UPS CampusShip: View/Print Label

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

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

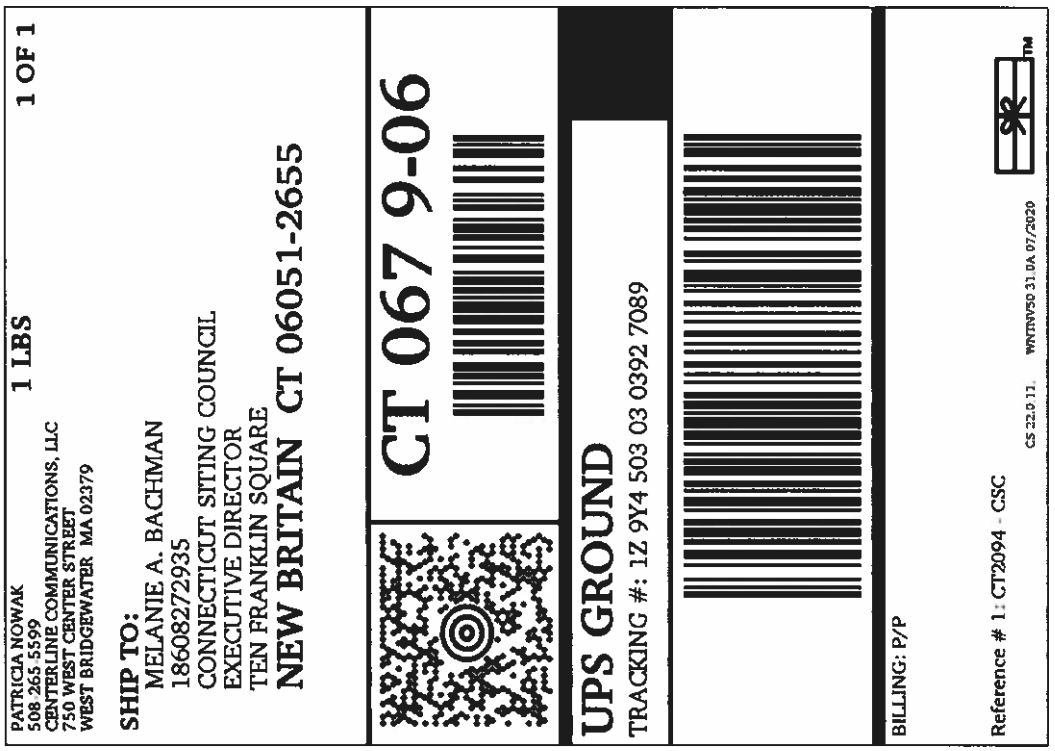
   Customers without a Daily Pickup
   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To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

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

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

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

FOLD HERE



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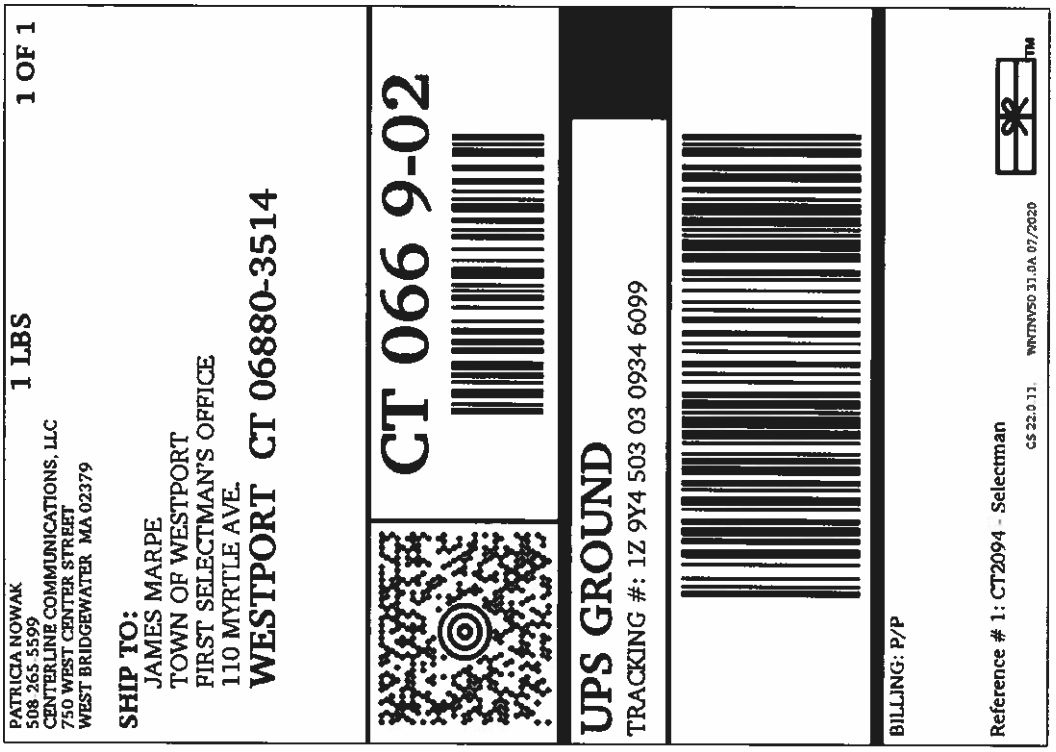

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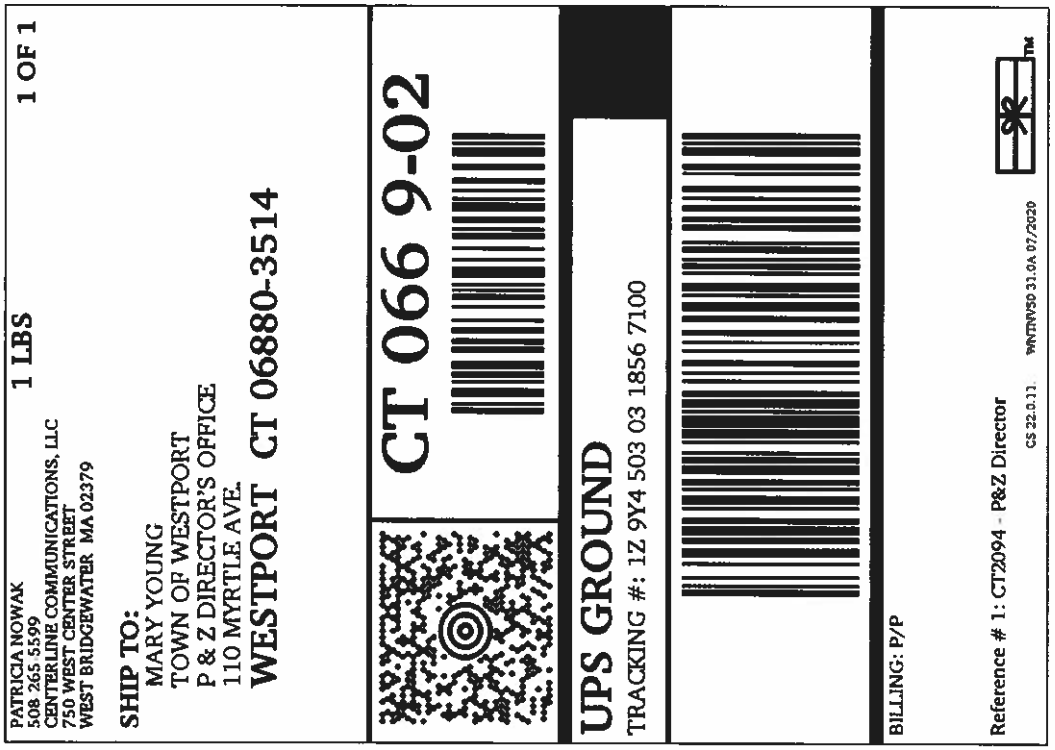

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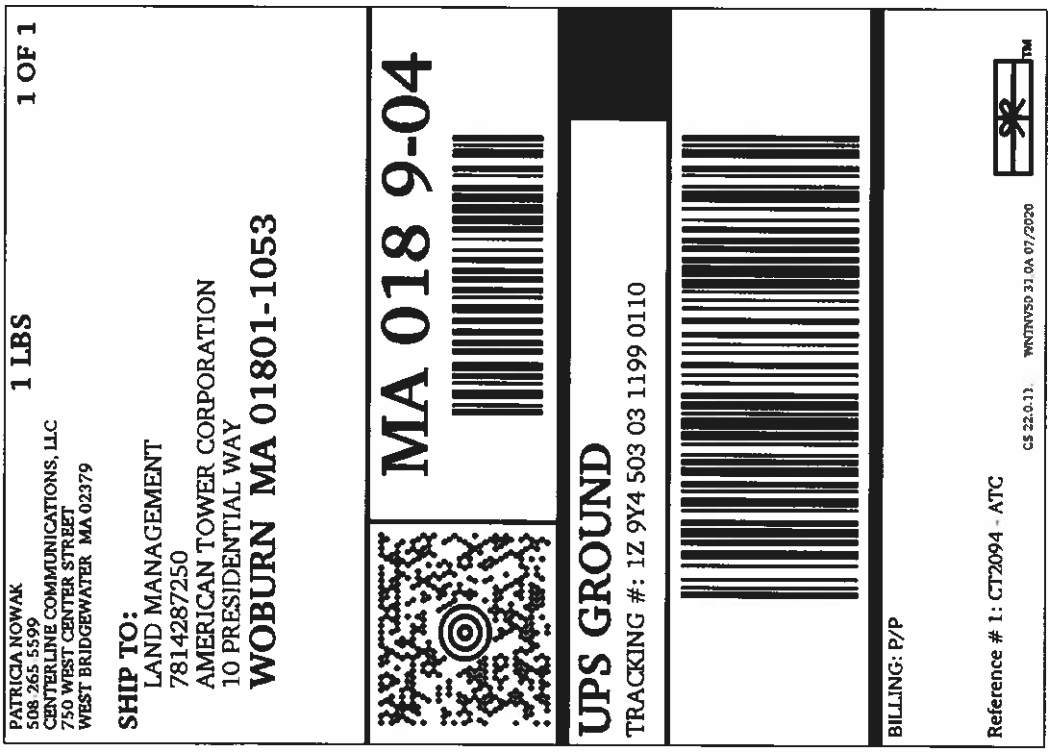

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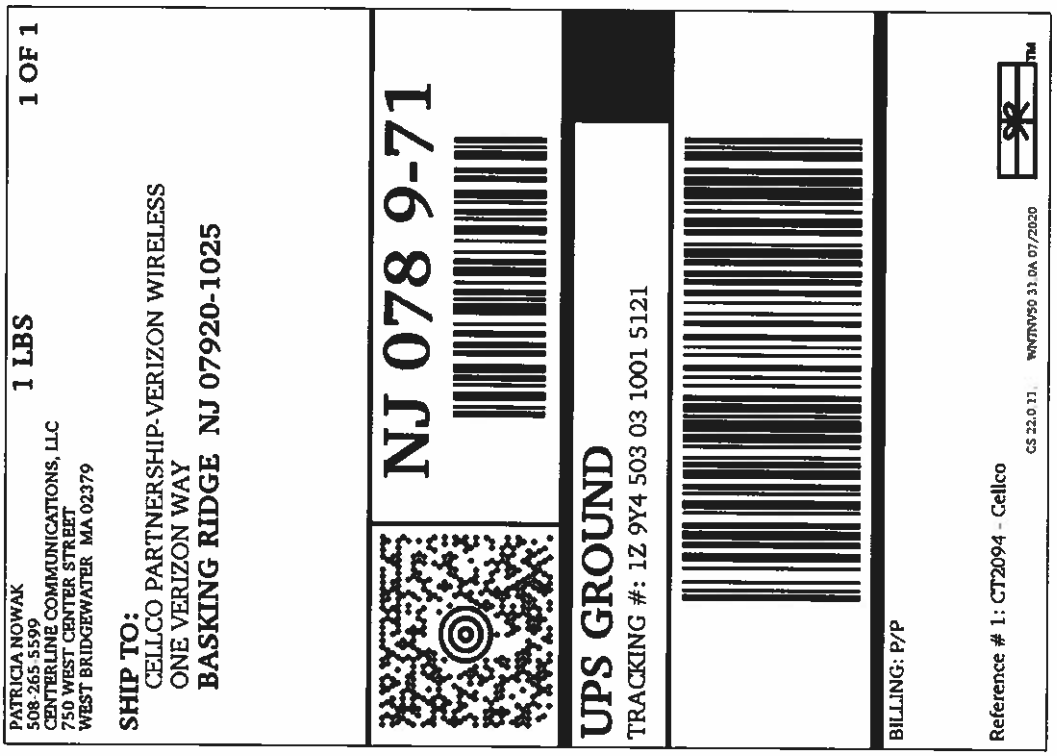


July 23, 2020

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

Regarding: Notice of Exempt Modification – AT&T Site CT2094
Address: 2 Allen Raymond Lane (a/k/a 2 Sunny Lane), Westport, CT

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (hereinafter "AT&T") currently maintains a wireless telecommunications facility on an existing 130' monopole tower (the "Tower") at the above-referenced address, latitude 41.162900, longitude -73.373100. Said Tower is managed by American Tower Corporation.

AT&T desires to modify its existing telecommunications facility on the Tower by adding (3) Antennas, (3) Remote Radio Units, and (1) Surge Arrestor, as well as swapping (3) Antennas, and swapping (6) Remote Radio Units and other related modifications, as more particularly detailed and described in the enclosed Construction Drawings prepared by SMW Engineering Group, Inc, dated May 28, 2020. Enclosed please also find a Mount Structural Analysis prepared by MasTec Network Solutions dated April 24, 2020. The centerline height of the antennas will be at 100 feet.

The Tower was originally approved by the Connecticut Siting Council on December 17, 1998 under Docket No. 188. Enclosed please find a copy of the above referenced approval.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the following individuals: The Honorable James Marpe, First Selectman of the Town of Westport; Mary Young, Planning and Zoning Director of the Town of Westport; Cellco Partnership, as the property owner; and American Tower Corporation, as Tower manager. Enclosed please find a property card and a GIS map of the property.

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

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

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

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

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

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

6. The existing structure and its foundation can support the proposed loading. *Please see the Structural Analysis Report dated April 28, 2020 and prepared by American Tower Corporation.*

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

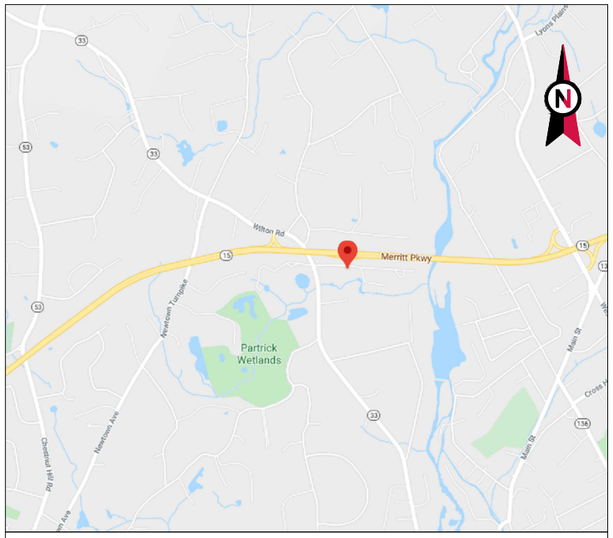
Sincerely,

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

Enclosures:
Exhibit 1 – Construction Drawings
Exhibit 2 - Mount Analysis
Exhibit 3 – CSC Approval
Exhibit 4 – Property Cards and GIS Map
Exhibit 5 – NIER Study
Exhibit 6 – Structural Analysis

cc: The Honorable James Marpe, First Selectman of the Town of Westport
Mary Young, Planning and Zoning Director of the Town of Westport
Cellco Partnership, as the property owner
American Tower Corporation, as Tower manager

EXHIBIT 1

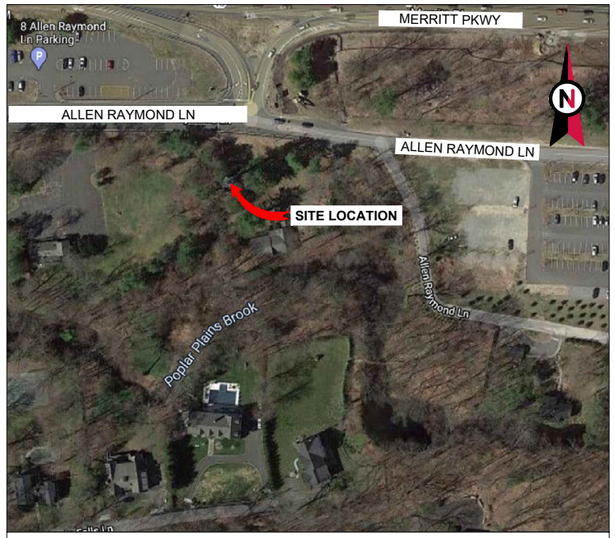


VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: CRANBURYSU CT
ATC SITE NUMBER: 411189
AT&T PACE NUMBER: MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127
AT&T SITE ID: CTL02094
AT&T FA CODE:10035342
AT&T SITE NAME: CANTON - COLLINSVILLE
PROJECTS: 3C, 4C, 4T4R ANTENNA RETROFIT, 5G NR
SITE ADDRESS: 2 SUNNY LANE
WESTPORT, CT 06880-1906

AT&T MOBILITY
ANTENNA AMENDMENT DRAWINGS



LOCATION MAP

COMPLIANCE CODE

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

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

UTILITY COMPANIES

POWER COMPANY: NOT PROVIDED
PHONE: NOT PROVIDED

TELEPHONE COMPANY: NOT PROVIDED
PHONE: NOT PROVIDED

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

PROJECT SUMMARY

SITE ADDRESS:

2 SUNNY LANE

WESTPORT, CT 06880-1906

COUNTY: FAIRFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.162917

LONGITUDE: -73.373083

GROUND ELEVATION: 51' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

AT&T MOBILITY

ENGINEER:

JEREMY SHARIT
SMW ENGINEERING GROUP INC.
158 BUSINESS CENTER DR.
BIRMINGHAM, AL. 35244
JOB# 20-10209

PROPERTY OWNER:

AMERICAN TOWER
116 HUNTINGTON AVE
BOSTON, MA 02116

CONSULTING ENGINEER

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

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:
TOWER WORK:
REMOVE (3) ANTENNA3, (3) RRU-11 B12, (3) RRU-12, 12 TMA'S, (6) 1-5/8" UMTS COAX CABLES.

INSTALL (6) ANTENNAS, (9) RRH'S, (1) DC9 SQUID, (2) 0.78" DC CABLES, AND (1) 0.39" FIBER CABLE.

EXISTING (3) ANTENNAS, (1) DC6 SQUID, (6) 1-5/8" COAX CABLES, (2) 0.78" DC CABLES, (1) 0.39" FIBER CABLE TO REMAIN, (3) ANTENNAS, AND (1) HOME RUN RET TO BE RELOCATED.

GROUND WORK:
REMOVE (12) DIPLEXERS.

INSTALL (1) 5G RBS 6630 AND (1) IDLE.

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

HEAD SOUTHWEST ON I-95 S, TAKE EXIT 16 TOWARD EAST NORWALK 0.1 MI, TURN RIGHT ONTO EAST AVE (SIGNS FOR U.S. 1) 1.2 MI, CONTINUE ONTO NEWTOWN AVE 1.4 MI, TURN RIGHT ONTO PARTRICK AVE 1.7 MI, TURN LEFT ONTO WILTON RD 0.3 MI, TURN RIGHT ONTO SUNNY LN 0.1 MI

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	COVER SHEET	0	05/28/20	ZDS
G-002	GENERAL NOTES	0	05/28/20	ZDS
C-101	DETAILED SITE PLAN	0	05/28/20	ZDS
C-201	TOWER ELEVATION	0	05/28/20	ZDS
C-401	RF SCHEDULE AND ANTENNA INSTALLATION	0	05/28/20	ZDS
C-501	CONSTRUCTION DETAILS	0	05/28/20	ZDS
C-502	EQUIPMENT SPECIFICATIONS	0	05/28/20	ZDS
E-501	GROUNDING DETAILS	0	05/28/20	ZDS
R-601	SUPPLEMENTAL	0	05/28/20	ZDS
R-602	SUPPLEMENTAL	0	05/28/20	ZDS

AMERICAN TOWER®

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

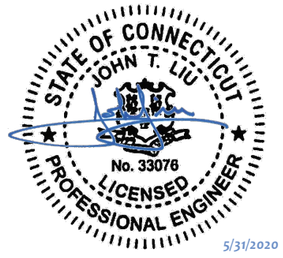
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:



5/31/2020

AT&T

DATE DRAWN:	05/28/20
ATC JOB NO:	411189-REV-1-1587496885727
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

COVER SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

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

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

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

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

AMERICAN TOWER®

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158 BUSINESS CENTER DRIVE
BIRMINGHAM, AL 35244
TEL: 205-252-6985 FAX: 205-320-1504

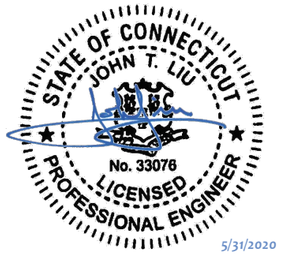
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:



AT&T

DATE DRAWN:	05/28/20
ATC JOB NO:	411189-REV-1-1587496885727
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

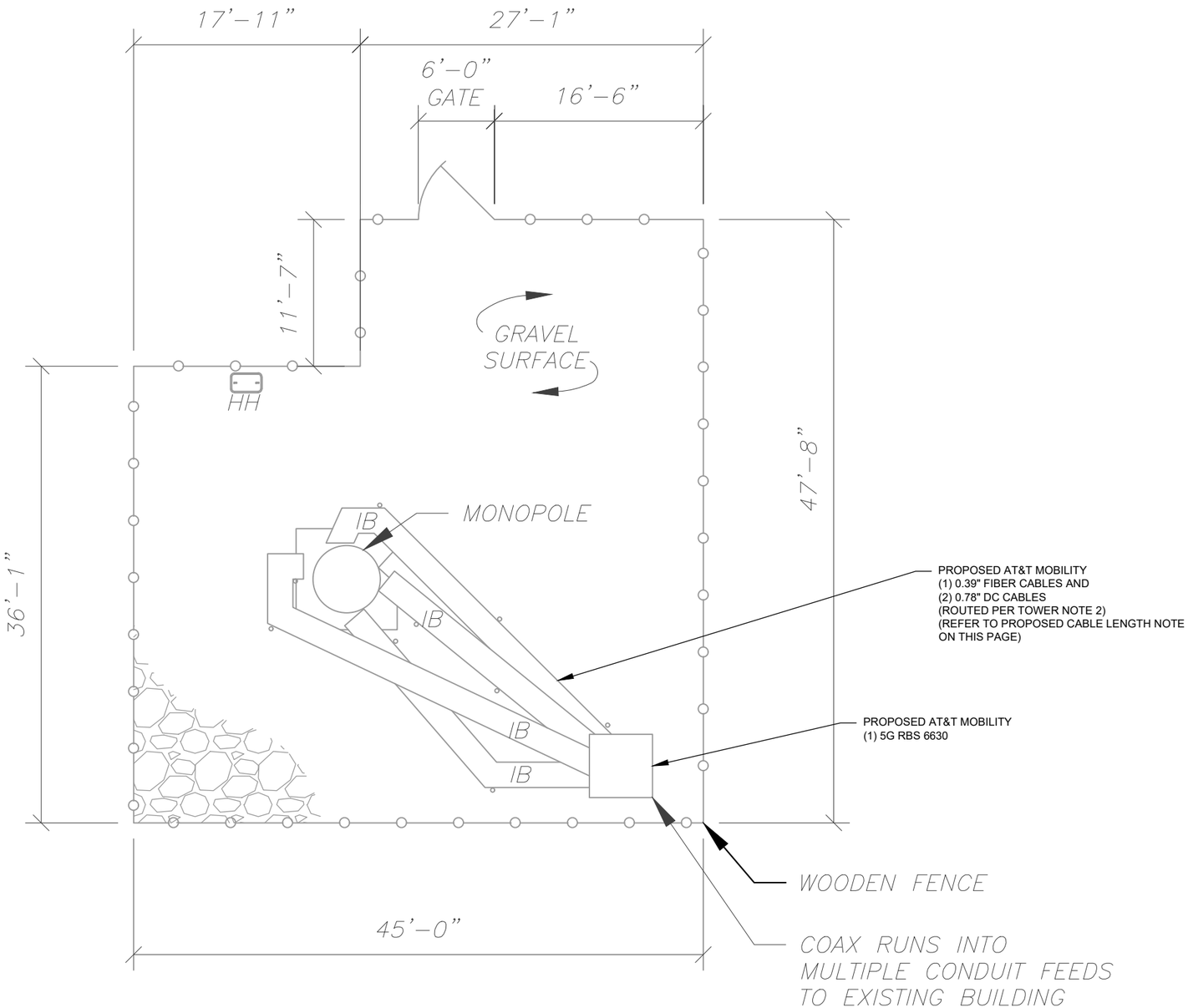
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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

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

LEGEND

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



1 DETAILED SITE PLAN

0 10' 20'

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

N

PROPOSED CABLE LENGTH:

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

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:

STATE OF CONNECTICUT
JOHN T. LIU
No. 33076
LICENSED
PROFESSIONAL ENGINEER
5/31/2020

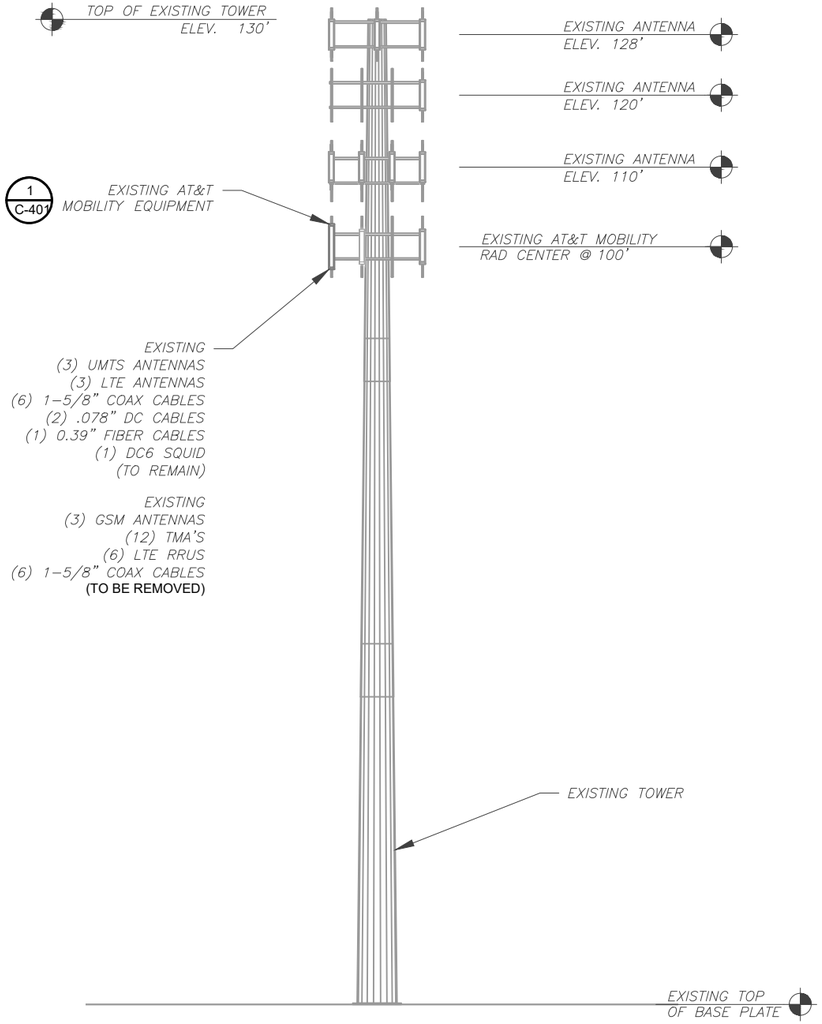
AT&T

DATE DRAWN:	05/28/20
ATC JOB NO:	411189-REV-1-1587496885727
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

DETAILED SITE PLAN

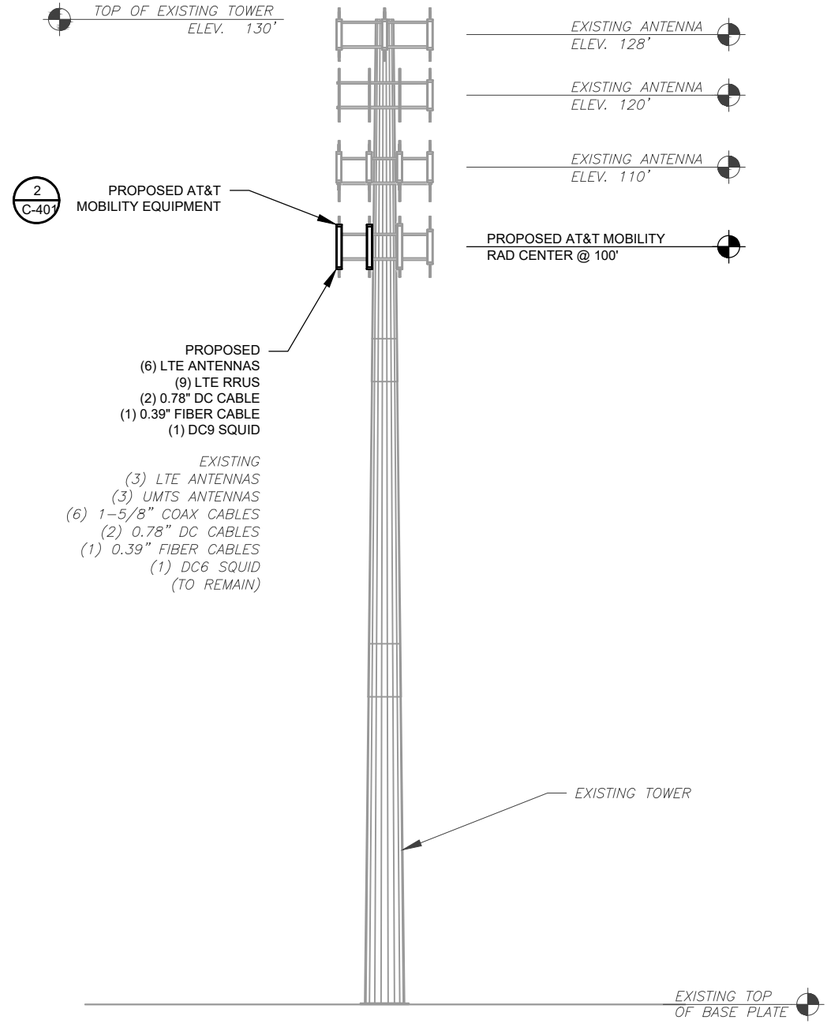
SHEET NUMBER:	REVISION:
C-101	0

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



1 EXISTING TOWER ELEVATION
SCALE: 1" = 20'

PER MOUNT ANALYSIS COMPLETED BY MASTEC, DATED 04/24/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. A MOUNT MODIFICATION DESIGN SHALL BE COMPLETED AND MODIFICATION MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL TOWER ELEVATION
SCALE: 1" = 20'

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

SCOPE OF WORK:

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

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

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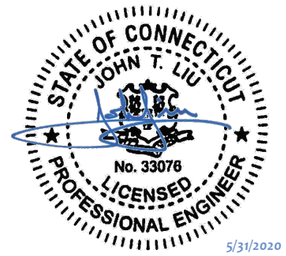
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:



AT&T

DATE DRAWN:	05/28/20
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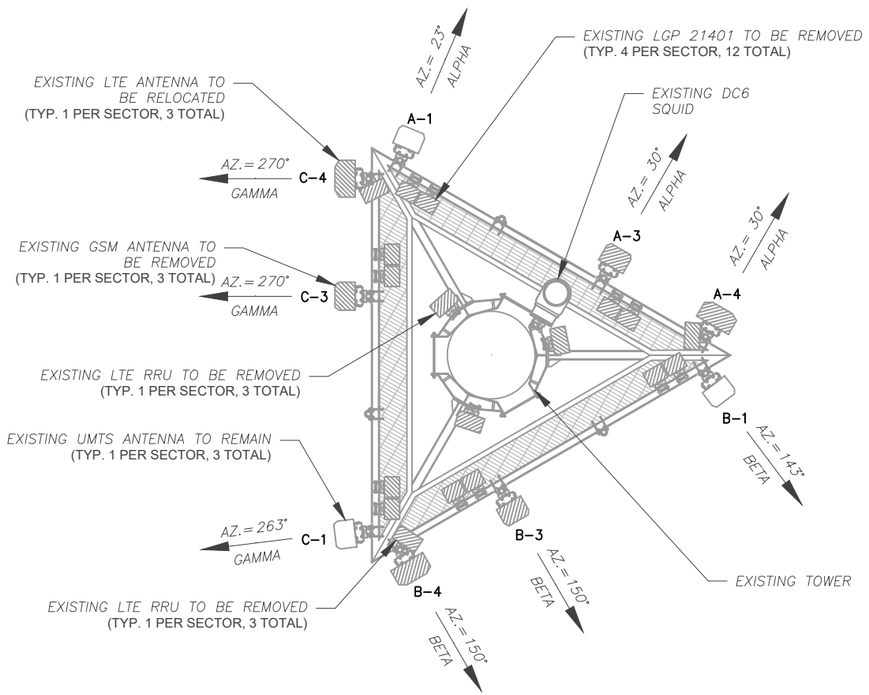
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

TOWER ELEVATION

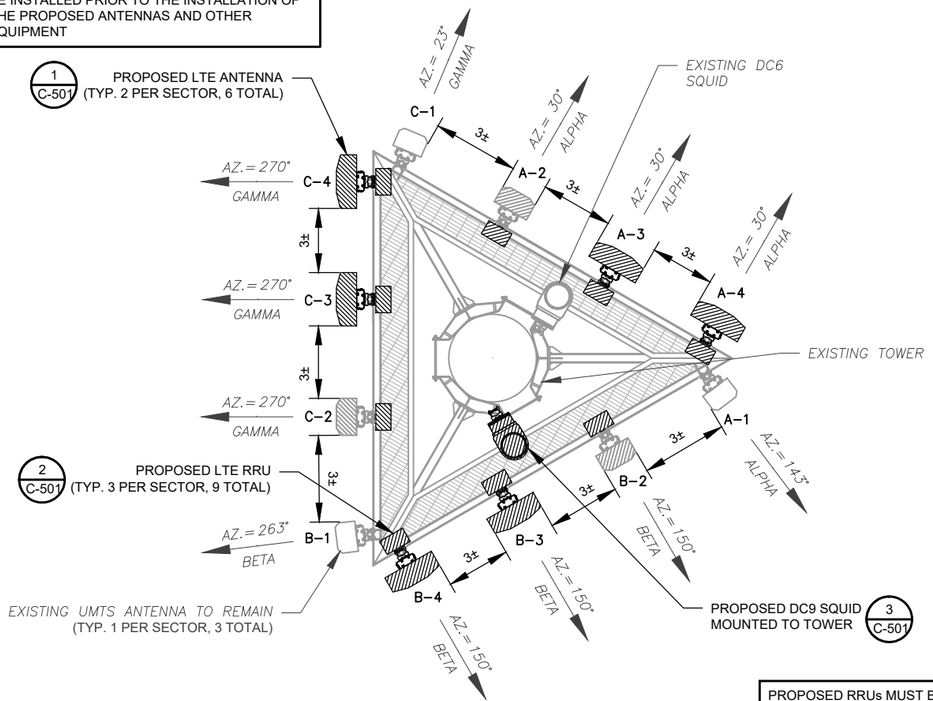
SHEET NUMBER:	REVISION:
C-201	0

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



1 CURRENT ANTENNA PLAN
1" = 5'-0"

PER MOUNT ANALYSIS COMPLETED BY MASTEC, DATED 04/24/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. A MOUNT MODIFICATION DESIGN SHALL BE COMPLETED AND MODIFICATION MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL ANTENNA PLAN
1" = 5'-0"

PROPOSED RRUs MUST BE INSTALLED A MINIMUM OF 8" 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
FIND	100'	23°	A1	POWER WAVE 7770	UMTS	RMN	(2) POWERWAVE LGP 12104 TMA	RMV
		–	A2	–	–	–	–	–
		30°	A3	POWERWAVE 7770	GSM	RMV	(2) POWERWAVE LGP 12104 TMA	RMV
		30°	A4	CCI HPA-65R-BUU-H6	LTE	REL	RRUS-11 B12	RMV
							RRUS-12 B2	RMV
BETA	100'	143°	B1	POWER WAVE 7770	UMTS	RMN	(2) POWERWAVE LGP 12104 TMA	RMV
		–	B2	–	–	–	–	–
		150°	B3	POWERWAVE 7770	GSM	RMV	(2) POWERWAVE LGP 12104 TMA	RMV
		150°	B4	CCI HPA-65R-BUU-H6	LTE	REL	RRUS-11 B12	RMV
							RRUS-12 B2	RMV
GAMMA	100'	263°	C1	POWER WAVE 7770	UMTS	RMN	(2) POWERWAVE LGP 12104 TMA	RMV
		–	C2	–	–	–	–	–
		270°	C3	POWERWAVE 7770	GSM	RMV	(2) POWERWAVE LGP 12104 TMA	RMV
		270°	C4	CCI HPA-65R-BUU-H6	LTE	REL	RRUS-11 B12	RMV
							RRUS-12 B2	RMV

NOTES

1. BASED ON APPROVED ATC APPLICATION 411189-REV-1-1587496885727, DATED 04/21/20. CONFIRM WITH AT&T MOBILITY REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIG OR MOUNT CONFIG. CONTRACTOR TO VERIFY MOUNT CONFIG HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (EQUIP) (I.E. CLEARANCES, MOUNT PIPE, SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
3. ALL PROPOSED EQUIP INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH ATC'S CM.
4. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
5. POSITIONS START WITH FIRST PIPE ON THE LEFT SIDE (AS VIEWED FROM BEHIND THE MOUNT).

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	100'	23°	C1	POWER WAVE 7770	UMTS	RMN	-	-
		30°	A2	CCI HPA-65R-BUU-H6	LTE	REL	RRUS-4415 B30	ADD
		30°	A3	CCI OPA65R-BU6DA	LTE	ADD	RRUS-8843 B2/B66A	ADD
		30°	A4	CCI DMP65R-BU6DA	LTE	ADD	RRUS-4449 B5/B12	ADD
BETA	100'	143°	A1	POWER WAVE 7770	UMTS	RMN	-	-
		150°	B2	CCI HPA-65R-BUU-H6	LTE	REL	RRUS-4415 B30	ADD
		150°	B3	CCI OPA65R-BU6DA	LTE	ADD	RRUS-8843 B2/B66A	ADD
		150°	B4	CCI DMP65R-BU6DA	LTE	ADD	RRUS-4449 B5/B12	ADD
GAMMA	100'	263°	B1	POWER WAVE 7770	UMTS	RMN	-	-
		270°	C2	CCI HPA-65R-BUU-H6	LTE	REL	RRUS-4415 B30	ADD
		270°	C3	CCI OPA65R-BU6DA	LTE	ADD	RRUS-8843 B2/B66A	ADD
		270°	C4	CCI DMP65R-BU6DA	LTE	ADD	RRUS-4449 B5/B12	ADD

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
DC6-48-60-18-8F	RMN	(6) 1-5/8" COAX	(2) 0.78"	(1) 0.40"	RMN
–	–	(6) 1-5/8" COAX	–	–	RMV

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

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

FINAL FIBER DISTRIBUTION/SQUID		FINAL CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
DC6-48-60-18-8F	RMN	(6) 1-5/8" COAX	(2) 0.78"	(1) 0.39"	RMN
DC9-48-60-24-8C-EV	ADD	-	(2) 0.78"	(1) 0.39"	ADD

3 EQUIPMENT SCHEDULES

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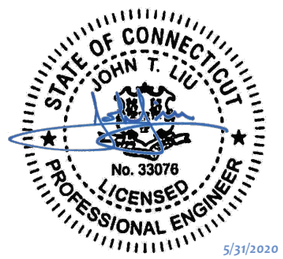
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:



AT&T

DATE DRAWN:	05/28/20
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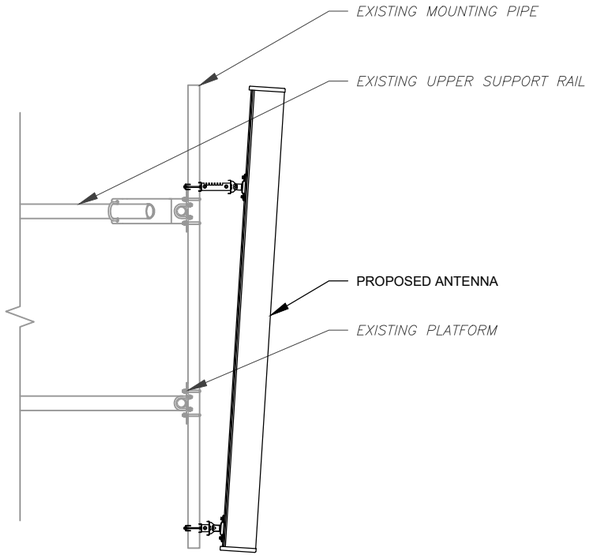
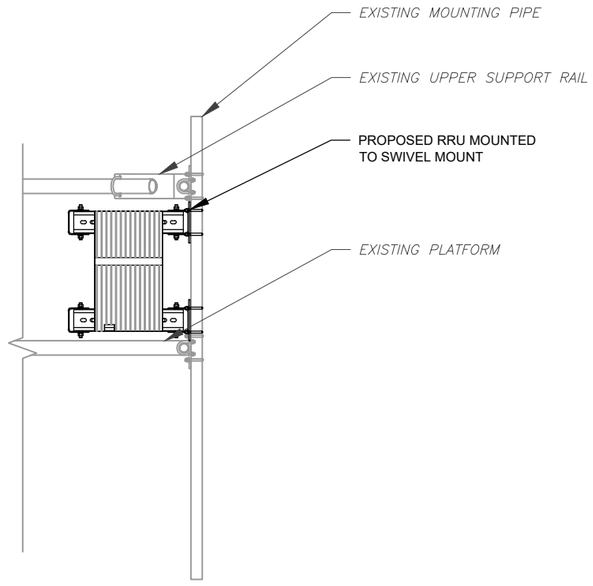
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

RF SCHEDULE AND ANTENNA INSTALLATION

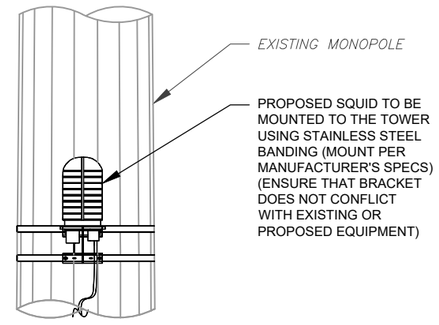
SHEET NUMBER:	REVISION:
C-401	0



1 ANTENNA DETAIL
SCALE: N.T.S.



2 RRU DETAIL
SCALE: N.T.S.



3 PROPOSED SQUID MOUNTING
SCALE: NOT TO SCALE

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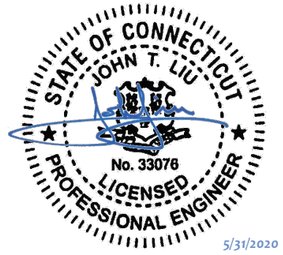
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:



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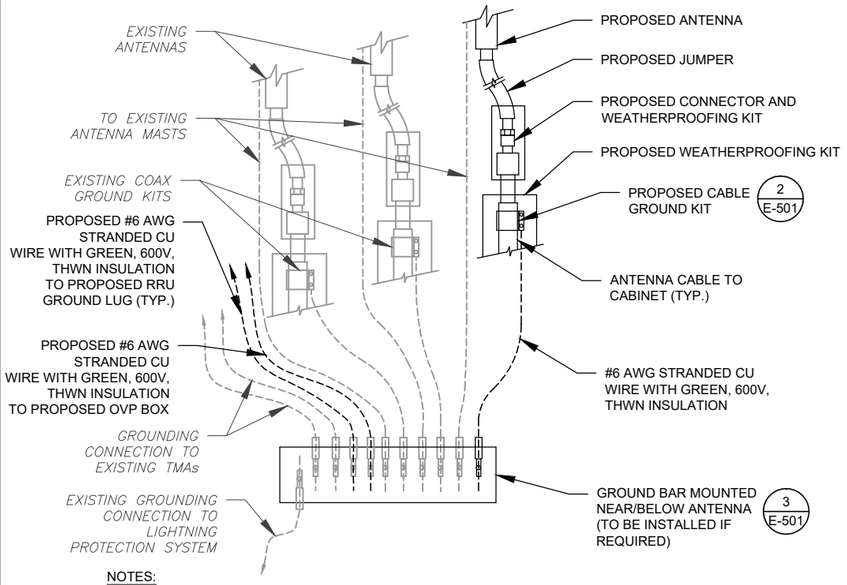
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

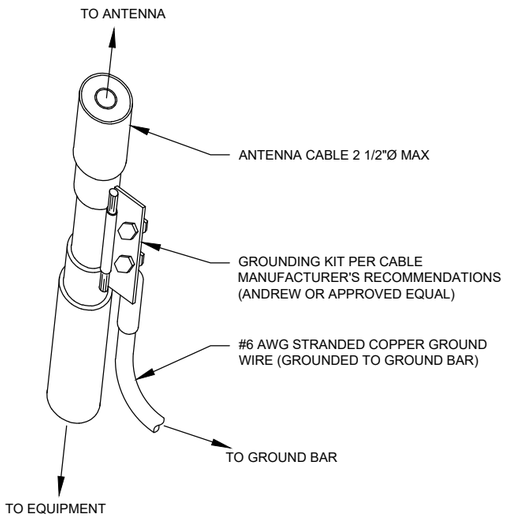


NOTES:

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.

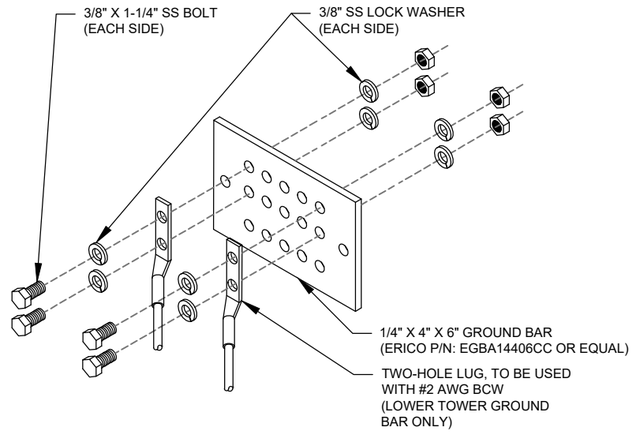


GROUND KIT NOTES:

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.

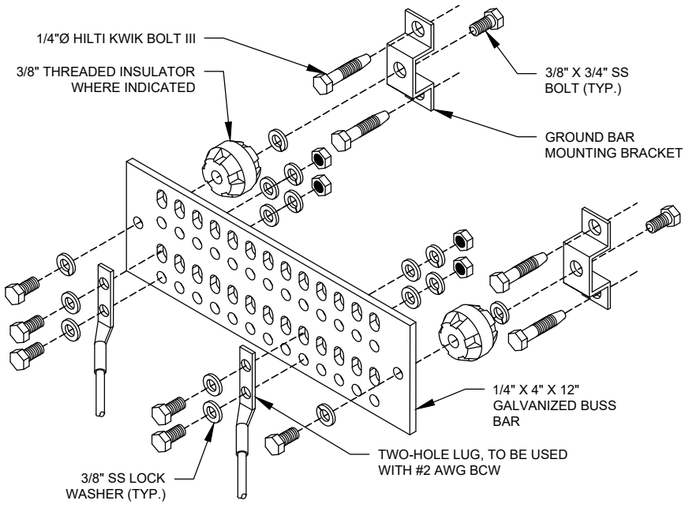


GROUND BAR NOTES:

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.

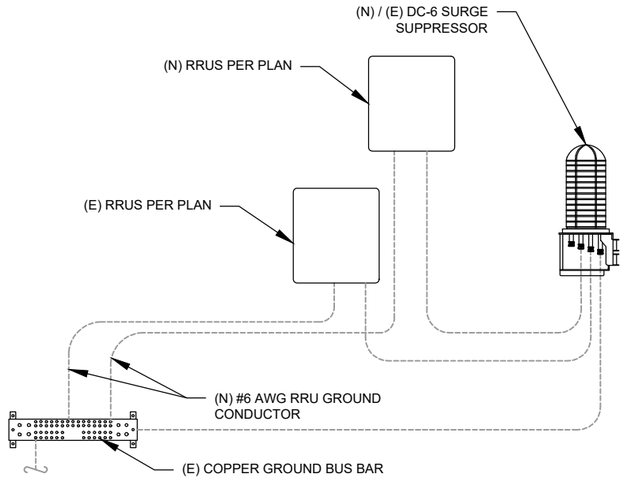


GROUND BAR NOTES

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.

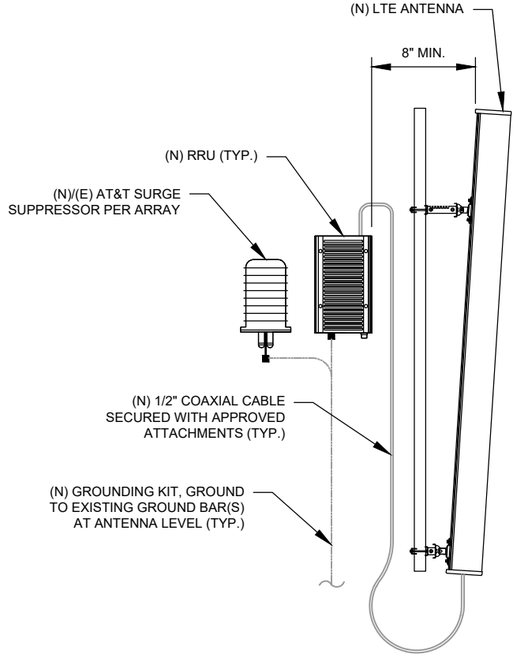
4 MAIN GROUND BAR DETAIL

SCALE: N.T.S.



5 RRU GROUNDING

SCALE: N.T.S.



6 ANTENNA/RRU GROUNDING

SCALE: N.T.S.

AMERICAN TOWER®

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

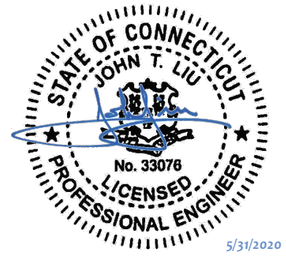
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:



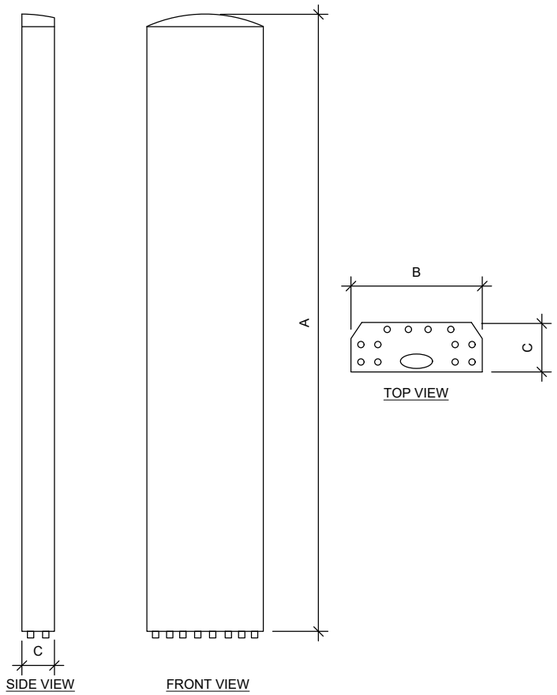
AT&T

DATE DRAWN:	05/28/20
ATC JOB NO:	411189-REV-1-1587496885727
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

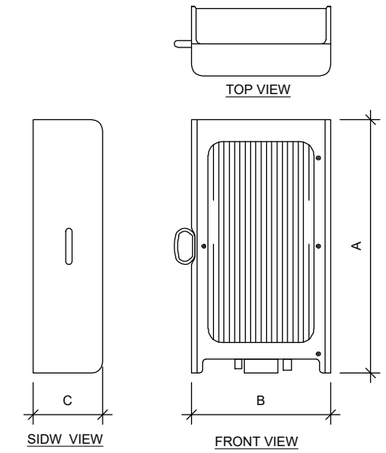
GROUNDING DETAILS

SHEET NUMBER: E-501

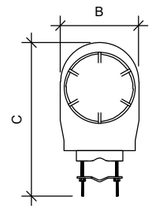
REVISION: 0

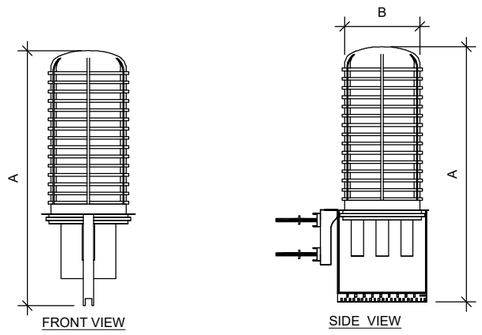


ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
CCI OPA65R-BU6DA	71.2"	21.0"	7.8"	60.2
CCI DMP65R-BU6DA	71.2"	20.7"	7.7"	79.4



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
4415 B30	16.5"	13.4"	5.9"	46.0
RRUS-8843 B2/B66A	18.0"	13.2"	11.3"	75.0
4449 B5, B12	17.9"	13.2"	9.4"	71.0





RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
DC9-48-60-24-8C-EV	31.41"	10.24"	18.28"	16.0

1 EQUIPMENT SPECIFICATIONS

SCALE: NOT TO SCALE

AMERICAN TOWER®

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

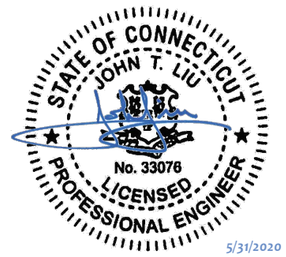
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:



AT&T

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ATC JOB NO:	411189-REV-1-1587496885727
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

EQUIPMENT SPECIFICATIONS

SHEET NUMBER:	REVISION:
C-502	0

May 18, 2020

Geoff Middlebrooks
American Tower Corporation
3500 Regency Parkway, Suite 100
Cary, NC 27518

MasTec Network Solutions
507 Airport Blvd, Suite 111
Morrisville, NC 27560
Tel (919) 674-5895
MNS.Engineering@mastec.com

Subject:	**Mount Modification Structural Analysis**	
ATC Designation:	**Site Name:**	Cranburysu CT
	Site Number:	411189
Carrier Designation:	**Carrier:**	AT&T
	Site Name:	MRCTB045060
	Site Number:	CTL02094
	FA Number:	10035342
Engineering Firm Designation:	**MNS Project Number:**	21944-MOD1
Site Data:	**2 Sunny Ln, Westport, Fairfield County, CT 06880** **Latitude 41.1628°, Longitude -73.3735°** **130 ft Monopole** **100 ft RAD Center (14.5 ft Platform w/ Handrail)**	

Dear Geoff,

MasTec Network Solutions is pleased to submit this **Mount Modification Structural Analysis** to determine the structural integrity of the above-mentioned structure.

This analysis has been performed in compliance with the *ANSI/TIA-222-H Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures*. Based on our analysis we have determined the structural strength to have the following result:

Antenna Mounting Structure	**49%**	**Sufficient***

*Structure has sufficient capacity provided the proposed reinforcement is installed as recommended.

We at MasTec Network Solutions appreciate the opportunity of providing continued specialty services. Please do not hesitate to contact our office should you have any questions.

Prepared By:

Noah Noxon, EIT
Structural Engineer I

STATE OF CONNECTICUT · RAPHAEL MOHAMED · No. 25112 · LICENSED · PROFESSIONAL ENGINEER

Raphael Mohamed

Digitally signed by Raphael Mohamed
DN: E=Raphael.Mohamed@mastec.com, CN=Raphael Mohamed, OU=Users, OU=MasTec Network Solutions, OU=Service Lines, DC=mastec, DC=local
Date: 2020.05.18 15:34:06-04'00'

Reviewed By:

Raphael I. Mohamed, PE, PEng
Senior Director of Engineering
CT PE License No. 25112

This item has been digitally signed and sealed by Raphael I. Mohamed, PE.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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

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BIRMINGHAM, AL 35244
TEL: 205-252-6985 FAX: 205-320-1504

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:

STATE OF CONNECTICUT · JOHN T. LIU · No. 33076 · LICENSED · PROFESSIONAL ENGINEER

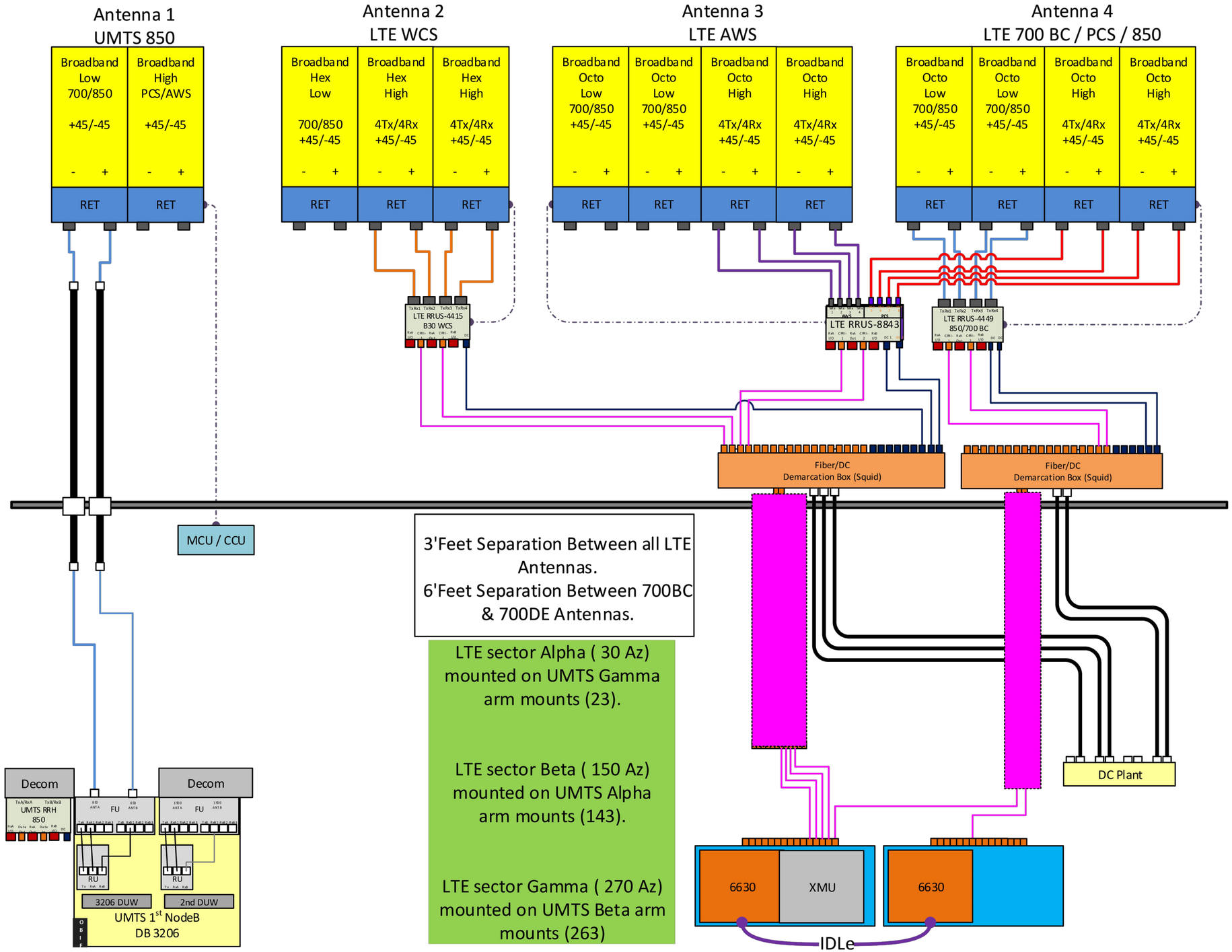
5/31/2020

AT&T

DATE DRAWN:	05/28/20
ATC JOB NO:	411189-REV-1-1587496885727
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0



1 PLUMBING DIAGRAM

SCALE: NOT TO SCALE

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

AMERICAN TOWER®

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

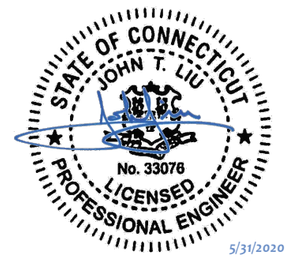
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	05/28/20

ATC SITE NUMBER:
411189

ATC SITE NAME:
CRANBURYSU CT

SITE ADDRESS:
2 SUNNY LANE
WESTPORT, CT 06880-1906

SEAL:



AT&T

DATE DRAWN:	05/28/20
ATC JOB NO:	411189-REV-1-1587496885727
CUSTOMER ID:	10035342
CUSTOMER #:	MRCTB045060, MRCTB045017, MRCTB045016, MRCTB045027, & MRCTB045127

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	0

MOUNT REINFORCEMENT DRAWINGS PREPARED FOR AT&T ATC SITE NO. 411189

SITE NAME: MRCTB045060
SITE NUMBER: CTL02094
FA#: 10035342

SITE ADDRESS:
2 SUNNY LN, WESTPORT
FAIRFIELD COUNTY, CT 06880

PROJECT CONTACTS:

1. PROJECT MANAGER
   GEOFF MIDDLEBROOKS
   919-466-5292
   GEOFF.MIDDLEBROOKS@AMERICANTOWER.COM

2. DESIGN ENGINEER - MAIN RFI CONTACT
   NOAH NOXON
   919-674-5889
   NOAH.NOXON@MASTEC.COM

3. ENGINEER OF RECORD
   RAPHAEL I. MOHAMED, PE, PEng
   919-674-5895
   507 AIRPORT BLVD.
   SUITE 111
   MORRISVILLE, NC 27560
   RAPHAEL.MOHAMED@MASTEC.COM

4. FOR FABRICATION AND CONSTRUCTION RELATED INQUIRIES: CONTACT MASTEC DESIGN ENGINEER AND ENGINEER OF RECORD.

TOWER INFORMATION

TOWER HEIGHT / TYPE:	130 FT MONOPOLE
MOUNT HEIGHT/TYPE:	100 FT 14.5FT PLATFORM W/ HANDRAILS
TOWER LOCATION:	LAT: 41.1628°
	LONG: -73.3735°
FAILING ANALYSIS FIRM NAME:	MASTEC NETWORK SOLUTIONS
PROJECT NUMBER:	21944-MNT1
STRUCTURAL ANALYSIS DATE:	04/24/2020
PASSING ANALYSIS FIRM NAME:	MASTEC NETWORK SOLUTIONS
PROJECT NUMBER:	21944-MOD1

CODE COMPLIANCE

ANSI/TIA-222-H
2018 INTERNATIONAL BUILDING CODE

DRAWINGS INCLUDED

SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
T-1	TITLE SHEET		
N-1	MODIFICATION INSPECTION CHECKLIST		
N-2	GENERAL NOTES		
S-1	MODIFICATION SCHEDULE		
S-2	PLATFORM REINFORCEMENT DETAILS		
A-1	MANUFACTURER SPECIFICATIONS I		

QUALIFIED ENGINEERING SERVICES ARE AVAILABLE FROM MASTEC NETWORK SOLUTIONS TO ASSIST CONTRACTORS IN CLASS IV RIGGING PLAN REVIEWS. FOR REQUESTED QUALIFIED ENGINEERING SERVICES, PLEASE CONTACT RAPHAEL MOHAMED AT (919) 244-5207.

NO.	DATE	DESCRIPTION	BY
0	05/18/19	FIRST ISSUE	NDN

REVISIONS

STATE OF CONNECTICUT
RAPHAEL MOHAMED
No. 25112
LICENSED
PROFESSIONAL ENGINEER

RAPHAEL I. MOHAMED, PE,PEng
SENIOR DIRECTOR OF ENGINEERING
CT PE LICENSE NO. 25112

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT.

MasTec Network Solutions
507 AIRPORT BLVD., SUITE 111
MORRISVILLE, NC 27560

SITE NAME: MRCTB045060
SITE NUMBER: CTL02094
FA NUMBER: 10035342
MNS ENG. NUMBER: 21944 - MOD1

SITE ADDRESS:
2 SUNNY LN, WESTPORT
FAIRFIELD COUNTY, CT 06880

DRAWN BY: NDN
CHECKED BY: CDG
APPROVED BY: RIM
SCALE: N.T.S

TITLE SHEET

T-1 | REV 0

MI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
PRE-CONSTRUCTION	
X	MI CHECKLIST DRAWING
N/A	EOR APPROVAL
N/A	FABRICATION INSPECTION
N/A	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF BASE PLATE
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	CONTINUOUS FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
N/A	GROUT COMP. STRENGTH (ASTM C109)
N/A	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
N/A	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
N/A	EARTHWORK: LIFT AND DENSITY
X	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
N/A	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PMI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PMI REPORT

MODIFICATION INSPECTION NOTES:

GENERAL:

1. THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF THE TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR)
2. THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR POINT OF CONTACT (POC).

MI INSPECTOR:

1. THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM

   REVIEW THE REQUIREMENTS OF THE MI CHECKLIST WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
2. THE MI IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTORS (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS. AND SUBMITTING THE MI REPORT.

GENERAL CONTRACTOR:

1. THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:
   - REVIEW THE REQUIREMENTS OF THE MI CHECKLIST.
   - WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT
   - ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
   - BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.
2. THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

MI VERIFICATION INSPECTIONS:

VERIFICATION INSPECTION MAY BE CONDUCTED BY AN INDEPENDENT FIRM AFTER A MODIFICATION PROJECT IS COMPLETED, AS MARKED BY THE OF AN ACCEPTED "PASSING MI" OR "PASS AS NOTED MI" REPORT FOR THE ORIGINAL PROJECT.

REQUIRED PHOTOS:

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTIONS AND INSPECTION:
- RAW MATERIALS
- PHOTOS OF ALL CRITICAL DETAILS
- FOUNDATION MODIFICATIONS
- WELD PREPARATION
- BOLT INSTALLATION AND TORQUE
- FINAL INSTALLED CONDITION
- SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
- FINAL IN FIELD CONDITIONS

PHOTOS OF ELEVATED MODIFICATION TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

CORRECTION OF FAILING MI'S:

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE TOWER OWNER TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.
- OR, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/ENFORCEMENT USING THE AS-BUILT CONDITION.

RECOMMENDATIONS:

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING A MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- IT MAY BE BENEFICIAL TO INSTALL ALL TOWER MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE SITE VISIT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI, THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACULTIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

CANCELLATION OR DELAYS IN SCHEDULED MI:

IF THE GC AND MI INSPECTOR AGREE TO A DATE ON WHICH THE MI WILL BE CONDUCTED, AND EITHER PARTY CANCELS OR DELAYS, TOWER OWNER SHALL NOT BE RESPONSIBLE FOR ANY COSTS, FEES, LOSS OF DEPOSITS AND/OR OTHER PENALTIES RELATED TO THE CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G. TRAVEL AND LODGING, COSTS OF KEEPING EQUIPMENT ON-SITE, ETC.). IF TOWER OWNER CONTRACTS DIRECTLY FOR A THIRD PARTY MI, EXCEPTIONS MAY BE MADE IN THE EVENT THAT THE DELAY/CANCELLATION IS CAUSED BY WEATHER OR OTHER CONDITIONS THAT MAY COMPROMISE THE SAFETY OF THE PARTIES INVOLVED.

NO.	DATE	DESCRIPTION	BY
0	05/18/19	FIRST ISSUE	NDN

REVISIONS

STATE OF CONNECTICUT
RAPHAEL MOHAMED
No. 25112
LICENSED
PROFESSIONAL ENGINEER

RAPHAEL I. MOHAMED, PE,PEng
SENIOR DIRECTOR OF ENGINEERING
CT PE LICENSE NO. 25112

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT.

MasTec Network Solutions
507 AIRPORT BLVD., SUITE 111
MORRISVILLE, NC 27560

SITE NAME: MRCTB045060
SITE NUMBER: CTL02094
FA NUMBER: 10035342
MNS ENG. NUMBER: 21944 - MOD1

SITE ADDRESS:
2 SUNNY LN, WESTPORT
FAIRFIELD COUNTY, CT 06880

DRAWN BY: NDN

CHECKED BY: CDG

APPROVED BY: RIM

SCALE: N.T.S

MODIFICATION INSPECTION CHECKLIST

N-1

REV 0

GENERAL NOTES:

1. ALL WORK PRESENTED IN THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.
2. THE CONTRACTOR MUST HAVE A MINIMUM OF 5 YEARS OF EXPERIENCE IN TOWER ERECTION AND RETROFIT SIMILAR TO THAT DESCRIBED HEREIN.
3. ALL CONSTRUCTION IS TO BE COMPLETE IN ACCORDANCE WITH THE ANSI/ASSE A10.48 AND ANSI/TIA-322 STANDARDS. THE CONTRACTOR MUST HAVE CONSIDERABLE WORKING KNOWLEDGE IN THESE STANDARDS TO ACCEPT THIS WORK. BY ACCEPTING THIS PROJECT, THE CONTRACTOR IS ATTESTING THAT HE HAS SUFFICIENT EXPERIENCE, ABILITY, AND KNOWLEDGE OF THE WORK TO BE PERFORMED AND IS PROPERLY LICENSED AND REGISTERED TO COMPLETE THIS WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS PRIOR TO BEGINNING ANY MATERIAL ORDERS, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE EOR. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR MAY PROCEED WITH THE PROJECT.
5. ANY WORK PERFORMED WITHOUT A PREFABRICATION MAPPING IS DONE AT THE RISK OF THE CONTRACTOR AND/OR FABRICATOR.
6. ALL MANUFACTURERS' INSTRUCTIONS FOR INSTALLATION MUST BE FOLLOWED EXACTLY AS SPECIFIED. WHEN CONFLICTING WITH THESE DRAWINGS, THE MANUFACTURER SPECIFICATIONS SHALL GOVERN.
7. ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF THESE DRAWINGS SHALL BE IN NEW OR GOOD WORKING QUALITY, FREE FROM DEFECTS AND FAULTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL SUBSTITUTIONS MUST BE GIVEN WRITTEN APPROVAL FROM THE EOR PRIOR TO INSTALLATION. ALL MATERIALS SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL INTENDED CONSTRUCTION ACTIVITY INCLUDING MATERIALS, ACCESS AND WORK SCHEDULE. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND WILL BE RESPONSIBLE FOR ABIDING BY ALL REQUIREMENTS AND CONDITIONS OF THE PERMITS. WHEN APPLICABLE, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTION PRIOR TO BEGINNING OF ANY CONSTRUCTION.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS. CONSTRUCTION OF THE PROPOSED WORK SHALL MEET ANSI/ASSE A10.48, OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
10. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE INSTALLATION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENTS DURING ERECTION AND/OR FIELD ALTERATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE-DOWNS THAT MAY BE NECESSARY; SUCH MATERIAL SHALL BE REMOVED AFTER THE COMPLETION OF THE PROJECT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
12. THE CLIMBING FACILITIES, SAFETY CLIMB AND ALL PARTS THEREOF SHALL NOT BE IMPEDED, MODIFIED OR ALTERED WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE EOR.
13. INCORRECTLY FABRICATED, DAMAGED, MIS-FITTING, OR NON-CONFORMING MATERIALS AND CONDITIONS SHALL BE REPORTED TO THE EOR PRIOR TO ANY REMEDIAL OR CORRECTING ACTION. ALL ACTIONS SHALL REQUIRE EOR APPROVAL.

STEEL:

1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST AISC CODE AND ASTM SPECIFICATIONS.
2. HOLES SHALL NOT BE TORCH CUT THROUGH STRUCTURAL STEEL FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC SPECIFICATIONS.
3. HOT-DIP GALVANIZE ALL ITEMS AFTER FABRICATION IN COMPLIANCE WITH ASTM A-123 UNLESS OTHERWISE SPECIFIED. ALL NEW STEEL IS TO BE PAINTED TO MATCH THE EXISTING STEEL.
4. NEW STEEL MEMBERS MUST HAVE SINGLE DRILLED HOLES. SLOTTED AND DOUBLY DRILLED HOLES ARE NOT ACCEPTABLE MEANS OF FABRICATION UNLESS OTHERWISE SPECIFIED.
5. ALL CONNECTIONS NOT DETAILED IN THESE DRAWINGS MUST BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS.
6. ALL BOLTED CONNECTIONS MUST BE INSTALLED TO A SNUG-TIGHTENED CONDITION PER AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM 325 OR A490 BOLTS" SECTION 8.1 UNLESS OTHERWISE SPECIFIED.
7. CONTRACTOR MAY BE REQUIRED TO STACK WASHERS FOR BOLTS WHERE THREADS ARE EXCLUDED FROM SHEAR PLANE TO OBTAIN SNUG TIGHT INSTALLATION. A NUT LOCKING DEVICE MUST BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS. GALVANIZED ASTM 325 OR A490 BOLTS SHALL NOT BE REUSED.

COLD GALVANIZATION:

1. ALL DAMAGED SURFACES SHALL BE REPAIRED WITH A COLD-GALVANIZING COATING CONFORMING TO ASTM 780. THIS COATING SHALL BE APPLIED BY BRUSH. THE GALVANIZING COMPOUND SHALL CONTAIN A MINIMUM OF 95% ± PURE ZINC. THE FINISHED COATING SHALL BE A MINIMUM THICKNESS OF 4 MILS.
2. CONTRACTOR TO USE ZINGA OR ZRC COLD GALVANIZATION COMPOUNDS OR APPROVED EQUIVALENTS.
3. CLEAN AREAS TO BE PREPARED AND REMOVE SLAG FROM WELDS FOR TREATMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
4. IF THE TOWER IS PAINTED, ALL TREATED AREAS ARE TO BE BRUSH PAINTED TO MATCH THE TOWER AFTER COLD GALVANIZING COMPOUND IS ALLOWED TO CURE.

U-BOLTS:

1. ALL U-BOLTS ARE TO BE ASTM A36/A307, SAE 429 GR. 2 UNLESS OTHERWISE SPECIFIED.
2. U-BOLTS SHALL MEET REQUIREMENTS OF ASME B18.31.5-2011 BENT BOLTS.
3. U-BOLT ASSEMBLY SHALL COME COMPLETE WITH NUTS (ASTM A563), WASHERS (ASTM F436), AND LOCK WASHERS.
4. FULL U-BOLT ASSEMBLY TO BE HOT-DIP GALVANIZED PER ASTM A153/A153M OR A123, AS APPLICABLE.

MODIFICATION MATERIALS

SCOPE	SHAPE	GRADE	YIELD STRENGTH (Fy)	ULTIMATE STRENGTH (Fu)
ALL	PIPE	A53 GR. B	35 KSI	60 KSI
ALL	ANGLE	A36	36 KSI	58 KSI

NO.	DATE	DESCRIPTION	BY
0	05/18/19	FIRST ISSUE	NDN

REVISIONS

RAPHAEL I. MOHAMED, PE,PEng
SENIOR DIRECTOR OF ENGINEERING
CT PE LICENSE NO. 25112

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT.

MasTec Network Solutions
507 AIRPORT BLVD., SUITE 111
MORRISVILLE, NC 27560

SITE NAME: MRCTB045060
SITE NUMBER: CTL02094
FA NUMBER: 10035342
MNS ENG. NUMBER: 21944 - MOD1

SITE ADDRESS:
2 SUNNY LN, WESTPORT
FAIRFIELD COUNTY, CT 06880

DRAWN BY: NDN

CHECKED BY: CDG

APPROVED BY: RIM

SCALE: N.T.S

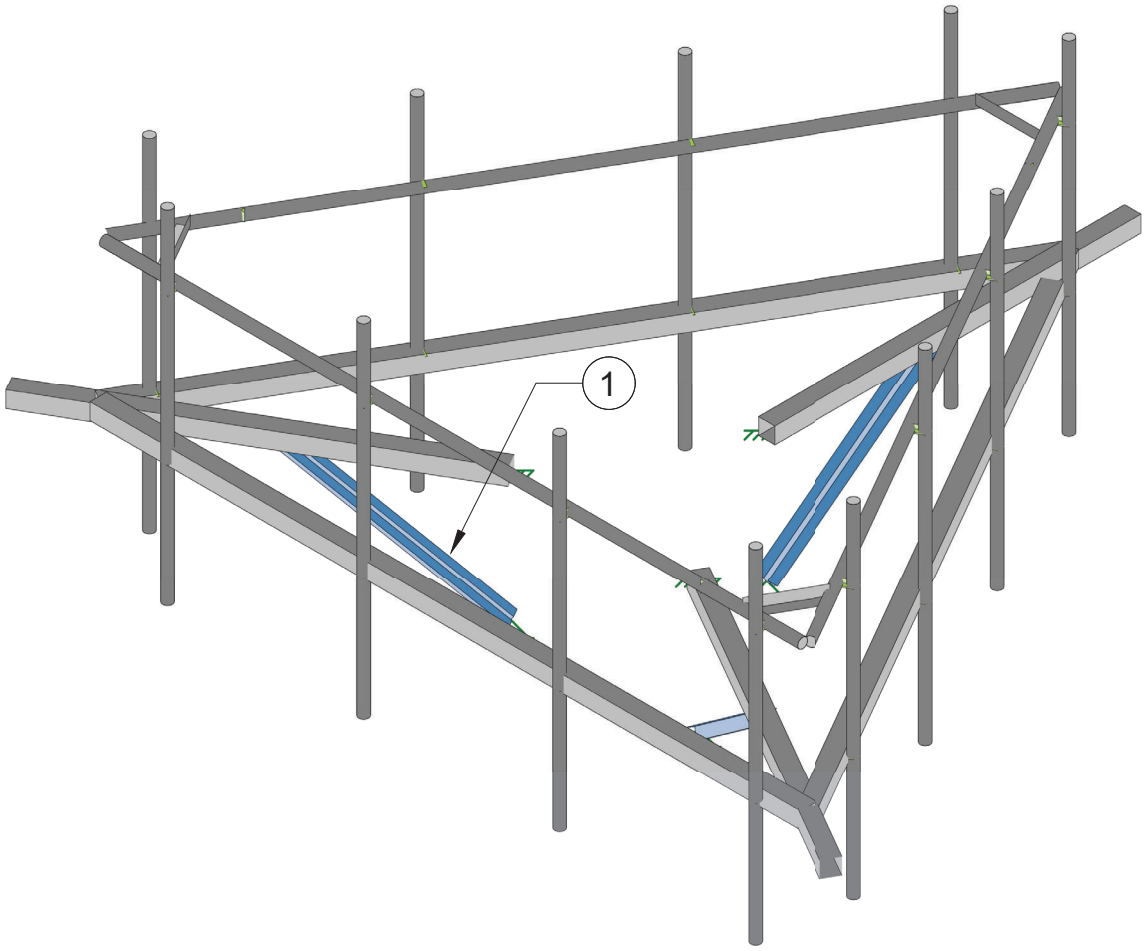
NOTES

N-2

REV 0

MODIFICATION SCHEDULE

SCOPE NO.	MODIFICATION DESCRIPTION	BOTTOM ELEVATION	TOP ELEVATION	SHEET NO.
1	INSTALLATION OF NEW PRK-1245 KICKER KIT	-	100-0" ±	S-2



NOTES:

1. APPURTENANCES MAY INTERFERE WITH PROPOSED MODIFICATIONS.
2. ALL MODIFICATIONS TO BE INSTALLED CONTINUOUSLY THROUGH EXISTING EQUIPMENT. ALL EXISTING EQUIPMENT MUST NOT BE DAMAGED OR TAKEN OFF AIR DURING INSTALLATION OF PROPOSED MODIFICATIONS.
3. ANTENNA AND COAX NOT SHOWN FOR CLARITY. SEE STRUCTURAL ANALYSIS REPORT FOR EXISTING ANTENNA LOADING AND COAX CONFIGURATION.
4. PRIOR TO FABRICATION AND INSTALLATION , CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND QUANTITIES GIVEN. INFORMATION PROVIDED IS FOR QUOTING PURPOSES ONLY, AND SHALL NOT BE USED FOR FABRICATION.
5. EXISTING RRU'S AND ANCILLARY EQUIPMENT MAY NEED TO BE TEMPORARILY RELOCATED AS NECESSARY TO COMPLETE THIS MODIFICATION. EQUIPMENT IS NOT TO BE TAKEN OFF AIR AT ANY TIME DURING INSTALLATION. PLEASE CONTACT EOR IF THIS CANNOT BE MET.
6. CONTACT EOR IF PROPOSED MOUNT REINFORCEMENT DIMENSIONS CANNOT BE MET.

NO.	DATE	DESCRIPTION	BY
0	05/18/19	FIRST ISSUE	NDN

REVISIONS

STATE OF CONNECTICUT
RAPHAEL MOHAMED
No. 25112
LICENSED
PROFESSIONAL ENGINEER

RAPHAEL I. MOHAMED, PE,PEng
SENIOR DIRECTOR OF ENGINEERING
CT PE LICENSE NO. 25112

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2 SUNNY LN, WESTPORT
FAIRFIELD COUNTY, CT 06880

DRAWN BY: NDN

CHECKED BY: CDG

APPROVED BY: RIM

SCALE: N.T.S

MODIFICATION SCHEDULE

S-1

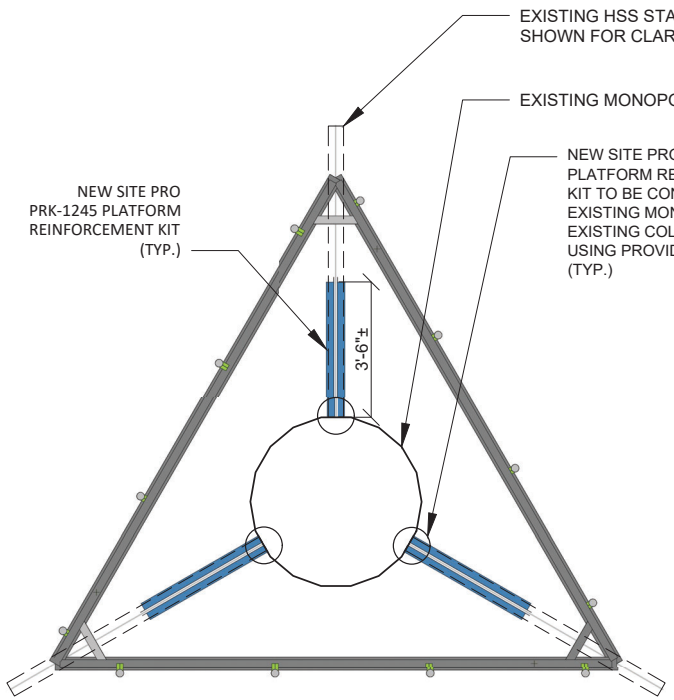
REV 0

NOTES:

1. CONTRACTOR TO FIELD VERIFY THE REQUIRED LENGTH OF THE NEW STIFF-ARM PIPES AND MAY CUT ENDS AS REQUIRED TO AVOID UNNECESSARY OVERHANG AND OVERLAP.
2. TWO COATS OF COLD GALVANIZING COATING MUST BE APPLIED TO ALL CUT ENDS IN ACCORDANCE TO ASTM A780 PRIOR TO INSTALLATION.

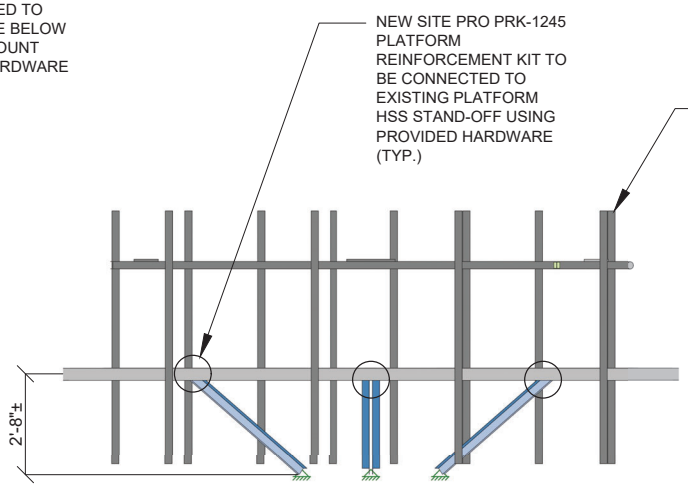
NEW PLATFORM REINFORCEMENT STABILIZER KIT MATERIAL LIST

PART NO.	QTY.	LENGTH	DESCRIPTION
SITE PRO1 PRK-1245	1	4'-4.75"	PLATFORM REINFORCEMENT KICKER KIT



2 / S-2

1 / S-2 PRK 1245 KICKER KIT INSTALLATION
PLAN VIEW
NTS



2 / S-2 PRK 1245 KICKER KIT INSTALLATION
SIDE VIEW
NTS

NO.	DATE	DESCRIPTION	BY
0	05/18/19	FIRST ISSUE	NDN

REVISIONS

STATE OF CONNECTICUT · RAPHAEL MOHAMED · No. 25112 · LICENSED PROFESSIONAL ENGINEER

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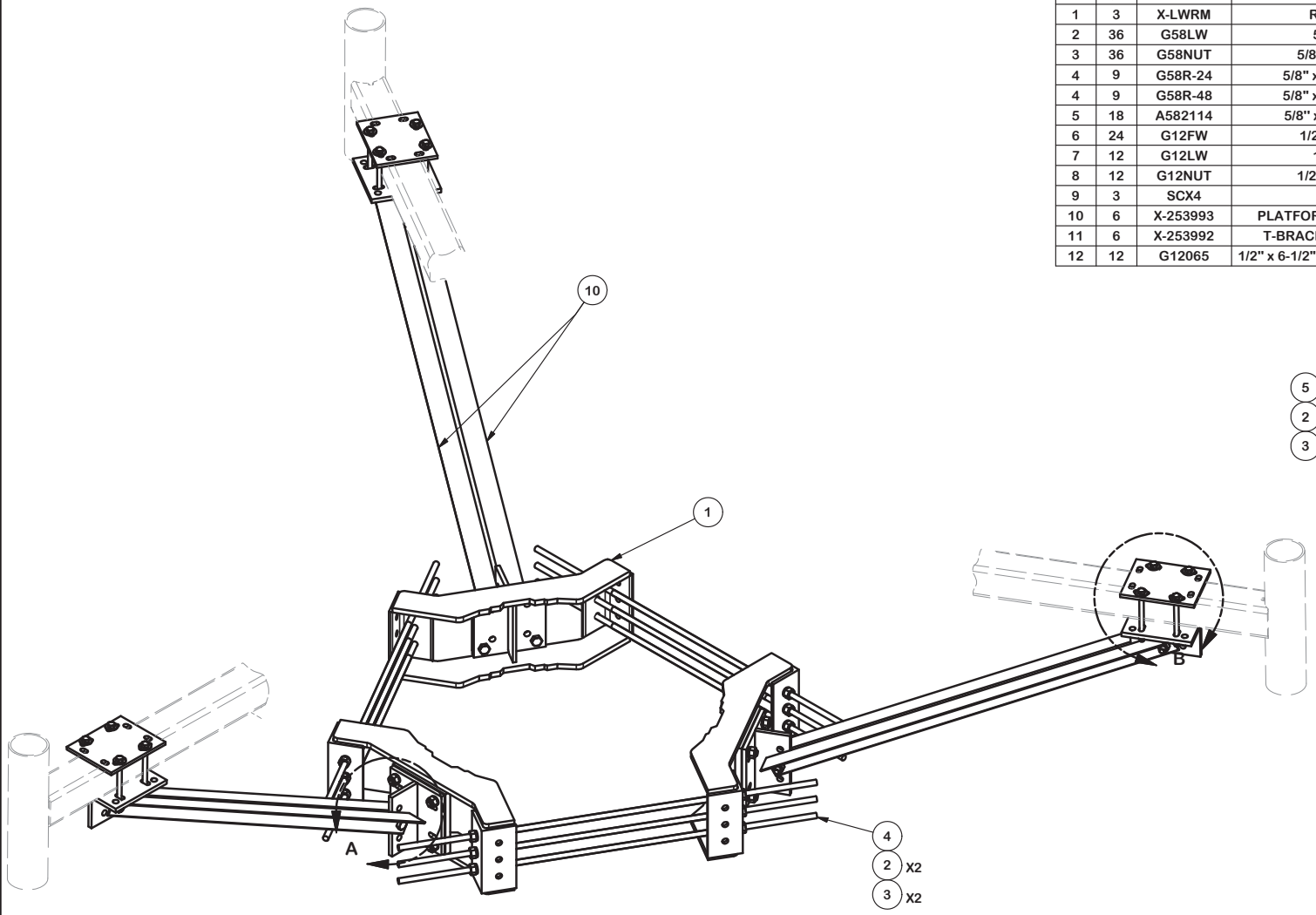
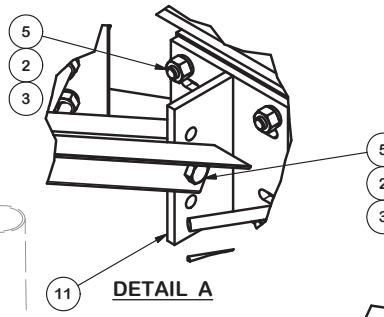
PLATFORM REINFORCEMENT DETAILS

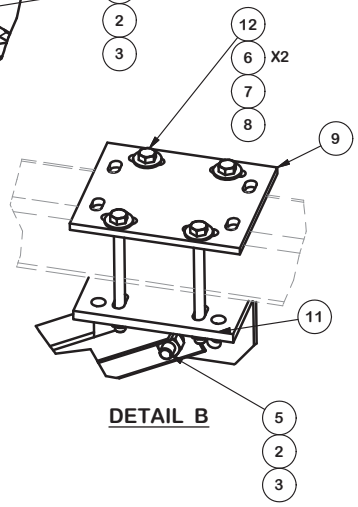
S-2 | REV 0

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-LWRM	RING MOUNT WELDMENT		68.81	206.42
2	36	G58LW	5/8" HDG LOCKWASHER		0.03	0.94
3	36	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	4.68
4	9	G58R-24	5/8" x 24" THREADED ROD (HDG.)	24 in	0.40	3.59
4	9	G58R-48	5/8" x 48" THREADED ROD (HDG.)	48 in	0.40	3.59
5	18	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	5.62
6	24	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.82
7	12	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.17
8	12	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.86
9	3	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	18.06
10	6	X-253993	PLATFORM REINFORCEMENT KIT ANGLE	52 25/32 in	14.33	85.99
11	6	X-253992	T-BRACKET FOR REINFORCEMENT KIT		13.55	81.27
12	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	4.91
					TOTAL WT. #	466.20





DETAIL A



DETAIL B

TOLERANCE NOTES

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

REVISION HISTORY				
REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	CHANGED ALL 5/8" BOLTS TO A582114	4488	CEK	10/1/2015

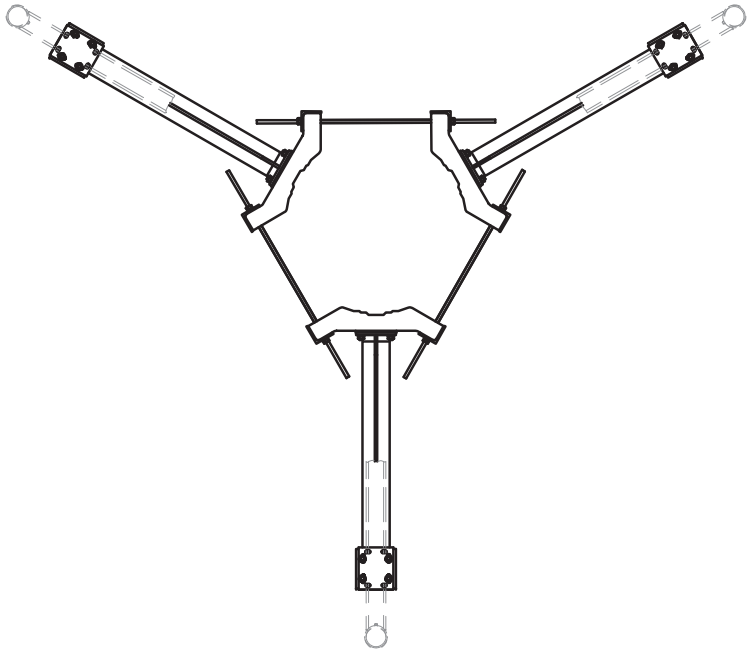
DESCRIPTION
PLATFORM RENIFORCEMENT
ON A 12" TO 45" POLE
4' 6" ANGLE

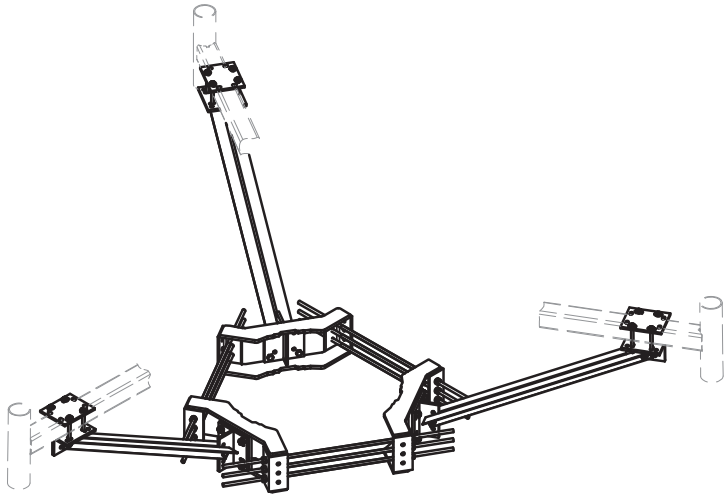
SITE PRO 1 — A valmont COMPANY

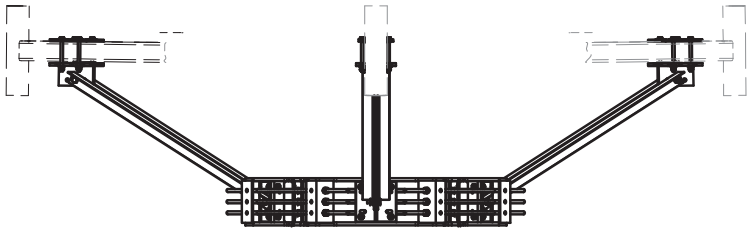
Engineering Support Team: 1-888-753-7446

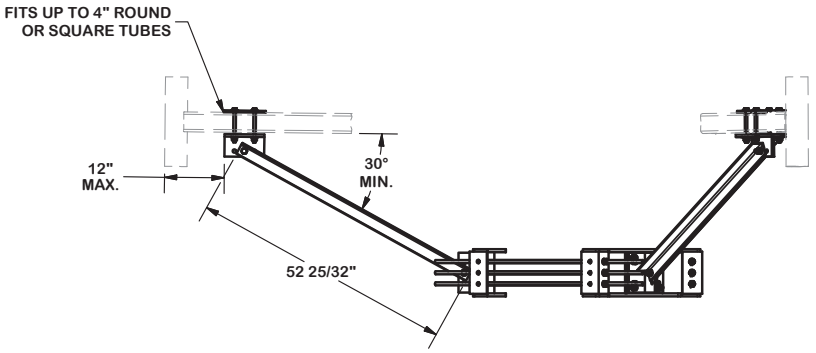
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
4488	CEK 4/11/2014		PRK-1245	1 OF 2
CLASS / SUB	DRAWING USAGE	CHECKED BY	DWG. NO.	
81 / 01	CUSTOMER	BMC 1/18/2016	PRK-1245	









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DESCRIPTION
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ON A 12" TO 45" POLE
4' 6" ANGLE

SITE PRO 1
A valmont COMPANY

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CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4488	CEK 4/11/2014		PRK-1245

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	01	CUSTOMER	BMC 1/18/2016	PRK-1245

EXHIBIT 2

AMERICAN TOWER®

MasTec Network Solutions

April 24, 2020

Geoff Middlebrooks
American Tower Corporation
3500 Regency Parkway, Suite 100
Cary, NC 27518

MasTec Network Solutions
507 Airport Blvd, Suite 111
Morrisville, NC 27560
Tel (919) 674-5895
MNS.Engineering@mastec.com

Subject:	**Mount Structural Analysis**	
ATC Designation:	**Site Name:**	Cranburysu CT
	Site Number:	411189
Carrier Designation:	**Carrier:**	AT&T
	Site Name:	MRCTB045060
	Site Number:	CTL02094
	FA Number:	10035342
Engineering Firm Designation:	**MNS Project Number:**	21944-MNT1
Site Data:	**2 Sunny Ln, Westport, Fairfield County, CT 06880** **Latitude 41.1628°, Longitude -73.3735°** **130 ft Monopole** **100 ft RAD Center (14.5 ft Platform w/ Handrail)**	

Dear Geoff,

MasTec Network Solutions is pleased to submit this **Mount Structural Analysis** to determine the structural integrity of the above-mentioned structure.

This analysis has been performed in compliance with the *ANSI/TIA-222-H Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures*. Based on our analysis we have determined the structural strength to have the following result:

Antenna Mounting Structure	**200%**	**Insufficient**

We at MasTec Network Solutions appreciate the opportunity of providing continued specialty services. Please do not hesitate to contact our office should you have any questions.

Prepared By:

Noah Noxon, EIT
Structural Engineer I

STATE OF CONNECTICUT
RAPHAEL MOHAMED
No. 25112
LICENSED
PROFESSIONAL ENGINEER

Raphael Mohamed

Reviewed By:

Raphael I. Mohamed, PE, PEng
Senior Director of Engineering
CT PE License No. 25112

This item has been digitally signed and sealed by Raphael I. Mohamed, PE.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MasTec
Network Solutions

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The purpose of this analysis is to determine the acceptability of AT&T's proposed loading. Documents used for this analysis are stated in **Table 1**. This analysis has been performed in compliance with the applicable codes and parameters listed in **Table 2**.

Table 1: Referenced Documents

Company	Document Type	Reference	Date
Fullerton Engineering	Previous Mount Analysis	Project No. 2016.0200.0024	7/6/2016
MasTec	Mount Mapping	ATC# 411189	4/17/2020
ATC	APP	ATC# 411189	4/21/2020
AT&T	RFDS	RFDS Name: CTL05127	2/25/2020

Table 2: Design Basis

Codes and Standards	
TIA Standard	*ANSI/TIA-222-H*
Wind Parameters	
Ultimate Wind Speed	117 mph
Nominal Wind Speed with Ice	50 mph
Radial Ice Thickness	1 in
Operational Wind Speed	30 mph
Exposure Category	B
Risk Category	II
Topographic Category	1
Seismic Parameters	
S_s	0.233
S_1	0.056
Man Load	
Maintenance Load, L_m	500 lbs
Maintenance Load, L_v	250 lbs

Seismic effects have been considered in accordance with *Section 2.7 of TIA-222-H.*

Based on our analysis, we have determined the mounting components to be **Inadequate** to support the existing and proposed loading as described in **Table 3** of this analysis report.

To ensure the requirements of the applicable standards are met, we have the following recommendations:

Recommendations:

1) All bolts and hardware should be checked for tightness and condition prior to installing the proposed equipment.
2) Reinforce existing mount with (1) Site Pro PRK-1245 kit and associated hardware for each sector. Modification drawings will be required to show the necessary attachment points and part details.

CARRIER LOADING

The existing and proposed antenna equipment with corresponding mounts are shown below in **Table 3**. If the equipment listed below differs from actual field conditions, MasTec Network Solutions should be contacted to review the discrepancies.

Table 3: Appurtenance Loading

Final Carrier Loading:

Mount Elevation (ft)	Antenna Elevation (ft)	Qty	Description	Carrier	Mount Type	Notes
100	100	3	CCI OPA65R-BU6D	AT&T	(1) 14.5' Platform with Handrail	--
		3	CCI DMP65R-BU6DA			
		3	CCI HPA-65R-BUU-H6			
		3	Powerwave Allgon 7770.00			
		6	Kathrein 860-10025			
		1	Raycap DC6-48-60-18-8F			
		1	Raycap DC9-48-60-24-8C-EV			
		3	Ericsson RRUS 4449 B5/B12			
		6	Ericsson RRUS 4415 B30			
		3	Ericsson RRUS 8843 B2/B66			
		1	GPS			

ANALYSIS RESULTS

RISA-3D (V17.0.2), a commercially available software package for structural analysis, was used to create a three-dimensional model of the structure and calculate member stresses for various loading cases. Selected output from the analysis is included in **APPENDIX 3**. Please find below a summary of the structure analysis results.

Capacity percentages below 105% are considered acceptable for structure components.

Table 4: Mount Components

Structural Component	Capacity Percentage	Result	Notes
Standoffs	50%	Pass	1
Face Horizontals	23%	Pass	1
Support Rails	16%	Pass	1
Mount Pipes	39%	Pass	1
Corner Angles	8%	Pass	1

1. Please see **APPENDIX 3** for calculation details

Table 5: Additional Structural Components

Component	Percentage	Result	Notes
Connection Bolts	21%	Pass	1
Connection Plate	200%	Fail	1

1. Please see **APPENDIX 2** for calculation details.

ASSUMPTIONS, LIMITATIONS AND DISCLAIMER

1) The mount was built in accordance with the designer's specifications and the mount has been maintained and is free of damage.
2) This Structural Analysis is not a condition assessment of the mount and is an evaluation of the theoretical structural capacity.
3) This analysis is based from the information supplied, and therefore, this report's results are as accurate as the supplied data.
4) MasTec Network Solutions makes no warranties, expressed and/or implied, in connection with this report, and disclaims any liability associated with material, fabrication, or erection of this tower. MasTec will not be held responsible from any consequential or incidental damages sustained by any person, firm, or organization as a result of the contents of this report. The maximum liability of MasTec pursuant to this report will be limited to the total fee received for compilation of this report.
5) It is the tower owner's responsibility to verify that the mount modeled and analyzed is the correct structure modeled.
6) The use of this report shall be limited to the purpose for which it was commissioned and may not be used for any other purposes without the written consent of MasTec Network Solutions.
7) The mount was properly fabricated and was constructed and has been maintained in accordance with manufacturer's specifications.
8) The connection from the tower to the mount is assumed to be adequate and in good condition.
9) Member connections are assumed to have been designed to meet for exceed the theoretical capacity of the connected member.
10) Steel grades have been assumed as follows:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM 500 (GR B-46)
HSS (Round)	ASTM 500 (GR B-42)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325
U-Bolts	SAE 429 Gr.2

APPENDIX 1: LOADING PARAMETERS

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: 51.13 ft (NAVD 88)
Latitude: 41.162811
Longitude: -73.373516

Wind

Results:

Wind Speed:	117 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph
Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4
Date Accessed:	Fri Apr 24 2020

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.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

ASCE
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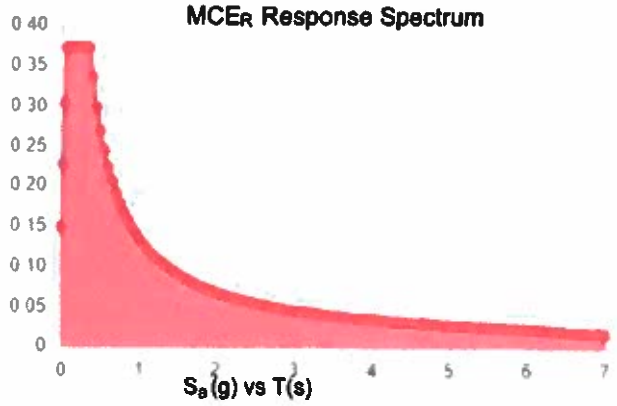
Seismic

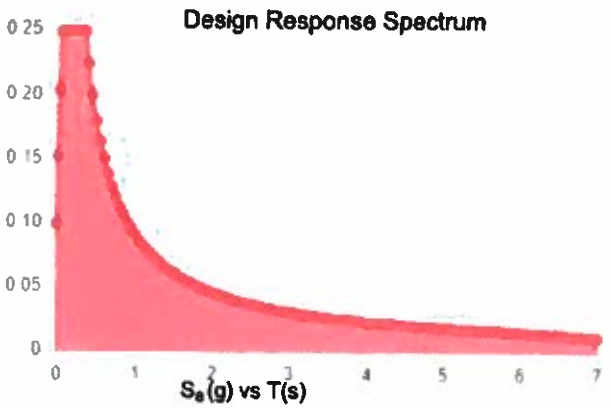
Site Soil Class: D - Default (see Section 11.4.3)

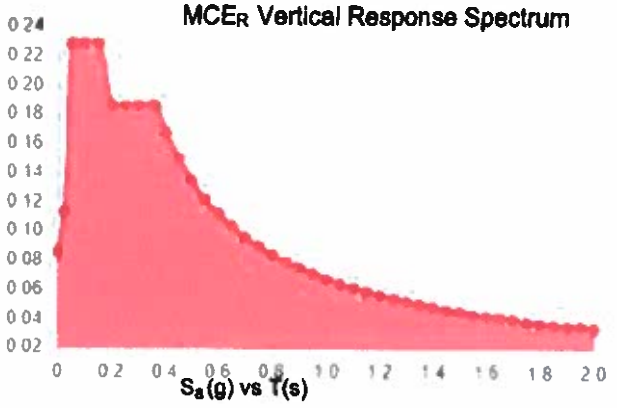
Results:

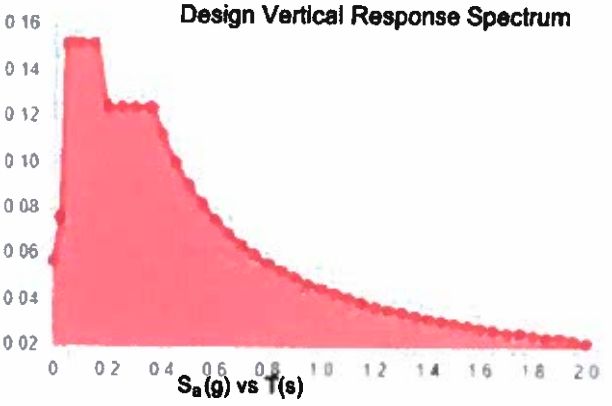
S_S :	0.233	S_{D1} :	0.09
S_1 :	0.056	T_L :	6
F_a :	1.6	PGA :	0.136
F_v :	2.4	PGA_M :	0.208
S_{MS} :	0.373	F_{PGA} :	1.528
S_{M1} :	0.135	I_e :	1
S_{DS} :	0.249	C_v :	0.766

Seismic Design Category B









Data Accessed: Fri Apr 24 2020

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.

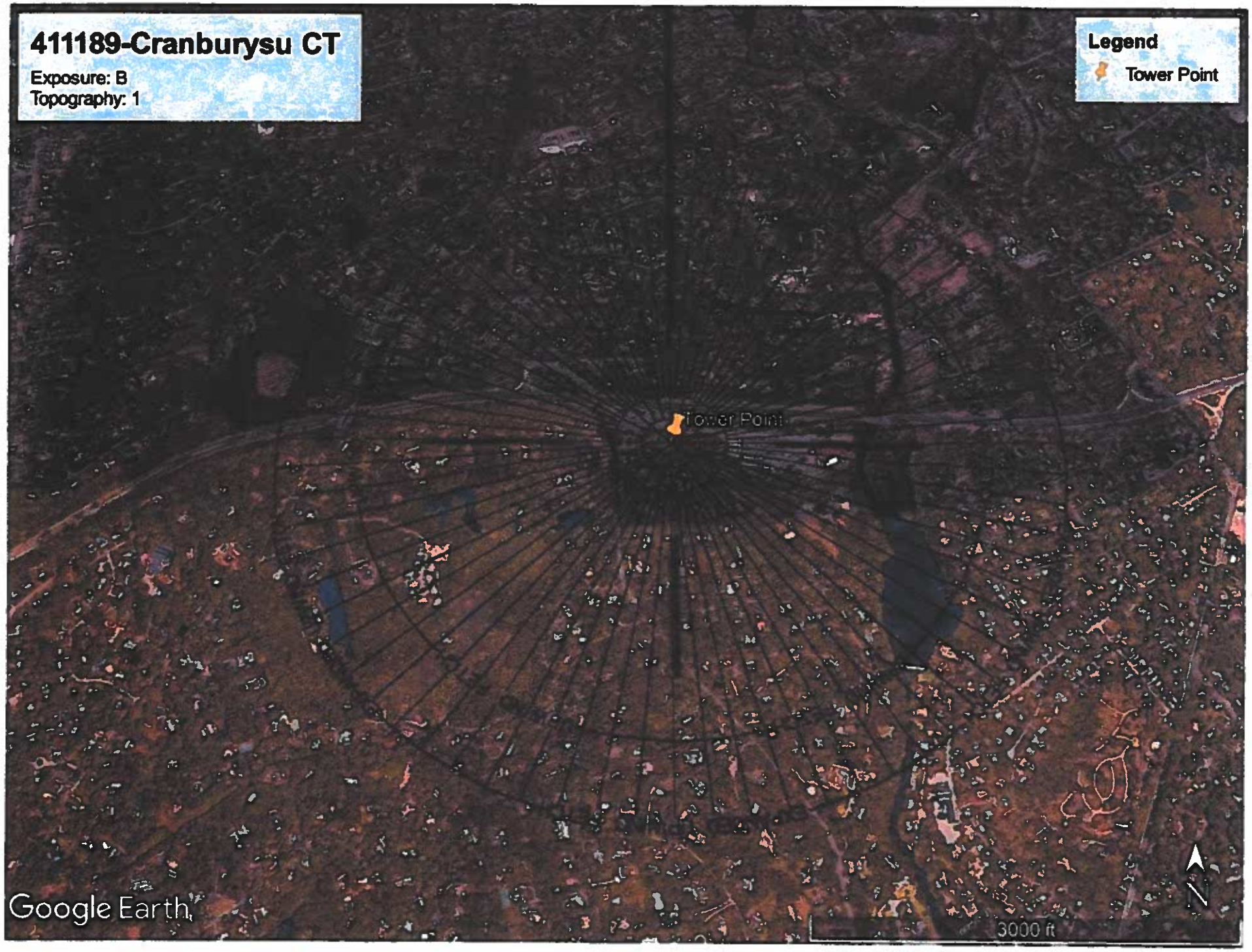
Ice

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 Apr 24 2020

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.


411189-Cranburysu CT
Exposure: B
Topography: 1
Legend
Tower Point
Tower Point
Google Earth
3000 ft

APPENDIX 2: LOADING CALCULATIONS

MasTec
Network Solutions

Mount Analysis Tool

Site Name	Cranburysu CT		
Site ID	411189		
Job Number	21944-MNT1	Mount Existing?	Existing
Code	H	Risk Category	II

Legend	
Input	
Calculated	
Notes	

Maximum Capacity		
Controlling Capacity	50.2%	PASS

Analysis Parameters

Mount Height	100	ft
Exposure Category	B	(B,C, or D)
Ultimate Wind Speed	117	mph
Ice Wind Speed	50	mph
Design Ice Thickness, t_i	1	in
Maintenance Wind Speed	30	mph
Run Earthquake Analysis?	Yes	
Ground Elevation	51.13	ft, Google Earth
S_1	0.056	USGS
S_{DS}	0.249	2.7.5
Vertical Seismic Loads, E_v	0.050	2.7.6
Seismic Response Coefficient, C_s	0.125	2.7.7.1.1
C_s Min	0.030	2.7.7.1.1

Wind Parameters

Gust Effect Factor, G_h	1.000	2.6.9	K_t	1.000	2.6.7
K_z	0.988	2.6.5.2	K_d	0.998	2.6.8
K_{zt}	1.000	2.6.6	K_s	0.900	16.6
K_d	0.950	Table 2-2	*Note for Rooftop Structures greater than 50', unobstructed for 90 deg and protruding 50' above surrounding buildings Ks must be calculated.		
q_z	29.647	psf, 2.6.11.6			
C/D	116.309	Table 2-9			
t_e	1.117	in, 2.6.10			
q_{zi}	5.414	psf, 2.6.9.6	I, Ice	1.000	Table 2-3
C/D $_{ice}$	49.705	Table 2-9	I, EQ	1.000	Table 2-3
$q_{maintenance}$	1.947	psf, 2.6.9.6	$K_{es\ mtnce}$	1.000	Table S-1
C/D $_{maintenance}$	29.823	Table 2-9	$K_{es\ ice}$	1.000	Table S-1
Ice Dead, Grating	0.010427624	ksf			

Pipe Mounts (Orientation Drawn Top-Down)

Risa 3D Label	Elevation (ft)	Length (in)	Diameter (in)
A1	99	84	2.375
A2	99	84	2.375
A3	99	84	2.375
A4	99	84	2.375
B1	99	84	2.375
B2	99	84	2.375
B3	99	84	2.375
B4	99	84	2.375
C1	99	84	2.375
C2	99	84	2.375
C3	99	84	2.375
C4	99	84	2.375
K1	99	2	2.375
K2	99	2	2.375
K3	99	2	2.375

Appurtenances

Model	Type	Height (in)	Width (in)	Depth (in)	Weight (lbs)
Powerwave 7770	Antenna	55	11	5	35
CCI HPA-65R-BUU-H6	Antenna	72.3	14.8	9	51
CCI OPA65R-BU6DA	Antenna	71.2	21	7.8	60.2
CCI DMP65R-BU6DA	Antenna	71.2	20.7	7.7	79.4
Ericsson RRUS 4415 B30	RRU, TMA, Etc.	14.96	13.18	5.04	42.9
Ericsson 82/B66A 8843	RRU, TMA, Etc.	14.96	13.2	11.1	75
Ericsson RRUS 4449 B5/B12	RRU, TMA, Etc.	14.96	13.19	10.43	73
Raycap DC9-48-60-24-8C-EV	Round	18.28	10.24	31.4	26.2
Kathrein 860-10025	RRU, TMA, Etc.	5.9	2.4	2	1.16
Kathrein 860-10006	RRU, TMA, Etc.	1.7	19	9.8	3
Raycap DC6-48-60-18-8F	Round	22.25	11	11	18.9

Pipe Mount	Antenna	Elevation (ft)	Quantity	Orientation (deg)	Front Exposed (%)	Side Exposed (%)	Type	Height (in)	Width (in)	Depth (in)	Weight (lbs)	Front Area (ft²)	Side Area (ft²)	Front K_a (in²)	Side K_a (in²)	Twist %	Bending %
A1	Powerwave 7770	100	1	0	100.0%	100.0%	Antenna	55.000	11.000	5.000	35.000	5.506	2.926	0.163	0.087	3.0%	66.6%
A1																	
A1																	
A1																	
A1																	
A1																	
A2	CCI HPA-65R-BUU-H6	100	1	0	100.0%	100.0%	Antenna	72.300	14.800	8.000	51.000	8.706	6.482	0.288	0.192	0.0%	78.6%
A2	Ericsson RRUS 4415 B30	101	1	0	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.189	5.040	42.900	1.643	0.839	0.000	0.019	12.6%	30.3%
A2																	
A2																	
A2																	
A2																	
A3	CCI OPA65R-BU6DA	100	1	0	100.0%	100.0%	Antenna	71.200	21.000	7.800	80.200	12.671	6.673	0.382	0.199	0.0%	78.1%
A3	Ericsson B2/B66A 8843	101	1	0	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.200	11.100	76.000	1.846	1.384	0.000	0.041	12.6%	30.3%
A3																	
A3																	
A3																	
A3																	
A4	CCI DMP65R-BU6DA	100	1	0	100.0%	100.0%	Antenna	71.200	20.700	7.700	78.400	12.709	6.615	0.377	0.198	0.0%	78.1%
A4	Ericsson RRUS 4449 B5/B12	101	1	0	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.189	10.430	73.000	1.844	1.309	0.000	0.039	12.6%	30.3%
A4																	
A4																	
A4																	
A4																	
B1	Powerwave 7770	100	1	120	100.0%	100.0%	Antenna	55.000	11.000	5.000	35.000	5.506	2.926	0.169	0.144	3.0%	66.6%
B1																	
B1																	
B1																	
B1																	
B1																	
B2	CCI HPA-65R-BUU-H6	100	1	120	100.0%	100.0%	Antenna	72.300	14.800	8.000	51.000	8.706	6.482	0.216	0.284	0.0%	78.6%
B2	Ericsson RRUS 4415 B30	101	1	120	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.189	5.040	42.900	1.643	0.839	0.000	0.041	12.6%	30.3%
B2																	
B2																	
B2																	
B2																	
B3	CCI OPA65R-BU6DA	100	1	120	100.0%	100.0%	Antenna	71.200	21.000	7.800	80.200	12.671	6.673	0.222	0.328	0.0%	78.1%
B3	Ericsson B2/B66A 8843	101	1	120	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.200	11.100	76.000	1.846	1.384	0.000	0.047	12.6%	30.3%
B3																	
B3																	
B3																	
B3																	
B4	CCI DMP65R-BU6DA	100	1	120	100.0%	100.0%	Antenna	71.200	20.700	7.700	78.400	12.709	6.615	0.319	0.294	0.0%	78.1%
B4	Ericsson RRUS 4449 B5/B12	101	1	120	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.189	10.430	73.000	1.844	1.309	0.000	0.048	12.6%	30.3%
B4																	
B4																	
B4																	
B4																	
C1	Powerwave 7770	100	1	240	100.0%	100.0%	Antenna	55.000	11.000	5.000	35.000	5.506	2.926	0.169	0.144	3.0%	66.6%
C1																	
C1																	
C1																	
C1																	
C1																	
C2	CCI HPA-65R-BUU-H6	100	1	240	100.0%	100.0%	Antenna	72.300	14.800	8.000	51.000	8.706	6.482	0.216	0.284	0.0%	78.6%
C2	Ericsson RRUS 4415 B30	101	1	240	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.189	5.040	42.900	1.643	0.839	0.000	0.041	12.6%	30.3%
C2																	
C2																	
C2																	
C2																	
C3	CCI OPA65R-BU6DA	100	1	240	100.0%	100.0%	Antenna	71.200	21.000	7.800	80.200	12.671	6.673	0.222	0.328	0.0%	78.1%
C3	Ericsson B2/B66A 8843	101	1	240	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.200	11.100	76.000	1.846	1.384	0.000	0.047	12.6%	30.3%
C3																	
C3																	
C3																	
C3																	

C4	CCI DMP65R-BUSOA	100	1	240	100.0%	100.0%	Antenna	71.200	20.700	7.700	78.400	12.708	5.615	0.219	0.324	0.0%	78.1%
C4	Ericsson RRUS 4449 B5/B12	101	1	240	0.0%	100.0%	RRU, TMA, Etc.	14.980	13.180	10.430	73.000	1.844	1.300	0.000	0.048	12.5%	30.3%
C4																	
C4																	
C4																	
C4																	
C4																	
K1	Kathrein 860-10025	100	2	0	0.0%	100.0%	RRU, TMA, Etc.	5.900	2.400	2.000	2.320	0.116	0.100	0.000	0.006	0.0%	0.0%
K1																	
K1																	
K1																	
K1																	
K1																	
K2	Kathrein 860-10025	100	2	120	0.0%	100.0%	RRU, TMA, Etc.	5.900	2.400	2.000	2.320	0.116	0.100	0.000	0.007	0.0%	0.0%
K2																	
K2																	
K2																	
K2																	
K2																	
K3	Kathrein 860-10025	100	2	240	0.0%	100.0%	RRU, TMA, Etc.	5.900	2.400	2.000	2.320	0.116	0.100	0.000	0.007	0.0%	0.0%
K3																	
K3																	
K3																	
K3																	
K3																	

Member	Section Set	Member Length (ft)	Flat/Round	Wind Projection (in)	D_i (in)	A_g (in^2)	K_z	Front Wind (klf)	Side Wind (klf)	Front Ice Wind (klf)	Side Ice Wind (klf)	Ice Dead (klf)	Front Moment Wind (kip)	Side Moment Wind (kip)
M1	Face Horizontals	14.5	Flat	4.000	5.657	23.777	2.000	0.020	0.000	0.005	0.001	0.009	0.001	0.000
M2	Face Horizontals	14.49999969	Flat	4.000	5.657	23.777	2.000	0.005	0.015	0.001	0.005	0.009	0.000	0.001
M3	Face Horizontals	14.49999969	Flat	4.000	5.657	23.777	2.000	0.005	0.015	0.001	0.005	0.009	0.000	0.001
M4	Standoffs	7.5	Flat	4.000	5.657	23.777	2.000	0.000	0.020	0.000	0.004	0.009	0.000	0.001
M5	Standoffs	7.500000408	Flat	4.000	5.657	23.777	2.000	0.015	0.005	0.004	0.002	0.009	0.001	0.000
M6	Standoffs	7.500000408	Flat	4.000	5.657	23.777	2.000	0.015	0.005	0.004	0.002	0.009	0.001	0.000
M7	RIGID	0.25	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M8	RIGID	0.25	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M9	RIGID	0.25	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M10	RIGID	0.25	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M11	RIGID	0.250000542	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M12	RIGID	0.250000542	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000
M13	RIGID	0.250000542	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000
M14	RIGID	0.250000542	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000
M15	RIGID	0.249999896	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000
M16	RIGID	0.249999896	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000
M17	RIGID	0.249999896	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000
M18	RIGID	0.249999896	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000
M19	Support Rails	14.25	Round	2.375	2.375	12.258	1.200	0.007	0.006	0.000	0.001	0.005	0.000	0.000
M20	Support Rails	14.25	Round	2.375	2.375	12.258	1.200	0.002	0.005	0.001	0.001	0.005	0.000	0.000
M21	Support Rails	14.25	Round	2.375	2.375	12.258	1.200	0.002	0.005	0.001	0.001	0.005	0.000	0.000
M22	RIGID	0.25	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M23	RIGID	0.25	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M24	RIGID	0.25	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M25	RIGID	0.25	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000
M26	RIGID	0.250000542	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.002	0.002	0.000	0.000
M27	RIGID	0.250000542	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.002	0.002	0.000	0.000
M28	RIGID	0.250000542	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.002	0.002	0.000	0.000
M29	RIGID	0.250000542	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.002	0.002	0.000	0.000
M30	RIGID	0.249999896	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.002	0.002	0.000	0.000
M31	RIGID	0.249999896	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.002	0.002	0.000	0.000
M32	RIGID	0.249999896	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.002	0.002	0.000	0.000
M33	RIGID	0.249999896	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.002	0.002	0.002	0.000	0.000
M34	Corner Angles	1.333333534	Flat	2.500	3.536	16.331	2.000	0.003	0.009	0.001	0.001	0.006	0.000	0.001
M35	Corner Angles	1.333333	Flat	2.500	3.536	16.331	2.000	0.012	0.000	0.004	0.002	0.006	0.001	0.000
M36	Corner Angles	1.333333534	Flat	2.500	3.536	16.331	2.000	0.003	0.009	0.001	0.002	0.006	0.000	0.001
B1	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
A4	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
B2	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
B3	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
A3	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
B4	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
C1	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
A2	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
C2	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
C3	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
A1	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
C4	Mount Pipes	7	Round	2.380	2.380	12.275	1.200	0.007	0.007	0.003	0.003	0.005	0.000	0.000
K2	RIGID	0.166666	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.004	0.004	0.002	0.000	0.000
K1	RIGID	0.166666	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.004	0.004	0.002	0.000	0.000
K3	RIGID	0.166666	Flat	0.000	0.000	3.921	2.000	0.000	0.000	0.004	0.004	0.002	0.000	0.000

MasTec
Network Solutions

Bolt Calcuations:

Bolt Size:	3/4	in
# Bolts:	4	
Plate Width:	6	in
Plate Height:	10	in
Bolt H Gap:	3	in
Bolt V Gap:	8	in
Plate T:	0.5	in
Bolt Grade:	A325N	
Fu_{bolt}	120	ksi
r:	4.272	in
J:	73.000	in^4/in^2
Bolt Area, Normal:	0.442	
Bolt Area, Net Tensile:	0.334	in^2

Allowable Shear:	17.9	kip
Allowable Tension:	30.1	kip

Tension Capacity:	20.8%
Shear Capacity:	4.9%
Combined Capacity:	4.6%

Bolt Capacity:	20.8%

Plate Calculations:

Horizontal Member Height:	4	in
Horizontal Member Width:	4	in
Plate Grade:	A36	
Plate Fy:	36	ksi

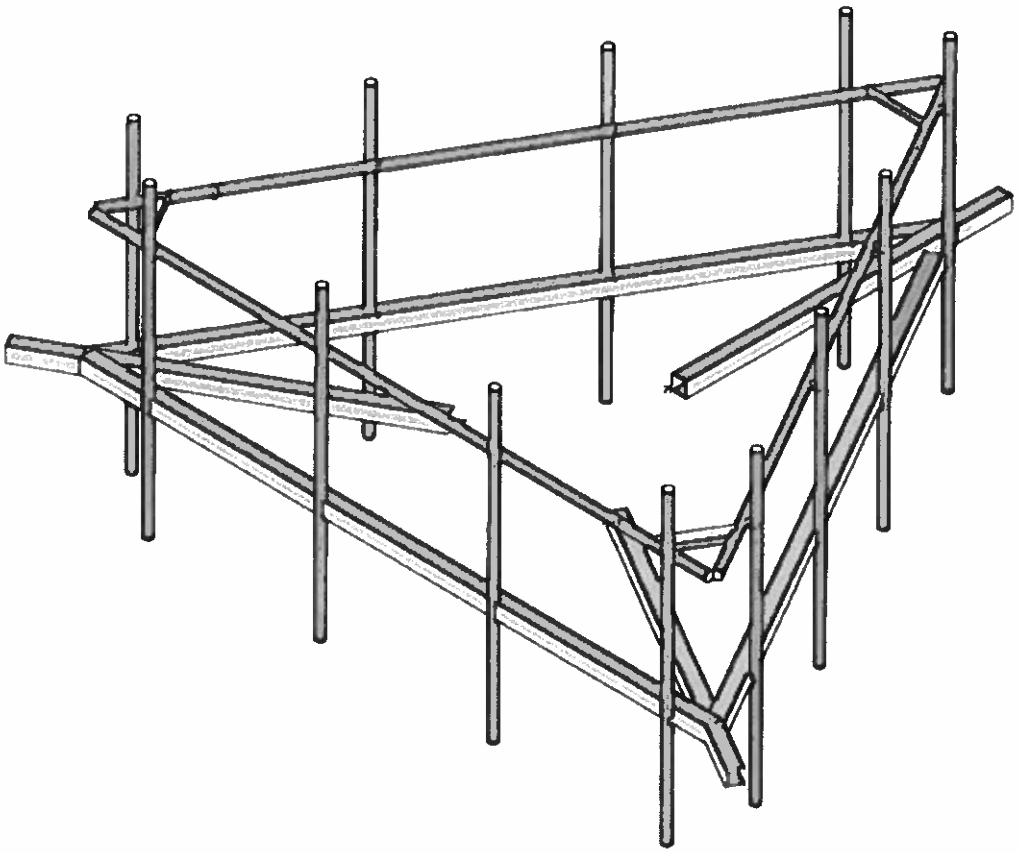
Mx =	0.000	k*in
Mz =	24.272	k*in

Zx =	0.625	in^3
Zz =	0.375	in^3

ØMpy (X) =	20.250	k - in
ØMpx (X) =	12.150	k - in

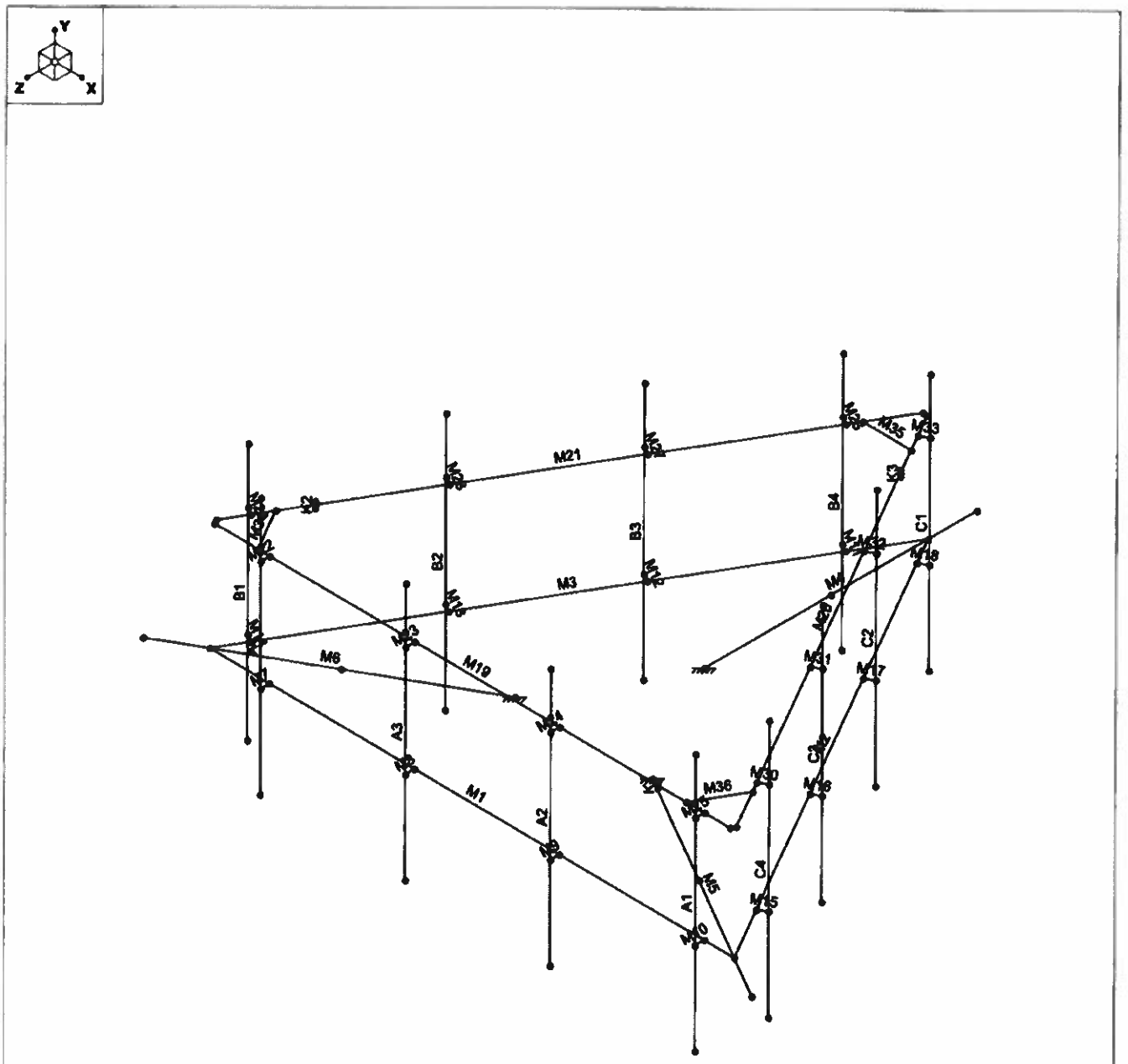
Plate Capacity:	199.8%

APPENDIX 3: RISA 3D OUTPUT



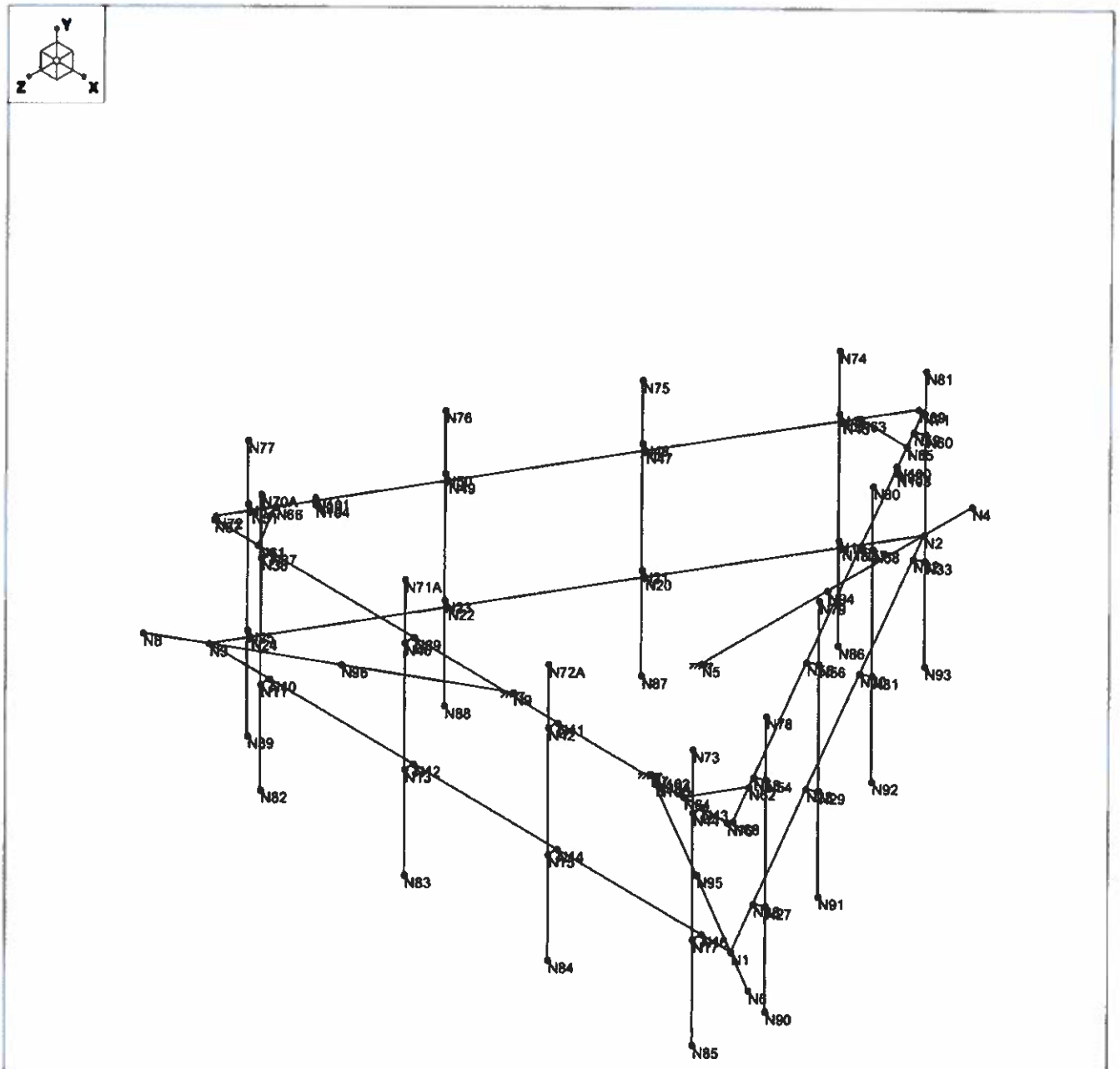
Envelope Only Solution

Mastec	ATC411189-Cranburysu CT-10035342	Render
NDN		Apr 24, 2020 at 1:39 PM
21944-MNT1		21944-MNT1.R3D



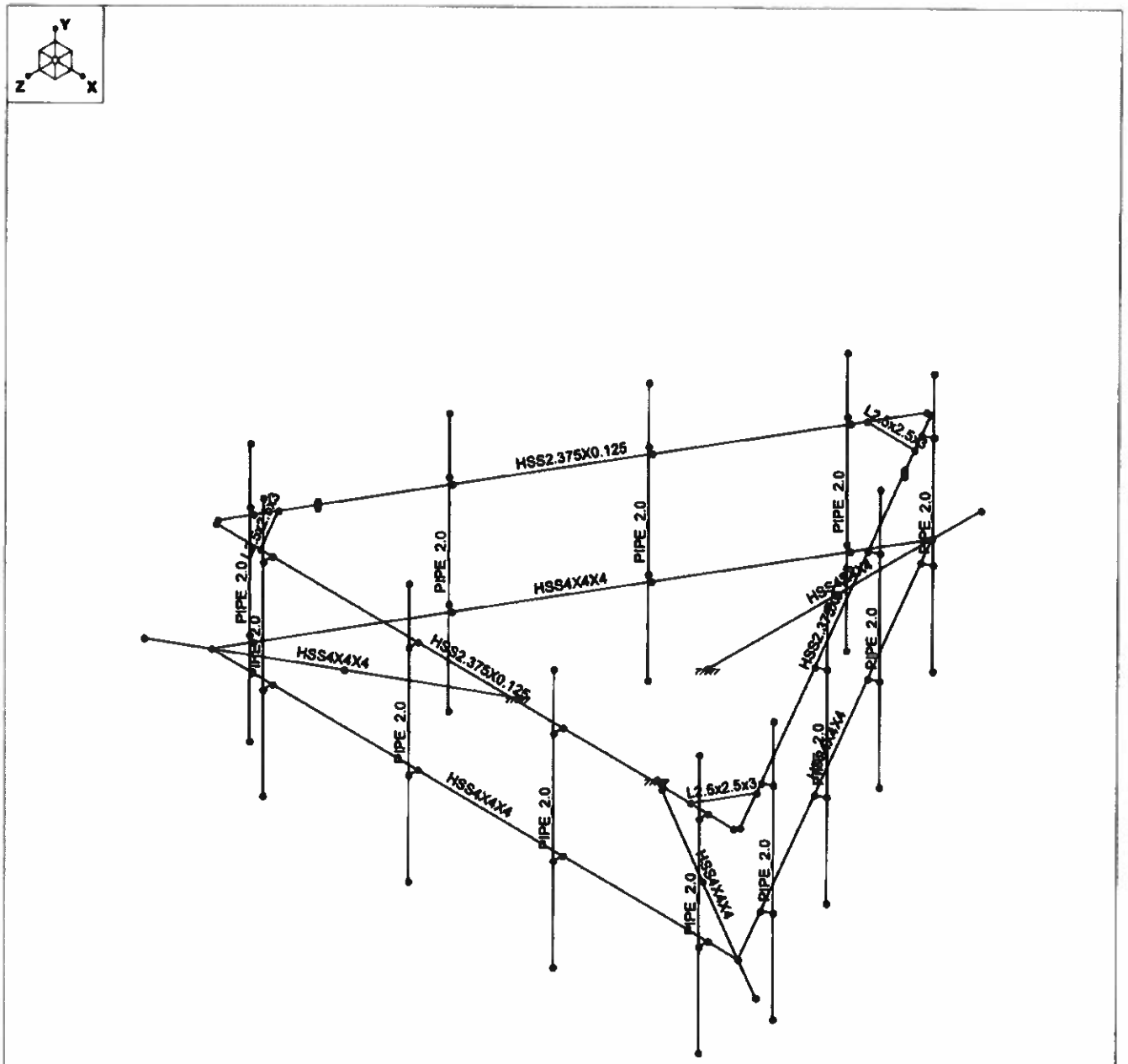
Envelope Only Solution

Mastec	ATC411189-Cranburysu CT-10035342	Member Labels
NDN		Apr 24, 2020 at 1:40 PM
21944-MNT1		21944-MNT1.R3D



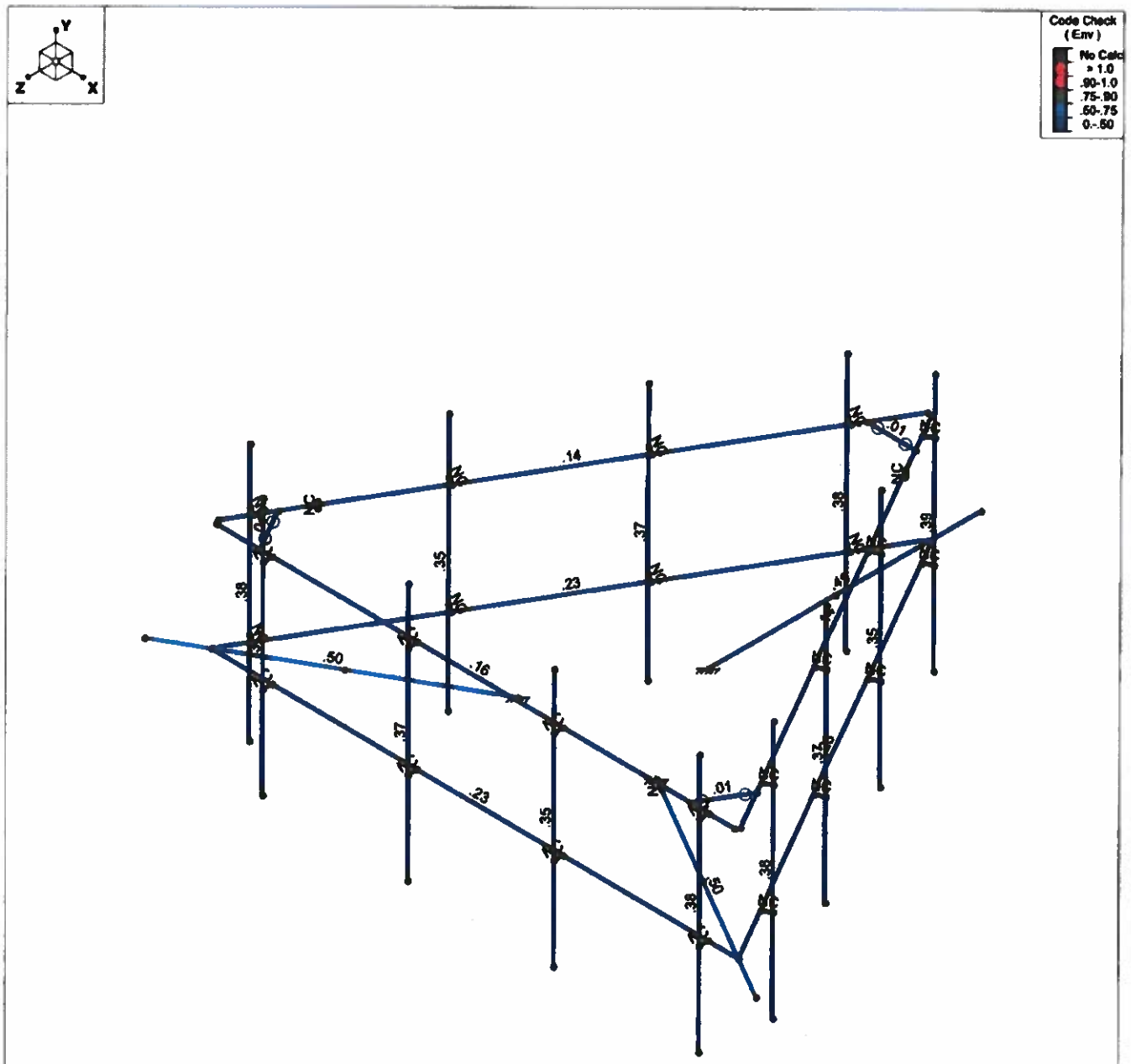
Envelope Only Solution

Mastec	ATC411189-Cranburysu CT-10035342	Joint Labels
NDN		Apr 24, 2020 at 1:40 PM
21944-MNT1		21944-MNT1.R3D



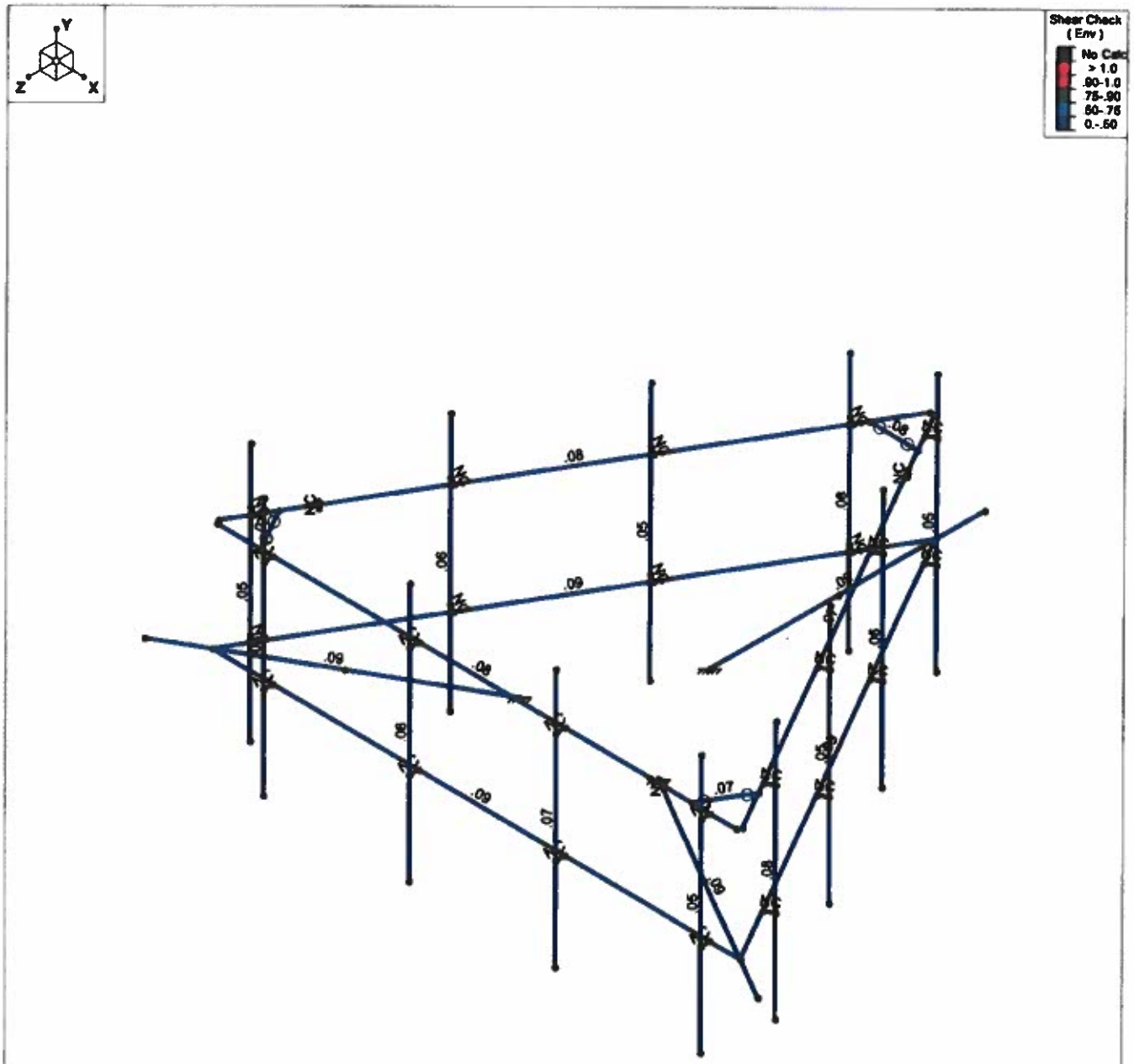
Envelope Only Solution

Mastec	ATC411189-Cranburysu CT-10035342	Shapes
NDN		Apr 24, 2020 at 1:40 PM
21944-MNT1		21944-MNT1.R3D



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Mastec	ATC411189-Cranburysu CT-10035342	Unity Bending Check
NDN		Apr 24, 2020 at 6:03 PM
21944-MNT1		21944-MNT1.R3D



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Mastec	ATC411189-Cranburysu CT-10035342	Shear Check
NDN		Apr 24, 2020 at 6:04 PM
21944-MNT1		21944-MNT1.R3D

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (1E5 F)	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B R...	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B R...	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoffs	HSS4X4X4	Beam	SquareTube	A500 Gr...	Typical	3.37	7.8	7.8	12.8
2	Face Horizontals	HSS4X4X4	Beam	SquareTube	A500 Gr...	Typical	3.37	7.8	7.8	12.8
3	Support Rails	HSS2.375X...	Beam	Pipe	A500 Gr...	Typical	.823	.527	.527	1.05
4	Mount Pipes	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	Corner Angles	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	7.25	0	4.185789	0	
2	N2	0.	0	-8.371579	0	
3	N3	-7.25	0	4.185789	0	
4	N4	0.	0	-9.704912	0	
5	N5	0.	0	-2.204912	0	
6	N6	8.404701	0	4.852456	0	
7	N7	1.90951	0	1.102456	0	
8	N8	-8.404701	0	4.852456	0	
9	N9	-1.90951	0	1.102456	0	
10	N10	-5.583333	0	4.185789	0	
11	N11	-5.583333	0	4.435789	0	
12	N12	-1.583333	0	4.185789	0	
13	N13	-1.583333	0	4.435789	0	
14	N14	2.416667	0	4.185789	0	
15	N15	2.416667	0	4.435789	0	
16	N16	6.416667	0	4.185789	0	
17	N17	6.416667	0	4.435789	0	
18	N18	-0.833333	0	-6.928203	0	
19	N19	-1.04984	0	-7.053203	0	
20	N20	-2.833333	0	-3.464102	0	
21	N21	-3.04984	0	-3.589102	0	
22	N22	-4.833333	0	-0.	0	
23	N23	-5.04984	0	-.125	0	
24	N24	-6.833333	0	3.464102	0	
25	N25	-7.04984	0	3.339102	0	
26	N26	6.416667	0	2.742414	0	
27	N27	6.633173	0	2.617414	0	
28	N28	4.416667	0	-0.721688	0	
29	N29	4.633173	0	-0.846688	0	
30	N30	2.416667	0	-4.185789	0	
31	N31	2.633173	0	-4.310789	0	
32	N32	0.416667	0	-7.649891	0	
33	N33	0.633173	0	-7.774891	0	
34	N37	-5.583333	3	4.185789	0	
35	N38	-5.583333	3	4.435789	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
36	N39	-1.583333	3	4.185789	0	
37	N40	-1.583333	3	4.435789	0	
38	N41	2.416667	3	4.185789	0	
39	N42	2.416667	3	4.435789	0	
40	N43	6.416667	3	4.185789	0	
41	N44	6.416667	3	4.435789	0	
42	N45	-0.833333	3	-6.928203	0	
43	N46	-1.04984	3	-7.053203	0	
44	N47	-2.833333	3	-3.464102	0	
45	N48	-3.04984	3	-3.589102	0	
46	N49	-4.833333	3	-0.	0	
47	N50	-5.04984	3	-.125	0	
48	N51	-6.833333	3	3.464102	0	
49	N52	-7.04984	3	3.339102	0	
50	N53	6.416667	3	2.742414	0	
51	N54	6.633173	3	2.617414	0	
52	N55	4.416667	3	-0.721688	0	
53	N56	4.633173	3	-0.846688	0	
54	N57	2.416667	3	-4.185789	0	
55	N58	2.633173	3	-4.310789	0	
56	N59	0.416667	3	-7.649891	0	
57	N60	0.633173	3	-7.774891	0	
58	N61	-5.916667	3	4.185789	0	
59	N62	6.583333	3	3.031089	0	
60	N63	-0.666667	3	-7.216878	0	
61	N64	5.916667	3	4.185789	0	
62	N65	0.666667	3	-7.216878	0	
63	N66	-6.583333	3	3.031089	0	
64	N67	-7.125	3	4.185789	0	
65	N68	7.1875	3	4.077536	0	
66	N69	-0.0625	3	-8.263326	0	
67	N70	7.125	3	4.185789	0	
68	N71	0.0625	3	-8.263326	0	
69	N72	-7.1875	3	4.077536	0	
70	N70A	-5.583333	4.5	4.435789	0	
71	N71A	-1.583333	4.5	4.435789	0	
72	N72A	2.416667	4.5	4.435789	0	
73	N73	6.416667	4.5	4.435789	0	
74	N74	-1.04984	4.5	-7.053203	0	
75	N75	-3.04984	4.5	-3.589102	0	
76	N76	-5.04984	4.5	-.125	0	
77	N77	-7.04984	4.5	3.339102	0	
78	N78	6.633173	4.5	2.617414	0	
79	N79	4.633173	4.5	-0.846688	0	
80	N80	2.633173	4.5	-4.310789	0	
81	N81	0.633173	4.5	-7.774891	0	
82	N82	-5.583333	-2.5	4.435789	0	
83	N83	-1.583333	-2.5	4.435789	0	
84	N84	2.416667	-2.5	4.435789	0	
85	N85	6.416667	-2.5	4.435789	0	
86	N86	-1.04984	-2.5	-7.053203	0	
87	N87	-3.04984	-2.5	-3.589102	0	
88	N88	-5.04984	-2.5	-.125	0	
89	N89	-7.04984	-2.5	3.339102	0	
90	N90	6.633173	-2.5	2.617414	0	
91	N91	4.633173	-2.5	-0.846688	0	
92	N92	2.633173	-2.5	-4.310789	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
93	N93	0.633173	-2.5	-7.774891	0	
94	N94	0.	0	-5.704912	0	
95	N95	4.940599	0	2.852456	0	
96	N96	-4.940599	0	2.852456	0	
97	N98	1.0625	3	-6.531275	0	
98	N99	-6.1875	3	2.345485	0	
99	N99A	5.125	3	4.185789	0	
100	N100	1.0625	3.083333	-6.531275	0	
101	N101	-6.1875	3.083333	2.345485	0	
102	N102	5.125	3.083333	4.185789	0	
103	N103	1.0625	2.916667	-6.531275	0	
104	N104	-6.1875	2.916667	2.345485	0	
105	N105	5.125	2.916667	4.185789	0	

Joint Boundary Conditions

	Joint 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	N9	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N5	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N7	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N3	N1			Face Hortzont...	Beam	SquareTube	A500 Gr.B...	Typical
2	M2	N1	N2			Face Hortzont...	Beam	SquareTube	A500 Gr.B...	Typical
3	M3	N2	N3			Face Horizont...	Beam	SquareTube	A500 Gr.B...	Typical
4	M4	N4	N5			Standoffs	Beam	SquareTube	A500 Gr.B...	Typical
5	M5	N6	N7			Standoffs	Beam	SquareTube	A500 Gr.B...	Typical
6	M6	N8	N9			Standoffs	Beam	SquareTube	A500 Gr.B...	Typical
7	M7	N10	N11			RIGID	None	None	RIGID	Typical
8	M8	N12	N13			RIGID	None	None	RIGID	Typical
9	M9	N14	N15			RIGID	None	None	RIGID	Typical
10	M10	N16	N17			RIGID	None	None	RIGID	Typical
11	M11	N18	N19			RIGID	None	None	RIGID	Typical
12	M12	N20	N21			RIGID	None	None	RIGID	Typical
13	M13	N22	N23			RIGID	None	None	RIGID	Typical
14	M14	N24	N25			RIGID	None	None	RIGID	Typical
15	M15	N26	N27			RIGID	None	None	RIGID	Typical
16	M16	N28	N29			RIGID	None	None	RIGID	Typical
17	M17	N30	N31			RIGID	None	None	RIGID	Typical
18	M18	N32	N33			RIGID	None	None	RIGID	Typical
19	M19	N67	N70			Support Rails	Beam	Pipe	A500 Gr.B...	Typical
20	M20	N71	N68			Support Rails	Beam	Pipe	A500 Gr.B...	Typical
21	M21	N72	N69			Support Rails	Beam	Pipe	A500 Gr.B...	Typical
22	M22	N37	N38			RIGID	None	None	RIGID	Typical
23	M23	N39	N40			RIGID	None	None	RIGID	Typical
24	M24	N41	N42			RIGID	None	None	RIGID	Typical
25	M25	N43	N44			RIGID	None	None	RIGID	Typical
26	M26	N45	N46			RIGID	None	None	RIGID	Typical
27	M27	N47	N48			RIGID	None	None	RIGID	Typical
28	M28	N49	N50			RIGID	None	None	RIGID	Typical
29	M29	N51	N52			RIGID	None	None	RIGID	Typical
30	M30	N53	N54			RIGID	None	None	RIGID	Typical
31	M31	N55	N56			RIGID	None	None	RIGID	Typical
32	M32	N57	N58			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
33	M33	N59	N60			RIGID	None	None	RIGID	Typical
34	M34	N61	N66		270	Corner Angles	Beam	Single Angle	A36 Gr.36	Typical
35	M35	N63	N65		270	Corner Angles	Beam	Single Angle	A36 Gr.36	Typical
36	M36	N64	N62			Corner Angles	Beam	Single Angle	A36 Gr.36	Typical
37	B1	N77	N89			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
38	A4	N70A	N82			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
39	B2	N76	N88			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
40	B3	N75	N87			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
41	A3	N71A	N83			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
42	B4	N74	N86			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
43	C1	N81	N93			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
44	A2	N72A	N84			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
45	C2	N80	N92			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
46	C3	N79	N91			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
47	A1	N73	N85			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
48	C4	N78	N90			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
49	K2	N101	N104			RIGID	None	None	RIGID	Typical
50	K1	N102	N105			RIGID	None	None	RIGID	Typical
51	K3	N100	N103			RIGID	None	None	RIGID	Typical

Joint Loads and Enforced Displacements (BLC 42 : Man 1 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N10	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 43 : Man 2 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N18	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 44 : Man 3 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N26	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 45 : Man 4 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N4	L	Y	-.25

Joint Loads and Enforced Displacements (BLC 46 : Man 5 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N6	L	Y	-.25

Joint Loads and Enforced Displacements (BLC 47 : Man 6 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft, k*s^2*ft)]
1	N8	L	Y	-.25

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Y	-.035	%35.7
2	A2	Y	-.051	%39.4
3	A2	Y	-.043	%21.4
4	A3	Y	-.06	%39
5	A3	Y	-.075	%21.4

Member Point Loads (BLC 1 : Dead) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
6	A4	Y	-.079	%39
7	A4	Y	-.073	%21.4
8	B1	Y	-.035	%35.7
9	B2	Y	-.051	%39.4
10	B2	Y	-.043	%21.4
11	B3	Y	-.06	%39
12	B3	Y	-.075	%21.4
13	B4	Y	-.079	%39
14	B4	Y	-.073	%21.4
15	C1	Y	-.035	%35.7
16	C2	Y	-.051	%39.4
17	C2	Y	-.043	%21.4
18	C3	Y	-.06	%39
19	C3	Y	-.075	%21.4
20	C4	Y	-.079	%39
21	C4	Y	-.073	%21.4
22	K1	Y	-.002	0
23	K2	Y	-.002	0
24	K3	Y	-.002	0

Member Point Loads (BLC 2 : Ice Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Y	-.083	%35.7
2	A2	Y	-.152	%39.4
3	A2	Y	-.026	%21.4
4	A3	Y	-.19	%39
5	A3	Y	-.031	%21.4
6	A4	Y	-.188	%39
7	A4	Y	-.031	%21.4
8	B1	Y	-.083	%35.7
9	B2	Y	-.152	%39.4
10	B2	Y	-.026	%21.4
11	B3	Y	-.19	%39
12	B3	Y	-.031	%21.4
13	B4	Y	-.188	%39
14	B4	Y	-.031	%21.4
15	C1	Y	-.083	%35.7
16	C2	Y	-.152	%39.4
17	C2	Y	-.026	%21.4
18	C3	Y	-.19	%39
19	C3	Y	-.031	%21.4
20	C4	Y	-.188	%39
21	C4	Y	-.031	%21.4
22	K1	Y	-.006	0
23	K2	Y	-.006	0
24	K3	Y	-.006	0

Member Point Loads (BLC 3 : Full Wind Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	-.082	%3
2	A2	Z	-.144	0
3	A3	Z	-.191	0
4	A4	Z	-.188	0
5	B1	Z	-.053	%3
6	B2	Z	-.108	0
7	B3	Z	-.111	0

Member Point Loads (BLC 3 : Full Wind Antenna (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
8	B4	Z	-.11	0
9	C1	Z	-.053	%3
10	C2	Z	-.108	0
11	C3	Z	-.111	0
12	C4	Z	-.11	0
13	A1	Z	-.082	%68.5
14	A2	Z	-.144	%78.8
15	A3	Z	-.191	%78.1
16	A4	Z	-.188	%78.1
17	B1	Z	-.053	%68.5
18	B2	Z	-.108	%78.8
19	B3	Z	-.111	%78.1
20	B4	Z	-.11	%78.1
21	C1	Z	-.053	%68.5
22	C2	Z	-.108	%78.8
23	C3	Z	-.111	%78.1
24	C4	Z	-.11	%78.1

Member Point Loads (BLC 4 : Full Wind Antenna (30 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	-.062	%3
2	A2	Z	-.114	0
3	A3	Z	-.142	0
4	A4	Z	-.14	0
5	B1	Z	-.038	%3
6	B2	Z	-.083	0
7	B3	Z	-.073	0
8	B4	Z	-.072	0
9	C1	Z	-.062	%3
10	C2	Z	-.114	0
11	C3	Z	-.142	0
12	C4	Z	-.14	0
13	A1	Z	-.062	%68.5
14	A2	Z	-.114	%78.8
15	A3	Z	-.142	%78.1
16	A4	Z	-.14	%78.1
17	B1	Z	-.038	%68.5
18	B2	Z	-.083	%78.8
19	B3	Z	-.073	%78.1
20	B4	Z	-.072	%78.1
21	C1	Z	-.062	%68.5
22	C2	Z	-.114	%78.8
23	C3	Z	-.142	%78.1
24	C4	Z	-.14	%78.1
25	A1	X	.036	%3
26	A2	X	.066	0
27	A2	X	.002	%21.4
28	A3	X	.082	0
29	A3	X	.005	%21.4
30	A4	X	.081	0
31	A4	X	.005	%21.4
32	B1	X	.022	%3
33	B2	X	.048	0
34	B2	X	.009	%21.4
35	B3	X	.042	0
36	B3	X	.021	%21.4

Member Point Loads (BLC 4 : Full Wind Antenna (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
37	B4	X	.042	0
38	B4	X	.019	%21.4
39	C1	X	.036	%3
40	C2	X	.066	0
41	C2	X	.002	%21.4
42	C3	X	.082	0
43	C3	X	.005	%21.4
44	C4	X	.081	0
45	C4	X	.005	%21.4
46	K1	X	.001	0
47	K2	X	.003	0
48	K3	X	.001	0
49	A1	X	.036	%68.5
50	A2	X	.066	%78.8
51	A3	X	.082	%78.1
52	A4	X	.081	%78.1
53	B1	X	.022	%68.5
54	B2	X	.048	%78.8
55	B3	X	.042	%78.1
56	B4	X	.042	%78.1
57	C1	X	.036	%68.5
58	C2	X	.066	%78.8
59	C3	X	.082	%78.1
60	C4	X	.081	%78.1

Member Point Loads (BLC 5 : Full Wind Antenna (60 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	-.026	%3
2	A2	Z	-.054	0
3	A3	Z	-.055	0
4	A4	Z	-.055	0
5	B1	Z	-.026	%3
6	B2	Z	-.054	0
7	B3	Z	-.055	0
8	B4	Z	-.055	0
9	C1	Z	-.041	%3
10	C2	Z	-.072	0
11	C3	Z	-.095	0
12	C4	Z	-.094	0
13	A1	Z	-.026	%68.5
14	A2	Z	-.054	%78.8
15	A3	Z	-.055	%78.1
16	A4	Z	-.055	%78.1
17	B1	Z	-.026	%68.5
18	B2	Z	-.054	%78.8
19	B3	Z	-.055	%78.1
20	B4	Z	-.055	%78.1
21	C1	Z	-.041	%68.5
22	C2	Z	-.072	%78.8
23	C3	Z	-.095	%78.1
24	C4	Z	-.094	%78.1
25	A1	X	.046	%3
26	A2	X	.094	0
27	A2	X	.012	%21.4
28	A3	X	.096	0
29	A3	X	.027	%21.4

Member Point Loads (BLC 5 : Full Wind Antenna (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
30	A4	X	.095	0
31	A4	X	.025	%21.4
32	B1	X	.046	%3
33	B2	X	.094	0
34	B2	X	.012	%21.4
35	B3	X	.096	0
36	B3	X	.027	%21.4
37	B4	X	.095	0
38	B4	X	.025	%21.4
39	C1	X	.071	%3
40	C2	X	.125	0
41	C2	X	0	%21.4
42	C3	X	.165	0
43	C3	X	0	%21.4
44	C4	X	.163	0
45	C4	X	0	%21.4
46	K1	X	.004	0
47	K2	X	.004	0
48	K3	X	0	0
49	A1	X	.046	%68.5
50	A2	X	.094	%78.8
51	A3	X	.096	%78.1
52	A4	X	.095	%78.1
53	B1	X	.046	%68.5
54	B2	X	.094	%78.8
55	B3	X	.096	%78.1
56	B4	X	.095	%78.1
57	C1	X	.071	%68.5
58	C2	X	.125	%78.8
59	C3	X	.165	%78.1
60	C4	X	.163	%78.1

Member Point Loads (BLC 6 : Full Wind Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	0	%3
2	A2	Z	0	0
3	A3	Z	0	0
4	A4	Z	0	0
5	B1	Z	0	%3
6	B2	Z	0	0
7	B3	Z	0	0
8	B4	Z	0	0
9	C1	Z	0	%3
10	C2	Z	0	0
11	C3	Z	0	0
12	C4	Z	0	0
13	A1	Z	0	%68.5
14	A2	Z	0	%78.8
15	A3	Z	0	%78.1
16	A4	Z	0	%78.1
17	B1	Z	0	%68.5
18	B2	Z	0	%78.8
19	B3	Z	0	%78.1
20	B4	Z	0	%78.1
21	C1	Z	0	%68.5
22	C2	Z	0	%78.8

Member Point Loads (BLC 6 : Full Wind Antenna (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
23	C3	Z	0	%78.1
24	C4	Z	0	%78.1
25	A1	X	.043	%3
26	A2	X	.096	0
27	A2	X	.019	%21.4
28	A3	X	.084	0
29	A3	X	.041	%21.4
30	A4	X	.083	0
31	A4	X	.039	%21.4
32	B1	X	.072	%3
33	B2	X	.132	0
34	B2	X	.005	%21.4
35	B3	X	.164	0
36	B3	X	.01	%21.4
37	B4	X	.162	0
38	B4	X	.01	%21.4
39	C1	X	.072	%3
40	C2	X	.132	0
41	C2	X	.005	%21.4
42	C3	X	.164	0
43	C3	X	.01	%21.4
44	C4	X	.162	0
45	C4	X	.01	%21.4
46	K1	X	.006	0
47	K2	X	.001	0
48	K3	X	.001	0
49	A1	X	.043	%68.5
50	A2	X	.096	%78.8
51	A3	X	.084	%78.1
52	A4	X	.083	%78.1
53	B1	X	.072	%68.5
54	B2	X	.132	%78.8
55	B3	X	.164	%78.1
56	B4	X	.162	%78.1
57	C1	X	.072	%68.5
58	C2	X	.132	%78.8
59	C3	X	.164	%78.1
60	C4	X	.162	%78.1

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	.026	%3
2	A2	Z	.054	0
3	A3	Z	.055	0
4	A4	Z	.055	0
5	B1	Z	.041	%3
6	B2	Z	.072	0
7	B3	Z	.095	0
8	B4	Z	.094	0
9	C1	Z	.026	%3
10	C2	Z	.054	0
11	C3	Z	.055	0
12	C4	Z	.055	0
13	A1	Z	.026	%68.5
14	A2	Z	.054	%78.8
15	A3	Z	.055	%78.1

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
16	A4	Z	.055	%78.1
17	B1	Z	.041	%68.5
18	B2	Z	.072	%78.8
19	B3	Z	.095	%78.1
20	B4	Z	.094	%78.1
21	C1	Z	.026	%68.5
22	C2	Z	.054	%78.8
23	C3	Z	.055	%78.1
24	C4	Z	.055	%78.1
25	A1	X	.046	%3
26	A2	X	.094	0
27	A2	X	.012	%21.4
28	A3	X	.096	0
29	A3	X	.027	%21.4
30	A4	X	.095	0
31	A4	X	.025	%21.4
32	B1	X	.071	%3
33	B2	X	.125	0
34	B3	X	.165	0
35	B4	X	.163	0
36	C1	X	.046	%3
37	C2	X	.094	0
38	C2	X	.012	%21.4
39	C3	X	.096	0
40	C3	X	.027	%21.4
41	C4	X	.095	0
42	C4	X	.025	%21.4
43	K1	X	.004	0
44	K3	X	.004	0
45	A1	X	.046	%68.5
46	A2	X	.094	%78.8
47	A3	X	.096	%78.1
48	A4	X	.095	%78.1
49	B1	X	.071	%68.5
50	B2	X	.125	%78.8
51	B3	X	.165	%78.1
52	B4	X	.163	%78.1
53	C1	X	.046	%68.5
54	C2	X	.094	%78.8
55	C3	X	.096	%78.1
56	C4	X	.095	%78.1

Member Point Loads (BLC 8 : Full Wind Antenna (150 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	.062	%3
2	A2	Z	.114	0
3	A3	Z	.142	0
4	A4	Z	.14	0
5	B1	Z	.062	%3
6	B2	Z	.114	0
7	B3	Z	.142	0
8	B4	Z	.14	0
9	C1	Z	.038	%3
10	C2	Z	.083	0
11	C3	Z	.073	0
12	C4	Z	.072	0

Member Point Loads (BLC 8 : Full Wind Antenna (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
13	A1	Z	.062	%68.5
14	A2	Z	.114	%78.8
15	A3	Z	.142	%78.1
16	A4	Z	.14	%78.1
17	B1	Z	.062	%68.5
18	B2	Z	.114	%78.8
19	B3	Z	.142	%78.1
20	B4	Z	.14	%78.1
21	C1	Z	.038	%68.5
22	C2	Z	.083	%78.8
23	C3	Z	.073	%78.1
24	C4	Z	.072	%78.1
25	A1	X	.036	%3
26	A2	X	.066	0
27	A2	X	.002	%21.4
28	A3	X	.082	0
29	A3	X	.005	%21.4
30	A4	X	.081	0
31	A4	X	.005	%21.4
32	B1	X	.036	%3
33	B2	X	.066	0
34	B2	X	.002	%21.4
35	B3	X	.082	0
36	B3	X	.005	%21.4
37	B4	X	.081	0
38	B4	X	.005	%21.4
39	C1	X	.022	%3
40	C2	X	.048	0
41	C2	X	.009	%21.4
42	C3	X	.042	0
43	C3	X	.021	%21.4
44	C4	X	.042	0
45	C4	X	.019	%21.4
46	K1	X	.001	0
47	K2	X	.001	0
48	K3	X	.003	0
49	A1	X	.036	%68.5
50	A2	X	.066	%78.8
51	A3	X	.082	%78.1
52	A4	X	.081	%78.1
53	B1	X	.036	%68.5
54	B2	X	.066	%78.8
55	B3	X	.082	%78.1
56	B4	X	.081	%78.1
57	C1	X	.022	%68.5
58	C2	X	.048	%78.8
59	C3	X	.042	%78.1
60	C4	X	.042	%78.1

Member Point Loads (BLC 15 : Ice Wind Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	-.018	%3
2	A2	Z	-.031	0
3	A3	Z	-.039	0
4	A4	Z	-.039	0
5	B1	Z	-.013	%3

Member Point Loads (BLC 15 : Ice Wind Antenna (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
6	B2	Z	-.024	0
7	B3	Z	-.025	0
8	B4	Z	-.024	0
9	C1	Z	-.013	%3
10	C2	Z	-.024	0
11	C3	Z	-.025	0
12	C4	Z	-.024	0
13	A1	Z	-.018	%68.5
14	A2	Z	-.031	%78.8
15	A3	Z	-.039	%78.1
16	A4	Z	-.039	%78.1
17	B1	Z	-.013	%68.5
18	B2	Z	-.024	%78.8
19	B3	Z	-.025	%78.1
20	B4	Z	-.024	%78.1
21	C1	Z	-.013	%68.5
22	C2	Z	-.024	%78.8
23	C3	Z	-.025	%78.1
24	C4	Z	-.024	%78.1

Member Point Loads (BLC 16 : Ice Wind Antenna (30 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	-.014	%3
2	A2	Z	-.025	0
3	A3	Z	-.03	0
4	A4	Z	-.03	0
5	B1	Z	-.01	%3
6	B2	Z	-.019	0
7	B3	Z	-.017	0
8	B4	Z	-.017	0
9	C1	Z	-.014	%3
10	C2	Z	-.025	0
11	C3	Z	-.03	0
12	C4	Z	-.03	0
13	A1	Z	-.014	%68.5
14	A2	Z	-.025	%78.8
15	A3	Z	-.03	%78.1
16	A4	Z	-.03	%78.1
17	B1	Z	-.01	%68.5
18	B2	Z	-.019	%78.8
19	B3	Z	-.017	%78.1
20	B4	Z	-.017	%78.1
21	C1	Z	-.014	%68.5
22	C2	Z	-.025	%78.8
23	C3	Z	-.03	%78.1
24	C4	Z	-.03	%78.1
25	A1	X	.008	%3
26	A2	X	.014	0
27	A2	X	.001	%21.4
28	A3	X	.017	0
29	A3	X	.001	%21.4
30	A4	X	.017	0
31	A4	X	.001	%21.4
32	B1	X	.006	%3
33	B2	X	.011	0
34	B2	X	.003	%21.4

Member Point Loads (BLC 16 : Ice Wind Antenna (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
35	B3	X	.01	0
36	B3	X	.005	%21.4
37	B4	X	.01	0
38	B4	X	.005	%21.4
39	C1	X	.008	%3
40	C2	X	.014	0
41	C2	X	.001	%21.4
42	C3	X	.017	0
43	C3	X	.001	%21.4
44	C4	X	.017	0
45	C4	X	.001	%21.4
46	K1	X	0	0
47	K2	X	.002	0
48	K3	X	0	0
49	A1	X	.008	%68.5
50	A2	X	.014	%78.8
51	A3	X	.017	%78.1
52	A4	X	.017	%78.1
53	B1	X	.006	%68.5
54	B2	X	.011	%78.8
55	B3	X	.01	%78.1
56	B4	X	.01	%78.1
57	C1	X	.008	%68.5
58	C2	X	.014	%78.8
59	C3	X	.017	%78.1
60	C4	X	.017	%78.1

Member Point Loads (BLC 17 : Ice Wind Antenna (60 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	-.006	%3
2	A2	Z	-.012	0
3	A3	Z	-.012	0
4	A4	Z	-.012	0
5	B1	Z	-.006	%3
6	B2	Z	-.012	0
7	B3	Z	-.012	0
8	B4	Z	-.012	0
9	C1	Z	-.009	%3
10	C2	Z	-.015	0
11	C3	Z	-.02	0
12	C4	Z	-.019	0
13	A1	Z	-.006	%68.5
14	A2	Z	-.012	%78.8
15	A3	Z	-.012	%78.1
16	A4	Z	-.012	%78.1
17	B1	Z	-.006	%68.5
18	B2	Z	-.012	%78.8
19	B3	Z	-.012	%78.1
20	B4	Z	-.012	%78.1
21	C1	Z	-.009	%68.5
22	C2	Z	-.015	%78.8
23	C3	Z	-.02	%78.1
24	C4	Z	-.019	%78.1
25	A1	X	.011	%3
26	A2	X	.021	0
27	A2	X	.004	%21.4

Member Point Loads (BLC 17 : Ice Wind Antenna (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[k-k-ft]	Location[ft,%]
28	A3	X	.021	0
29	A3	X	.007	%21.4
30	A4	X	.021	0
31	A4	X	.006	%21.4
32	B1	X	.011	%3
33	B2	X	.021	0
34	B2	X	.004	%21.4
35	B3	X	.021	0
36	B3	X	.007	%21.4
37	B4	X	.021	0
38	B4	X	.006	%21.4
39	C1	X	.016	%3
40	C2	X	.027	0
41	C2	X	0	%21.4
42	C3	X	.034	0
43	C3	X	0	%21.4
44	C4	X	.034	0
45	C4	X	0	%21.4
46	K1	X	.002	0
47	K2	X	.002	0
48	K3	X	0	0
49	A1	X	.011	%68.5
50	A2	X	.021	%78.8
51	A3	X	.021	%78.1
52	A4	X	.021	%78.1
53	B1	X	.011	%68.5
54	B2	X	.021	%78.8
55	B3	X	.021	%78.1
56	B4	X	.021	%78.1
57	C1	X	.016	%68.5
58	C2	X	.027	%78.8
59	C3	X	.034	%78.1
60	C4	X	.034	%78.1

Member Point Loads (BLC 18 : Ice Wind Antenna (90 Deg))

	Member Label	Direction	Magnitude[k-k-ft]	Location[ft,%]
1	A1	Z	0	%3
2	A2	Z	0	0
3	A3	Z	0	0
4	A4	Z	0	0
5	B1	Z	0	%3
6	B2	Z	0	0
7	B3	Z	0	0
8	B4	Z	0	0
9	C1	Z	0	%3
10	C2	Z	0	0
11	C3	Z	0	0
12	C4	Z	0	0
13	A1	Z	0	%68.5
14	A2	Z	0	%78.8
15	A3	Z	0	%78.1
16	A4	Z	0	%78.1
17	B1	Z	0	%68.5
18	B2	Z	0	%78.8
19	B3	Z	0	%78.1
20	B4	Z	0	%78.1

Member Point Loads (BLC 18 : Ice Wind Antenna (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
21	C1	Z	0	%68.5
22	C2	Z	0	%78.8
23	C3	Z	0	%78.1
24	C4	Z	0	%78.1
25	A1	X	.011	%3
26	A2	X	.022	0
27	A2	X	.006	%21.4
28	A3	X	.02	0
29	A3	X	.01	%21.4
30	A4	X	.019	0
31	A4	X	.01	%21.4
32	B1	X	.016	%3
33	B2	X	.028	0
34	B2	X	.001	%21.4
35	B3	X	.034	0
36	B3	X	.003	%21.4
37	B4	X	.034	0
38	B4	X	.002	%21.4
39	C1	X	.016	%3
40	C2	X	.028	0
41	C2	X	.001	%21.4
42	C3	X	.034	0
43	C3	X	.003	%21.4
44	C4	X	.034	0
45	C4	X	.002	%21.4
46	K1	X	.003	0
47	K2	X	.001	0
48	K3	X	.001	0
49	A1	X	.011	%68.5
50	A2	X	.022	%78.8
51	A3	X	.02	%78.1
52	A4	X	.019	%78.1
53	B1	X	.016	%68.5
54	B2	X	.028	%78.8
55	B3	X	.034	%78.1
56	B4	X	.034	%78.1
57	C1	X	.016	%68.5
58	C2	X	.028	%78.8
59	C3	X	.034	%78.1
60	C4	X	.034	%78.1

Member Point Loads (BLC 19 : Ice Wind Antenna (120 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	.006	%3
2	A2	Z	.012	0
3	A3	Z	.012	0
4	A4	Z	.012	0
5	B1	Z	.009	%3
6	B2	Z	.015	0
7	B3	Z	.02	0
8	B4	Z	.019	0
9	C1	Z	.006	%3
10	C2	Z	.012	0
11	C3	Z	.012	0
12	C4	Z	.012	0
13	A1	Z	.006	%68.5

Member Point Loads (BLC 19 : Ice Wind Antenna (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
14	A2	Z	.012	%78.8
15	A3	Z	.012	%78.1
16	A4	Z	.012	%78.1
17	B1	Z	.009	%68.5
18	B2	Z	.015	%78.8
19	B3	Z	.02	%78.1
20	B4	Z	.019	%78.1
21	C1	Z	.006	%68.5
22	C2	Z	.012	%78.8
23	C3	Z	.012	%78.1
24	C4	Z	.012	%78.1
25	A1	X	.011	%3
26	A2	X	.021	0
27	A2	X	.004	%21.4
28	A3	X	.021	0
29	A3	X	.007	%21.4
30	A4	X	.021	0
31	A4	X	.006	%21.4
32	B1	X	.016	%3
33	B2	X	.027	0
34	B3	X	.034	0
35	B4	X	.034	0
36	C1	X	.011	%3
37	C2	X	.021	0
38	C2	X	.004	%21.4
39	C3	X	.021	0
40	C3	X	.007	%21.4
41	C4	X	.021	0
42	C4	X	.006	%21.4
43	K1	X	.002	0
44	K3	X	.002	0
45	A1	X	.011	%68.5
46	A2	X	.021	%78.8
47	A3	X	.021	%78.1
48	A4	X	.021	%78.1
49	B1	X	.016	%68.5
50	B2	X	.027	%78.8
51	B3	X	.034	%78.1
52	B4	X	.034	%78.1
53	C1	X	.011	%68.5
54	C2	X	.021	%78.8
55	C3	X	.021	%78.1
56	C4	X	.021	%78.1

Member Point Loads (BLC 20 : Ice Wind Antenna (150 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	.014	%3
2	A2	Z	.012	0
3	A3	Z	.012	0
4	A4	Z	.012	0
5	B1	Z	.009	%3
6	B2	Z	.015	0
7	B3	Z	.02	0
8	B4	Z	.019	0
9	C1	Z	.006	%3
10	C2	Z	.012	0

Member Point Loads (BLC 20 : Ice Wind Antenna (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
11	C3	Z	.012	0
12	C4	Z	.012	0
13	A1	Z	.014	%68.5
14	A2	Z	.012	%78.8
15	A3	Z	.012	%78.1
16	A4	Z	.012	%78.1
17	B1	Z	.009	%68.5
18	B2	Z	.015	%78.8
19	B3	Z	.02	%78.1
20	B4	Z	.019	%78.1
21	C1	Z	.006	%68.5
22	C2	Z	.012	%78.8
23	C3	Z	.012	%78.1
24	C4	Z	.012	%78.1
25	A1	X	.008	%3
26	A2	X	.021	0
27	A2	X	.004	%21.4
28	A3	X	.021	0
29	A3	X	.007	%21.4
30	A4	X	.021	0
31	A4	X	.006	%21.4
32	B1	X	.016	%3
33	B2	X	.027	0
34	B3	X	.034	0
35	B4	X	.034	0
36	C1	X	.011	%3
37	C2	X	.021	0
38	C2	X	.004	%21.4
39	C3	X	.021	0
40	C3	X	.007	%21.4
41	C4	X	.021	0
42	C4	X	.006	%21.4
43	K1	X	.002	0
44	K3	X	.002	0
45	A1	X	.008	%68.5
46	A2	X	.021	%78.8
47	A3	X	.021	%78.1
48	A4	X	.021	%78.1
49	B1	X	.016	%68.5
50	B2	X	.027	%78.8
51	B3	X	.034	%78.1
52	B4	X	.034	%78.1
53	C1	X	.011	%68.5
54	C2	X	.021	%78.8
55	C3	X	.021	%78.1
56	C4	X	.021	%78.1

Member Point Loads (BLC 27 : Seismic Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Z	-.004	%35.7
2	A2	Z	-.006	%39.4
3	A2	Z	-.005	%21.4
4	A3	Z	-.007	%39
5	A3	Z	-.009	%21.4
6	A4	Z	-.01	%39
7	A4	Z	-.009	%21.4

Member Point Loads (BLC 27 : Seismic Antenna (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
8	B1	Z	-.004	%35.7
9	B2	Z	-.006	%39.4
10	B2	Z	-.005	%21.4
11	B3	Z	-.007	%39
12	B3	Z	-.009	%21.4
13	B4	Z	-.01	%39
14	B4	Z	-.009	%21.4
15	C1	Z	-.004	%35.7
16	C2	Z	-.006	%39.4
17	C2	Z	-.005	%21.4
18	C3	Z	-.007	%39
19	C3	Z	-.009	%21.4
20	C4	Z	-.01	%39
21	C4	Z	-.009	%21.4
22	K1	Z	0	0
23	K2	Z	0	0
24	K3	Z	0	0

Member Point Loads (BLC 28 : Seismic Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	X	.004	%35.7
2	A2	X	.006	%39.4
3	A2	X	.005	%21.4
4	A3	X	.007	%39
5	A3	X	.009	%21.4
6	A4	X	.01	%39
7	A4	X	.009	%21.4
8	B1	X	.004	%35.7
9	B2	X	.006	%39.4
10	B2	X	.005	%21.4
11	B3	X	.007	%39
12	B3	X	.009	%21.4
13	B4	X	.01	%39
14	B4	X	.009	%21.4
15	C1	X	.004	%35.7
16	C2	X	.006	%39.4
17	C2	X	.005	%21.4
18	C3	X	.007	%39
19	C3	X	.009	%21.4
20	C4	X	.01	%39
21	C4	X	.009	%21.4
22	K1	X	0	0
23	K2	X	0	0
24	K3	X	0	0

Member Point Loads (BLC 41 : Seismic Vertical Antennas)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	A1	Y	-.007	%35.7
2	A2	Y	-.01	%39.4
3	A2	Y	-.009	%21.4
4	A3	Y	-.012	%39
5	A3	Y	-.015	%21.4
6	A4	Y	-.016	%39
7	A4	Y	-.015	%21.4
8	B1	Y	-.007	%35.7
9	B2	Y	-.01	%39.4

Member Point Loads (BLC 41 : Seismic Vertical Antennas) (Continued)

	Member Label	Direction	Magnitude[k-ft]	Location[ft,%]
10	B2	Y	-.009	%21.4
11	B3	Y	-.012	%39
12	B3	Y	-.015	%21.4
13	B4	Y	-.016	%39
14	B4	Y	-.015	%21.4
15	C1	Y	-.007	%35.7
16	C2	Y	-.01	%39.4
17	C2	Y	-.009	%21.4
18	C3	Y	-.012	%39
19	C3	Y	-.015	%21.4
20	C4	Y	-.016	%39
21	C4	Y	-.015	%21.4
22	K1	Y	0	0
23	K2	Y	0	0
24	K3	Y	0	0

Member Distributed Loads (BLC 2 : Ice Dead)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Y	-.009	-.009	0	%100
2	M2	Y	-.009	-.009	0	%100
3	M3	Y	-.009	-.009	0	%100
4	M4	Y	-.009	-.009	0	%100
5	M5	Y	-.009	-.009	0	%100
6	M6	Y	-.009	-.009	0	%100
7	M7	Y	-.002	-.002	0	%100
8	M8	Y	-.002	-.002	0	%100
9	M9	Y	-.002	-.002	0	%100
10	M10	Y	-.002	-.002	0	%100
11	M11	Y	-.002	-.002	0	%100
12	M12	Y	-.002	-.002	0	%100
13	M13	Y	-.002	-.002	0	%100
14	M14	Y	-.002	-.002	0	%100
15	M15	Y	-.002	-.002	0	%100
16	M16	Y	-.002	-.002	0	%100
17	M17	Y	-.002	-.002	0	%100
18	M18	Y	-.002	-.002	0	%100
19	M19	Y	-.005	-.005	0	%100
20	M20	Y	-.005	-.005	0	%100
21	M21	Y	-.005	-.005	0	%100
22	M22	Y	-.002	-.002	0	%100
23	M23	Y	-.002	-.002	0	%100
24	M24	Y	-.002	-.002	0	%100
25	M25	Y	-.002	-.002	0	%100
26	M26	Y	-.002	-.002	0	%100
27	M27	Y	-.002	-.002	0	%100
28	M28	Y	-.002	-.002	0	%100
29	M29	Y	-.002	-.002	0	%100
30	M30	Y	-.002	-.002	0	%100
31	M31	Y	-.002	-.002	0	%100
32	M32	Y	-.002	-.002	0	%100
33	M33	Y	-.002	-.002	0	%100
34	M34	Y	-.006	-.006	0	%100
35	M35	Y	-.006	-.006	0	%100
36	M36	Y	-.006	-.006	0	%100
37	B1	Y	-.005	-.005	0	%100

Member Distributed Loads (BLC 2 : Ice Dead) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft...	End Location[ft...
38	A4	Y	-.005	-.005	0	%100
39	B2	Y	-.005	-.005	0	%100
40	B3	Y	-.005	-.005	0	%100
41	A3	Y	-.005	-.005	0	%100
42	B4	Y	-.005	-.005	0	%100
43	C1	Y	-.005	-.005	0	%100
44	A2	Y	-.005	-.005	0	%100
45	C2	Y	-.005	-.005	0	%100
46	C3	Y	-.005	-.005	0	%100
47	A1	Y	-.005	-.005	0	%100
48	C4	Y	-.005	-.005	0	%100
49	K2	Y	-.002	-.002	0	%100
50	K1	Y	-.002	-.002	0	%100
51	K3	Y	-.002	-.002	0	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft...	End Location[ft...
1	M1	Z	-.02	-.02	0	%100
2	M2	Z	-.005	-.005	0	%100
3	M3	Z	-.005	-.005	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	-.015	-.015	0	%100
6	M6	Z	-.015	-.015	0	%100
7	M19	Z	-.007	-.007	0	%100
8	M20	Z	-.002	-.002	0	%100
9	M21	Z	-.002	-.002	0	%100
10	M34	Z	-.003	-.003	0	%100
11	M35	Z	-.012	-.012	0	%100
12	M36	Z	-.003	-.003	0	%100
13	B1	Z	-.007	-.007	0	%3
14	C1	Z	-.007	-.007	0	%3
15	A1	Z	-.007	-.007	0	%3
16	B1	Z	-.007	-.007	%68.5	%100
17	A4	Z	-.007	-.007	%78.1	%100
18	B2	Z	-.007	-.007	%78.8	%100
19	B3	Z	-.007	-.007	%78.1	%100
20	A3	Z	-.007	-.007	%78.1	%100
21	B4	Z	-.007	-.007	%78.1	%100
22	C1	Z	-.007	-.007	%68.5	%100
23	A2	Z	-.007	-.007	%78.8	%100
24	C2	Z	-.007	-.007	%78.8	%100
25	C3	Z	-.007	-.007	%78.1	%100
26	A1	Z	-.007	-.007	%68.5	%100
27	C4	Z	-.007	-.007	%78.1	%100
28	M1	X	0	0	0	%100
29	M2	X	0	0	0	%100
30	M3	X	0	0	0	%100
31	M4	X	0	0	0	%100
32	M5	X	0	0	0	%100
33	M6	X	0	0	0	%100
34	M19	X	0	0	0	%100
35	M20	X	0	0	0	%100
36	M21	X	0	0	0	%100
37	M34	X	0	0	0	%100
38	M35	X	0	0	0	%100
39	M36	X	0	0	0	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
40	B1	X	0	0	0	%3
41	A4	X	0	0	0	%100
42	A3	X	0	0	0	%100
43	C1	X	0	0	0	%3
44	A2	X	0	0	0	%100
45	A1	X	0	0	0	%100
46	B1	X	0	0	%68.5	%100
47	B2	X	0	0	%78.8	%100
48	B3	X	0	0	%78.1	%100
49	B4	X	0	0	%78.1	%100
50	C1	X	0	0	%68.5	%100
51	C2	X	0	0	%78.8	%100
52	C3	X	0	0	%78.1	%100
53	C4	X	0	0	%78.1	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	-.013	-.013	0	%100
2	M2	Z	-.013	-.013	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	-.004	-.004	0	%100
5	M5	Z	-.017	-.017	0	%100
6	M6	Z	-.004	-.004	0	%100
7	M19	Z	-.005	-.005	0	%100
8	M20	Z	-.005	-.005	0	%100
9	M21	Z	0	0	0	%100
10	M34	Z	-.008	-.008	0	%100
11	M35	Z	-.008	-.008	0	%100
12	M36	Z	0	0	0	%100
13	B1	Z	-.006	-.006	0	%3
14	C1	Z	-.006	-.006	0	%3
15	A1	Z	-.006	-.006	0	%3
16	B1	Z	-.006	-.006	%68.5	%100
17	A4	Z	-.006	-.006	%78.1	%100
18	B2	Z	-.006	-.006	%78.8	%100
19	B3	Z	-.006	-.006	%78.1	%100
20	A3	Z	-.006	-.006	%78.1	%100
21	B4	Z	-.006	-.006	%78.1	%100
22	C1	Z	-.006	-.006	%68.5	%100
23	A2	Z	-.006	-.006	%78.8	%100
24	C2	Z	-.006	-.006	%78.8	%100
25	C3	Z	-.006	-.006	%78.1	%100
26	A1	Z	-.006	-.006	%68.5	%100
27	C4	Z	-.006	-.006	%78.1	%100
28	M1	X	.007	.007	0	%100
29	M2	X	.007	.007	0	%100
30	M3	X	0	0	0	%100
31	M4	X	.002	.002	0	%100
32	M5	X	.01	.01	0	%100
33	M6	X	.002	.002	0	%100
34	M19	X	.003	.003	0	%100
35	M20	X	.003	.003	0	%100
36	M21	X	0	0	0	%100
37	M34	X	.005	.005	0	%100
38	M35	X	.005	.005	0	%100
39	M36	X	0	0	0	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
40	B1	X	.004	.004	0	%3
41	A4	X	.004	.004	0	%100
42	A3	X	.004	.004	0	%100
43	C1	X	.004	.004	0	%3
44	A2	X	.004	.004	0	%100
45	A1	X	.004	.004	0	%100
46	B1	X	.004	.004	%68.5	%100
47	B2	X	.004	.004	%78.8	%100
48	B3	X	.004	.004	%78.1	%100
49	B4	X	.004	.004	%78.1	%100
50	C1	X	.004	.004	%68.5	%100
51	C2	X	.004	.004	%78.8	%100
52	C3	X	.004	.004	%78.1	%100
53	C4	X	.004	.004	%78.1	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	-.002	-.002	0	%100
2	M2	Z	-.01	-.01	0	%100
3	M3	Z	-.002	-.002	0	%100
4	M4	Z	-.007	-.007	0	%100
5	M5	Z	-.007	-.007	0	%100
6	M6	Z	0	0	0	%100
7	M19	Z	-.001	-.001	0	%100
8	M20	Z	-.004	-.004	0	%100
9	M21	Z	-.001	-.001	0	%100
10	M34	Z	-.006	-.006	0	%100
11	M35	Z	-.002	-.002	0	%100
12	M36	Z	-.002	-.002	0	%100
13	B1	Z	-.004	-.004	0	%3
14	C1	Z	-.004	-.004	0	%3
15	A1	Z	-.004	-.004	0	%3
16	B1	Z	-.004	-.004	%68.5	%100
17	A4	Z	-.004	-.004	%78.1	%100
18	B2	Z	-.004	-.004	%78.8	%100
19	B3	Z	-.004	-.004	%78.1	%100
20	A3	Z	-.004	-.004	%78.1	%100
21	B4	Z	-.004	-.004	%78.1	%100
22	C1	Z	-.004	-.004	%68.5	%100
23	A2	Z	-.004	-.004	%78.8	%100
24	C2	Z	-.004	-.004	%78.8	%100
25	C3	Z	-.004	-.004	%78.1	%100
26	A1	Z	-.004	-.004	%68.5	%100
27	C4	Z	-.004	-.004	%78.1	%100
28	M1	X	.004	.004	0	%100
29	M2	X	.017	.017	0	%100
30	M3	X	.004	.004	0	%100
31	M4	X	.013	.013	0	%100
32	M5	X	.013	.013	0	%100
33	M6	X	0	0	0	%100
34	M19	X	.002	.002	0	%100
35	M20	X	.006	.006	0	%100
36	M21	X	.002	.002	0	%100
37	M34	X	.011	.011	0	%100
38	M35	X	.003	.003	0	%100
39	M36	X	.003	.003	0	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
40	B1	X	.006	.006	0	%3
41	A4	X	.006	.006	0	%100
42	A3	X	.006	.006	0	%100
43	C1	X	.006	.006	0	%3
44	A2	X	.006	.006	0	%100
45	A1	X	.006	.006	0	%100
46	B1	X	.006	.006	%68.5	%100
47	B2	X	.006	.006	%78.8	%100
48	B3	X	.006	.006	%78.1	%100
49	B4	X	.006	.006	%78.1	%100
50	C1	X	.006	.006	%68.5	%100
51	C2	X	.006	.006	%78.8	%100
52	C3	X	.006	.006	%78.1	%100
53	C4	X	.006	.006	%78.1	%100

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M19	Z	0	0	0	%100
8	M20	Z	0	0	0	%100
9	M21	Z	0	0	0	%100
10	M34	Z	0	0	0	%100
11	M35	Z	0	0	0	%100
12	M36	Z	0	0	0	%100
13	B1	Z	0	0	0	%3
14	C1	Z	0	0	0	%3
15	A1	Z	0	0	0	%3
16	B1	Z	0	0	%68.5	%100
17	A4	Z	0	0	%78.1	%100
18	B2	Z	0	0	%78.8	%100
19	B3	Z	0	0	%78.1	%100
20	A3	Z	0	0	%78.1	%100
21	B4	Z	0	0	%78.1	%100
22	C1	Z	0	0	%68.5	%100
23	A2	Z	0	0	%78.8	%100
24	C2	Z	0	0	%78.8	%100
25	C3	Z	0	0	%78.1	%100
26	A1	Z	0	0	%68.5	%100
27	C4	Z	0	0	%78.1	%100
28	M1	X	0	0	0	%100
29	M2	X	.015	.015	0	%100
30	M3	X	.015	.015	0	%100
31	M4	X	.02	.02	0	%100
32	M5	X	.005	.005	0	%100
33	M6	X	.005	.005	0	%100
34	M19	X	0	0	0	%100
35	M20	X	.005	.005	0	%100
36	M21	X	.005	.005	0	%100
37	M34	X	.009	.009	0	%100
38	M35	X	0	0	0	%100
39	M36	X	.009	.009	0	%100

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
40	B1	X	.007	.007	0	%3
41	A4	X	.007	.007	0	%100
42	A3	X	.007	.007	0	%100
43	C1	X	.007	.007	0	%3
44	A2	X	.007	.007	0	%100
45	A1	X	.007	.007	0	%100
46	B1	X	.007	.007	%68.5	%100
47	B2	X	.007	.007	%78.8	%100
48	B3	X	.007	.007	%78.1	%100
49	B4	X	.007	.007	%78.1	%100
50	C1	X	.007	.007	%68.5	%100
51	C2	X	.007	.007	%78.8	%100
52	C3	X	.007	.007	%78.1	%100
53	C4	X	.007	.007	%78.1	%100

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft	End Location[ft...
1	M1	Z	.002	.002	0	%100
2	M2	Z	.002	.002	0	%100
3	M3	Z	.01	.01	0	%100
4	M4	Z	.007	.007	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	.007	.007	0	%100
7	M19	Z	.001	.001	0	%100
8	M20	Z	.001	.001	0	%100
9	M21	Z	.004	.004	0	%100
10	M34	Z	.002	.002	0	%100
11	M35	Z	.002	.002	0	%100
12	M36	Z	.006	.006	0	%100
13	B1	Z	.004	.004	0	%3
14	C1	Z	.004	.004	0	%3
15	A1	Z	.004	.004	0	%3
16	B1	Z	.004	.004	%68.5	%100
17	A4	Z	.004	.004	%78.1	%100
18	B2	Z	.004	.004	%78.8	%100
19	B3	Z	.004	.004	%78.1	%100
20	A3	Z	.004	.004	%78.1	%100
21	B4	Z	.004	.004	%78.1	%100
22	C1	Z	.004	.004	%68.5	%100
23	A2	Z	.004	.004	%78.8	%100
24	C2	Z	.004	.004	%78.8	%100
25	C3	Z	.004	.004	%78.1	%100
26	A1	Z	.004	.004	%68.5	%100
27	C4	Z	.004	.004	%78.1	%100
28	M1	X	.004	.004	0	%100
29	M2	X	.004	.004	0	%100
30	M3	X	.017	.017	0	%100
31	M4	X	.013	.013	0	%100
32	M5	X	0	0	0	%100
33	M6	X	.013	.013	0	%100
34	M19	X	.002	.002	0	%100
35	M20	X	.002	.002	0	%100
36	M21	X	.006	.006	0	%100
37	M34	X	.003	.003	0	%100
38	M35	X	.003	.003	0	%100
39	M36	X	.011	.011	0	%100

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
40	B1	X	.006	.006	0	%3
41	A4	X	.006	.006	0	%100
42	A3	X	.006	.006	0	%100
43	C1	X	.006	.006	0	%3
44	A2	X	.006	.006	0	%100
45	A1	X	.006	.006	0	%100
46	B1	X	.006	.006	%68.5	%100
47	B2	X	.006	.006	%78.8	%100
48	B3	X	.006	.006	%78.1	%100
49	B4	X	.006	.006	%78.1	%100
50	C1	X	.006	.006	%68.5	%100
51	C2	X	.006	.006	%78.8	%100
52	C3	X	.006	.006	%78.1	%100
53	C4	X	.006	.006	%78.1	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	.013	.013	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	.013	.013	0	%100
4	M4	Z	.004	.004	0	%100
5	M5	Z	.004	.004	0	%100
6	M6	Z	.017	.017	0	%100
7	M19	Z	.005	.005	0	%100
8	M20	Z	0	0	0	%100
9	M21	Z	.005	.005	0	%100
10	M34	Z	0	0	0	%100
11	M35	Z	.008	.008	0	%100
12	M36	Z	.008	.008	0	%100
13	B1	Z	.006	.006	0	%3
14	C1	Z	.006	.006	0	%3
15	A1	Z	.006	.006	0	%3
16	B1	Z	.006	.006	%68.5	%100
17	A4	Z	.006	.006	%78.1	%100
18	B2	Z	.006	.006	%78.8	%100
19	B3	Z	.006	.006	%78.1	%100
20	A3	Z	.006	.006	%78.1	%100
21	B4	Z	.006	.006	%78.1	%100
22	C1	Z	.006	.006	%68.5	%100
23	A2	Z	.006	.006	%78.8	%100
24	C2	Z	.006	.006	%78.8	%100
25	C3	Z	.006	.006	%78.1	%100
26	A1	Z	.006	.006	%68.5	%100
27	C4	Z	.006	.006	%78.1	%100
28	M1	X	.007	.007	0	%100
29	M2	X	0	0	0	%100
30	M3	X	.007	.007	0	%100
31	M4	X	.002	.002	0	%100
32	M5	X	.002	.002	0	%100
33	M6	X	.01	.01	0	%100
34	M19	X	.003	.003	0	%100
35	M20	X	0	0	0	%100
36	M21	X	.003	.003	0	%100
37	M34	X	0	0	0	%100
38	M35	X	.005	.005	0	%100
39	M36	X	.005	.005	0	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
40	B1	X	.004	.004	0	%3
41	A4	X	.004	.004	0	%100
42	A3	X	.004	.004	0	%100
43	C1	X	.004	.004	0	%3
44	A2	X	.004	.004	0	%100
45	A1	X	.004	.004	0	%100
46	B1	X	.004	.004	%68.5	%100
47	B2	X	.004	.004	%78.8	%100
48	B3	X	.004	.004	%78.1	%100
49	B4	X	.004	.004	%78.1	%100
50	C1	X	.004	.004	%68.5	%100
51	C2	X	.004	.004	%78.8	%100
52	C3	X	.004	.004	%78.1	%100
53	C4	X	.004	.004	%78.1	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	-.005	-.005	0	%100
2	M2	Z	-.001	-.001	0	%100
3	M3	Z	-.001	-.001	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	-.004	-.004	0	%100
6	M6	Z	-.004	-.004	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	-.002	-.002	0	%100
12	M12	Z	-.002	-.002	0	%100
13	M13	Z	-.002	-.002	0	%100
14	M14	Z	-.002	-.002	0	%100
15	M15	Z	-.002	-.002	0	%100
16	M16	Z	-.002	-.002	0	%100
17	M17	Z	-.002	-.002	0	%100
18	M18	Z	-.002	-.002	0	%100
19	M19	Z	-.003	-.003	0	%100
20	M20	Z	-.001	-.001	0	%100
21	M21	Z	-.001	-.001	0	%100
22	M22	Z	0	0	0	%100
23	M23	Z	0	0	0	%100
24	M24	Z	0	0	0	%100
25	M25	Z	0	0	0	%100
26	M26	Z	-.002	-.002	0	%100
27	M27	Z	-.002	-.002	0	%100
28	M28	Z	-.002	-.002	0	%100
29	M29	Z	-.002	-.002	0	%100
30	M30	Z	-.002	-.002	0	%100
31	M31	Z	-.002	-.002	0	%100
32	M32	Z	-.002	-.002	0	%100
33	M33	Z	-.002	-.002	0	%100
34	M34	Z	-.001	-.001	0	%100
35	M35	Z	-.004	-.004	0	%100
36	M36	Z	-.001	-.001	0	%100
37	B1	Z	-.003	-.003	0	%3
38	C1	Z	-.003	-.003	0	%3
39	A1	Z	-.003	-.003	0	%3

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
40	B1	Z	-.003	-.003	%68.5	%100
41	A4	Z	-.003	-.003	%78.1	%100
42	B2	Z	-.003	-.003	%78.8	%100
43	B3	Z	-.003	-.003	%78.1	%100
44	A3	Z	-.003	-.003	%78.1	%100
45	B4	Z	-.003	-.003	%78.1	%100
46	C1	Z	-.003	-.003	%68.5	%100
47	A2	Z	-.003	-.003	%78.8	%100
48	C2	Z	-.003	-.003	%78.8	%100
49	C3	Z	-.003	-.003	%78.1	%100
50	A1	Z	-.003	-.003	%68.5	%100
51	C4	Z	-.003	-.003	%78.1	%100
52	K2	Z	-.004	-.004	0	%100
53	K1	Z	-.004	-.004	0	%100
54	K3	Z	-.004	-.004	0	%100
55	M1	X	0	0	0	%100
56	M2	X	0	0	0	%100
57	M3	X	0	0	0	%100
58	M4	X	0	0	0	%100
59	M5	X	0	0	0	%100
60	M6	X	0	0	0	%100
61	M7	X	0	0	0	%100
62	M8	X	0	0	0	%100
63	M9	X	0	0	0	%100
64	M10	X	0	0	0	%100
65	M11	X	0	0	0	%100
66	M12	X	0	0	0	%100
67	M13	X	0	0	0	%100
68	M14	X	0	0	0	%100
69	M15	X	0	0	0	%100
70	M16	X	0	0	0	%100
71	M17	X	0	0	0	%100
72	M18	X	0	0	0	%100
73	M19	X	0	0	0	%100
74	M20	X	0	0	0	%100
75	M21	X	0	0	0	%100
76	M22	X	0	0	0	%100
77	M23	X	0	0	0	%100
78	M24	X	0	0	0	%100
79	M25	X	0	0	0	%100
80	M26	X	0	0	0	%100
81	M27	X	0	0	0	%100
82	M28	X	0	0	0	%100
83	M29	X	0	0	0	%100
84	M30	X	0	0	0	%100
85	M31	X	0	0	0	%100
86	M32	X	0	0	0	%100
87	M33	X	0	0	0	%100
88	M34	X	0	0	0	%100
89	M35	X	0	0	0	%100
90	M36	X	0	0	0	%100
91	B1	X	0	0	0	%3
92	A4	X	0	0	0	%100
93	A3	X	0	0	0	%100
94	C1	X	0	0	0	%3
95	A2	X	0	0	0	%100
96	A1	X	0	0	0	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
97	K1	X	0	0	0	%100
98	B1	X	0	0	%68.5	%100
99	B2	X	0	0	%78.8	%100
100	B3	X	0	0	%78.1	%100
101	B4	X	0	0	%78.1	%100
102	C1	X	0	0	%68.5	%100
103	C2	X	0	0	%78.8	%100
104	C3	X	0	0	%78.1	%100
105	C4	X	0	0	%78.1	%100
106	K2	X	0	0	0	%100
107	K3	X	0	0	0	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	-.003	-.003	0	%100
2	M2	Z	-.003	-.003	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	-.001	-.001	0	%100
5	M5	Z	-.004	-.004	0	%100
6	M6	Z	-.002	-.002	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	-.001	-.001	0	%100
12	M12	Z	-.001	-.001	0	%100
13	M13	Z	-.001	-.001	0	%100
14	M14	Z	-.001	-.001	0	%100
15	M15	Z	-.001	-.001	0	%100
16	M16	Z	-.001	-.001	0	%100
17	M17	Z	-.001	-.001	0	%100
18	M18	Z	-.001	-.001	0	%100
19	M19	Z	-.002	-.002	0	%100
20	M20	Z	-.001	-.001	0	%100
21	M21	Z	0	0	0	%100
22	M22	Z	0	0	0	%100
23	M23	Z	0	0	0	%100
24	M24	Z	0	0	0	%100
25	M25	Z	0	0	0	%100
26	M26	Z	-.001	-.001	0	%100
27	M27	Z	-.001	-.001	0	%100
28	M28	Z	-.001	-.001	0	%100
29	M29	Z	-.001	-.001	0	%100
30	M30	Z	-.001	-.001	0	%100
31	M31	Z	-.001	-.001	0	%100
32	M32	Z	-.001	-.001	0	%100
33	M33	Z	-.001	-.001	0	%100
34	M34	Z	-.002	-.002	0	%100
35	M35	Z	-.003	-.003	0	%100
36	M36	Z	0	0	0	%100
37	B1	Z	-.002	-.002	0	%3
38	C1	Z	-.002	-.002	0	%3
39	A1	Z	-.002	-.002	0	%3
40	B1	Z	-.002	-.002	%68.5	%100
41	A4	Z	-.002	-.002	%78.1	%100
42	B2	Z	-.002	-.002	%78.8	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
43	B3	Z	-.002	-.002	%78.1	%100
44	A3	Z	-.002	-.002	%78.1	%100
45	B4	Z	-.002	-.002	%78.1	%100
46	C1	Z	-.002	-.002	%68.5	%100
47	A2	Z	-.002	-.002	%78.8	%100
48	C2	Z	-.002	-.002	%78.8	%100
49	C3	Z	-.002	-.002	%78.1	%100
50	A1	Z	-.002	-.002	%68.5	%100
51	C4	Z	-.002	-.002	%78.1	%100
52	K2	Z	-.003	-.003	0	%100
53	K1	Z	-.003	-.003	0	%100
54	K3	Z	-.003	-.003	0	%100
55	M1	X	.002	.002	0	%100
56	M2	X	.002	.002	0	%100
57	M3	X	0	0	0	%100
58	M4	X	0	0	0	%100
59	M5	X	.002	.002	0	%100
60	M6	X	.001	.001	0	%100
61	M7	X	0	0	0	%100
62	M8	X	0	0	0	%100
63	M9	X	0	0	0	%100
64	M10	X	0	0	0	%100
65	M11	X	.001	.001	0	%100
66	M12	X	.001	.001	0	%100
67	M13	X	.001	.001	0	%100
68	M14	X	.001	.001	0	%100
69	M15	X	.001	.001	0	%100
70	M16	X	.001	.001	0	%100
71	M17	X	.001	.001	0	%100
72	M18	X	.001	.001	0	%100
73	M19	X	.001	.001	0	%100
74	M20	X	.001	.001	0	%100
75	M21	X	0	0	0	%100
76	M22	X	0	0	0	%100
77	M23	X	0	0	0	%100
78	M24	X	0	0	0	%100
79	M25	X	0	0	0	%100
80	M26	X	.001	.001	0	%100
81	M27	X	.001	.001	0	%100
82	M28	X	.001	.001	0	%100
83	M29	X	.001	.001	0	%100
84	M30	X	.001	.001	0	%100
85	M31	X	.001	.001	0	%100
86	M32	X	.001	.001	0	%100
87	M33	X	.001	.001	0	%100
88	M34	X	.001	.001	0	%100
89	M35	X	.002	.002	0	%100
90	M36	X	0	0	0	%100
91	B1	X	.001	.001	0	%3
92	A4	X	.001	.001	0	%100
93	A3	X	.001	.001	0	%100
94	C1	X	.001	.001	0	%3
95	A2	X	.001	.001	0	%100
96	A1	X	.001	.001	0	%100
97	K1	X	.002	.002	0	%100
98	B1	X	.001	.001	%68.5	%100
99	B2	X	.001	.001	%78.8	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
100	B3	X	.001	.001	%78.1	%100
101	B4	X	.001	.001	%78.1	%100
102	C1	X	.001	.001	%68.5	%100
103	C2	X	.001	.001	%78.8	%100
104	C3	X	.001	.001	%78.1	%100
105	C4	X	.001	.001	%78.1	%100
106	K2	X	.002	.002	0	%100
107	K3	X	.002	.002	0	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	-.001	-.001	0	%100
2	M2	Z	-.002	-.002	0	%100
3	M3	Z	-.001	-.001	0	%100
4	M4	Z	-.001	-.001	0	%100
5	M5	Z	-.002	-.002	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	-.001	-.001	0	%100
12	M12	Z	-.001	-.001	0	%100
13	M13	Z	-.001	-.001	0	%100
14	M14	Z	-.001	-.001	0	%100
15	M15	Z	-.001	-.001	0	%100
16	M16	Z	-.001	-.001	0	%100
17	M17	Z	-.001	-.001	0	%100
18	M18	Z	-.001	-.001	0	%100
19	M19	Z	-.001	-.001	0	%100
20	M20	Z	-.001	-.001	0	%100
21	M21	Z	0	0	0	%100
22	M22	Z	0	0	0	%100
23	M23	Z	0	0	0	%100
24	M24	Z	0	0	0	%100
25	M25	Z	0	0	0	%100
26	M26	Z	-.001	-.001	0	%100
27	M27	Z	-.001	-.001	0	%100
28	M28	Z	-.001	-.001	0	%100
29	M29	Z	-.001	-.001	0	%100
30	M30	Z	-.001	-.001	0	%100
31	M31	Z	-.001	-.001	0	%100
32	M32	Z	-.001	-.001	0	%100
33	M33	Z	-.001	-.001	0	%100
34	M34	Z	-.001	-.001	0	%100
35	M35	Z	-.001	-.001	0	%100
36	M36	Z	0	0	0	%100
37	B1	Z	-.001	-.001	0	%3
38	C1	Z	-.001	-.001	0	%3
39	A1	Z	-.001	-.001	0	%3
40	B1	Z	-.001	-.001	%68.5	%100
41	A4	Z	-.001	-.001	%78.1	%100
42	B2	Z	-.001	-.001	%78.8	%100
43	B3	Z	-.001	-.001	%78.1	%100
44	A3	Z	-.001	-.001	%78.1	%100
45	B4	Z	-.001	-.001	%78.1	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
46	C1	Z	-.001	-.001	%68.5	%100
47	A2	Z	-.001	-.001	%78.8	%100
48	C2	Z	-.001	-.001	%78.8	%100
49	C3	Z	-.001	-.001	%78.1	%100
50	A1	Z	-.001	-.001	%68.5	%100
51	C4	Z	-.001	-.001	%78.1	%100
52	K2	Z	-.002	-.002	0	%100
53	K1	Z	-.002	-.002	0	%100
54	K3	Z	-.002	-.002	0	%100
55	M1	X	.002	.002	0	%100
56	M2	X	.003	.003	0	%100
57	M3	X	.001	.001	0	%100
58	M4	X	.002	.002	0	%100
59	M5	X	.003	.003	0	%100
60	M6	X	.001	.001	0	%100
61	M7	X	0	0	0	%100
62	M8	X	0	0	0	%100
63	M9	X	0	0	0	%100
64	M10	X	0	0	0	%100
65	M11	X	.001	.001	0	%100
66	M12	X	.001	.001	0	%100
67	M13	X	.001	.001	0	%100
68	M14	X	.001	.001	0	%100
69	M15	X	.001	.001	0	%100
70	M16	X	.001	.001	0	%100
71	M17	X	.001	.001	0	%100
72	M18	X	.001	.001	0	%100
73	M19	X	.001	.001	0	%100
74	M20	X	.001	.001	0	%100
75	M21	X	.001	.001	0	%100
76	M22	X	0	0	0	%100
77	M23	X	0	0	0	%100
78	M24	X	0	0	0	%100
79	M25	X	0	0	0	%100
80	M26	X	.001	.001	0	%100
81	M27	X	.001	.001	0	%100
82	M28	X	.001	.001	0	%100
83	M29	X	.001	.001	0	%100
84	M30	X	.001	.001	0	%100
85	M31	X	.001	.001	0	%100
86	M32	X	.001	.001	0	%100
87	M33	X	.001	.001	0	%100
88	M34	X	.002	.002	0	%100
89	M35	X	.002	.002	0	%100
90	M36	X	.001	.001	0	%100
91	B1	X	.002	.002	0	%3
92	A4	X	.002	.002	0	%100
93	A3	X	.002	.002	0	%100
94	C1	X	.002	.002	0	%3
95	A2	X	.002	.002	0	%100
96	A1	X	.002	.002	0	%100
97	K1	X	.003	.003	0	%100
98	B1	X	.002	.002	%68.5	%100
99	B2	X	.002	.002	%78.8	%100
100	B3	X	.002	.002	%78.1	%100
101	B4	X	.002	.002	%78.1	%100
102	C1	X	.002	.002	%68.5	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
103	C2	X	.002	.002	%78.8	%100
104	C3	X	.002	.002	%78.1	%100
105	C4	X	.002	.002	%78.1	%100
106	K2	X	.003	.003	0	%100
107	K3	X	.003	.003	0	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	0	0	0	%100
13	M13	Z	0	0	0	%100
14	M14	Z	0	0	0	%100
15	M15	Z	0	0	0	%100
16	M16	Z	0	0	0	%100
17	M17	Z	0	0	0	%100
18	M18	Z	0	0	0	%100
19	M19	Z	0	0	0	%100
20	M20	Z	0	0	0	%100
21	M21	Z	0	0	0	%100
22	M22	Z	0	0	0	%100
23	M23	Z	0	0	0	%100
24	M24	Z	0	0	0	%100
25	M25	Z	0	0	0	%100
26	M26	Z	0	0	0	%100
27	M27	Z	0	0	0	%100
28	M28	Z	0	0	0	%100
29	M29	Z	0	0	0	%100
30	M30	Z	0	0	0	%100
31	M31	Z	0	0	0	%100
32	M32	Z	0	0	0	%100
33	M33	Z	0	0	0	%100
34	M34	Z	0	0	0	%100
35	M35	Z	0	0	0	%100
36	M36	Z	0	0	0	%100
37	B1	Z	0	0	0	%3
38	C1	Z	0	0	0	%3
39	A1	Z	0	0	0	%3
40	B1	Z	0	0	%68.5	%100
41	A4	Z	0	0	%78.1	%100
42	B2	Z	0	0	%78.8	%100
43	B3	Z	0	0	%78.1	%100
44	A3	Z	0	0	%78.1	%100
45	B4	Z	0	0	%78.1	%100
46	C1	Z	0	0	%68.5	%100
47	A2	Z	0	0	%78.8	%100
48	C2	Z	0	0	%78.8	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
49	C3	Z	0	0	%78.1	%100
50	A1	Z	0	0	%68.5	%100
51	C4	Z	0	0	%78.1	%100
52	K2	Z	0	0	0	%100
53	K1	Z	0	0	0	%100
54	K3	Z	0	0	0	%100
55	M1	X	.001	.001	0	%100
56	M2	X	.003	.003	0	%100
57	M3	X	.003	.003	0	%100
58	M4	X	.004	.004	0	%100
59	M5	X	.002	.002	0	%100
60	M6	X	.002	.002	0	%100
61	M7	X	0	0	0	%100
62	M8	X	0	0	0	%100
63	M9	X	0	0	0	%100
64	M10	X	0	0	0	%100
65	M11	X	.002	.002	0	%100
66	M12	X	.002	.002	0	%100
67	M13	X	.002	.002	0	%100
68	M14	X	.002	.002	0	%100
69	M15	X	.002	.002	0	%100
70	M16	X	.002	.002	0	%100
71	M17	X	.002	.002	0	%100
72	M18	X	.002	.002	0	%100
73	M19	X	.001	.001	0	%100
74	M20	X	.001	.001	0	%100
75	M21	X	.001	.001	0	%100
76	M22	X	0	0	0	%100
77	M23	X	0	0	0	%100
78	M24	X	0	0	0	%100
79	M25	X	0	0	0	%100
80	M26	X	.002	.002	0	%100
81	M27	X	.002	.002	0	%100
82	M28	X	.002	.002	0	%100
83	M29	X	.002	.002	0	%100
84	M30	X	.002	.002	0	%100
85	M31	X	.002	.002	0	%100
86	M32	X	.002	.002	0	%100
87	M33	X	.002	.002	0	%100
88	M34	X	.002	.002	0	%100
89	M35	X	.002	.002	0	%100
90	M36	X	.002	.002	0	%100
91	B1	X	.003	.003	0	%3
92	A4	X	.003	.003	0	%100
93	A3	X	.003	.003	0	%100
94	C1	X	.003	.003	0	%3
95	A2	X	.003	.003	0	%100
96	A1	X	.003	.003	0	%100
97	K1	X	.004	.004	0	%100
98	B1	X	.003	.003	%68.5	%100
99	B2	X	.003	.003	%78.8	%100
100	B3	X	.003	.003	%78.1	%100
101	B4	X	.003	.003	%78.1	%100
102	C1	X	.003	.003	%68.5	%100
103	C2	X	.003	.003	%78.8	%100
104	C3	X	.003	.003	%78.1	%100
105	C4	X	.003	.003	%78.1	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
106	K2	X	.004	.004	0	%100
107	K3	X	.004	.004	0	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
1	M1	Z	.001	.001	0	%100
2	M2	Z	.001	.001	0	%100
3	M3	Z	.002	.002	0	%100
4	M4	Z	.001	.001	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	.002	.002	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	.001	.001	0	%100
12	M12	Z	.001	.001	0	%100
13	M13	Z	.001	.001	0	%100
14	M14	Z	.001	.001	0	%100
15	M15	Z	.001	.001	0	%100
16	M16	Z	.001	.001	0	%100
17	M17	Z	.001	.001	0	%100
18	M18	Z	.001	.001	0	%100
19	M19	Z	.001	.001	0	%100
20	M20	Z	0	0	0	%100
21	M21	Z	.001	.001	0	%100
22	M22	Z	0	0	0	%100
23	M23	Z	0	0	0	%100
24	M24	Z	0	0	0	%100
25	M25	Z	0	0	0	%100
26	M26	Z	.001	.001	0	%100
27	M27	Z	.001	.001	0	%100
28	M28	Z	.001	.001	0	%100
29	M29	Z	.001	.001	0	%100
30	M30	Z	.001	.001	0	%100
31	M31	Z	.001	.001	0	%100
32	M32	Z	.001	.001	0	%100
33	M33	Z	.001	.001	0	%100
34	M34	Z	0	0	0	%100
35	M35	Z	.001	.001	0	%100
36	M36	Z	.001	.001	0	%100
37	B1	Z	.001	.001	0	%3
38	C1	Z	.001	.001	0	%3
39	A1	Z	.001	.001	0	%3
40	B1	Z	.001	.001	%68.5	%100
41	A4	Z	.001	.001	%78.1	%100
42	B2	Z	.001	.001	%78.8	%100
43	B3	Z	.001	.001	%78.1	%100
44	A3	Z	.001	.001	%78.1	%100
45	B4	Z	.001	.001	%78.1	%100
46	C1	Z	.001	.001	%68.5	%100
47	A2	Z	.001	.001	%78.8	%100
48	C2	Z	.001	.001	%78.8	%100
49	C3	Z	.001	.001	%78.1	%100
50	A1	Z	.001	.001	%68.5	%100
51	C4	Z	.001	.001	%78.1	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude(k/ft,F,k/sf)	End Magnitude(k/ft,F,k/sf)	Start Location(ft,...	End Location(ft,...
52	K2	Z	.002	.002	0	%100
53	K1	Z	.002	.002	0	%100
54	K3	Z	.002	.002	0	%100
55	M1	X	.002	.002	0	%100
56	M2	X	.001	.001	0	%100
57	M3	X	.003	.003	0	%100
58	M4	X	.002	.002	0	%100
59	M5	X	.001	.001	0	%100
60	M6	X	.003	.003	0	%100
61	M7	X	0	0	0	%100
62	M8	X	0	0	0	%100
63	M9	X	0	0	0	%100
64	M10	X	0	0	0	%100
65	M11	X	.001	.001	0	%100
66	M12	X	.001	.001	0	%100
67	M13	X	.001	.001	0	%100
68	M14	X	.001	.001	0	%100
69	M15	X	.001	.001	0	%100
70	M16	X	.001	.001	0	%100
71	M17	X	.001	.001	0	%100
72	M18	X	.001	.001	0	%100
73	M19	X	.001	.001	0	%100
74	M20	X	.001	.001	0	%100
75	M21	X	.001	.001	0	%100
76	M22	X	0	0	0	%100
77	M23	X	0	0	0	%100
78	M24	X	0	0	0	%100
79	M25	X	0	0	0	%100
80	M26	X	.001	.001	0	%100
81	M27	X	.001	.001	0	%100
82	M28	X	.001	.001	0	%100
83	M29	X	.001	.001	0	%100
84	M30	X	.001	.001	0	%100
85	M31	X	.001	.001	0	%100
86	M32	X	.001	.001	0	%100
87	M33	X	.001	.001	0	%100
88	M34	X	.001	.001	0	%100
89	M35	X	.002	.002	0	%100
90	M36	X	.002	.002	0	%100
91	B1	X	.002	.002	0	%3
92	A4	X	.002	.002	0	%100
93	A3	X	.002	.002	0	%100
94	C1	X	.002	.002	0	%3
95	A2	X	.002	.002	0	%100
96	A1	X	.002	.002	0	%100
97	K1	X	.003	.003	0	%100
98	B1	X	.002	.002	%68.5	%100
99	B2	X	.002	.002	%78.8	%100
100	B3	X	.002	.002	%78.1	%100
101	B4	X	.002	.002	%78.1	%100
102	C1	X	.002	.002	%68.5	%100
103	C2	X	.002	.002	%78.8	%100
104	C3	X	.002	.002	%78.1	%100
105	C4	X	.002	.002	%78.1	%100
106	K2	X	.003	.003	0	%100
107	K3	X	.003	.003	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,k-f]	End Magnitude[k/ft,F,k-f]	Start Location[ft,...	End Location[ft,...
1	M1	Z	.003	.003	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	.003	.003	0	%100
4	M4	Z	.001	.001	0	%100
5	M5	Z	.002	.002	0	%100
6	M6	Z	.004	.004	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	.001	.001	0	%100
12	M12	Z	.001	.001	0	%100
13	M13	Z	.001	.001	0	%100
14	M14	Z	.001	.001	0	%100
15	M15	Z	.001	.001	0	%100
16	M16	Z	.001	.001	0	%100
17	M17	Z	.001	.001	0	%100
18	M18	Z	.001	.001	0	%100
19	M19	Z	.002	.002	0	%100
20	M20	Z	0	0	0	%100
21	M21	Z	.001	.001	0	%100
22	M22	Z	0	0	0	%100
23	M23	Z	0	0	0	%100
24	M24	Z	0	0	0	%100
25	M25	Z	0	0	0	%100
26	M26	Z	.001	.001	0	%100
27	M27	Z	.001	.001	0	%100
28	M28	Z	.001	.001	0	%100
29	M29	Z	.001	.001	0	%100
30	M30	Z	.001	.001	0	%100
31	M31	Z	.001	.001	0	%100
32	M32	Z	.001	.001	0	%100
33	M33	Z	.001	.001	0	%100
34	M34	Z	0	0	0	%100
35	M35	Z	.003	.003	0	%100
36	M36	Z	.002	.002	0	%100
37	B1	Z	.002	.002	0	%3
38	C1	Z	.002	.002	0	%3
39	A1	Z	.002	.002	0	%3
40	B1	Z	.002	.002	%68.5	%100
41	A4	Z	.002	.002	%78.1	%100
42	B2	Z	.002	.002	%78.8	%100
43	B3	Z	.002	.002	%78.1	%100
44	A3	Z	.002	.002	%78.1	%100
45	B4	Z	.002	.002	%78.1	%100
46	C1	Z	.002	.002	%68.5	%100
47	A2	Z	.002	.002	%78.8	%100
48	C2	Z	.002	.002	%78.8	%100
49	C3	Z	.002	.002	%78.1	%100
50	A1	Z	.002	.002	%68.5	%100
51	C4	Z	.002	.002	%78.1	%100
52	K2	Z	.003	.003	0	%100
53	K1	Z	.003	.003	0	%100
54	K3	Z	.003	.003	0	%100
55	M1	X	.002	.002	0	%100
56	M2	X	0	0	0	%100
57	M3	X	.002	.002	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,	End Location[ft,
58	M4	X	0	0	0	%100
59	M5	X	.001	.001	0	%100
60	M6	X	.002	.002	0	%100
61	M7	X	0	0	0	%100
62	M8	X	0	0	0	%100
63	M9	X	0	0	0	%100
64	M10	X	0	0	0	%100
65	M11	X	.001	.001	0	%100
66	M12	X	.001	.001	0	%100
67	M13	X	.001	.001	0	%100
68	M14	X	.001	.001	0	%100
69	M15	X	.001	.001	0	%100
70	M16	X	.001	.001	0	%100
71	M17	X	.001	.001	0	%100
72	M18	X	.001	.001	0	%100
73	M19	X	.001	.001	0	%100
74	M20	X	0	0	0	%100
75	M21	X	.001	.001	0	%100
76	M22	X	0	0	0	%100
77	M23	X	0	0	0	%100
78	M24	X	0	0	0	%100
79	M25	X	0	0	0	%100
80	M26	X	.001	.001	0	%100
81	M27	X	.001	.001	0	%100
82	M28	X	.001	.001	0	%100
83	M29	X	.001	.001	0	%100
84	M30	X	.001	.001	0	%100
85	M31	X	.001	.001	0	%100
86	M32	X	.001	.001	0	%100
87	M33	X	.001	.001	0	%100
88	M34	X	0	0	0	%100
89	M35	X	.002	.002	0	%100
90	M36	X	.001	.001	0	%100
91	B1	X	.001	.001	0	%3
92	A4	X	.001	.001	0	%100
93	A3	X	.001	.001	0	%100
94	C1	X	.001	.001	0	%3
95	A2	X	.001	.001	0	%100
96	A1	X	.001	.001	0	%100
97	K1	X	.002	.002	0	%100
98	B1	X	.001	.001	%68.5	%100
99	B2	X	.001	.001	%78.8	%100
100	B3	X	.001	.001	%78.1	%100
101	B4	X	.001	.001	%78.1	%100
102	C1	X	.001	.001	%68.5	%100
103	C2	X	.001	.001	%78.8	%100
104	C3	X	.001	.001	%78.1	%100
105	C4	X	.001	.001	%78.1	%100
106	K2	X	.002	.002	0	%100
107	K3	X	.002	.002	0	%100

Member Distributed Loads (BLC 48 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,	End Location[ft,
1	M3	Y	-.001	-.008	0	2.071
2	M3	Y	-.008	-.014	2.071	4.143
3	M3	Y	-.014	-.014	4.143	6.214

Member Distributed Loads (BLC 48 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft	End Location[ft
4	M3	Y	-.014	-.014	6.214	8.286
5	M3	Y	-.014	-.014	8.286	10.357
6	M3	Y	-.014	-.008	10.357	12.429
7	M3	Y	-.008	-.001	12.429	14.5
8	M4	Y	-.001	-.011	.75	2.5
9	M4	Y	-.011	-.012	2.5	4.25
10	M4	Y	-.012	-.003	4.25	6
11	M6	Y	-.001	-.011	.75	2.5
12	M6	Y	-.011	-.012	2.5	4.25
13	M6	Y	-.012	-.003	4.25	6
14	M1	Y	-.001	-.008	0	2.071
15	M1	Y	-.008	-.014	2.071	4.143
16	M1	Y	-.014	-.014	4.143	6.214
17	M1	Y	-.014	-.014	6.214	8.286
18	M1	Y	-.014	-.014	8.286	10.357
19	M1	Y	-.014	-.008	10.357	12.429
20	M1	Y	-.008	-.001	12.429	14.5
21	M5	Y	-.001	-.011	.75	2.5
22	M5	Y	-.011	-.012	2.5	4.25
23	M5	Y	-.012	-.003	4.25	6
24	M2	Y	-.001	-.008	0	2.071
25	M2	Y	-.008	-.014	2.071	4.143
26	M2	Y	-.014	-.014	4.143	6.214
27	M2	Y	-.014	-.014	6.214	8.286
28	M2	Y	-.014	-.014	8.286	10.357
29	M2	Y	-.014	-.008	10.357	12.429
30	M2	Y	-.008	-.001	12.429	14.5

Member Distributed Loads (BLC 49 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft	End Location[ft
1	M3	Y	.0009799	.007	0	2.071
2	M3	Y	.007	.012	2.071	4.143
3	M3	Y	.012	.012	4.143	6.214
4	M3	Y	.012	.012	6.214	8.286
5	M3	Y	.012	.012	8.286	10.357
6	M3	Y	.012	.007	10.357	12.429
7	M3	Y	.007	.0009799	12.429	14.5
8	M4	Y	.001	.009	.75	2.5
9	M4	Y	.009	.01	2.5	4.25
10	M4	Y	.01	.003	4.25	6
11	M6	Y	.001	.009	.75	2.5
12	M6	Y	.009	.01	2.5	4.25
13	M6	Y	.01	.003	4.25	6
14	M1	Y	.0009799	.007	0	2.071
15	M1	Y	.007	.012	2.071	4.143
16	M1	Y	.012	.012	4.143	6.214
17	M1	Y	.012	.012	6.214	8.286
18	M1	Y	.012	.012	8.286	10.357
19	M1	Y	.012	.007	10.357	12.429
20	M1	Y	.007	.0009799	12.429	14.5
21	M5	Y	.001	.009	.75	2.5
22	M5	Y	.009	.01	2.5	4.25
23	M5	Y	.01	.003	4.25	6
24	M2	Y	.0009799	.007	0	2.071
25	M2	Y	.007	.012	2.071	4.143
26	M2	Y	.012	.012	4.143	6.214

Member Distributed Loads (BLC 49 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,...
27	M2	Y	.012	.012	6.214	8.286
28	M2	Y	.012	.012	8.286	10.357
29	M2	Y	.012	.007	10.357	12.429
30	M2	Y	.007	.0009799	12.429	14.5

Member Area Loads (BLC 1 : Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N3	N96	N94	N2	Y	Two Way	-.012
2	N3	N96	N95	N1	Y	Two Way	-.012
3	N1	N95	N94	N2	Y	Two Way	-.012

Member Area Loads (BLC 2 : Ice Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N3	N96	N94	N2	Y	Two Way	.01
2	N3	N96	N95	N1	Y	Two Way	.01
3	N1	N95	N94	N2	Y	Two Way	.01

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Dead	None		-1			24		3	
2	Ice Dead	None					24	51	3	
3	Full Wind Antenna (0 Deg)	None					24			
4	Full Wind Antenna (30 Deg)	None					60			
5	Full Wind Antenna (60 Deg)	None					60			
6	Full Wind Antenna (90 Deg)	None					60			
7	Full Wind Antenna (120 Deg)	None					56			
8	Full Wind Antenna (150 Deg)	None					60			
9	Full Wind Members (0 Deg)	None						53		
10	Full Wind Members (30 Deg)	None						53		
11	Full Wind Members (60 Deg)	None						53		
12	Full Wind Members (90 Deg)	None						53		
13	Full Wind Members (120 Deg)	None						53		
14	Full Wind Members (150 Deg)	None						53		
15	Ice Wind Antenna (0 Deg)	None					24			
16	Ice Wind Antenna (30 Deg)	None					60			
17	Ice Wind Antenna (60 Deg)	None					60			
18	Ice Wind Antenna (90 Deg)	None					60			
19	Ice Wind Antenna (120 Deg)	None					56			
20	Ice Wind Antenna (150 Deg)	None					56			
21	Ice Wind Members (0 Deg)	None						107		
22	Ice Wind Members (30 Deg)	None						107		
23	Ice Wind Members (60 Deg)	None						107		
24	Ice Wind Members (90 Deg)	None						107		
25	Ice Wind Members (120 Deg)	None						107		
26	Ice Wind Members (150 Deg)	None						107		
27	Seismic Antenna (0 Deg)	None					24			
28	Seismic Antenna (90 Deg)	None					24			
29	Seismic Members (0 Deg)	None		-.05	-.124					
30	Seismic Members (30 Deg)	None	.062	-.05	-.108					
31	Seismic Members (60 Deg)	None	.108	-.05	-.062					
32	Seismic Members (90 Deg)	None	.124	-.05	-7.627e-...					
33	Seismic Members (120 Deg)	None	.108	-.05	.062					
34	Seismic Members (150 Deg)	None	.062	-.05	.108					

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut..	Area(Me..	Surface(..
35	Seismic Members (180 Deg)	None	1.525e-17	-.05	.124					
36	Seismic Members (210 Deg)	None	-.062	-.05	.108					
37	Seismic Members (240 Deg)	None	-.108	-.05	.062					
38	Seismic Members (270 Deg)	None	-.124	-.05	2.288e-17					
39	Seismic Members (300 Deg)	None	-.108	-.05	-.062					
40	Seismic Members (330 Deg)	None	-.062	-.05	-.108					
41	Seismic Vertical Antennas	None					24			
42	Man 1 (500 lbs)	None				1				
43	Man 2 (500 lbs)	None				1				
44	Man 3 (500 lbs)	None				1				
45	Man 4 (250 lbs)	None				1				
46	Man 5 (250 lbs)	None				1				
47	Man 6 (250 lbs)	None				1				
48	BLC 1 Transient Area Loads	None						30		
49	BLC 2 Transient Area Loads	None						30		

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4D	Yes	Y		1	1.4																				
2	1.2D + 1.0W 0°	Yes	Y		1	1.2	3	1	9	1																
3	1.2D + 1.0W 30°	Yes	Y		1	1.2	4	1	10	1																
4	1.2D + 1.0W 60°	Yes	Y		1	1.2	5	1	11	1																
5	1.2D + 1.0W 90°	Yes	Y		1	1.2	6	1	12	1																
6	1.2D + 1.0W 120°	Yes	Y		1	1.2	7	1	13	1																
7	1.2D + 1.0W 150°	Yes	Y		1	1.2	8	1	14	1																
8	1.2D + 1.0W 180°	Yes	Y		1	1.2	3	-1	9	-1																
9	1.2D + 1.0W 210°	Yes	Y		1	1.2	4	-1	10	-1																
10	1.2D + 1.0W 240°	Yes	Y		1	1.2	5	-1	11	-1																
11	1.2D + 1.0W 270°	Yes	Y		1	1.2	6	-1	12	-1																
12	1.2D + 1.0W 300°	Yes	Y		1	1.2	7	-1	13	-1																
13	1.2D + 1.0W 330°	Yes	Y		1	1.2	8	-1	14	-1																
14	1.2D + 1.0Di + 1.0Wi 0°	Yes	Y		1	1.2	2	1	15	1	21	1														
15	1.2D + 1.0Di + 1.0Wi 30°	Yes	Y		1	1.2	2	1	16	1	22	1														
16	1.2D + 1.0Di + 1.0Wi 60°	Yes	Y		1	1.2	2	1	17	1	23	1														
17	1.2D + 1.0Di + 1.0Wi 90°	Yes	Y		1	1.2	2	1	18	1	24	1														
18	1.2D + 1.0Di + 1.0Wi 120°	Yes	Y		1	1.2	2	1	19	1	25	1														
19	1.2D + 1.0Di + 1.0Wi 150°	Yes	Y		1	1.2	2	1	20	1	26	1														
20	1.2D + 1.0Di + 1.0Wi 180°	Yes	Y		1	1.2	2	1	15	-1	21	-1														
21	1.2D + 1.0Di + 1.0Wi 210°	Yes	Y		1	1.2	2	1	16	-1	22	-1														
22	1.2D + 1.0Di + 1.0Wi 240°	Yes	Y		1	1.2	2	1	17	-1	23	-1														
23	1.2D + 1.0Di + 1.0Wi 270°	Yes	Y		1	1.2	2	1	18	-1	24	-1														
24	1.2D + 1.0Di + 1.0Wi 300°	Yes	Y		1	1.2	2	1	19	-1	25	-1														
25	1.2D + 1.0Di + 1.0Wi 330°	Yes	Y		1	1.2	2	1	20	-1	26	-1														
26	1.2D + 1.5Lm_1 + 1.0Wm 0°	Yes	Y		1	1.2	3	.069	9	.069	42	1.5														
27	1.2D + 1.5Lm_1 + 1.0Wm 30°	Yes	Y		1	1.2	4	.069	10	.069	42	1.5														
28	1.2D + 1.5Lm_1 + 1.0Wm 60°	Yes	Y		1	1.2	5	.069	11	.069	42	1.5														
29	1.2D + 1.5Lm_1 + 1.0Wm 90°	Yes	Y		1	1.2	6	.069	12	.069	42	1.5														
30	1.2D + 1.5Lm_1 + 1.0Wm 120°	Yes	Y		1	1.2	7	.069	13	.069	42	1.5														
31	1.2D + 1.5Lm_1 + 1.0Wm 150°	Yes	Y		1	1.2	8	.069	14	.069	42	1.5														
32	1.2D + 1.5Lm_1 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	42	1.5														
33	1.2D + 1.5Lm_1 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	42	1.5														
34	1.2D + 1.5Lm_1 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	42	1.5														
35	1.2D + 1.5Lm_1 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	42	1.5														
36	1.2D + 1.5Lm_1 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	42	1.5														
37	1.2D + 1.5Lm_1 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	42	1.5														

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
38	1.2D + 1.5Lm_2 + 1.0Wm 0°	Yes	Y		1	1.2	3	.069	9	.069	43	1.5												
39	1.2D + 1.5Lm_2 + 1.0Wm 30°	Yes	Y		1	1.2	4	.069	10	.069	43	1.5												
40	1.2D + 1.5Lm_2 + 1.0Wm 60°	Yes	Y		1	1.2	5	.069	11	.069	43	1.5												
41	1.2D + 1.5Lm_2 + 1.0Wm 90°	Yes	Y		1	1.2	6	.069	12	.069	43	1.5												
42	1.2D + 1.5Lm_2 + 1.0Wm 120°	Yes	Y		1	1.2	7	.069	13	.069	43	1.5												
43	1.2D + 1.5Lm_2 + 1.0Wm 150°	Yes	Y		1	1.2	8	.069	14	.069	43	1.5												
44	1.2D + 1.5Lm_2 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	43	1.5												
45	1.2D + 1.5Lm_2 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	43	1.5												
46	1.2D + 1.5Lm_2 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	43	1.5												
47	1.2D + 1.5Lm_2 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	43	1.5												
48	1.2D + 1.5Lm_2 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	43	1.5												
49	1.2D + 1.5Lm_2 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	43	1.5												
50	1.2D + 1.5Lm_3 + 1.0Wm 0°	Yes	Y		1	1.2	3	.069	9	.069	44	1.5												
51	1.2D + 1.5Lm_3 + 1.0Wm 30°	Yes	Y		1	1.2	4	.069	10	.069	44	1.5												
52	1.2D + 1.5Lm_3 + 1.0Wm 60°	Yes	Y		1	1.2	5	.069	11	.069	44	1.5												
53	1.2D + 1.5Lm_3 + 1.0Wm 90°	Yes	Y		1	1.2	6	.069	12	.069	44	1.5												
54	1.2D + 1.5Lm_3 + 1.0Wm 120°	Yes	Y		1	1.2	7	.069	13	.069	44	1.5												
55	1.2D + 1.5Lm_3 + 1.0Wm 150°	Yes	Y		1	1.2	8	.069	14	.069	44	1.5												
56	1.2D + 1.5Lm_3 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	44	1.5												
57	1.2D + 1.5Lm_3 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	44	1.5												
58	1.2D + 1.5Lm_3 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	44	1.5												
59	1.2D + 1.5Lm_3 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	44	1.5												
60	1.2D + 1.5Lm_3 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	44	1.5												
61	1.2D + 1.5Lm_3 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	44	1.5												
62	1.2D + 1.5Lv_1 0°	Yes	Y		1	1.2	45	1.5																
63	1.2D + 1.5Lv_1 30°	Yes	Y		1	1.2	45	1.5																
64	1.2D + 1.5Lv_1 60°	Yes	Y		1	1.2	45	1.5																
65	1.2D + 1.5Lv_1 90°	Yes	Y		1	1.2	45	1.5																
66	1.2D + 1.5Lv_1 120°	Yes	Y		1	1.2	45	1.5																
67	1.2D + 1.5Lv_1 150°	Yes	Y		1	1.2	45	1.5																
68	1.2D + 1.5Lv_1 180°	Yes	Y		1	1.2	45	1.5																
69	1.2D + 1.5Lv_1 210°	Yes	Y		1	1.2	45	1.5																
70	1.2D + 1.5Lv_1 240°	Yes	Y		1	1.2	45	1.5																
71	1.2D + 1.5Lv_1 270°	Yes	Y		1	1.2	45	1.5																
72	1.2D + 1.5Lv_1 300°	Yes	Y		1	1.2	45	1.5																
73	1.2D + 1.5Lv_1 330°	Yes	Y		1	1.2	45	1.5																
74	1.2D + 1.5Lv_2 0°	Yes	Y		1	1.2	46	1.5																
75	1.2D + 1.5Lv_2 30°	Yes	Y		1	1.2	46	1.5																
76	1.2D + 1.5Lv_2 60°	Yes	Y		1	1.2	46	1.5																
77	1.2D + 1.5Lv_2 90°	Yes	Y		1	1.2	46	1.5																
78	1.2D + 1.5Lv_2 120°	Yes	Y		1	1.2	46	1.5																
79	1.2D + 1.5Lv_2 150°	Yes	Y		1	1.2	46	1.5																
80	1.2D + 1.5Lv_2 180°	Yes	Y		1	1.2	46	1.5																
81	1.2D + 1.5Lv_2 210°	Yes	Y		1	1.2	46	1.5																
82	1.2D + 1.5Lv_2 240°	Yes	Y		1	1.2	46	1.5																
83	1.2D + 1.5Lv_2 270°	Yes	Y		1	1.2	46	1.5																
84	1.2D + 1.5Lv_2 300°	Yes	Y		1	1.2	46	1.5																
85	1.2D + 1.5Lv_2 330°	Yes	Y		1	1.2	46	1.5																
86	1.2D + 1.5Lv_3 0°	Yes	Y		1	1.2	47	1.5																
87	1.2D + 1.5Lv_3 30°	Yes	Y		1	1.2	47	1.5																
88	1.2D + 1.5Lv_3 60°	Yes	Y		1	1.2	47	1.5																
89	1.2D + 1.5Lv_3 90°	Yes	Y		1	1.2	47	1.5																
90	1.2D + 1.5Lv_3 120°	Yes	Y		1	1.2	47	1.5																
91	1.2D + 1.5Lv_3 150°	Yes	Y		1	1.2	47	1.5																
92	1.2D + 1.5Lv_3 180°	Yes	Y		1	1.2	47	1.5																
93	1.2D + 1.5Lv_3 210°	Yes	Y		1	1.2	47	1.5																
94	1.2D + 1.5Lv_3 240°	Yes	Y		1	1.2	47	1.5																

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
95	1.2D + 1.5Lv_3_270°	Yes	Y		1	1.2	47	1.5																
96	1.2D + 1.5Lv_3_300°	Yes	Y		1	1.2	47	1.5																
97	1.2D + 1.5Lv_3_330°	Yes	Y		1	1.2	47	1.5																
98	1.2D + 1.0EV +1.0 EH 0°	Yes	Y		1	1.2	27	1	28		29	1	40	1										
99	1.2D + 1.0EV +1.0 EH 30°	Yes	Y		1	1.2	27	.866	28	.5	30	1	40	1										
100	1.2D + 1.0EV +1.0 EH 60°	Yes	Y		1	1.2	27	.5	28	.866	31	1	40	1										
101	1.2D + 1.0EV +1.0 EH 90°	Yes	Y		1	1.2	27		28	1	32	1	40	1										
102	1.2D + 1.0EV +1.0 EH 120°	Yes	Y		1	1.2	27	-.5	28	.866	33	1	40	1										
103	1.2D + 1.0EV +1.0 EH 150°	Yes	Y		1	1.2	27	-.8...	28	.5	34	1	40	1										
104	1.2D + 1.0EV +1.0 EH 180°	Yes	Y		1	1.2	27	-1	28		35	1	40	1										
105	1.2D + 1.0EV +1.0 EH 210°	Yes	Y		1	1.2	27	-.8...	28	-.5	36	1	40	1										
106	1.2D + 1.0EV +1.0 EH 240°	Yes	Y		1	1.2	27	-.5	28	-.8...	37	1	40	1										
107	1.2D + 1.0EV +1.0 EH 270°	Yes	Y		1	1.2	27		28	-1	38	1	40	1										
108	1.2D + 1.0EV +1.0 EH 300°	Yes	Y		1	1.2	27	.5	28	-.8...	39	1	40	1										
109	1.2D + 1.0EV +1.0 EH 330°	Yes	Y		1	1.2	27	.866	28	-.5	40	1	40	1										

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N9	max	1.819	10	2.313	22	1.012	4	-.908	3	1.833	13	-1.813	4
2		min	-1.873	4	.765	4	-.979	10	-4.062	21	-1.837	7	-6.911	22
3	N5	max	.629	11	2.302	14	1.926	2	7.951	14	1.544	5	.71	5
4		min	-.63	5	.806	8	-1.989	8	2.327	8	-1.548	11	-.744	11
5	N7	max	1.867	12	2.314	18	1.029	12	-.968	13	1.808	9	6.959	18
6		min	-1.813	6	.753	12	-.997	6	-3.963	19	-1.812	3	1.769	12
7	Totals:	max	4.009	11	6.601	21	3.725	2						
8		min	-4.009	5	3.703	3	-3.725	8						

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

	Mem...	Shape	Code Check	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi...	phi...	phi...	phi...	Cb	Eqn
1	M1	HSS4X4X4	.232	0	14	.087	14.5	y	3	57...	13...	16...	16...	3.311	H...
2	M2	HSS4X4X4	.230	0	22	.089	14.5	z	11	57...	13...	16...	16...	3.307	H...
3	M3	HSS4X4X4	.229	0	18	.089	14.5	z	7	57...	13...	16...	16...	3.317	H...
4	M4	HSS4X4X4	.494	7.5	14	.089	7.5	y	12	11...	13...	16...	16...	2.131	H...
5	M5	HSS4X4X4	.501	7.5	18	.088	7.5	y	4	11...	13...	16...	16...	2.135	H...
6	M6	HSS4X4X4	.502	7.5	22	.085	7.5	y	8	11...	13...	16...	16...	2.134	H...
7	M19	HSS2.375X...	.156	1.633	10	.075	13.063		7	4.0...	31...	1.6...	1.6...	3.284	H...
8	M20	HSS2.375X...	.143	12.617	6	.071	.742		13	4.0...	31...	1.6...	1.6...	3.343	H...
9	M21	HSS2.375X...	.139	8.758	13	.076	.742		9	4.0...	31...	1.6...	1.6...	3.588	H...
10	M34	L2.5x2.5x3	.012	.681	9	.073	1.333	z	2	27...	29...	.873	1.9...	1.136	H...
11	M35	L2.5x2.5x3	.012	.694	13	.075	1.333	z	6	27...	29...	.873	1.9...	1.136	H...
12	M36	L2.5x2.5x3	.012	.653	5	.073	0	y	10	27...	29...	.873	1.9...	1.136	H...
13	B1	PIPE 2.0	.382	4.448	8	.054	1.531		12	17...	32...	1.6...	1.6...	2.214	H...
14	A4	PIPE 2.0	.373	4.448	13	.083	4.448		11	17...	32...	1.6...	1.6...	2.907	H...
15	B2	PIPE 2.0	.345	4.448	7	.064	1.531		9	17...	32...	1.6...	1.6...	1.492	H...
16	B3	PIPE 2.0	.373	4.448	6	.053	1.531		3	17...	32...	1.6...	1.6...	1.727	H...
17	A3	PIPE 2.0	.370	4.448	2	.058	4.448		10	17...	32...	1.6...	1.6...	2.245	H...
18	B4	PIPE 2.0	.378	4.448	5	.080	1.531		3	17...	32...	1.6...	1.6...	1.834	H...
19	C1	PIPE 2.0	.386	4.448	12	.052	1.531		4	17...	32...	1.6...	1.6...	2.382	H...
20	A2	PIPE 2.0	.353	4.448	3	.067	4.448		5	17...	32...	1.6...	1.6...	2.056	H...
21	C2	PIPE 2.0	.350	4.448	11	.061	1.531		3	17...	32...	1.6...	1.6...	2.091	H...
22	C3	PIPE 2.0	.373	4.448	10	.053	1.531		6	17...	32...	1.6...	1.6...	1.843	H...
23	A1	PIPE 2.0	.384	4.448	4	.053	4.448		7	17...	32...	1.6...	1.6...	2.114	H...
24	C4	PIPE 2.0	.376	4.448	9	.084	1.531		7	17...	32...	1.6...	1.6...	1.84	H...

EXHIBIT 3

Filing Guides
Meetings & Minutes
Public Participation
Audio Link to New Britain Hearing Rooms
Programs & Services
Telecommunications Database
Maps
Publications
Other Resources
Statutes & Regulations
Frequently Asked Questions

Calendar
Receive Updates by E-mail Sign-Up for E-alerts
REGISTER Online to VOTE
Regulations of CT State Agencies
CT Alert WE CAN'T ALERT YOU... IF WE CAN'T REACH YOU

Melanie Bachman,
Executive Director

DOCKET NO. 188 - An application by Cellco Partnership d/b/a Bell Atlantic Mobile for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed telecommunications tower and associated equipment located at 2 Sunny Lane or on a parcel located immediately south of the intersection of Clinton Avenue and the Merritt Parkway in Westport, Connecticut.

Connecticut Siting Council

December 17, 1998

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications tower and equipment buildings at the proposed prime site in Westport, Connecticut, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Bell Atlantic Mobile (BAM) for the construction, operation, and maintenance of a telecommunications tower, and associated equipment at the proposed prime site, located at 2 Sunny Lane, Westport, Connecticut. We find the effects on scenic resources and adjacent residences of the proposed alternate site to be significant, and therefore deny certification of that site.

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 BAM, Springwich Cellular Limited Partnership (SCLP), Sprint PCS (Sprint), Omnipoint Communications, and Nextel Communications of the Mid-Atlantic, Inc. (Nextel); and such tower, excluding appurtenances, shall not exceed a height of 130 feet above ground level (AGL).

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include a final site plan(s) for site development detailing: relocation of the tower to the northwestern corner of the parcel to protect a nearby watercourse and wetlands, and to be closer to the commuter parking area; tower compound reduced in area to the minimum necessary for tower security; construction of the cable tray below grade; placement of a stockade or other architecturally treated fence around the compound; the location and specifications for the tower foundation, antennas, emergency generator and fuel tank, security fence, accessway, and vegetative screening; placement of underground utilities; construction plans for tree trimming, water drainage, and erosion and sedimentation controls consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended; provisions for the tower finish that may include painting; and provisions for the prevention and containment of spills and/or other discharge into surface water and ground water bodies.

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

4. The Certificate Holder shall provide the Council a recalculated report of electromagnetic radiofrequency power density for all transmitting antennas on the proposed tower as ordered in this Decision and Order, and again for any proposed change in the operation of the tower.

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

6. The Certificate Holder shall comply with the Town of Westport's recommendations for site development, including: proper abandonment of the existing septic system; removal of a portion of the existing driveway to accommodate for increased lot coverage; planting a dense vegetative buffer north of the Poplar Plains Brook; and relocation of the above-ground fuel tank to a distance at least 60 feet away from the waterway protection lines.

7. If the facility does not initially provide, or permanently ceases to provide cellular services following completion of construction, this Decision and Order shall be void, and the Certificate Holder shall dismantle the

tower and remove all associated equipment or re-application for any continued or new use shall be made to the Council before any such use is made.

8. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

9. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

10. The Certificate Holder shall provide to the Council the Federal Aviation Administration's determination for obstruction or hazard to air navigation.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Hartford Courant, Westport News, and 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.

The parties and intervenors to this proceeding are:

APPLICANT	**ITS REPRESENTATIVE**
Bell Atlantic Mobile	Kenneth C. Baldwin, Esq. Brian C. S. Freeman, Esq. Robinson & Cole One Commercial Plaza Hartford, CT 06103-3597
	Mr. David S. Malko, P.E. Jennifer Young Gaudet Bell Atlantic Mobile 20 Alexander Drive Wallingford, CT 06492
PARTIES	**ITS REPRESENTATIVE**
Town of Westport	Ira W. BloomTown Attorney Town Hall, 110 Myrtle Avenue Westport, CT 06880 203) 341-1040
Residents of Clinton Avenue Westport	Robert Sullivan, Esq. Law Offices of Robert Sullivan 190 Main StreetWestport, CT 06880 (203) 227-1404
INTERVENORS	**ITS REPRESENTATIVE**
Sprint Spectrum, L.P. d/b/a Sprint PCS	Julie M. Cashin, Esq. Hurwitz & Sagarin, PC 147 North Broad Street Milford, CT 06460 (203) 877-8000
Nextel Communications of the Mid-Atlantic	Christopher B. Fisher, Esq. d/b/a Nextel Communications Cuddy, Feder & Worby, Esq. 90 Maple Avenue White Plains, NY 10601
Springwich Cellular Limited Partnership	Peter J. Tyrrell, Esq. General Counsel 500 Enterprise Drive Rocky Hill, CT 06067-3900
INTERVENORS	**ITS REPRESENTATIVE**
Residents of Sunny Lane, Westport	Lawrence P. Weisman Weisman & Lubell 5 Sylvan Road South P.O. Box 3184 Westport, CT 06880 (203) 226-8307

Omnipoint Communications, Inc.

Brian Weinstein
Omnipoint Communications, Inc.
25 Van Zant Street, Suite 18E
East Norwalk, CT 06855
(203) 855-5450

Content Last Modified on 8/9/2002 2:30:22 PM

EXHIBIT 4

2 ALLEN RAYMOND LN

Location	2 ALLEN RAYMOND LN	**Mblu**	B13/ / 026/000 /
Acct#	8579	**Owner**	CELLCO PARTNERSHIP
Assessment	$1,378,920	**Appraisal**	$1,969,886
PID	4500	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$1,444,286	$525,600	$1,969,886
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$1,011,020	$367,900	$1,378,920

Owner of Record

Owner	CELLCO PARTNERSHIP
Co-Owner	BELL ATLANTIC NYNEX MOBILE DBA
Address	PO BOX 2549 ADDISON , TX 75001

Sale Price	$415,000
Certificate	1
Book & Page	1488/0099
Sale Date	12/10/1996
Instrument	00

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
CELLCO PARTNERSHIP	$415,000	1	1488/0099	00	12/10/1996

Building Information

Building 1 : Section 1

Year Built:	1968
Living Area:	3,006
Replacement Cost:	$508,423
Building Percent Good:	80
Replacement Cost Less Depreciation:	$406,700

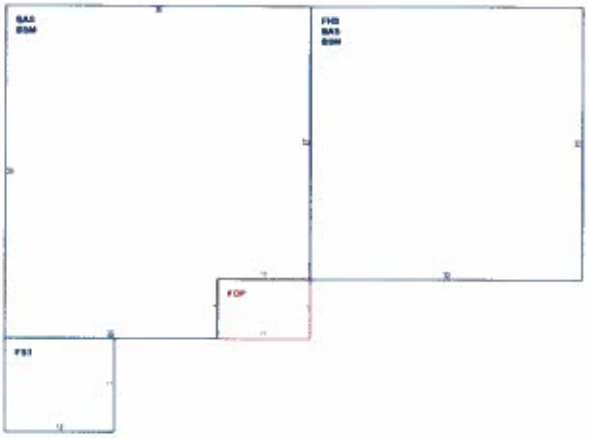
Building Attributes

Field	Description
STYLE	Res Typ Comm
MODEL	Commercial
Grade	Average +20
Stories:	1
Occupancy	1.00
Exterior Wall 1	Board & Batten
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt/F Glas
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air
AC Type	Central
Struct Class	
Bldg Use	Cell Site
Income Adj	
Usrfld 216	
Usrfld 217	
Usrfld 218	
Usrfld 219	
1st Floor Use:	
Heat/AC	Heat/AC Pkgs
Frame Type	Wood Frame
Baths/Plumbing	Average
Ceiling/Walls	Ceil & Walls
Rooms/Prtns	Average
Wall Height	8.00
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos2/WestportCTPhotos/\00\02\54\59.jpg)

Building Layout



(ParcelSketch.ashx?pid=4500&bid=4500)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	2,351	2,351
FHS	Half Story, Finished	1,024	512
FST	Utility Storage, Fin	143	143
BSM	Basement Area	2,351	0
FOP	Porch, Open	77	0
		5,946	3,006

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use Land Line Valuation

Land Use

Use Code	434
Description	Cell Site
Zone	AAA
Neighborhood	C
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	1.63
Frontage	0
Depth	0
Assessed Value	$367,900
Appraised Value	$525,600

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
CELL	Cell on TWR	TW		6.00 Sites	$1,037,600	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$1,444,286	$525,600	$1,969,886
2018	$1,444,300	$525,600	$1,969,900
2017	$1,444,300	$525,600	$1,969,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$1,011,020	$367,900	$1,378,920
2018	$1,011,020	$367,900	$1,378,920
2017	$1,011,020	$367,900	$1,378,920

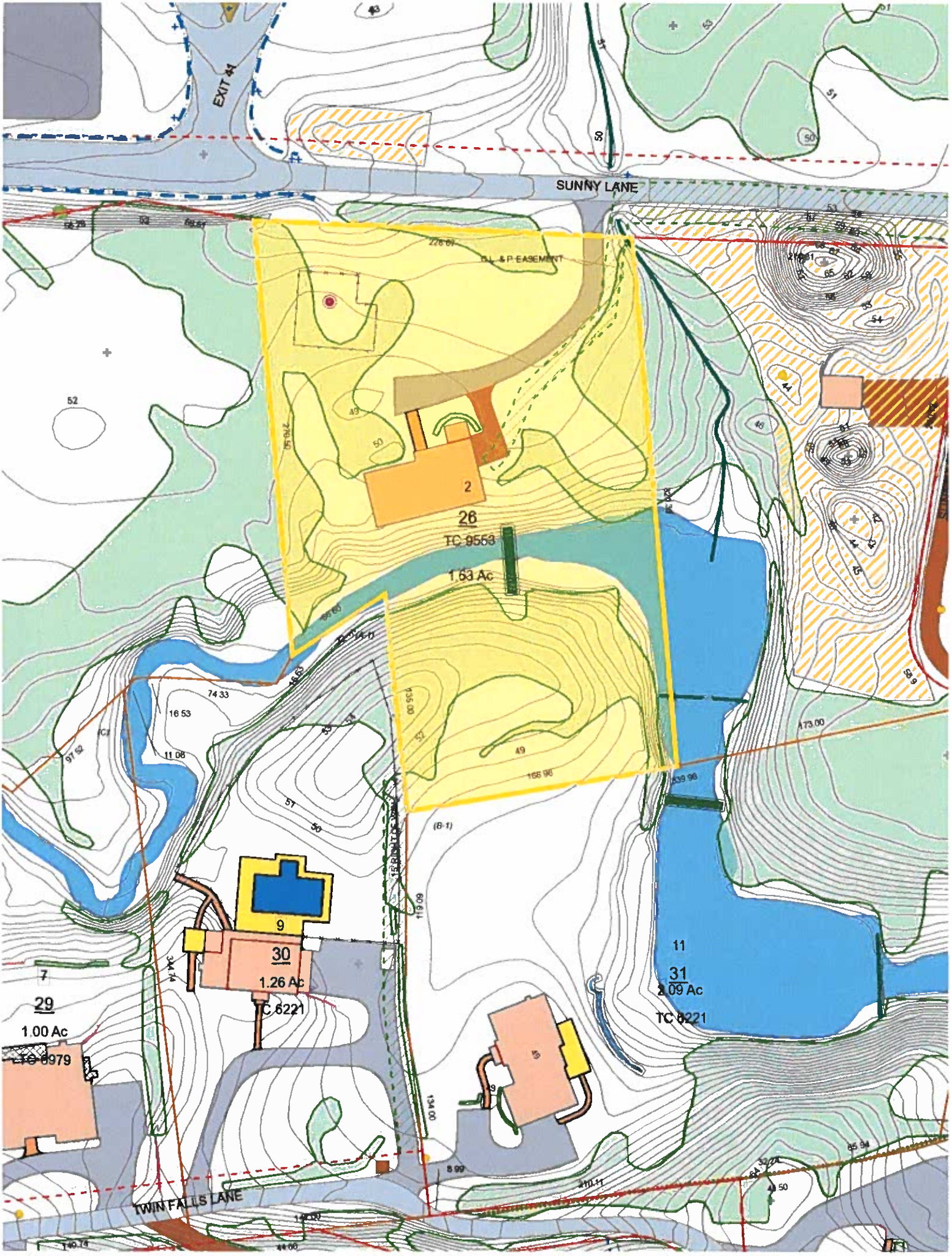

EXIT 44
SUNNY LANE
D.L. & P. EASEMENT
2
26
TC 9553
1.63 Ac
9
30
1.26 Ac
TC 6221
7
29
1.00 Ac
TC 6979
11
31
2.09 Ac
TC 6221
TWIN FALLS LANE

EXHIBIT 5

Lawrence Behr Associates INC
www.lbagroup.com

NIER Study Report

SITE NAME:

411189 Cranburysu CT

LOCATION:

Westport, Connecticut

COMPANY:

American Tower Corporation
Woburn, Massachusetts

July 13th, 2020

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

Contents

DISCLAIMER NOTICE

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NIER STUDY REPORT

411189 Cranburysu CT

Westport, Connecticut

INTRODUCTION

Lawrence Behr Associates, Inc. (LBA) has been retained by American Tower Corporation (ATC) of Woburn, Massachusetts to evaluate the RF emissions of an existing tower at this location.

SITE AND FACILITY CONSIDERATIONS

Site 411189 Cranburysu CT is located at 2 Sunny Lane in Westport, Connecticut at coordinates 41.16291, -73.37308. The support structure is a 131' monopole. The installation consists of three antenna levels with radiation centers of 104', 113', and 128' 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 LBA

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

The load list may be seen in Appendix 3.

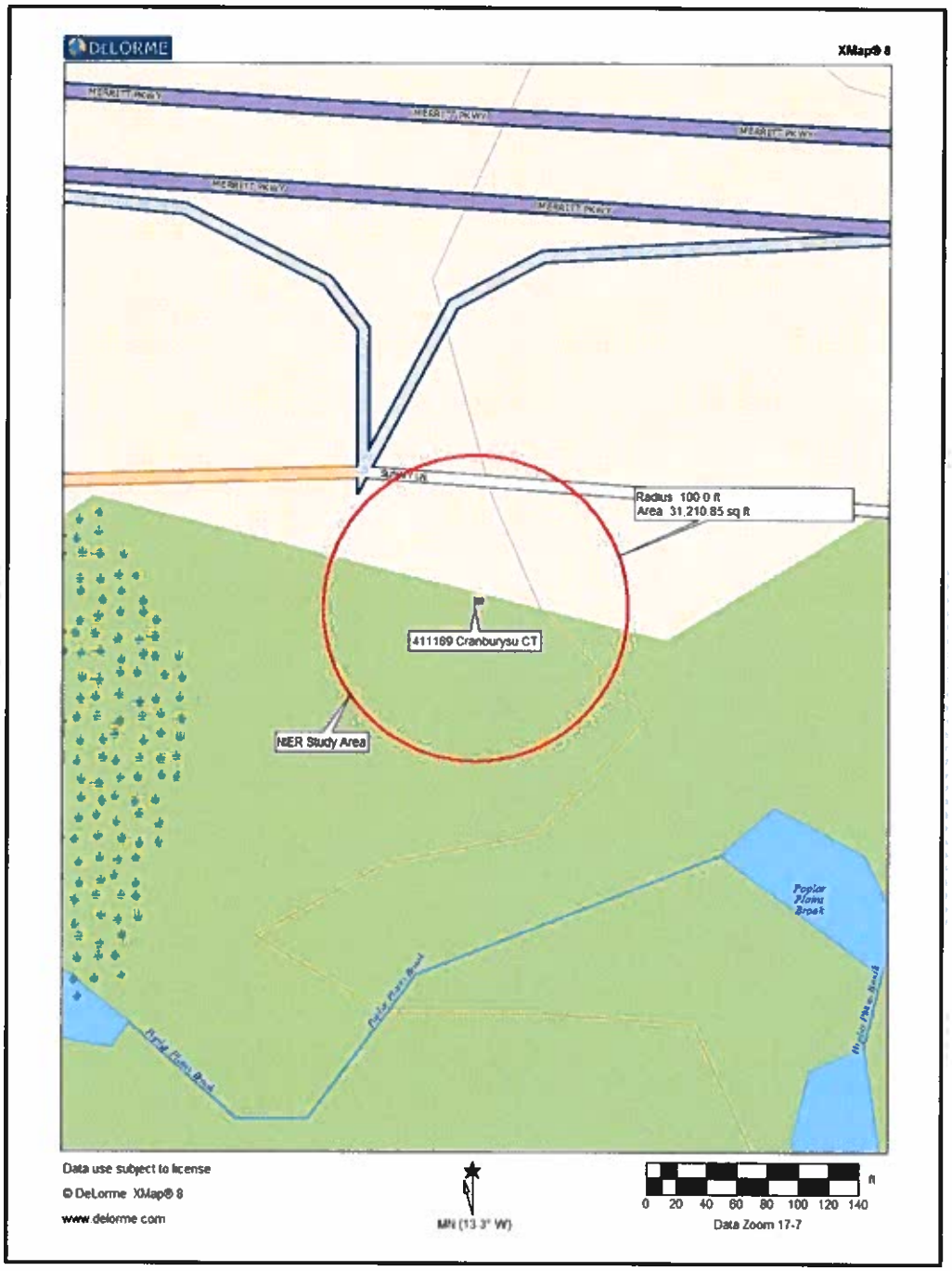
POWER DENSITY CALCULATIONS

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

July 13th, 2020

Kathryn G. Tesh
Wireless Services Manager

APPENDIX 1 *Topographic Map*



APPENDIX 2 *Satellite Photo*

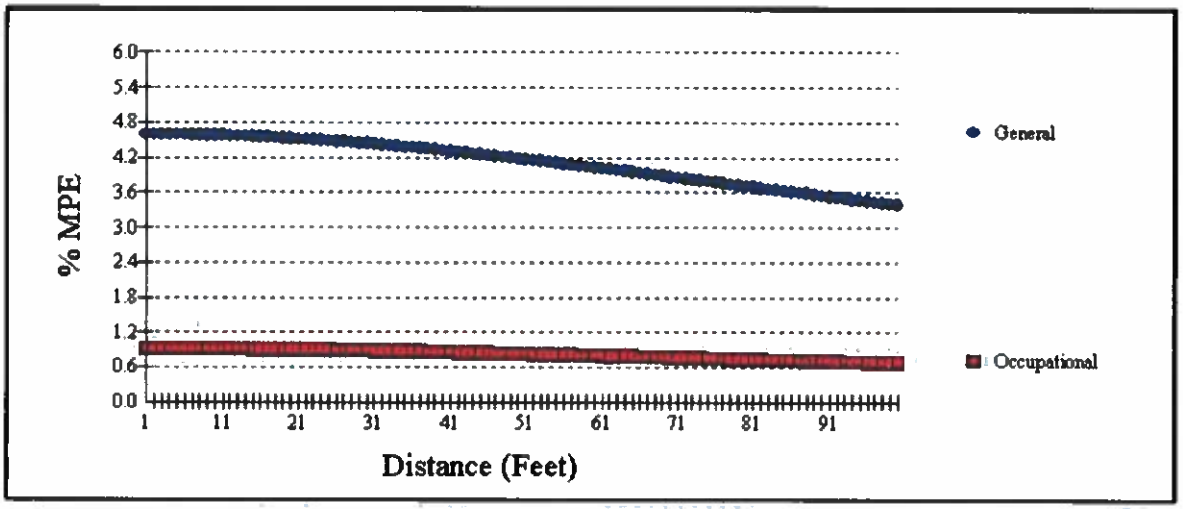
Lawrence Behr Associates INC
www.lbagroup.com | 3400 Tupper Drive | Greenville, NC 27834
252-757-0279 | 800-522-4464 | lbagrp@lbagroup.com

APPENDIX 3 *Load List*

Proposed	Customer	RAD Height (ft)	Equipment Quantity	Equipment Type	Manufacturer	Model Number	Line Quantity	Line size	Mount Type	Azimuths	TX Frequency	RX Frequency
No	VERIZON WIRELESS	128	2	PANEL	Antel	LPA-80080/6CF___	2	1 5/8" Coax	Platform with Handrails		869-890	824-847
No	VERIZON WIRELESS	128	4	PANEL	Decibel	DB846F65ZAXY	4	1 5/8" Coax	Platform with Handrails		869-890	824-847
No	VERIZON WIRELESS	128	6	PANEL	Quintel	QS6656-5			Platform with Handrails		2145-2155, 746-757	1745-1755, 776-787
No	SPRINT NEXTEL	126	1	DISH-HP	Andrew Microwaves	VHLP800-11 (49 lbs)	1	1/2" Coax	Low Profile Platform	50/150/270		
No	T-MOBILE	113	3	PANEL	RFS	APXVAARR24_43-U-NA20			Low Profile Platform	30/150/270	627-688, 698-734	627-688, 698-734
No	T-MOBILE	113	3	PANEL	Ericsson	AIR-32 B2A/B66A a			Low Profile Platform	30/150/270	1940-1950, 2110-2120, 2140-2145	1710-1720, 1710-1745, 1860-1870
No	T-MOBILE	113	3	PANEL	EMS	RR90-17-02DP	6	1 5/8" Coax	Low Profile Platform	30/150/270	1940-1950, 2110-2120, 2140-2145	1710-1720, 1710-1745, 1860-1870
No	T-MOBILE	113	3	PANEL	Ericsson	AIR 21, 1.3 M, B2A B4P			Low Profile Platform	30/150/270	1940-1950, 2110-2120, 2140-2145	1710-1720, 1710-1745, 1860-1870
No	AT&T MOBILITY	104	3	PANEL	Powerwave Allgon	P6S-16-XLH-RR			Low Profile Platform	143/263/23		
No	AT&T MOBILITY	104	6	PANEL	Powerwave Allgon	7770.00	12	1 5/8" Coax	Low Profile Platform	143/263/23	650-1900	650-1900
No	AT&T MOBILITY	104	3	PANEL	CCI	HPA-65R-BUU-H6			Low Profile Platform	30/150/270	1900, 700	19002100, 700

APPENDIX 4

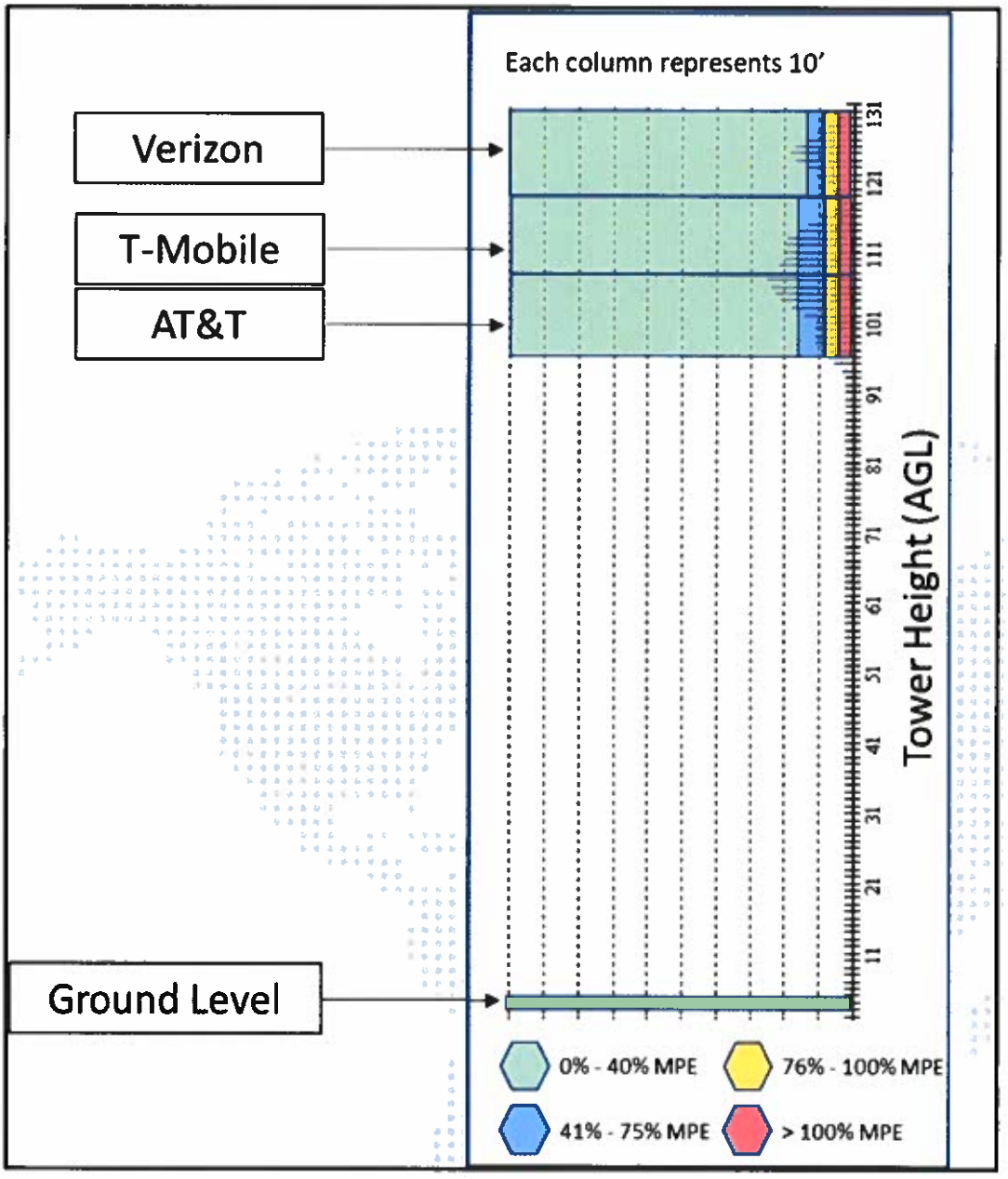
FCC OET-65 MPE Limit Study



General Population MPE (@1'):	4.60%
Occupational MPE (@1'):	0.92%
Maximum Power Density (@1'):	0.0296 mW/cm^2

APPENDIX 5

Tower Radiation Patterns



APPENDIX 6 *Information Pertaining to MPE Studies*

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

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

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

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

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

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

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.

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

f = frequency

* = Plane-wave equivalent power density

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

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

f = frequency
* = Plane-wave equivalent power density

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

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

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

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

Cylindrical Model (Near Field Predictions)

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

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

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

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

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

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

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

Spherical Model (Far Field Predictions)

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

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

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

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

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

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

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

EXHIBIT 6

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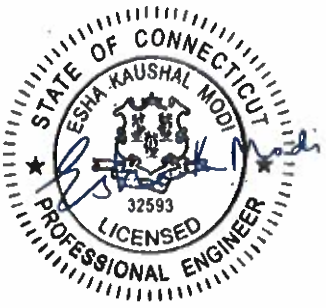
Structural Analysis Report

Structure	:	**130 ft Monopole**
ATC Site Name	:	**CRANBURYSU CT, CT**
ATC Asset Number	:	**411189**
Engineering Number	:	**13198800_C3_03**
Proposed Carrier	:	**AT&T MOBILITY**
Carrier Site Name	:	**MRCTB045060**
Carrier Site Number	:	**CTL02094**
Site Location	:	**2 SUNNY LANE** **WESTPORT, CT 06880-1906** **41.162900,-73.373100**
County	:	**Fairfield**
Date	:	**April 28, 2020**
Max Usage	:	**38%**
Result	:	**Pass**



Prepared By:
Saja Alkhafaji
Structural Engineer

Saja Alkhafaji

Reviewed By:

COA: PEC.0001553

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Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 130 ft monopole to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	EEI Job #10847, dated June 7, 2002
Foundation Drawing	EEI Project #10847, dated June 10, 2002
Geotechnical Report	Clarence Welti Association Project Name 2 Sunny Lane, dated January 29, 1999

Analysis

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

Basic Wind Speed:	93 mph (3-Second Gust, V_{asd}) / 120 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.23, S_1 = 0.07
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
133.0	2	Antel LPA-80080/6CF ___	Low Profile Platform	(6) 1 5/8" Coax (2) 1 5/8" (1.63"-41.3mm) Fiber	VERIZON WIRELESS
	4	Decibel DB846F65ZAXY			
129.0	1	VZW Unused Reserve (2594.83 sqin)			
128.0	3	Samsung B2/B66A RRH-BR049			
	6	Quintel QS6656-5			
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung Outdoor CBRS 20W RRH			
	3	Samsung Outdoor LAA 1W RRH –Clip-on Antenna			
	1	RFS DB-C1-12C-24AB-0Z			
126.0	1	Andrew Microwaves VHLP800-11 (49 lbs)	Low Profile Platform	(1) 1/2" Coax (3) 0.78" (19.7mm) 8 AWG 6 (3) 1 1/4" Hybriflex Cable (6) 1 5/8" Coax (1) 1.7" (43.2mm) Hybrid (2) 2" conduit	SPRINT NEXTEL
125.0	3	Alcatel-Lucent 800MHz RRH			
	3	Alcatel-Lucent 1900MHz RRH			
	1	Generic 24" x 24" Junction Box			
120.0	1	Generic 24" x 24" Junction Box			
	3	Nokia 2.5G MAA - AAHC(64T64R)			
	3	Alcatel-Lucent RRH2x50-08			
	3	Commscope NNVV-65B-R4			
110.0	3	EMS RR90-17-02DP	Low Profile Platform	(3) 1 1/4" (1.25"-31.8mm) Fiber (9) 1 5/8" Coax (6) 7/8" Coax	T-MOBILE
	3	Ericsson Radio 4449 B12,B71			
	3	Ericsson AIR 21, 1.3 M, B2A B4P			
	3	Ericsson AIR-32 B2A/B66Aa			
	3	RFS APXVAARR24_43-U-NA20			
	3	Ericsson KRY 112 71			
107.0	1	Generic GPS	Platform with Handrails	(1) 7/8" Coax (1) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (1) 3" conduit	AT&T MOBILITY
100.0	3	CCI HPA-65R-BUU-H6			
	3	Powerwave Allgon 7770.00			
	1	Raycap DC6-48-60-18-8F			
91.0		-	Flat Low Profile Platform	-	OTHER
80.0	1	Generic GPS	Flush	(1) 1/2" Coax	T-MOBILE
75.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	SPRINT NEXTEL
	2	Generic 2" x 8" GPS	Stand-Off	(2) 0.63" (16mm) LDF4-50A	VERIZON WIRELESS
60.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	AT&T MOBILITY

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
100.0	12	Powerwave Allgon LGP21901	-	(6) 1 5/8" Coax	AT&T MOBILITY
	6	Powerwave Allgon 7020			
	3	Powerwave Allgon 7770.00			
	3	Ericsson RRUS-11 (50 lbs.)			
	3	Ericsson RRUS 12 w/ RRUS A2			
	12	Powerwave Allgon LGP21401			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
100.0	6	Kathrein Scala 860-10025	Platform with Handrails with Site Pro PRK-1245 Kit	(1) 0.39" (9.8mm) Cable (2) 0.78" (19.7mm) 8 AWG 6 (1) 3" conduit	AT&T MOBILITY
	1	Kathrein Scala 860 10006			
	1	Generic GPS			
	3	Ericsson RRUS 8843 B2, B66A			
	3	Ericsson Radio 4415 B30			
	3	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC9-48-60-24-8C-EV			
	3	CCI DMP65R-BU6DA			
	3	CCI OPA65R-BU6D			

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

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	35%	Pass
Shaft	34%	Pass
Base Plate	28%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	2513.1	38%
Axial (Kips)	58.6	26%
Shear (Kips)	26.0	18%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
126.0	Andrew Microwaves VHLP800-11 (49 lbs)	SPRINT NEXTEL	0.522	0.427
100.0	Kathrein Scala 860-10025	AT&T MOBILITY	0.333	0.385
	Kathrein Scala 860 10006			
	Generic GPS			
	Ericsson RRUS 8843 B2, B66A			
	Ericsson Radio 4415 B30			
	Ericsson RRUS 4449 B5, B12			
	Raycap DC9-48-60-24-8C-EV			
	CCI DMP65R-BU6DA			
	CCI OPA65R-BU6D			

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

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Standard Conditions

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

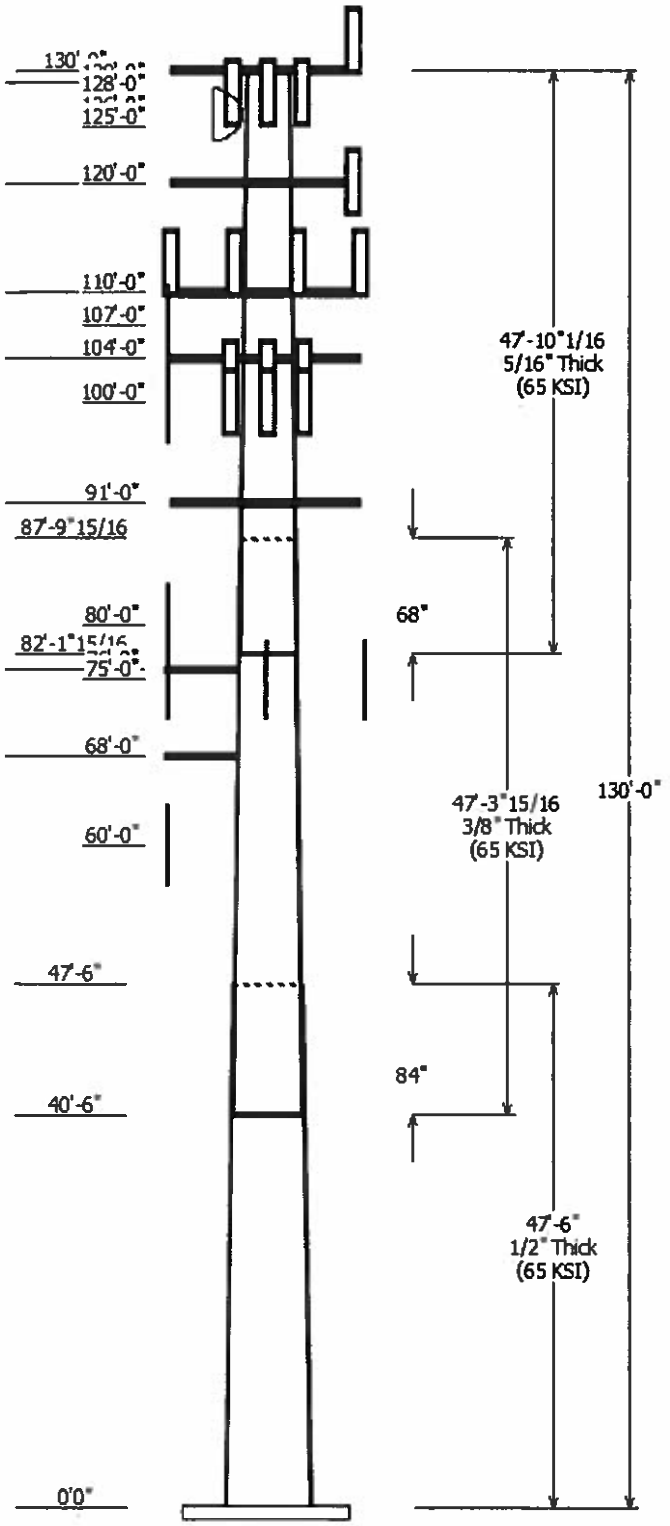
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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

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

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



Job Information

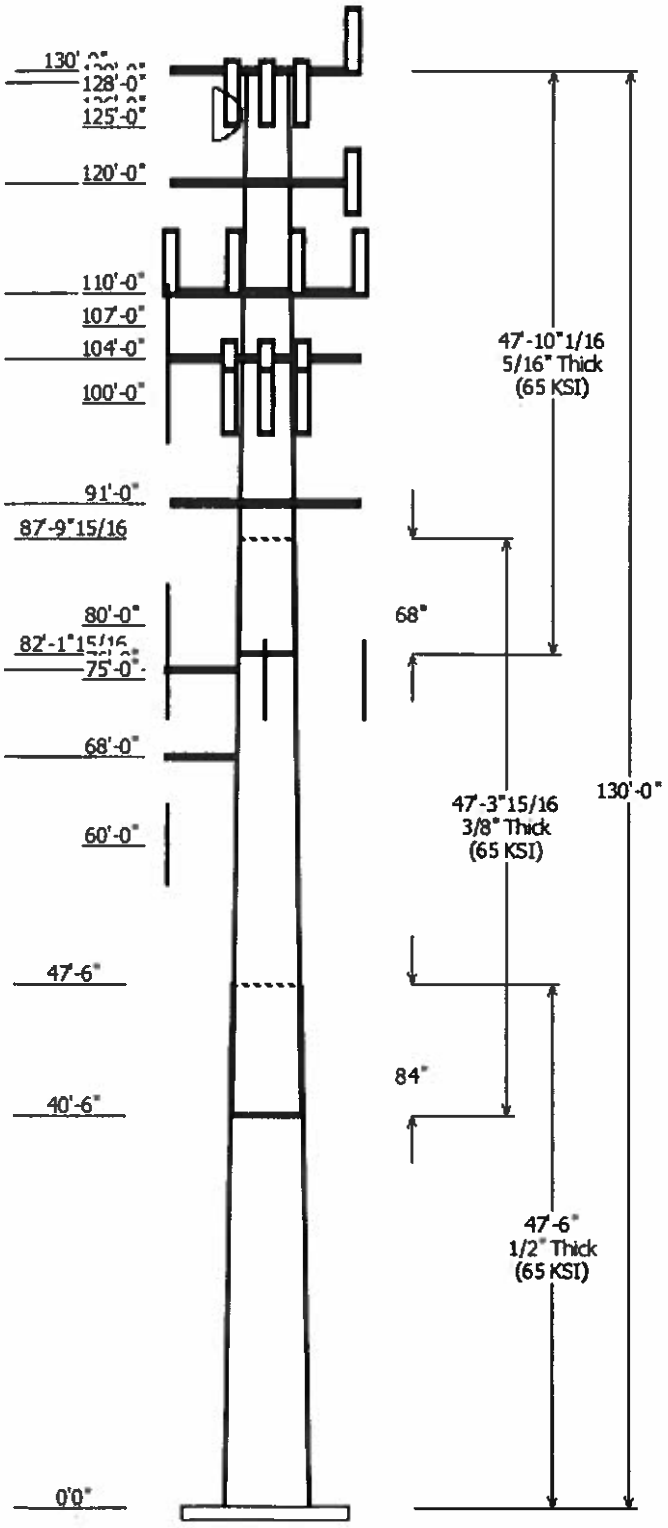
Client : AT&T MOBILITY	
Pole : 411189	Code: ANSI/TIA-222-G
Location : CRANBURYSU CT, CT	
Description : 130 ft EEI Monopole	Struct Class : II
Shape : 18 Sides	Exposure : B
Height : 130.00 (ft)	Topo : 1
Base Elev (ft): 0.00	
Taper: 0.27074$in/ft)	

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	47.500	49.14	62.00	0.500		0.000	18 Sides	65
2	47.330	38.97	51.78	0.375	Slip Joint	84.000	18 Sides	65
3	47.837	28.17	41.13	0.313	Slip Joint	68.000	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
130.000	133.000	2	Antel LPA-80080/6CF ___
130.000	133.000	4	Decibel DB846F65ZAXY
130.000	130.000	1	Flat Low Profile Platform
129.000	129.000	1	VZW Unused Reserve (2594.83
128.000	128.000	6	Quintel QS6656-5
128.000	128.000	1	RFS DB-C1-12C-24AB-0Z
128.000	128.000	3	Samsung B2/B66A RRH-BR049
128.000	128.000	3	Samsung B5/B13 RRH-BR04C
128.000	128.000	3	Samsung Outdoor CBRS 20W
128.000	128.000	3	Samsung Outdoor LAA 1W
126.000	126.000	1	Andrew Microwaves VHLP800-
125.000	125.000	1	Generic 24" x 24" Junction Box
125.000	125.000	3	Alcatel-Lucent 1900MHz RRH
125.000	125.000	3	Alcatel-Lucent 800MHz RRH
120.000	120.000	1	Flat Low Profile Platform
120.000	120.000	3	Commscope NNVV-65B-R4
120.000	120.000	1	Generic 24" x 24" Junction Box
120.000	120.000	3	Nokia 2.5G MAA -
120.000	120.000	3	Alcatel-Lucent RRH2x50-08
110.000	110.000	1	Flat Low Profile Platform
110.000	113.000	3	RFS APXVAARR24_43-U-NA20
110.000	113.000	3	Ericsson AIR-32 B2A/B66Aa
110.000	113.000	3	Ericsson AIR 21, 1.3 M, B2A B4
110.000	113.000	3	EMS RR90-17-02DP
110.000	113.000	3	Ericsson Radio 4449 B12,B71
110.000	110.000	3	Ericsson KRY 112 71
107.000	107.000	1	Generic GPS
104.000	104.000	1	Flat Platform w/ Handrails
100.000	100.000	3	CCI OPA65R-BU6D
100.000	100.000	3	CCI DMP65R-BU6DA
100.000	104.000	3	CCI HPA-65R-BUU-H6
100.000	104.000	3	Powerwave Allgon 7770.00
100.000	100.000	1	Raycap DC9-48-60-24-8C-EV
100.000	100.000	3	Ericsson RRUS 4449 B5, B12
100.000	100.000	3	Ericsson Radio 4415 B30
100.000	100.000	3	Ericsson RRUS 8843 B2, B66A
100.000	104.000	1	Raycap DC6-48-60-18-8F
100.000	100.000	1	Generic GPS
100.000	100.000	1	Kathrein Scala 860 10006
100.000	100.000	6	Kathrein Scala 860-10025
91.000	91.000	1	Empty Flat Low Profile Platfor
80.000	80.000	1	Generic GPS
76.000	76.000	1	Stand-Off
75.000	75.000	2	Generic 2" x 8" GPS
75.000	75.000	1	Generic GPS



68.000	68.000	1	Side Arm
60.000	60.000	1	Generic GPS

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	60.000	1/2" Coax	No
0.000	75.000	0.63" (16mm)	No
0.000	75.000	1/2" Coax	No
0.000	80.000	1/2" Coax	No
0.000	100.0	0.39" (10mm)	No
0.000	100.0	0.39" (9.8mm)	No
0.000	100.0	0.78" (19.7mm) 8	No
0.000	100.0	0.78" (19.7mm) 8	No
0.000	100.0	1 5/8" Coax	No
0.000	100.0	3" conduit	No
0.000	100.0	3" conduit	No
0.000	107.0	7/8" Coax	No
0.000	110.0	1 1/4" (1.25"-	No
0.000	110.0	1 5/8" Coax	No
0.000	110.0	7/8" Coax	No
0.000	120.0	1 1/4" Hybriflex	No
0.000	120.0	1 5/8" Coax	No
0.000	120.0	1.7" (43.2mm)	No
0.000	120.0	2" conduit	No
0.000	125.0	0.78" (19.7mm) 8	No
0.000	126.0	1/2" Coax	No
0.000	128.0	1 5/8" (1.63"-	No
0.000	133.0	1 5/8" Coax	Yes

Load Cases

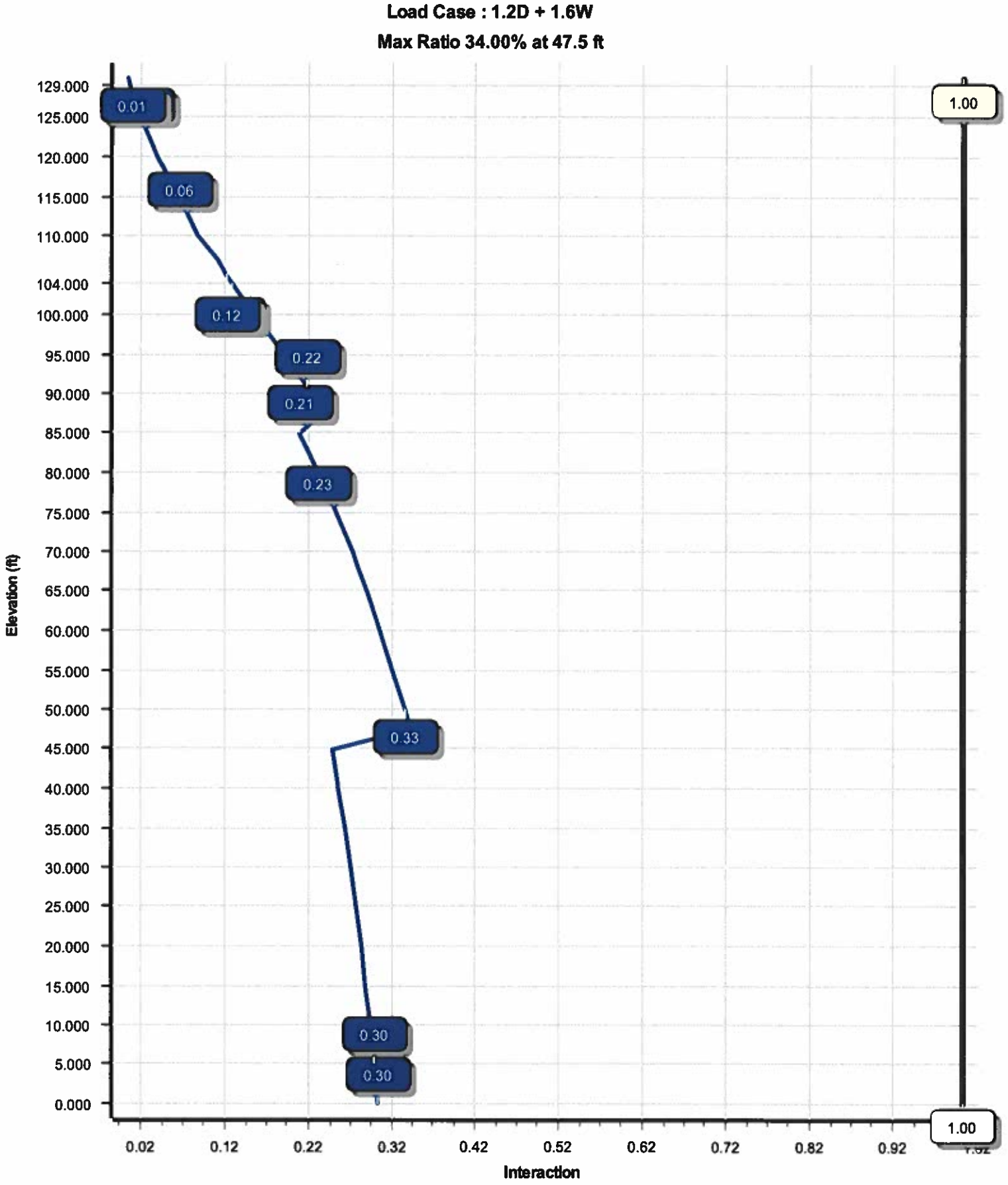
1.2D + 1.6W	93 mph with No Ice
0.9D + 1.6W	93 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2513.09	25.99	58.60
0.9D + 1.6W	2499.43	25.98	43.95
1.2D + 1.0Di + 1.0Wi	761.85	8.13	98.93
(1.2 + 0.2Sds) * DL + E ELFM	231.95	2.35	58.54
(1.2 + 0.2Sds) * DL + E EMAM	275.52	2.72	58.54
(0.9 - 0.2Sds) * DL + E ELFM	230.40	2.35	39.93
(0.9 - 0.2Sds) * DL + E EMAM	273.52	2.72	39.93
1.0D + 1.0W	582.84	6.05	48.85

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	126.00	6.260	0.431


Load Case : 1.2D + 1.6W
Max Ratio 34.00% at 47.5 ft
Elevation (ft)
129.000
125.000
120.000
115.000
110.000
104.000
100.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.01
0.06
0.12
0.22
0.21
0.23
0.33
0.30
0.30
1.00
1.00
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 411189	**Code: ANSI/TIA-222-G**	
Site Name: CRANBURYSU CT, CT	**Engineering Number:13198800_C3_03**	**4/30/2020 9:48:17 PM**
Customer: AT&T MOBILITY		

Analysis Parameters

Location :	**Fairfield County, CT**	**Height (ft) :**	**130**
Code :	**ANSI/TIA-222-G**	**Base Diameter (in) :**	**62.00**
Shape :	**18 Sides**	**Top Diameter (in) :**	**28.18**
Pole Type :	**Taper**	**Taper (in/ft) :**	**0.271**
Pole Manfacturer :	**EEI**	**Rotation (deg) :**	**0.00**

Ice & Wind Parameters

Structure Class:	**II**	**Design Wind Speed Without Ice:**	**93 mph**
Exposure Category:	**B**	**Design Wind Speed With Ice:**	**50 mph**
Topographic Category:	**1**	**Operational Wind Speed:**	**60 mph**
Crest Height:	**0 ft**	**Design Ice Thickness:**	**0.75 in**

Seismic Parameters

Analysis Method:	**Equivalent Modal Analysis & Equivalent Lateral Force Methods**				
Site Class:	**D - Stiff Soil**				
Period Based on Rayleigh Method (sec):	**1.49**				
T_L (sec):	**6**	**p:**	**1**	**C_s:**	**0.048**
S_s:	**0.227**	**S_1:**	**0.067**	**C_s Max:**	**0.048**
F_a:	**1.600**	**F_v:**	**2.400**	**C_s Min:**	**0.030**
S_{ds}:	**0.242**	**S_{d1}:**	**0.107**		

Load Cases

1.2D + 1.6W	**93 mph with No Ice**
0.9D + 1.6W	**93 mph with No Ice (Reduced DL)**
1.2D + 1.0Di + 1.0Wi	**50 mph with 0.75 in Radial Ice**
(1.2 + 0.2Sds) * DL + E ELFM	**Seismic Equivalent Lateral Forces Method**
(1.2 + 0.2Sds) * DL + E EMAM	**Seismic Equivalent Modal Analysis Method**
(0.9 - 0.2Sds) * DL + E ELFM	**Seismic (Reduced DL) Equivalent Lateral Forces Method**
(0.9 - 0.2Sds) * DL + E EMAM	**Seismic (Reduced DL) Equivalent Modal Analysis Method**
1.0D + 1.0W	**Serviceability 60 mph**

Site Number: 411189 | Code: ANSI/TIA-222-G |

Site Name: CRANBURYSU CT, CT | Engineering Number:13198800_C3_03 | 4/30/2020 9:48:17 PM

Customer: AT&T MOBILITY

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	47.500	0.5000	65		0.00	14,125	62.00	0.00	97.60	46638.0	20.45	124.00	49.14	47.50	77.19	23072.0	15.92	98.28	0.270745
2-18	47.330	0.3750	65	Slip	84.00	8,626	51.78	40.50	61.19	20432.2	22.94	138.09	38.97	87.83	45.94	8645.4	16.91	103.92	0.270745
3-18	47.837	0.3125	65	Slip	68.00	5,544	41.13	82.16	40.48	8521.7	21.80	131.62	28.17	130.00	27.64	2711.5	14.49	90.17	0.270745
				Shaft Weight		28,296													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
130.00	Decibel DB846F65ZAXY	4	0.80	3.000	21.00	7.030	0.75	214.96	8.262	0.75
130.00	Antel LPA-80080/6CF ___	2	0.80	3.000	21.00	8.628	0.71	212.55	5.491	0.71
130.00	Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	2,139.75	44.952	1.00
129.00	VZW Unused Reserve (2594.83	1	0.80	0.000	148.90	18.020	0.90	251.25	30.406	0.90
128.00	Samsung Outdoor LAA 1W RRH	3	0.80	0.000	4.40	0.811	0.50	20.29	1.406	0.50
128.00	Samsung Outdoor CBRS 20W	3	0.80	0.000	18.60	0.857	0.50	42.25	1.475	0.50
128.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	126.67	2.765	0.50
128.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	147.27	2.765	0.50
128.00	RFS DB-C1-12C-24AB-0Z	1	0.80	0.000	32.00	4.056	1.00	157.25	5.401	1.00
128.00	Quintel QS6656-5	6	0.80	0.000	65.00	8.133	0.74	261.36	10.880	0.74
126.00	Andrew Microwaves VHLP800-	1	1.00	0.000	49.00	7.760	1.00	205.72	9.367	1.00
125.00	Alcatel-Lucent 800MHz RRH	3	0.80	0.000	53.00	2.134	0.67	125.48	3.095	0.67
125.00	Alcatel-Lucent 1900MHz RRH	3	0.80	0.000	44.00	3.258	0.72	150.98	4.426	0.72
125.00	Generic 24" x 24" Junction Box	1	0.80	0.000	20.00	4.800	1.00	132.74	6.196	1.00
120.00	Alcatel-Lucent RRH2x50-08	3	0.80	0.000	52.90	1.701	0.50	110.85	2.545	0.50
120.00	Nokia 2.5G MAA - AAHC(64T64R)	3	0.80	0.000	103.60	4.203	0.64	213.84	5.514	0.64
120.00	Generic 24" x 24" Junction Box	1	0.80	0.000	20.00	4.800	1.00	132.27	6.190	1.00
120.00	Commscope NNVV-65B-R4	3	0.80	0.000	77.40	12.271	0.64	323.11	15.013	0.64
120.00	Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	2,133.56	44.770	1.00
110.00	Ericsson KRY 112 71	3	0.80	0.000	13.20	0.583	0.50	30.96	1.120	0.50
110.00	Ericsson Radio 4449 B12,B71	3	0.80	3.000	74.00	1.639	0.50	128.31	2.458	0.50
110.00	EMS RR90-17-02DP	3	0.80	3.000	13.50	4.356	0.64	108.15	5.311	0.64
110.00	Ericsson AIR 21, 1.3 M, B2A B4P	3	0.80	3.000	83.00	6.049	0.71	224.58	8.146	0.71
110.00	Ericsson AIR-32 B2A/B66Aa	3	0.80	3.000	132.20	6.510	0.71	287.04	8.635	0.71
110.00	RFS APXVAARR24_43-U-NA20	3	0.80	3.000	127.90	20.243	0.63	508.75	23.841	0.63
110.00	Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	2,128.53	44.621	1.00
107.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	38.32	1.519	1.00
104.00	Flat Platform w/ Handrails	1	1.00	0.000	2,270.00	48.500	1.00	3,825.18	71.629	1.00
100.00	Kathrein Scala 860-10025	6	0.75	0.000	1.10	0.140	0.50	6.24	0.431	0.50
100.00	Kathrein Scala 860 10006	1	0.75	0.000	3.00	0.269	1.00	32.07	0.868	1.00
100.00	Generic GPS	1	0.75	0.000	10.00	0.900	1.00	38.08	1.514	1.00
100.00	Raycap DC6-48-60-18-8F	1	0.75	4.000	20.00	1.260	1.00	70.54	1.892	1.00
100.00	Ericsson RRUS 8843 B2, B66A	3	0.75	0.000	72.00	1.639	0.50	130.83	2.450	0.50
100.00	Ericsson Radio 4415 B30	3	0.75	0.000	43.00	1.650	0.50	83.45	2.465	0.50
100.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	132.86	2.864	0.50
100.00	Raycap DC9-48-60-24-8C-EV	1	0.75	0.000	16.00	4.788	1.00	139.91	6.200	1.00
100.00	Powerwave Allgon 7770.00	3	0.75	4.000	35.00	5.508	0.65	163.23	6.517	0.65
100.00	CCI HPA-65R-BUU-H6	3	0.75	4.000	51.00	9.658	0.69	261.58	12.319	0.69
100.00	CCI DMP65R-BU6DA	3	0.75	0.000	79.40	12.709	0.63	326.64	15.386	0.63
100.00	CCI OPA65R-BU6D	3	0.75	0.000	63.20	12.871	0.63	314.05	15.556	0.63
91.00	Empty Flat Low Profile Platform	1	1.00	0.000	1,500.00	26.100	1.00	2,117.23	44.288	1.00
80.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	37.46	1.500	1.00
76.00	Stand-Off	1	1.00	0.000	100.00	3.000	1.00	145.62	4.466	1.00
75.00	Generic 2" x 8" GPS	2	1.00	0.000	10.00	0.141	1.00	15.15	0.456	1.00
75.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	37.26	1.496	1.00
68.00	Side Arm	1	1.00	0.000	126.00	5.000	1.00	207.09	8.218	1.00
60.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	36.64	1.482	1.00

Totals Num Loadings:47 106 13,498.50 28,810.88

Linear Appurtenance Properties

Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	133.00	6	1 5/8" Coax	1.98	0.82	N	6	1.00	1.00	90	1.00	Y	VERIZON WIRELESS
0.00	128.00	2	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	126.00	1	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	125.00	3	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	120.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	120.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	120.00	1	1.7" (43.2mm) Hybrid	1.70	1.78	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	120.00	2	2" conduit	2.38	3.65	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	110.00	3	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	110.00	9	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	110.00	6	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	107.00	1	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	1	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	1	0.39" (9.8mm) Cable	0.39	0.07	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	2	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	2	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	1	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	1	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	80.00	1	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	75.00	2	0.63" (16mm) LDF4-	0.63	0.15	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	75.00	1	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	60.00	1	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY

Segment Properties (Max Len : 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.5000	62.000	97.597	46,638.0	20.45	124.00	77.3	1481.	0.0	0.0
5.00		0.5000	60.646	95.449	43,625.5	19.98	121.29	77.9	1416.	0.0	1,642.2
10.00		0.5000	59.293	93.300	40,745.7	19.50	118.59	78.5	1353.	0.0	1,605.7
15.00		0.5000	57.939	91.152	37,995.4	19.02	115.88	79.0	1291.	0.0	1,569.1
20.00		0.5000	56.585	89.004	35,371.8	18.54	113.17	79.6	1231.	0.0	1,532.6
25.00		0.5000	55.231	86.856	32,871.8	18.07	110.46	80.2	1172.	0.0	1,496.0
30.00		0.5000	53.878	84.707	30,492.5	17.59	107.76	80.7	1114.	0.0	1,459.5
35.00		0.5000	52.524	82.559	28,230.9	17.11	105.05	81.3	1058.	0.0	1,422.9
40.00		0.5000	51.170	80.411	26,083.9	16.63	102.34	81.8	1004.	0.0	1,386.4
40.50	Bot - Section 2	0.5000	51.035	80.196	25,875.4	16.59	102.07	81.9	998.6	0.0	136.6
45.00		0.5000	49.816	78.262	24,048.7	16.16	99.63	82.4	950.8	0.0	2,139.0
47.50	Top - Section 1	0.3750	49.890	58.933	18,254.8	22.05	133.04	75.5	720.7	0.0	1,166.0
50.00		0.3750	49.213	58.127	17,516.3	21.73	131.23	75.8	701.0	0.0	497.9
55.00		0.3750	47.859	56.516	16,099.7	21.09	127.62	76.6	662.6	0.0	975.3
60.00		0.3750	46.505	54.905	14,761.7	20.46	124.01	77.3	625.2	0.0	947.8
65.00		0.3750	45.152	53.293	13,499.9	19.82	120.40	78.1	588.9	0.0	920.4
68.00		0.3750	44.339	52.327	12,778.4	19.44	118.24	78.5	567.6	0.0	539.1
70.00		0.3750	43.798	51.682	12,312.1	19.18	116.79	78.8	553.7	0.0	353.9
75.00		0.3750	42.444	50.071	11,196.1	18.55	113.18	79.6	519.6	0.0	865.6
76.00		0.3750	42.173	49.749	10,981.3	18.42	112.46	79.7	512.9	0.0	169.8
80.00		0.3750	41.090	48.460	10,149.7	17.91	109.57	80.3	486.5	0.0	668.4
82.16	Bot - Section 3	0.3750	40.505	47.763	9,717.9	17.63	108.01	80.7	472.6	0.0	354.2
85.00		0.3750	39.737	46.849	9,170.6	17.27	105.96	81.1	454.6	0.0	843.7
87.83	Top - Section 2	0.3125	39.595	38.962	7,596.4	20.93	126.71	76.8	377.9	0.0	825.6
90.00		0.3125	39.008	38.380	7,260.6	20.60	124.83	77.2	366.6	0.0	285.5
91.00		0.3125	38.737	38.111	7,109.3	20.45	123.96	77.4	361.5	0.0	130.1
95.00		0.3125	37.654	37.037	6,525.0	19.84	120.49	78.1	341.3	0.0	511.4
100.0		0.3125	36.301	35.694	5,840.8	19.07	116.16	79.0	316.9	0.0	618.7
104.0		0.3125	35.218	34.620	5,329.2	18.46	112.70	79.7	298.0	0.0	478.5
105.0		0.3125	34.947	34.352	5,206.1	18.31	111.83	79.9	293.4	0.0	117.3
107.0		0.3125	34.405	33.815	4,965.7	18.00	110.10	80.2	284.3	0.0	232.0
110.0		0.3125	33.593	33.009	4,619.2	17.54	107.50	80.8	270.8	0.0	341.1
115.0		0.3125	32.239	31.666	4,078.2	16.78	103.17	81.7	249.1	0.0	550.2
120.0		0.3125	30.886	30.324	3,581.1	16.02	98.83	82.6	228.4	0.0	527.3
125.0		0.3125	29.532	28.981	3,126.1	15.25	94.50	82.6	208.5	0.0	504.5
126.0		0.3125	29.261	28.712	3,040.0	15.10	93.64	82.6	204.6	0.0	98.2
128.0		0.3125	28.720	28.175	2,872.6	14.79	91.90	82.6	197.0	0.0	193.6
129.0		0.3125	28.449	27.907	2,791.3	14.64	91.04	82.6	193.2	0.0	95.4
130.0		0.3125	28.178	27.638	2,711.5	14.49	90.17	82.6	189.5	0.0	94.5
											28,296.3

Site Number: 411189 | Code: ANSI/TIA-222-G |

Site Name: CRANBURYSU CT, CT | Engineering Number:13198800_C3_03 | 4/30/2020 9:48:18 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W | 93 mph with No Ice | 19 Iterations

Gust Response Factor :1.10 | Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		218.5	0.0					0.0	0.0	218.5	0.0	0.0	0.0
5.00		432.2	1,970.7					0.0	379.3	432.2	2,350.0	0.0	0.0
10.00		422.6	1,926.8					0.0	379.3	422.6	2,306.1	0.0	0.0
15.00		412.9	1,883.0					0.0	379.3	412.9	2,262.3	0.0	0.0
20.00		403.3	1,839.1					0.0	379.3	403.3	2,218.4	0.0	0.0
25.00		393.6	1,795.2					0.0	379.3	393.6	2,174.6	0.0	0.0
30.00		388.5	1,751.4					0.0	379.3	388.5	2,130.7	0.0	0.0
35.00		391.2	1,707.5					0.0	379.3	391.2	2,086.8	0.0	0.0
40.00		216.9	1,663.6					0.0	379.3	216.9	2,043.0	0.0	0.0
40.50	Bot - Section 2	201.6	164.0					0.0	37.9	201.6	201.9	0.0	0.0
45.00		283.1	2,566.8					0.0	341.4	283.1	2,908.2	0.0	0.0
47.50	Top - Section 1	202.9	1,399.2					0.0	189.7	202.9	1,588.8	0.0	0.0
50.00		304.6	597.5					0.0	189.7	304.6	787.2	0.0	0.0
55.00		405.8	1,170.3					0.0	379.3	405.8	1,549.6	0.0	0.0
60.00	Appurtenance(s)	404.2	1,137.4	28.5	0.0	0.0	12.0	0.0	379.3	432.7	1,528.7	0.0	0.0
65.00		321.8	1,104.5					0.0	378.4	321.8	1,482.9	0.0	0.0
68.00	Appurtenance(s)	200.0	646.9	163.8	0.0	0.0	151.2	0.0	227.1	363.8	1,025.2	0.0	0.0
70.00		277.6	424.7					0.0	151.4	277.6	576.1	0.0	0.0
75.00	Appurtenance(s)	237.2	1,038.7	39.8	0.0	0.0	36.0	0.0	378.4	277.0	1,453.2	0.0	0.0
76.00	Appurtenance(s)	195.3	203.8	101.5	0.0	0.0	120.0	0.0	75.1	296.8	398.9	0.0	0.0
80.00	Appurtenance(s)	239.7	802.0	30.9	0.0	0.0	12.0	0.0	300.6	270.6	1,114.6	0.0	0.0
82.16	Bot - Section 3	194.1	425.0					0.0	162.2	194.1	587.2	0.0	0.0
85.00		219.7	1,012.5					0.0	212.6	219.7	1,225.1	0.0	0.0
87.83	Top - Section 2	192.2	990.7					0.0	212.1	192.2	1,202.9	0.0	0.0
90.00		121.0	342.7					0.0	162.7	121.0	505.3	0.0	0.0
91.00	Appurtenance(s)	188.6	156.2	929.5	0.0	0.0	1,800.0	0.0	75.0	1,118.1	2,031.1	0.0	0.0
95.00		335.2	613.7					0.0	299.9	335.2	913.6	0.0	0.0
100.00	Appurtenance(s)	329.4	742.5	2,605.7	0.0	3,550.9	1,559.3	0.0	374.8	2,935.1	2,676.6	0.0	0.0
104.00	Appurtenance(s)	180.5	574.2	1,794.4	0.0	0.0	2,724.0	0.0	191.5	1,974.8	3,489.8	0.0	0.0
105.00		106.7	140.8					0.0	47.9	106.7	188.7	0.0	0.0
107.00	Appurtenance(s)	176.0	278.3	33.6	0.0	0.0	12.0	0.0	95.8	209.6	386.1	0.0	0.0
110.00	Appurtenance(s)	276.3	409.3	3,305.8	0.0	6,894.9	3,397.7	0.0	142.5	3,582.1	3,949.4	0.0	0.0
115.00		337.5	660.2					0.0	162.4	337.5	822.6	0.0	0.0
120.00	Appurtenance(s)	327.3	632.8	2,207.8	0.0	0.0	2,666.0	0.0	162.4	2,535.1	3,461.2	0.0	0.0
125.00	Appurtenance(s)	192.6	605.4	503.1	0.0	0.0	373.2	0.0	60.4	695.7	1,039.0	0.0	0.0
126.00	Appurtenance(s)	94.0	117.8	303.3	0.0	0.0	58.8	0.0	9.9	397.3	186.5	0.0	0.0
128.00	Appurtenance(s)	93.4	232.3	1,516.7	0.0	0.0	1,146.1	0.0	19.5	1,610.1	1,397.9	0.0	0.0
129.00	Appurtenance(s)	61.7	114.5	510.5	0.0	0.0	178.7	0.0	5.9	572.2	299.1	0.0	0.0
130.00	Appurtenance(s)	30.8	113.4	2,087.9	0.0	3,176.0	1,951.2	0.0	5.9	2,118.7	2,070.5	0.0	0.0
								Totals:		26,173.0	58,619.8	0.00	0.00

Site Number: 411189 | Code: ANSI/TIA-222-G |

Site Name: CRANBURYSU CT, CT | Engineering Number:13198800_C3_03 | 4/30/2020 9:48:29 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W | 93 mph with No Ice | 19 Iterations

Gust Response Factor :1.10 | Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

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	-58.60	-25.99	0.00	-2,513.09	0.00	2,513.09	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.301
5.00	-56.22	-25.63	0.00	-2,383.13	0.00	2,383.13	6,692.31	3,346.15	16,532.0	8,278.33	0.04	-0.07	0.296
10.00	-53.88	-25.28	0.00	-2,254.96	0.00	2,254.96	6,588.83	3,294.42	15,907.1	7,965.37	0.16	-0.15	0.291
15.00	-51.59	-24.93	0.00	-2,128.58	0.00	2,128.58	6,483.18	3,241.59	15,288.6	7,655.67	0.36	-0.23	0.286
20.00	-49.34	-24.58	0.00	-2,003.95	0.00	2,003.95	6,375.36	3,187.68	14,676.9	7,349.39	0.64	-0.30	0.280
25.00	-47.13	-24.24	0.00	-1,881.05	0.00	1,881.05	6,265.37	3,132.69	14,072.5	7,046.72	1.00	-0.38	0.275
30.00	-44.97	-23.90	0.00	-1,759.86	0.00	1,759.86	6,153.21	3,076.61	13,475.6	6,747.85	1.44	-0.46	0.268
35.00	-42.85	-23.55	0.00	-1,640.38	0.00	1,640.38	6,038.88	3,019.44	12,886.7	6,452.96	1.97	-0.54	0.261
40.00	-40.80	-23.34	0.00	-1,522.66	0.00	1,522.66	5,922.38	2,961.19	12,306.1	6,162.22	2.58	-0.62	0.254
40.50	-40.58	-23.16	0.00	-1,510.99	0.00	1,510.99	5,910.61	2,955.30	12,248.5	6,133.39	2.64	-0.63	0.253
45.00	-37.65	-22.88	0.00	-1,406.75	0.00	1,406.75	5,803.70	2,901.85	11,734.2	5,875.83	3.27	-0.70	0.246
47.50	-36.05	-22.69	0.00	-1,349.54	0.00	1,349.54	4,002.81	2,001.40	8,146.29	4,079.20	3.65	-0.74	0.340
50.00	-35.24	-22.42	0.00	-1,292.83	0.00	1,292.83	3,967.67	1,983.84	7,963.57	3,987.71	4.05	-0.78	0.333
55.00	-33.66	-22.05	0.00	-1,180.75	0.00	1,180.75	3,895.77	1,947.89	7,600.87	3,806.08	4.92	-0.88	0.319
60.00	-32.10	-21.64	0.00	-1,070.52	0.00	1,070.52	3,821.70	1,910.85	7,242.12	3,626.44	5.90	-0.98	0.304
65.00	-30.59	-21.34	0.00	-962.30	0.00	962.30	3,745.46	1,872.73	6,887.67	3,448.96	6.98	-1.08	0.287
68.00	-29.56	-20.98	0.00	-898.29	0.00	898.29	3,698.67	1,849.34	6,677.23	3,343.58	7.68	-1.14	0.277
70.00	-28.96	-20.72	0.00	-856.33	0.00	856.33	3,667.05	1,833.52	6,537.91	3,273.81	8.17	-1.18	0.270
75.00	-27.50	-20.44	0.00	-752.71	0.00	752.71	3,586.46	1,793.23	6,193.19	3,101.20	9.45	-1.27	0.251
76.00	-27.09	-20.16	0.00	-732.27	0.00	732.27	3,570.09	1,785.04	6,124.88	3,066.99	9.72	-1.29	0.246
80.00	-25.96	-19.89	0.00	-651.64	0.00	651.64	3,503.71	1,751.85	5,853.88	2,931.29	10.83	-1.36	0.230
82.16	-25.36	-19.70	0.00	-608.62	0.00	608.62	3,467.23	1,733.61	5,708.83	2,858.66	11.46	-1.40	0.220
85.00	-24.13	-19.47	0.00	-552.75	0.00	552.75	3,418.78	1,709.39	5,520.34	2,764.27	12.31	-1.45	0.207
87.83	-22.92	-19.26	0.00	-497.66	0.00	497.66	2,692.45	1,346.23	4,345.60	2,176.03	13.18	-1.49	0.237
90.00	-22.41	-19.14	0.00	-455.86	0.00	455.86	2,665.65	1,332.83	4,237.49	2,121.90	13.87	-1.53	0.223
91.00	-20.39	-17.98	0.00	-436.73	0.00	436.73	2,653.16	1,326.58	4,187.89	2,097.06	14.19	-1.55	0.216
95.00	-19.47	-17.64	0.00	-364.81	0.00	364.81	2,602.34	1,301.17	3,990.97	1,998.45	15.51	-1.61	0.190
100.00	-16.86	-14.65	0.00	-273.06	0.00	273.06	2,536.86	1,268.43	3,748.34	1,876.95	17.24	-1.68	0.152
104.00	-13.43	-12.58	0.00	-214.47	0.00	214.47	2,482.92	1,241.46	3,557.28	1,781.28	18.67	-1.73	0.126
105.00	-13.24	-12.47	0.00	-201.89	0.00	201.89	2,469.21	1,234.61	3,509.96	1,757.59	19.03	-1.74	0.120
107.00	-12.85	-12.25	0.00	-176.95	0.00	176.95	2,441.54	1,220.77	3,415.88	1,710.48	19.76	-1.76	0.109
110.00	-9.01	-8.55	0.00	-133.30	0.00	133.30	2,399.39	1,199.69	3,276.20	1,640.54	20.88	-1.79	0.085
115.00	-8.20	-8.20	0.00	-90.53	0.00	90.53	2,327.39	1,163.70	3,047.43	1,525.98	22.77	-1.82	0.063
120.00	-4.82	-5.55	0.00	-49.55	0.00	49.55	2,252.90	1,126.45	2,823.60	1,413.90	24.69	-1.84	0.037
125.00	-3.80	-4.82	0.00	-21.79	0.00	21.79	2,153.14	1,076.57	2,577.88	1,290.85	26.63	-1.86	0.019
126.00	-3.63	-4.42	0.00	-16.97	0.00	16.97	2,133.19	1,066.60	2,530.08	1,266.92	27.02	-1.86	0.015
128.00	-2.28	-2.77	0.00	-8.13	0.00	8.13	2,093.29	1,046.64	2,435.81	1,219.72	27.80	-1.86	0.008
129.00	-2.00	-2.18	0.00	-5.36	0.00	5.36	2,073.34	1,036.67	2,389.35	1,196.45	28.19	-1.86	0.005
130.00	0.00	-2.12	0.00	-3.18	0.00	3.18	2,053.39	1,026.69	2,343.34	1,173.41	28.58	-1.86	0.003

Site Number: 411189 | Code: ANSI/TIA-222-G |

Site Name: CRANBURYSU CT, CT | Engineering Number:13198800_C3_03 | 4/30/2020 9:48:29 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W | 93 mph with No Ice (Reduced DL) | 19 Iterations

Gust Response Factor :1.10 | Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		218.5	0.0					0.0	0.0	218.5	0.0	0.0	0.0
5.00		432.2	1,478.0					0.0	284.5	432.2	1,762.5	0.0	0.0
10.00		422.6	1,445.1					0.0	284.5	422.6	1,729.6	0.0	0.0
15.00		412.9	1,412.2					0.0	284.5	412.9	1,696.7	0.0	0.0
20.00		403.3	1,379.3					0.0	284.5	403.3	1,663.8	0.0	0.0
25.00		393.6	1,346.4					0.0	284.5	393.6	1,630.9	0.0	0.0
30.00		388.5	1,313.5					0.0	284.5	388.5	1,598.0	0.0	0.0
35.00		391.2	1,280.6					0.0	284.5	391.2	1,565.1	0.0	0.0
40.00		216.9	1,247.7					0.0	284.5	216.9	1,532.2	0.0	0.0
40.50	Bot - Section 2	201.6	123.0					0.0	28.4	201.6	151.4	0.0	0.0
45.00		283.1	1,925.1					0.0	256.0	283.1	2,181.2	0.0	0.0
47.50	Top - Section 1	202.9	1,049.4					0.0	142.2	202.9	1,191.6	0.0	0.0
50.00		304.6	448.1					0.0	142.2	304.6	590.4	0.0	0.0
55.00		405.8	877.7					0.0	284.5	405.8	1,162.2	0.0	0.0
60.00	Appurtenance(s)	404.2	853.1	28.5	0.0	0.0	9.0	0.0	284.5	432.7	1,146.6	0.0	0.0
65.00		321.8	828.4					0.0	283.8	321.8	1,112.2	0.0	0.0
68.00	Appurtenance(s)	200.0	485.2	163.8	0.0	0.0	113.4	0.0	170.3	363.8	768.9	0.0	0.0
70.00		277.6	318.5					0.0	113.5	277.6	432.1	0.0	0.0
75.00	Appurtenance(s)	237.2	779.0	39.8	0.0	0.0	27.0	0.0	283.8	277.0	1,089.9	0.0	0.0
76.00	Appurtenance(s)	195.3	152.8	101.5	0.0	0.0	90.0	0.0	56.4	296.8	299.2	0.0	0.0
80.00	Appurtenance(s)	239.7	601.5	30.9	0.0	0.0	9.0	0.0	225.4	270.6	836.0	0.0	0.0
82.16	Bot - Section 3	194.1	318.7					0.0	121.6	194.1	440.4	0.0	0.0
85.00		219.7	759.3					0.0	159.5	219.7	918.8	0.0	0.0
87.83	Top - Section 2	192.2	743.1					0.0	159.1	192.2	902.2	0.0	0.0
90.00		121.0	257.0					0.0	122.0	121.0	379.0	0.0	0.0
91.00	Appurtenance(s)	188.6	117.1	929.5	0.0	0.0	1,350.0	0.0	56.2	1,118.1	1,523.3	0.0	0.0
95.00		335.2	460.3					0.0	224.9	335.2	685.2	0.0	0.0
100.00	Appurtenance(s)	329.4	556.8	2,605.7	0.0	3,550.9	1,169.5	0.0	281.1	2,935.1	2,007.4	0.0	0.0
104.00	Appurtenance(s)	180.5	430.7	1,794.4	0.0	0.0	2,043.0	0.0	143.6	1,974.8	2,617.3	0.0	0.0
105.00		106.7	105.6					0.0	35.9	106.7	141.5	0.0	0.0
107.00	Appurtenance(s)	176.0	208.8	33.6	0.0	0.0	9.0	0.0	71.8	209.6	289.6	0.0	0.0
110.00	Appurtenance(s)	276.3	307.0	3,305.8	0.0	6,894.9	2,548.3	0.0	106.8	3,582.1	2,962.1	0.0	0.0
115.00		337.5	495.2					0.0	121.8	337.5	616.9	0.0	0.0
120.00	Appurtenance(s)	327.3	474.6	2,207.8	0.0	0.0	1,999.5	0.0	121.8	2,535.1	2,595.9	0.0	0.0
125.00	Appurtenance(s)	192.6	454.1	503.1	0.0	0.0	279.9	0.0	45.3	695.7	779.2	0.0	0.0
126.00	Appurtenance(s)	94.0	88.3	303.3	0.0	0.0	44.1	0.0	7.5	397.3	139.9	0.0	0.0
128.00	Appurtenance(s)	93.4	174.2	1,516.7	0.0	0.0	859.6	0.0	14.7	1,610.1	1,048.5	0.0	0.0
129.00	Appurtenance(s)	61.6	85.9	510.5	0.0	0.0	134.0	0.0	4.4	572.1	224.3	0.0	0.0
130.00	Appurtenance(s)	30.7	85.1	2,087.9	0.0	3,176.0	1,463.4	0.0	4.4	2,118.5	1,552.9	0.0	0.0
								Totals:		26,172.7	43,964.8	0.00	0.00

Site Number: 411189 | Code: ANSI/TIA-222-G |

Site Name: CRANBURYSU CT, CT | Engineering Number:13198800_C3_03 | 4/30/2020 9:48:39 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W | 93 mph with No Ice (Reduced DL) | 19 Iterations

Gust Response Factor :1.10 | Wind Importance Factor 1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

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	-43.95	-25.98	0.00	-2,499.43	0.00	2,499.43	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.297
5.00	-42.15	-25.60	0.00	-2,369.51	0.00	2,369.51	6,692.31	3,346.15	16,532.0	8,278.33	0.04	-0.07	0.293
10.00	-40.39	-25.23	0.00	-2,241.49	0.00	2,241.49	6,588.83	3,294.42	15,907.1	7,965.37	0.16	-0.15	0.288
15.00	-38.66	-24.87	0.00	-2,115.34	0.00	2,115.34	6,483.18	3,241.59	15,288.6	7,655.67	0.36	-0.23	0.282
20.00	-36.97	-24.50	0.00	-1,991.01	0.00	1,991.01	6,375.36	3,187.68	14,676.9	7,349.39	0.63	-0.30	0.277
25.00	-35.30	-24.15	0.00	-1,868.49	0.00	1,868.49	6,265.37	3,132.69	14,072.5	7,046.72	0.99	-0.38	0.271
30.00	-33.68	-23.79	0.00	-1,747.75	0.00	1,747.75	6,153.21	3,076.61	13,475.6	6,747.85	1.43	-0.46	0.265
35.00	-32.08	-23.43	0.00	-1,628.78	0.00	1,628.78	6,038.88	3,019.44	12,886.7	6,452.96	1.96	-0.54	0.258
40.00	-30.54	-23.22	0.00	-1,511.61	0.00	1,511.61	5,922.38	2,961.19	12,306.1	6,162.22	2.56	-0.62	0.251
40.50	-30.37	-23.04	0.00	-1,500.00	0.00	1,500.00	5,910.61	2,955.30	12,248.5	6,133.39	2.63	-0.62	0.250
45.00	-28.17	-22.76	0.00	-1,396.31	0.00	1,396.31	5,803.70	2,901.85	11,734.2	5,875.83	3.25	-0.70	0.243
47.50	-26.97	-22.56	0.00	-1,339.41	0.00	1,339.41	4,002.81	2,001.40	8,146.29	4,079.20	3.63	-0.74	0.335
50.00	-26.35	-22.28	0.00	-1,283.00	0.00	1,283.00	3,967.67	1,983.84	7,963.57	3,987.71	4.02	-0.78	0.329
55.00	-25.16	-21.90	0.00	-1,171.58	0.00	1,171.58	3,895.77	1,947.89	7,600.87	3,806.08	4.89	-0.88	0.314
60.00	-23.98	-21.49	0.00	-1,062.06	0.00	1,062.06	3,821.70	1,910.85	7,242.12	3,626.44	5.86	-0.98	0.299
65.00	-22.85	-21.18	0.00	-954.59	0.00	954.59	3,745.46	1,872.73	6,887.67	3,448.96	6.94	-1.07	0.283
68.00	-22.07	-20.82	0.00	-891.04	0.00	891.04	3,698.67	1,849.34	6,677.23	3,343.58	7.63	-1.13	0.273
70.00	-21.62	-20.56	0.00	-849.39	0.00	849.39	3,667.05	1,833.52	6,537.91	3,273.81	8.11	-1.17	0.265
75.00	-20.51	-20.28	0.00	-746.58	0.00	746.58	3,586.46	1,793.23	6,193.19	3,101.20	9.39	-1.26	0.247
76.00	-20.21	-19.99	0.00	-726.30	0.00	726.30	3,570.09	1,785.04	6,124.88	3,066.99	9.66	-1.28	0.243
80.00	-19.36	-19.72	0.00	-646.32	0.00	646.32	3,503.71	1,751.85	5,853.88	2,931.29	10.76	-1.35	0.226
82.16	-18.91	-19.53	0.00	-603.65	0.00	603.65	3,467.23	1,733.61	5,708.83	2,858.66	11.38	-1.39	0.217
85.00	-17.98	-19.31	0.00	-548.24	0.00	548.24	3,418.78	1,709.39	5,520.34	2,764.27	12.22	-1.44	0.204
87.83	-17.07	-19.10	0.00	-493.61	0.00	493.61	2,692.45	1,346.23	4,345.60	2,176.03	13.09	-1.48	0.233
90.00	-16.68	-18.98	0.00	-452.16	0.00	452.16	2,665.65	1,332.83	4,237.49	2,121.90	13.77	-1.52	0.220
91.00	-15.18	-17.83	0.00	-433.18	0.00	433.18	2,653.16	1,326.58	4,187.89	2,097.06	14.09	-1.53	0.212
95.00	-14.48	-17.49	0.00	-361.86	0.00	361.86	2,602.34	1,301.17	3,990.97	1,998.45	15.40	-1.60	0.187
100.00	-12.54	-14.52	0.00	-270.83	0.00	270.83	2,536.86	1,268.43	3,748.34	1,876.95	17.12	-1.67	0.149
104.00	-9.98	-12.47	0.00	-212.77	0.00	212.77	2,482.92	1,241.46	3,557.28	1,781.28	18.54	-1.71	0.124
105.00	-9.84	-12.36	0.00	-200.30	0.00	200.30	2,469.21	1,234.61	3,509.96	1,757.59	18.90	-1.73	0.118
107.00	-9.55	-12.15	0.00	-175.58	0.00	175.58	2,441.54	1,220.77	3,415.88	1,710.48	19.62	-1.75	0.107
110.00	-6.70	-8.48	0.00	-132.24	0.00	132.24	2,399.39	1,199.69	3,276.20	1,640.54	20.73	-1.77	0.083
115.00	-6.09	-8.13	0.00	-89.84	0.00	89.84	2,327.39	1,163.70	3,047.43	1,525.98	22.61	-1.81	0.062
120.00	-3.57	-5.51	0.00	-49.21	0.00	49.21	2,252.90	1,126.45	2,823.60	1,413.90	24.51	-1.83	0.036
125.00	-2.81	-4.79	0.00	-21.66	0.00	21.66	2,153.14	1,076.57	2,577.88	1,290.85	26.44	-1.85	0.018
126.00	-2.69	-4.39	0.00	-16.87	0.00	16.87	2,133.19	1,066.60	2,530.08	1,266.92	26.83	-1.85	0.015
128.00	-1.69	-2.75	0.00	-8.09	0.00	8.09	2,093.29	1,046.64	2,435.81	1,219.72	27.60	-1.85	0.007
129.00	-1.48	-2.17	0.00	-5.34	0.00	5.34	2,073.34	1,036.67	2,389.35	1,196.45	27.99	-1.85	0.005
130.00	0.00	-2.12	0.00	-3.18	0.00	3.18	2,053.39	1,026.69	2,343.34	1,173.41	28.38	-1.85	0.003

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 19 Iterations

Gust Response Factor :1.10 — Ice Dead Load Factor 1.00 — Wind Importance Factor 1.00
Dead Load Factor :1.20 — Ice Importance Factor 1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		75.6	0.0					0.0	0.0	75.6	0.0	0.0	0.0
5.00		149.9	2,419.4					12.6	460.6	162.5	2,880.0	0.0	0.0
10.00		147.1	2,417.7					13.4	467.3	160.5	2,885.0	0.0	0.0
15.00		144.2	2,388.6					13.8	470.8	158.0	2,859.4	0.0	0.0
20.00		141.2	2,350.5					14.0	473.1	155.2	2,823.7	0.0	0.0
25.00		138.1	2,307.8					14.2	475.0	152.3	2,782.7	0.0	0.0
30.00		136.6	2,262.1					14.4	476.5	151.0	2,738.6	0.0	0.0
35.00		137.9	2,214.3					14.9	477.8	152.8	2,692.1	0.0	0.0
40.00		76.5	2,165.1					15.7	478.9	92.2	2,644.0	0.0	0.0
40.50	Bot - Section 2	71.2	214.3					1.6	47.9	72.8	262.3	0.0	0.0
45.00		100.1	3,019.0					14.8	432.0	114.8	3,451.0	0.0	0.0
47.50	Top - Section 1	71.8	1,649.1					8.4	240.3	80.2	1,889.4	0.0	0.0
50.00		108.0	845.5					8.6	240.5	116.6	1,086.0	0.0	0.0
55.00		144.1	1,656.8					17.6	481.7	161.7	2,138.5	0.0	0.0
60.00	Appurtenance(s)	143.9	1,615.0	8.5	0.0	0.0	48.6	18.2	482.4	170.5	2,146.1	0.0	0.0
65.00		114.8	1,572.7					18.7	482.2	133.5	2,054.9	0.0	0.0
68.00	Appurtenance(s)	71.4	924.7	48.6	0.0	0.0	358.3	11.5	289.6	131.6	1,572.7	0.0	0.0
70.00		99.4	608.4					7.7	193.2	107.2	801.7	0.0	0.0
75.00	Appurtenance(s)	85.0	1,486.6	14.7	0.0	0.0	103.6	19.7	483.5	119.3	2,073.7	0.0	0.0
76.00	Appurtenance(s)	70.2	293.2	27.3	0.0	0.0	265.6	4.0	96.2	101.5	655.1	0.0	0.0
80.00	Appurtenance(s)	86.2	1,152.0	9.3	0.0	0.0	49.5	16.2	385.1	111.6	1,586.6	0.0	0.0
82.16	Bot - Section 3	69.9	612.4					8.9	208.1	78.7	820.5	0.0	0.0
85.00		79.2	1,258.2					11.7	273.0	90.9	1,531.1	0.0	0.0
87.83	Top - Section 2	69.3	1,232.2					11.8	272.5	81.2	1,504.7	0.0	0.0
90.00		43.7	525.7					9.2	209.0	52.9	734.8	0.0	0.0
91.00	Appurtenance(s)	68.3	240.1	284.9	0.0	0.0	3,917.2	4.3	96.4	357.5	4,253.7	0.0	0.0
95.00		121.6	941.4					17.2	385.7	138.8	1,327.1	0.0	0.0
100.00	Appurtenance(s)	119.8	1,140.0	597.7	0.0	804.1	6,010.3	21.8	482.5	739.3	7,632.7	0.0	0.0
104.00	Appurtenance(s)	65.8	884.6	478.8	0.0	0.0	4,099.2	17.7	278.0	562.3	5,261.8	0.0	0.0
105.00		39.0	218.0					4.5	69.5	43.4	287.6	0.0	0.0
107.00	Appurtenance(s)	64.4	430.7	10.2	0.0	0.0	50.3	9.0	139.1	83.6	620.2	0.0	0.0
110.00	Appurtenance(s)	101.4	633.3	830.6	0.0	1,555.3	9,349.1	13.6	207.6	945.6	10,190.0	0.0	0.0
115.00		124.3	1,020.6					22.9	271.3	147.2	1,291.9	0.0	0.0
120.00	Appurtenance(s)	121.0	980.4	587.0	0.0	0.0	6,875.3	23.3	271.7	731.3	8,127.4	0.0	0.0
125.00	Appurtenance(s)	71.4	940.0	123.8	0.0	0.0	1,335.3	23.6	170.1	218.9	2,445.4	0.0	0.0
126.00	Appurtenance(s)	35.0	184.3	66.1	0.0	0.0	264.5	4.8	31.9	105.9	480.7	0.0	0.0
128.00	Appurtenance(s)	34.8	363.1	376.3	0.0	0.0	3,881.0	9.6	63.6	420.7	4,307.7	0.0	0.0
129.00	Appurtenance(s)	23.0	179.4	155.6	0.0	0.0	429.9	4.8	27.9	183.4	637.3	0.0	0.0
130.00	Appurtenance(s)	11.5	177.8	507.1	0.0	560.7	5,249.9	4.8	28.0	523.4	5,455.6	0.0	0.0
								Totals:		8,186.50	98,933.5	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 0.75 in Radial Ice 19 Iterations

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

Calculated Forces

Seg 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	-98.93	-8.13	0.00	-761.85	0.00	761.85	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.103
5.00	-96.05	-8.01	0.00	-721.20	0.00	721.20	6,692.31	3,346.15	16,532.0	8,278.33	0.01	-0.02	0.101
10.00	-93.16	-7.88	0.00	-681.17	0.00	681.17	6,588.83	3,294.42	15,907.1	7,965.37	0.05	-0.05	0.100
15.00	-90.30	-7.76	0.00	-641.76	0.00	641.76	6,483.18	3,241.59	15,288.6	7,655.67	0.11	-0.07	0.098
20.00	-87.47	-7.63	0.00	-602.98	0.00	602.98	6,375.36	3,187.68	14,676.9	7,349.39	0.19	-0.09	0.096
25.00	-84.69	-7.51	0.00	-564.82	0.00	564.82	6,265.37	3,132.69	14,072.5	7,046.72	0.30	-0.12	0.094
30.00	-81.94	-7.39	0.00	-527.26	0.00	527.26	6,153.21	3,076.61	13,475.6	6,747.85	0.44	-0.14	0.091
35.00	-79.25	-7.26	0.00	-490.33	0.00	490.33	6,038.88	3,019.44	12,886.7	6,452.96	0.59	-0.16	0.089
40.00	-76.60	-7.18	0.00	-454.02	0.00	454.02	5,922.38	2,961.19	12,306.1	6,162.22	0.78	-0.19	0.087
40.50	-76.34	-7.12	0.00	-450.44	0.00	450.44	5,910.61	2,955.30	12,248.5	6,133.39	0.80	-0.19	0.086
45.00	-72.89	-7.01	0.00	-418.40	0.00	418.40	5,803.70	2,901.85	11,734.2	5,875.83	0.99	-0.21	0.084
47.50	-71.00	-6.94	0.00	-400.86	0.00	400.86	4,002.81	2,001.40	8,146.29	4,079.20	1.10	-0.22	0.116
50.00	-69.91	-6.85	0.00	-383.51	0.00	383.51	3,967.67	1,983.84	7,963.57	3,987.71	1.22	-0.23	0.114
55.00	-67.77	-6.71	0.00	-349.27	0.00	349.27	3,895.77	1,947.89	7,600.87	3,806.08	1.48	-0.26	0.109
60.00	-65.62	-6.56	0.00	-315.72	0.00	315.72	3,821.70	1,910.85	7,242.12	3,626.44	1.77	-0.29	0.104
65.00	-63.56	-6.44	0.00	-282.90	0.00	282.90	3,745.46	1,872.73	6,887.67	3,448.96	2.10	-0.32	0.099
68.00	-61.99	-6.32	0.00	-263.57	0.00	263.57	3,698.67	1,849.34	6,677.23	3,343.58	2.31	-0.34	0.096
70.00	-61.19	-6.23	0.00	-250.93	0.00	250.93	3,667.05	1,833.52	6,537.91	3,273.81	2.45	-0.35	0.093
75.00	-59.11	-6.11	0.00	-219.79	0.00	219.79	3,586.46	1,793.23	6,193.19	3,101.20	2.83	-0.38	0.087
76.00	-58.46	-6.02	0.00	-213.68	0.00	213.68	3,570.09	1,785.04	6,124.88	3,066.99	2.91	-0.38	0.086
80.00	-56.87	-5.91	0.00	-189.60	0.00	189.60	3,503.71	1,751.85	5,853.88	2,931.29	3.25	-0.40	0.081
82.16	-56.05	-5.84	0.00	-176.81	0.00	176.81	3,467.23	1,733.61	5,708.83	2,858.66	3.43	-0.42	0.078
85.00	-54.52	-5.75	0.00	-160.25	0.00	160.25	3,418.78	1,709.39	5,520.34	2,764.27	3.68	-0.43	0.074
87.83	-53.01	-5.67	0.00	-143.97	0.00	143.97	2,692.45	1,346.23	4,345.60	2,176.03	3.94	-0.44	0.086
90.00	-52.28	-5.62	0.00	-131.67	0.00	131.67	2,665.65	1,332.83	4,237.49	2,121.90	4.15	-0.45	0.082
91.00	-48.02	-5.24	0.00	-126.05	0.00	126.05	2,653.16	1,326.58	4,187.89	2,097.06	4.24	-0.46	0.078
95.00	-46.70	-5.10	0.00	-105.10	0.00	105.10	2,602.34	1,301.17	3,990.97	1,998.45	4.63	-0.48	0.071
100.00	-39.07	-4.31	0.00	-78.79	0.00	78.79	2,536.86	1,268.43	3,748.34	1,876.95	5.15	-0.50	0.057
104.00	-33.81	-3.71	0.00	-61.55	0.00	61.55	2,482.92	1,241.46	3,557.28	1,781.28	5.57	-0.51	0.048
105.00	-33.52	-3.66	0.00	-57.84	0.00	57.84	2,469.21	1,234.61	3,509.96	1,757.59	5.68	-0.51	0.046
107.00	-32.90	-3.58	0.00	-50.52	0.00	50.52	2,441.54	1,220.77	3,415.88	1,710.48	5.89	-0.52	0.043
110.00	-22.72	-2.54	0.00	-38.23	0.00	38.23	2,399.39	1,199.69	3,276.20	1,640.54	6.22	-0.53	0.033
115.00	-21.43	-2.39	0.00	-25.52	0.00	25.52	2,327.39	1,163.70	3,047.43	1,525.98	6.78	-0.54	0.026
120.00	-13.31	-1.58	0.00	-13.59	0.00	13.59	2,252.90	1,126.45	2,823.60	1,413.90	7.35	-0.54	0.016
125.00	-10.87	-1.34	0.00	-5.69	0.00	5.69	2,153.14	1,076.57	2,577.88	1,290.85	7.92	-0.55	0.009
126.00	-10.39	-1.23	0.00	-4.36	0.00	4.36	2,133.19	1,066.60	2,530.08	1,266.92	8.03	-0.55	0.008
128.00	-6.09	-0.77	0.00	-1.90	0.00	1.90	2,093.29	1,046.64	2,435.81	1,219.72	8.26	-0.55	0.004
129.00	-5.45	-0.58	0.00	-1.14	0.00	1.14	2,073.34	1,036.67	2,389.35	1,196.45	8.38	-0.55	0.004
130.00	0.00	-0.52	0.00	-0.56	0.00	0.56	2,053.39	1,026.69	2,343.34	1,173.41	8.49	-0.55	0.000

Site Number: 411189 | Code: ANSI/TIA-222-G |

Site Name: CRANBURYSU CT, CT | Engineering Number:13198800_C3_03 | 4/30/2020 9:48:47 PM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W | Serviceability 60 mph | 18 Iterations

Gust Response Factor :1.10 | Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		50.9	0.0					0.0	0.0	50.9	0.0	0.0	0.0
5.00		100.6	1,642.2					0.0	316.1	100.6	1,958.3	0.0	0.0
10.00		98.4	1,605.7					0.0	316.1	98.4	1,921.8	0.0	0.0
15.00		96.1	1,569.1					0.0	316.1	96.1	1,885.2	0.0	0.0
20.00		93.9	1,532.6					0.0	316.1	93.9	1,848.7	0.0	0.0
25.00		91.6	1,496.0					0.0	316.1	91.6	1,812.1	0.0	0.0
30.00		90.4	1,459.5					0.0	316.1	90.4	1,775.6	0.0	0.0
35.00		91.1	1,422.9					0.0	316.1	91.1	1,739.0	0.0	0.0
40.00		50.5	1,386.4					0.0	316.1	50.5	1,702.5	0.0	0.0
40.50	Bot - Section 2	46.9	136.6					0.0	31.6	46.9	168.2	0.0	0.0
45.00		65.9	2,139.0					0.0	284.5	65.9	2,423.5	0.0	0.0
47.50	Top - Section 1	47.2	1,166.0					0.0	158.1	47.2	1,324.0	0.0	0.0
50.00		70.9	497.9					0.0	158.1	70.9	656.0	0.0	0.0
55.00		94.4	975.3					0.0	316.1	94.4	1,291.4	0.0	0.0
60.00	Appurtenance(s)	94.1	947.8	6.6	0.0	0.0	10.0	0.0	316.1	100.7	1,273.9	0.0	0.0
65.00		74.9	920.4					0.0	315.4	74.9	1,235.8	0.0	0.0
68.00	Appurtenance(s)	46.5	539.1	38.1	0.0	0.0	126.0	0.0	189.2	84.7	854.3	0.0	0.0
70.00		64.6	353.9					0.0	126.1	64.6	480.1	0.0	0.0
75.00	Appurtenance(s)	55.2	865.6	9.3	0.0	0.0	30.0	0.0	315.4	64.5	1,211.0	0.0	0.0
76.00	Appurtenance(s)	45.5	169.8	23.6	0.0	0.0	100.0	0.0	62.6	69.1	332.5	0.0	0.0
80.00	Appurtenance(s)	55.8	668.4	7.2	0.0	0.0	10.0	0.0	250.5	63.0	928.8	0.0	0.0
82.16	Bot - Section 3	45.2	354.2					0.0	135.1	45.2	489.3	0.0	0.0
85.00		51.1	843.7					0.0	177.2	51.1	1,020.9	0.0	0.0
87.83	Top - Section 2	44.7	825.6					0.0	176.8	44.7	1,002.4	0.0	0.0
90.00		28.2	285.5					0.0	135.6	28.2	421.1	0.0	0.0
91.00	Appurtenance(s)	43.9	130.1	216.3	0.0	0.0	1,500.0	0.0	62.5	260.2	1,692.6	0.0	0.0
95.00		78.0	511.4					0.0	249.9	78.0	761.3	0.0	0.0
100.00	Appurtenance(s)	76.7	618.7	606.5	0.0	826.5	1,299.4	0.0	312.4	683.2	2,230.5	0.0	0.0
104.00	Appurtenance(s)	42.0	478.5	417.7	0.0	0.0	2,270.0	0.0	159.6	459.7	2,908.1	0.0	0.0
105.00		24.8	117.3					0.0	39.9	24.8	157.2	0.0	0.0
107.00	Appurtenance(s)	41.0	232.0	7.8	0.0	0.0	10.0	0.0	79.8	48.8	321.8	0.0	0.0
110.00	Appurtenance(s)	64.3	341.1	769.5	0.0	1,604.9	2,831.4	0.0	118.7	833.8	3,291.2	0.0	0.0
115.00		78.6	550.2					0.0	135.3	78.6	685.5	0.0	0.0
120.00	Appurtenance(s)	76.2	527.3	513.9	0.0	0.0	2,221.7	0.0	135.3	590.1	2,884.3	0.0	0.0
125.00	Appurtenance(s)	44.8	504.5	117.1	0.0	0.0	311.0	0.0	50.3	161.9	865.8	0.0	0.0
126.00	Appurtenance(s)	21.9	98.2	70.6	0.0	0.0	49.0	0.0	8.3	92.5	155.4	0.0	0.0
128.00	Appurtenance(s)	21.7	193.6	353.0	0.0	0.0	955.1	0.0	16.3	374.8	1,165.0	0.0	0.0
129.00	Appurtenance(s)	14.3	95.4	118.8	0.0	0.0	148.9	0.0	4.9	133.2	249.2	0.0	0.0
130.00	Appurtenance(s)	7.1	94.5	486.0	0.0	739.3	1,626.0	0.0	4.9	493.1	1,725.4	0.0	0.0
								Totals:		6,092.02	48,849.8	0.00	0.00

Site Number: 411189 | Code: ANSI/TIA-222-G |

Site Name: CRANBURYSU CT, CT | Engineering Number:13198800_C3_03 | 4/30/2020 9:48:57 PM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W | Serviceability 60 mph | 18 Iterations

Gust Response Factor :1.10 | Wind Importance Factor 1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-48.85	-6.05	0.00	-582.84	0.00	582.84	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.075
5.00	-46.89	-5.96	0.00	-552.60	0.00	552.60	6,692.31	3,346.15	16,532.0	8,278.33	0.01	-0.02	0.074
10.00	-44.97	-5.88	0.00	-522.79	0.00	522.79	6,588.83	3,294.42	15,907.1	7,965.37	0.04	-0.03	0.072
15.00	-43.08	-5.79	0.00	-493.42	0.00	493.42	6,483.18	3,241.59	15,288.6	7,655.67	0.08	-0.05	0.071
20.00	-41.23	-5.71	0.00	-464.46	0.00	464.46	6,375.36	3,187.68	14,676.9	7,349.39	0.15	-0.07	0.070
25.00	-39.41	-5.63	0.00	-435.91	0.00	435.91	6,265.37	3,132.69	14,072.5	7,046.72	0.23	-0.09	0.068
30.00	-37.64	-5.55	0.00	-407.78	0.00	407.78	6,153.21	3,076.61	13,475.6	6,747.85	0.33	-0.11	0.067
35.00	-35.90	-5.46	0.00	-380.05	0.00	380.05	6,038.88	3,019.44	12,886.7	6,452.96	0.46	-0.13	0.065
40.00	-34.19	-5.41	0.00	-352.74	0.00	352.74	5,922.38	2,961.19	12,306.1	6,162.22	0.60	-0.14	0.063
40.50	-34.02	-5.37	0.00	-350.03	0.00	350.03	5,910.61	2,955.30	12,248.5	6,133.39	0.61	-0.15	0.063
45.00	-31.60	-5.31	0.00	-325.85	0.00	325.85	5,803.70	2,901.85	11,734.2	5,875.83	0.76	-0.16	0.061
47.50	-30.27	-5.26	0.00	-312.59	0.00	312.59	4,002.81	2,001.40	8,146.29	4,079.20	0.85	-0.17	0.084
50.00	-29.62	-5.20	0.00	-299.43	0.00	299.43	3,967.67	1,983.84	7,963.57	3,987.71	0.94	-0.18	0.083
55.00	-28.32	-5.11	0.00	-273.45	0.00	273.45	3,895.77	1,947.89	7,600.87	3,806.08	1.14	-0.20	0.079
60.00	-27.05	-5.01	0.00	-247.90	0.00	247.90	3,821.70	1,910.85	7,242.12	3,626.44	1.37	-0.23	0.075
65.00	-25.81	-4.94	0.00	-222.83	0.00	222.83	3,745.46	1,872.73	6,887.67	3,448.96	1.62	-0.25	0.072
68.00	-24.96	-4.86	0.00	-208.00	0.00	208.00	3,698.67	1,849.34	6,677.23	3,343.58	1.78	-0.26	0.069
70.00	-24.48	-4.80	0.00	-198.28	0.00	198.28	3,667.05	1,833.52	6,537.91	3,273.81	1.89	-0.27	0.067
75.00	-23.26	-4.73	0.00	-174.29	0.00	174.29	3,586.46	1,793.23	6,193.19	3,101.20	2.19	-0.29	0.063
76.00	-22.93	-4.67	0.00	-169.55	0.00	169.55	3,570.09	1,785.04	6,124.88	3,066.99	2.25	-0.30	0.062
80.00	-22.00	-4.60	0.00	-150.89	0.00	150.89	3,503.71	1,751.85	5,853.88	2,931.29	2.51	-0.32	0.058
82.16	-21.51	-4.56	0.00	-140.93	0.00	140.93	3,467.23	1,733.61	5,708.83	2,858.66	2.66	-0.32	0.056
85.00	-20.49	-4.51	0.00	-127.99	0.00	127.99	3,418.78	1,709.39	5,520.34	2,764.27	2.85	-0.34	0.052
87.83	-19.49	-4.46	0.00	-115.24	0.00	115.24	2,692.45	1,346.23	4,345.60	2,176.03	3.05	-0.35	0.060
90.00	-19.07	-4.43	0.00	-105.56	0.00	105.56	2,665.65	1,332.83	4,237.49	2,121.90	3.21	-0.35	0.057
91.00	-17.37	-4.16	0.00	-101.13	0.00	101.13	2,653.16	1,326.58	4,187.89	2,097.06	3.29	-0.36	0.055
95.00	-16.61	-4.08	0.00	-84.48	0.00	84.48	2,602.34	1,301.17	3,990.97	1,998.45	3.59	-0.37	0.049
100.00	-14.39	-3.39	0.00	-63.23	0.00	63.23	2,536.86	1,268.43	3,748.34	1,876.95	3.99	-0.39	0.039
104.00	-11.48	-2.91	0.00	-49.67	0.00	49.67	2,482.92	1,241.46	3,557.28	1,781.28	4.33	-0.40	0.033
105.00	-11.32	-2.89	0.00	-46.76	0.00	46.76	2,469.21	1,234.61	3,509.96	1,757.59	4.41	-0.40	0.031
107.00	-11.00	-2.84	0.00	-40.99	0.00	40.99	2,441.54	1,220.77	3,415.88	1,710.48	4.58	-0.41	0.028
110.00	-7.72	-1.98	0.00	-30.87	0.00	30.87	2,399.39	1,199.69	3,276.20	1,640.54	4.84	-0.41	0.022
115.00	-7.03	-1.90	0.00	-20.97	0.00	20.97	2,327.39	1,163.70	3,047.43	1,525.98	5.28	-0.42	0.017
120.00	-4.15	-1.29	0.00	-11.48	0.00	11.48	2,252.90	1,126.45	2,823.60	1,413.90	5.72	-0.43	0.010
125.00	-3.29	-1.12	0.00	-5.05	0.00	5.05	2,153.14	1,076.57	2,577.88	1,290.85	6.17	-0.43	0.005
126.00	-3.13	-1.02	0.00	-3.94	0.00	3.94	2,133.19	1,066.60	2,530.08	1,266.92	6.26	-0.43	0.005
128.00	-1.97	-0.64	0.00	-1.89	0.00	1.89	2,093.29	1,046.64	2,435.81	1,219.72	6.44	-0.43	0.002
129.00	-1.72	-0.51	0.00	-1.25	0.00	1.25	2,073.34	1,036.67	2,389.35	1,196.45	6.53	-0.43	0.002
130.00	0.00	-0.49	0.00	-0.74	0.00	0.74	2,053.39	1,026.69	2,343.34	1,173.41	6.62	-0.43	0.001

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.23
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
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}):	0.24
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
Seismic Response Coefficient (C_s):	0.05
Upper Limit C_s	0.05
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.49
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.49
Total Unfactored Dead Load:	48.85 k
Seismic Base Shear (E):	2.34 k

Load Case (1.2 + 0.2Sds) * DL + E ELFM **Seismic Equivalent Lateral Forces Method**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	129.50	99	143	0.005	11	124
37	128.50	100	142	0.005	11	125
36	127.00	210	292	0.010	22	262
35	125.50	106	146	0.005	11	133
34	122.50	555	732	0.024	56	693
33	117.50	663	822	0.027	63	827
32	112.50	685	797	0.026	61	856
31	108.50	460	506	0.017	39	574
30	106.00	312	331	0.011	25	389
29	104.50	157	164	0.005	13	196
28	102.00	638	641	0.021	49	797
27	97.50	931	874	0.029	67	1,162
26	93.00	761	666	0.022	51	950
25	90.50	193	162	0.005	12	240
24	88.92	421	344	0.011	26	526
23	86.42	1,002	785	0.026	60	1,251
22	83.58	1,021	761	0.025	58	1,275
21	81.08	489	349	0.011	27	611
20	78.00	919	618	0.020	47	1,147
19	75.50	232	149	0.005	11	290
18	72.50	1,181	712	0.023	55	1,474
17	69.00	480	269	0.009	21	599
16	66.50	728	386	0.013	30	909

15	62.50	1,236	597	0.019	46	1,543
14	57.50	1,264	539	0.018	41	1,578
13	52.50	1,291	480	0.016	37	1,612
12	48.75	656	218	0.007	17	819
11	46.25	1,324	408	0.013	31	1,653
10	42.75	2,424	663	0.022	51	3,026
9	40.25	168	42	0.001	3	210
8	37.50	1,702	383	0.013	29	2,125
7	32.50	1,739	316	0.010	24	2,171
6	27.50	1,776	251	0.008	19	2,217
5	22.50	1,812	190	0.006	15	2,262
4	17.50	1,849	133	0.004	10	2,308
3	12.50	1,885	82	0.003	6	2,354
2	7.50	1,922	39	0.001	3	2,399
1	2.50	1,958	8	0.000	1	2,445
Decibel DB846F65ZAXY	130.00	84	121	0.004	9	105
Antel LPA-80080/6CF	130.00	42	61	0.002	5	52
Flat Low Profile Pla	130.00	1,500	2,164	0.071	166	1,873
VZW Unused Reserve (	129.00	149	212	0.007	16	186
Samsung Outdoor LAA	128.00	13	19	0.001	1	16
Samsung Outdoor CBRS	128.00	56	79	0.003	6	70
Samsung B5/B13 RRH-B	128.00	211	297	0.010	23	263
Samsung B2/B66A RRH-	128.00	253	357	0.012	27	316
RFS DB-C1-12C-24AB-0	128.00	32	45	0.001	3	40
Quintel QS6656-5	128.00	390	550	0.018	42	487
Andrew Microwaves VH	126.00	49	67	0.002	5	61
Alcatel-Lucent 800MH	125.00	159	216	0.007	17	198
Alcatel-Lucent 1900M	125.00	132	180	0.006	14	165
Generic 24" x 24" Ju	125.00	20	27	0.001	2	25
Alcatel-Lucent RRH2x	120.00	159	203	0.007	16	198
Nokia 2.5G MAA - AAH	120.00	311	398	0.013	30	388
Generic 24" x 24" Ju	120.00	20	26	0.001	2	25
Commscope NNVV-65B-R	120.00	232	297	0.010	23	290
Flat Low Profile Pla	120.00	1,500	1,920	0.063	147	1,873
Ericsson KRY 112 71	110.00	40	44	0.001	3	49
Ericsson Radio 4449	110.00	222	249	0.008	19	277
EMS RR90-17-02DP	110.00	41	46	0.001	3	51
Ericsson AIR 21, 1.3	110.00	249	280	0.009	21	311
Ericsson AIR-32 B2A/	110.00	397	446	0.015	34	495
RFS APXVAARR24_43-U-	110.00	384	431	0.014	33	479
Flat Low Profile Pla	110.00	1,500	1,686	0.055	129	1,873
Generic GPS	107.00	10	11	0.000	1	12
Flat Platform w/ Han	104.00	2,270	2,346	0.077	180	2,834
Kathrein Scala 860-1	100.00	7	6	0.000	0	8
Kathrein Scala 860 1	100.00	3	3	0.000	0	4
Generic GPS	100.00	10	10	0.000	1	12
Raycap DC6-48-60-18-	100.00	20	19	0.001	1	25
Ericsson RRUS 8843 B	100.00	216	211	0.007	16	270
Ericsson Radio 4415	100.00	129	126	0.004	10	161
Ericsson RRUS 4449 B	100.00	213	208	0.007	16	266
Raycap DC9-48-60-24-	100.00	16	16	0.001	1	20
Powerwave Allgon 777	100.00	105	102	0.003	8	131
CCI HPA-65R-BUU-H6	100.00	153	149	0.005	11	191
CCI DMP65R-BU6DA	100.00	238	232	0.008	18	297
CCI OPA65R-BU6D	100.00	190	185	0.006	14	237
Empty Flat Low Profi	91.00	1,500	1,270	0.041	97	1,873
Generic GPS	80.00	10	7	0.000	1	12
Stand-Off	76.00	100	65	0.002	5	125
Generic 2" x 8" GPS	75.00	20	13	0.000	1	25
Generic GPS	75.00	10	6	0.000	0	12
Side Arm	68.00	126	69	0.002	5	157
Generic GPS	60.00	10	5	0.000	0	12
		48,850	30,614	1.000	2,345	60,985

Load Case (0.9 - 0.2Sds) * DL + E ELFM **Seismic (Reduced DL) Equivalent Lateral Forces Method**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	129.50	99	143	0.005	11	85
37	128.50	100	142	0.005	11	85
36	127.00	210	292	0.010	22	179
35	125.50	106	146	0.005	11	91
34	122.50	555	732	0.024	56	472
33	117.50	663	822	0.027	63	564
32	112.50	685	797	0.026	61	584
31	108.50	460	506	0.017	39	392
30	106.00	312	331	0.011	25	265
29	104.50	157	164	0.005	13	134
28	102.00	638	641	0.021	49	543
27	97.50	931	874	0.029	67	793
26	93.00	761	666	0.022	51	648
25	90.50	193	162	0.005	12	164
24	88.92	421	344	0.011	26	359
23	86.42	1,002	785	0.026	60	854
22	83.58	1,021	761	0.025	58	869
21	81.08	489	349	0.011	27	417
20	78.00	919	618	0.020	47	782
19	75.50	232	149	0.005	11	198
18	72.50	1,181	712	0.023	55	1,006
17	69.00	480	269	0.009	21	409
16	66.50	728	386	0.013	30	620
15	62.50	1,236	597	0.019	46	1,052
14	57.50	1,264	539	0.018	41	1,076
13	52.50	1,291	480	0.016	37	1,100
12	48.75	656	218	0.007	17	559
11	46.25	1,324	408	0.013	31	1,127
10	42.75	2,424	663	0.022	51	2,064
9	40.25	168	42	0.001	3	143
8	37.50	1,702	383	0.013	29	1,450
7	32.50	1,739	316	0.010	24	1,481
6	27.50	1,776	251	0.008	19	1,512
5	22.50	1,812	190	0.006	15	1,543
4	17.50	1,849	133	0.004	10	1,574
3	12.50	1,885	82	0.003	6	1,605
2	7.50	1,922	39	0.001	3	1,637
1	2.50	1,958	8	0.000	1	1,668
Decibel DB846F65ZAXY	130.00	84	121	0.004	9	72
Antel LPA-80080/6CF	130.00	42	61	0.002	5	36
Flat Low Profile Pla	130.00	1,500	2,164	0.071	166	1,277
VZW Unused Reserve (	129.00	149	212	0.007	16	127
Samsung Outdoor LAA	128.00	13	19	0.001	1	11
Samsung Outdoor CBRS	128.00	56	79	0.003	6	48
Samsung B5/B13 RRH-B	128.00	211	297	0.010	23	180
Samsung B2/B66A RRH-	128.00	253	357	0.012	27	216
RFS DB-C1-12C-24AB-0	128.00	32	45	0.001	3	27
Quintel QS6656-5	128.00	390	550	0.018	42	332
Andrew Microwaves VH	126.00	49	67	0.002	5	42
Alcatel-Lucent 800MH	125.00	159	216	0.007	17	135
Alcatel-Lucent 1900M	125.00	132	180	0.006	14	112
Generic 24" x 24" Ju	125.00	20	27	0.001	2	17
Alcatel-Lucent RRH2x	120.00	159	203	0.007	16	135
Nokia 2.5G MAA - AAH	120.00	311	398	0.013	30	265
Generic 24" x 24" Ju	120.00	20	26	0.001	2	17
Commscope NNVV-65B-R	120.00	232	297	0.010	23	198
Flat Low Profile Pla	120.00	1,500	1,920	0.063	147	1,277

Ericsson KRY 112 71	110.00	40	44	0.001	3	34
Ericsson Radio 4449	110.00	222	249	0.008	19	189
EMS RR90-17-02DP	110.00	41	46	0.001	3	34
Ericsson AIR 21, 1.3	110.00	249	280	0.009	21	212
Ericsson AIR-32 B2A/	110.00	397	446	0.015	34	338
RFS APXVAARR24_43-U-	110.00	384	431	0.014	33	327
Flat Low Profile Pla	110.00	1,500	1,686	0.055	129	1,277
Generic GPS	107.00	10	11	0.000	1	9
Flat Platform w/ Han	104.00	2,270	2,346	0.077	180	1,933
Kathrein Scala 860-1	100.00	7	6	0.000	0	6
Kathrein Scala 860 1	100.00	3	3	0.000	0	3
Generic GPS	100.00	10	10	0.000	1	9
Raycap DC6-48-60-18-	100.00	20	19	0.001	1	17
Ericsson RRUS 8843 B	100.00	216	211	0.007	16	184
Ericsson Radio 4415	100.00	129	126	0.004	10	110
Ericsson RRUS 4449 B	100.00	213	208	0.007	16	181
Raycap DC9-48-60-24-	100.00	16	16	0.001	1	14
Powerwave Allgon 777	100.00	105	102	0.003	8	89
CCI HPA-65R-BUU-H6	100.00	153	149	0.005	11	130
CCI DMP65R-BU6DA	100.00	238	232	0.008	18	203
CCI OPA65R-BU6D	100.00	190	185	0.006	14	161
Empty Flat Low Profi	91.00	1,500	1,270	0.041	97	1,277
Generic GPS	80.00	10	7	0.000	1	9
Stand-Off	76.00	100	65	0.002	5	85
Generic 2" x 8" GPS	75.00	20	13	0.000	1	17
Generic GPS	75.00	10	6	0.000	0	9
Side Arm	68.00	126	69	0.002	5	107
Generic GPS	60.00	10	5	0.000	0	9
		48,850	30,614	1.000	2,345	41,599

Load Case (1.2 + 0.2Sds) * DL + E ELFM **Seismic Equivalent Lateral Forces Method**

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-58.54	-2.35	0.00	-231.95	0.00	231.95	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.036
5.00	-56.14	-2.35	0.00	-220.22	0.00	220.22	6,692.31	3,346.15	16,532.0	8,278.33	0.00	-0.01	0.035
10.00	-53.79	-2.35	0.00	-208.47	0.00	208.47	6,588.83	3,294.42	15,907.1	7,965.37	0.01	-0.01	0.034
15.00	-51.48	-2.35	0.00	-196.72	0.00	196.72	6,483.18	3,241.59	15,288.6	7,655.67	0.03	-0.02	0.034
20.00	-49.22	-2.34	0.00	-184.99	0.00	184.99	6,375.36	3,187.68	14,676.9	7,349.39	0.06	-0.03	0.033
25.00	-47.00	-2.32	0.00	-173.31	0.00	173.31	6,265.37	3,132.69	14,072.5	7,046.72	0.09	-0.04	0.032
30.00	-44.83	-2.30	0.00	-161.71	0.00	161.71	6,153.21	3,076.61	13,475.6	6,747.85	0.13	-0.04	0.031
35.00	-42.70	-2.28	0.00	-150.20	0.00	150.20	6,038.88	3,019.44	12,886.7	6,452.96	0.18	-0.05	0.030
40.00	-42.49	-2.28	0.00	-138.82	0.00	138.82	5,922.38	2,961.19	12,306.1	6,162.22	0.24	-0.06	0.030
40.50	-39.47	-2.22	0.00	-137.68	0.00	137.68	5,910.61	2,955.30	12,248.5	6,133.39	0.24	-0.06	0.029
45.00	-37.81	-2.19	0.00	-127.67	0.00	127.67	5,803.70	2,901.85	11,734.2	5,875.83	0.30	-0.06	0.028
47.50	-36.99	-2.18	0.00	-122.18	0.00	122.18	4,002.81	2,001.40	8,146.29	4,079.20	0.34	-0.07	0.039
50.00	-35.38	-2.14	0.00	-116.74	0.00	116.74	3,967.67	1,983.84	7,963.57	3,987.71	0.37	-0.07	0.038
55.00	-33.80	-2.11	0.00	-106.01	0.00	106.01	3,895.77	1,947.89	7,600.87	3,806.08	0.45	-0.08	0.037
60.00	-32.25	-2.06	0.00	-95.48	0.00	95.48	3,821.70	1,910.85	7,242.12	3,626.44	0.54	-0.09	0.035
65.00	-31.34	-2.04	0.00	-85.17	0.00	85.17	3,745.46	1,872.73	6,887.67	3,448.96	0.64	-0.10	0.033
68.00	-30.58	-2.01	0.00	-79.06	0.00	79.06	3,698.67	1,849.34	6,677.23	3,343.58	0.71	-0.10	0.032
70.00	-29.11	-1.96	0.00	-75.04	0.00	75.04	3,667.05	1,833.52	6,537.91	3,273.81	0.75	-0.11	0.031
75.00	-28.78	-1.95	0.00	-65.25	0.00	65.25	3,586.46	1,793.23	6,193.19	3,101.20	0.87	-0.12	0.029
76.00	-27.51	-1.89	0.00	-63.31	0.00	63.31	3,570.09	1,785.04	6,124.88	3,066.99	0.89	-0.12	0.028
80.00	-26.88	-1.87	0.00	-55.74	0.00	55.74	3,503.71	1,751.85	5,853.88	2,931.29	0.99	-0.12	0.027
82.16	-25.61	-1.81	0.00	-51.70	0.00	51.70	3,467.23	1,733.61	5,708.83	2,858.66	1.05	-0.13	0.025
85.00	-24.36	-1.75	0.00	-46.57	0.00	46.57	3,418.78	1,709.39	5,520.34	2,764.27	1.12	-0.13	0.024
87.83	-23.83	-1.72	0.00	-41.63	0.00	41.63	2,692.45	1,346.23	4,345.60	2,176.03	1.20	-0.13	0.028
90.00	-23.59	-1.71	0.00	-37.90	0.00	37.90	2,665.65	1,332.83	4,237.49	2,121.90	1.26	-0.14	0.027
91.00	-20.77	-1.55	0.00	-36.19	0.00	36.19	2,653.16	1,326.58	4,187.89	2,097.06	1.29	-0.14	0.025
95.00	-19.61	-1.49	0.00	-29.98	0.00	29.98	2,602.34	1,301.17	3,990.97	1,998.45	1.41	-0.14	0.023
100.00	-17.19	-1.34	0.00	-22.55	0.00	22.55	2,536.86	1,268.43	3,748.34	1,876.95	1.57	-0.15	0.019
104.00	-14.16	-1.14	0.00	-17.21	0.00	17.21	2,482.92	1,241.46	3,557.28	1,781.28	1.69	-0.15	0.015
105.00	-13.77	-1.11	0.00	-16.07	0.00	16.07	2,469.21	1,234.61	3,509.96	1,757.59	1.72	-0.15	0.015
107.00	-13.18	-1.07	0.00	-13.85	0.00	13.85	2,441.54	1,220.77	3,415.88	1,710.48	1.79	-0.16	0.013
110.00	-8.79	-0.75	0.00	-10.64	0.00	10.64	2,399.39	1,199.69	3,276.20	1,640.54	1.89	-0.16	0.010
115.00	-7.97	-0.69	0.00	-6.88	0.00	6.88	2,327.39	1,163.70	3,047.43	1,525.98	2.06	-0.16	0.008
120.00	-4.50	-0.40	0.00	-3.44	0.00	3.44	2,252.90	1,126.45	2,823.60	1,413.90	2.23	-0.16	0.004
125.00	-3.98	-0.36	0.00	-1.42	0.00	1.42	2,153.14	1,076.57	2,577.88	1,290.85	2.40	-0.16	0.003
126.00	-3.66	-0.33	0.00	-1.06	0.00	1.06	2,133.19	1,066.60	2,530.08	1,266.92	2.43	-0.16	0.003
128.00	-2.34	-0.21	0.00	-0.40	0.00	0.40	2,093.29	1,046.64	2,435.81	1,219.72	2.50	-0.16	0.001
129.00	-2.03	-0.19	0.00	-0.19	0.00	0.19	2,073.34	1,036.67	2,389.35	1,196.45	2.53	-0.16	0.001
130.00	0.00	-0.18	0.00	0.00	0.00	0.00	2,053.39	1,026.69	2,343.34	1,173.41	2.57	-0.16	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELFM **Seismic (Reduced DL) Equivalent Lateral Forces Method**

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-39.93	-2.35	0.00	-230.40	0.00	230.40	6,793.61	3,396.81	17,163.1	8,594.34	0.00	0.00	0.033
5.00	-38.29	-2.35	0.00	-218.68	0.00	218.68	6,692.31	3,346.15	16,532.0	8,278.33	0.00	-0.01	0.032
10.00	-36.69	-2.34	0.00	-206.94	0.00	206.94	6,588.83	3,294.42	15,907.1	7,965.37	0.01	-0.01	0.032
15.00	-35.11	-2.34	0.00	-195.22	0.00	195.22	6,483.18	3,241.59	15,288.6	7,655.67	0.03	-0.02	0.031
20.00	-33.57	-2.33	0.00	-183.53	0.00	183.53	6,375.36	3,187.68	14,676.9	7,349.39	0.06	-0.03	0.030
25.00	-32.06	-2.31	0.00	-171.89	0.00	171.89	6,265.37	3,132.69	14,072.5	7,046.72	0.09	-0.04	0.030
30.00	-30.58	-2.29	0.00	-160.33	0.00	160.33	6,153.21	3,076.61	13,475.6	6,747.85	0.13	-0.04	0.029
35.00	-29.13	-2.26	0.00	-148.88	0.00	148.88	6,038.88	3,019.44	12,886.7	6,452.96	0.18	-0.05	0.028
40.00	-28.98	-2.26	0.00	-137.57	0.00	137.57	5,922.38	2,961.19	12,306.1	6,162.22	0.24	-0.06	0.027
40.50	-26.92	-2.21	0.00	-136.44	0.00	136.44	5,910.61	2,955.30	12,248.5	6,133.39	0.24	-0.06	0.027
45.00	-25.79	-2.18	0.00	-126.49	0.00	126.49	5,803.70	2,901.85	11,734.2	5,875.83	0.30	-0.06	0.026
47.50	-25.23	-2.16	0.00	-121.04	0.00	121.04	4,002.81	2,001.40	8,146.29	4,079.20	0.33	-0.07	0.036
50.00	-24.13	-2.13	0.00	-115.63	0.00	115.63	3,967.67	1,983.84	7,963.57	3,987.71	0.37	-0.07	0.035
55.00	-23.06	-2.09	0.00	-104.98	0.00	104.98	3,895.77	1,947.89	7,600.87	3,806.08	0.45	-0.08	0.034
60.00	-22.00	-2.05	0.00	-94.53	0.00	94.53	3,821.70	1,910.85	7,242.12	3,626.44	0.54	-0.09	0.032
65.00	-21.38	-2.02	0.00	-84.30	0.00	84.30	3,745.46	1,872.73	6,887.67	3,448.96	0.64	-0.10	0.030
68.00	-20.86	-1.99	0.00	-78.24	0.00	78.24	3,698.67	1,849.34	6,677.23	3,343.58	0.70	-0.10	0.029
70.00	-19.85	-1.94	0.00	-74.26	0.00	74.26	3,667.05	1,833.52	6,537.91	3,273.81	0.74	-0.11	0.028
75.00	-19.63	-1.93	0.00	-64.57	0.00	64.57	3,586.46	1,793.23	6,193.19	3,101.20	0.86	-0.11	0.026
76.00	-18.76	-1.87	0.00	-62.64	0.00	62.64	3,570.09	1,785.04	6,124.88	3,066.99	0.88	-0.12	0.026
80.00	-18.34	-1.85	0.00	-55.14	0.00	55.14	3,503.71	1,751.85	5,853.88	2,931.29	0.98	-0.12	0.024
82.16	-17.47	-1.79	0.00	-51.15	0.00	51.15	3,467.23	1,733.61	5,708.83	2,858.66	1.04	-0.13	0.023
85.00	-16.61	-1.73	0.00	-46.07	0.00	46.07	3,418.78	1,709.39	5,520.34	2,764.27	1.11	-0.13	0.022
87.83	-16.26	-1.70	0.00	-41.18	0.00	41.18	2,692.45	1,346.23	4,345.60	2,176.03	1.19	-0.13	0.025
90.00	-16.09	-1.69	0.00	-37.49	0.00	37.49	2,665.65	1,332.83	4,237.49	2,121.90	1.25	-0.14	0.024
91.00	-14.17	-1.54	0.00	-35.80	0.00	35.80	2,653.16	1,326.58	4,187.89	2,097.06	1.28	-0.14	0.022
95.00	-13.37	-1.47	0.00	-29.65	0.00	29.65	2,602.34	1,301.17	3,990.97	1,998.45	1.40	-0.14	0.020
100.00	-11.72	-1.32	0.00	-22.30	0.00	22.30	2,536.86	1,268.43	3,748.34	1,876.95	1.55	-0.15	0.017
104.00	-9.66	-1.12	0.00	-17.02	0.00	17.02	2,482.92	1,241.46	3,557.28	1,781.28	1.68	-0.15	0.013
105.00	-9.39	-1.10	0.00	-15.90	0.00	15.90	2,469.21	1,234.61	3,509.96	1,757.59	1.71	-0.15	0.013
107.00	-8.99	-1.06	0.00	-13.70	0.00	13.70	2,441.54	1,220.77	3,415.88	1,710.48	1.77	-0.15	0.012
110.00	-6.00	-0.74	0.00	-10.53	0.00	10.53	2,399.39	1,199.69	3,276.20	1,640.54	1.87	-0.16	0.009
115.00	-5.43	-0.68	0.00	-6.81	0.00	6.81	2,327.39	1,163.70	3,047.43	1,525.98	2.04	-0.16	0.007
120.00	-3.07	-0.40	0.00	-3.41	0.00	3.41	2,252.90	1,126.45	2,823.60	1,413.90	2.21	-0.16	0.004
125.00	-2.71	-0.36	0.00	-1.41	0.00	1.41	2,153.14	1,076.57	2,577.88	1,290.85	2.37	-0.16	0.002
126.00	-2.49	-0.33	0.00	-1.05	0.00	1.05	2,133.19	1,066.60	2,530.08	1,266.92	2.41	-0.16	0.002
128.00	-1.60	-0.21	0.00	-0.39	0.00	0.39	2,093.29	1,046.64	2,435.81	1,219.72	2.48	-0.16	0.001
129.00	-1.38	-0.18	0.00	-0.18	0.00	0.18	2,073.34	1,036.67	2,389.35	1,196.45	2.51	-0.16	0.001
130.00	0.00	-0.18	0.00	0.00	0.00	0.00	2,053.39	1,026.69	2,343.34	1,173.41	2.54	-0.16	0.000

Equivalent Modal Analysis Method

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

Spectral Response Acceleration for Short Period (S_s):	0.23
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
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}):	0.24
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
Period Based on Rayleigh Method (sec):	1.49
Redundancy Factor (p):	1.00

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
38	129.50	99	1.875	1.904	1.113	0.457	30	124
37	128.50	100	1.847	1.759	1.060	0.434	29	125
36	127.00	210	1.804	1.556	0.984	0.401	56	262
35	125.50	106	1.761	1.369	0.912	0.369	26	133
34	122.50	555	1.678	1.041	0.782	0.309	114	693
33	117.50	663	1.544	0.615	0.597	0.220	97	827
32	112.50	685	1.415	0.314	0.448	0.145	66	856
31	108.50	460	1.317	0.144	0.351	0.095	29	574
30	106.00	312	1.257	0.065	0.299	0.068	14	389
29	104.50	157	1.221	0.026	0.271	0.054	6	196
28	102.00	638	1.164	-0.027	0.229	0.033	14	797
27	97.50	931	1.063	-0.088	0.165	0.003	2	1,162
26	93.00	761	0.967	-0.117	0.116	-0.017	-8	950
25	90.50	193	0.916	-0.121	0.094	-0.023	-3	240
24	88.92	421	0.884	-0.121	0.081	-0.025	-7	526
23	86.42	1,002	0.835	-0.117	0.064	-0.027	-18	1,251
22	83.58	1,021	0.781	-0.108	0.049	-0.026	-17	1,275
21	81.08	489	0.735	-0.097	0.037	-0.022	-7	611
20	78.00	919	0.680	-0.081	0.026	-0.015	-9	1,147
19	75.50	232	0.637	-0.066	0.019	-0.007	-1	290
18	72.50	1,181	0.588	-0.049	0.013	0.003	2	1,474
17	69.00	480	0.532	-0.028	0.009	0.015	5	599
16	66.50	728	0.495	-0.014	0.007	0.023	11	909
15	62.50	1,236	0.437	0.006	0.006	0.035	29	1,543
14	57.50	1,264	0.370	0.027	0.008	0.047	39	1,578
13	52.50	1,291	0.308	0.043	0.012	0.054	47	1,612
12	48.75	656	0.266	0.052	0.015	0.057	25	819
11	46.25	1,324	0.239	0.057	0.018	0.058	51	1,653
10	42.75	2,424	0.204	0.062	0.023	0.058	94	3,026
9	40.25	168	0.181	0.065	0.026	0.058	7	210
8	37.50	1,702	0.157	0.067	0.029	0.057	65	2,125
7	32.50	1,739	0.118	0.070	0.035	0.056	64	2,171
6	27.50	1,776	0.085	0.071	0.039	0.054	63	2,217
5	22.50	1,812	0.057	0.071	0.042	0.051	62	2,262

4	17.50	1,849	0.034	0.069	0.041	0.049	60	2,308
3	12.50	1,885	0.017	0.062	0.037	0.044	55	2,354
2	7.50	1,922	0.006	0.048	0.027	0.035	44	2,399
1	2.50	1,958	0.001	0.021	0.011	0.016	21	2,445
Decibel DB846F65ZAXY	130.00	84	1.890	1.980	1.140	0.469	26	105
Antel LPA-80080/6CF	130.00	42	1.890	1.980	1.140	0.469	13	52
Flat Low Profile Pla	130.00	1,500	1.890	1.980	1.140	0.469	469	1,873
VZW Unused Reserve (	129.00	149	1.861	1.831	1.086	0.446	44	186
Samsung Outdoor LAA	128.00	13	1.832	1.689	1.034	0.423	4	16
Samsung Outdoor	128.00	56	1.832	1.689	1.034	0.423	16	70
Samsung B5/B13 RRH-B	128.00	211	1.832	1.689	1.034	0.423	59	263
Samsung B2/B66A RRH-	128.00	253	1.832	1.689	1.034	0.423	71	316
RFS DB-C1-12C-24AB-0	128.00	32	1.832	1.689	1.034	0.423	9	40
Quintel QS6656-5	128.00	390	1.832	1.689	1.034	0.423	110	487
Andrew Microwaves	126.00	49	1.775	1.429	0.936	0.380	12	61
Alcatel-Lucent 800MH	125.00	159	1.747	1.310	0.889	0.359	38	198
Alcatel-Lucent 1900M	125.00	132	1.747	1.310	0.889	0.359	32	165
Generic 24" x 24" Ju	125.00	20	1.747	1.310	0.889	0.359	5	25
Alcatel-Lucent RRH2x	120.00	159	1.610	0.811	0.684	0.263	28	198
Nokia 2.5G MAA - AAH	120.00	311	1.610	0.811	0.684	0.263	54	388
Generic 24" x 24" Ju	120.00	20	1.610	0.811	0.684	0.263	4	25
Commscope NNVV-	120.00	232	1.610	0.811	0.684	0.263	41	290
Flat Low Profile Pla	120.00	1,500	1.610	0.811	0.684	0.263	263	1,873
Ericsson KRY 112 71	110.00	40	1.353	0.201	0.385	0.113	3	49
Ericsson Radio 4449	110.00	222	1.353	0.201	0.385	0.113	17	277
EMS RR90-17-02DP	110.00	41	1.353	0.201	0.385	0.113	3	51
Ericsson AIR 21, 1.3	110.00	249	1.353	0.201	0.385	0.113	19	311
Ericsson AIR-32 B2A/	110.00	397	1.353	0.201	0.385	0.113	30	495
RFS APXVAARR24_43-U-	110.00	384	1.353	0.201	0.385	0.113	29	479
Flat Low Profile Pla	110.00	1,500	1.353	0.201	0.385	0.113	113	1,873
Generic GPS	107.00	10	1.280	0.094	0.319	0.079	1	12
Flat Platform w/ Han	104.00	2,270	1.210	0.014	0.262	0.049	75	2,834
Kathrein Scala 860-1	100.00	7	1.118	-0.059	0.198	0.018	0	8
Kathrein Scala 860 1	100.00	3	1.118	-0.059	0.198	0.018	0	4
Generic GPS	100.00	10	1.118	-0.059	0.198	0.018	0	12
Raycap DC6-48-60-18-	100.00	20	1.118	-0.059	0.198	0.018	0	25
Ericsson RRUS 8843 B	100.00	216	1.118	-0.059	0.198	0.018	3	270
Ericsson Radio 4415	100.00	129	1.118	-0.059	0.198	0.018	2	161
Ericsson RRUS 4449 B	100.00	213	1.118	-0.059	0.198	0.018	3	266
Raycap DC9-48-60-24-	100.00	16	1.118	-0.059	0.198	0.018	0	20
Powerwave Allgon 777	100.00	105	1.118	-0.059	0.198	0.018	1	131
CCI HPA-65R-BUU-H6	100.00	153	1.118	-0.059	0.198	0.018	2	191
CCI DMP65R-BU6DA	100.00	238	1.118	-0.059	0.198	0.018	3	297
CCI OPA65R-BU6D	100.00	190	1.118	-0.059	0.198	0.018	2	237
Empty Flat Low Profi	91.00	1,500	0.926	-0.121	0.098	-0.022	-22	1,873
Generic GPS	80.00	10	0.716	-0.092	0.033	-0.020	0	12
Stand-Off	76.00	100	0.646	-0.069	0.021	-0.009	-1	125
Generic 2" x 8" GPS	75.00	20	0.629	-0.063	0.018	-0.006	0	25
Generic GPS	75.00	10	0.629	-0.063	0.018	-0.006	0	12
Side Arm	68.00	126	0.517	-0.022	0.008	0.018	2	157
Generic GPS	60.00	10	0.403	0.017	0.006	0.042	0	12
		48,850	91.921	36.268	31.685	11.489	2,739	60,985

Load Case (0.9 - 0.2Sds) * DL + E EMAM **Seismic (Reduced DL) Equivalent Modal Analysis Method**

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
38	129.50	99	1.875	1.904	1.113	0.457	30	85
37	128.50	100	1.847	1.759	1.060	0.434	29	85

36	127.00	210	1.804	1.556	0.984	0.401	56	179
35	125.50	106	1.761	1.369	0.912	0.369	26	91
34	122.50	555	1.678	1.041	0.782	0.309	114	472
33	117.50	663	1.544	0.615	0.597	0.220	97	564
32	112.50	685	1.415	0.314	0.448	0.145	66	584
31	108.50	460	1.317	0.144	0.351	0.095	29	392
30	106.00	312	1.257	0.065	0.299	0.068	14	265
29	104.50	157	1.221	0.026	0.271	0.054	6	134
28	102.00	638	1.164	-0.027	0.229	0.033	14	543
27	97.50	931	1.063	-0.088	0.165	0.003	2	793
26	93.00	761	0.967	-0.117	0.116	-0.017	-8	648
25	90.50	193	0.916	-0.121	0.094	-0.023	-3	164
24	88.92	421	0.884	-0.121	0.081	-0.025	-7	359
23	86.42	1,002	0.835	-0.117	0.064	-0.027	-18	854
22	83.58	1,021	0.781	-0.108	0.049	-0.026	-17	869
21	81.08	489	0.735	-0.097	0.037	-0.022	-7	417
20	78.00	919	0.680	-0.081	0.026	-0.015	-9	782
19	75.50	232	0.637	-0.066	0.019	-0.007	-1	198
18	72.50	1,181	0.588	-0.049	0.013	0.003	2	1,006
17	69.00	480	0.532	-0.028	0.009	0.015	5	409
16	66.50	728	0.495	-0.014	0.007	0.023	11	620
15	62.50	1,236	0.437	0.006	0.006	0.035	29	1,052
14	57.50	1,264	0.370	0.027	0.008	0.047	39	1,076
13	52.50	1,291	0.308	0.043	0.012	0.054	47	1,100
12	48.75	656	0.266	0.052	0.015	0.057	25	559
11	46.25	1,324	0.239	0.057	0.018	0.058	51	1,127
10	42.75	2,424	0.204	0.062	0.023	0.058	94	2,064
9	40.25	168	0.181	0.065	0.026	0.058	7	143
8	37.50	1,702	0.157	0.067	0.029	0.057	65	1,450
7	32.50	1,739	0.118	0.070	0.035	0.056	64	1,481
6	27.50	1,776	0.085	0.071	0.039	0.054	63	1,512
5	22.50	1,812	0.057	0.071	0.042	0.051	62	1,543
4	17.50	1,849	0.034	0.069	0.041	0.049	60	1,574
3	12.50	1,885	0.017	0.062	0.037	0.044	55	1,605
2	7.50	1,922	0.006	0.048	0.027	0.035	44	1,637
1	2.50	1,958	0.001	0.021	0.011	0.016	21	1,668
Decibel DB846F65ZAXY	130.00	84	1.890	1.980	1.140	0.469	26	72
Antel LPA-80080/6CF	130.00	42	1.890	1.980	1.140	0.469	13	36
Flat Low Profile Pla	130.00	1,500	1.890	1.980	1.140	0.469	469	1,277
VZW Unused Reserve (	129.00	149	1.861	1.831	1.086	0.446	44	127
Samsung Outdoor LAA	128.00	13	1.832	1.689	1.034	0.423	4	11
Samsung Outdoor	128.00	56	1.832	1.689	1.034	0.423	16	48
Samsung B5/B13 RRH-B	128.00	211	1.832	1.689	1.034	0.423	59	180
Samsung B2/B66A RRH-	128.00	253	1.832	1.689	1.034	0.423	71	216
RFS DB-C1-12C-24AB-0	128.00	32	1.832	1.689	1.034	0.423	9	27
Quintel QS6656-5	128.00	390	1.832	1.689	1.034	0.423	110	332
Andrew Microwaves	126.00	49	1.775	1.429	0.936	0.380	12	42
Alcatel-Lucent 800MH	125.00	159	1.747	1.310	0.889	0.359	38	135
Alcatel-Lucent 1900M	125.00	132	1.747	1.310	0.889	0.359	32	112
Generic 24" x 24" Ju	125.00	20	1.747	1.310	0.889	0.359	5	17
Alcatel-Lucent RRH2x	120.00	159	1.610	0.811	0.684	0.263	28	135
Nokia 2.5G MAA - AAH	120.00	311	1.610	0.811	0.684	0.263	54	265
Generic 24" x 24" Ju	120.00	20	1.610	0.811	0.684	0.263	4	17
Commscope NNVV-	120.00	232	1.610	0.811	0.684	0.263	41	198
Flat Low Profile Pla	120.00	1,500	1.610	0.811	0.684	0.263	263	1,277
Ericsson KRY 112 71	110.00	40	1.353	0.201	0.385	0.113	3	34
Ericsson Radio 4449	110.00	222	1.353	0.201	0.385	0.113	17	189
EMS RR90-17-02DP	110.00	41	1.353	0.201	0.385	0.113	3	34
Ericsson AIR 21, 1.3	110.00	249	1.353	0.201	0.385	0.113	19	212
Ericsson AIR-32 B2A/	110.00	397	1.353	0.201	0.385	0.113	30	338
RFS APXVAARR24_43-U-	110.00	384	1.353	0.201	0.385	0.113	29	327
Flat Low Profile Pla	110.00	1,500	1.353	0.201	0.385	0.113	113	1,277
Generic GPS	107.00	10	1.280	0.094	0.319	0.079	1	9
Flat Platform w/ Han	104.00	2,270	1.210	0.014	0.262	0.049	75	1,933

Kathrein Scala 860-1	100.00	7	1.118	-0.059	0.198	0.018	0	6
Kathrein Scala 860 1	100.00	3	1.118	-0.059	0.198	0.018	0	3
Generic GPS	100.00	10	1.118	-0.059	0.198	0.018	0	9
Raycap DC6-48-60-18-	100.00	20	1.118	-0.059	0.198	0.018	0	17
Ericsson RRUS 8843 B	100.00	216	1.118	-0.059	0.198	0.018	3	184
Ericsson Radio 4415	100.00	129	1.118	-0.059	0.198	0.018	2	110
Ericsson RRUS 4449 B	100.00	213	1.118	-0.059	0.198	0.018	3	181
Raycap DC9-48-60-24-	100.00	16	1.118	-0.059	0.198	0.018	0	14
Powerwave Allgon 777	100.00	105	1.118	-0.059	0.198	0.018	1	89
CCI HPA-65R-BUU-H6	100.00	153	1.118	-0.059	0.198	0.018	2	130
CCI DMP65R-BU6DA	100.00	238	1.118	-0.059	0.198	0.018	3	203
CCI OPA65R-BU6D	100.00	190	1.118	-0.059	0.198	0.018	2	161
Empty Flat Low Profi	91.00	1,500	0.926	-0.121	0.098	-0.022	-22	1,277
Generic GPS	80.00	10	0.716	-0.092	0.033	-0.020	0	9
Stand-Off	76.00	100	0.646	-0.069	0.021	-0.009	-1	85
Generic 2" x 8" GPS	75.00	20	0.629	-0.063	0.018	-0.006	0	17
Generic GPS	75.00	10	0.629	-0.063	0.018	-0.006	0	9
Side Arm	68.00	126	0.517	-0.022	0.008	0.018	2	107
Generic GPS	60.00	10	0.403	0.017	0.006	0.042	0	9
		48,850	91.921	36.268	31.685	11.489	2,739	41,599

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-58.54	-2.72	0.00	-275.52	0.00	275.52	6,793.61	3,396.81	17,163.17	8,594.34	0.00	0.00	0.041
5.00	-56.14	-2.69	0.00	-261.92	0.00	261.92	6,692.31	3,346.15	16,532.08	8,278.33	0.00	-0.01	0.040
10.00	-53.79	-2.64	0.00	-248.49	0.00	248.49	6,588.83	3,294.42	15,907.10	7,965.37	0.02	-0.02	0.039
15.00	-51.48	-2.58	0.00	-235.30	0.00	235.30	6,483.18	3,241.59	15,288.61	7,655.67	0.04	-0.02	0.039
20.00	-49.22	-2.53	0.00	-222.38	0.00	222.38	6,375.36	3,187.68	14,676.96	7,349.39	0.07	-0.03	0.038
25.00	-47.00	-2.47	0.00	-209.73	0.00	209.73	6,265.37	3,132.69	14,072.53	7,046.72	0.11	-0.04	0.037
30.00	-44.83	-2.41	0.00	-197.38	0.00	197.38	6,153.21	3,076.61	13,475.67	6,747.85	0.16	-0.05	0.037
35.00	-42.70	-2.35	0.00	-185.32	0.00	185.32	6,038.88	3,019.44	12,886.76	6,452.96	0.22	-0.06	0.036
40.00	-42.49	-2.35	0.00	-173.56	0.00	173.56	5,922.38	2,961.19	12,306.16	6,162.22	0.28	-0.07	0.035
40.50	-39.47	-2.25	0.00	-172.39	0.00	172.39	5,910.61	2,955.30	12,248.57	6,133.39	0.29	-0.07	0.035
45.00	-37.81	-2.20	0.00	-162.24	0.00	162.24	5,803.70	2,901.85	11,734.22	5,875.83	0.36	-0.08	0.034
47.50	-36.99	-2.18	0.00	-156.73	0.00	156.73	4,002.81	2,001.40	8,146.29	4,079.20	0.40	-0.08	0.048
50.00	-35.38	-2.14	0.00	-151.28	0.00	151.28	3,967.67	1,983.84	7,963.57	3,987.71	0.45	-0.09	0.047
55.00	-33.80	-2.10	0.00	-140.59	0.00	140.59	3,895.77	1,947.89	7,600.87	3,806.08	0.55	-0.10	0.046
60.00	-32.25	-2.08	0.00	-130.08	0.00	130.08	3,821.70	1,910.85	7,242.12	3,626.44	0.66	-0.11	0.044
65.00	-31.34	-2.07	0.00	-119.69	0.00	119.69	3,745.46	1,872.73	6,887.67	3,448.96	0.78	-0.12	0.043
68.00	-30.58	-2.06	0.00	-113.48	0.00	113.48	3,698.67	1,849.34	6,677.23	3,343.58	0.86	-0.13	0.042
70.00	-29.11	-2.06	0.00	-109.35	0.00	109.35	3,667.05	1,833.52	6,537.91	3,273.81	0.92	-0.14	0.041
75.00	-28.78	-2.07	0.00	-99.03	0.00	99.03	3,586.46	1,793.23	6,193.19	3,101.20	1.07	-0.15	0.040
76.00	-27.51	-2.08	0.00	-96.96	0.00	96.96	3,570.09	1,785.04	6,124.88	3,066.99	1.10	-0.15	0.039
80.00	-26.88	-2.09	0.00	-88.66	0.00	88.66	3,503.71	1,751.85	5,853.88	2,931.29	1.23	-0.16	0.038
82.16	-25.61	-2.10	0.00	-84.14	0.00	84.14	3,467.23	1,733.61	5,708.83	2,858.66	1.30	-0.17	0.037
85.00	-24.36	-2.12	0.00	-78.18	0.00	78.18	3,418.78	1,709.39	5,520.34	2,764.27	1.40	-0.17	0.035
87.83	-23.83	-2.13	0.00	-72.18	0.00	72.18	2,692.45	1,346.23	4,345.60	2,176.03	1.51	-0.18	0.042
90.00	-23.59	-2.13	0.00	-67.56	0.00	67.56	2,665.65	1,332.83	4,237.49	2,121.90	1.59	-0.18	0.041
91.00	-20.77	-2.16	0.00	-65.43	0.00	65.43	2,653.16	1,326.58	4,187.89	2,097.06	1.63	-0.19	0.039
95.00	-19.60	-2.15	0.00	-56.81	0.00	56.81	2,602.34	1,301.17	3,990.97	1,998.45	1.79	-0.20	0.036
100.00	-17.18	-2.12	0.00	-46.05	0.00	46.05	2,536.86	1,268.43	3,748.34	1,876.95	2.00	-0.21	0.031
104.00	-14.15	-2.03	0.00	-37.57	0.00	37.57	2,482.92	1,241.46	3,557.28	1,781.28	2.18	-0.22	0.027
105.00	-13.76	-2.01	0.00	-35.55	0.00	35.55	2,469.21	1,234.61	3,509.96	1,757.59	2.22	-0.22	0.026
107.00	-13.18	-1.98	0.00	-31.52	0.00	31.52	2,441.54	1,220.77	3,415.88	1,710.48	2.31	-0.22	0.024
110.00	-8.79	-1.69	0.00	-25.58	0.00	25.58	2,399.39	1,199.69	3,276.20	1,640.54	2.45	-0.23	0.019
115.00	-7.96	-1.59	0.00	-17.15	0.00	17.15	2,327.39	1,163.70	3,047.43	1,525.98	2.69	-0.23	0.015
120.00	-4.50	-1.07	0.00	-9.22	0.00	9.22	2,252.90	1,126.45	2,823.60	1,413.90	2.94	-0.24	0.009
125.00	-3.98	-0.97	0.00	-3.87	0.00	3.87	2,153.14	1,076.57	2,577.88	1,290.85	3.19	-0.24	0.005
126.00	-3.65	-0.90	0.00	-2.90	0.00	2.90	2,133.19	1,066.60	2,530.08	1,266.92	3.24	-0.24	0.004
128.00	-2.34	-0.59	0.00	-1.11	0.00	1.11	2,093.29	1,046.64	2,435.81	1,219.72	3.34	-0.24	0.002
129.00	-2.03	-0.52	0.00	-0.52	0.00	0.52	2,073.34	1,036.67	2,389.35	1,196.45	3.39	-0.24	0.001
130.00	0.00	-0.51	0.00	0.00	0.00	0.00	2,053.39	1,026.69	2,343.34	1,173.41	3.44	-0.24	0.000

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-39.93	-2.72	0.00	-273.52	0.00	273.52	6,793.61	3,396.81	17,163.17	8,594.34	0.00	0.00	0.038
5.00	-38.29	-2.68	0.00	-259.92	0.00	259.92	6,692.31	3,346.15	16,532.08	8,278.33	0.00	-0.01	0.037
10.00	-36.69	-2.63	0.00	-246.51	0.00	246.51	6,588.83	3,294.42	15,907.10	7,965.37	0.02	-0.02	0.037
15.00	-35.11	-2.58	0.00	-233.36	0.00	233.36	6,483.18	3,241.59	15,288.61	7,655.67	0.04	-0.02	0.036
20.00	-33.57	-2.52	0.00	-220.48	0.00	220.48	6,375.36	3,187.68	14,676.96	7,349.39	0.07	-0.03	0.035
25.00	-32.06	-2.46	0.00	-207.88	0.00	207.88	6,265.37	3,132.69	14,072.53	7,046.72	0.11	-0.04	0.035
30.00	-30.58	-2.40	0.00	-195.59	0.00	195.59	6,153.21	3,076.61	13,475.67	6,747.85	0.16	-0.05	0.034
35.00	-29.13	-2.34	0.00	-183.60	0.00	183.60	6,038.88	3,019.44	12,886.76	6,452.96	0.22	-0.06	0.033
40.00	-28.98	-2.33	0.00	-171.92	0.00	171.92	5,922.38	2,961.19	12,306.16	6,162.22	0.28	-0.07	0.033
40.50	-26.92	-2.24	0.00	-170.75	0.00	170.75	5,910.61	2,955.30	12,248.57	6,133.39	0.29	-0.07	0.032
45.00	-25.79	-2.19	0.00	-160.69	0.00	160.69	5,803.70	2,901.85	11,734.22	5,875.83	0.36	-0.08	0.032
47.50	-25.23	-2.16	0.00	-155.22	0.00	155.22	4,002.81	2,001.40	8,146.29	4,079.20	0.40	-0.08	0.044
50.00	-24.13	-2.12	0.00	-149.81	0.00	149.81	3,967.67	1,983.84	7,963.57	3,987.71	0.45	-0.09	0.044
55.00	-23.06	-2.08	0.00	-139.21	0.00	139.21	3,895.77	1,947.89	7,600.87	3,806.08	0.54	-0.10	0.042
60.00	-22.00	-2.06	0.00	-128.80	0.00	128.80	3,821.70	1,910.85	7,242.12	3,626.44	0.65	-0.11	0.041
65.00	-21.37	-2.05	0.00	-118.52	0.00	118.52	3,745.46	1,872.73	6,887.67	3,448.96	0.77	-0.12	0.040
68.00	-20.86	-2.04	0.00	-112.38	0.00	112.38	3,698.67	1,849.34	6,677.23	3,343.58	0.85	-0.13	0.039
70.00	-19.85	-2.04	0.00	-108.30	0.00	108.30	3,667.05	1,833.52	6,537.91	3,273.81	0.91	-0.13	0.038
75.00	-19.63	-2.04	0.00	-98.10	0.00	98.10	3,586.46	1,793.23	6,193.19	3,101.20	1.06	-0.15	0.037
76.00	-18.76	-2.05	0.00	-96.05	0.00	96.05	3,570.09	1,785.04	6,124.88	3,066.99	1.09	-0.15	0.037
80.00	-18.34	-2.06	0.00	-87.84	0.00	87.84	3,503.71	1,751.85	5,853.88	2,931.29	1.22	-0.16	0.035
82.16	-17.47	-2.08	0.00	-83.38	0.00	83.38	3,467.23	1,733.61	5,708.83	2,858.66	1.29	-0.16	0.034
85.00	-16.61	-2.10	0.00	-77.49	0.00	77.49	3,418.78	1,709.39	5,520.34	2,764.27	1.39	-0.17	0.033
87.83	-16.25	-2.10	0.00	-71.56	0.00	71.56	2,692.45	1,346.23	4,345.60	2,176.03	1.49	-0.18	0.039
90.00	-16.09	-2.11	0.00	-66.99	0.00	66.99	2,665.65	1,332.83	4,237.49	2,121.90	1.57	-0.18	0.038
91.00	-14.16	-2.13	0.00	-64.89	0.00	64.89	2,653.16	1,326.58	4,187.89	2,097.06	1.61	-0.18	0.036
95.00	-13.37	-2.13	0.00	-56.36	0.00	56.36	2,602.34	1,301.17	3,990.97	1,998.45	1.77	-0.19	0.033
100.00	-11.72	-2.10	0.00	-45.70	0.00	45.70	2,536.86	1,268.43	3,748.34	1,876.95	1.98	-0.21	0.029
104.00	-9.65	-2.01	0.00	-37.31	0.00	37.31	2,482.92	1,241.46	3,557.28	1,781.28	2.16	-0.21	0.025
105.00	-9.39	-2.00	0.00	-35.30	0.00	35.30	2,469.21	1,234.61	3,509.96	1,757.59	2.20	-0.22	0.024
107.00	-8.99	-1.96	0.00	-31.31	0.00	31.31	2,441.54	1,220.77	3,415.88	1,710.48	2.29	-0.22	0.022
110.00	-5.99	-1.67	0.00	-25.42	0.00	25.42	2,399.39	1,199.69	3,276.20	1,640.54	2.43	-0.22	0.018
115.00	-5.43	-1.58	0.00	-17.04	0.00	17.04	2,327.39	1,163.70	3,047.43	1,525.98	2.67	-0.23	0.014
120.00	-3.07	-1.06	0.00	-9.16	0.00	9.16	2,252.90	1,126.45	2,823.60	1,413.90	2.91	-0.23	0.008
125.00	-2.71	-0.96	0.00	-3.85	0.00	3.85	2,153.14	1,076.57	2,577.88	1,290.85	3.16	-0.24	0.004
126.00	-2.49	-0.89	0.00	-2.89	0.00	2.89	2,133.19	1,066.60	2,530.08	1,266.92	3.21	-0.24	0.003
128.00	-1.59	-0.59	0.00	-1.10	0.00	1.10	2,093.29	1,046.64	2,435.81	1,219.72	3.31	-0.24	0.002
129.00	-1.38	-0.51	0.00	-0.51	0.00	0.51	2,073.34	1,036.67	2,389.35	1,196.45	3.36	-0.24	0.001
130.00	0.00	-0.51	0.00	0.00	0.00	0.00	2,053.39	1,026.69	2,343.34	1,173.41	3.41	-0.24	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	25.99	0.00	58.60	0.00	0.00	2513.09	47.50	0.34
0.9D + 1.6W	25.98	0.00	43.95	0.00	0.00	2499.43	47.50	0.34
1.2D + 1.0Di + 1.0Wi	8.13	0.00	98.93	0.00	0.00	761.85	47.50	0.12
(1.2 + 0.2Sds) * DL + E ELFM	2.35	0.00	58.54	0.00	0.00	231.95	47.50	0.04
(1.2 + 0.2Sds) * DL + E EMAM	2.72	0.00	58.54	0.00	0.00	275.52	47.50	0.05
(0.9 - 0.2Sds) * DL + E ELFM	2.35	0.00	39.93	0.00	0.00	230.40	47.50	0.04
(0.9 - 0.2Sds) * DL + E EMAM	2.72	0.00	39.93	0.00	0.00	273.52	47.50	0.04
1.0D + 1.0W	6.05	0.00	48.85	0.00	0.00	582.84	47.50	0.08

Site Name: CRANBURYSU CT, CT
Site Number: 411189
Tower Type: MP
Design Loads (Factored) - Analysis per TIA-222-G Standards

Monolithic Mat & Pier Foundation Analysis

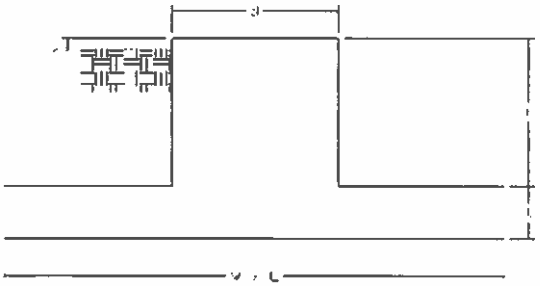
Foundation Analysis Parameters		
Design / Analysis / Mapping:	Analysis	-
Compression/Leg:	58.6	k
Uplift/Leg:	0.0	k
Total Shear:	26.0	k
Moment:	2,513.1	k-ft
Tower + Appurtenance Weight:	58.6	k
Depth to Base of Foundation (l + t - h):	4.5	ft
Diameter of Pier (d):	8	ft
Length of Pier (l):	2.5	ft
Height of Pier above Ground (h):	1	ft
Width of Pad (W):	29.5	ft
Length of Pad (L):	29.5	ft
Thickness of Pad (t):	3	ft
Tower Leg Center to Center:	0	ft
Number of Tower Legs:	1	-
Tower Center from Mat Center:	0	ft
Depth Below Ground Surface to Water Table:	6	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Soil Above Water Table:	100	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Below Water Table:	37.6	pcf
Friction Angle of Uplift:	15	°
Coefficient of Shear Friction:	0.6	-
Ultimate Compressive Bearing Pressure:	6,000	psf
Ultimate Passive Pressure on Pad Face:	0	psf
$f_{Soil\ and\ Concrete\ Weight}$:	0.9	-
f_{Soil}:	0.75	-

Foundation Steel Parameters		
Concrete Strength (f'_c):	4,000	psi
Pad Tension Steel Depth:	32.0	in
Dead Load Factor:	0.9	-
f_{Shear}:	0.75	-
$f_{Flexure\ /\ Tension}$:	0.9	-
$f_{Compression}$:	0.65	-
b:	0.85	-
Bottom Pad Rebar Size #:	8	-
# of Bottom Pad Rebar:	44	-
Pad Bottom Steel Area:	34.76	in^2
Pad Steel F_y:	60,000	psi
Top Pad Rebar Size #:	8	-
# of Top Pad Rebar:	28	-
Pad Top Steel Area:	22.12	in^2
Pier Rebar Size #:	8	-
Pier Steel Area (Single Bar):	0.79	in^2
# of Pier Rebar:	44	-
Pier Steel F_y:	60,000	psi
Pier Cage Diameter:	88.0	in
Rebar Strain Limit:	0.008	-
Steel Elastic Modulus:	29,000	ksi
Tie Rebar Size #:	4	-
Tie Steel Area (Single Bar):	0.20	in^2
Tie Spacing:	8	in
Tie Steel F_y:	60,000	psi

Overturning Moment Usage		
Design OTM:	2656.0	k-ft
OTM Resistance:	7945.3	k-ft
Design OTM / OTM Resistance:	33%	Pass

Soil Bearing Pressure Usage		
Net Bearing Pressure:	1186	psf
Factored Nominal Bearing Pressure:	4500	psf
Factored Nominal (Net) Bearing Pressure:	26%	Pass
Load Direction Controling Design Bearing Pressure:	*Diagonal to Pad Edge*	

Sliding Factor of Safety		
Ultimate Friction Resistance:	349.4	k
Ultimate Passive Pressure Resistance:	0.0	k
Total Factored Sliding Resistance:	262.0	k
Sliding Design / Sliding Resistance:	10%	Pass



Pad Strength Capacity			
Factored One Way Shear (V_u):	189.2	k	
One Way Shear Capacity (fV_c):	1074.7	k	*ACI11.3.1.1*
V_u / fV_c:	18%	Pass	
Load Direction Controling Shear Capacity:	*Parallel to Pad Edge*		
Lower Steel Pad Factored Moment (M_u):	1385.0	k-ft	
Lower Steel Pad Moment Capacity (fM_n):	4890.2	k-ft	*ACI10.3*
M_u / fM_n:	28%	Pass	
Load Direction Controling Flexural Capacity:	*Parallel to Pad Edge*		
Upper Steel Pad Factored Moment (M_u):	599.0	k-ft	
Upper Steel Pad Moment Capacity (fM_n):	3138.6	k-ft	
M_u / fM_n:	19%	Pass	
Lower Pad Flexural Reinforcement Ratio:	0.0031		*OK - Minimum Reinforcement Ratio Met - ACI10.5.1*
Upper Pad Flexural Reinforcement Ratio:	0.0020		*OK - Minimum Reinforcement Ratio Met - ACI10.5.1*
Pad Shrinkage Reinforcement Ratio:	0.0050		*OK - Shrinkage Reinforcement Ratio Met - ACI7.12.2.1*
Lower Pad Reinforcement Spacing:	8	in	*Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4*
Upper Pad Reinforcement Spacing:	13	in	*Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4*
Factored Punching Shear (V_u):	2.6	k	
Nominal Punching Shear Capacity (f_cV_n):	2441.5	k	*ACI11.12.2.1*
V_u / fV_c:	0%	Pass	

Pier Strength Capacity			
Factored Moment in Pier (M_u):	2578.1	k-ft	
Pier Moment Capacity (fM_n):	6730.8	k-ft	
M_u / fM_n:	38%	Pass	
Factored Shear in Pier (V_u):	26.0	k	
Pier Shear Capacity (fV_n):	862.3	k	
V_u / fV_c:	3%	Pass	
Pier Shear Reinforcement Ratio:	0.0003		*OK - No Ties Necessary for Shear - ACI11.5.6.1*
Factored Tension in Pier (T_u):	0.0	k	
Pier Tension Capacity (fT_n):	1877.0	k	
T_u / fT_n:	0%	Pass	
Factored Compression in Pier (P_u):	58.6	k	
Pier Compression Capacity (fP_n):	12735.7	k	*ACI10.3.6.2*
P_u / fP_n:	0%	Pass	
Minimum Depth to Develop Vertical Rebar:	19	in	*ACI12.2.3*
Minimum Hook Development Length:	14	in	*ACI12.5*
Minimum Mat Thickness / Edge Distance from Pier:	17.0	in	
Minimum Foundation Depth:	2.77	ft	
$M_u/f_BM_n + T_u/f_TT_n$:	38%	Pass	

Base Plate & Anchor Rod Analysis

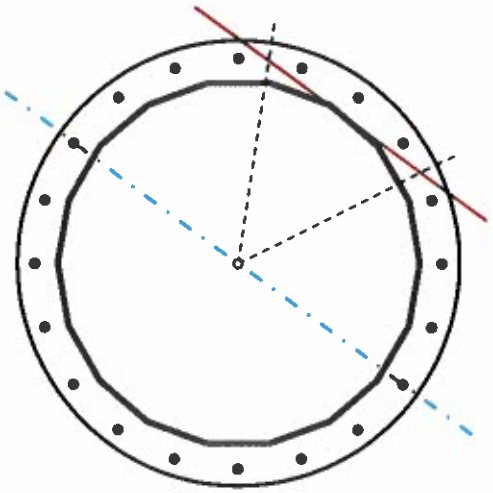
Pole Dimensions		
Number of Sides	18	-
Diameter	62	in
Thickness	1/2	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	2513.1	k-ft
Axial, Pu	58.6	k
Shear, Vu	26.0	k
Neutral Axis	324	°

Report Capacities		
Component	Capacity	Result
Base Plate	28%	Pass
Anchor Rods	35%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	77	in
Thickness	2	in
Grade	A572-60	
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Clip	N/A	in
Orientation Offset	0	°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	550.2	k
Bending Stress, ϕMn	1981.0	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	20	-
Diameter, ø	2 1/4	in
Bolt Circle	71	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	11.2	in
Orientation Offset	0	°
Applied Force, Pu	90.8	k
Anchor Rods, ϕPn	259.8	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	26.0	2513.1	1.00
Anchor Rod Forces	26.0	2513.1	1.00
Additional Bolt (Grp1) Forces			
Additional Bolt (Grp2) Forces			
Dywidag Forces			
Stiffener Forces			

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	96.1143	5.3397	0.4468		45449.07
Bolt	3.9761	3.2477	0.8393	4.5	38253.38
Bolt1					
Bolt2					
Dywidag					
Stiffener					

Base Plate		
Shape	Round	-
Diameter, D	77	in
Thickness, t	2	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Base Plate Chord	45.662	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	20	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	71	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	90.8	k
Applied Shear, Vu	0.6	k
Compressive Capacity, ϕPn	259.8	k
Tensile Capacity, ϕRnt	0.349	OK
Interaction Capacity	0.354	OK

External Base Plate		
Chord Length AA	39.079	in
Additional AA	4.000	in
Section Modulus, Z	43.079	in^3
Applied Moment, Mu	550.2	k-ft
Bending Capacity, ϕMn	2326.3	k-ft
Capacity, Mu/ϕMn	0.237	OK
Chord Length AB	37.506	in
Additional AB	4.000	in
Section Modulus, Z	41.506	in^3
Applied Moment, Mu	423.6	k-ft
Bending Capacity, ϕMn	2241.3	k-ft
Capacity, Mu/ϕMn	0.189	OK
Bend Line Length	36.686	in
Additional Bend Line	0.000	in
Section Modulus, Z	36.686	in^3
Applied Moment, Mu	550.2	k-ft
Bending Capacity, ϕMn	1981.0	k-ft
Capacity, Mu/ϕMn	0.278	OK

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

DEPARTMENT OF ADMINISTRATIVE SERVICES

June 18, 2020

Brendan Smith, P.E.
American Tower Corporation
3500 Regency Parkway, Suite 100
Cary, NC 27518

I-20-07

Re: Interpretation of 2018 State Building Code – Communication Tower Structural Design

Mr. Smith,

You requested a formal interpretation regarding the requirements of section 3108 and 1609 of the 2015 International Building Code portion of the 2018 Connecticut State Building Code which states:

3108.1 General. Towers shall be designed and constructed in accordance with the provisions of TIA-222. Towers shall be designed for seismic loads; exceptions related to seismic design listed in Section 2.7.3 of TIA-222 shall not apply. In Section 2.6.6.2 of TIA 222, the horizontal extent of Topographic Category 2, escarpments, shall be 16 times the height of the escarpment.

1609.1.1 Determination of wind loads. Wind loads on every building or structure shall be determined in accordance with chapters 26 to 30 of ASCE 7 or provisions of the alternate all-heights method in Section 1609.6. The type of opening protection required, the ultimate design wind speed, Vult, and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.
Exceptions:
5. Designs using TIA-222 for antenna-supporting structures and antennas, provided the horizontal extent of Topographic Category 2 escarpments in Section 2.6.6.2 of TIA-222 shall be 16 times the height of the escarpment.

Question 1:
Would an installation done to the TIA-222-H standard be compliant under the current State Building Code?

Answer 1:
Yes. The 2015 International Building Code references TIA-222-G plus several amendments. TIA-222-H is an updated version of the TIA-222-G standard and is the reference standard in the 2018 International Building Code. Designs complying with the updated standard would be deemed to comply with the current code.

Question 2:

If TIA-222-H is compliant under the current State Building Code, is the use of ASCE 7-16 Wind Speeds, as referenced by TIA-222-H, compliant? Or does CT have specific wind and ice parameters that must be utilized?

Answer 2:

Per 1609.1.1 exception 5, telecommunication towers may be designed to TIA-222 with conditions. Since TIA-222-H is a compliant design standard and references ASCE-7-16, the parameters found in that standard may be utilized.

Sincerely,

Joseph V. Cassidy, P.E.
State Building Inspector

Cc: Darren Hobbs, Deputy State Building Inspector