



November 15, 2016

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

Regarding: Notice of Exempt Modification – RRU Installation
Property Address: 133 Horse Fence Hill Road Southbury, CT 06488
AT&T Site: CT2126

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 150-foot monopole at the above-referenced address, latitude 41.459972, longitude -73.245000. Said monopole is owned by American Tower Corporation. The existing equipment shelter is 22.7' x 24.8' totaling 562.96 square feet.

AT&T desires to modify its existing telecommunications facility by adding three remote-radio heads ("RRHs"). The centerline height of said antennas is and will remain at 153 feet. Antennas are mounted utilizing a platform with hand rails.

Please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72 (b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to First Selectman of the Town of Southbury Jeff Manville. A copy of this letter is also being sent to the monopole owner American Tower Corporation, as well as to the land owner the Smith Lynn Revocable Family Trust.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72 (b)(2). Specifically:

1. The planned modification will not result in an increase in the height of the existing structure. The antennas to be swapped will be installed at the existing height of 153' feet on the 150-foot monopole.
2. The proposed modifications will not involve any changes to ground-mounted equipment, and therefore will not require an extension of the site boundary.
3. The proposed modification will not increase the noise level at the facility by six decibel or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above Federal Communications Commission (FCC) safety standard. An RF emissions calculation (attached) for AT&T's modified facility is herein provided.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The monopole and its foundation can support AT&T's proposed modifications (please see attached structural analysis completed by American Tower dated November 1, 2016).

For the foregoing reasons, AT&T respectfully requests that the proposed antenna swap and remote radio head installation be allowed within the exempt modifications under R.C.S.A. §16-50j-72 (b)(2).

Sincerely,

Sarah Snell

Sarah Snell
Site Acquisition Specialist

cc: First Selectman of the Town of Southbury Jeff Manville (municipality)
American Tower Corporation (monopole owner)
Smith Lynn Revocable Family Trust (landowner)

133 HORSE FENCE HILL ROAD

Location 133 HORSE FENCE HILL ROAD

Mblu 24/ 92/ 58/ /

Acct# 00214500

Owner SMITH LYNN REV FAM TRUST

Assessment \$221,370

Appraisal \$316,250

PID 2310

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$99,290	\$216,960	\$316,250

Assessment			
Valuation Year	Improvements	Land	Total
2015	\$69,500	\$151,870	\$221,370

Owner of Record

Owner SMITH LYNN REV FAM TRUST
Co-Owner C/O PA HAMILTON
Address PO BOX 747
SOUTHURY, CT 06488-

Sale Price \$0
Certificate
Book & Page 493/1152
Sale Date 08/19/2005
Instrument 25

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
SMITH LYNN REV FAM TRUST	\$0		493/1152	25	08/19/2005
SMITH SCOTT S & LYNN	\$0		1640/ 144	25	03/15/1983

Building Information

Building 1 : Section 1

Year Built: 1950
Living Area: 1104
Replacement Cost: \$131,677
Building Percent 70
Good:

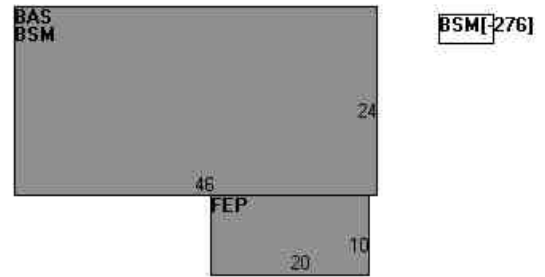
Replacement Cost
Less Depreciation: \$92,170

Building Photo



(<http://images.vgsi.com/photos/SouthburyCTPhotos/\00\00\11>)

Building Layout



Building Attributes	
Field	Description
Style	Ranch
Model	Residential
Grade:	C
Stories	1
Occupancy	1
Exterior Wall 1	Clapboard
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Forced Hot Air
AC Percent	0
Total Bedrooms:	3 Bedrooms
Full Bthrms:	2
Half Baths:	0
Extra Fixtures	0
Total Rooms:	5
Bath Style:	Average
Kitchen Style:	Average
Num Kitchens	1
Pln FPL:	0
Det FPL:	0
Gas Fireplace(s)	0
% Attic Fin	0
LF Dormer	0
Foundation	Conc Block
Bsmt Gar(s)	0
Bsmt %	75
SF FBM	0
Fin Bsmt Qual	
Bsmt Access	Hatchway

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	1104	1104
BSM	Basement	828	0
FEP	Finished Enclosed Porch	200	0
		2132	1104

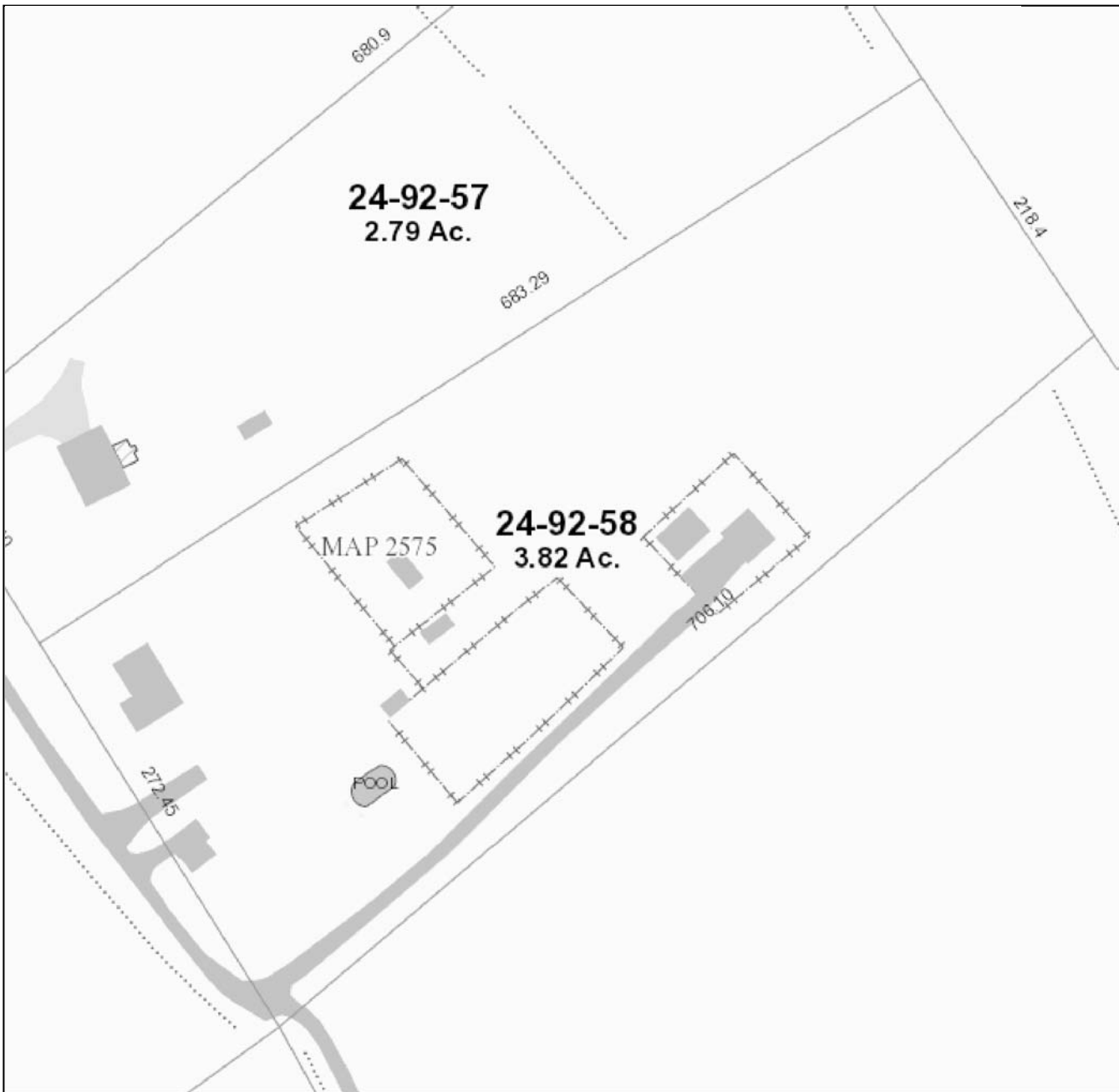
Extra Features

Town of Southbury

Geographic Information System (GIS)



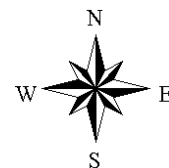
Date Printed: 11/15/2016



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for informational purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Southbury and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 100 feet



PROJECT INFORMATION

SCOPE OF WORK: UNMANNED COMMUNICATIONS FACILITY MODIFICATIONS INCLUDING THE REPLACEMENT OF EXISTING TOP MOUNTED (3) RRUS-11 WITH NEW (3) RRUS-12 UNITS, RE-USE EXISTING (1) FIBER TRUNK, EXISTING (2) DC TRUNKS, EXISTING (1) RAYCAP SURGE ARRESTOR AND ASSOCIATED JUMPER CABLES.

SITE NUMBER: CT2126

SITE NAME: SOUTHBURY

SITE ADDRESS: HORSE FENCE HILL SOUTHBURY, CT 06488

TOWER OWNER: AMERICAN TOWER CORP
116 HUNTINHTON AVE. 11th FLOOR
BOSTON, MA 02116

APPLICANT: AT&T MOBILITY
550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NOC CONTACT: TEL 866-915-5600

COORDINATES: LAT. N41°27'35.9"
LONG. W73°14'42.1"

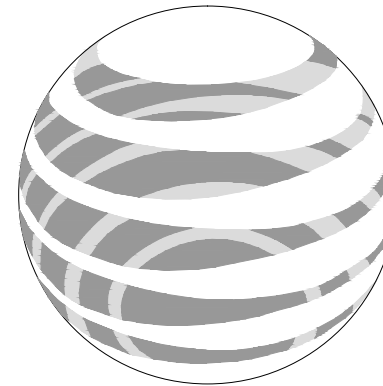
GROUND LEVEL: ±345'

DEED REFERENCE: N/A

SITE PARCEL NO.: N/A

CURRENT ZONING: N/A

HORIZONTAL DATUM: (NAD) 1983



at&t
Mobility

SITE NUMBER: CT2126
SITE NAME: SOUTHBURY
PROJECT: LTE BWE 1900

DRAWING INDEX

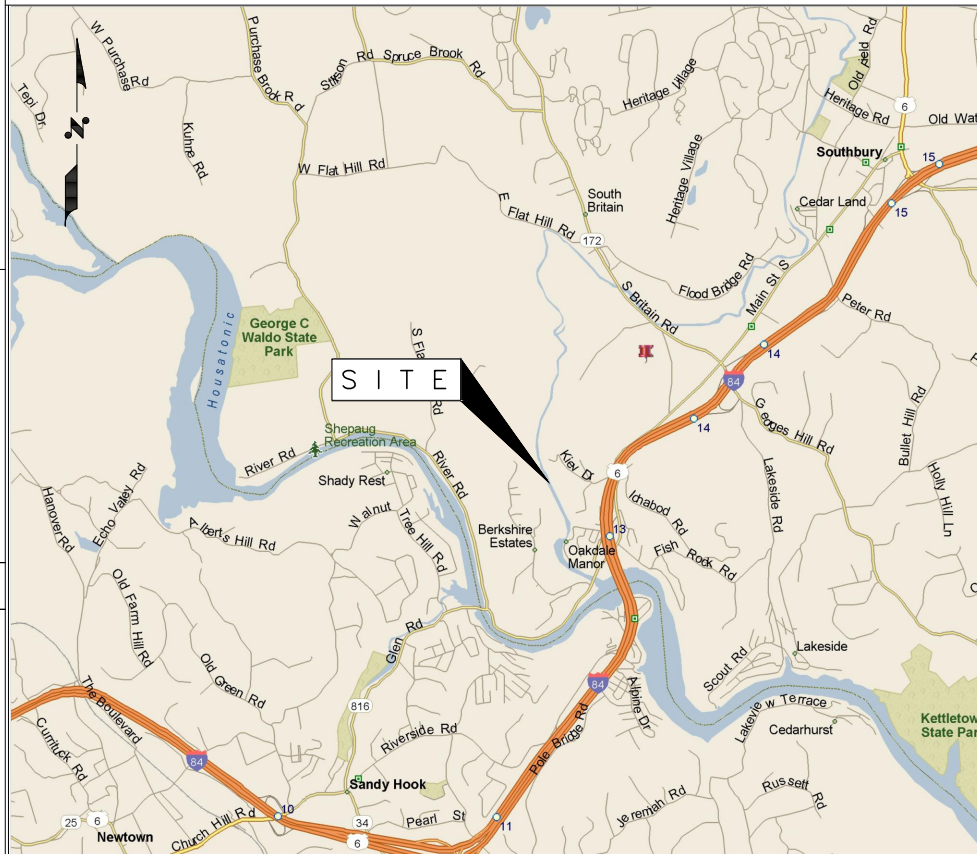
REV

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LOCATION MAP

DIRECTIONS: FROM ROCKY HILL, TAKE I-91 SOUTH. TAKE EXIT 18, PROCEED WEST ON I-691. CONTINUE ON I-84 WEST. TAKE I-84 WEST EXIT 14 (RT-172). PROCEED NORTH ON CT RT-172 (S BRITAIN RD). TURN LEFT ONTO HORSE FENCE HILL ROAD. TURN LEFT ONTO 5th DRIVEWAY AND FOLLOW TILL END.

SITE ACCESS: LOCKED GATE



APPLICABLE BUILDING CODES AND STANDARDS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH PROJECT STANDARDS AND SPECIFICATIONS. SUBCONTRACTOR WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE:
CONNECTICUT STATE BUILDING CODE

ELECTRICAL CODE:
NATIONAL ELECTRICAL CODE LATEST EDITION
SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
AMERICAN NATIONAL STANDARDS INSTITUTE/TELECOMMUNICATIONS INDUSTRY ASSOCIATION (ANSI/TIA) 222-F OR G AS APPLICABLE, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.



AT LEAST 2 WORKING DAYS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CONNECTICUT ONE CALL SYSTEM AT 1-800-922-4455

CONTACT & UTILITY INFORMATION

CONTACT	CONTACT	COMPANY	PHONE NO.
ENGINEERING:	MIGUEL NOBRE	VRG	(508) 981-9590
SITE ACQUISITION:	DAVID COOPER	EMPIRE	(484) 683-5349
CONSTRUCTION:	BILL DANIELS	EMPIRE	(484) 683-5349
UTILITIES			
POWER:	WORK REQUEST GROUP	NATIONAL GRID	(800) 375-7405
TELCO:	.	VERIZON	(800) 941-9900

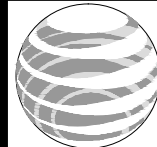


489 Washington Street
Auburn, MA 01501
Tel. (508) 981-9590
Fax (508) 519-8939
mnobre@verticalresourcesgrp.com



EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

SITE NUMBER: CT2070
SITE NAME: NEW FAIRFIELD CENTER
302 BALL POND ROAD
NEW FAIRFIELD, CT 06812
FAIRFIELD COUNTY



at&t
Mobility

550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
1	10/22/16	FOR CONSTRUCTION	E.L.P.	G.A.M.	
2	10/17/16	FOR REVIEW	E.L.P.	G.A.M.	

SCALE: DESIGNED BY: M.N. DRAWN BY: G.A.M.



AT&T MOBILITY

TITLE SHEET

JOB NUMBER	DRAWING NUMBER	REV
50-145	01	1

GENERAL NOTES

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR – PRIME CONTRACTOR
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T WIRELESS
 OEM – ORIGINAL EQUIPMENT MANUFACTURER
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO SCALE UNLESS OTHERWISE NOTED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. ROUTING OF CONDUIT FOR POWER AND TELCO SHALL BE APPROVED BY OWNER OF SITE.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

SITE WORK GENERAL NOTES

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES, TOP SOIL AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE OWNER SPECIFICATION FOR SITE SIGNAGE.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE TRANSMISSION EQUIPMENT AND TOWER AREAS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION, SEE DETAIL 303.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION'S GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 (HOT-DIP) UNLESS NOTED OTHERWISE. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. STEEL FASTENER HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 (HOT-DIP)
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI OR APPROVED EQUAL.
- ALL STRUCTURAL STEEL SHALL BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000 PSI) MAY BE USED.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
 CONCRETE CAST AGAINST EARTH.....3 IN.
 CONCRETE EXPOSED TO EARTH OR WEATHER:
 #6 AND LARGER2 INCH
 #5 AND SMALLER & WWF.....1 1/2 INCH
 CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
 SLAB AND WALL3/4 INCH
 BEAMS AND COLUMNS.....1 1/2 INCH
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD HILTI OR APPROVED EQUAL.
- CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC 1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
 (A) RESULTS OF CONCRETE CYLINDER TESTS PERFORMED AT THE SUPPLIER'S PLANT,
 (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
 FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7, TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.
- ALL CONCRETE SHALL BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

- EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL, EXPOSE UNDISTURBED NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
- COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
- AS AN ALTERNATIVE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
- COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.
- AS AN ALTERNATIVE TO ITEMS 2 AND 3 PROOF ROLL THE SUBGRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/3B) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). ANY SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL, AND COMPACTED AS STATED ABOVE.
- COMPACTION CRITERIA FOR OTHER FILL AREAS ON SITE SHALL MEET THE SAME REQUIREMENTS AS NOTED ABOVE.
- SOIL COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH TECHNICAL SPECIFICATION FOR CONSTRUCTION OF RADIO ACCESS NETWORK SITES.

COMPACTION EQUIPMENT:

HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

ELECTRICAL INSTALLATION NOTES

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PERMANENT LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S). NO HAND WRITTEN LABELS ALLOWED.
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED. NO HAND WRITTEN LABELS ALLOWED.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (SIZE 6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND POWER GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEC, AND NEC.

ELECTRICAL INSTALLATION NOTES (cont.)

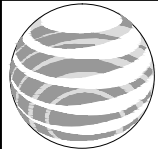
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



489 Washington Street
 Auburn, MA 01501
 Tel. (508) 981- 9590
 Fax (508) 519 - 8939
 mnobre@verticalresourcesgrp.com

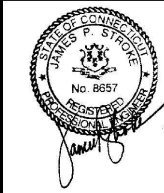


SITE NUMBER: CT2070
SITE NAME: NEW FAIRFIELD CENTER
 302 BALL POND ROAD
 NEW FAIRFIELD, CT 06812
 FAIRFIELD COUNTY



at&t
Mobility
 550 COCHITUATE RD
 SUITES 13 & 14
 FRAMINGHAM, MA 01701

▲	10/22/16	FOR CONSTRUCTION	E.L.P.	G.A.M.	
▲	10/17/16	FOR REVIEW	E.L.P.	G.A.M.	
NO.	DATE	REVISION	BY	CHK	APP'D
SCALE	DESIGNED BY: M.N.		DRAWN BY: G.A.M.		



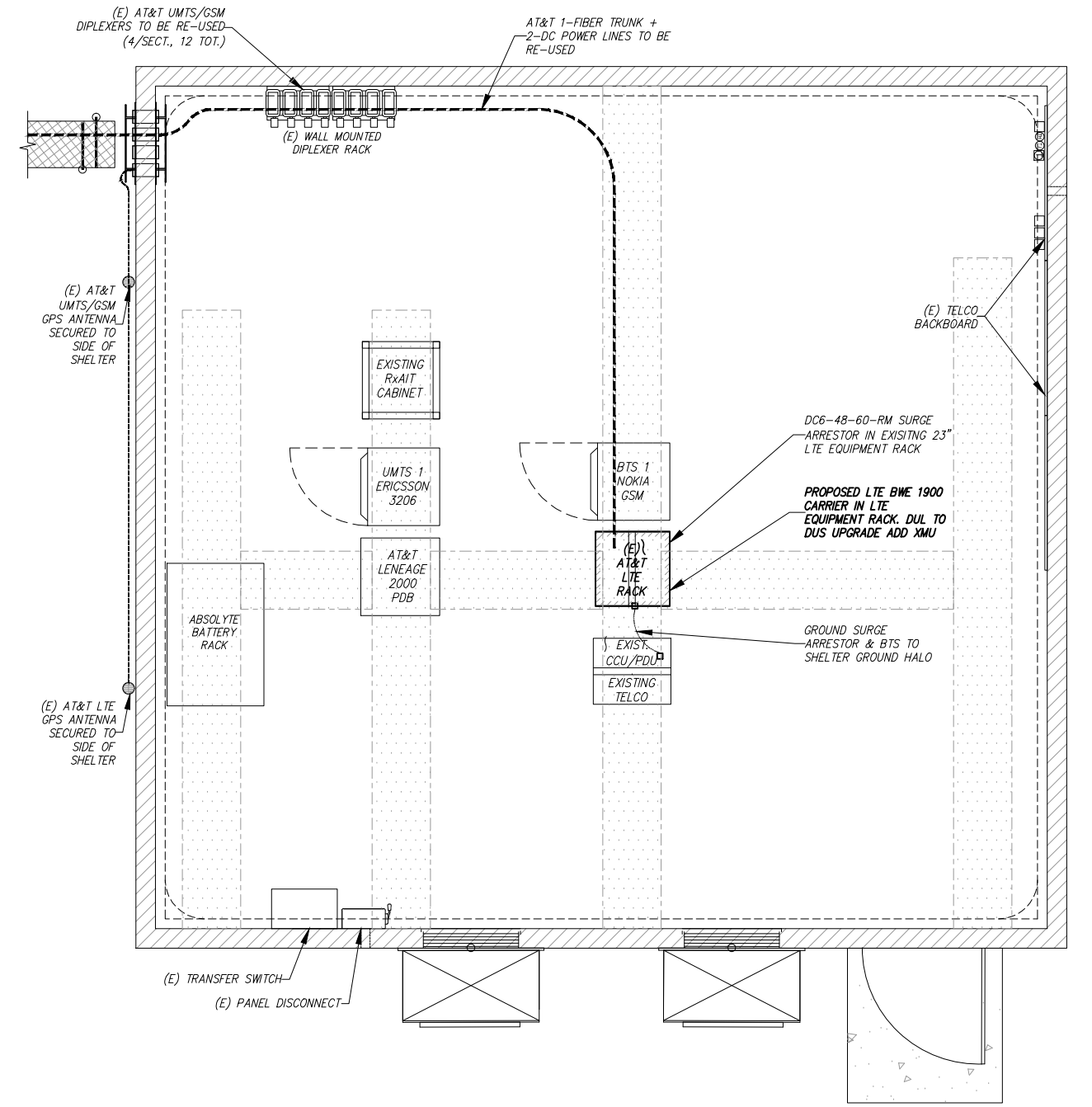
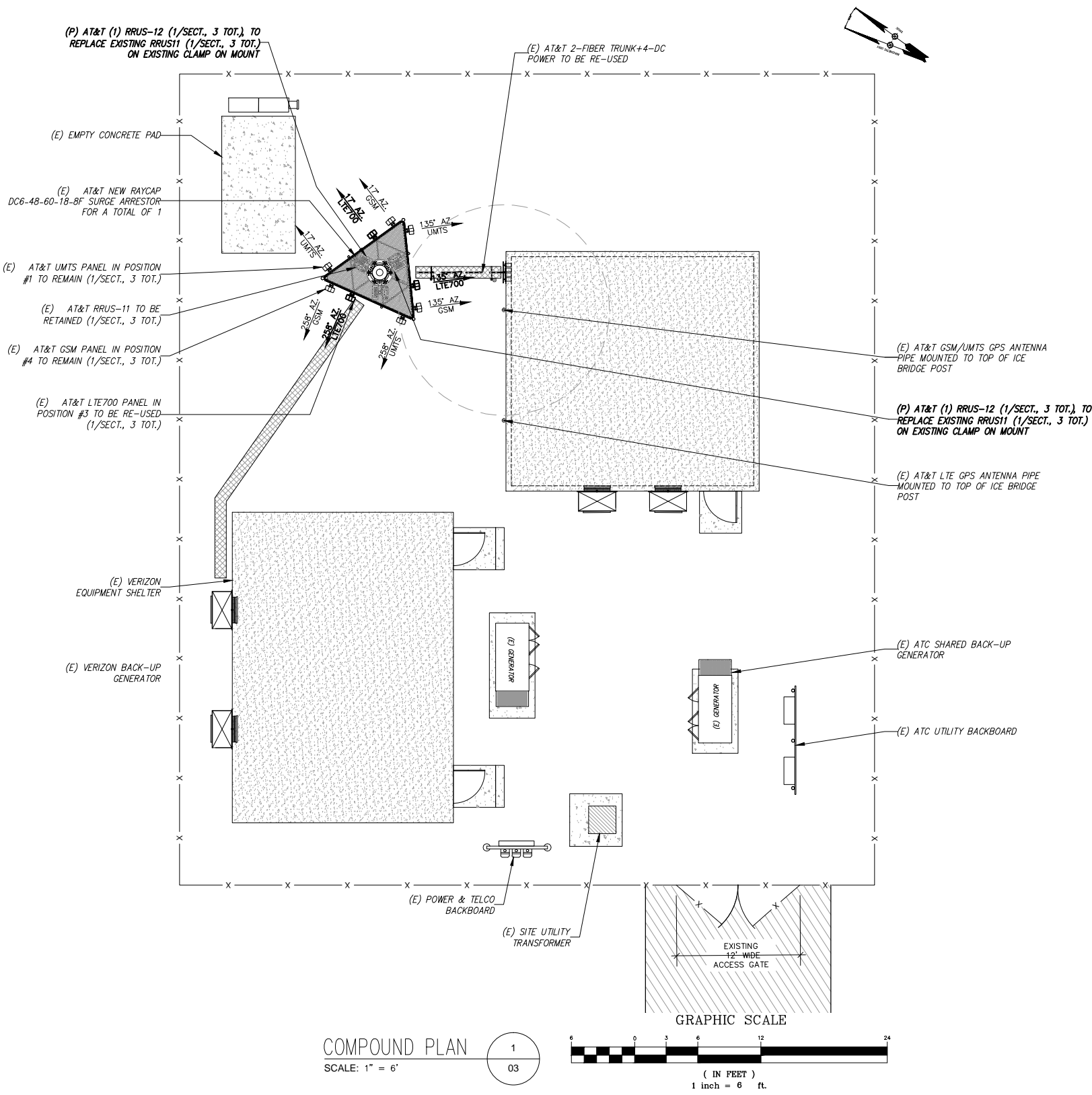
AT&T MOBILITY		
NOTES		
JOB NUMBER	DRAWING NUMBER	REV
50-145	02	1

GENERAL NOTES

1. THE TYPE, DIMENSIONS, MOUNTING HARDWARE, AND THE POSITIONS OF ALL EQUIPMENT IN THE COMPOUND ARE SHOWN IN ILLUSTRATIVE FASHION. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. ACTUAL HARDWARE DETAILS AND FINAL LOCATIONS MAY DIFFER SLIGHTLY FROM WHAT IS SHOWN.

2. THE CELLULAR INSTALLATION IS AN UNMANNED PRIVATE AND SECURED COMPOUND. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.

3. CONSTRUCTION, MAINTENANCE & OPERATION OF PROPOSED TOWER FACILITY WILL BE HELD IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE & FEDERAL REGULATIONS AND GUIDELINES.



VRG
VERTICAL RESOURCES GRP.

489 Washington Street
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Fax (508) 519-8939
mnbre@verticalresourcesgrp.com

EMPIRE telecom

EMPIRE TELECOM USA, LLC
16 ESQUIRE ROAD
BILLERICA, MA 01821

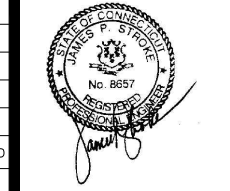
SITE NUMBER: CT2070
SITE NAME: NEW FAIRFIELD CENTER
302 BALL POND ROAD
NEW FAIRFIELD, CT 06812
FAIRFIELD COUNTY

at&t
Mobility

550 COCHITUATE RD
SUITES 13 & 14
FRAMINGHAM, MA 01701

NO.	DATE	REVISION	BY	CHK	APP'D
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2	10/17/16	FOR REVIEW	E.L.P.	G.A.M.	

SCALE DESIGNED BY: M.N. DRAWN BY: G.A.M.

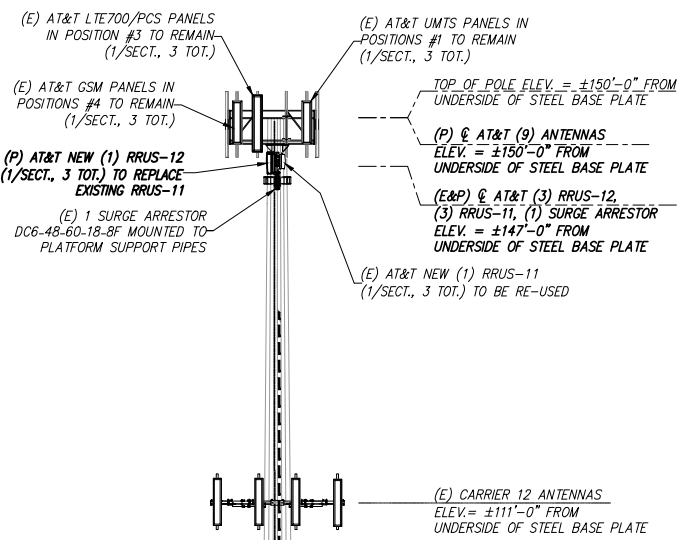


AT&T MOBILITY

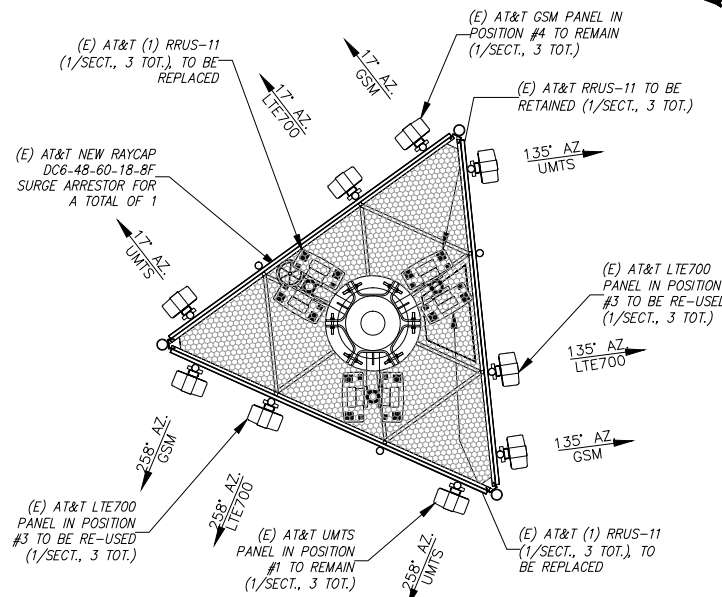
SITE PLAN & EQUIPMENT PLAN

JOB NUMBER	DRAWING NUMBER	REV
50-145	03	1

NOTES:
STRUCTURAL ANALYSIS TO
DETERMINE TOWERS CAPACITY
TO SUPPORT PROPOSED
ANTENNAS SHALL BE DONE BY
OTHERS



NOTES:
REFER TO FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS AND CONFIGURATIONS

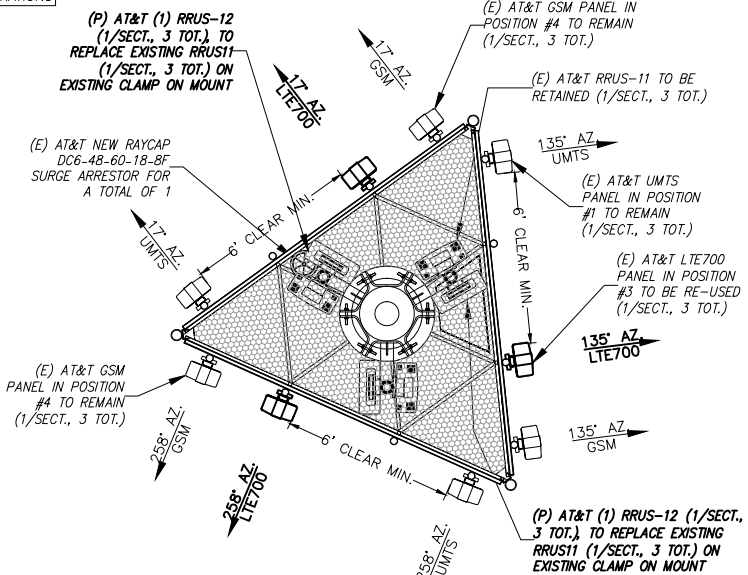


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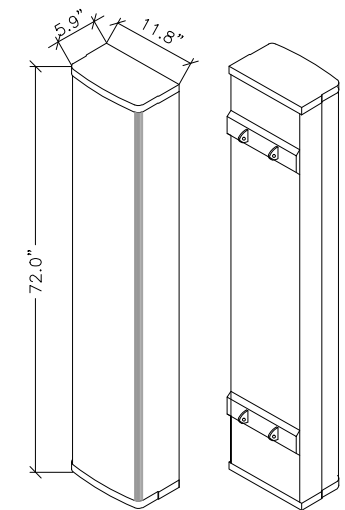
ANTENNA MOUNTING PLAN VIEW

SCALE: N.T.S.

2
04



PROPOSED

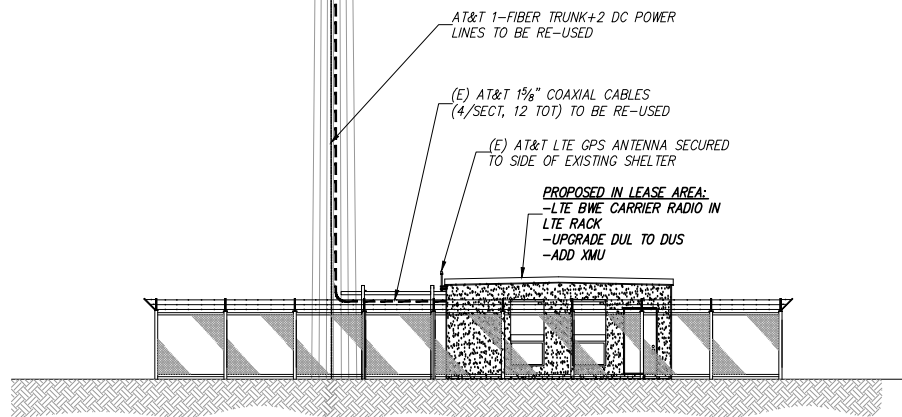


ISOMETRIC FRONT VIEW
ISOMETRIC REAR VIEW

LTE CCI HEXPORT
PANEL ANTENNA

SCALE: N.T.S.

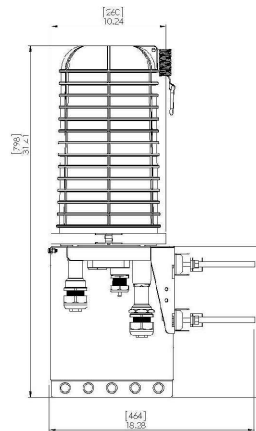
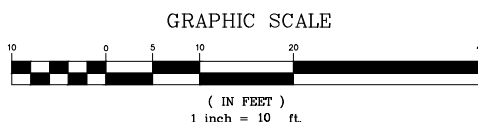
3
04



ELEVATION VIEW

SCALE: 1" = 10'

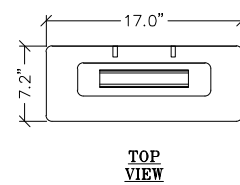
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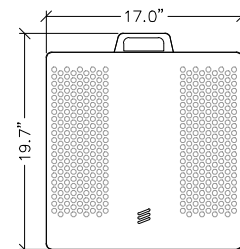
RAYCAP SURGE
SUPPRESSOR DC64860188F

SCALE: N.T.S.

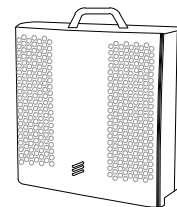
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TOP VIEW



FRONT VIEW

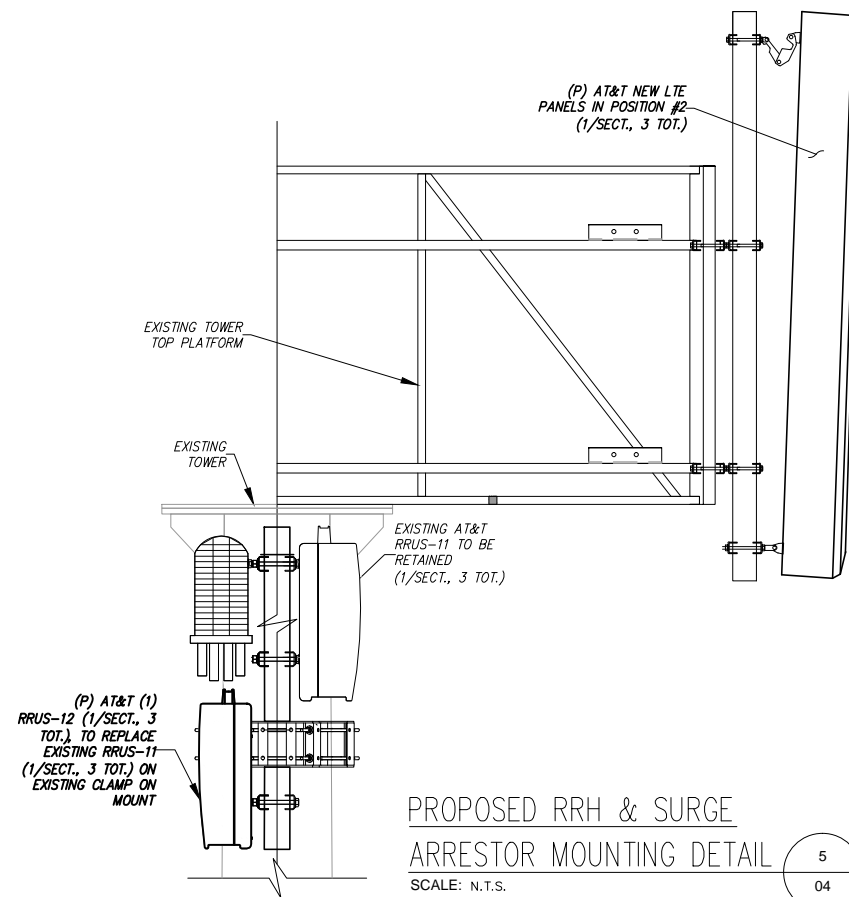


SIDE VIEW

PROPOSED ERICSSON
DUAL PA RRUS-12

SCALE: N.T.S.

6
04

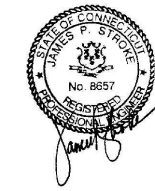


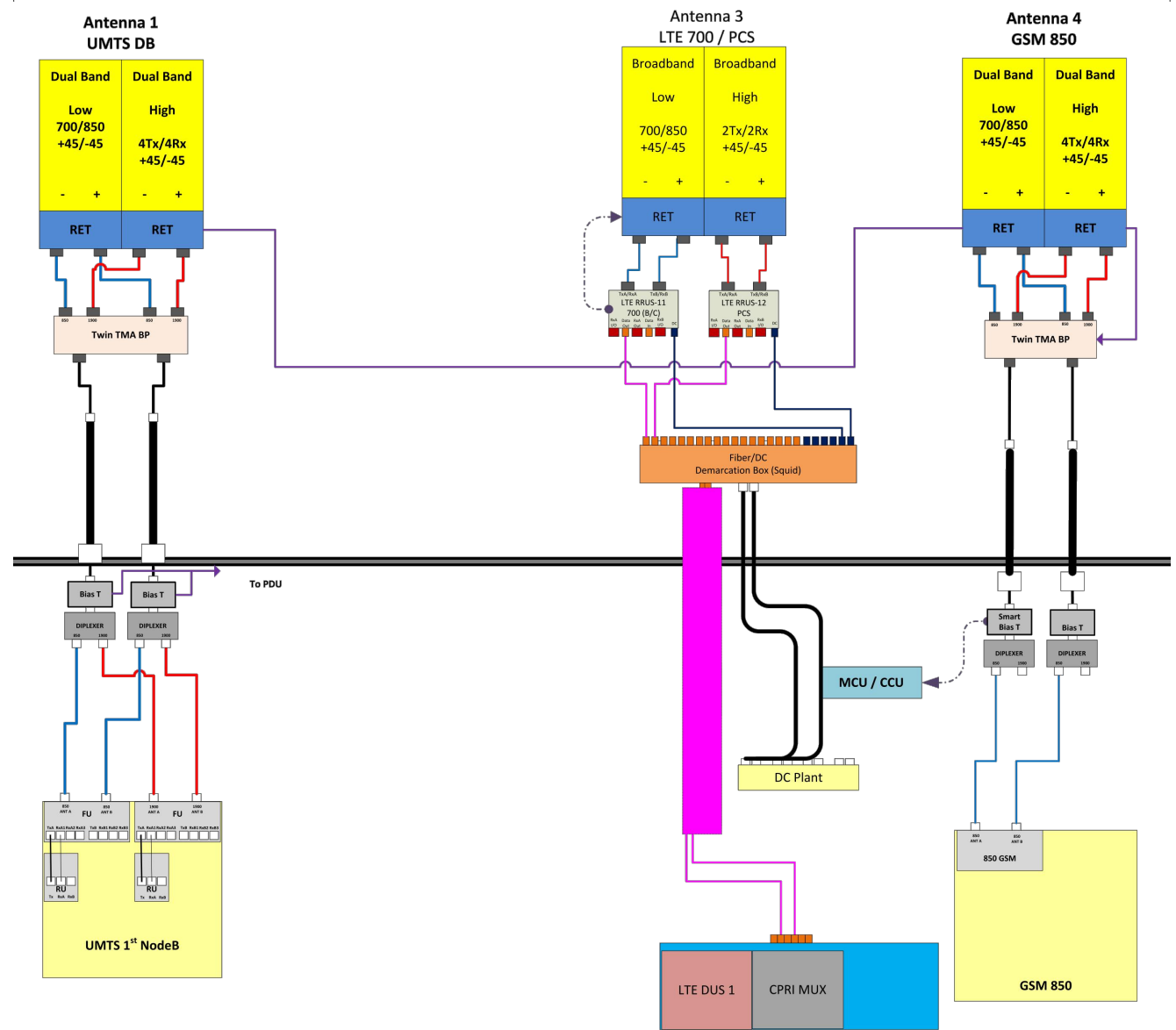
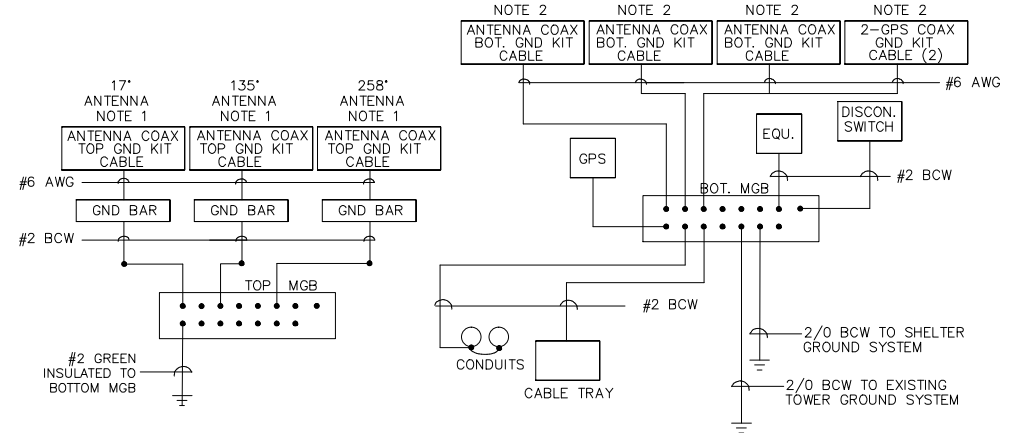
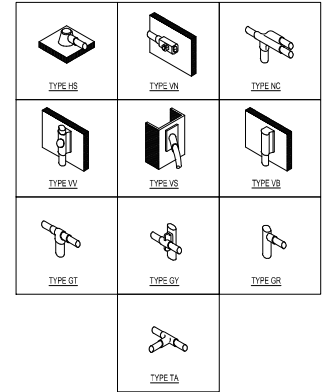
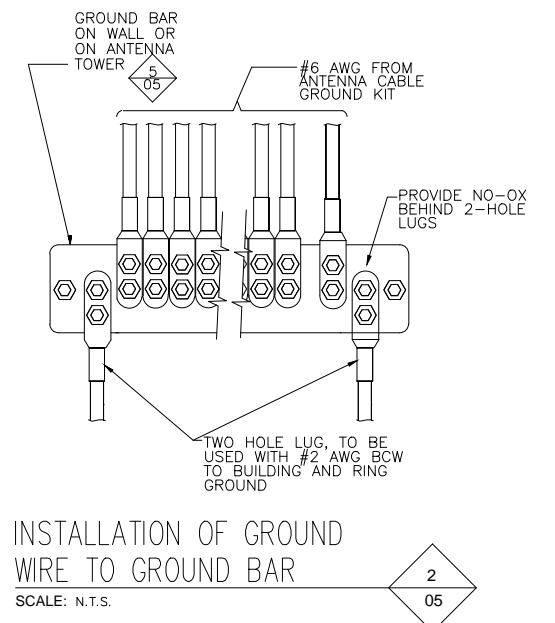
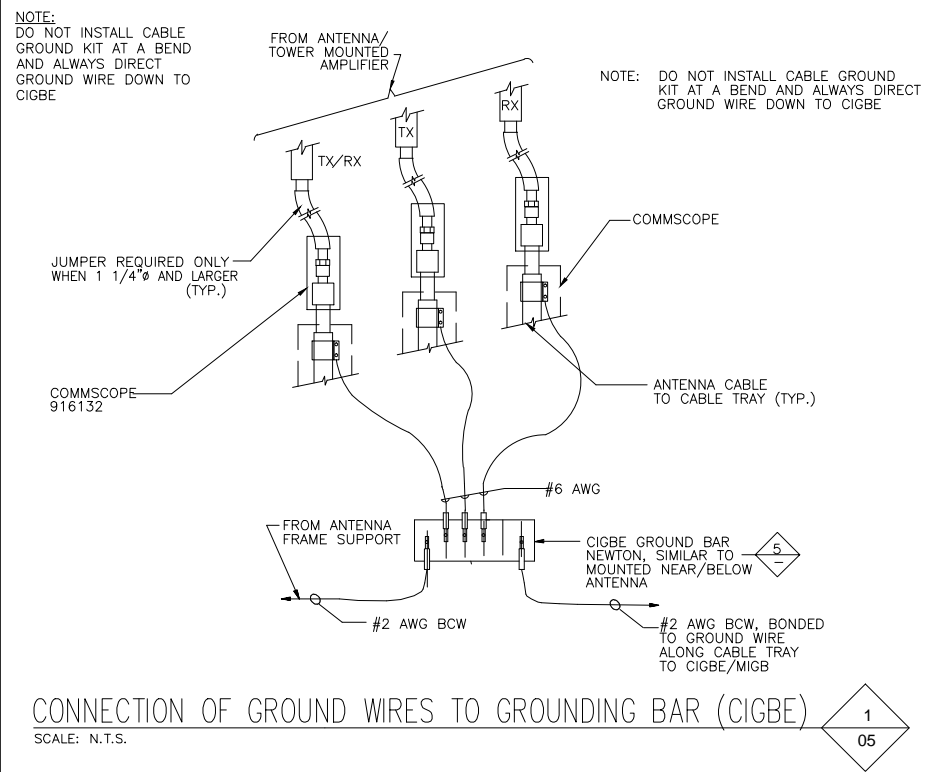
PROPOSED RRH & SURGE
ARRESTOR MOUNTING DETAIL

SCALE: N.T.S.

5
04

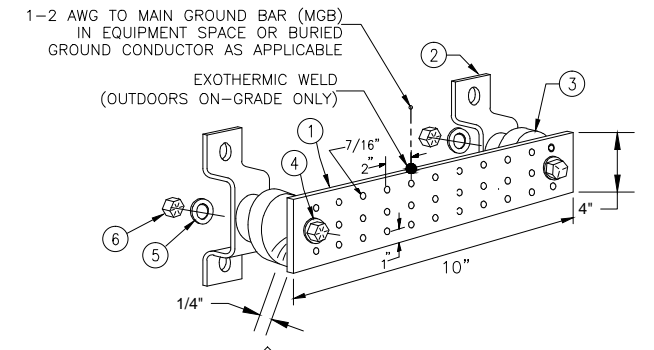
NO.	DATE	REVISION	BY	CHK	APP'D
1	10/22/16	FOR CONSTRUCTION	E.L.P.	G.A.M.	
2	10/17/16	FOR REVIEW	E.L.P.	G.A.M.	
SCALE DESIGNED BY: M.N. DRAWN BY: G.A.M.					





NEWTON INSTRUMENT COMPANY, INC.
BUTNER, N.C. OR APPROVED EQUAL

ITEM	REQ.	PART NO.	DESCRIPTION
①	1	1/4"x4"x12"	PRE DRILLED GND. BAR
②	2	A-6056	WALL MTG. BRKT.
③	2	3061-4	INSULATORS
④	2	3012-13	5/8"-11x4" H.H.C.S.
⑤	4	3015-8	5/8 LOCKWASHER
⑥	2	3014-8	5/8"-11 HEX NUT





AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 150 ft Monopole
ATC Site Name : Southbury CT, CT
ATC Site Number : 302519
Engineering Number : OAA687959_C3_02
Proposed Carrier : AT&T Mobility
Carrier Site Name : Southbury
Carrier Site Number : CT2126
Site Location : 133 Horse Fence Hill Rd
Southbury, CT 06488-2106
41.459972,-73.245000
County : New Haven
Date : November 1, 2016
Max Usage : 99%
Result : Pass

Prepared By:
Felix Buabeng

Reviewed By:

Felix Buabeng

COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
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Existing and Reserved Equipment.....	2
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Deflection, Twist, and Sway.....	3
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Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 150 ft monopole to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	ITT Meyers Site #CT-0055, dated May 21, 2002
Foundation Drawing	Girard Project #1C140, dated November 19, 1987
Modifications	SpectraSite Site #CT-0055, dated May 21, 2002

Analysis

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

Basic Wind Speed:	97 mph (3-Second Gust, V_{asd}) / 125 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	3
Crest Height:	148 ft
Spectral Response:	$S_s = 0.20$, $S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

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

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



Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	153.0	6	Powerwave Allgon TT08-19DB111-001	Platform w/ Handrails	(12) 1 5/8" Coax (2) 0.78" 8 AWG 6 (1) 3" Conduit	AT&T Mobility
		1	Raycap DC6-48-60-18-8F ("Squid")			
		3	Ericsson RRUS 11 (Band 12) (55 lb)			
		6	Powerwave Allgon 7770.00			
		3	KMW AM-X-CD-16-65-00T-RET			
113.0	114.0	6	RFS FD9R6004/1C-3L	T-Arms	(12) 1 5/8" Coax (1) 1 5/8" Hybriflex Cable	Verizon
		3	Alcatel-Lucent RRH2x40-AWS			
		3	Decibel 932DG90T2E-M			
		1	RFS DB-T1-6Z-8AB-0Z			
		3	Andrew HBX-6517DS-VTM (13.2lbs)			
		3	Powerwave Allgon P65-16-XL-2			
		3	Andrew LNX-6514DS-VTM (72.7" height)			

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	153.0	-	-	-	(1) 3/8" (0.38") RET Control Cable	AT&T Mobility

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	153.0	12	Powerwave Allgon7020.00 Dual Band RET	Platform w/ Handrails	(1) 0.39" Fiber Trunk	AT&T Mobility
		3	Ericsson RRUS 12			

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

Install proposed coax inside the pole shaft.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	68%	Pass
Shaft	99%	Pass
Base Plate	43%	Pass
Flanges	79%	Pass
Reinforcement	72%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	2,257.2	79%
Axial (Kips)	25.9	98%
Shear (Kips)	24.9	33%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
150.0	Powerwave Allgon 7020.00 Dual Band RET	AT&T Mobility	3.998	2.940
	Ericsson RRUS 12			

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



Standard Conditions

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

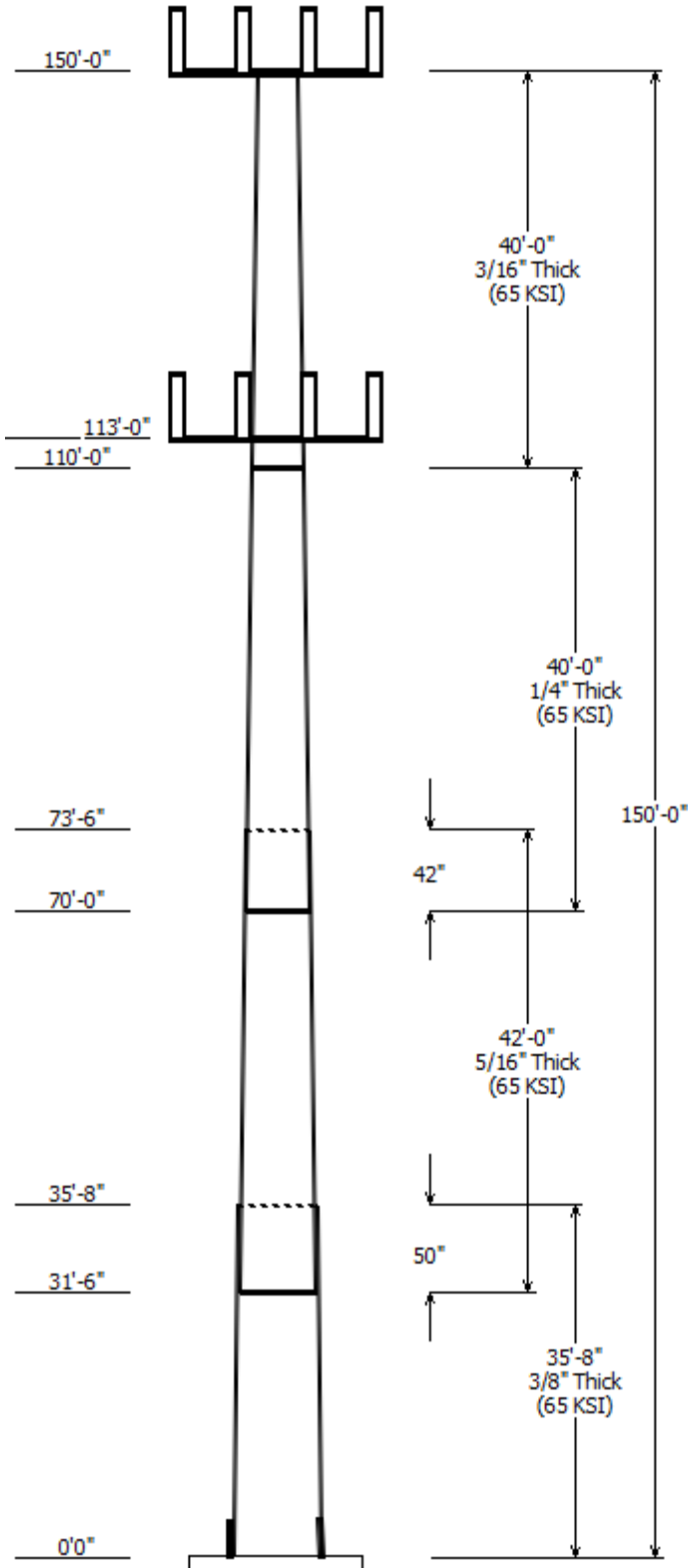
- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements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

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

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

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

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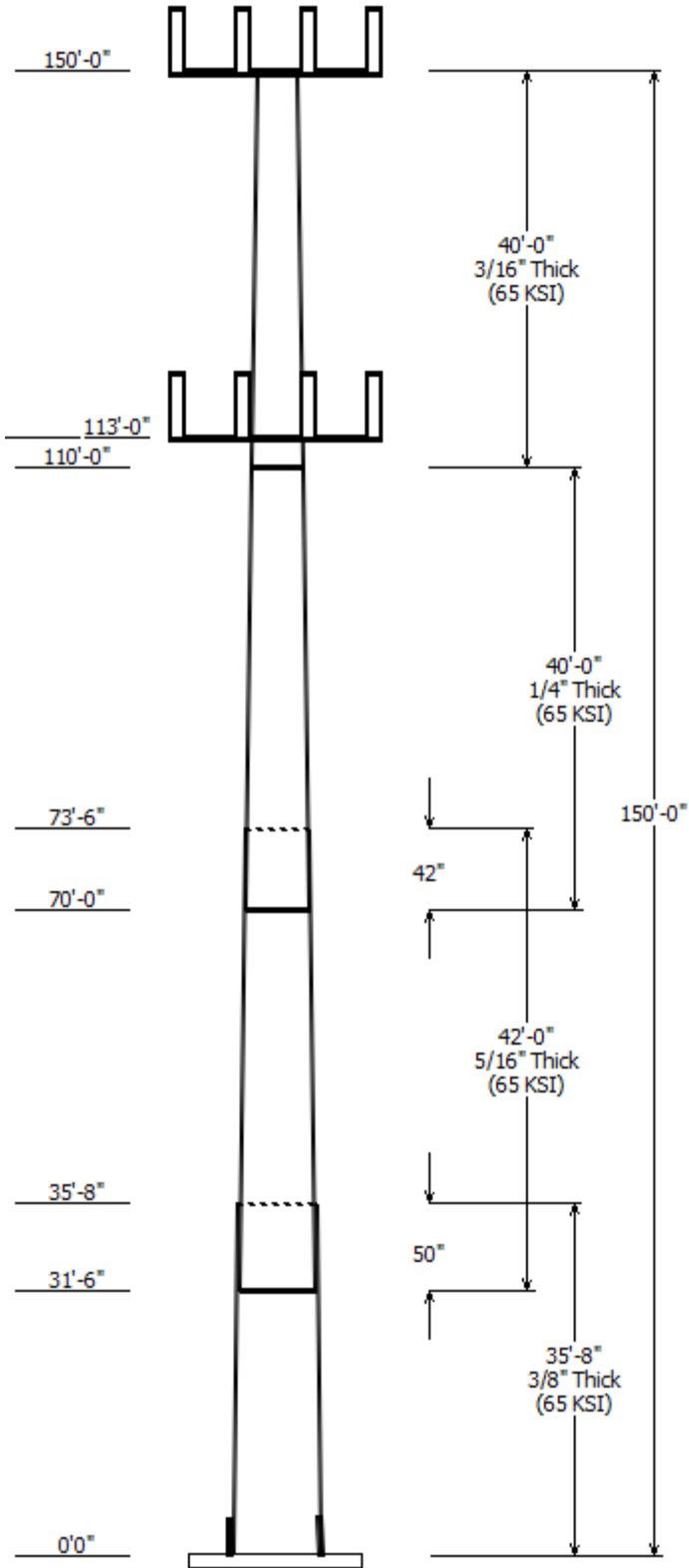
Job Information	
Pole :	302519
Code:	ANSI/TIA-222-G
Description :	150 ft ITT Meyer Type "B" Monopole
Client :	AT&T Mobility
Struct Class :	II
Location :	Southbury CT, CT
Shape :	12 Sides
Exposure :	B
Height :	150.00 (ft)
Topo :	3
Base Elev (ft):	0.00
Taper:	0.156700(in/ft)

Sections Properties							
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade (ksi)
		Top	Bottom				
1	35.667	31.79	37.38	0.375		0.000	65
2	42.000	26.48	33.06	0.313	Slip Joint	50.000	65
3	40.000	21.26	27.53	0.250	Slip Joint	42.000	65
4	40.000	15.00	21.26	0.188	Butt Joint	0.000	65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
150.000	153.000	3	Ericsson RRUS 12
150.000	153.000	12	Powerwave Allgon 7020.00
150.000	153.000	3	KMW AM-X-CD-16-65-00T-RET
150.000	153.000	1	Raycap DC6-48-60-18-8F
150.000	153.000	3	Ericsson RRUS 11 (Band 12) (55
150.000	150.000	1	Flat Platform w/ Handrails
150.000	153.000	6	Powerwave Allgon TT08-
150.000	153.000	6	Powerwave Allgon 7770.00
113.000	114.000	3	Powerwave Allgon P65-16-XL-
113.000	114.000	6	RFS FD9R6004/1C-3L
113.000	114.000	3	Alcatel-Lucent RRH2x40-AWS
113.000	114.000	3	Decibel 932DG90T2E-M
113.000	113.000	3	Round T-Arms
113.000	114.000	3	Andrew LNX-6514DS-VTM
113.000	114.000	3	Andrew HBX-6517DS-VTM
113.000	114.000	1	RFS DB-T1-6Z-8AB-0Z

Linear Appurtenance			
From Elev (ft)	To Elev (ft)	Description	Exposed To Wind
10.000	113.0	1 5/8" Coax	No
10.000	150.0	0.39" Fiber Trunk	No
10.000	150.0	0.78" 8 AWG 6	No
10.000	150.0	1 5/8" Coax	No
0.000	150.0	3" Conduit	No
0.000	22.000	#20 Dywidag	Yes
0.000	113.0	1 5/8" Hybriflex	No

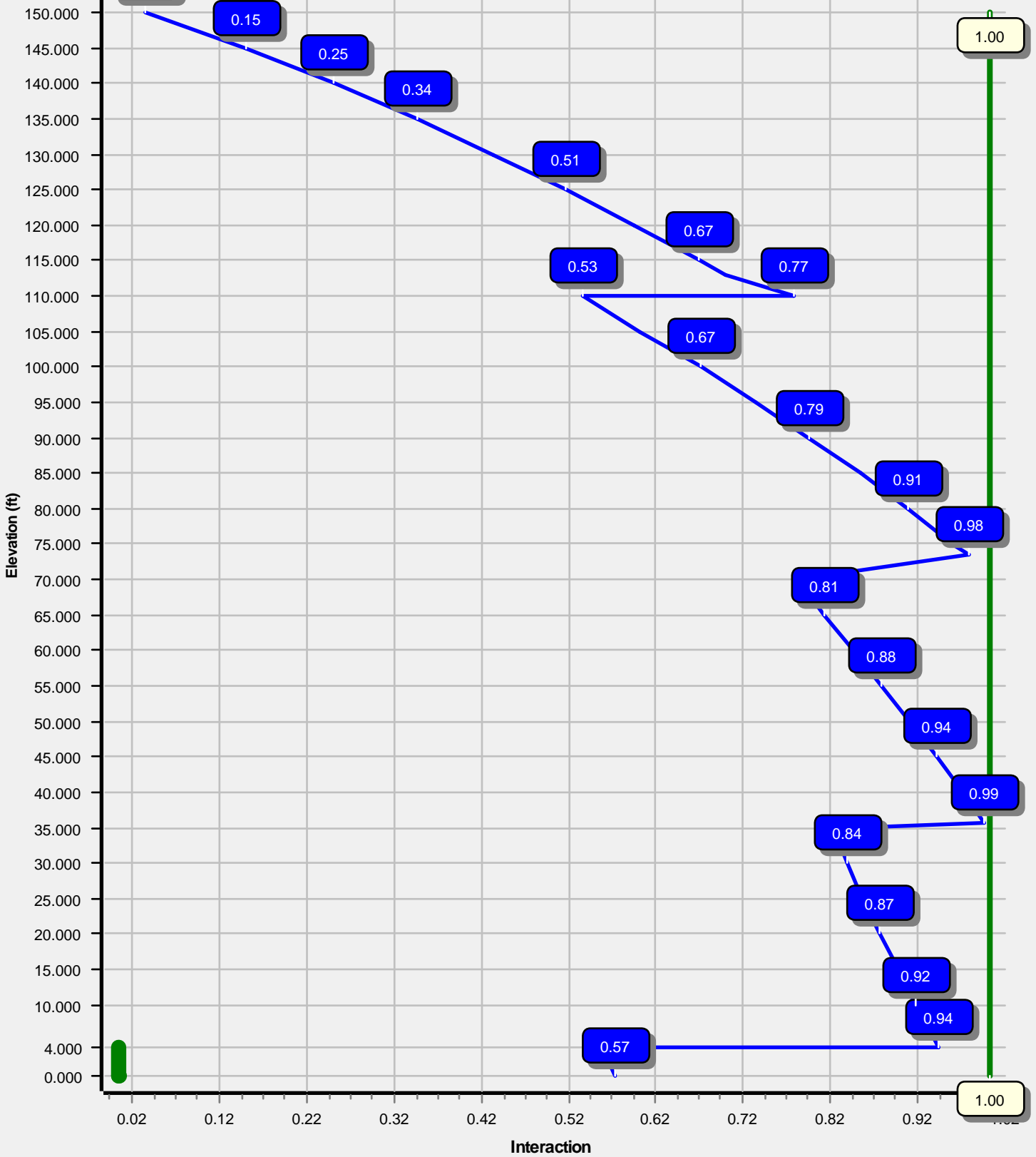
Load Cases	
1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph



Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2257.21	25.64	25.85
0.9D + 1.6W	2217.41	25.63	19.38
1.2D + 1.0Di + 1.0Wi	556.41	5.78	41.94
(1.2 + 0.2Sds) * DL + E ELFM	109.01	0.84	25.69
(1.2 + 0.2Sds) * DL + E EMAM	199.98	1.59	25.69
(0.9 - 0.2Sds) * DL + E ELFM	106.32	0.84	17.72
(0.9 - 0.2Sds) * DL + E EMAM	194.57	1.59	17.72
1.0D + 1.0W	536.61	6.17	21.57

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

Load Case : 1.2D + 1.6W
Max Ratio 99.45% at 35.7 ft



Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:46 PM

Customer: AT&T Mobility

Analysis Parameters

Location:	New Haven County, CT		
Code:	ANSI/TIA-222-G	Height (ft):	150
Shape:	12 Sides	Base Diameter (in):	37.38
Pole Type:	Taper	Top Diameter (in):	15.00
Pole Manufacturer:	ITT Meyer	Taper (in/ft) :	0.157

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	97 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	3	Operational Wind Speed:	60 mph
Crest Height:	147.5 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	3.05		
T _L (sec):	6	p:	1.3
S _s :	0.200	S ₁ :	0.065
F _a :	1.600	F _v :	2.400
S _{ds} :	0.213	S _{d1} :	0.104
		C _s :	0.030
		C _s Max:	0.030
		C _s Min:	0.030

Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-12	35.667	0.3750	65		0.00	5,014	37.38	0.00	44.68	7810.1	24.03	99.68	31.79	35.67	37.93	4778.9	20.04	84.78	0.156700
2-12	42.000	0.3125	65	Slip	50.00	4,237	33.06	31.50	32.96	4514.2	25.68	105.82	26.48	73.50	26.34	2303.3	20.03	84.76	0.156700
3-12	40.000	0.2500	65	Slip	42.00	2,646	27.53	70.00	21.97	2087.4	26.83	110.14	21.26	110.00	16.92	954.0	20.12	85.07	0.156700
4-12	40.000	0.1875	65	Butt	0.00	1,475	21.26	110.00	12.73	721.9	27.71	113.43	15.00	150.00	8.94	250.5	18.76	80.00	0.156700
Shaft Weight						13,372													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
150.00	Ericsson RRUS 11 (Band 12)	3	55.00	2.520	0.67	135.09	3.437	0.67	0.000	3.000
150.00	Ericsson RRUS 12	3	50.00	3.150	0.67	122.81	4.297	0.67	0.000	3.000
150.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	3,485.34	64.319	1.00	0.000	0.000
150.00	KMW AM-X-CD-16-65-00T-	3	48.50	8.020	0.67	247.16	9.374	0.67	0.000	3.000
150.00	Powerwave Allgon 7020.00	12	2.20	0.400	0.50	5.40	0.546	0.50	0.000	3.000
150.00	Powerwave Allgon 7770.00	6	35.00	5.510	0.65	177.37	6.614	0.65	0.000	3.000
150.00	Powerwave Allgon TT08-	6	22.00	0.920	0.50	54.04	1.255	0.50	0.000	3.000
150.00	Raycap DC6-48-60-18-8F	1	31.80	1.280	1.00	78.11	1.746	1.00	0.000	3.000
113.00	Alcatel-Lucent RRH2x40-AWS	3	44.00	2.160	0.67	121.38	2.834	0.67	0.000	1.000
113.00	Andrew HBX-6517DS-VTM	3	13.20	5.240	0.69	139.95	6.568	0.69	0.000	1.000
113.00	Andrew LNX-6514DS-VTM	3	38.80	8.170	0.69	252.23	9.532	0.69	0.000	1.000
113.00	Decibel 932DG90T2E-M	3	9.50	3.490	0.66	99.70	4.446	0.66	0.000	1.000
113.00	Powerwave Allgon P65-16-	3	33.00	8.130	0.65	223.87	9.486	0.65	0.000	1.000
113.00	RFS DB-T1-6Z-8AB-OZ	1	44.00	4.800	0.67	194.75	5.712	0.67	0.000	1.000
113.00	RFS FD9R6004/1C-3L	6	3.10	0.370	0.50	7.61	0.504	0.50	0.000	1.000
113.00	Round T-Arms	3	250.00	9.700	0.67	468.05	18.301	0.67	0.000	0.000
Totals		60	4088.80			10,687.91			Number of Loadings : 16	

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	150.00	1	3" Conduit	3.50	7.58	N	0.00	N	AT&T Mobility
10.00	150.00	1	0.39" Fiber Trunk	0.39	0.06	N	0.00	N	AT&T Mobility
10.00	150.00	2	0.78" 8 AWG 6	0.78	0.59	N	0.00	N	AT&T Mobility
10.00	150.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	AT&T Mobility
0.00	113.00	1	1 5/8" Hybriflex	1.98	1.30	N	0.00	N	Verizon
10.00	113.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon
0.00	22.00	4	#20 Dywidag	2.50	0.00	N	8.00	Y	--

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Intermediate Connections Description	Spacing (in)	Len (in)	Connectors	Continuation?
0.00	4.00	4	SOL #20 All Thread	80	3.31	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	No

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)	Additional Reinforcing		
												Area (in ²)	Ix (in ⁴)	Weight (lb)
0.00		0.3750	37.380	44.684	7,810.1	24.03	99.68	78.5	403.6	0.0	0.0	19.64	5,317	0.0
4.00	Reinf. Top	0.3750	36.753	43.927	7,419.9	23.58	98.01	79.0	390.0	0.0	603.0	19.64	5,175	267.2
5.00		0.3750	36.597	43.737	7,324.4	23.47	97.59	79.1	386.6	0.0	149.2			
10.00		0.3750	35.813	42.791	6,859.3	22.91	95.50	79.7	370.0	0.0	736.1			
15.00		0.3750	35.029	41.845	6,414.3	22.35	93.41	80.3	353.7	0.0	720.0			
20.00		0.3750	34.246	40.899	5,989.0	21.79	91.32	80.9	337.8	0.0	703.9			
25.00		0.3750	33.462	39.953	5,583.0	21.23	89.23	81.6	322.3	0.0	687.8			
30.00		0.3750	32.679	39.007	5,195.7	20.67	87.14	81.9	307.1	0.0	671.7			
31.50	Bot - Section 2	0.3750	32.444	38.723	5,083.1	20.50	86.52	81.9	302.7	0.0	198.4			
35.00		0.3750	31.895	38.061	4,826.7	20.11	85.05	81.9	292.3	0.0	846.5			
35.67	Top - Section 1	0.3125	32.416	32.304	4,249.6	25.12	103.73	77.3	253.3	0.0	159.6			
40.00		0.3125	31.737	31.621	3,985.6	24.53	101.56	78.0	242.6	0.0	471.3			
45.00		0.3125	30.953	30.833	3,694.9	23.86	99.05	78.7	230.6	0.0	531.3			
50.00		0.3125	30.170	30.044	3,418.6	23.19	96.54	79.4	218.9	0.0	517.9			
55.00		0.3125	29.386	29.256	3,156.5	22.52	94.04	80.2	207.5	0.0	504.5			
60.00		0.3125	28.603	28.467	2,908.1	21.85	91.53	80.9	196.4	0.0	491.0			
65.00		0.3125	27.819	27.679	2,673.1	21.17	89.02	81.6	185.6	0.0	477.6			
70.00	Bot - Section 3	0.3125	27.036	26.891	2,451.2	20.50	86.52	81.9	175.1	0.0	464.2			
73.50	Top - Section 2	0.2500	26.988	21.524	1,964.0	26.25	107.95	76.1	140.6	0.0	575.9			
75.00		0.2500	26.752	21.335	1,912.7	25.99	107.01	76.4	138.1	0.0	109.4			
80.00		0.2500	25.969	20.704	1,748.0	25.15	103.88	77.3	130.0	0.0	357.6			
85.00		0.2500	25.185	20.073	1,593.1	24.31	100.74	78.2	122.2	0.0	346.9			
90.00		0.2500	24.402	19.442	1,447.6	23.47	97.61	79.1	114.6	0.0	336.2			
95.00		0.2500	23.618	18.812	1,311.2	22.63	94.47	80.0	107.2	0.0	325.4			
100.0		0.2500	22.835	18.181	1,183.7	21.79	91.34	80.9	100.1	0.0	314.7			
105.0		0.2500	22.051	17.550	1,064.7	20.96	88.21	81.9	93.3	0.0	304.0			
110.0	Top - Section 3	0.2500	21.268	16.919	954.0	20.12	85.07	81.9	86.7	0.0	293.2			
110.0	Bot - Section 4	0.1875	21.268	12.727	721.9	27.71	113.43	74.5	65.6	0.0				
113.0		0.1875	20.798	12.444	674.7	27.04	110.92	75.2	62.7	0.0	128.5			
115.0		0.1875	20.484	12.254	644.4	26.59	109.25	75.7	60.8	0.0	84.0			
120.0		0.1875	19.701	11.781	572.6	25.47	105.07	76.9	56.1	0.0	204.5			
125.0		0.1875	18.917	11.308	506.4	24.35	100.89	78.2	51.7	0.0	196.4			
130.0		0.1875	18.134	10.835	445.4	23.24	96.71	79.4	47.5	0.0	188.4			
135.0		0.1875	17.350	10.362	389.6	22.12	92.54	80.6	43.4	0.0	180.3			
140.0		0.1875	16.567	9.889	338.6	21.00	88.36	81.8	39.5	0.0	172.3			
145.0		0.1875	15.783	9.416	292.3	19.88	84.18	81.9	35.8	0.0	164.2			
150.0		0.1875	15.000	8.943	250.5	18.76	80.00	81.9	32.3	0.0	156.2			
											13,372.1			267.2

Load Case: 1.2D + 1.6W	97 mph with No Ice	29 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.20		
Wind Load Factor :1.60		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		463.9	0.0					0.0	0.0	463.9	0.0	0.0	0.0
4.00	Reinf. Top	576.2	723.7					96.7	363.3	672.9	1,086.9	0.0	0.0
5.00		653.2	179.0					23.7	10.7	676.9	189.6	0.0	0.0
10.00		1,049.3	883.3					115.4	53.3	1,164.8	936.6	0.0	0.0
15.00		987.2	864.0					110.9	178.8	1,098.1	1,042.8	0.0	0.0
20.00		854.7	844.7					106.8	178.8	961.5	1,023.5	0.0	0.0
25.00		731.0	825.4					0.0	178.8	731.0	1,004.2	0.0	0.0
30.00		458.3	806.1					0.0	178.8	458.3	984.8	0.0	0.0
31.50	Bot - Section 2	348.0	238.1					0.0	53.6	348.0	291.7	0.0	0.0
35.00		290.9	1,015.8					0.0	125.2	290.9	1,141.0	0.0	0.0
35.67	Top - Section 1	345.1	191.5					0.0	23.8	345.1	215.4	0.0	0.0
40.00		637.6	565.6					0.0	155.0	637.6	720.5	0.0	0.0
45.00		670.5	637.5					0.0	178.8	670.5	816.3	0.0	0.0
50.00		655.5	621.4					0.0	178.8	655.5	800.2	0.0	0.0
55.00		639.5	605.4					0.0	178.8	639.5	784.1	0.0	0.0
60.00		622.8	589.3					0.0	178.8	622.8	768.0	0.0	0.0
65.00		605.7	573.2					0.0	178.8	605.7	752.0	0.0	0.0
70.00	Bot - Section 3	506.1	557.1					0.0	178.8	506.1	735.9	0.0	0.0
73.50	Top - Section 2	295.2	691.1					0.0	125.2	295.2	816.3	0.0	0.0
75.00		374.1	131.3					0.0	53.6	374.1	184.9	0.0	0.0
80.00		564.1	429.1					0.0	178.8	564.1	607.9	0.0	0.0
85.00		546.5	416.3					0.0	178.8	546.5	595.1	0.0	0.0
90.00		529.1	403.4					0.0	178.8	529.1	582.2	0.0	0.0
95.00		511.7	390.5					0.0	178.8	511.7	569.3	0.0	0.0
100.00		494.4	377.6					0.0	178.8	494.4	556.4	0.0	0.0
105.00		477.2	364.8					0.0	178.8	477.2	543.5	0.0	0.0
110.00	Top - Section 3	370.8	351.9					0.0	178.8	370.8	530.7	0.0	0.0
113.00	Appertunance(s)	225.8	154.2	3,107.9	0.0	2,374.6	1,473.7	0.0	107.3	3,333.7	1,735.2	0.0	0.0
115.00		306.6	100.8					0.0	44.8	306.6	145.6	0.0	0.0
120.00		426.3	245.4					0.0	112.0	426.3	357.3	0.0	0.0
125.00		409.5	235.7					0.0	112.0	409.5	347.7	0.0	0.0
130.00		392.8	226.0					0.0	112.0	392.8	338.0	0.0	0.0
135.00		376.1	216.4					0.0	112.0	376.1	328.3	0.0	0.0
140.00		359.5	206.7					0.0	112.0	359.5	318.7	0.0	0.0
145.00		342.9	197.1					0.0	112.0	342.9	309.0	0.0	0.0
150.00	Appertunance(s)	167.3	187.4	4,238.2	0.0	6,298.7	3,432.8	0.0	112.0	4,405.6	3,732.2	0.0	0.0
Totals:										26,064.8	25,891.9	0.00	0.00

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

Load Case: 1.2D + 1.6W

97 mph with No Ice

29 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-25.85	-25.64	0.00	-2,257.21	0.00	2,257.21	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.571
4.00	-24.71	-25.02	0.00	-2,154.63	0.00	2,154.63	3,123.00	1,561.50	4,678.77	2,310.67	0.08	-0.19	0.555
4.00	-24.71	-25.02	0.00	-2,154.63	0.00	2,154.63	3,123.00	1,561.50	4,678.77	2,310.67	0.08	-0.19	0.941
5.00	-24.43	-24.44	0.00	-2,129.61	0.00	2,129.61	3,114.35	1,557.18	4,645.51	2,294.24	0.13	-0.24	0.936
10.00	-23.33	-23.43	0.00	-2,007.41	0.00	2,007.41	3,070.50	1,535.25	4,480.02	2,212.51	0.59	-0.64	0.915
15.00	-22.15	-22.48	0.00	-1,890.25	0.00	1,890.25	3,025.61	1,512.81	4,315.90	2,131.46	1.48	-1.05	0.894
20.00	-20.99	-21.64	0.00	-1,777.87	0.00	1,777.87	2,979.68	1,489.84	4,153.25	2,051.14	2.79	-1.45	0.874
25.00	-19.86	-21.03	0.00	-1,669.65	0.00	1,669.65	2,932.71	1,466.36	3,992.19	1,971.59	4.53	-1.86	0.854
30.00	-18.80	-20.62	0.00	-1,564.52	0.00	1,564.52	2,875.21	1,437.61	3,820.20	1,886.65	6.70	-2.27	0.836
31.50	-18.45	-20.33	0.00	-1,533.59	0.00	1,533.59	2,854.29	1,427.15	3,764.49	1,859.14	7.44	-2.40	0.832
35.00	-17.26	-20.04	0.00	-1,462.44	0.00	1,462.44	2,805.48	1,402.74	3,636.10	1,795.73	9.31	-2.69	0.821
35.67	-16.99	-19.75	0.00	-1,449.08	0.00	1,449.08	2,248.07	1,124.03	2,973.91	1,468.70	9.69	-2.75	0.995
40.00	-16.16	-19.19	0.00	-1,363.50	0.00	1,363.50	2,218.59	1,109.29	2,872.23	1,418.49	12.35	-3.11	0.969
45.00	-15.23	-18.60	0.00	-1,267.54	0.00	1,267.54	2,183.60	1,091.80	2,755.77	1,360.97	15.86	-3.58	0.939
50.00	-14.33	-18.01	0.00	-1,174.53	0.00	1,174.53	2,147.58	1,073.79	2,640.30	1,303.95	19.86	-4.05	0.908
55.00	-13.45	-17.43	0.00	-1,084.47	0.00	1,084.47	2,110.52	1,055.26	2,525.94	1,247.47	24.36	-4.52	0.876
60.00	-12.60	-16.85	0.00	-997.34	0.00	997.34	2,072.41	1,036.21	2,412.79	1,191.58	29.34	-4.99	0.843
65.00	-11.78	-16.27	0.00	-913.11	0.00	913.11	2,033.27	1,016.64	2,300.94	1,136.35	34.81	-5.46	0.810
70.00	-10.99	-15.77	0.00	-831.75	0.00	831.75	1,982.10	991.05	2,178.42	1,075.84	40.77	-5.92	0.779
73.50	-10.14	-15.43	0.00	-776.56	0.00	776.56	1,473.96	736.98	1,624.57	802.32	45.23	-6.25	0.975
75.00	-9.91	-15.10	0.00	-753.41	0.00	753.41	1,466.28	733.14	1,601.77	791.05	47.21	-6.39	0.960
80.00	-9.24	-14.55	0.00	-677.92	0.00	677.92	1,440.00	720.00	1,526.12	753.69	54.17	-6.93	0.906
85.00	-8.59	-14.01	0.00	-605.16	0.00	605.16	1,412.68	706.34	1,451.11	716.65	61.69	-7.45	0.851
90.00	-7.97	-13.48	0.00	-535.09	0.00	535.09	1,384.32	692.16	1,376.86	679.98	69.74	-7.96	0.793
95.00	-7.37	-12.96	0.00	-467.68	0.00	467.68	1,354.92	677.46	1,303.45	643.72	78.31	-8.45	0.732
100.00	-6.79	-12.44	0.00	-402.89	0.00	402.89	1,324.47	662.24	1,230.99	607.94	87.38	-8.92	0.668
105.00	-6.24	-11.93	0.00	-340.70	0.00	340.70	1,292.99	646.50	1,159.59	572.68	96.92	-9.37	0.600
110.00	-5.72	-11.51	0.00	-281.05	0.00	281.05	1,247.13	623.57	1,077.81	532.29	106.91	-9.78	0.533
110.00	-5.72	-11.51	0.00	-281.05	0.00	281.05	853.24	426.62	741.78	366.34	106.91	-9.78	0.775
113.00	-4.55	-7.94	0.00	-244.15	0.00	244.15	842.42	421.21	715.90	353.56	113.10	-10.02	0.696
115.00	-4.42	-7.64	0.00	-228.27	0.00	228.27	834.99	417.50	698.71	345.06	117.32	-10.22	0.667
120.00	-4.09	-7.19	0.00	-190.07	0.00	190.07	815.71	407.86	655.98	323.96	128.21	-10.68	0.592
125.00	-3.78	-6.75	0.00	-154.12	0.00	154.12	795.39	397.69	613.71	303.09	139.56	-11.11	0.514
130.00	-3.48	-6.32	0.00	-120.38	0.00	120.38	774.02	387.01	572.00	282.49	151.33	-11.49	0.431
135.00	-3.21	-5.90	0.00	-88.79	0.00	88.79	751.62	375.81	530.94	262.21	163.47	-11.83	0.343
140.00	-2.95	-5.50	0.00	-59.28	0.00	59.28	728.18	364.09	490.64	242.31	175.92	-12.10	0.249
145.00	-2.70	-5.10	0.00	-31.81	0.00	31.81	694.06	347.03	445.03	219.78	188.60	-12.29	0.149
150.00	0.00	-4.41	0.00	-6.30	0.00	6.30	659.19	329.60	401.19	198.13	201.43	-12.38	0.032

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:47 PM

Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

29 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		463.9	0.0					0.0	0.0	463.9	0.0	0.0	0.0
4.00	Reinf. Top	576.2	542.7					96.7	272.4	672.9	815.2	0.0	0.0
5.00		653.2	134.2					23.7	8.0	676.9	142.2	0.0	0.0
10.00		1,049.3	662.5					115.4	40.0	1,164.8	702.4	0.0	0.0
15.00		987.2	648.0					110.9	134.1	1,098.1	782.1	0.0	0.0
20.00		854.7	633.5					106.8	134.1	961.5	767.6	0.0	0.0
25.00		731.0	619.0					0.0	134.1	731.0	753.1	0.0	0.0
30.00		458.3	604.5					0.0	134.1	458.3	738.6	0.0	0.0
31.50	Bot - Section 2	348.0	178.5					0.0	40.2	348.0	218.8	0.0	0.0
35.00		290.9	761.9					0.0	93.9	290.9	855.7	0.0	0.0
35.67	Top - Section 1	345.1	143.6					0.0	17.9	345.1	161.5	0.0	0.0
40.00		637.6	424.2					0.0	116.2	637.6	540.4	0.0	0.0
45.00		670.5	478.2					0.0	134.1	670.5	612.3	0.0	0.0
50.00		655.5	466.1					0.0	134.1	655.5	600.2	0.0	0.0
55.00		639.5	454.0					0.0	134.1	639.5	588.1	0.0	0.0
60.00		622.8	441.9					0.0	134.1	622.8	576.0	0.0	0.0
65.00		605.7	429.9					0.0	134.1	605.7	564.0	0.0	0.0
70.00	Bot - Section 3	506.1	417.8					0.0	134.1	506.1	551.9	0.0	0.0
73.50	Top - Section 2	295.2	518.3					0.0	93.9	295.2	612.2	0.0	0.0
75.00		374.1	98.4					0.0	40.2	374.1	138.7	0.0	0.0
80.00		564.1	321.9					0.0	134.1	564.1	456.0	0.0	0.0
85.00		546.5	312.2					0.0	134.1	546.5	446.3	0.0	0.0
90.00		529.1	302.5					0.0	134.1	529.1	436.6	0.0	0.0
95.00		511.7	292.9					0.0	134.1	511.7	427.0	0.0	0.0
100.00		494.4	283.2					0.0	134.1	494.4	417.3	0.0	0.0
105.00		477.2	273.6					0.0	134.1	477.2	407.7	0.0	0.0
110.00	Top - Section 3	370.8	263.9					0.0	134.1	370.8	398.0	0.0	0.0
113.00	Appertunance(s)	225.8	115.6	3,107.9	0.0	2,374.6	1,105.3	0.0	80.5	3,333.7	1,301.4	0.0	0.0
115.00		306.6	75.6					0.0	33.6	306.6	109.2	0.0	0.0
120.00		426.3	184.0					0.0	84.0	426.3	268.0	0.0	0.0
125.00		409.5	176.8					0.0	84.0	409.5	260.7	0.0	0.0
130.00		392.8	169.5					0.0	84.0	392.8	253.5	0.0	0.0
135.00		376.1	162.3					0.0	84.0	376.1	246.3	0.0	0.0
140.00		359.5	155.0					0.0	84.0	359.5	239.0	0.0	0.0
145.00		342.9	147.8					0.0	84.0	342.9	231.8	0.0	0.0
150.00	Appertunance(s)	167.3	140.6	4,238.2	0.0	6,298.7	2,574.6	0.0	84.0	4,405.6	2,799.2	0.0	0.0
Totals:										26,064.8	19,418.9	0.00	0.00

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:48 PM

Customer: AT&T Mobility

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

29 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 0.90

Wind Load Factor : 1.60

Calculated Forces

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total	Rotation	Ratio
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	(deg)	
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)		
0.00	-19.38	-25.63	0.00	-2,217.41	0.00	2,217.41	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.560
4.00	-18.51	-25.00	0.00	-2,114.88	0.00	2,114.88	3,123.00	1,561.50	4,678.77	2,310.67	0.08	-0.19	0.544
4.00	-18.51	-25.00	0.00	-2,114.88	0.00	2,114.88	3,123.00	1,561.50	4,678.77	2,310.67	0.08	-0.19	0.921
5.00	-18.28	-24.39	0.00	-2,089.89	0.00	2,089.89	3,114.35	1,557.18	4,645.51	2,294.24	0.13	-0.24	0.917
10.00	-17.42	-23.34	0.00	-1,967.94	0.00	1,967.94	3,070.50	1,535.25	4,480.02	2,212.51	0.58	-0.63	0.895
15.00	-16.50	-22.35	0.00	-1,851.23	0.00	1,851.23	3,025.61	1,512.81	4,315.90	2,131.46	1.45	-1.03	0.874
20.00	-15.61	-21.48	0.00	-1,739.50	0.00	1,739.50	2,979.68	1,489.84	4,153.25	2,051.14	2.74	-1.42	0.854
25.00	-14.73	-20.83	0.00	-1,632.12	0.00	1,632.12	2,932.71	1,466.36	3,992.19	1,971.59	4.44	-1.82	0.833
30.00	-13.91	-20.41	0.00	-1,527.97	0.00	1,527.97	2,875.21	1,437.61	3,820.20	1,886.65	6.57	-2.23	0.815
31.50	-13.64	-20.10	0.00	-1,497.35	0.00	1,497.35	2,854.29	1,427.15	3,764.49	1,859.14	7.29	-2.35	0.810
35.00	-12.73	-19.81	0.00	-1,427.00	0.00	1,427.00	2,805.48	1,402.74	3,636.10	1,795.73	9.12	-2.64	0.799
35.67	-12.52	-19.50	0.00	-1,413.79	0.00	1,413.79	2,248.07	1,124.03	2,973.91	1,468.70	9.49	-2.69	0.968
40.00	-11.88	-18.93	0.00	-1,329.27	0.00	1,329.27	2,218.59	1,109.29	2,872.23	1,418.49	12.10	-3.05	0.943
45.00	-11.16	-18.31	0.00	-1,234.65	0.00	1,234.65	2,183.60	1,091.80	2,755.77	1,360.97	15.53	-3.50	0.913
50.00	-10.46	-17.70	0.00	-1,143.09	0.00	1,143.09	2,147.58	1,073.79	2,640.30	1,303.95	19.44	-3.96	0.882
55.00	-9.79	-17.10	0.00	-1,054.58	0.00	1,054.58	2,110.52	1,055.26	2,525.94	1,247.47	23.83	-4.42	0.850
60.00	-9.13	-16.51	0.00	-969.09	0.00	969.09	2,072.41	1,036.21	2,412.79	1,191.58	28.70	-4.88	0.818
65.00	-8.50	-15.92	0.00	-886.56	0.00	886.56	2,033.27	1,016.64	2,300.94	1,136.35	34.04	-5.33	0.785
70.00	-7.90	-15.42	0.00	-806.96	0.00	806.96	1,982.10	991.05	2,178.42	1,075.84	39.86	-5.78	0.754
73.50	-7.26	-15.09	0.00	-753.01	0.00	753.01	1,473.96	736.98	1,624.57	802.32	44.20	-6.10	0.944
75.00	-7.07	-14.74	0.00	-730.38	0.00	730.38	1,466.28	733.14	1,601.77	791.05	46.14	-6.23	0.929
80.00	-6.56	-14.19	0.00	-656.67	0.00	656.67	1,440.00	720.00	1,526.12	753.69	52.93	-6.75	0.876
85.00	-6.06	-13.64	0.00	-585.73	0.00	585.73	1,412.68	706.34	1,451.11	716.65	60.25	-7.26	0.822
90.00	-5.59	-13.11	0.00	-517.51	0.00	517.51	1,384.32	692.16	1,376.86	679.98	68.09	-7.75	0.765
95.00	-5.14	-12.59	0.00	-451.95	0.00	451.95	1,354.92	677.46	1,303.45	643.72	76.44	-8.22	0.706
100.00	-4.70	-12.07	0.00	-389.02	0.00	389.02	1,324.47	662.24	1,230.99	607.94	85.27	-8.68	0.644
105.00	-4.29	-11.57	0.00	-328.65	0.00	328.65	1,292.99	646.50	1,159.59	572.68	94.55	-9.11	0.578
110.00	-3.90	-11.16	0.00	-270.80	0.00	270.80	1,247.13	623.57	1,077.81	532.29	104.27	-9.51	0.512
110.00	-3.90	-11.16	0.00	-270.80	0.00	270.80	853.24	426.62	741.78	366.34	104.27	-9.51	0.744
113.00	-3.14	-7.67	0.00	-234.94	0.00	234.94	842.42	421.21	715.90	353.56	110.29	-9.74	0.669
115.00	-3.05	-7.37	0.00	-219.60	0.00	219.60	834.99	417.50	698.71	345.06	114.39	-9.93	0.640
120.00	-2.81	-6.92	0.00	-182.78	0.00	182.78	815.71	407.86	655.98	323.96	124.98	-10.38	0.568
125.00	-2.58	-6.49	0.00	-148.18	0.00	148.18	795.39	397.69	613.71	303.09	136.01	-10.79	0.492
130.00	-2.37	-6.07	0.00	-115.74	0.00	115.74	774.02	387.01	572.00	282.49	147.44	-11.16	0.413
135.00	-2.17	-5.66	0.00	-85.41	0.00	85.41	751.62	375.81	530.94	262.21	159.22	-11.48	0.329
140.00	-1.99	-5.27	0.00	-57.10	0.00	57.10	728.18	364.09	490.64	242.31	171.31	-11.74	0.239
145.00	-1.82	-4.89	0.00	-30.75	0.00	30.75	694.06	347.03	445.03	219.78	183.62	-11.92	0.143
150.00	0.00	-4.41	0.00	-6.30	0.00	6.30	659.19	329.60	401.19	198.13	196.07	-12.01	0.032

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:49 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice	28 Iterations
Gust Response Factor : 1.10	Ice Dead Load Factor : 1.00	Wind Importance Factor : 1.00
Dead Load Factor : 1.20		Ice Importance Factor : 1.00
Wind Load Factor : 1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		83.0	0.0					0.0	0.0	83.0	0.0	0.0	0.0
4.00	Reinf. Top	103.2	1,016.7					44.0	428.4	147.2	1,445.1	0.0	0.0
5.00		118.0	257.7					11.0	28.2	129.0	286.0	0.0	0.0
10.00		190.2	1,286.5					54.3	145.2	244.4	1,431.7	0.0	0.0
15.00		179.7	1,274.3					52.7	274.5	232.4	1,548.8	0.0	0.0
20.00		169.9	1,254.9					51.1	276.6	220.9	1,531.5	0.0	0.0
25.00		160.7	1,231.9					0.0	218.5	160.7	1,450.4	0.0	0.0
30.00		101.0	1,206.9					0.0	178.8	101.0	1,385.7	0.0	0.0
31.50	Bot - Section 2	76.7	358.0					0.0	53.6	76.7	411.6	0.0	0.0
35.00		64.2	1,296.8					0.0	125.2	64.2	1,422.0	0.0	0.0
35.67	Top - Section 1	76.3	245.0					0.0	23.8	76.3	268.8	0.0	0.0
40.00		141.1	906.6					0.0	155.0	141.1	1,061.6	0.0	0.0
45.00		148.8	1,022.7					0.0	178.8	148.8	1,201.5	0.0	0.0
50.00		145.8	997.9					0.0	178.8	145.8	1,176.7	0.0	0.0
55.00		142.7	972.9					0.0	178.8	142.7	1,151.7	0.0	0.0
60.00		139.4	947.7					0.0	178.8	139.4	1,126.5	0.0	0.0
65.00		136.0	922.3					0.0	178.8	136.0	1,101.1	0.0	0.0
70.00	Bot - Section 3	113.8	897.0					0.0	178.8	113.8	1,075.8	0.0	0.0
73.50	Top - Section 2	66.4	928.6					0.0	125.2	66.4	1,053.8	0.0	0.0
75.00		84.4	232.2					0.0	53.6	84.4	285.8	0.0	0.0
80.00		127.6	756.2					0.0	178.8	127.6	935.0	0.0	0.0
85.00		124.1	734.0					0.0	178.8	124.1	912.8	0.0	0.0
90.00		120.6	711.8					0.0	178.8	120.6	890.6	0.0	0.0
95.00		117.1	689.6					0.0	178.8	117.1	868.4	0.0	0.0
100.00		113.7	667.4					0.0	178.8	113.7	846.2	0.0	0.0
105.00		110.2	645.2					0.0	178.8	110.2	824.0	0.0	0.0
110.00	Top - Section 3	86.0	623.1					0.0	178.8	86.0	801.9	0.0	0.0
113.00	Appertunance(s)	52.6	313.6	707.2	0.0	477.4	4,195.8	0.0	107.3	759.8	4,616.6	0.0	0.0
115.00		71.7	205.6					0.0	44.8	71.7	250.4	0.0	0.0
120.00		100.1	498.1					0.0	112.0	100.1	610.0	0.0	0.0
125.00		96.7	479.2					0.0	112.0	96.7	591.2	0.0	0.0
130.00		93.4	460.4					0.0	112.0	93.4	572.3	0.0	0.0
135.00		90.1	441.6					0.0	112.0	90.1	553.5	0.0	0.0
140.00		86.8	422.7					0.0	112.0	86.8	534.7	0.0	0.0
145.00		83.6	403.9					0.0	112.0	83.6	515.9	0.0	0.0
150.00	Appertunance(s)	41.0	385.1	972.5	0.0	1,301.1	6,709.3	0.0	112.0	1,013.4	7,206.4	0.0	0.0
Totals:										5,849.28	41,945.8	0.00	0.00

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:50 PM

Customer: AT&T Mobility

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 in Radial Ice

28 Iterations

Gust Response Factor : 1.10

Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00

Dead Load Factor : 1.20

Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total	Rotation	Ratio
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	(deg)	
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)		
0.00	-41.94	-5.78	0.00	-556.41	0.00	556.41	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.149
4.00	-40.50	-5.66	0.00	-533.28	0.00	533.28	3,123.00	1,561.50	4,678.77	2,310.67	0.02	-0.05	0.145
4.00	-40.50	-5.66	0.00	-533.28	0.00	533.28	3,123.00	1,561.50	4,678.77	2,310.67	0.02	-0.05	0.244
5.00	-40.20	-5.57	0.00	-527.62	0.00	527.62	3,114.35	1,557.18	4,645.51	2,294.24	0.03	-0.06	0.243
10.00	-38.76	-5.39	0.00	-499.79	0.00	499.79	3,070.50	1,535.25	4,480.02	2,212.51	0.15	-0.16	0.239
15.00	-37.21	-5.21	0.00	-472.86	0.00	472.86	3,025.61	1,512.81	4,315.90	2,131.46	0.37	-0.26	0.234
20.00	-35.67	-5.05	0.00	-446.78	0.00	446.78	2,979.68	1,489.84	4,153.25	2,051.14	0.69	-0.36	0.230
25.00	-34.21	-4.94	0.00	-421.54	0.00	421.54	2,932.71	1,466.36	3,992.19	1,971.59	1.13	-0.46	0.225
30.00	-32.82	-4.87	0.00	-396.84	0.00	396.84	2,875.21	1,437.61	3,820.20	1,886.65	1.67	-0.57	0.222
31.50	-32.40	-4.81	0.00	-389.54	0.00	389.54	2,854.29	1,427.15	3,764.49	1,859.14	1.85	-0.60	0.221
35.00	-30.98	-4.76	0.00	-372.69	0.00	372.69	2,805.48	1,402.74	3,636.10	1,795.73	2.32	-0.68	0.219
35.67	-30.71	-4.71	0.00	-369.52	0.00	369.52	2,248.07	1,124.03	2,973.91	1,468.70	2.42	-0.69	0.265
40.00	-29.64	-4.61	0.00	-349.11	0.00	349.11	2,218.59	1,109.29	2,872.23	1,418.49	3.09	-0.78	0.259
45.00	-28.43	-4.50	0.00	-326.07	0.00	326.07	2,183.60	1,091.80	2,755.77	1,360.97	3.97	-0.90	0.253
50.00	-27.25	-4.39	0.00	-303.56	0.00	303.56	2,147.58	1,073.79	2,640.30	1,303.95	4.98	-1.03	0.246
55.00	-26.09	-4.29	0.00	-281.59	0.00	281.59	2,110.52	1,055.26	2,525.94	1,247.47	6.12	-1.15	0.238
60.00	-24.96	-4.18	0.00	-260.16	0.00	260.16	2,072.41	1,036.21	2,412.79	1,191.58	7.39	-1.27	0.230
65.00	-23.85	-4.07	0.00	-239.28	0.00	239.28	2,033.27	1,016.64	2,300.94	1,136.35	8.78	-1.39	0.222
70.00	-22.77	-3.97	0.00	-218.96	0.00	218.96	1,982.10	991.05	2,178.42	1,075.84	10.31	-1.51	0.215
73.50	-21.71	-3.89	0.00	-205.08	0.00	205.08	1,473.96	736.98	1,624.57	802.32	11.45	-1.60	0.270
75.00	-21.42	-3.83	0.00	-199.24	0.00	199.24	1,466.28	733.14	1,601.77	791.05	11.95	-1.64	0.267
80.00	-20.49	-3.73	0.00	-180.07	0.00	180.07	1,440.00	720.00	1,526.12	753.69	13.74	-1.78	0.253
85.00	-19.57	-3.62	0.00	-161.42	0.00	161.42	1,412.68	706.34	1,451.11	716.65	15.68	-1.92	0.239
90.00	-18.67	-3.52	0.00	-143.30	0.00	143.30	1,384.32	692.16	1,376.86	679.98	17.76	-2.05	0.224
95.00	-17.80	-3.41	0.00	-125.73	0.00	125.73	1,354.92	677.46	1,303.45	643.72	19.98	-2.18	0.208
100.00	-16.95	-3.30	0.00	-108.70	0.00	108.70	1,324.47	662.24	1,230.99	607.94	22.34	-2.31	0.192
105.00	-16.13	-3.19	0.00	-92.21	0.00	92.21	1,292.99	646.50	1,159.59	572.68	24.82	-2.43	0.174
110.00	-15.33	-3.09	0.00	-76.29	0.00	76.29	1,247.13	623.57	1,077.81	532.29	27.43	-2.55	0.156
110.00	-15.33	-3.09	0.00	-76.29	0.00	76.29	853.24	426.62	741.78	366.34	27.43	-2.55	0.226
113.00	-10.75	-2.13	0.00	-66.55	0.00	66.55	842.42	421.21	715.90	353.56	29.05	-2.61	0.201
115.00	-10.50	-2.07	0.00	-62.28	0.00	62.28	834.99	417.50	698.71	345.06	30.15	-2.66	0.193
120.00	-9.89	-1.96	0.00	-51.95	0.00	51.95	815.71	407.86	655.98	323.96	33.01	-2.79	0.173
125.00	-9.30	-1.85	0.00	-42.17	0.00	42.17	795.39	397.69	613.71	303.09	36.00	-2.91	0.151
130.00	-8.73	-1.74	0.00	-32.92	0.00	32.92	774.02	387.01	572.00	282.49	39.10	-3.01	0.128
135.00	-8.18	-1.63	0.00	-24.20	0.00	24.20	751.62	375.81	530.94	262.21	42.30	-3.10	0.103
140.00	-7.65	-1.53	0.00	-16.03	0.00	16.03	728.18	364.09	490.64	242.31	45.59	-3.18	0.077
145.00	-7.14	-1.42	0.00	-8.40	0.00	8.40	694.06	347.03	445.03	219.78	48.95	-3.23	0.049
150.00	0.00	-1.01	0.00	-1.30	0.00	1.30	659.19	329.60	401.19	198.13	52.34	-3.25	0.007

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:50 PM

Customer: AT&T Mobility

Load Case: 1.0D + 1.0W

Serviceability 60 mph

28 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		110.9	0.0					0.0	0.0	110.9	0.0	0.0	0.0
4.00	Reinf. Top	137.8	603.0					30.2	302.7	168.0	905.8	0.0	0.0
5.00		156.2	149.2					7.5	8.9	163.7	158.0	0.0	0.0
10.00		250.9	736.1					36.9	44.4	287.8	780.5	0.0	0.0
15.00		236.1	720.0					36.2	149.0	272.2	869.0	0.0	0.0
20.00		204.4	703.9					35.5	149.0	239.9	852.9	0.0	0.0
25.00		174.8	687.8					0.0	149.0	174.8	836.8	0.0	0.0
30.00		109.6	671.7					0.0	149.0	109.6	820.7	0.0	0.0
31.50	Bot - Section 2	83.2	198.4					0.0	44.7	83.2	243.1	0.0	0.0
35.00		69.6	846.5					0.0	104.3	69.6	950.8	0.0	0.0
35.67	Top - Section 1	82.5	159.6					0.0	19.9	82.5	179.5	0.0	0.0
40.00		152.5	471.3					0.0	129.1	152.5	600.4	0.0	0.0
45.00		160.3	531.3					0.0	149.0	160.3	680.3	0.0	0.0
50.00		156.7	517.9					0.0	149.0	156.7	666.9	0.0	0.0
55.00		152.9	504.5					0.0	149.0	152.9	653.5	0.0	0.0
60.00		148.9	491.0					0.0	149.0	148.9	640.0	0.0	0.0
65.00		144.8	477.6					0.0	149.0	144.8	626.6	0.0	0.0
70.00	Bot - Section 3	121.0	464.2					0.0	149.0	121.0	613.2	0.0	0.0
73.50	Top - Section 2	70.6	575.9					0.0	104.3	70.6	680.2	0.0	0.0
75.00		89.5	109.4					0.0	44.7	89.5	154.1	0.0	0.0
80.00		134.9	357.6					0.0	149.0	134.9	506.6	0.0	0.0
85.00		130.7	346.9					0.0	149.0	130.7	495.9	0.0	0.0
90.00		126.5	336.2					0.0	149.0	126.5	485.1	0.0	0.0
95.00		122.4	325.4					0.0	149.0	122.4	474.4	0.0	0.0
100.00		118.2	314.7					0.0	149.0	118.2	463.7	0.0	0.0
105.00		114.1	304.0					0.0	149.0	114.1	453.0	0.0	0.0
110.00	Top - Section 3	88.7	293.2					0.0	149.0	88.7	442.2	0.0	0.0
113.00	Appertunance(s)	54.0	128.5	743.2	0.0	567.8	1,228.1	0.0	89.4	797.2	1,446.0	0.0	0.0
115.00		73.3	84.0					0.0	37.3	73.3	121.4	0.0	0.0
120.00		101.9	204.5					0.0	93.3	101.9	297.8	0.0	0.0
125.00		97.9	196.4					0.0	93.3	97.9	289.7	0.0	0.0
130.00		93.9	188.4					0.0	93.3	93.9	281.7	0.0	0.0
135.00		89.9	180.3					0.0	93.3	89.9	273.6	0.0	0.0
140.00		86.0	172.3					0.0	93.3	86.0	265.6	0.0	0.0
145.00		82.0	164.2					0.0	93.3	82.0	257.5	0.0	0.0
150.00	Appertunance(s)	40.0	156.2	1,013.5	0.0	1,506.2	2,860.7	0.0	93.3	1,053.5	3,110.2	0.0	0.0
Totals:										6,270.73	21,576.5	0.00	0.00

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:51 PM

Customer: AT&T Mobility

Load Case: 1.0D + 1.0W

Serviceability 60 mph

28 Iterations

Gust Response Factor : 1.10

Wind Importance Factor : 1.00

Dead Load Factor : 1.00

Wind Load Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-21.57	-6.17	0.00	-536.61	0.00	536.61	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.139
4.00	-20.67	-6.01	0.00	-511.94	0.00	511.94	3,123.00	1,561.50	4,678.77	2,310.67	0.02	-0.05	0.135
4.00	-20.67	-6.01	0.00	-511.94	0.00	511.94	3,123.00	1,561.50	4,678.77	2,310.67	0.02	-0.05	0.228
5.00	-20.50	-5.87	0.00	-505.93	0.00	505.93	3,114.35	1,557.18	4,645.51	2,294.24	0.03	-0.06	0.227
10.00	-19.71	-5.61	0.00	-476.60	0.00	476.60	3,070.50	1,535.25	4,480.02	2,212.51	0.14	-0.15	0.222
15.00	-18.84	-5.37	0.00	-448.55	0.00	448.55	3,025.61	1,512.81	4,315.90	2,131.46	0.35	-0.25	0.217
20.00	-17.98	-5.15	0.00	-421.73	0.00	421.73	2,979.68	1,489.84	4,153.25	2,051.14	0.66	-0.34	0.212
25.00	-17.13	-5.00	0.00	-395.97	0.00	395.97	2,932.71	1,466.36	3,992.19	1,971.59	1.08	-0.44	0.207
30.00	-16.31	-4.90	0.00	-370.97	0.00	370.97	2,875.21	1,437.61	3,820.20	1,886.65	1.59	-0.54	0.202
31.50	-16.06	-4.83	0.00	-363.62	0.00	363.62	2,854.29	1,427.15	3,764.49	1,859.14	1.77	-0.57	0.201
35.00	-15.11	-4.76	0.00	-346.71	0.00	346.71	2,805.48	1,402.74	3,636.10	1,795.73	2.21	-0.64	0.198
35.67	-14.92	-4.69	0.00	-343.54	0.00	343.54	2,248.07	1,124.03	2,973.91	1,468.70	2.30	-0.65	0.241
40.00	-14.32	-4.55	0.00	-323.22	0.00	323.22	2,218.59	1,109.29	2,872.23	1,418.49	2.93	-0.74	0.234
45.00	-13.63	-4.41	0.00	-300.44	0.00	300.44	2,183.60	1,091.80	2,755.77	1,360.97	3.77	-0.85	0.227
50.00	-12.96	-4.27	0.00	-278.39	0.00	278.39	2,147.58	1,073.79	2,640.30	1,303.95	4.72	-0.96	0.220
55.00	-12.30	-4.13	0.00	-257.04	0.00	257.04	2,110.52	1,055.26	2,525.94	1,247.47	5.78	-1.07	0.212
60.00	-11.65	-3.99	0.00	-236.39	0.00	236.39	2,072.41	1,036.21	2,412.79	1,191.58	6.97	-1.18	0.204
65.00	-11.02	-3.85	0.00	-216.44	0.00	216.44	2,033.27	1,016.64	2,300.94	1,136.35	8.26	-1.29	0.196
70.00	-10.41	-3.73	0.00	-197.18	0.00	197.18	1,982.10	991.05	2,178.42	1,075.84	9.68	-1.41	0.189
73.50	-9.73	-3.66	0.00	-184.11	0.00	184.11	1,473.96	736.98	1,624.57	802.32	10.74	-1.48	0.236
75.00	-9.57	-3.58	0.00	-178.63	0.00	178.63	1,466.28	733.14	1,601.77	791.05	11.21	-1.52	0.232
80.00	-9.06	-3.45	0.00	-160.75	0.00	160.75	1,440.00	720.00	1,526.12	753.69	12.87	-1.64	0.220
85.00	-8.56	-3.32	0.00	-143.51	0.00	143.51	1,412.68	706.34	1,451.11	716.65	14.65	-1.77	0.206
90.00	-8.07	-3.19	0.00	-126.91	0.00	126.91	1,384.32	692.16	1,376.86	679.98	16.57	-1.89	0.192
95.00	-7.60	-3.07	0.00	-110.94	0.00	110.94	1,354.92	677.46	1,303.45	643.72	18.60	-2.00	0.178
100.00	-7.13	-2.95	0.00	-95.58	0.00	95.58	1,324.47	662.24	1,230.99	607.94	20.76	-2.12	0.163
105.00	-6.68	-2.83	0.00	-80.83	0.00	80.83	1,292.99	646.50	1,159.59	572.68	23.04	-2.22	0.146
110.00	-6.24	-2.73	0.00	-66.67	0.00	66.67	1,247.13	623.57	1,077.81	532.29	25.42	-2.32	0.130
110.00	-6.24	-2.73	0.00	-66.67	0.00	66.67	853.24	426.62	741.78	366.34	25.42	-2.32	0.189
113.00	-4.82	-1.88	0.00	-57.90	0.00	57.90	842.42	421.21	715.90	353.56	26.89	-2.38	0.170
115.00	-4.70	-1.81	0.00	-54.14	0.00	54.14	834.99	417.50	698.71	345.06	27.90	-2.42	0.163
120.00	-4.41	-1.70	0.00	-45.09	0.00	45.09	815.71	407.86	655.98	323.96	30.49	-2.53	0.145
125.00	-4.12	-1.60	0.00	-36.57	0.00	36.57	795.39	397.69	613.71	303.09	33.20	-2.63	0.126
130.00	-3.84	-1.50	0.00	-28.57	0.00	28.57	774.02	387.01	572.00	282.49	36.01	-2.73	0.106
135.00	-3.57	-1.40	0.00	-21.08	0.00	21.08	751.62	375.81	530.94	262.21	38.91	-2.81	0.085
140.00	-3.31	-1.30	0.00	-14.08	0.00	14.08	728.18	364.09	490.64	242.31	41.88	-2.87	0.063
145.00	-3.05	-1.21	0.00	-7.56	0.00	7.56	694.06	347.03	445.03	219.78	44.91	-2.91	0.039
150.00	0.00	-1.05	0.00	-1.51	0.00	1.51	659.19	329.60	401.19	198.13	47.97	-2.94	0.008

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:51 PM

Customer: AT&T Mobility

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	3.05
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	21.58 k
Seismic Base Shear (E):	0.84 k

Load Case (1.2 + 0.2Sds) * DL + E ELFM

Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
35	147.50	249	5,428	0.033	27	310
34	142.50	258	5,229	0.031	26	320
33	137.50	266	5,021	0.030	25	330
32	132.50	274	4,804	0.029	24	340
31	127.50	282	4,579	0.028	23	350
30	122.50	290	4,348	0.026	22	360
29	117.50	298	4,111	0.025	21	370
28	114.00	121	1,577	0.009	8	151
27	111.50	218	2,709	0.016	14	271
26	107.50	442	5,111	0.031	26	550
25	102.50	453	4,759	0.029	24	563
24	97.50	464	4,408	0.026	22	576
23	92.50	474	4,059	0.024	21	590
22	87.50	485	3,714	0.022	19	603
21	82.50	496	3,375	0.020	17	616
20	77.50	507	3,043	0.018	15	630
19	74.25	154	849	0.005	4	191
18	71.75	680	3,502	0.021	18	845
17	67.50	613	2,794	0.017	14	762
16	62.50	627	2,448	0.015	12	779
15	57.50	640	2,116	0.013	11	795
14	52.50	653	1,801	0.011	9	812
13	47.50	667	1,505	0.009	8	829

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

12	42.50	680	1,229	0.007	6	845
11	37.83	600	859	0.005	4	746
10	35.33	179	224	0.001	1	223
9	33.25	951	1,051	0.006	5	1,182
8	30.75	243	230	0.001	1	302
7	27.50	821	621	0.004	3	1,020
6	22.50	837	424	0.003	2	1,040
5	17.50	853	261	0.002	1	1,060
4	12.50	869	136	0.001	1	1,080
3	7.50	780	44	0.000	0	970
2	4.50	158	3	0.000	0	196
1	2.00	906	4	0.000	0	1,126
Powerwave Allgon 702	150.00	26	594	0.004	3	33
Powerwave Allgon TT0	150.00	132	2,970	0.018	15	164
Raycap DC6-48-60-18-	150.00	32	715	0.004	4	40
Ericsson RRUS 11 (Ba	150.00	165	3,713	0.022	19	205
Ericsson RRUS 12	150.00	150	3,375	0.020	17	186
Powerwave Allgon 777	150.00	210	4,725	0.028	24	261
KMW AM-X-CD-16-65-00	150.00	146	3,274	0.020	17	181
Flat Platform w/ Han	150.00	2,000	45,000	0.270	228	2,485
RFS FD9R6004/1C-3L	113.00	19	238	0.001	1	23
Alcatel-Lucent RRH2x	113.00	132	1,686	0.010	9	164
Decibel 932DG90T2E-M	113.00	29	364	0.002	2	35
RFS DB-T1-6Z-8AB-0Z	113.00	44	562	0.003	3	55
Andrew HBX-6517DS-VT	113.00	40	506	0.003	3	49
Powerwave Allgon P65	113.00	99	1,264	0.008	6	123
Andrew LNX-6514DS-VT	113.00	116	1,486	0.009	8	145
Round T-Arms	113.00	750	9,577	0.058	48	932
		21,577	166,422	1.000	841	26,813

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

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
35	147.50	249	5,428	0.033	27	214
34	142.50	258	5,229	0.031	26	221
33	137.50	266	5,021	0.030	25	228
32	132.50	274	4,804	0.029	24	235
31	127.50	282	4,579	0.028	23	241
30	122.50	290	4,348	0.026	22	248
29	117.50	298	4,111	0.025	21	255
28	114.00	121	1,577	0.009	8	104
27	111.50	218	2,709	0.016	14	187
26	107.50	442	5,111	0.031	26	379
25	102.50	453	4,759	0.029	24	388
24	97.50	464	4,408	0.026	22	398
23	92.50	474	4,059	0.024	21	407
22	87.50	485	3,714	0.022	19	416
21	82.50	496	3,375	0.020	17	425
20	77.50	507	3,043	0.018	15	434
19	74.25	154	849	0.005	4	132
18	71.75	680	3,502	0.021	18	583
17	67.50	613	2,794	0.017	14	526
16	62.50	627	2,448	0.015	12	537
15	57.50	640	2,116	0.013	11	549
14	52.50	653	1,801	0.011	9	560
13	47.50	667	1,505	0.009	8	572
12	42.50	680	1,229	0.007	6	583
11	37.83	600	859	0.005	4	515
10	35.33	179	224	0.001	1	154

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

9	33.25	951	1,051	0.006	5	815
8	30.75	243	230	0.001	1	208
7	27.50	821	621	0.004	3	704
6	22.50	837	424	0.003	2	717
5	17.50	853	261	0.002	1	731
4	12.50	869	136	0.001	1	745
3	7.50	780	44	0.000	0	669
2	4.50	158	3	0.000	0	135
1	2.00	906	4	0.000	0	777
Powerwave Allgon 702	150.00	26	594	0.004	3	23
Powerwave Allgon TT0	150.00	132	2,970	0.018	15	113
Raycap DC6-48-60-18-	150.00	32	715	0.004	4	27
Ericsson RRUS 11 (Ba	150.00	165	3,713	0.022	19	141
Ericsson RRUS 12	150.00	150	3,375	0.020	17	129
Powerwave Allgon 777	150.00	210	4,725	0.028	24	180
KMW AM-X-CD-16-65-00	150.00	146	3,274	0.020	17	125
Flat Platform w/ Han	150.00	2,000	45,000	0.270	228	1,715
RFS FD9R6004/1C-3L	113.00	19	238	0.001	1	16
Alcatel-Lucent RRH2x	113.00	132	1,686	0.010	9	113
Decibel 932DG90T2E-M	113.00	29	364	0.002	2	24
RFS DB-T1-6Z-8AB-0Z	113.00	44	562	0.003	3	38
Andrew HBX-6517DS-VT	113.00	40	506	0.003	3	34
Powerwave Allgon P65	113.00	99	1,264	0.008	6	85
Andrew LNX-6514DS-VT	113.00	116	1,486	0.009	8	100
Round T-Arms	113.00	750	9,577	0.058	48	643
		21,577	166,422	1.000	841	18,498

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

Load Case (1.2 + 0.2Sds) * DL + E ELFM

Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-25.69	-0.84	0.00	-109.01	0.00	109.01	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.033
4.00	-25.49	-0.85	0.00	-105.64	0.00	105.64	3,123.00	1,561.50	4,678.77	2,310.67	0.00	-0.01	0.033
4.00	-25.49	-0.85	0.00	-105.64	0.00	105.64	3,123.00	1,561.50	4,678.77	2,310.67	0.00	-0.01	0.054
5.00	-24.52	-0.85	0.00	-104.79	0.00	104.79	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.01	0.054
10.00	-23.44	-0.86	0.00	-100.54	0.00	100.54	3,070.50	1,535.25	4,480.02	2,212.51	0.03	-0.03	0.053
15.00	-22.38	-0.86	0.00	-96.26	0.00	96.26	3,025.61	1,512.81	4,315.90	2,131.46	0.07	-0.05	0.053
20.00	-21.34	-0.87	0.00	-91.95	0.00	91.95	2,979.68	1,489.84	4,153.25	2,051.14	0.14	-0.07	0.052
25.00	-20.32	-0.87	0.00	-87.61	0.00	87.61	2,932.71	1,466.36	3,992.19	1,971.59	0.23	-0.09	0.051
30.00	-20.02	-0.87	0.00	-83.26	0.00	83.26	2,875.21	1,437.61	3,820.20	1,886.65	0.34	-0.12	0.051
31.50	-18.84	-0.87	0.00	-81.95	0.00	81.95	2,854.29	1,427.15	3,764.49	1,859.14	0.37	-0.12	0.051
35.00	-18.61	-0.87	0.00	-78.90	0.00	78.90	2,805.48	1,402.74	3,636.10	1,795.73	0.47	-0.14	0.051
35.67	-17.87	-0.87	0.00	-78.32	0.00	78.32	2,248.07	1,124.03	2,973.91	1,468.70	0.49	-0.14	0.061
40.00	-17.02	-0.87	0.00	-74.56	0.00	74.56	2,218.59	1,109.29	2,872.23	1,418.49	0.63	-0.16	0.060
45.00	-16.19	-0.86	0.00	-70.22	0.00	70.22	2,183.60	1,091.80	2,755.77	1,360.97	0.81	-0.19	0.059
50.00	-15.38	-0.86	0.00	-65.90	0.00	65.90	2,147.58	1,073.79	2,640.30	1,303.95	1.02	-0.21	0.058
55.00	-14.58	-0.85	0.00	-61.61	0.00	61.61	2,110.52	1,055.26	2,525.94	1,247.47	1.26	-0.24	0.056
60.00	-13.80	-0.84	0.00	-57.35	0.00	57.35	2,072.41	1,036.21	2,412.79	1,191.58	1.52	-0.27	0.055
65.00	-13.04	-0.83	0.00	-53.13	0.00	53.13	2,033.27	1,016.64	2,300.94	1,136.35	1.82	-0.29	0.053
70.00	-12.20	-0.81	0.00	-48.98	0.00	48.98	1,982.10	991.05	2,178.42	1,075.84	2.14	-0.32	0.052
73.50	-12.00	-0.81	0.00	-46.13	0.00	46.13	1,473.96	736.98	1,624.57	802.32	2.38	-0.34	0.066
75.00	-11.38	-0.80	0.00	-44.91	0.00	44.91	1,466.28	733.14	1,601.77	791.05	2.49	-0.35	0.065
80.00	-10.76	-0.78	0.00	-40.93	0.00	40.93	1,440.00	720.00	1,526.12	753.69	2.87	-0.38	0.062
85.00	-10.16	-0.76	0.00	-37.03	0.00	37.03	1,412.68	706.34	1,451.11	716.65	3.29	-0.41	0.059
90.00	-9.57	-0.74	0.00	-33.21	0.00	33.21	1,384.32	692.16	1,376.86	679.98	3.74	-0.44	0.056
95.00	-8.99	-0.72	0.00	-29.49	0.00	29.49	1,354.92	677.46	1,303.45	643.72	4.22	-0.47	0.052
100.00	-8.43	-0.70	0.00	-25.88	0.00	25.88	1,324.47	662.24	1,230.99	607.94	4.73	-0.50	0.049
105.00	-7.88	-0.67	0.00	-22.39	0.00	22.39	1,292.99	646.50	1,159.59	572.68	5.27	-0.53	0.045
110.00	-7.61	-0.66	0.00	-19.04	0.00	19.04	1,247.13	623.57	1,077.81	532.29	5.85	-0.56	0.042
110.00	-7.61	-0.66	0.00	-19.04	0.00	19.04	853.24	426.62	741.78	366.34	5.85	-0.56	0.061
113.00	-5.93	-0.56	0.00	-17.06	0.00	17.06	842.42	421.21	715.90	353.56	6.21	-0.58	0.055
115.00	-5.56	-0.53	0.00	-15.95	0.00	15.95	834.99	417.50	698.71	345.06	6.45	-0.59	0.053
120.00	-5.20	-0.51	0.00	-13.29	0.00	13.29	815.71	407.86	655.98	323.96	7.09	-0.62	0.047
125.00	-4.85	-0.49	0.00	-10.74	0.00	10.74	795.39	397.69	613.71	303.09	7.76	-0.65	0.042
130.00	-4.51	-0.46	0.00	-8.31	0.00	8.31	774.02	387.01	572.00	282.49	8.46	-0.68	0.035
135.00	-4.18	-0.43	0.00	-6.02	0.00	6.02	751.62	375.81	530.94	262.21	9.18	-0.70	0.029
140.00	-3.86	-0.40	0.00	-3.86	0.00	3.86	728.18	364.09	490.64	242.31	9.93	-0.72	0.021
145.00	-3.55	-0.37	0.00	-1.86	0.00	1.86	694.06	347.03	445.03	219.78	10.69	-0.73	0.014
150.00	0.00	-0.33	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	11.46	-0.74	0.000

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

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

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-17.72	-0.84	0.00	-106.32	0.00	106.32	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.031
4.00	-17.59	-0.84	0.00	-102.96	0.00	102.96	3,123.00	1,561.50	4,678.77	2,310.67	0.00	-0.01	0.030
4.00	-17.59	-0.84	0.00	-102.96	0.00	102.96	3,123.00	1,561.50	4,678.77	2,310.67	0.00	-0.01	0.050
5.00	-16.92	-0.85	0.00	-102.11	0.00	102.11	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.01	0.050
10.00	-16.17	-0.85	0.00	-97.88	0.00	97.88	3,070.50	1,535.25	4,480.02	2,212.51	0.03	-0.03	0.050
15.00	-15.44	-0.85	0.00	-93.62	0.00	93.62	3,025.61	1,512.81	4,315.90	2,131.46	0.07	-0.05	0.049
20.00	-14.72	-0.86	0.00	-89.35	0.00	89.35	2,979.68	1,489.84	4,153.25	2,051.14	0.13	-0.07	0.049
25.00	-14.02	-0.86	0.00	-85.06	0.00	85.06	2,932.71	1,466.36	3,992.19	1,971.59	0.22	-0.09	0.048
30.00	-13.81	-0.86	0.00	-80.77	0.00	80.77	2,875.21	1,437.61	3,820.20	1,886.65	0.33	-0.11	0.048
31.50	-12.99	-0.86	0.00	-79.48	0.00	79.48	2,854.29	1,427.15	3,764.49	1,859.14	0.36	-0.12	0.047
35.00	-12.84	-0.86	0.00	-76.48	0.00	76.48	2,805.48	1,402.74	3,636.10	1,795.73	0.46	-0.13	0.047
35.67	-12.33	-0.85	0.00	-75.91	0.00	75.91	2,248.07	1,124.03	2,973.91	1,468.70	0.48	-0.14	0.057
40.00	-11.74	-0.85	0.00	-72.22	0.00	72.22	2,218.59	1,109.29	2,872.23	1,418.49	0.61	-0.16	0.056
45.00	-11.17	-0.85	0.00	-67.97	0.00	67.97	2,183.60	1,091.80	2,755.77	1,360.97	0.79	-0.18	0.055
50.00	-10.61	-0.84	0.00	-63.74	0.00	63.74	2,147.58	1,073.79	2,640.30	1,303.95	0.99	-0.21	0.054
55.00	-10.06	-0.83	0.00	-59.54	0.00	59.54	2,110.52	1,055.26	2,525.94	1,247.47	1.22	-0.23	0.052
60.00	-9.52	-0.82	0.00	-55.39	0.00	55.39	2,072.41	1,036.21	2,412.79	1,191.58	1.48	-0.26	0.051
65.00	-9.00	-0.81	0.00	-51.29	0.00	51.29	2,033.27	1,016.64	2,300.94	1,136.35	1.76	-0.28	0.050
70.00	-8.41	-0.79	0.00	-47.25	0.00	47.25	1,982.10	991.05	2,178.42	1,075.84	2.08	-0.31	0.048
73.50	-8.28	-0.79	0.00	-44.48	0.00	44.48	1,473.96	736.98	1,624.57	802.32	2.31	-0.33	0.061
75.00	-7.85	-0.77	0.00	-43.30	0.00	43.30	1,466.28	733.14	1,601.77	791.05	2.42	-0.34	0.060
80.00	-7.42	-0.76	0.00	-39.44	0.00	39.44	1,440.00	720.00	1,526.12	753.69	2.79	-0.37	0.057
85.00	-7.00	-0.74	0.00	-35.65	0.00	35.65	1,412.68	706.34	1,451.11	716.65	3.19	-0.40	0.055
90.00	-6.60	-0.72	0.00	-31.96	0.00	31.96	1,384.32	692.16	1,376.86	679.98	3.62	-0.43	0.052
95.00	-6.20	-0.70	0.00	-28.37	0.00	28.37	1,354.92	677.46	1,303.45	643.72	4.09	-0.46	0.049
100.00	-5.81	-0.67	0.00	-24.88	0.00	24.88	1,324.47	662.24	1,230.99	607.94	4.58	-0.49	0.045
105.00	-5.43	-0.65	0.00	-21.52	0.00	21.52	1,292.99	646.50	1,159.59	572.68	5.11	-0.52	0.042
110.00	-5.25	-0.63	0.00	-18.30	0.00	18.30	1,247.13	623.57	1,077.81	532.29	5.66	-0.54	0.039
110.00	-5.25	-0.63	0.00	-18.30	0.00	18.30	853.24	426.62	741.78	366.34	5.66	-0.54	0.056
113.00	-4.09	-0.53	0.00	-16.40	0.00	16.40	842.42	421.21	715.90	353.56	6.01	-0.56	0.051
115.00	-3.83	-0.51	0.00	-15.33	0.00	15.33	834.99	417.50	698.71	345.06	6.25	-0.57	0.049
120.00	-3.59	-0.49	0.00	-12.76	0.00	12.76	815.71	407.86	655.98	323.96	6.86	-0.60	0.044
125.00	-3.34	-0.47	0.00	-10.31	0.00	10.31	795.39	397.69	613.71	303.09	7.51	-0.63	0.038
130.00	-3.11	-0.44	0.00	-7.98	0.00	7.98	774.02	387.01	572.00	282.49	8.18	-0.66	0.032
135.00	-2.88	-0.41	0.00	-5.77	0.00	5.77	751.62	375.81	530.94	262.21	8.88	-0.68	0.026
140.00	-2.66	-0.39	0.00	-3.71	0.00	3.71	728.18	364.09	490.64	242.31	9.60	-0.70	0.019
145.00	-2.45	-0.36	0.00	-1.78	0.00	1.78	694.06	347.03	445.03	219.78	10.34	-0.71	0.012
150.00	0.00	-0.33	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	11.08	-0.71	0.000

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

Equivalent Modal Forces Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	3.05
Redundancy Factor (ρ):	1.30

Load Case (1.2 + 0.2Sds) * DL + E EMAM

Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
35	147.50	249	1.828	1.667	1.025	0.357	77	310
34	142.50	258	1.706	1.144	0.823	0.275	61	320
33	137.50	266	1.588	0.742	0.654	0.203	47	330
32	132.50	274	1.475	0.441	0.513	0.139	33	340
31	127.50	282	1.366	0.222	0.397	0.084	21	350
30	122.50	290	1.261	0.069	0.302	0.038	10	360
29	117.50	298	1.160	-0.030	0.226	0.000	0	370
28	114.00	121	1.092	-0.074	0.182	-0.022	-2	151
27	111.50	218	1.044	-0.096	0.154	-0.035	-7	271
26	107.50	442	0.971	-0.116	0.117	-0.051	-20	550
25	102.50	453	0.883	-0.121	0.081	-0.065	-25	563
24	97.50	464	0.799	-0.112	0.053	-0.069	-28	576
23	92.50	474	0.719	-0.092	0.034	-0.065	-27	590
22	87.50	485	0.643	-0.068	0.020	-0.052	-22	603
21	82.50	496	0.572	-0.043	0.012	-0.031	-13	616
20	77.50	507	0.505	-0.018	0.007	-0.006	-3	630
19	74.25	154	0.463	-0.003	0.006	0.011	1	191
18	71.75	680	0.432	0.008	0.006	0.022	13	845
17	67.50	613	0.383	0.023	0.007	0.039	21	762
16	62.50	627	0.328	0.039	0.010	0.053	29	779
15	57.50	640	0.278	0.050	0.014	0.061	34	795
14	52.50	653	0.232	0.058	0.019	0.065	37	812
13	47.50	667	0.190	0.064	0.025	0.066	38	829
12	42.50	680	0.152	0.068	0.030	0.065	38	845
11	37.83	600	0.120	0.070	0.034	0.064	33	746
10	35.33	179	0.105	0.071	0.037	0.063	10	223
9	33.25	951	0.093	0.071	0.038	0.062	51	1,182
8	30.75	243	0.079	0.072	0.040	0.061	13	302
7	27.50	821	0.064	0.072	0.041	0.061	43	1,020
6	22.50	837	0.043	0.070	0.042	0.059	43	1,040
5	17.50	853	0.026	0.067	0.040	0.056	42	1,060
4	12.50	869	0.013	0.059	0.034	0.051	39	1,080
3	7.50	780	0.005	0.044	0.025	0.042	28	970
2	4.50	158	0.002	0.030	0.016	0.031	4	196

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

1	2.00	906	0.000	0.015	0.008	0.017	14	1,126
Powerwave Allgon 702	150.00	26	1.890	1.980	1.140	0.401	9	33
Powerwave Allgon TT0	150.00	132	1.890	1.980	1.140	0.401	46	164
Raycap DC6-48-60-18-	150.00	32	1.890	1.980	1.140	0.401	11	40
Ericsson RRUS 11 (Ba	150.00	165	1.890	1.980	1.140	0.401	57	205
Ericsson RRUS 12	150.00	150	1.890	1.980	1.140	0.401	52	186
Powerwave Allgon 777	150.00	210	1.890	1.980	1.140	0.401	73	261
KMW AM-X-CD-16-65-00	150.00	146	1.890	1.980	1.140	0.401	51	181
Flat Platform w/ Han	150.00	2,000	1.890	1.980	1.140	0.401	695	2,485
RFS FD9R6004/1C-3L	113.00	19	1.073	-0.084	0.170	-0.027	0	23
Alcatel-Lucent RRH2x	113.00	132	1.073	-0.084	0.170	-0.027	-3	164
Decibel 932DG90T2E-M	113.00	29	1.073	-0.084	0.170	-0.027	-1	35
RFS DB-T1-6Z-8AB-OZ	113.00	44	1.073	-0.084	0.170	-0.027	-1	55
Andrew HBX-6517DS-VT	113.00	40	1.073	-0.084	0.170	-0.027	-1	49
Powerwave Allgon P65	113.00	99	1.073	-0.084	0.170	-0.027	-2	123
Andrew LNX-6514DS-VT	113.00	116	1.073	-0.084	0.170	-0.027	-3	145
Round T-Arms	113.00	750	1.073	-0.084	0.170	-0.027	-18	932
		21,577	44.314	19.628	15.557	4.637	1,597	26,813

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

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
35	147.50	249	1.828	1.667	1.025	0.357	77	214
34	142.50	258	1.706	1.144	0.823	0.275	61	221
33	137.50	266	1.588	0.742	0.654	0.203	47	228
32	132.50	274	1.475	0.441	0.513	0.139	33	235
31	127.50	282	1.366	0.222	0.397	0.084	21	241
30	122.50	290	1.261	0.069	0.302	0.038	10	248
29	117.50	298	1.160	-0.030	0.226	0.000	0	255
28	114.00	121	1.092	-0.074	0.182	-0.022	-2	104
27	111.50	218	1.044	-0.096	0.154	-0.035	-7	187
26	107.50	442	0.971	-0.116	0.117	-0.051	-20	379
25	102.50	453	0.883	-0.121	0.081	-0.065	-25	388
24	97.50	464	0.799	-0.112	0.053	-0.069	-28	398
23	92.50	474	0.719	-0.092	0.034	-0.065	-27	407
22	87.50	485	0.643	-0.068	0.020	-0.052	-22	416
21	82.50	496	0.572	-0.043	0.012	-0.031	-13	425
20	77.50	507	0.505	-0.018	0.007	-0.006	-3	434
19	74.25	154	0.463	-0.003	0.006	0.011	1	132
18	71.75	680	0.432	0.008	0.006	0.022	13	583
17	67.50	613	0.383	0.023	0.007	0.039	21	526
16	62.50	627	0.328	0.039	0.010	0.053	29	537
15	57.50	640	0.278	0.050	0.014	0.061	34	549
14	52.50	653	0.232	0.058	0.019	0.065	37	560
13	47.50	667	0.190	0.064	0.025	0.066	38	572
12	42.50	680	0.152	0.068	0.030	0.065	38	583
11	37.83	600	0.120	0.070	0.034	0.064	33	515
10	35.33	179	0.105	0.071	0.037	0.063	10	154
9	33.25	951	0.093	0.071	0.038	0.062	51	815
8	30.75	243	0.079	0.072	0.040	0.061	13	208
7	27.50	821	0.064	0.072	0.041	0.061	43	704
6	22.50	837	0.043	0.070	0.042	0.059	43	717
5	17.50	853	0.026	0.067	0.040	0.056	42	731
4	12.50	869	0.013	0.059	0.034	0.051	39	745
3	7.50	780	0.005	0.044	0.025	0.042	28	669
2	4.50	158	0.002	0.030	0.016	0.031	4	135
1	2.00	906	0.000	0.015	0.008	0.017	14	777
Powerwave Allgon 702	150.00	26	1.890	1.980	1.140	0.401	9	23

Site Number: 302519

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

Powerwave Allgon TT0	150.00	132	1.890	1.980	1.140	0.401	46	113
Raycap DC6-48-60-18-	150.00	32	1.890	1.980	1.140	0.401	11	27
Ericsson RRUS 11 (Ba	150.00	165	1.890	1.980	1.140	0.401	57	141
Ericsson RRUS 12	150.00	150	1.890	1.980	1.140	0.401	52	129
Powerwave Allgon 777	150.00	210	1.890	1.980	1.140	0.401	73	180
KMW AM-X-CD-16-65-00	150.00	146	1.890	1.980	1.140	0.401	51	125
Flat Platform w/ Han	150.00	2,000	1.890	1.980	1.140	0.401	695	1,715
RFS FD9R6004/1C-3L	113.00	19	1.073	-0.084	0.170	-0.027	0	16
Alcatel-Lucent RRH2x	113.00	132	1.073	-0.084	0.170	-0.027	-3	113
Decibel 932DG90T2E-M	113.00	29	1.073	-0.084	0.170	-0.027	-1	24
RFS DB-T1-6Z-8AB-0Z	113.00	44	1.073	-0.084	0.170	-0.027	-1	38
Andrew HBX-6517DS-VT	113.00	40	1.073	-0.084	0.170	-0.027	-1	34
Powerwave Allgon P65	113.00	99	1.073	-0.084	0.170	-0.027	-2	85
Andrew LNX-6514DS-VT	113.00	116	1.073	-0.084	0.170	-0.027	-3	100
Round T-Arms	113.00	750	1.073	-0.084	0.170	-0.027	-18	643
		21,577	44.314	19.628	15.557	4.637	1,597	18,498

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

Load Case (1.2 + 0.2Sds) * DL + E EMAM

Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-25.69	-1.59	0.00	-199.98	0.00	199.98	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.056
4.00	-25.49	-1.59	0.00	-193.63	0.00	193.63	3,123.00	1,561.50	4,678.77	2,310.67	0.01	-0.02	0.055
4.00	-25.49	-1.59	0.00	-193.63	0.00	193.63	3,123.00	1,561.50	4,678.77	2,310.67	0.01	-0.02	0.092
5.00	-24.52	-1.57	0.00	-192.04	0.00	192.04	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.092
10.00	-23.44	-1.54	0.00	-184.21	0.00	184.21	3,070.50	1,535.25	4,480.02	2,212.51	0.05	-0.06	0.091
15.00	-22.38	-1.51	0.00	-176.49	0.00	176.49	3,025.61	1,512.81	4,315.90	2,131.46	0.13	-0.10	0.090
20.00	-21.34	-1.48	0.00	-168.92	0.00	168.92	2,979.68	1,489.84	4,153.25	2,051.14	0.25	-0.13	0.090
25.00	-20.32	-1.45	0.00	-161.50	0.00	161.50	2,932.71	1,466.36	3,992.19	1,971.59	0.41	-0.17	0.089
30.00	-20.01	-1.45	0.00	-154.23	0.00	154.23	2,875.21	1,437.61	3,820.20	1,886.65	0.62	-0.21	0.089
31.50	-18.83	-1.40	0.00	-152.06	0.00	152.06	2,854.29	1,427.15	3,764.49	1,859.14	0.69	-0.23	0.088
35.00	-18.61	-1.39	0.00	-147.16	0.00	147.16	2,805.48	1,402.74	3,636.10	1,795.73	0.86	-0.26	0.089
35.67	-17.86	-1.36	0.00	-146.23	0.00	146.23	2,248.07	1,124.03	2,973.91	1,468.70	0.90	-0.26	0.108
40.00	-17.02	-1.33	0.00	-140.32	0.00	140.32	2,218.59	1,109.29	2,872.23	1,418.49	1.15	-0.30	0.107
45.00	-16.19	-1.31	0.00	-133.65	0.00	133.65	2,183.60	1,091.80	2,755.77	1,360.97	1.49	-0.35	0.106
50.00	-15.37	-1.28	0.00	-127.12	0.00	127.12	2,147.58	1,073.79	2,640.30	1,303.95	1.88	-0.40	0.105
55.00	-14.58	-1.25	0.00	-120.73	0.00	120.73	2,110.52	1,055.26	2,525.94	1,247.47	2.32	-0.45	0.104
60.00	-13.80	-1.23	0.00	-114.47	0.00	114.47	2,072.41	1,036.21	2,412.79	1,191.58	2.82	-0.50	0.103
65.00	-13.03	-1.21	0.00	-108.33	0.00	108.33	2,033.27	1,016.64	2,300.94	1,136.35	3.37	-0.56	0.102
70.00	-12.19	-1.20	0.00	-102.26	0.00	102.26	1,982.10	991.05	2,178.42	1,075.84	3.99	-0.61	0.101
73.50	-12.00	-1.20	0.00	-98.05	0.00	98.05	1,473.96	736.98	1,624.57	802.32	4.45	-0.65	0.130
75.00	-11.37	-1.21	0.00	-96.25	0.00	96.25	1,466.28	733.14	1,601.77	791.05	4.66	-0.67	0.129
80.00	-10.75	-1.23	0.00	-90.20	0.00	90.20	1,440.00	720.00	1,526.12	753.69	5.40	-0.74	0.127
85.00	-10.14	-1.25	0.00	-84.06	0.00	84.06	1,412.68	706.34	1,451.11	716.65	6.21	-0.81	0.124
90.00	-9.55	-1.28	0.00	-77.80	0.00	77.80	1,384.32	692.16	1,376.86	679.98	7.10	-0.88	0.121
95.00	-8.97	-1.31	0.00	-71.38	0.00	71.38	1,354.92	677.46	1,303.45	643.72	8.06	-0.96	0.118
100.00	-8.41	-1.34	0.00	-64.80	0.00	64.80	1,324.47	662.24	1,230.99	607.94	9.10	-1.03	0.113
105.00	-7.86	-1.36	0.00	-58.10	0.00	58.10	1,292.99	646.50	1,159.59	572.68	10.22	-1.10	0.108
110.00	-7.58	-1.37	0.00	-51.30	0.00	51.30	1,247.13	623.57	1,077.81	532.29	11.42	-1.18	0.102
110.00	-7.58	-1.37	0.00	-51.30	0.00	51.30	853.24	426.62	741.78	366.34	11.42	-1.18	0.149
113.00	-5.91	-1.37	0.00	-47.19	0.00	47.19	842.42	421.21	715.90	353.56	12.17	-1.22	0.141
115.00	-5.54	-1.37	0.00	-44.45	0.00	44.45	834.99	417.50	698.71	345.06	12.69	-1.26	0.135
120.00	-5.17	-1.36	0.00	-37.61	0.00	37.61	815.71	407.86	655.98	323.96	14.06	-1.35	0.122
125.00	-4.82	-1.34	0.00	-30.82	0.00	30.82	795.39	397.69	613.71	303.09	15.52	-1.44	0.108
130.00	-4.48	-1.30	0.00	-24.14	0.00	24.14	774.02	387.01	572.00	282.49	17.06	-1.51	0.091
135.00	-4.15	-1.25	0.00	-17.64	0.00	17.64	751.62	375.81	530.94	262.21	18.69	-1.58	0.073
140.00	-3.83	-1.18	0.00	-11.39	0.00	11.39	728.18	364.09	490.64	242.31	20.37	-1.63	0.052
145.00	-3.52	-1.10	0.00	-5.49	0.00	5.49	694.06	347.03	445.03	219.78	22.10	-1.67	0.030
150.00	0.00	-0.99	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	23.86	-1.68	0.000

Site Number: 302519

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

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Customer: AT&T Mobility

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

Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-17.72	-1.59	0.00	-194.57	0.00	194.57	3,157.17	1,578.58	4,812.28	2,376.61	0.00	0.00	0.053
4.00	-17.59	-1.58	0.00	-188.22	0.00	188.22	3,123.00	1,561.50	4,678.77	2,310.67	0.01	-0.02	0.052
4.00	-17.59	-1.58	0.00	-188.22	0.00	188.22	3,123.00	1,561.50	4,678.77	2,310.67	0.01	-0.02	0.087
5.00	-16.92	-1.56	0.00	-186.64	0.00	186.64	3,114.35	1,557.18	4,645.51	2,294.24	0.01	-0.02	0.087
10.00	-16.17	-1.53	0.00	-178.83	0.00	178.83	3,070.50	1,535.25	4,480.02	2,212.51	0.05	-0.06	0.086
15.00	-15.44	-1.50	0.00	-171.17	0.00	171.17	3,025.61	1,512.81	4,315.90	2,131.46	0.13	-0.09	0.085
20.00	-14.72	-1.47	0.00	-163.67	0.00	163.67	2,979.68	1,489.84	4,153.25	2,051.14	0.25	-0.13	0.085
25.00	-14.02	-1.43	0.00	-156.34	0.00	156.34	2,932.71	1,466.36	3,992.19	1,971.59	0.40	-0.17	0.084
30.00	-13.81	-1.42	0.00	-149.19	0.00	149.19	2,875.21	1,437.61	3,820.20	1,886.65	0.60	-0.21	0.084
31.50	-12.99	-1.37	0.00	-147.05	0.00	147.05	2,854.29	1,427.15	3,764.49	1,859.14	0.67	-0.22	0.084
35.00	-12.84	-1.37	0.00	-142.25	0.00	142.25	2,805.48	1,402.74	3,636.10	1,795.73	0.84	-0.25	0.084
35.67	-12.32	-1.34	0.00	-141.34	0.00	141.34	2,248.07	1,124.03	2,973.91	1,468.70	0.87	-0.25	0.102
40.00	-11.74	-1.30	0.00	-135.55	0.00	135.55	2,218.59	1,109.29	2,872.23	1,418.49	1.12	-0.29	0.101
45.00	-11.16	-1.27	0.00	-129.04	0.00	129.04	2,183.60	1,091.80	2,755.77	1,360.97	1.44	-0.34	0.100
50.00	-10.60	-1.24	0.00	-122.68	0.00	122.68	2,147.58	1,073.79	2,640.30	1,303.95	1.82	-0.38	0.099
55.00	-10.05	-1.21	0.00	-116.48	0.00	116.48	2,110.52	1,055.26	2,525.94	1,247.47	2.25	-0.43	0.098
60.00	-9.52	-1.19	0.00	-110.42	0.00	110.42	2,072.41	1,036.21	2,412.79	1,191.58	2.73	-0.49	0.097
65.00	-8.99	-1.17	0.00	-104.49	0.00	104.49	2,033.27	1,016.64	2,300.94	1,136.35	3.27	-0.54	0.096
70.00	-8.41	-1.16	0.00	-98.64	0.00	98.64	1,982.10	991.05	2,178.42	1,075.84	3.86	-0.59	0.096
73.50	-8.27	-1.16	0.00	-94.59	0.00	94.59	1,473.96	736.98	1,624.57	802.32	4.31	-0.63	0.124
75.00	-7.84	-1.16	0.00	-92.85	0.00	92.85	1,466.28	733.14	1,601.77	791.05	4.51	-0.65	0.123
80.00	-7.41	-1.18	0.00	-87.04	0.00	87.04	1,440.00	720.00	1,526.12	753.69	5.22	-0.72	0.121
85.00	-6.99	-1.20	0.00	-81.15	0.00	81.15	1,412.68	706.34	1,451.11	716.65	6.01	-0.78	0.118
90.00	-6.59	-1.23	0.00	-75.13	0.00	75.13	1,384.32	692.16	1,376.86	679.98	6.87	-0.85	0.115
95.00	-6.19	-1.26	0.00	-68.96	0.00	68.96	1,354.92	677.46	1,303.45	643.72	7.80	-0.92	0.112
100.00	-5.80	-1.29	0.00	-62.65	0.00	62.65	1,324.47	662.24	1,230.99	607.94	8.80	-1.00	0.107
105.00	-5.41	-1.31	0.00	-56.21	0.00	56.21	1,292.99	646.50	1,159.59	572.68	9.88	-1.07	0.102
110.00	-5.23	-1.32	0.00	-49.67	0.00	49.67	1,247.13	623.57	1,077.81	532.29	11.04	-1.14	0.098
110.00	-5.23	-1.32	0.00	-49.67	0.00	49.67	853.24	426.62	741.78	366.34	11.04	-1.14	0.142
113.00	-4.07	-1.33	0.00	-45.72	0.00	45.72	842.42	421.21	715.90	353.56	11.77	-1.18	0.134
115.00	-3.81	-1.33	0.00	-43.07	0.00	43.07	834.99	417.50	698.71	345.06	12.27	-1.22	0.129
120.00	-3.56	-1.32	0.00	-36.44	0.00	36.44	815.71	407.86	655.98	323.96	13.59	-1.31	0.117
125.00	-3.32	-1.29	0.00	-29.86	0.00	29.86	795.39	397.69	613.71	303.09	15.01	-1.39	0.103
130.00	-3.08	-1.26	0.00	-23.38	0.00	23.38	774.02	387.01	572.00	282.49	16.50	-1.46	0.087
135.00	-2.86	-1.21	0.00	-17.09	0.00	17.09	751.62	375.81	530.94	262.21	18.07	-1.53	0.069
140.00	-2.64	-1.14	0.00	-11.04	0.00	11.04	728.18	364.09	490.64	242.31	19.70	-1.58	0.049
145.00	-2.42	-1.06	0.00	-5.31	0.00	5.31	694.06	347.03	445.03	219.78	21.37	-1.61	0.028
150.00	0.00	-0.99	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	23.07	-1.63	0.000

Site Number: 302519

Code: ANSI/TIA-222-G

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Site Name: Southbury CT, CT

Engineering Number: OAA687959_C3_02

11/3/2016 3:53:52 PM

Customer: AT&T Mobility

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	25.64	0.00	25.85	0.00	0.00	2257.21	35.67	0.99
0.9D + 1.6W	25.63	0.00	19.38	0.00	0.00	2217.41	35.67	0.97
1.2D + 1.0Di + 1.0Wi	5.78	0.00	41.94	0.00	0.00	556.41	73.50	0.27
(1.2 + 0.2Sds) * DL + E ELFM	0.84	0.00	25.69	0.00	0.00	109.01	73.50	0.07
(1.2 + 0.2Sds) * DL + E EMAM	1.59	0.00	25.69	0.00	0.00	199.98	110.00	0.15
(0.9 - 0.2Sds) * DL + E ELFM	0.84	0.00	17.72	0.00	0.00	106.32	73.50	0.06
(0.9 - 0.2Sds) * DL + E EMAM	1.59	0.00	17.72	0.00	0.00	194.57	110.00	0.14
1.0D + 1.0W	6.17	0.00	21.57	0.00	0.00	536.61	35.67	0.24

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Upper Termination Connectors				Lower Termination Connectors				Max Member		
			VQ/I (lb/in)	Applied (kips)	phiVn (kips)	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Pu (kip)	phiPn (kip)	Ratio
0.00	4.00	(4) SOL-#20 All Thre	223.8	6.7	16.8	231.2	12.0	20	16	0.0	12.0	0	0	237.5	330.5	0.719

Base/Flange Plate	Plate Type	Baseplate
	Pole Diameter	37.38 in
	Pole Thickness	0.375 in
	Plate Length	44 in
	Plate Thickness	2.5 in
	Plate Fy	60 ksi
	Weld Length	0.3125 in
	ϕ_s Resistance	1382.37 k-in
	Applied	595.45 k-in
Stiffeners	#	0

Code Rev. **G**

Date 11/3/2016
 Engineer FB
 Site # 302519
 Carrier AT&T Mobility

Moment 2257.2 k-ft
 Axial 25.9 k

Bolts	#	8
	Bolt Circle	44 in
	(R)adial / (S)quare	S
	Bolt Gap	6 in
	Diameter	2.25 in
	Hole Diameter	2.625 in
	Type	A615-75
	Fy	75 ksi
	Fu	100 ksi
	ϕ_s Resistance	259.82 k
Applied	176.69 k	
Reinforcement	#	4
	DYW. Circle	44 in
	Offset Angle	22.5 °
	Type	#20
	Diameter	2.5 in
Fu	150 ksi	
Extra Bolts O	#	0

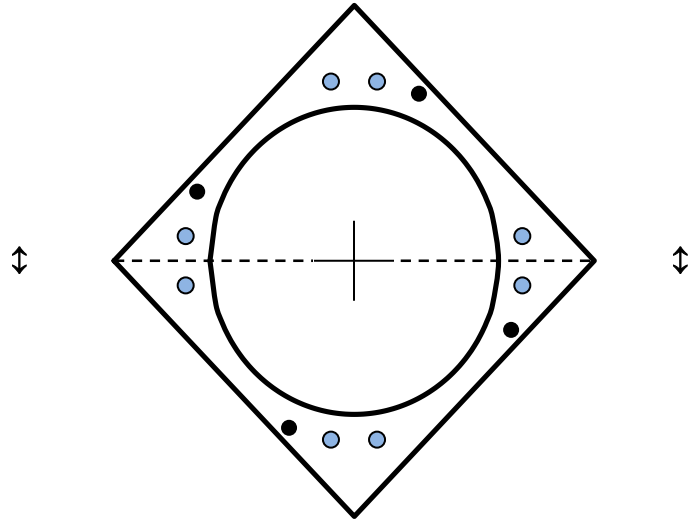


Plate Stress Ratio:
0.43 (Pass)

Bolt Stress Ratio:
0.68 (Pass)

Base/Flange Plate	Plate Type	Flange @ 110.0 ft
	Pole Diameter	21.267 in
	Pole Thickness	0.1875 in
	Plate Diameter	28.5 in
	Plate Thickness	1 in
	Plate Fy	50 ksi
	Weld Length	0.1875 in
	ϕ_s Resistance	208.44 k-in
	Applied	64.37 k-in
Stiffeners	#	12 Show
	Thickness	0.375 in
	Length	3 in
	Height	6 in
	Chamfer	0 in
	Offset Angle	45 °
	Fy	36 ksi

Code Rev. **G**

Moment **281.1 k-ft**

Axial **5.7 k**

Date **11/3/2016**

Engineer **FB**

Site # **302519**

Carrier **AT&T Mobility**

Bolts	#	12
	Bolt Circle (R)adial / (S)quare	25.75 in R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance	54.52 k
	Applied	43.16 k
Reinforcement	#	0
Extra Bolts O	#	0

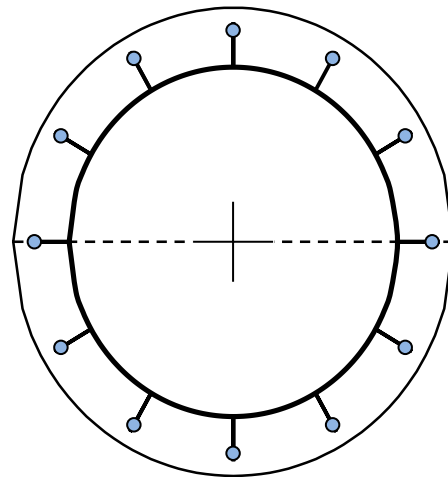
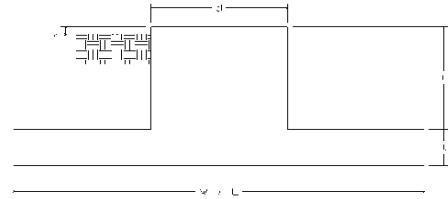


Plate Stress Ratio:
0.31 (Pass)

Bolt Stress Ratio:
0.79 (Pass)

Site Name: Southbury CT, CT
 Site Number: 302519
 Engineering Number: OAA687959_C3_02
 Engineer: FB
 Date: 11/03/16
 Tower Type: MP

Program Last Updated: 11/15/2012



Design Loads (Factored) - Analysis per TIA-222-G Standards

Design / Analysis / Mapping:	Analysis		
Compression/Leg:	25.9 k	Concrete Strength (f'_c):	3000 psi
Uplift/Leg:	0.0 k	Pad Tension Steel Depth:	32.00 in
Total Shear:	25.6 k	ϕ_{Shear} :	0.75
Moment:	2257.2 k-ft	$\phi_{\text{Flexure / Tension}}$:	0.90
Tower + Appurtenance Weight:	25.9 k	$\phi_{\text{Compression}}$:	0.65
Depth to Base of Foundation (l + t - h):	8.00 ft	β :	0.85
Diameter of Pier (d):	5.00 ft	Bottom Pad Rebar Size #:	10
Height of Pier above Ground (h):	0.50	# of Bottom Pad Rebar:	36
Width of Pad (W):	18.00 ft	Pad Bottom Steel Area:	45.72 in ²
Length of Pad (L):	18.00 ft	Pad Steel F_y :	60000 psi
Thickness of Pad (t):	3.00 ft	Top Pad Rebar Size #:	10
Tower Leg Center to Center:	0.00 ft	# of Top Pad Rebar:	36
Number of Tower Legs:	1.0 (1 if MP or GT)	Pad Top Steel Area:	45.72 in ²
Tower Center from Mat Center:	0.00 ft	Pier Rebar Size #:	11
Depth Below Ground Surface to Water Table:	10.00 ft	Pier Steel Area (Single Bar):	1.56 in ²
Unit Weight of Concrete:	150.0 pcf	# of Pier Rebar:	52
Unit Weight of Soil Above Water Table:	110.0 pcf	Pier Steel F_y :	60000 psi
Unit Weight of Water:	62.4 pcf	Pier Cage Diameter:	52.0 in
Unit Weight of Soil Below Water Table:	47.6 pcf	Rebar Strain Limit:	0.008
Friction Angle of Uplift:	15.0 Degrees	Steel Elastic Modulus:	29000 ksi
Ultimate Coefficient of Shear Friction:	0.35	Tie Rebar Size #:	4
Ultimate Compressive Bearing Pressure:	6000.0 psf	Tie Steel Area (Single Bar):	0.20 in ²
Ultimate Passive Pressure on Pad Face:	0.0 psf	Tie Spacing:	12 in
$\phi_{\text{Soil and Concrete Weight}}$:	0.9	Tie Steel F_y :	60000 psi
ϕ_{Soil} :	0.75		

Overturning Moment Usage

Design OTM:	2475.2 k-ft
OTM Resistance:	3128.6 k-ft
Design OTM / OTM Resistance:	0.79 Result: OK

Soil Bearing Pressure Usage

Net Bearing Pressure:	4432 psf
Factored Nominal Bearing Pressure:	4500 psf
Net Bearing Pressure/Factored Nominal Bearing Pressure:	0.98 Result: OK
Load Direction Controlling Design Bearing Pressure:	Diagonal to Pad Edge

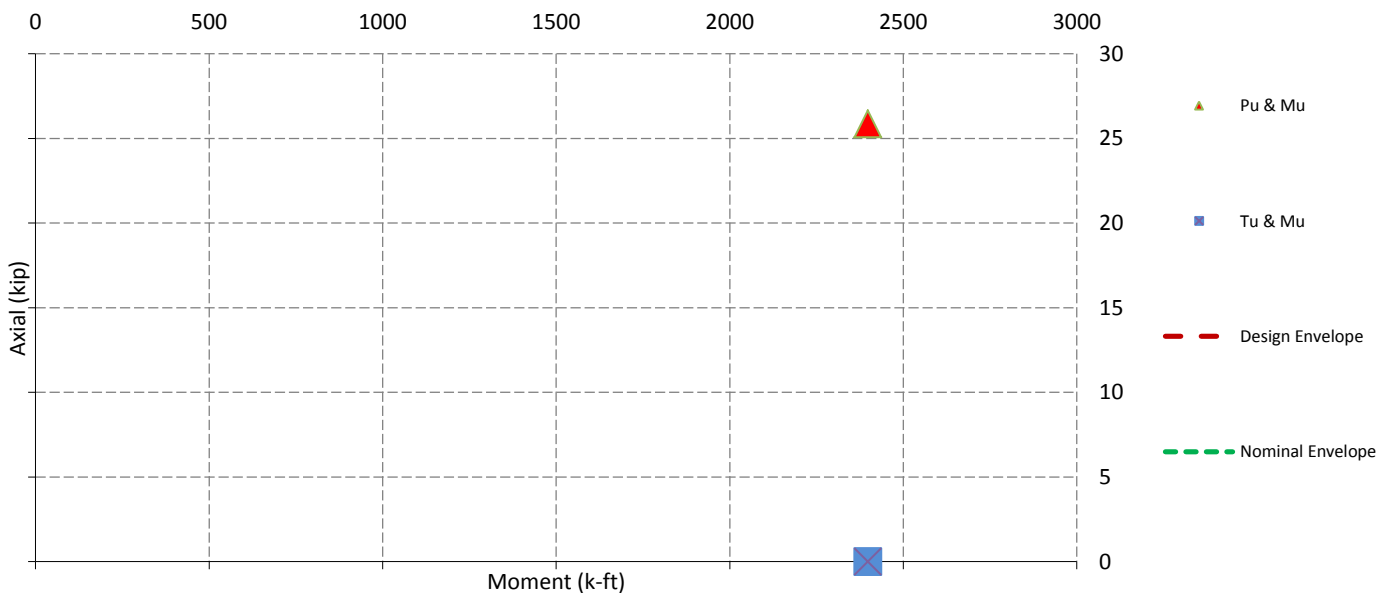
Sliding Factor of Safety

Total Factored Sliding Resistance:	92.1 k
Sliding Design / Sliding Resistance:	0.28 Result: OK

One Way Shear, Flexural Capacity, and Punching Shear

Factored One Way Shear (V_u):	156.2 k
One Way Shear Capacity (ϕV_c):	477.1 k - ACI11.3.1.1
$V_u / \phi V_c$:	0.33 Result: OK
Load Direction Controlling Shear Capacity:	Diagonal to Pad Edge
Lower Steel Pad Factored Moment (M_u):	896.2 k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	6148.2 k-ft - ACI10.3
$M_u / \phi M_n$:	0.15 Result: OK
Load Direction Controlling Flexural Capacity:	Parallel to Pad Edge
Upper Steel Pad Factored Moment (M_u):	593.3 k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	6148.2 k-ft
$M_u / \phi M_n$:	0.10 Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0066 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0066 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Reinforcement Spacing:	6 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	6 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear (V_u):	0.0 k
Nominal Punching Shear Capacity ($\phi_c V_n$):	1519.7 k - ACI11.12.2.1
$V_u / \phi V_c$:	0.00 Result: OK
Factored Moment in Pier (M_u):	2398.2 k-ft
Pier Moment Capacity (ϕM_n):	9281.4 k-ft
$M_u / \phi M_n$:	0.26 Result: OK
Factored Shear in Pier (V_u):	25.6 k
Pier Shear Capacity (ϕV_n):	233.4 k
$V_u / \phi V_c$:	0.11 Result: OK
Pier Shear Reinforcement Ratio:	0.0007 No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier (T_u):	0.0 k
Pier Tension Capacity (ϕT_n):	4380.5 k
$T_u / \phi T_n$:	0.00 Result: OK
Factored Compression in Pier (P_u):	25.9 k
Pier Compression Capacity (ϕP_n):	3641.6 k - ACI10.3.6.2
$P_u / \phi P_n$:	0.01 Result: OK
Pier Compression Reinforcement Ratio:	0.029 OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u / \phi_B M_n + T_u / \phi_T T_n$:	0.26 Result: OK

Nominal and Design Moment Capacity and Factored Design Loads





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

AT&T Existing Facility

Site ID: CT2126

Southbury
Horse Fence Hill
Southbury, CT 06488

October 30, 2016

EBI Project Number: 6216004901

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	6.12 %



October 30, 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: **CT2126 – Southbury**

EBI Consulting was directed to analyze the proposed AT&T facility located at **Horse Fence Hill, Southbury, 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ 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 ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately $467 \mu\text{W}/\text{cm}^2$ and $567 \mu\text{W}/\text{cm}^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is $1000 \mu\text{W}/\text{cm}^2$. 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 **Horse Fence Hill, Southbury, 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 UMTS channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 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.
- 4) 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.
- 5) 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.
- 6) 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.



- 7) 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.
- 8) 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.
- 9) The antennas used in this modeling are the **Kathrein 800-10121, KMW AM-X-CD-16-65-00T-RET and the Powerwave 7770** 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.
- 10) The antenna mounting height centerlines of the proposed antennas are **150 feet** above ground level (AGL) for **Sector A**, **150 feet** above ground level (AGL) for **Sector B** and **150 feet** above ground level (AGL) for Sector C.
- 11) 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):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	120 Watts	Total TX Power(W):	120 Watts	Total TX Power(W):	120 Watts
ERP (W):	2,471.44	ERP (W):	2,471.44	ERP (W):	2,471.44
Antenna A1 MPE%	0.54 %	Antenna B1 MPE%	0.54 %	Antenna C1 MPE%	0.54 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	KMW AM-X-CD-16-65-00T-RET	Make / Model:	KMW AM-X-CD-16-65-00T-RET	Make / Model:	KMW AM-X-CD-16-65-00T-RET
Gain:	13.35 / 15.25 dBd	Gain:	13.35 / 15.25 dBd	Gain:	13.35 / 15.25 dBd
Height (AGL):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 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):	6,614.85	ERP (W):	6,614.85	ERP (W):	6,614.85
Antenna A2 MPE%	1.66 %	Antenna B2 MPE%	1.66 %	Antenna C2 MPE%	1.66 %
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Powerwave 7770	Make / Model:	Powerwave 7770	Make / Model:	Powerwave 7770
Gain:	11.4 / 13.4 dBd	Gain:	11.4 / 13.4 dBd	Gain:	11.4 / 13.4 dBd
Height (AGL):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	120 Watts	Total TX Power(W):	120 Watts	Total TX Power(W):	120 Watts
ERP (W):	2,140.89	ERP (W):	2,140.89	ERP (W):	2,140.89
Antenna A3 MPE%	0.48 %	Antenna B3 MPE%	0.48 %	Antenna C3 MPE%	0.48 %

Site Composite MPE%	
Carrier	MPE%
AT&T – Max per sector	2.68 %
Verizon Wireless	3.44 %
PageNet	0.00 %
Site Total MPE %:	6.12 %

AT&T Sector A Total:	2.68 %
AT&T Sector B Total:	2.68 %
AT&T Sector C Total:	2.68 %
Site Total:	6.12 %

AT&T Frequency Band / Technology	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
AT&T 850 MHz UMTS	2	418.91	150	1.45	850 MHz	567	0.26%
AT&T 1900 MHz (PCS) UMTS	2	816.81	150	2.83	1900 MHz (PCS)	1000	0.28%
AT&T 700 MHz LTE	2	1,297.63	150	4.50	700 MHz	467	0.96%
AT&T 1900 MHz (PCS) LTE	2	2,009.79	150	6.97	1900 MHz (PCS)	1000	0.70%
AT&T 850 MHz GSM	2	414.12	150	1.44	850 MHz	567	0.25%
AT&T 1900 MHz (PCS) GSM	2	656.33	150	2.28	1900 MHz (PCS)	1000	0.23%
						Total:	2.68%



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:	2.68 %
Sector B:	2.68 %
Sector C:	2.68 %
AT&T Maximum Total (per sector):	2.68 %
Site Total:	6.12 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **6.12 %** 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.