Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

December 21, 2016

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

RE: **Notice of Exempt Modification for AT&T/ LTE 3C Crown Site BU: 803934**
AT&T Site ID: CT5857
400 Main Street, Somers, CT 06071
Latitude: 41° 59' 1.48"/ Longitude: -72° 27' 56.87"

Dear Ms. Bachman:

AT&T currently maintains six (6) antennas at the 160-foot level of the existing 190-monopole tower at 400 Main Street in Somers, CT. The tower is owned by Crown Castle; the property is owned by the Town of Somers. AT&T now intends to replace three (3) RRU-11s with three (3) RRU-12s.

A request for original zoning documents was sent to the Town of Somers but has not been answered.

This modification complies with the aforementioned condition(s).

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.S.C.A. § 16-50j-73, a copy of this letter is being sent to Ms. Lisa Pellegrini, First Selectman, Town of Somers, as well as the property owner, and Crown Castle is the tower owner.

1. The proposed modifications will not result in an increase in the height of the existing tower.

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

3. The proposed modification 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 Communication 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-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Jeffrey Barbadora.

Sincerely,

Jeffrey Barbadora
Real Estate Specialist
12 Gill Street, Suite 5800, Woburn, MA 01801
781-729-0053
Jeff.Barbadora@crowncastle.com

Attachments:

Tab 1: Exhibit-1: Compound plan and elevation depicting the planned changes
Tab 2: Exhibit-2: Structural Modification Report
Tab 3: Exhibit-3: General Power Density Table Report (RF Emissions Analysis Report)

cc: Ms. Lisa Pellegrini, First Selectman
Town of Somers
600 Main Street
Somers, CT 06071

Town of Somers, CT

Property Listing Report

Map Block Lot 05-07 | Account 00202300

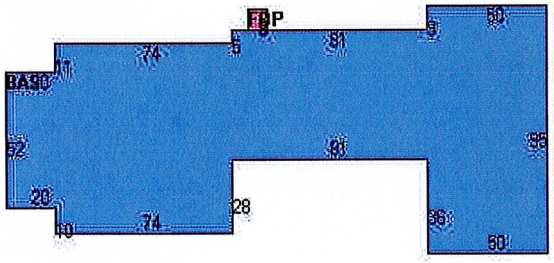
Property Information

Property Location	400 MAIN ST
Owner	SOMERS TOWN OF
Co-Owner	FIRE COMPLEX
Mailing Address	400 MAIN STREET SOMERS CT 06071
Land Use	928 Fire Dept
Land Class	E
Zoning Code	A-1
Census Tract	

Neighborhood	E
Acreage	11
Utilities	,Well,Septic,Well,Septic
Lot Setting/Desc	Clear
Additional Info	

Photo

Sketch



Primary Construction Details

Year Built	0
Stories	
Building Style	
Building Use	
Building Condition	
Floors	Concr-Finished
Total Rooms	

Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	Hip
Roof Cover	Copper

Exterior Walls	Wood Frame
Interior Walls	Drywall
Heating Type	Forced Air
Heating Fuel	Oil
AC Type	None
Gross Bldg Area	16346
Total Living Area	16282

Report Created On 12/21/2016

Town of Somers, CT

Property Listing Report | Map Block Lot 05-07 | Account 00202300

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	2532600	1772800
Extras	56200	39300
Improvements	2692100	1884400
Outbuildings	103300	72300
Land	592500	414800
Total	3284600	2299200

Outbuilding and Extra Items

Type	Description
Paving Asph	32000 SF
PreCast Cell Shed	120 SF
Fence 8'	330 LF
Tower	190 LF
Light	13 UNITS
Sprinklers-Wet	15242 SF
Air Conditioning	8800 SF

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Open Porch	64	0
Finished Upper Story	1040	1040
First Floor	15242	15242
Total Area		0

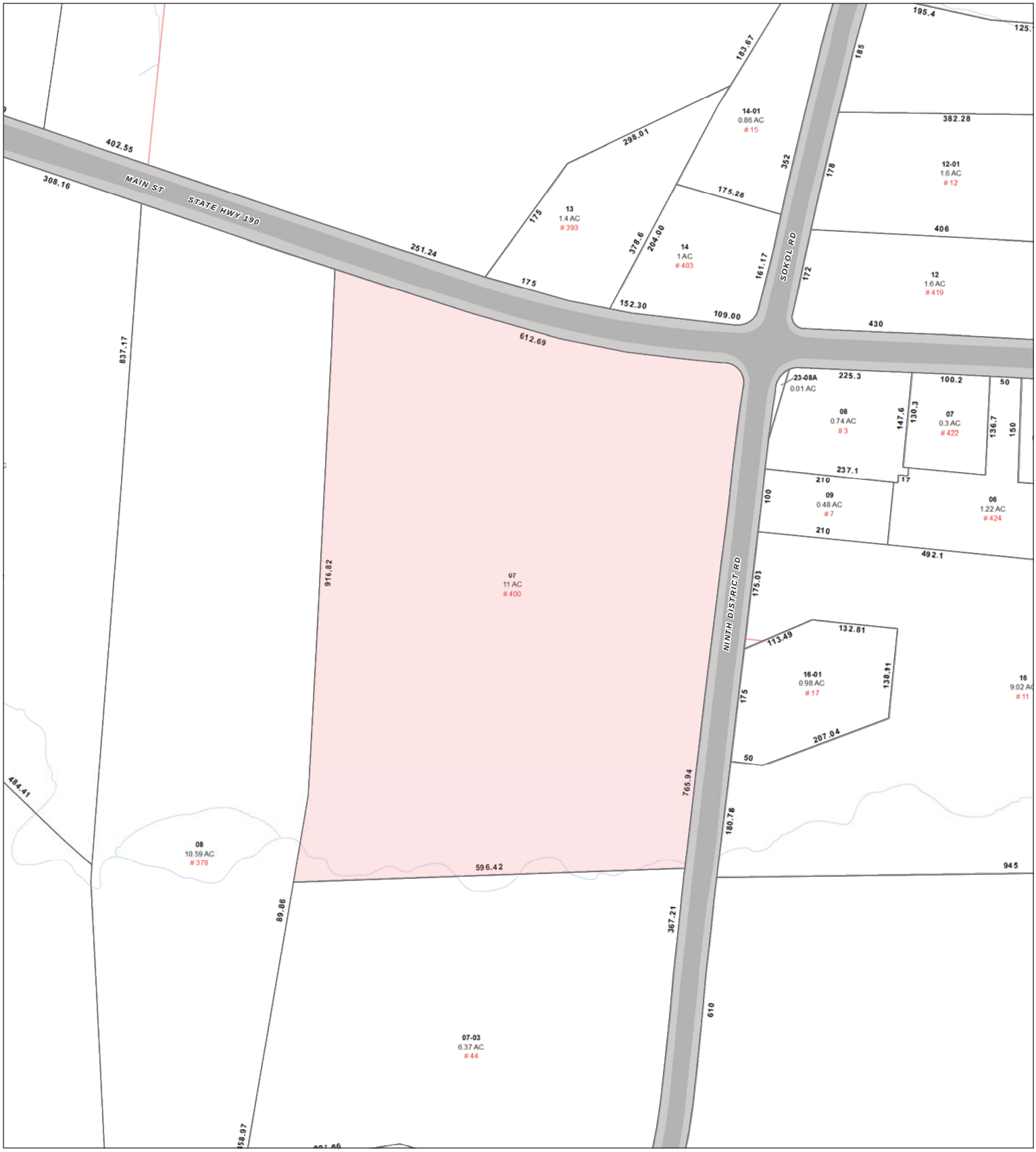
Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
SOMERS TOWN OF	165/ 819	8/18/1995	240000

Report Created On 12/21/2016

Town of Somers, Connecticut - Assessment Parcel Map

Parcel: 05-07 **Address:** 400 MAIN ST



Map Produced April 2016

Approximate Scale: 1 inch = 200 feet

WIRELESS COMMUNICATIONS FACILITY
CT5857 - LTE 2C
SOMERS CENTRAL
CROWN CASTLE SITE NO.: 803934
400 MAIN STREET
SOMERS, CT 06071

GENERAL NOTES

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

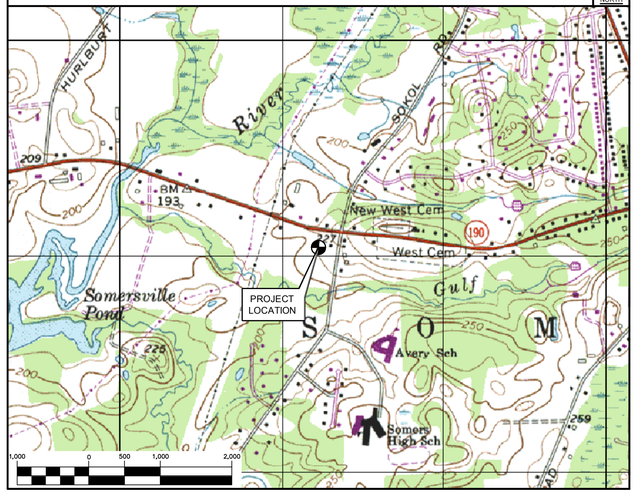
SITE DIRECTIONS

FROM: 500 ENTERPRISE DRIVE, ROCKY HILL, CONNECTICUT
TO: 400 MAIN STREET, SOMERS, CONNECTICUT

1.	HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD	0.31 MI
2.	TURN LEFT ONTO CAPITAL BLVD	0.27 MI
3.	TURN LEFT ONTO WEST ST	0.16 MI
4.	MERGE ONTO I-91 N via THE RAMP ON THE LEFT TOWARD HARTFORD	26.29 MI
5.	MERGE ONTO CT-190 E via EXIT 47E TOWARD HAZARDVILLE/SOMERS	6.73 MI
6.	400 MAIN STREET IS ON THE RIGHT	

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. INSTALL (3) NEW RRUS-12'S ON EXISTING RRU TOWER MOUNT. RECONFIGURE AS REQUIRED.

PROJECT INFORMATION

AT&T SITE NUMBER:	CT5857
AT&T SITE NAME:	SOMERS CENTRAL
SITE ADDRESS:	CROWN CASTLE SITE NO.: 803934 400 MAIN STREET SOMERS, CT 06071
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°-59'-01.43" N LONGITUDE: 72°-27'-55.86" W GROUND ELEVATION: ±210' AMSL SITES COORDINATES AND GROUND ELEVATION REFERENCED FROM GOOGLE EARTH.

SHEET INDEX

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

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	12/05/16	KAWJR	CAG	CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION

PROFESSIONAL ENGINEER SEAL

at&t

EMPIRE telecom

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

AT&T MOBILITY
WIRELESS COMMUNICATIONS FACILITY
CT5857 - LTE 2C
SOMERS CENTRAL
400 MAIN STREET
SOMERS, CT 06071

DATE: 10/31/16
SCALE: AS NOTED
JOB NO. 16071.54

TITLE SHEET

T-1

Sheet No. 1 of 7

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): 95–105 MPH (3 SECOND GUST)
- RISK CATEGORY: II (BASED ON IBC TABLE 1604.5)
- NOMINAL DESIGN SPEED (OTHER STRUCTURE): 97 MPH (Vasd) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7–10) PER 2012 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2016 CONNECTICUT STATE BUILDING CODE.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7–10 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES:

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

STRUCTURAL STEEL

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

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

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

PAINT NOTES

PAINTING SCHEDULE:

1. ANTENNA PANELS:
   A. SHERWIN WILLIAMS POLANE–B
   B. COLOR TO BE MATCHED WITH EXISTING TOWER STRUCTURE.
2. COAXIAL CABLES:
   A. ONE COAT OF DTM BONDING PRIMER (2–5 MILS. DRY FINISH)
   B. TWO COATS OF DTM ACRYLIC PRIMER/FINISH (2.5–5 MILS. DRY FINISH)
   C. COLOR TO BE FIELD MATCHED WITH EXISTING STRUCTURE.

EXAMINATION AND PREPARATION:

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

CLEANING:

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

APPLICATION:

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

COMPLETED WORK:

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

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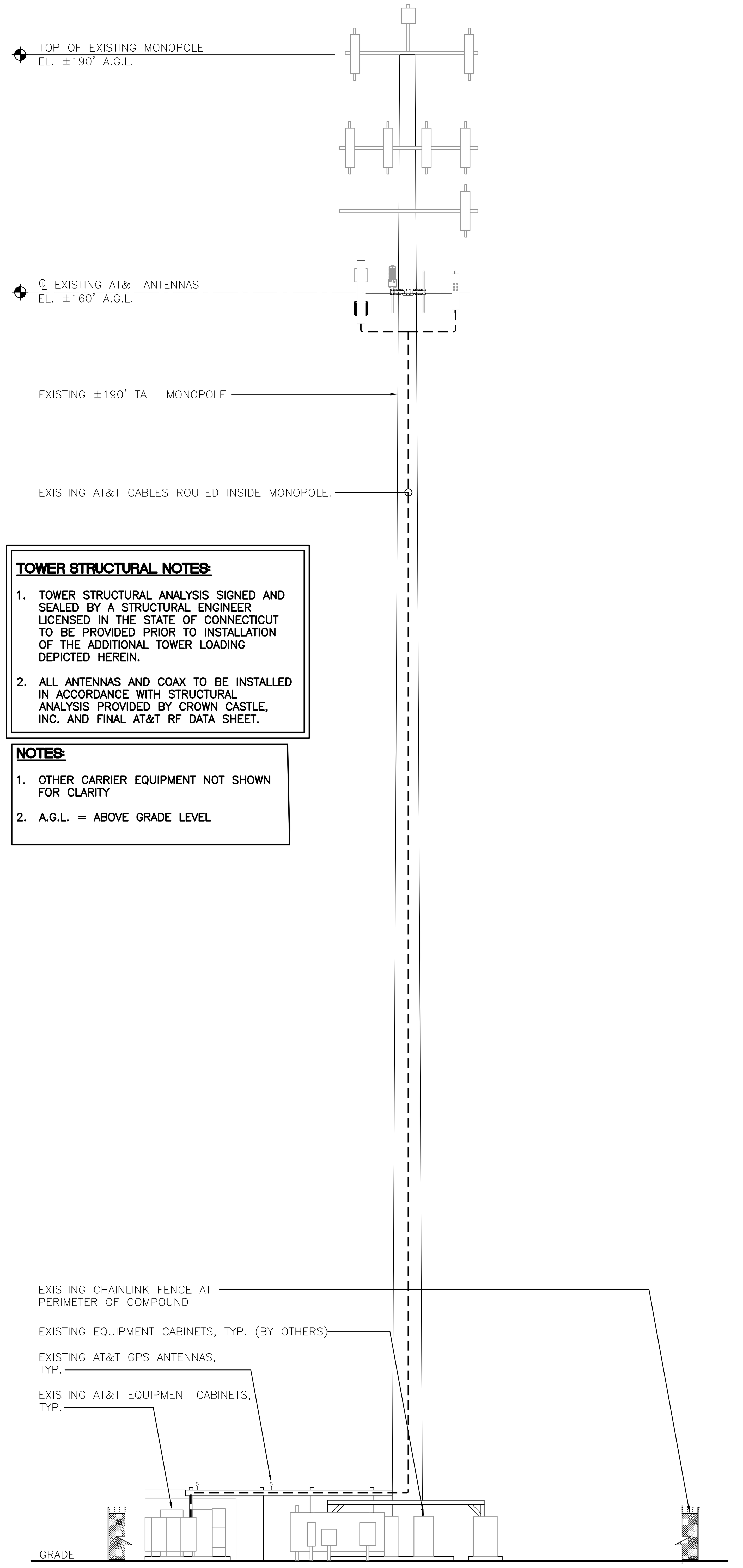
JOB NO. 16071.54

NOTES AND SPECIFICATIONS

N–1

Sheet No. 2 of 7



TOWER STRUCTURAL NOTES:

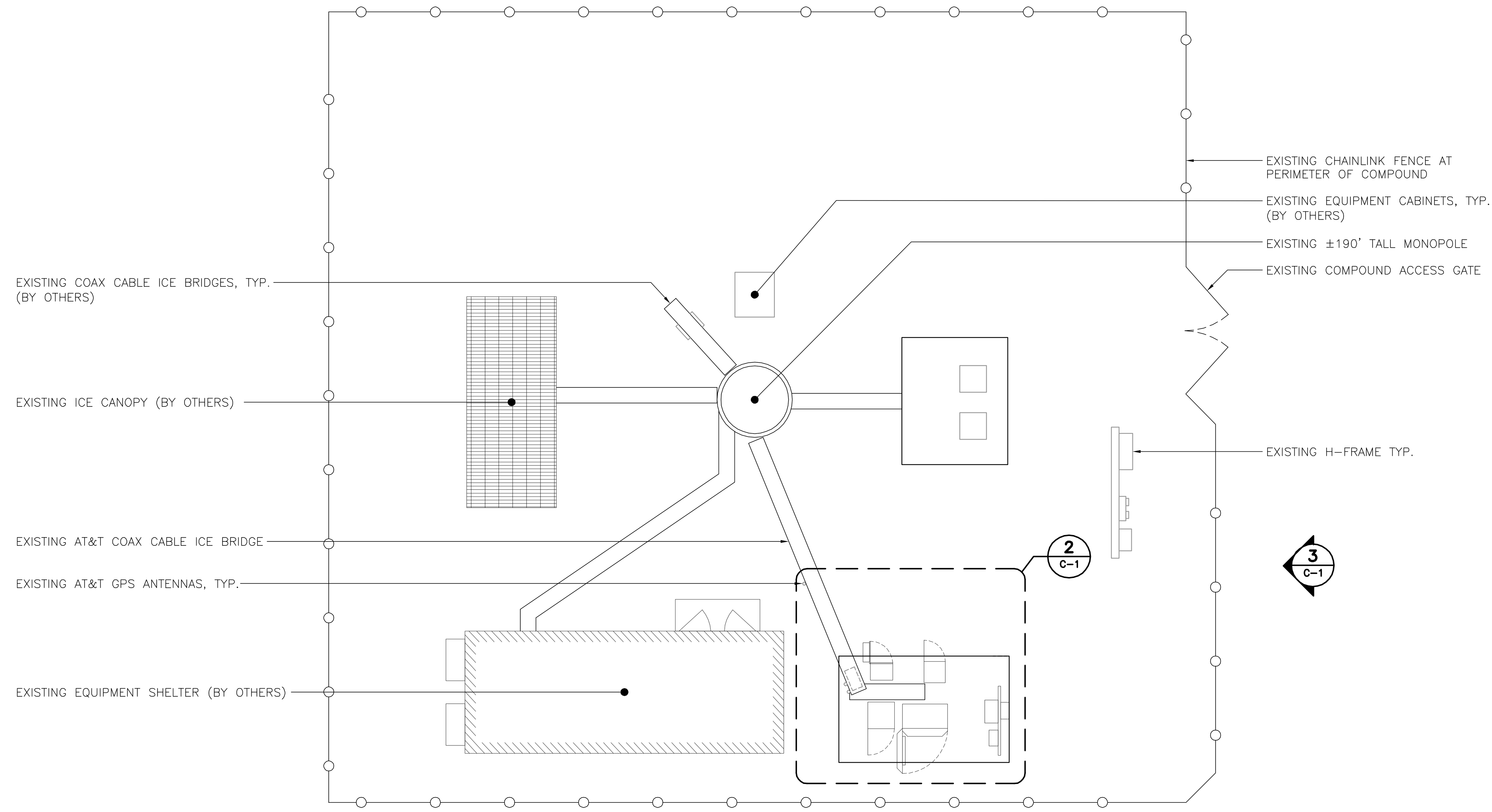
1. TOWER STRUCTURAL ANALYSIS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT TO BE PROVIDED PRIOR TO INSTALLATION OF THE ADDITIONAL TOWER LOADING DEPICTED HEREIN.
2. ALL ANTENNAS AND COAX TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY CROWN CASTLE,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

NOTES:

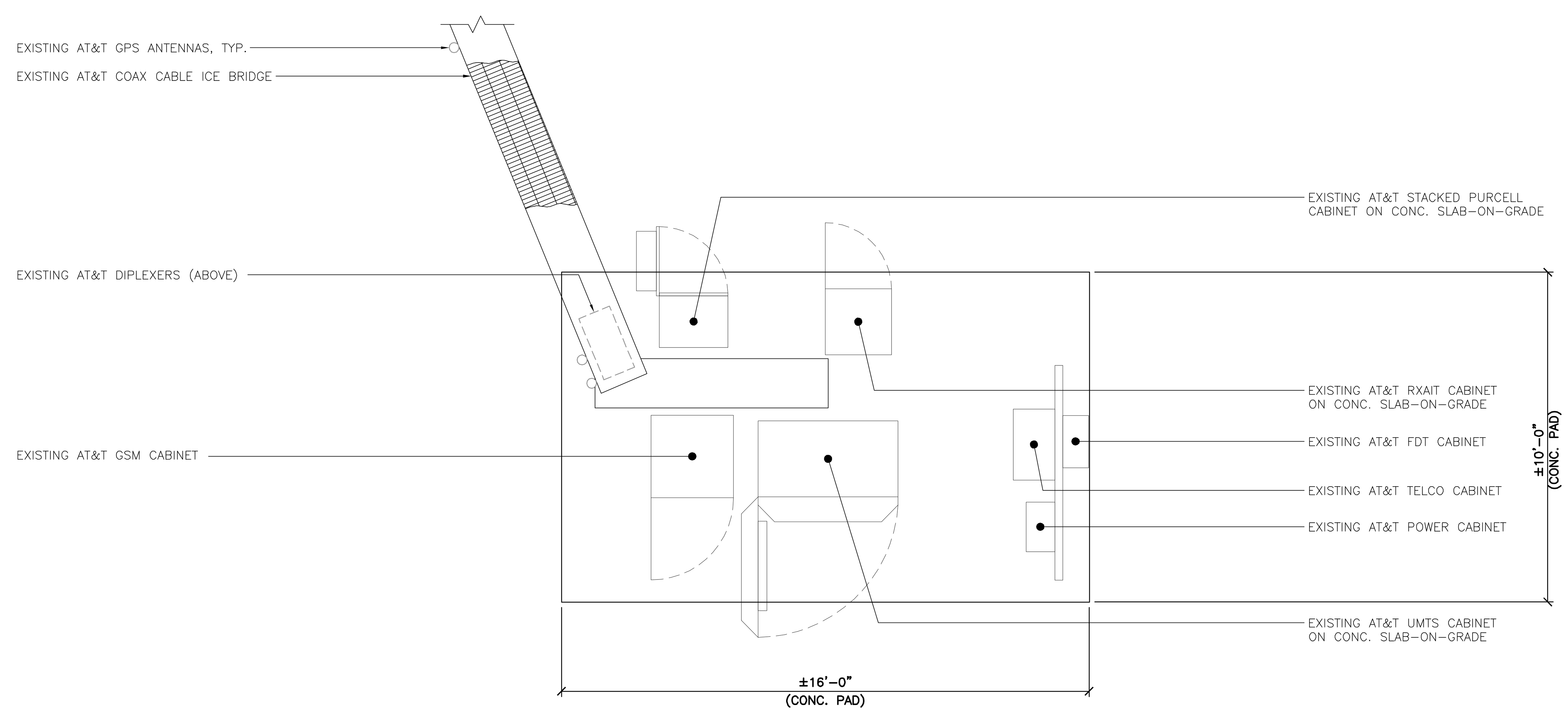
1. OTHER CARRIER EQUIPMENT NOT SHOWN FOR CLARITY
2. A.G.L. = ABOVE GRADE LEVEL

3 / C-1 **EAST TOWER ELEVATION**
SCALE: 1" = 10'

GRAPHIC SCALE 10 0 5 10 20 40
(IN FEET)
1 inch = 10 ft.



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



2 / C-1 **EQUIPMENT LAYOUT PLAN**
SCALE: 3/8" = 1'-0"
APPROXIMATE NORTH

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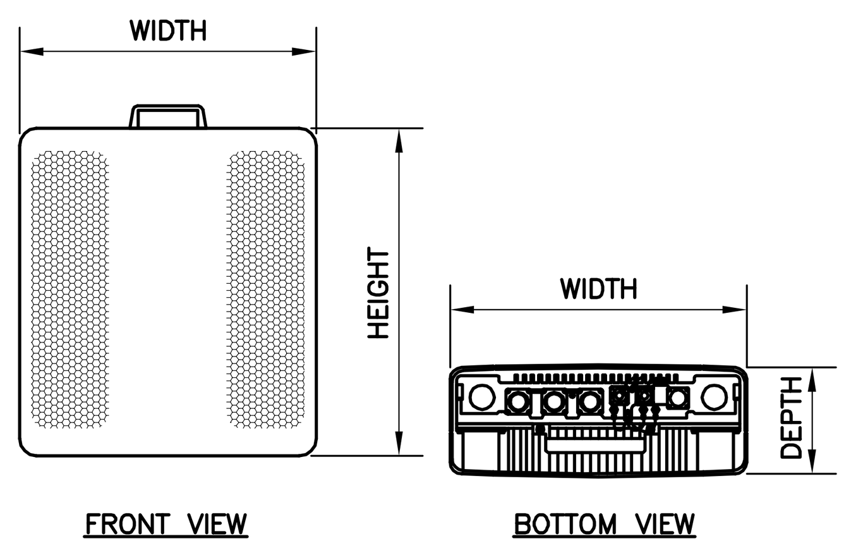
PLANS AND ELEVATION

C-1

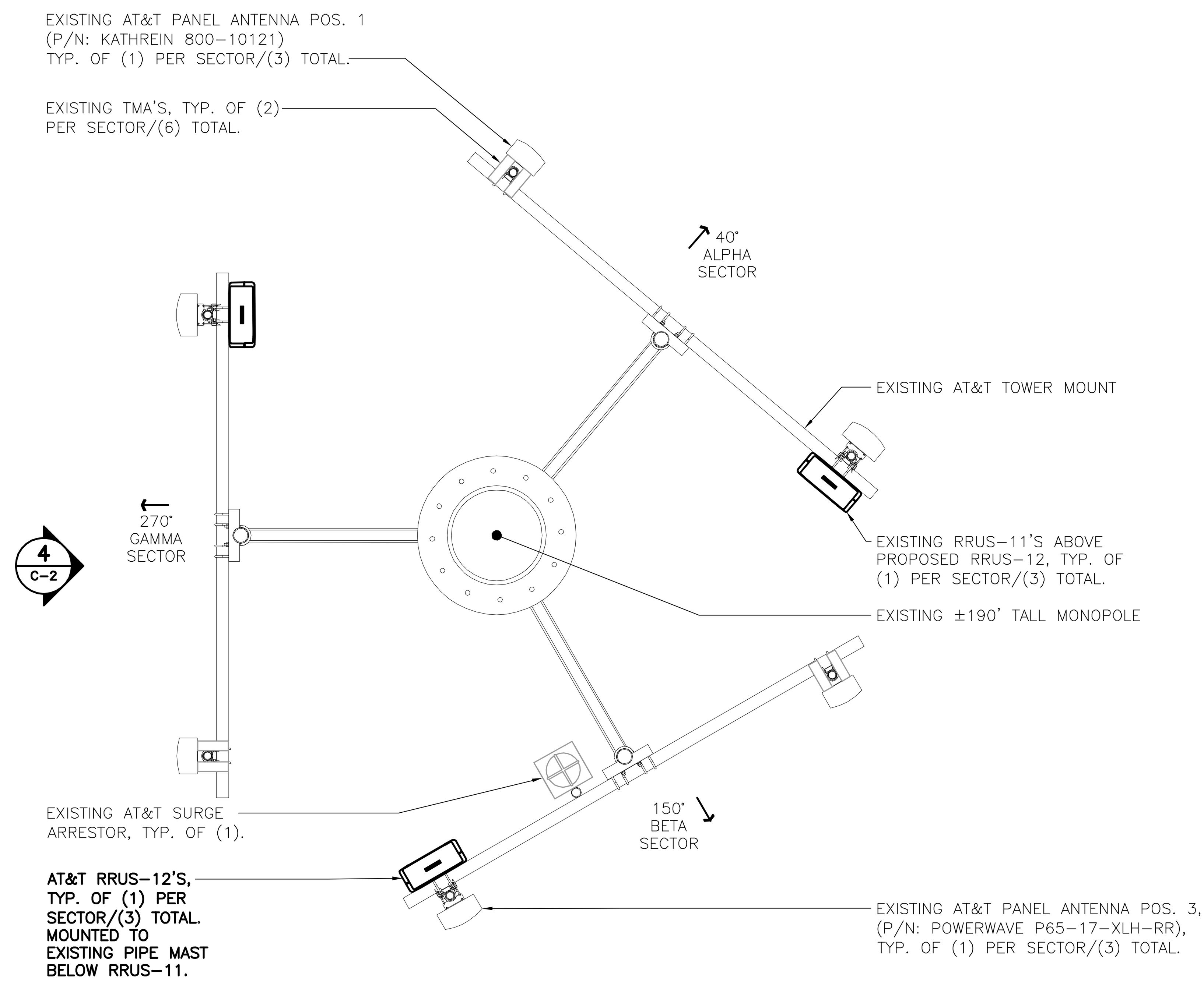
Sheet No. 3 of 7



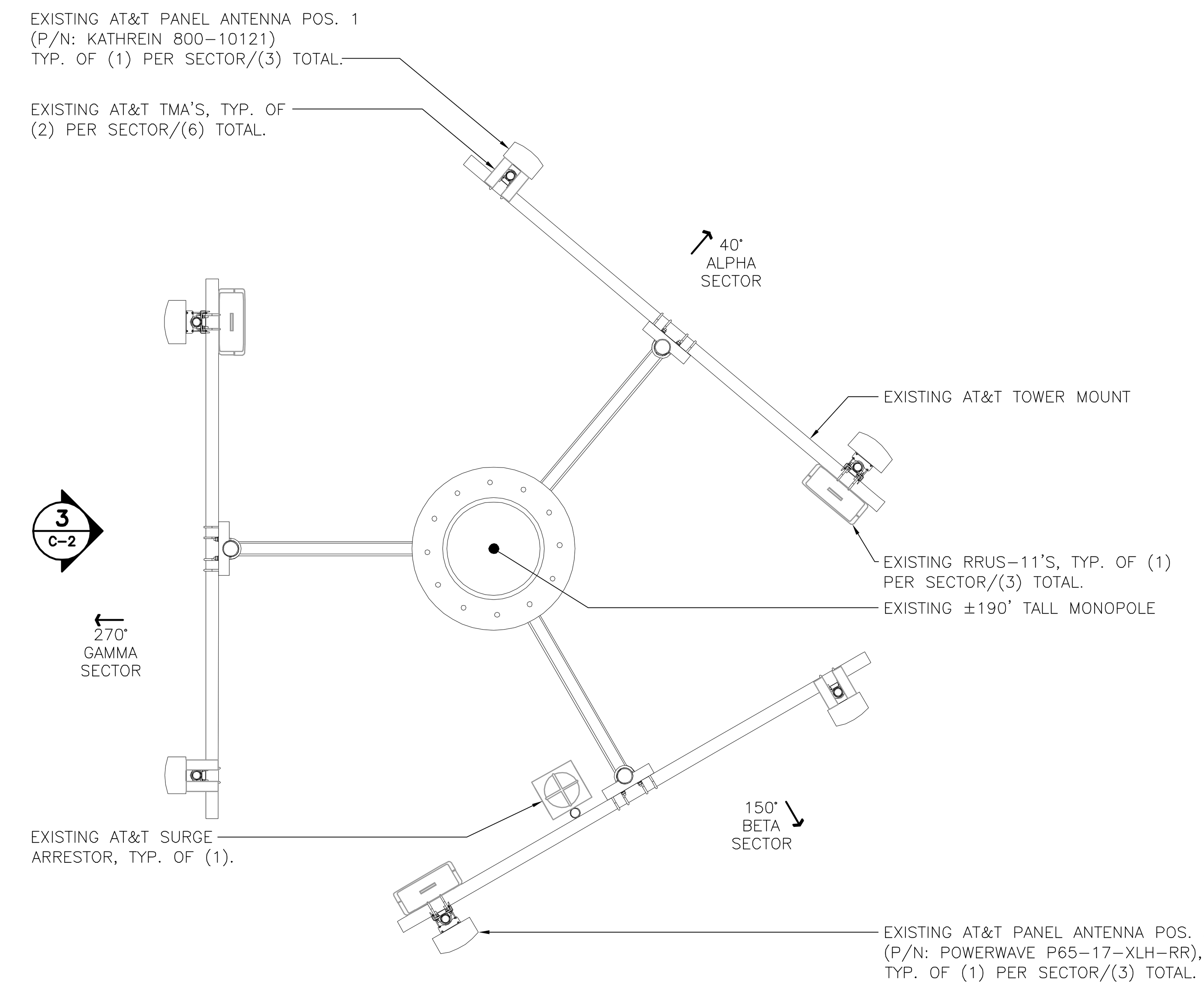
RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS 12	20.4"L x 18.5"W x 7.5"D	50 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

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

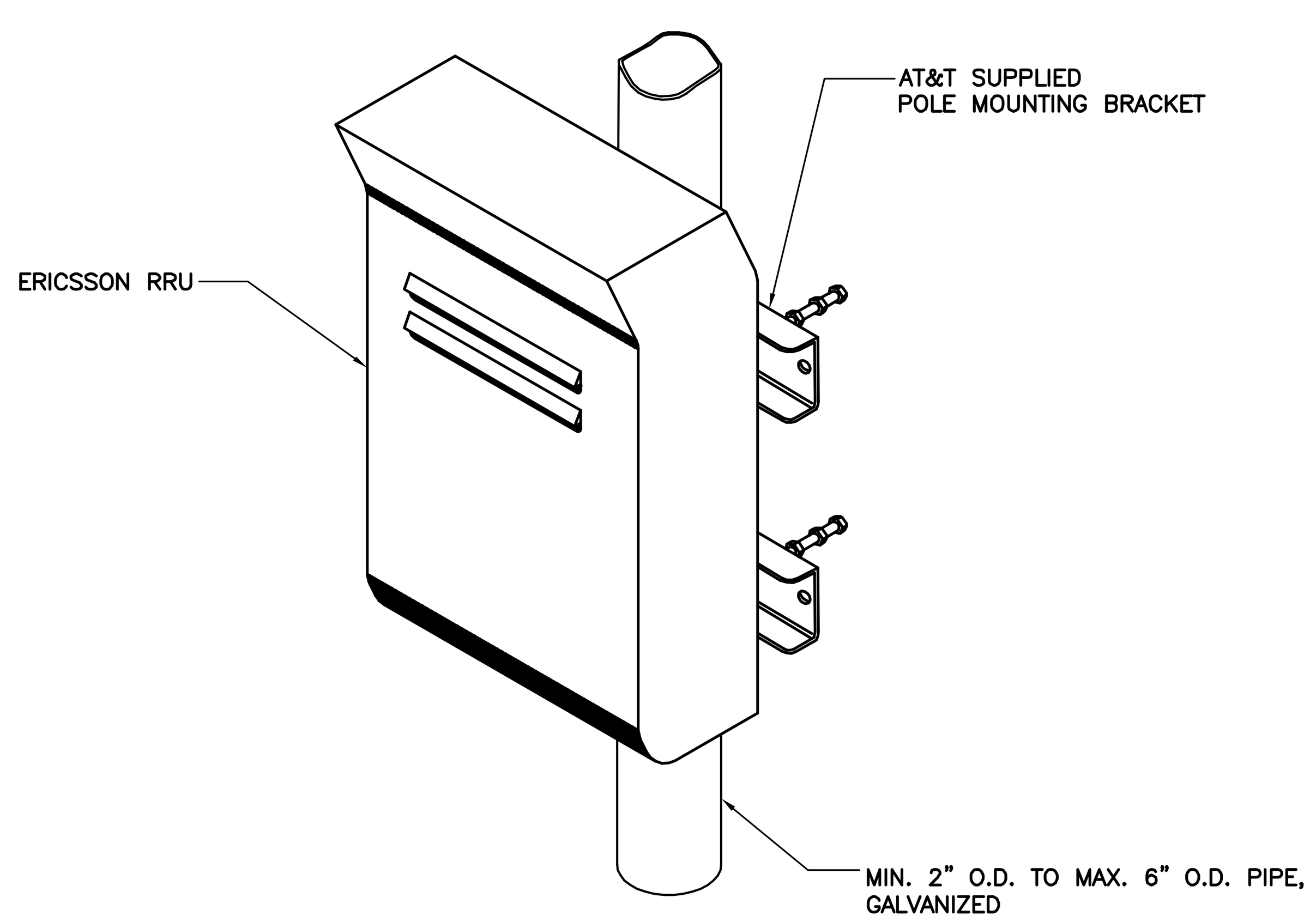
5 (C-2) ERICSSON RRUS 12 DETAIL
SCALE: 1" = 1'-0"



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



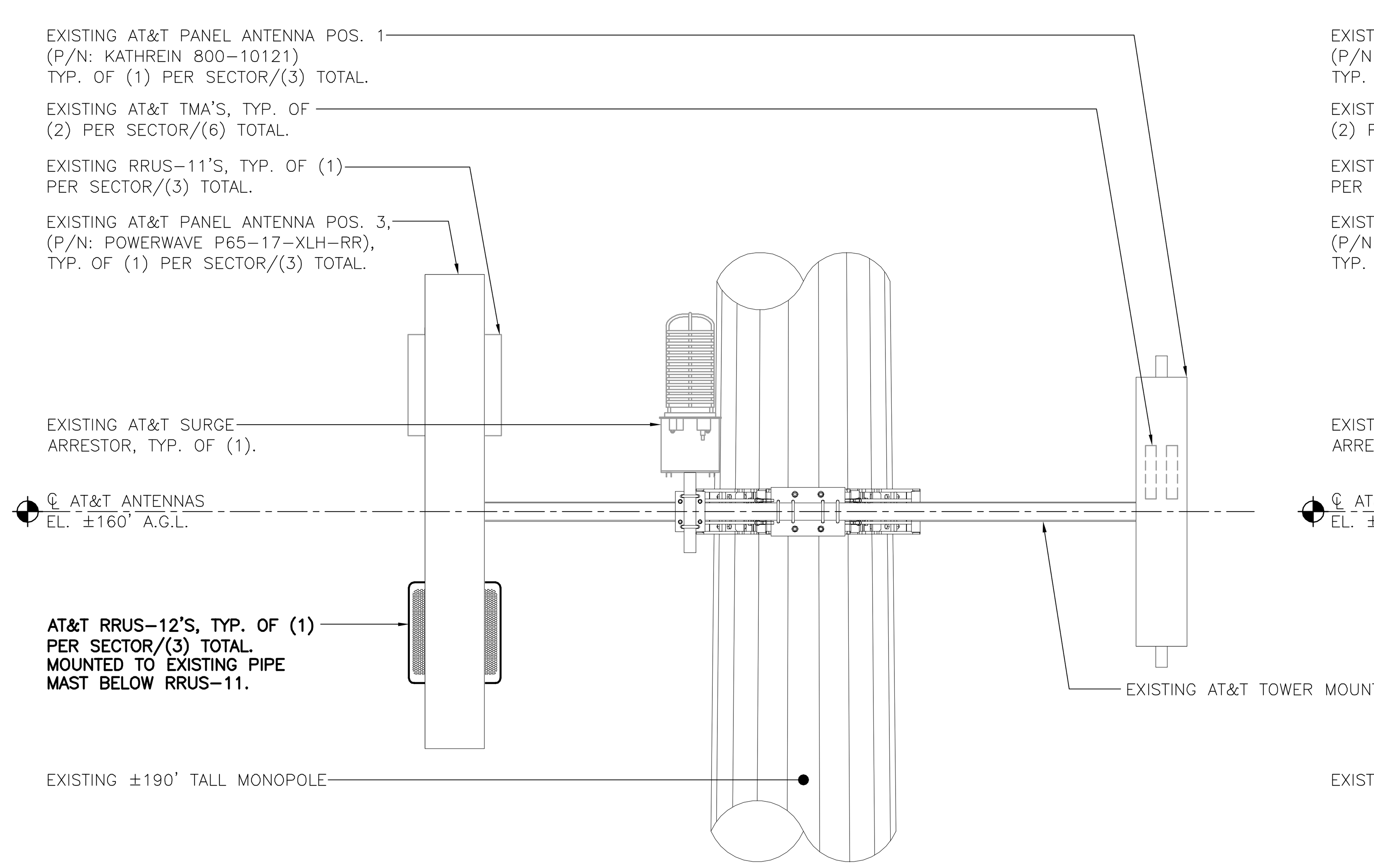
1 (C-2) EXISTING ANTENNA PLAN
SCALE: 3/8" = 1'-0"
NORTH



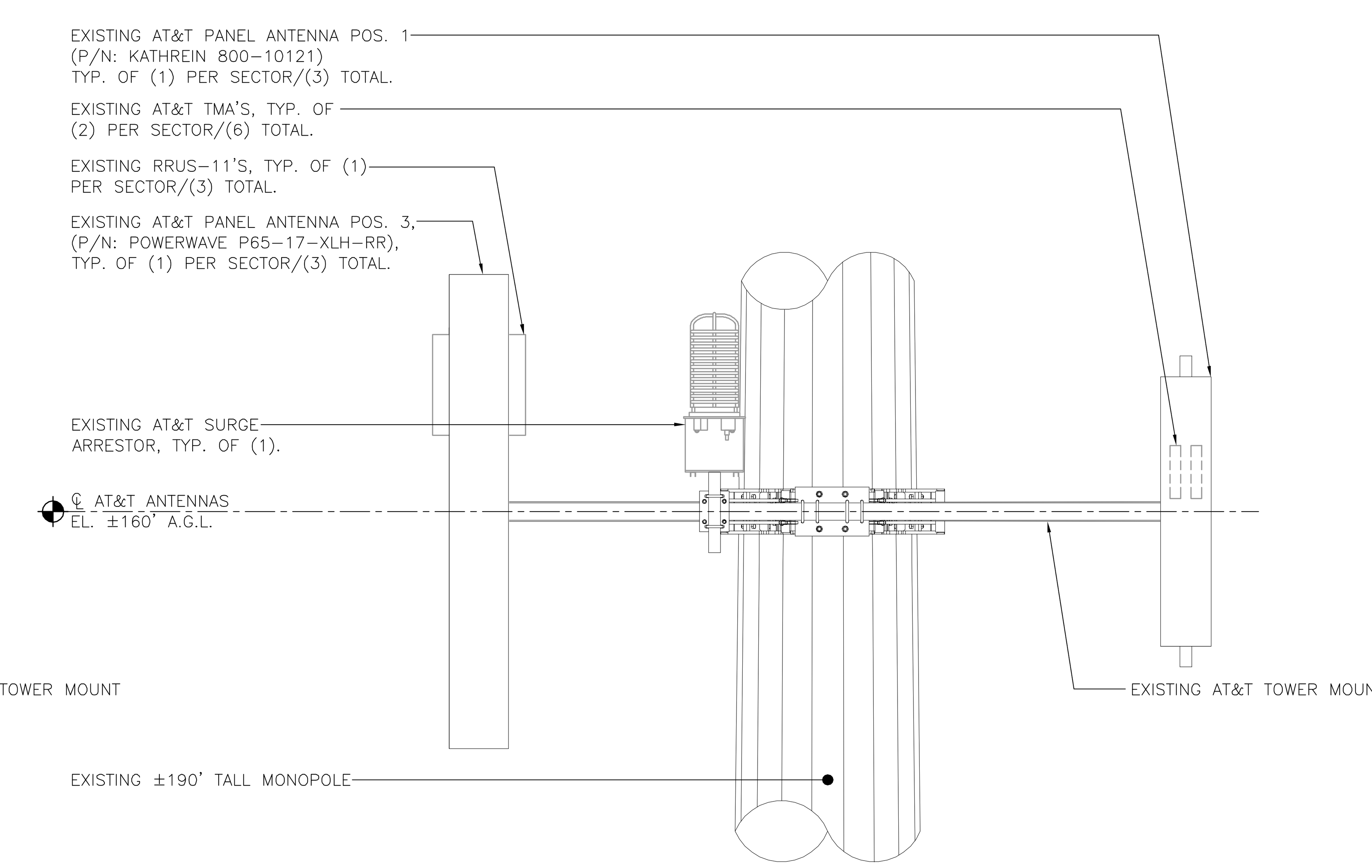
ISOMETRIC VIEW

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.

6 (C-2) TYPICAL RRUS MOUNTING DETAILS
SCALE: NTS



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



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

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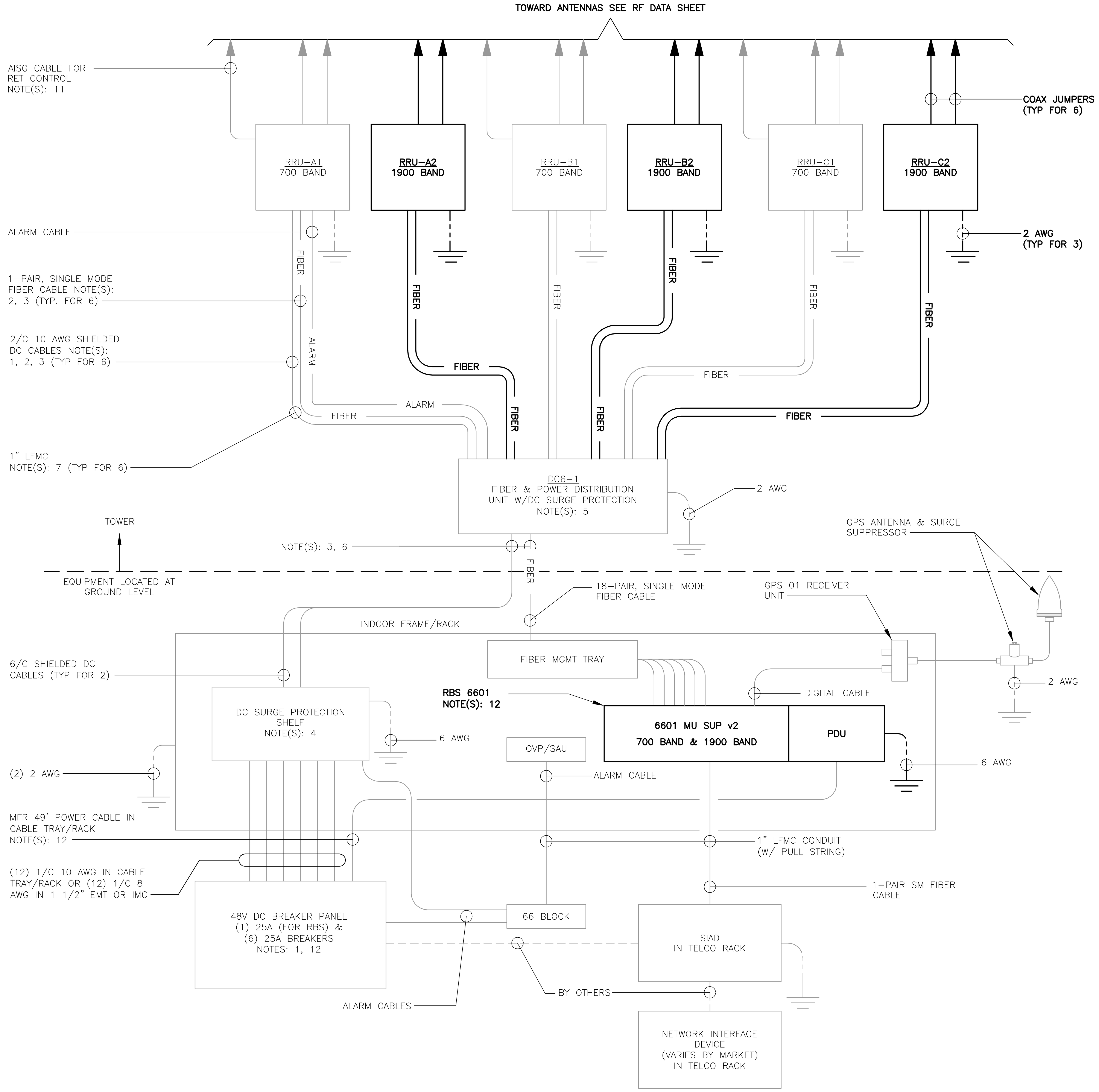
LTE 2C
EQUIPMENT
DETAILS

C-2
Sheet No. 4 of 7



1 E-1 **LTE SCHEMATIC DIAGRAM**

NOT TO SCALE

LTE SCHEMATIC DIAGRAM NOTES:

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

ELECTRICAL NOTES

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

TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM

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

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

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

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

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

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

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

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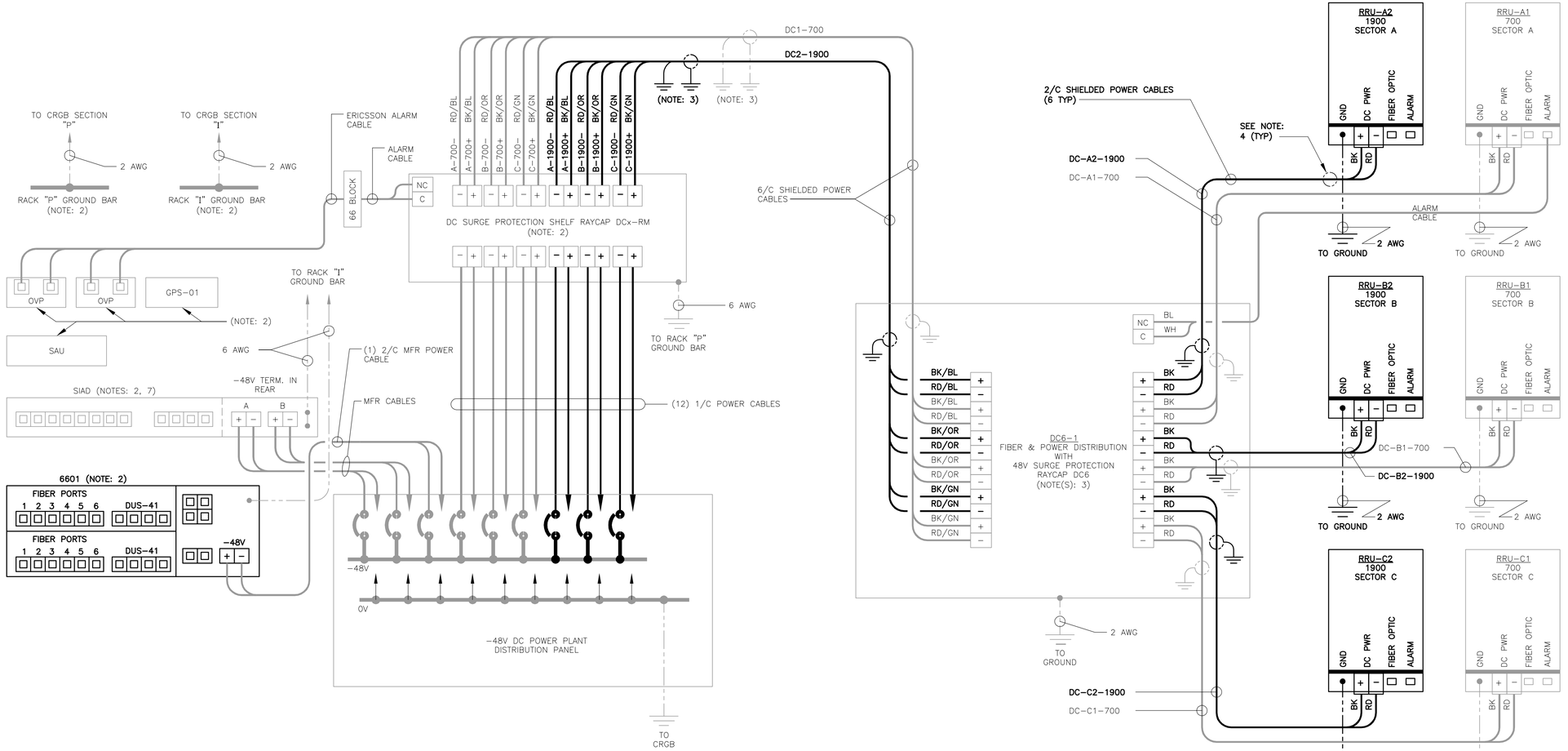
LTE SCHEMATIC DIAGRAM AND NOTES

E-1



1 / E-2 LTE WIRING DIAGRAM

NOT TO SCALE

LTE WIRING DIAGRAM NOTES:

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

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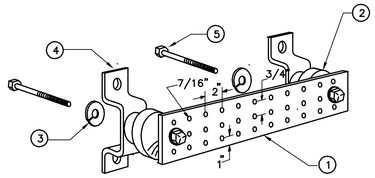
LTE WIRING DIAGRAM

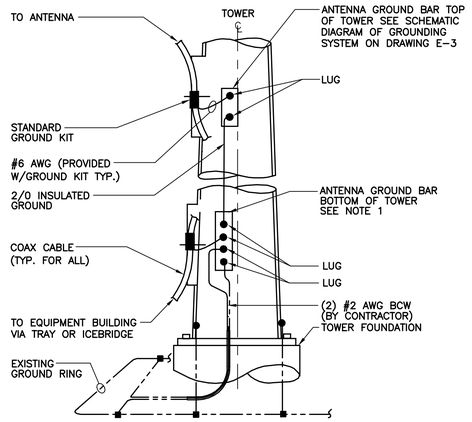
E-2



LEGEND

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

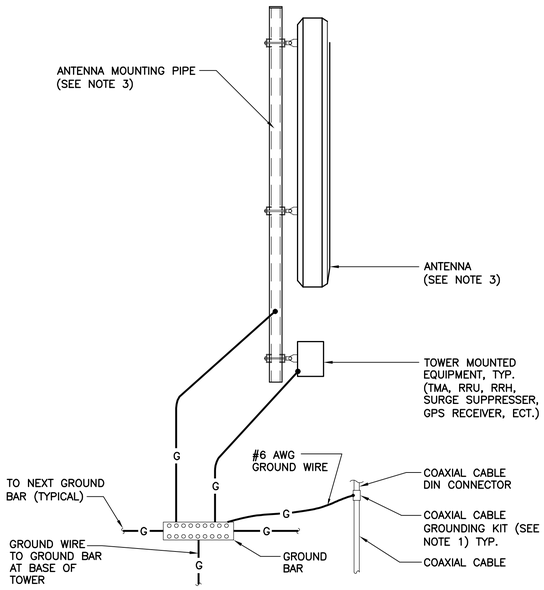
3 / E-3 **GROUND BAR DETAIL**
NOT TO SCALE



NOTES:

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

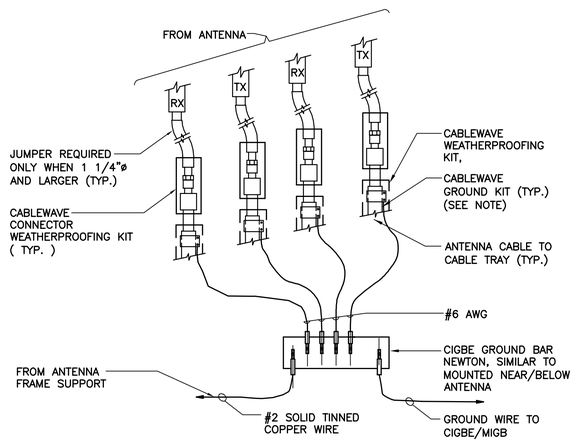
2 / E-3 **ANTENNA CABLE GROUNDING - TOWER**
NOT TO SCALE



NOTES:

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

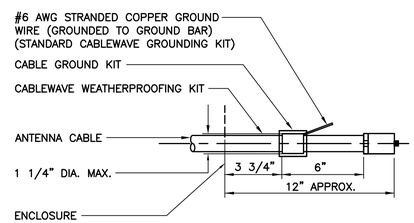
1 / E-3 **TYPICAL ANTENNA GROUNDING DETAIL**
NOT TO SCALE



NOTE:

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

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



NOTE:

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

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

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TYPICAL ELECTRICAL DETAILS

E-3

Sheet No. 7 of 7

Date: **November 15, 2016**

Kevin Morrow
Crown Castle
3530 Toringdon Way Suite 300
Charlotte, NC 28277

Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
(724) 416-2000

Subject: **Structural Analysis Report**

Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Carrier Site Number:	CT5857
	Carrier Site Name:	Somers Central
Crown Castle Designation:	**Crown Castle BU Number:**	803934
	Crown Castle Site Name:	CT SOMERS FD CAC
	Crown Castle JDE Job Number:	406199
	Crown Castle Work Order Number:	1324617
	Crown Castle Application Number:	367359 Rev. 0
Engineering Firm Designation:	**Crown Castle Project Number:**	1324617
Site Data:	**400 MAIN STREET, SOMERS, Tolland County, CT** **Latitude *41° 59' 1.48"*, Longitude *-72° 27' 56.87"*** **187 Foot - Monopole Tower**	

Dear Kevin Morrow,

Crown Castle is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 1324617, in accordance with application 367359, revision 0.

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

LC5: Existing + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing loading, respectively.

This analysis has been performed in accordance with the 2016 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 125 mph converted to a nominal 3-second gust wind speed of 97 mph per Section 1609.3 and Appendix N as required for use in the TIA-222-G Standard per Exception #5 of Section 1609.1.1. Exposure Category C and Risk Category II were used in this analysis.

All modifications and equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

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

Structural analysis prepared by: Jeremy Hesson, E.I.T. / BNM

Respectfully submitted by:

STATE OF CONNECTICUT
TERRY P. STYRAN
31522
LICENSED PROFESSIONAL ENGINEER
11/16/2016

Terry P. Styran, P.E.
Senior Project Engineer
tnxTower Report - version 7.0.5.1

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1) INTRODUCTION

This tower is a 187 ft Monopole tower designed by Summit Manufacturing, LLC. in April of 2001. The tower was originally designed for a wind speed of 80 mph per TIA/EIA-222-F.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a 3-second gust wind speed of 97 mph with no ice, 50 mph with 1 inch ice thickness and 60 mph under service loads, exposure category C.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
160.0	160.0	3	ericsson	RRUS 12	-	-	-

Table 2 - Existing Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
188.0	193.0	1	andrew	DB404L-B	4 1	1-1/4 7/8	1
	190.0	2	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe			
	188.0	1	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe			
		1	tower mounts	Platform Mount [LP-1201]			
	186.0	3	alcatel lucent	TD-RRH8x20-25			
		3	rfs celwave	APXVTM14-C-120 w/ Mount Pipe			
186.0	186.0	3	alcatel lucent	800MHz 2X50W RRH W/FILTER	-	-	1
		3	alcatel lucent	PCS 1900MHz 4x45W-65MHz			
		1	tower mounts	Side Arm Mount [SO 102-3]			
181.0	181.0	3	alcatel lucent	RRH2X40-AWS	-	-	1
		3	alcatel lucent	RRH2x40 700			
		1	crown mounts	Side Arm Mount [SO 102-3]			
178.0	179.0	3	andrew	LNX-6513DS-A1M w/ Mount Pipe	19	1-5/8	1
		2	antel	LPA-80063/4CF w/ Mount Pipe			
		4	antel	LPA-80080-4CF-EDIN-0 w/ Mount Pipe			
		6	kathrein	742 213 w/ Mount Pipe			
		2	rfs celwave	DB-T1-6Z-8AB-0Z			
	178.0	1	tower mounts	Platform Mount [LP-1201]			
168.0	169.0	3	commscope	ATBT-BOTTOM-24V	12	1-5/8	1
		3	commscope	LNX-6515DS-VTM w/ Mount Pipe			
		3	ems wireless	RR90-17-02DP w/ Mount Pipe			
		3	ericsson	KRY 112 71/1			
	168.0	1	tower mounts	Platform Mount [LP-1201]			
160.0	160.0	3	ericsson	RRUS-11	-	-	2

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
		3	ericsson	RRUS-11	6 2 1	1-5/8 3/4 3/8	1
		3	kathrein	800 10121 w/ Mount Pipe			
		6	powerwave technologies	LGP21401			
		3	powerwave technologies	P65-17-XLH-RR w/ Mount Pipe			
		1	raycap	DC6-48-60-18-8F			
		1	tower mounts	T-Arm Mount [TA 601-3]			
150.0	150.0	3	rfs celwave	APXV18-206517S-C w/ Mount Pipe	6	1-5/8	1
		1	tower mounts	Pipe Mount [PM 601-3]			
120.0	125.0	1	sinclair	SD212-SF2P2SNM	1	7/8	1
	120.0	1	tower mounts	Side Arm Mount [SO 702-1]			
115.0	122.0	1	sinclair	SD110-SFXPASNM	1	1/2	1
	115.0	1	tower mounts	Pipe Mount [PM 601-1]			
81.0	82.0	1	telewave	ANT450D3	1	7/8	1
	81.0	1	tower mounts	Side Arm Mount [SO 310-1]			
48.0	48.0	1	lucent	KS24019-L112A	1	1/2	1
		1	tower mounts	Side Arm Mount [SO 701-1]			

Notes:
1) Existing Equipment
2) Equipment To Be Removed; Not considered in this analysis

Table 3 - Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
188	188	12	generic	Panel Antennas (CaAa = 75 ft^2)	-	-
178	178	12	generic	Panel Antennas (CaAa = 75 ft^2)	-	-
168	168	12	generic	Panel Antennas (CaAa = 75 ft^2)	-	-
158	158	12	generic	Panel Antennas (CaAa = 75 ft^2)	-	-
148	148	12	generic	Panel Antennas (CaAa = 75 ft^2)	-	-
138	138	12	generic	Panel Antennas (CaAa = 75 ft^2)	-	-
128	128	12	generic	Panel Antennas (CaAa = 75 ft^2)	-	-

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Dr. Clarence Welti, P.E., P.C.	1095648	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Summit Manufacturing/PJF	1058248	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Summit Manufacturing/PJF	419873	CCISITES

3.1) Analysis Method

tnxTower (version 7.0.5.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

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

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	187 - 136	Pole	TP36.201x26x0.25	1	-16.990	1858.360	63.7	Pass
L2	136 - 89.5	Pole	TP45.003x34.801x0.375	2	-29.014	3691.640	66.3	Pass
L3	89.5 - 44.25	Pole	TP53.304x43.103x0.438	3	-45.380	5079.070	69.7	Pass
L4	44.25 - 0	Pole	TP61.28x51.079x0.5	4	-69.658	6780.010	68.7	Pass
							Summary	
						Pole (L3)	69.7	Pass
						Rating =	69.7	Pass

Table 6 - Tower Component Stresses vs. Capacity – LC5

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	66.3	Pass
1	Base Plate	0	47.3	Pass
1	Base Foundation	0	66.5	Pass
1	Base Foundation Soil Interaction	0	57.1	Pass

Structure Rating (max from all components) =	69.7%

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.

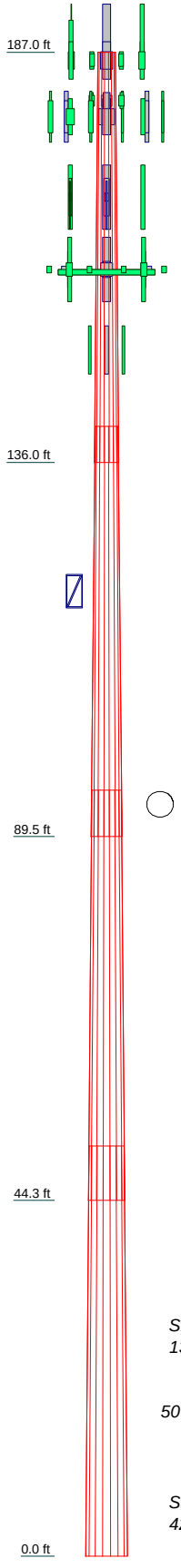
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	51.000	18	0.250	4.500	26.000	36.201		4.2
2	51.000	18	0.375	5.750	34.801	45.003		8.2
3	51.000	18	0.438	6.750	43.103	53.304		11.5
4	51.000	18	0.500		51.079	61.280		15.3
							A607-65	39.3



ALL REACTIONS ARE FACTORED

AXIAL 128 K

SHEAR 13 K

MOMENT 1879 kip-ft

TORQUE 2 kip-ft
50 mph WIND - 1.000 in ICE

AXIAL 70 K

SHEAR 42 K

MOMENT 5730 kip-ft

TORQUE 2 kip-ft
REACTIONS - 97 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
DB404L-B	188	LNX-6515DS-VTM w/ Mount Pipe	168
APXVSPP18-C-A20 w/ Mount Pipe	188	RR90-17-02DP w/ Mount Pipe	168
APXVSPP18-C-A20 w/ Mount Pipe	188	RR90-17-02DP w/ Mount Pipe	168
APXVSPP18-C-A20 w/ Mount Pipe	188	RR90-17-02DP w/ Mount Pipe	168
APXVTM14-C-120 w/ Mount Pipe	188	ATBT-BOTTOM-24V	168
APXVTM14-C-120 w/ Mount Pipe	188	ATBT-BOTTOM-24V	168
APXVTM14-C-120 w/ Mount Pipe	188	ATBT-BOTTOM-24V	168
TD-RRH8x20-25	188	KRY 112 71/1	168
TD-RRH8x20-25	188	KRY 112 71/1	168
TD-RRH8x20-25	188	KRY 112 71/1	168
(2) 6' x 2" Mount Pipe	188	6' x 2" Mount Pipe	168
(2) 6' x 2" Mount Pipe	188	6' x 2" Mount Pipe	168
(2) 6' x 2" Mount Pipe	188	6' x 2" Mount Pipe	168
Platform Mount [LP-1201]	188	Platform Mount [LP-1201]	168
PCS 1900MHz 4x45W-65MHz	186	800 10121 w/ Mount Pipe	160
PCS 1900MHz 4x45W-65MHz	186	800 10121 w/ Mount Pipe	160
PCS 1900MHz 4x45W-65MHz	186	800 10121 w/ Mount Pipe	160
800MHz 2X50W RRH W/FILTER	186	P65-17-XLH-RR w/ Mount Pipe	160
800MHz 2X50W RRH W/FILTER	186	P65-17-XLH-RR w/ Mount Pipe	160
800MHz 2X50W RRH W/FILTER	186	P65-17-XLH-RR w/ Mount Pipe	160
Side Arm Mount [SO 102-3]	186	RRUS-11	160
RRH2X40-AWS	181	RRUS-11	160
RRH2X40-AWS	181	RRUS-11	160
RRH2X40-AWS	181	(2) LGP21401	160
RRH2x40 700	181	(2) LGP21401	160
RRH2x40 700	181	(2) LGP21401	160
RRH2x40 700	181	DC6-48-60-18-8F	160
Side Arm Mount [SO 102-3]	181	T-Arm Mount [TA 601-3]	160
(2) 742 213 w/ Mount Pipe	178	RRUS 12	160
(2) 742 213 w/ Mount Pipe	178	RRUS 12	160
(2) 742 213 w/ Mount Pipe	178	RRUS 12	160
LNX-6513DS-A1M w/ Mount Pipe	178	APXV18-206517S-C w/ Mount Pipe	150
LNX-6513DS-A1M w/ Mount Pipe	178	APXV18-206517S-C w/ Mount Pipe	150
LNX-6513DS-A1M w/ Mount Pipe	178	APXV18-206517S-C w/ Mount Pipe	150
(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	178	Pipe Mount [PM 601-3]	150
(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	178	SD212-SF2P2SNM	120
(2) LPA-80063/4CF w/ Mount Pipe	178	Side Arm Mount [SO 702-1]	120
DB-T1-6Z-8AB-0Z	178	SD110-SFXPASNM	115
DB-T1-6Z-8AB-0Z	178	Pipe Mount [PM 601-1]	115
Platform Mount [LP-1201]	178	ANT450D3	81
LNX-6515DS-VTM w/ Mount Pipe	168	Side Arm Mount [SO 310-1]	81
LNX-6515DS-VTM w/ Mount Pipe	168	KS24019-L112A	48
		Side Arm Mount [SO 701-1]	48

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Tolland County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TOWER RATING: 69.7%

CROWN CASTLE
The Foundation for a Wireless World

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2000 Corporate Drive
Canonsburg, PA 15317
Phone: (724) 416-2000
FAX:

Job: ***BU#803934***			
Project:			
Client: Crown Castle	Drawn by: BMihalko		App'd:
Code: TIA-222-G	Date: 11/16/16		Scale: NTS
Path: X:\ENG Work Area\JHesson\WIP\803934 WO 1324617\QAE - BNM\803934.eri			Dwg No. E-1

Tower Input Data

There is a pole section.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

1) Tower is located in Tolland County, Connecticut.
2) Basic wind speed of 97 mph.
3) Structure Class II.
4) Exposure Category C.
5) Topographic Category 1.
6) Crest Height 0.000 ft.
7) Nominal ice thickness of 1.000 in.
8) Ice thickness is considered to increase with height.
9) Ice density of 56.000 pcf.
10) A wind speed of 50 mph is used in combination with ice.
11) Temperature drop of 50.000 °F.
12) Deflections calculated using a wind speed of 60 mph.
13) A non-linear (P-delta) analysis was used.
14) Pressures are calculated at each section.
15) Stress ratio used in pole design is 1.
16) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Horizontals	Assume Legs Pinned	Calculate Redundant Bracing Forces
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Use Moment Magnification	√ Use Clear Spans For Wind Area	SR Leg Bolts Resist Compression
√ Use Code Stress Ratios	Use Clear Spans For KL/r	All Leg Panels Have Same Allowable
√ Use Code Safety Factors - Guys	Retension Guys To Initial Tension	Offset Girt At Foundation
Escalate Ice	√ Bypass Mast Stability Checks	√ Consider Feed Line Torque
Always Use Max Kz	√ Use Azimuth Dish Coefficients	Include Angle Block Shear Check
Use Special Wind Profile	√ Project Wind Area of Appurt.	Use TIA-222-G Bracing Resist. Exemption
Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Use TIA-222-G Tension Splice Exemption
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Poles
Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	√ Include Shear-Torsion Interaction
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Always Use Sub-Critical Flow
SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Use Top Mounted Sockets
SR Members Are Concentric		

Tapered Pole Section Geometry

Section	*Elevation* *ft*	*Section Length* *ft*	*Splice Length* *ft*	*Number of Sides*	*Top Diameter* *in*	*Bottom Diameter* *in*	*Wall Thickness* *in*	*Bend Radius* *in*	*Pole Grade*
L1	187.000-136.000	51.000	4.500	18	26.000	36.201	0.250	1.000	A607-65 (65 ksi)
L2	136.000-89.500	51.000	5.750	18	34.801	45.003	0.375	1.500	A607-65 (65 ksi)
L3	89.500-44.250	51.000	6.750	18	43.103	53.304	0.438	1.750	A607-65 (65 ksi)
L4	44.250-0.000	51.000		18	51.079	61.280	0.500	2.000	A607-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	26.401	20.433	1711.654	9.141	13.208	129.592	3425.561	10.218	4.136	16.544
	36.759	28.527	4658.191	12.763	18.390	253.299	9322.512	14.266	5.931	23.726
L2	36.252	40.975	6135.246	12.221	17.679	347.039	12278.565	20.492	5.465	14.573
	45.697	53.118	13365.891	15.843	22.862	584.646	26749.369	26.564	7.261	19.361
L3	44.936	59.246	13625.290	15.146	21.896	622.267	27268.509	29.629	6.816	15.58
	54.126	73.412	25921.737	18.768	27.078	957.284	51877.583	36.713	8.612	19.683
L4	53.238	80.269	25943.041	17.955	25.948	999.807	51920.218	40.142	8.110	16.22
	62.225	96.458	45019.064	21.577	31.130	1446.152	90097.366	48.238	9.905	19.811

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 187.000-136.000				1	1	1			
L2 136.000-89.500				1	1	1			
L3 89.500-44.250				1	1	1			
L4 44.250-0.000				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
HB158-1-08U8-S8J18(1-5/8")	C	Surface Ar (CaAa)	178.000 - 0.000	1	1	0.000 0.000	1.980		0.001
LDF7-50A(1-5/8")	C	Surface Ar (CaAa)	178.000 - 0.000	6	6	0.010 0.100	1.980		0.001
*81 AVA5-50(7/8")	A	Surface Ar (CaAa)	81.000 - 8.000	1	1	0.250 0.250	1.102		0.000
*48 LDF4-50A(1/2")	C	Surface Ar (CaAa)	48.000 - 8.000	1	1	-0.100 -0.100	0.630		0.000
***									

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
*188 HB114-1-0813U4-M5J(1-1/4")	C	No	Inside Pole	187.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
HB114-1-08U4-M5J(1-1/4")	C	No	Inside Pole	187.000 - 0.000	3	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
HCC 78-50J(7/8")	C	No	Inside Pole	187.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
*178 LDF7-50A(1-5/8")	C	No	Inside Pole	178.000 - 0.000	12	No Ice	0.000	0.001

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
*168								
AVA7-50(1-5/8")	C	No	Inside Pole	168.000 - 0.000	6	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
HJ7-50A(1-5/8")	C	No	Inside Pole	168.000 - 0.000	6	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
*160								
LDF7-50A(1-5/8")	C	No	Inside Pole	160.000 - 0.000	6	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
WR-VG86ST-BRD(3/4")	C	No	Inside Pole	160.000 - 0.000	2	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
FB-L98B-002-75000(3/8")	C	No	Inside Pole	160.000 - 0.000	1	No Ice	0.000	0.000
						1/2" Ice	0.000	0.000
						1" Ice	0.000	0.000
*150								
CR 50 1873(1-5/8")	A	No	Inside Pole	150.000 - 8.000	6	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
*120								
HCC 78-50J(7/8")	C	No	Inside Pole	120.000 - 0.000	1	No Ice	0.000	0.001
						1/2" Ice	0.000	0.001
						1" Ice	0.000	0.001
*115								
HCC12-50J(1/2")	C	No	Inside Pole	115.000 - 0.000	1	No Ice	0.000	0.000
						1/2" Ice	0.000	0.000
						1" Ice	0.000	0.000
***								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	187.000-136.000	A	0.000	0.000	0.000	0.000	0.070
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	58.212	0.000	1.410
L2	136.000-89.500	A	0.000	0.000	0.000	0.000	0.232
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	64.449	0.000	1.772
L3	89.500-44.250	A	0.000	0.000	4.050	0.000	0.236
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	62.953	0.000	1.738
L4	44.250-0.000	A	0.000	0.000	3.995	0.000	0.191
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	63.614	0.000	1.704

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	187.000-136.000	A	2.342	0.000	0.000	0.000	0.000	0.070
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	114.959	0.000	3.275
L2	136.000-89.500	A	2.260	0.000	0.000	0.000	0.000	0.232
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	127.276	0.000	3.837
L3	89.500-44.250	A	2.145	0.000	0.000	20.662	0.000	0.578

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	124.110	0.000	3.689
L4	44.250-0.000	A	1.925	0.000	0.000	19.549	0.000	0.500
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	135.032	0.000	3.729

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	187.000-136.000	-0.127	1.278	-0.140	1.598
L2	136.000-89.500	-0.151	1.519	-0.171	1.954
L3	89.500-44.250	-0.204	1.478	-0.339	1.740
L4	44.250-0.000	-0.197	1.567	-0.285	2.058

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	7	HB158-1-08U8-S8J18(1-5/8")	136.00 - 178.00	1.0000	1.0000
L1	8	LDF7-50A(1-5/8")	136.00 - 178.00	1.0000	1.0000
L2	7	HB158-1-08U8-S8J18(1-5/8")	89.50 - 136.00	1.0000	1.0000
L2	8	LDF7-50A(1-5/8")	89.50 - 136.00	1.0000	1.0000
L2	23	AVA5-50(7/8")	89.50 - 81.00	1.0000	1.0000
L2	25	LDF4-50A(1/2")	89.50 - 48.00	1.0000	1.0000
L3	7	HB158-1-08U8-S8J18(1-5/8")	44.25 - 89.50	1.0000	1.0000
L3	8	LDF7-50A(1-5/8")	44.25 - 89.50	1.0000	1.0000
L3	23	AVA5-50(7/8")	44.25 - 81.00	1.0000	1.0000
L3	25	LDF4-50A(1/2")	44.25 - 48.00	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
*188 DB404L-B	A	From Leg	2.000	0.000	188.000	No Ice	1.140	1.140	0.014

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000 5.000			1/2" Ice 1" Ice	2.052 2.964	2.052 2.964	0.018 0.022
APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.000 0.000 2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	8.262 8.822 9.346	6.946 8.127 9.021	0.083 0.151 0.227
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.000 0.000 2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	8.262 8.822 9.346	6.946 8.127 9.021	0.083 0.151 0.227
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	8.262 8.822 9.346	6.946 8.127 9.021	0.083 0.151 0.227
APXVTM14-C-120 w/ Mount Pipe	A	From Leg	4.000 0.000 -2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	6.580 7.031 7.473	4.959 5.754 6.472	0.074 0.128 0.190
APXVTM14-C-120 w/ Mount Pipe	B	From Leg	4.000 0.000 -2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	6.580 7.031 7.473	4.959 5.754 6.472	0.074 0.128 0.190
APXVTM14-C-120 w/ Mount Pipe	C	From Leg	4.000 0.000 -2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	6.580 7.031 7.473	4.959 5.754 6.472	0.074 0.128 0.190
TD-RRH8x20-25	A	From Leg	4.000 0.000 -2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	4.045 4.298 4.557	1.535 1.714 1.901	0.070 0.097 0.128
TD-RRH8x20-25	B	From Leg	4.000 0.000 -2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	4.045 4.298 4.557	1.535 1.714 1.901	0.070 0.097 0.128
TD-RRH8x20-25	C	From Leg	4.000 0.000 -2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	4.045 4.298 4.557	1.535 1.714 1.901	0.070 0.097 0.128
(2) 6' x 2" Mount Pipe	A	From Leg	4.000 0.000 2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
(2) 6' x 2" Mount Pipe	B	From Leg	4.000 0.000 2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
(2) 6' x 2" Mount Pipe	C	From Leg	4.000 0.000 2.000	0.000	188.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
Platform Mount [LP-1201]	C	None		0.000	188.000	No Ice 1/2" Ice 1" Ice	23.100 26.800 30.500	23.100 26.800 30.500	2.100 2.500 2.900
*186 PCS 1900MHz 4x45W-65MHz	A	From Leg	1.000 0.000 0.000	0.000	186.000	No Ice 1/2" Ice 1" Ice	2.322 2.527 2.739	2.238 2.441 2.651	0.060 0.083 0.110
PCS 1900MHz 4x45W-65MHz	B	From Leg	1.000 0.000 0.000	0.000	186.000	No Ice 1/2" Ice 1" Ice	2.322 2.527 2.739	2.238 2.441 2.651	0.060 0.083 0.110
PCS 1900MHz 4x45W-	C	From Leg	1.000	0.000	186.000	No Ice	2.322	2.238	0.060

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
65MHz			0.000 0.000			1/2" Ice 1" Ice	2.527 2.739	2.441 2.651	0.083 0.110
800MHz 2X50W RRH W/FILTER	A	From Leg	1.000 0.000 0.000	0.000	186.000	No Ice 1/2" Ice 1" Ice	2.058 2.240 2.429	1.932 2.109 2.293	0.064 0.086 0.111
800MHz 2X50W RRH W/FILTER	B	From Leg	1.000 0.000 0.000	0.000	186.000	No Ice 1/2" Ice 1" Ice	2.058 2.240 2.429	1.932 2.109 2.293	0.064 0.086 0.111
800MHz 2X50W RRH W/FILTER	C	From Leg	1.000 0.000 0.000	0.000	186.000	No Ice 1/2" Ice 1" Ice	2.058 2.240 2.429	1.932 2.109 2.293	0.064 0.086 0.111
Side Arm Mount [SO 102-3]	C	None		0.000	186.000	No Ice 1/2" Ice 1" Ice	3.000 3.480 3.960	3.000 3.480 3.960	0.081 0.111 0.141
*181									
RRH2X40-AWS	A	From Leg	1.000 0.000 0.000	0.000	181.000	No Ice 1/2" Ice 1" Ice	2.161 2.360 2.565	1.420 1.590 1.768	0.044 0.061 0.082
RRH2X40-AWS	B	From Leg	1.000 0.000 0.000	0.000	181.000	No Ice 1/2" Ice 1" Ice	2.161 2.360 2.565	1.420 1.590 1.768	0.044 0.061 0.082
RRH2X40-AWS	C	From Leg	1.000 0.000 0.000	0.000	181.000	No Ice 1/2" Ice 1" Ice	2.161 2.360 2.565	1.420 1.590 1.768	0.044 0.061 0.082
RRH2x40 700	A	From Leg	1.000 0.000 0.000	0.000	181.000	No Ice 1/2" Ice 1" Ice	1.962 2.137 2.318	1.034 1.168 1.311	0.050 0.067 0.086
RRH2x40 700	B	From Leg	1.000 0.000 0.000	0.000	181.000	No Ice 1/2" Ice 1" Ice	1.962 2.137 2.318	1.034 1.168 1.311	0.050 0.067 0.086
RRH2x40 700	C	From Leg	1.000 0.000 0.000	0.000	181.000	No Ice 1/2" Ice 1" Ice	1.962 2.137 2.318	1.034 1.168 1.311	0.050 0.067 0.086
Side Arm Mount [SO 102-3]	C	None		0.000	181.000	No Ice 1/2" Ice 1" Ice	3.000 3.480 3.960	3.000 3.480 3.960	0.081 0.111 0.141
*178									
(2) 742 213 w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	5.373 5.950 6.501	4.620 6.000 6.982	0.049 0.094 0.146
(2) 742 213 w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	5.373 5.950 6.501	4.620 6.000 6.982	0.049 0.094 0.146
(2) 742 213 w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	5.373 5.950 6.501	4.620 6.000 6.982	0.049 0.094 0.146
LNX-6513DS-A1M w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	6.083 6.519 6.949	5.159 5.923 6.616	0.051 0.105 0.165

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
LNX-6513DS-A1M w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	6.083 6.519 6.949	5.159 5.923 6.616	0.051 0.105 0.165
LNX-6513DS-A1M w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	6.083 6.519 6.949	5.159 5.923 6.616	0.051 0.105 0.165
(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	2.856 3.220 3.592	6.569 7.195 7.837	0.030 0.076 0.128
(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	2.856 3.220 3.592	6.569 7.195 7.837	0.030 0.076 0.128
(2) LPA-80063/4CF w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	6.385 6.784 7.192	6.603 7.232 7.876	0.038 0.104 0.176
DB-T1-6Z-8AB-0Z	A	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	4.800 5.070 5.348	2.000 2.193 2.393	0.044 0.080 0.120
DB-T1-6Z-8AB-0Z	C	From Leg	4.000 0.000 1.000	0.000	178.000	No Ice 1/2" Ice 1" Ice	4.800 5.070 5.348	2.000 2.193 2.393	0.044 0.080 0.120
Platform Mount [LP-1201]	C	None		0.000	178.000	No Ice 1/2" Ice 1" Ice	23.100 26.800 30.500	23.100 26.800 30.500	2.100 2.500 2.900
*168									
LNX-6515DS-VTM w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	11.683 12.404 13.135	9.842 11.366 12.914	0.083 0.173 0.273
LNX-6515DS-VTM w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	11.683 12.404 13.135	9.842 11.366 12.914	0.083 0.173 0.273
LNX-6515DS-VTM w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	11.683 12.404 13.135	9.842 11.366 12.914	0.083 0.173 0.273
RR90-17-02DP w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	4.593 5.018 5.436	3.319 4.089 4.784	0.034 0.072 0.115
RR90-17-02DP w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	4.593 5.018 5.436	3.319 4.089 4.784	0.034 0.072 0.115
RR90-17-02DP w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	4.593 5.018 5.436	3.319 4.089 4.784	0.034 0.072 0.115
ATBT-BOTTOM-24V	A	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	0.104 0.148 0.199	0.065 0.102 0.147	0.003 0.004 0.006
ATBT-BOTTOM-24V	B	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	0.104 0.148 0.199	0.065 0.102 0.147	0.003 0.004 0.006

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
ATBT-BOTTOM-24V	C	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	0.104 0.148 0.199	0.065 0.102 0.147	0.003 0.004 0.006
KRY 112 71/1	A	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	0.583 0.688 0.799	0.398 0.488 0.586	0.013 0.018 0.025
KRY 112 71/1	B	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	0.583 0.688 0.799	0.398 0.488 0.586	0.013 0.018 0.025
KRY 112 71/1	C	From Leg	4.000 0.000 1.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	0.583 0.688 0.799	0.398 0.488 0.586	0.013 0.018 0.025
6' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
6' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
6' x 2" Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	168.000	No Ice 1/2" Ice 1" Ice	1.425 1.925 2.294	1.425 1.925 2.294	0.022 0.033 0.048
Platform Mount [LP-1201]	C	None		0.000	168.000	No Ice 1/2" Ice 1" Ice	23.100 26.800 30.500	23.100 26.800 30.500	2.100 2.500 2.900
*160 800 10121 w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	5.388 5.813 6.234	4.600 5.351 6.046	0.066 0.114 0.168
800 10121 w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	5.388 5.813 6.234	4.600 5.351 6.046	0.066 0.114 0.168
800 10121 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	5.388 5.813 6.234	4.600 5.351 6.046	0.066 0.114 0.168
P65-17-XLH-RR w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	11.704 12.424 13.153	8.938 10.450 11.986	0.092 0.178 0.273
P65-17-XLH-RR w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	11.704 12.424 13.153	8.938 10.450 11.986	0.092 0.178 0.273
P65-17-XLH-RR w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	11.704 12.424 13.153	8.938 10.450 11.986	0.092 0.178 0.273
RRUS-11	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	2.784 2.992 3.207	1.187 1.334 1.490	0.048 0.068 0.092
RRUS-11	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	2.784 2.992 3.207	1.187 1.334 1.490	0.048 0.068 0.092

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
RRUS-11	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	2.784 2.992 3.207	1.187 1.334 1.490	0.048 0.068 0.092
(2) LGP21401	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	1.104 1.239 1.381	0.207 0.274 0.348	0.014 0.021 0.030
(2) LGP21401	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	1.104 1.239 1.381	0.207 0.274 0.348	0.014 0.021 0.030
(2) LGP21401	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	1.104 1.239 1.381	0.207 0.274 0.348	0.014 0.021 0.030
DC6-48-60-18-8F	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	0.791 1.274 1.450	0.791 1.274 1.450	0.020 0.035 0.053
T-Arm Mount [TA 601-3]	C	None		0.000	160.000	No Ice 1/2" Ice 1" Ice	10.900 14.650 18.400	10.900 14.650 18.400	0.726 0.926 1.125
RRUS 12	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	3.145 3.365 3.592	1.285 1.438 1.600	0.058 0.081 0.108
RRUS 12	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	3.145 3.365 3.592	1.285 1.438 1.600	0.058 0.081 0.108
RRUS 12	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 1/2" Ice 1" Ice	3.145 3.365 3.592	1.285 1.438 1.600	0.058 0.081 0.108
*150 APXV18-206517S-C w/ Mount Pipe	A	From Leg	1.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	5.404 5.960 6.481	4.700 5.860 6.734	0.052 0.097 0.150
APXV18-206517S-C w/ Mount Pipe	B	From Leg	1.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	5.404 5.960 6.481	4.700 5.860 6.734	0.052 0.097 0.150
APXV18-206517S-C w/ Mount Pipe	C	From Leg	1.000 0.000 0.000	0.000	150.000	No Ice 1/2" Ice 1" Ice	5.404 5.960 6.481	4.700 5.860 6.734	0.052 0.097 0.150
Pipe Mount [PM 601-3]	C	None		0.000	150.000	No Ice 1/2" Ice 1" Ice	4.390 5.480 6.570	4.390 5.480 6.570	0.195 0.237 0.280
*120 SD212-SF2P2SNM	A	From Leg	6.000 0.000 5.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	2.160 3.960 5.760	2.160 3.960 5.760	0.021 0.050 0.079
Side Arm Mount [SO 702-1]	A	From Face	3.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	1.000 1.250 1.500	1.430 2.050 2.670	0.027 0.038 0.049
*115 SD110-SFXPASNM	B	From Leg	1.000 0.000	0.000	115.000	No Ice 1/2"	6.333 7.917	6.333 7.917	0.025 0.069

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			7.000			Ice 1" Ice	9.501	9.501	0.112
Pipe Mount [PM 601-1]	B	From Leg	0.500 0.000 0.000	0.000	115.000	No Ice 1/2" Ice 1" Ice	3.000 3.740 4.480	0.900 1.120 1.340	0.065 0.079 0.093
*81 ANT450D3	A	From Leg	3.000 0.000 1.000	0.000	81.000	No Ice 1/2" Ice 1" Ice	1.431 2.185 2.939	1.431 2.185 2.939	0.088 0.100 0.112
Side Arm Mount [SO 310-1]	A	From Leg	1.000 0.000 0.000	0.000	81.000	No Ice 1/2" Ice 1" Ice	2.970 4.400 5.830	2.990 4.580 6.170	0.055 0.083 0.112
*48 KS24019-L112A	A	From Leg	3.000 0.000 0.000	0.000	48.000	No Ice 1/2" Ice 1" Ice	0.100 0.180 0.260	0.100 0.180 0.260	0.005 0.006 0.008
Side Arm Mount [SO 701-1]	A	From Leg	1.500 0.000 0.000	0.000	48.000	No Ice 1/2" Ice 1" Ice	0.850 1.140 1.430	1.670 2.340 3.010	0.065 0.079 0.093
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Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp

Comb. No.	Description
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	187 - 136	Pole	Max Tension	26	0.000	-0.000	0.000
			Max. Compression	26	-50.257	2.709	-2.386
			Max. Mx	20	-17.010	836.118	-8.073
			Max. My	14	-17.039	8.252	-831.033
			Max. Vy	20	-26.038	836.118	-8.073
			Max. Vx	14	25.891	8.252	-831.033
			Max. Torque	18			-0.757
L2	136 - 89.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-70.002	2.844	-6.001
			Max. Mx	20	-29.024	2150.873	-17.263
			Max. My	14	-29.049	17.029	-2138.537
			Max. Vy	20	-31.963	2150.873	-17.263
			Max. Vx	14	31.767	17.029	-2138.537
			Max. Torque	18			-1.829
L3	89.5 - 44.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-94.566	3.679	-9.104
			Max. Mx	20	-45.385	3686.981	-24.719
			Max. My	14	-45.398	24.592	-3665.802
			Max. Vy	20	-37.224	3686.981	-24.719
			Max. Vx	14	37.028	24.592	-3665.802
			Max. Torque	20			-2.011
L4	44.25 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-128.449	4.478	-14.220
			Max. Mx	20	-69.658	5715.941	-33.621
			Max. My	14	-69.659	33.000	-5683.712
			Max. Vy	20	-41.866	5715.941	-33.621
			Max. Vx	14	41.642	33.000	-5683.712
			Max. Torque	20			-2.292

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	34	128.449	6.542	-11.262
	Max. H_x	21	52.267	41.814	-0.157

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Max. H_z	3	52.267	-0.157	41.591
	Max. M_x	2	5681.450	-0.157	41.591
	Max. M_z	8	5714.877	-41.814	0.157
	Max. Torsion	8	2.264	-41.814	0.157
	Min. Vert	5	52.267	-21.020	36.098
	Min. H_x	8	69.689	-41.814	0.157
	Min. H_z	15	52.267	0.157	-41.591
	Min. M_x	14	-5683.712	0.157	-41.591
	Min. M_z	20	-5715.941	41.814	-0.157
	Min. Torsion	20	-2.290	41.814	-0.157

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	58.074	0.000	0.000	0.911	0.414	0.000
1.2 Dead+1.6 Wind 0 deg - No Ice	69.689	0.157	-41.591	-5681.450	-31.929	0.130
0.9 Dead+1.6 Wind 0 deg - No Ice	52.267	0.157	-41.591	-5606.374	-31.558	0.130
1.2 Dead+1.6 Wind 30 deg - No Ice	69.689	21.020	-36.098	-4936.202	-2881.389	-1.027
0.9 Dead+1.6 Wind 30 deg - No Ice	52.267	21.020	-36.098	-4870.989	-2843.245	-1.020
1.2 Dead+1.6 Wind 60 deg - No Ice	69.689	36.251	-20.932	-2868.139	-4958.586	-1.899
0.9 Dead+1.6 Wind 60 deg - No Ice	52.267	36.251	-20.932	-2830.322	-4892.932	-1.887
1.2 Dead+1.6 Wind 90 deg - No Ice	69.689	41.814	-0.157	-31.305	-5714.877	-2.264
0.9 Dead+1.6 Wind 90 deg - No Ice	52.267	41.814	-0.157	-31.092	-5639.233	-2.249
1.2 Dead+1.6 Wind 120 deg - No Ice	69.689	36.094	20.659	2814.366	-4926.365	-2.031
0.9 Dead+1.6 Wind 120 deg - No Ice	52.267	36.094	20.659	2776.832	-4861.213	-2.018
1.2 Dead+1.6 Wind 150 deg - No Ice	69.689	20.748	35.940	4906.279	-2825.289	-1.263
0.9 Dead+1.6 Wind 150 deg - No Ice	52.267	20.748	35.940	4840.975	-2788.030	-1.255
1.2 Dead+1.6 Wind 180 deg - No Ice	69.689	-0.157	41.591	5683.712	33.000	-0.156
0.9 Dead+1.6 Wind 180 deg - No Ice	52.267	-0.157	41.591	5608.052	32.345	-0.155
1.2 Dead+1.6 Wind 210 deg - No Ice	69.689	-21.020	36.098	4938.475	2882.435	1.002
0.9 Dead+1.6 Wind 210 deg - No Ice	52.267	-21.020	36.098	4872.676	2844.013	0.995
1.2 Dead+1.6 Wind 240 deg - No Ice	69.689	-36.251	20.932	2870.439	4959.628	1.900
0.9 Dead+1.6 Wind 240 deg - No Ice	52.267	-36.251	20.932	2832.028	4893.698	1.888
1.2 Dead+1.6 Wind 270 deg - No Ice	69.689	-41.814	0.157	33.622	5715.941	2.290
0.9 Dead+1.6 Wind 270 deg - No Ice	52.267	-41.814	0.157	32.809	5639.998	2.275
1.2 Dead+1.6 Wind 300 deg - No Ice	69.689	-36.094	-20.659	-2812.060	4927.455	2.056
0.9 Dead+1.6 Wind 300 deg - No Ice	52.267	-36.094	-20.659	-2775.122	4862.013	2.043
1.2 Dead+1.6 Wind 330 deg - No Ice	69.689	-20.748	-35.940	-4904.000	2826.383	1.262
0.9 Dead+1.6 Wind 330 deg - No Ice	52.267	-20.748	-35.940	-4839.284	2788.833	1.254

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
1.2 Dead+1.0 Ice+1.0 Temp	128.449	-0.000	0.000	14.220	4.478	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	128.449	0.026	-12.989	-1842.534	-1.606	0.069
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	128.449	6.542	-11.262	-1596.825	-932.288	-0.707
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	128.449	11.304	-6.517	-919.351	-1611.929	-1.295
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	128.449	13.038	-0.026	8.352	-1858.422	-1.535
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	128.449	11.278	6.472	937.708	-1605.724	-1.364
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	128.449	6.496	11.235	1619.695	-921.547	-0.828
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	128.449	-0.026	12.989	1871.580	10.778	-0.070
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	128.449	-6.542	11.262	1625.877	941.439	0.707
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	128.449	-11.304	6.517	948.426	1621.075	1.295
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	128.449	-13.038	0.026	20.737	1867.585	1.535
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	128.449	-11.278	-6.472	-908.626	1614.908	1.364
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	128.449	-6.496	-11.235	-1590.635	930.737	0.828
Dead+Wind 0 deg - Service	58.074	0.034	-8.899	-1206.491	-6.448	0.030
Dead+Wind 30 deg - Service	58.074	4.498	-7.724	-1048.170	-611.917	-0.220
Dead+Wind 60 deg - Service	58.074	7.756	-4.479	-608.740	-1053.305	-0.409
Dead+Wind 90 deg - Service	58.074	8.947	-0.034	-5.947	-1213.994	-0.489
Dead+Wind 120 deg - Service	58.074	7.723	4.420	598.693	-1046.415	-0.439
Dead+Wind 150 deg - Service	58.074	4.439	7.690	1043.167	-599.982	-0.271
Dead+Wind 180 deg - Service	58.074	-0.034	8.899	1208.376	7.335	-0.031
Dead+Wind 210 deg - Service	58.074	-4.498	7.724	1050.055	612.803	0.218
Dead+Wind 240 deg - Service	58.074	-7.756	4.479	610.627	1054.191	0.409
Dead+Wind 270 deg - Service	58.074	-8.947	0.034	7.835	1214.881	0.491
Dead+Wind 300 deg - Service	58.074	-7.723	-4.420	-596.806	1047.303	0.440
Dead+Wind 330 deg - Service	58.074	-4.439	-7.690	-1041.281	600.870	0.271

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.000	-58.074	0.000	0.000	58.074	0.000	0.000%
2	0.157	-69.689	-41.591	-0.157	69.689	41.591	0.000%
3	0.157	-52.267	-41.591	-0.157	52.267	41.591	0.000%
4	21.020	-69.689	-36.098	-21.020	69.689	36.098	0.000%
5	21.020	-52.267	-36.098	-21.020	52.267	36.098	0.000%
6	36.251	-69.689	-20.932	-36.251	69.689	20.932	0.000%
7	36.251	-52.267	-20.932	-36.251	52.267	20.932	0.000%
8	41.814	-69.689	-0.157	-41.814	69.689	0.157	0.000%
9	41.814	-52.267	-0.157	-41.814	52.267	0.157	0.000%
10	36.094	-69.689	20.659	-36.094	69.689	-20.659	0.000%
11	36.094	-52.267	20.659	-36.094	52.267	-20.659	0.000%
12	20.748	-69.689	35.940	-20.748	69.689	-35.940	0.000%
13	20.748	-52.267	35.940	-20.748	52.267	-35.940	0.000%
14	-0.157	-69.689	41.591	0.157	69.689	-41.591	0.000%
15	-0.157	-52.267	41.591	0.157	52.267	-41.591	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
16	-21.020	-69.689	36.098	21.020	69.689	-36.098	0.000%
17	-21.020	-52.267	36.098	21.020	52.267	-36.098	0.000%
18	-36.251	-69.689	20.932	36.251	69.689	-20.932	0.000%
19	-36.251	-52.267	20.932	36.251	52.267	-20.932	0.000%
20	-41.814	-69.689	0.157	41.814	69.689	-0.157	0.000%
21	-41.814	-52.267	0.157	41.814	52.267	-0.157	0.000%
22	-36.094	-69.689	-20.659	36.094	69.689	20.659	0.000%
23	-36.094	-52.267	-20.659	36.094	52.267	20.659	0.000%
24	-20.748	-69.689	-35.940	20.748	69.689	35.940	0.000%
25	-20.748	-52.267	-35.940	20.748	52.267	35.940	0.000%
26	0.000	-128.449	0.000	0.000	128.449	-0.000	0.000%
27	0.026	-128.449	-12.988	-0.026	128.449	12.989	0.000%
28	6.542	-128.449	-11.261	-6.542	128.449	11.262	0.000%
29	11.304	-128.449	-6.517	-11.304	128.449	6.517	0.000%
30	13.038	-128.449	-0.026	-13.038	128.449	0.026	0.000%
31	11.278	-128.449	6.472	-11.278	128.449	-6.472	0.000%
32	6.496	-128.449	11.235	-6.496	128.449	-11.235	0.000%
33	-0.026	-128.449	12.988	0.026	128.449	-12.989	0.000%
34	-6.542	-128.449	11.261	6.542	128.449	-11.262	0.000%
35	-11.304	-128.449	6.517	11.304	128.449	-6.517	0.000%
36	-13.038	-128.449	0.026	13.038	128.449	-0.026	0.000%
37	-11.278	-128.449	-6.472	11.278	128.449	6.472	0.000%
38	-6.496	-128.449	-11.235	6.496	128.449	11.235	0.000%
39	0.034	-58.074	-8.899	-0.034	58.074	8.899	0.000%
40	4.498	-58.074	-7.724	-4.498	58.074	7.724	0.000%
41	7.756	-58.074	-4.479	-7.756	58.074	4.479	0.000%
42	8.947	-58.074	-0.034	-8.947	58.074	0.034	0.000%
43	7.723	-58.074	4.420	-7.723	58.074	-4.420	0.000%
44	4.439	-58.074	7.690	-4.439	58.074	-7.690	0.000%
45	-0.034	-58.074	8.899	0.034	58.074	-8.899	0.000%
46	-4.498	-58.074	7.724	4.498	58.074	-7.724	0.000%
47	-7.756	-58.074	4.479	7.756	58.074	-4.479	0.000%
48	-8.947	-58.074	0.034	8.947	58.074	-0.034	0.000%
49	-7.723	-58.074	-4.420	7.723	58.074	4.420	0.000%
50	-4.439	-58.074	-7.690	4.439	58.074	7.690	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00004469
3	Yes	4	0.00000001	0.00052063
4	Yes	6	0.00000001	0.00014857
5	Yes	6	0.00000001	0.00004587
6	Yes	6	0.00000001	0.00015159
7	Yes	6	0.00000001	0.00004693
8	Yes	5	0.00000001	0.00010291
9	Yes	5	0.00000001	0.00004694
10	Yes	6	0.00000001	0.00014448
11	Yes	6	0.00000001	0.00004487
12	Yes	6	0.00000001	0.00014717
13	Yes	6	0.00000001	0.00004586
14	Yes	5	0.00000001	0.00004940
15	Yes	4	0.00000001	0.00056246
16	Yes	6	0.00000001	0.00015082
17	Yes	6	0.00000001	0.00004665
18	Yes	6	0.00000001	0.00014804
19	Yes	6	0.00000001	0.00004563
20	Yes	5	0.00000001	0.00002819
21	Yes	4	0.00000001	0.00039049
22	Yes	6	0.00000001	0.00014810
23	Yes	6	0.00000001	0.00004617
24	Yes	6	0.00000001	0.00014517
25	Yes	6	0.00000001	0.00004514

26	Yes	4	0.00000001	0.00006693
27	Yes	6	0.00000001	0.00020184
28	Yes	6	0.00000001	0.00031787
29	Yes	6	0.00000001	0.00032381
30	Yes	6	0.00000001	0.00020396
31	Yes	6	0.00000001	0.00031866
32	Yes	6	0.00000001	0.00032318
33	Yes	6	0.00000001	0.00020499
34	Yes	6	0.00000001	0.00033197
35	Yes	6	0.00000001	0.00032704
36	Yes	6	0.00000001	0.00020550
37	Yes	6	0.00000001	0.00032216
38	Yes	6	0.00000001	0.00031649
39	Yes	4	0.00000001	0.00007466
40	Yes	4	0.00000001	0.00056521
41	Yes	4	0.00000001	0.00060152
42	Yes	4	0.00000001	0.00009648
43	Yes	4	0.00000001	0.00053677
44	Yes	4	0.00000001	0.00056719
45	Yes	4	0.00000001	0.00007530
46	Yes	4	0.00000001	0.00059371
47	Yes	4	0.00000001	0.00056165
48	Yes	4	0.00000001	0.00008767
49	Yes	4	0.00000001	0.00057887
50	Yes	4	0.00000001	0.00054422

Maximum Tower Deflections - Service Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	187 - 136	30.938	47	1.495	0.002
L2	140.5 - 89.5	17.294	47	1.211	0.001
L3	95.25 - 44.25	7.697	47	0.784	0.001
L4	51 - 0	2.165	47	0.389	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
188.000	DB404L-B	47	30.938	1.495	0.002	50560
186.000	PCS 1900MHz 4x45W-65MHz	47	30.628	1.490	0.002	50560
181.000	RRH2X40-AWS	47	29.077	1.464	0.001	42133
178.000	(2) 742 213 w/ Mount Pipe	47	28.149	1.448	0.001	28089
168.000	LNX-6515DS-VTM w/ Mount Pipe	47	25.092	1.393	0.001	13305
160.000	800 10121 w/ Mount Pipe	47	22.709	1.346	0.001	9362
150.000	APXV18-206517S-C w/ Mount Pipe	47	19.849	1.281	0.001	6831
120.000	SD212-SF2P2SNM	47	12.433	1.028	0.001	5902
115.000	SD110-SFXPASNM	47	11.380	0.979	0.001	6029
81.000	ANT450D3	47	5.493	0.649	0.000	6198
48.000	KS24019-L112A	47	1.936	0.365	0.000	5865

Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	187 - 136	145.349	18	7.038	0.008
L2	140.5 - 89.5	81.341	18	5.703	0.005
L3	95.25 - 44.25	36.225	18	3.693	0.003
L4	51 - 0	10.190	18	1.832	0.001

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
188.000	DB404L-B	18	145.349	7.038	0.008	11078
186.000	PCS 1900MHz 4x45W-65MHz	18	143.893	7.014	0.008	11078
181.000	RRH2X40-AWS	18	136.619	6.892	0.007	9232
178.000	(2) 742 213 w/ Mount Pipe	18	132.269	6.818	0.007	6154
168.000	LNX-6515DS-VTM w/ Mount Pipe	18	117.932	6.562	0.007	2912
160.000	800 10121 w/ Mount Pipe	18	106.755	6.341	0.006	2047
150.000	APXV18-206517S-C w/ Mount Pipe	18	93.335	6.035	0.005	1491
120.000	SD212-SF2P2SNM	18	58.503	4.843	0.004	1275
115.000	SD110-SFXPASNM	18	53.551	4.614	0.003	1300
81.000	ANT450D3	18	25.851	3.057	0.002	1324
48.000	KS24019-L112A	18	9.113	1.717	0.001	1247

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	187 - 136 (1)	TP36.201x26x0.25	51.000	0.000	0.0	27.813	-16.990	1858.360	0.009
L2	136 - 89.5 (2)	TP45.003x34.801x0.375	51.000	0.000	0.0	51.749	-29.014	3691.640	0.008
L3	89.5 - 44.25 (3)	TP53.304x43.103x0.438	51.000	0.000	0.0	71.537	-45.380	5079.070	0.009
L4	44.25 - 0 (4)	TP61.28x51.079x0.5	51.000	0.000	0.0	96.458	-69.658	6780.010	0.010

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	187 - 136 (1)	TP36.201x26x0.25	840.967	1340.400	0.627	0.000	1340.400	0.000
L2	136 - 89.5 (2)	TP45.003x34.801x0.375	2159.908	3297.983	0.655	0.000	3297.983	0.000
L3	89.5 - 44.25 (3)	TP53.304x43.103x0.438	3698.650	5377.117	0.688	0.000	5377.117	0.000
L4	44.25 - 0 (4)	TP61.28x51.079x0.5	5730.383	8470.833	0.676	0.000	8470.833	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	187 - 136 (1)	TP36.201x26x0.25	26.148	929.181	0.028	0.755	2684.083	0.000
L2	136 - 89.5 (2)	TP45.003x34.801x0.375	32.025	1845.820	0.017	0.966	6604.033	0.000
L3	89.5 - 44.25 (3)	TP53.304x43.103x0.438	37.283	2539.540	0.015	1.654	10767.417	0.000
L4	44.25 - 0 (4)	TP61.28x51.079x0.5	41.912	3390.010	0.012	1.900	16962.333	0.000

Pole Interaction Design Data

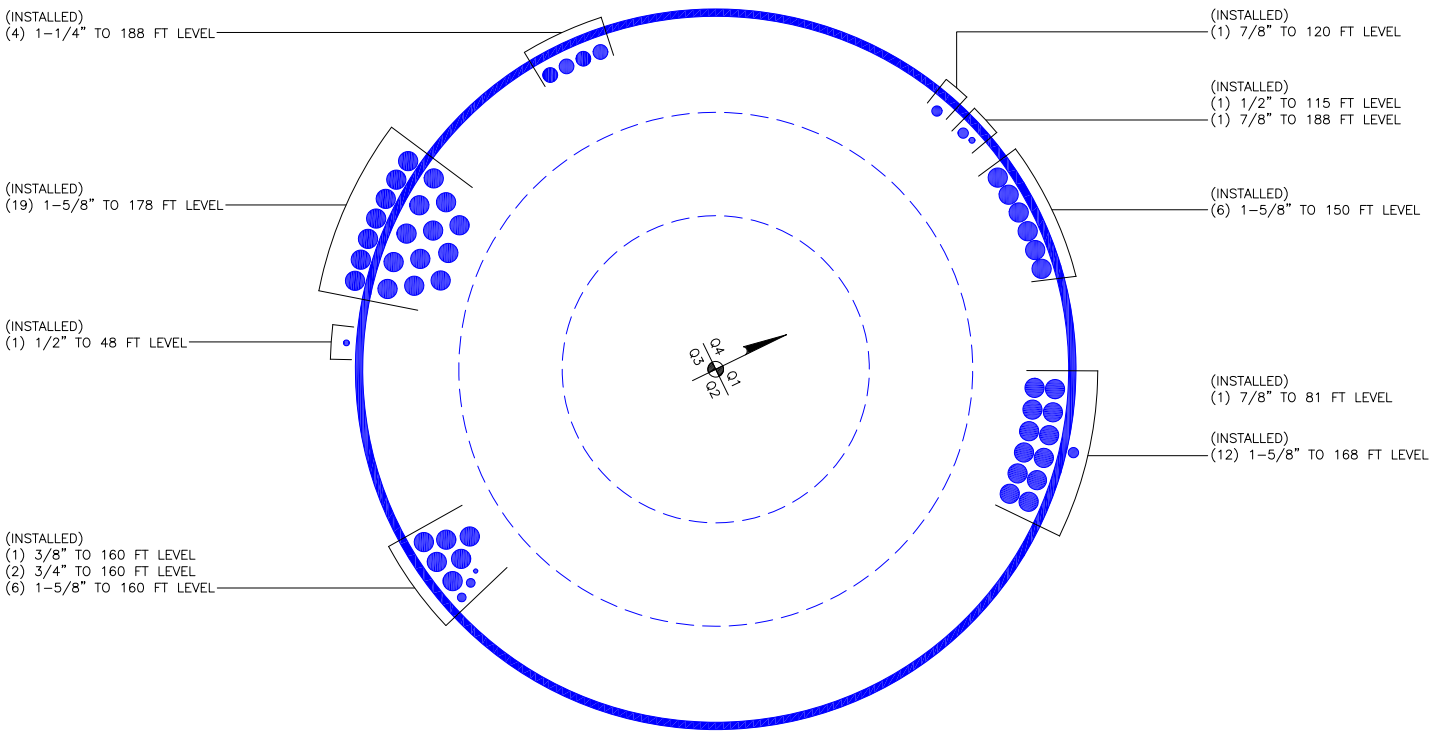
Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	187 - 136 (1)	0.009	0.627	0.000	0.028	0.000	0.637 ✔	1.000	4.8.2 ✔
L2	136 - 89.5 (2)	0.008	0.655	0.000	0.017	0.000	0.663 ✔	1.000	4.8.2 ✔
L3	89.5 - 44.25 (3)	0.009	0.688	0.000	0.015	0.000	0.697 ✔	1.000	4.8.2 ✔
L4	44.25 - 0 (4)	0.010	0.676	0.000	0.012	0.000	0.687 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	187 - 136	Pole	TP36.201x26x0.25	1	-16.990	1858.360	63.7	Pass
L2	136 - 89.5	Pole	TP45.003x34.801x0.375	2	-29.014	3691.640	66.3	Pass
L3	89.5 - 44.25	Pole	TP53.304x43.103x0.438	3	-45.380	5079.070	69.7	Pass
L4	44.25 - 0	Pole	TP61.28x51.079x0.5	4	-69.658	6780.010	68.7	Pass
							Summary	
						Pole (L3)	69.7	Pass
						RATING =	**69.7**	**Pass**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 803934 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

Square, Stiffened / Unstiffened Base Plate, Any Rod Material - Rev. F /G

Assumptions: 1) Rod groups at corners. Total # rods divisible by 4. Maximum total # of rods = 48 (12 per Corner).
2) Rod Spacing = Straight Center-to-Center distance between any (2) adjacent rods (same corner)
3) Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU#: *803934*
Site Name: *CT SOMERS FD CAC*
App #: *367359 Rev. 0*

Anchor Rod Data		
Eta Factor, η	0.5	TIA G (Fig. 4-4)
Qty:	24	
Diam:	2.25	in
Rod Material:	A615-J	
Yield, Fy:	75	ksi
Strength, Fu:	100	ksi
Bolt Circle:	69	in
Anchor Spacing:	6	in

Plate Data		
W=Side:	70	in
Thick:	3.25	in
Grade:	55	ksi
Clip Distance:	18	in

Stiffener Data (Welding at both sides)		
Configuration:	Unstiffened	
Weld Type:		**
Groove Depth:		<-- Disregard
Groove Angle:		<-- Disregard
Fillet H. Weld:		in
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

Pole Data		
Diam:	61.28	in
Thick:	0.5	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round

Base Reactions		
TIA Revision:	G	
Factored Moment, Mu:	5730	ft-kips
Factored Axial, Pu:	70	kips
Factored Shear, Vu:	42	kips

Anchor Rod Results

TIA G --> Max Rod (Cu+ Vu/η):	172.5	Kips
Axial Design Strength, Φ*Fu*Anet:	260.0	Kips
Anchor Rod Stress Ratio:	66.3%	**Pass**

Base Plate Results	Flexural Check	
Base Plate Stress:	23.4	ksi
PL Design Bending Strength, Φ*Fy:	49.5	ksi
Base Plate Stress Ratio:	47.3%	**Pass**

PL Ref. Data	
Yield Line (in):	37.71
Max PL Length:	37.71

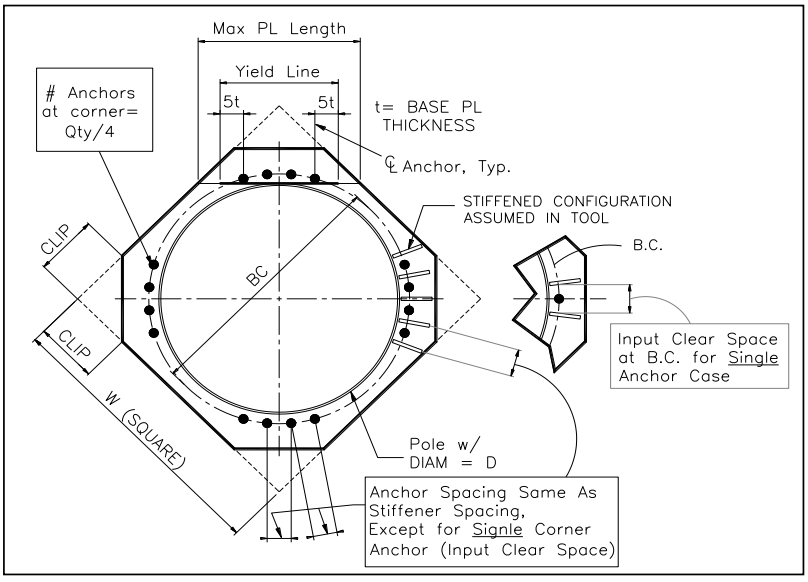
N/A - Unstiffened

Stiffener Results

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

Pole Results

Pole Punching Shear Check:	N/A



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

CCI Foundation Tool Suite - Monopole Pier

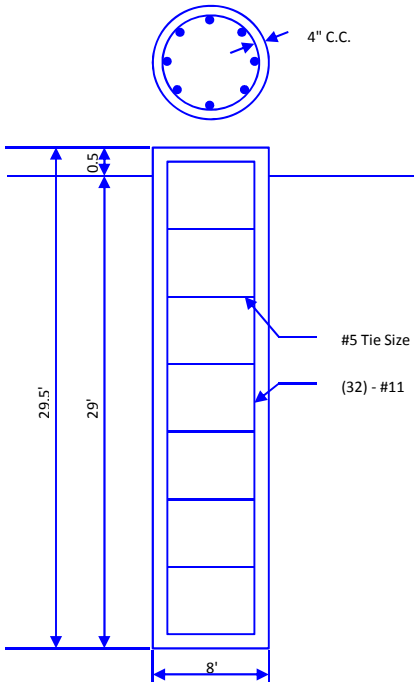
CCIFTS 1.2.108.14286 - Phase 1-2 Date: 11/16/2016

BU:	803934
Site Name:	CT SOMERS FD CAC
App Number:	367359 Rev. 0
Work Order:	1324617

Monopole Drilled Pier

Input

Criteria		
TIA Revision:	G	
ACI 318 Revision:	2008	
Seismic Category:	B	
Forces		
Compression	70	kips
Shear	42	kips
Moment	5730	k-ft
Swelling Force	0	kips
Foundation Dimensions		
Pier Diameter:	8	ft
Ext. above grade:	0.5	ft
Depth below grade:	29	ft
Material Properties		
Number of Rebar:	32	
Rebar Size:	11	
Tie Size	5	
Rebar tensile strength:	60	ksi
Concrete Strength:	3000	psi
Ultimate Concrete Strain	0.003	in/in
Clear Cover to Ties:	4	in



Soil Profile: 803934

Layer	Thickness (ft)	From (ft)	To (ft)	Unit Weight (pcf)	Cohesion (psf)	Friction Angle (deg)	Ultimate Uplift Skin Friction (ksf)	Ultimate Comp. Skin Friction (ksf)	Ultimate Bearing Capacity (ksf)	SPT 'N' Counts
1	4	0	4	120	0	0	0	0	0	
2	0.5	4	4.5	120		34	0.6	0.6	0	
3	24.5	4.5	29	60		34	0.6	0.6	24	

Analysis Results

Soil Lateral Capacity

Depth to Zero Shear:	6.03	ft
Max Moment, Mu:	5932.58	k-ft
Soil Safety Factor:	2.33	
Safety Factor Req'd:	1.33	
RATING:	57.1%	

Soil Axial Capacity

Skin Friction (k):	282.74	kips
End Bearing (k):	904.78	kips
Comp. Capacity (k), ϕCn:	1187.52	kips
Comp. (k), Cu:	70.00	kips
RATING:	5.9%	

Concrete/Steel Check

Mu (from soil analysis)	5932.58	k-ft
ϕMn	8920.43	k-ft
RATING:	66.5%	

rho provided	0.69	
rho required	0.33	OK
Rebar Spacing	6.97	
Spacing required	22.56	OK
Dev. Length required	22.64	
Dev. Length provided	61.78	OK

Overall Foundation Rating: 66.5%

CCISeismic - Design Category

Per *2012/2015 IBC*

Site BU:	803934
Work Order:	1324617
Application:	367359 Rev. 0

	Degrees	Minutes	Seconds		
Site Latitude =	41	59	1.48	41.9837	degrees
Site Longitude =	-72	27	56.87	-72.4658	degrees
Ground Supported Structure =	Yes				
Structure Class =	II			*(Table 2-1)*	
Site Class =	D - Stiff Soil			*(Table 2-11)*	

Spectral response acceleration short periods, S_S =	0.175	USGS Seismic Tool
Spectral response acceleration 1 s period, S_1 =	0.064	

Importance Factor, I =	1.0	*(Table 2-3)*
Acceleration-based site coefficient, F_a =	1.6	*(Table 2-12)*
Velocity-based site coefficient, F_v =	2.4	*(Table 2-13)*

Design spectral response acceleration short period, S_{DS} =	0.187	*(2.7.6)*
Design spectral response acceleration 1 s period, S_{D1} =	0.102	*(2.7.6)*

Seismic Design Category - Short Period Response =	B	*ASCE 7-05 Table 11.6-1*
Seismic Design Category - 1s Period Response =	B	*ASCE 7-05 Table 11.6-2*

Worst Case Seismic Design Category =	B	*ASCE 7-05 Tables 11.6-1 and 6-2*

USGS Design Maps Summary Report

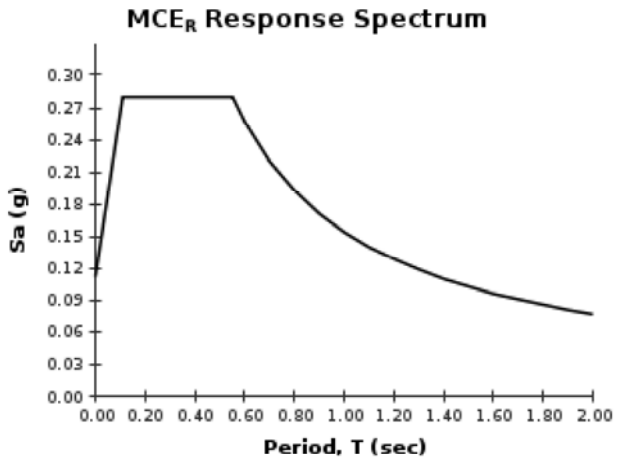
User–Specified Input

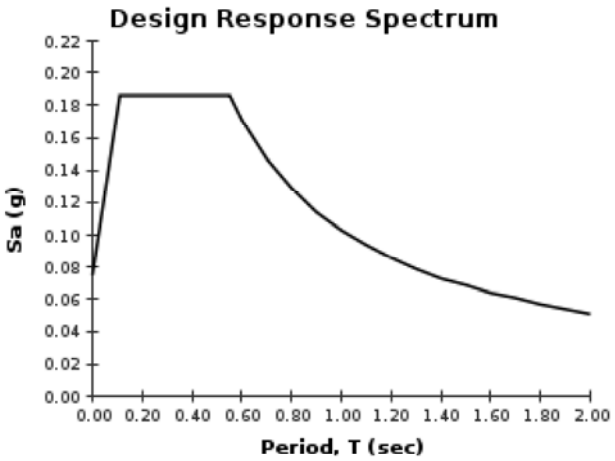
Report Title	803934 Mon November 14, 2016 20:13:48 UTC
Building Code Reference Document	2012/2015 International Building Code (which utilizes USGS hazard data available in 2008)
Site Coordinates	41.98374°N, 72.4658°W
Site Soil Classification	Site Class D – “Stiff Soil”
Risk Category	I/II/III

USGS–Provided Output

S_S =	0.175 g	S_{MS} =	0.280 g	S_{DS} =	0.186 g
S_1 =	0.064 g	S_{M1} =	0.154 g	S_{D1} =	0.103 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the “2009 NEHRP” building code reference document.





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RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

AT&T Existing Facility

Site ID: CT5857

Somers Central
400 Main Street
Somers, CT 06071

December 5, 2016

EBI Project Number: 6216005592

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	6.21 %

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

December 5, 2016

AT&T Mobility – New England
Attn: Cameron Syme, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT5857 – Somers Central**

EBI Consulting was directed to analyze the proposed AT&T facility located at **400 Main Street, Somers, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (µW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed AT&T Wireless antenna facility located at **400 Main Street, Somers, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 UMTS channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 2 GSM channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 2 GSM channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 2 LTE channels (700 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

5) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

7) For the following calculations the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

8) The antennas used in this modeling are the **Kathrein 800-10121 and the Powerwave P65-17-XLH-RR** for transmission in the 700 MHz, 850 MHz and 1900 MHz (PCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

9) The antenna mounting height centerlines of the proposed antennas are **160 feet** above ground level (AGL) for **Sector A**, **160 feet** above ground level (AGL) for **Sector B** and **160 feet** above ground level (AGL) for Sector C.

10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general public threshold limits.

AT&T Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	Kathrein 800-10121	Make / Model:	Kathrein 800-10121	Make / Model:	Kathrein 800-10121
Gain:	11.45 / 14.35 dBd	Gain:	11.45 / 14.35 dBd	Gain:	11.45 / 14.35 dBd
Height (AGL):	**160 feet**	Height (AGL):	**160 feet**	Height (AGL):	**160 feet**
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	6	Channel Count	6	Channel Count	6
Total TX Power(W):	180 Watts	Total TX Power(W):	180 Watts	Total TX Power(W):	180 Watts
ERP (W):	3,309.26	ERP (W):	3,309.26	ERP (W):	3,309.26
Antenna A1 MPE%	**0.70 %**	Antenna B1 MPE%	**0.70 %**	Antenna C1 MPE%	**0.70 %**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Powerwave P65-17-XLH-RR	Make / Model:	Powerwave P65-17-XLH-RR	Make / Model:	Powerwave P65-17-XLH-RR
Gain:	14.3 / 15.1 dBd	Gain:	14.3 / 15.1 dBd	Gain:	14.3 / 15.1 dBd
Height (AGL):	**160 feet**	Height (AGL):	**160 feet**	Height (AGL):	**160 feet**
Frequency Bands	700 MHz / 1900 MHz (PCS)	Frequency Bands	700 MHz / 1900 MHz (PCS)	Frequency Bands	700 MHz / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	240 Watts	Total TX Power(W):	240 Watts	Total TX Power(W):	240 Watts
ERP (W):	7,112.97	ERP (W):	7,112.97	ERP (W):	7,112.97
Antenna A2 MPE%	**1.64 %**	Antenna B2 MPE%	**1.64 %**	Antenna C2 MPE%	**1.64 %**

Site Composite MPE%	
Carrier	**MPE%**
AT&T – Max per sector	**2.33 %**
Sprint	0.15 %
Pocket (now MetroPCS)	0.33 %
Verizon	1.68 %
T-Mobile	1.15 %
Town	0.57 %
Site Total MPE %:	**6.21 %**

AT&T Sector A Total:	2.33 %
AT&T Sector B Total:	2.33 %
AT&T Sector C Total:	2.33 %
Site Total:	6.21 %

AT&T _ Frequency Band / Technology Per Sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
AT&T 850 MHz UMTS	2	418.91	160	1.27	850 MHz	567	0.22%
AT&T 850 MHz GSM	2	418.91	160	1.27	850 MHz	567	0.22%
AT&T 1900 MHz (PCS) GSM	2	816.81	160	2.48	1900 MHz (PCS)	1000	0.25%
AT&T 700 MHz LTE	2	1,614.92	160	4.90	700 MHz	467	1.05%
AT&T 1900 MHz (PCS) LTE	2	1,941.56	160	5.89	1900 MHz (PCS)	1000	0.59%
						Total*:	2.33%

*NOTE: Totals may vary by 0.01% due to summing of remainders

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	2.33 %
Sector B:	2.33 %
Sector C:	2.33 %
AT&T Maximum Total (per sector):	2.33 %
Site Total:	6.21 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **6.21 %** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.