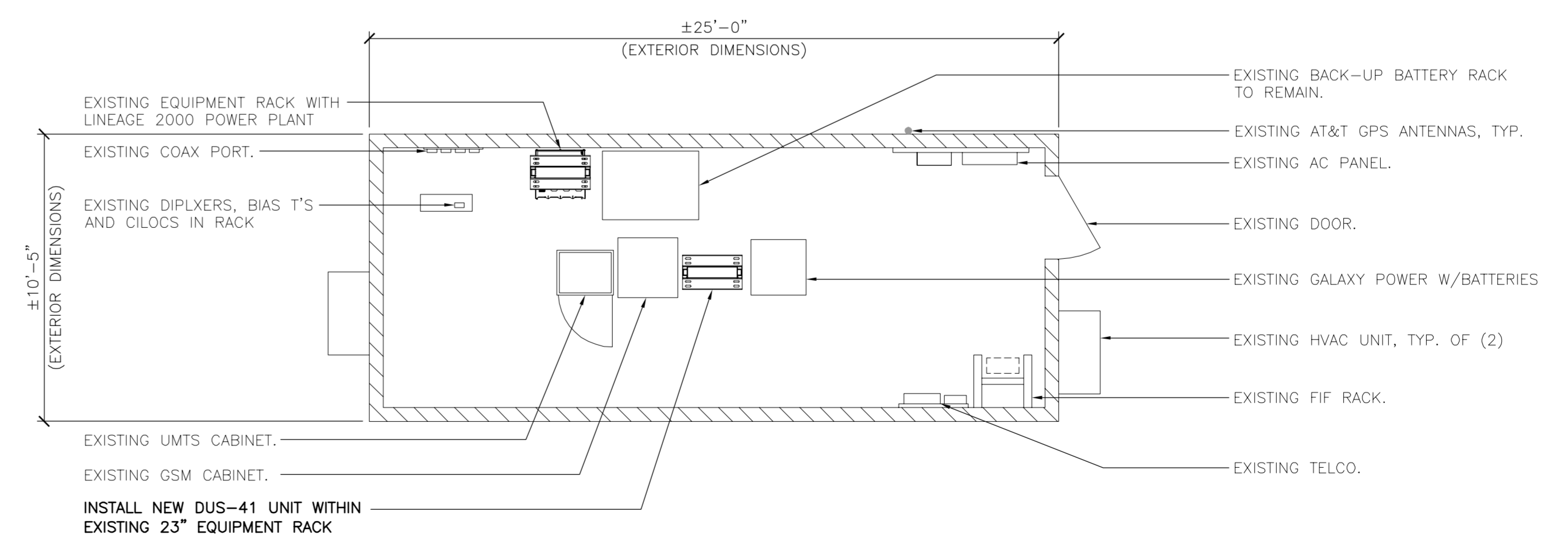
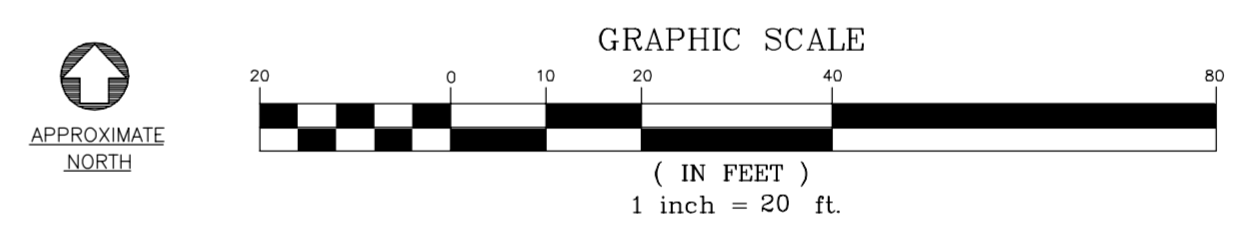
- OTHER CARRIER EQUIPMENT NOT SHOWN FOR CLARITY
- A.G.L. = ABOVE GRADE LEVEL

**NOTE:**  
GROUND EQUIPMENT NOT SHOWN FOR CLARITY.

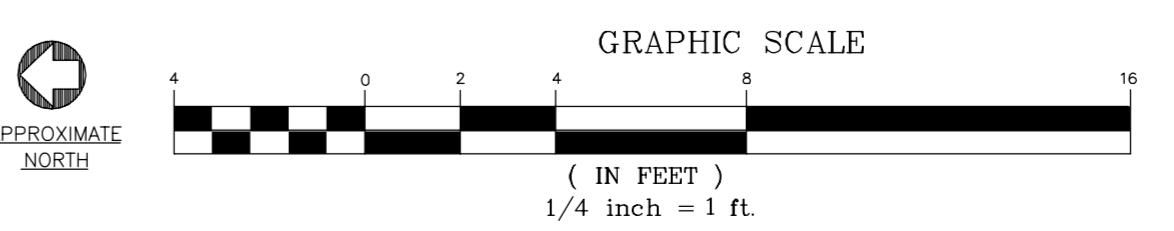
**3 SOUTHWEST TOWER ELEVATION**  
SCALE: 1" = 15'



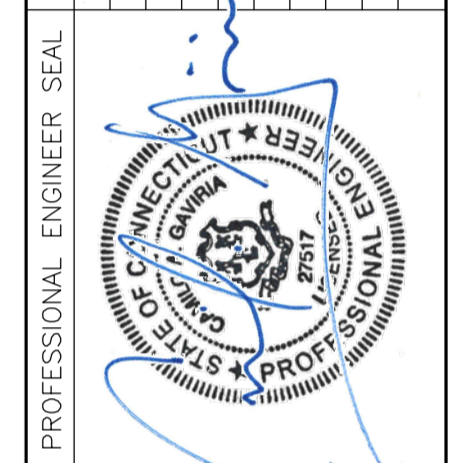
**1 COMPOUND PLAN**  
SCALE: 1" = 20'



**2 EQUIPMENT PLAN**  
SCALE: 1/4" = 1'-0"



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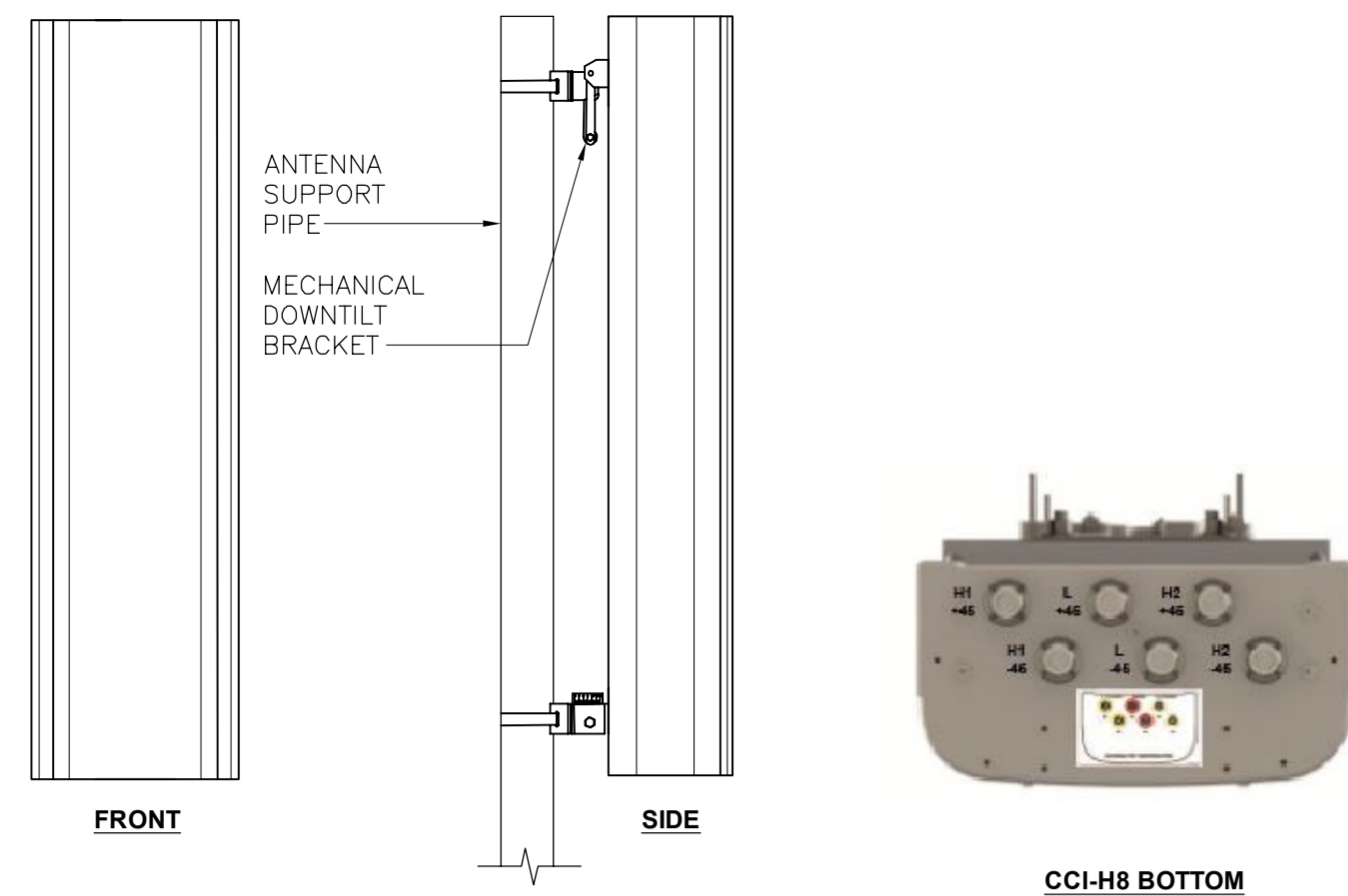
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**PLANS AND ELEVATION**

**C-1**

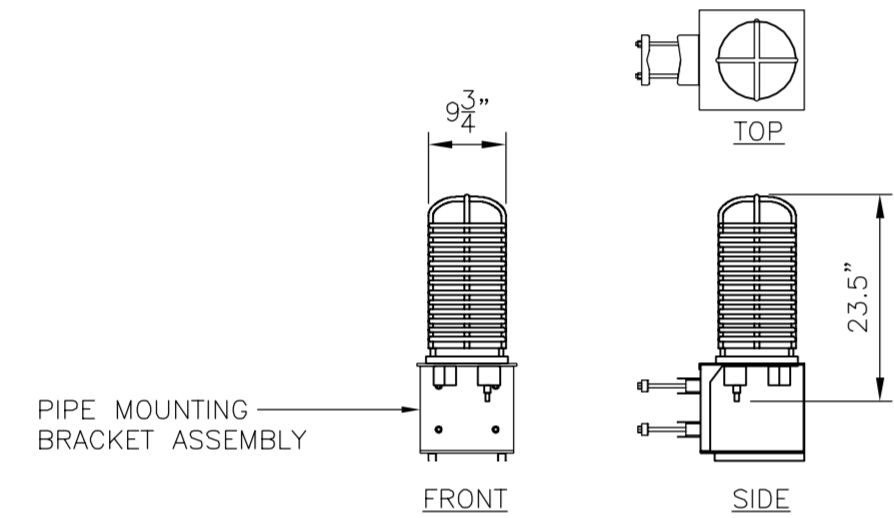
Sheet No. 3 of 7



CCI-H8 BOTTOM

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.

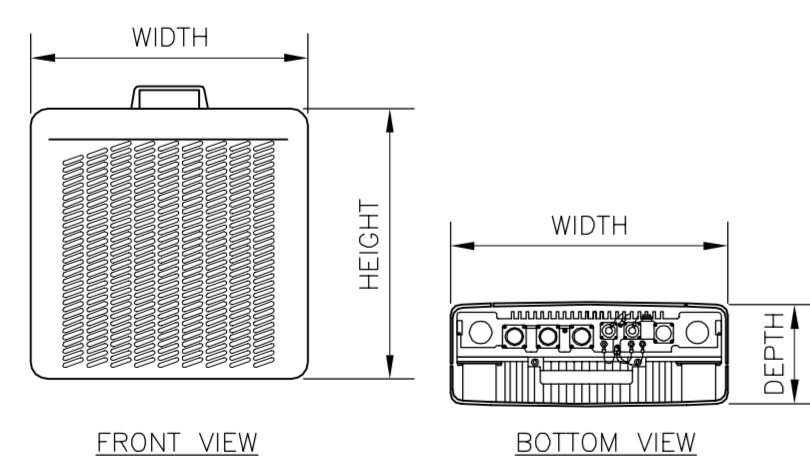
**5 PROPOSED ANTENNA DETAIL**  
SCALE: 1/2" = 1'-0"



SITE TYPE	ARRESTOR MAKE/MODEL	QTY REQUIRED	ARRESTOR LOCATION	WEIGHT
	MAKE: RAYCAP (SQUID) MODEL: DC6-48-60-18-8C	(1) PER SITE	TOWER, ADJACENT TO AT&T ANTENNAS AND RRUS.	20 LBS. (WITHOUT MOUNT)

- NOTES:  
1. CONTRACTOR TO COORDINATE FINAL SURGE ARRESTOR MODEL SELECTION(S) WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.  
2. CONTRACTOR TO INSTALL ARRESTOR IN CONFORMANCE WITH MANUFACTURERS RECOMMENDATIONS.

**6 SURGE ARRESTOR DETAIL**  
SCALE: NTS

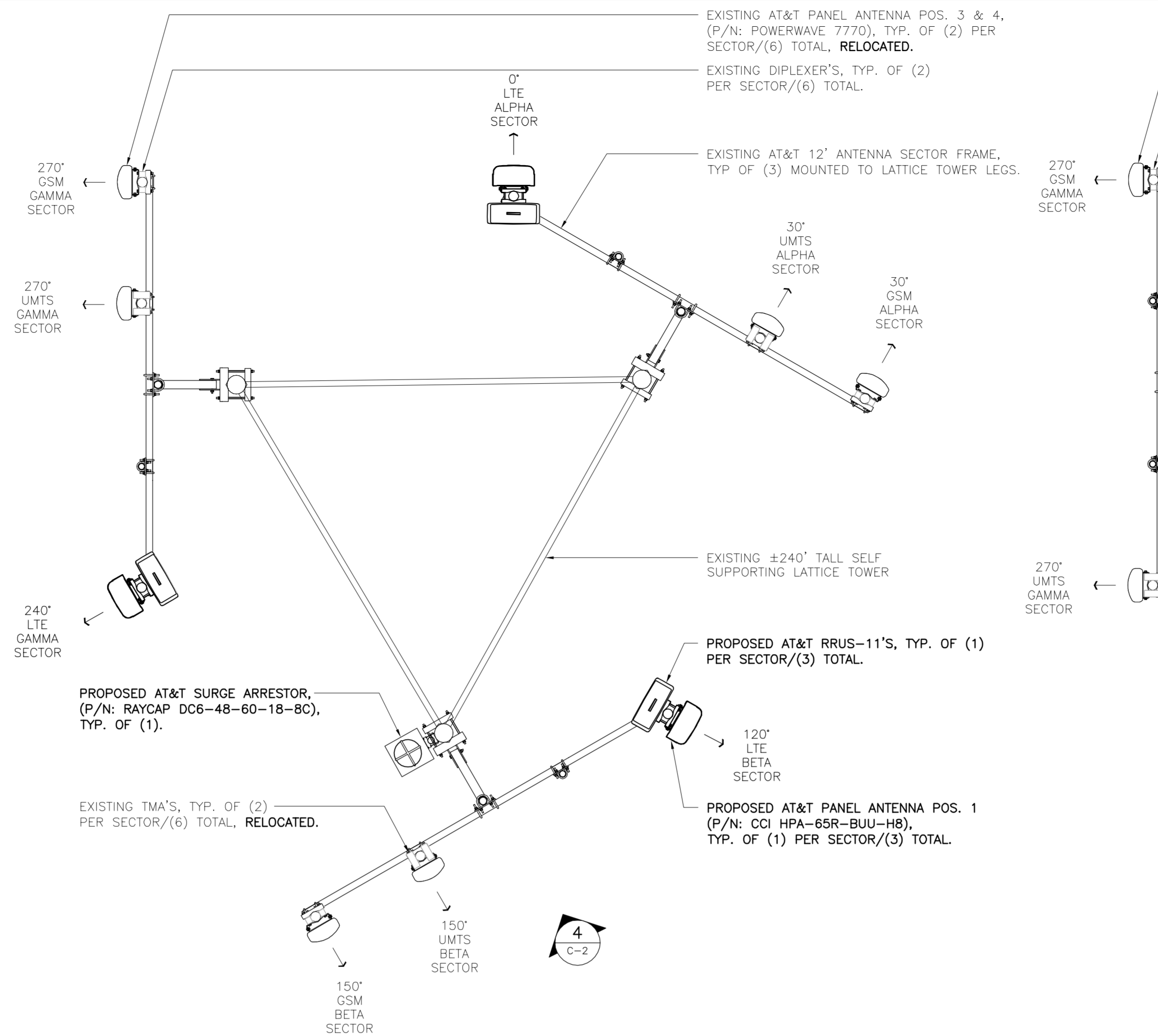


RRUS-11

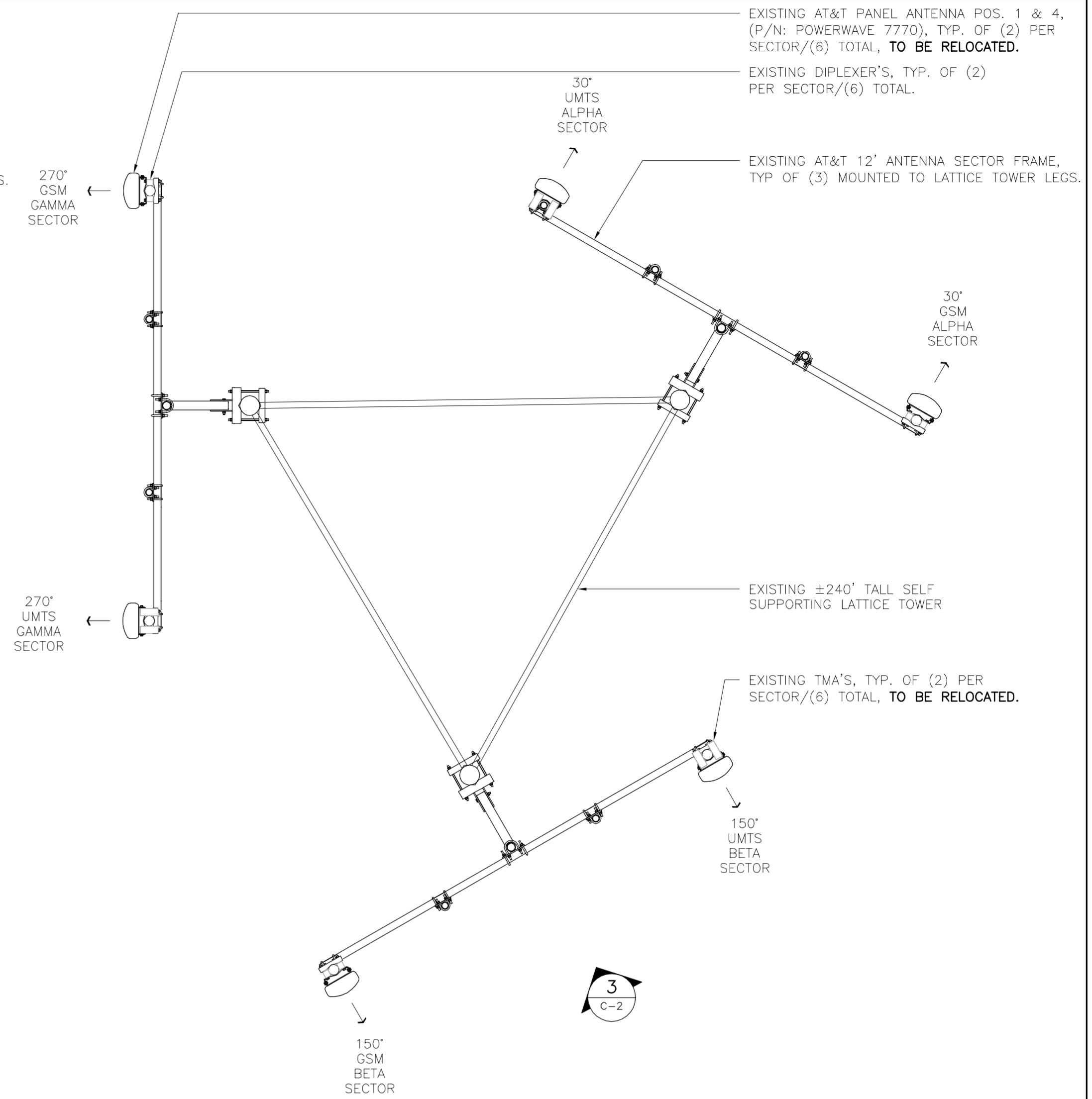
RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS 11	17.8"H x 17.3"W x 7.2"D	50 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

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

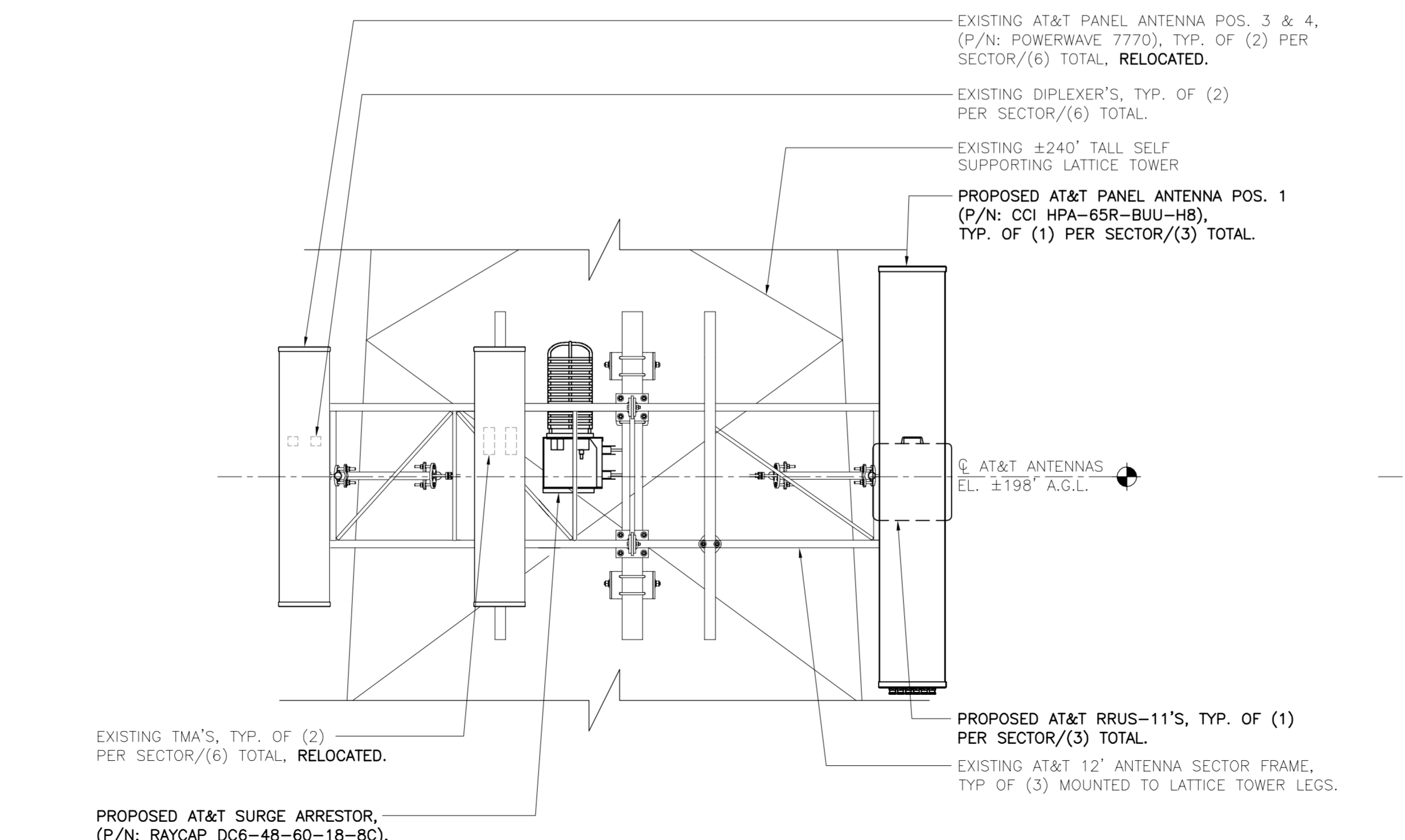
**7 ERICSSON RRUS 11 DETAIL**  
SCALE: 1" = 1'-0"



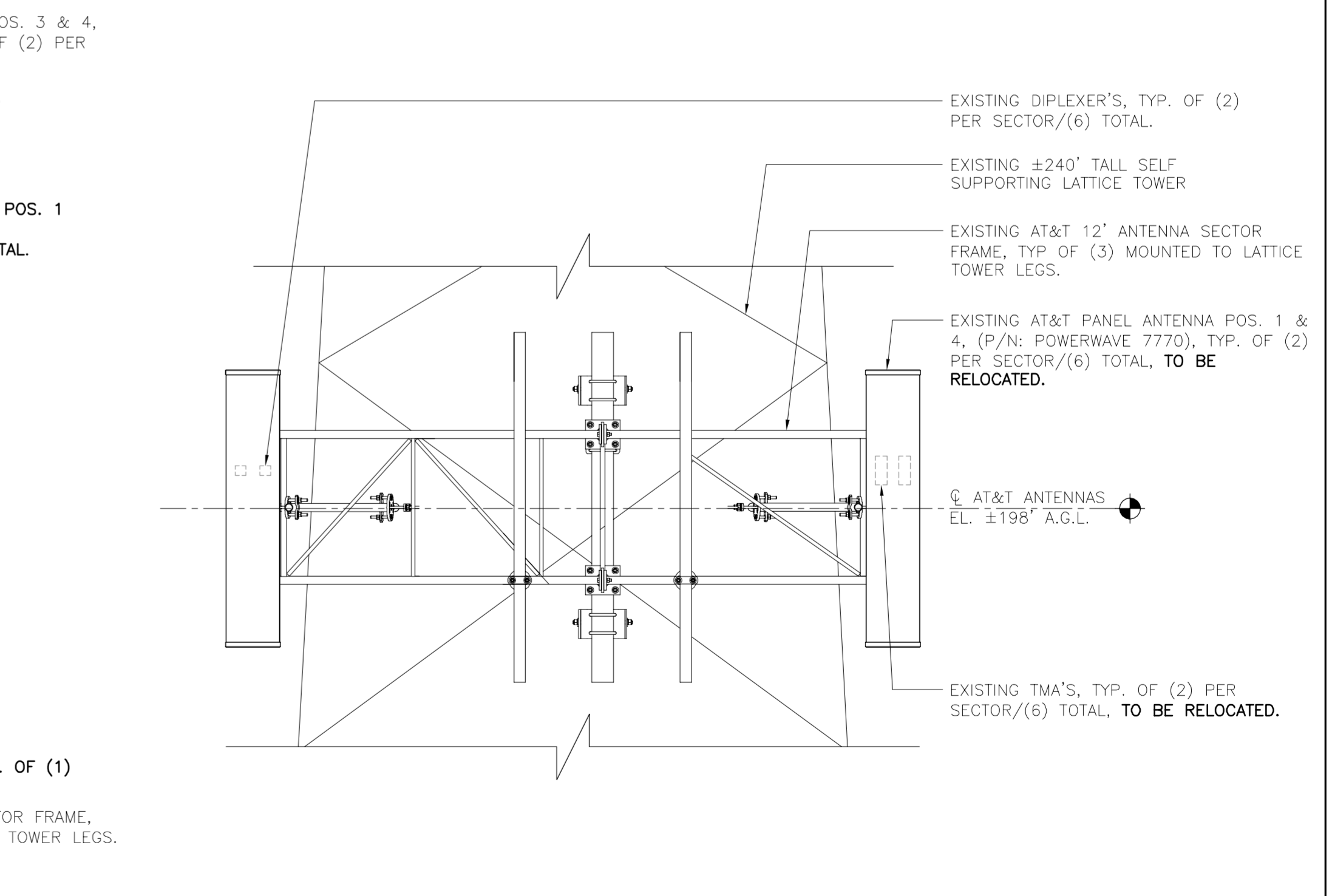
**2 PROPOSED ANTENNA PLAN**  
SCALE: 3/8" = 1'-0" NORTH



**1 EXISTING ANTENNA PLAN**  
SCALE: 3/8" = 1'-0" NORTH



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



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

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
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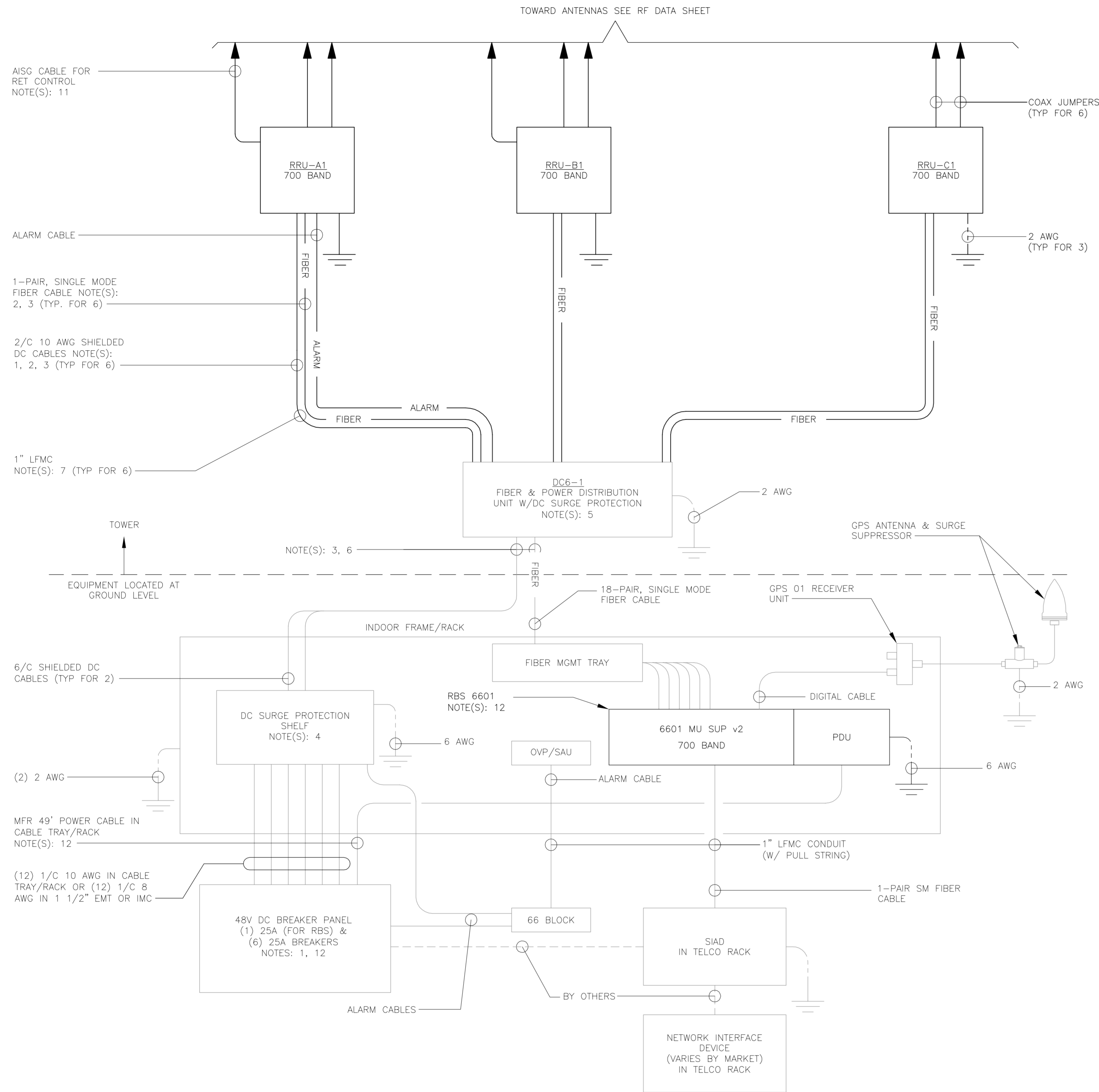
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**LTE 1C**  
EQUIPMENT  
DETAILS

**C-2**  
Sheet No. 4 of 7





**1** LTE SCHEMATIC DIAGRAM  
E-1 NOT TO SCALE

**LTE SCHEMATIC DIAGRAM NOTES:**

- 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.
- LEAVE COILED AND PROTECTED UNTIL TERMINATED.
- DC AND FIBER CABLE SHALL BE ROUTED WITH THE EXISTING COAX CABLE.
- DC SURGE PROTECTION SHELF SHALL BE RAYCAP DCx-48-60-RM.
- FIBER & DC DISTRIBUTION BOX W/DC SURGE PROTECTION SHALL BE RAYCAP DC6-48-60-18-8F.
- 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.
- CONDUIT TO BE USED ON A TOWER IF THE RRU IS MORE THAN 10' FROM THE DISTRIBUTION UNITS. MAX CABLE LENGTH IS 16 FEET.
- 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.
- 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.
- FIBER OPTIC CABLES SHALL BE INSTALLED IN FLEXIBLE CONDUIT AS SCOPED BY MARKET.
- RET CONTROL FROM THE RRU IS AN OPTIONAL METHOD OF CONNECTION. REFER TO RF DATA SHEET FOR APPLICABILITY.
- 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.

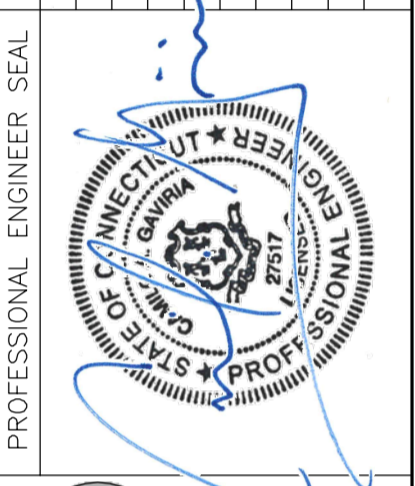
**ELECTRICAL NOTES**

- 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.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
- CONNECT ALL NEW EQUIPMENT TO EXISTING TELCO AS REQUIRED BY MANUFACTURER.
- MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
- 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.
- 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 OWNER'S REPRESENTATIVE, AND ANY DEFICIENCIES SHALL BE CORRECTED.
- 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.
- PROVIDE AND INSTALL GROUND KITS FOR ALL NEW COAXIAL CABLES AND BOND TO EXISTING OWNERS GROUNDING SYSTEM PER OWNERS SPECIFICATIONS AND NEC.
- 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.
- MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE AND/OR BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
- 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.
- 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.
- 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.
- GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
- EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122. (MIN. #12 AWG).
- 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**

- 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:
    - TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
    - CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
    - GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.
- TESTING SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF OWNER'S CONSTRUCTION REPRESENTATIVE. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.
- 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.
- CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

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CONSTRUCTION DOCUMENTS - REVISED PER CLIENT REVIEW	CAG	12/15/15	CTP
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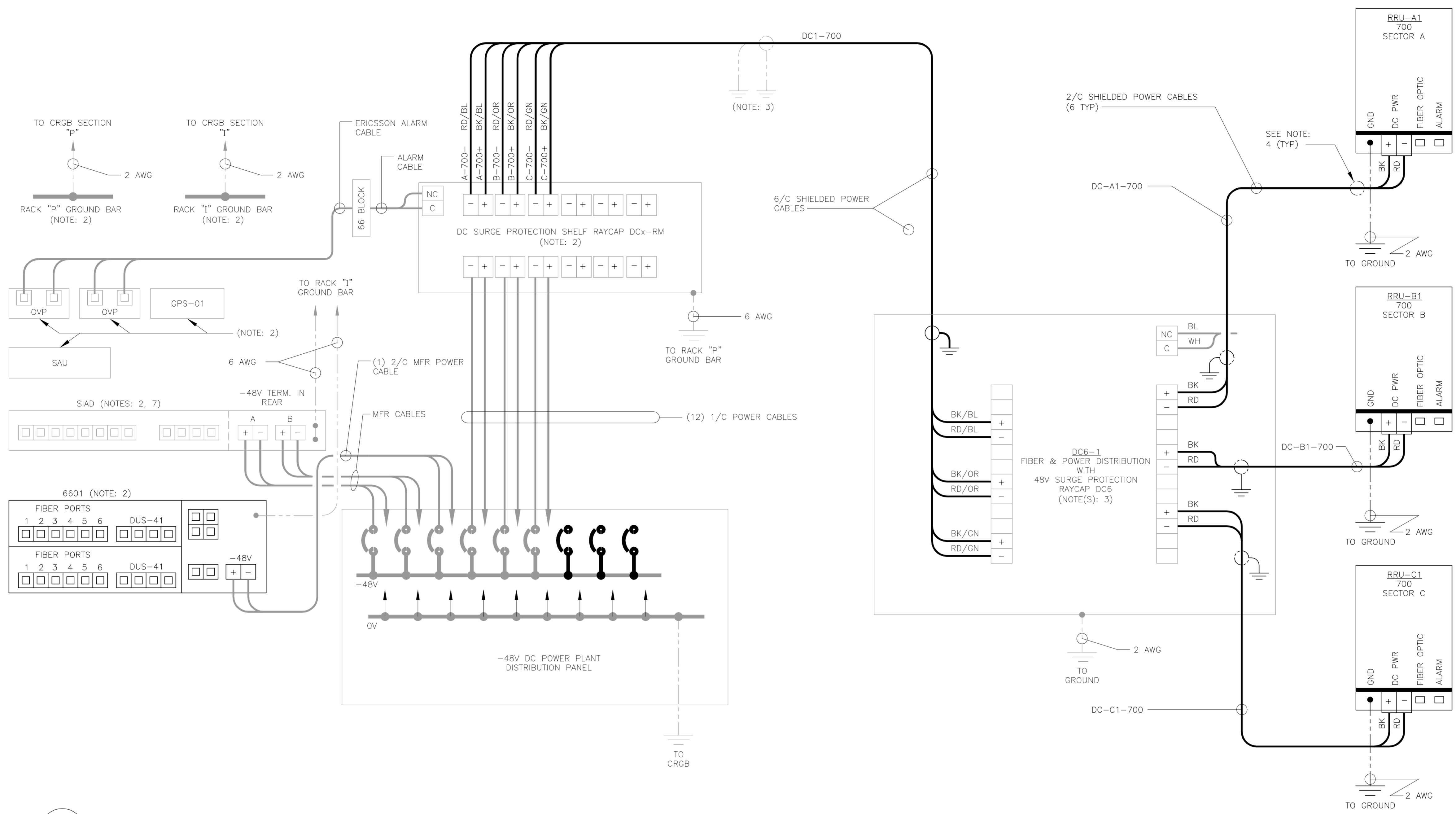


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**LTE SCHEMATIC DIAGRAM AND NOTES**

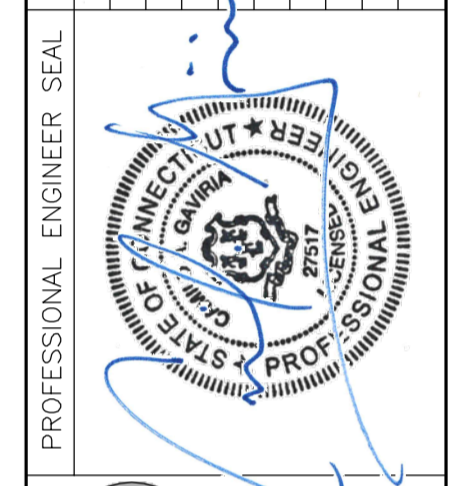


**1** LTE WIRING DIAGRAM  
E-2 NOT TO SCALE

**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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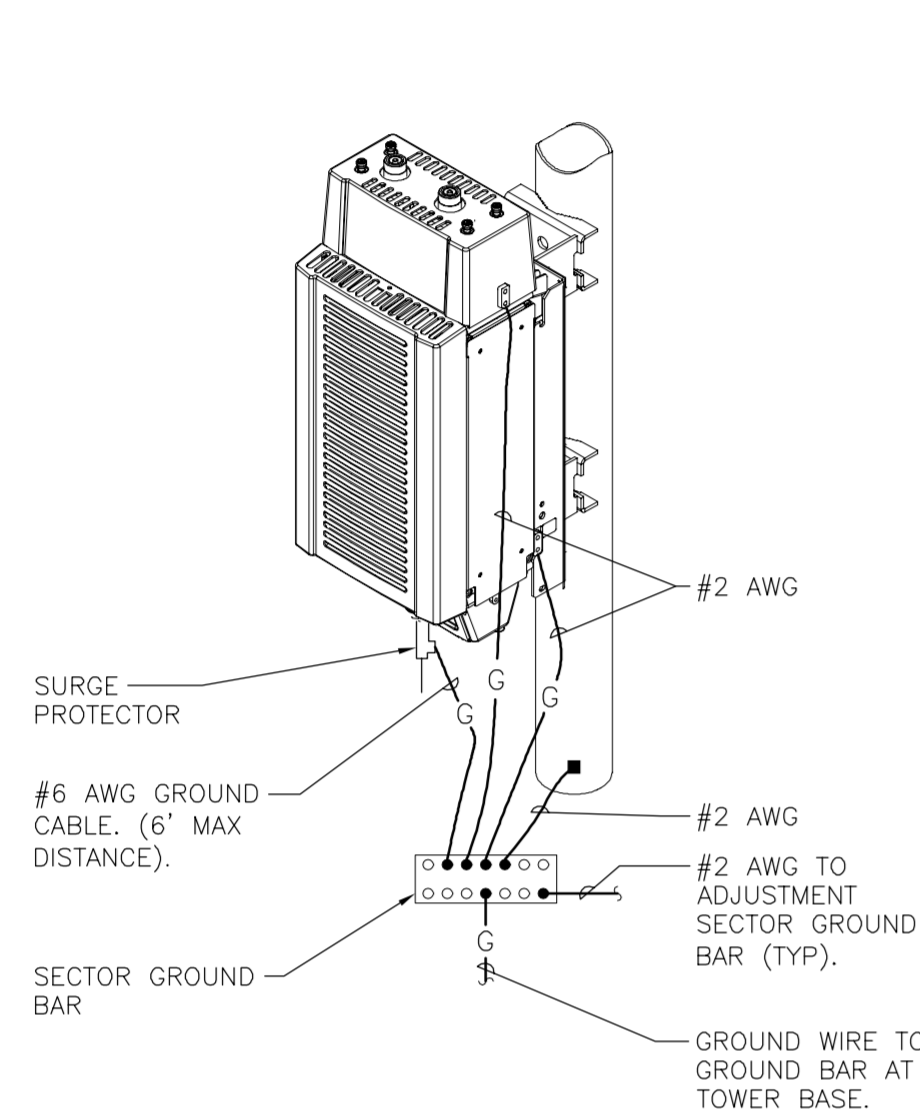
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363 PUMPKIN HILL ROAD  
ASHFORD, CT 06278

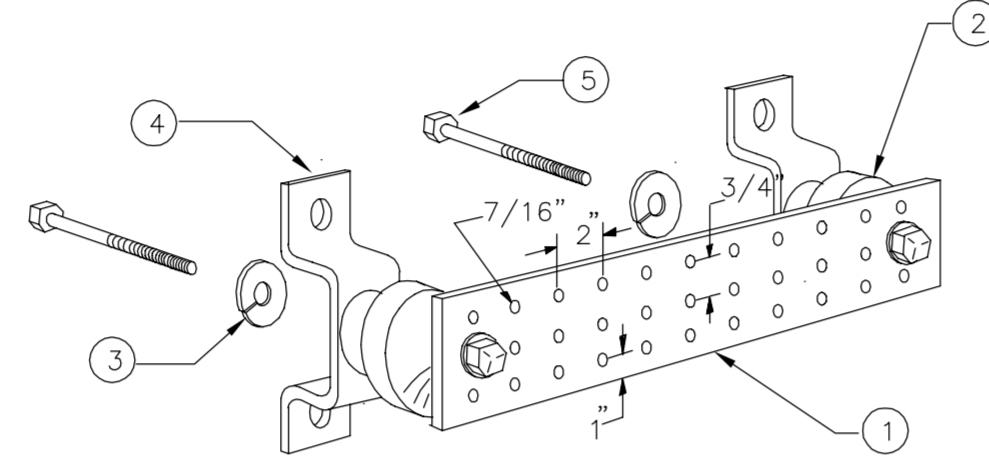
DATE: 03/03/17  
SCALE: AS NOTED  
JOB NO. 17010.06

LTE WIRING DIAGRAM

EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:  
 1. AT TOP OF THE CABINET  
 2. AT RIGHT SIDE OF THE CABINET.



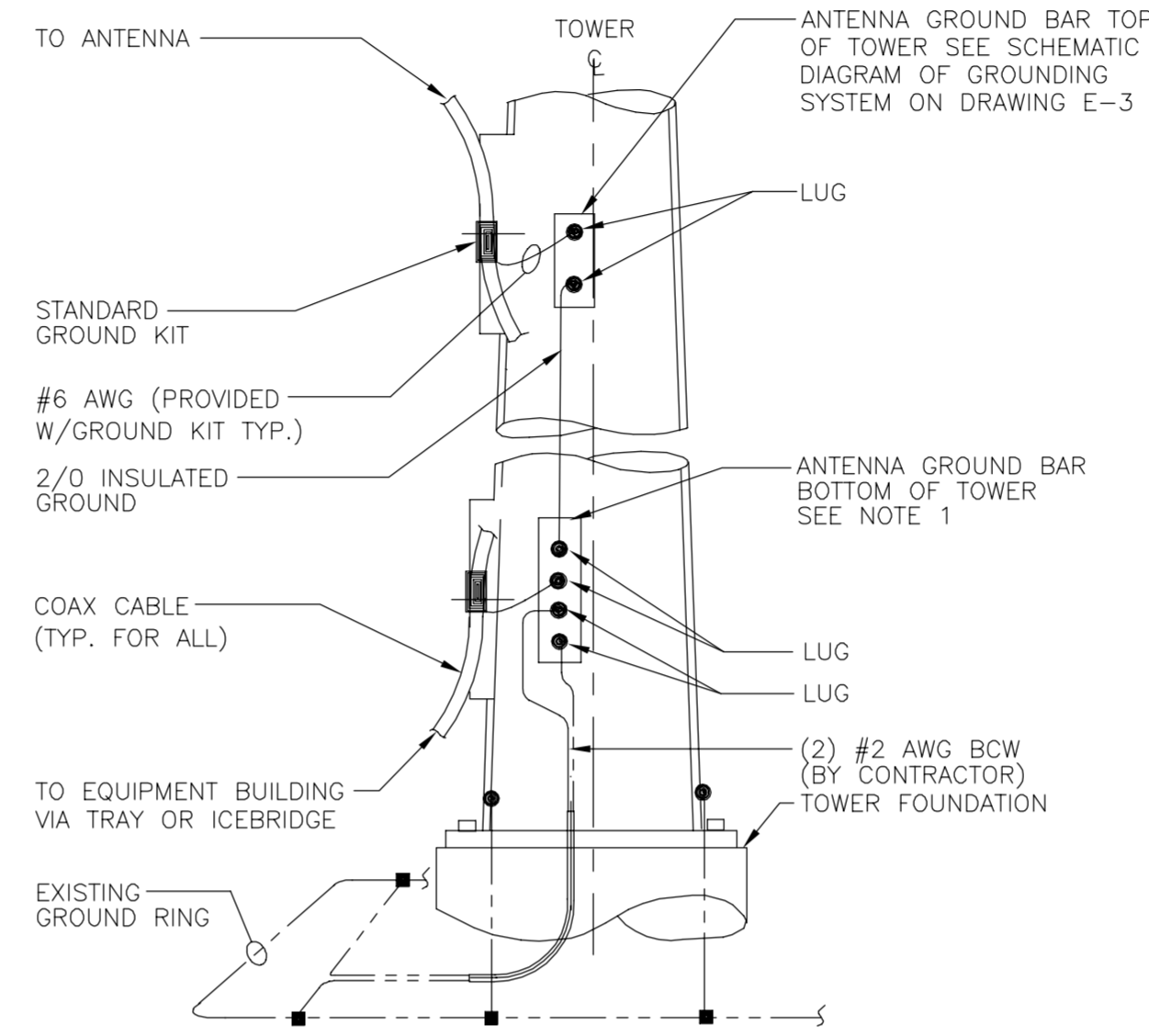
**4 RRU POLE MOUNT GROUNDED**  
 E-3 NOT TO SCALE



**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. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056.
5. STAINLESS STEEL SECURITY SCREWS.

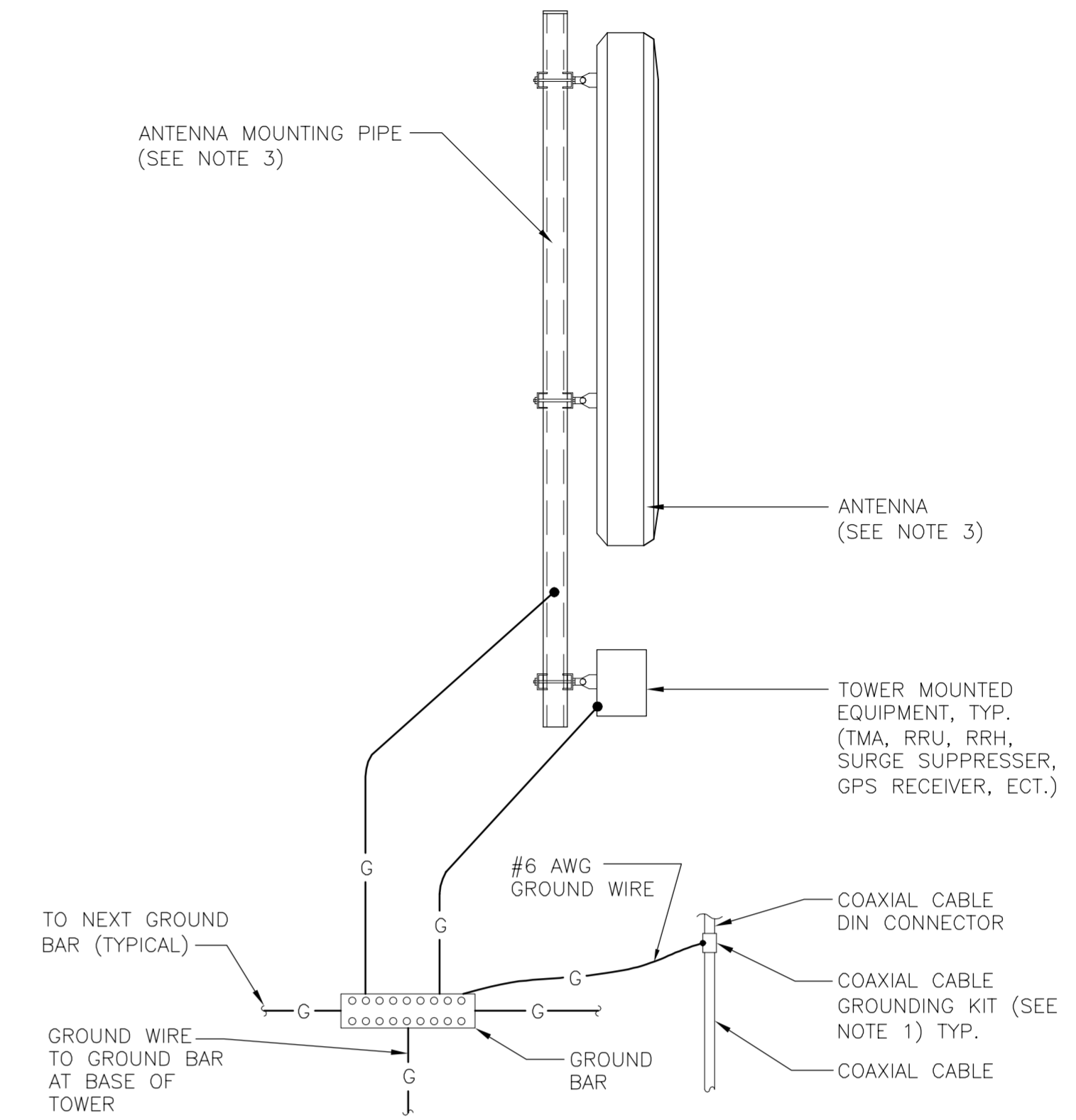
**3 GROUND BAR DETAIL**  
 E-3 NOT TO SCALE



**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.

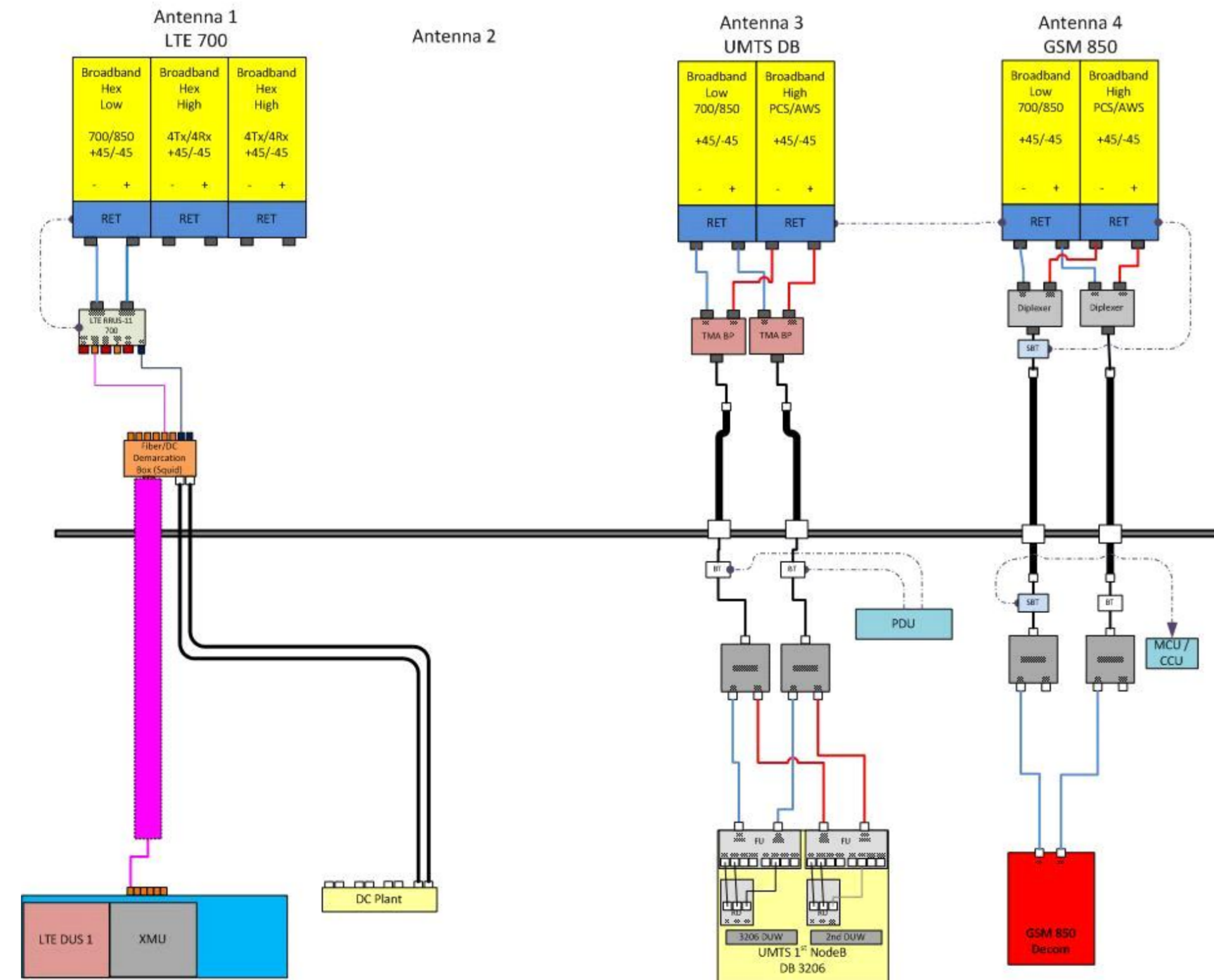
**2 ANTENNA CABLE GROUNDED - TOWER**  
 E-3 NOT TO SCALE



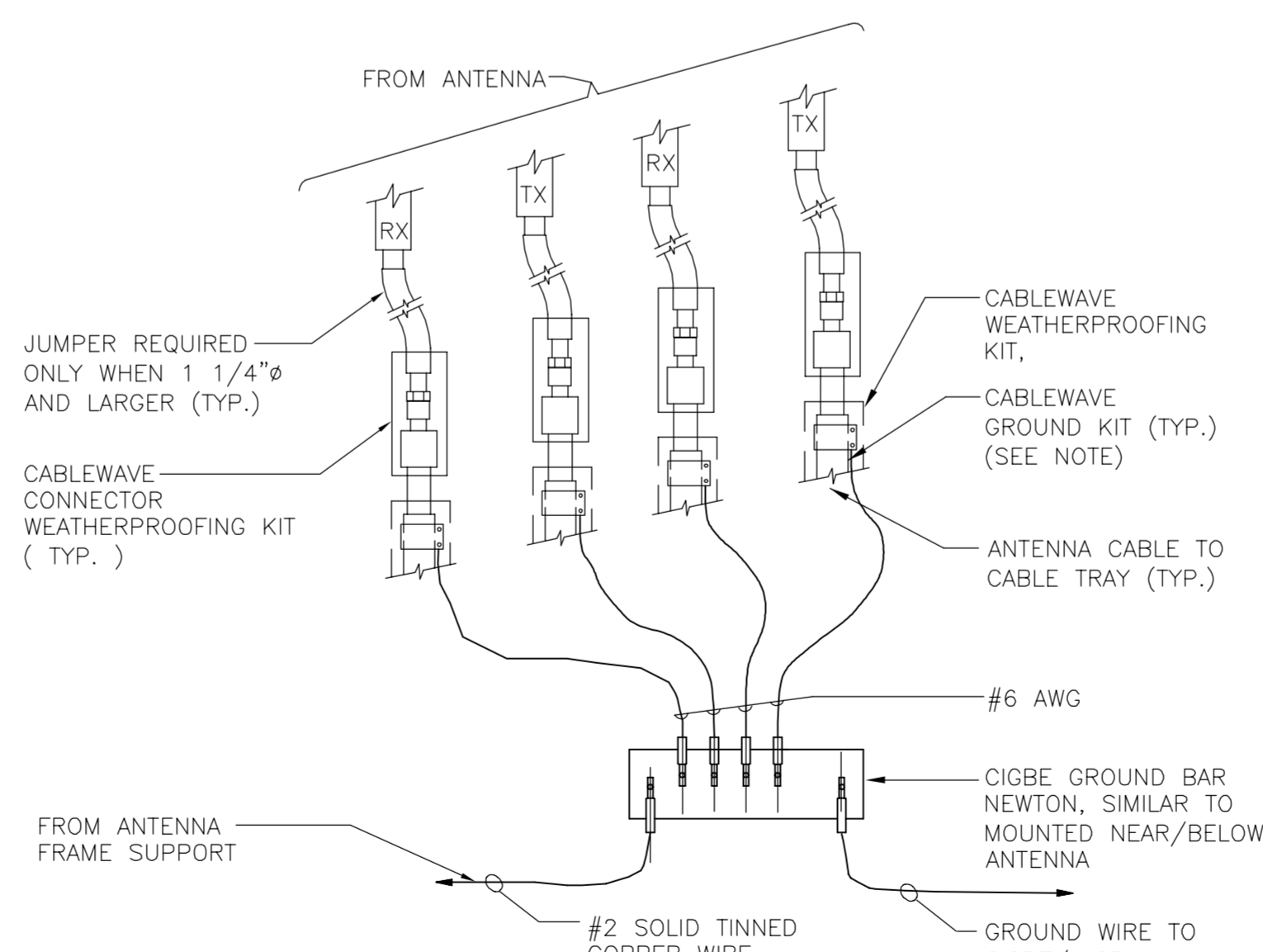
**NOTES:**

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 TYPICAL ANTENNA GROUNDED DETAIL**  
 E-3 NOT TO SCALE



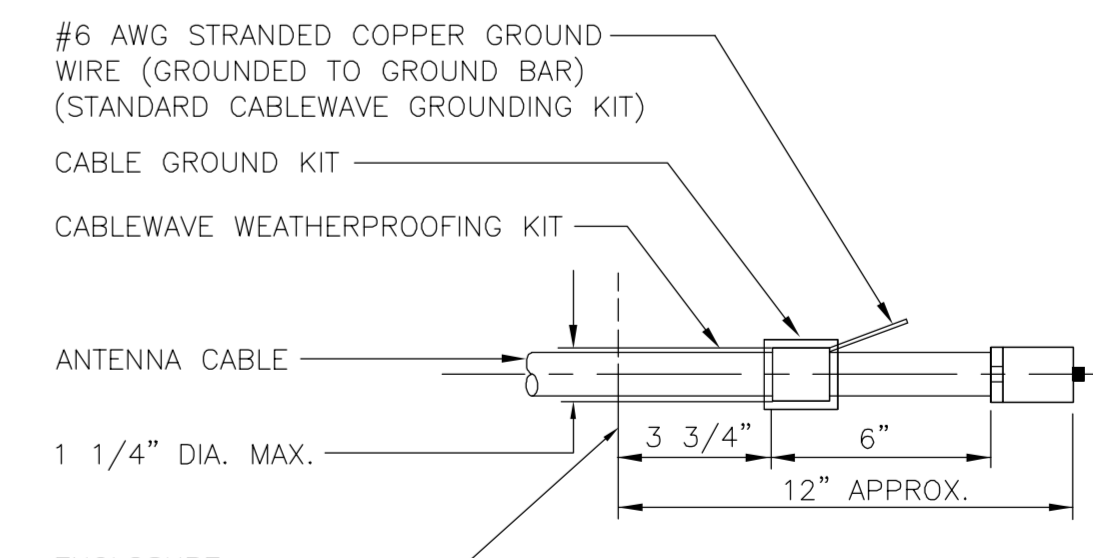
**7 RF PLUMBING DIAGRAM**  
 E-3 NOT TO SCALE



**NOTE:**

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

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

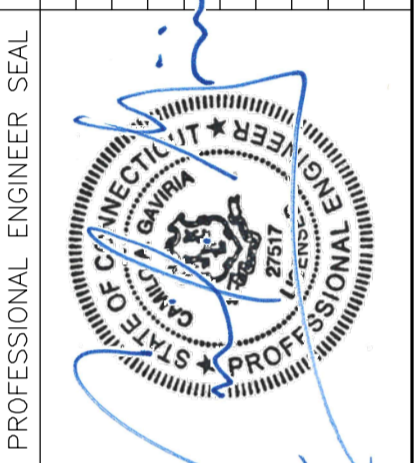


**NOTE:**

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

**5 ANTENNA CABLE GROUNDED DETAIL**  
 E-3 NOT TO SCALE

REV.	DATE	BY	CHK'D	DESCRIPTION
3	04/07/17	CAG	TUL	CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION
2	04/29/16	RAW	CAG	CONSTRUCTION DOCUMENTS - REVISED PER CLIENT REVIEW
1	12/15/15	CIP	CAG	CONSTRUCTION DOCUMENTS - REVISED PER CLIENT REVIEW
0	11/11/15	CIP	DMD	CONSTRUCTION DOCUMENTS - ISSUED FOR CLIENT REVIEW



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 Branford, CT 06405  
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**AT&T MOBILITY**  
 WIRELESS COMMUNICATIONS FACILITY  
**ASHFORD - 363 PUMPKIN HILL RD**  
**CT1068 - LTE 1C**  
 363 PUMPKIN HILL ROAD  
 ASHFORD, CT 06278

DATE: 03/03/17  
 SCALE: AS NOTED  
 JOB NO. 17010.06

TYPICAL ELECTRICAL DETAILS



**AMERICAN TOWER®**  
CORPORATION

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## Structural Analysis Report

**Structure** : 240 ft Self Supported Tower  
**ATC Site Name** : Ashford CT, CT  
**ATC Site Number** : 411217  
**Engineering Number** : OAA694949\_C3\_01  
**Proposed Carrier** : AT&T Mobility  
**Carrier Site Name** : Ashford  
**Carrier Site Number** : CT1068  
**Site Location** : 353 Pumpkin Hill Rd.  
Ashford, CT 06278-1711  
41.84786111,-72.12161111  
**County** : Windham  
**Date** : February 2, 2017  
**Max Usage** : 79%  
**Result** : Pass

Prepared By:  
Travis J. Gatling  
Structural Engineer I

*Travis J. Gatling*

**COA: PEC.0001553**



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## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 240 ft self supported tower to reflect the change in loading by AT&T Mobility.

## Supporting Documents

<b>Tower Drawings</b>	Sabre Job #128805, dated September 21, 2015
<b>Foundation Drawing</b>	Sabre Job #128805, dated September 21, 2015
<b>Geotechnical Report</b>	Terracon Project #J2155118, dated February 23, 2015

## 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.

<b>Basic Wind Speed:</b>	101 mph (3-Second Gust $V_{ASD}$ ) / 130 mph (3-Second Gust $V_{ASD}$ )
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
<b>Structure Class:</b>	II
<b>Exposure Category:</b>	B
<b>Topographic Category:</b>	1
<b>Spectral Response:</b>	$S_s = 0.17, S_1 = 0.06$
<b>Site Class:</b>	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](mailto: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 <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
240.0	245.0	6	Andrew HBXX-6517DS-VTM	Sector Frames	(12) 1 5/8" Coax (2) 1 5/8" Fiber	Verizon
		6	Andrew LNX-6514DS-VTM			
		2	RFS DB-T1-6Z-8AB-0Z			
		3	Alcatel-Lucent RRH2X60-1900			
	3	Alcatel-Lucent RRH2x60 - AWS Band 4				
	240.0	1	VZW Unused Reserve: 5,907 sq in			
196.0	196.0	6	Powerwave 7770.00	Sector Frames	(12) 2 1/4" Coax (3) 3/8" RET Control Cable (2) 0.78" 8 AWG 6 (1) 0.39" Fiber Trunk	AT&T Mobility
		6	Powerwave LGP21401			
		6	Powerwave 7020.00 Dual Band RET			
		6	Powerwave LGP21901			
185.0	185.0	1	12' Dipole	Leg	(1) 7/8" Coax	Other
182.0	182.0	1	18' Omni	Leg	(1) 1/2" Coax	

**Equipment to be Removed**

Elevation <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
196.0	196.0	3	KMW AM-X-CD-17-65-00T-RET	-	-	AT&T Mobility
		1	Raycap DC6-48-60-18-8F			
		6	Ericsson RRUS-11 800 MHz			

**Proposed Equipment**

Elevation <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
196.0	196.0	1	Raycap DC6-48-60-18-8C	Sector Frames	-	AT&T Mobility
		3	CCI HPA-65R-BUU-H8			
		6	Ericsson RRUS 11 B4			

<sup>1</sup>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).



**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Legs	72%	Pass
Diagonals	79%	Pass
Horizontals	48%	Pass
Anchor Bolts	37%	Pass

**Foundations**

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Uplift (Kips)	591.0	317.4	40%
Axial (Kips)	661.0	373.2	42%
Total Shear (Kips)	106.0	58.2	41%

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, Twist and Sway\***

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
196.0	Raycap DC6-48-60-18-8C	AT&T Mobility	0.299	0.017	0.225
	Ericsson RRUS 11 B4				
	CCI HPA-65R-BUU-H8				

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





## Standard Conditions

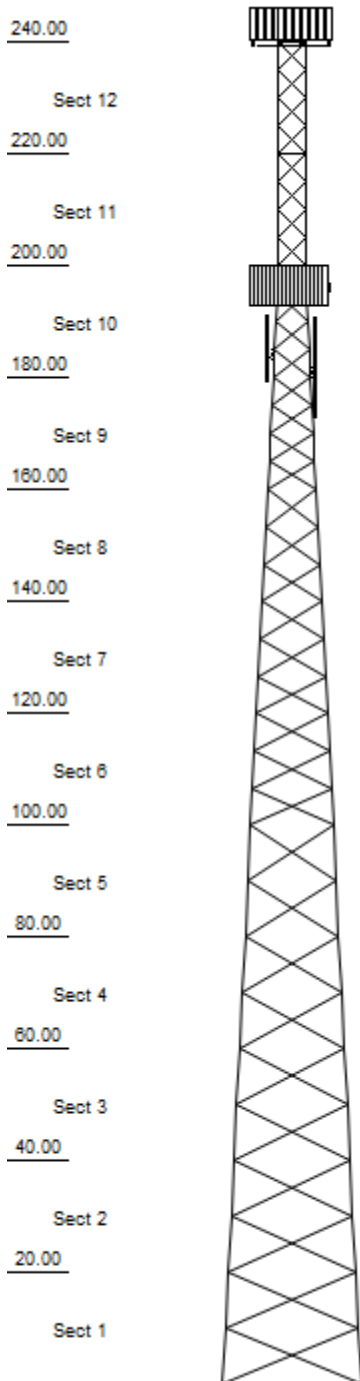
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- 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.



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Loads: 101 mph no ice  
 50 mph w/ 1" radial ice  
 Site Class: D Ss: 0.17 S1: 0.06  
 60 mph Serviceability

Job Information			
Tower : 411217	Location : Ashford CT, CT		
Code : ANSI/TIA-222-G	Shape : Triangle	Base Width : 25.00 ft	
Client : AT&T Mobility		Top Width : 5.00 ft	

Sections Properties			
Section	Leg Members	Diagonal Members	Horizontal Members
1 - 2	PX 50 ksi 10" DIA PIPE	SAE 36 ksi 4X4X0.3125	
3	PX 50 ksi 10" DIA PIPE	SAE 36 ksi 4X4X0.25	
4	PX 50 ksi 8" DIA PIPE	SAU 36 ksi 3.5X4X0.25	
5	PX 50 ksi 8" DIA PIPE	SAE 36 ksi 3.5x3.5x0.25	
6	PX 50 ksi 8" DIA PIPE	SAE 36 ksi 3X3X0.25	
7	PST 50 ksi 8" DIA PIPE	SAE 36 ksi 3X3X0.1875	
8	PSP 50 ksi 5.563" OD x 0.5"	SAE 36 ksi 2.5X2.5X0.25	
9	PX 50 ksi 5" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25	
10	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2X2X0.25	SAE 36 ksi 2X2X0.25
11	PX 50 ksi 3" DIA PIPE	SAE 36 ksi 2X2X0.3125	SAE 36 ksi 2X2X0.3125
12	PST 50 ksi 2.375" x 0.218"	SAE 36 ksi 2X2X0.125	SAE 36 ksi 2X2X0.125

Discrete Appurtenance			
Elev (ft)	Type	Qty	Description
240.00	Panel	1	VZW Unused Reserve: 5,907 sq i
240.00	Mounting Frame	3	Round Sector Frame
240.00	Panel	6	Andrew HBXX-6517DS-VTM
240.00	Panel	6	Andrew LNX-6514DS-VTM
240.00	Panel	2	RFS DB-T1-6Z-8AB-0Z
240.00	Panel	3	Alcatel-Lucent RRH2X60-1900
240.00	Panel	3	Alcatel-Lucent RRH2x60 - AWS B
196.00	Panel	1	Raycap DC6-48-60-18-8C
196.00	Mounting Frame	3	Round Sector Frame
196.00	Panel	3	CCI HPA-65R-BUU-H8
196.00	Panel	6	Powerwave Allgon 7770.00
196.00	Panel	6	Ericsson RRUS 11 B4
196.00	Panel	6	Powerwave Allgon LGP21401
196.00	Panel	6	Powerwave Allgon 7020.00 Dual
196.00	Panel	6	Powerwave Allgon LGP21901
185.00	Whip	1	12' Dipole
182.00	Whip	1	18' Omni

Linear Appurtenance			
Elev (ft)		Qty	Description
From	To		
0.00	240.00	1	Waveguide
0.00	240.00	2	1 5/8" Fiber
0.00	240.00	12	1 5/8" Coax
0.00	196.00	1	Waveguide
0.00	196.00	3	3/8" RET Control Cab
0.00	196.00	12	2 1/4" Coax
0.00	196.00	2	0.78" 8 AWG 6
0.00	196.00	1	0.39" Fiber Trunk
0.00	185.00	1	7/8" Coax
0.00	182.00	1	1/2" Coax

Global Base Foundation Design Loads			
Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	7,621.18	63.43	58.22
DL + WL + IL	2,557.99	202.35	19.30

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<b>Job Information</b>		
<b>Tower :</b> 411217	<b>Location :</b> Ashford CT, CT	
<b>Code :</b> ANSI/TIA-222-G	<b>Shape :</b> Triangle	<b>Base Width :</b> 25.00 ft
<b>Client :</b> AT&T Mobility		<b>Top Width :</b> 5.00 ft

<b>Individual Base Foundation Design Loads</b>		
<b>Vertical (kip)</b>	<b>Uplift (kip)</b>	<b>Horizontal (kip)</b>
373.15	317.41	36.28

Site Number: 411217  
Site Name: Ashford CT, CT  
Customer: AT&T Mobility

Code: ANSI/TIA-222-G  
Engineering Number: OAA694949\_C3\_01

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### Analysis Parameters

Location:	WINDHAM County, CT	Height (ft):	240
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	25.00
Tower Manufacturer:	Sabre	Top Face Width (ft):	5.00
Tower Type:	Self Support	Anchor Bolt Detail Type	c

---

### Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	101 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	1.00 in

---

### Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	0.95				
$T_L$ (sec):	6	p:	1.3	$C_S$ :	0.035
$S_S$ :	0.173	$S_1$ :	0.063	$C_S$ , Max:	0.035
$F_a$ :	1.600	$F_V$ :	2.400	$C_S$ , Min:	0.030
$S_{ds}$ :	0.185	$S_{d1}$ :	0.101		

---

### Load Cases

1.2D + 1.6W Normal	101 mph Normal to Face with No Ice
1.2D + 1.6W 60 deg	101 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	101 mph 90 degree with No Ice
1.2D + 1.6W 120 deg	101 mph 120 degree with No Ice
1.2D + 1.6W 180 deg	101 mph 180 degree with No Ice
1.2D + 1.6W 210 deg	101 mph 210 degree with No Ice
1.2D + 1.6W 240 deg	101 mph 240 degree with No Ice
1.2D + 1.6W 300 deg	101 mph 300 degree with No Ice
1.2D + 1.6W 330 deg	101 mph 330 degree with No Ice
0.9D + 1.6W Normal	101 mph Normal to Face with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	101 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	101 mph 90 deg with No Ice (Reduced DL)
0.9D + 1.6W 120 deg	101 mph 120 deg with No Ice (Reduced DL)
0.9D + 1.6W 180 deg	101 mph 180 deg with No Ice (Reduced DL)
0.9D + 1.6W 210 deg	101 mph 210 deg with No Ice (Reduced DL)
0.9D + 1.6W 240 deg	101 mph 240 deg with No Ice (Reduced DL)
0.9D + 1.6W 300 deg	101 mph 300 deg with No Ice (Reduced DL)
0.9D + 1.6W 330 deg	101 mph 330 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 1 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 1 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 1 in Radial Ice

Site Number: 411217  
Site Name: Ashford CT, CT  
Customer: AT&T Mobility

Code: ANSI/TIA-222-G  
Engineering Number: OAA694949\_C3\_01

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## Analysis Parameters

1.2D + 1.0Di + 1.0Wi 120 deg	50 mph 120 deg with 1 in Radial Ice
1.2D + 1.0Di + 1.0Wi 180 deg	50 mph 180 deg with 1 in Radial Ice
1.2D + 1.0Di + 1.0Wi 210 deg	50 mph 210 deg with 1 in Radial Ice
1.2D + 1.0Di + 1.0Wi 240 deg	50 mph 240 deg with 1 in Radial Ice
1.2D + 1.0Di + 1.0Wi 300 deg	50 mph 300 deg with 1 in Radial Ice
1.2D + 1.0Di + 1.0Wi 330 deg	50 mph 330 deg with 1 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(1.2 + 0.2Sds) * DL + E 120 deg	Seismic 120 deg
(1.2 + 0.2Sds) * DL + E 180 deg	Seismic 180 deg
(1.2 + 0.2Sds) * DL + E 210 deg	Seismic 210 deg
(1.2 + 0.2Sds) * DL + E 240 deg	Seismic 240 deg
(1.2 + 0.2Sds) * DL + E 300 deg	Seismic 300 deg
(1.2 + 0.2Sds) * DL + E 330 deg	Seismic 330 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
(0.9 - 0.2Sds) * DL + E 120 deg	Seismic (Reduced DL) 120 deg
(0.9 - 0.2Sds) * DL + E 180 deg	Seismic (Reduced DL) 180 deg
(0.9 - 0.2Sds) * DL + E 210 deg	Seismic (Reduced DL) 210 deg
(0.9 - 0.2Sds) * DL + E 240 deg	Seismic (Reduced DL) 240 deg
(0.9 - 0.2Sds) * DL + E 300 deg	Seismic (Reduced DL) 300 deg
(0.9 - 0.2Sds) * DL + E 330 deg	Seismic (Reduced DL) 330 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg
1.0D + 1.0W Service 120 deg	Serviceability - 60 mph Wind 120 deg
1.0D + 1.0W Service 180 deg	Serviceability - 60 mph Wind 180 deg
1.0D + 1.0W Service 210 deg	Serviceability - 60 mph Wind 210 deg
1.0D + 1.0W Service 240 deg	Serviceability - 60 mph Wind 240 deg
1.0D + 1.0W Service 300 deg	Serviceability - 60 mph Wind 300 deg
1.0D + 1.0W Service 330 deg	Serviceability - 60 mph Wind 330 deg

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Site Number: 411217  
 Site Name: Ashford CT, CT  
 Customer: AT&T Mobility

Code: ANSI/TIA-222-G  
 Engineering Number: OAA694949\_C3\_01

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### Tower Loading

#### Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
240.0	Alcatel-Lucent	3	44	1.9	1.7	11.2	7.6	0.80	0.50	5.0	432.4	28.34	86	190
240.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.50	5.0	434.7	28.34	87	186
240.0	RFS DB-T1-6Z-8AB-	2	44	4.8	4.0	11.8	7.9	0.80	0.67	5.0	991.5	28.34	198	127
240.0	Andrew LNX-	6	39	8.2	6.1	11.9	7.1	0.80	0.69	5.0	5214.0	28.34	1043	335
240.0	Andrew HBXX-	6	41	8.5	6.2	12.0	6.5	0.80	0.68	5.0	5364.9	28.34	1073	352
240.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	28.17	931	1296
240.0	VZW Unused	1	757	41.1	1.5	18.1	18.1	1.00	1.00	0.0	0.0	28.17	1573	1089
196.0	Powerwave Allgon	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	26.59	20	48
196.0	Powerwave Allgon	6	2	0.4	0.7	4.9	2.4	0.80	0.50	0.0	0.0	26.59	35	19
196.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	26.59	95	122
196.0	Raycap DC6-48-60-	1	16	1.5	1.5	20.1	6.4	0.80	0.50	0.0	0.0	26.59	21	23
196.0	Ericsson RRUS 11 B4	6	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	26.59	324	438
196.0	Powerwave Allgon	6	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	26.59	622	302
196.0	CCI HPA-65R-BUU-H8	3	68	13.0	7.7	14.8	7.4	0.80	0.67	0.0	0.0	26.59	755	294
196.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	26.59	879	1296
185.0	12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	26.15	160	58
182.0	18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	26.03	191	79
Totals		63	4343	359.0										

#### Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
240.0	Alcatel-Lucent	3	44	1.9	1.7	11.2	7.6	0.80	0.50	5.0	432.4	28.34	86	107
240.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.50	5.0	434.7	28.34	87	104
240.0	RFS DB-T1-6Z-8AB-	2	44	4.8	4.0	11.8	7.9	0.80	0.67	5.0	991.5	28.34	198	71
240.0	Andrew LNX-	6	39	8.2	6.1	11.9	7.1	0.80	0.69	5.0	5214.0	28.34	1043	189
240.0	Andrew HBXX-	6	41	8.5	6.2	12.0	6.5	0.80	0.68	5.0	5364.9	28.34	1073	198
240.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	28.17	931	729
240.0	VZW Unused	1	757	41.1	1.5	18.1	18.1	1.00	1.00	0.0	0.0	28.17	1573	613
196.0	Powerwave Allgon	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	26.59	20	27
196.0	Powerwave Allgon	6	2	0.4	0.7	4.9	2.4	0.80	0.50	0.0	0.0	26.59	35	11
196.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	26.59	95	69
196.0	Raycap DC6-48-60-	1	16	1.5	1.5	20.1	6.4	0.80	0.50	0.0	0.0	26.59	21	13
196.0	Ericsson RRUS 11 B4	6	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	26.59	324	246
196.0	Powerwave Allgon	6	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	26.59	622	170
196.0	CCI HPA-65R-BUU-H8	3	68	13.0	7.7	14.8	7.4	0.80	0.67	0.0	0.0	26.59	755	165
196.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	26.59	879	729
185.0	12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	26.15	160	32
182.0	18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	26.03	191	45
Totals		63	4343	359.0										

#### Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
240.0	Alcatel-Lucent	3	151	2.7	1.7	11.2	7.6	0.80	0.50	5.0	96.9	6.94	19	574
240.0	Alcatel-Lucent	3	147	2.7	1.7	11.2	7.2	0.80	0.50	5.0	96.9	6.94	19	561
240.0	RFS DB-T1-6Z-8AB-	2	263	6.4	4.0	11.8	7.9	0.80	0.67	5.0	202.4	6.94	40	652
240.0	Andrew LNX-	6	284	12.1	6.1	11.9	7.1	0.80	0.69	5.0	1182.7	6.94	237	2102

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 Site Name: Ashford CT, CT  
 Customer: AT&T Mobility

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### Tower Loading

240.0	Andrew HBXX-	6	346	10.4	6.2	12.0	6.5	0.80	0.68	5.0	1004.7	6.94	201	2551
240.0	Round Sector Frame	3	813	37.5	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.90	371	3142
240.0	VZW Unused	1	1491	80.9	1.5	18.1	18.1	1.00	1.00	0.0	0.0	6.90	475	1971
196.0	Powerwave Allgon	6	27	0.5	0.3	6.0	3.0	0.80	0.50	0.0	0.0	6.52	7	202
196.0	Powerwave Allgon	6	28	0.8	0.7	4.9	2.4	0.80	0.50	0.0	0.0	6.52	10	207
196.0	Powerwave Allgon	6	67	1.8	1.2	9.2	2.6	0.80	0.50	0.0	0.0	6.52	23	501
196.0	Raycap DC6-48-60-	1	147	4.1	1.5	20.1	6.4	0.80	0.50	0.0	0.0	6.52	9	180
196.0	Ericsson RRUS 11 B4	6	179	3.7	1.6	17.0	7.2	0.80	0.67	0.0	0.0	6.52	67	1361
196.0	Powerwave Allgon	6	235	7.0	4.6	11.0	5.0	0.80	0.65	0.0	0.0	6.52	121	1743
196.0	CCI HPA-65R-BUU-H8	3	490	15.2	7.7	14.8	7.4	0.80	0.67	0.0	0.0	6.52	136	1811
196.0	Round Sector Frame	3	803	37.0	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.52	346	3108
185.0	12' Dipole	1	222	14.3	12.0	3.0	3.0	1.00	1.00	0.0	0.0	6.41	78	276
182.0	18' Omni	1	417	14.2	18.0	3.0	3.0	1.00	1.00	0.0	0.0	6.38	77	514
Totals		63	17014	629.9										

### Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
240.0	Alcatel-Lucent	3	44	1.9	1.7	11.2	7.6	0.80	0.50	5.0	95.4	10.00	19	132
240.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.50	5.0	95.9	10.00	19	129
240.0	RFS DB-T1-6Z-8AB-	2	44	4.8	4.0	11.8	7.9	0.80	0.67	5.0	218.7	10.00	44	88
240.0	Andrew LNX-	6	39	8.2	6.1	11.9	7.1	0.80	0.69	5.0	1150.0	10.00	230	233
240.0	Andrew HBXX-	6	41	8.5	6.2	12.0	6.5	0.80	0.68	5.0	1183.3	10.00	237	244
240.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.94	205	900
240.0	VZW Unused	1	757	41.1	1.5	18.1	18.1	1.00	1.00	0.0	0.0	9.94	347	757
196.0	Powerwave Allgon	6	6	0.2	0.3	6.0	3.0	0.80	0.50	0.0	0.0	9.38	4	33
196.0	Powerwave Allgon	6	2	0.4	0.7	4.9	2.4	0.80	0.50	0.0	0.0	9.38	8	13
196.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	0.0	0.0	9.38	21	85
196.0	Raycap DC6-48-60-	1	16	1.5	1.5	20.1	6.4	0.80	0.50	0.0	0.0	9.38	5	16
196.0	Ericsson RRUS 11 B4	6	51	2.8	1.6	17.0	7.2	0.80	0.67	0.0	0.0	9.38	72	304
196.0	Powerwave Allgon	6	35	5.5	4.6	11.0	5.0	0.80	0.65	0.0	0.0	9.38	137	210
196.0	CCI HPA-65R-BUU-H8	3	68	13.0	7.7	14.8	7.4	0.80	0.67	0.0	0.0	9.38	166	204
196.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	9.38	194	900
185.0	12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	9.23	35	40
182.0	18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	9.19	42	55
Totals		63	4343	359.0										

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## Tower Loading

### Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	240.0	1 5/8" Coax	12	1.98	0.82	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	240.0	1 5/8" Fiber	2	1.63	1.61	0	Lin App	Individual	0.00	N	1.00	1.00	0.01
0.00	240.0	Waveguide	1	2.00	6.00	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	196.0	0.39" Fiber Trunk	1	0.39	0.06	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	196.0	0.78" 8 AWG 6	2	0.78	0.59	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	196.0	2 1/4" Coax	12	2.38	1.22	50	Lin App	Block	0.00	N	1.00	1.00	0.00
0.00	196.0	3/8" RET Control	3	0.38	0.23	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	196.0	Waveguide	1	2.00	6.00	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	185.0	7/8" Coax	1	1.09	0.33	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
0.00	182.0	1/2" Coax	1	0.63	0.15	0	Lin App	Individual	0.00	N	1.00	1.00	0.01



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## Equivalent Lateral Force Method

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

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.17
Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.06
Long-Period Transition Period ( $T_L$ - Seconds):	6
Importance Factor ( $I_p$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.18
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Seismic Response Coefficient ( $C_s$ ):	0.04
Upper Limit $C_s$ :	0.04
Lower Limit $C_s$ :	0.03
Period based on Rayleigh Method (sec):	0.95
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.23
Total Unfactored Dead Load:	52.86 k
Seismic Base Shear (E):	2.42 k

### LoadCase (1.2 + 0.2Sds) \* DL + E

### Seismic

Section	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
12	230.00	987	781,550	0.048	117	1,221
11	210.00	1,720	1,218,06	0.075	182	2,128
10	190.00	2,291	1,434,75	0.089	214	2,834
9	170.00	3,020	1,649,86	0.102	246	3,735
8	150.00	3,355	1,571,74	0.097	235	4,149
7	130.00	3,475	1,365,90	0.084	204	4,298
6	110.00	4,818	1,542,66	0.095	230	5,959
5	90.00	4,763	1,192,27	0.074	178	5,892
4	70.00	4,982	916,058	0.057	137	6,162
3	50.00	5,903	718,211	0.044	107	7,302
2	30.00	6,510	423,138	0.026	63	8,053
1	10.00	6,691	112,922	0.007	17	8,276
Alcatel-Lucent RRH2x60 - AWS Band 4	240.00	132	110,110	0.007	16	163
Alcatel-Lucent RRH2X60-1900	240.00	129	107,607	0.007	16	160
RFS DB-T1-6Z-8AB-0Z	240.00	88	73,407	0.005	11	109
Andrew LNX-6514DS-VTM	240.00	233	194,194	0.012	29	288
Andrew HBXX-6517DS-VTM	240.00	244	203,703	0.013	30	302
Round Sector Frame	240.00	900	750,749	0.046	112	1,113
VZW Unused Reserve: 5,907 sq in	240.00	757	631,046	0.039	94	936
Powerwave Allgon LGP21901	196.00	33	21,469	0.001	3	41
Powerwave Allgon 7020.00 Dual Band	196.00	13	8,588	0.001	1	16
Powerwave Allgon LGP21401	196.00	85	55,039	0.003	8	105
Raycap DC6-48-60-18-8C	196.00	16	10,409	0.001	2	20

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### Equivalent Lateral Force Method

Ericsson RRUS 11 B4	196.00	304	197,908	0.012	30	376
Powerwave Allgon 7770.00	196.00	210	136,623	0.008	20	260
CCI HPA-65R-BUU-H8	196.00	204	132,719	0.008	20	252
Round Sector Frame	196.00	900	585,526	0.036	87	1,113
12' Dipole	185.00	40	24,243	0.001	4	49
18' Omni	182.00	55	32,671	0.002	5	68
		52,858	16,203,144	1.000	2,419	65,381

### LoadCase (0.9 - 0.2Sds) \* DL + E

### Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
12	230.00	987	781,550	0.048	117	852
11	210.00	1,720	1,218,06	0.075	182	1,485
10	190.00	2,291	1,434,75	0.089	214	1,977
9	170.00	3,020	1,649,86	0.102	246	2,606
8	150.00	3,355	1,571,74	0.097	235	2,895
7	130.00	3,475	1,365,90	0.084	204	2,999
6	110.00	4,818	1,542,66	0.095	230	4,158
5	90.00	4,763	1,192,27	0.074	178	4,111
4	70.00	4,982	916,058	0.057	137	4,300
3	50.00	5,903	718,211	0.044	107	5,095
2	30.00	6,510	423,138	0.026	63	5,619
1	10.00	6,691	112,922	0.007	17	5,775
Alcatel-Lucent RRH2x60 - AWS Band 4	240.00	132	110,110	0.007	16	114
Alcatel-Lucent RRH2X60-1900	240.00	129	107,607	0.007	16	111
RFS DB-T1-6Z-8AB-0Z	240.00	88	73,407	0.005	11	76
Andrew LNX-6514DS-VTM	240.00	233	194,194	0.012	29	201
Andrew HBXX-6517DS-VTM	240.00	244	203,703	0.013	30	211
Round Sector Frame	240.00	900	750,749	0.046	112	777
VZW Unused Reserve: 5,907 sq in	240.00	757	631,046	0.039	94	653
Powerwave Allgon LGP21901	196.00	33	21,469	0.001	3	28
Powerwave Allgon 7020.00 Dual Band	196.00	13	8,588	0.001	1	11
Powerwave Allgon LGP21401	196.00	85	55,039	0.003	8	73
Raycap DC6-48-60-18-8C	196.00	16	10,409	0.001	2	14
Ericsson RRUS 11 B4	196.00	304	197,908	0.012	30	263
Powerwave Allgon 7770.00	196.00	210	136,623	0.008	20	181
CCI HPA-65R-BUU-H8	196.00	204	132,719	0.008	20	176
Round Sector Frame	196.00	900	585,526	0.036	87	777
12' Dipole	185.00	40	24,243	0.001	4	35
18' Omni	182.00	55	32,671	0.002	5	47
		52,858	16,203,144	1.000	2,419	45,622

Site Number: 411217  
 Site Name: Ashford CT, CT  
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## Equivalent Modal Analysis Method

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

Spectral Response Acceleration for Short Period ( $S_{s1}$ ):	0.17
Spectral Response Acceleration at 1.0 Second Period ( $S_{s1}$ ):	0.06
Importance Factor ( $I_p$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.18
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Period Based on Rayleigh Method (sec):	0.95
Redundancy Factor ( $\rho$ ):	1.30

### LoadCase (1.2 + 0.2Sds) \* DL + E

### Seismic

Section	Height		Seismic				Horizontal Force (lb)	Vertical Force (lb)
	Above Base (ft)	Weight (lb)	a	b	c	$S_{az}$		
12	230.00	987	1.736	1.263	0.871	0.309	132	1,221
11	210.00	1,720	1.447	0.379	0.482	0.175	130	2,128
10	190.00	2,291	1.185	-0.009	0.243	0.092	92	2,834
9	170.00	3,020	0.948	-0.119	0.107	0.054	70	3,735
8	150.00	3,355	0.738	-0.098	0.038	0.044	64	4,149
7	130.00	3,475	0.555	-0.036	0.010	0.046	70	4,298
6	110.00	4,818	0.397	0.019	0.007	0.048	99	5,959
5	90.00	4,763	0.266	0.052	0.015	0.044	91	5,892
4	70.00	4,982	0.161	0.067	0.029	0.037	80	6,162
3	50.00	5,903	0.082	0.072	0.039	0.030	77	7,302
2	30.00	6,510	0.030	0.068	0.040	0.024	67	8,053
1	10.00	6,691	0.003	0.039	0.022	0.012	36	8,276
Alcatel-Lucent RRH2x60 - AWS	240.00	132	1.890	1.980	1.140	0.396	23	163
Alcatel-Lucent RRH2X60-1900	240.00	129	1.890	1.980	1.140	0.396	22	160
RFS DB-T1-6Z-8AB-0Z	240.00	88	1.890	1.980	1.140	0.396	15	109
Andrew LNX-6514DS-VTM	240.00	233	1.890	1.980	1.140	0.396	40	288
Andrew HBXX-6517DS-VTM	240.00	244	1.890	1.980	1.140	0.396	42	302
Round Sector Frame	240.00	900	1.890	1.980	1.140	0.396	154	1,113
VZW Unused Reserve: 5,907 sq	240.00	757	1.890	1.980	1.140	0.396	130	936
Powerwave Allgon LGP21901	196.00	33	1.261	0.069	0.302	0.112	2	41
Powerwave Allgon 7020.00 Dual	196.00	13	1.261	0.069	0.302	0.112	1	16
Powerwave Allgon LGP21401	196.00	85	1.261	0.069	0.302	0.112	4	105
Raycap DC6-48-60-18-8C	196.00	16	1.261	0.069	0.302	0.112	1	20
Ericsson RRUS 11 B4	196.00	304	1.261	0.069	0.302	0.112	15	376
Powerwave Allgon 7770.00	196.00	210	1.261	0.069	0.302	0.112	10	260
CCI HPA-65R-BUU-H8	196.00	204	1.261	0.069	0.302	0.112	10	252
Round Sector Frame	196.00	900	1.261	0.069	0.302	0.112	44	1,113
12' Dipole	185.00	40	1.123	-0.056	0.201	0.079	1	49
18' Omni	182.00	55	1.087	-0.077	0.179	0.072	2	68
		52,858	33.071	15.978	12.682	4.734	1,522	65,381

### LoadCase (0.9 - 0.2Sds) \* DL + E

### Seismic (Reduced DL)

Section	Height		Seismic				Horizontal Force (lb)	Vertical Force (lb)
	Above Base (ft)	Weight (lb)	a	b	c	$S_{az}$		
12	230.00	987	1.736	1.263	0.871	0.309	132	852

Site Number: 411217  
 Site Name: Ashford CT, CT  
 Customer: AT&T Mobility

Code: ANSI/TIA-222-G  
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### Equivalent Modal Analysis Method

11	210.00	1,720	1.447	0.379	0.482	0.175	130	1,485
10	190.00	2,291	1.185	-0.009	0.243	0.092	92	1,977
9	170.00	3,020	0.948	-0.119	0.107	0.054	70	2,606
8	150.00	3,355	0.738	-0.098	0.038	0.044	64	2,895
7	130.00	3,475	0.555	-0.036	0.010	0.046	70	2,999
6	110.00	4,818	0.397	0.019	0.007	0.048	99	4,158
5	90.00	4,763	0.266	0.052	0.015	0.044	91	4,111
4	70.00	4,982	0.161	0.067	0.029	0.037	80	4,300
3	50.00	5,903	0.082	0.072	0.039	0.030	77	5,095
2	30.00	6,510	0.030	0.068	0.040	0.024	67	5,619
1	10.00	6,691	0.003	0.039	0.022	0.012	36	5,775
Alcatel-Lucent RRH2x60 - AWS	240.00	132	1.890	1.980	1.140	0.396	23	114
Alcatel-Lucent RRH2X60-1900	240.00	129	1.890	1.980	1.140	0.396	22	111
RFS DB-T1-6Z-8AB-OZ	240.00	88	1.890	1.980	1.140	0.396	15	76
Andrew LNX-6514DS-VTM	240.00	233	1.890	1.980	1.140	0.396	40	201
Andrew HBXX-6517DS-VTM	240.00	244	1.890	1.980	1.140	0.396	42	211
Round Sector Frame	240.00	900	1.890	1.980	1.140	0.396	154	777
VZW Unused Reserve: 5,907 sq	240.00	757	1.890	1.980	1.140	0.396	130	653
Powerwave Allgon LGP21901	196.00	33	1.261	0.069	0.302	0.112	2	28
Powerwave Allgon 7020.00 Dual	196.00	13	1.261	0.069	0.302	0.112	1	11
Powerwave Allgon LGP21401	196.00	85	1.261	0.069	0.302	0.112	4	73
Raycap DC6-48-60-18-8C	196.00	16	1.261	0.069	0.302	0.112	1	14
Ericsson RRUS 11 B4	196.00	304	1.261	0.069	0.302	0.112	15	263
Powerwave Allgon 7770.00	196.00	210	1.261	0.069	0.302	0.112	10	181
CCI HPA-65R-BUU-H8	196.00	204	1.261	0.069	0.302	0.112	10	176
Round Sector Frame	196.00	900	1.261	0.069	0.302	0.112	44	777
12' Dipole	185.00	40	1.123	-0.056	0.201	0.079	1	35
18' Omni	182.00	55	1.087	-0.077	0.179	0.072	2	47
		52,858	33.071	15.978	12.682	4.734	1,522	45,622

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### Force/Stress Summary

Section: 1		S		Bot Elev (ft): 0.00				Height (ft): 20.000							
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use			
Max Compression Member		(kip)	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	PX - 10" DIA PIPE	-366.30	10.02	100	100	100	33.1	50.0	668.68	0	0	0.00	0.00	54	Member X
HORIZ		0.00	0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 4X4X0.3125	-8.91	26.46	50	50	50	203.3	36.0	13.12	2	1	30.38	43.50	67	Member Z
Max Tension Member		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use				
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls			
LEG	PX - 10" DIA PIPE	312.06	50	65	724.50	0	0	0.00	0.00		43	Member			
HORIZ		0.00	0	0	0.00	0	0	0.00	0.00	0.00	0				
DIAG	SAE - 4X4X0.3125	9.11	36	58	70.65	2	1	30.38	34.80	43.55	29	Bolt Shear			
Max Splice Forces		Pu	phiRnt	Use	Num										
		(kip)	(kip)	%	Bolts	Bolt Type									
Top Tension		295.27	0.00	0	0										
Top Compression		345.99	0.00	0											
Bot Tension		319.37	1011.78	37	6	1 1/2 F1554-105									
Bot Compression		373.70	0.00	0											

Section: 2		S		Bot Elev (ft): 20.00				Height (ft): 20.000							
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear	Use			
Max Compression Member		(kip)	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	PX - 10" DIA PIPE	-338.91	10.02	100	100	100	33.1	50.0	668.68	0	0	0.00	0.00	50	Member X
HORIZ		0.00	0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 4X4X0.3125	-9.20	24.62	50	50	50	189.2	36.0	15.15	1	1	21.87	26.10	60	Member Z
Max Tension Member		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use				
		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls			
LEG	PX - 10" DIA PIPE	290.35	50	65	724.50	0	0	0.00	0.00		40	Member			
HORIZ		0.00	0	0	0.00	0	0	0.00	0.00	0.00	0				
DIAG	SAE - 4X4X0.3125	8.99	36	58	69.38	1	1	21.87	15.77	34.16	57	Bolt Bear			
Max Splice Forces		Pu	phiRnt	Use	Num										
		(kip)	(kip)	%	Bolts	Bolt Type									
Top Tension		271.67	0.00	0	0										
Top Compression		316.57	0.00	0											
Bot Tension		295.27	0.00	0											
Bot Compression		345.99	0.00	0											

Site Number: 411217  
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### Force/Stress Summary

Section: 3		S	Bot Elev (ft): 40.00				Height (ft): 20.000								
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	PX - 10" DIA PIPE	-308.88	1.2D + 1.6W	10.02	100	100	100	33.1	50.0	668.68	0	0	0.00	0.00	46 Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 4X4X0.25	-8.70	1.2D + 1.6W 90	22.81	50	50	50	172.2	35.7	14.79	1	1	21.87	20.88	58 Member Z

		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
<b>Max Tension Member</b>													
LEG	PX - 10" DIA PIPE	262.41	1.2D + 1.6W 60	50	65	724.50	0	0	0.00	0.00			36 Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 4X4X0.25	8.51	1.2D + 1.6W 90	36	58	56.16	1	1	21.87	12.61	27.33		67 Bolt Bear

		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
<b>Max Splice Forces</b>							
Top Tension		247.92	0.9D + 1.6W 180	0.00	0	0	
Top Compression		286.52	1.2D + 1.6W	0.00	0		
Bot Tension		271.67	0.9D + 1.6W 180	0.00	0		
Bot Compression		316.57	1.2D + 1.6W	0.00	0		

Section: 4		S	Bot Elev (ft): 60.00				Height (ft): 20.000								
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	PX - 8" DIA PIPE	-278.77	1.2D + 1.6W	10.02	100	100	100	41.7	50.0	507.12	0	0	0.00	0.00	54 Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAU - 3.5X4X0.25	-8.17	1.2D + 1.6W 90	21.03	50	50	50	171.9	36.0	13.83	1	1	21.87	20.88	59 Member Z

		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
<b>Max Tension Member</b>													
LEG	PX - 8" DIA PIPE	242.85	0.9D + 1.6W 180	50	65	576.00	0	0	0.00	0.00			42 Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAU - 3.5X4X0.25	7.97	1.2D + 1.6W 90	36	58	51.91	1	1	21.87	12.61	21.89		63 Bolt Bear

		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
<b>Max Splice Forces</b>							
Top Tension		223.50	0.9D + 1.6W 180	0.00	0	0	
Top Compression		256.40	1.2D + 1.6W	0.00	0		
Bot Tension		247.92	0.9D + 1.6W 180	0.00	0		
Bot Compression		286.52	1.2D + 1.6W	0.00	0		

Site Number: 411217  
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### Force/Stress Summary

Section: 5		S	Bot Elev (ft): 80.00				Height (ft): 20.000								
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	PX - 8" DIA PIPE	-248.81	1.2D + 1.6W	10.02	100	100	100	41.7	50.0	507.12	0	0	0.00	0.00	49 Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3.5x3.5x0.25	-7.62	1.2D + 1.6W 90	19.29	50	50	50	168.3	36.0	13.48	1	1	21.87	20.88	56 Member Z

		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
<b>Max Tension Member</b>													
LEG	PX - 8" DIA PIPE	214.57	1.2D + 1.6W 60	50	65	576.00	0	0	0.00	0.00			37 Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 3.5x3.5x0.25	7.47	1.2D + 1.6W 90	36	58	48.00	1	1	21.87	12.61	21.89		59 Bolt Bear

		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
<b>Max Splice Forces</b>							
Top Tension		198.40	0.9D + 1.6W 180	0.00	0	0	
Top Compression		226.09	1.2D + 1.6W	0.00	0		
Bot Tension		223.50	0.9D + 1.6W 180	0.00	0		
Bot Compression		256.40	1.2D + 1.6W	0.00	0		

Section: 6		S	Bot Elev (ft): 100.0				Height (ft): 20.000								
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	PX - 8" DIA PIPE	-221.05	1.2D + 1.6W	6.68	100	100	100	27.8	50.0	544.30	0	0	0.00	0.00	40 Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.25	-6.22	1.2D + 1.6W 90	16.11	50	50	50	163.3	36.0	12.20	1	1	21.87	20.88	51 Member Z

		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
<b>Max Tension Member</b>													
LEG	PX - 8" DIA PIPE	191.98	1.2D + 1.6W 60	50	65	576.00	0	0	0.00	0.00			33 Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00		0
DIAG	SAE - 3X3X0.25	6.16	1.2D + 1.6W 90	36	58	39.84	1	1	21.87	12.61	19.17		48 Bolt Bear

		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
<b>Max Splice Forces</b>							
Top Tension		173.78	0.9D + 1.6W 180	0.00	0	0	
Top Compression		195.87	1.2D + 1.6W	0.00	0		
Bot Tension		198.40	0.9D + 1.6W 180	0.00	0		
Bot Compression		226.09	1.2D + 1.6W	0.00	0		

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### Force/Stress Summary

Section: 7		S		Bot Elev (ft): 120.0				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	PST - 8" DIA PIPE	-190.86	1.2D + 1.6W	6.68	100	100	100	27.3	50.0	358.02	0	0	0.00	0.00	53 Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 3X3X0.1875	-5.62	1.2D + 1.6W 90	14.31	50	50	50	144.1	36.0	11.86	1	1	15.19	13.05	47 Member Z
Max Tension Member															
LEG	PST - 8" DIA PIPE	170.26	0.9D + 1.6W 180	50	65	378.00	0	0	0.00	0.00					45 Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00			0.00		0
DIAG	SAE - 3X3X0.1875	5.47	1.2D + 1.6W 90	36	58	30.97	1	1	15.19	7.83			14.32		69 Bolt Bear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	148.99	0.9D + 1.6W 180		0.00	0	0								
	Top Compression	166.81	1.2D + 1.6W		0.00	0									
	Bot Tension	173.78	0.9D + 1.6W 180		0.00	0									
	Bot Compression	195.87	1.2D + 1.6W		0.00	0									

Section: 8		S		Bot Elev (ft): 140.0				Height (ft): 20.000							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
Max Compression Member															
LEG	PSP - 5.563" OD x 0.	-161.95	1.2D + 1.6W	6.68	100	100	100	44.5	50.0	309.56	0	0	0.00	0.00	52 Member X
	HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2.5X2.5X0.25	-4.95	1.2D + 1.6W 90	12.58	50	50	50	153.7	36.0	11.38	1	1	15.19	17.40	43 Member Z
Max Tension Member															
LEG	PSP - 5.563" OD x 0.	144.06	1.2D + 1.6W 180	50	65	357.89	0	0	0.00	0.00					40 Member
	HORIZ	0.00		0	0	0.00	0	0	0.00	0.00			0.00		0
DIAG	SAE - 2.5X2.5X0.25	4.82	1.2D + 1.6W 90	36	58	32.71	1	1	15.19	10.44			15.01		46 Bolt Bear
Max Splice Forces															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
	Top Tension	123.49	0.9D + 1.6W 180		0.00	0	0								
	Top Compression	137.52	1.2D + 1.6W		0.00	0									
	Bot Tension	148.99	0.9D + 1.6W 180		0.00	0									
	Bot Compression	166.81	1.2D + 1.6W		0.00	0									



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### Force/Stress Summary

Section: 9		S	Bot Elev (ft): 160.0				Height (ft): 20.000								
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear			Use	
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Boles	Holes	phiRnv	phiRn	%	Controls	
		Load Case		KL/R							(kip)	(kip)			
<b>Max Compression Member</b>															
LEG	PX - 5" DIA PIPE	-133.80	1.2D + 1.6W	5.01	100	100	100	32.7	50.0	254.32	0	0	0.00	0.00	52 Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG	SAE - 2.5X2.5X0.25	-4.10	1.2D + 1.6W 90	10.07	50	50	50	123.2	36.0	17.35	1	1	15.19	17.40	26 Bolt Shear
<b>Max Tension Member</b>															
LEG	PX - 5" DIA PIPE	119.86	1.2D + 1.6W 180	50	65	274.95	0	0	0.00	0.00					43 Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00			0.00		0
DIAG	SAE - 2.5X2.5X0.25	4.02	1.2D + 1.6W 90	36	58	32.71	1	1	15.19	10.44			15.01		38 Bolt Bear
<b>Max Splice Forces</b>															
		Pu	Load Case	phiRnt	Use	Num									
		(kip)		(kip)	%	Boles	Bolt Type								
	Top Tension	97.30	0.9D + 1.6W 180	0.00	0	0									
	Top Compression	107.66	1.2D + 1.6W	0.00	0										
	Bot Tension	123.49	0.9D + 1.6W 180	0.00	0										
	Bot Compression	137.52	1.2D + 1.6W	0.00	0										

Section: 10		S	Bot Elev (ft): 180.0				Height (ft): 20.000								
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear			Use	
		(kip)	(ft)	X	Y	Z	(ksi)	(kip)	Boles	Holes	phiRnv	phiRn	%	Controls	
		Load Case		KL/R							(kip)	(kip)			
<b>Max Compression Member</b>															
LEG	PX - 4" DIA PIPE	-103.81	1.2D + 1.6W	5.01	100	100	100	40.6	50.0	175.91	0	0	0.00	0.00	59 Member X
HORIZ	SAE - 2X2X0.25	-0.82	1.2D + 1.6W	5.000	100	100	100	153.5	36.0	9.02	1	1	15.19	17.40	9 Member Z
DIAG	SAE - 2X2X0.25	-3.57	1.2D + 1.6W 90	8.401	50	50	50	128.9	36.0	12.70	1	1	15.19	17.40	28 Member Z
<b>Max Tension Member</b>															
LEG	PX - 4" DIA PIPE	93.61	1.2D + 1.6W 180	50	65	198.45	0	0	0.00	0.00					47 Member
HORIZ	SAE - 2X2X0.25	0.73	1.2D + 1.6W 180	36	58	24.55	1	1	15.19	10.44			12.29		7 Bolt Bear
DIAG	SAE - 2X2X0.25	3.46	1.2D + 1.6W 90	36	58	24.55	1	1	15.19	10.44			12.29		33 Bolt Bear
<b>Max Splice Forces</b>															
		Pu	Load Case	phiRnt	Use	Num									
		(kip)		(kip)	%	Boles	Bolt Type								
	Top Tension	73.03	0.9D + 1.6W 180	0.00	0	0									
	Top Compression	79.26	1.2D + 1.6W	0.00	0										
	Bot Tension	97.30	0.9D + 1.6W 180	0.00	0										
	Bot Compression	107.66	1.2D + 1.6W	0.00	0										

Site Number: 411217  
 Site Name: Ashford CT, CT  
 Customer: AT&T Mobility

Code: ANSI/TIA-222-G  
 Engineering Number: OAA694949\_C3\_01

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2/3/2017 2:49:29 PM

### Force/Stress Summary

Section: 11		S	Bot Elev (ft): 200.0				Height (ft): 20.000									
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear			Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	PX - 3" DIA PIPE	-72.12	1.2D + 1.6W	5.00	100	100	100	52.6	50.0	110.98	0	0	0.00	0.00	64	Member X
HORIZ	SAE - 2X2X0.3125	-0.50	1.2D + 1.6W 90	5.000	100	100	100	153.8	36.0	10.98	1	1	15.19	21.75	4	Member Z
DIAG	SAE - 2X2X0.3125	-4.87	1.2D + 1.6W	7.071	50	50	50	111.6	36.0	19.34	1	1	15.19	21.75	32	Bolt Shear

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
Max Tension Member		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
LEG	PX - 3" DIA PIPE	66.80	180	50	65	135.90	0	0	0.00	0.00		49 Member
HORIZ	SAE - 2X2X0.3125	0.46	60	36	58	29.87	1	1	15.19	13.05	15.37	3 Bolt Bear
DIAG	SAE - 2X2X0.3125	4.66	90	36	58	29.87	1	1	15.19	13.05	15.37	35 Bolt Bear

Max Splice Forces		Pu	phiRnt	Use	Num	
		(kip)	(kip)	%	Bolts	Bolt Type
Top Tension		32.10	0.00	0	0	
Top Compression		35.41	0.00	0		
Bot Tension		73.03	0.00	0		
Bot Compression		79.26	0.00	0		

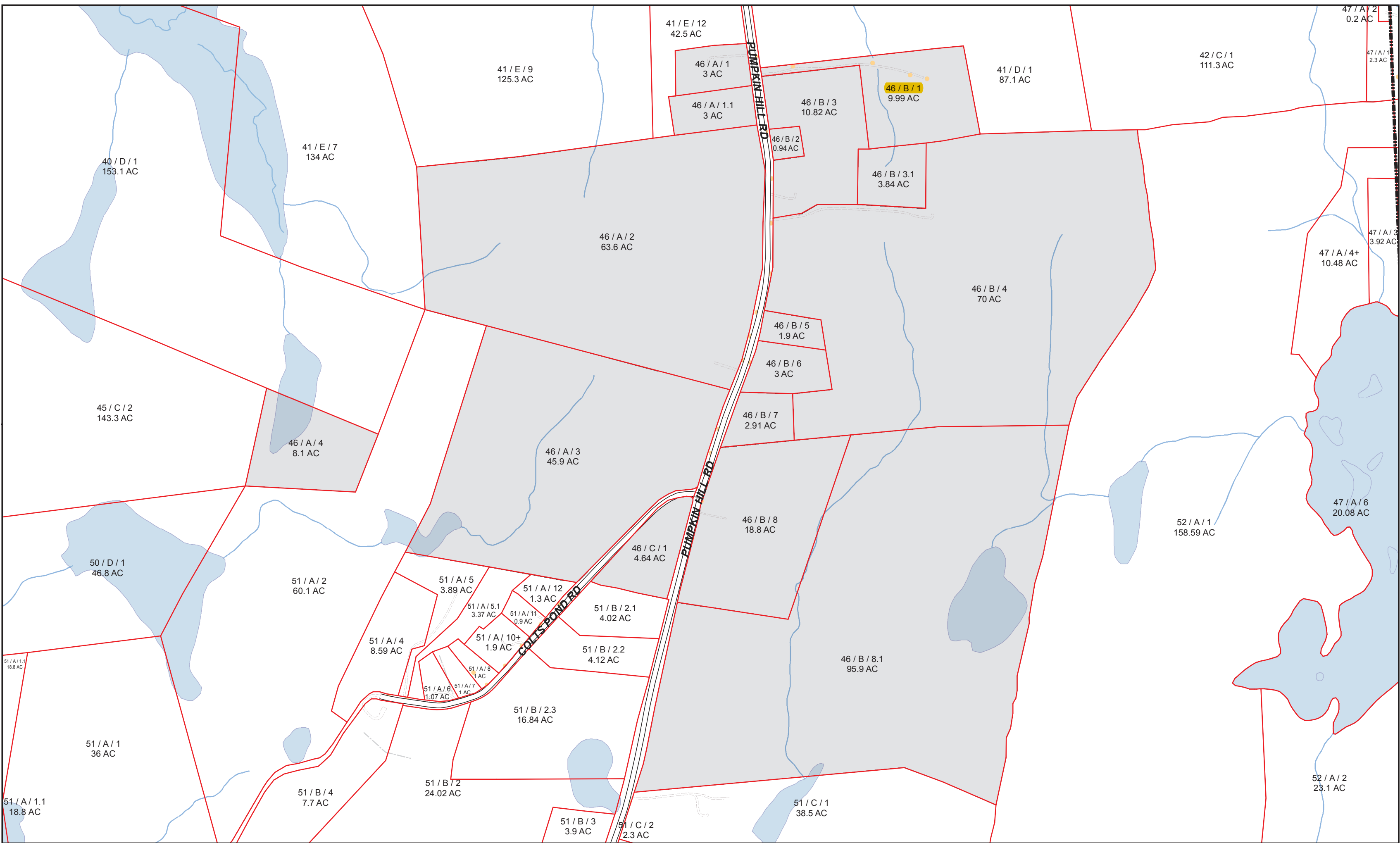
Section: 12		S	Bot Elev (ft): 220.0				Height (ft): 20.000									
		Pu	Len	Bracing %			F'y	Phic Pn	Num	Shear	Bear			Use		
Max Compression Member		(kip)	Load Case	(ft)	X	Y	Z	KL/R	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	%	Controls
LEG	PST - 2.375" x 0.218	-30.75	1.2D + 1.6W	5.00	100	100	100	78.3	50.0	42.53	0	0	0.00	0.00	72	Member X
HORIZ	SAE - 2X2X0.125	-2.32	1.2D + 1.6W	5.000	100	100	100	150.8	36.0	4.77	1	1	15.19	8.70	48	Member Z
DIAG	SAE - 2X2X0.125	-4.15	1.2D + 1.6W	7.071	50	50	50	109.9	36.0	8.23	1	1	15.19	8.70	50	Member Z

		Pu	Fy	Fu	Phit Pn	Num	Num	Shear	Bear	Blk Shear	Use	
Max Tension Member		(kip)	(ksi)	(ksi)	(kip)	Bolts	Holes	phiRnv	phiRn	phit Pn	%	Controls
LEG	PST - 2.375" x 0.218	27.71	180	50	65	66.60	0	0	0.00	0.00		41 Member
HORIZ	SAE - 2X2X0.125	2.30	60	36	58	12.60	1	1	15.19	5.22	6.15	44 Bolt Bear
DIAG	SAE - 2X2X0.125	4.14	330	36	58	12.60	1	1	15.19	5.22	6.15	79 Bolt Bear

Max Splice Forces		Pu	phiRnt	Use	Num	
		(kip)	(kip)	%	Bolts	Bolt Type
Top Tension		0.00	0.00	0	0	
Top Compression		3.89	0.00	0		
Bot Tension		32.10	0.00	0		
Bot Compression		35.41	0.00	0		

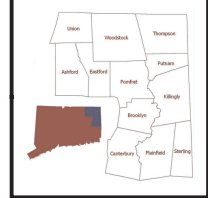


**Legend**

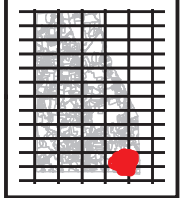
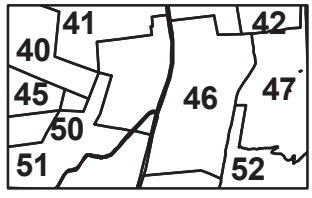
Town Line	Parcel Boundaries 041013	Lakes and Ponds
Parcel Lines	Utility Poles	Building Polygon
Center_Line	Driveways	Rivers and Streams
Railroad	Parcels on this Map	

Note: The areas, boundaries, and dimensions shown on this tax map are derived from

Map  
**46**



Created By:  
Northeastern Connecticut  
Council of Government  
Printed On: May 20, 2013



1 inch = 500 feet

# 353 PUMPKIN HILL RD

**Location** 353 PUMPKIN HILL RD

**Mblu** 46/ B/ 1/ /

**Acct#** 00205600

**Owner** BUNTE IRENE D

**Assessment** \$299,400

**Appraisal** \$427,800

**PID** 1872

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$149,800	\$278,000	\$427,800
Assessment			
Valuation Year	Improvements	Land	Total
2016	\$104,800	\$194,600	\$299,400

## Owner of Record

<b>Owner</b>	BUNTE IRENE D	<b>Sale Price</b>	\$0
<b>Co-Owner</b>	C/O AMERICAN TOWER CORP	<b>Certificate</b>	C
<b>Address</b>	ATT: LAND MANAGEMENT 10 PRESIDENTIAL WAY WOBURN, MA 01801	<b>Book &amp; Page</b>	118/ 924
		<b>Sale Date</b>	11/01/1999

## Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
BUNTE IRENE D	\$0	C	118/ 924	11/01/1999

## Building Information

### Building 1 : Section 1

**Year Built:** 1984  
**Living Area:** 720  
**Replacement Cost:** \$48,362  
**Building Percent** 70  
**Good:**  
**Replacement Cost**  
**Less Depreciation:** \$33,900

### Building Photo

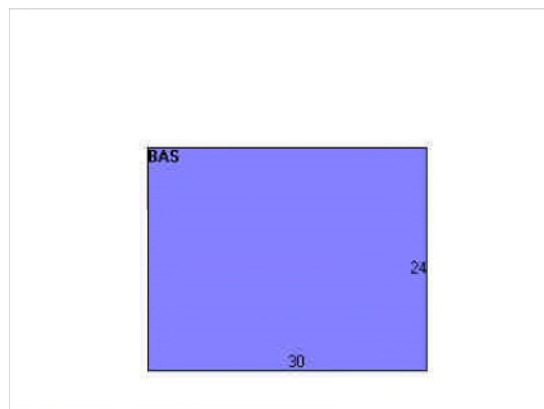
Building Attributes	
Field	Description
STYLE	Light Indust
MODEL	Commercial

Grade	Average
Stories:	1
Occupancy	1
Exterior Wall 1	Concrete
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt Shingl
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Hot Air-No Duc
AC Type	Central
Bldg Use	Commercial 94
Sprinkler Type	
Sprinkler %	
Mezzanine Fin.	
Mezanine Unf.	
219	
1st Floor Use:	
Heat/AC	Heat/AC Pkg
Frame Type	Masonry
Baths/Plumbing	None
Ceiling/Walls	None
Rooms/Prtns	Average
Wall Height	10
% Comn Wall	



(<http://images.vgsi.com/photos/AshfordCTPhotos//00\00\13\68.JPG>)

### Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	720	720
		720	720

### Extra Features

Extra Features	Legend
No Data for Extra Features	

### Land

#### Land Use

<b>Use Code</b>	200
<b>Description</b>	Commercial 94
<b>Zone</b>	RA
<b>Neighborhood</b>	C3
<b>Alt Land Appr Category</b>	No

#### Land Line Valuation

<b>Size (Acres)</b>	9.96
<b>Frontage</b>	
<b>Depth</b>	
<b>Assessed Value</b>	\$194,600
<b>Appraised Value</b>	\$278,000

**Outbuildings**

<b>Outbuildings</b>						<b>Legend</b>
<b>Code</b>	<b>Description</b>	<b>Sub Code</b>	<b>Sub Description</b>	<b>Size</b>	<b>Value</b>	<b>Bldg #</b>
FN4	Fence 8'			400 L.F.	\$3,200	1
SHD2	Pre Cast Cell			252 S.F.	\$36,100	1
SHD2	Pre Cast Cell			100 S.F.	\$7,700	1
TWR1	Cell Tower			240 HEIGHT	\$174,400	1

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