

JENNIFER SMITH

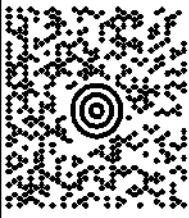
7744095807  
CENTERLINE COMMUNICATIONS, LLC  
750 WEST CENTER STREET  
WEST BRIDGEWATER MA 02379

1.0 LBS LTR

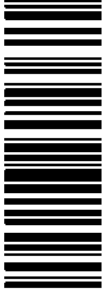
1 OF 1

**SHIP TO:**

MELANIE A. BACHMAN  
18608272935  
CONNECTICUT SITING COUNCIL  
EXECUTIVE DIRECTOR  
TEN FRANKLIN SQUARE  
**NEW BRITAIN CT 06051-2655**



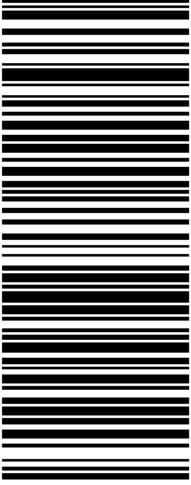
**CT 067 9-06**



**UPS 2ND DAY AIR**

**2**

TRACKING #: 1Z 9Y4 503 02 1216 2694



BILLING: P/P

Reference # 1: 283420 - STRATFORD CT

CS 22-0.18. WNTNVS0 \$1.0A 07/2021\*



TM

August 3, 2021

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

Re: Notice of Exempt Modifications – AT&T Site CT2381  
Telecommunications ATC Site 283420  
Address: 23 Stoneybrook Rd., Stratford

Dear Ms. Bachman,

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains antennas on a wireless telecommunications facility on an existing 120’ American Tower Corporation (ATC) telecommunications tower at the above referenced address, latitude 41.2032800, longitude -73.1486300.

AT&T desires to modify its existing equipment by removing three (3) antennas, (1) DCB, (12) coax, (3) control cable, and (4) fiber trunk. And adding (3) antennas, (6) RRH, (1) DC9, (1) DC Trunk, (4) 8AWG6, (3) 2.5” conduits and (1) fiber trunk, as more particularly detailed and described on the enclosed Construction Drawings prepared by RPM Engineering dated July 2, 2021

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 was sent to Mayor Laura R. Hoydick, Council Clerk Margo Paquette and the Property Owner, Stoneybrook Management LLC.

The planned modifications to the facility fall 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 Commissions safety standard. *Please see the RF emissions calculation for AT&T’s modifications enclosed herewith.*
5. The proposed modifications will not cause an ineligible change or alternation 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 enclosed herewith.

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

Please let me know if anything further would be helpful in your review.

Kind Regards,

*Jennille Smith*

Jennille Smith  
*Site Acquisition Consultant – Agent for AT&T*  
*Centerline Communications LLC*  
750 West Center St. Ste 301  
West Bridgewater, MA 02379  
774-409-5807

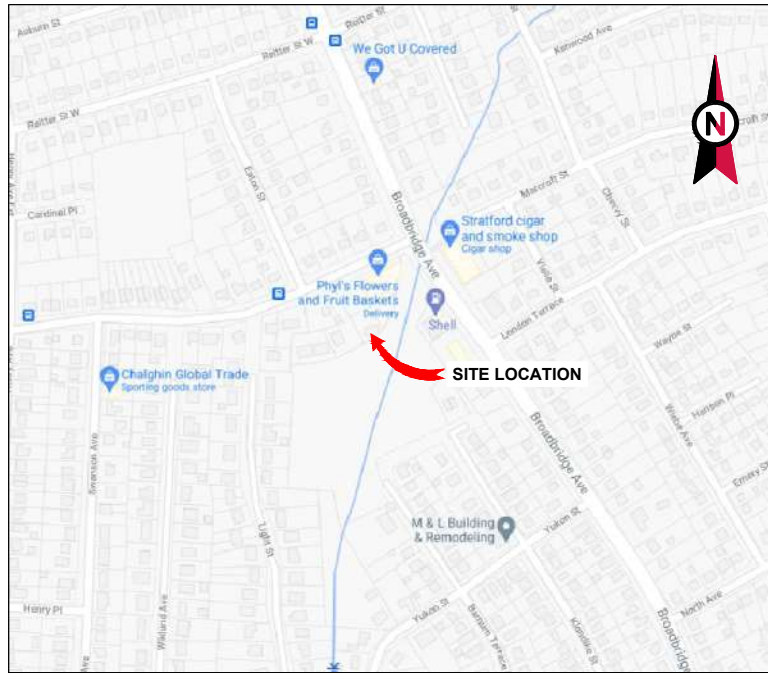
Enclosures: Exhibit 1 – Construction Drawings  
Exhibit 2 – Property Card and GIS  
Exhibit 3 – Structural Analysis  
Exhibit 4 – Mount Analysis  
Exhibit 5 – RF Emissions Analysis Report Evaluation  
Exhibit 6 – Prior Zoning Decisions  
Exhibit 7 – Delivery Confirmations

Cc: Mayor Laura R. Hoydick  
Town of Stratford  
2725 Main Street  
Stratford, CT 06615

Council Clerk Margo Paquette  
Town of Stratford  
2725 Main Street  
Stratford, CT 06615

Stoneybrook Management LLC  
124 Knapp Street  
Easton, CT 06612

# EXHIBIT 1



VICINITY MAP



**AMERICAN TOWER®**

ATC SITE NAME: STONYBROOK RD CT  
 ATC SITE NUMBER: 283420  
 AT&T PACE NUMBERS: MRCTB049862, MRCTB049863  
 AT&T PROJECTS: LTE 5C & 6C  
 AT&T SITE ID: CTL2381  
 AT&T SEARCH RING ID: CT2381S  
 AT&T FA CODE: 12906923  
 AT&T SITE NAME: STRATFORD STONYBROOK ROAD  
 SITE ADDRESS: 23 STONYBROOK ROAD  
 STRATFORD, CT 06614



LOCATION MAP

**AMERICAN TOWER®**  
**ATC TOWER SERVICES**  
 3500 REGENCY PARKWAY  
 SUITE 100  
 CARY, NC 27518  
 PHONE: (919) 468-0112  
 COA: C01229-00



REV.	DESCRIPTION	BY	DATE
A	PRELIM	KWB	05/17/21
0	FINAL	TMM	07/02/21

ATC SITE NUMBER:  
283420

ATC SITE NAME:  
STONYBROOK RD CT

AT&T MOBILITY SITE NAME:  
STRATFORD  
STONYBROOK ROAD  
SITE ADDRESS:  
23 STONYBROOK ROAD  
STRATFORD, CT 06614



DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

TITLE SHEET

SHEET NUMBER:	REVISION:
<b>G-001</b>	<b>0</b>

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. 2018 CONNECTICUT STATE BUILDING CODE 2. 2014 NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES

PROJECT SUMMARY
<u>SITE ADDRESS:</u> 23 STONYBROOK ROAD STRATFORD, CT 06614 COUNTY: FAIRFIELD
<u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.2032800° LONGITUDE: -73.1486300° GROUND ELEVATION: 73' AMSL

PROJECT DESCRIPTION
THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (3) ANTENNA(S), (1) DC6, (12) COAX, (3) CONTROL CABLE AND (4) FIBER TRUNK  INSTALL (3) ANTENNA(S), (6) RRH(S), (1) DC9, (1) DC TRUNK, (4) 8AWG6, (3) 2 1/2" CONDUIT(S) AND (1) FIBER TRUNK  EXISTING (3) ANTENNA(S), (9) RRH(S), (1) DC6, AND (1) FIBER TRUNK(S) <u>GROUND WORK:</u> INSTALL (1) XMU AND (1) IDLe CABLE

SHEET INDEX				
SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	07/02/21	TMM
G-002	GENERAL NOTES	0	07/02/21	TMM
C-101	DETAILED SITE PLAN	0	07/02/21	TMM
C-102	DETAILED SHELTER PLAN	0	07/02/21	TMM
C-201	TOWER ELEVATION	0	07/02/21	TMM
C-401	RF SCHEDULE AND ANTENNA INSTALLATION	0	07/02/21	TMM
C-501	CONSTRUCTION DETAILS	0	07/02/21	TMM
C-505	GENERATOR SPECIFICATIONS	0	07/02/21	TMM
E-501	GROUNDING DETAILS	0	07/02/21	TMM
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			

PROJECT TEAM
<u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801
<u>APPLICANT:</u> AT&T MOBILITY
<u>ENGINEER:</u> RPM ENGINEERING LLC 875 KINGS HIGHWAY, SUITE 209 WEST DEPTFORD, NJ 08096
<u>PROPERTY OWNER:</u> TBD

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 550 COCHITUATE RD FRAMINGHAM MA TAKE 90 WEST TO EXIT 9 (I84), CONTINUE ON I-84 USING LEFT LANE TO EXIT 57 (15 SOUTH), TO EXIT 86 TO MERGE ONTO I-91 SOUTH, TAKE EXIT 17 TO MERGE ONTO 15 SOUTH, TAKE EXIT 52 FOR STATE ROUTE 108 SOUTH, KEEP RIGHT AND FOLLOW SIGN FOR CT-108, CONTINUE ON CT108 WEST/NICHOLS AVE, TURN RIGHT ONTO REITTER STREET, TURN LEFT ONTO BROADBRIDGE AVE, TURN RIGHT ONTO STONYBROOK ROAD, SITE WILL BE ON LEFT BEHIND STRIP MALL



Know what's below.  
Call before you dig.



**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 NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE 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, UNGRATE, 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 OF 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.
  - 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 GREEDED 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.**



REV.	DESCRIPTION	BY	DATE
A	PRELIM	KMB	05/18/21
0	FINAL	TMM	07/02/21

ATC SITE NUMBER:  
**283420**

ATC SITE NAME:  
**STONYBROOK RD CT**

AT&T MOBILITY SITE NAME:  
**STRATFORD  
STONYBROOK ROAD**

SITE ADDRESS:  
23 STONYBROOK ROAD  
STRATFORD, CT 06614



DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

**GENERAL NOTES**

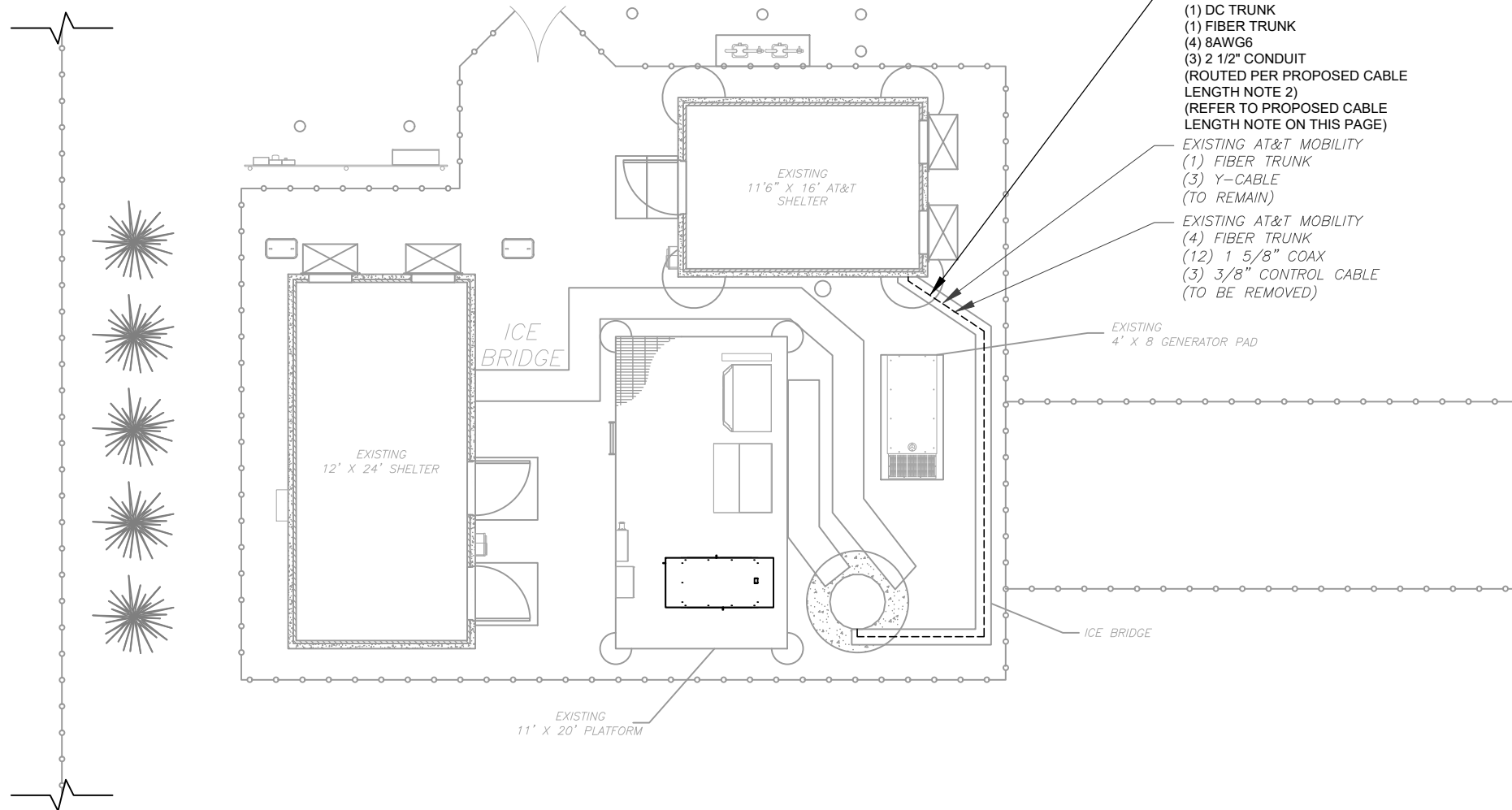
SHEET NUMBER: <b>G-002</b>	REVISION: <b>0</b>
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**SITE PLAN NOTES:**

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



PROPOSED AT&T MOBILITY  
 (1) DC TRUNK  
 (1) FIBER TRUNK  
 (4) 8AWG6  
 (3) 2 1/2" CONDUIT  
 (ROUTED PER PROPOSED CABLE LENGTH NOTE 2)  
 (REFER TO PROPOSED CABLE LENGTH NOTE ON THIS PAGE)

EXISTING AT&T MOBILITY  
 (1) FIBER TRUNK  
 (3) Y-CABLE  
 (TO REMAIN)

EXISTING AT&T MOBILITY  
 (4) FIBER TRUNK  
 (12) 1 5/8" COAX  
 (3) 3/8" CONTROL CABLE  
 (TO BE REMOVED)

EXISTING  
 4' X 8' GENERATOR PAD

ICE BRIDGE

EXISTING  
 11' X 20' PLATFORM

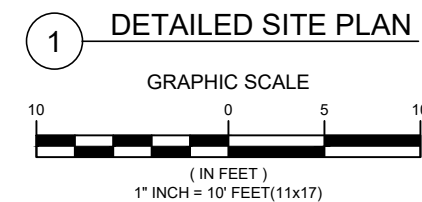
EXISTING  
 12' X 24' SHELTER

EXISTING  
 11'6" X 16" AT&T  
 SHELTER

ICE BRIDGE

**PROPOSED CABLE LENGTH:**

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **170'**. 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. 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.




**AMERICAN TOWER®**  
**ATC TOWER SERVICES**  
 3500 REGENCY PARKWAY  
 SUITE 100  
 CARY, NC 27518  
 PHONE: (919) 468-0112  
 COA: C01229-00



**RPM ENGINEERING**  
 With Integrity

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KMB	05/18/21
0	FINAL	TMM	07/02/21

ATC SITE NUMBER:  
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ATC SITE NAME:  
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AT&T MOBILITY SITE NAME:  
**STRATFORD**

STONYBROOK ROAD  
 SITE ADDRESS:  
 23 STONYBROOK ROAD  
 STRATFORD, CT 06614

SEAL:



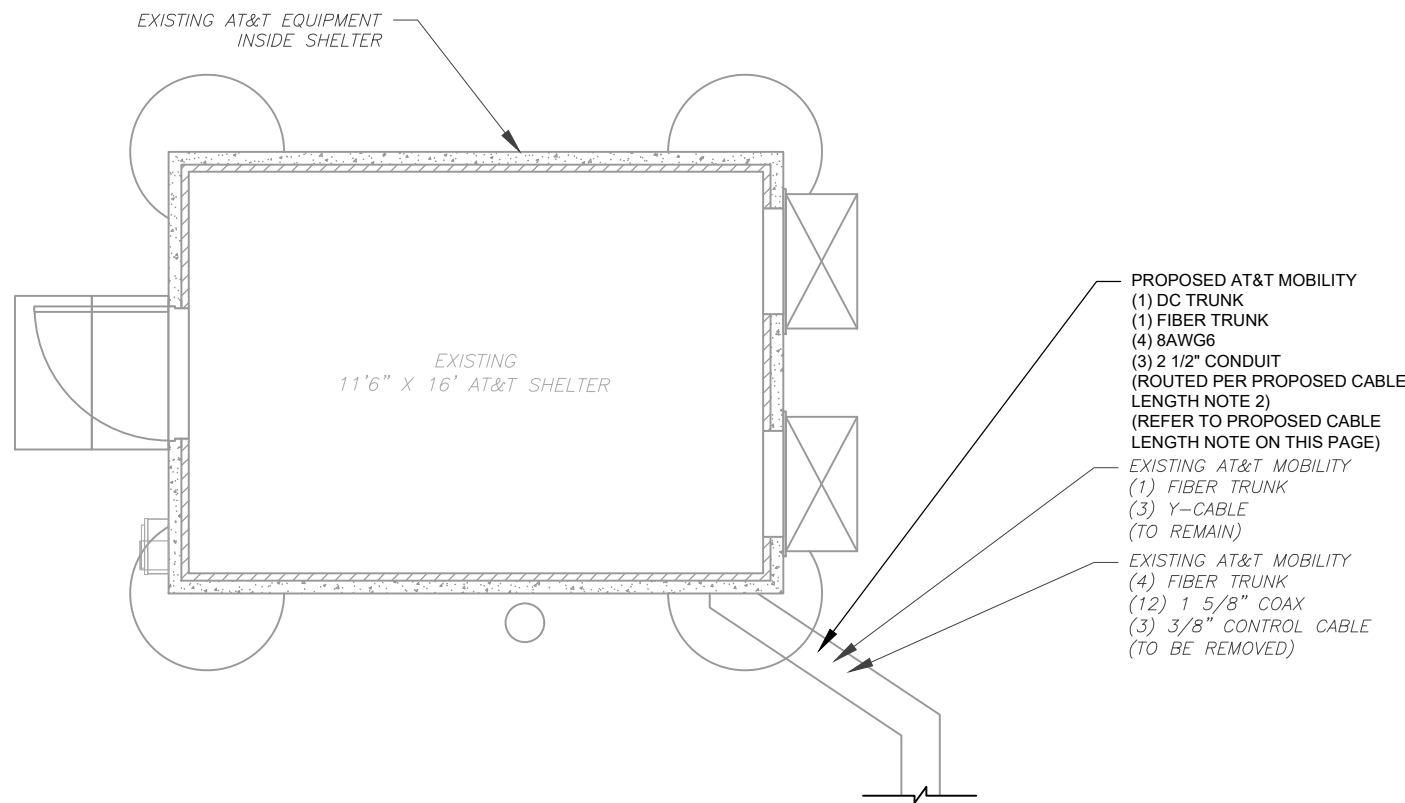

DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

**DETAILED SITE PLAN**

SHEET NUMBER:	REVISION:
<b>C-101</b>	<b>0</b>

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**GROUND WORK:**  
 INSTALL (1) XMU AND (1) IDLe CABLE



1 DETAILED EQUIPMENT PLAN

0 5' 10'

SCALE: 1"=5' (11X17)  
 1"=2.5' (22X34)

**AMERICAN TOWER®**  
**ATC TOWER SERVICES**  
 3500 REGENCY PARKWAY  
 SUITE 100  
 CARY, NC 27518  
 PHONE: (919) 468-0112  
 COA: C01229-00

**RPM ENGINEERING**  
*With Integrity*

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KMB	05/18/21
0	FINAL	TMM	07/02/21

ATC SITE NUMBER:  
 283420

ATC SITE NAME:  
 STONYBROOK RD CT

AT&T MOBILITY SITE NAME:  
 STRATFORD  
 STONYBROOK ROAD  
 SITE ADDRESS:  
 23 STONYBROOK ROAD  
 STRATFORD, CT 06614

SEAL:



DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

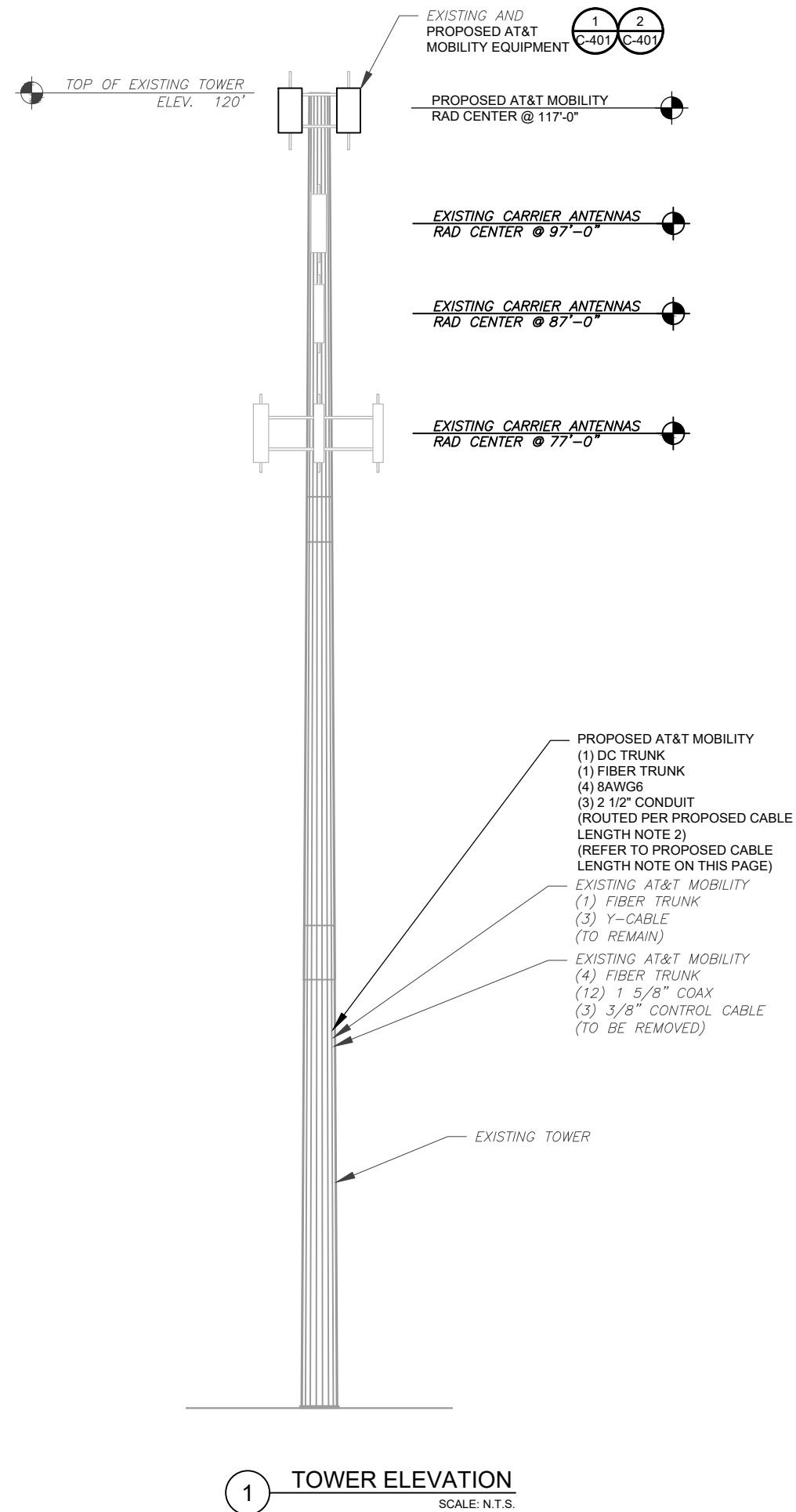
DETAILED EQUIPMENT LAYOUT

SHEET NUMBER:	REVISION:
<b>C-102</b>	<b>0</b>

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**TOWER WORK:**  
 REMOVE (3) ANTENNA(S), (1) DC6, (12) COAX, (3) CONTROL CABLE AND (4) FIBER TRUNK  
 INSTALL (3) ANTENNA(S), (6) RRH(S), (1) DC9, (1) DC TRUNK, (4) 8AWG6, (3) 2 1/2" CONDUIT(S) AND (1) FIBER TRUNK  
 EXISTING (3) ANTENNA(S), (9) RRH(S), (1) DC6, AND (1) FIBER TRUNK(S)  
**GROUND WORK:**  
 INSTALL (1) XMU AND (1) IDLe CABLE



PER MOUNT ANALYSIS COMPLETED BY TYLER M. BARKER, DATED MAY 21, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING

1 TOWER ELEVATION  
SCALE: N.T.S.

- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT 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.
  - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
  - 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.
  - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)



REV.	DESCRIPTION	BY	DATE
A	PRELIM	KMB	05/18/21
0	FINAL	TMM	07/02/21

ATC SITE NUMBER:  
283420

ATC SITE NAME:  
STONYBROOK RD CT

AT&T MOBILITY SITE NAME:  
STRATFORD  
STONYBROOK ROAD  
SITE ADDRESS:  
23 STONYBROOK ROAD  
STRATFORD, CT 06614



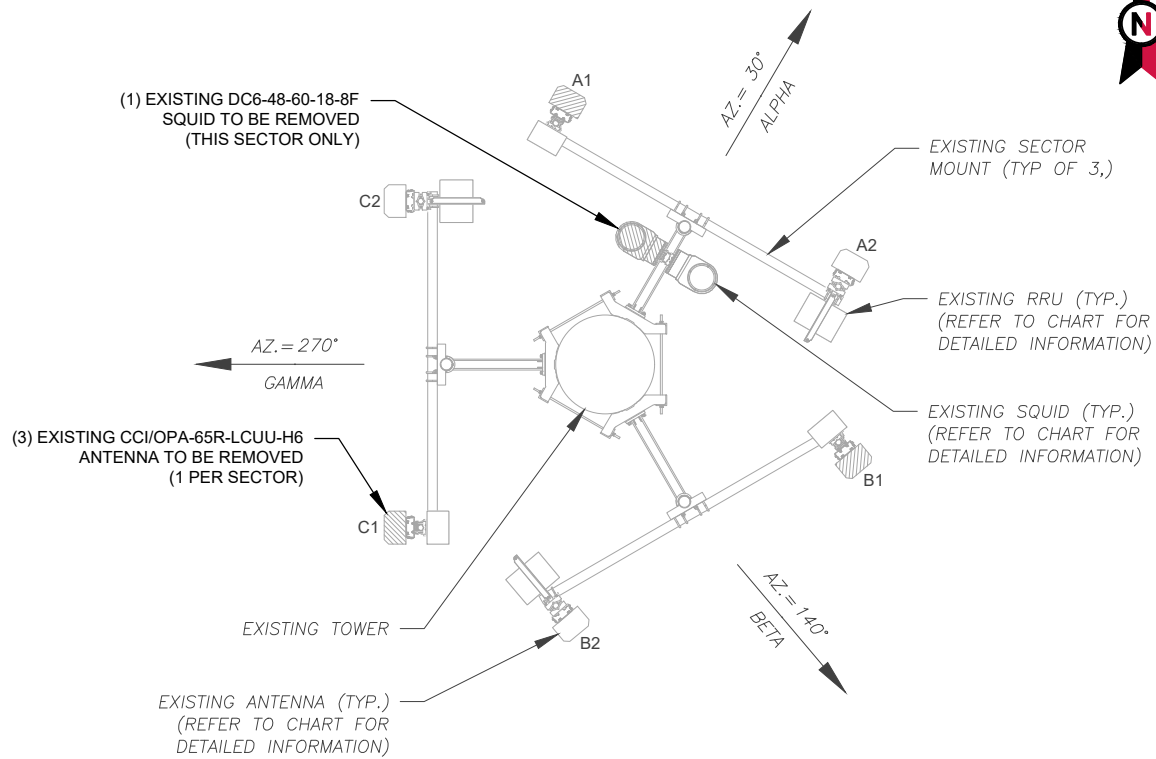
DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

**TOWER ELEVATION**

SHEET NUMBER: <b>C-201</b>	REVISION: <b>A</b>
-------------------------------	-----------------------

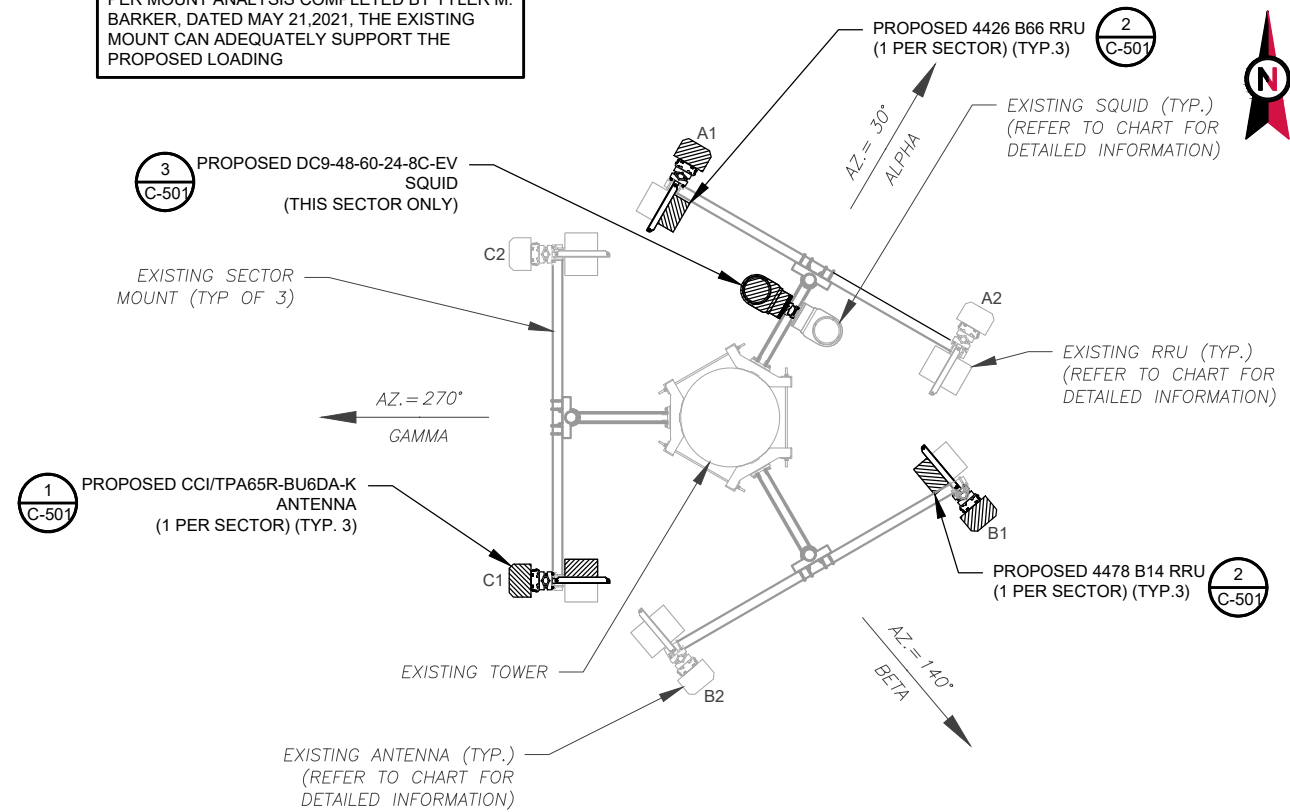
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EXISTING CONFIGURATIONS ARE BASED ON RFDS. CONTRACTOR TO VERIFY EXISTING CONDITIONS.



1 CURRENT ANTENNA PLAN  
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY TYLER M. BARKER, DATED MAY 21, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING



2 FINAL ANTENNA PLAN  
SCALE: N.T.S.

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 12" AWAY FROM ALL ANTENNAS

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	117'	30°	A1	OPA-65R-LCUU-H6	LTE 1900	RMV	(1) RRH RRUS-32 B2	RMN
			A2	800-10965	LTE 850, 5G 850, LTE WCS, LTE 700	RMN	(1) RRH 4449 B5/B12 (1) RRUS-32 B30	RMN RMN
BETA	117'	140°	B1	OPA-65R-LCUU-H6	LTE 1900	RMV	(1) RRH RRUS-32 B2	RMN
			B2	800-10965	LTE 850, 5G 850, LTE WCS, LTE 700	RMN	(1) RRH 4449 B5/B12 (1) RRUS-32 B30	RMN RMN
GAMMA	117'	270°	C1	OPA-65R-LCUU-H6	LTE 1900	RMV	(1) RRH RRUS-32 B2	RMN
			C2	800-10965	LTE 850, 5G 850, LTE WCS, LTE 700	RMN	(1) RRH 4449 B5/B12 (1) RRUS-32 B30	RMN RMN

NOTES

- CONFIRM WITH AT&T MOBILITY REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA AZIMUTHS, MOUNT CONFIGURATIONS AND TOWER ORIENTATION. SCALES SHOWN ARE FOR REFERENCE ONLY AND EXISTING DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION AND NOTIFY ATC OF ANY DISCREPANCIES.
- CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH AT&T'S FIRSTNET REQUIREMENTS (SEE SHEET R-602)

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	117'	30°	A1	(1) TPA65R-BU6DA-K	LTE 700, LTE AWS	ADD	(1) 4478 B14 (1) 4426 B66 (1) RRH RRUS-32 B2	ADD ADD RMN
			A2	800-10965	LTE 850, 5G 850, LTE WCS, LTE 700	RMN	(1) RRH 4449 B5/B12 (1) RRUS-32 B30	RMN RMN
BETA	117'	140°	B1	(1) TPA65R-BU6DA-K	LTE 700, LTE AWS	ADD	(1) 4478 B14 (1) 4426 B66 (1) RRH RRUS-32 B2	ADD ADD RMN
			B2	800-10965	LTE 850, 5G 850, LTE WCS, LTE 700	RMN	(1) RRH 4449 B5/B12 (1) RRUS-32 B30	RMN RMN
GAMMA	117'	270°	C1	(1) TPA65R-BU6DA-K	LTE 700, LTE AWS	ADD	(1) 4478 B14 (1) 4426 B66 (1) RRH RRUS-32 B2	ADD ADD RMN
			C2	800-10965	LTE 850, 5G 850, LTE WCS, LTE 700	RMN	(1) RRH 4449 B5/B12 (1) RRUS-32 B30	RMN RMN

STATUS ABBREVIATIONS

RMV: TO BE REMOVED  
RMN: TO REMAIN  
REL: TO BE RELOCATED  
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'  
RRU TO ANTENNA: 10'

3 EQUIPMENT SCHEDULES

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(1) DC6-48-60-18-8F	RMN	(3) RET	(4) DC TRUNK	(2) FIBER TRUNK	RMN
(1) DC6-48-60-18-8F	RMV	(12) 1 5/8" COAX	-	(2) FIBER TRUNK	RMV

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(1) DC6-48-60-18-8F	RMN	(3) 2 1/2" CONDUIT	(4) DC TRUNK	(1) FIBER TRUNK	RMN
(1) DC9-48-60-24-8C-EV	ADD	(4) 8 AWG 6	(1) DC TRUNK	(1) FIBER TRUNK	ADD

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3500 REGENCY PARKWAY  
SUITE 100  
CARY, NC 27518  
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COA: C01229-00

**RPM ENGINEERING**  
With Integrity

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KMB	05/18/21
0	FINAL	TMM	07/02/21

ATC SITE NUMBER:  
283420

ATC SITE NAME:  
STONYBROOK RD CT  
AT&T MOBILITY SITE NAME:  
STRATFORD  
STONYBROOK ROAD  
SITE ADDRESS:  
23 STONYBROOK ROAD  
STRATFORD, CT 06614

SEAL:



DATE DRAWN: 05/17/2021  
ATC JOB NO: 283420  
CUSTOMER ID: MRCTB049862  
CUSTOMER #: CTL02381

RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER: C-401  
REVISION: 0

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KMB	05/18/21
0	FINAL	TMM	07/02/21

ATC SITE NUMBER:  
283420

ATC SITE NAME:  
STONYBROOK RD CT

AT&T MOBILITY SITE NAME:  
STRATFORD  
STONYBROOK ROAD  
SITE ADDRESS:  
23 STONYBROOK ROAD  
STRATFORD, CT 06614

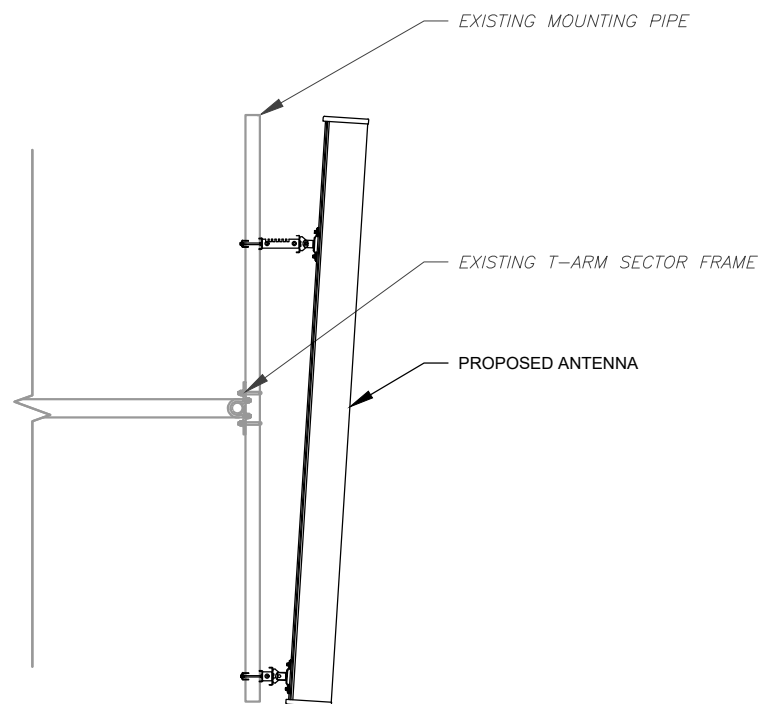
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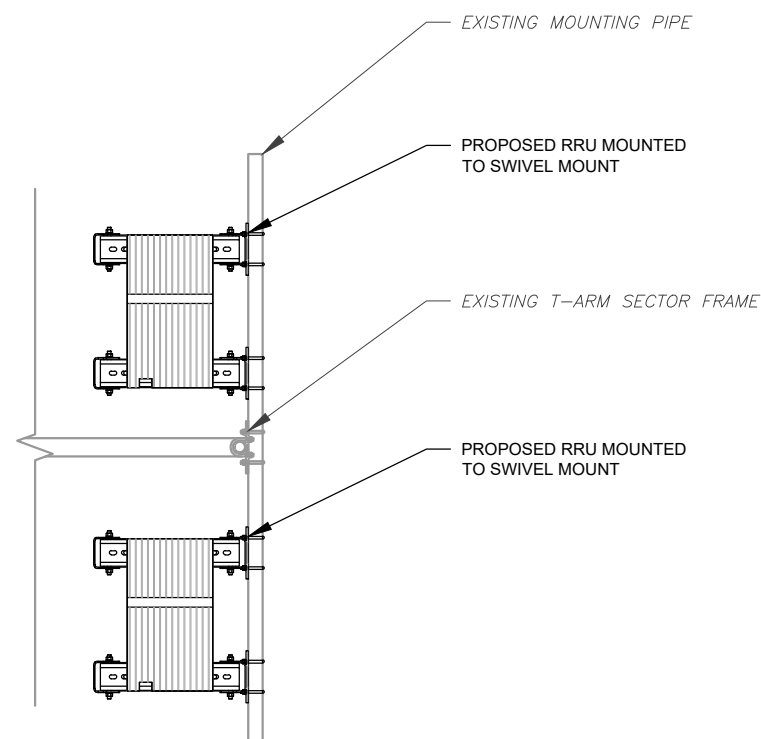
DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

**CONSTRUCTION  
DETAILS**

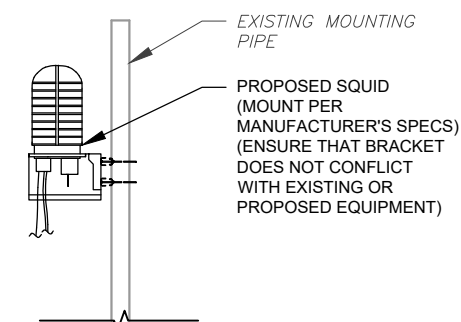
SHEET NUMBER:	REVISION:
<b>C-501</b>	<b>0</b>



1 ANTENNA DETAIL  
SCALE: N.T.S.

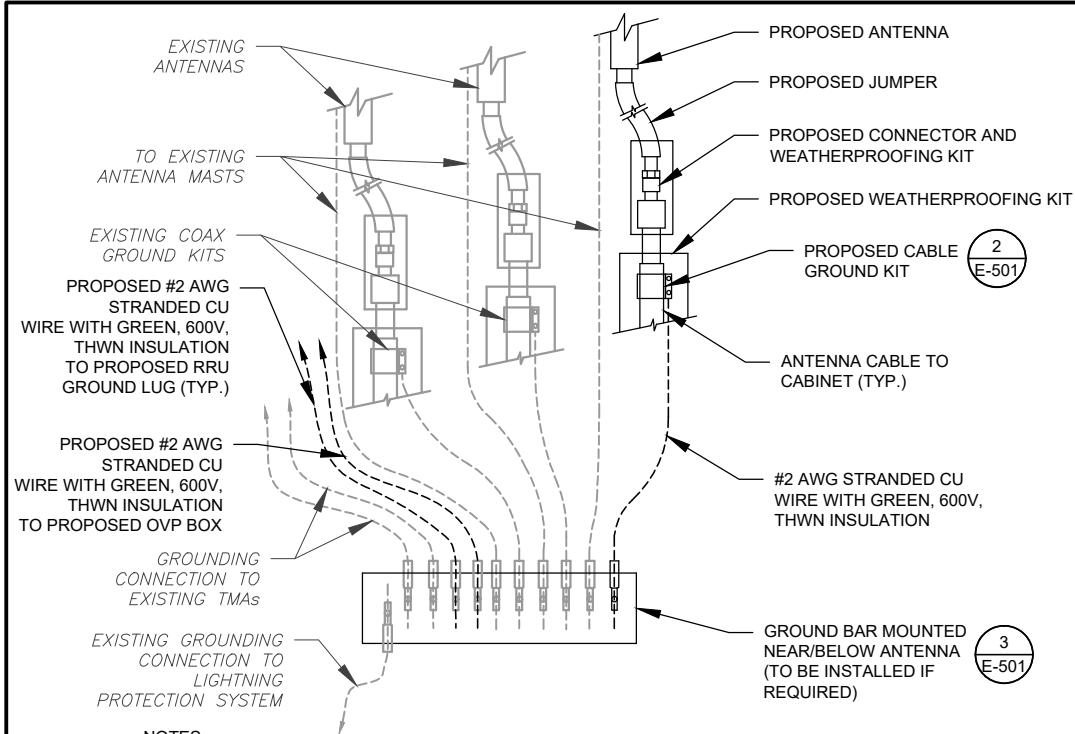


2 PROPOSED RRU MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



3 PROPOSED SQUID MOUNTING  
SCALE: N.T.S.

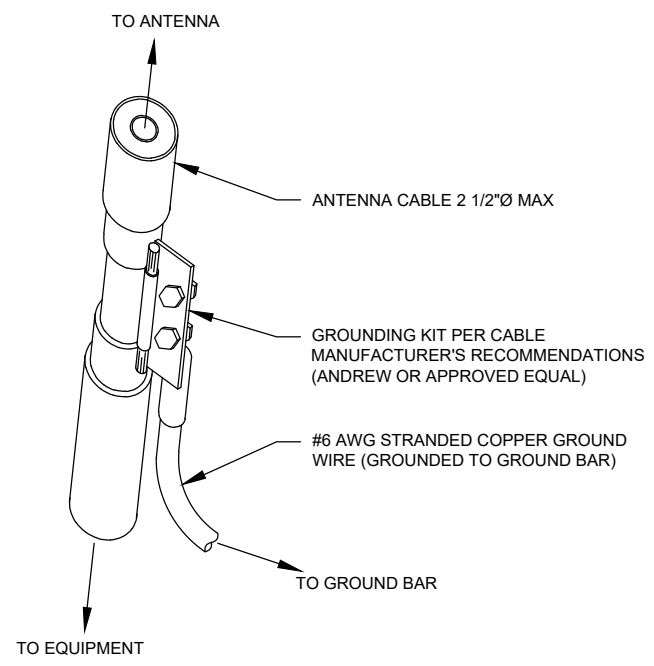




**NOTES:**

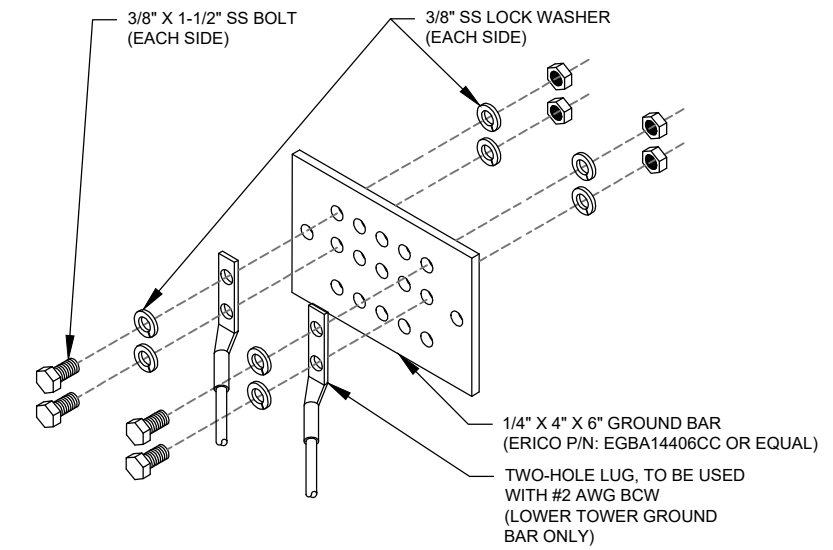
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY GROUNDING 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.



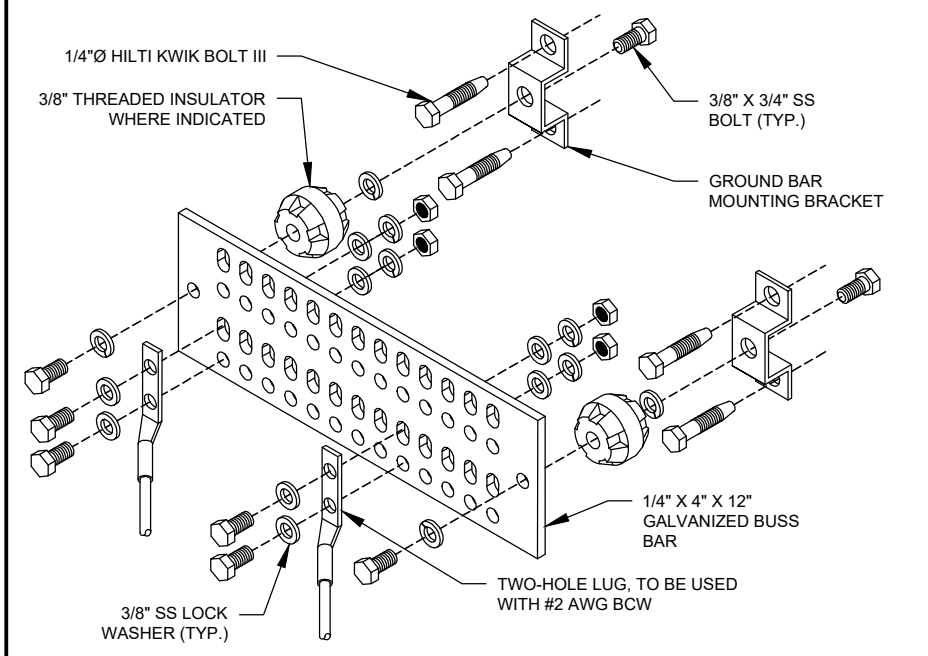
- GROUND KIT NOTES:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
  2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

**2 CABLE GROUND KIT CONNECTION DETAIL**  
SCALE: N.T.S.



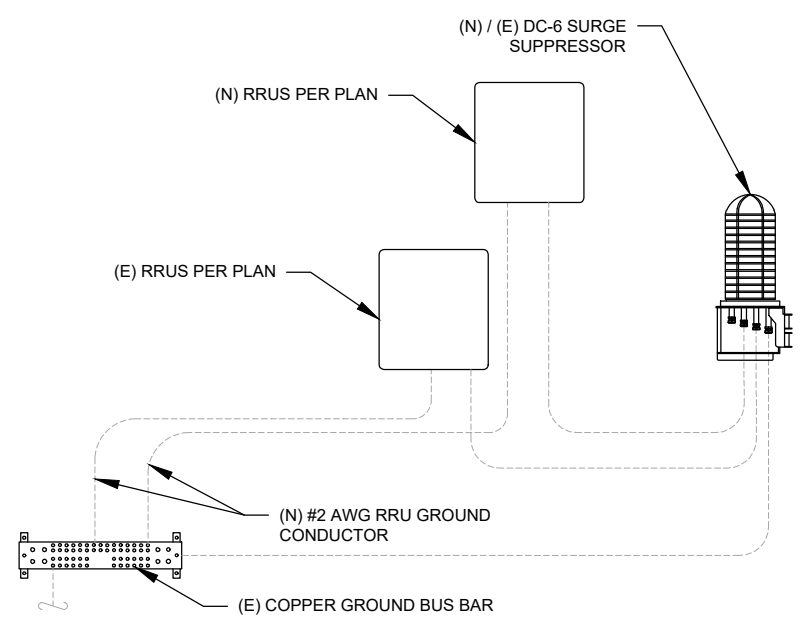
- GROUND BAR NOTES:**
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
  2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

**3 TOWER GROUND BAR DETAIL**  
SCALE: N.T.S.

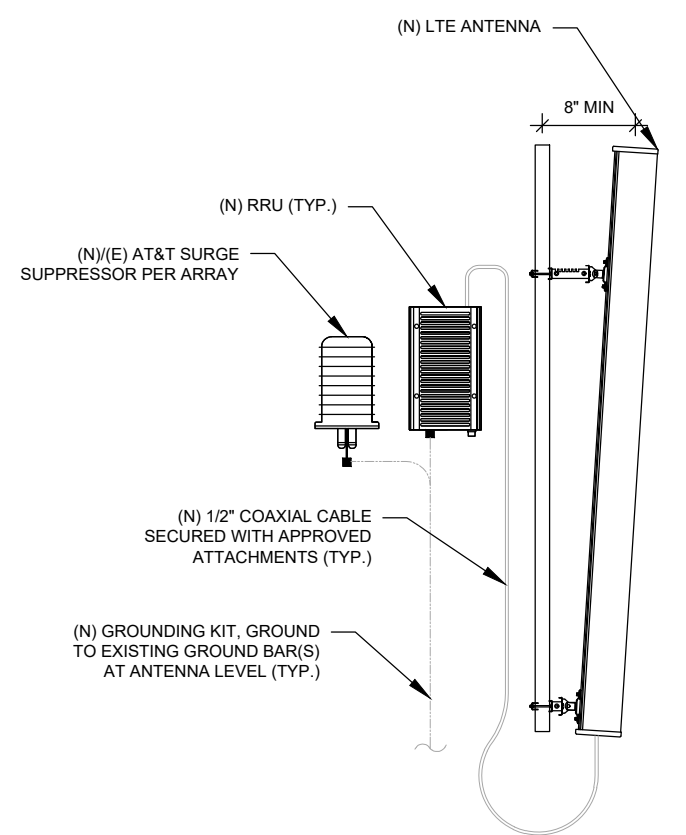


- GROUND BAR NOTES**
1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
  2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

**4 MAIN GROUND BAR DETAIL**  
SCALE: N.T.S.



**5 RRU GROUNDING**  
SCALE: N.T.S.



**6 ANTENNA/RRU GROUNDING**  
SCALE: N.T.S.

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**RPM ENGINEERING**  
*With Integrity*

REV.	DESCRIPTION	BY	DATE
A	PRELIM	KMB	05/18/21
0	FINAL	TMM	07/02/21

ATC SITE NUMBER:  
**283420**

ATC SITE NAME:  
**STONYBROOK RD CT**

AT&T MOBILITY SITE NAME:  
**STRATFORD**

STONYBROOK ROAD  
 SITE ADDRESS:  
 23 STONYBROOK ROAD  
 STRATFORD, CT 06614

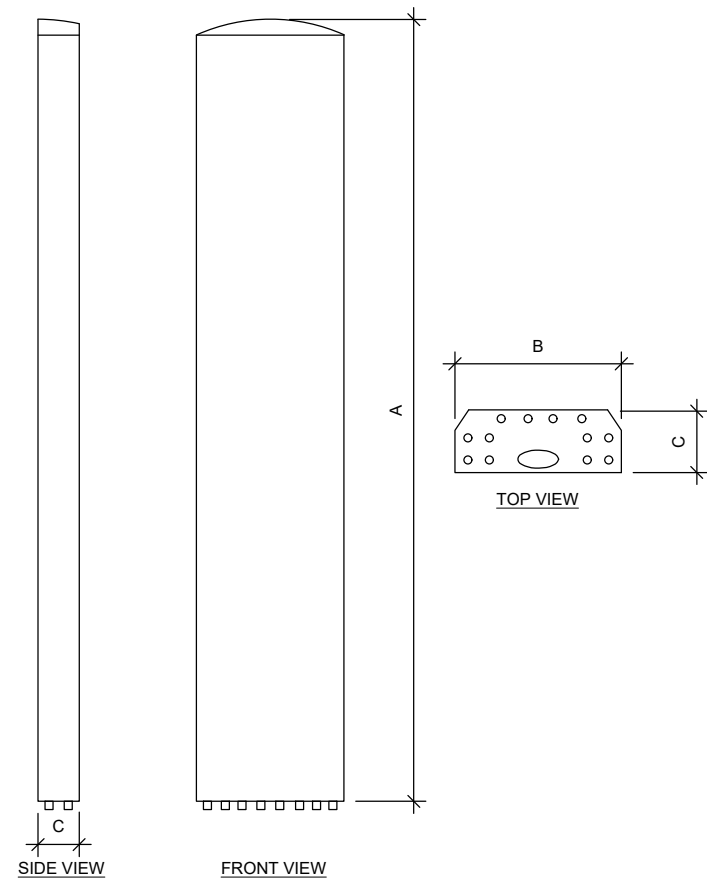
SEAL:

DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

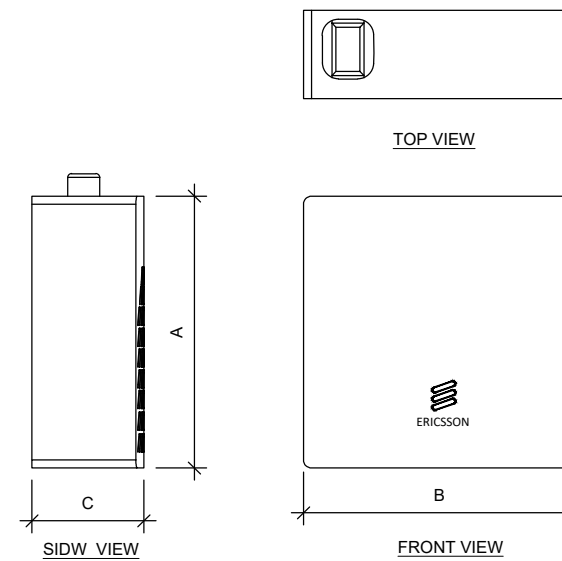
**GROUNDING DETAILS**

SHEET NUMBER: <b>E-501</b>	REVISION: <b>0</b>
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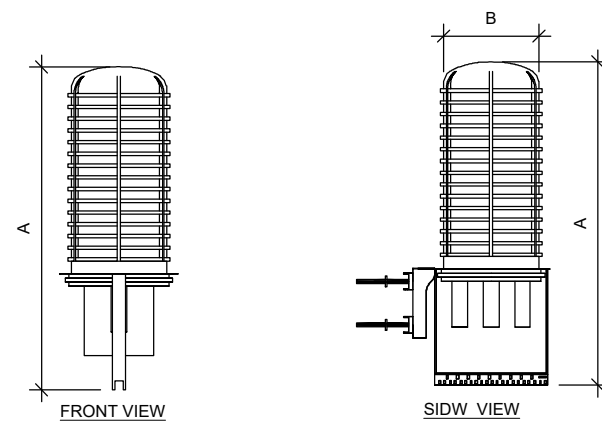
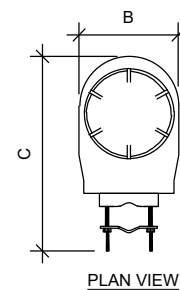
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ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
TPA65R-BU6D	71.2"	21"	7.8"	67.5



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
ERICSSON 4478 B14	16.5"	13.4"	7.7"	59.9
ERICSSON 4426 B66	15"	13.2"	5.8"	48.4



RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
DC9-48-60-24-8C-EV	31.4"	18.3"	10.2"	16

**1** EQUIPMENT SPECIFICATIONS  
SCALE: N.T.S.



DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

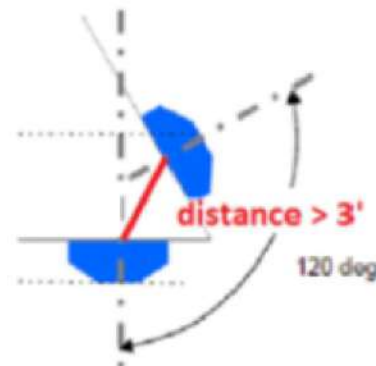
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0



# RF REQUIREMENTS FOR 700 B14 FIRSTNET, 700 B12, 700D B29 ANTENNA SEPARATION

- ❑ Horizontal separation (side to side of antenna):  $\geq 3'$
- ❑ Vertical separation (between the tips of the antennas):  $> 3'$
- ❑ Inter-sector separation:  $> 3'$  between the center of the antenna backplanes.



- ❑ Please note additional horizontal separation may be required if B14 antennas azimuth are different from others or antennas are severely angled with respect to the mount.
- ❑ Typical 3' horizontal separation can tolerate skew angle up to  $6^\circ$ .



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

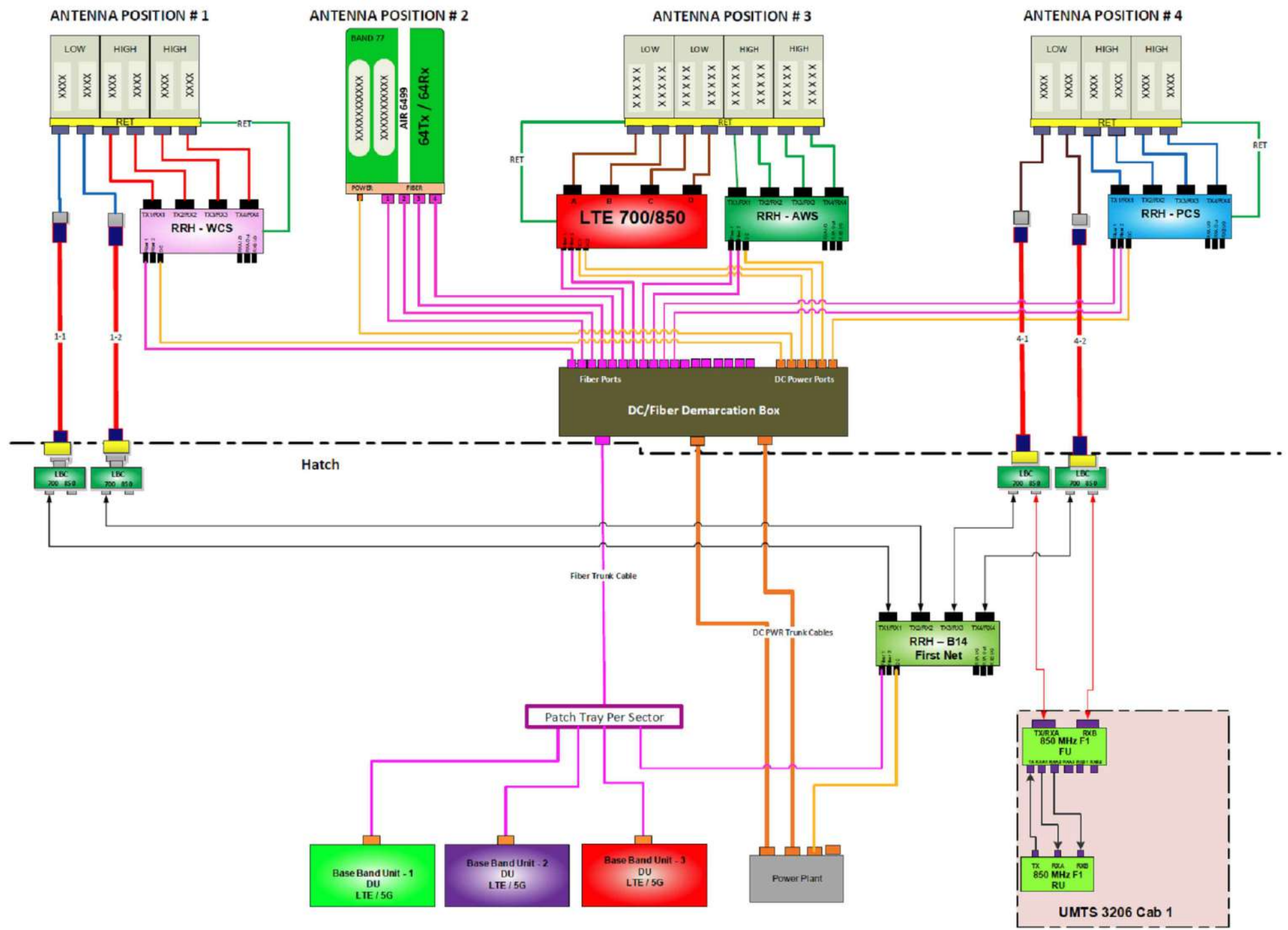


DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	0

**C-Band N77 Design  
 3 – Hex Antennas + Air Antenna  
 SECTOR GAMMA**



1 RFDS PLUMBING DIAGRAM

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. GENERAL CONTRACTOR IS TO CHECK WITH THE AT&T MOBILITY CM TO ENSURE THIS IS THE MOST RECENT VERSION OF THE RFDS.

DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

SUPPLEMENTAL	
SHEET NUMBER:	REVISION:
R-603	0



This report was prepared for American Tower Corporation by



## Antenna Mount Analysis Report

**ATC Site Name** : Stoneybrook Rd CT  
**ATC Asset Number** : 283420  
**Engineering Number** : 13361423\_C8\_01  
**Mount Elevation** : 116 ft  
**Carrier** : AT&T Mobility  
**Carrier Site Name** : MRCTB049862  
**Carrier Site Number** : CTL02381  
**Site Location** : 23 Stonybrook Road  
 Stratford, CT 06614-3715  
 41.203278, -73.148625  
**County** : Fairfield  
**Date** : May 21, 2021  
**Max Usage** : 88%  
**Result** : Pass

Prepared By:  
Asad Sayeed, E.I.  
CLS Engineering PLLC

Reviewed By:  
Tyler M. Barker, P.E.  
CLS Engineering PLLC



Mount Analysis for American Tower  
283420 - Stoneybrook Rd CT

May 21, 2021  
CLS Engineering PLLC Project #41124-13361423\_C8\_01-01-MA

### Introduction

The proposed equipment is to be mounted to the existing T-Arms. This proposed mounting configuration was analyzed using RISA-3D, a commercially available finite element analysis software package. A selection of input and output from our analysis is attached to the end of this report.

### Supporting Documents

<b>Structural Data</b>	Site Photos, dated June 10, 2020 Site Pro 1 Assembly drawing #MM02, dated March 23, 2010
<b>Previous Analyses</b>	Structural Analysis by American Tower Corporation, Engineering #13337496_C3_04, dated March 29, 2021 Mount Analysis by Hudson Design Group, LLC., FA #12906923, dated July 20, 2020
<b>Loading Data</b>	ATC Application, Project #13361423 AT&T RFDS ID: 4234865, Version 2.00, dated March 30, 2021

### Analysis

<b>Codes</b>	TIA-222-H
<b>Basic Wind Speed</b>	119 mph, $V_{ult}$ (3-Second Gust)
<b>Basic Wind Speed w/ Ice</b>	50 mph (3-Second Gust) w/ 1" Radial Ice (Escalating)
<b>Exposure Category</b>	B
<b>Topographic Factor Procedure:</b>	Method 2
<b>Feature:</b>	Flat
<b>Crest Height (H):</b>	0 ft
<b>Crest Length (L):</b>	0 ft
<b>Risk Category</b>	II
<b>Maintenance Live Load</b>	$L_M$ : 500 lb
<b>Spectral Response</b>	$S_s$ : 0.21; $S_1$ : 0.05; Site Class: D

### Conclusion

Based on the analysis, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

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



DATE DRAWN:	05/17/2021
ATC JOB NO:	283420
CUSTOMER ID:	MRCTB049862
CUSTOMER #:	CTL02381

SUPPLEMENTAL

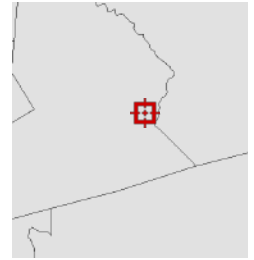
SHEET NUMBER:	REVISION:
R-604	0

## EXHIBIT 2





Overview



Legend

- Parcels
- Yearly Sales**
- 2015
- 2016
- 2017
- 2018
- Roads
- City Labels

<b>Parcel ID</b>	17088	<b>Alternate ID</b>	1626900	<b>Owner Address</b>	STONYBROOK MANAGEMENT LLC
<b>Sec/Twp/Rng</b>	30-10-16	<b>Class</b>	C		124 KNAPP ST
<b>Property Address</b>	23 STONYBROOK RD STRATFORD	<b>Acreage</b>	0.46000918		EASTON CT 06612
<b>District</b>	12A				
<b>Brief Tax Description</b>	n/a				

(Note: Not to be used on legal documents)

Date created: 6/18/2021  
Last Data Uploaded: 6/11/2021 8:13:25 PM

Developed by Schneider GEOSPATIAL



**Summary**

**ParcelId** 17088  
**Account Number** 1626900  
**Location Address** 23 STONYBROOK RD  
**Map-Block-Lot** 30 /11 /10 /16  
 Dev Lot. LTS 126-133 S/S  
**Use Class/Description** 323 Nbhd Ctr  
**Assessing Neighborhood** 12A  
**Census Tract** 0810  
**Acreage** 0.46



**Owner**

STONYBROOK MANAGEMENT LLC  
 124 KNAPP ST  
 EASTON, CT 06612

**Appraised Value**

	2018	2017
+ Building Value	\$698,900	\$698,900
+ XF Value	\$14,400	\$14,400
+ OB Value	\$13,200	\$13,200
+ Land Value	\$212,800	\$212,800
+ Special Land Value		
+ Total Appraised Value	\$939,300	\$939,300
+ Net Appraised Value	\$939,300	\$939,300
+ Current Assessment	\$657,510	\$657,510

**Assessment History**

	2018	2017
+ Building Value	\$499,310	\$499,310
+ OB/Misc	\$9,240	\$9,240
+ Land	\$148,960	\$148,960
+ Total Assessment	\$657,510	\$657,510

**Land**

Use	Class	Zoning	Area	Value
323 Nbhd Ctr	C		0.46 AC	\$212,800

**Commercial Building**

**Building #** 1  
**Style** Retail Strip Ctr  
**Actual Year Built** 1969  
**Gross Area** 21718  
**Stories** 2  
**Exterior Wall** Concr/Cinder  
**Interior Wall** Drywall/Sheet  
**Wall Height** 9  
**Units** 8  
**Roof Cover** Built Up  
**Roof Structure** Flat  
**Floor Type** Carpet  
**Heat Type** Gas  
**Heat Fuel** Hot Water  
**AC Type** Heat/AC Split  
**Sprinkler** 06  
**Construction** Masonry  
**Plumbing** Average  
**Comm Walls** 0

**Building Sub Areas**

Code	Description	Living Area	Gross Area	Effective Area
APT	Apartment	4762	4762	4762
BAS	First Floor	8502	8502	8502
UBM	Unfinished Basement	0	8454	2114
	Totals	13264	21718	15378

### Out Buildings\Extra Features

Description	Sub Description	Area	Year Built	Value
Air Condition		5679.6S.F.	1980	\$10,300
Paving	Asphalt	16000S.F.	1969	\$13,200
Sprinklers - Wet		3000S.F.	1980	\$4,100

### Sales History

Sale Date	Type of Document	Grantee	Vacant/Improved	Book/Page	Amount
03-24-2005		STONYBROOK MANAGEMENT LLC	Improved	2604/ 275	\$900,000
08-13-1969		STONYBROOK CENTER INC THE	Improved	0451/0378	\$90,000

### Recent Sales in Neighborhood

Sale date range:

From:

06/18/2018

To:

06/18/2021

Sales by Neighborhood

1500

Feet

Sales by Distance

### Permit Information

Permit ID	Issue Date	Type	Description	Amount	Inspection Date	% Complete	Date Complete	Comments
23661	06-15-2017	BP	Building Permi	\$15,000		100		REPLACE ANTENNAS
17802	05-09-2017	PL	Plumbing Permi	\$1,800		100		GAS TO GENERATOR
25242	04-10-2017	EL	Electrical Per	\$20,000		100		CELL TOWER SHELTER
21865	11-24-2014	BP	Building Permi	\$13,000		100		TOWER EXTENSION
21746	10-01-2014	BP	Building Permi	\$15,000		100		1 ANTENNA TRANSCEND WIRELESS
16222	03-28-2014	PL	Plumbing Permi	\$4,000		100		GAS LINE
20473	02-21-2014	EL	Electrical Per	\$5,000		100		GROUNDING/CONDUITS
21142	11-27-2013	BP	Building Permi	\$23,000		100		9 ANTENNAS
20139	08-29-2012	BP	Building Permi	\$8,500		100		REPL ANTENNAS/ADD EQUIP
19882	04-23-2012	BP	Building Permi	\$800		100		NEW FOP REAR
18872	05-23-2011	EL	Electrical Per	\$30,000		100		
13114	04-29-2011	PL	Plumbing Permi	\$800		100		371 STONYBROOK
11692	04-29-2011	HA	HVAC Permit	\$800		100		REPAIR 371 STONYBROOK
19040	02-07-2011	BP	Building Permi	\$120,000		100		MONOPOLE FOR TELECOMMUNICATIONS
17766	02-03-2009	BP	Building Permi	\$800		100		SEPERATION WALL
12382	02-02-2009	PL	Plumbing Permi	\$1,500		100		PLUMBING
13536	01-23-2009	EL	Electrical Per	\$800		100		ELECTRICAL
12129	03-19-2008	PL	Plumbing Permi	\$2,250		100		FIRE SUPPRESSION SYST
17144	03-04-2008	BP	Building Permi	\$20,000		100		CONVERT BAKERY TO GROC STORE
S2975	03-04-2008	SN	Sign Permit	\$500		100		SIGN FOR MARTINS FAMILY MARKET
9865	02-29-2008	HA	HVAC Permit	\$12,508		100		HOOD SYSTEM
11632	09-26-2006	PL	Plumbing Permi	\$5,000		100		NEW PLUMBING
12303	09-25-2006	EL	Electrical Per	\$3,500		100		REFIT BAKERY SPACE
15952	09-21-2006	BP	Building Permi	\$1,000		100		UPDATE EXISTING BAKERY
15825	07-24-2006	BP	Building Permi	\$18,000		100		REROOF RESIDENCE

Generate Owner List by Radius

Distance:

100

Feet

- Show All Owners
- Show Parcel ID on Label

Use Address From:

Owner  Property

Select export file format:

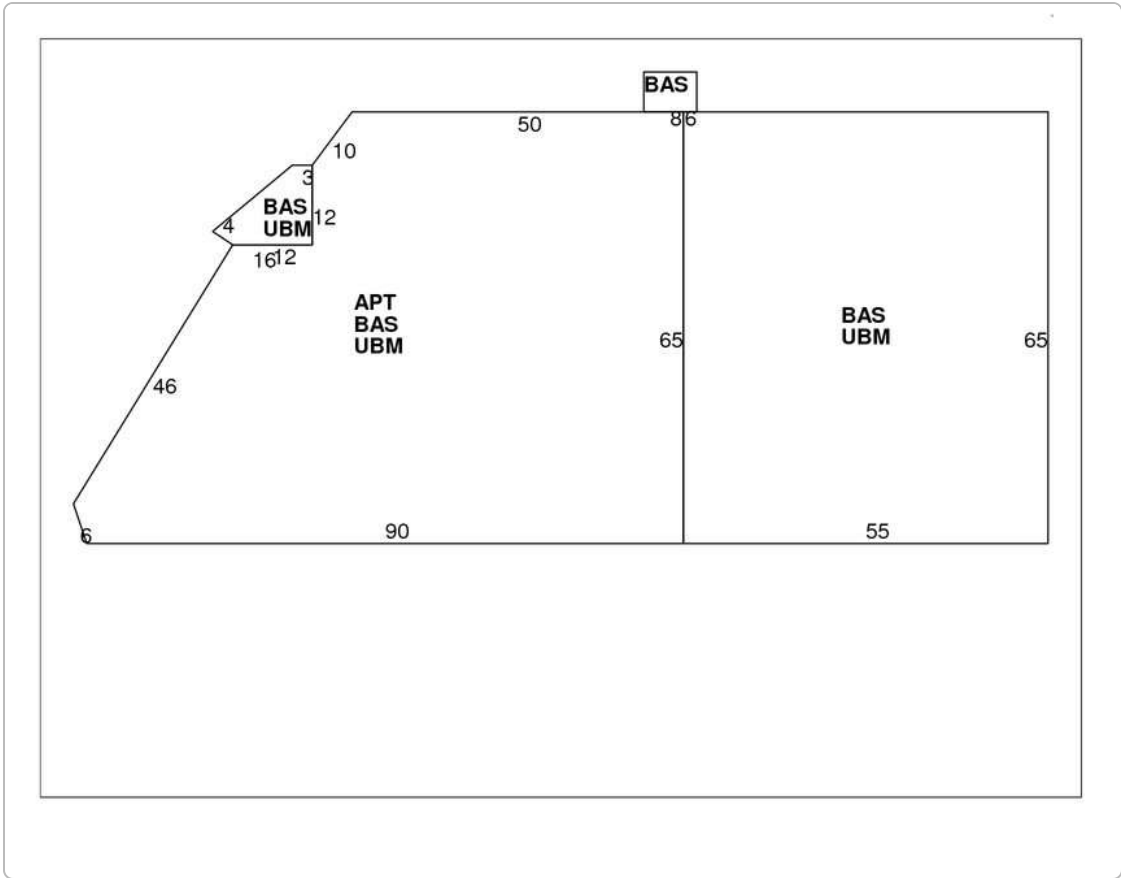
Address labels (5160)

Skip Labels  
0

International mailing labels that exceed 5 lines are not supported on the Address labels (5160). For international addresses, please use the xls, csv or tab download formats.

Download

Sketch



Photos



**No data available for the following modules: Building Data.**

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 Schneider  
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## EXHIBIT 3





**AMERICAN TOWER®**  
CORPORATION

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## Structural Analysis Report

**Structure** : 119 ft Monopole  
**ATC Site Name** : STONEYBROOK RD CT, CT  
**ATC Asset Number** : 283420  
**Engineering Number** : 13361423\_C3\_04  
**Proposed Carrier** : AT&T MOBILITY  
**Carrier Site Name** : MRCTB049862  
**Carrier Site Number** : CTL02381  
**Site Location** : 23 Stonybrook Road  
Stratford, CT 06614-3715  
41.203300,-73.148600  
**County** : Fairfield  
**Date** : May 27, 2021  
**Max Usage** : 64%  
**Result** : Pass



Prepared By:  
Brady Layton  
Structural Engineer

Reviewed By:

**COA: PEC.0001553**



**Table of Contents**

Introduction .....	1
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Calculations .....	Attached



## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 119 ft monopole to reflect the change in loading by AT&T MOBILITY.

## Supporting Documents

<b>Tower Drawings</b>	Valmont Order #20380-10, dated July 30, 2010
<b>Foundation Drawing</b>	Valmont Order #20380-60, dated June 11, 2010
<b>Geotechnical Report</b>	Terracon Project #J2105132, dated April 2, 2010
<b>Modifications</b>	TES Job #13142, dated November 12, 2014

## Analysis

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

<b>Basic Wind Speed:</b>	119 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 1
<b>Topographic Category:</b>	1
<b>Crest Height (H):</b>	0 ft
<b>Spectral Response:</b>	$S_s = 0.21, S_1 = 0.05$
<b>Site Class:</b>	D - Stiff Soil

## Conclusion

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

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



**Existing and Reserved Equipment**

Elev. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
117.0	1	Commscope WCS-IMFQ-AMT	T-Arm	(1) 0.39" (10mm) Fiber Trunk	AT&T MOBILITY
	1	Raycap DC6-48-60-18-8F(32.8 lbs)			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 32 B2			
	3	Ericsson RRUS-32 B30 (77 lbs)			
	3	Kathrein Scala 80010965			
97.0	3	Ericsson Radio 4449 B71 B85A	Triangular Platform with Handrails	(1) 1 1/4" (1.25"-31.8mm) Fiber (2) 1 5/8" Hybriflex	T-MOBILE
	3	Ericsson RRUS 4415 B25			
	3	RFS APXVAARR24_43-U-NA20			
	3	Ericsson AIR32 B66Aa/B2a			
	3	Ericsson Air6449 B41			
77.0	6	Amphenol Antel BXA-171063-12CF	T-Arm	(12) 1 5/8" Coax	VERIZON WIRELESS
	3	Alcatel-Lucent 9442 RRH 2x40 700U			
	3	Alcatel-Lucent 9442 RRH2x40-AWS			
	6	Amphenol Antel BXA-70063-6CF-6			

**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
117.0	6	CCI TPX-070821	-	(12) 1 5/8" Coax (3) 3/8" (0.38"-9.5mm) RET Control Cable (4) 7/8" (0.88"-22.2mm) Fiber	AT&T MOBILITY
	3	CCI OPA-65R-LCUU-H6			
	3	Amphenol Antel BXA-171063-12CF			
	1	Raycap DC6-48-60-18-8F(32.8 lbs)			

**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
117.0	3	Ericsson RRUS 4426 B66	T-Arm	(1) 0.39" (10mm) Fiber Trunk (4) 0.82" (20.8mm) 8 AWG 6 (1) 0.92" (23.4mm) Cable (3) 2 1/2" conduit	AT&T MOBILITY
	3	Ericsson RRUS 4478 B14			
	1	Raycap DC9-48-60-24-8C-EV			
	3	CCI TPA65R-BU6D			

<sup>1</sup> Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines inside the pole shaft.



**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	42%	Pass
Shaft	61%	Pass
Base Plate	26%	Pass
Reinforcement	64%	Pass
Flanges	46%	Pass

**Foundations**

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	1,152.6	31%
Axial (Kips)	33.3	5%
Shear (Kips)	13.5	17%

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) (°)
117.0	Ericsson RRUS 4426 B66	AT&T MOBILITY	1.153	1.184
	Ericsson RRUS 4478 B14			
	Raycap DC9-48-60-24-8C-EV			
	CCI TPA65R-BU6D			

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





## 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:

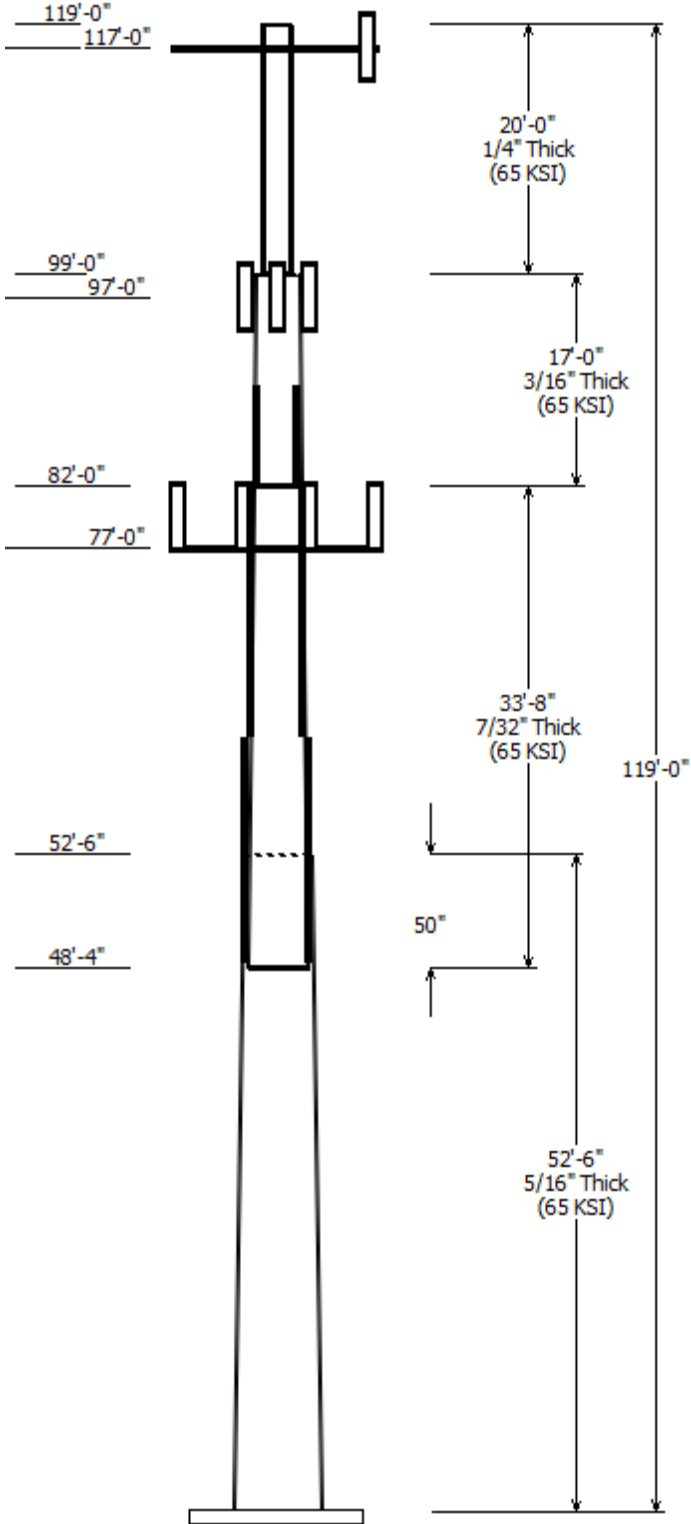
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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	Code: ANSI/TIA-222-H
Pole : 283420	
Location : STONEYBROOK RD CT, CT	
Description : 119' Valmont Monopole	Risk Category : II
Shape : 18 Sides	Exposure : B
Height : 119.00 (ft)	Topo Method : Method 1
Base Elev (ft): 0.00	Topographic Category : 1
Taper: 0.30000@in/ft)	

Sections Properties							
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade
		Across Flats Top	Across Flats Bottom				
1	52.500	26.25	42.00	0.313		0.000	18 Sides 65
2	33.667	17.83	27.93	0.219	Slip Joint	50.000	18 Sides 65
3	17.000	12.73	17.83	0.188	Butt Joint	0.000	18 Sides 65
4	20.000	12.56	12.56	0.250	Butt Joint	0.000	18 Sides 65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
117.000	117.000	3	Generic Round T-Arm
117.000	117.000	3	Kathrein Scala 80010965
117.000	117.000	3	CCI TPA65R-BU6D
117.000	117.000	1	Raycap DC9-48-60-24-8C-EV
117.000	117.000	3	Ericsson RRUS-32 B30 (77 lbs)
117.000	118.000	3	Ericsson RRUS 32 B2
117.000	117.000	3	Ericsson RRUS 4449 B5, B12
117.000	117.000	3	Ericsson RRUS 4478 B14
117.000	117.000	3	Ericsson RRUS 4426 B66
117.000	118.000	1	Raycap DC6-48-60-18-8F(32.8 lb
117.000	117.000	1	Commscope WCS-IMFQ-AMT
97.000	97.000	1	Generic Round Platform with
97.000	97.000	3	RFS APXVAARR24_43-U-NA20
97.000	97.000	3	Ericsson AIR32 B66Aa/B2a
97.000	97.000	3	Ericsson Air6449 B41
97.000	97.000	3	Ericsson RRUS 4415 B25
97.000	97.000	3	Ericsson Radio 4449 B71 B85A
77.000	77.000	3	Generic Round T-Arm
77.000	78.000	6	Amphenol Antel BXA-70063-
77.000	78.000	6	Amphenol Antel BXA-171063-
77.000	77.000	3	Alcatel-Lucent 9442 RRH 2x40 7
77.000	77.000	3	Alcatel-Lucent 9442 RRH2x40-

Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
42.000	92.000	1" Flat Plate	Yes
42.000	92.000	1" Flat Plate	Yes
42.000	92.000	1" Flat Plate	Yes
0.000	97.000	1 1/4" (1.25"-	No
0.000	97.000	1 5/8" Hybriflex	No
0.000	117.0	0.39" (10mm)	No
0.000	117.0	0.39" (10mm)	No
0.000	117.0	0.82" (20.8mm) 8	No
0.000	117.0	0.92" (23.4mm)	No
0.000	117.0	2 1/2" conduit	No
0.000	77.000	1 5/8" Coax	No

Load Cases

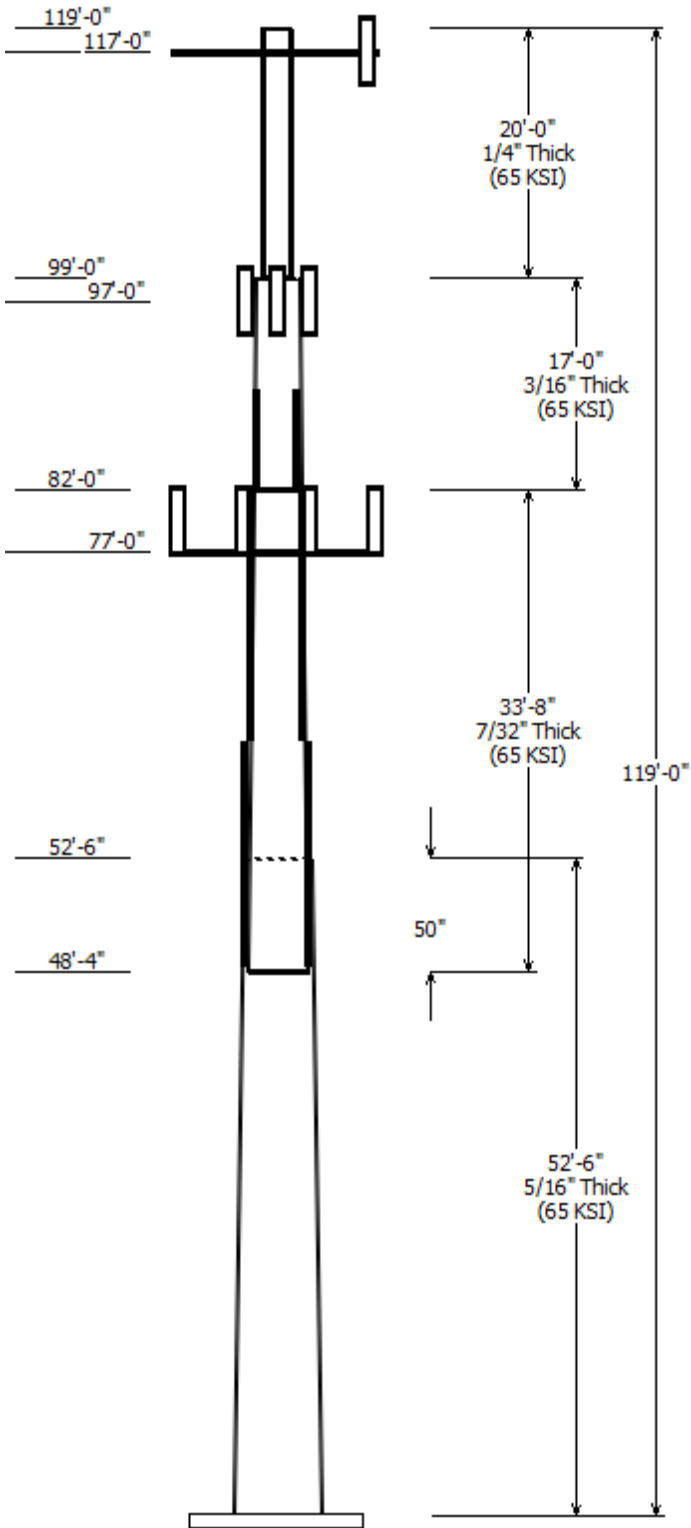
1.2D + 1.0W	119 mph with No Ice
0.9D + 1.0W	119 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

### Reactions

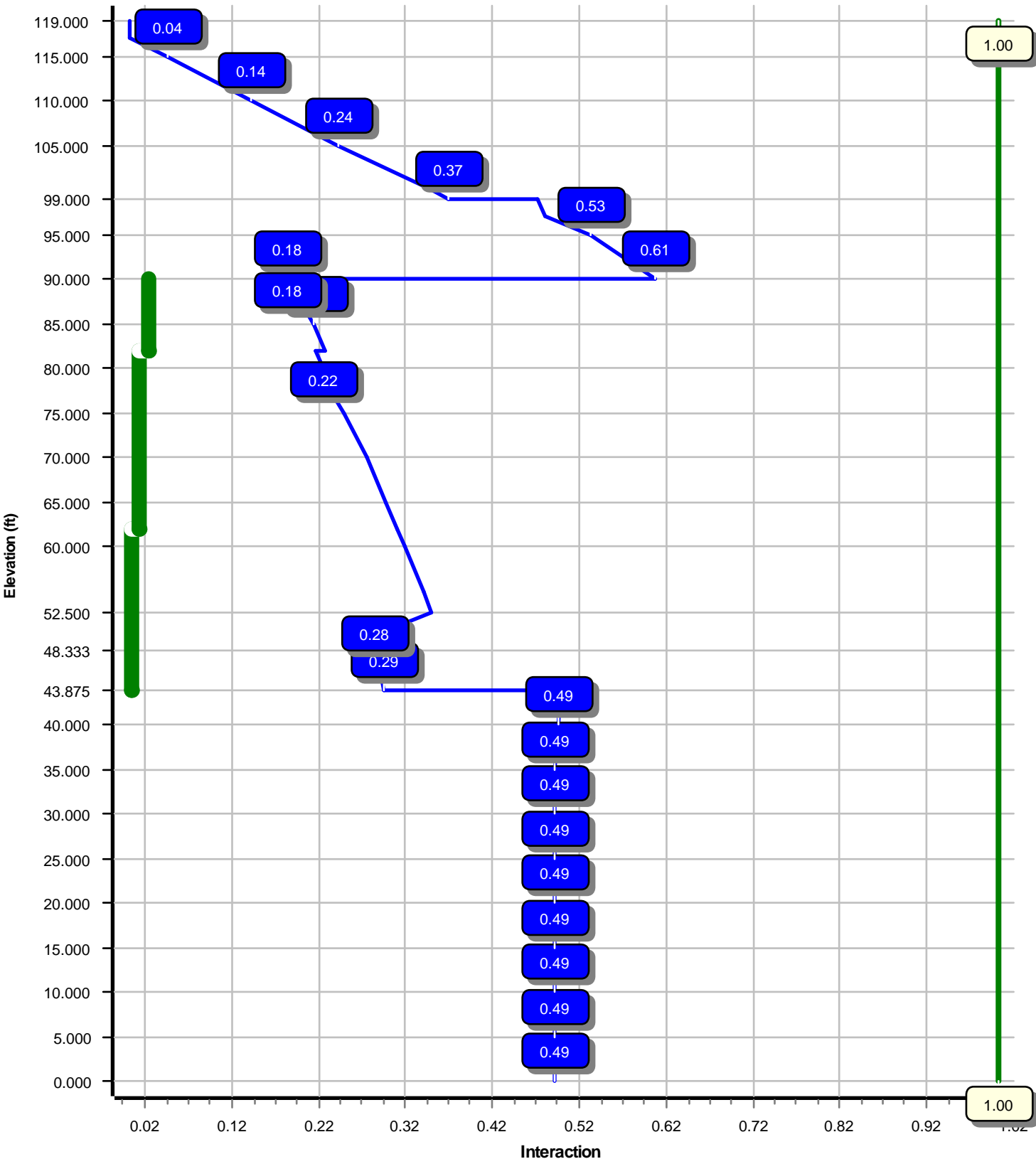
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	1152.60	13.54	33.27
0.9D + 1.0W	1134.73	13.52	24.95
1.2D + 1.0Di + 1.0Wi	296.15	3.55	42.54
1.2D + 1.0Ev + 1.0Eh	78.61	0.83	33.44
0.9D - 1.0Ev + 1.0Eh	77.12	0.83	23.00
1.0D + 1.0W	262.48	3.10	27.74

### 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 60.57% at 90.1 ft



Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

5/27/2021 2:45:38 PM

Customer: AT&T MOBILITY

**Analysis Parameters**

Location :	Fairfield County, CT	Height (ft) :	119
Code :	ANSI/TIA-222-H	Base Diameter (in) :	42.00
Shape :	18 Sides	Top Diameter (in) :	12.56
Pole Type :	Custom	Taper (in/ft) :	0.300
Pole Manufacturer :	Valmont	Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	1.00

**Ice & Wind Parameters**

Exposure Category:	B	Design Wind Speed Without Ice:	119 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:	77.00 ft

**Seismic Parameters**

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	2.33		
T <sub>L</sub> (sec):	6	p:	1
S <sub>s</sub> :	0.207	S <sub>1</sub> :	0.054
F <sub>a</sub> :	1.600	F <sub>v</sub> :	2.400
S <sub>ds</sub> :	0.221	S <sub>d1</sub> :	0.086
		C <sub>s</sub> :	0.030
		C <sub>s</sub> Max:	0.030
		C <sub>s</sub> Min:	0.030

**Load Cases**

1.2D + 1.0W	119 mph with No Ice
0.9D + 1.0W	119 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: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

**Shaft Section Properties**

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	52.500	0.3125	65		0.00	5,991	42.00	0.00	41.35	9078.5	21.94	134.40	26.25	52.50	25.73	2186.6	13.05	84.00	0.300000
2-18	33.667	0.2188	65	Slip	50.00	1,803	27.93	48.33	19.24	1868.2	20.76	127.71	17.83	82.00	12.23	479.8	12.61	81.54	0.300000
3-18	17.000	0.1875	65	Butt	0.00	520	17.83	82.00	10.50	413.4	15.01	95.13	12.73	99.00	7.47	148.6	10.22	67.93	0.300000
4-18	20.000	0.2500	65	Butt	0.00	665	12.56	99.00	9.77	187.1	7.10	50.25	12.56	119.00	9.77	187.1	7.10	50.25	0.000000
Shaft Weight						8,979													

**Discrete Appurtenance Properties**

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
117.00	Commscope WCS-IMFQ-AMT	1	0.80	0.000	29.50	0.989	1.00	51.43	1.420	1.00
117.00	Raycap DC6-48-60-18-8F(32.8	1	0.80	1.000	32.80	1.470	1.00	72.97	1.925	1.00
117.00	Ericsson RRUS 4426 B66	3	0.80	0.000	48.40	1.650	0.50	77.47	2.203	0.50
117.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.90	1.842	0.50	95.90	2.426	0.50
117.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	112.96	2.576	0.50
117.00	Ericsson RRUS 32 B2	3	0.80	1.000	53.00	2.743	0.67	100.89	3.504	0.67
117.00	Ericsson RRUS-32 B30 (77 lbs)	3	0.80	0.000	77.00	3.314	0.71	140.32	4.150	0.71
117.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	1.00	100.05	5.746	1.00
117.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	482.59	15.068	0.67
117.00	CCI TPA65R-BU6D	3	0.80	0.000	67.50	12.871	0.63	237.67	14.692	0.63
117.00	Kathrein Scala 80010965	3	0.80	0.000	97.60	13.814	0.62	271.18	15.800	0.62
97.00	Ericsson Radio 4449 B71 B85A	3	0.75	0.000	75.00	1.650	0.50	113.42	2.193	0.50
97.00	Ericsson RRUS 4415 B25	3	0.75	0.000	46.00	1.842	0.50	77.32	2.415	0.50
97.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	191.07	6.696	0.63
97.00	Ericsson AIR32 B66Aa/B2a	3	0.75	0.000	132.20	6.510	0.71	234.17	7.909	0.71
97.00	RFS APXVAARR24_43-U-NA20	3	0.75	0.000	127.90	20.243	0.63	378.71	22.613	0.63
97.00	Generic Round Platform with	1	1.00	0.000	2,500.00	27.200	1.00	3,534.81	42.817	1.00
77.00	Alcatel-Lucent 9442 RRH2x40-	3	0.80	0.000	49.00	2.500	0.67	96.92	3.188	0.67
77.00	Alcatel-Lucent 9442 RRH 2x40	3	0.80	0.000	50.70	2.744	0.67	103.14	3.422	0.67
77.00	Amphenol Antel BXA-171063-	6	0.80	1.000	12.80	4.790	0.72	72.56	6.262	0.72
77.00	Amphenol Antel BXA-70063-6CF-	6	0.80	1.000	17.00	7.569	0.66	116.86	8.332	0.66
77.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	475.55	14.845	0.67
Totals	Num Loadings:22	64			7,809.70			14,463.62		

**Linear Appurtenance Properties**

Load Case Azimuth (deg) : 0

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Coax / Flat	Dist Between Rows	Dist Between Cols	Dist Azimuth (deg)	Dist From Face (in)	Dist Exposed To Wind Carrier
0.00	117.00	1	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0	0.00	N AT&T MOBILITY
0.00	117.00	1	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0	0.00	N AT&T MOBILITY
0.00	117.00	4	0.82" (20.8mm) 8 AWG	0.82	0.62	N	0	0.00	0	0.00	N AT&T MOBILITY
0.00	117.00	1	0.92" (23.4mm) Cable	0.92	0.89	N	0	0.00	0	0.00	N AT&T MOBILITY
0.00	117.00	3	2 1/2" conduit	2.88	5.79	N	0	0.00	0	0.00	N AT&T MOBILITY
0.00	97.00	1	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0	0.00	N T-MOBILE
0.00	97.00	2	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0	0.00	N T-MOBILE
42.00	92.00	1	1" Flat Plate	1.00	30.45	Y	1	0.00	0.00	90	Y
42.00	92.00	1	1" Flat Plate	1.00	30.45	Y	1	0.00	0.00	210	Y
42.00	92.00	1	1" Flat Plate	1.00	30.45	Y	1	0.00	0.00	330	Y
0.00	77.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	N VERIZON WIRELESS



Site Number: 283420

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

**Additional Steel**

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	— Intermediate Connections —			Connectors	Continuation?
						Description	Spacing (in)	Len (in)		
43.88	62.00	3	PL PL 6" x 1"	65	0.00	5/8" Hollo Bolt	24.0	3.00	5/8" Hollo Bolt	Yes
62.00	82.00	3	PL PL 6" x 1"	65	0.00	5/8" Hollo Bolt	24.0	3.00	5/8" Hollo Bolt	Yes
82.00	90.13	3	PL PL 6" x 1"	65	0.00	5/8" Hollo Bolt	24.0	3.00	5/8" Hollo Bolt	Yes

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

**Segment Properties** (Max Len : 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	Weight (lb)	Additional Reinforcing		
												Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	Weight (lb)
0.00		0.3125	42.000	41.347	9,078.5	21.94	134.40	75.6	425.7	0.0	0.0			
5.00		0.3125	40.500	39.860	8,133.3	21.09	129.60	76.6	395.5	0.0	690.8			
10.00		0.3125	39.000	38.372	7,256.2	20.24	124.80	77.6	366.5	0.0	665.5			
15.00		0.3125	37.500	36.884	6,444.4	19.40	120.00	78.6	338.5	0.0	640.2			
20.00		0.3125	36.000	35.396	5,695.6	18.55	115.20	79.6	311.6	0.0	614.9			
25.00		0.3125	34.500	33.909	5,007.2	17.70	110.40	80.6	285.9	0.0	589.6			
30.00		0.3125	33.000	32.421	4,376.6	16.86	105.60	81.6	261.2	0.0	564.3			
35.00		0.3125	31.500	30.933	3,801.3	16.01	100.80	82.6	237.7	0.0	538.9			
40.00		0.3125	30.000	29.445	3,278.8	15.16	96.00	82.6	215.3	0.0	513.6			
43.88	Reinf Bottom	0.3125	28.838	28.292	2,908.5	14.51	92.28	82.6	198.7	0.0	380.7			
45.00		0.3125	28.500	27.957	2,806.5	14.32	91.20	82.6	194.0	0.0	107.7	18.00	1,985	68.9
48.33	Bot - Section 2	0.3125	27.500	26.966	2,518.3	13.75	88.00	82.6	180.4	0.0	311.5	18.00	1,855	204.2
50.00		0.3125	27.000	26.470	2,381.9	13.47	86.40	82.6	173.8	0.0	259.7	18.00	1,847	102.1
52.50	Top - Section 1	0.2188	26.688	18.377	1,626.6	19.75	122.00	78.2	120.1	0.0	380.6	18.00	1,752	153.1
55.00		0.2188	25.938	17.856	1,492.3	19.14	118.57	78.9	113.3	0.0	154.1	18.00	1,660	153.1
60.00		0.2188	24.438	16.815	1,246.1	17.93	111.71	80.3	100.4	0.0	294.9	18.00	1,483	306.3
62.00	Reinf. Top Reinf	0.2188	23.837	16.398	1,155.7	17.45	108.97	80.9	95.5	0.0	113.0	18.00	1,415	122.5
65.00		0.2188	22.938	15.773	1,028.6	16.73	104.86	81.7	88.3	0.0	164.2	18.00	1,317	183.8
70.00		0.2188	21.438	14.732	838.0	15.52	98.00	82.6	77.0	0.0	259.5	18.00	1,160	306.3
75.00		0.2188	19.938	13.690	672.6	14.31	91.14	82.6	66.4	0.0	241.8	18.00	1,014	306.3
77.00		0.2188	19.337	13.274	613.0	13.82	88.40	82.6	62.4	0.0	91.8	18.00	958.4	122.5
80.00		0.2188	18.438	12.649	530.5	13.10	84.29	82.6	56.7	0.0	132.3	18.00	877.9	183.8
82.00	Top - Section 2	0.2188	17.837	12.232	479.8	12.61	81.54	82.6	53.0	0.0	84.7	18.00	826.2	122.5
82.00	Bot - Section 3	0.1875	17.837	10.504	413.4	15.01	95.13	82.6	45.6	0.0		18.00	826.2	
85.00		0.1875	16.938	9.968	353.3	14.16	90.33	82.6	41.1	0.0	104.5	18.00	751.7	183.8
90.00		0.1875	15.438	9.075	266.7	12.75	82.33	82.6	34.0	0.0	162.0	18.00	635.7	306.3
90.13	Reinf. Top	0.1875	15.400	9.053	264.7	12.72	82.13	82.6	33.9	0.0	3.9	18.00	633.0	7.7
95.00		0.1875	13.938	8.183	195.5	11.34	74.33	82.6	27.6	0.0	143.0			
97.00		0.1875	13.337	7.826	171.0	10.78	71.13	82.6	25.2	0.0	54.5			
99.00	Top - Section 3	0.1875	12.738	7.469	148.6	10.22	67.93	82.6	23.0	0.0	52.0			
99.00	Bot - Section 4	0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0				
100.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	33.2			
105.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	166.2			
110.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	166.2			
115.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	166.2			
117.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	66.5			
119.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	66.5			
											8,978.9			2,832.9

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

**Load Case: 1.2D + 1.0W**

119 mph with No Ice

25 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		168.5	0.0					0.0	0.0	168.5	0.0	0.0	0.0
5.00		330.8	829.0					0.0	206.1	330.8	1,035.1	0.0	0.0
10.00		318.5	798.6					0.0	206.1	318.5	1,004.7	0.0	0.0
15.00		306.3	768.2					0.0	206.1	306.3	974.3	0.0	0.0
20.00		294.0	737.9					0.0	206.1	294.0	944.0	0.0	0.0
25.00		281.8	707.5					0.0	206.1	281.8	913.6	0.0	0.0
30.00		272.7	677.1					0.0	206.1	272.7	883.2	0.0	0.0
35.00		268.8	646.7					0.0	206.1	268.8	852.8	0.0	0.0
40.00		236.5	616.4					0.0	206.1	236.5	822.5	0.0	0.0
43.88	Reinf Bottom	132.0	456.8					0.0	365.3	132.0	822.1	0.0	0.0
45.00		116.1	129.2					0.0	252.4	116.1	381.6	0.0	0.0
48.33	Bot - Section 2	130.0	373.8					0.0	747.8	130.0	1,121.6	0.0	0.0
50.00		107.9	311.6					0.0	373.9	107.9	685.5	0.0	0.0
52.50	Top - Section 1	128.0	456.7					0.0	560.9	128.0	1,017.5	0.0	0.0
55.00		187.5	184.9					0.0	560.9	187.5	745.8	0.0	0.0
60.00		172.3	353.9					0.0	1,121.7	172.3	1,475.6	0.0	0.0
62.00	Reinf. Top Reinf	119.4	135.6					0.0	448.7	119.4	584.3	0.0	0.0
65.00		185.4	197.1					0.0	673.0	185.4	870.1	0.0	0.0
70.00		223.1	311.4					0.0	1,121.7	223.1	1,433.1	0.0	0.0
75.00		150.7	290.1					0.0	1,121.7	150.7	1,411.9	0.0	0.0
77.00	Appurtenance(s)	102.8	110.1	2,208.3	0.0	1,409.5	1,698.5	0.0	448.7	2,311.2	2,257.3	0.0	0.0
80.00		100.4	158.8					0.0	637.6	100.4	796.4	0.0	0.0
82.00	Top - Section 2	96.5	101.6					0.0	425.1	96.5	526.7	0.0	0.0
85.00		147.0	125.4					0.0	637.6	147.0	763.0	0.0	0.0
90.00		92.0	194.4					0.0	1,062.7	92.0	1,257.1	0.0	0.0
90.13	Reinf. Top	82.8	4.6					0.0	26.6	82.8	31.2	0.0	0.0
95.00		111.7	171.5					0.0	348.9	111.7	520.5	0.0	0.0
97.00	Appurtenance(s)	61.0	65.4	2,897.0	0.0	0.0	4,746.4	0.0	58.8	2,958.0	4,870.6	0.0	0.0
99.00	Top - Section 3	44.4	62.5					0.0	50.1	44.4	112.5	0.0	0.0
100.00		87.4	39.9					0.0	25.0	87.4	64.9	0.0	0.0
105.00		146.9	199.5					0.0	125.2	146.9	324.6	0.0	0.0
110.00		148.8	199.5					0.0	125.2	148.8	324.6	0.0	0.0
115.00		105.1	199.5					0.0	125.2	105.1	324.6	0.0	0.0
117.00	Appurtenance(s)	56.4	79.8	3,009.0	0.0	218.7	2,926.8	0.0	50.1	3,065.4	3,056.6	0.0	0.0
119.00		26.2	79.8					0.0	0.0	26.2	79.8	0.0	0.0
<b>Totals:</b>										<b>13,654.0</b>	<b>33,289.5</b>	<b>0.00</b>	<b>0.00</b>

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

**Load Case: 1.2D + 1.0W**

119 mph with No Ice

25 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	-33.27	-13.54	0.00	-1,152.60	0.00	1,152.60	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.490
5.00	-32.19	-13.31	0.00	-1,084.91	0.00	1,084.91	2,747.79	699.53	2,539.19	2,272.29	0.09	-0.18	0.490
10.00	-31.15	-13.09	0.00	-1,018.39	0.00	1,018.39	2,679.61	673.42	2,353.20	2,132.56	0.38	-0.36	0.490
15.00	-30.13	-12.88	0.00	-952.96	0.00	952.96	2,608.76	647.31	2,174.28	1,995.03	0.86	-0.55	0.490
20.00	-29.14	-12.68	0.00	-888.59	0.00	888.59	2,535.24	621.20	2,002.44	1,859.96	1.54	-0.76	0.490
25.00	-28.19	-12.49	0.00	-825.21	0.00	825.21	2,459.06	595.09	1,837.67	1,727.58	2.45	-0.97	0.490
30.00	-27.26	-12.31	0.00	-762.76	0.00	762.76	2,380.22	568.98	1,679.97	1,598.16	3.59	-1.20	0.489
35.00	-26.36	-12.14	0.00	-701.21	0.00	701.21	2,298.17	542.87	1,529.34	1,471.58	4.97	-1.43	0.488
40.00	-25.50	-11.98	0.00	-640.54	0.00	640.54	2,187.63	516.76	1,385.79	1,332.77	6.60	-1.68	0.493
43.88	-24.65	-11.88	0.00	-594.12	0.00	594.12	2,101.97	496.53	1,279.40	1,229.91	8.05	-1.89	0.495
45.00	-24.26	-11.79	0.00	-580.76	0.00	580.76	2,077.10	490.65	1,249.31	1,200.82	8.51	-1.96	0.291
48.33	-23.12	-11.65	0.00	-541.47	0.00	541.47	2,003.41	473.25	1,162.26	1,116.68	9.91	-2.07	0.287
50.00	-22.43	-11.55	0.00	-522.05	0.00	522.05	1,966.57	464.54	1,119.91	1,075.76	10.65	-2.13	0.281
52.50	-21.40	-11.41	0.00	-493.18	0.00	493.18	1,292.92	322.51	771.05	703.85	11.78	-2.21	0.347
55.00	-20.63	-11.25	0.00	-464.65	0.00	464.65	1,267.71	313.38	727.98	670.42	12.96	-2.30	0.337
60.00	-19.14	-11.06	0.00	-408.41	0.00	408.41	1,215.29	295.10	645.55	604.90	15.48	-2.49	0.317
62.00	-18.54	-10.95	0.00	-386.29	0.00	386.29	1,193.58	287.79	613.97	579.24	16.54	-2.58	0.309
62.00	-18.54	-10.95	0.00	-386.29	0.00	386.29	1,193.58	287.79	613.97	579.24	16.54	-2.58	0.309
65.00	-17.65	-10.77	0.00	-353.45	0.00	353.45	1,160.21	276.82	568.07	541.39	18.20	-2.70	0.295
70.00	-16.19	-10.54	0.00	-299.58	0.00	299.58	1,094.51	258.55	495.55	476.69	21.13	-2.90	0.272
75.00	-14.77	-10.35	0.00	-246.90	0.00	246.90	1,017.13	240.27	427.97	411.36	24.27	-3.09	0.247
77.00	-12.63	-7.94	0.00	-224.80	0.00	224.80	986.19	232.96	402.33	386.57	25.59	-3.17	0.233
80.00	-11.82	-7.81	0.00	-200.99	0.00	200.99	939.76	221.99	365.35	350.84	27.62	-3.29	0.222
82.00	-11.29	-7.70	0.00	-185.37	0.00	185.37	908.81	214.68	341.68	327.98	29.01	-3.37	0.214
82.00	-11.29	-7.70	0.00	-185.37	0.00	185.37	780.36	184.34	293.89	282.62	29.01	-3.37	0.000
85.00	-10.52	-7.54	0.00	-162.26	0.00	162.26	740.57	174.94	264.69	254.39	31.16	-3.48	0.211
90.00	-9.26	-7.38	0.00	-124.56	0.00	124.56	674.25	159.27	219.41	210.64	34.91	-3.66	0.181
90.13	-9.22	-7.31	0.00	-123.64	0.00	123.64	672.59	158.88	218.34	209.60	35.00	-3.67	0.181
90.13	-9.22	-7.31	0.00	-123.64	0.00	123.64	672.59	158.88	218.34	209.60	35.00	-3.67	0.606
95.00	-8.68	-7.20	0.00	-87.98	0.00	87.98	607.93	143.61	178.38	171.01	38.84	-3.83	0.531
97.00	-4.01	-3.93	0.00	-73.59	0.00	73.59	581.40	137.34	163.16	156.32	40.49	-4.07	0.478
99.00	-3.89	-3.89	0.00	-65.73	0.00	65.73	554.88	131.07	148.61	142.28	42.25	-4.30	0.470
99.00	-3.89	-3.89	0.00	-65.73	0.00	65.73	725.83	171.46	190.75	181.64	42.25	-4.30	0.368
100.00	-3.81	-3.81	0.00	-61.85	0.00	61.85	725.83	171.46	190.75	181.64	43.16	-4.42	0.346
105.00	-3.48	-3.66	0.00	-42.78	0.00	42.78	725.83	171.46	190.75	181.64	48.01	-4.82	0.241
110.00	-3.16	-3.49	0.00	-24.48	0.00	24.48	725.83	171.46	190.75	181.64	53.19	-5.07	0.140
115.00	-2.84	-3.36	0.00	-7.01	0.00	7.01	725.83	171.46	190.75	181.64	58.58	-5.19	0.043
117.00	-0.08	-0.03	0.00	-0.07	0.00	0.07	725.83	171.46	190.75	181.64	60.75	-5.21	0.000
119.00	0.00	-0.03	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	62.93	-5.21	0.000

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

5/27/2021 2:45:41 PM

Customer: AT&T MOBILITY

<b>Load Case: 0.9D + 1.0W</b>	<b>119 mph with No Ice (Reduced DL)</b>	<b>25 Iterations</b>
Gust Response Factor :1.10		
Dead Load Factor :0.90		
Wind Load Factor :1.00		

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		168.5	0.0					0.0	0.0	168.5	0.0	0.0	0.0
5.00		330.8	621.7					0.0	154.6	330.8	776.3	0.0	0.0
10.00		318.5	599.0					0.0	154.6	318.5	753.5	0.0	0.0
15.00		306.3	576.2					0.0	154.6	306.3	730.8	0.0	0.0
20.00		294.0	553.4					0.0	154.6	294.0	708.0	0.0	0.0
25.00		281.8	530.6					0.0	154.6	281.8	685.2	0.0	0.0
30.00		272.7	507.8					0.0	154.6	272.7	662.4	0.0	0.0
35.00		268.8	485.1					0.0	154.6	268.8	639.6	0.0	0.0
40.00		236.5	462.3					0.0	154.6	236.5	616.8	0.0	0.0
43.88	Reinf Bottom	132.0	342.6					0.0	273.9	132.0	616.5	0.0	0.0
45.00		116.1	96.9					0.0	189.3	116.1	286.2	0.0	0.0
48.33	Bot - Section 2	130.0	280.3					0.0	560.9	130.0	841.2	0.0	0.0
50.00		107.9	233.7					0.0	280.4	107.9	514.1	0.0	0.0
52.50	Top - Section 1	128.0	342.5					0.0	420.6	128.0	763.1	0.0	0.0
55.00		187.5	138.7					0.0	420.6	187.5	559.3	0.0	0.0
60.00		172.3	265.4					0.0	841.3	172.3	1,106.7	0.0	0.0
62.00	Reinf. Top Reinf	119.4	101.7					0.0	336.5	119.4	438.2	0.0	0.0
65.00		185.4	147.8					0.0	504.8	185.4	652.6	0.0	0.0
70.00		223.1	233.6					0.0	841.3	223.1	1,074.8	0.0	0.0
75.00		150.7	217.6					0.0	841.3	150.7	1,058.9	0.0	0.0
77.00	Appurtenance(s)	102.8	82.6	2,208.3	0.0	1,409.5	1,273.9	0.0	336.5	2,311.2	1,693.0	0.0	0.0
80.00		100.4	119.1					0.0	478.2	100.4	597.3	0.0	0.0
82.00	Top - Section 2	96.5	76.2					0.0	318.8	96.5	395.0	0.0	0.0
85.00		147.0	94.0					0.0	478.2	147.0	572.2	0.0	0.0
90.00		92.0	145.8					0.0	797.0	92.0	942.8	0.0	0.0
90.13	Reinf. Top	82.8	3.5					0.0	19.9	82.8	23.4	0.0	0.0
95.00		111.7	128.7					0.0	261.7	111.7	390.4	0.0	0.0
97.00	Appurtenance(s)	61.0	49.0	2,897.0	0.0	0.0	3,559.8	0.0	44.1	2,958.0	3,652.9	0.0	0.0
99.00	Top - Section 3	44.4	46.8					0.0	37.5	44.4	84.4	0.0	0.0
100.00		87.4	29.9					0.0	18.8	87.4	48.7	0.0	0.0
105.00		146.9	149.6					0.0	93.9	146.9	243.5	0.0	0.0
110.00		148.8	149.6					0.0	93.9	148.8	243.5	0.0	0.0
115.00		105.1	149.6					0.0	93.9	105.1	243.5	0.0	0.0
117.00	Appurtenance(s)	56.4	59.8	3,009.0	0.0	218.7	2,195.1	0.0	37.5	3,065.4	2,292.5	0.0	0.0
119.00		26.2	59.8					0.0	0.0	26.2	59.8	0.0	0.0
<b>Totals:</b>										<b>13,654.0</b>	<b>24,967.1</b>	<b>0.00</b>	<b>0.00</b>

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

5/27/2021 2:45:43 PM

Customer: AT&T MOBILITY

**Load Case: 0.9D + 1.0W**

119 mph with No Ice (Reduced DL)

25 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	-24.95	-13.52	0.00	-1,134.73	0.00	1,134.73	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.479
5.00	-24.13	-13.27	0.00	-1,067.12	0.00	1,067.12	2,747.79	699.53	2,539.19	2,272.29	0.09	-0.17	0.479
10.00	-23.34	-13.02	0.00	-1,000.79	0.00	1,000.79	2,679.61	673.42	2,353.20	2,132.56	0.37	-0.35	0.478
15.00	-22.56	-12.78	0.00	-935.69	0.00	935.69	2,608.76	647.31	2,174.28	1,995.03	0.84	-0.54	0.478
20.00	-21.81	-12.56	0.00	-871.77	0.00	871.77	2,535.24	621.20	2,002.44	1,859.96	1.52	-0.74	0.478
25.00	-21.09	-12.35	0.00	-808.97	0.00	808.97	2,459.06	595.09	1,837.67	1,727.58	2.41	-0.95	0.477
30.00	-20.38	-12.14	0.00	-747.23	0.00	747.23	2,380.22	568.98	1,679.97	1,598.16	3.52	-1.17	0.477
35.00	-19.70	-11.94	0.00	-686.51	0.00	686.51	2,298.17	542.87	1,529.34	1,471.58	4.88	-1.41	0.476
40.00	-19.04	-11.76	0.00	-626.80	0.00	626.80	2,187.63	516.76	1,385.79	1,332.77	6.48	-1.65	0.480
43.88	-18.40	-11.66	0.00	-581.21	0.00	581.21	2,101.97	496.53	1,279.40	1,229.91	7.91	-1.86	0.482
45.00	-18.10	-11.56	0.00	-568.10	0.00	568.10	2,077.10	490.65	1,249.31	1,200.82	8.35	-1.92	0.283
48.33	-17.25	-11.42	0.00	-529.57	0.00	529.57	2,003.41	473.25	1,162.26	1,116.68	9.73	-2.03	0.279
50.00	-16.73	-11.32	0.00	-510.53	0.00	510.53	1,966.57	464.54	1,119.91	1,075.76	10.45	-2.08	0.273
52.50	-15.95	-11.19	0.00	-482.23	0.00	482.23	1,292.92	322.51	771.05	703.85	11.56	-2.17	0.337
55.00	-15.37	-11.01	0.00	-454.27	0.00	454.27	1,267.71	313.38	727.98	670.42	12.72	-2.25	0.328
60.00	-14.25	-10.83	0.00	-399.20	0.00	399.20	1,215.29	295.10	645.55	604.90	15.18	-2.44	0.308
62.00	-13.80	-10.72	0.00	-377.54	0.00	377.54	1,193.58	287.79	613.97	579.24	16.23	-2.53	0.300
62.00	-13.80	-10.72	0.00	-377.54	0.00	377.54	1,193.58	287.79	613.97	579.24	16.23	-2.53	0.300
65.00	-13.13	-10.54	0.00	-345.39	0.00	345.39	1,160.21	276.82	568.07	541.39	17.85	-2.65	0.286
70.00	-12.03	-10.30	0.00	-292.70	0.00	292.70	1,094.51	258.55	495.55	476.69	20.73	-2.84	0.264
75.00	-10.96	-10.12	0.00	-241.18	0.00	241.18	1,017.13	240.27	427.97	411.36	23.80	-3.03	0.240
77.00	-9.38	-7.74	0.00	-219.52	0.00	219.52	986.19	232.96	402.33	386.57	25.09	-3.11	0.227
80.00	-8.77	-7.62	0.00	-196.29	0.00	196.29	939.76	221.99	365.35	350.84	27.08	-3.22	0.216
82.00	-8.37	-7.52	0.00	-181.05	0.00	181.05	908.81	214.68	341.68	327.98	28.44	-3.30	0.208
82.00	-8.37	-7.52	0.00	-181.05	0.00	181.05	780.36	184.34	293.89	282.62	28.44	-3.30	0.000
85.00	-7.79	-7.36	0.00	-158.49	0.00	158.49	740.57	174.94	264.69	254.39	30.55	-3.41	0.205
90.00	-6.84	-7.22	0.00	-121.70	0.00	121.70	674.25	159.27	219.41	210.64	34.22	-3.59	0.176
90.13	-6.81	-7.15	0.00	-120.80	0.00	120.80	672.59	158.88	218.34	209.60	34.31	-3.59	0.175
90.13	-6.81	-7.15	0.00	-120.80	0.00	120.80	672.59	158.88	218.34	209.60	34.31	-3.59	0.588
95.00	-6.41	-7.03	0.00	-85.96	0.00	85.96	607.93	143.61	178.38	171.01	38.07	-3.75	0.516
97.00	-2.95	-3.84	0.00	-71.90	0.00	71.90	581.40	137.34	163.16	156.32	39.69	-3.98	0.466
99.00	-2.86	-3.80	0.00	-64.21	0.00	64.21	554.88	131.07	148.61	142.28	41.40	-4.21	0.457
99.00	-2.86	-3.80	0.00	-64.21	0.00	64.21	725.83	171.46	190.75	181.64	41.40	-4.21	0.358
100.00	-2.80	-3.73	0.00	-60.41	0.00	60.41	725.83	171.46	190.75	181.64	42.30	-4.33	0.337
105.00	-2.55	-3.57	0.00	-41.79	0.00	41.79	725.83	171.46	190.75	181.64	47.04	-4.72	0.234
110.00	-2.31	-3.41	0.00	-23.92	0.00	23.92	725.83	171.46	190.75	181.64	52.12	-4.97	0.135
115.00	-2.07	-3.29	0.00	-6.86	0.00	6.86	725.83	171.46	190.75	181.64	57.38	-5.08	0.041
117.00	-0.06	-0.03	0.00	-0.06	0.00	0.06	725.83	171.46	190.75	181.64	59.51	-5.09	0.000
119.00	0.00	-0.03	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	61.64	-5.09	0.000

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	24 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		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		50.7	0.0					0.0	0.0	50.7	0.0	0.0	0.0
5.00		99.8	1,028.8					0.0	206.1	99.8	1,234.9	0.0	0.0
10.00		96.6	1,013.9					0.0	206.1	96.6	1,220.0	0.0	0.0
15.00		93.2	986.6					0.0	206.1	93.2	1,192.7	0.0	0.0
20.00		89.8	955.0					0.0	206.1	89.8	1,161.1	0.0	0.0
25.00		86.3	921.3					0.0	206.1	86.3	1,127.4	0.0	0.0
30.00		83.8	886.1					0.0	206.1	83.8	1,092.2	0.0	0.0
35.00		82.9	850.0					0.0	206.1	82.9	1,056.1	0.0	0.0
40.00		73.2	813.1					0.0	206.1	73.2	1,019.2	0.0	0.0
43.88	Reinf Bottom	41.0	605.3					0.0	370.6	41.0	975.8	0.0	0.0
45.00		36.1	172.1					0.0	255.6	36.1	427.7	0.0	0.0
48.33	Bot - Section 2	40.5	497.1					0.0	757.4	40.5	1,254.5	0.0	0.0
50.00		33.7	373.5					0.0	378.7	33.7	752.2	0.0	0.0
52.50	Top - Section 1	40.0	547.4					0.0	568.1	40.0	1,115.6	0.0	0.0
55.00		58.8	273.7					0.0	568.2	58.8	841.9	0.0	0.0
60.00		54.2	522.7					0.0	1,136.5	54.2	1,659.2	0.0	0.0
62.00	Reinf. Top Reinf	37.7	201.9					0.0	454.7	37.7	656.6	0.0	0.0
65.00		58.8	293.4					0.0	682.0	58.8	975.4	0.0	0.0
70.00		71.2	462.8					0.0	1,136.8	71.2	1,599.7	0.0	0.0
75.00		48.3	432.5					0.0	1,137.0	48.3	1,569.5	0.0	0.0
77.00	Appurtenance(s)	33.2	165.7	496.8	0.0	294.9	3,182.2	0.0	454.8	530.0	3,802.8	0.0	0.0
80.00		32.5	238.8					0.0	646.9	32.5	885.6	0.0	0.0
82.00	Top - Section 2	31.4	153.5					0.0	431.3	31.4	584.7	0.0	0.0
85.00		48.2	199.7					0.0	646.9	48.2	846.7	0.0	0.0
90.00		30.3	308.6					0.0	1,078.3	30.3	1,386.9	0.0	0.0
90.13	Reinf. Top	27.6	7.5					0.0	27.0	27.6	34.4	0.0	0.0
95.00		37.4	273.4					0.0	354.8	37.4	628.2	0.0	0.0
97.00	Appurtenance(s)	20.6	105.6	667.6	0.0	0.0	6,734.0	0.0	58.8	688.2	6,898.4	0.0	0.0
99.00	Top - Section 3	15.1	101.1					0.0	50.1	15.1	151.2	0.0	0.0
100.00		29.8	59.0					0.0	25.0	29.8	84.0	0.0	0.0
105.00		50.1	295.4					0.0	125.2	50.1	420.5	0.0	0.0
110.00		50.8	295.9					0.0	125.2	50.8	421.0	0.0	0.0
115.00		35.9	296.3					0.0	125.2	35.9	421.5	0.0	0.0
117.00	Appurtenance(s)	19.9	118.7	669.2	0.0	49.6	4,752.8	0.0	50.1	689.1	4,921.5	0.0	0.0
119.00		9.5	118.7					0.0	0.0	9.5	118.7	0.0	0.0
<b>Totals:</b>									<b>3,582.55</b>	<b>42,538.0</b>	<b>0.00</b>	<b>0.00</b>	



Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

5/27/2021 2:45:45 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	24 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	-42.54	-3.55	0.00	-296.15	0.00	296.15	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.138
5.00	-41.30	-3.48	0.00	-278.41	0.00	278.41	2,747.79	699.53	2,539.19	2,272.29	0.02	-0.05	0.138
10.00	-40.08	-3.42	0.00	-261.01	0.00	261.01	2,679.61	673.42	2,353.20	2,132.56	0.10	-0.09	0.137
15.00	-38.88	-3.36	0.00	-243.92	0.00	243.92	2,608.76	647.31	2,174.28	1,995.03	0.22	-0.14	0.137
20.00	-37.72	-3.30	0.00	-227.14	0.00	227.14	2,535.24	621.20	2,002.44	1,859.96	0.40	-0.19	0.137
25.00	-36.59	-3.24	0.00	-210.65	0.00	210.65	2,459.06	595.09	1,837.67	1,727.58	0.63	-0.25	0.137
30.00	-35.49	-3.19	0.00	-194.44	0.00	194.44	2,380.22	568.98	1,679.97	1,598.16	0.92	-0.31	0.137
35.00	-34.43	-3.14	0.00	-178.49	0.00	178.49	2,298.17	542.87	1,529.34	1,471.58	1.27	-0.37	0.136
40.00	-33.41	-3.09	0.00	-162.79	0.00	162.79	2,187.63	516.76	1,385.79	1,332.77	1.69	-0.43	0.137
43.88	-32.43	-3.06	0.00	-150.81	0.00	150.81	2,101.97	496.53	1,279.40	1,229.91	2.06	-0.48	0.138
45.00	-32.00	-3.04	0.00	-147.36	0.00	147.36	2,077.10	490.65	1,249.31	1,200.82	2.18	-0.50	0.081
48.33	-30.75	-3.00	0.00	-137.24	0.00	137.24	2,003.41	473.25	1,162.26	1,116.68	2.54	-0.53	0.080
50.00	-30.00	-2.96	0.00	-132.25	0.00	132.25	1,966.57	464.54	1,119.91	1,075.76	2.72	-0.54	0.078
52.50	-28.88	-2.92	0.00	-124.84	0.00	124.84	1,292.92	322.51	771.05	703.85	3.01	-0.56	0.097
55.00	-28.04	-2.88	0.00	-117.53	0.00	117.53	1,267.71	313.38	727.98	670.42	3.31	-0.59	0.094
60.00	-26.38	-2.82	0.00	-103.15	0.00	103.15	1,215.29	295.10	645.55	604.90	3.95	-0.64	0.088
62.00	-25.72	-2.79	0.00	-97.52	0.00	97.52	1,193.58	287.79	613.97	579.24	4.23	-0.66	0.086
62.00	-25.72	-2.79	0.00	-97.52	0.00	97.52	1,193.58	287.79	613.97	579.24	4.23	-0.66	0.086
65.00	-24.74	-2.73	0.00	-89.16	0.00	89.16	1,160.21	276.82	568.07	541.39	4.65	-0.69	0.082
70.00	-23.14	-2.66	0.00	-75.49	0.00	75.49	1,094.51	258.55	495.55	476.69	5.40	-0.74	0.076
75.00	-21.57	-2.61	0.00	-62.18	0.00	62.18	1,017.13	240.27	427.97	411.36	6.20	-0.79	0.070
77.00	-17.78	-2.03	0.00	-56.67	0.00	56.67	986.19	232.96	402.33	386.57	6.53	-0.81	0.065
80.00	-16.89	-1.99	0.00	-50.58	0.00	50.58	939.76	221.99	365.35	350.84	7.05	-0.84	0.062
82.00	-16.31	-1.96	0.00	-46.60	0.00	46.60	908.81	214.68	341.68	327.98	7.40	-0.86	0.060
82.00	-16.31	-1.96	0.00	-46.60	0.00	46.60	780.36	184.34	293.89	282.62	7.40	-0.86	0.000
85.00	-15.46	-1.91	0.00	-40.72	0.00	40.72	740.57	174.94	264.69	254.39	7.95	-0.88	0.059
90.00	-14.07	-1.86	0.00	-31.17	0.00	31.17	674.25	159.27	219.41	210.64	8.90	-0.93	0.051
90.13	-14.04	-1.84	0.00	-30.94	0.00	30.94	672.59	158.88	218.34	209.60	8.92	-0.93	0.051
90.13	-14.04	-1.84	0.00	-30.94	0.00	30.94	672.59	158.88	218.34	209.60	8.92	-0.93	0.169
95.00	-13.41	-1.80	0.00	-21.97	0.00	21.97	607.93	143.61	178.38	171.01	9.90	-0.97	0.151
97.00	-6.52	-1.00	0.00	-18.37	0.00	18.37	581.40	137.34	163.16	156.32	10.32	-1.03	0.129
99.00	-6.37	-0.99	0.00	-16.37	0.00	16.37	554.88	131.07	148.61	142.28	10.76	-1.09	0.127
99.00	-6.37	-0.99	0.00	-16.37	0.00	16.37	725.83	171.46	190.75	181.64	10.76	-1.09	0.099
100.00	-6.28	-0.96	0.00	-15.38	0.00	15.38	725.83	171.46	190.75	181.64	10.99	-1.12	0.093
105.00	-5.86	-0.91	0.00	-10.56	0.00	10.56	725.83	171.46	190.75	181.64	12.22	-1.22	0.066
110.00	-5.44	-0.86	0.00	-5.99	0.00	5.99	725.83	171.46	190.75	181.64	13.53	-1.28	0.041
115.00	-5.02	-0.81	0.00	-1.70	0.00	1.70	725.83	171.46	190.75	181.64	14.89	-1.31	0.016
117.00	-0.12	-0.01	0.00	-0.02	0.00	0.02	725.83	171.46	190.75	181.64	15.44	-1.31	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	15.99	-1.31	0.000

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

5/27/2021 2:45:45 PM

Customer: AT&T MOBILITY

**Load Case: 1.0D + 1.0W**

**Serviceability 60 mph**

**24 Iterations**

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		38.3	0.0					0.0	0.0	38.3	0.0	0.0	0.0
5.00		75.2	690.8					0.0	171.7	75.2	862.6	0.0	0.0
10.00		72.5	665.5					0.0	171.7	72.5	837.3	0.0	0.0
15.00		69.7	640.2					0.0	171.7	69.7	811.9	0.0	0.0
20.00		66.9	614.9					0.0	171.7	66.9	786.6	0.0	0.0
25.00		64.1	589.6					0.0	171.7	64.1	761.3	0.0	0.0
30.00		62.0	564.3					0.0	171.7	62.0	736.0	0.0	0.0
35.00		61.1	538.9					0.0	171.7	61.1	710.7	0.0	0.0
40.00		53.8	513.6					0.0	171.7	53.8	685.4	0.0	0.0
43.88	Reinf Bottom	30.0	380.7					0.0	304.4	30.0	685.0	0.0	0.0
45.00		26.4	107.7					0.0	210.3	26.4	318.0	0.0	0.0
48.33	Bot - Section 2	29.6	311.5					0.0	623.2	29.6	934.7	0.0	0.0
50.00		24.5	259.7					0.0	311.6	24.5	571.3	0.0	0.0
52.50	Top - Section 1	29.1	380.6					0.0	467.4	29.1	847.9	0.0	0.0
55.00		42.6	154.1					0.0	467.4	42.6	621.5	0.0	0.0
60.00		39.2	294.9					0.0	934.8	39.2	1,229.7	0.0	0.0
62.00	Reinf. Top Reinf	27.2	113.0					0.0	373.9	27.2	486.9	0.0	0.0
65.00		42.2	164.2					0.0	560.9	42.2	725.1	0.0	0.0
70.00		50.8	259.5					0.0	934.8	50.8	1,194.3	0.0	0.0
75.00		34.3	241.8					0.0	934.8	34.3	1,176.5	0.0	0.0
77.00	Appurtenance(s)	23.4	91.8	502.3	0.0	320.6	1,415.4	0.0	373.9	525.7	1,881.1	0.0	0.0
80.00		22.8	132.3					0.0	531.3	22.8	663.6	0.0	0.0
82.00	Top - Section 2	22.0	84.7					0.0	354.2	22.0	438.9	0.0	0.0
85.00		33.4	104.5					0.0	531.3	33.4	635.8	0.0	0.0
90.00		20.9	162.0					0.0	885.6	20.9	1,047.6	0.0	0.0
90.13	Reinf. Top	19.7	3.9					0.0	22.1	19.7	26.0	0.0	0.0
95.00		27.0	143.0					0.0	290.8	27.0	433.7	0.0	0.0
97.00	Appurtenance(s)	15.5	54.5	659.0	0.0	0.0	3,955.3	0.0	49.0	674.4	4,058.8	0.0	0.0
99.00	Top - Section 3	11.5	52.0					0.0	41.7	11.5	93.8	0.0	0.0
100.00		23.0	33.2					0.0	20.9	23.0	54.1	0.0	0.0
105.00		38.6	166.2					0.0	104.3	38.6	270.5	0.0	0.0
110.00		38.9	166.2					0.0	104.3	38.9	270.5	0.0	0.0
115.00		27.4	166.2					0.0	104.3	27.4	270.5	0.0	0.0
117.00	Appurtenance(s)	14.8	66.5	684.4	0.0	49.7	2,439.0	0.0	41.7	699.2	2,547.2	0.0	0.0
119.00		6.9	66.5					0.0	0.0	6.9	66.5	0.0	0.0
<b>Totals:</b>										<b>3,131.14</b>	<b>27,741.2</b>	<b>0.00</b>	<b>0.00</b>

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

5/27/2021 2:45:47 PM

Customer: AT&T MOBILITY

**Load Case: 1.0D + 1.0W**

**Serviceability 60 mph**

**24 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	-27.74	-3.10	0.00	-262.48	0.00	262.48	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.119
5.00	-26.88	-3.05	0.00	-246.97	0.00	246.97	2,747.79	699.53	2,539.19	2,272.29	0.02	-0.04	0.118
10.00	-26.04	-2.99	0.00	-231.74	0.00	231.74	2,679.61	673.42	2,353.20	2,132.56	0.09	-0.08	0.118
15.00	-25.22	-2.94	0.00	-216.78	0.00	216.78	2,608.76	647.31	2,174.28	1,995.03	0.19	-0.13	0.118
20.00	-24.43	-2.89	0.00	-202.08	0.00	202.08	2,535.24	621.20	2,002.44	1,859.96	0.35	-0.17	0.118
25.00	-23.67	-2.85	0.00	-187.62	0.00	187.62	2,459.06	595.09	1,837.67	1,727.58	0.56	-0.22	0.118
30.00	-22.93	-2.80	0.00	-173.39	0.00	173.39	2,380.22	568.98	1,679.97	1,598.16	0.82	-0.27	0.118
35.00	-22.22	-2.76	0.00	-159.38	0.00	159.38	2,298.17	542.87	1,529.34	1,471.58	1.13	-0.33	0.118
40.00	-21.53	-2.72	0.00	-145.58	0.00	145.58	2,187.63	516.76	1,385.79	1,332.77	1.50	-0.38	0.119
43.88	-20.84	-2.70	0.00	-135.04	0.00	135.04	2,101.97	496.53	1,279.40	1,229.91	1.83	-0.43	0.120
45.00	-20.53	-2.67	0.00	-132.01	0.00	132.01	2,077.10	490.65	1,249.31	1,200.82	1.94	-0.44	0.070
48.33	-19.59	-2.64	0.00	-123.09	0.00	123.09	2,003.41	473.25	1,162.26	1,116.68	2.26	-0.47	0.069
50.00	-19.02	-2.62	0.00	-118.69	0.00	118.69	1,966.57	464.54	1,119.91	1,075.76	2.42	-0.48	0.068
52.50	-18.17	-2.59	0.00	-112.13	0.00	112.13	1,292.92	322.51	771.05	703.85	2.68	-0.50	0.084
55.00	-17.55	-2.55	0.00	-105.66	0.00	105.66	1,267.71	313.38	727.98	670.42	2.95	-0.52	0.082
60.00	-16.32	-2.51	0.00	-92.90	0.00	92.90	1,215.29	295.10	645.55	604.90	3.52	-0.57	0.077
62.00	-15.83	-2.48	0.00	-87.88	0.00	87.88	1,193.58	287.79	613.97	579.24	3.76	-0.59	0.075
62.00	-15.83	-2.48	0.00	-87.88	0.00	87.88	1,193.58	287.79	613.97	579.24	3.76	-0.59	0.075
65.00	-15.10	-2.44	0.00	-80.43	0.00	80.43	1,160.21	276.82	568.07	541.39	4.14	-0.61	0.071
70.00	-13.91	-2.39	0.00	-68.20	0.00	68.20	1,094.51	258.55	495.55	476.69	4.81	-0.66	0.066
75.00	-12.73	-2.35	0.00	-56.25	0.00	56.25	1,017.13	240.27	427.97	411.36	5.52	-0.70	0.060
77.00	-10.86	-1.81	0.00	-51.23	0.00	51.23	986.19	232.96	402.33	386.57	5.82	-0.72	0.056
80.00	-10.19	-1.78	0.00	-45.81	0.00	45.81	939.76	221.99	365.35	350.84	6.28	-0.75	0.054
82.00	-9.75	-1.75	0.00	-42.25	0.00	42.25	908.81	214.68	341.68	327.98	6.60	-0.77	0.052
82.00	-9.75	-1.75	0.00	-42.25	0.00	42.25	780.36	184.34	293.89	282.62	6.60	-0.77	0.000
85.00	-9.12	-1.72	0.00	-36.99	0.00	36.99	740.57	174.94	264.69	254.39	7.09	-0.79	0.051
90.00	-8.07	-1.68	0.00	-28.41	0.00	28.41	674.25	159.27	219.41	210.64	7.94	-0.83	0.044
90.13	-8.04	-1.67	0.00	-28.20	0.00	28.20	672.59	158.88	218.34	209.60	7.96	-0.83	0.044
90.13	-8.04	-1.67	0.00	-28.20	0.00	28.20	672.59	158.88	218.34	209.60	7.96	-0.83	0.147
95.00	-7.61	-1.64	0.00	-20.07	0.00	20.07	607.93	143.61	178.38	171.01	8.84	-0.87	0.130
97.00	-3.56	-0.90	0.00	-16.79	0.00	16.79	581.40	137.34	163.16	156.32	9.21	-0.93	0.114
99.00	-3.46	-0.89	0.00	-14.98	0.00	14.98	554.88	131.07	148.61	142.28	9.61	-0.98	0.112
99.00	-3.46	-0.89	0.00	-14.98	0.00	14.98	725.83	171.46	190.75	181.64	9.61	-0.98	0.087
100.00	-3.41	-0.87	0.00	-14.09	0.00	14.09	725.83	171.46	190.75	181.64	9.82	-1.01	0.082
105.00	-3.14	-0.83	0.00	-9.72	0.00	9.72	725.83	171.46	190.75	181.64	10.93	-1.10	0.058
110.00	-2.87	-0.79	0.00	-5.55	0.00	5.55	725.83	171.46	190.75	181.64	12.11	-1.15	0.035
115.00	-2.60	-0.76	0.00	-1.59	0.00	1.59	725.83	171.46	190.75	181.64	13.33	-1.18	0.012
117.00	-0.07	-0.01	0.00	-0.02	0.00	0.02	725.83	171.46	190.75	181.64	13.83	-1.18	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	14.33	-1.18	0.000

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number: 13361423\_C3\_04

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Customer: AT&T MOBILITY

**Equivalent Lateral Forces Method Analysis**

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.21
Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.05
Long-Period Transition Period ( $T_L$ ):	6
Importance Factor ( $I_E$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.22
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.09
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):	2.33
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.91
Total Unfactored Dead Load:	27.74 k
Seismic Base Shear (E):	0.83 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)
34	118.00	66	611	0.006	5	83
33	116.00	108	963	0.009	8	135
32	112.50	271	2,269	0.022	18	337
31	107.50	271	2,080	0.020	17	337
30	102.50	271	1,899	0.018	15	337
29	99.50	54	359	0.003	3	67
28	98.00	94	604	0.006	5	117
27	96.00	103	641	0.006	5	129
26	92.56	434	2,505	0.024	20	540
25	90.06	26	142	0.001	1	32
24	87.50	1,048	5,434	0.053	44	1,303
23	83.50	636	3,016	0.029	24	791
22	81.00	439	1,964	0.019	16	546
21	78.50	664	2,797	0.027	23	826
20	76.00	466	1,845	0.018	15	579
19	72.50	1,177	4,259	0.041	34	1,464
18	67.50	1,194	3,771	0.037	30	1,486
17	63.50	725	2,037	0.020	16	902
16	61.00	487	1,267	0.012	10	606
15	57.50	1,230	2,857	0.028	23	1,530
14	53.75	621	1,269	0.012	10	773
13	51.25	848	1,581	0.015	13	1,055
12	49.17	571	984	0.010	8	711
11	46.67	935	1,457	0.014	12	1,163
10	44.44	318	451	0.004	4	396

Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

9	41.94	685	870	0.008	7	852
8	37.50	685	703	0.007	6	853
7	32.50	711	554	0.005	4	884
6	27.50	736	417	0.004	3	916
5	22.50	761	294	0.003	2	947
4	17.50	787	188	0.002	2	979
3	12.50	812	102	0.001	1	1,010
2	7.50	837	40	0.000	0	1,042
1	2.50	863	5	0.000	0	1,073
Commscope WCS-IMFQ-A	117.00	30	267	0.003	2	37
Raycap DC6-48-60-18-	117.00	33	297	0.003	2	41
Ericsson RRUS 4426 B	117.00	145	1,313	0.013	11	181
Ericsson RRUS 4478 B	117.00	180	1,625	0.016	13	224
Ericsson RRUS 4449 B	117.00	213	1,926	0.019	16	265
Ericsson RRUS 32 B2	117.00	159	1,438	0.014	12	198
Ericsson RRUS-32 B30	117.00	231	2,089	0.020	17	287
Raycap DC9-48-60-24-	117.00	16	145	0.001	1	20
Generic Round T-Arm	117.00	938	8,478	0.082	68	1,166
CCI TPA65R-BU6D	117.00	203	1,831	0.018	15	252
Kathrein Scala 80010	117.00	293	2,648	0.026	21	364
Ericsson Radio 4449	97.00	225	1,422	0.014	11	280
Ericsson RRUS 4415 B	97.00	138	872	0.008	7	172
Ericsson Air6449 B41	97.00	312	1,971	0.019	16	388
Ericsson AIR32 B66Aa	97.00	397	2,506	0.024	20	493
RFS APXVAARR24_43-U-	97.00	384	2,424	0.024	20	477
Generic Round Platfo	97.00	2,500	15,795	0.153	128	3,110
Alcatel-Lucent 9442	77.00	147	597	0.006	5	183
Alcatel-Lucent 9442	77.00	152	618	0.006	5	189
Amphenol Antel BXA-1	77.00	77	312	0.003	3	96
Amphenol Antel BXA-7	77.00	102	414	0.004	3	127
Generic Round T-Arm	77.00	938	3,808	0.037	31	1,166
		27,741	103,031	1.000	832	34,515

**Load Case 0.9D - 1.0Ev + 1.0Eh**

**Seismic (Reduced DL)**

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
34	118.00	66	611	0.006	5	57
33	116.00	108	963	0.009	8	93
32	112.50	271	2,269	0.022	18	232
31	107.50	271	2,080	0.020	17	232
30	102.50	271	1,899	0.018	15	232
29	99.50	54	359	0.003	3	46
28	98.00	94	604	0.006	5	80
27	96.00	103	641	0.006	5	89
26	92.56	434	2,505	0.024	20	371
25	90.06	26	142	0.001	1	22
24	87.50	1,048	5,434	0.053	44	897
23	83.50	636	3,016	0.029	24	544
22	81.00	439	1,964	0.019	16	376
21	78.50	664	2,797	0.027	23	568
20	76.00	466	1,845	0.018	15	399
19	72.50	1,177	4,259	0.041	34	1,007
18	67.50	1,194	3,771	0.037	30	1,022
17	63.50	725	2,037	0.020	16	621
16	61.00	487	1,267	0.012	10	417
15	57.50	1,230	2,857	0.028	23	1,052
14	53.75	621	1,269	0.012	10	532
13	51.25	848	1,581	0.015	13	726
12	49.17	571	984	0.010	8	489
11	46.67	935	1,457	0.014	12	800

Site Number: 283420

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

10	44.44	318	451	0.004	4	272
9	41.94	685	870	0.008	7	586
8	37.50	685	703	0.007	6	587
7	32.50	711	554	0.005	4	608
6	27.50	736	417	0.004	3	630
5	22.50	761	294	0.003	2	652
4	17.50	787	188	0.002	2	673
3	12.50	812	102	0.001	1	695
2	7.50	837	40	0.000	0	717
1	2.50	863	5	0.000	0	738
Commscope WCS-IMFQ-A	117.00	30	267	0.003	2	25
Raycap DC6-48-60-18-	117.00	33	297	0.003	2	28
Ericsson RRUS 4426 B	117.00	145	1,313	0.013	11	124
Ericsson RRUS 4478 B	117.00	180	1,625	0.016	13	154
Ericsson RRUS 4449 B	117.00	213	1,926	0.019	16	182
Ericsson RRUS 32 B2	117.00	159	1,438	0.014	12	136
Ericsson RRUS-32 B30	117.00	231	2,089	0.020	17	198
Raycap DC9-48-60-24-	117.00	16	145	0.001	1	14
Generic Round T-Arm	117.00	938	8,478	0.082	68	802
CCI TPA65R-BU6D	117.00	203	1,831	0.018	15	173
Kathrein Scala 80010	117.00	293	2,648	0.026	21	251
Ericsson Radio 4449	97.00	225	1,422	0.014	11	193
Ericsson RRUS 4415 B	97.00	138	872	0.008	7	118
Ericsson Air6449 B41	97.00	312	1,971	0.019	16	267
Ericsson AIR32 B66Aa	97.00	397	2,506	0.024	20	339
RFS APXVAARR24_43-U-	97.00	384	2,424	0.024	20	328
Generic Round Platfo	97.00	2,500	15,795	0.153	128	2,140
Alcatel-Lucent 9442	77.00	147	597	0.006	5	126
Alcatel-Lucent 9442	77.00	152	618	0.006	5	130
Amphenol Antel BXA-1	77.00	77	312	0.003	3	66
Amphenol Antel BXA-7	77.00	102	414	0.004	3	87
Generic Round T-Arm	77.00	938	3,808	0.037	31	802
		27,741	103,031	1.000	832	23,742

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

**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	-33.44	-0.83	0.00	-78.61	0.00	78.61	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.044
5.00	-32.40	-0.84	0.00	-74.43	0.00	74.43	2,747.79	699.53	2,539.19	2,272.29	0.01	-0.01	0.045
10.00	-31.39	-0.85	0.00	-70.23	0.00	70.23	2,679.61	673.42	2,353.20	2,132.56	0.03	-0.02	0.045
15.00	-30.41	-0.85	0.00	-65.99	0.00	65.99	2,608.76	647.31	2,174.28	1,995.03	0.06	-0.04	0.045
20.00	-29.46	-0.86	0.00	-61.73	0.00	61.73	2,535.24	621.20	2,002.44	1,859.96	0.11	-0.05	0.045
25.00	-28.55	-0.86	0.00	-57.45	0.00	57.45	2,459.06	595.09	1,837.67	1,727.58	0.17	-0.07	0.045
30.00	-27.66	-0.86	0.00	-53.15	0.00	53.15	2,380.22	568.98	1,679.97	1,598.16	0.25	-0.08	0.045
35.00	-26.81	-0.86	0.00	-48.84	0.00	48.84	2,298.17	542.87	1,529.34	1,471.58	0.34	-0.10	0.045
40.00	-25.96	-0.86	0.00	-44.52	0.00	44.52	2,187.63	516.76	1,385.79	1,332.77	0.46	-0.12	0.045
43.88	-25.56	-0.86	0.00	-41.18	0.00	41.18	2,101.97	496.53	1,279.40	1,229.91	0.56	-0.13	0.046
45.00	-24.40	-0.85	0.00	-40.21	0.00	40.21	2,077.10	490.65	1,249.31	1,200.82	0.59	-0.14	0.027
48.33	-23.69	-0.84	0.00	-37.38	0.00	37.38	2,003.41	473.25	1,162.26	1,116.68	0.69	-0.14	0.026
50.00	-22.63	-0.83	0.00	-35.98	0.00	35.98	1,966.57	464.54	1,119.91	1,075.76	0.74	-0.15	0.026
52.50	-21.86	-0.82	0.00	-33.91	0.00	33.91	1,292.92	322.51	771.05	703.85	0.82	-0.15	0.032
55.00	-20.33	-0.80	0.00	-31.86	0.00	31.86	1,267.71	313.38	727.98	670.42	0.90	-0.16	0.030
60.00	-19.72	-0.79	0.00	-27.89	0.00	27.89	1,215.29	295.10	645.55	604.90	1.07	-0.17	0.029
62.00	-18.82	-0.77	0.00	-26.31	0.00	26.31	1,193.58	287.79	613.97	579.24	1.14	-0.18	0.028
62.00	-18.82	-0.77	0.00	-26.31	0.00	26.31	1,193.58	287.79	613.97	579.24	1.14	-0.18	0.028
65.00	-17.34	-0.74	0.00	-24.00	0.00	24.00	1,160.21	276.82	568.07	541.39	1.26	-0.19	0.026
70.00	-15.87	-0.70	0.00	-20.32	0.00	20.32	1,094.51	258.55	495.55	476.69	1.46	-0.20	0.024
75.00	-15.29	-0.69	0.00	-16.81	0.00	16.81	1,017.13	240.27	427.97	411.36	1.68	-0.21	0.023
77.00	-12.71	-0.61	0.00	-15.43	0.00	15.43	986.19	232.96	402.33	386.57	1.77	-0.22	0.021
80.00	-12.16	-0.59	0.00	-13.60	0.00	13.60	939.76	221.99	365.35	350.84	1.91	-0.23	0.020
82.00	-11.37	-0.57	0.00	-12.41	0.00	12.41	908.81	214.68	341.68	327.98	2.01	-0.23	0.019
82.00	-11.37	-0.57	0.00	-12.41	0.00	12.41	780.36	184.34	293.89	282.62	2.01	-0.23	0.000
85.00	-10.07	-0.52	0.00	-10.71	0.00	10.71	740.57	174.94	264.69	254.39	2.15	-0.24	0.018
90.00	-10.03	-0.52	0.00	-8.11	0.00	8.11	674.25	159.27	219.41	210.64	2.41	-0.25	0.016
90.13	-9.49	-0.50	0.00	-8.05	0.00	8.05	672.59	158.88	218.34	209.60	2.42	-0.25	0.016
90.13	-9.49	-0.50	0.00	-8.05	0.00	8.05	672.59	158.88	218.34	209.60	2.42	-0.25	0.053
95.00	-9.36	-0.49	0.00	-5.62	0.00	5.62	607.93	143.61	178.38	171.01	2.68	-0.26	0.048
97.00	-4.33	-0.27	0.00	-4.63	0.00	4.63	581.40	137.34	163.16	156.32	2.79	-0.28	0.037
99.00	-4.26	-0.26	0.00	-4.10	0.00	4.10	554.88	131.07	148.61	142.28	2.91	-0.29	0.036
99.00	-4.26	-0.26	0.00	-4.10	0.00	4.10	725.83	171.46	190.75	181.64	2.91	-0.29	0.028
100.00	-3.92	-0.25	0.00	-3.84	0.00	3.84	725.83	171.46	190.75	181.64	2.98	-0.30	0.027
105.00	-3.59	-0.23	0.00	-2.60	0.00	2.60	725.83	171.46	190.75	181.64	3.30	-0.32	0.019
110.00	-3.25	-0.21	0.00	-1.45	0.00	1.45	725.83	171.46	190.75	181.64	3.65	-0.34	0.012
115.00	-3.12	-0.20	0.00	-0.40	0.00	0.40	725.83	171.46	190.75	181.64	4.01	-0.35	0.007
117.00	0.00	0.00	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	4.16	-0.35	0.000
119.00	0.00	0.00	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	4.30	-0.35	0.000



Site Number: 283420

Code: ANSI/TIA-222-H

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

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	-23.00	-0.83	0.00	-77.12	0.00	77.12	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.040
5.00	-22.29	-0.84	0.00	-72.95	0.00	72.95	2,747.79	699.53	2,539.19	2,272.29	0.01	-0.01	0.040
10.00	-21.59	-0.84	0.00	-68.76	0.00	68.76	2,679.61	673.42	2,353.20	2,132.56	0.03	-0.02	0.040
15.00	-20.92	-0.84	0.00	-64.55	0.00	64.55	2,608.76	647.31	2,174.28	1,995.03	0.06	-0.04	0.040
20.00	-20.27	-0.85	0.00	-60.33	0.00	60.33	2,535.24	621.20	2,002.44	1,859.96	0.10	-0.05	0.040
25.00	-19.64	-0.85	0.00	-56.09	0.00	56.09	2,459.06	595.09	1,837.67	1,727.58	0.17	-0.07	0.040
30.00	-19.03	-0.85	0.00	-51.85	0.00	51.85	2,380.22	568.98	1,679.97	1,598.16	0.24	-0.08	0.040
35.00	-18.44	-0.85	0.00	-47.62	0.00	47.62	2,298.17	542.87	1,529.34	1,471.58	0.34	-0.10	0.040
40.00	-17.85	-0.84	0.00	-43.38	0.00	43.38	2,187.63	516.76	1,385.79	1,332.77	0.45	-0.11	0.041
43.88	-17.58	-0.84	0.00	-40.11	0.00	40.11	2,101.97	496.53	1,279.40	1,229.91	0.54	-0.13	0.041
45.00	-16.78	-0.83	0.00	-39.17	0.00	39.17	2,077.10	490.65	1,249.31	1,200.82	0.58	-0.13	0.024
48.33	-16.29	-0.82	0.00	-36.40	0.00	36.40	2,003.41	473.25	1,162.26	1,116.68	0.67	-0.14	0.024
50.00	-15.57	-0.81	0.00	-35.03	0.00	35.03	1,966.57	464.54	1,119.91	1,075.76	0.72	-0.14	0.023
52.50	-15.04	-0.80	0.00	-33.01	0.00	33.01	1,292.92	322.51	771.05	703.85	0.80	-0.15	0.028
55.00	-13.98	-0.78	0.00	-31.01	0.00	31.01	1,267.71	313.38	727.98	670.42	0.88	-0.16	0.027
60.00	-13.57	-0.77	0.00	-27.13	0.00	27.13	1,215.29	295.10	645.55	604.90	1.05	-0.17	0.026
62.00	-12.95	-0.75	0.00	-25.60	0.00	25.60	1,193.58	287.79	613.97	579.24	1.12	-0.17	0.025
62.00	-12.95	-0.75	0.00	-25.60	0.00	25.60	1,193.58	287.79	613.97	579.24	1.12	-0.17	0.025
65.00	-11.92	-0.72	0.00	-23.35	0.00	23.35	1,160.21	276.82	568.07	541.39	1.23	-0.18	0.024
70.00	-10.92	-0.68	0.00	-19.75	0.00	19.75	1,094.51	258.55	495.55	476.69	1.43	-0.20	0.022
75.00	-10.52	-0.67	0.00	-16.34	0.00	16.34	1,017.13	240.27	427.97	411.36	1.64	-0.21	0.020
77.00	-8.74	-0.59	0.00	-15.00	0.00	15.00	986.19	232.96	402.33	386.57	1.73	-0.21	0.019
80.00	-8.36	-0.58	0.00	-13.22	0.00	13.22	939.76	221.99	365.35	350.84	1.86	-0.22	0.018
82.00	-7.82	-0.55	0.00	-12.06	0.00	12.06	908.81	214.68	341.68	327.98	1.96	-0.23	0.017
82.00	-7.82	-0.55	0.00	-12.06	0.00	12.06	780.36	184.34	293.89	282.62	1.96	-0.23	0.000
85.00	-6.92	-0.51	0.00	-10.41	0.00	10.41	740.57	174.94	264.69	254.39	2.10	-0.23	0.016
90.00	-6.90	-0.51	0.00	-7.88	0.00	7.88	674.25	159.27	219.41	210.64	2.35	-0.25	0.014
90.13	-6.53	-0.48	0.00	-7.82	0.00	7.82	672.59	158.88	218.34	209.60	2.36	-0.25	0.014
90.13	-6.53	-0.48	0.00	-7.82	0.00	7.82	672.59	158.88	218.34	209.60	2.36	-0.25	0.047
95.00	-6.44	-0.48	0.00	-5.46	0.00	5.46	607.93	143.61	178.38	171.01	2.62	-0.26	0.043
97.00	-2.98	-0.26	0.00	-4.50	0.00	4.50	581.40	137.34	163.16	156.32	2.73	-0.27	0.034
99.00	-2.93	-0.26	0.00	-3.98	0.00	3.98	554.88	131.07	148.61	142.28	2.84	-0.28	0.033
99.00	-2.93	-0.26	0.00	-3.98	0.00	3.98	725.83	171.46	190.75	181.64	2.84	-0.28	0.026
100.00	-2.70	-0.24	0.00	-3.72	0.00	3.72	725.83	171.46	190.75	181.64	2.90	-0.29	0.024
105.00	-2.47	-0.22	0.00	-2.52	0.00	2.52	725.83	171.46	190.75	181.64	3.22	-0.32	0.017
110.00	-2.24	-0.20	0.00	-1.41	0.00	1.41	725.83	171.46	190.75	181.64	3.56	-0.33	0.011
115.00	-2.14	-0.20	0.00	-0.39	0.00	0.39	725.83	171.46	190.75	181.64	3.91	-0.34	0.005
117.00	0.00	0.00	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	4.05	-0.34	0.000
119.00	0.00	0.00	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	4.19	-0.34	0.000

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Site Name: STONEYBROOK RD CT, CT

Engineering Number:13361423\_C3\_04

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Customer: AT&T MOBILITY

## Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	13.54	0.00	33.27	0.00	0.00	1152.60	90.13	0.61
0.9D + 1.0W	13.52	0.00	24.95	0.00	0.00	1134.73	90.13	0.59
1.2D + 1.0Di + 1.0Wi	3.55	0.00	42.54	0.00	0.00	296.15	90.13	0.17
1.2D + 1.0Ev + 1.0Eh	0.83	0.00	33.44	0.00	0.00	78.61	90.13	0.05
0.9D - 1.0Ev + 1.0Eh	0.83	0.00	23.00	0.00	0.00	77.12	90.13	0.05
1.0D + 1.0W	3.10	0.00	27.74	0.00	0.00	262.48	90.13	0.15

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Site Name: STONEYBROOK RD CT, CT

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Customer: AT&T MOBILITY

**Additional Steel Summary**

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors				Max Member		
			VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	Ratio	Pu (kip)	phiPn (kip)	Ratio
43.88	62.00	(3) PL-PL 6" x 1"	317.2	7.6	25.3	0.301	146.4	300.9	0.487
62.00	82.00	(3) PL-PL 6" x 1"	385.3	9.2	25.3	0.366	137.5	300.9	0.457
82.00	90.13	(3) PL-PL 6" x 1"	403.5	9.7	25.3	0.383	98.5	300.9	0.327

Elev From (ft)	Elev To (ft)	Member	Upper Termination Connectors					Lower Termination Connectors				
			MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio
43.88	62.00	(3) PL-PL 6" x 1"	0.0	25.3	0	0	0.000	129.2	25.3	6	8	0.639
62.00	82.00	(3) PL-PL 6" x 1"	0.0	25.3	0	0	0.000	0.0	25.3	0	0	0.000
82.00	90.13	(3) PL-PL 6" x 1"	81.3	25.3	4	8	0.402	0.0	25.3	0	0	0.000

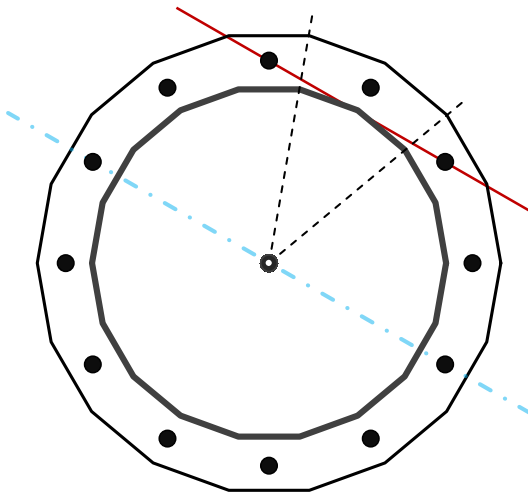
## Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	42	in
Thickness	5/16	in
Orientation Offset		°

Base Reactions		
Moment, Mu	1,152.6	k-ft
Axial, Pu	33.3	k
Shear, Vu	13.5	k
Neutral Axis	330	°

Report Capacities		
Component	Capacity	Result
Base Plate	26%	Pass
Anchor Rods	42%	Pass
Dwyidag	-	-

Base Plate		
Number of Sides	18	-
Diameter, $\phi$	55.15	in
Thickness	2	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	N/A	in
Orientation Offset		°
Anchor Rod Detail	d	$\eta=0.5$
Clear Distance	3 1/2	in
Applied Moment, Mu	235.4	k
Bending Stress, $\phi Mn$	901.1	k



Original Anchor Rods		
Arrangement	Radial	-
Quantity	12	-
Diameter, $\phi$	2 1/4	in
Bolt Circle	49.15	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	12.9	in
Orientation Offset		°
Applied Force, Pu	101.2	k
Anchor Rods, $\phi Pn$	243.6	k

# Calculations for Monopole Base Plate & Anchor Rod Analysis

## Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	13.5	1152.6	1.00
Anchor Rod Forces	13.5	1152.6	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 <sup>2</sup>	in <sup>2</sup>	in <sup>4</sup>	#	in <sup>4</sup>
Pole	40.7191	2.2622	0.0739		8846.79
Bolt	3.9761	3.2477	0.8393	4.5	10668.51
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	18	-
Width, W	55.15	in
Thickness, t	2	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	35.742	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3.5	-

Anchor Rods		
Anchor Rod Quantity, N	12	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	49.15	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	101.2	k
Applied Shear, Vu	0.9	k
Compressive Capacity, $\phi P_n$	243.6	k
Tensile Capacity, $\phi R_n$	0.416	OK
Interaction Capacity	0.423	OK

External Base Plate		
Chord Length AA	35.869	in
Additional AA	4.000	in
Section Modulus, Z	39.869	in <sup>3</sup>
Applied Moment, Mu	235.4	k-ft
Bending Capacity, $\phi M_n$	1794.1	k-ft
Capacity, Mu/ $\phi M_n$	0.131	OK
Chord Length AB	35.219	in
Additional AB	4.000	in
Section Modulus, Z	39.219	in <sup>3</sup>
Applied Moment, Mu	202.5	k-ft
Bending Capacity, $\phi M_n$	1764.9	k-ft
Capacity, Mu/ $\phi M_n$	0.115	OK
Bend Line Length	20.024	in
Additional Bend Line	0.000	in
Section Modulus, Z	20.024	in <sup>3</sup>
Applied Moment, Mu	235.4	k-ft
Bending Capacity, $\phi M_n$	901.1	k-ft
Capacity, Mu/ $\phi M_n$	0.261	OK

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in <sup>3</sup>
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, $\phi M_n$	0.0	k-ft
Capacity, Mu/ $\phi M_n$		

<b>Base/Flange Plate</b>	Plate Type	<b>Flange @ 82.0 ft</b>
	Pole Diameter	17.8375 in
	Pole Thickness	0.1875 in
	Plate Diameter	24.2 in
	Plate Thickness	1.5 in
	Plate Fy	50 ksi
	Weld Length	0.1875 in
	$\phi_s$ Resistance	6527.34 k-in
	Applied	-12.86 k-in
	<b>Stiffeners</b>	#
Thickness		1 in
Length		8 in
Height		12 in
Chamfer		0 in
Offset Angle		30°
Fy		65 ksi

Code Rev. **H**

Date **5/27/2021**  
 Engineer **BLL**  
 Site # **283420**  
 Carrier **AT&T MOBILITY**

Moment **185.4 k-ft**  
 Axial **11.3 k**

<b>Bolts</b>	#	<b>3</b>
	Bolt Circle	21.7 in
	(R)adial / (S)quare	R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
<b>Bypass</b>	$\phi_s$ Resistance	54.52 k
	Applied	3.76 k
	#	<b>6</b>
	DYW. Circle	28.25 in
<b>Flat Plate O</b>	Offset Angle	°
	Type	Other
	Diameter	2.2567 in
	Fu	50 ksi
	$\phi_s$ Resistance	159.99 k
<b>Flat Plate O</b>	Applied	42.08 k
	#	<b>3</b>
	Bolt Circle	19 in
	(R)adial / (S)quare	R
	Offset Angle	°
	Diameter	2.76395 in
	Type	Other
	Fy	50 ksi
Fu	65 ksi	
<b>Flat Plate O</b>	$\phi_s$ Resistance	243.22 k
	Applied	23.97 k

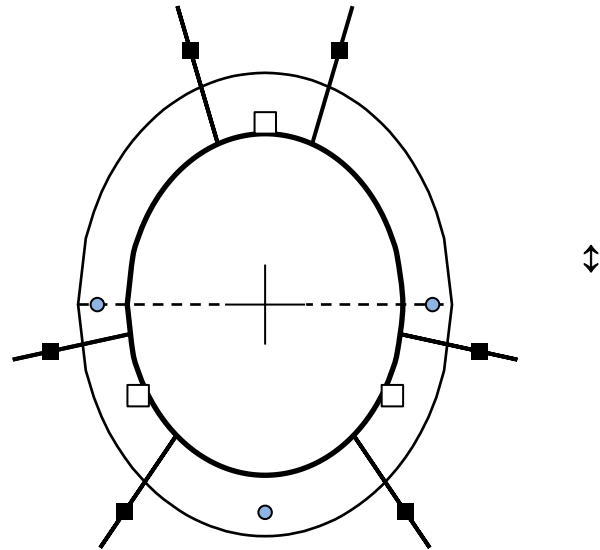


Plate Stress Ratio:  
**0.00** (Pass)

Bolt Stress Ratio:  
**0.07** (Pass)

Flat Plate Stress Ratio:  
**0.10** (Pass)

Bypass Stress Ratio:  
**0.26** (Pass)

# Flange Plate Analysis

Flange Plate	Plate Type	<b>Flange</b>	<b>@ 99 ft</b>
	Pole Diameter	12.5625	in
	Pole Thickness	0.25	in
	Plate Diameter	18	in
	Plate Thickness	1 1/4	in
	Plate Fy	50	ksi
	Weld Length	1/4	in
	f <sub>s</sub> Resistance	74.21	k-in
	Applied	16.35	k-in

Code Rev. **H**

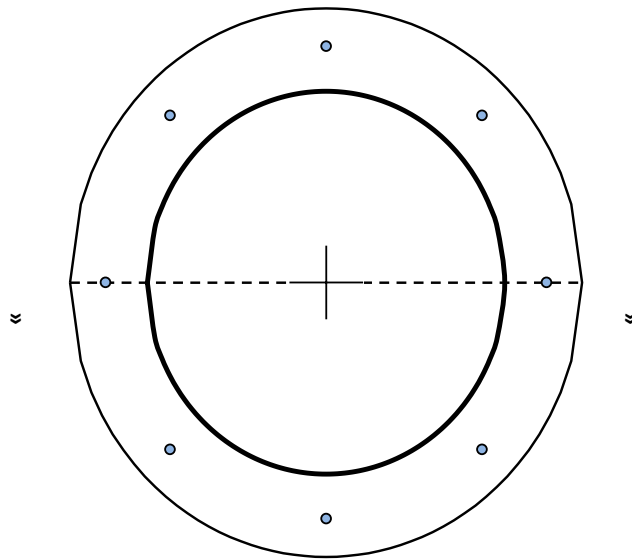
Date	5/27/2021
Engineer	BLL
Site #	283420
Carrier	AT&T MOBILITY

Moment **65.7 k-ft**  
Axial **3.9 k**

Required Flange Thickness:  
0.59 in OK

Stiffeners	#	
------------	---	--

Bolts	#	<b>8</b>	
	Bolt Circle (R)adial / (S)quare	15.5 R	in
	Diameter	1	in
	Hole Diameter	1 1/8	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	f <sub>s</sub> Resistance	54.52	k
	Applied	24.92	k



Reinforcement	#	
---------------	---	--

**Plate Stress Ratio:**  
22% Pass

**Bolt Stress Ratio:**  
46% Pass

Extra Bolts	#	
-------------	---	--



## Pier Foundation Analysis (ANSI/TIA-222-H)

### Foundation Analysis Parameters

Pier Diameter	$D$	6.50	ft
Pier Embedment	$L-h$	31.0	ft
Pier Height above Ground	$H$	0.50	ft
Water Table Depth [BGL]	$GW$	7	ft
Pullout Angle	$\Theta$	30	°
Unit Weight of Concrete		150	pcf
Uplift Skin Friction Factor		0.860	

### Reactions

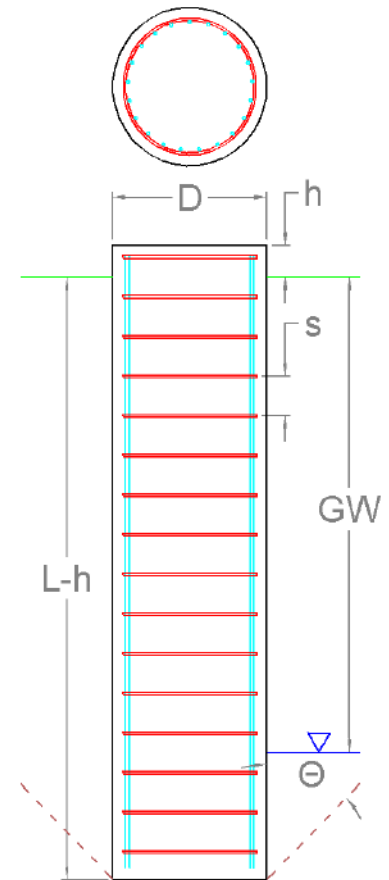
Moment, $M_u$	1,152.6	k-ft
Shear, $V_u$	13.5	k
Axial, $P_u$	33.3	k
Uplift, $T_u$	0.0	k

### Soil Properties

Layer Depth (ft)		Unit Weight	Cohesion	Friction Angle	Ultimate Skin Friction	Ultimate Bearing Pressure
TOP	BTM	pcf	psf	°	psf	psf
0.0	4.0	105	0	0	0	0
4.0	7.0	123	0	32	691	0
7.0	10.0	127	0	37	1,051	0
10.0	15.0	122	0	34	1,258	0
15.0	20.0	121	0	33	1,420	0
20.0	25.0	118	0	32	1,544	0
25.0	30.0	114	0	30	1,149	0
30.0	35.0	127	0	34	1,706	44,220

### Soil Strength Capacities

Volume of Concrete	1,045.3	ft <sup>3</sup>
Weight of Concrete [Buoyancy Considered]	107.1	k
Average Soil Unit Weight	70.1	pcf
Skin Friction Resistance	689.9	k
Compressive Bearing Resistance	1,467.4	k
Pullout Weight [Minus Concrete Weight]	1,126.8	k
Compressive Force, $P_u$	72.2	k
Nominal Compressive Capacity, $\phi_s P_n$	1,618.0	k
$P_u / \phi_s P_n$	<b>4.5%</b>	
Total Lateral Resistance	2,110.2	k
Inflection Point [BGL]	20.3	ft
Moment at Inflection Point, $M_D$	1,434.7	k-ft
Nominal Moment Capacity, $\phi_s M_n$	10,024.0	k-ft
$M_D / \phi_s M_n$	<b>14.3%</b>	



### Pier Strength Capacities

Concrete Compressive Strength, $f'_c$	4,000	psi
Rebar Size #	9	
Rebar Area (Single)	1.00	in <sup>2</sup>
Rebar Quantity	24	
Rebar Yield Strength, $F_y$	60	ksi
Vertical Rebar Clear Cover	3	in
Tie Rebar Size #	4	
Tie Rebar Area (Single)	0.20	in <sup>2</sup>
Tie Rebar Spacing	12.0	in
Tie Rebar Yield Strength, $F_y$	60	ksi
Rebar Cage Diameter	69.87	in
Strength Bending/Tension Reduction Factor, $\phi_B$	0.90	
Strength Shear Reduction Factor, $\phi_V$	0.75	
Strength Compression Reduction Factor, $\phi_C$	0.65	
Steel Elastic Modulus	29,000	ksi
Design Moment, $M_u$	1,159.9	k-ft
Moment Capacity, $\phi_B M_n$	3,695.1	k-ft
$M_u / \phi_B M_n$	<b>31.4%</b>	
Design Shear, $V_u$	91.3	k
Shear Capacity, $\phi_V V_n$	548.5	k
$V_u / \phi_V V_n$	<b>16.6%</b>	
Design Compression, $P_u$	72.2	k
Compression Capacity, $\phi_P P_n$	9,154.5	k
$P_u / \phi_P P_n$	<b>0.8%</b>	
Bending Reinforcement Ratio	0.005	



## EXHIBIT 4



**AMERICAN TOWER®**  
CORPORATION

This report was prepared for American Tower Corporation by

**CLS**ENGINEERING  
PLLC

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## Antenna Mount Analysis Report

**ATC Site Name** : Stoneybrook Rd CT  
**ATC Asset Number** : 283420  
**Engineering Number** : 13361423\_C8\_01  
**Mount Elevation** : 116 ft  
**Carrier** : AT&T Mobility  
**Carrier Site Name** : MRCTB049862  
**Carrier Site Number** : CTL02381  
**Site Location** : 23 Stonybrook Road  
Stratford, CT 06614-3715  
41.203278, -73.148625  
**County** : Fairfield  
**Date** : May 21, 2021  
**Max Usage** : 88%  
**Result** : Pass

Prepared By:  
**Asad Sayeed, E.I.**  
CLS Engineering PLLC

Reviewed By:  
**Tyler M. Barker, P.E.**  
CLS Engineering PLLC



Tyler M. Barker  
CLS Engineering PLLC  
PE # 32402 Exp. 1/31/2021  
COA # PEC.001833 Exp. 8/14/2022  
05/21/2021

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Calculations ..... Attached

## Introduction

The proposed equipment is to be mounted to the existing T-Arms. This proposed mounting configuration was analyzed using RISA-3D, a commercially available finite element analysis software package. A selection of input and output from our analysis is attached to the end of this report.

## Supporting Documents

<b>Structural Data</b>	Site Photos, dated June 10, 2020 Site Pro 1 Assembly drawing #MM02, dated March 23, 2010
<b>Previous Analyses</b>	Structural Analysis by American Tower Corporation, Engineering #13337496_C3_04, dated March 29, 2021 Mount Analysis by Hudson Design Group, LLC., FA #12906923, dated July 20, 2020
<b>Loading Data</b>	ATC Application, Project #13361423 AT&T RFDS ID: 4234865, Version 2.00, dated March 30, 2021

## Analysis

<b>Codes</b>	TIA-222-H
<b>Basic Wind Speed</b>	119 mph, $V_{ult}$ (3-Second Gust)
<b>Basic Wind Speed w/ Ice</b>	50 mph (3-Second Gust) w/ 1" Radial Ice (Escalating)
<b>Exposure Category</b>	B
<b>Topographic Factor Procedure:</b>	Method 2
<b>Feature:</b>	Flat
<b>Crest Height (H):</b>	0 ft
<b>Crest Length (L):</b>	0 ft
<b>Risk Category</b>	II
<b>Maintenance Live Load</b>	$L_M$ : 500 lb
<b>Spectral Response</b>	$S_5$ : 0.21; $S_1$ : 0.05; Site Class: D

## Conclusion

Based on the analysis, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

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

**Antenna Loading**

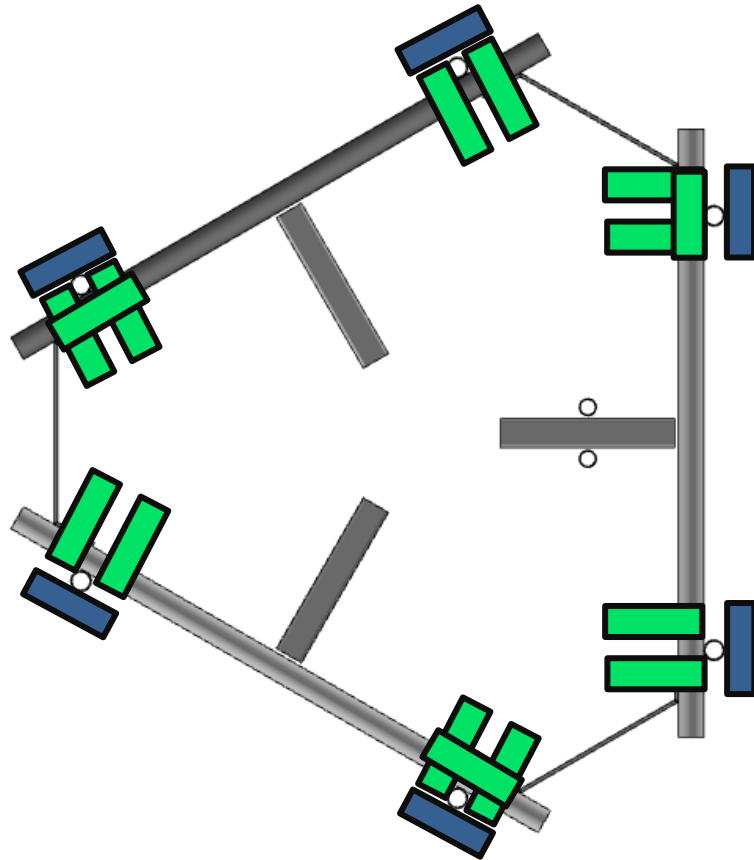
Elevation (ft)		Antennas	
Mount	Rad.	#	Name
116.0	117.0	3	Kathrein 80010965
		3	CCI TPA65R-BU6D
		1	Raycap DC9-48-60-24-8C-EV
		3	Ericsson RRUS 32 B2
		3	Ericsson RRUS 32 B30
		3	Ericsson RRUS 4449 B5/B12
		3	Ericsson RRUS 4478 B14
		3	Ericsson RRUS 4426 B66
		1	Commscope WCS-IMFQ-AMT
		1	Raycap DC6-48-60-18-8F

**Structure Usages**

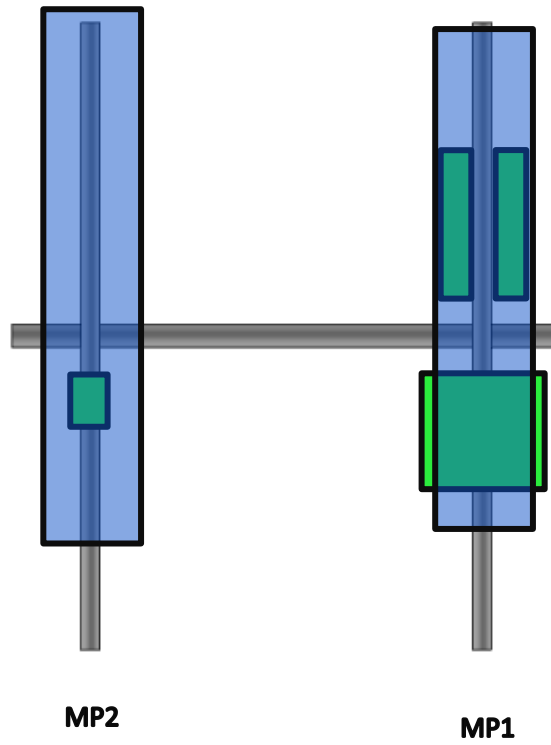
Structural Component	Controlling Usage	Pass/Fail
Mount to Tower Connection	88%	Pass
Face Horizontals	45%	Pass
Mount Pipes	27%	Pass
Stand-Off Horizontals	27%	Pass
Corner Plates	21%	Pass



Equipment Layout Plan View



Equipment Layout Front Elevation View



### **Standard Conditions**

This analysis is inclusive of the antenna supporting frames/mounts and all recorded connections that will support the equipment listed in this report. It considers only the theoretical capacity of structural components and it is not a condition assessment. The validity of the analysis may be dependent on the accuracy of structural information supplied by others. The client is responsible for verifying this information. If any provided information is revised after completion of this analysis, CLS Engineering PLLC should be notified immediately to revise results.

This analysis assumes the following:

1. The tower or other superstructure and mounts (if existing) were properly constructed as per the original design and have been properly maintained in accordance with applicable code standards.
2. Member sizes and strengths are accurate as supplied or are assumed as stated in the calculations.
3. In the absence of sufficient design information, all welds and connections are assumed to develop at least the capacity of the connected member, unless otherwise stated in this analysis.
4. All prior structural modifications, if any, are assumed to be correctly installed and fully effective.
5. The loading configuration is complete and accurate as supplied and/or as modeled in the previous analysis. All appurtenances are assumed to be properly installed and supported as per manufacturer requirements.
6. Some conservative assumptions may be used regarding appurtenances and their projected areas based on careful interpretation of data supplied, previous experience and standard industry practice.

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of the report. All opinions and conclusions contained herein are subject to revision based upon receipt of new or updated information. All services are provided exercising a level of care and diligence equivalent to the standard of our profession. No warranty or guarantee, either expressed or implied, is offered. All services are confidential in nature and this report will not be released to any other party without the client's consent. The use of this analysis is limited to the expressed purpose for which it was commissioned and it may not be reused, copied or disseminated for any other purpose without consent from CLS Engineering PLLC.

All services were performed, results obtained and recommendations made in accordance with generally accepted engineering principles and practices. CLS Engineering PLLC is not responsible for the conclusions, opinions or recommendations made by others based on the information supplied in this analysis.

It is not possible to have the fully detailed information necessary to perform a complete and thorough analysis of every structural sub-component of an existing structure. The structural analysis by CLS Engineering PLLC verifies the adequacy of the primary members of the structure. CLS Engineering PLLC provides a limited scope of service in that we cannot verify the adequacy of every weld, bolt, gusset, etc.

Wind & Ice Loading			
Nominal Mount Elevation (AGL), $z_{mount}$	116 ft	$K_a$	0.90
Nominal Rad Elevation (AGL), $z_{rad}$	117 ft	$K_d$	0.95
Elevation AMSL (ft)	75 ft	$K_e$	1.00
TIA Standard	H	$K_z$	1.03
Basic Wind Speed, $V_{ult}$ (bare)	119 mph	$K_{zt}$	1.00
Basic Wind Speed, $V$ (ice)	50 mph	$K_s$	1.00
Design Ice Thickness, $t_i$	1 in	$t_{iz}$	1.13 in
Exposure Category	B	$G_h$	1.00
Risk Category	II	$q_z$ (bare)	35.4 psf
Seismic Response Coeff., $C_s$	0.11	$q_z$ (ice)	6.3 psf

Live Loading	
At Mount Pipes, $L_M$	500 lb
Joint Labels Considered	1_M1
	1_M2

Section Set Label	Shape Label	$F_A$ (lb/ft)		Ice Wt. (lb/ft)
		Bare	Ice	
Standoff Arm	HSS4X4X4	21.25	1.56	8.63
Face Horizontal	PIPE_3.0	11.15	3.25	6.42
Corner Plate	PL6x0.5_HRA	31.87	4.66	7.30
MOUNT_PIPE_2.5	PIPE_2.5	9.16	2.89	5.55
MOUNT_PIPE_2.0	PIPE_2.0	7.57	2.61	4.86

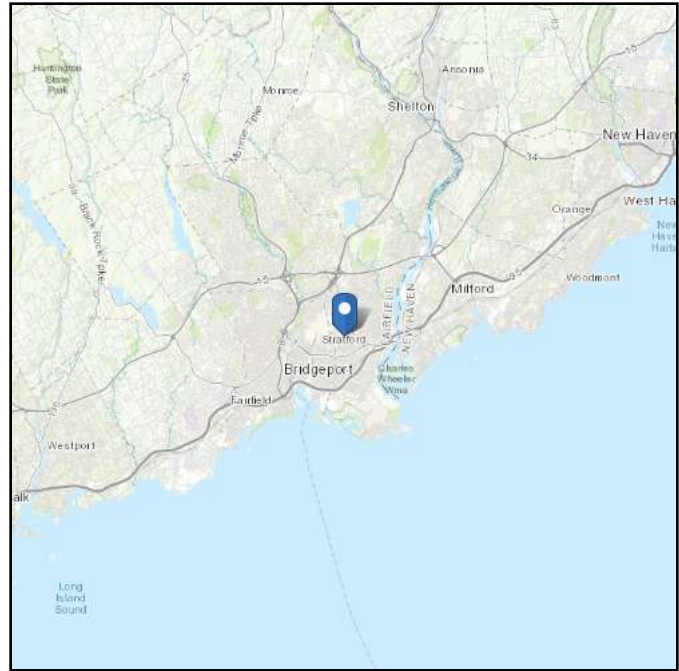
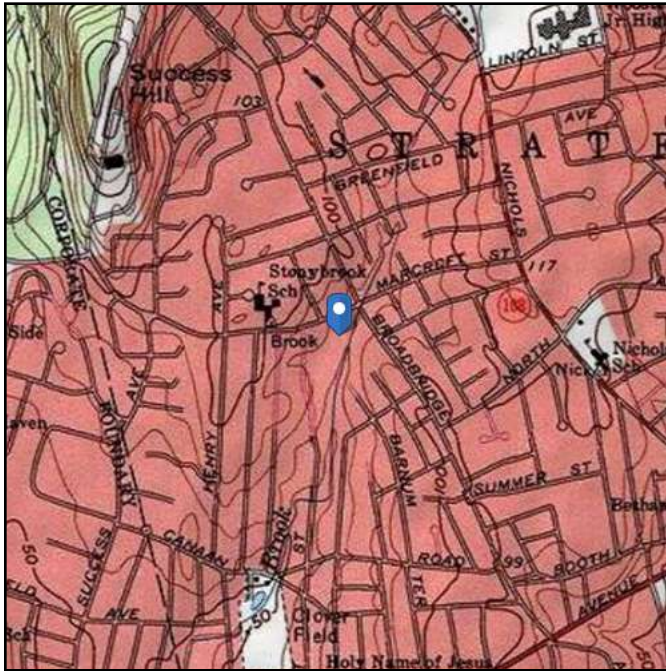
Appurtenances																														
Appurtenance Model	Status	Azimuth Offset (°, U)	Rad Elev. Override (ft)	Swap Width & Depth	Area Factor		Qty. per Azimuth			Total Qty. Override	0° Joints		120° Joints		240° Joints		Height (in)	Width (in)	Depth (in)	Weight (Bare) (lb)	Shape	Weight of Ice (lb)	$EPA_A$ (Bare) (ft²)		$EPA_A$ (Ice) (ft²)		$F_A$ (Bare) (lb)		$F_A$ (Ice) (lb)	
					Front	Side	0°	120°	240°		1	2	1	2	1	2							N	T	N	T	N	T	N	T
TPA65R-BU6D				<input type="checkbox"/>			1	1	1		1_A1T	1_A1B	2_A1T	2_A1B	3_A1T	3_A1B	71.2	21	7.8	72.5	Generic	170.31	12.22	4.54	13.95	6.02	390.42	145.05	78.65	33.93
80010965				<input type="checkbox"/>			1	1	1		1_A2T	1_A2B	2_A2T	2_A2B	3_A2T	3_A2B	78.7	20	6.9	108.6	Generic	173.71	12.23	4.21	13.98	5.73	390.74	134.51	78.84	32.32
RRUS 4478 B14				<input checked="" type="checkbox"/>	0.5	0.5	1	1	1		1_R1TT		2_R1TT		3_R1TT		16.5	13.4	7.7	59.9	Flat	36.04	0.53	0.92	0.78	1.23	16.91	29.43	4.40	6.91
RRUS 32 B2				<input checked="" type="checkbox"/>	0.5	0.5	1	1	1		1_R1TT		2_R1TT		3_R1TT		27.2	12.05	7	52.9	Flat	47.80	0.83	1.37	1.17	1.76	26.65	43.63	6.58	9.92
RRUS 4426 B66				<input type="checkbox"/>	0.5		1	1	1		1_R1BN		2_R1BN		3_R1BN		14.96	13.19	5.8	48.4	Flat	29.10	0.82	0.73	1.11	1.16	26.27	23.17	6.26	6.54
RRUS 4449 B5/B12				<input checked="" type="checkbox"/>	0.5	0.5	1	1	1		1_R2TT		2_R2TT		3_R2TT		17.9	13.19	9.44	71	Flat	42.01	0.70	0.98	0.98	1.30	22.49	31.43	5.55	7.33
RRUS 32 B30				<input checked="" type="checkbox"/>	0.5	0.5	1	1	1		1_R2TT		2_R2TT		3_R2TT		26.7	12.1	6.7	60	Flat	46.31	0.79	1.35	1.11	1.73	25.12	43.01	6.27	9.78
WCS-IMFQ-AMT				<input type="checkbox"/>	0.5		1				1_T2BN						11.2	10.6	6.9	29.5	Flat	21.98	0.49	0.64	0.72	1.03	15.80	20.58	4.07	5.81
DC6-48-60-18-8F				<input type="checkbox"/>			1				1_M						24	11	11	18.9	Round	40.21	1.28	1.28	1.69	1.69	41.00	41.00	9.56	9.56
DC9-48-60-24-8C-EV				<input type="checkbox"/>			1				2_M						31.41	10.24	18.28	26.2	Flat	84.15	2.74	4.78	3.54	5.77	87.43	152.87	19.94	32.53

# ASCE 7 Hazards Report

**Address:**  
No Address at This Location

**Standard:** ASCE/SEI 7-16  
**Risk Category:** II  
**Soil Class:** D - Default (see Section 11.4.3)

**Elevation:** 75.25 ft (NAVD 88)  
**Latitude:** 41.203278  
**Longitude:** -73.148625



## Wind

### Results:

Wind Speed:	119 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	98 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2  
Date Accessed: Fri May 21 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

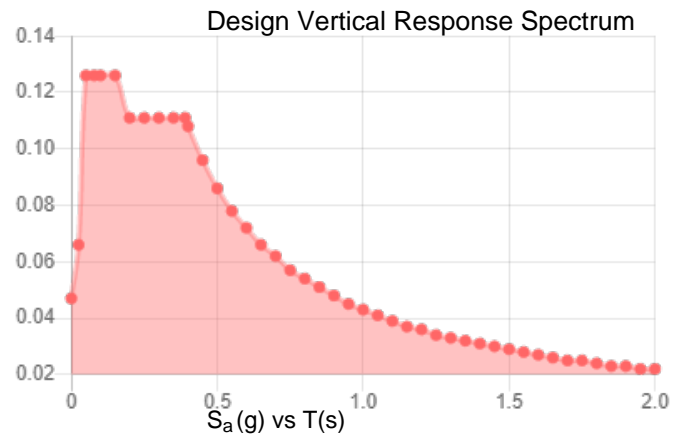
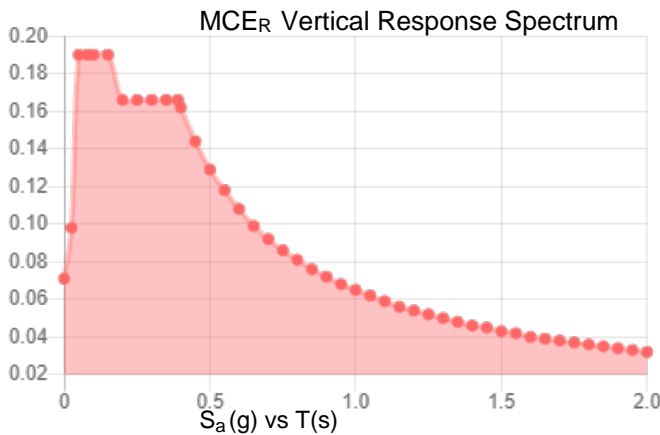
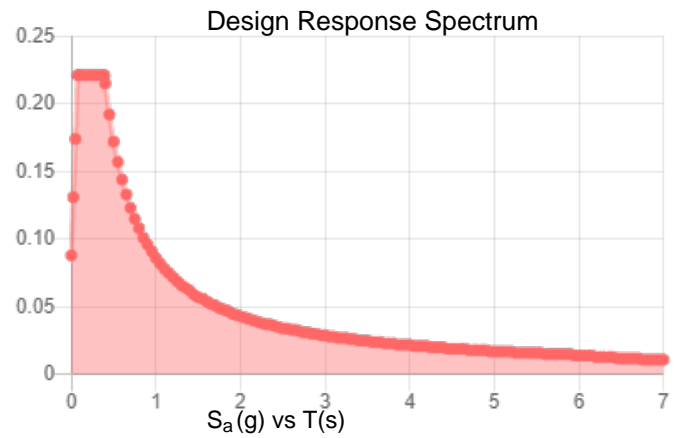
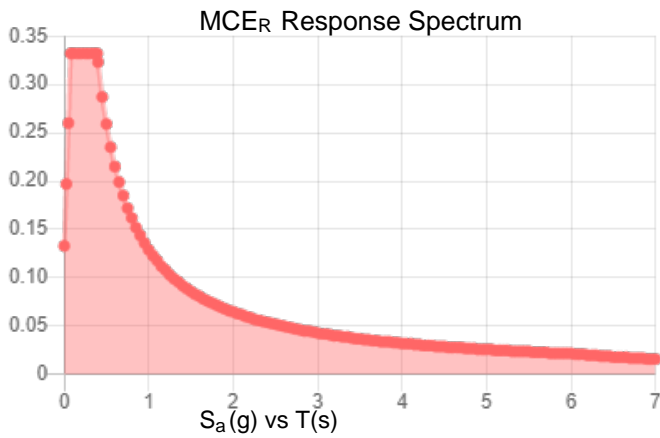
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

**Site Soil Class:** D - Default (see Section 11.4.3)

**Results:**

$S_s$ :	0.207	$S_{D1}$ :	0.086
$S_1$ :	0.054	$T_L$ :	6
$F_a$ :	1.6	PGA :	0.118
$F_v$ :	2.4	PGA <sub>M</sub> :	0.184
$S_{MS}$ :	0.332	$F_{PGA}$ :	1.565
$S_{M1}$ :	0.129	$I_e$ :	1
$S_{DS}$ :	0.221	$C_v$ :	0.715

**Seismic Design Category** B



**Data Accessed:**

Fri May 21 2021

**Date Source:**

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

## Ice

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### Results:

Ice Thickness: 1.00 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

**Data Source:** Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

**Date Accessed:** Fri May 21 2021

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

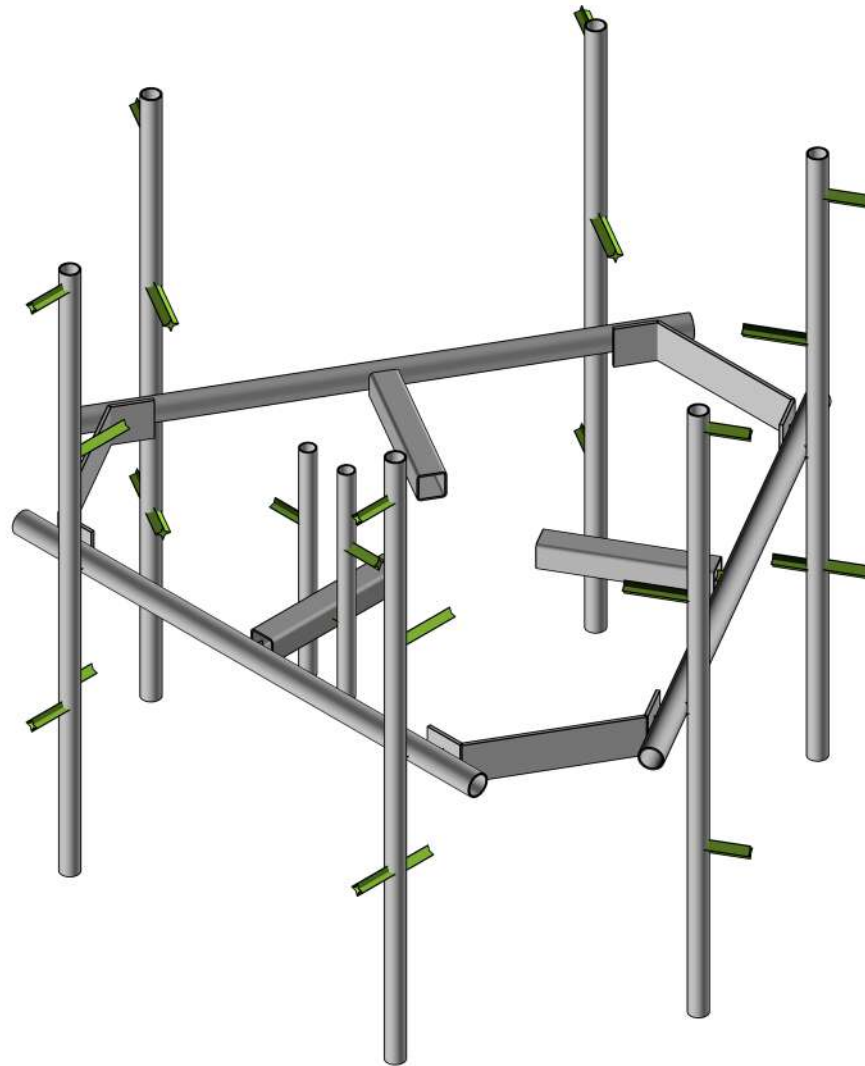
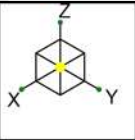
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Telamon CLS

AAS

41124-13361423\_C8\_01-01-MA

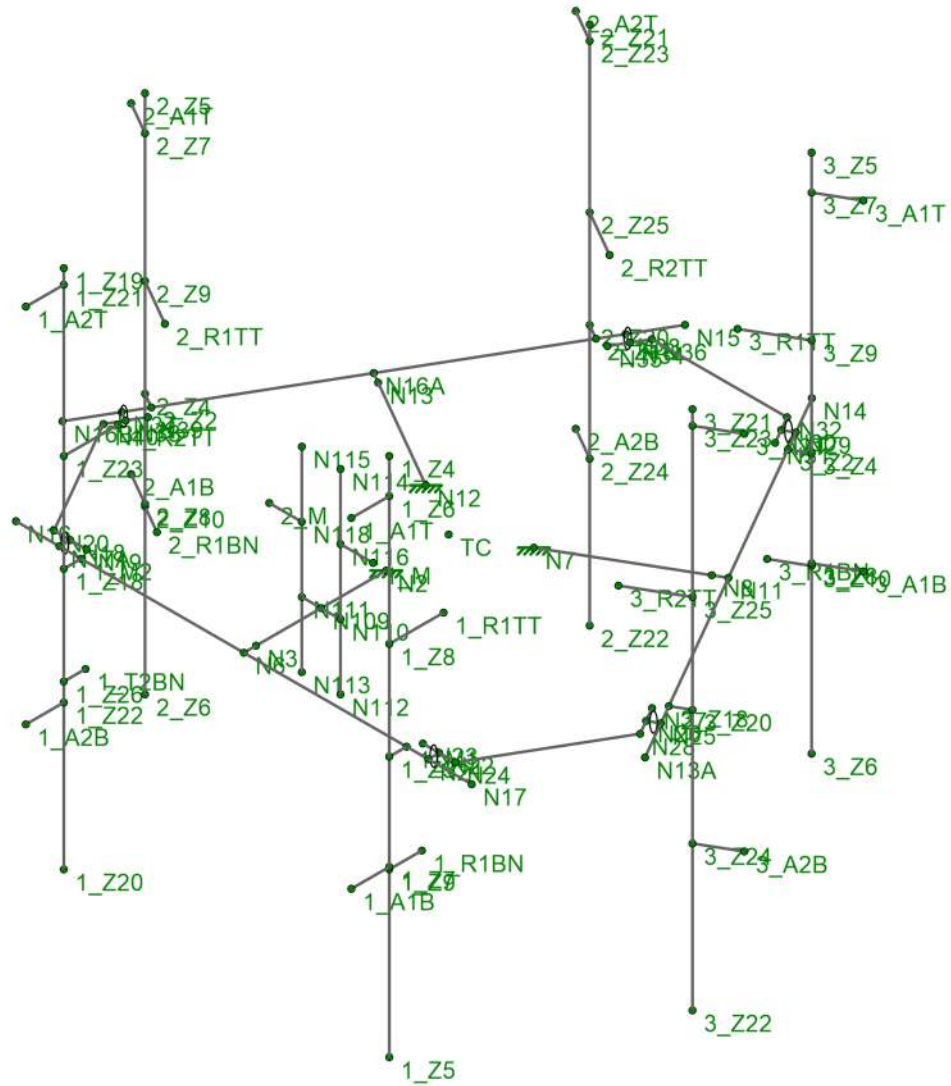
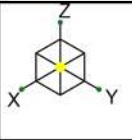
41124-13361423\_C8\_01-Stoneybrook Rd CT

Rendered

SK-1

May 21, 2021

41124-13361423\_C8\_01-01-MA.r3d



Telamon CLS

41124-13361423\_C8\_01-Stoneybrook Rd CT

SK-2

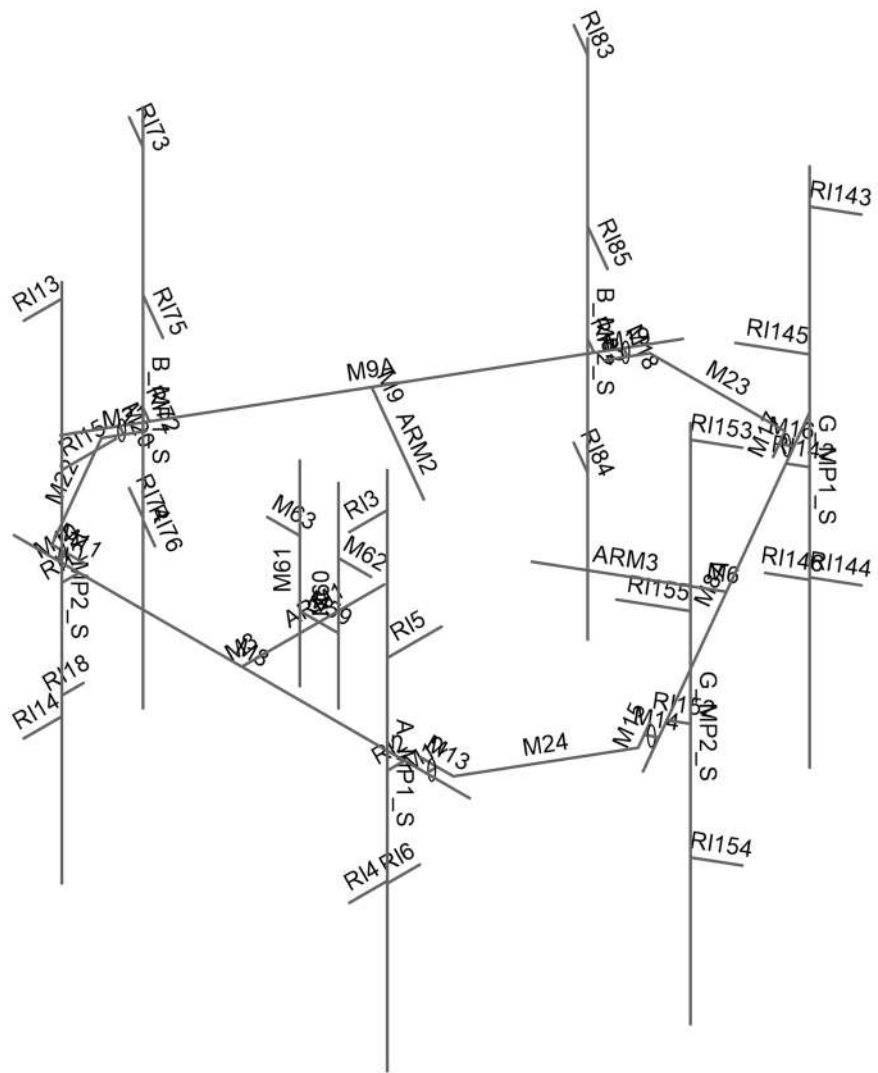
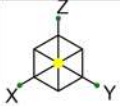
AAS

May 21, 2021

41124-13361423\_C8\_01-01-MA

Joint Labels

41124-13361423\_C8\_01-01-MA.r3d



Telamon CLS

41124-13361423\_C8\_01-Stoneybrook Rd CT

SK-3

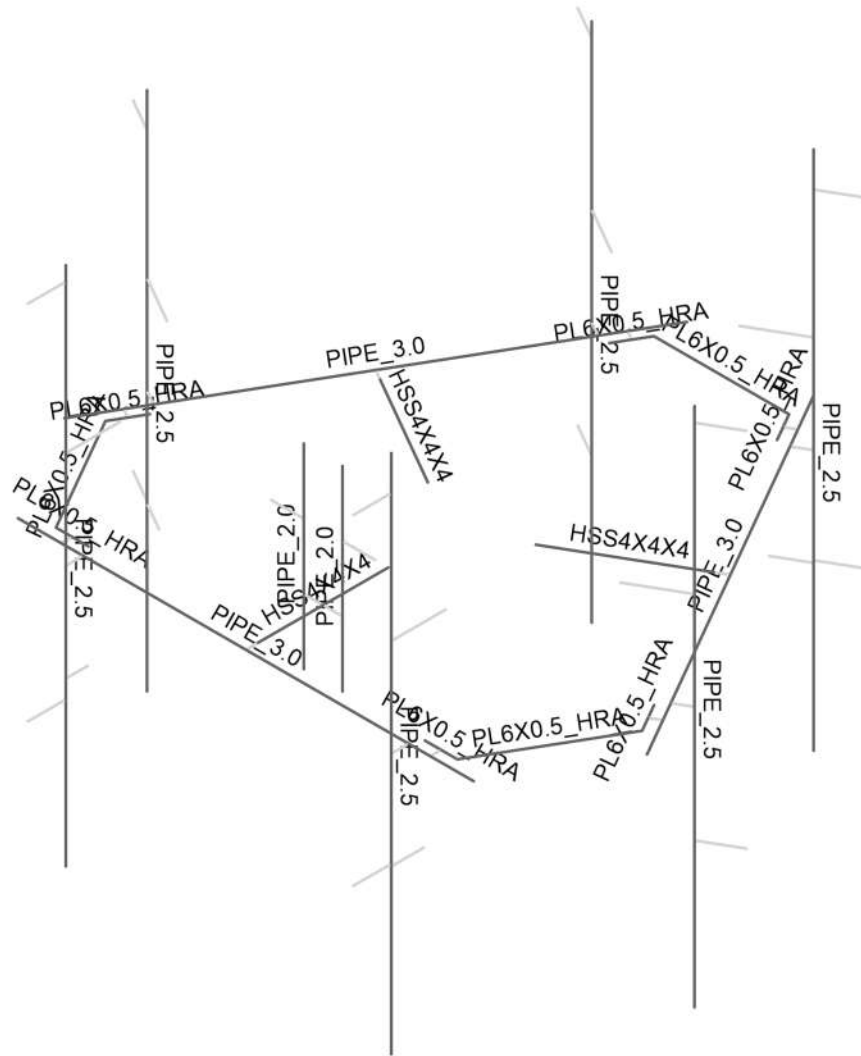
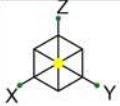
AAS

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41124-13361423\_C8\_01-01-MA

Member Labels

41124-13361423\_C8\_01-01-MA.r3d



Telamon CLS

AAS

41124-13361423\_C8\_01-01-MA

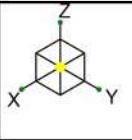
41124-13361423\_C8\_01-Stoneybrook Rd CT

Member Shapes

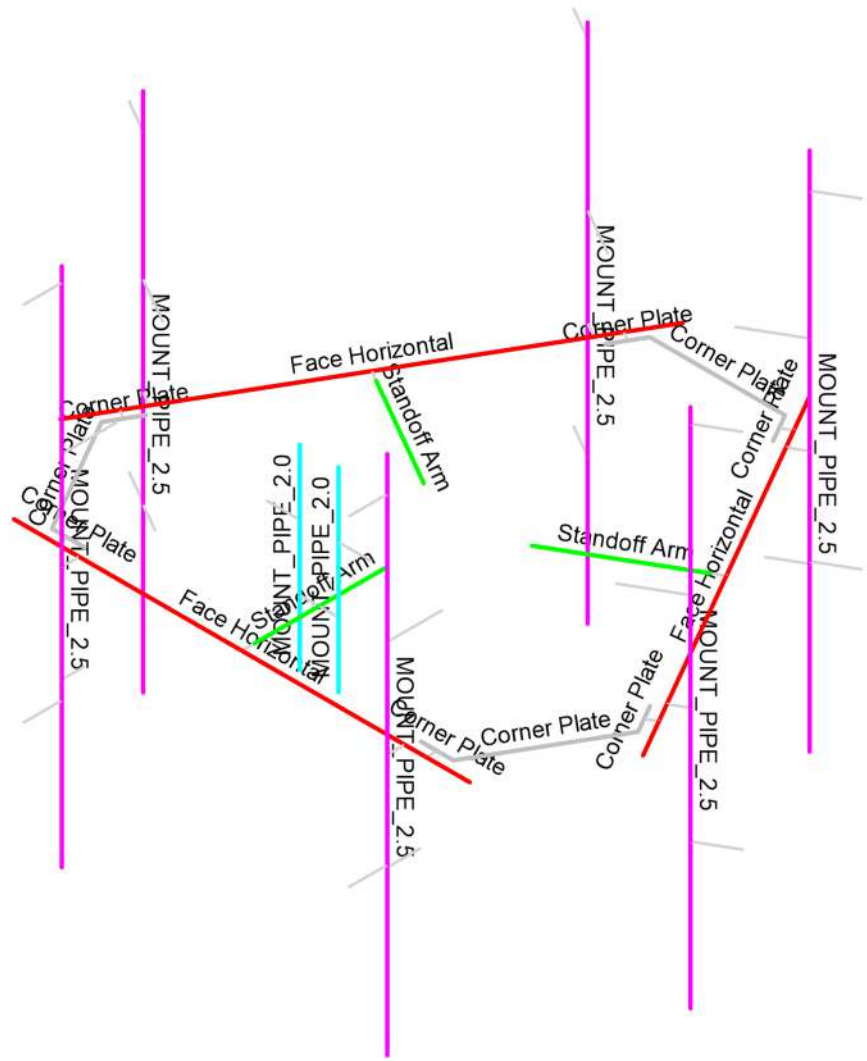
SK-4

May 21, 2021

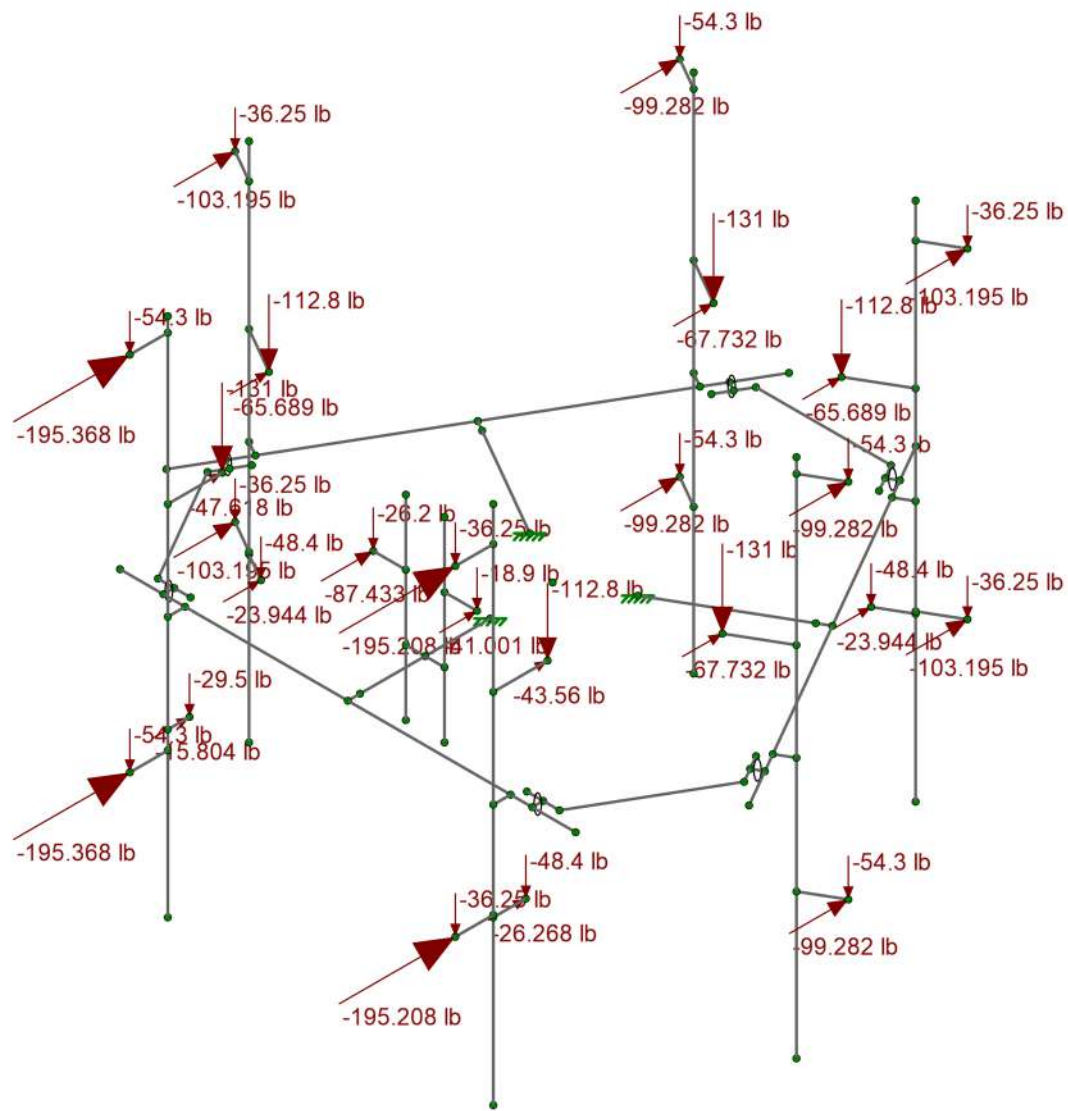
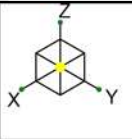
41124-13361423\_C8\_01-01-MA.r3d



Section Sets	
na	na
Standoff Arm	Standoff Arm
Face Horizontal	Face Horizontal
Corner Plate	Corner Plate
MOUNT_PIPE_2.5	MOUNT_PIPE_2.5
MOUNT_PIPE_2.0	MOUNT_PIPE_2.0
RIGID	RIGID



Telamon CLS	41124-13361423_C8_01-Stoneybrook Rd CT	SK-5
AAS		May 21, 2021
41124-13361423_C8_01-01-MA	Section Sets	41124-13361423_C8_01-01-MA.r3d



Loads: LC 1, DISPLAY (1.0D + 1.0W\_0)

Telamon CLS

41124-13361423\_C8\_01-Stoneybrook Rd CT

SK-6

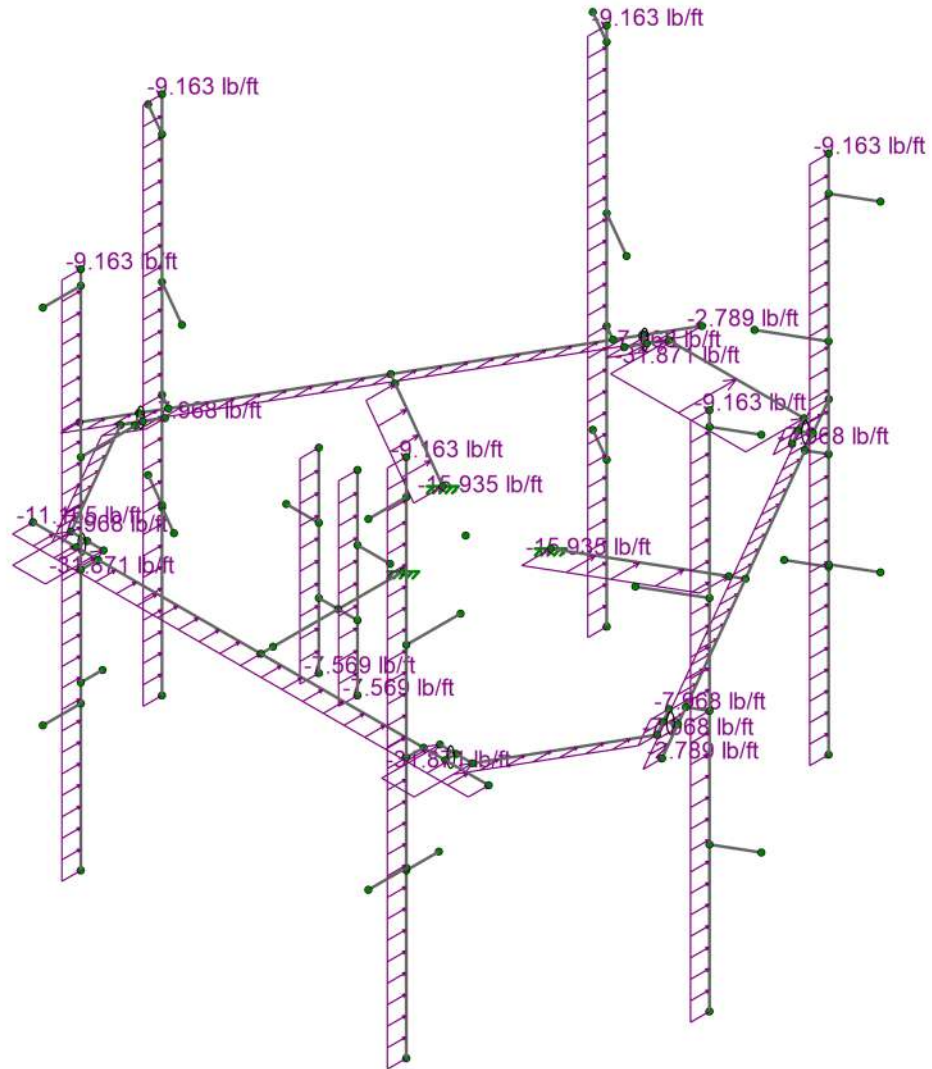
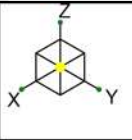
AAS

May 21, 2021

41124-13361423\_C8\_01-01-MA

Joint Loads - Dead and Normal Wind

41124-13361423\_C8\_01-01-MA.r3d



Loads: BLC 5, Structure Wind 0

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41124-13361423\_C8\_01-Stoneybrook Rd CT

SK-7

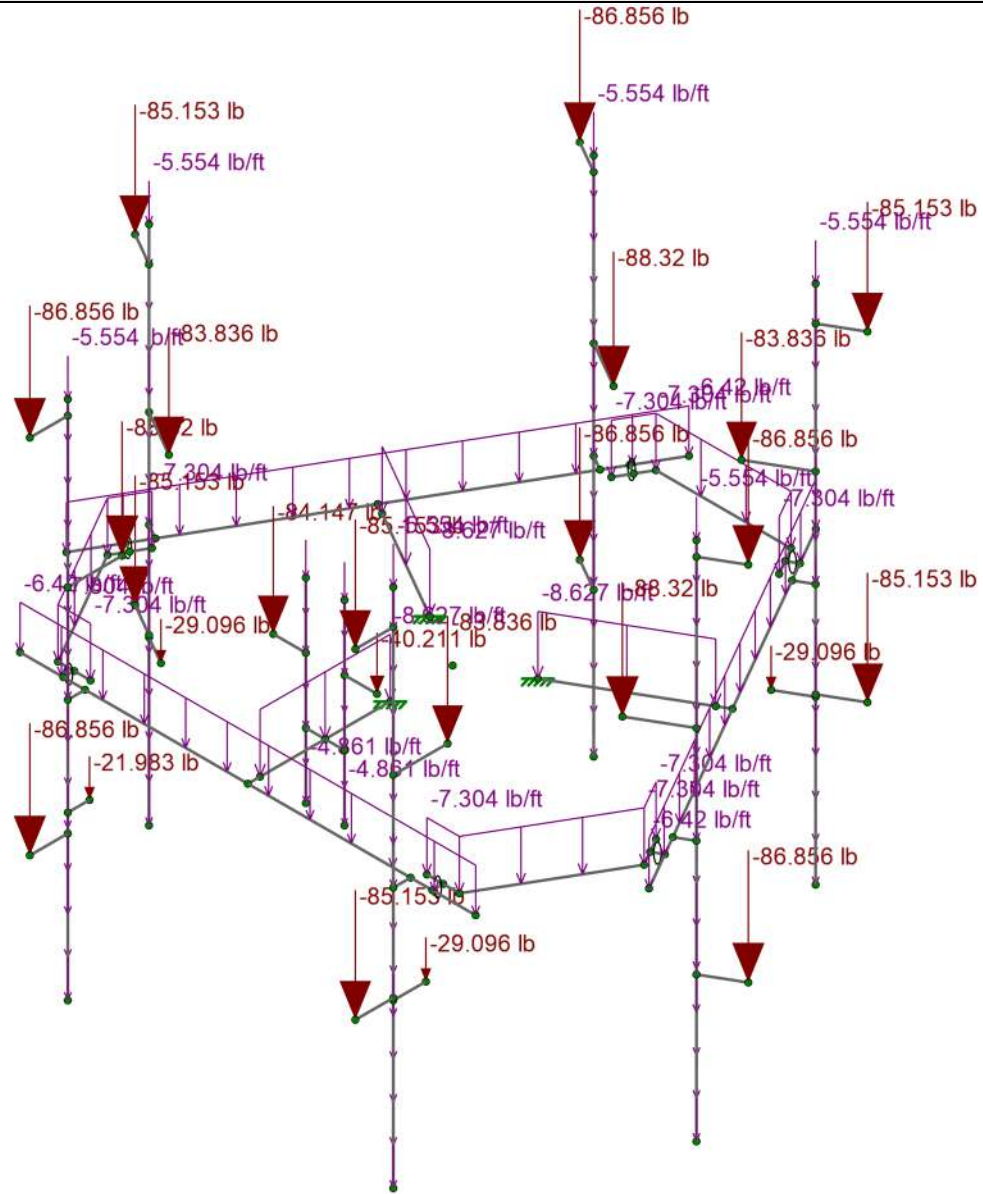
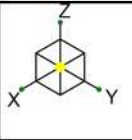
AAS

May 21, 2021

41124-13361423\_C8\_01-01-MA

Distributed Load - Normal Wind

41124-13361423\_C8\_01-01-MA.r3d



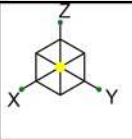
Loads: BLC 2, Ice Dead

Telamon CLS
AAS
41124-13361423_C8_01-01-MA

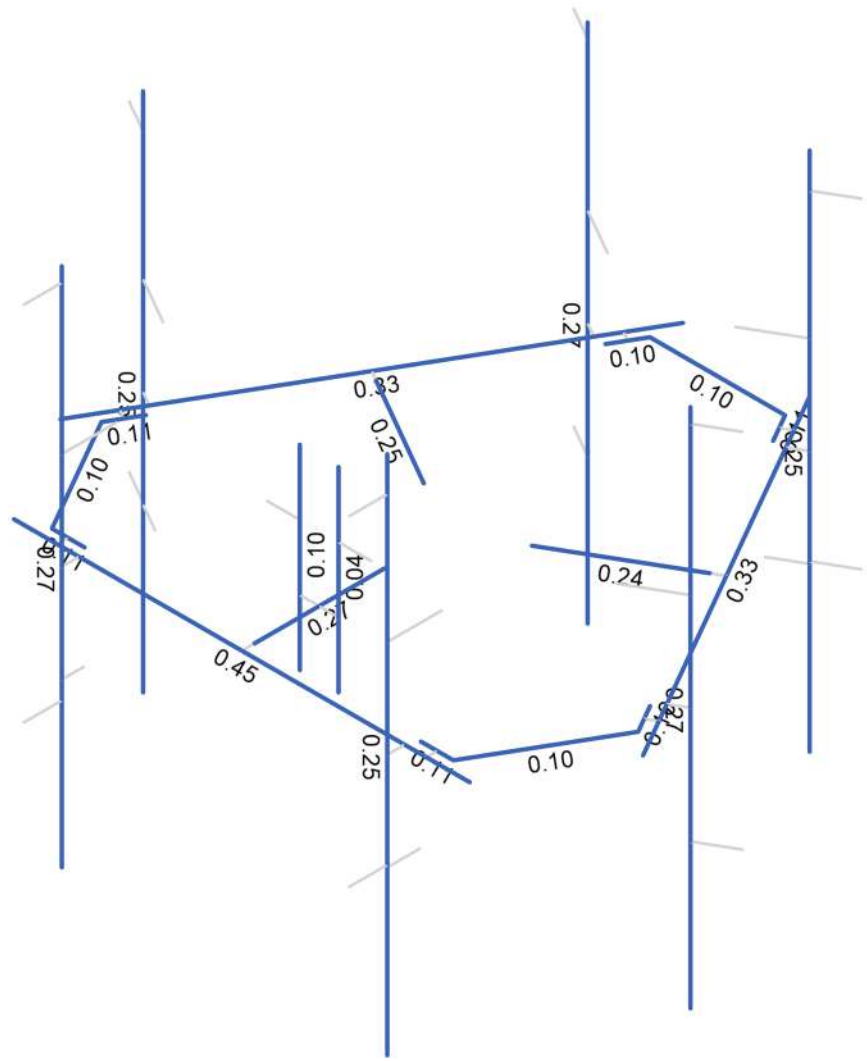
41124-13361423_C8_01-Stoneybrook Rd CT
Ice Dead Loads

SK-8
May 21, 2021
41124-13361423_C8_01-01-MA.r3d



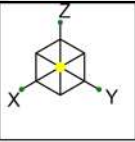


Code Check (Env)	
Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	.0-.50



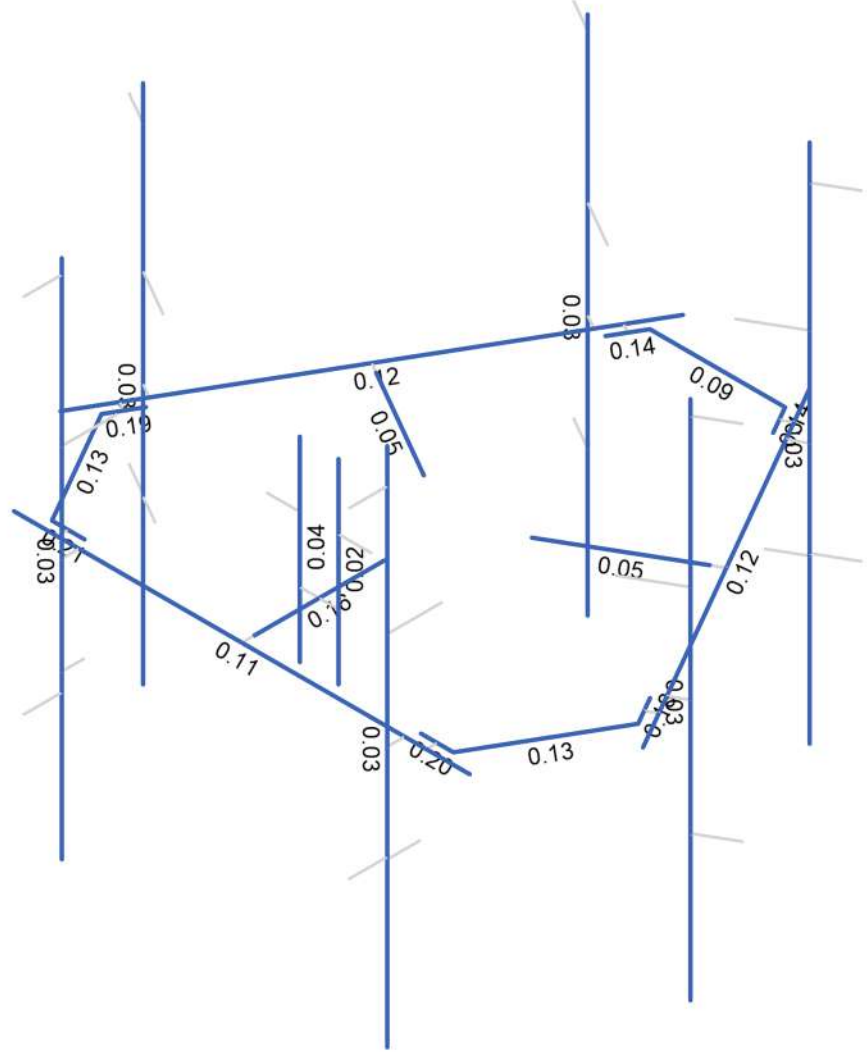
Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Telamon CLS	41124-13361423_C8_01-Stoneybrook Rd CT	SK-9
AAS		May 21, 2021
41124-13361423_C8_01-01-MA	Envelope Member Unity Check Results - Bending	41124-13361423_C8_01-01-MA.r3d



Shear Check (Env)

- No Calc
- > 1.0
- .90-1.0
- .75-.90
- .50-.75
- .0-.50



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Telamon CLS	41124-13361423_C8_01-Stoneybrook Rd CT	SK-10
AAS		May 21, 2021
41124-13361423_C8_01-01-MA	Envelope Member Check Results - Shear	41124-13361423_C8_01-01-MA.r3d

**Basic Load Cases**

	BLC Description	Category	Z Gravity	Nodal	Distributed
1	Dead	DL	-1	30	
2	Ice Dead	RL		30	23
5	Structure Wind 0°	None			22
6	Structure Wind 30°	None			38
7	Structure Wind 45°	None			46
8	Structure Wind 60°	None			44
9	Structure Wind 90°	None			19
10	Structure Wind 120°	None			44
11	Structure Wind 135°	None			46
12	Structure Wind 150°	None			38
13	Structure Wind 180°	None			22
14	Structure Wind 210°	None			38
15	Structure Wind 225°	None			46
16	Structure Wind 240°	None			44
17	Structure Wind 270°	None			19
18	Structure Wind 300°	None			44
19	Structure Wind 315°	None			46
20	Structure Wind 330°	None			38
21	Structure Wind w/ Ice 0°	None			22
22	Structure Wind w/ Ice 30°	None			38
23	Structure Wind w/ Ice 45°	None			46
24	Structure Wind w/ Ice 60°	None			44
25	Structure Wind w/ Ice 90°	None			19
26	Structure Wind w/ Ice 120°	None			44
27	Structure Wind w/ Ice 135°	None			46
28	Structure Wind w/ Ice 150°	None			38
29	Structure Wind w/ Ice 180°	None			22
30	Structure Wind w/ Ice 210°	None			38
31	Structure Wind w/ Ice 225°	None			46
32	Structure Wind w/ Ice 240°	None			44
33	Structure Wind w/ Ice 270°	None			19
34	Structure Wind w/ Ice 300°	None			44
35	Structure Wind w/ Ice 315°	None			46
36	Structure Wind w/ Ice 330°	None			38
37	Antenna Wind 0°	None		30	
38	Antenna Wind 30°	None		60	
39	Antenna Wind 45°	None		60	
40	Antenna Wind 60°	None		60	
41	Antenna Wind 90°	None		30	
42	Antenna Wind 120°	None		60	
43	Antenna Wind 135°	None		60	
44	Antenna Wind 150°	None		60	
45	Antenna Wind 180°	None		30	
46	Antenna Wind 210°	None		60	
47	Antenna Wind 225°	None		60	
48	Antenna Wind 240°	None		60	
49	Antenna Wind 270°	None		30	
50	Antenna Wind 300°	None		60	
51	Antenna Wind 315°	None		60	
52	Antenna Wind 330°	None		60	
53	Antenna Wind w/ Ice 0°	None		30	
54	Antenna Wind w/ Ice 30°	None		60	
55	Antenna Wind w/ Ice 45°	None		60	
56	Antenna Wind w/ Ice 60°	None		60	
57	Antenna Wind w/ Ice 90°	None		30	
58	Antenna Wind w/ Ice 120°	None		60	
59	Antenna Wind w/ Ice 135°	None		60	
60	Antenna Wind w/ Ice 150°	None		60	

**Basic Load Cases (Continued)**

	BLC Description	Category	Z Gravity	Nodal	Distributed
61	Antenna Wind w/ Ice 180°	None		30	
62	Antenna Wind w/ Ice 210°	None		60	
63	Antenna Wind w/ Ice 225°	None		60	
64	Antenna Wind w/ Ice 240°	None		60	
65	Antenna Wind w/ Ice 270°	None		30	
66	Antenna Wind w/ Ice 300°	None		60	
67	Antenna Wind w/ Ice 315°	None		60	
68	Antenna Wind w/ Ice 330°	None		60	
69	Seismic X	ELX		30	23
70	Seismic Y	ELY		30	23
71	Seismic Z	ELZ		30	23
72	Maintenance Live 500 (1)	OL1		1	
73	Maintenance Live 500 (2)	OL2		1	

**Load Combinations**

	Description	Solve	PDelta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	DISPLAY (1.0D + 1.0W_0°)	Yes	Y	DL	1	37	1				
2	1.4D	Yes	Y	DL	1.4						
3	1.2D + 1.0W_0°	Yes	Y	DL	1.2	5	1	37	1		
4	1.2D + 1.0W_30°	Yes	Y	DL	1.2	6	1	38	1		
5	1.2D + 1.0W_45°	Yes	Y	DL	1.2	7	1	39	1		
6	1.2D + 1.0W_60°	Yes	Y	DL	1.2	8	1	40	1		
7	1.2D + 1.0W_90°	Yes	Y	DL	1.2	9	1	41	1		
8	1.2D + 1.0W_120°	Yes	Y	DL	1.2	10	1	42	1		
9	1.2D + 1.0W_135°	Yes	Y	DL	1.2	11	1	43	1		
10	1.2D + 1.0W_150°	Yes	Y	DL	1.2	12	1	44	1		
11	1.2D + 1.0W_180°	Yes	Y	DL	1.2	13	-1	45	-1		
12	1.2D + 1.0W_210°	Yes	Y	DL	1.2	14	-1	46	-1		
13	1.2D + 1.0W_225°	Yes	Y	DL	1.2	15	-1	47	-1		
14	1.2D + 1.0W_240°	Yes	Y	DL	1.2	16	-1	48	-1		
15	1.2D + 1.0W_270°	Yes	Y	DL	1.2	17	-1	49	-1		
16	1.2D + 1.0W_300°	Yes	Y	DL	1.2	18	-1	50	-1		
17	1.2D + 1.0W_315°	Yes	Y	DL	1.2	19	-1	51	-1		
18	1.2D + 1.0W_330°	Yes	Y	DL	1.2	20	-1	52	-1		
19	1.2D + 1.0Di + 1.0Wi_0°	Yes	Y	DL	1.2	21	1	53	1	RL	1
20	1.2D + 1.0Di + 1.0Wi_30°	Yes	Y	DL	1.2	22	1	54	1	RL	1
21	1.2D + 1.0Di + 1.0Wi_45°	Yes	Y	DL	1.2	23	1	55	1	RL	1
22	1.2D + 1.0Di + 1.0Wi_60°	Yes	Y	DL	1.2	24	1	56	1	RL	1
23	1.2D + 1.0Di + 1.0Wi_90°	Yes	Y	DL	1.2	25	1	57	1	RL	1
24	1.2D + 1.0Di + 1.0Wi_120°	Yes	Y	DL	1.2	26	1	58	1	RL	1
25	1.2D + 1.0Di + 1.0Wi_135°	Yes	Y	DL	1.2	27	1	59	1	RL	1
26	1.2D + 1.0Di + 1.0Wi_150°	Yes	Y	DL	1.2	28	1	60	1	RL	1
27	1.2D + 1.0Di + 1.0Wi_180°	Yes	Y	DL	1.2	29	-1	61	-1	RL	1
28	1.2D + 1.0Di + 1.0Wi_210°	Yes	Y	DL	1.2	30	-1	62	-1	RL	1
29	1.2D + 1.0Di + 1.0Wi_225°	Yes	Y	DL	1.2	31	-1	63	-1	RL	1
30	1.2D + 1.0Di + 1.0Wi_240°	Yes	Y	DL	1.2	32	-1	64	-1	RL	1
31	1.2D + 1.0Di + 1.0Wi_270°	Yes	Y	DL	1.2	33	-1	65	-1	RL	1
32	1.2D + 1.0Di + 1.0Wi_300°	Yes	Y	DL	1.2	34	-1	66	-1	RL	1
33	1.2D + 1.0Di + 1.0Wi_315°	Yes	Y	DL	1.2	35	-1	67	-1	RL	1
34	1.2D + 1.0Di + 1.0Wi_330°	Yes	Y	DL	1.2	36	-1	68	-1	RL	1
35	1.2D + 1.0Ev + 1.0Eh_0°	Yes	Y	DL	1.244	ELX	-1	ELY			
36	1.2D + 1.0Ev + 1.0Eh_30°	Yes	Y	DL	1.244	ELX	-0.866	ELY	0.5		
37	1.2D + 1.0Ev + 1.0Eh_45°	Yes	Y	DL	1.244	ELX	-0.707	ELY	0.707		
38	1.2D + 1.0Ev + 1.0Eh_60°	Yes	Y	DL	1.244	ELX	-0.5	ELY	0.866		
39	1.2D + 1.0Ev + 1.0Eh_90°	Yes	Y	DL	1.244	ELX		ELY	1		
40	1.2D + 1.0Ev + 1.0Eh_120°	Yes	Y	DL	1.244	ELX	0.5	ELY	0.866		
41	1.2D + 1.0Ev + 1.0Eh_135°	Yes	Y	DL	1.244	ELX	0.707	ELY	0.707		
42	1.2D + 1.0Ev + 1.0Eh_150°	Yes	Y	DL	1.244	ELX	0.866	ELY	0.5		

**Load Combinations (Continued)**

	Description	Solve	PDelta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
43	1.2D + 1.0Ev + 1.0Eh 180°	Yes	Y	DL	1.244	ELX	1	ELY			
44	1.2D + 1.0Ev + 1.0Eh 210°	Yes	Y	DL	1.244	ELX	0.866	ELY	-0.5		
45	1.2D + 1.0Ev + 1.0Eh 225°	Yes	Y	DL	1.244	ELX	0.707	ELY	-0.707		
46	1.2D + 1.0Ev + 1.0Eh 240°	Yes	Y	DL	1.244	ELX	0.5	ELY	-0.866		
47	1.2D + 1.0Ev + 1.0Eh 270°	Yes	Y	DL	1.244	ELX		ELY	-1		
48	1.2D + 1.0Ev + 1.0Eh 300°	Yes	Y	DL	1.244	ELX	-0.5	ELY	-0.866		
49	1.2D + 1.0Ev + 1.0Eh 315°	Yes	Y	DL	1.244	ELX	-0.707	ELY	-0.707		
50	1.2D + 1.0Ev + 1.0Eh 330°	Yes	Y	DL	1.244	ELX	-0.866	ELY	-0.5		
51	0.9D - 1.0Ev + 1.0Eh 0°	Yes	Y	DL	0.856	ELX	-1	ELY			
52	0.9D - 1.0Ev + 1.0Eh 30°	Yes	Y	DL	0.856	ELX	-0.866	ELY	0.5		
53	0.9D - 1.0Ev + 1.0Eh 45°	Yes	Y	DL	0.856	ELX	-0.707	ELY	0.707		
54	0.9D - 1.0Ev + 1.0Eh 60°	Yes	Y	DL	0.856	ELX	-0.5	ELY	0.866		
55	0.9D - 1.0Ev + 1.0Eh 90°	Yes	Y	DL	0.856	ELX		ELY	1		
56	0.9D - 1.0Ev + 1.0Eh 120°	Yes	Y	DL	0.856	ELX	0.5	ELY	0.866		
57	0.9D - 1.0Ev + 1.0Eh 135°	Yes	Y	DL	0.856	ELX	0.707	ELY	0.707		
58	0.9D - 1.0Ev + 1.0Eh 150°	Yes	Y	DL	0.856	ELX	0.866	ELY	0.5		
59	0.9D - 1.0Ev + 1.0Eh 180°	Yes	Y	DL	0.856	ELX	1	ELY			
60	0.9D - 1.0Ev + 1.0Eh 210°	Yes	Y	DL	0.856	ELX	0.866	ELY	-0.5		
61	0.9D - 1.0Ev + 1.0Eh 225°	Yes	Y	DL	0.856	ELX	0.707	ELY	-0.707		
62	0.9D - 1.0Ev + 1.0Eh 240°	Yes	Y	DL	0.856	ELX	0.5	ELY	-0.866		
63	0.9D - 1.0Ev + 1.0Eh 270°	Yes	Y	DL	0.856	ELX		ELY	-1		
64	0.9D - 1.0Ev + 1.0Eh 300°	Yes	Y	DL	0.856	ELX	-0.5	ELY	-0.866		
65	0.9D - 1.0Ev + 1.0Eh 315°	Yes	Y	DL	0.856	ELX	-0.707	ELY	-0.707		
66	0.9D - 1.0Ev + 1.0Eh 330°	Yes	Y	DL	0.856	ELX	-0.866	ELY	-0.5		
67	1.2D + 1.5Lm 1 + 1.0Wm 0°	Yes	Y	DL	1.2	5	0.067	37	0.067	OL1	1.5
68	1.2D + 1.5Lm 1 + 1.0Wm 30°	Yes	Y	DL	1.2	6	0.067	38	0.067	OL1	1.5
69	1.2D + 1.5Lm 1 + 1.0Wm 45°	Yes	Y	DL	1.2	7	0.067	39	0.067	OL1	1.5
70	1.2D + 1.5Lm 1 + 1.0Wm 60°	Yes	Y	DL	1.2	8	0.067	40	0.067	OL1	1.5
71	1.2D + 1.5Lm 1 + 1.0Wm 90°	Yes	Y	DL	1.2	9	0.067	41	0.067	OL1	1.5
72	1.2D + 1.5Lm 1 + 1.0Wm 120°	Yes	Y	DL	1.2	10	0.067	42	0.067	OL1	1.5
73	1.2D + 1.5Lm 1 + 1.0Wm 135°	Yes	Y	DL	1.2	11	0.067	43	0.067	OL1	1.5
74	1.2D + 1.5Lm 1 + 1.0Wm 150°	Yes	Y	DL	1.2	12	0.067	44	0.067	OL1	1.5
75	1.2D + 1.5Lm 1 + 1.0Wm 180°	Yes	Y	DL	1.2	13	-0.067	45	-0.067	OL1	1.5
76	1.2D + 1.5Lm 1 + 1.0Wm 210°	Yes	Y	DL	1.2	14	-0.067	46	-0.067	OL1	1.5
77	1.2D + 1.5Lm 1 + 1.0Wm 225°	Yes	Y	DL	1.2	15	-0.067	47	-0.067	OL1	1.5
78	1.2D + 1.5Lm 1 + 1.0Wm 240°	Yes	Y	DL	1.2	16	-0.067	48	-0.067	OL1	1.5
79	1.2D + 1.5Lm 1 + 1.0Wm 270°	Yes	Y	DL	1.2	17	-0.067	49	-0.067	OL1	1.5
80	1.2D + 1.5Lm 1 + 1.0Wm 300°	Yes	Y	DL	1.2	18	-0.067	50	-0.067	OL1	1.5
81	1.2D + 1.5Lm 1 + 1.0Wm 315°	Yes	Y	DL	1.2	19	-0.067	51	-0.067	OL1	1.5
82	1.2D + 1.5Lm 1 + 1.0Wm 330°	Yes	Y	DL	1.2	20	-0.067	52	-0.067	OL1	1.5
83	1.2D + 1.5Lm 2 + 1.0Wm 0°	Yes	Y	DL	1.2	5	0.067	37	0.067	OL2	1.5
84	1.2D + 1.5Lm 2 + 1.0Wm 30°	Yes	Y	DL	1.2	6	0.067	38	0.067	OL2	1.5
85	1.2D + 1.5Lm 2 + 1.0Wm 45°	Yes	Y	DL	1.2	7	0.067	39	0.067	OL2	1.5
86	1.2D + 1.5Lm 2 + 1.0Wm 60°	Yes	Y	DL	1.2	8	0.067	40	0.067	OL2	1.5
87	1.2D + 1.5Lm 2 + 1.0Wm 90°	Yes	Y	DL	1.2	9	0.067	41	0.067	OL2	1.5
88	1.2D + 1.5Lm 2 + 1.0Wm 120°	Yes	Y	DL	1.2	10	0.067	42	0.067	OL2	1.5
89	1.2D + 1.5Lm 2 + 1.0Wm 135°	Yes	Y	DL	1.2	11	0.067	43	0.067	OL2	1.5
90	1.2D + 1.5Lm 2 + 1.0Wm 150°	Yes	Y	DL	1.2	12	0.067	44	0.067	OL2	1.5
91	1.2D + 1.5Lm 2 + 1.0Wm 180°	Yes	Y	DL	1.2	13	-0.067	45	-0.067	OL2	1.5
92	1.2D + 1.5Lm 2 + 1.0Wm 210°	Yes	Y	DL	1.2	14	-0.067	46	-0.067	OL2	1.5
93	1.2D + 1.5Lm 2 + 1.0Wm 225°	Yes	Y	DL	1.2	15	-0.067	47	-0.067	OL2	1.5
94	1.2D + 1.5Lm 2 + 1.0Wm 240°	Yes	Y	DL	1.2	16	-0.067	48	-0.067	OL2	1.5
95	1.2D + 1.5Lm 2 + 1.0Wm 270°	Yes	Y	DL	1.2	17	-0.067	49	-0.067	OL2	1.5
96	1.2D + 1.5Lm 2 + 1.0Wm 300°	Yes	Y	DL	1.2	18	-0.067	50	-0.067	OL2	1.5
97	1.2D + 1.5Lm 2 + 1.0Wm 315°	Yes	Y	DL	1.2	19	-0.067	51	-0.067	OL2	1.5
98	1.2D + 1.5Lm 2 + 1.0Wm 330°	Yes	Y	DL	1.2	20	-0.067	52	-0.067	OL2	1.5

**Hot Rolled Steel Properties**

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [ $1e^{-5}F^{-1}$ ]	Density [k/ft <sup>3</sup> ]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	Q235 Gr. B	29000	11154	0.3	0.65	0.49	35	1.5	58	1.2
4	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
5	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
6	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
7	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
8	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
9	A500 GR.C RND	29000	11154	0.3	0.65	0.49	46	1.5	58	1.3
10	A500 GR.C RECT	29000	11154	0.3	0.65	0.49	50	1.5	58	1.3

**Hot Rolled Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design Rule	Area [in <sup>2</sup> ]	Iyy [in <sup>4</sup> ]	Izz [in <sup>4</sup> ]	J [in <sup>4</sup> ]
1	Standoff Arm	HSS4X4X4	Beam	None	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
2	Face Horizontal	PIPE 3.0	Beam	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Corner Plate	PL6x0.5_HRA	Beam	None	A36 Gr.36	Typical	4	0.083	21.333	0.32
4	MOUNT_PIPE_2.5	PIPE_2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
5	MOUNT_PIPE_2.0	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	0.627	0.627	1.25

**Hot Rolled Steel Design Parameters**

	Label	Shape	Length [in]	Lb z-z [in]	Lcomp top [in]	Function
1	ARM1	Standoff Arm	24		Lbyy	Lateral
2	M8	Face Horizontal	84	48		Lateral
3	ARM3	Standoff Arm	24		Lbyy	Lateral
4	ARM2	Standoff Arm	24		Lbyy	Lateral
5	M8A	Face Horizontal	84	48		Lateral
6	M9A	Face Horizontal	84	48		Lateral
7	M11	Corner Plate	6		Lbyy	Lateral
8	M13	Corner Plate	6		Lbyy	Lateral
9	M15	Corner Plate	6		Lbyy	Lateral
10	M17	Corner Plate	6		Lbyy	Lateral
11	M19	Corner Plate	6		Lbyy	Lateral
12	M21	Corner Plate	6		Lbyy	Lateral
13	M22	Corner Plate	24.921		Lbyy	Lateral
14	M23	Corner Plate	24.921		Lbyy	Lateral
15	M24	Corner Plate	24.921		Lbyy	Lateral
16	A_MP1_S	MOUNT_PIPE_2.5	96		Lbyy	Lateral
17	A_MP2_S	MOUNT_PIPE_2.5	96		Lbyy	Lateral
18	B_MP1_S	MOUNT_PIPE_2.5	96		Lbyy	Lateral
19	B_MP2_S	MOUNT_PIPE_2.5	96		Lbyy	Lateral
20	G_MP1_S	MOUNT_PIPE_2.5	96		Lbyy	Lateral
21	G_MP2_S	MOUNT_PIPE_2.5	96		Lbyy	Lateral
22	M60	MOUNT_PIPE_2.0	36			Lateral
23	M61	MOUNT_PIPE_2.0	36			Lateral

**Member Advanced Data**

	Label	I Release	Physical	Deflection Ratio Options	Seismic DR
1	ARM1		Yes		None
2	M8		Yes	Default	None
3	M3		Yes	** NA **	None
4	ARM3		Yes		None
5	M6		Yes	** NA **	None
6	ARM2		Yes		None
7	M9		Yes	** NA **	None
8	M8A		Yes		None
9	M9A		Yes		None
10	M10	OOOXOO	Yes	** NA **	None

**Member Advanced Data (Continued)**

	Label	I Release	Physical	Deflection Ratio Options	Seismic DR
11	M11		Yes		None
12	M12	OOOXOO	Yes	** NA **	None
13	M13		Yes		None
14	M14	OOOXOO	Yes	** NA **	None
15	M15		Yes		None
16	M16	OOOXOO	Yes	** NA **	None
17	M17		Yes		None
18	M18	OOOXOO	Yes	** NA **	None
19	M19		Yes		None
20	M20	OOOXOO	Yes	** NA **	None
21	M21		Yes		None
22	M22		Yes		None
23	M23		Yes		None
24	M24		Yes		None
25	RI2		Yes	** NA **	None
26	A MP1 S		Yes	** NA **	None
27	RI3		Yes	** NA **	None
28	RI4		Yes	** NA **	None
29	RI5		Yes	** NA **	None
30	RI6		Yes	** NA **	None
31	RI12		Yes	** NA **	None
32	A MP2 S		Yes	** NA **	None
33	RI13		Yes	** NA **	None
34	RI14		Yes	** NA **	None
35	RI15		Yes	** NA **	None
36	RI18		Yes	** NA **	None
37	RI72		Yes	** NA **	None
38	B MP1 S		Yes	** NA **	None
39	RI73		Yes	** NA **	None
40	RI74		Yes	** NA **	None
41	RI75		Yes	** NA **	None
42	RI76		Yes	** NA **	None
43	RI82		Yes	** NA **	None
44	B MP2 S		Yes	** NA **	None
45	RI83		Yes	** NA **	None
46	RI84		Yes	** NA **	None
47	RI85		Yes	** NA **	None
48	RI142		Yes	** NA **	None
49	G MP1 S		Yes	** NA **	None
50	RI143		Yes	** NA **	None
51	RI144		Yes	** NA **	None
52	RI145		Yes	** NA **	None
53	RI146		Yes	** NA **	None
54	RI152		Yes	** NA **	None
55	G MP2 S		Yes	** NA **	None
56	RI153		Yes	** NA **	None
57	RI154		Yes	** NA **	None
58	RI155		Yes	** NA **	None
59	M59		Yes	** NA **	None
60	M60		Yes	** NA **	None
61	M61		Yes	** NA **	None
62	M62		Yes	** NA **	None
63	M63		Yes	** NA **	None

**Node Boundary Conditions**

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N7	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction



**Node Boundary Conditions (Continued)**

Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
3 N12	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

**Envelope Node Reactions**

Node Label	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC	
1 N2	max	1218.785	3	971.667	15	1840.278	27	1393.666	71	-545.312	1	1550.978	16
2	min	-1218.305	11	-971.67	7	650.024	51	-1580.646	95	-4131.411	27	-1550.65	8
3 N12	max	930.352	18	1045.207	15	1565.395	32	-710.031	8	1873.681	34	1352.723	3
4	min	-930.84	10	-1045.727	7	574.659	56	-3269.049	32	314.306	10	-1353.043	11
5 N7	max	934.327	4	1033.996	15	1551.215	22	3235.555	22	1913.074	20	1312.141	11
6	min	-934.805	12	-1033.473	7	568.3	62	711.143	14	295.973	12	-1311.813	3
7 Totals:	max	2980.652	3	3050.869	15	4882.898	34						
8	min	-2980.649	11	-3050.87	7	1819.376	58						

**Envelope AISC 15th (360-16): LRFD Steel Code Checks**

Member	Shape	Code	CheckLoc[in]	LC	Shear	CheckLoc[in]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [lb-ft]	phi*Mn z-z [lb-ft]	Cb	Eqn
1 M8	PIPE 3.0	0.454	41.558	93	0.114	41.558	11	50160.801	65205	5748.75	5748.75	1.618	H1-1b	
2 M9A	PIPE 3.0	0.331	42.442	31	0.116	41.558	16	50160.801	65205	5748.75	5748.75	1.546	H1-1b	
3 M8A	PIPE 3.0	0.327	42.442	20	0.116	41.558	6	50160.801	65205	5748.75	5748.75	1.54	H1-1b	
4 B_MP2_S	PIPE 2.5	0.273	47.495	8	0.028	48.505	7	30038.461	50715	3596.25	3596.25	1.658	H1-1b	
5 G_MP2_S	PIPE 2.5	0.273	47.495	14	0.028	48.505	12	30038.461	50715	3596.25	3596.25	1.658	H1-1b	
6 A_MP2_S	PIPE 2.5	0.273	47.495	3	0.028	48.505	18	30038.461	50715	3596.25	3596.25	1.709	H1-1b	
7 ARM1	HSS4X4X4	0.272	0	25	0.158	0	y 95	137201.855	139518	16180.5	16180.5	1.542	H1-1b	
8 B_MP1_S	PIPE 2.5	0.252	47.495	8	0.028	48.505	10	30038.461	50715	3596.25	3596.25	1.676	H1-1b	
9 A_MP1_S	PIPE 2.5	0.252	47.495	3	0.028	48.505	4	30038.461	50715	3596.25	3596.25	1.737	H1-1b	
10 G_MP1_S	PIPE 2.5	0.252	47.495	14	0.028	48.505	15	30038.461	50715	3596.25	3596.25	1.676	H1-1b	
11 ARM2	HSS4X4X4	0.246	0	34	0.049	0	y 30	137201.855	139518	16180.5	16180.5	1.493	H1-1b	
12 ARM3	HSS4X4X4	0.245	0	20	0.048	0	y 8	137201.855	139518	16180.5	16180.5	1.488	H1-1b	
13 M21	PL6x0.5_HRA	0.108	3.032	18	0.191	3.032	y 98	118287.472	129600	1350	21600	3	H1-1b	
14 M11	PL6x0.5_HRA	0.108	3.032	10	0.21	6	y 98	118287.472	129600	1350	21600	3	H1-1b	
15 M13	PL6x0.5_HRA	0.107	3.032	12	0.197	6	y 68	118287.472	129600	1350	21600	3	H1-1b	
16 M17	PL6x0.5_HRA	0.107	3.032	7	0.144	6	y 15	118287.472	129600	1350	21600	3	H1-1b	
17 M15	PL6x0.5_HRA	0.105	3.032	4	0.178	3.032	y 68	118287.472	129600	1350	21600	3	H1-1b	
18 M19	PL6x0.5_HRA	0.104	3.032	15	0.142	6	y 7	118287.472	129600	1350	21600	3	H1-1b	
19 M22	PL6x0.5_HRA	0.101	0	18	0.134	24.921	y 98	30192.106	129600	1350	21600	2.068	H1-1b	
20 M24	PL6x0.5_HRA	0.099	0	12	0.125	0	y 68	30192.106	129600	1350	21600	2.066	H1-1b	
21 M23	PL6x0.5_HRA	0.099	0	7	0.09	0	y 15	30192.106	129600	1350	21600	2.06	H1-1b	
22 M61	PIPE 2.0	0.098	12.126	15	0.04	12.126	9	28843.414	32130	1871.625	1871.625	2.584	H1-1b	
23 M60	PIPE 2.0	0.036	12.126	7	0.018	12.126	11	28843.414	32130	1871.625	1871.625	2.427	H1-1b	



# TOWER-MOUNT CONNECTION ANALYSIS

v.1.0.0

SITE INFORMATION	
Site ID	283420.0
Site Name	Stoneybrook Rd CT
Project ID	41124-13361423_C8_01-01-MA

ANALYSIS PARAMETERS	
TIA Revision	H

APPLIED FORCES FROM R3D		
Member Label		ARM1
Member End Label		I
Force-X	F <sub>x</sub> , lbs	-1218.3
Force-Y	F <sub>y</sub> , lbs	1839.8
Force-Z	F <sub>z</sub> , lbs	-971.7
Moment X-X	M <sub>x</sub> , lbs-ft	-1580.6
Moment Y-Y	M <sub>y</sub> , lbs-ft	1551.0
Moment Z-Z	M <sub>z</sub> , lbs-ft	4131.4

STANDOFF MEMBER PROPERTIES	
Standoff Member Type	Square/Rect. HSS
Standoff Member Shape	HSS4X4X1/4
Standoff Member Grade	A500-46
Member to Plate Weld Size, in	3/16

BOLT & PLATE PROPERTIES	
Bolt Quantity	4
Bolt Edge Distance (e), in	1.00
Nominal Bolt Diameter (ØDb), in	0.625
Bolt Grade	A325
Plate Height (H), in	8.50
Plate Width (W), in	8.50
Plate Thickness (T), in	0.50
Plate Grade	A36

BOLT ANALYSIS	
Shear Demand (V <sub>u</sub> ), k	0.78
Shear Capacity (ΦR <sub>nv</sub> ), k	13.81
Tension Demand (T <sub>u</sub> ), k	6.07
Tension Capacity (ΦR <sub>nt</sub> ), k	20.34
Shear Utilization	5.6%
Tension Utilization	29.8%
Interaction Utilization	9.2%

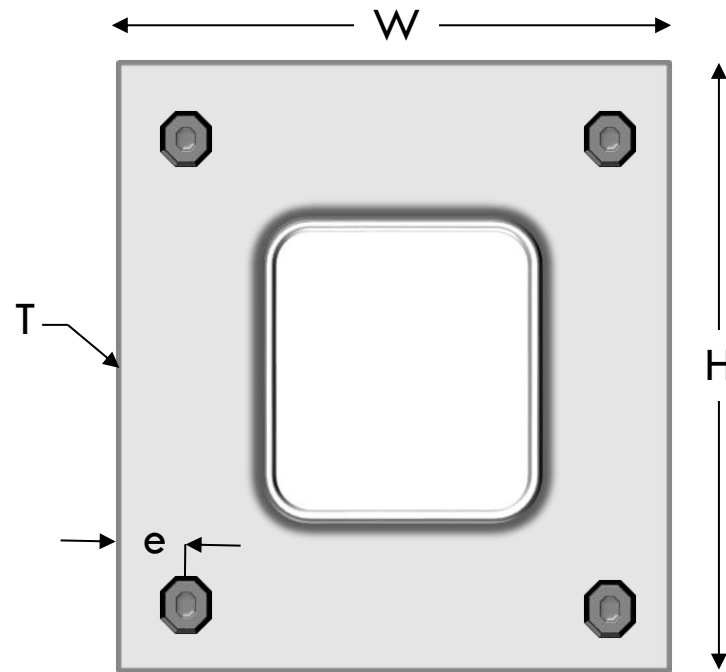
PLATE ANALYSIS	
Moment Demand (M <sub>u</sub> ), k-in	15.16
Flexural Capacity (ΦM <sub>n</sub> ), k-in	17.21
Plate Utilization	88.1%

PASS

PASS



319 Chapanoke Road, Suite 118  
 Raleigh, NC 27603  
 Office: (405) 348-5460  
 Fax: (405) 341-6334



MATERIAL PROPERTIES	
Standoff Member - Yield Strength (F <sub>y</sub> ), ksi	46
Standoff Member - Ultimate Strength (F <sub>u</sub> ), ksi	58
Bolt - Yield Strength (F <sub>y</sub> ), ksi	92
Bolt - Tensile Strength (F <sub>u</sub> ), ksi	120
Plate - Yield Strength (F <sub>y</sub> ), ksi	36
Plate - Ultimate Strength (F <sub>u</sub> ), ksi	58

## EXHIBIT 5



# **NIER Study Report**

**SITE NAME:**

283420 Stoneybrook Rd CT

**LOCATION:**

Stratford, Connecticut

**COMPANY:**

American Tower  
Woburn, Massachusetts

*July 4<sup>th</sup>, 2021*



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## Disclaimer Notice

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KINSTON, NORTH CAROLINA



## **NIER STUDY REPORT**

### 283420 Stoneybrook Rd CT

*Stratford, CT*

#### **INTRODUCTION**

Tower Engineering Professionals (TEP) has been retained by American Tower (ATC) of Woburn, Massachusetts to evaluate the RF emissions of an existing tower at this location.

#### **SITE AND FACILITY CONSIDERATIONS**

Site Stoneybrook Rd CT is located at 23 Stoneybrook Rd in Stratford, CT at coordinates 41.203278, -73.1148625. The support structure is a 119' monopole. The installation consists of three antenna levels with radiation centers of 117', 97', & 77' above ground level. All antennae will have a radiation center as described above. 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 TEP

A topographic map of the study area is located in Appendix 1. A satellite view of the study area is located in Appendix 2.



## POWER DENSITY CALCULATIONS

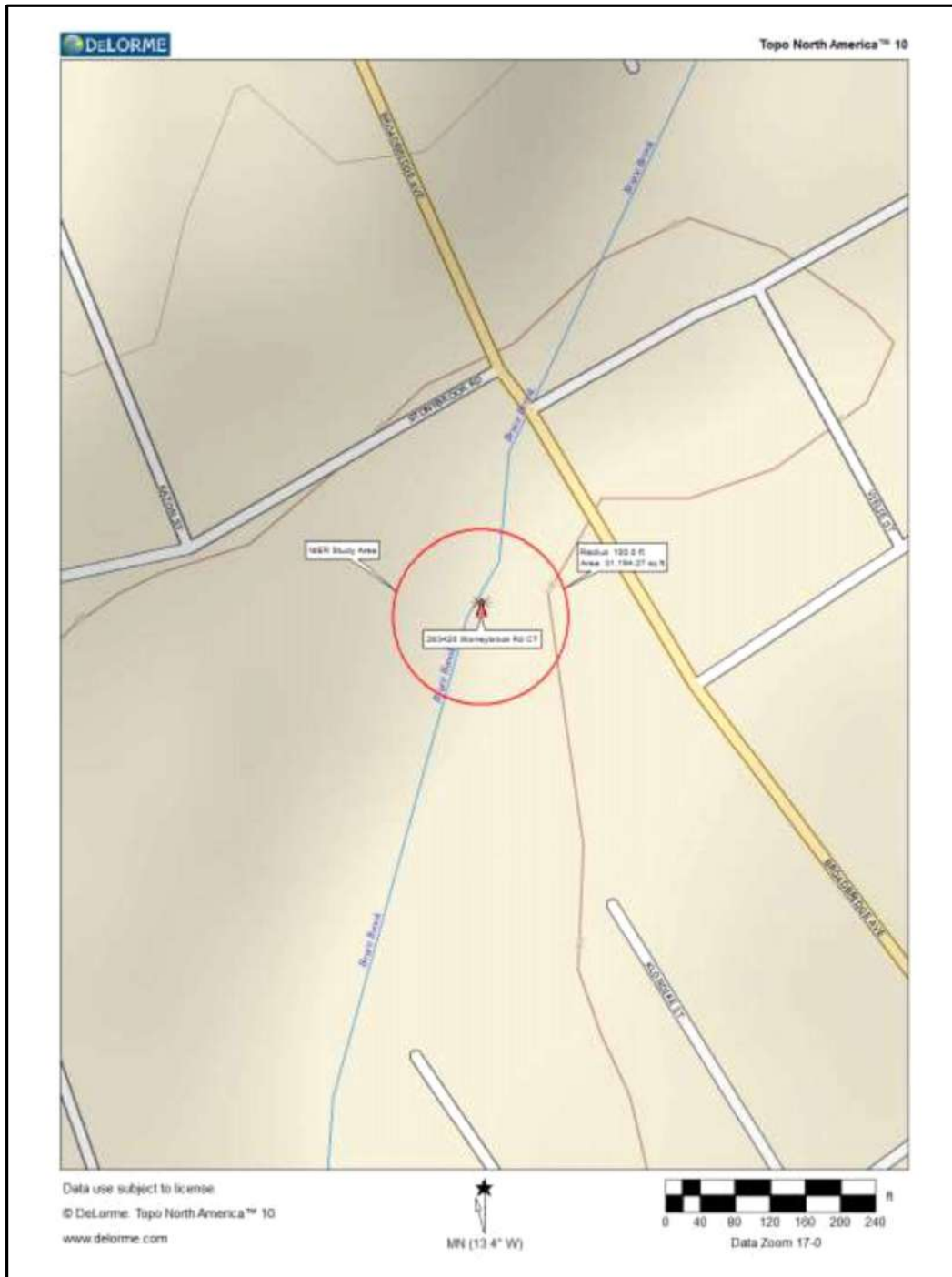
Graphs of the power density at different distances from the transmitter, compared to FCC MPE general population and occupational limits, may be seen in Appendix 3. These limits are based upon the Information Relating to MPE Standards found in Appendix 6. Study methodology may be seen in Appendix 7, which describes the Non-Ionizing Radiation Prediction Models. Approximate radiation patterns may be found in Appendix 4. Radio channels used at this site are listed in Appendix 5. This site ***IS*** in compliance with FCC OET-65 MPE limits.

July 4<sup>th</sup>, 2021

Michael W. Hayden NCE CPBE CBNT AMD CPI  
Director, RF Design & Services  
Tower Engineering Professionals



## APPENDIX 1 Topographic Map





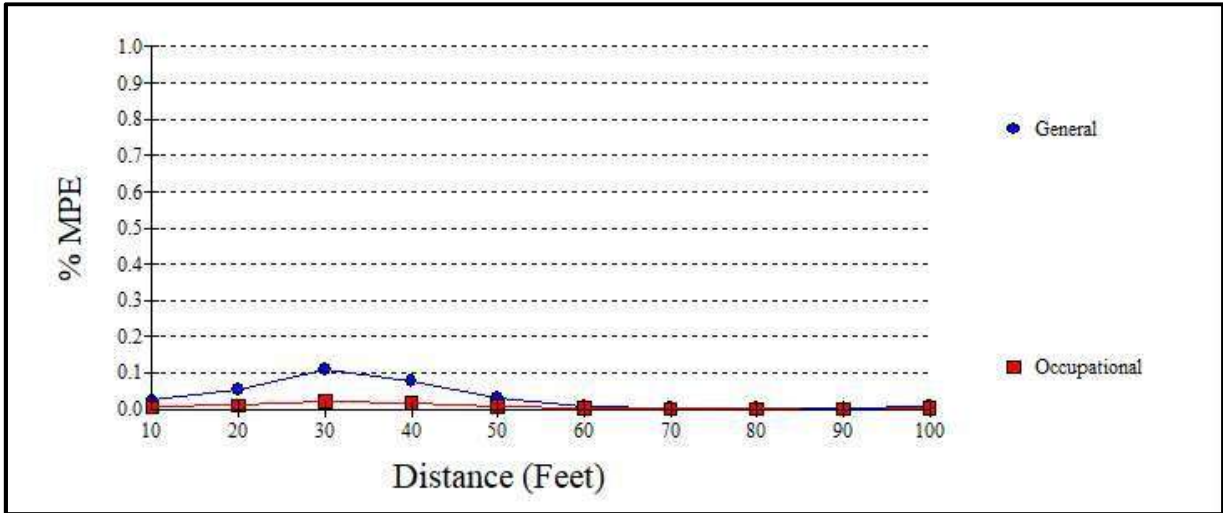


## APPENDIX 2 Satellite Photo





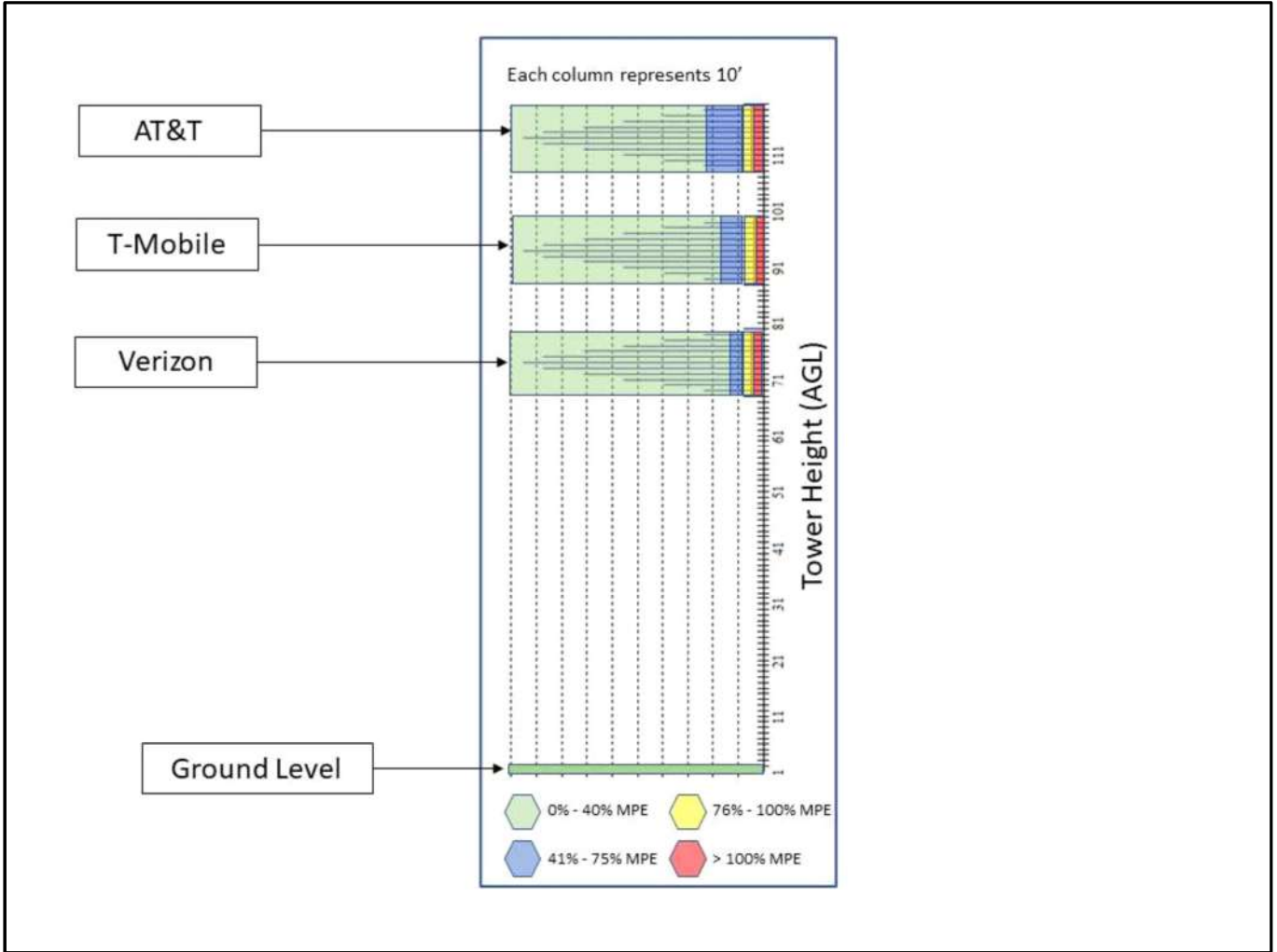
### APPENDIX 3 FCC OET-65 MPE Limit Study



Maximum Power Density (@30'):	0.0018 mW/cm <sup>2</sup>
General Population MPE (@30'):	0.1167%
Occupational MPE (@30'):	0.002%



## APPENDIX 4 Tower Radiation Patterns





## APPENDIX 5 Channel Table

EUTRA OPERATING BAND	EARFCNDL	EARFCNUL	Download Channel Bandwidth (MHz)	Upload Channel Bandwidth (MHz)
PCS MHz A3+A4 (10MHz) E-UTRA Band 2	650	18650	10	10
PCS MHz E (5MHz) E-UTRA Band 2	975	18975	5	5
PCS MHz C5 (5MHz) E-UTRA Band 2	1175	19175	5	5
850 MHz B-2586 (5MHz) E-UTRA Band 5	2586	20586	5	5
700 MHz OFFSET LOWER_B+C (10 MHz) E-UTRA BAND 17	5780	23780	10	10
WCS MHz A+B (10 MHz) E-UTRA Band 30	9820	27710	10	10
AWS-3 MHz J (10 MHz) E-UTRA Band 66	67086	132622	10	10
700 MHz UPPER D (10 MHz) E-UTRA BAND 14	5330	23330	10	10
850 MHz B-2586 (5MHz) E-UTRA Band 5 (UMTS)	4413	4188	5	5



## 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:  $\text{mW}/\text{cm}^2$ ), electric field strength (units of volts per meter:  $\text{V}/\text{m}$ ) and magnetic field strength (units of amperes per meter:  $\text{A}/\text{m}$ ). 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).

**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.



## 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.

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

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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	180/f <sup>2</sup>	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

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

$\theta_{BW}$  = 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



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

July 10, 2014

Christopher B. Fisher, Esq.  
Cuddy & Feder LLP  
445 Hamilton Avenue, 14<sup>th</sup> Floor  
White Plains, New York 10601

RE: **PETITION NO. 1100** - New Cingular Wireless PCS, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the extension of an existing telecommunications facility located at 23 Stonybrook Road, Stratford, Connecticut.

Dear Attorney Fisher:

At a public meeting held on July 10, 2014, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with the following conditions:

- The tower be modified to support the proposed loading in accordance with the structural report dated May 28, 2014;
- Within 45 days following completion of the equipment installation, AT&T shall provide documentation certified by a professional engineer that its installation complied with the recommendations of the structural analysis; and
- Any nonfunctioning antenna, and associated antenna mounting equipment that is the subject of this petition shall be removed within 60 days of the date the antenna ceased to function.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated April 18, 2014.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

Robert Stein  
Chairman

RS/RDM/jb

Enclosure: Staff Report dated July 10, 2014

c: The Honorable John A. Harkins, Mayor, Town of Stratford  
Gary Lorentson, Planning & Zoning Administrator, Town of Stratford  
The Honorable Bill Finch, Mayor, City of Bridgeport  
David Kooris, Planning Director, City of Bridgeport





# STATE OF CONNECTICUT

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Petition No. 1100

New Cingular Wireless PCS, LLC

23 Stony Brook Road, Stratford, Connecticut

Staff Report

July 10, 2014

On April 21, 2014, the Connecticut Siting Council (Council) received a petition from New Cingular Wireless PCS, LLC (AT&T) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the extension of and collocation on an existing telecommunications tower located at 23 Stony Brook Road, Stratford, Connecticut. Council Chairman Robin Stein and staff member Robert Mercier visited the site on May 19, 2014 to review the proposal. Christopher Fisher, Esq. of Cuddy & Feder LLP and AT&T technical staff represented AT&T at the field review.

Pursuant to § 16-50j-40 of the Regulations of Connecticut State Agencies, on April 17, 2014, AT&T notified federal, state and regional entities, appropriate elected officials, the Town of Stratford and the City of Bridgeport (within 2,500 feet) of the proposed project. AT&T discussed the project with Town of Stratford officials prior to the petition filing and, according to AT&T, the Town chose not to comment. Notice was also sent to abutting property owners on April 17, 2014. No municipal officials or residents attended the field review nor were any written comments received to date.

At a Council meeting on May 29, 2014, after concern was expressed regarding notice of the project to the surrounding neighborhood, the Council voted to set the date by which to make a decision to October 18, 2014 to allow time for AT&T to install and maintain a sign on the property for 14 days describing the proposal and providing contact information for the Council. AT&T installed the sign on June 20, 2014 and no subsequent inquiries were received by the Council.

The existing 100-foot monopole was approved by the Council under Docket 385 in February 2010. The Docket 385 applicant was T-Mobile Northeast LLC (T-Mobile), which currently has antennas installed at the 97-foot and 87-foot levels of the tower. Cellco Partnership d/b/a Verizon Wireless (Verizon) is located at the 77-foot level of the tower. As a condition of the Council's approval, antennas could only be installed in an exterior flush-mount configuration.

AT&T proposes to extend the tower by 20 feet to an overall height of 120 feet and install three flush mounted antennas and associated remote radio units at both the 117-foot and 107-foot levels of the tower. A revised structural report was submitted on May 28, 2014 indicating the tower needs reinforcement to support the proposed loading. Once reinforcements are complete, the tower would be below 100 percent of allowable tower stress levels.

AT&T would install an equipment shelter and a generator within the existing 40-foot by 50-foot lease area. The existing eight-foot high compound fence would be extended to enclose the shelter and generator. The existing lease area would not be expanded. Although AT&T initially specified a diesel generator for the site, it is investigating the feasibility of using a natural gas-fired generator as a gas feeder has been recently installed to the compound.

The tower site is at the rear of a small commercial plaza surrounded by high density residential development. Most of the existing tower visibility is to the adjacent neighborhood south and east of the site. With the extension, visibility would moderately increase given the abundance of mature, deciduous trees interspersed with some open lawn areas throughout the area. There would be instances in the surrounding area where additional residences would have a view of the tower above or through the tree canopy. The site would be more noticeable to the neighborhood during "leaf off" conditions.

AT&T's proposal qualifies as an eligible facility under the Middle Class Tax Relief and Job Creation Act of 2012 and Section I.C of the Nationwide Collocation Agreement which allow a telecommunications carrier to extend the height of an existing tower where the modification does not qualify as a "substantial change". In this instance, the tower would increase in height by 20 percent, which does not meet the Federal Communications Commission's definition of a "substantial change" under the Act or the Agreement.

A noise study conducted by AT&T indicates that a noise study concluded that AT&T's installation together with T-Mobile's and Verizon's installations would not create noise levels exceeding regulatory limits under non-emergency conditions.

Staff recommends approval of the petition with the following conditions:

- the tower be modified to support the proposed loading in accordance with the structural report prepared by Frederick Bost, a Professional Engineer duly licensed in the State of Connecticut, dated May 28, 2014;
- Within 45 days following completion of the equipment installation, AT&T shall provide documentation certified by a professional engineer that its installation complied with the recommendations of the structural analysis; and,
- any nonfunctioning antenna, and associated antenna mounting equipment subject of this petition shall be removed within 60 days of the date the antenna ceased to function.





Google Earth Image of site location at 23 Stonybrook Road, Stratford.

CERTIFICATE OF ZONING COMPLIANCE

TOWN OF STRATFORD, CT

Requirements: Owners Signature, Copy of Plot Plan/Floor Plan

HOUSE NO. 23 LOT NO. 13 STREET Stonybrook Rd.

OWNERS NAME/ADDRESS: Stonybrook Management LLC (Fla. Tower Partners tower)

TYPE OF PERMIT: BUILDING  SIGN  OTHER

TYPE OF CONSTRUCTION: NEW  ADDITION  REPAIR   
REMOVAL  POOL  GARAGE  SHED  OTHER  antennas & equip. shelter

TYPE OF OCCUPANCY: EXISTING \_\_\_\_\_ PROPOSED \_\_\_\_\_

Total Property size: <u>0.73 ac.</u>	Size of existing buildings <u>12' x 30' shelter (VZN)</u>
Total Wetlands Area: _____	Size of New Addition <u>11.5' x 16' (shelter)</u>
Lot Area (Minus Wetlands): _____	P/Z / BZA Approval <u>CSC Petition # 1100</u>
Building area <u>184 sf</u>	
Building Coverage: <u>0.9%</u>	Zone _____ Fee <u>160.00</u>

(A) Is the project located within the coastal boundary as defined by C.A.M. No

(B) Project is exempt from Coastal Site Plan Review - \_\_\_\_\_ YES \_\_\_\_\_ NO

(C) The Coastal Site Plan Review was conducted and approved in accordance with the Coastal Management Act on \_\_\_\_\_ (Date) by \_\_\_\_\_ (Board/Comm.)

OWNER'S SIGNATURE see attached PHONE (941) 757-5010

APPLICANT'S NAME Site Acquisitions Inc SIGNATURE [Signature]

MAILING ADDRESS 27 Northwestern Dr. Salem, NH

[Signature]  
Zoning Enforcement Officer

1/16/15  
Date

\*FOR COMMERCIAL PERMITS

I UNDERSTAND THAT THE INSTALLATION OF ANY SIGNAGE ON THE EXTERIOR OF THE BUILDING OR ON THE PROPERTY WILL NEED A SEPARATE SIGN PERMIT.

\* FOR VARIANCES AND NEW RESIDENCES

I UNDERSTAND THAT I MUST CONTACT THE ZONING OFFICER FOR AN INSPECTION ONCE THE FOUNDATION IS INSTALLED BEFORE PROCEEDING WITH FRAMING.





# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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July 19, 2019

Kristen Motel, Esq.  
Lucia Chiocchio, Esq.  
Cuddy & Feder LLP  
445 Hamilton Avenue, 14<sup>th</sup> floor  
White Plains, NY 10601

RE: **DOCKET NO. 385** - American Towers LLC Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 23 Stonybrook Road, Stratford, Connecticut.

Dear Attorney Motel and Attorney Chiocchio:

During a public meeting held on July 18, 2019, the Connecticut Siting Council (Council) by its Decision and Order dated July 18, 2019, modified the Decision and Order in Docket 385 rendered on February 25, 2010 for the construction, maintenance and operation of a telecommunications facility located at 23 Stonybrook Road, Stratford, Connecticut and reissued the Certificate of Environmental Compatibility and Public Need (Certificate), thereby eliminating the requirement that panel antennas on this telecommunications facility shall be installed in an exterior, flush mount configuration.

Therefore, the Council hereby approves the installation of three new standoff T-Arm antenna mounts with braces at the 117-foot level of the the tower consistent with **EM-CING-138-190403** - New Cingular Wireless PCS, LLC (AT&T) notice of intent to modify an existing telecommunications facility located at 23 Stonybrook Road, Stratford, Connecticut, with the following conditions:

1. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
2. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
3. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
4. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by AT&T shall be removed within 60 days of the date the antenna ceased to function;
5. The validity of this action shall expire one year from the date of this letter; and
6. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

Enclosed are the Council's Staff report, Modified Decision and Order, and reissued Certificate.

Sincerely,

Melanie A. Bachman  
Executive Director

MAB/RDM/laf

Enclosures



- c: Gregory Mercier, Supervising Attorney, US Tower Division, American Tower Corporation
- Patricia Nowak, Site Acquisition Consultant, Centerline Communications, LLC
- Parties & Intervenors
- State Documents Librarian
- The Honorable Laura R. Hoydick, Mayor, Town of Stratford
- John Rusatsky, Zoning Enforcement Officer, Town of Stratford
- Jay Habansky, Planning & Zoning Administrator, Town of Stratford



**STATE OF CONNECTICUT**  
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**Docket No. 385**  
**23 Stonybrook Road, Stratford**  
**AT&T Request to Reopen and Modify the Decision and Order**

**Staff Report**  
**July 18, 2019**

**Introduction**

On February 25, 2010, the Connecticut Siting Council (Council) issued a Certificate of Environmental Compatibility and Public Need (Certificate) to T-Mobile Northeast, LLC for the construction, maintenance and operation of a telecommunications facility at 23 Stonybrook Road, Stratford, Connecticut.

The Council's Docket 385 Decision and Order (D&O), Condition 1, specified that "panel antennas shall be installed in an exterior, flush mount configuration and such panel antennas shall not exceed a height of 100 feet above ground level".

The Council approved a transfer of Certificate to Florida Tower Partners on January 6, 2011. The Council approved a second transfer of Certificate from Florida Tower Partners to American Tower Corporation (ATC) on March 5, 2016.

On June 10, 2019, AT&T submitted a Request to Reopen and Modify D&O Condition No. 1 to allow for other types of antenna mounts to be used at this facility including, but not limited to, T-Arm mount systems. AT&T's request has been authorized by ATC.

**Background Site Information**

*Development and Management Plan*

On October 21, 2010, the Council approved a Development and Management (D&M) Plan for this facility, except for the utility route, which was approved by the Council on March 17, 2011. The D&M Plan included a 100-foot monopole with a white finish. T-Mobile installed three flush-mounted panel antennas at the 98-foot level of the tower and reserved space at the 88-foot level for future antenna/network expansion.

Subsequent to the D&M approval, in 2013, the Council approved a tower share request from Verizon to install flush mount antennas at the 77-foot level of the tower.

*Petition No. 1100 – Tower Extension*

On July 10, 2014, the Council approved a Petition submitted by AT&T for a 20-foot extension of the monopole to support three flush mounted antennas and associated remote radio units at both the 117-foot and 107-foot levels of the tower. The extension was constructed and AT&T installed antennas at the 117-foot level of the tower.

### *AT&T Exempt Modification Request*

On April 1, 2019, AT&T submitted a Notice of Exempt Modification to install new T-Arm mounts at the 117-foot level of the 120-foot tower to support six antennas and associated remote radio units (RRUs). On April 5, 2019, the Council submitted correspondence to AT&T's consultant stating the filing is incomplete as it does not conform to Condition 1 of the Council's D&O for this facility that limited panel antennas to a flush mount configuration.

Specifically, AT&T proposed to replace its existing flush mount antenna configuration at the 117-foot level of the tower with a new T-Arm antenna configuration using three new 24-inch long standoff T-Arm antenna mounts with interconnecting arm braces. AT&T would install six panel antennas (3 relocated and 3 new) and install nine RRUs (3 relocated, 6 new) on the new T-Arm mounts.

A Professional Engineer duly licensed in the State of Connecticut certified that the structure is adequate to support the proposed loading.

The facility would have a cumulative worst-case power density of 25.7 percent of the applicable limit using a -10 dB off-beam adjustment.

The Notice of Exempt Modification and a copy of the Council's notice of the incomplete Exempt Modification filing was sent to the Town, property owner, and tower owner.

### **Request to Reopen and Modify**

In response to the Council's April 5, 2019 correspondence regarding the incomplete Exempt Modification filing, AT&T's Request to Reopen and Modify the D&O seeks to allow the use of other antenna mounting designs, including but not limited to T-Arm mounts, to promote tower sharing and enhance existing wireless service, as detailed below:

- Restricting antenna installations on the tower to flush mounts has the potential to deter wireless carriers and other entities that do not use this type of antenna mounting equipment from co-locating on the facility;
- The flush mount antenna configuration cannot meet AT&T's current state-of-the art network coverage and capacity demands; and
- The visual effect of AT&T's proposed T-Arm antenna configuration compared to the existing flush mount configuration is not significant, as demonstrated in a visual assessment included within the Request.

On June 7, 2019, AT&T sent notification of the Request to Reopen and Modify the D&O to the Town of Stratford (Town) and abutting property owners.

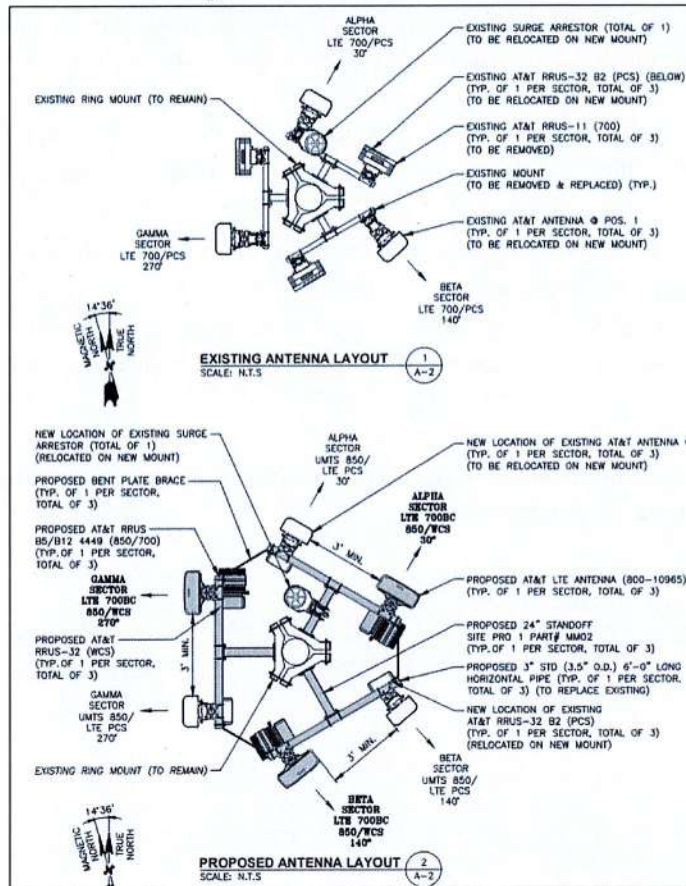
On June 10, 2019, the Council notified Parties and Intervenors of the Request to Reopen and Modify the D&O and requested that any submission of comments or statements with respect to whether the Request to Reopen and Modify the D&O should be granted or denied including any request for a hearing be submitted to the Council by close of business on July 11, 2019. The Council has not received any comment to date.



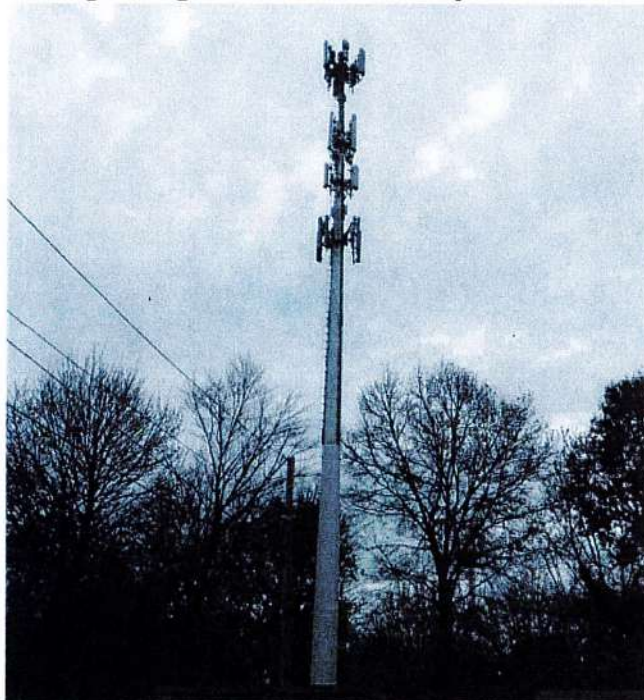
### Site Location



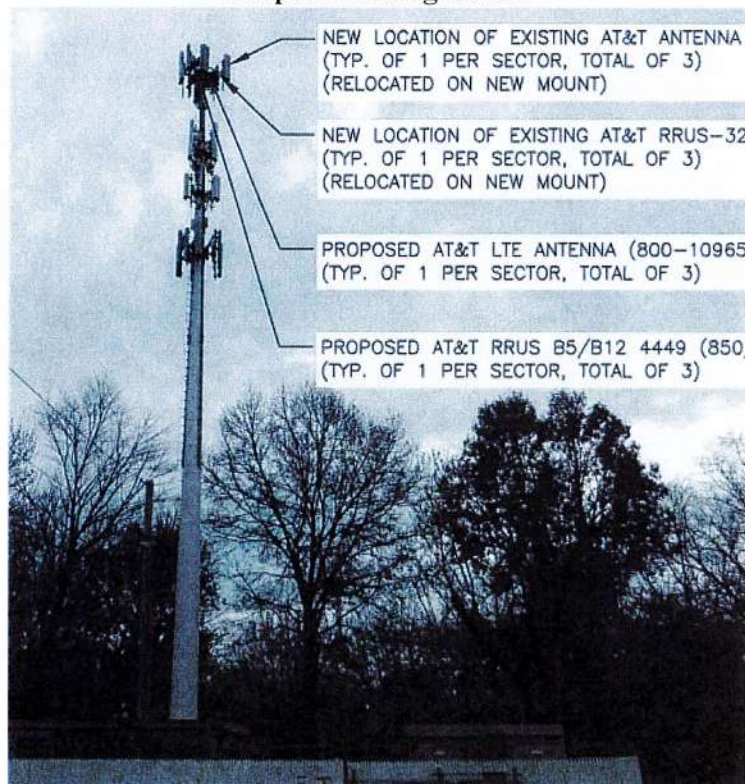
### Exempt Modification Antenna Plan



**Existing Configuration – AT&T at top mount location**



**Proposed Configuration**





DOCKET NO. 385 – American Towers LLC Certificate of } Connecticut  
 Environmental Compatibility and Public Need for the construction, }  
 maintenance and operation of a telecommunications facility located } Siting  
 at 23 Stonybrook Road, Stratford, Connecticut. } Council  
 July 18, 2019

**Decision and Order**

In response to the Connecticut Siting Council’s (Council) reopening of the record in this docket on July 18, 2019 to consider whether changed conditions exist that would warrant a modification to the original Decision and Order’s Condition 1 eliminating the requirement that panel antennas on this telecommunications facility be installed in an exterior, flush mount configuration, the Council hereby rescinds the Decision and Order in Docket 385 rendered on February 25, 2010 and issues this new Decision and Order for the construction, maintenance and operation of a telecommunications facility located at 23 Stonybrook Road, Stratford, Connecticut.

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 monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of T-Mobile Northeast LLC and other entities, both public and private. The height of the tower may be extended after the date of this Decision and Order pursuant to regulations of the Federal Communications Commission.
2. The tower compound shall be oriented in an east-west configuration along the south property line. The tower shall be located to the maximum feasible distance from the west property line.
3. 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 Stratford 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;
  - 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.
  - c) details for the installation of architecturally-treated fencing around the compound and the installation of evergreen plantings along the west property boundary, where necessary to provide visual screening to the adjacent residences.
4. The Certificate Holder shall, prior to the commencement of operation, 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.

5. 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.
6. 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.
7. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Stratford public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
8. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services 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.
9. At least one wireless telecommunications carrier shall install their equipment and shall become operational not later than 120 days after the tower is erected. 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.
10. Any request for extension of the time period referred to in Condition 8 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 Stratford. Any proposed modifications to this Decision and Order shall likewise be so served.
11. 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.
12. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.
13. 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.

We hereby direct that a copy of the staff report and modified Decision and Order be served on each person listed in the Service List, dated March 5, 2015, and notice of issuance published in The Connecticut Post.

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.





# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

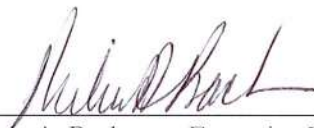
E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

**CERTIFICATE  
OF  
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED  
DOCKET NO. 385**

Pursuant to General Statutes § 4-181a(b), the Connecticut Siting Council hereby reissues a Certificate of Environmental Compatibility and Public Need to American Towers LLC for the construction, maintenance and operation of a telecommunications facility located at 23 Stonybrook Road, Stratford, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on July 18, 2019.

By order of the Council,

  
\_\_\_\_\_  
Melanie A. Bachman, Executive Director

July 18, 2019



STATE OF CONNECTICUT )

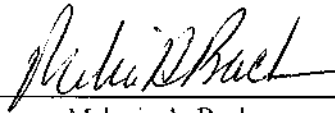
ss. New Britain, Connecticut :

July 19, 2019

COUNTY OF HARTFORD )

I hereby certify that the foregoing is a true and correct copy of the Modified Decision and Order and reissued Certificate of Environmental Compatibility and Public Need by the Connecticut Siting Council, State of Connecticut.

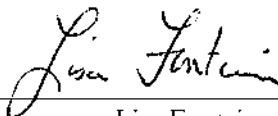
**ATTEST:**



Melanie A. Bachman  
Executive Director  
Connecticut Siting Council

I certify that a copy of the Modified Decision and Order and reissued Certificate of Environmental Compatibility and Public Need in Docket No. 385 have been forwarded by Certified First Class Return Receipt Requested mail on July 19, 2019, to all parties and intervenors of record as listed on the attached service list, dated March 5, 2015.

**ATTEST:**



Lisa Fontaine  
Fiscal Administrative Officer  
Connecticut Siting Council

**LIST OF PARTIES AND INTERVENORS**  
**SERVICE LIST**

<b>Status Granted</b>	<b>Document Service</b>	<b>Status Holder (name, address &amp; phone number)</b>	<b>Representative (name, address &amp; phone number)</b>
<b>Certificate Holder (as of 03/05/15)</b>		American Towers LLC	Gregory Mercier Supervising Attorney, US Tower Division American Tower Corporation 10 Presidential Way Woburn, MA 01801 (781) 926-4500 (781) 926-4555 fax <a href="mailto:Greg.mercier@americantower.com">Greg.mercier@americantower.com</a>
<b>Applicant</b>	<input checked="" type="checkbox"/> E-mail  <input checked="" type="checkbox"/> E-mail	T-Mobile Northeast LLC	Julie Kohler, Esq. Cohen and Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604 (203) 368-0211 (203) 394-9901 <a href="mailto:jkohler@cohenandwolf.com">jkohler@cohenandwolf.com</a>  Monte E. Frank, Esq. Cohen and Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604 (203) 368-0211 (203) 394-9901 <a href="mailto:mfrank@cohenandwolf.com">mfrank@cohenandwolf.com</a>

# EXHIBIT 7

JENNIFER SMITH

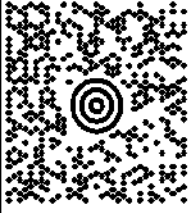
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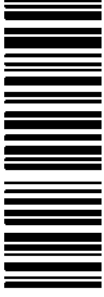
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TOWN OF STRATFORD CT  
2725 MAIN STREET  
**STRATFORD CT 06615-5818**



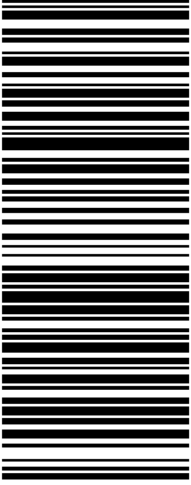
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CS 22-0.18. WNTNVS031.0A 07/2021\*



TM

JENNIFER SMITH

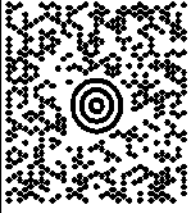
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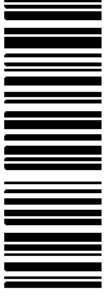
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**SHIP TO:**

MAYOR LAURA R. HOYDICK  
TOWN OF STRATFORD CT  
2725 MAIN STREET  
**STRATFORD CT 06615-5818**



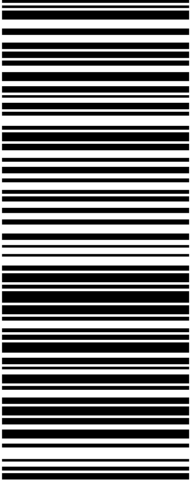
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**UPS 2ND DAY AIR**

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TM

JENNIFER SMITH

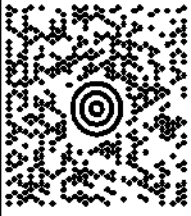
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750 WEST CENTER STREET  
WEST BRIDGEWATER MA 02379

1.0 LBS LTR

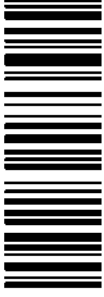
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**SHIP TO:**

STONEYBRROK MGMT LLC  
124 KNAPP STREET  
EASTON CT 06612-1078



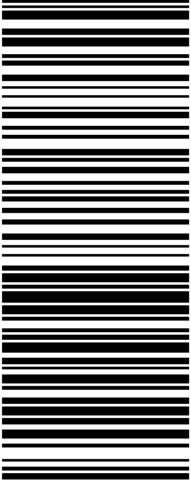
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