UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

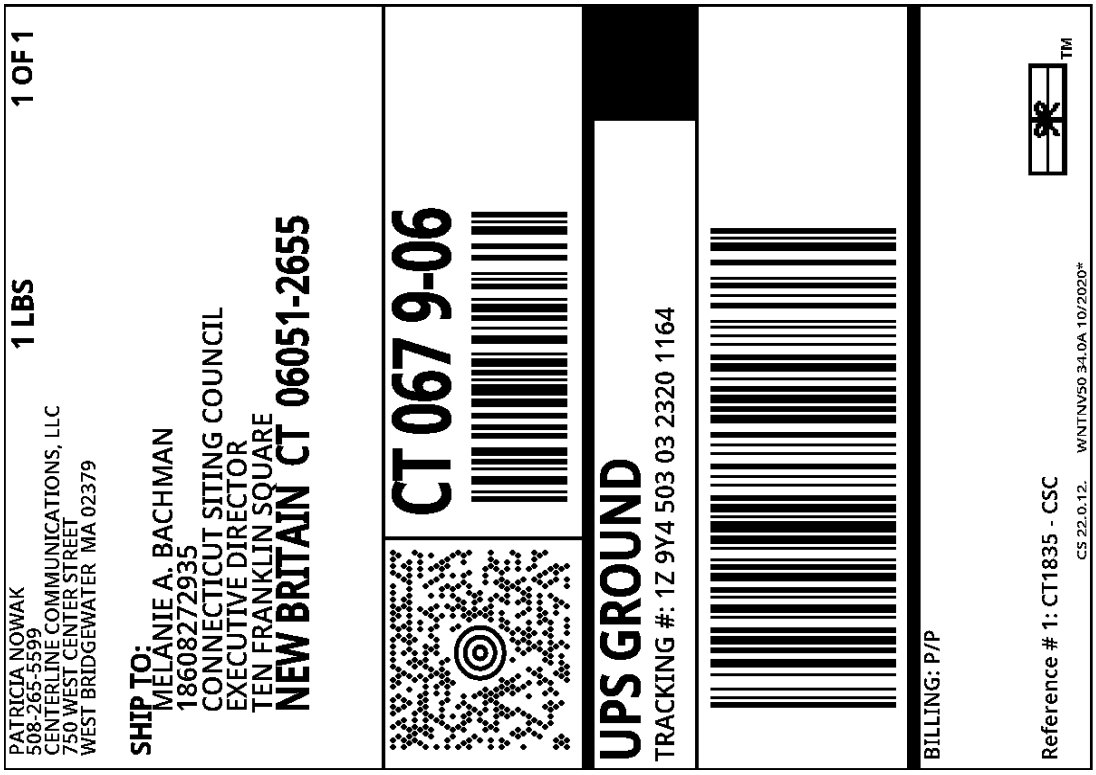
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
   Hand the package to any UPS driver in your area.

UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

UPS Access Point™
CVS STORE # 7232
689 DEPOT ST
NORTH EASTON ,MA 02356

UPS Access Point™
TOWN LINE GENERAL STORE
450 E CENTER ST
WEST BRIDGEWATER ,MA 02379

FOLD HERE



November 5, 2020

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

Regarding: Notice of Exempt Modification – AT&T Site CT1835
Address: 655 Bassett Road, Watertown, CT 06795

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (hereinafter "AT&T") currently maintains a wireless telecommunications facility on an existing 129' monopole tower (the "Tower") at the above-referenced address, latitude 41.657100, longitude -73.136300. Said Tower is managed by American Tower Corporation.

AT&T desires to modify its existing telecommunications facility on the Tower by swapping (6) antennas, swapping (6) remote radio units, adding (3) remote radio units and (1) surge arrestor with accompanying lines, as well as, other related modifications, as more particularly detailed and described in the enclosed Construction Drawings prepared by SMW Engineering Group, Inc, dated September 22, 2020. Please note this modification includes B2, B5, and B12 hardware that is both 4G (LTE) and 5GNR capable through remote software configuration and either or both services may be turned on or off at various times. Enclosed please also find an Antenna Mount Analysis Report prepared by American Tower Corporation dated July 13, 2020. The centerline height of the antennas will be at 126 feet.

The Tower was originally approved by the Connecticut Siting Council on May 10, 2012 under Docket No. 422. Enclosed please find a copy of the Decision.

Please accept this letter 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 the following individuals: The Honorable Mary Ann Rosa, Chair of Town Council, Town of Watertown, CT; Mark Raimo, Town Manager of the Town of Watertown, CT; Mark Massoud, Planning and Zoning Department of the Town of Watertown, CT; Frank E. Gustafson, as the property owner; and American Tower Corporation, as Tower manager. Enclosed please find property cards and a GIS map of the property.

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

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

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

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

4. The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. *Please see the enclosed Radio Frequency Emissions Report for AT&T's modified facility enclosed herewith.*

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

6. The existing structure and its foundation can support the proposed loading. *Please see the Structural Analysis Report dated August 19, 2020 and prepared by American Tower Corporation.*

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

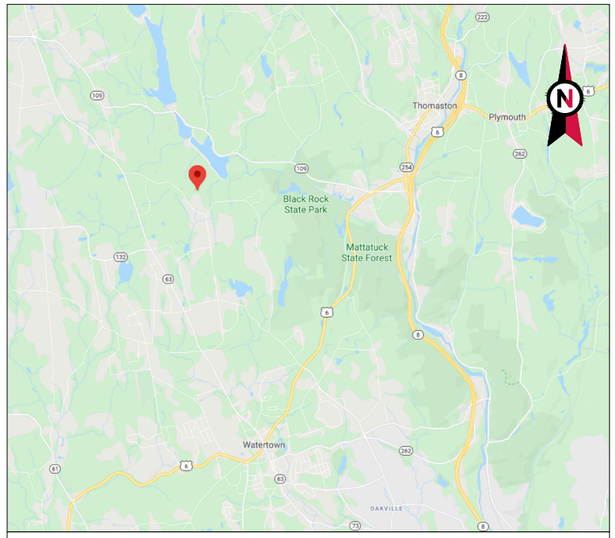
Sincerely,

Patricia Nowak
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
pnowak@clinellc.com

Enclosures:
Exhibit 1 – Construction Drawings
Exhibit 2 - Mount Analysis
Exhibit 3 – CSC Decision
Exhibit 4 – Property Cards and GIS Map
Exhibit 5 – Radio Frequency Emissions Report
Exhibit 6 – Structural Analysis

cc:
The Honorable Mary Ann Rosa, Chair of Town Council, Town of Watertown, CT
Mark Raimo, Town Manager of the Town of Watertown, CT
Mark Massoud, Planning and Zoning Department of the Town of Watertown, CT
Frank E. Gustafson, as the property owner
American Tower Corporation, as Tower manager

EXHIBIT 1

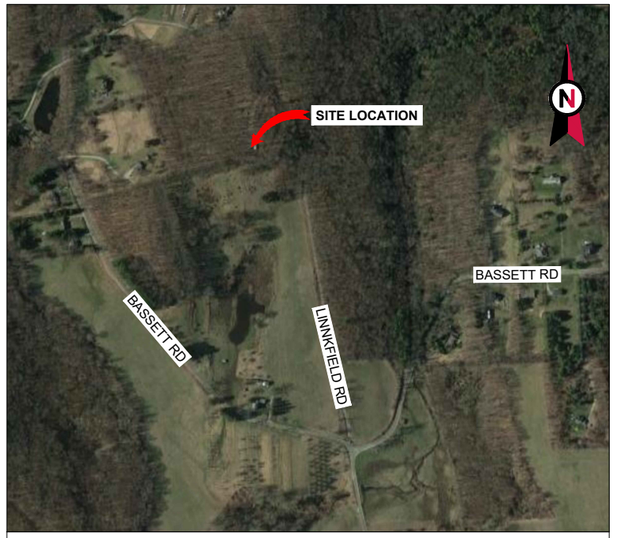


VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: WATERTOWN CT
ATC SITE NUMBER: 283424
AT&T PACE NUMBER: MRCTB046623/MRCTB046543/ MRCTB046501/MRCTB046499/MRCTB046647
AT&T SITE ID: CTL01835
AT&T FA CODE:10128117
AT&T SITE NAME: WATERTOWN BASSETT ROAD
PROJECTS: 3C/4C/4TX4RX RETROFIT/5G NR
SITE ADDRESS: 655 BASSETT ROAD
WATERTOWN, CT 06795-1139

AT&T MOBILITY
ANTENNA AMENDMENT DRAWINGS



LOCATION MAP

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: CONNECTICUT LIGHT & POWER
PHONE: (888) 783-6617

TELEPHONE COMPANY: FRONTIER
PHONE: (800) 921-8102

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

655 BASSETT ROAD

WATERTOWN, CT 06795-1139

COUNTY: LITCHFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.65707777

LONGITUDE: -73.1362611

GROUND ELEVATION: 833' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

JEREMY SHARIT
SMW ENGINEERING GROUP INC.
158 BUSINESS CENTER DR.
BIRMINGHAM, AL. 35244
JOB# 20-10237

PROPERTY OWNER:

FRANK GUSTAFSON REVOCABLE TRUST
FRANK GUSTAFSON
655 BASSETT ROAD
WATERTOWN, CT 06795

APPLICANT:

AT&T MOBILITY

CONSULTING ENGINEER

JOHN LIU, PE
(423) 541-0561
JOHNLIU@TELECOM.TEAM

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

TOWER WORK:

REMOVE (6) LTE ANTENNAS AND (6) LTE RRH'S

INSTALL (6) LTE ANTENNAS, (9) LTE RRH'S, (1) DC ONLY SQUID, (2) 0.78" 8AWG6 CABLES, AND MOUNT MODIFICATIONS

EXISTING (3) UMTS ANTENNAS, (3) LTE ANTENNAS, (3) UMTS RRH'S, (2) DC/FIBER SQUIDS, (4) 0.78" 8AWG6 CABLES AND (2) 0.39" FIBER CABLES TO REMAIN.

GROUND WORK:

INSTALL (1) 6630 AND (1) IDLE CABLE.

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

FROM DOWNTOWN WATERBURY START OUT GOING WEST ON E MAIN ST TOWARD MAPLE ST. TURN RIGHT ONTO RIVERSIDE ST. MERGE ONTO CT-8 N/JAMES H DARCEY MEMORIAL HWY N TOWARD WATERTOWN/TORRINGTON. TAKE THE CT-262 EXIT, EXIT 37, TOWARD WATERTOWN. TURN LEFT ONTO FROST BRIDGE RD/CT-262. CONTINUE TO FOLLOW CT-262. TURN RIGHT ONTO BUCKINGHAM ST/CT-262. BUCKINGHAM ST/CT-262 BECOMES FERN HILL RD. FERN HILL RD BECOMES SMITH POND RD. TURN RIGHT ONTO LINKFIELD RD 999 LINKFIELD RD IS ON THE LEFT

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	COVER SHEET	1	09/22/20	ZDS
G-002	GENERAL NOTES	1	09/22/20	ZDS
C-001	OVERALL SITE PLAN	1	09/22/20	ZDS
C-101	DETAILED SITE PLAN	1	09/22/20	ZDS
C-102	SHELTER LAYOUT	1	09/22/20	ZDS
C-201	TOWER ELEVATION	1	09/22/20	ZDS
C-401	RF SCHEDULE AND ANTENNA INSTALLATION	1	09/22/20	ZDS
C-501	CONSTRUCTION DETAILS	1	09/22/20	ZDS
C-502	EQUIPMENT SPECIFICATIONS	1	09/22/20	ZDS
E-501	GROUNDING DETAILS	1	09/22/20	ZDS
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			

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SMW ENGINEERING GROUP, INC.
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158 BUSINESS CENTER DRIVE
BIRMINGHAM, AL 35244
TEL: 205-252-6985 FAX: 205-320-1504

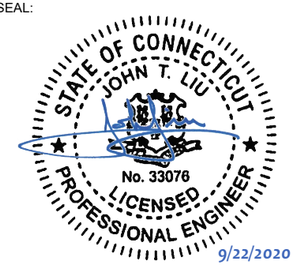
REV.	DESCRIPTION	BY	DATE
1	FOR CONSTRUCTION	ZDS	09/22/20

ATC SITE NUMBER:
283424

ATC SITE NAME:
WATERTOWN CT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795-1139

SEAL:



AT&T

DATE DRAWN:	05/29/20
ATC JOB NO:	283424
CUSTOMER ID:	10128117
CUSTOMER #:	20-10237

COVER SHEET

SHEET NUMBER: G-001

REVISION: 1

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, AT&T MOBILITY "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF AT&T MOBILITY TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE AT&T MOBILITY REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T MOBILITY REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T MOBILITY REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T MOBILITY CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH AT&T MOBILITY AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MOBILITY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T MOBILITY SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T MOBILITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T MOBILITY SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY AT&T MOBILITY REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE AT&T MOBILITY REP. ANY WORK FOUND BY THE AT&T MOBILITY REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. AT&T MOBILITY FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T MOBILITY WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. AT&T MOBILITY OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO AT&T MOBILITY OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T MOBILITY UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OD COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
   - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND AT&T MOBILITY SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

AMERICAN TOWER®

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW
158 BUSINESS CENTER DRIVE
BIRMINGHAM, AL 35244
TEL: 205-252-6985 FAX: 205-320-1504

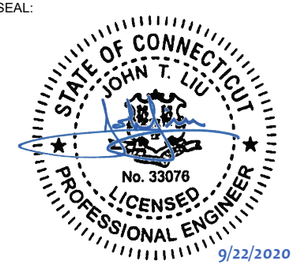
REV.	DESCRIPTION	BY	DATE
1	FOR CONSTRUCTION	ZDS	09/22/20

ATC SITE NUMBER:
283424

ATC SITE NAME:
WATERTOWN CT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795-1139

SEAL:



AT&T

DATE DRAWN:	05/29/20
ATC JOB NO:	283424
CUSTOMER ID:	10128117
CUSTOMER #:	20-10237

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	1

SITE PLAN NOTES:

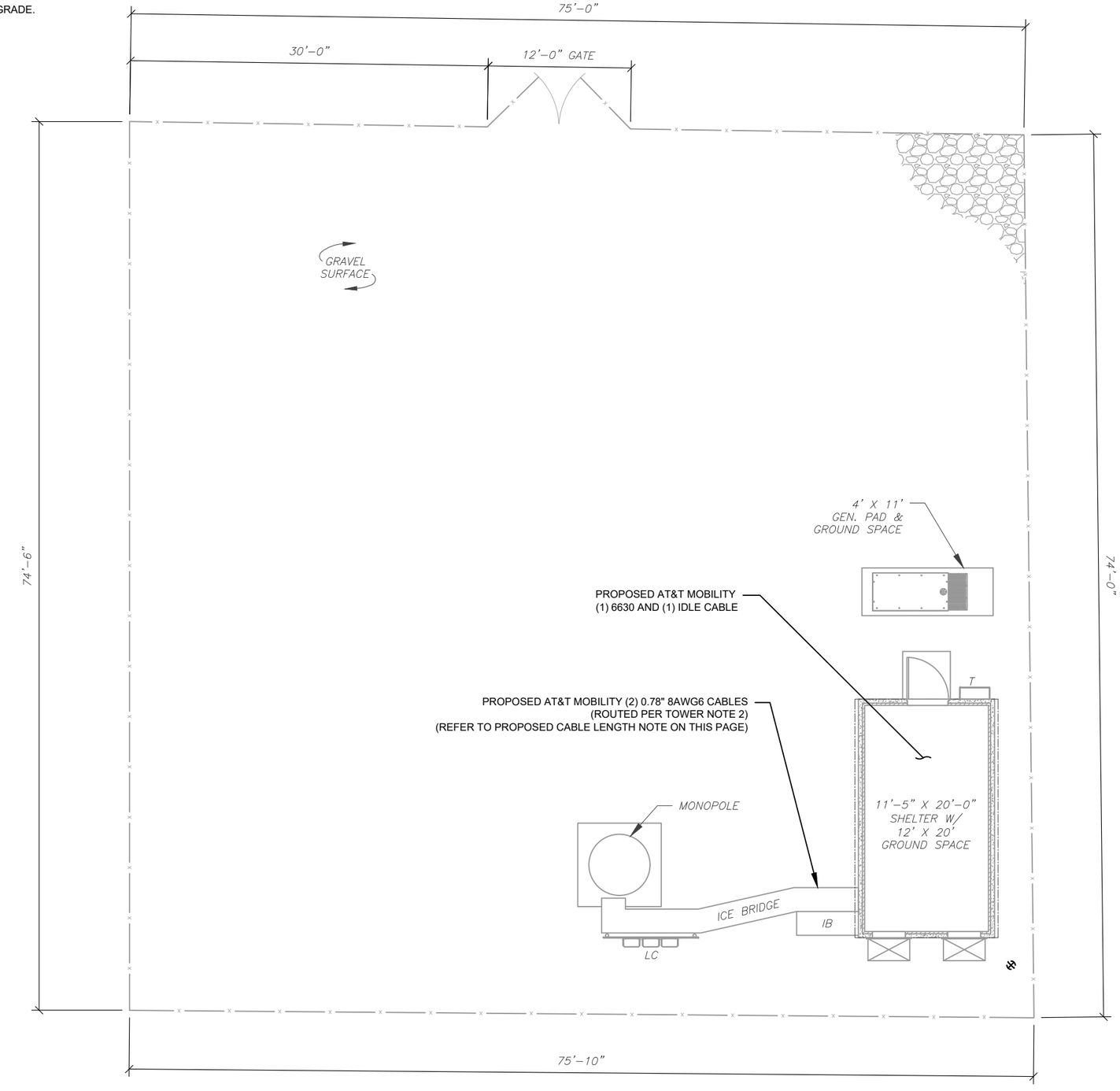
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
——x——	CHAINLINK FENCE



1 DETAILED SITE PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **171'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).

AMERICAN TOWER®

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW
158 BUSINESS CENTER DRIVE
BIRMINGHAM, AL 35244
TEL: 205-252-6985 FAX: 205-320-1504

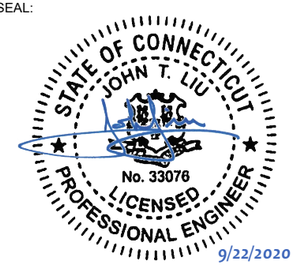
REV.	DESCRIPTION	BY	DATE
1	FOR CONSTRUCTION	ZDS	09/22/20

ATC SITE NUMBER:
283424

ATC SITE NAME:
WATERTOWN CT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795-1139

SEAL:



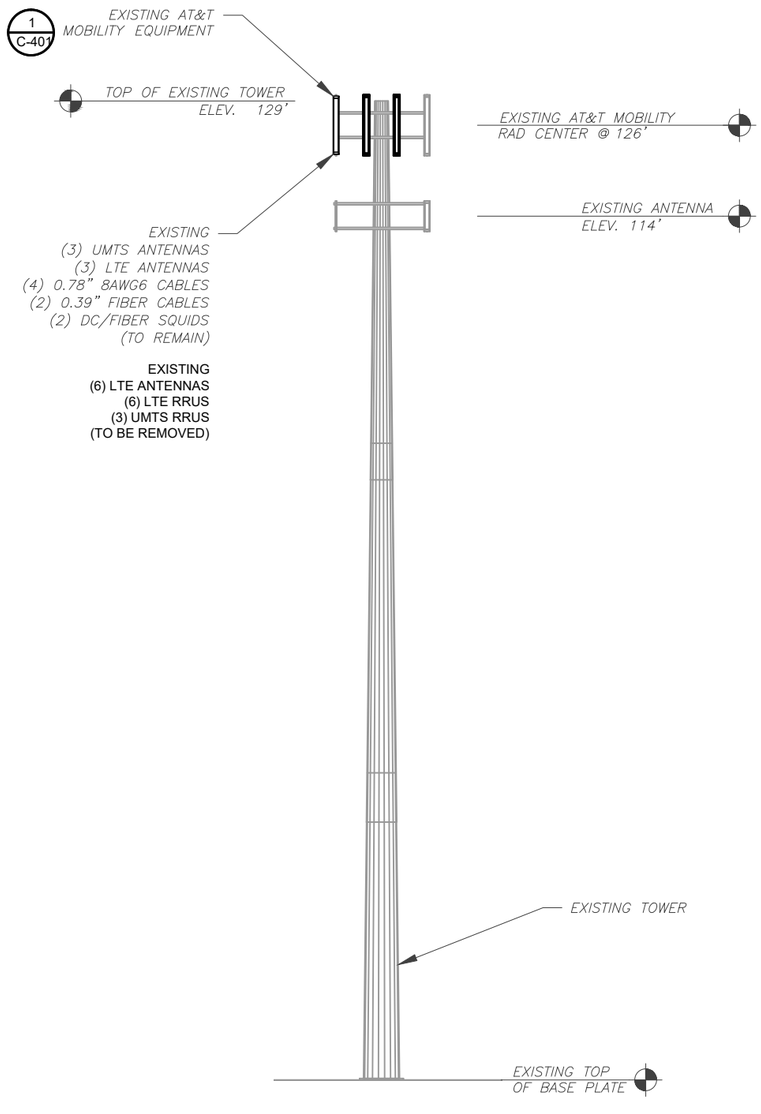
AT&T

DATE DRAWN:	05/29/20
ATC JOB NO:	283424
CUSTOMER ID:	10128117
CUSTOMER #:	20-10237

DETAILED SITE PLAN

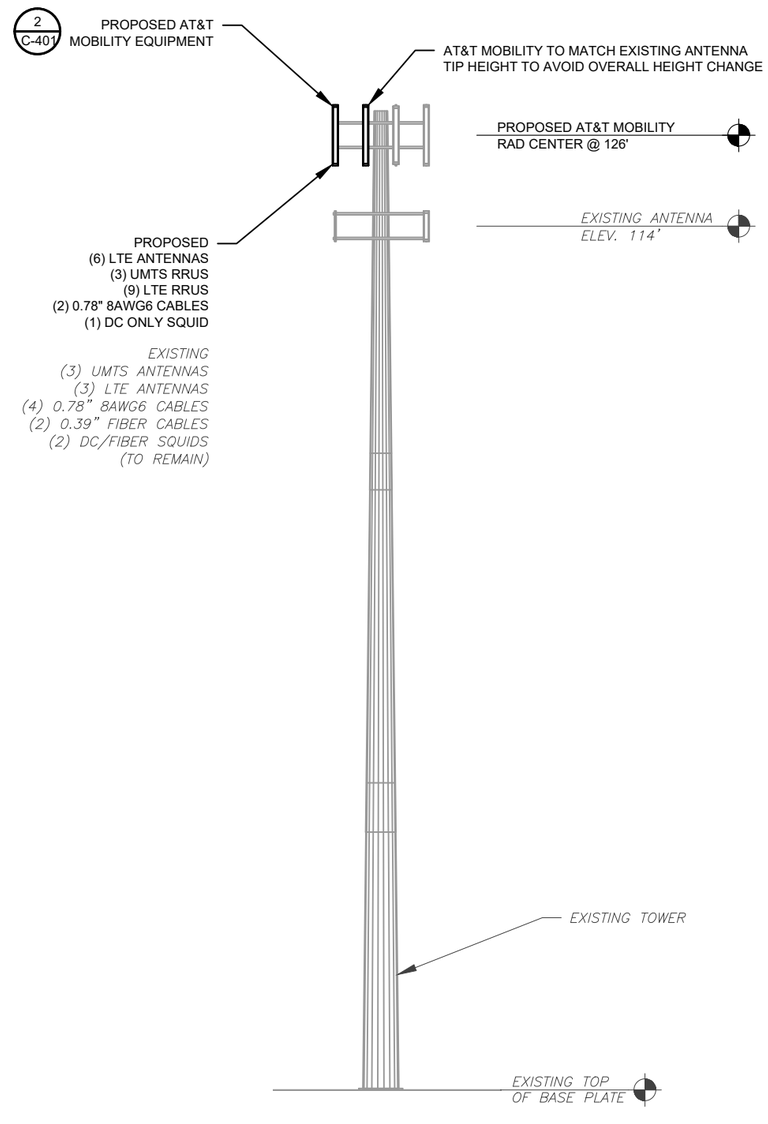
SHEET NUMBER:	REVISION:
C-101	1

EXISTING AND FINAL CONFIGURATIONS ARE BASED ON RFDS. CONTRACTOR TO VERIFY EXISTING CONDITIONS.



1 EXISTING TOWER ELEVATION
SCALE: 1" = 20'

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 07/13/20, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING ONCE THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, IS INSTALLED.



2 FINAL TOWER ELEVATION
SCALE: 1" = 20'

TOWER NOTE:
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
3. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

SCOPE OF WORK:

1. WHEN STACKING CABLES 3 OR MORE DEEP, USE STACKABLE SNAP-INS, TALLEY PART NUMBER SSH-158-3 (OR ENGINEER APPROVED EQUAL).
2. CONTRACTOR SHALL CONFIRM THE FINAL CABLE ROUTING PLAN WITH THE STRUCTURAL ANALYSIS.

COAXIAL CABLE NOTES:
1. CONTRACTOR SHALL CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION. REFER TO "ANTENNA SYSTEM LABELING STANDARD" ND-00027 LATEST VERISON.
2. CONTRACTOR SHALL WEATHERPROOF ALL ANTENNA CONNECTORS WITH SELF AMALGAMATING TAPE. WEATHERPROOFING SHALL BE COMPLETED IN STRICT ACCODRANCE WITH AT&T STANDARDS.
3. CONTRACTOR SHALL GROUND ALL EQUIPMENT. INCLUDING ANTENNAS, RET MOTORS, TMA'S, COAX CABLES, AND RET CONTROL CBALES AS A COMPLETE SYTEM. GROUNDING SHALL BE EXECUTED BY QUALIFIED WIREMEN IN COMPLIANCE WITH MANUFACTURER'S SPECIFICATION AND RECOMMENDATION.
4. CONRACTOR TO VERIFY THAT EXISTING COAX HANGERS ARE STACKABLE SNAP IN HANGERS. IF EXISTING HANGERS ARE NOT STACKABLE SNAP IN HANGERS THE CONTRACTOR SHALL REPLACE EXISTING HANGERS WITH NEW SNAP IN HANGERS IF APPLICABLE.

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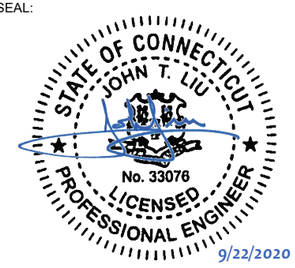
REV.	DESCRIPTION	BY	DATE
1	FOR CONSTRUCTION	ZDS	09/22/20

ATC SITE NUMBER:
283424

ATC SITE NAME:
WATERTOWN CT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795-1139

SEAL:



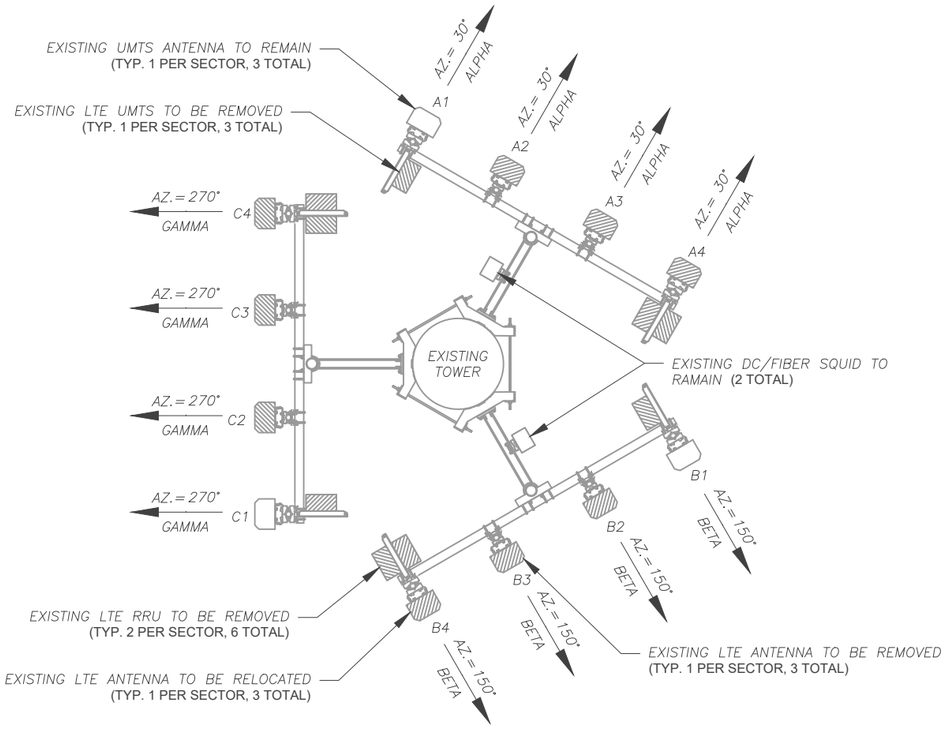
AT&T

DATE DRAWN:	05/29/20
ATC JOB NO:	283424
CUSTOMER ID:	10128117
CUSTOMER #:	20-10237

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	1

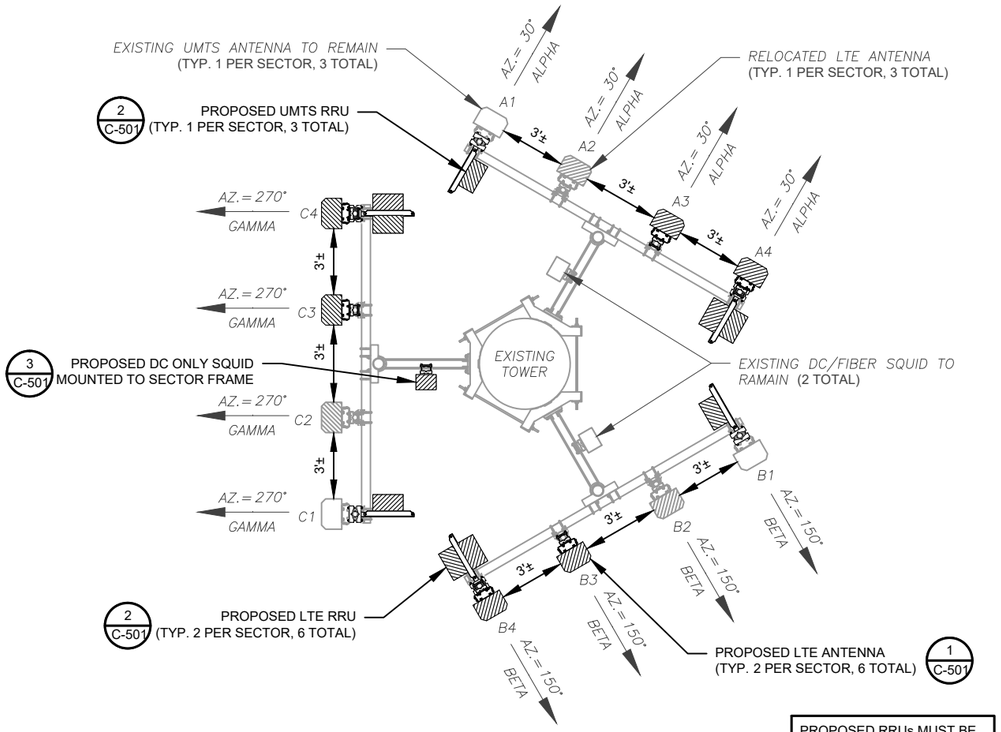
EXISTING AND FINAL CONFIGURATIONS ARE BASED ON RFDS. CONTRACTOR TO VERIFY EXISTING CONDITIONS.



1 CURRENT ANTENNA PLAN

1" = 5'-0"

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 07/13/20, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING ONCE THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, IS INSTALLED.



2 FINAL ANTENNA PLAN

1" = 5'-0"

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 8" AWAY FROM ALL ANTENNAS

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	126'	30°	A1	SBNH-1D6565C	UMTS	RMN	RRUS-11 B12	RMV
			A2	SBNH-1D6565C	LTE	RMV	–	–
			A3	SBNH-1D6565C	LTE	RMV	–	–
			A4	HPA-65R-BUU-H8	LTE	REL	RRUS-11 B12	RMV
							RRUS-12 B2+A2 B25	RMV
BETA	126'	150°	B1	SBNH-1D6565C	UMTS	RMN	RRUS-11 B12	RMV
			B2	SBNH-1D6565C	LTE	RMV	–	–
			B3	SBNH-1D6565C	LTE	RMV	–	–
			B4	HPA-65R-BUU-H8	LTE	REL	RRUS-11 B12	RMV
							RRUS-12 B2+A2 B25	RMV
GAMMA	126'	270°	C1	SBNH-1D6565C	UMTS	RMN	RRUS-11 B12	RMV
			C2	SBNH-1D6565C	LTE	RMV	–	–
			C3	SBNH-1D6565C	LTE	RMV	–	–
			C4	HPA-65R-BUU-H8	LTE	REL	RRUS-11 B12	RMV
							RRUS-12 B2+A2 B25	RMV

NOTES

1. BASED ON APPROVED ATC APPLICATION 283424, DATED 05/08/20. CONFIRM WITH AT&T MOBILITY REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIG OR MOUNT CONFIG. CONTRACTOR TO VERIFY MOUNT CONFIG HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (EQUIP) (I.E. CLEARANCES, MOUNT PIPE, SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
3. ALL PROPOSED EQUIP INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH ATC'S CM.
4. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
5. POSITIONS START WITH FIRST PIPE ON THE LEFT SIDE (AS VIEWED FROM BEHIND THE MOUNT).

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	126'	30°	A1	SBNH-1D6565C	UMTS	RMN	RRUS-11 B5	ADD
			A2	HPA-65R-BUU-H8	LTE	REL	-	-
			A3	OPA65R-BU8DA	LTE	ADD	RRUS-4478 B14	ADD
			A4	DMP65R-BU8DA	LTE	ADD	RRUS-4449 B5/B12	ADD
							RRUS-8843 B2/B66A	ADD
BETA	126'	150°	B1	SBNH-1D6565C	UMTS	RMN	RRUS-11 B5	ADD
			B2	HPA-65R-BUU-H8	LTE	REL	-	-
			B3	OPA65R-BU8DA	LTE	ADD	RRUS-4478 B14	ADD
			B4	DMP65R-BU8DA	LTE	ADD	RRUS-4449 B5/B12	ADD
							RRUS-8843 B2/B66A	ADD
GAMMA	126'	270°	C1	SBNH-1D6565C	UMTS	RMN	RRUS-11 B5	ADD
			C2	HPA-65R-BUU-H8	LTE	REL	-	-
			C3	OPA65R-BU8DA	LTE	ADD	RRUS-4478 B14	ADD
			C4	DMP65R-BU8DA	LTE	ADD	RRUS-4449 B5/B12	ADD
							RRUS-8843 B2/B66A	ADD

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(2) DC2-48-60-8-18F-02	RMN	–	(4) 0.78"	(2) 0.39"	RMN
–	–	–	–	–	–

STATUS ABBREVIATIONS
RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
DSC: TO BE DISCONNECTED & REMAIN
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS
FIBER DISTRIBUTION/SQUID TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL FIBER DISTRIBUTION/SQUID		FINAL CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(2) DC2-48-60-8-18F-02	RMN	–	(4) 0.78"	(2) 0.39"	RMN
DC2-48-60-8-18F-02	ADD	-	(2) 0.78"	-	ADD

3 EQUIPMENT SCHEDULES

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BIRMINGHAM, AL 35244
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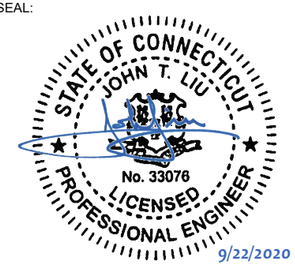
REV.	DESCRIPTION	BY	DATE
1	FOR CONSTRUCTION	ZDS	09/22/20

ATC SITE NUMBER:
283424

ATC SITE NAME:
WATERTOWN CT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795-1139

SEAL:

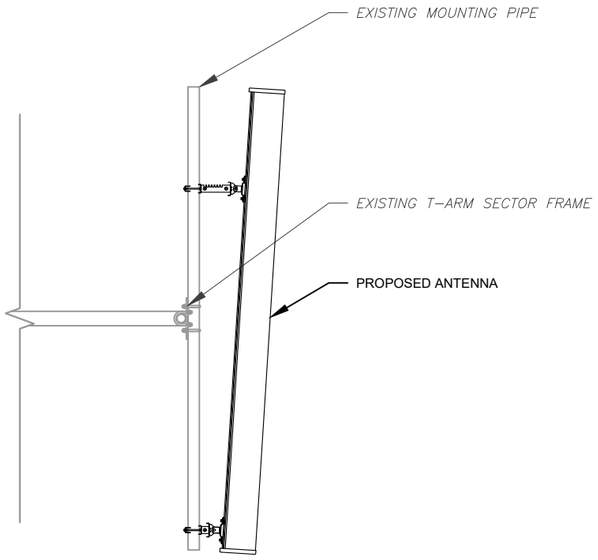


AT&T

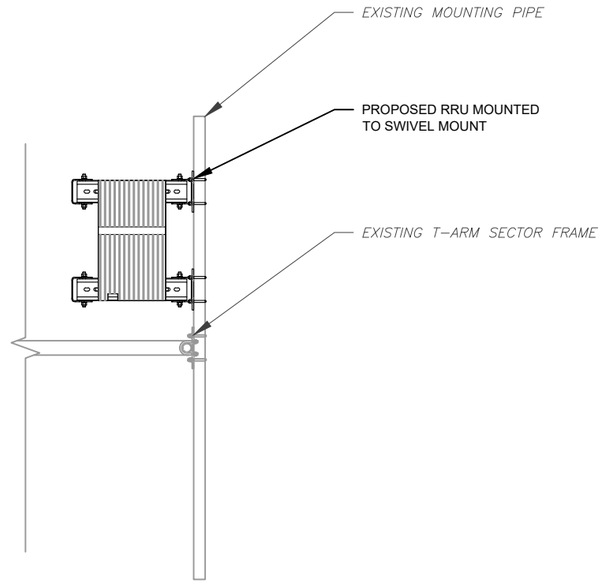
DATE DRAWN:	05/29/20
ATC JOB NO:	283424
CUSTOMER ID:	10128117
CUSTOMER #:	20-10237

RF SCHEDULE AND ANTENNA INSTALLATION

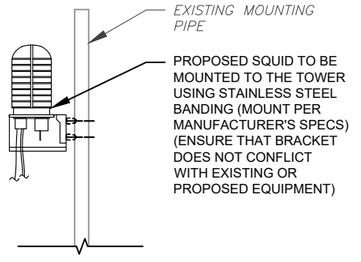
SHEET NUMBER:	REVISION:
C-401	1



1 ANTENNA DETAIL
SCALE: N.T.S.



2 RRU DETAIL
SCALE: N.T.S.



3 PROPOSED SQUID MOUNTING
SCALE: NOT TO SCALE

AMERICAN TOWER®

SMW ENGINEERING GROUP, INC.
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158 BUSINESS CENTER DRIVE
BIRMINGHAM, AL 35244
TEL: 205-252-6985 FAX: 205-320-1504

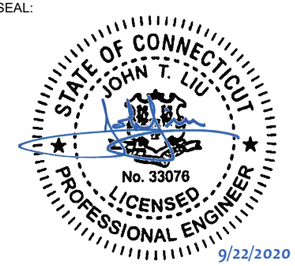
REV.	DESCRIPTION	BY	DATE
1	FOR CONSTRUCTION	ZDS	09/22/20

ATC SITE NUMBER:
283424

ATC SITE NAME:
WATERTOWN CT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795-1139

SEAL:

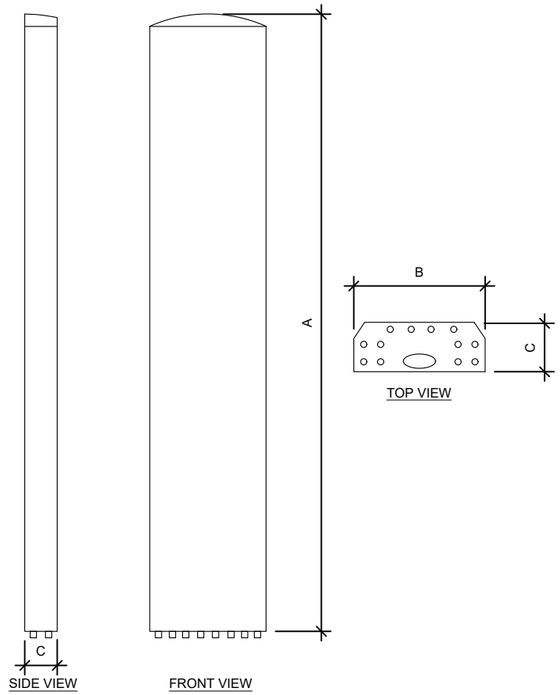


AT&T

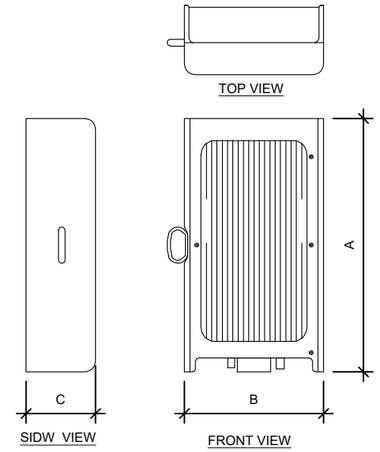
DATE DRAWN:	05/29/20
ATC JOB NO:	283424
CUSTOMER ID:	10128117
CUSTOMER #:	20-10237

CONSTRUCTION DETAILS

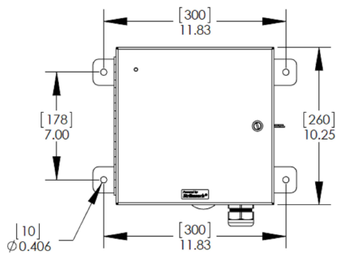
SHEET NUMBER:	REVISION:
C-501	1

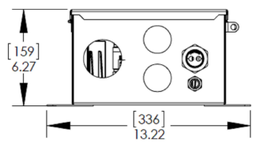


ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
OPA65R-BU8DA	96.0"	21"	7.8"	76.5
DMP65R-BU8DA	96.0"	20.7"	7.7"	95.7



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RRUS-11 B5	19.69"	16.97"	7.17"	55.0
RRUS-4478 B14	18.1"	13.4"	8.3"	59.4
RRUS-4449 B5/B12	17.9"	13.2"	9.4"	71.0
RRUS-8843 B2/B66A	18.0"	13.2"	11.3"	75.0





RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
DC2-48-60-8-18F-02	13.22"	11.64"	6.27"	16.0

1 EQUIPMENT SPECIFICATIONS
SCALE: NOT TO SCALE

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REV.	DESCRIPTION	BY	DATE
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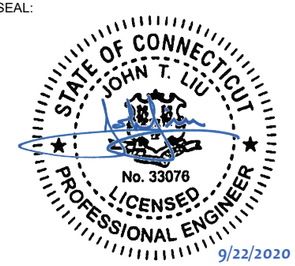
283424

ATC SITE NAME:
WATERTOWN CT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795-1139

SEAL:

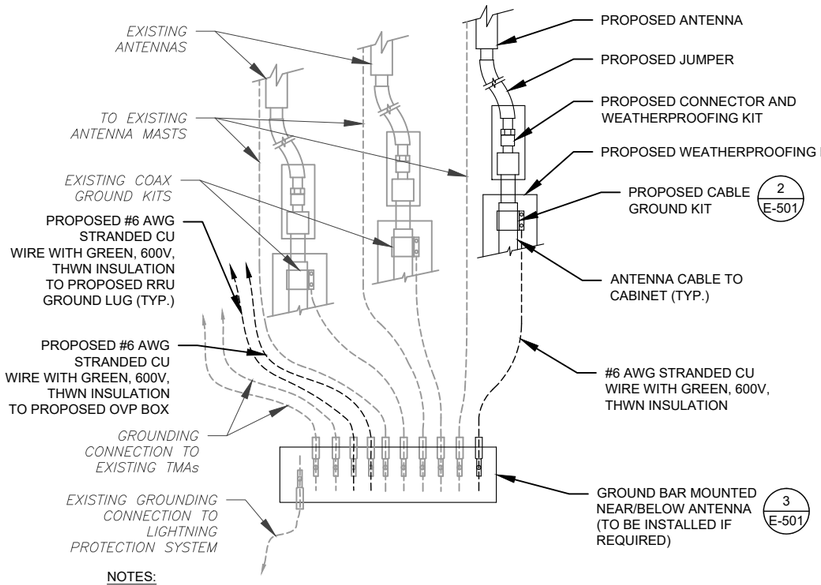


AT&T

DATE DRAWN:	05/29/20
ATC JOB NO:	283424
CUSTOMER ID:	10128117
CUSTOMER #:	20-10237

EQUIPMENT SPECIFICATIONS

SHEET NUMBER:	REVISION:
C-502	1

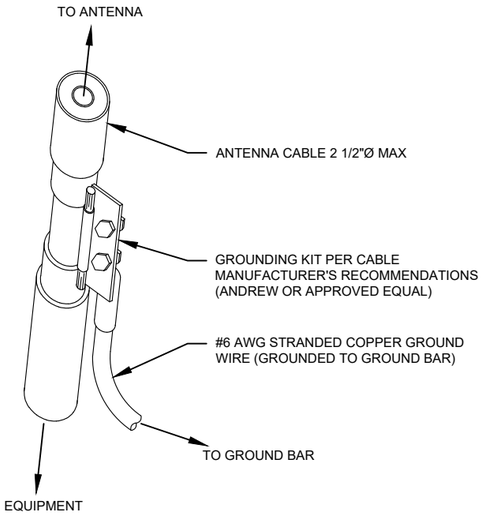


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T MOBILITY GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

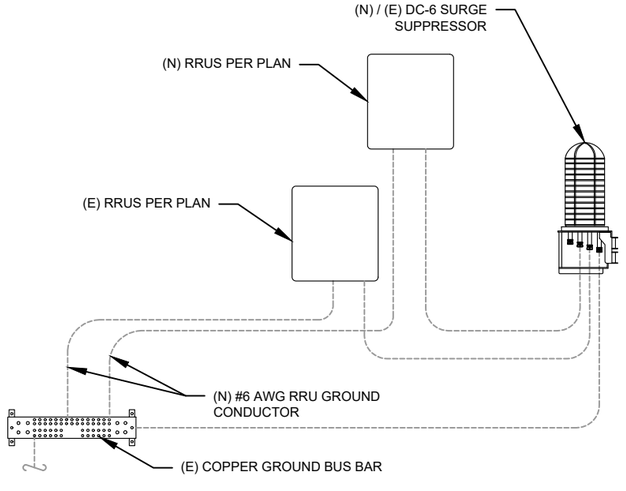


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

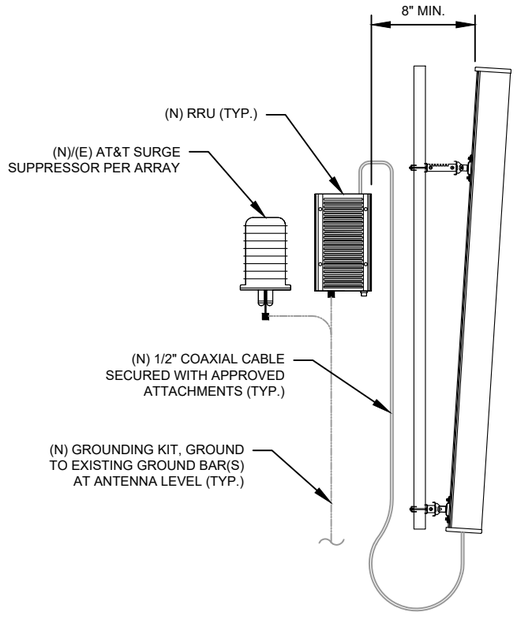
2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



3 RRU GROUNDING

SCALE: N.T.S.



4 ANTENNA/RRU GROUNDING

SCALE: N.T.S.

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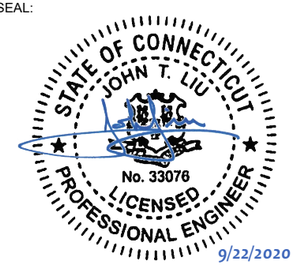
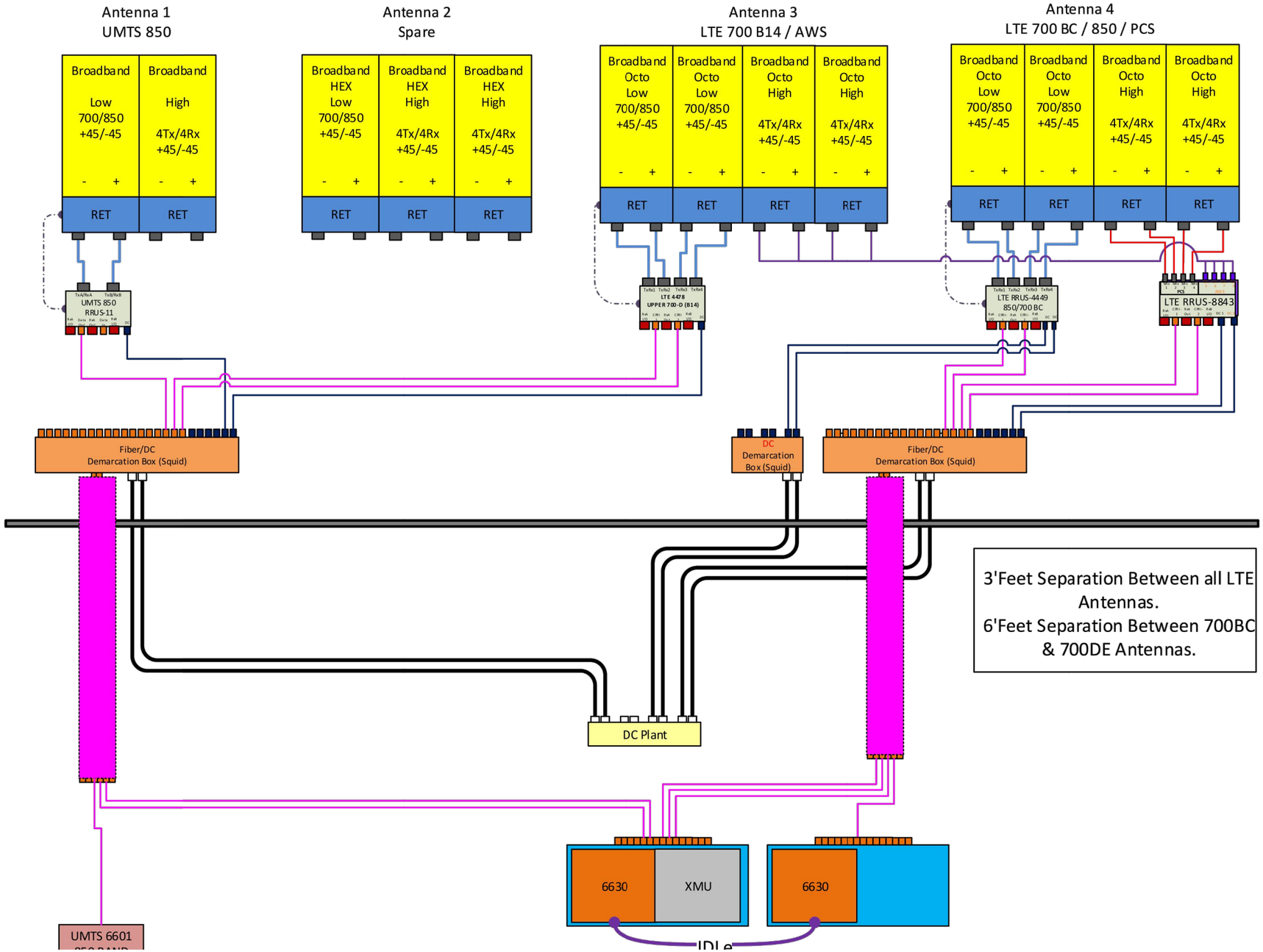


AT&T

DATE DRAWN:	05/29/20
ATC JOB NO:	283424
CUSTOMER ID:	10128117
CUSTOMER #:	20-10237

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	1



1 PLUMBING DIAGRAM

SCALE: NOT TO SCALE

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	-

Antenna Mount Analysis Report

ATC Site Name	:	**WATERTOWN CT, CT**
ATC Site Number	:	**283424**
Engineering Number	:	**13213496_C9_06**
Mount Elevation	:	**124 ft**
Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**MRCTB046623**
Carrier Site Number	:	**CTL01835**
Site Location	:	**655 Bassett Road** **Watertown, CT 06795-1139** **41.65707777 , -73.1362611**
County	:	**Litchfield**
Date	:	**July 13, 2020**
Max Usage	:	**98%**
Result	:	**Contingent Pass**

Prepared By:
Mitchell Chen
Structural Engineer I

Reviewed By:

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 124 ft.

Supporting Documents

Mount Mapping	MasTec Project #202197, dated June 17, 2020
Radio Frequency Data Sheet	RFDS ID #10128117, dated March 24, 2020
Reference Photos	Site photos from 2020

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	115 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.185, S1 = 0.054
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Install modifications per ATC drawing #13213496_C9_06.

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.

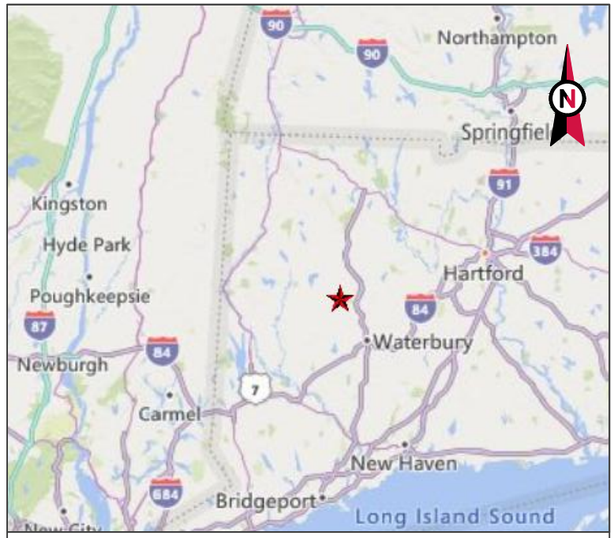
A.T. Engineering Service, PLLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

1 MOUNT ANALYSIS
SCALE: NOT TO SCALE

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	-



VICINITY MAP

AMERICAN TOWER®

SITE NAME: WATERTOWN CT
SITE NUMBER: 283424
ATC PROJECT NUMBER: 13213496_C9_06
SITE ADDRESS: 655 BASSETT ROAD
WATERTOWN, CT 06795

LOCATION MAP

MOUNT REINFORCEMENT DRAWINGS
PREPARED FOR AT&T MOBILITY

PROJECT TEAM

TOWER OWNER

AMERICAN TOWER
10 PRESIDENTAL WAY
WOBURN, MA 01801

ENGINEERED BY

ATC TOWER SERVICES
3500 REGENCY PARKWAY, SUITE 100
CARY, NC 27518

CARRIER INFORMATION

CARRIER: AT&T MOBILITY
CARRIER SITE NAME: MRCTB046623
CARRIER SITE NUMBER: CTL01835

811 Know what's below. Call before you dig.

PROJECT DESCRIPTION

THE MODIFICATIONS PRESENTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE MOUNT ANALYSIS COMPLETED UNDER ENGINEERING PROJECT NUMBER 13213496_C8_03 DATED 07/02/20. SATISFACTORY COMPLETION OF THE WORK INDICATED ON THESE DRAWINGS WILL RESULT IN THE MOUNT MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE MOUNT ANALYSIS WAS COMPLETED.

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. ANSI/TIA/EIA: STRUCTURAL STANDARDS (222-H EDITION)
2. INTERNATIONAL BUILDING CODE (2015 IBC)
3. CONNECTICUT STATE BUILDING CODE (2018)

PROJECT LOCATION

GEOGRAPHIC COORDINATES

LATITUDE: 41.65707777

LONGITUDE: -73.1362611

SHEET	SHEET TITLE	REV.
G-002	IBC GENERAL NOTES AND MOUNT MODIFICATION INSPECTION	0
S-101	MODIFICATION PROFILE	0
R-601	SUPPLEMENTAL	0
R-602	SUPPLEMENTAL	0

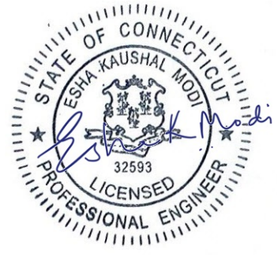
AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	07/15/20

ATC SITE NUMBER:
283424

ATC SITE NAME:
WATERTOWN CT
CONNECTICUT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795



DRAWN BY:	CGM
APPROVED BY:	MCC
DATE DRAWN:	07/15/20
ATC JOB NO:	13213496_C9_06

COVER

SHEET NUMBER: G-001

REVISION: 0

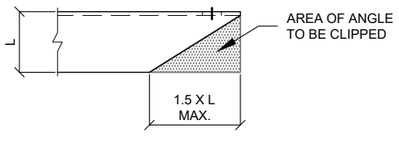
GENERAL

1. ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL REQUIRED PERMITS.
2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
4. ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
5. ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSI/TIA-322 AND ANSI/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
8. CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

STRUCTURAL STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
2. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
3. ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
4. FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
5. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
6. ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2) BRUSHED COATS OF POLYGUARD CA-14 MASTIC OR EQUIVALENT. REFER TO THE MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION. APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
7. CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
8. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.

MAXIMUM ALLOWABLE ANGLE CLIP



PAINT

1. AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1L.

WELDING

1. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
2. ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
3. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
4. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER AND/OR BASE METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
5. IN CASES WHERE BASE METAL GRADE IS UNKNOWN, ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES; ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES, UNLESS NOTED OTHERWISE.
6. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

BOLT TIGHTENING PROCEDURE

1. STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
2. FLANGE BOLTS SHALL BE INSTALLED AND TIGHTENED USING DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS. DTI SQUIRTER WASHERS ARE TO BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
3. IN LIEU OF USING DTI SQUIRTER WASHERS, FLANGE BOLTS MAY BE TIGHTENED USING AISC / RCSC "TURN-OF-THE-NUT" METHOD, PENDING APPROVAL BY THE ENGINEER OF RECORD (EOR). TIGHTEN FLANGE BOLTS USING THE CHART BELOW:

BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

BOLT TIGHTENING PROCEDURE (CONTINUED)

4. SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

   FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

   8.2.1 TURN-OF-NUT PRETENSIONING
   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

5. ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

   ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

MODIFICATION INSPECTION NOTES

THE MOUNT MODIFICATION INSPECTION (MMI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER SITES.

TO ENSURE THAT THE REQUIREMENTS OF THE MMI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR SUBMIT ALL REQUIRED PHOTOGRAPHS AND DRAWINGS TO AMERICAN TOWER CORPORATION (ATC).

GENERAL CONTRACTOR

THE GENERAL CONTRACTOR IS REQUIRED TO:

- REVIEW THE REQUIREMENTS OF THE MMI CHECKLIST.
- UNDERSTAND ALL INSPECTION REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MMI CHECKLIST.

MOUNT MODIFICATION INSPECTION CHECKLIST

INSPECTION DOCUMENT	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY
ON-SITE COLD GALVANIZING VERIFICATION	PHOTOGRAPHIC EVIDENCE OF COLD GALVANIZATION TYPE AND APPLICATION IN ALL APPLICABLE LOCATIONS TO BE INCLUDED WITHIN THE MMI REPORT	✔	GC
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	"AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO MMI FOR APPROVAL/REVIEW AND INCLUSION IN MMI REPORT	✔	GC
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF MOUNT MODIFICATION INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE MMI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN MMI REPORT.	✔	GC

TABLE KEY:
MMI - MOUNT MODIFICATION INSPECTION
GC - GENERAL CONTRACTOR
ATC - AMERICAN TOWER CORPORATION

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

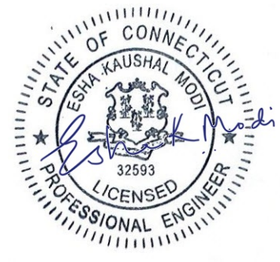
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	07/15/20

ATC SITE NUMBER:
283424

ATC SITE NAME:
WATERTOWN CT

CONNECTICUT

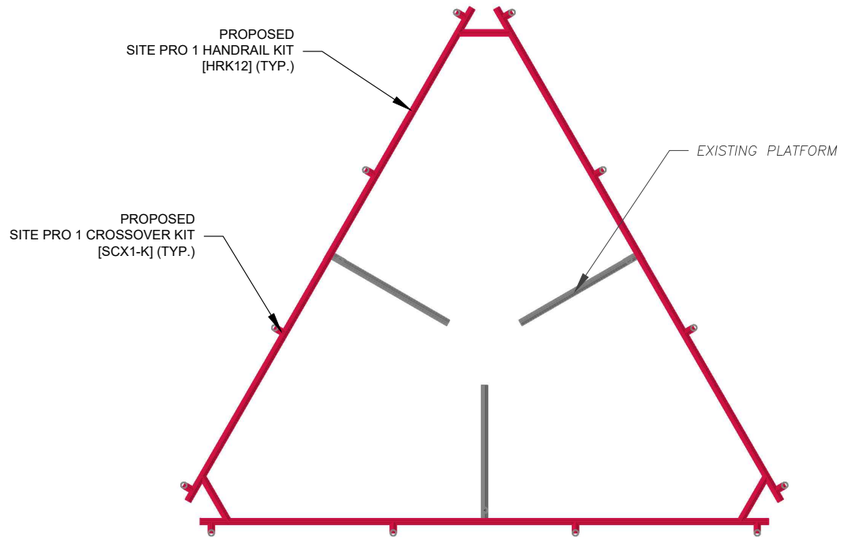
SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795



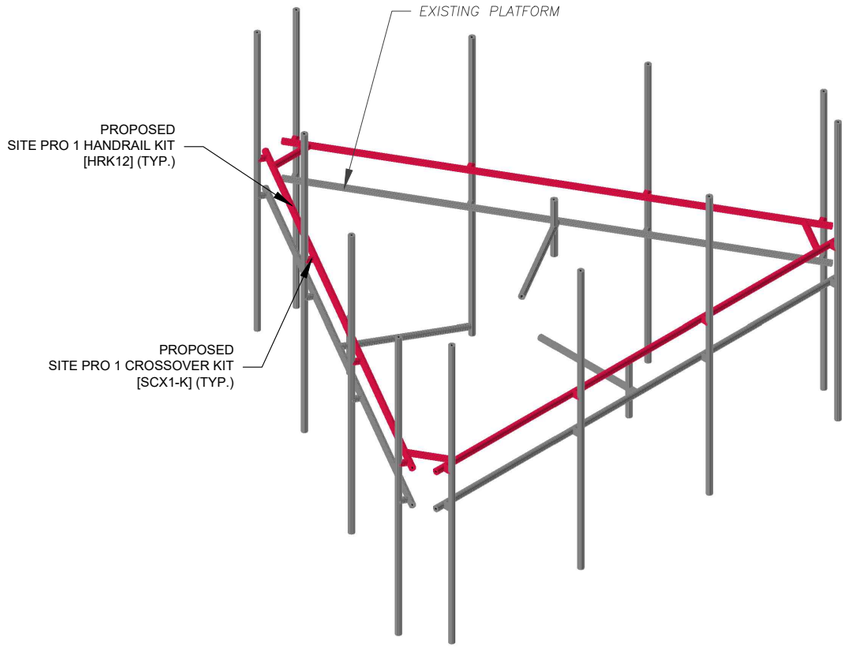
DRAWN BY:	CGM
APPROVED BY:	MCC
DATE DRAWN:	07/15/20
ATC JOB NO:	13213496_C9_06

IBC GENERAL NOTES AND MOUNT MODIFICATION INSPECTION

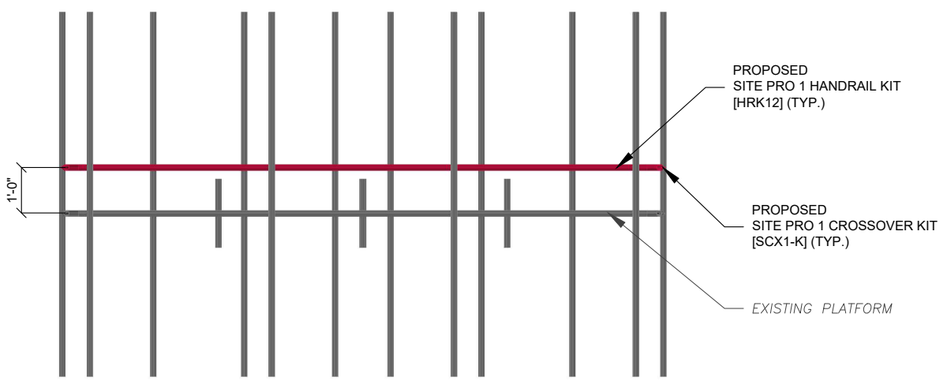
SHEET NUMBER:	REVISION:
G-002	0



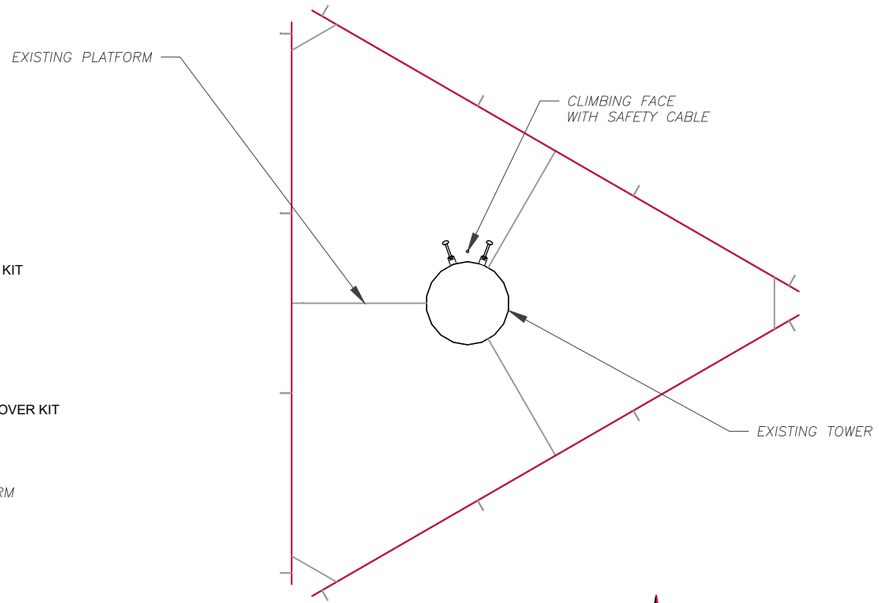
MOUNT MODIFICATION - TOP VIEW



MOUNT MODIFICATION - ISOMETRIC VIEW



MOUNT MODIFICATION - FRONT VIEW



SAFETY CLIMB LOCATION

N

NOTE:
CONTRACTOR TO INSTALL MOUNT MODIFICATIONS PER THE MANUFACTURERS SPECIFICATION. MODIFICATIONS SHALL NOT OBSTRUCT, INTERFERE, OR BLOCK EXISTING SAFETY CLIMB SYSTEM. IF ANY OF THESE OCCURS DURING INSTALLATION CONTACT THE AMERICAN TOWER PMI INBOX PMI@AMERICANTOWER.COM

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CGM	07/15/20

ATC SITE NUMBER:
283424

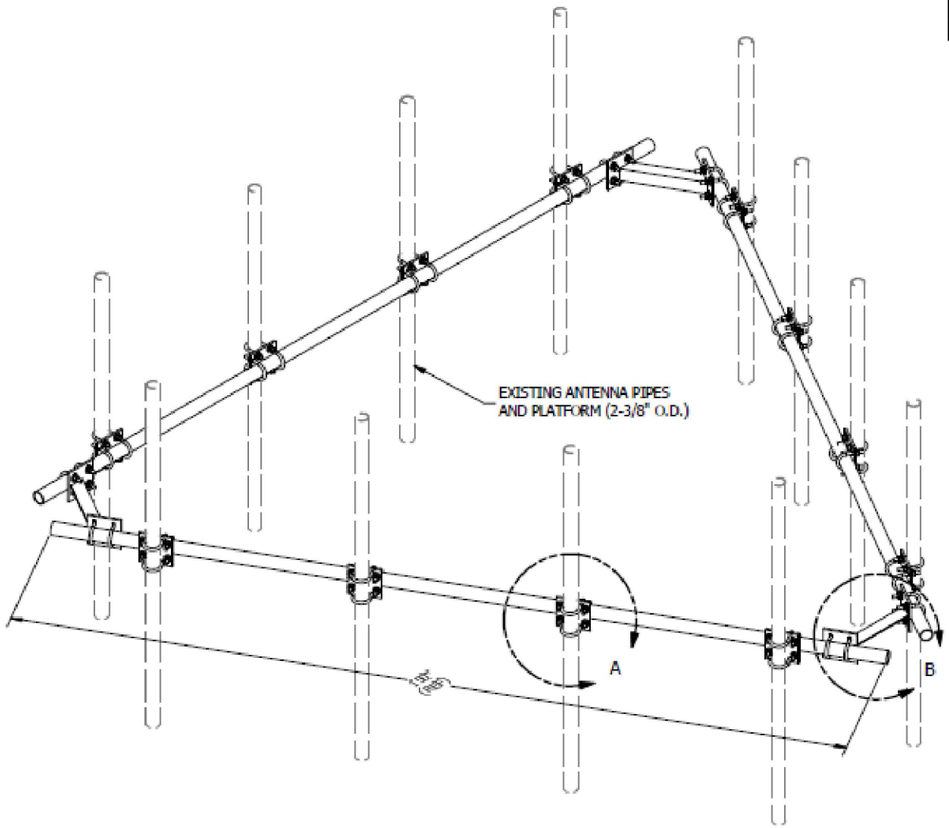
ATC SITE NAME:
WATERTOWN CT
CONNECTICUT

SITE ADDRESS:
655 BASSETT ROAD
WATERTOWN, CT 06795

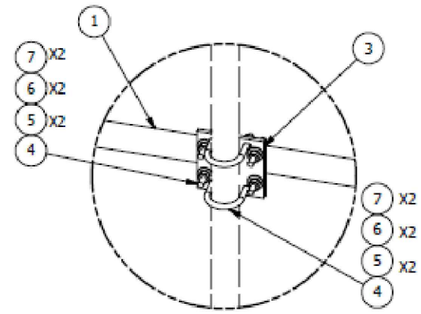
DRAWN BY:	CGM
APPROVED BY:	MCC
DATE DRAWN:	07/15/20
ATC JOB NO:	13213496_C9_06

MODIFICATION PROFILE

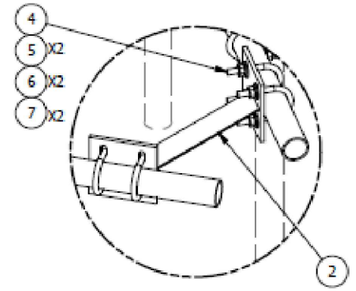
SHEET NUMBER:	REVISION:
S-101	0



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	P2150	2-3/8" O.D. X 150" SCH 40 GALVANIZED PIPE	150 in	45.77	137.31
2	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
3	12	SCX1	CROSSOVER PLATE 2-3/8" X 2-3/8"	6 in	3.71	44.50
4	60	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	37.51
5	120	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	4.09
6	120	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	1.67
7	120	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	8.60
					TOTAL WT. #	272.43



DETAIL A



DETAIL B

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	REPLACED HCP WITH X-AHCP		CEK	7/10/2014

REVISION HISTORY

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: HANDRAIL KIT FOR 12'-6" FACE

CPD NO.

DRAWN BY: KC8 5/30/2012

ENG. APPROVAL

CLASS: 81 | SUB: 01

DRAWING USAGE: CUSTOMER

CHECKED BY: BMC 7/13/2014

PART NO.: HRK12

DWG. NO.: HRK12

PAGE 1 OF 1

SITE PRO 1 — A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

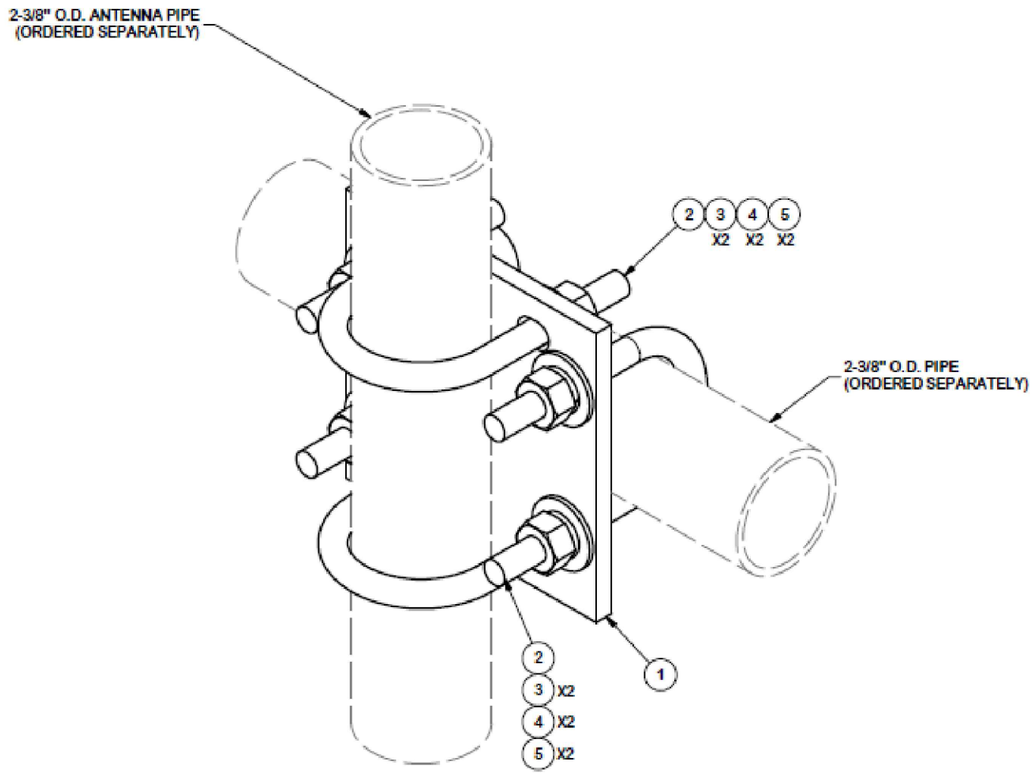
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: 0

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	SCX1	CROSSOVER PLATE 2-3/8" X 2-3/8"		3.71	3.71
2	4	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	2.50
3	8	G12FW	1/2" HDG USS FLATWASHER		0.03	0.27
4	8	G12LW	1/2" HDG LOCKWASHER		0.01	0.11
5	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	7.16



REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	ADDED MISSING U-BOLT AND HRDWE		KC8	7/5/2012

REVISION HISTORY

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* **- NO CONING OF HOLES**
LASER CUT EDGES AND HOLES *(± 0.010")* **- NO CONING OF HOLES**
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

DESCRIPTION: CROSSOVER PLATE

SITE PRO 1 — A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 6/30/2011		SCX1-K	1 OF 1

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	CEK 8/23/2012	SCX1-K

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION: 0

EXHIBIT 2

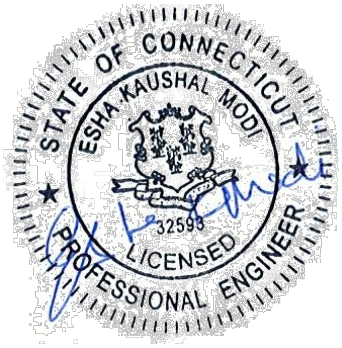
AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	**WATERTOWN CT, CT**
ATC Site Number	:	**283424**
Engineering Number	:	**13213496_C9_06**
Mount Elevation	:	**124 ft**
Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**MRCTB046623**
Carrier Site Number	:	**CTL01835**
Site Location	:	**655 Bassett Road** **Watertown, CT 06795-1139** **41.65707777 , -73.1362611**
County	:	**Litchfield**
Date	:	**July 13, 2020**
Max Usage	:	**98%**
Result	:	**Contingent Pass**

Prepared By:
Mitchell Chen
Structural Engineer I

Reviewed By:



Authorized by "EOR"
Oct 30 2020 3:45 PM cosign

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 124 ft.

Supporting Documents

Mount Mapping	MasTec Project #202197, dated June 17, 2020
Radio Frequency Data Sheet	RFDS ID #10128117, dated March 24, 2020
Reference Photos	Site photos from 2020

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	115 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1'' radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.185, S1 = 0.054
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Install modifications per ATC drawing #13213496_C9_06.

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.

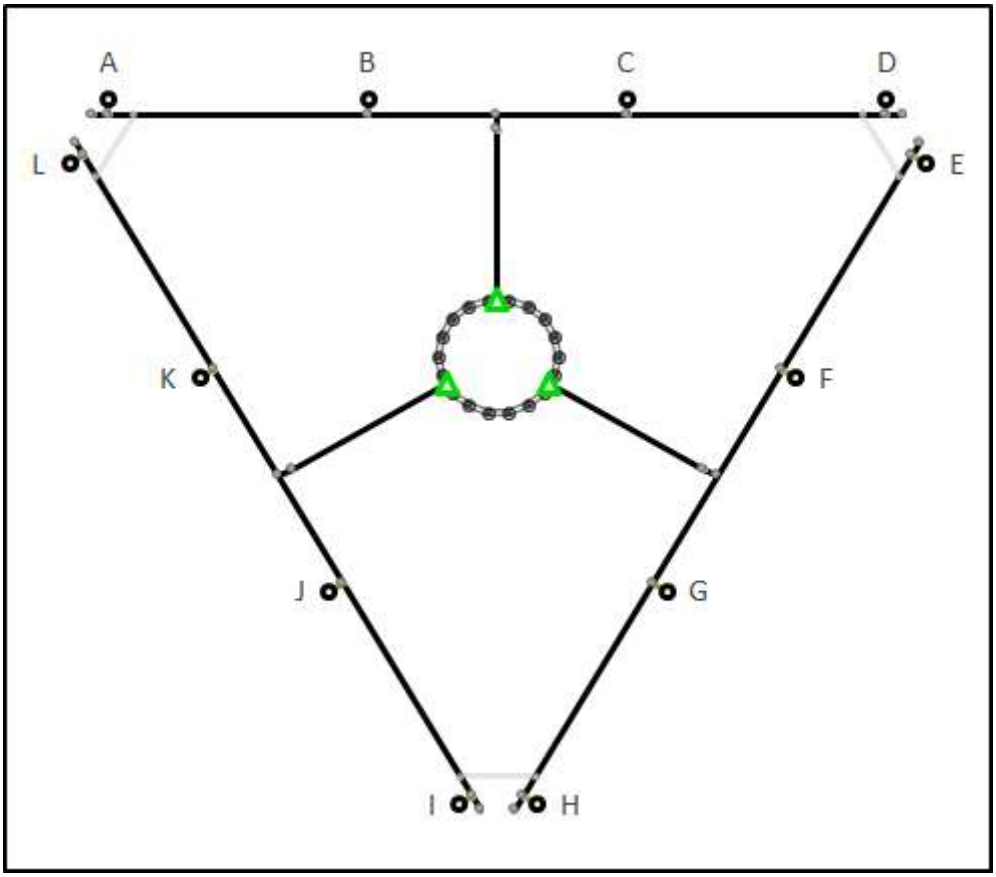
Application Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
124.0	126.0	3	CCI OPA65R-BU8D
		3	Commscope SBNH-1D6565C
		3	CCI DMP65R-BU8D
		3	CCI HPA-65R-BUU-H8
		1	Raycap DC2-48-60-8-18F-02
		1	Raycap DC2-48-60-8-18F-02
		1	Raycap DC2-48-60-8-18F-02
		3	Ericsson RRUS 11 B5
		3	Ericsson RRUS 4478 B14
		3	Ericsson RRUS 4449 B5, B12
		3	Ericsson RRUS 8843 B2, B66A

Structure Usages

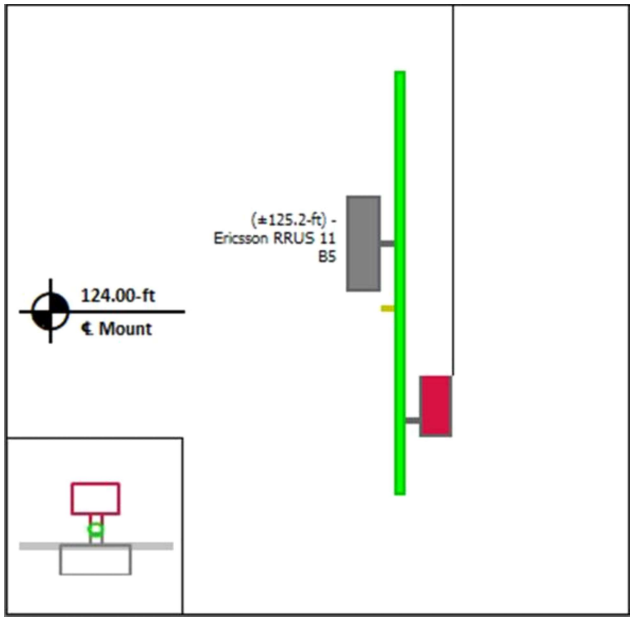
Structural Component	Controlling Usage	Pass/Fail
Horizontals	93%	Pass
Mount Pipes	98%	Pass
Connection	81%	Pass
Mod-Kit	82%	Pass

Mount Layout

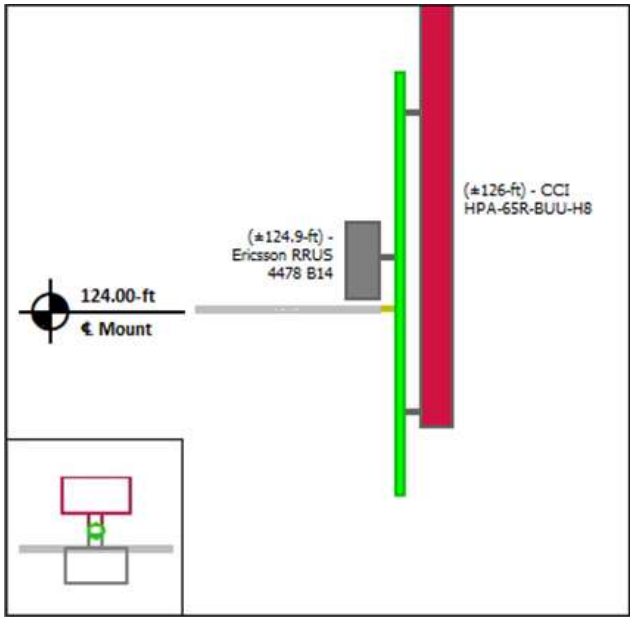


Equipment Layout

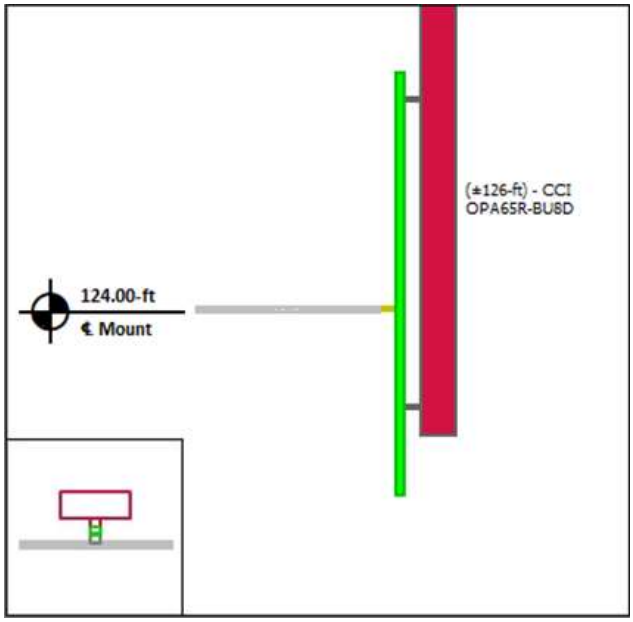
Mount Pipe A



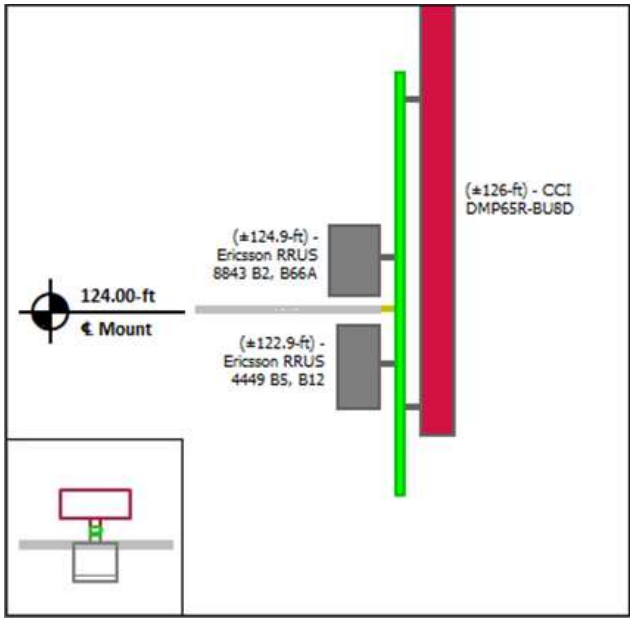
Mount Pipe B



Mount Pipe C

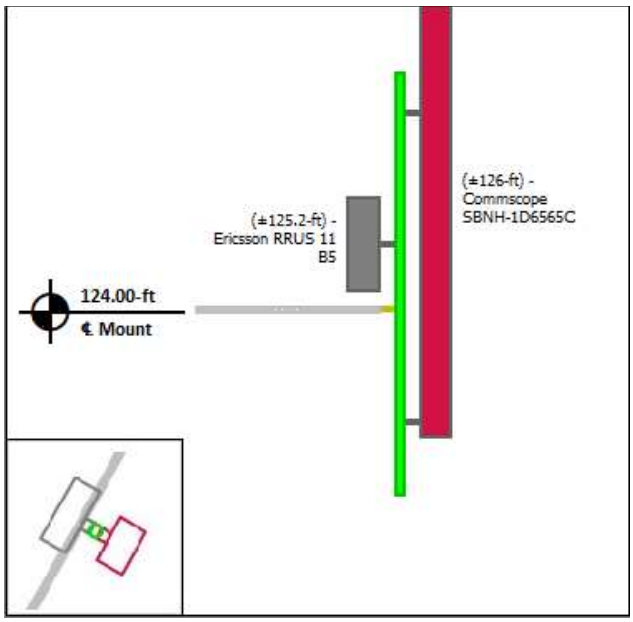


Mount Pipe D

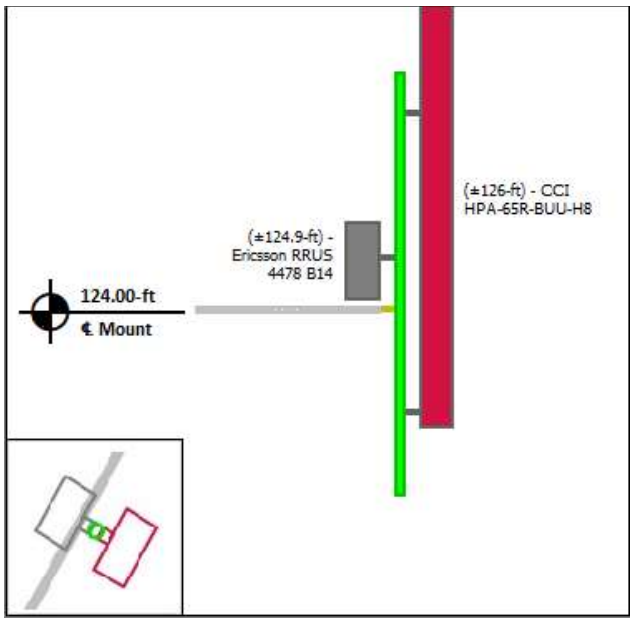


Equipment Layout Cont'd.

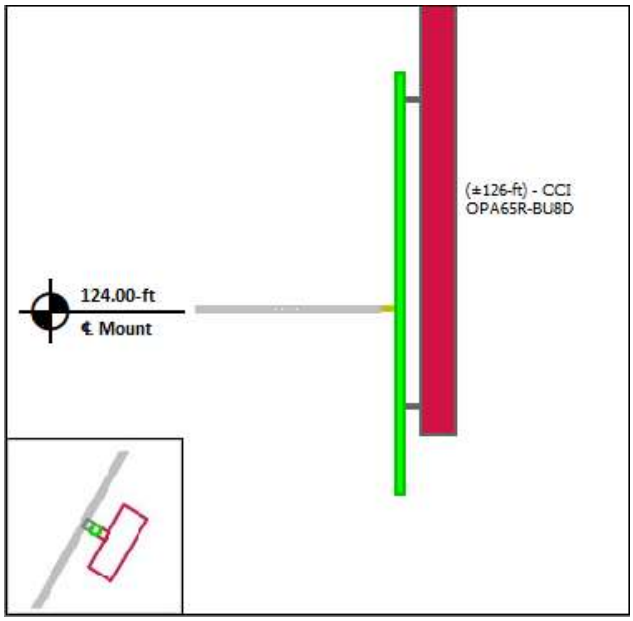
Mount Pipe E



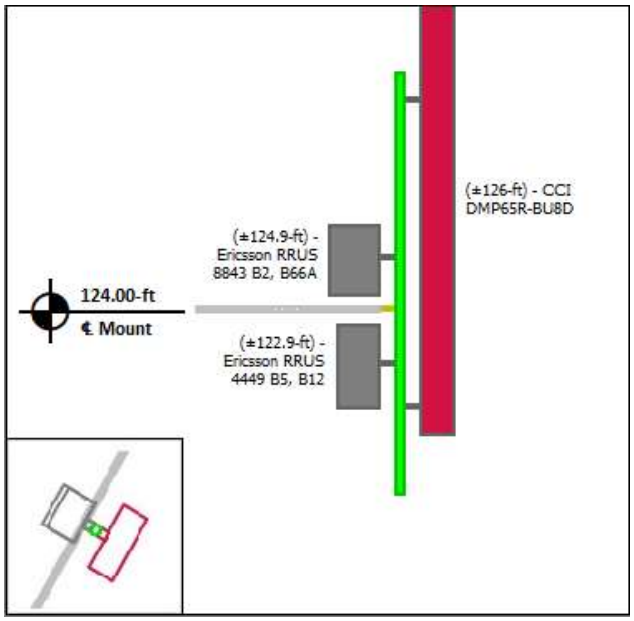
Mount Pipe F



Mount Pipe G

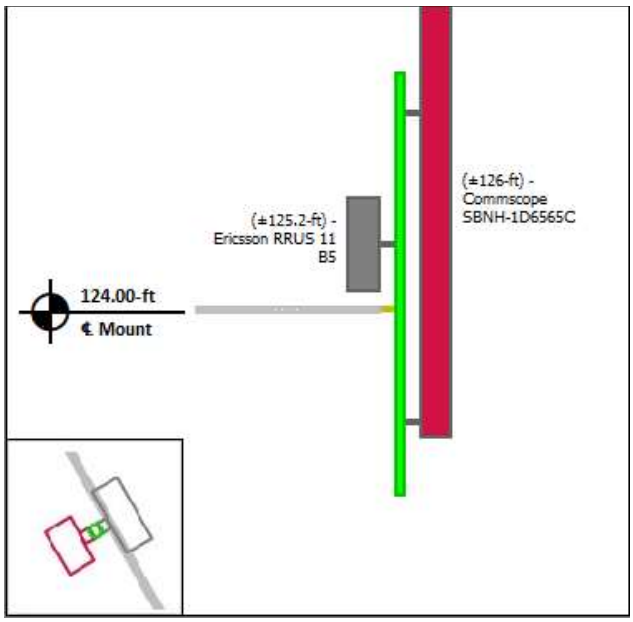


Mount Pipe H

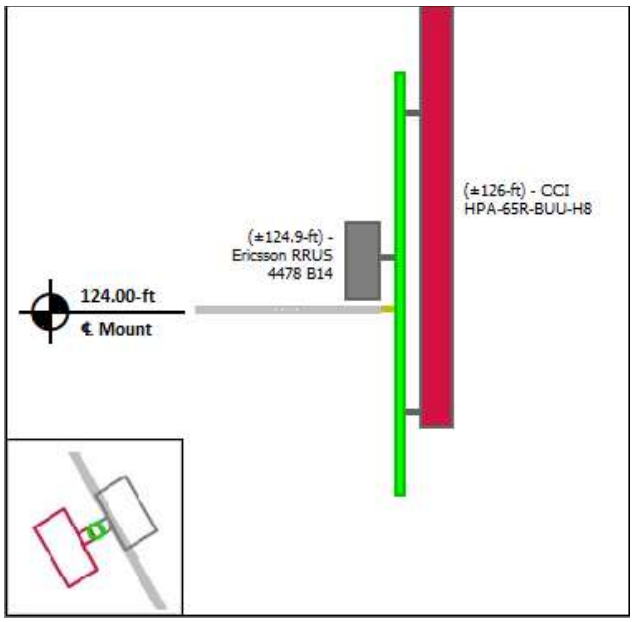


Equipment Layout Cont'd.

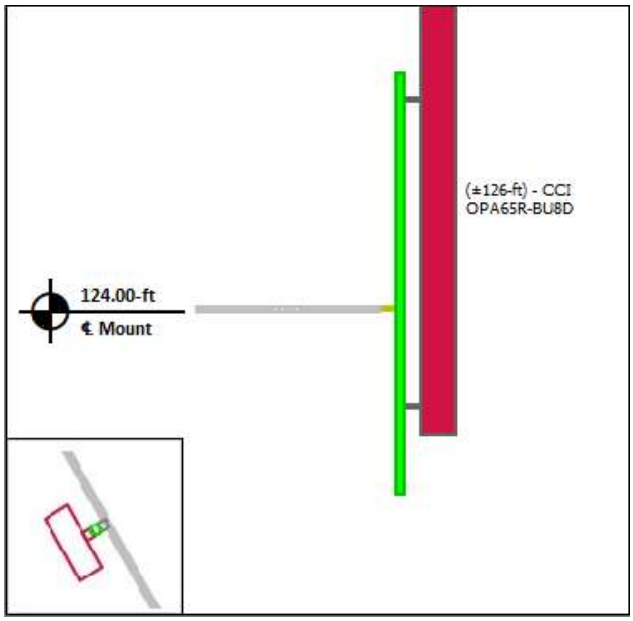
Mount Pipe I



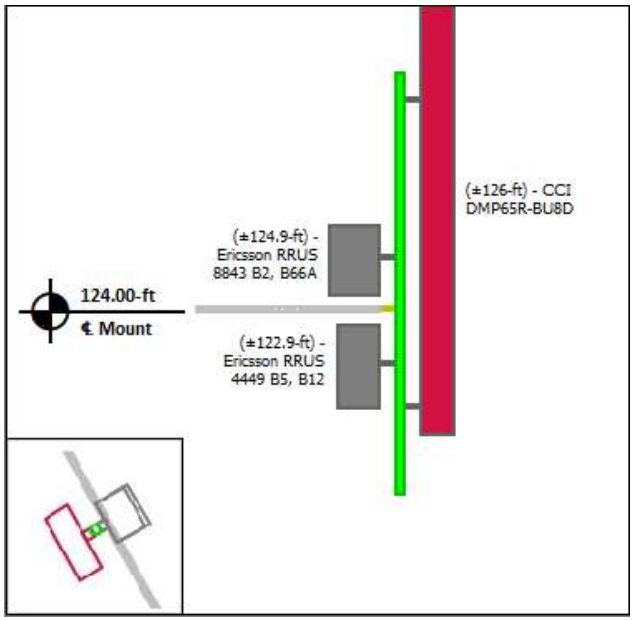
Mount Pipe J



Mount Pipe K



Mount Pipe L



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

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 supplied herein.

AMERICAN TOWER®
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Site Number:	*283424*
Project Number:	*13213496_C9_06*
Carrier:	*AT&T Mobility*
Mount Elevation:	*124 ft*
Date:	7/13/2020

Mount Analysis Force Calculations

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.32	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	0.97	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	115	mph
Velocity Pressure	q_z	41.3	psf
Height Escalation Factor	K_{iz}	1.14	
Thickness of Radial Glaze Ice	T_{iz}	1.14	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.197	
1 Second DSRAP	S_{D1}	0.086	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.099	
Amplification Factor	A	1.0	
Total Weight	W	2617.4	lbs
Total Shear Force	V_S	258.2	lbs
Horizontal Seismic Load	Eh	258.2	lbs
Vertical Seismic Load	Ev	103.3	lbs

Antenna Calculations

Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
CCI OPA65R-BU8D	105.6	23.1	8.6	76.5	21.89	3.78	24.57	4.88
Commscope SBNH-1D6565C	106.0	13.1	7.8	60.8	13.85	3.45	16.61	4.56
CCI DMP65R-BU8D	105.6	22.8	8.5	95.7	21.62	3.73	24.31	4.83
CCI HPA-65R-BUU-H8	101.6	16.3	8.1	68.0	15.70	3.45	18.30	4.51
Raycap DC2-48-60-8-18F-02	17.2	21.1	6.8	14.5	N/A	N/A		
Raycap DC2-48-60-8-18F-02	17.2	21.1	6.8	14.5	N/A	N/A		
Raycap DC2-48-60-8-18F-02	17.2	21.1	6.8	14.5	N/A	N/A		
Ericsson RRUS 11 B5	21.7	18.7	7.9	50.7	3.38	1.44	4.19	2.05
Ericsson RRUS 4478 B14	18.2	14.7	8.5	59.9	2.23	1.28	2.90	1.83
Ericsson RRUS 4449 B5, B12	19.7	14.5	10.3	71.0	2.38	1.70	3.08	2.31
Ericsson RRUS 8843 B2, B66A	16.4	14.5	12.0	72.0	1.98	1.64	2.61	2.22

AMERICAN TOWER®
CORPORATION

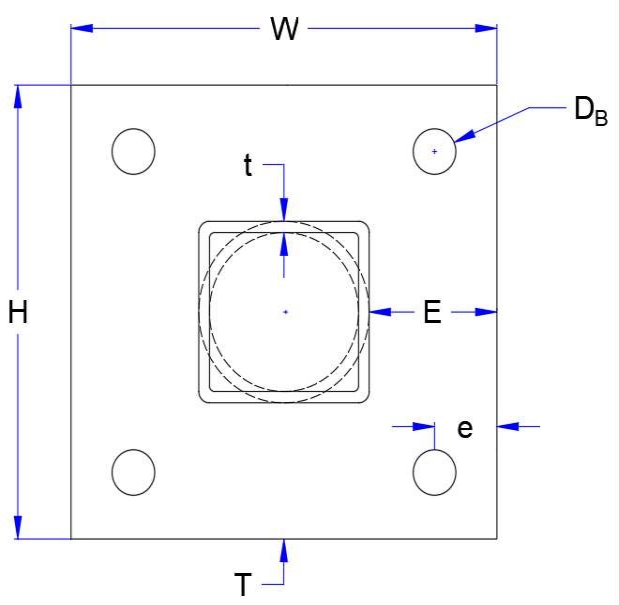
Site Number:	*283424*
Project Number:	*13213496_C9_06*
Carrier:	*AT&T Mobility*
Mount Elevation:	*124 ft*
Date:	7/13/2020

Mount-to-Tower Connection Analysis

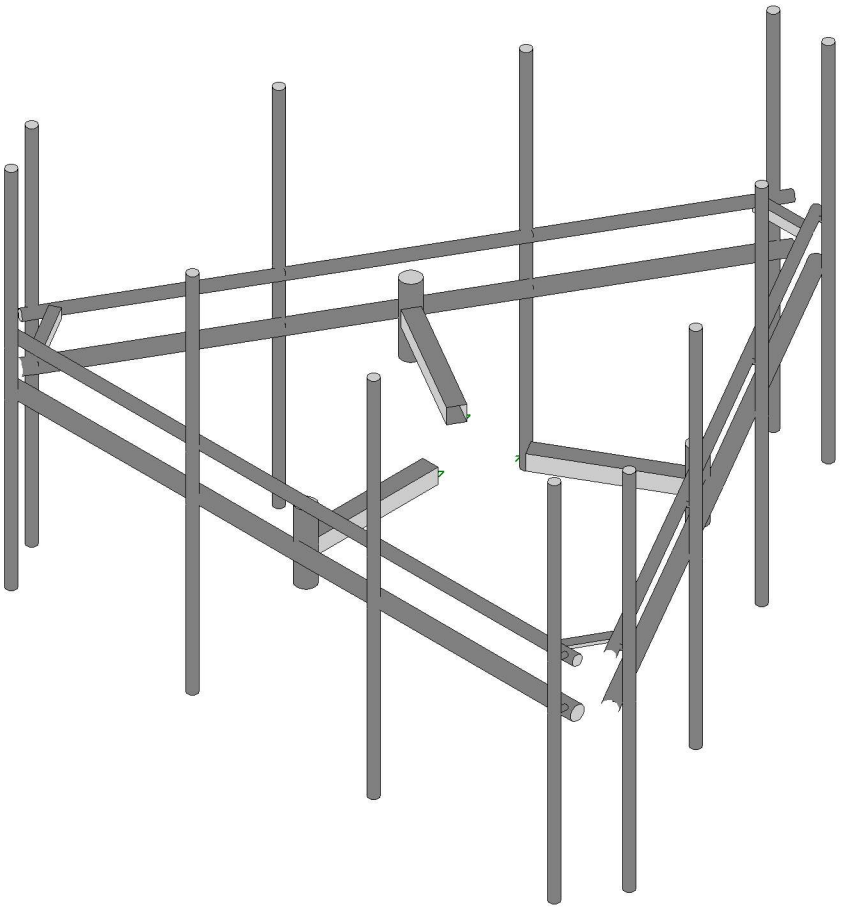
Applied Loads from RISA 3D			
Controlling Load Combination		13	
Node Label		N027	
Force in X	Fx	-2259.7	lbs
Force in Y	Fy	1106.2	lbs
Force in Z	Fz	3490.2	lbs
Moment about X	Mx	3287.8	lb-ft
Moment about Y	My	9331.5	lb-ft
Moment about Z	Mz	-1666.0	lb-ft

Bolt Shear and Tensile Capacity			
Bolt Quantity	n	4	
Bolt Diameter	D_B	5/8	in
Bolt Edge Distance	e	1	in
Bolt Grade		A325	
Bolt Fy	Fy_B	92	ksi
Bolt Fu	Fu_B	120	ksi
Applied Shear	Vu	0.33	k
Applied Tension	Tu	13.49	k
Tensile Strength	ϕTn	20.3	k
Interaction Capacity	(Tu+Vu)/ϕTn	68%	Pass

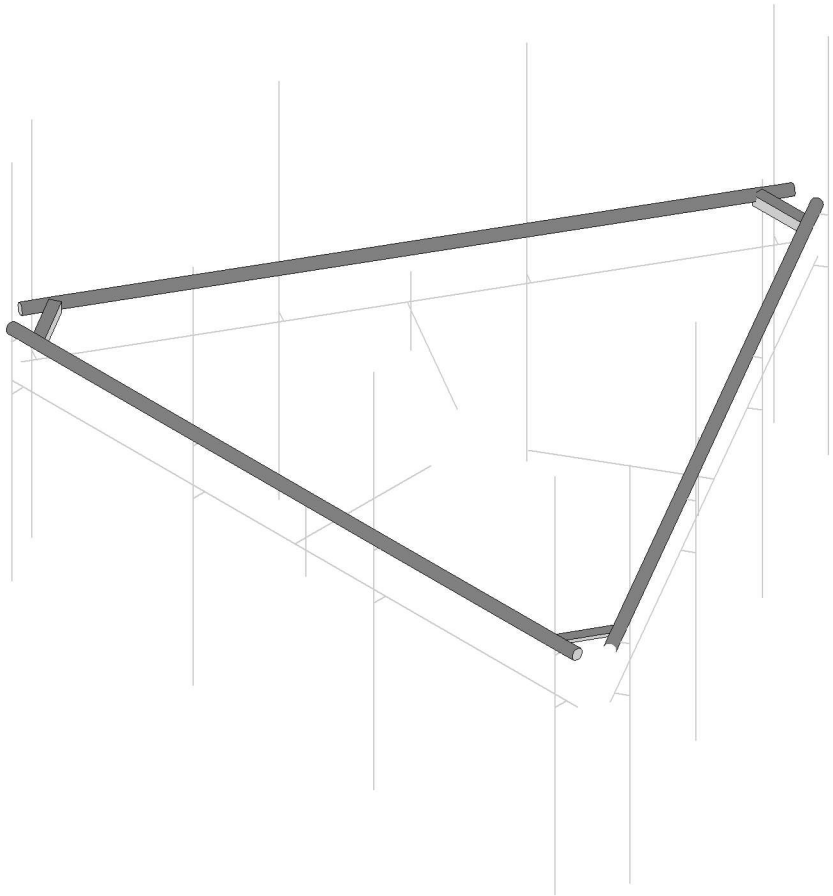
Plate Flexural Capacity			
Plate Height	H	8	in
Plate Width	W	8	in
Plate Thickness	T	3/4	in
Plate Grade		A36	
Plate Fy	Fy_P	36	ksi
Plate Fu	Fu_P	58	ksi
Applied Moment	Mu	16.9	k-in
Flexural Strength	ϕMn	36.5	k-in
Flexural Capacity	Mu/ϕMn	46%	Pass



Weld and Base Metal Capacity			
Standoff Type		Tube	
Standoff Member		HSS4x4x4	
Member Edge Distance	E	2	in
Member Width	w	4	in
Member Thickness	t	0.250	in
Member Grade		A500 Gr. B	
Member Fy	Fy_M	42	ksi
Member Fu	Fu_M	58	ksi
Weld Size	a	3/16	in
Weld Length	l	16.0	in
Applied Load	Pu	27.0	k
Weld Strength	ϕRn	33.4	k
Weld Capacity	Pu/ϕRn	81%	Pass
Minimum Base Metal Thickness		0.160	in
Controlling Base Metal Thickness		0.250	in
Base Metal Result		Acceptable	



American Tower Corp.		SK - 1
Mitchell.Chen	283424, WATERTOWN CT	July 13, 2020 at 2:12 PM
13213496_C9_06	3D Rendering (Final Configuration)	R3D. AT&T MOBILITY @ 283424, ...



American Tower Corp.		SK - 2
Mitchell.Chen	283424, WATERTOWN CT	July 13, 2020 at 2:12 PM
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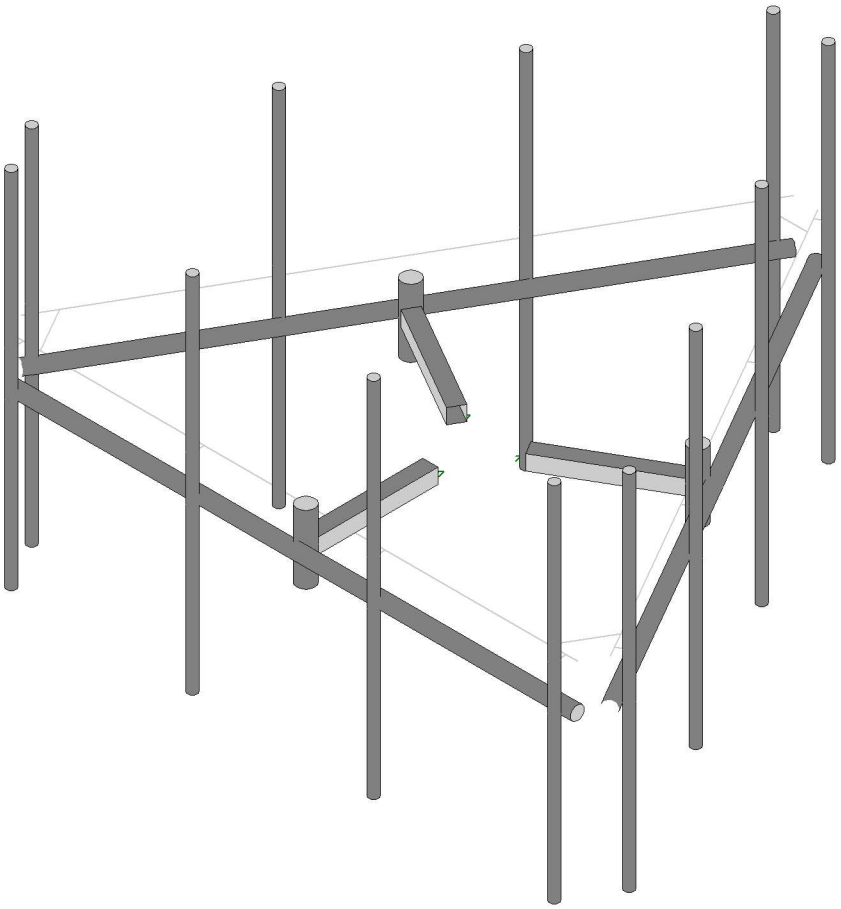

American Tower Corp.		SK - 3
Mitchell.Chen	283424, WATERTOWN CT	July 13, 2020 at 2:12 PM
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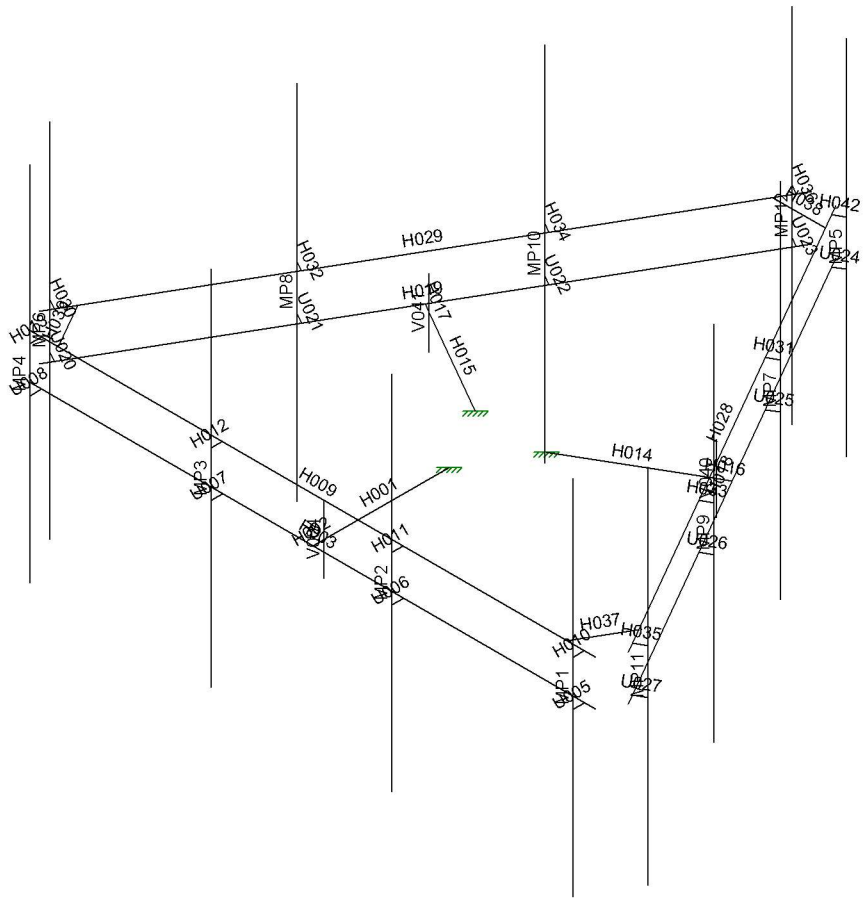
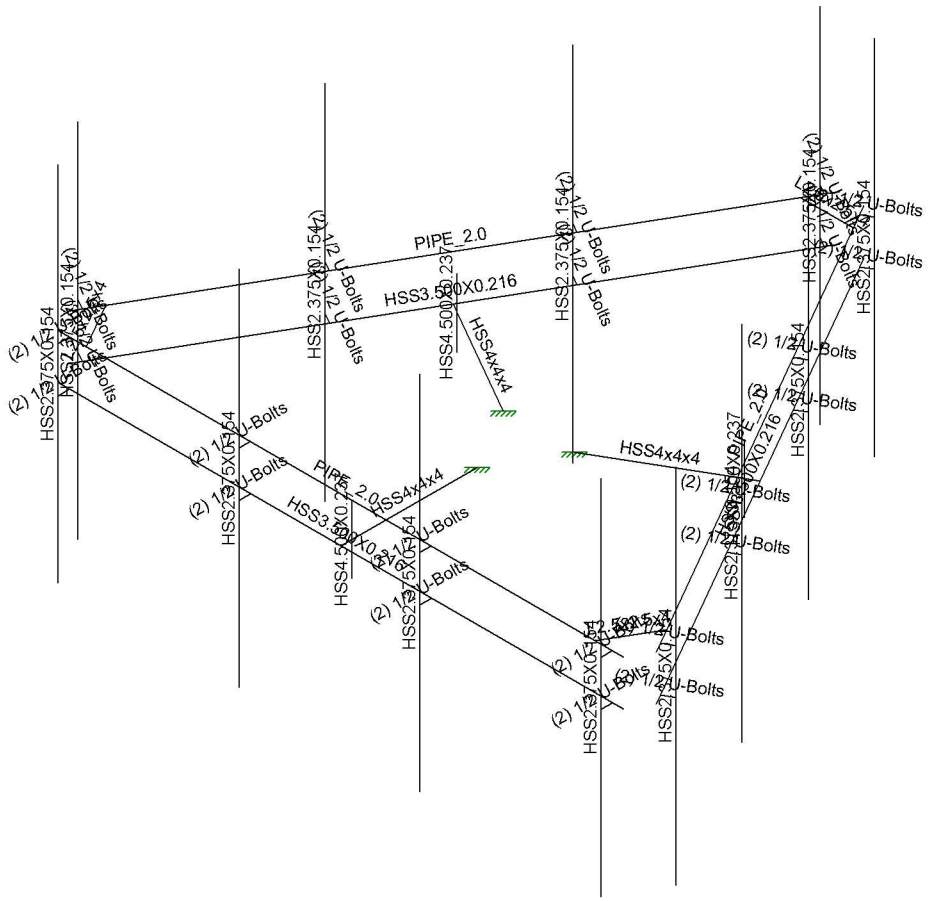
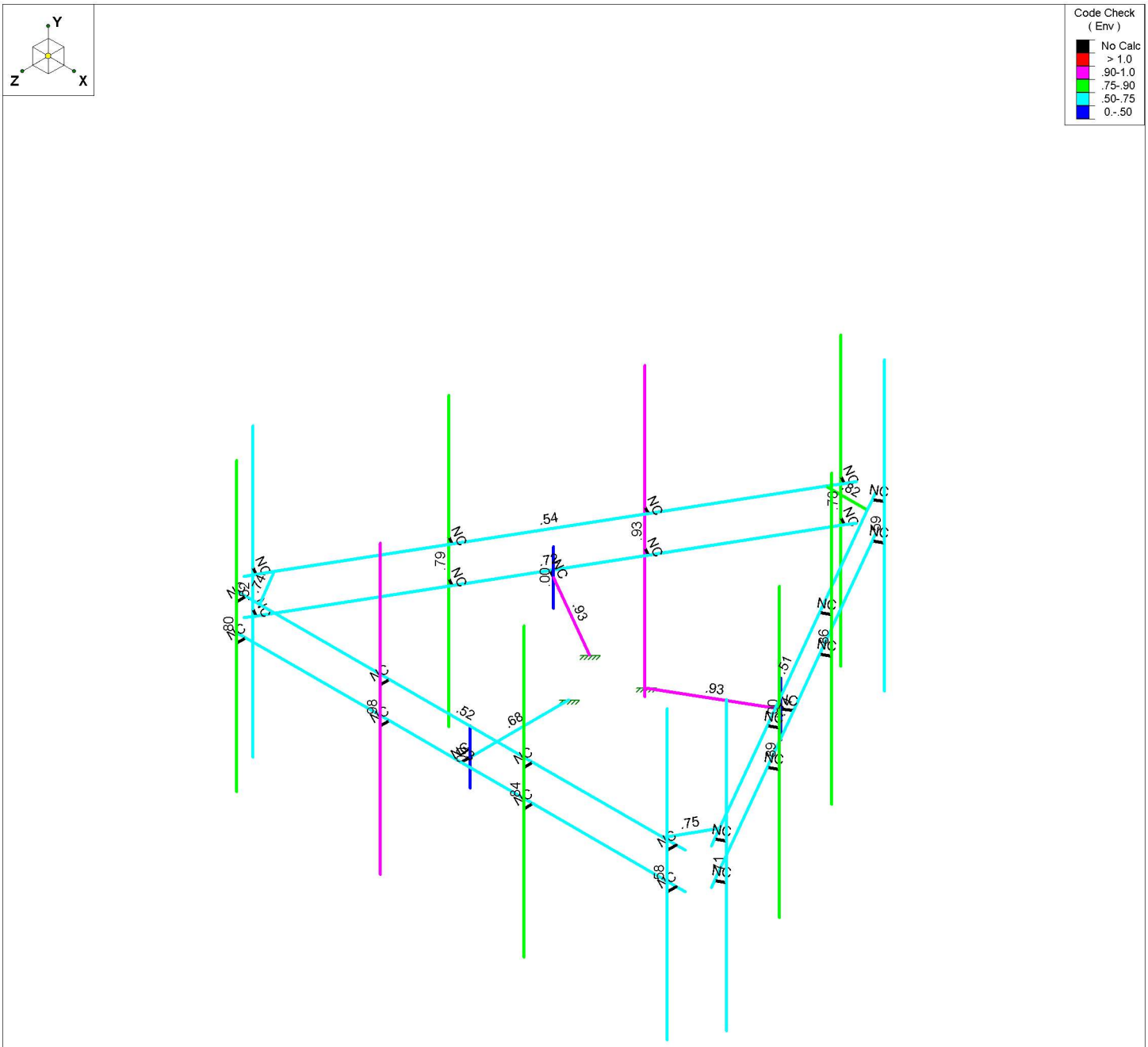


American Tower Corp.		SK - 4
Mitchell.Chen	283424, WATERTOWN CT	July 13, 2020 at 2:13 PM
13213496_C9_06	Member Labels	R3D. AT&T MOBILITY @ 283424, ...

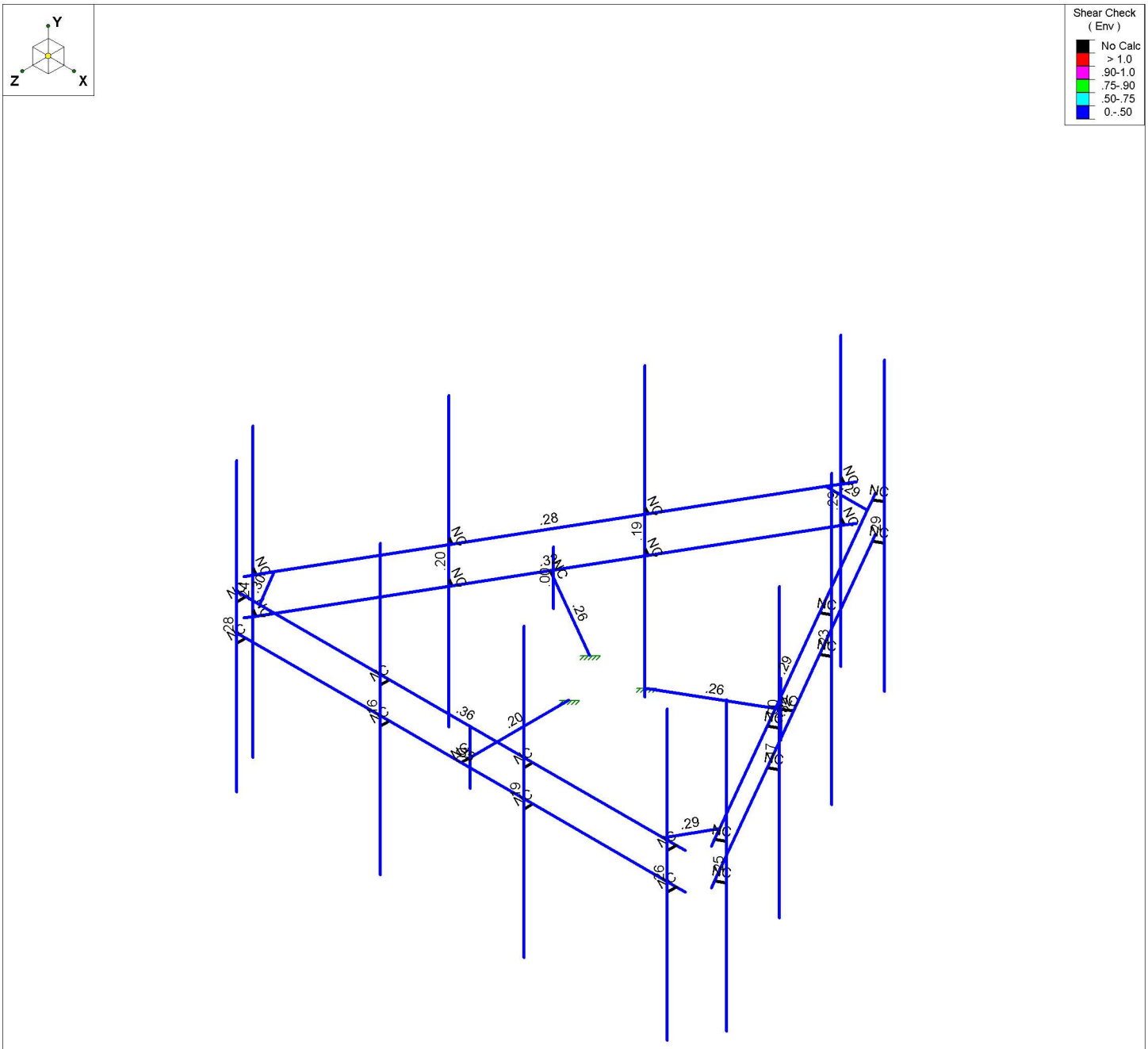


American Tower Corp.		SK - 5
Mitchell.Chen	283424, WATERTOWN CT	July 13, 2020 at 2:13 PM
13213496_C9_06	Member Shapes	R3D. AT&T MOBILITY @ 283424, ...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.4D

American Tower Corp.		SK - 6
Mitchell.Chen	283424, WATERTOWN CT	July 13, 2020 at 2:13 PM
13213496_C9_06	Unity Bending Checks	R3D. AT&T MOBILITY @ 283424, ...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.4D

American Tower Corp.		SK - 7
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EXHIBIT 3

DOCKET NO. 422 – North Atlantic Towers, LLC and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and management of a telecommunications facility located at 655 Bassett Road, Watertown, Connecticut.	}	Connecticut Siting Council May 10, 2012

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and management of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to North Atlantic Towers, LLC, hereinafter referred to as the Certificate Holder, for a telecommunications facility at the updated location at 655 Bassett Road, Watertown, Connecticut. The Council denies certification of the facility location proposed in the Certificate Holder's original application for the same property.

Unless otherwise approved by the Council, the facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a monopine, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of New Cingular Wireless PCS, LLC and other entities, both public and private, but such tower shall not exceed a height of 130 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Watertown for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and

    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

7. Any request for extension of the time period referred to in Condition 6 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Watertown. Any proposed modifications to this Decision and Order shall likewise be so served.

8. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

9. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.

10. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.

11. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

12. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

13. The Certificate Holder shall maintain the facility and associated equipment, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.

14. If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and/or transfer.

Pursuant to General Statutes **§** 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Town Times.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

Applicant	**Its Representatives**
North Atlantic Towers, LLC and New Cingular Wireless PCS, LLC	Lucia Chiocchio, Esq. Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th Floor White Plains, NY 10601 John S. Stevens North Atlantic Towers, LLC 1001 3rd Ave. West., Suite 420 Bradenton, FL 34250 Michele Briggs AT&T 500 Enterprise Drive Rocky Hill, CT 06067-3900

Party	**Its Representatives**
Town of Watertown	Paul R. Jessell Town Attorney Slavin Stauffacher & Scott LLC 27 Siemon Company Drive Suite 300W Watertown, CT 06795 Charles Frigon, Town Manager Watertown Town Hall 424 Main Street Watertown, CT 06795
Intervenor	**Its Representative**
Robert and Cathleen Alex 435 Bassett Road Watertown, CT 06795	

EXHIBIT 4

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2018.

Information on the Property Records for the Municipality of Watertown was last updated on 10/22/2020.

Parcel Information

Location:	655 BASSETT RD	Property Use:	Residential	Primary Use:	Residential
Unique ID:	003592	Map Block Lot:	15 25 3	Acres:	52.50
490 Acres:	49.47	Zone:	R90	Volume / Page:	2135/ 139
Developers Map / Lot:		Census:	3602		

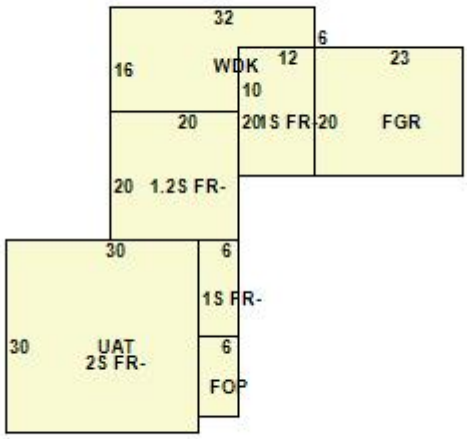
Value Information

	Appraised Value	Assessed Value
Land	525,200	251,020
Buildings	165,900	116,100
Detached Outbuildings	10,000	7,100
Total	701,100	374,220

Owner's Information

Owner's Data
GUSTAFSON FRANK E (EST) ET AL 655 BASSETT RD WATERTOWN, CT 06795-1139

Building 1



Building Use:	Single Family	Style:	Old Style	Living Area:	2,610
Stories:	2.00	Construction:	Wood Frame	Year Built:	1840
Total Rooms:	9	Bedrooms:	4	Full Baths:	1

Half Baths:	0	Fireplaces:	0	Heating:	Hot Air No Duct
Fuel:	Oil	Cooling Percent:	0	Basement Garages:	0
Roof Material:	Asphalt	Siding:	Vinyl Siding	Units:	

Special Features

Generator	1
Unfinished Basement	990

Attached Components

Type:	Year Built:	Area:
Unfinished Attic	1840	900
Wood Deck	1840	392
Frame Garage	1840	460
Open Porch	1840	78

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
1 Story Barn	1880	0.00	0.00	1,628
Pole Barn All Walls	1840	0.00	0.00	770
Frame Shed	1980	0.00	0.00	140

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
GUSTAFSON FRANK E (EST) ET AL	2135	0139	06/03/2020	Other	No	$1,040,284

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
GUSTAFSON FRANK E EST/FRANK E JR &	0971	0118	11/18/1999		No	$0
GUSTAFSON FRANK E (EST) ET AL	0971	0118	11/18/1999		No	$0
GUSTAFSON EDWARD	0879	0001	01/12/1998		No	$0

Building Permits

Permit Number	Permit Type	Date Opened	Date Closed	Permit Status	Reason
66518	Other	10/22/2013			GENERATOR
65000	Other	11/28/2012			MECHANICAL SERVICE FOR ANTENNAE
64369	Other	09/12/2012			INSTALL 1 ANTENNAE - AT&T
34296	Other	09/24/1998			
22715	Other	10/01/1990			

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2018.

Information on the Property Records for the Municipality of Watertown was last updated on 10/22/2020.

Parcel Information

Location:	655 BASSETT RD	Property Use:	Vacant Land	Primary Use:	Cell Tower
Unique ID:	185880	Map Block Lot:	15 25 3*	Acres:	0.00
490 Acres:	0.00	Zone:		Volume / Page:	1851/0144
Developers Map / Lot:		Census:	3602		

Value Information

	Appraised Value	Assessed Value
Land	0	0
Buildings	0	0
Detached Outbuildings	420,000	294,000
Total	420,000	294,000

Owner's Information

Owner's Data
NORTH ATLANTIC TOWERS & AT&T C/O AMERICAN TOWERS LLC PROP T PO BOX 723597 ATLANTA, GA 31139

Detached Outbuildings

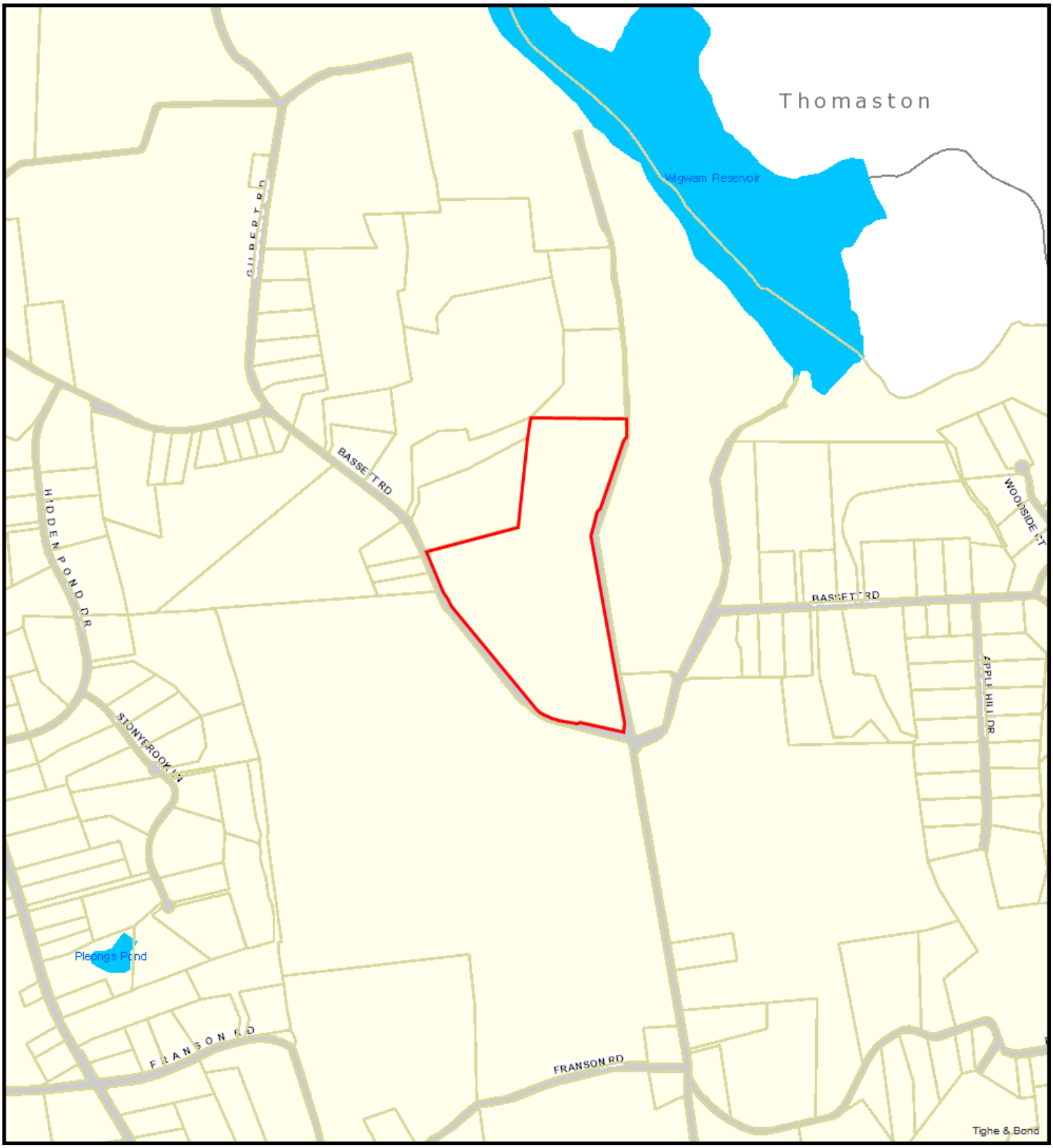
Type:	Year Built:	Length:	Width:	Area:
Cell Tower	0000	0.00	0.00	2

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Valid Sale	Sale Price
NORTH ATLANTIC TOWERS & AT&T	1851	0144	05/01/2013		No	$0
NORTH ATLANTIC TOWERS & AT&T	1851	0144	05/01/2013		No	$0
GUSTAFSON FRANK E EST/FRANK E JR &	0971	0118	11/18/1999		No	$0

Building Permits

Permit Number	Permit Type	Date Opened	Date Closed	Permit Status	Reason
81761	Other	07/18/2018		Closed	RUN POWER FROM EXISITNG METER PACK TO VERIZON WIRELESS RQUIPMENT ON METAL PLATFORM AND ALL NEEDED GR
81707	Other	06/27/2018		Closed	INSTALLING 6 NEW ANTENNAS & 3 NEW REMOTE RADIO HEADS
80278	Other	04/21/2017		Closed	ANTENNA MODIFICATION
65000	Other	11/28/2012		Closed	MECHANICAL SERVICE
64369	Other	09/12/2012		Closed	INSTALL 1 ANTENNA



655 Bassett Road

11/4/2020 11:34:30 PM

Scale: 1"=1000'

Scale is approximate

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

EXHIBIT 5

Lawrence Behr Associates INC
www.lbagroup.com

Radio Frequency Emissions Report

SITE NAME:

283424 Watertown CT

LOCATION:

Watertown, Connecticut

COMPANY:

American Tower Corporation
Woburn, Massachusetts

October 7th, 2020 Revision 1

3400 Tupper Drive | Greenville, NC 27834
252-757-0279 | 800-522-4464 | lbagrp@lbagroup.com

Contents

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RADIO FREQUENCY EMISSIONS REPORT

283424 Watertown CT

Watertown, Connecticut

INTRODUCTION

Lawrence Behr Associates, Inc. (LBA) has been retained by American Tower Corporation (ATC) of Woburn, Massachusetts to evaluate the RF emissions of an existing tower at this location. AT&T is adding emitters to this site and the purpose of this study is to determine if, after the addition of the AT&T emitters, the site is in Compliance with FCC Regulations.

This study supersedes the one dated September 13, 2020, because additional frequencies were determined to be in use or proposed for use. This study includes all known existing or proposed frequencies. The new study frequency list has 14 frequencies per sector rather than the 6 originally studied.

Using the revised list of frequencies, this study has determined that THIS SITE IS IN COMPLIANCE with Federal Regulations.

Details regarding the FCC Rules and the methodology used to determine compliance may be seen below.

SITE AND FACILITY CONSIDERATIONS

Site 283424 Watertown CT is located at 655 Bassett Road in Watertown, Connecticut at coordinates 41.65707, -73.13626. The support structure is a 127' monopole.

All data used in this study was provided by one or more of the following sources:

1. ATC furnished data
2. Compiled from carrier and manufacturer standard configurations
3. Empirical data collected by LBA

AT&T proposes to add antennas to the tower at the 126' level. The structure already supports several antennas. This study only considers the existing or proposed antennas of the AT&T facility in detail.

The load list may be seen in Appendix 1. Appendix 2 contains the AT&T channel counts, frequency bands, and power levels. AT&T Antenna information may be seen in Appendix 3.

POWER DENSITY CALCULATIONS

Based upon the provided information and the FCC limits for exposure as outlined in 47 CFR 1.1307(b)(1) - (b)(3), the power levels and percentages of the FCC's allowable general population limit are shown in Appendix 4. Calculations were done at industry standard average head height of six feet above ground level.

A summary of the power density from all emitters may be seen in Appendix 5.

These limits are based upon the Information Relating to MPE Standards found in Appendix 6. Study methodology may be seen in Appendix 7, which describes the Non-Ionizing Radiation Prediction Models. Approximate radiation patterns may be found in Appendix 5. This site ***IS*** in compliance with FCC OET-65 MPE limits.

October 7th, 2020
Revision 1

Kathryn G. Tesh
Wireless Services Manager

APPENDIX 1 *Load List*

Customer	RAD Height (ft)	Equipment Quantity	Equipment Type	Manufacturer	Model Number	Line Quantity	Line size	Mount Type	Azimuths	TX Power	ERP	TX Frequency	RX Frequency
AT&T MOBILITY	126	3	PANEL	Commscope	SBNH-1D6565C	0		T-Arm	30/150/270			869-890, 890-894	824-845, 845-849
AT&T MOBILITY	126	3	PANEL	CCI	OPA65R-BU8D	0		T-Arm	30/150/270			2145-2155, 2170-2180, 728-746	1745-1755, 1770-1780, 704-716
AT&T MOBILITY	126	3	PANEL	CCI	DMP65R-BU8D	0		T-Arm	30/150/270			1930-1945, 1965-1990, 2145-2155, 2170-2180, 728-746	1745-1755, 1770-1780, 1850-1865, 1885-1910, 704-716
AT&T MOBILITY	126	3	PANEL	CCI	HPA-65R-BUU-H8	0		T-Arm	30/150/270			1930-1935, 716-728, 734-746, 880-893	1850-1855, 704-716, 835-848
VERIZON WIRELESS	114	6	PANEL	Commscope	JAHH-65B-R3B			Sector Frame	80/190/330			1970-1975, 2145-2155, 746-757, 869-880, 890-892	1745-1755, 189-1895, 776-787, 824-835, 845-847

APPENDIX 2

AT&T Channels Used

Antenna	Technology	Frequency Band	Channel Count	Transmitter Power per Channel (W)
AT&T A1	LTE	1900	1	40
AT&T A2	LTE	700	1	40
AT&T A3	LTE	700	1	40
AT&T A4	UMTS	850	1	40
AT&T A5	UMTS	850	1	40
AT&T A6	UMTS	850	1	40
AT&T A7	LTE	700	1	40
AT&T A8	LTE	2100	1	40
AT&T A9	LTE	2100	1	40
AT&T A10	LTE	700	1	40
AT&T A11	LTE	1900	1	40
AT&T A12	LTE	1900	1	40
AT&T A13	LTE	2100	1	40
AT&T A14	LTE	2100	1	40
AT&T B1	LTE	1900	1	40
AT&T B2	LTE	700	1	40
AT&T B3	LTE	700	1	40
AT&T B4	UMTS	850	1	40
AT&T B5	UMTS	850	1	40
AT&T B6	UMTS	850	1	40
AT&T B7	LTE	700	1	40
AT&T B8	LTE	2100	1	40
AT&T B9	LTE	2100	1	40
AT&T B10	LTE	700	1	40
AT&T B11	LTE	1900	1	40
AT&T B12	LTE	1900	1	40
AT&T B13	LTE	2100	1	40
AT&T B14	LTE	2100	1	40
AT&T C1	LTE	1900	1	40
AT&T C2	LTE	700	1	40
AT&T C3	LTE	700	1	40
AT&T C4	UMTS	850	1	40
AT&T C5	UMTS	850	1	40
AT&T C6	UMTS	850	1	40
AT&T C7	LTE	700	1	40
AT&T C8	LTE	2100	1	40
AT&T C9	LTE	2100	1	40
AT&T C10	LTE	700	1	40
AT&T C11	LTE	1900	1	40
AT&T C12	LTE	1900	1	40
AT&T C13	LTE	2100	1	40
AT&T C14	LTE	2100	1	40

APPENDIX 3

AT&T Antenna Information

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	AT&T A1	CCI HPA-65R-BUU-H8	126
A	AT&T A2	CCI HPA-65R-BUU-H8	126
A	AT&T A3	CCI HPA-65R-BUU-H8	126
A	AT&T A4	CCI HPA-65R-BUU-H8	126
A	AT&T A5	Commscope SBNH-1D6565C	126
A	AT&T A6	Commscope SBNH-1D6565C	126
A	AT&T A7	CCI OPA65R-BU8D	126
A	AT&T A8	CCI OPA65R-BU8D	126
A	AT&T A9	CCI OPA65R-BU8D	126
A	AT&T A10	CCI DMP65R-BU8D	126
A	AT&T A11	CCI DMP65R-BU8D	126
A	AT&T A12	CCI DMP65R-BU8D	126
A	AT&T A13	CCI DMP65R-BU8D	126
A	AT&T A14	CCI DMP65R-BU8D	126
B	AT&T B1	CCI HPA-65R-BUU-H8	126
B	AT&T B2	CCI HPA-65R-BUU-H8	126
B	AT&T B3	CCI HPA-65R-BUU-H8	126
B	AT&T B4	CCI HPA-65R-BUU-H8	126
B	AT&T B5	Commscope SBNH-1D6565C	126
B	AT&T B6	Commscope SBNH-1D6565C	126
B	AT&T B7	CCI OPA65R-BU8D	126
B	AT&T B8	CCI OPA65R-BU8D	126
B	AT&T B9	CCI OPA65R-BU8D	126
B	AT&T B10	CCI DMP65R-BU8D	126
B	AT&T B11	CCI DMP65R-BU8D	126
B	AT&T B12	CCI DMP65R-BU8D	126
B	AT&T B13	CCI DMP65R-BU8D	126
B	AT&T B14	CCI DMP65R-BU8D	126
C	AT&T C1	CCI HPA-65R-BUU-H8	126
C	AT&T C2	CCI HPA-65R-BUU-H8	126
C	AT&T C3	CCI HPA-65R-BUU-H8	126
C	AT&T C4	CCI HPA-65R-BUU-H8	126
C	AT&T C5	Commscope SBNH-1D6565C	126
C	AT&T C6	Commscope SBNH-1D6565C	126
C	AT&T C7	CCI OPA65R-BU8D	126
C	AT&T C8	CCI OPA65R-BU8D	126
C	AT&T C9	CCI OPA65R-BU8D	126
C	AT&T C10	CCI DMP65R-BU8D	126
C	AT&T C11	CCI DMP65R-BU8D	126
C	AT&T C12	CCI DMP65R-BU8D	126
C	AT&T C13	CCI DMP65R-BU8D	126
C	AT&T C14	CCI DMP65R-BU8D	126

APPENDIX 4

FCC OET-65 MPE Limit Study

Antenna ID	Antenna Make / Model	Frequency Band	Antenna Gain (dBd)	Antenna Height (ft)	Channel Count	TX Power (W)	ERP (W) (All Channels)	Total Power Density ($\mu W/cm^2$)	Allowable Public MPE ($\mu W/cm^2$)	Public MPE%
AT&T A1	CCI HPA-65R-BUU-H8	1900	14.75	126	1	40	1959.12	0.4425628	1000.00	0.044256%
AT&T A2	CCI HPA-65R-BUU-H8	700	11.95	126	1	40	1028.16	0.2322603	466.67	0.049770%
AT&T A3	CCI HPA-65R-BUU-H8	700	11.95	126	1	40	1028.16	0.2322603	466.67	0.049770%
AT&T A4	CCI HPA-65R-BUU-H8	850	12.65	126	1	40	1207.98	0.770372	566.67	0.135948%
AT&T A5	Commscope SBNH-1D6565C	850	13.45	126	1	40	1452.31	2.9126138	566.67	0.513991%
AT&T A6	Commscope SBNH-1D6565C	850	13.45	126	1	40	1452.31	2.9126138	566.67	0.513991%
AT&T A7	CCI OPA65R-BU8D	700	12.15	126	1	40	1076.61	0.0931878	466.67	0.019969%
AT&T A8	CCI OPA65R-BU8D	2100	16.05	126	1	40	2642.77	0.5665757	1000.00	0.056658%
AT&T A9	CCI OPA65R-BU8D	2100	16.05	126	1	40	2642.77	0.5665757	1000.00	0.056658%
AT&T A10	CCI DMP65R-BU8D	700	11.85	126	1	40	1004.75	0.0869679	466.67	0.018636%
AT&T A11	CCI DMP65R-BU8D	1900	15.55	126	1	40	2355.37	0.255723	1000.00	0.025572%
AT&T A12	CCI DMP65R-BU8D	1900	15.55	126	1	40	2355.37	0.255723	1000.00	0.025572%
AT&T A13	CCI DMP65R-BU8D	2100	15.95	126	1	40	2582.62	0.5536789	1000.00	0.055368%
AT&T A14	CCI DMP65R-BU8D	2100	15.95	126	1	40	2582.62	0.5536789	1000.00	0.055368%
AT&T B1	CCI HPA-65R-BUU-H8	1900	14.75	126	1	40	1959.12	0.4425628	1000.00	0.044256%
AT&T B2	CCI HPA-65R-BUU-H8	700	11.95	126	1	40	1028.16	0.2322603	466.67	0.049770%
AT&T B3	CCI HPA-65R-BUU-H8	700	11.95	126	1	40	1028.16	0.2322603	466.67	0.049770%
AT&T B4	CCI HPA-65R-BUU-H8	850	12.65	126	1	40	1207.98	0.770372	566.67	0.135948%
AT&T B5	Commscope SBNH-1D6565C	850	13.45	126	1	40	1452.31	2.9126138	566.67	0.513991%
AT&T B6	Commscope SBNH-1D6565C	850	13.45	126	1	40	1452.31	2.9126138	566.67	0.513991%
AT&T B7	CCI OPA65R-BU8D	700	12.15	126	1	40	1076.61	0.0931878	466.67	0.019969%
AT&T B8	CCI OPA65R-BU8D	2100	16.05	126	1	40	2642.77	0.5665757	1000.00	0.056658%
AT&T B9	CCI OPA65R-BU8D	2100	16.05	126	1	40	2642.77	0.5665757	1000.00	0.056658%
AT&T B10	CCI DMP65R-BU8D	700	11.85	126	1	40	1004.75	0.0869679	466.67	0.018636%
AT&T B11	CCI DMP65R-BU8D	1900	15.55	126	1	40	2355.37	0.255723	1000.00	0.025572%
AT&T B12	CCI DMP65R-BU8D	1900	15.55	126	1	40	2355.37	0.255723	1000.00	0.025572%
AT&T B13	CCI DMP65R-BU8D	2100	15.95	126	1	40	2582.62	0.5536789	1000.00	0.055368%
AT&T B14	CCI DMP65R-BU8D	2100	15.95	126	1	40	2582.62	0.5536789	1000.00	0.055368%
AT&T C1	CCI HPA-65R-BUU-H8	1900	14.75	126	1	40	1959.12	0.4425628	1000.00	0.044256%
AT&T C2	CCI HPA-65R-BUU-H8	700	11.95	126	1	40	1028.16	0.2322603	466.67	0.049770%
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AT&T C4	CCI HPA-65R-BUU-H8	850	12.65	126	1	40	1207.98	0.770372	566.67	0.135948%
AT&T C5	Commscope SBNH-1D6565C	850	13.45	126	1	40	1452.31	2.9126138	566.67	0.513991%
AT&T C6	Commscope SBNH-1D6565C	850	13.45	126	1	40	1452.31	2.9126138	566.67	0.513991%
AT&T C7	CCI OPA65R-BU8D	700	12.15	126	1	40	1076.61	0.0931878	466.67	0.019969%
AT&T C8	CCI OPA65R-BU8D	2100	16.05	126	1	40	2642.77	0.5665757	1000.00	0.056658%
AT&T C9	CCI OPA65R-BU8D	2100	16.05	126	1	40	2642.77	0.5665757	1000.00	0.056658%
AT&T C10	CCI DMP65R-BU8D	700	11.85	126	1	40	1004.75	0.0869679	466.67	0.018636%
AT&T C11	CCI DMP65R-BU8D	1900	15.55	126	1	40	2355.37	0.255723	1000.00	0.025572%
AT&T C12	CCI DMP65R-BU8D	1900	15.55	126	1	40	2355.37	0.255723	1000.00	0.025572%
AT&T C13	CCI DMP65R-BU8D	2100	15.95	126	1	40	2582.62	0.5536789	1000.00	0.055368%
AT&T C14	CCI DMP65R-BU8D	2100	15.95	126	1	40	2582.62	0.5536789	1000.00	0.055368%
AT&T All Sectors									**Total:**	**4.8646%**

APPENDIX 5

Summary of Power Density

Carriers	Power Density Value (% of General Population)
AT&T All Sectors:	4.8646%
Other Carriers:	1.3421%
Site Total:	6.2067%
Site Compliance Status:	Compliant

APPENDIX 6

Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the

magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

The FCC guidelines define two separate tiers of exposure limits. As defined by the FCC, these limits are:

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.

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. Additional details can be found in FCC OET 65.

For the purposes of this study, only General population/uncontrolled exposure limits were studied.

APPENDIX 7

MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	$900/F^2$	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

Where:
f = frequency
* = Plane-wave equivalent power density

Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	$180/F^2$	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

Where:
f = frequency
* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still

has a curvature but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65. As this study is concerned only with Near Field calculations, we will only describe the model used for this study. For additional details, refer to FCC OET Bulletin 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:
S = Power Density
P = Total Power into antenna
R = Distance from the antenna
L = Antenna aperture length

For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:
S = Power Density
θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)
P = Total Power into antenna
R = Distance from the antenna
L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.

Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:
S = Power Density
EIRP = Effective Radiated Power from antenna
Rc = Reflection Coefficient (2.56)
R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

EXHIBIT 6

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Structural Analysis Report

Structure	:	**129 ft Monopine**
ATC Site Name	:	**WATERTOWN CT, CT**
ATC Asset Number	:	**283424**
Engineering Number	:	**13213496_C3_07**
Proposed Carrier	:	**AT&T MOBILITY**
Carrier Site Name	:	**MRCTB046623**
Carrier Site Number	:	**CTL01835**
Site Location	:	**655 Bassett Road** **Watertown, CT 06795-1139** **41.657100,-73.136300**
County	:	**Litchfield**
Date	:	**August 19, 2020**
Max Usage	:	**100%**
Result	:	**Pass**

Prepared By:
Lyle Morin
Structural Engineer I

Reviewed By:

Authorized by "EOR"
19 Aug 2020 04:57:05 cosign

COA: PEC.0001553

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Table of Contents

Introduction

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

Supporting Documents

Tower Drawings	Larson Camouflage Job #611200, dated September 19, 2002
Foundation Drawing	Larson Camouflage Job #611200, dated September 19, 2002
Geotechnical Report	Berkshire Geo-Technologies, dated July 16, 2012
Mount Analysis	ATC Engineering #13213496_C8_03, dated July 2, 2020
Mount Modification Drawing	ATC Job #13213496_C9_06, dated July 15, 2020

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:	115 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	Ss = 0.19, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
126.0	3	Raycap DC2-48-60-8-18F-02	T-Arm with SitePro Handrail Kit	(3) 0.45" (11.5mm) Fiber (6) 0.78" (19.7mm) 8 AWG 6	AT&T MOBILITY
	3	CCI HPA-65R-BUU-H8			
	3	Commscope SBNH-1D6565C			
114.0	2	RFS DB-T1-6Z-8AB-0Z	Sector Frame	(2) 1 5/8" (1.63"-41.3mm) Fiber	VERIZON WIRELESS
	6	Commscope JAHH-65B-R3B			
	3	Alcatel-Lucent B66A RRH 4x45			
	3	Alcatel-Lucent B25 RRH4x30			
	3	Nokia B5 RRH4x40-850			
	3	Alcatel-Lucent B13 RRH4x30-4R			

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
126.0	12	Ericsson RRUS 11 (Band 12) (55 lb)	-	(3) 3/8" (0.38"-9.5mm) RET Control Cable	AT&T MOBILITY
	3	Ericsson RRUS A2 Module (15.1"Height)			
	6	Commscope SBNH-1D6565C			
	3	Ericsson RRUS-12 B2			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
126.0	3	Ericsson RRUS 11 B5	T-Arm with SitePro Handrail Kit	(3) 0.39" (10mm) Fiber Trunk (3) 3" conduit	AT&T MOBILITY
	3	CCI DMP65R-BU8D			
	3	CCI OPA65R-BU8D			
	3	Ericsson RRUS 8843 B2, B66A			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 4449 B5, B12			

[1] Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	80%	Pass
Shaft	100%	Pass
Base Plate	29%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	3,386.8	56%
Axial (Kips)	42.3	1%
Shear (Kips)	33.8	4%

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) (°)
126.0	Ericsson RRUS 8843 B2, B66A	AT&T MOBILITY	1.653	1.450
	Ericsson RRUS 4478 B14			
	Ericsson RRUS 4449 B5, B12			
	Ericsson RRUS 11 B5			
	CCI DMP65R-BU8D			
	CCI OPA65R-BU8D			

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

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Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

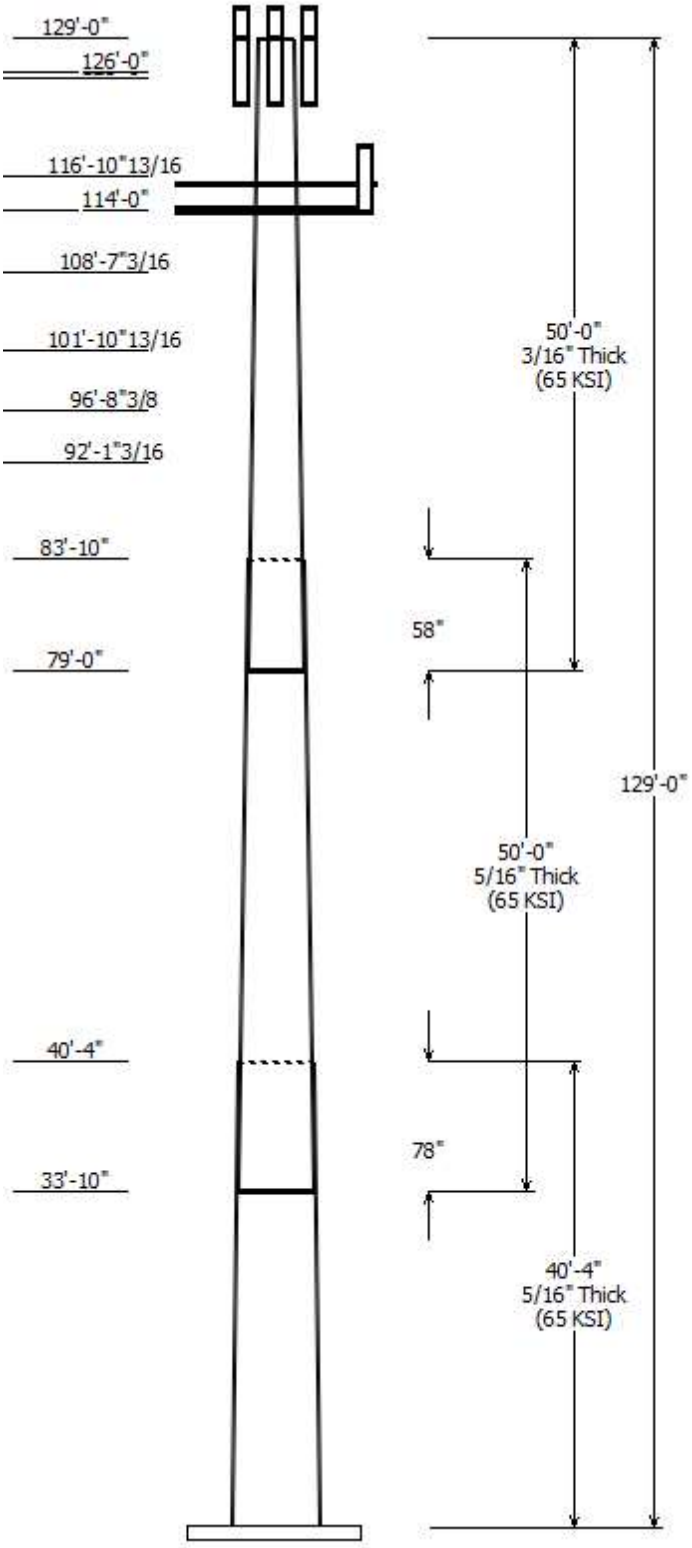
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

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 supplied herein.



Job Information

Client :	AT&T MOBILITY		
Pole :	283424	Code:	ANSI/TIA-222-H
Location :	WATERTOWN CT, CT		
Description :		Risk Category :	II
Shape :	18 Sides	Exposure :	C
Height :	129.00 (ft)	Topo Method :	Method 1
Base Elev (ft):	0.00	Topographic Category :	1
Taper:	0.280000 (in/ft)		

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	40.333	44.82	56.12	0.313		0.000	18 Sides	65
2	50.000	33.27	47.27	0.313	Slip Joint	78.000	18 Sides	65
3	50.000	21.00	35.00	0.188	Slip Joint	58.000	18 Sides	65

Discrete Appurtenance

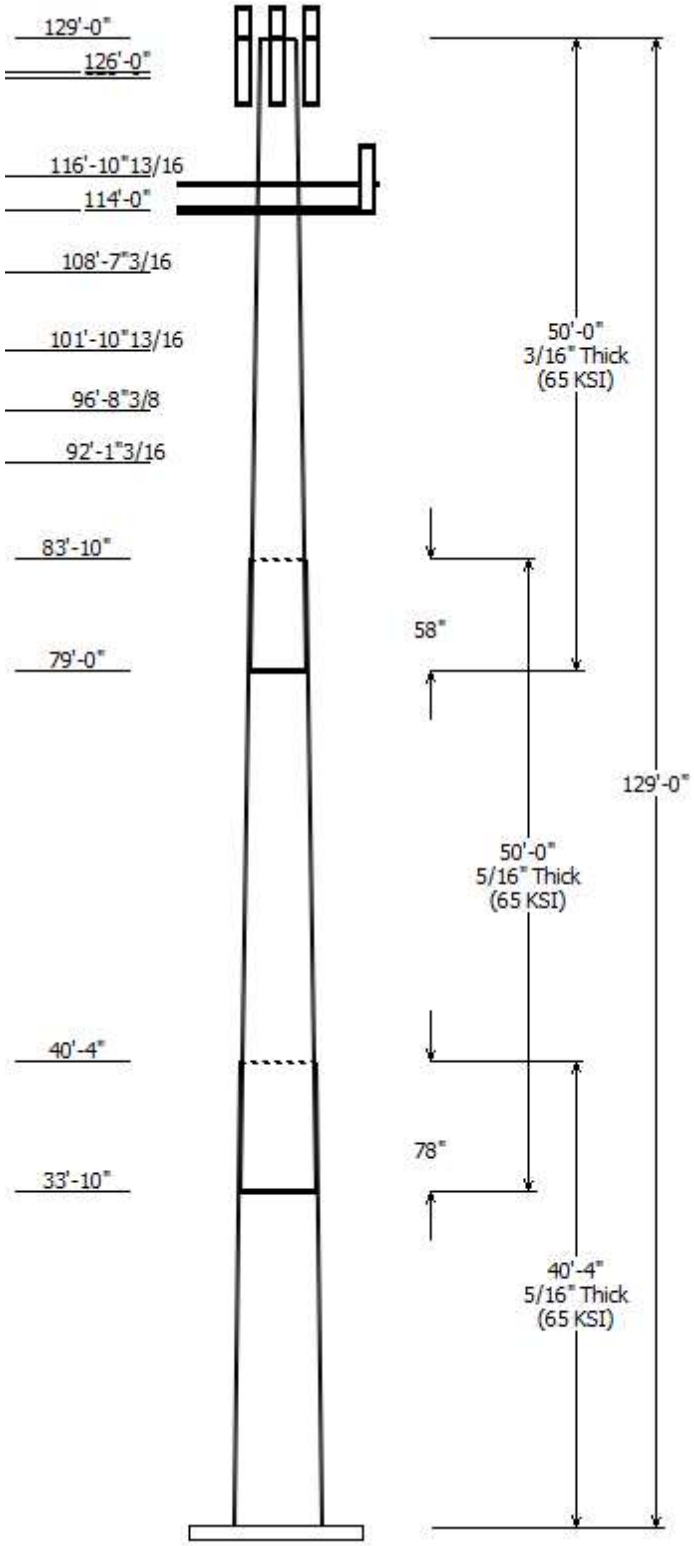
Attach Elev (ft)	Force Elev (ft)	Qty	Description
126.000	126.000	3	Round T-Arms with Site Pro 1
126.000	129.000	3	Raycap DC2-48-60-8-18F-02
126.000	126.000	3	Ericsson RRUS 4449 B5, B12
126.000	126.000	3	Ericsson RRUS 4478 B14
126.000	126.000	3	Ericsson RRUS 8843 B2, B66A
126.000	131.000	3	4' Pine Tree Branches
126.000	126.000	3	CCI OPA65R-BU8D
126.000	126.000	3	CCI DMP65R-BU8D
126.000	129.000	3	CCI HPA-65R-BUU-H8
126.000	129.000	3	Commscope SBNH-1D6565C
126.000	126.000	3	Ericsson RRUS 11 B5
125.500	125.500	26	4' Pine Tree Branches
116.900	116.900	24	6' Pine Tree Branches
114.000	114.000	3	Round Sector Frame
114.000	116.000	6	Commscope JAHH-65B-R3B
114.000	116.000	2	RFS DB-T1-6Z-8AB-0Z
114.000	114.000	3	Alcatel-Lucent B66A RRH 4x45
114.000	114.000	3	Alcatel-Lucent B13 RRH4x30-4R
114.000	116.000	3	Alcatel-Lucent B25 RRH4x30
114.000	114.000	3	Nokia B5 RRH4x40-850
108.600	108.600	24	6' Pine Tree Branches
101.900	101.900	15	8' Pine Tree Branches
96.700	96.700	15	8' Pine Tree Branches
92.100	92.100	12	10' Pine Tree Branches

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	114.0	1 5/8" (1.63"-	No
0.000	126.0	0.39" (10mm)	No
0.000	126.0	0.45" (11.5mm)	No
0.000	126.0	0.78" (19.7mm) 8	No
0.000	126.0	3" conduit	No

Load Cases

1.2D + 1.0W	115 mph with No Ice
0.9D + 1.0W	115 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

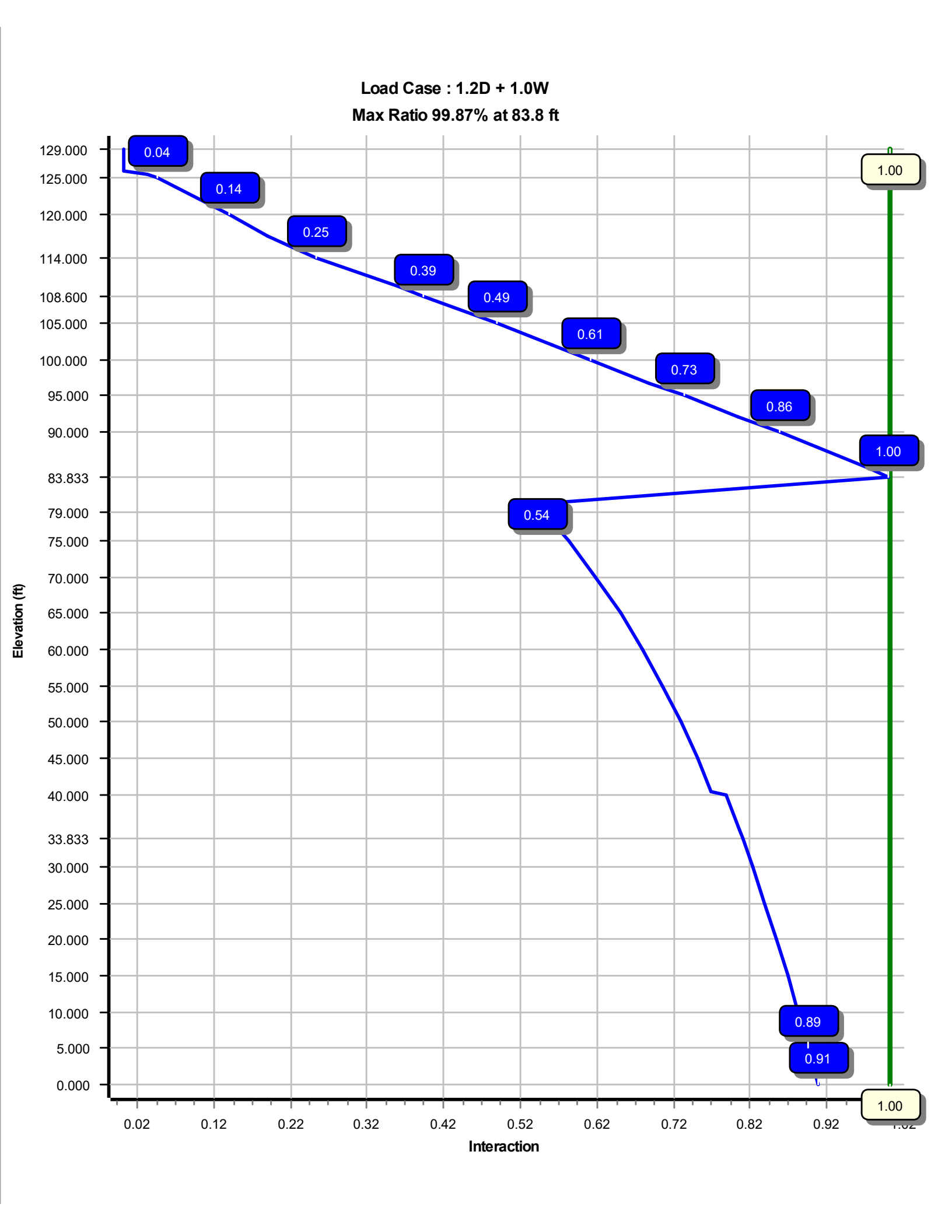


Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	3386.76	33.81	42.31
0.9D + 1.0W	3350.73	33.79	31.72
1.2D + 1.0Di + 1.0Wi	826.61	8.55	53.29
1.2D + 1.0Ev + 1.0Eh	125.86	1.16	42.45
0.9D - 1.0Ev + 1.0Eh	124.20	1.16	29.44
1.0D + 1.0W	820.12	8.23	35.31

Dish Deflections

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


Load Case : 1.2D + 1.0W
Max Ratio 99.87% at 83.8 ft
Elevation (ft)
129.000
125.000
120.000
114.000
108.600
105.000
100.000
95.000
90.000
83.833
79.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
33.833
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction
0.04
0.14
0.25
0.39
0.49
0.61
0.73
0.86
1.00
0.54
0.89
0.91
1.00
1.00

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

Site Name: WATERTOWN CT, CT **Engineering Number:**13213496_C3_07 **8/19/2020 3:06:45 PM**

Customer: AT&T MOBILITY

Analysis Parameters

Location :	Litchfield County, CT	**Height (ft) :**	129
Code :	ANSI/TIA-222-H	**Base Diameter (in) :**	56.12
Shape :	18 Sides	**Top Diameter (in) :**	21.00
Pole Type :	Taper	**Taper (in/ft) :**	0.280
Pole Manfacturer :		**Rotation (deg) :**	0.00
Kd (non-service) :	0.95	**Ke :**	0.97

Ice & Wind Parameters

Exposure Category:	C	**Design Wind Speed Without Ice:**	115 mph
Risk Category:	II	**Design Wind Speed With Ice:**	50 mph
Topographic Factor Procedure:	Method 1	**Operational Wind Speed:**	60 mph
Topographic Category:	1	**Design Ice Thickness:**	1.00 in
Crest Height:	0 ft	**HMSL:**	833.00 ft

Seismic Parameters

Analysis Method: Equivalent Lateral Force Method

Site Class: D - Stiff Soil

Period Based on Rayleigh Method (sec): 2.12

T_L (sec):	6	**p:**	1	**C_s:**	0.033
S_s:	0.188	**S_1:**	0.065	**C_s Max:**	0.033
F_a:	1.600	**F_v:**	2.400	**C_s Min:**	0.030
S_{ds}:	0.201	**S_{d1}:**	0.104		

Load Cases

1.2D + 1.0W	115 mph with No Ice
0.9D + 1.0W	115 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Site Number: 283424 | Code: ANSI/TIA-222-H |

Site Name: WATERTOWN CT, CT | Engineering Number:13213496_C3_07 | 8/19/2020 3:06:45 PM

Customer: AT&T MOBILITY

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	40.333	0.3125	65		0.00	6,828	56.12	0.00	55.35	21780.7	29.90	179.58	44.82	40.33	44.15	11053.2	23.53	143.45	0.280000
2-18	50.000	0.3125	65	Slip	78.00	6,743	47.27	33.83	46.58	12976.4	24.91	151.27	33.27	83.83	32.69	4486.7	17.01	106.47	0.280000
3-18	50.000	0.1875	65	Slip	58.00	2,816	35.00	79.00	20.72	3172.1	31.15	186.67	21.00	129.00	12.39	677.8	17.99	112.00	0.280000
				Shaft Weight		16,387													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
126.00	Ericsson RRUS 8843 B2, B66A	3	0.80	0.000	72.00	1.639	0.50	112.23	2.194	0.50
126.00	4' Pine Tree Branches	3	1.00	5.000	60.80	1.710	1.00	63.58	1.788	1.00
126.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.90	1.842	0.50	96.19	2.431	0.50
126.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	113.30	2.581	0.50
126.00	Raycap DC2-48-60-8-18F-02	3	0.80	3.000	14.50	2.496	0.50	55.92	3.176	0.50
126.00	Ericsson RRUS 11 B5	3	0.80	0.000	50.70	2.791	0.50	98.22	3.511	0.50
126.00	Commscope SBNH-1D6565C	3	0.80	3.000	60.80	11.440	0.70	211.40	13.564	0.70
126.00	CCI HPA-65R-BUU-H8	3	0.80	3.000	68.00	12.976	0.67	236.65	15.326	0.67
126.00	Round T-Arms with Site Pro 1	3	0.75	0.000	300.00	14.400	0.67	437.18	20.984	0.67
126.00	CCI DMP65R-BU8D	3	0.80	0.000	95.70	17.871	0.63	318.79	20.290	0.63
126.00	CCI OPA65R-BU8D	3	0.80	0.000	76.50	18.089	0.63	302.82	20.512	0.63
125.50	4' Pine Tree Branches	26	1.00	0.000	60.80	1.710	1.00	63.58	1.788	1.00
116.90	6' Pine Tree Branches	24	1.00	0.000	84.90	2.430	1.00	88.75	2.540	1.00
114.00	Nokia B5 RRH4x40-850	3	0.80	0.000	48.50	1.322	0.50	75.27	1.816	0.50
114.00	Alcatel-Lucent B25 RRH4x30	3	0.80	2.000	53.00	2.120	0.50	92.17	2.764	0.50
114.00	Alcatel-Lucent B13 RRH4x30-4R	3	0.80	0.000	57.80	2.140	0.50	102.55	2.788	0.50
114.00	Alcatel-Lucent B66A RRH 4x45	3	0.80	0.000	67.00	2.580	0.50	113.15	3.312	0.50
114.00	RFS DB-T1-6Z-8AB-0Z	2	0.80	2.000	44.00	4.800	0.72	125.66	5.722	0.72
114.00	Commscope JAHH-65B-R3B	6	0.80	2.000	60.60	9.113	0.69	191.86	10.913	0.69
114.00	Round Sector Frame	3	0.75	0.000	300.00	14.400	0.75	538.65	25.139	0.75
108.60	6' Pine Tree Branches	24	1.00	0.000	84.10	2.440	1.00	87.88	2.550	1.00
101.90	8' Pine Tree Branches	15	1.00	0.000	107.00	3.150	1.00	111.79	3.291	1.00
96.70	8' Pine Tree Branches	15	1.00	0.000	106.20	3.160	1.00	110.93	3.301	1.00
92.10	10' Pine Tree Branches	12	1.00	0.000	128.40	3.860	1.00	134.08	4.031	1.00
Totals	Num Loadings:24	172			15,195.80			21,148.64		

Linear Appurtenance Properties

Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	126.00	3	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	126.00	3	0.45" (11.5mm) Fiber	0.45	0.08	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	126.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	126.00	3	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	114.00	2	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.3125	56.120	55.352	21,780.7	29.90	179.58	66.2	764.4	0.0	0.0
5.00		0.3125	54.720	53.963	20,182.3	29.11	175.10	67.2	726.5	0.0	929.9
10.00		0.3125	53.320	52.575	18,664.1	28.32	170.62	68.1	689.4	0.0	906.3
15.00		0.3125	51.920	51.186	17,224.0	27.53	166.14	69.0	653.4	0.0	882.7
20.00		0.3125	50.520	49.798	15,859.9	26.74	161.66	69.9	618.3	0.0	859.1
25.00		0.3125	49.120	48.409	14,569.8	25.95	157.18	70.9	584.2	0.0	835.4
30.00		0.3125	47.720	47.021	13,351.7	25.16	152.70	71.8	551.1	0.0	811.8
33.83	Bot - Section 2	0.3125	46.647	45.956	12,465.2	24.56	149.27	72.5	526.3	0.0	606.4
35.00		0.3125	46.320	45.632	12,203.4	24.37	148.22	72.7	518.9	0.0	366.1
40.00		0.3125	44.920	44.243	11,122.9	23.58	143.74	73.7	487.7	0.0	1,539.7
40.33	Top - Section 1	0.3125	45.452	44.771	11,525.4	23.88	145.45	73.3	499.4	0.0	101.0
45.00		0.3125	44.145	43.475	10,553.2	23.15	141.26	74.2	470.9	0.0	700.7
50.00		0.3125	42.745	42.086	9,573.9	22.36	136.78	75.1	441.2	0.0	727.9
55.00		0.3125	41.345	40.698	8,657.2	21.57	132.30	76.0	412.4	0.0	704.2
60.00		0.3125	39.945	39.309	7,801.0	20.78	127.82	77.0	384.7	0.0	680.6
65.00		0.3125	38.545	37.920	7,003.1	19.99	123.34	77.9	357.9	0.0	657.0
70.00		0.3125	37.145	36.532	6,261.6	19.20	118.86	78.8	332.0	0.0	633.4
75.00		0.3125	35.745	35.143	5,574.4	18.41	114.38	79.8	307.2	0.0	609.7
79.00	Bot - Section 3	0.3125	34.625	34.032	5,062.3	17.77	110.80	80.5	288.0	0.0	470.8
80.00		0.3125	34.345	33.755	4,939.4	17.62	109.90	80.7	283.3	0.0	185.5
83.83	Top - Section 2	0.1875	33.647	19.912	2,816.4	29.88	179.45	66.3	164.9	0.0	697.2
85.00		0.1875	33.320	19.717	2,734.7	29.57	177.71	66.6	161.7	0.0	78.7
90.00		0.1875	31.920	18.884	2,402.5	28.25	170.24	68.2	148.2	0.0	328.4
92.10		0.1875	31.332	18.534	2,271.4	27.70	167.10	68.8	142.8	0.0	133.7
95.00		0.1875	30.520	18.051	2,098.3	26.94	162.77	69.7	135.4	0.0	180.5
96.70		0.1875	30.044	17.768	2,001.1	26.49	160.23	70.2	131.2	0.0	103.6
100.0		0.1875	29.120	17.218	1,821.0	25.62	155.31	71.3	123.2	0.0	196.4
101.9		0.1875	28.588	16.901	1,722.4	25.12	152.47	71.9	118.7	0.0	110.3
105.0		0.1875	27.720	16.385	1,569.2	24.30	147.84	72.8	111.5	0.0	175.6
108.6		0.1875	26.712	15.785	1,403.1	23.36	142.46	73.9	103.5	0.0	197.0
110.0		0.1875	26.320	15.552	1,341.8	22.99	140.37	74.4	100.4	0.0	74.6
114.0		0.1875	25.200	14.885	1,176.6	21.94	134.40	75.6	92.0	0.0	207.1
115.0		0.1875	24.920	14.718	1,137.5	21.67	132.91	75.9	89.9	0.0	50.4
116.9		0.1875	24.388	14.402	1,065.7	21.17	130.07	76.5	86.1	0.0	94.1
120.0		0.1875	23.520	13.885	955.1	20.36	125.44	77.5	80.0	0.0	149.2
125.0		0.1875	22.120	13.052	793.3	19.04	117.97	79.0	70.6	0.0	229.2
125.5		0.1875	21.980	12.969	778.2	18.91	117.23	79.2	69.7	0.0	22.1
126.0		0.1875	21.840	12.885	763.3	18.78	116.48	79.3	68.8	0.0	22.0
129.0		0.1875	21.000	12.386	677.8	17.99	112.00	80.2	63.6	0.0	129.0
											16,387.3

Site Number: 283424 | Code: ANSI/TIA-222-H |

Site Name: WATERTOWN CT, CT | Engineering Number:13213496_C3_07 | 8/19/2020 3:06:45 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0W | 115 mph with No Ice | 23 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.20
Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		249.7	0.0					0.0	0.0	249.7	0.0	0.0	0.0
5.00		493.2	1,115.9					0.0	179.5	493.2	1,295.4	0.0	0.0
10.00		480.5	1,087.6					0.0	179.5	480.5	1,267.1	0.0	0.0
15.00		475.2	1,059.2					0.0	179.5	475.2	1,238.7	0.0	0.0
20.00		482.3	1,030.9					0.0	179.5	482.3	1,210.4	0.0	0.0
25.00		491.7	1,002.5					0.0	179.5	491.7	1,182.0	0.0	0.0
30.00		438.4	974.2					0.0	179.5	438.4	1,153.7	0.0	0.0
33.83	Bot - Section 2	249.8	727.7					0.0	137.6	249.8	865.3	0.0	0.0
35.00		311.3	439.3					0.0	41.9	311.3	481.2	0.0	0.0
40.00		269.2	1,847.6					0.0	179.5	269.2	2,027.1	0.0	0.0
40.33	Top - Section 1	251.3	121.2					0.0	12.0	251.3	133.1	0.0	0.0
45.00		483.7	840.8					0.0	167.6	483.7	1,008.3	0.0	0.0
50.00		495.5	873.4					0.0	179.5	495.5	1,053.0	0.0	0.0
55.00		489.0	845.1					0.0	179.5	489.0	1,024.6	0.0	0.0
60.00		481.2	816.7					0.0	179.5	481.2	996.3	0.0	0.0
65.00		472.3	788.4					0.0	179.5	472.3	967.9	0.0	0.0
70.00		462.3	760.0					0.0	179.5	462.3	939.6	0.0	0.0
75.00		407.3	731.7					0.0	179.5	407.3	911.2	0.0	0.0
79.00	Bot - Section 3	223.3	564.9					0.0	143.6	223.3	708.6	0.0	0.0
80.00		213.2	222.7					0.0	35.9	213.2	258.6	0.0	0.0
83.83	Top - Section 2	219.2	836.7					0.0	137.6	219.2	974.3	0.0	0.0
85.00		263.4	94.4					0.0	41.9	263.4	136.3	0.0	0.0
90.00		300.2	394.1					0.0	179.5	300.2	573.6	0.0	0.0
92.10		206.1	160.4					0.0	75.4	206.1	235.8	0.0	0.0
95.00		187.1	216.6					0.0	104.1	187.1	320.7	0.0	0.0
96.70		199.0	124.3					0.0	61.0	199.0	185.4	0.0	0.0
100.00		204.3	235.7					0.0	118.5	204.3	354.2	0.0	0.0
101.90		191.7	132.4					0.0	68.2	191.7	200.6	0.0	0.0
105.00		251.3	210.7					0.0	111.3	251.3	322.0	0.0	0.0
108.60		184.1	236.4					0.0	129.3	184.1	365.7	0.0	0.0
110.00		192.4	89.6					0.0	50.3	192.4	139.8	0.0	0.0
114.00	Appurtenance(s)	176.2	248.6	3,124.0	0.0	3,429.7	2,436.6	0.0	143.6	3,300.2	2,828.8	0.0	0.0
115.00		99.4	60.4					0.0	32.0	99.4	92.5	0.0	0.0
116.90		168.1	113.0					0.0	60.9	168.1	173.8	0.0	0.0
120.00		263.1	179.0					0.0	99.3	263.1	278.4	0.0	0.0
125.00		175.3	275.0					0.0	160.2	175.3	435.2	0.0	0.0
125.50	Appurtenance(s)	30.9	26.6	2,026.3	0.0	0.0	1,897.0	0.0	16.0	2,057.2	1,939.5	0.0	0.0
126.00	Appurtenance(s)	93.8	26.4	6,132.0	0.0	7,103.9	3,347.6	0.0	16.0	6,225.7	3,390.1	0.0	0.0
129.00		78.3	154.8					0.0	0.0	78.3	154.8	0.0	0.0
								Totals:		22,686.2	31,823.5	0.00	0.00

Site Number: 283424 | Code: ANSI/TIA-222-H |

Site Name: WATERTOWN CT, CT | Engineering Number:13213496_C3_07 | 8/19/2020 3:06:47 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0W | 115 mph with No Ice | 23 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.20
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	-42.31	-33.81	0.00	-3,386.76	0.00	3,386.76	3,299.40	971.43	4,896.32	3,797.13	0.00	0.00	0.906
5.00	-40.89	-33.47	0.00	-3,217.72	0.00	3,217.72	3,261.75	947.06	4,653.76	3,659.11	0.12	-0.22	0.893
10.00	-39.50	-33.14	0.00	-3,050.38	0.00	3,050.38	3,221.78	922.69	4,417.37	3,520.74	0.46	-0.44	0.880
15.00	-38.13	-32.80	0.00	-2,884.70	0.00	2,884.70	3,179.49	898.32	4,187.13	3,382.22	1.04	-0.66	0.866
20.00	-36.80	-32.45	0.00	-2,720.70	0.00	2,720.70	3,134.88	873.95	3,963.06	3,243.76	1.86	-0.89	0.852
25.00	-35.49	-32.09	0.00	-2,558.44	0.00	2,558.44	3,087.95	849.58	3,745.15	3,105.54	2.92	-1.13	0.837
30.00	-34.23	-31.76	0.00	-2,398.00	0.00	2,398.00	3,038.69	825.21	3,533.40	2,967.79	4.24	-1.37	0.821
33.83	-33.30	-31.56	0.00	-2,276.27	0.00	2,276.27	2,999.35	806.53	3,375.23	2,862.61	5.42	-1.56	0.808
35.00	-32.74	-31.32	0.00	-2,239.46	0.00	2,239.46	2,987.11	800.84	3,327.81	2,830.70	5.81	-1.62	0.804
40.00	-30.65	-31.06	0.00	-2,082.85	0.00	2,082.85	2,933.21	776.47	3,128.38	2,694.46	7.65	-1.88	0.785
40.33	-30.45	-30.88	0.00	-2,072.50	0.00	2,072.50	2,953.95	785.73	3,203.39	2,746.08	7.78	-1.89	0.767
45.00	-29.33	-30.48	0.00	-1,928.42	0.00	1,928.42	2,902.37	762.98	3,020.63	2,619.49	9.75	-2.13	0.748
50.00	-28.17	-30.07	0.00	-1,776.01	0.00	1,776.01	2,844.86	738.61	2,830.78	2,485.00	12.12	-2.38	0.726
55.00	-27.04	-29.66	0.00	-1,625.66	0.00	1,625.66	2,785.03	714.24	2,647.08	2,351.89	14.75	-2.64	0.703
60.00	-25.93	-29.24	0.00	-1,477.39	0.00	1,477.39	2,722.88	689.87	2,469.55	2,220.35	17.65	-2.89	0.677
65.00	-24.86	-28.83	0.00	-1,331.17	0.00	1,331.17	2,658.40	665.50	2,298.18	2,090.60	20.82	-3.15	0.648
70.00	-23.83	-28.42	0.00	-1,187.01	0.00	1,187.01	2,591.60	641.14	2,132.97	1,962.83	24.25	-3.40	0.616
75.00	-22.83	-28.05	0.00	-1,044.90	0.00	1,044.90	2,522.48	616.77	1,973.93	1,837.26	27.95	-3.66	0.580
79.00	-22.08	-27.83	0.00	-932.70	0.00	932.70	2,465.51	597.27	1,851.13	1,738.50	31.10	-3.86	0.548
80.00	-21.78	-27.65	0.00	-904.87	0.00	904.87	2,451.04	592.40	1,821.04	1,714.07	31.91	-3.91	0.539
83.83	-20.76	-27.40	0.00	-798.89	0.00	798.89	1,187.39	349.45	1,056.01	819.28	35.13	-4.10	0.999
85.00	-20.54	-27.21	0.00	-766.92	0.00	766.92	1,182.21	346.04	1,035.49	807.70	36.14	-4.16	0.973
90.00	-19.87	-26.95	0.00	-630.88	0.00	630.88	1,158.57	331.42	949.84	757.92	40.69	-4.52	0.856
92.10	-17.90	-24.66	0.00	-574.27	0.00	574.27	1,147.95	325.28	914.97	736.97	42.71	-4.67	0.801
95.00	-17.53	-24.50	0.00	-502.75	0.00	502.75	1,132.61	316.79	867.88	708.05	45.61	-4.87	0.731
96.70	-15.57	-22.13	0.00	-461.10	0.00	461.10	1,123.26	311.82	840.86	691.12	47.36	-4.98	0.686
100.00	-15.18	-21.93	0.00	-388.09	0.00	388.09	1,104.33	302.17	789.62	658.31	50.87	-5.18	0.609
101.90	-13.22	-19.53	0.00	-346.42	0.00	346.42	1,092.98	296.62	760.85	639.49	52.95	-5.28	0.558
105.00	-12.87	-19.28	0.00	-285.90	0.00	285.90	1,073.73	287.55	715.06	608.90	56.43	-5.45	0.486
108.60	-10.33	-16.27	0.00	-216.48	0.00	216.48	1,050.26	277.02	663.67	573.64	60.60	-5.61	0.391
110.00	-10.18	-16.09	0.00	-193.70	0.00	193.70	1,040.80	272.93	644.20	560.01	62.25	-5.67	0.359
114.00	-7.68	-12.53	0.00	-125.93	0.00	125.93	1,012.79	261.23	590.17	521.42	67.06	-5.81	0.251
115.00	-7.59	-12.43	0.00	-113.41	0.00	113.41	1,005.56	258.31	577.03	511.86	68.27	-5.83	0.231
116.90	-5.26	-9.39	0.00	-89.80	0.00	89.80	991.55	252.75	552.48	493.79	70.60	-5.88	0.189
120.00	-5.00	-9.11	0.00	-60.68	0.00	60.68	967.99	243.69	513.56	464.63	74.44	-5.94	0.137
125.00	-4.58	-8.89	0.00	-15.15	0.00	15.15	928.10	229.06	453.79	418.54	80.69	-6.00	0.043
125.50	-2.87	-6.64	0.00	-10.71	0.00	10.71	923.98	227.60	448.01	414.00	81.32	-6.00	0.030
126.00	-0.15	-0.09	0.00	-0.28	0.00	0.28	919.84	226.14	442.28	409.48	81.95	-6.01	0.001
129.00	0.00	-0.08	0.00	0.00	0.00	0.00	894.51	217.37	408.63	382.62	85.71	-6.01	0.000

Site Number: 283424 | Code: ANSI/TIA-222-H |

Site Name: WATERTOWN CT, CT | Engineering Number:13213496_C3_07 | 8/19/2020 3:06:47 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.0W | 115 mph with No Ice (Reduced DL) | 23 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		249.7	0.0					0.0	0.0	249.7	0.0	0.0	0.0
5.00		493.2	836.9					0.0	134.6	493.2	971.6	0.0	0.0
10.00		480.5	815.7					0.0	134.6	480.5	950.3	0.0	0.0
15.00		475.2	794.4					0.0	134.6	475.2	929.1	0.0	0.0
20.00		482.3	773.2					0.0	134.6	482.3	907.8	0.0	0.0
25.00		491.7	751.9					0.0	134.6	491.7	886.5	0.0	0.0
30.00		438.4	730.6					0.0	134.6	438.4	865.3	0.0	0.0
33.83	Bot - Section 2	249.8	545.8					0.0	103.2	249.8	649.0	0.0	0.0
35.00		311.3	329.5					0.0	31.4	311.3	360.9	0.0	0.0
40.00		269.2	1,385.7					0.0	134.6	269.2	1,520.4	0.0	0.0
40.33	Top - Section 1	251.3	90.9					0.0	9.0	251.3	99.8	0.0	0.0
45.00		483.7	630.6					0.0	125.7	483.7	756.3	0.0	0.0
50.00		495.5	655.1					0.0	134.6	495.5	789.7	0.0	0.0
55.00		489.0	633.8					0.0	134.6	489.0	768.5	0.0	0.0
60.00		481.2	612.6					0.0	134.6	481.2	747.2	0.0	0.0
65.00		472.3	591.3					0.0	134.6	472.3	725.9	0.0	0.0
70.00		462.3	570.0					0.0	134.6	462.3	704.7	0.0	0.0
75.00		407.3	548.8					0.0	134.6	407.3	683.4	0.0	0.0
79.00	Bot - Section 3	223.3	423.7					0.0	107.7	223.3	531.4	0.0	0.0
80.00		213.2	167.0					0.0	26.9	213.2	193.9	0.0	0.0
83.83	Top - Section 2	219.2	627.5					0.0	103.2	219.2	730.7	0.0	0.0
85.00		263.4	70.8					0.0	31.4	263.4	102.2	0.0	0.0
90.00		300.2	295.5					0.0	134.6	300.2	430.2	0.0	0.0
92.10		206.1	120.3					0.0	56.5	206.1	176.9	0.0	0.0
95.00		187.1	162.5					0.0	78.1	187.1	240.6	0.0	0.0
96.70		199.0	93.2					0.0	45.8	199.0	139.0	0.0	0.0
100.00		204.3	176.8					0.0	88.9	204.3	265.6	0.0	0.0
101.90		191.7	99.3					0.0	51.2	191.7	150.4	0.0	0.0
105.00		251.3	158.0					0.0	83.5	251.3	241.5	0.0	0.0
108.60		184.1	177.3					0.0	96.9	184.1	274.3	0.0	0.0
110.00		192.4	67.2					0.0	37.7	192.4	104.9	0.0	0.0
114.00	Appurtenance(s)	176.2	186.4	3,124.0	0.0	3,429.7	1,827.4	0.0	107.7	3,300.2	2,121.6	0.0	0.0
115.00		99.4	45.3					0.0	24.0	99.4	69.4	0.0	0.0
116.90		168.1	84.7					0.0	45.7	168.1	130.4	0.0	0.0
120.00		263.1	134.3					0.0	74.5	263.1	208.8	0.0	0.0
125.00		175.3	206.2					0.0	120.1	175.3	326.4	0.0	0.0
125.50	Appurtenance(s)	30.9	19.9	2,026.3	0.0	0.0	1,422.7	0.0	12.0	2,057.2	1,454.7	0.0	0.0
126.00	Appurtenance(s)	93.8	19.8	6,132.0	0.0	7,103.9	2,510.7	0.0	12.0	6,225.7	2,542.5	0.0	0.0
129.00		78.3	116.1					0.0	0.0	78.3	116.1	0.0	0.0
								Totals:		22,686.2	23,867.6	0.00	0.00

Site Number: 283424 | Code: ANSI/TIA-222-H |

Site Name: WATERTOWN CT, CT | Engineering Number:13213496_C3_07 | 8/19/2020 3:06:49 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.0W — 115 mph with No Ice (Reduced DL) — 23 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
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	-31.72	-33.79	0.00	-3,350.73	0.00	3,350.73	3,299.40	971.43	4,896.32	3,797.13	0.00	0.00	0.893
5.00	-30.62	-33.41	0.00	-3,181.80	0.00	3,181.80	3,261.75	947.06	4,653.76	3,659.11	0.12	-0.21	0.880
10.00	-29.55	-33.04	0.00	-3,014.76	0.00	3,014.76	3,221.78	922.69	4,417.37	3,520.74	0.46	-0.43	0.867
15.00	-28.49	-32.67	0.00	-2,849.58	0.00	2,849.58	3,179.49	898.32	4,187.13	3,382.22	1.03	-0.66	0.853
20.00	-27.46	-32.28	0.00	-2,686.25	0.00	2,686.25	3,134.88	873.95	3,963.06	3,243.76	1.84	-0.88	0.838
25.00	-26.45	-31.88	0.00	-2,524.84	0.00	2,524.84	3,087.95	849.58	3,745.15	3,105.54	2.89	-1.12	0.823
30.00	-25.48	-31.52	0.00	-2,365.43	0.00	2,365.43	3,038.69	825.21	3,533.40	2,967.79	4.19	-1.36	0.807
33.83	-24.77	-31.31	0.00	-2,244.59	0.00	2,244.59	2,999.35	806.53	3,375.23	2,862.61	5.36	-1.54	0.794
35.00	-24.33	-31.05	0.00	-2,208.07	0.00	2,208.07	2,987.11	800.84	3,327.81	2,830.70	5.74	-1.60	0.790
40.00	-22.75	-30.79	0.00	-2,052.80	0.00	2,052.80	2,933.21	776.47	3,128.38	2,694.46	7.56	-1.85	0.771
40.33	-22.59	-30.59	0.00	-2,042.53	0.00	2,042.53	2,953.95	785.73	3,203.39	2,746.08	7.69	-1.87	0.753
45.00	-21.73	-30.17	0.00	-1,899.79	0.00	1,899.79	2,902.37	762.98	3,020.63	2,619.49	9.63	-2.11	0.734
50.00	-20.83	-29.73	0.00	-1,748.95	0.00	1,748.95	2,844.86	738.61	2,830.78	2,485.00	11.97	-2.35	0.713
55.00	-19.95	-29.30	0.00	-1,600.28	0.00	1,600.28	2,785.03	714.24	2,647.08	2,351.89	14.57	-2.60	0.689
60.00	-19.10	-28.87	0.00	-1,453.78	0.00	1,453.78	2,722.88	689.87	2,469.55	2,220.35	17.43	-2.85	0.664
65.00	-18.28	-28.44	0.00	-1,309.44	0.00	1,309.44	2,658.40	665.50	2,298.18	2,090.60	20.55	-3.10	0.635
70.00	-17.48	-28.01	0.00	-1,167.25	0.00	1,167.25	2,591.60	641.14	2,132.97	1,962.83	23.94	-3.36	0.603
75.00	-16.71	-27.63	0.00	-1,027.18	0.00	1,027.18	2,522.48	616.77	1,973.93	1,837.26	27.58	-3.60	0.568
79.00	-16.14	-27.41	0.00	-916.65	0.00	916.65	2,465.51	597.27	1,851.13	1,738.50	30.69	-3.80	0.536
80.00	-15.90	-27.22	0.00	-889.24	0.00	889.24	2,451.04	592.40	1,821.04	1,714.07	31.49	-3.85	0.527
83.83	-15.13	-26.98	0.00	-784.91	0.00	784.91	1,187.39	349.45	1,056.01	819.28	34.66	-4.04	0.977
85.00	-14.95	-26.77	0.00	-753.44	0.00	753.44	1,182.21	346.04	1,035.49	807.70	35.65	-4.10	0.951
90.00	-14.43	-26.50	0.00	-619.61	0.00	619.61	1,158.57	331.42	949.84	757.92	40.14	-4.45	0.836
92.10	-12.97	-24.23	0.00	-563.97	0.00	563.97	1,147.95	325.28	914.97	736.97	42.13	-4.60	0.782
95.00	-12.68	-24.06	0.00	-493.69	0.00	493.69	1,132.61	316.79	867.88	708.05	44.98	-4.79	0.714
96.70	-11.25	-21.72	0.00	-452.79	0.00	452.79	1,123.26	311.82	840.86	691.12	46.71	-4.90	0.670
100.00	-10.95	-21.53	0.00	-381.10	0.00	381.10	1,104.33	302.17	789.62	658.31	50.16	-5.10	0.594
101.90	-9.51	-19.16	0.00	-340.20	0.00	340.20	1,092.98	296.62	760.85	639.49	52.21	-5.20	0.545
105.00	-9.24	-18.91	0.00	-280.81	0.00	280.81	1,073.73	287.55	715.06	608.90	55.64	-5.36	0.474
108.60	-7.40	-15.97	0.00	-212.71	0.00	212.71	1,050.26	277.02	663.67	573.64	59.75	-5.52	0.381
110.00	-7.28	-15.78	0.00	-190.36	0.00	190.36	1,040.80	272.93	644.20	560.01	61.37	-5.58	0.350
114.00	-5.48	-12.29	0.00	-123.81	0.00	123.81	1,012.79	261.23	590.17	521.42	66.10	-5.72	0.245
115.00	-5.41	-12.19	0.00	-111.51	0.00	111.51	1,005.56	258.31	577.03	511.86	67.30	-5.74	0.225
116.90	-3.73	-9.23	0.00	-88.35	0.00	88.35	991.55	252.75	552.48	493.79	69.60	-5.79	0.184
120.00	-3.54	-8.95	0.00	-59.75	0.00	59.75	967.99	243.69	513.56	464.63	73.37	-5.85	0.134
125.00	-3.23	-8.74	0.00	-15.02	0.00	15.02	928.10	229.06	453.79	418.54	79.53	-5.91	0.041
125.50	-2.00	-6.54	0.00	-10.65	0.00	10.65	923.98	227.60	448.01	414.00	80.15	-5.91	0.029
126.00	-0.11	-0.09	0.00	-0.27	0.00	0.27	919.84	226.14	442.28	409.48	80.77	-5.91	0.001
129.00	0.00	-0.08	0.00	0.00	0.00	0.00	894.51	217.37	408.63	382.62	84.47	-5.91	0.000

Site Number: 283424 | Code: ANSI/TIA-222-H |

Site Name: WATERTOWN CT, CT | Engineering Number:13213496_C3_07 | 8/19/2020 3:06:49 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi | 50 mph with 1.00 in Radial Ice | 22 Iterations

Gust Response Factor :1.10 | Ice Dead Load Factor :1.00

Dead Load Factor :1.20 | Ice Importance Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		79.7	0.0					0.0	0.0	79.7	0.0	0.0	0.0
5.00		157.8	1,384.5					0.0	179.5	157.8	1,564.1	0.0	0.0
10.00		154.2	1,380.3					0.0	179.5	154.2	1,559.8	0.0	0.0
15.00		152.8	1,359.6					0.0	179.5	152.8	1,539.1	0.0	0.0
20.00		155.4	1,333.4					0.0	179.5	155.4	1,513.0	0.0	0.0
25.00		158.8	1,304.5					0.0	179.5	158.8	1,484.0	0.0	0.0
30.00		141.8	1,273.8					0.0	179.5	141.8	1,453.3	0.0	0.0
33.83	Bot - Section 2	80.8	955.7					0.0	137.6	80.8	1,093.4	0.0	0.0
35.00		100.9	509.7					0.0	41.9	100.9	551.5	0.0	0.0
40.00		87.3	2,143.0					0.0	179.5	87.3	2,322.6	0.0	0.0
40.33	Top - Section 1	81.6	140.9					0.0	12.0	81.6	152.9	0.0	0.0
45.00		157.2	1,111.8					0.0	167.6	157.2	1,279.3	0.0	0.0
50.00		161.4	1,157.9					0.0	179.5	161.4	1,337.4	0.0	0.0
55.00		159.6	1,123.3					0.0	179.5	159.6	1,302.8	0.0	0.0
60.00		157.4	1,088.2					0.0	179.5	157.4	1,267.8	0.0	0.0
65.00		154.8	1,052.9					0.0	179.5	154.8	1,232.4	0.0	0.0
70.00		151.9	1,017.2					0.0	179.5	151.9	1,196.7	0.0	0.0
75.00		134.1	981.3					0.0	179.5	134.1	1,160.8	0.0	0.0
79.00	Bot - Section 3	73.6	759.7					0.0	143.6	73.6	903.3	0.0	0.0
80.00		70.4	271.6					0.0	35.9	70.4	307.5	0.0	0.0
83.83	Top - Section 2	72.4	1,019.4					0.0	137.6	72.4	1,157.0	0.0	0.0
85.00		87.3	149.7					0.0	41.9	87.3	191.5	0.0	0.0
90.00		99.6	622.1					0.0	179.5	99.6	801.6	0.0	0.0
92.10		68.5	254.9					0.0	75.4	68.5	330.3	0.0	0.0
95.00		62.3	344.1					0.0	104.1	62.3	448.3	0.0	0.0
96.70		66.4	198.1					0.0	61.0	66.4	259.2	0.0	0.0
100.00		68.2	375.1					0.0	118.5	68.2	493.6	0.0	0.0
101.90		64.2	211.4					0.0	68.2	64.2	279.6	0.0	0.0
105.00		84.3	336.2					0.0	111.3	84.3	447.5	0.0	0.0
108.60		61.9	377.6					0.0	129.3	61.9	506.9	0.0	0.0
110.00		64.9	143.8					0.0	50.3	64.9	194.1	0.0	0.0
114.00	Appurtenance(s)	59.5	397.6	828.6	0.0	780.5	3,914.5	0.0	143.6	888.1	4,455.7	0.0	0.0
115.00		33.7	97.4					0.0	32.0	33.7	129.4	0.0	0.0
116.90		57.1	181.8					0.0	60.9	57.1	242.7	0.0	0.0
120.00		89.6	287.8					0.0	99.3	89.6	387.1	0.0	0.0
125.00		59.9	441.1					0.0	160.2	59.9	601.3	0.0	0.0
125.50	Appurtenance(s)	10.6	43.1	400.5	0.0	0.0	1,953.4	0.0	16.0	411.1	2,012.5	0.0	0.0
126.00	Appurtenance(s)	33.9	42.8	1,406.3	0.0	1,565.3	5,964.3	0.0	16.0	1,440.1	6,023.2	0.0	0.0
129.00		28.6	250.0					0.0	0.0	28.6	250.0	0.0	0.0
								Totals:		6,379.57	42,433.2	0.00	0.00

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

Site Name: WATERTOWN CT, CT Engineering Number:13213496_C3_07 8/19/2020 3:06:50 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 1.00 in Radial Ice 22 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00

Dead Load Factor :1.20 Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.29	-8.55	0.00	-826.61	0.00	826.61	3,299.40	971.43	4,896.32	3,797.13	0.00	0.00	0.234
5.00	-51.72	-8.44	0.00	-783.84	0.00	783.84	3,261.75	947.06	4,653.76	3,659.11	0.03	-0.05	0.230
10.00	-50.15	-8.34	0.00	-741.62	0.00	741.62	3,221.78	922.69	4,417.37	3,520.74	0.11	-0.11	0.226
15.00	-48.60	-8.23	0.00	-699.95	0.00	699.95	3,179.49	898.32	4,187.13	3,382.22	0.25	-0.16	0.222
20.00	-47.08	-8.11	0.00	-658.82	0.00	658.82	3,134.88	873.95	3,963.06	3,243.76	0.45	-0.22	0.218
25.00	-45.59	-7.99	0.00	-618.26	0.00	618.26	3,087.95	849.58	3,745.15	3,105.54	0.71	-0.27	0.214
30.00	-44.13	-7.88	0.00	-578.30	0.00	578.30	3,038.69	825.21	3,533.40	2,967.79	1.03	-0.33	0.209
33.83	-43.03	-7.82	0.00	-548.08	0.00	548.08	2,999.35	806.53	3,375.23	2,862.61	1.32	-0.38	0.206
35.00	-42.48	-7.74	0.00	-538.96	0.00	538.96	2,987.11	800.84	3,327.81	2,830.70	1.41	-0.39	0.205
40.00	-40.15	-7.66	0.00	-500.25	0.00	500.25	2,933.21	776.47	3,128.38	2,694.46	1.86	-0.45	0.199
40.33	-40.00	-7.60	0.00	-497.70	0.00	497.70	2,953.95	785.73	3,203.39	2,746.08	1.89	-0.46	0.195
45.00	-38.71	-7.47	0.00	-462.24	0.00	462.24	2,902.37	762.98	3,020.63	2,619.49	2.37	-0.52	0.190
50.00	-37.37	-7.34	0.00	-424.89	0.00	424.89	2,844.86	738.61	2,830.78	2,485.00	2.94	-0.58	0.184
55.00	-36.06	-7.20	0.00	-388.21	0.00	388.21	2,785.03	714.24	2,647.08	2,351.89	3.57	-0.64	0.178
60.00	-34.79	-7.07	0.00	-352.21	0.00	352.21	2,722.88	689.87	2,469.55	2,220.35	4.27	-0.70	0.172
65.00	-33.55	-6.93	0.00	-316.89	0.00	316.89	2,658.40	665.50	2,298.18	2,090.60	5.04	-0.76	0.164
70.00	-32.35	-6.80	0.00	-282.24	0.00	282.24	2,591.60	641.14	2,132.97	1,962.83	5.86	-0.82	0.156
75.00	-31.18	-6.67	0.00	-248.26	0.00	248.26	2,522.48	616.77	1,973.93	1,837.26	6.75	-0.88	0.148
79.00	-30.28	-6.60	0.00	-221.56	0.00	221.56	2,465.51	597.27	1,851.13	1,738.50	7.51	-0.93	0.140
80.00	-29.97	-6.54	0.00	-214.96	0.00	214.96	2,451.04	592.40	1,821.04	1,714.07	7.71	-0.94	0.138
83.83	-28.81	-6.46	0.00	-189.88	0.00	189.88	1,187.39	349.45	1,056.01	819.28	8.48	-0.98	0.256
85.00	-28.61	-6.40	0.00	-182.34	0.00	182.34	1,182.21	346.04	1,035.49	807.70	8.72	-1.00	0.250
90.00	-27.80	-6.32	0.00	-150.34	0.00	150.34	1,158.57	331.42	949.84	757.92	9.82	-1.08	0.223
92.10	-25.58	-5.83	0.00	-137.08	0.00	137.08	1,147.95	325.28	914.97	736.97	10.30	-1.12	0.209
95.00	-25.13	-5.78	0.00	-120.17	0.00	120.17	1,132.61	316.79	867.88	708.05	11.00	-1.17	0.192
96.70	-22.91	-5.28	0.00	-110.35	0.00	110.35	1,123.26	311.82	840.86	691.12	11.42	-1.19	0.180
100.00	-22.41	-5.21	0.00	-92.94	0.00	92.94	1,104.33	302.17	789.62	658.31	12.26	-1.24	0.162
101.90	-20.16	-4.70	0.00	-83.04	0.00	83.04	1,092.98	296.62	760.85	639.49	12.76	-1.27	0.149
105.00	-19.71	-4.62	0.00	-68.46	0.00	68.46	1,073.73	287.55	715.06	608.90	13.60	-1.31	0.131
108.60	-16.72	-3.99	0.00	-51.83	0.00	51.83	1,050.26	277.02	663.67	573.64	14.60	-1.35	0.106
110.00	-16.53	-3.92	0.00	-46.24	0.00	46.24	1,040.80	272.93	644.20	560.01	14.99	-1.36	0.099
114.00	-12.10	-2.93	0.00	-29.77	0.00	29.77	1,012.79	261.23	590.17	521.42	16.15	-1.39	0.069
115.00	-11.97	-2.90	0.00	-26.84	0.00	26.84	1,005.56	258.31	577.03	511.86	16.44	-1.40	0.064
116.90	-9.22	-2.26	0.00	-21.33	0.00	21.33	991.55	252.75	552.48	493.79	17.00	-1.41	0.053
120.00	-8.84	-2.16	0.00	-14.33	0.00	14.33	967.99	243.69	513.56	464.63	17.92	-1.42	0.040
125.00	-8.24	-2.09	0.00	-3.53	0.00	3.53	928.10	229.06	453.79	418.54	19.42	-1.44	0.017
125.50	-6.23	-1.63	0.00	-2.48	0.00	2.48	923.98	227.60	448.01	414.00	19.57	-1.44	0.013
126.00	-0.25	-0.03	0.00	-0.10	0.00	0.10	919.84	226.14	442.28	409.48	19.72	-1.44	0.001
129.00	0.00	-0.03	0.00	0.00	0.00	0.00	894.51	217.37	408.63	382.62	20.63	-1.44	0.000

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

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

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		60.8	0.0					0.0	0.0	60.8	0.0	0.0	0.0
5.00		120.1	929.9					0.0	149.6	120.1	1,079.5	0.0	0.0
10.00		117.0	906.3					0.0	149.6	117.0	1,055.9	0.0	0.0
15.00		115.7	882.7					0.0	149.6	115.7	1,032.3	0.0	0.0
20.00		117.5	859.1					0.0	149.6	117.5	1,008.7	0.0	0.0
25.00		119.8	835.4					0.0	149.6	119.8	985.0	0.0	0.0
30.00		106.8	811.8					0.0	149.6	106.8	961.4	0.0	0.0
33.83	Bot - Section 2	60.8	606.4					0.0	114.7	60.8	721.1	0.0	0.0
35.00		75.8	366.1					0.0	34.9	75.8	401.0	0.0	0.0
40.00		65.6	1,539.7					0.0	149.6	65.6	1,689.3	0.0	0.0
40.33	Top - Section 1	61.2	101.0					0.0	10.0	61.2	110.9	0.0	0.0
45.00		117.8	700.7					0.0	139.6	117.8	840.3	0.0	0.0
50.00		120.7	727.9					0.0	149.6	120.7	877.5	0.0	0.0
55.00		119.1	704.2					0.0	149.6	119.1	853.8	0.0	0.0
60.00		117.2	680.6					0.0	149.6	117.2	830.2	0.0	0.0
65.00		115.0	657.0					0.0	149.6	115.0	806.6	0.0	0.0
70.00		112.6	633.4					0.0	149.6	112.6	783.0	0.0	0.0
75.00		99.2	609.7					0.0	149.6	99.2	759.3	0.0	0.0
79.00	Bot - Section 3	54.4	470.8					0.0	119.7	54.4	590.5	0.0	0.0
80.00		51.9	185.5					0.0	29.9	51.9	215.5	0.0	0.0
83.83	Top - Section 2	53.4	697.2					0.0	114.7	53.4	811.9	0.0	0.0
85.00		64.1	78.7					0.0	34.9	64.1	113.6	0.0	0.0
90.00		73.1	328.4					0.0	149.6	73.1	478.0	0.0	0.0
92.10		50.2	133.7					0.0	62.8	50.2	196.5	0.0	0.0
95.00		45.6	180.5					0.0	86.8	45.6	267.3	0.0	0.0
96.70		48.5	103.6					0.0	50.9	48.5	154.5	0.0	0.0
100.00		49.7	196.4					0.0	98.7	49.7	295.2	0.0	0.0
101.90		46.7	110.3					0.0	56.8	46.7	167.1	0.0	0.0
105.00		61.2	175.6					0.0	92.8	61.2	268.3	0.0	0.0
108.60		44.8	197.0					0.0	107.7	44.8	304.8	0.0	0.0
110.00		46.9	74.6					0.0	41.9	46.9	116.5	0.0	0.0
114.00	Appurtenance(s)	42.9	207.1	760.9	0.0	835.3	2,030.5	0.0	119.7	803.8	2,357.3	0.0	0.0
115.00		24.2	50.4					0.0	26.7	24.2	77.1	0.0	0.0
116.90		40.9	94.1					0.0	50.7	40.9	144.9	0.0	0.0
120.00		64.1	149.2					0.0	82.8	64.1	232.0	0.0	0.0
125.00		42.7	229.2					0.0	133.5	42.7	362.7	0.0	0.0
125.50	Appurtenance(s)	7.5	22.1	493.5	0.0	0.0	1,580.8	0.0	13.3	501.0	1,616.3	0.0	0.0
126.00	Appurtenance(s)	22.8	22.0	1,493.5	0.0	1,730.2	2,789.7	0.0	13.3	1,516.3	2,825.0	0.0	0.0
129.00		19.1	129.0					0.0	0.0	19.1	129.0	0.0	0.0
								Totals:		5,525.42	26,519.5	0.00	0.00

Site Number: 283424 | Code: ANSI/TIA-222-H |

Site Name: WATERTOWN CT, CT | Engineering Number:13213496_C3_07 | 8/19/2020 3:06:52 PM

Customer: AT&T MOBILITY

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

Gust Response Factor :1.10
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	-35.31	-8.23	0.00	-820.12	0.00	820.12	3,299.40	971.43	4,896.32	3,797.13	0.00	0.00	0.227
5.00	-34.22	-8.14	0.00	-778.97	0.00	778.97	3,261.75	947.06	4,653.76	3,659.11	0.03	-0.05	0.223
10.00	-33.16	-8.05	0.00	-738.26	0.00	738.26	3,221.78	922.69	4,417.37	3,520.74	0.11	-0.11	0.220
15.00	-32.12	-7.97	0.00	-697.99	0.00	697.99	3,179.49	898.32	4,187.13	3,382.22	0.25	-0.16	0.217
20.00	-31.10	-7.88	0.00	-658.16	0.00	658.16	3,134.88	873.95	3,963.06	3,243.76	0.45	-0.22	0.213
25.00	-30.11	-7.78	0.00	-618.77	0.00	618.77	3,087.95	849.58	3,745.15	3,105.54	0.71	-0.27	0.209
30.00	-29.14	-7.70	0.00	-579.86	0.00	579.86	3,038.69	825.21	3,533.40	2,967.79	1.03	-0.33	0.205
33.83	-28.42	-7.65	0.00	-550.35	0.00	550.35	2,999.35	806.53	3,375.23	2,862.61	1.31	-0.38	0.202
35.00	-28.01	-7.59	0.00	-541.42	0.00	541.42	2,987.11	800.84	3,327.81	2,830.70	1.41	-0.39	0.201
40.00	-26.32	-7.52	0.00	-503.48	0.00	503.48	2,933.21	776.47	3,128.38	2,694.46	1.85	-0.45	0.196
40.33	-26.21	-7.48	0.00	-500.98	0.00	500.98	2,953.95	785.73	3,203.39	2,746.08	1.88	-0.46	0.191
45.00	-25.36	-7.38	0.00	-466.08	0.00	466.08	2,902.37	762.98	3,020.63	2,619.49	2.36	-0.52	0.187
50.00	-24.48	-7.28	0.00	-429.19	0.00	429.19	2,844.86	738.61	2,830.78	2,485.00	2.93	-0.58	0.181
55.00	-23.62	-7.17	0.00	-392.82	0.00	392.82	2,785.03	714.24	2,647.08	2,351.89	3.57	-0.64	0.176
60.00	-22.78	-7.07	0.00	-356.95	0.00	356.95	2,722.88	689.87	2,469.55	2,220.35	4.27	-0.70	0.169
65.00	-21.97	-6.97	0.00	-321.60	0.00	321.60	2,658.40	665.50	2,298.18	2,090.60	5.04	-0.76	0.162
70.00	-21.18	-6.87	0.00	-286.76	0.00	286.76	2,591.60	641.14	2,132.97	1,962.83	5.87	-0.82	0.154
75.00	-20.41	-6.78	0.00	-252.42	0.00	252.42	2,522.48	616.77	1,973.93	1,837.26	6.76	-0.88	0.146
79.00	-19.82	-6.72	0.00	-225.32	0.00	225.32	2,465.51	597.27	1,851.13	1,738.50	7.52	-0.93	0.138
80.00	-19.60	-6.68	0.00	-218.59	0.00	218.59	2,451.04	592.40	1,821.04	1,714.07	7.72	-0.95	0.136
83.83	-18.79	-6.62	0.00	-192.99	0.00	192.99	1,187.39	349.45	1,056.01	819.28	8.50	-0.99	0.252
85.00	-18.67	-6.57	0.00	-185.27	0.00	185.27	1,182.21	346.04	1,035.49	807.70	8.74	-1.00	0.246
90.00	-18.19	-6.51	0.00	-152.41	0.00	152.41	1,158.57	331.42	949.84	757.92	9.84	-1.09	0.217
92.10	-16.46	-5.96	0.00	-138.74	0.00	138.74	1,147.95	325.28	914.97	736.97	10.33	-1.13	0.203
95.00	-16.19	-5.92	0.00	-121.47	0.00	121.47	1,132.61	316.79	867.88	708.05	11.03	-1.18	0.186
96.70	-14.45	-5.34	0.00	-111.41	0.00	111.41	1,123.26	311.82	840.86	691.12	11.46	-1.20	0.174
100.00	-14.15	-5.30	0.00	-93.78	0.00	93.78	1,104.33	302.17	789.62	658.31	12.31	-1.25	0.156
101.90	-12.39	-4.71	0.00	-83.72	0.00	83.72	1,092.98	296.62	760.85	639.49	12.81	-1.28	0.143
105.00	-12.12	-4.66	0.00	-69.11	0.00	69.11	1,073.73	287.55	715.06	608.90	13.65	-1.32	0.125
108.60	-9.81	-3.93	0.00	-52.35	0.00	52.35	1,050.26	277.02	663.67	573.64	14.66	-1.36	0.101
110.00	-9.69	-3.89	0.00	-46.84	0.00	46.84	1,040.80	272.93	644.20	560.01	15.06	-1.37	0.093
114.00	-7.35	-3.03	0.00	-30.46	0.00	30.46	1,012.79	261.23	590.17	521.42	16.23	-1.40	0.066
115.00	-7.28	-3.00	0.00	-27.44	0.00	27.44	1,005.56	258.31	577.03	511.86	16.52	-1.41	0.061
116.90	-5.11	-2.27	0.00	-21.73	0.00	21.73	991.55	252.75	552.48	493.79	17.09	-1.42	0.049
120.00	-4.88	-2.20	0.00	-14.69	0.00	14.69	967.99	243.69	513.56	464.63	18.01	-1.44	0.037
125.00	-4.52	-2.15	0.00	-3.68	0.00	3.68	928.10	229.06	453.79	418.54	19.53	-1.45	0.014
125.50	-2.91	-1.61	0.00	-2.60	0.00	2.60	923.98	227.60	448.01	414.00	19.68	-1.45	0.009
126.00	-0.13	-0.02	0.00	-0.07	0.00	0.07	919.84	226.14	442.28	409.48	19.83	-1.45	0.000
129.00	0.00	-0.02	0.00	0.00	0.00	0.00	894.51	217.37	408.63	382.62	20.74	-1.45	0.000

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coeffiecient F_v:	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	2.12
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.81
Total Unfactored Dead Load:	35.31 k
Seismic Base Shear (E):	1.16 k

Load Case 1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	127.50	129	832	0.007	9	160
37	125.75	35	222	0.002	2	44
36	125.25	35	222	0.002	2	44
35	122.50	363	2,175	0.020	23	450
34	118.45	232	1,309	0.012	14	288
33	115.95	145	787	0.007	8	180
32	114.50	77	409	0.004	4	96
31	112.00	327	1,667	0.015	17	405
30	109.30	117	569	0.005	6	145
29	106.80	305	1,426	0.013	15	378
28	103.45	268	1,185	0.011	12	333
27	100.95	167	706	0.006	7	207
26	98.35	295	1,190	0.011	12	366
25	95.85	154	594	0.005	6	192
24	93.55	267	984	0.009	10	331
23	91.05	197	689	0.006	7	244
22	87.50	478	1,559	0.014	16	593
21	84.42	114	347	0.003	4	141
20	81.92	812	2,351	0.021	25	1,007
19	79.50	215	591	0.005	6	267
18	77.00	590	1,529	0.014	16	732
17	72.50	759	1,763	0.016	18	942
16	67.50	783	1,597	0.014	17	971
15	62.50	807	1,432	0.013	15	1,000
14	57.50	830	1,267	0.011	13	1,030

13	52.50	854	1,106	0.010	12	1,059
12	47.50	877	948	0.009	10	1,088
11	42.67	840	748	0.007	8	1,042
10	40.17	111	88	0.001	1	138
9	37.50	1,689	1,190	0.011	12	2,095
8	34.42	401	242	0.002	3	497
7	31.92	721	379	0.003	4	894
6	27.50	961	386	0.003	4	1,192
5	22.50	985	275	0.002	3	1,222
4	17.50	1,009	179	0.002	2	1,251
3	12.50	1,032	100	0.001	1	1,280
2	7.50	1,056	40	0.000	0	1,309
1	2.50	1,080	6	0.000	0	1,339
Ericsson RRUS 8843 B	126.00	216	1,363	0.012	14	268
4' Pine Tree Branche	126.00	182	1,151	0.010	12	226
Ericsson RRUS 4478 B	126.00	180	1,134	0.010	12	223
Ericsson RRUS 4449 B	126.00	213	1,344	0.012	14	264
Raycap DC2-48-60-8-1	126.00	43	275	0.002	3	54
Ericsson RRUS 11 B5	126.00	152	960	0.009	10	189
Commscope SBNH-1D656	126.00	182	1,151	0.010	12	226
CCI HPA-65R-BUU-H8	126.00	204	1,287	0.012	13	253
Round T-Arms with Si	126.00	900	5,680	0.051	59	1,116
CCI DMP65R-BU8D	126.00	287	1,812	0.016	19	356
CCI OPA65R-BU8D	126.00	229	1,448	0.013	15	285
4' Pine Tree Branche	125.50	1,581	9,905	0.089	103	1,960
6' Pine Tree Branche	116.90	2,038	11,228	0.101	117	2,527
Nokia B5 RRH4x40-850	114.00	146	766	0.007	8	180
Alcatel-Lucent B25 R	114.00	159	837	0.008	9	197
Alcatel-Lucent B13 R	114.00	173	913	0.008	10	215
Alcatel-Lucent B66A	114.00	201	1,058	0.010	11	249
RFS DB-T1-6Z-8AB-0Z	114.00	88	463	0.004	5	109
Commscope JAHH-65B-R	114.00	364	1,915	0.017	20	451
Round Sector Frame	114.00	900	4,739	0.043	49	1,116
6' Pine Tree Branche	108.60	2,018	9,735	0.088	101	2,503
8' Pine Tree Branche	101.90	1,605	6,898	0.062	72	1,990
8' Pine Tree Branche	96.70	1,593	6,228	0.056	65	1,975
10' Pine Tree Branch	92.10	1,541	5,515	0.050	57	1,911
		35,314	110,894	1.000	1,156	43,794

Load Case 0.9D - 1.0Ev + 1.0Eh **Seismic (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	127.50	129	832	0.007	9	111
37	125.75	35	222	0.002	2	30
36	125.25	35	222	0.002	2	31
35	122.50	363	2,175	0.020	23	312
34	118.45	232	1,309	0.012	14	199
33	115.95	145	787	0.007	8	125
32	114.50	77	409	0.004	4	66
31	112.00	327	1,667	0.015	17	281
30	109.30	117	569	0.005	6	100
29	106.80	305	1,426	0.013	15	262
28	103.45	268	1,185	0.011	12	231
27	100.95	167	706	0.006	7	144
26	98.35	295	1,190	0.011	12	254
25	95.85	154	594	0.005	6	133
24	93.55	267	984	0.009	10	230
23	91.05	197	689	0.006	7	169
22	87.50	478	1,559	0.014	16	411
21	84.42	114	347	0.003	4	98

20	81.92	812	2,351	0.021	25	698
19	79.50	215	591	0.005	6	185
18	77.00	590	1,529	0.014	16	508
17	72.50	759	1,763	0.016	18	653
16	67.50	783	1,597	0.014	17	673
15	62.50	807	1,432	0.013	15	694
14	57.50	830	1,267	0.011	13	714
13	52.50	854	1,106	0.010	12	734
12	47.50	877	948	0.009	10	755
11	42.67	840	748	0.007	8	723
10	40.17	111	88	0.001	1	95
9	37.50	1,689	1,190	0.011	12	1,453
8	34.42	401	242	0.002	3	345
7	31.92	721	379	0.003	4	620
6	27.50	961	386	0.003	4	827
5	22.50	985	275	0.002	3	847
4	17.50	1,009	179	0.002	2	867
3	12.50	1,032	100	0.001	1	888
2	7.50	1,056	40	0.000	0	908
1	2.50	1,080	6	0.000	0	928
Ericsson RRUS 8843 B	126.00	216	1,363	0.012	14	186
4' Pine Tree Branche	126.00	182	1,151	0.010	12	157
Ericsson RRUS 4478 B	126.00	180	1,134	0.010	12	155
Ericsson RRUS 4449 B	126.00	213	1,344	0.012	14	183
Raycap DC2-48-60-8-1	126.00	43	275	0.002	3	37
Ericsson RRUS 11 B5	126.00	152	960	0.009	10	131
Commscope SBNH-1D656	126.00	182	1,151	0.010	12	157
CCI HPA-65R-BUU-H8	126.00	204	1,287	0.012	13	175
Round T-Arms with Si	126.00	900	5,680	0.051	59	774
CCI DMP65R-BU8D	126.00	287	1,812	0.016	19	247
CCI OPA65R-BU8D	126.00	229	1,448	0.013	15	197
4' Pine Tree Branche	125.50	1,581	9,905	0.089	103	1,359
6' Pine Tree Branche	116.90	2,038	11,228	0.101	117	1,752
Nokia B5 RRH4x40-850	114.00	146	766	0.007	8	125
Alcatel-Lucent B25 R	114.00	159	837	0.008	9	137
Alcatel-Lucent B13 R	114.00	173	913	0.008	10	149
Alcatel-Lucent B66A	114.00	201	1,058	0.010	11	173
RFS DB-T1-6Z-8AB-0Z	114.00	88	463	0.004	5	76
Commscope JAHH-65B-R	114.00	364	1,915	0.017	20	313
Round Sector Frame	114.00	900	4,739	0.043	49	774
6' Pine Tree Branche	108.60	2,018	9,735	0.088	101	1,736
8' Pine Tree Branche	101.90	1,605	6,898	0.062	72	1,380
8' Pine Tree Branche	96.70	1,593	6,228	0.056	65	1,370
10' Pine Tree Branch	92.10	1,541	5,515	0.050	57	1,325
		35,314	110,894	1.000	1,156	30,367

Load Case 1.2D + 1.0Ev + 1.0Eh **Seismic**

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	-42.45	-1.16	0.00	-125.86	0.00	125.86	3,299.40	971.43	4,896.32	3,797.13	0.00	0.00	0.046
5.00	-41.15	-1.16	0.00	-120.07	0.00	120.07	3,261.75	947.06	4,653.76	3,659.11	0.00	-0.01	0.045
10.00	-39.86	-1.17	0.00	-114.26	0.00	114.26	3,221.78	922.69	4,417.37	3,520.74	0.02	-0.02	0.045
15.00	-38.61	-1.17	0.00	-108.42	0.00	108.42	3,179.49	898.32	4,187.13	3,382.22	0.04	-0.02	0.044
20.00	-37.39	-1.17	0.00	-102.57	0.00	102.57	3,134.88	873.95	3,963.06	3,243.76	0.07	-0.03	0.044
25.00	-36.20	-1.17	0.00	-96.70	0.00	96.70	3,087.95	849.58	3,745.15	3,105.54	0.11	-0.04	0.043
30.00	-35.31	-1.17	0.00	-90.83	0.00	90.83	3,038.69	825.21	3,533.40	2,967.79	0.16	-0.05	0.042
33.83	-34.81	-1.17	0.00	-86.33	0.00	86.33	2,999.35	806.53	3,375.23	2,862.61	0.20	-0.06	0.042
35.00	-32.71	-1.16	0.00	-84.96	0.00	84.96	2,987.11	800.84	3,327.81	2,830.70	0.22	-0.06	0.041
40.00	-32.58	-1.16	0.00	-79.15	0.00	79.15	2,933.21	776.47	3,128.38	2,694.46	0.29	-0.07	0.040
40.33	-31.53	-1.16	0.00	-78.76	0.00	78.76	2,953.95	785.73	3,203.39	2,746.08	0.29	-0.07	0.039
45.00	-30.44	-1.15	0.00	-73.35	0.00	73.35	2,902.37	762.98	3,020.63	2,619.49	0.37	-0.08	0.038
50.00	-29.39	-1.14	0.00	-67.59	0.00	67.59	2,844.86	738.61	2,830.78	2,485.00	0.46	-0.09	0.038
55.00	-28.36	-1.13	0.00	-61.87	0.00	61.87	2,785.03	714.24	2,647.08	2,351.89	0.56	-0.10	0.036
60.00	-27.36	-1.12	0.00	-56.20	0.00	56.20	2,722.88	689.87	2,469.55	2,220.35	0.66	-0.11	0.035
65.00	-26.38	-1.11	0.00	-50.60	0.00	50.60	2,658.40	665.50	2,298.18	2,090.60	0.78	-0.12	0.034
70.00	-25.44	-1.09	0.00	-45.06	0.00	45.06	2,591.60	641.14	2,132.97	1,962.83	0.91	-0.13	0.033
75.00	-24.71	-1.08	0.00	-39.60	0.00	39.60	2,522.48	616.77	1,973.93	1,837.26	1.05	-0.14	0.031
79.00	-24.44	-1.07	0.00	-35.29	0.00	35.29	2,465.51	597.27	1,851.13	1,738.50	1.17	-0.15	0.030
80.00	-23.44	-1.05	0.00	-34.22	0.00	34.22	2,451.04	592.40	1,821.04	1,714.07	1.20	-0.15	0.030
83.83	-23.30	-1.05	0.00	-30.20	0.00	30.20	1,187.39	349.45	1,056.01	819.28	1.33	-0.16	0.056
85.00	-22.70	-1.03	0.00	-28.98	0.00	28.98	1,182.21	346.04	1,035.49	807.70	1.36	-0.16	0.055
90.00	-22.46	-1.03	0.00	-23.83	0.00	23.83	1,158.57	331.42	949.84	757.92	1.54	-0.17	0.051
92.10	-20.22	-0.95	0.00	-21.67	0.00	21.67	1,147.95	325.28	914.97	736.97	1.61	-0.18	0.047
95.00	-20.02	-0.95	0.00	-18.90	0.00	18.90	1,132.61	316.79	867.88	708.05	1.72	-0.18	0.044
96.70	-17.68	-0.87	0.00	-17.29	0.00	17.29	1,123.26	311.82	840.86	691.12	1.79	-0.19	0.041
100.00	-17.48	-0.86	0.00	-14.43	0.00	14.43	1,104.33	302.17	789.62	658.31	1.92	-0.20	0.038
101.90	-15.15	-0.77	0.00	-12.79	0.00	12.79	1,092.98	296.62	760.85	639.49	2.00	-0.20	0.034
105.00	-14.78	-0.76	0.00	-10.41	0.00	10.41	1,073.73	287.55	715.06	608.90	2.13	-0.21	0.031
108.60	-12.13	-0.64	0.00	-7.69	0.00	7.69	1,050.26	277.02	663.67	573.64	2.29	-0.21	0.025
110.00	-11.72	-0.62	0.00	-6.79	0.00	6.79	1,040.80	272.93	644.20	560.01	2.35	-0.21	0.023
114.00	-9.11	-0.50	0.00	-4.31	0.00	4.31	1,012.79	261.23	590.17	521.42	2.53	-0.22	0.017
115.00	-8.93	-0.49	0.00	-3.81	0.00	3.81	1,005.56	258.31	577.03	511.86	2.58	-0.22	0.016
116.90	-6.12	-0.35	0.00	-2.89	0.00	2.89	991.55	252.75	552.48	493.79	2.67	-0.22	0.012
120.00	-5.67	-0.32	0.00	-1.82	0.00	1.82	967.99	243.69	513.56	464.63	2.81	-0.22	0.010
125.00	-3.66	-0.21	0.00	-0.21	0.00	0.21	928.10	229.06	453.79	418.54	3.05	-0.22	0.004
125.50	-3.62	-0.21	0.00	-0.10	0.00	0.10	923.98	227.60	448.01	414.00	3.07	-0.22	0.004
126.00	0.00	0.00	0.00	0.00	0.00	0.00	919.84	226.14	442.28	409.48	3.09	-0.22	0.000
129.00	0.00	0.00	0.00	0.00	0.00	0.00	894.51	217.37	408.63	382.62	3.23	-0.22	0.000

Load Case 0.9D - 1.0Ev + 1.0Eh **Seismic (Reduced DL)**

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	-29.44	-1.16	0.00	-124.20	0.00	124.20	3,299.40	971.43	4,896.32	3,797.13	0.00	0.00	0.042
5.00	-28.53	-1.16	0.00	-118.41	0.00	118.41	3,261.75	947.06	4,653.76	3,659.11	0.00	-0.01	0.041
10.00	-27.64	-1.16	0.00	-112.61	0.00	112.61	3,221.78	922.69	4,417.37	3,520.74	0.02	-0.02	0.041
15.00	-26.77	-1.16	0.00	-106.80	0.00	106.80	3,179.49	898.32	4,187.13	3,382.22	0.04	-0.02	0.040
20.00	-25.93	-1.17	0.00	-100.98	0.00	100.98	3,134.88	873.95	3,963.06	3,243.76	0.07	-0.03	0.039
25.00	-25.10	-1.16	0.00	-95.15	0.00	95.15	3,087.95	849.58	3,745.15	3,105.54	0.11	-0.04	0.039
30.00	-24.48	-1.16	0.00	-89.33	0.00	89.33	3,038.69	825.21	3,533.40	2,967.79	0.16	-0.05	0.038
33.83	-24.14	-1.16	0.00	-84.87	0.00	84.87	2,999.35	806.53	3,375.23	2,862.61	0.20	-0.06	0.038
35.00	-22.68	-1.15	0.00	-83.51	0.00	83.51	2,987.11	800.84	3,327.81	2,830.70	0.21	-0.06	0.037
40.00	-22.59	-1.15	0.00	-77.76	0.00	77.76	2,933.21	776.47	3,128.38	2,694.46	0.28	-0.07	0.037
40.33	-21.86	-1.15	0.00	-77.37	0.00	77.37	2,953.95	785.73	3,203.39	2,746.08	0.29	-0.07	0.036
45.00	-21.11	-1.14	0.00	-72.03	0.00	72.03	2,902.37	762.98	3,020.63	2,619.49	0.36	-0.08	0.035
50.00	-20.38	-1.13	0.00	-66.34	0.00	66.34	2,844.86	738.61	2,830.78	2,485.00	0.45	-0.09	0.034
55.00	-19.66	-1.12	0.00	-60.70	0.00	60.70	2,785.03	714.24	2,647.08	2,351.89	0.55	-0.10	0.033
60.00	-18.97	-1.10	0.00	-55.11	0.00	55.11	2,722.88	689.87	2,469.55	2,220.35	0.65	-0.11	0.032
65.00	-18.29	-1.09	0.00	-49.59	0.00	49.59	2,658.40	665.50	2,298.18	2,090.60	0.77	-0.12	0.031
70.00	-17.64	-1.07	0.00	-44.14	0.00	44.14	2,591.60	641.14	2,132.97	1,962.83	0.90	-0.13	0.029
75.00	-17.13	-1.06	0.00	-38.78	0.00	38.78	2,522.48	616.77	1,973.93	1,837.26	1.04	-0.14	0.028
79.00	-16.95	-1.05	0.00	-34.54	0.00	34.54	2,465.51	597.27	1,851.13	1,738.50	1.15	-0.14	0.027
80.00	-16.25	-1.03	0.00	-33.49	0.00	33.49	2,451.04	592.40	1,821.04	1,714.07	1.18	-0.15	0.026
83.83	-16.15	-1.03	0.00	-29.55	0.00	29.55	1,187.39	349.45	1,056.01	819.28	1.30	-0.15	0.050
85.00	-15.74	-1.01	0.00	-28.35	0.00	28.35	1,182.21	346.04	1,035.49	807.70	1.34	-0.15	0.048
90.00	-15.57	-1.01	0.00	-23.30	0.00	23.30	1,158.57	331.42	949.84	757.92	1.51	-0.17	0.044
92.10	-14.02	-0.93	0.00	-21.19	0.00	21.19	1,147.95	325.28	914.97	736.97	1.59	-0.17	0.041
95.00	-13.88	-0.93	0.00	-18.48	0.00	18.48	1,132.61	316.79	867.88	708.05	1.69	-0.18	0.038
96.70	-12.26	-0.85	0.00	-16.90	0.00	16.90	1,123.26	311.82	840.86	691.12	1.76	-0.18	0.035
100.00	-12.12	-0.84	0.00	-14.10	0.00	14.10	1,104.33	302.17	789.62	658.31	1.89	-0.19	0.032
101.90	-10.51	-0.75	0.00	-12.51	0.00	12.51	1,092.98	296.62	760.85	639.49	1.97	-0.20	0.029
105.00	-10.24	-0.74	0.00	-10.17	0.00	10.17	1,073.73	287.55	715.06	608.90	2.10	-0.20	0.026
108.60	-8.41	-0.62	0.00	-7.52	0.00	7.52	1,050.26	277.02	663.67	573.64	2.25	-0.21	0.021
110.00	-8.13	-0.61	0.00	-6.64	0.00	6.64	1,040.80	272.93	644.20	560.01	2.31	-0.21	0.020
114.00	-6.32	-0.48	0.00	-4.22	0.00	4.22	1,012.79	261.23	590.17	521.42	2.49	-0.21	0.014
115.00	-6.19	-0.48	0.00	-3.73	0.00	3.73	1,005.56	258.31	577.03	511.86	2.53	-0.22	0.013
116.90	-4.24	-0.34	0.00	-2.83	0.00	2.83	991.55	252.75	552.48	493.79	2.62	-0.22	0.010
120.00	-3.93	-0.31	0.00	-1.78	0.00	1.78	967.99	243.69	513.56	464.63	2.76	-0.22	0.008
125.00	-2.54	-0.20	0.00	-0.20	0.00	0.20	928.10	229.06	453.79	418.54	2.99	-0.22	0.003
125.50	-2.51	-0.20	0.00	-0.10	0.00	0.10	923.98	227.60	448.01	414.00	3.01	-0.22	0.003
126.00	0.00	0.00	0.00	0.00	0.00	0.00	919.84	226.14	442.28	409.48	3.04	-0.22	0.000
129.00	0.00	0.00	0.00	0.00	0.00	0.00	894.51	217.37	408.63	382.62	3.18	-0.22	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	33.81	0.00	42.31	0.00	0.00	3386.76	83.83	1.00
0.9D + 1.0W	33.79	0.00	31.72	0.00	0.00	3350.73	83.83	0.98
1.2D + 1.0Di + 1.0Wi	8.55	0.00	53.29	0.00	0.00	826.61	83.83	0.26
1.2D + 1.0Ev + 1.0Eh	1.16	0.00	42.45	0.00	0.00	125.86	83.83	0.06
0.9D - 1.0Ev + 1.0Eh	1.16	0.00	29.44	0.00	0.00	124.20	83.83	0.05
1.0D + 1.0W	8.23	0.00	35.31	0.00	0.00	820.12	83.83	0.25

Site Name: Watertown CT, CT
Site Number: 283424
Design Base Loads (Factored) per TIA-222-H

Individual Pad & Pier Foundation Analysis

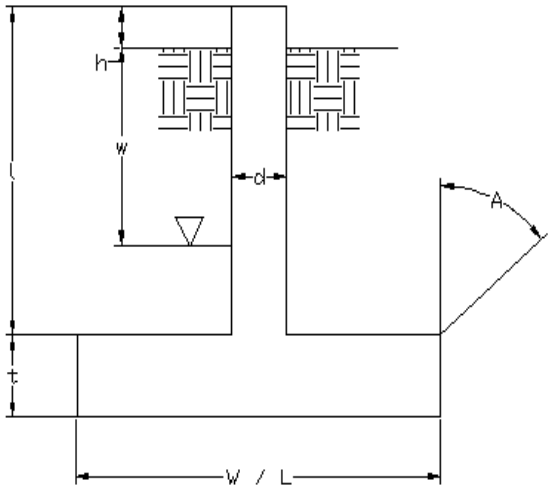
Foundation Analysis Parameters		
Foundation Mapped:	N	-
Moment (M_u):	3,386.8	k-ft
Shear/Leg (V_u):	33.8	k
Compression/Leg (P_u):	42.3	k
Uplift/Leg (T_u):	0.0	k
Tower Type:	MP	-
Pier Shape	Round	-
Diameter/Width of Prismatic Portion of Pier (d):	7.0	ft
Depth to Base of Foundation:	7.0	ft
Pier Height Above Ground (h):	0.5	ft
Length / Width of Pad (w):	21.0	ft
Thickness of Pad (t):	3.0	ft
Depth Below Ground Surface to Water Table (w):	8	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Above Water Table:	120	pcf
Unit Weight of Soil Below Water Table:	57.6	pcf
Friction Angle of Uplift from Top of Pad:	30	°
Friction Angle of Uplift from Base of Pad:	30	°
Uplift Angle Started at Top or Base of Pad (T/B):	T	-
Ultimate Skin Friction:	0	psf
Ultimate Compressive Bearing Pressure:	24,000	psf
Capacity Increase (Due to Transient Loads):	1	-
Bearing Strength Reduction Factor (f_s):	0.75	-
Uplift Strength Reduction Factor (f_s):	0.75	-

Foundation Steel Parameters		
Concrete Compressive Strength (f'_c):	4,000	psi
Vertical Steel Rebar Size #:	11	-
Vertical Steel Rebar Area:	1.56	in^2
# of Vertical Steel Rebars:	24	-
Vertical Steel Rebar Yield Strength (F_y):	60	ksi
Tie / Stirrup Size #:	5	-
Tie / Stirrup Area:	0.31	in^2
Tie / Stirrup Spacing:	6	in
Tie / Stirrup Steel Yield Strength (F_y):	60	ksi
Rebar Cage Diameter:	76.0	in
Bending/Tension Reduction Factor (f_B):	0.9	-
Shear Reduction Factor (f_V):	0.75	-
Compression Reduction Factor (f_V):	0.65	-
Steel Elastic Modulus:	29,000	ksi
Pad Steel Rebar Size #:	6	-
Pad Steel Rebar Area:	0.44	in^2
Pad Steel Rebar Yield Strength (F_y):	60	ksi
# of Rebar in Top of Pad:	21	-
# of Rebar in Base of Pad:	21	-
Pad Clear Cover:	3	in

Analysis results are

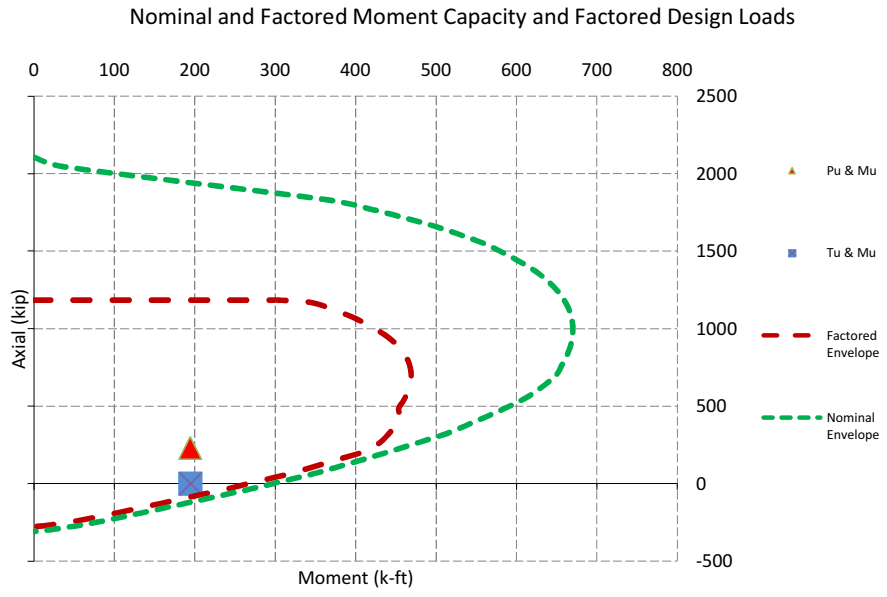
Depth (ft)		Ultimate Lateral	Increment	γ_{Soil}	Cu	ϕ
Top	Bottom	Bearing Pressure (psf)	(psf/ft)	(pcf)	(psf)	(°)
0	4.0	0	100	100	0	0
4.0	7.0	4,088	120	120	1,844	0

Axial Capacities and Design Moment		
Weight of Concrete (Bouyancy Considered):	224.43	k
Weight of Soil (Bouyancy Considered):	243.18	k
Ultimate Skin Friction Resistance:	0.00	k
Controlling Failure Mode (Top / Base):	Top	-
Nominal Uplift Capacity per Leg (f_sT_n):	350.70	k
T_u/f_sT_n:	0%	Pass
P_u:	98.94	k
Nominal Compressive Capacity per Leg (f_sP_n):	7938.00	k
P_u/f_sP_n:	1%	Pass
Inflection Point (Below Ground Surface):	4.97	ft
Factored Design Moment At Inflection Point (M_u):	3533.44	k-ft



Pad Strength Capacity			
b:	0.85	ACI318-0	*ACI318-05 - 10.2.7.3*
Lower Pad Flexural Reinforcement Spacing:	12.30	in	*Pad Reinforcing Spacing OK - ACI 318-14 - 8.7.2.2*
Upper Pad Flexural Reinforcement Spacing:	12.30	in	*Pad Reinforcing Spacing OK - ACI 318-14 - 8.7.2.2*
One Way Design Shear (V_u):	18.25	k	
One Way Shear Capacity (fV_c):	788.18	k	*ACI318-14 - 22.5.5.1*
V_u / fV_c:	2%	Pass	
Punching Design Shear Stress (v_u):	8.36	psi	
Nominal Punching Shear Capacity (f_cV_n):	189.74	psi	*ACI318-14 - 22.6.5.2*
v_u / fv_c:	4%	Pass	
Pier Moment Pad Flexure Transfer Ratio, γ_f:	0.60	-	*TIA-222-H 9.4.2*
Neutral Axis Depth:	13.92	in	
Moment Transfer Flexural Capacity ($fM_{sc,f}$):	218,429	k-in	
g_fM_{sc} / $fM_{sc,f}$:	12%	Pass	
Flexural Loading Due to Uplift (M_u):	0.00	k-ft	
Upper Steel Pad Moment Capacity (fM_n):	1343.10	k-ft	*ACI318-14 - 22.3*
M_u / fM_n:	0%	Pass	

Pier Strength Capacity			
Design Moment (M_u):	3533.44	k-ft	
Nominal Moment Capacity (f_BM_n):	6269.85	k-ft	*ACI318-14 - 9.5.2 & 22.3*
M_u/f_BM_n:	56%	Pass	
Design Shear (V_u):	33.81	k	
Nominal Shear Capacity (f_VV_n):	942.38	k	*ACI318-05 - 22.5*
V_u/f_VV_n:	4%	Pass	
Design Tension (T_u):	0.00	k	
Nominal Tension Capacity (f_TT_n):	2021.76	k	
T_u/f_TT_n:	0%	Pass	
Design Compression (P_u):	42.31	k	
Nominal Compression Capacity (f_PP_n):	10899.78	k	*ACI318-14 - 22.4*
P_u/f_PP_n:	0%	Pass	
Pier Reinforcement Ratio:	0.01	-	*Reinforcement Ratio is Satisfactory - TIA-222-H - 9.4.1*
$M_u/f_BM_n + T_u/f_TT_n$:	56%	Pass	



Base Plate & Anchor Rod Analysis

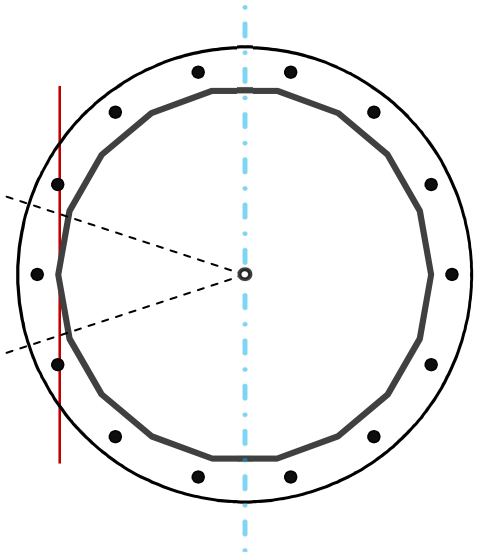
Pole Dimensions		
Number of Sides	18	-
Diameter	56.12	in
Thickness	5/16	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	3,386.8	k-ft
Axial, Pu	42.3	k
Shear, Vu	33.8	k
Neutral Axis	90	°

Report Capacities		
Component	Capacity	Result
Base Plate	29%	Pass
Anchor Rods	80%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	69.5	in
Thickness	2 1/2	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	N/A	in
Orientation Offset	0	°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	470.6	k
Bending Stress, ϕMn	1631.6	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	14	-
Diameter, ø	2 1/4	in
Bolt Circle	63.5	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	14.2	in
Orientation Offset	0	°
Applied Force, Pu	192.9	k
Anchor Rods, ϕPn	243.6	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	33.8	3386.8	1.00
Anchor Rod Forces	33.8	3386.8	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	54.5111	3.0284	0.0989		21223.49
Bolt	3.9761	3.2477	0.8393	4.5	21246.65
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Round	-
Diameter, D	69.5	in
Thickness, t	2.5	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	40.998	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	14	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	63.5	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	192.9	k
Applied Shear, Vu	0.8	k
Compressive Capacity, ϕPn	243.6	k
Tensile Capacity, ϕRnt	0.792	OK
Interaction Capacity	0.799	OK

External Base Plate		
Chord Length AA	34.533	in
Additional AA	5.000	in
Section Modulus, Z	61.770	in^3
Applied Moment, Mu	470.6	k-ft
Bending Capacity, ϕMn	2779.6	k-ft
Capacity, Mu/ϕMn	0.169	OK
Chord Length AB	33.078	in
Additional AB	5.000	in
Section Modulus, Z	59.497	in^3
Applied Moment, Mu	387.0	k-ft
Bending Capacity, ϕMn	2677.3	k-ft
Capacity, Mu/ϕMn	0.145	OK
Bend Line Length	23.206	in
Additional Bend Line	0.000	in
Section Modulus, Z	36.259	in^3
Applied Moment, Mu	470.6	k-ft
Bending Capacity, ϕMn	1631.6	k-ft
Capacity, Mu/ϕMn	0.288	OK

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in^3
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

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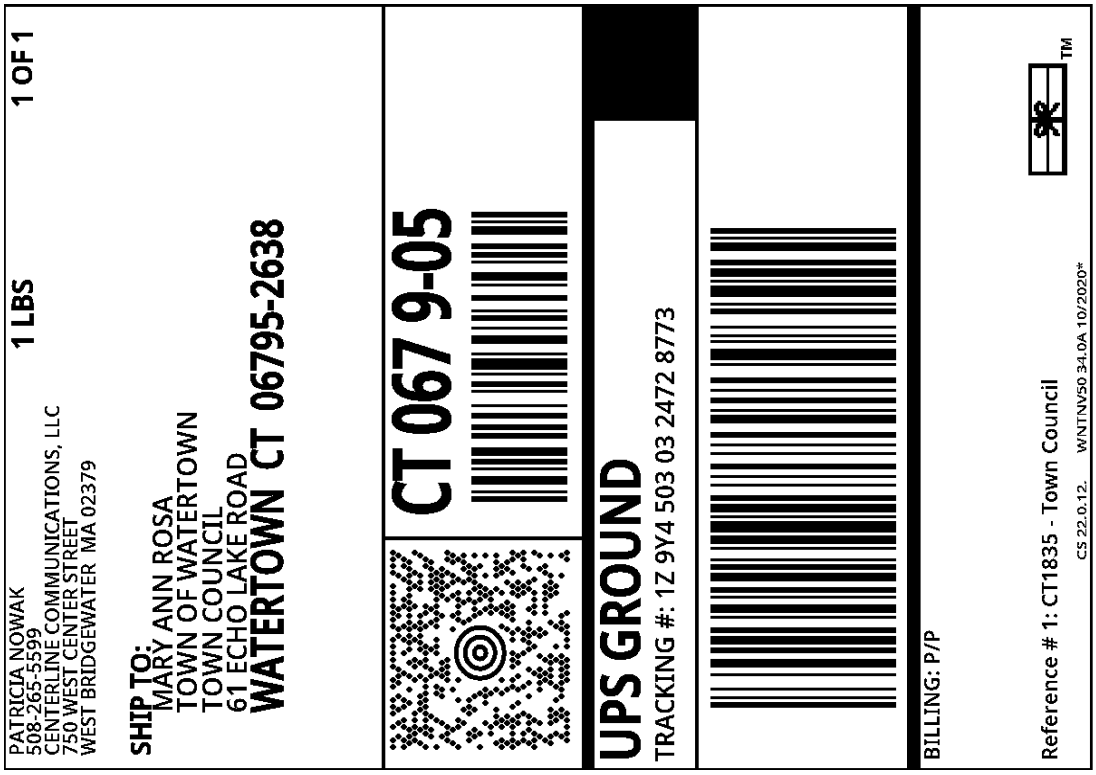

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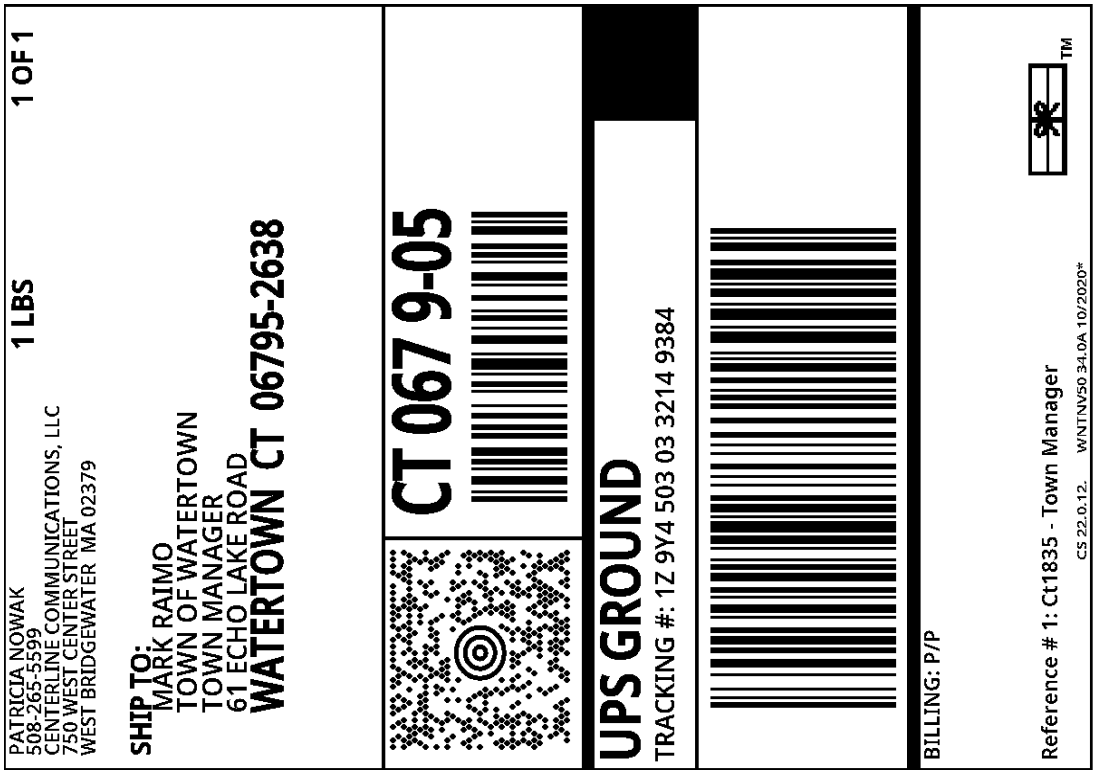

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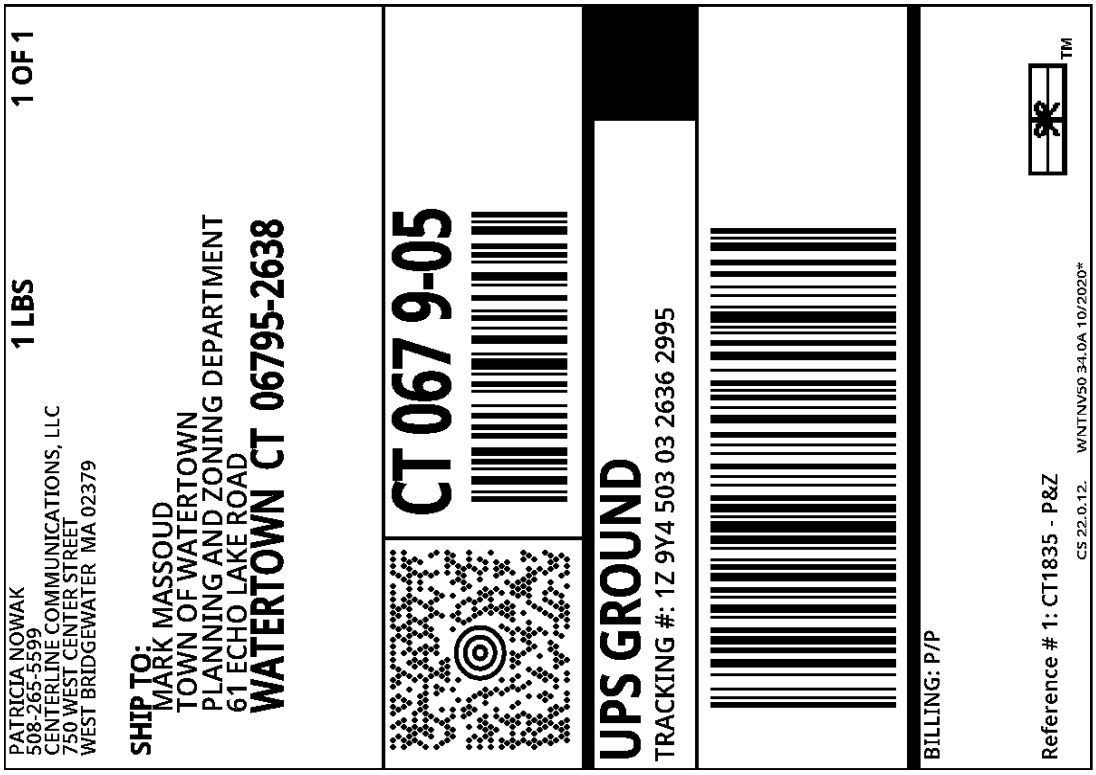

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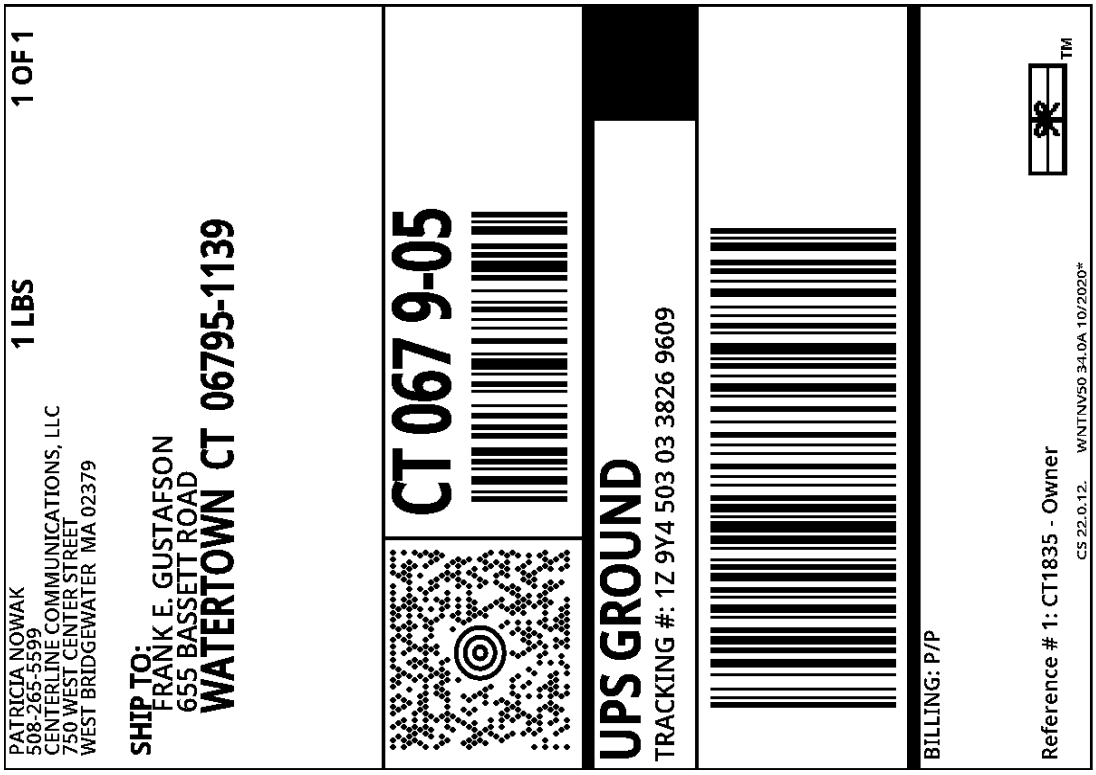

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