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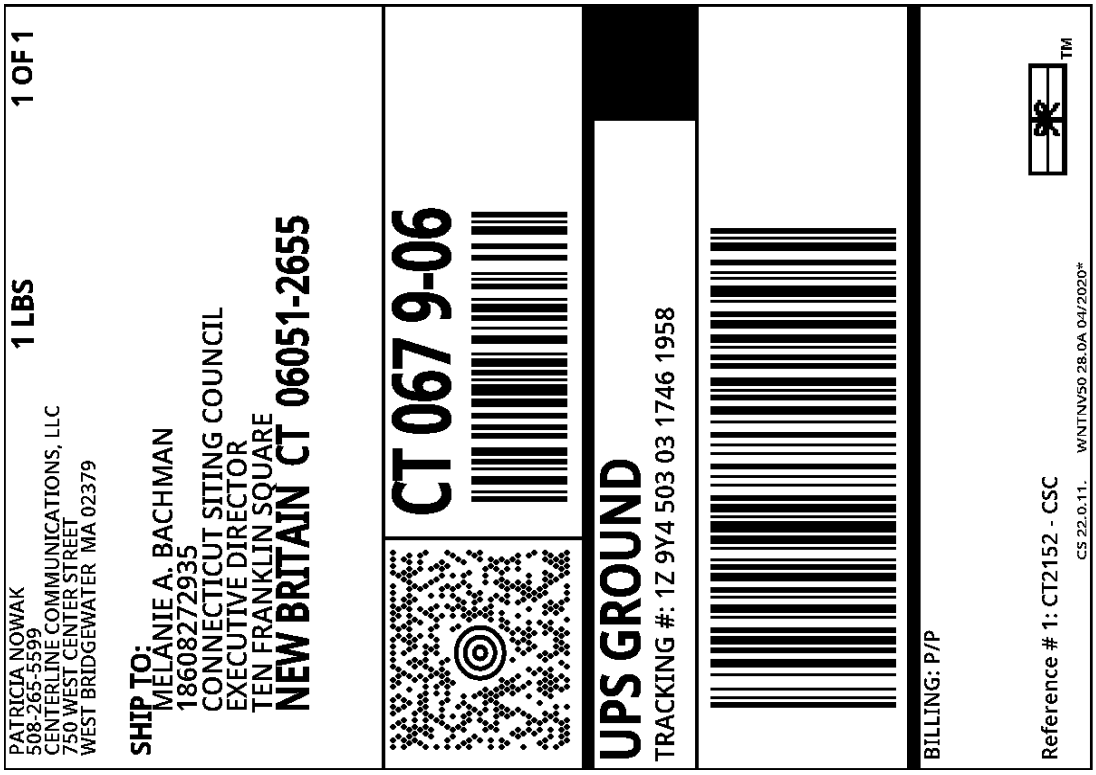
UPS Access Point™
CVS STORE # 972
555 WASHINGTON ST
SOUTH EASTON ,MA 02375

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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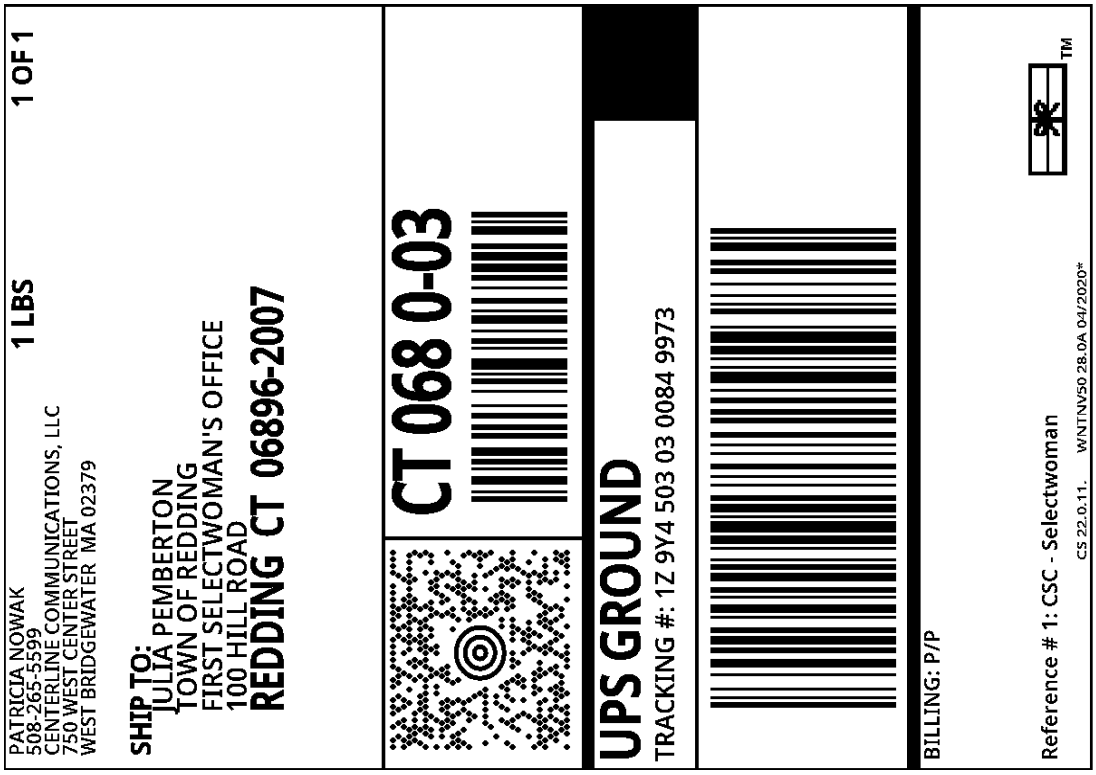

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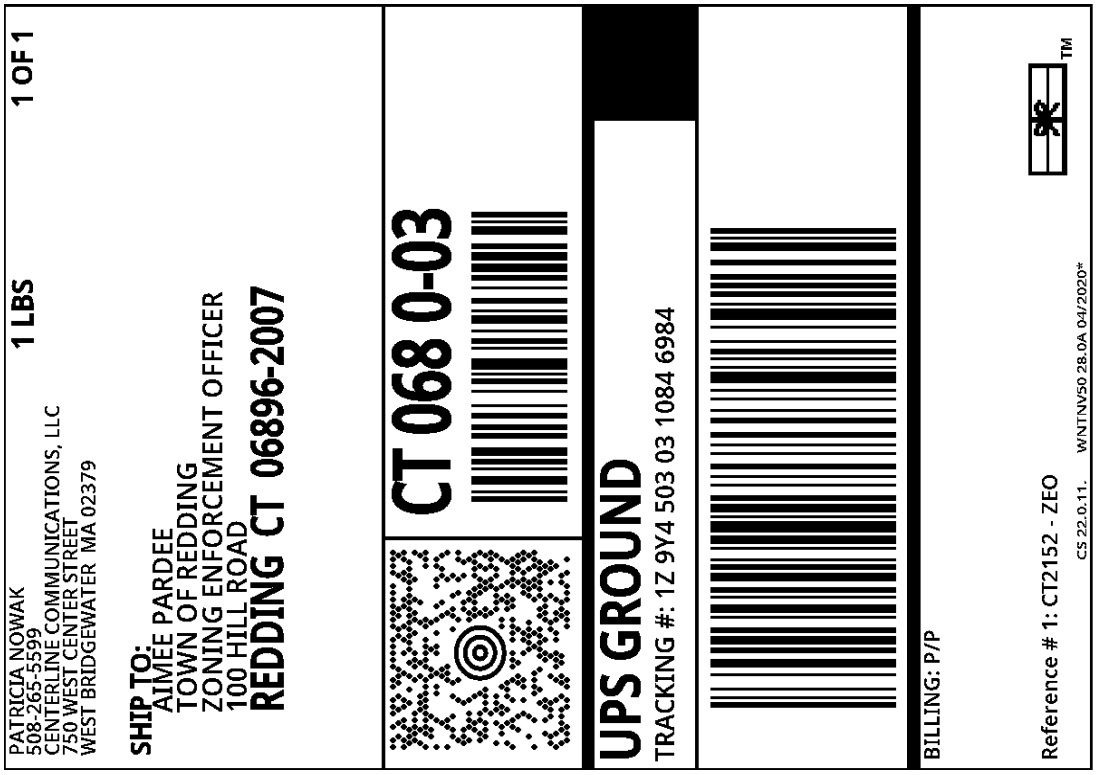

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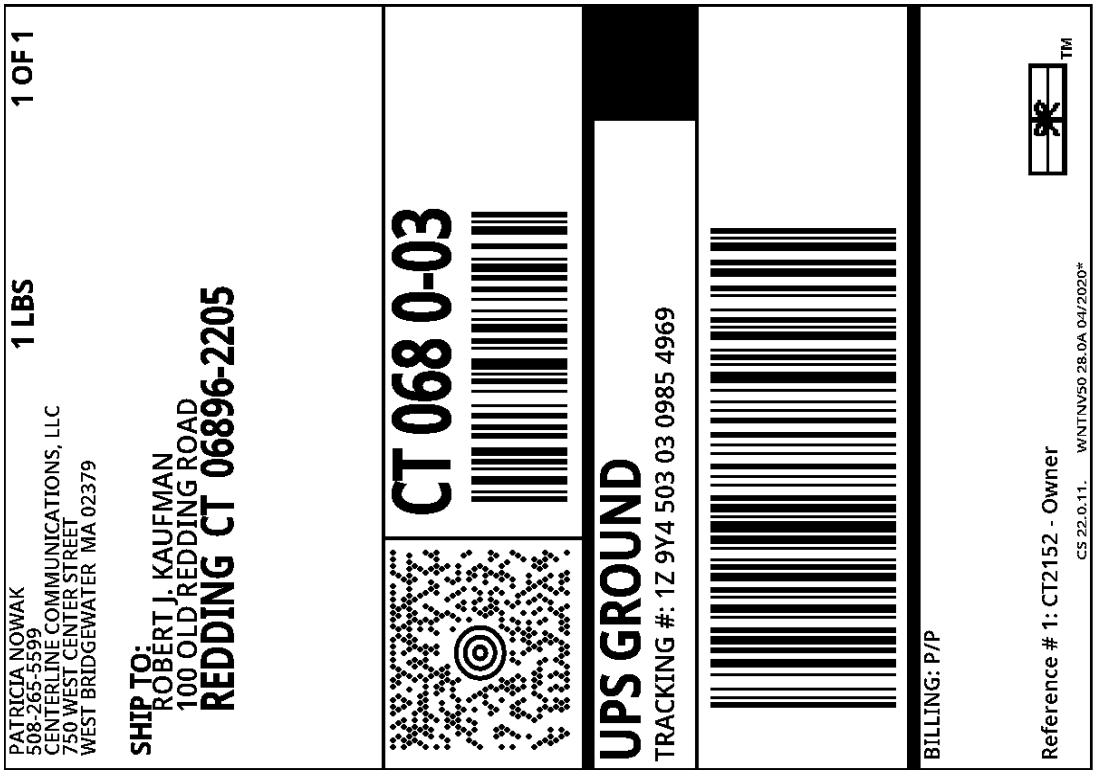

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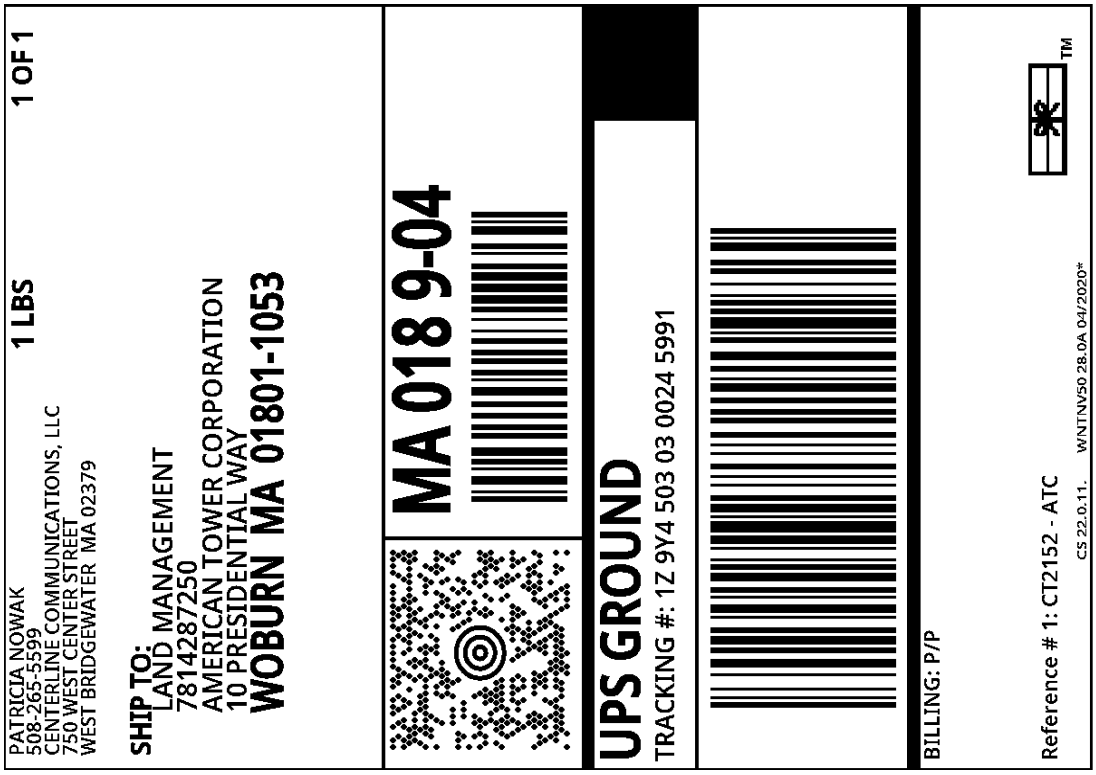


July 20, 2020

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

Regarding: Notice of Exempt Modification – AT&T Site CT2152
Address: 100 Old Redding Road, Redding, CT

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (hereinafter "AT&T") currently maintains a wireless telecommunications facility on an existing 180' self-support tower (the "Tower") at the above-referenced address, latitude 41.287100, longitude -73.438200. Said Tower is owned 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 (3) Remote Radio Units, as more particularly detailed and described in the enclosed Construction Drawings prepared by SMW Engineering Group, Inc, dated July 2, 2020. Enclosed please also find an Antenna Mount Analysis Report prepared by American Tower Corporation dated June 22, 2020. The centerline height of the antennas will be at 184 feet.

The Tower was originally approved by the Connecticut Siting Council on August 9, 1995 under Docket No. 167. Enclosed please find a copy of the above referenced approval. The Town of Redding, Connecticut issued Building Permit No. 8134 on August 30, 1996 for the construction of the Tower, a copy of which is also enclosed.

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 Julia Pemberton, First Selectwoman of the Town of Redding; Aimee Pardee, Land Use Director and Zoning Enforcement Officer of the Town of Redding; Robert J. Kaufman, as the property owner; and American Tower Corporation, as Tower owner. 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 June 24, 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).

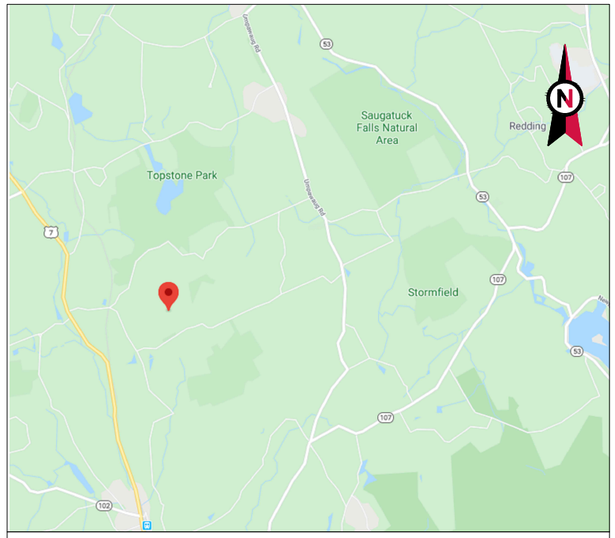
Sincerely,

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 and Original BP
Exhibit 4 – Property Cards and GIS Map
Exhibit 5 – NIER Study
Exhibit 6 – Structural Analysis

cc:
Honorable Julia Pemberton, First Selectwoman of the Town of Redding
Aimee Pardee, Land Use Director and Zoning Enforcement Officer of the Town of Redding
Robert J. Kaufman, as the property owner
American Tower Corporation, as Tower owner

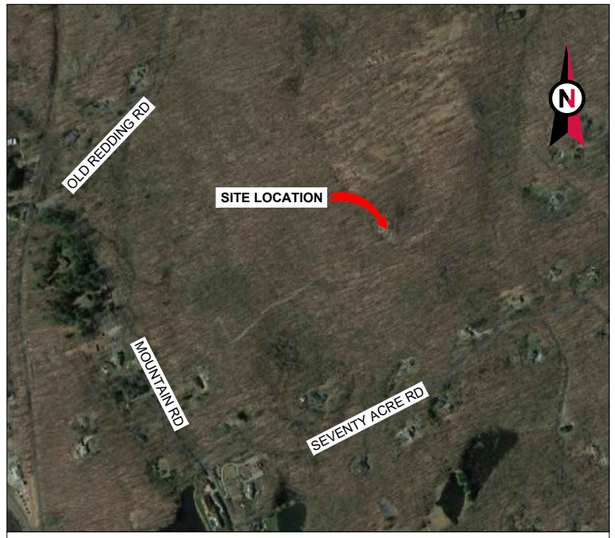
EXHIBIT 1



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: REDDING
ATC SITE NUMBER: 302522
AT&T SITE ID: CTL02152
AT&T FA CODE:10035092
AT&T SITE NAME: REDDING
SITE ADDRESS: 100 OLD REDDING ROAD
REDDING, CT 06896-2721



LOCATION MAP

CURRENT PROJECTS:

4C - PACE #: MRCTB047220
4TX4RX - PACE #: MRCTB047274
5G NR- PACE #: MRCTB047213

AT&T MOBILITY
ANTENNA AMENDMENT PLAN

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: UNITED ILLUMINATING
PHONE: (800) 722-5584

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 376-6843

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

PROJECT SUMMARY

SITE ADDRESS:

100 OLD REDDING ROAD REDDING, CT 06896-2721

COUNTY: FAIRFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.28708333

LONGITUDE: -73.4382

GROUND ELEVATION: 686' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

JEREMY SHARIT
SMW ENGINEERING GROUP INC.
158 BUSINESS CENTER DR.
BIRMINGHAM, AL. 35244
JOB# 20-10274

PROPERTY OWNER:

ROBERT J KAUFMAN
100 OLD REDDING RD.
REDDING, CT 06875

APPLICANT:

AT&T MOBILITY

CONSULTING ENGINEER

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

PROJECT DESCRIPTION

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

TOWER WORK:

REMOVE (3) ANTENNAS, (3) LTE RRH'S, (2) 0.74" 8AWG7 CABLES, AND (1) 0.29" FIBER CABLES

INSTALL (6) ANTENNAS, (6) RRH'S, (1) DC6 SQUID, (2) 0.78" DC TRUNKS, (1) 0.39" FIBER TRUNK, AND MOUNT MODIFICATION

EXISTING (6) ANTENNAS, (6) RRH'S, (2) DC/FIBER SQUIDS, (12) 1-1/4" COAX CABLES, (2) 0.78" DC TRUNKS AND (1) 0.39" FIBER TRUNK TO REMAIN

GROUND WORK:

INSTALL (1) 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

FROM HARTFORD TAKE I-84 WEST TO EXIT 3 TO RT 7 SOUTH. FOLLOW TO REDDING AND TURN LEFT ON OLD REDDING RD. AFTER STOP SIGN STAY TO THE RIGHT ON MOUNTAIN RD. ACCESS ROAD IS AHEAD ACROSS FROM # 139.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	A	06/23/20	ZDS
G-002	GENERAL NOTES	A	06/23/20	ZDS
C-101	DETAILED SITE PLAN	A	06/23/20	ZDS
C-201	TOWER ELEVATION	A	06/23/20	ZDS
C-401	ANTENNA INFORMATION & SCHEDULE	A	06/23/20	ZDS
C-402	ANTENNA INFORMATION & SCHEDULE	A	06/23/20	ZDS
C-501	CONSTRUCTION DETAILS	A	06/23/20	ZDS
C-502	EQUIPMENT SPECIFICATIONS	A	06/23/20	ZDS
E-501	GROUNDING DETAILS	A	06/23/20	ZDS
R-601	SUPPLEMENTAL	A	06/23/20	ZDS
R-602	SUPPLEMENTAL	A	06/23/20	ZDS

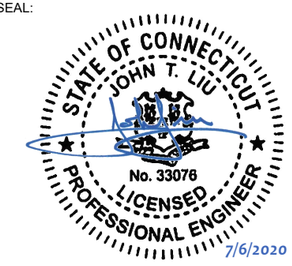
AMERICAN TOWER®

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	07/02/20

ATC SITE NUMBER:
302522
ATC SITE NAME:
REDDING
AT&T MOBILITY SITE NAME:
REDDING
SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:



AT&T

DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

TITLE SHEET

SHEET NUMBER: G-001
REVISION: A

GENERAL CONSTRUCTION NOTES:

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

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

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

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

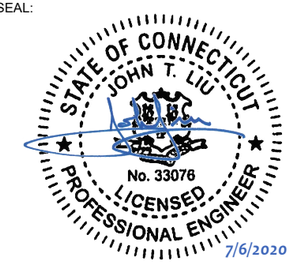
AMERICAN TOWER®

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	07/02/20

ATC SITE NUMBER:
302522
ATC SITE NAME:
REDDING
AT&T MOBILITY SITE NAME:
REDDING
SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:



AT&T

DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	A

SITE PLAN NOTES:

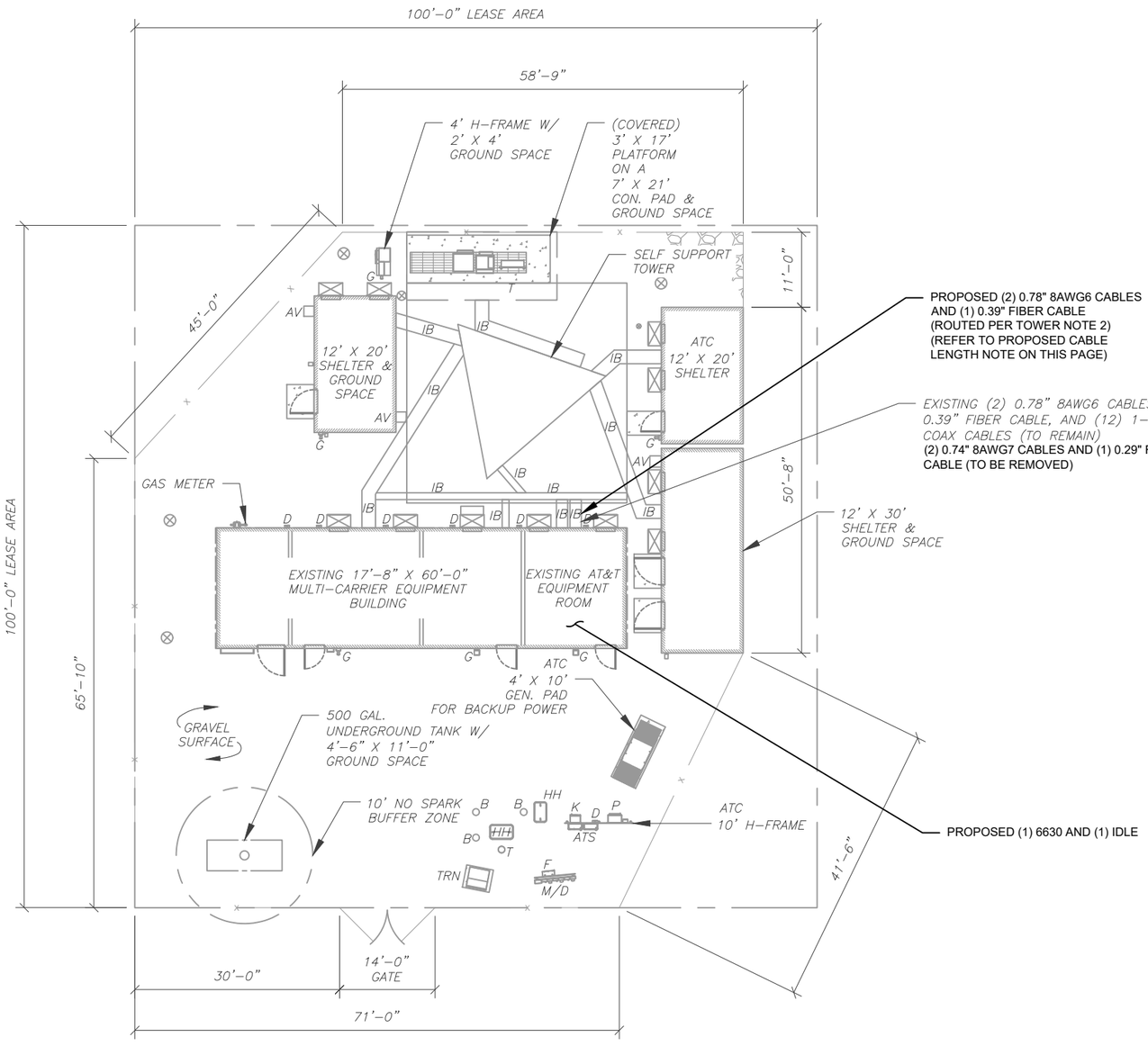
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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 20' 40'

SCALE: 1"=20' (11X17)
1"=10' (22X34)

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **213'**. 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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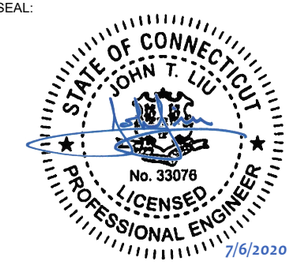
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	07/02/20

ATC SITE NUMBER:
302522
ATC SITE NAME:
REDDING
AT&T MOBILITY SITE NAME:
REDDING
SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:



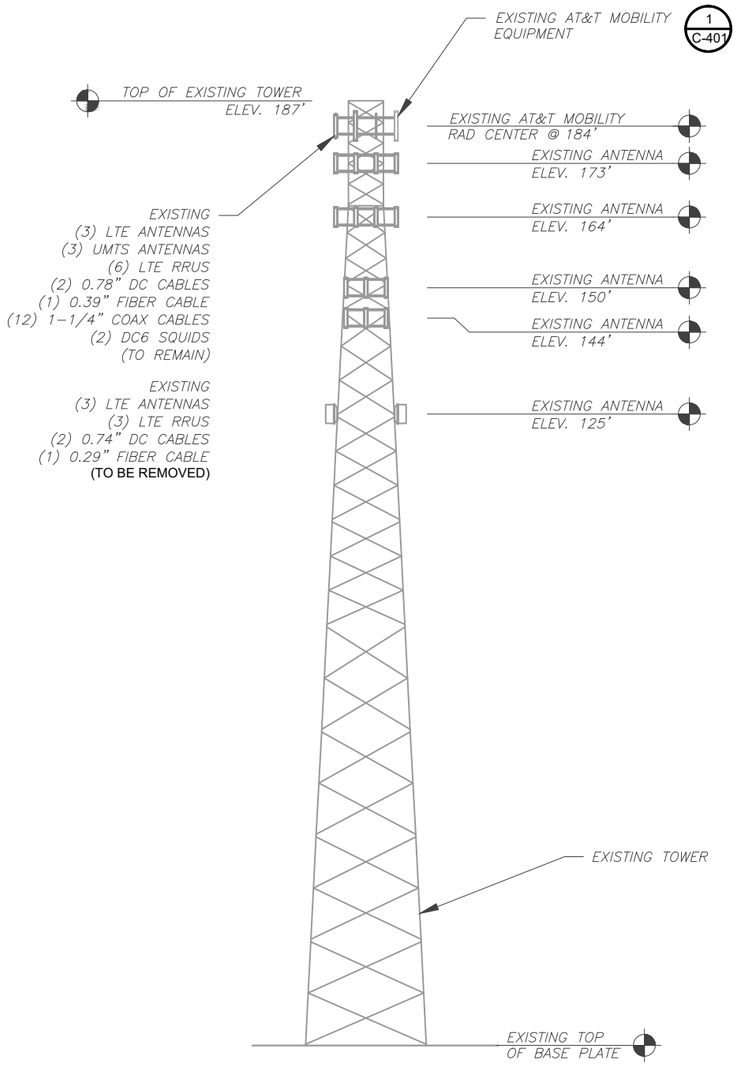
AT&T

DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

DETAILED SITE PLAN

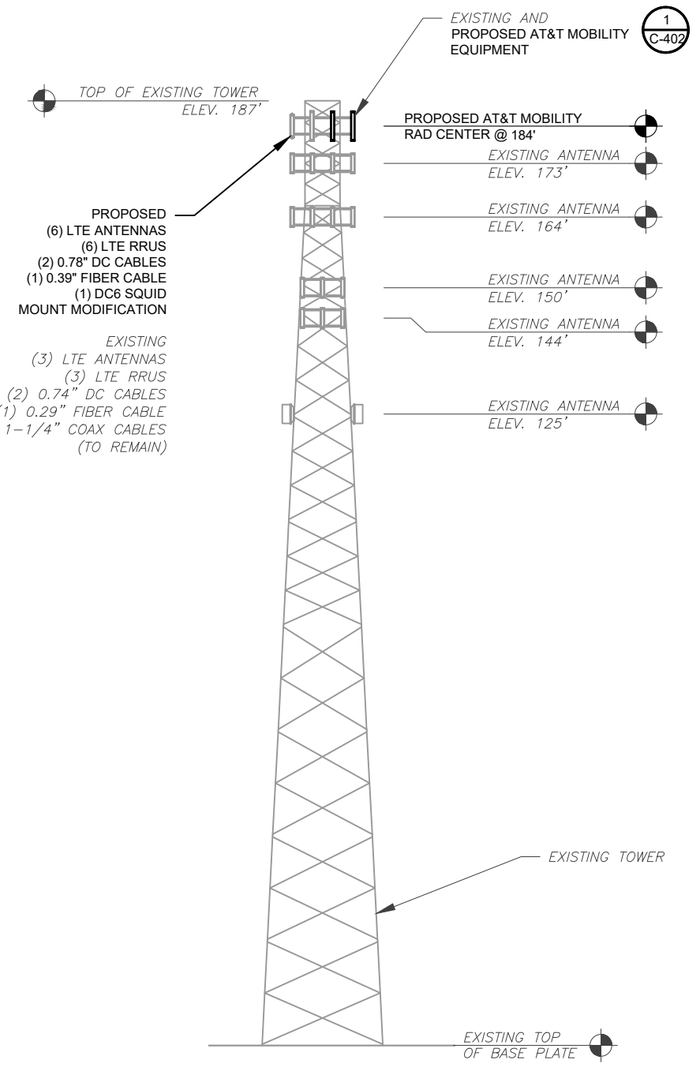
SHEET NUMBER:	REVISION:
C-101	A

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



1 EXISTING TOWER ELEVATION
SCALE: 1" = 30'

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 06/22/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 PROPOSED TOWER ELEVATION
SCALE: 1" = 30'

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. 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).
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.)

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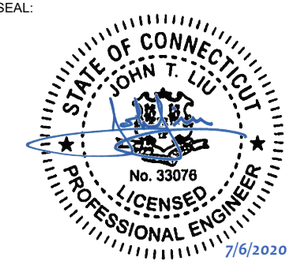
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	07/02/20

ATC SITE NUMBER:
302522
ATC SITE NAME:
REDDING
AT&T MOBILITY SITE NAME:
REDDING
SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:



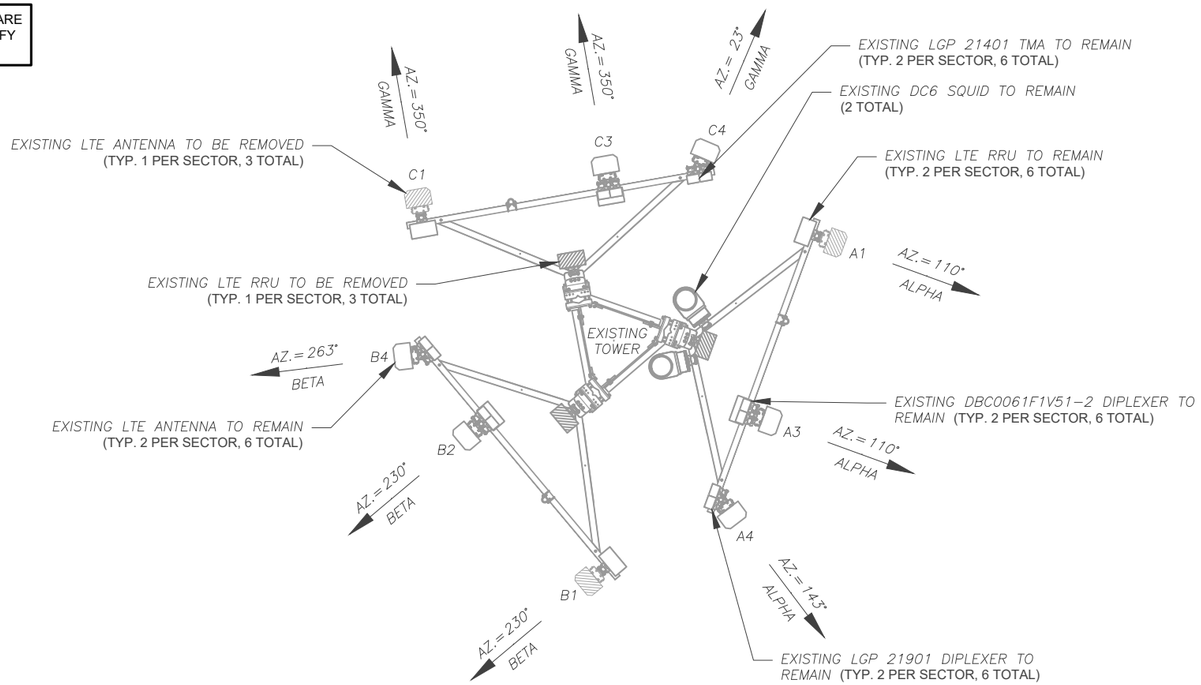
AT&T

DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	A

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



1 EXISTING ANTENNA PLAN

SCALE: 1" = 5'

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	184'	110°	A1	HPA-65R-BUU-H6	LTE	0°	RMV	RRUS-11 B12	RMV
								RRUS–32 B2	RMN
		–	A2	–	–	–	–	–	–
		110°	A3	QS66512–2	LTE	0°	RMN	RRUS–32 B30	RMN
								(2) DBC0061F1V51–2	RMN
		143°	A4	POWERWAVE 7770	UMTS	0°	RMN	(2) LGP 21901 DIPLEXER	RMN
								(2) LGP 21401 TMA	RMN
BETA	184'	230°	B1	HPA-65R-BUU-H6	LTE	0°	RMV	RRUS-11 B12	RMV
								RRUS–32 B2	RMN
		–	B2	–	–	–	–	–	–
		230°	B3	QS66512–2	LTE	0°	RMN	RRUS–32 B30	RMN
								(2) DBC0061F1V51–2	RMN
		263°	B4	POWERWAVE 7770	UMTS	0°	RMN	(2) LGP 21901 DIPLEXER	RMN
								(2) LGP 21401 TMA	RMN
GAMMA	184'	350°	C1	HPA-65R-BUU-H8	LTE	0°	RMV	RRUS-11 B12	RMV
								RRUS–32 B2	RMN
		–	C2	–	–	–	–	–	–
		350°	C3	TPA–65R–LCUUUU–H8	LTE	0°	RMN	RRUS–32 B30	RMN
								(2) DBC0061F1V51–2	RMN
		23°	C4	POWERWAVE 7770	UMTS	0°	RMN	(2) LGP 21901 DIPLEXER	RMN
								(2) LGP 21401 TMA	RMN

NOTES

1. 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. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

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

CABLE LENGTHS FOR JUMPERS

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

EXISTING FIBER DISTRIBUTION / SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	CONTROL	FIBER/HYBRID	STATUS
DC6–48–60–18–8C	*RMN*	*(12) 1–1/4"*	*(2) 0.78" 8AWG6*	*0.39" 10MM*	*RMN*
DC6–48–60–18–8F	*RMN*	–	(2) 0.74" 8AWG6	0.29" 7.5MM	RMV

2 EQUIPMENT SCHEDULES

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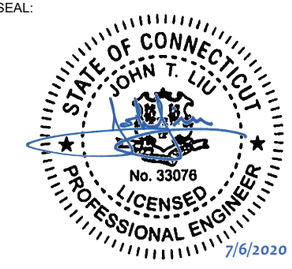
TEL: 205-252-6985 FAX: 205-320-1504

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	07/02/20

ATC SITE NUMBER:
302522
ATC SITE NAME:
REDDING
AT&T MOBILITY SITE NAME:
REDDING
SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:



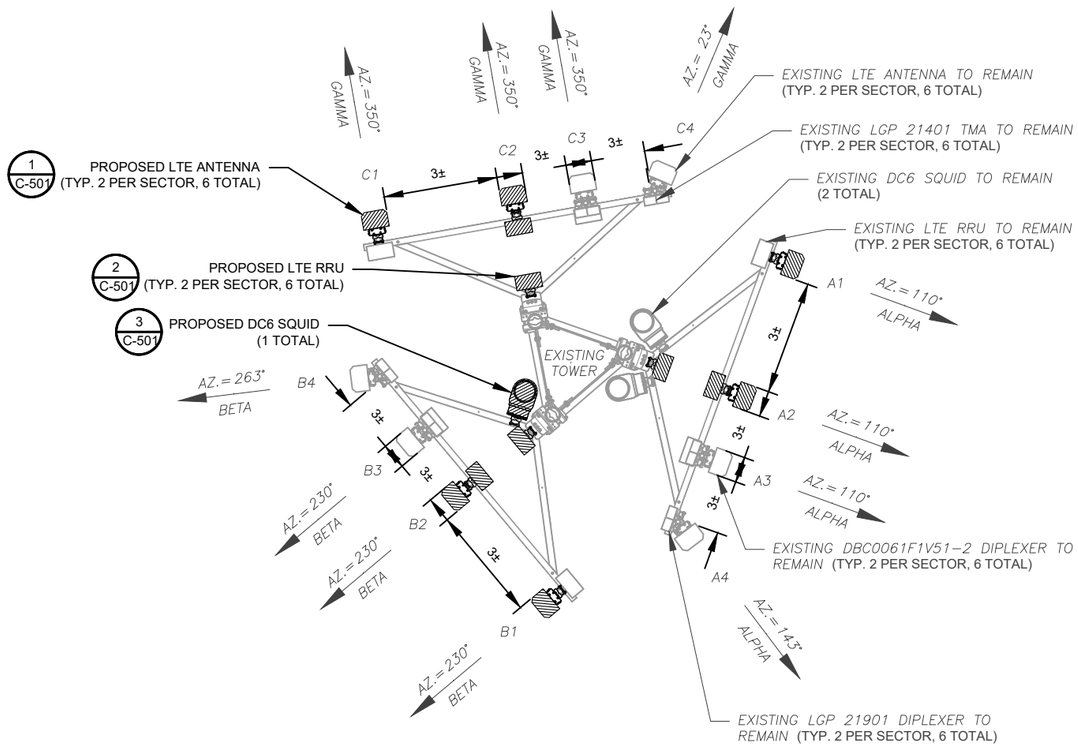
AT&T

DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	A

PER MOUNT ANALYSIS COMPLETED BY ATC, DATED 06/22/20, THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



1 FINAL ANTENNA PLAN

SCALE: 1" = 5'

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

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	184'	110°	A1	DMP65R-BU6DA	LTE	0°	ADD	4449 B5/B12	ADD
								RRUS-32 B2	*RMN*
		110°	A2	OPA65R-BU6DA	LTE	0°	ADD	RRUS-4478 B14	ADD
		110°	A3	*QS66512-2*	*LTE*	*0°*	-	*RRUS-32 B30*	*RMN*
								(2) DBC0061F1V51-2	*RMN*
		143°	A4	*POWERWAVE 7770*	*UMTS*	*0°*	-	*(2) LGP 21901 DIPLEXER*	*RMN*
								(2) LGP 21401 TMA	*RMN*
BETA	184'	230°	B1	DMP65R-BU6DA	LTE	0°	ADD	4449 B5/B12	ADD
								RRUS-32 B2	*RMN*
		230°	B2	OPA65R-BU6DA	LTE	0°	ADD	RRUS-4478 B14	ADD
		230°	B3	*QS66512-2*	*LTE*	*0°*	-	*RRUS-32 B30*	*RMN*
								(2) DBC0061F1V51-2	*RMN*
		263°	B4	*POWERWAVE 7770*	*UMTS*	*0°*	-	*(2) LGP 21901 DIPLEXER*	*RMN*
								(2) LGP 21401 TMA	*RMN*
GAMMA	184'	350°	C1	DMP65R-BU6DA	LTE	0°	ADD	4449 B5/B12	ADD
								RRUS-32 B2	*RMN*
		350°	C2	OPA65R-BU6DA	LTE	0°	ADD	RRUS-4478 B14	ADD
		350°	C3	*QS66512-2*	*LTE*	*0°*	-	*RRUS-32 B30*	*RMN*
								(2) DBC0061F1V51-2	*RMN*
		23°	C4	*POWERWAVE 7770*	*UMTS*	*0°*	-	*(2) LGP 21901 DIPLEXER*	*RMN*
								(2) LGP 21401 TMA	*RMN*

NOTES

1. 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. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

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

CABLE LENGTHS FOR JUMPERS

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

FINAL FIBER DISTRIBUTION / SQUID

MODEL NUMBER	STATUS
DC6-48-60-18-8C	*RMN*
DC6-48-60-18-8F	*RMN*
DC6-48-60-18-8F	ADD

FINAL CABLING SUMMARY

COAX	CONTROL	FIBER/HYBRID	STATUS
(12) 1-1/4"	*(2) 0.78" 8AWG6*	*0.39" 10MM*	*RMN*
–	-	-	-
–	(2) 0.78" 8AWG6	0.39" 10MM	ADD

2 EQUIPMENT SCHEDULES

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BIRMINGHAM, AL 35244
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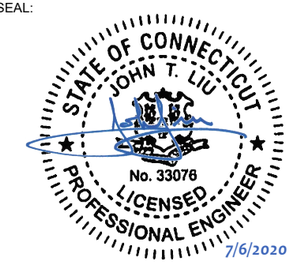
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	ZDS	07/02/20

ATC SITE NUMBER:
302522
ATC SITE NAME:
REDDING
AT&T MOBILITY SITE NAME:
REDDING
SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:

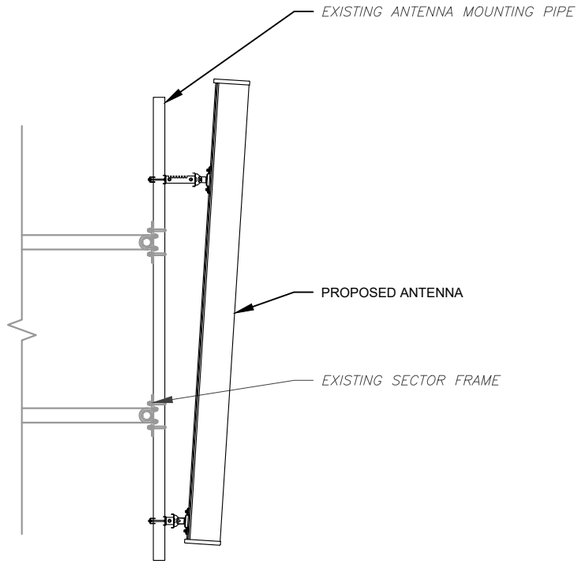


AT&T

DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

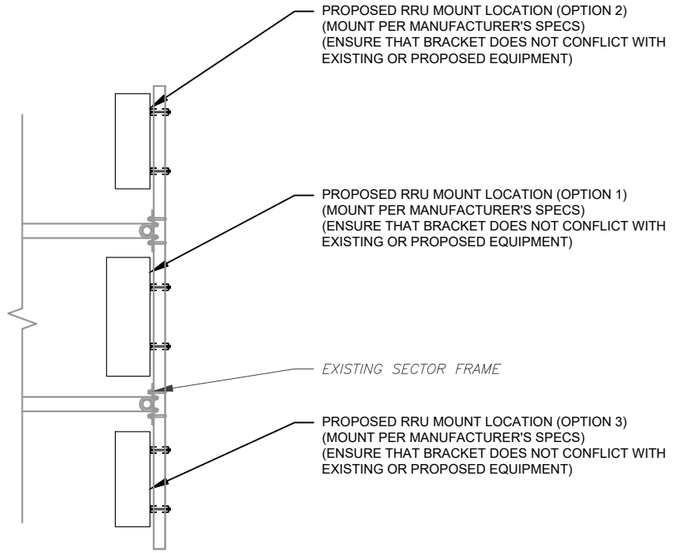
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-402	A



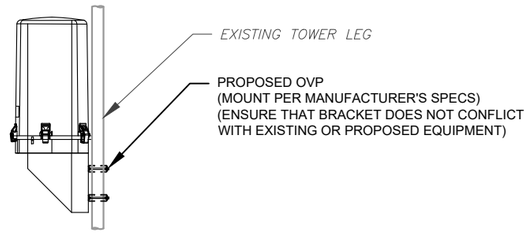
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED OVP MOUNTING

SCALE: N.T.S.

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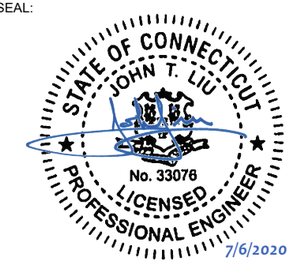
AT&T MOBILITY SITE NAME:
REDDING

SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:

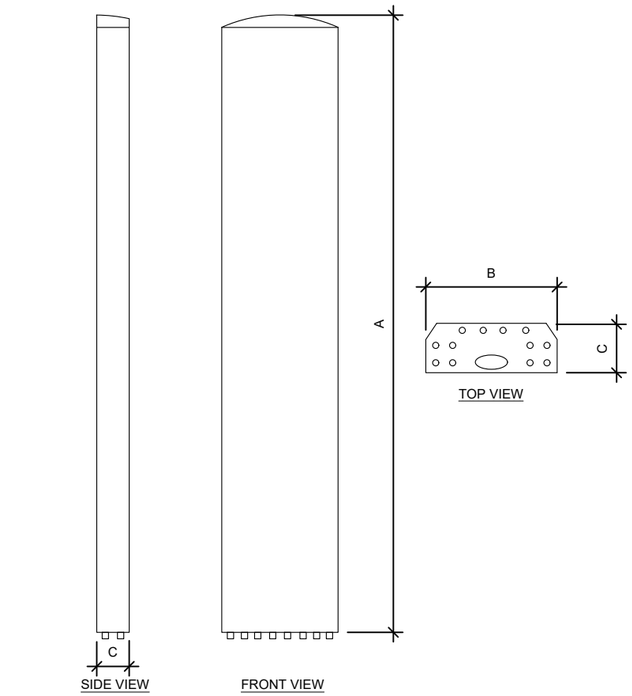


AT&T

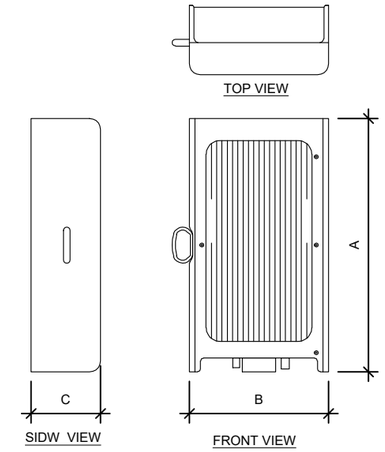
DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

CONSTRUCTION DETAILS

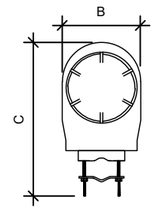
SHEET NUMBER:	REVISION:
C-501	A

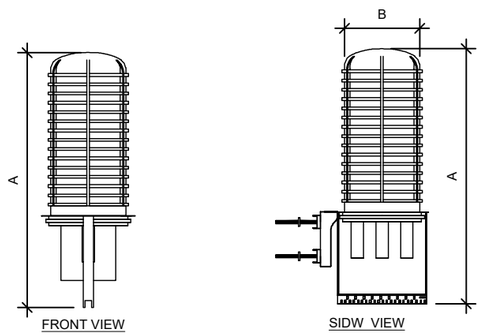


ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
DMP65R-BU6DA	71.2"	20.7"	7.7"	79.4
OPA65R-BU6DA	71.2"	21.0"	7.8"	60.2



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
4449 B5, B12	17.9"	13.2"	9.4"	71.0
4478 B14	18.1"	13.4"	8.3"	59.4





RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
DC6-48-60-18-8F	31.41"	10.24"	18.28"	16.0

1 EQUIPMENT SPECIFICATIONS

SCALE: NOT TO SCALE

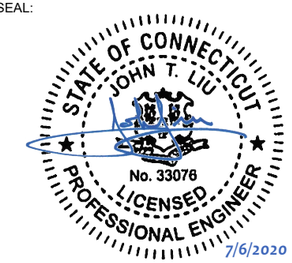
AMERICAN TOWER®

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	07/02/20

ATC SITE NUMBER:
302522
ATC SITE NAME:
REDDING
AT&T MOBILITY SITE NAME:
REDDING
SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:

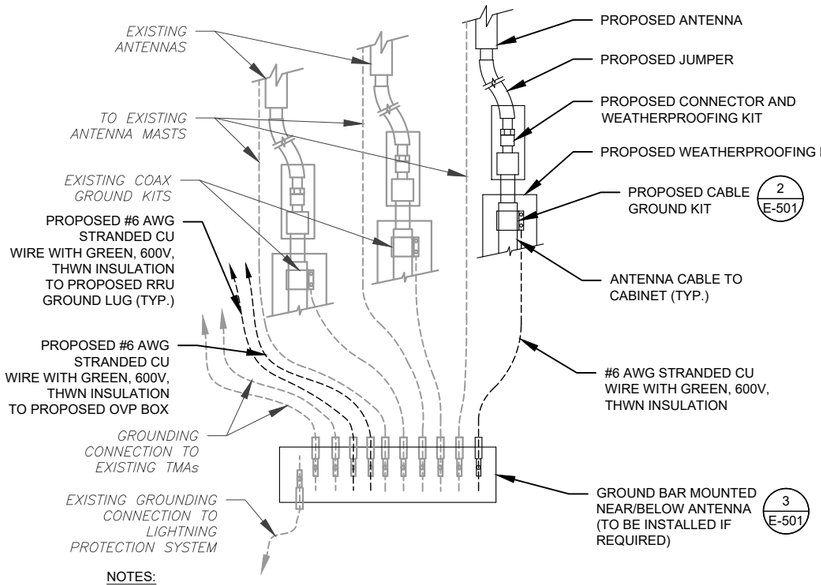


AT&T

DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

EQUIPMENT SPECIFICATIONS

SHEET NUMBER:	REVISION:
C-502	A

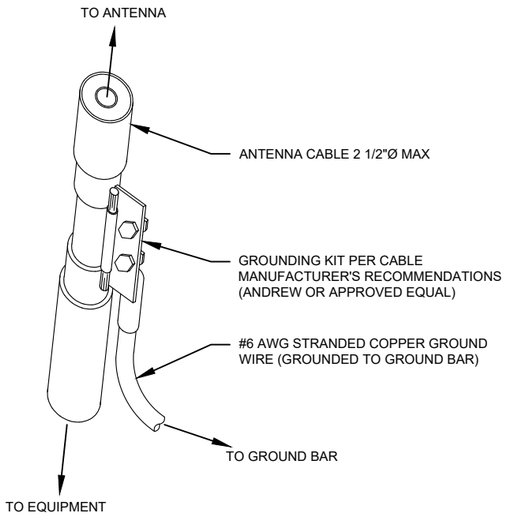


NOTES:

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

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

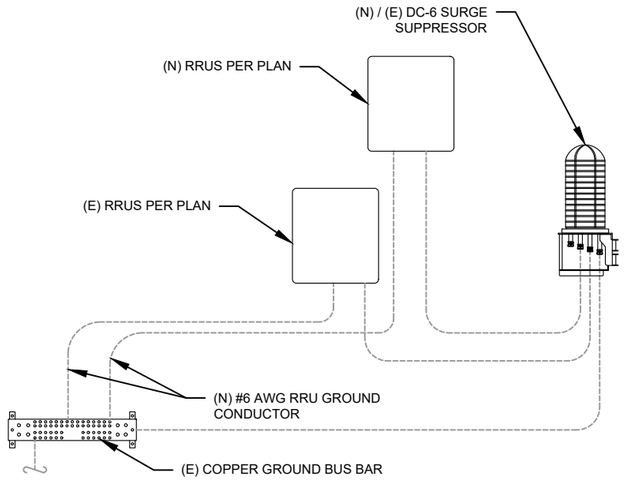


GROUND KIT NOTES:

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

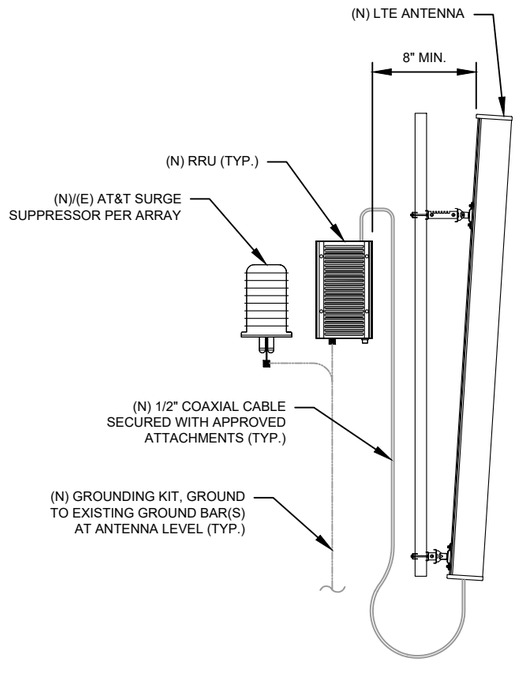
2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



3 RRU GROUNDING

SCALE: N.T.S.



4 ANTENNA/RRU GROUNDING

SCALE: N.T.S.

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	07/02/20

ATC SITE NUMBER:
302522
ATC SITE NAME:
REDDING
AT&T MOBILITY SITE NAME:
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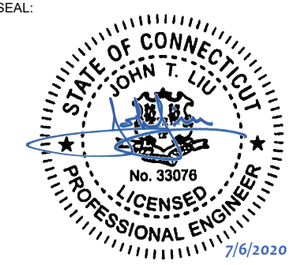
SITE ADDRESS:
100 OLD REDDING ROAD REDDING, CT 06896-2721

SEAL:



AT&T

DATE DRAWN:	06/23/20
ATC JOB NO:	13222841_G3
CUSTOMER ID:	REDDING
CUSTOMER #:	10035092

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	A

Antenna Mount Analysis Report

ATC Site Name	:	**Redding, CT**
ATC Site Number	:	**302522**
Engineering Number	:	**13222841_C8_01**
Mount Elevation	:	**182 ft**
Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**MRCTB047220**
Carrier Site Number	:	**CTL02152**
Site Location	:	**100 Old Redding Road** **Redding, CT 06896-2721** **41.28708333 , -73.4382**
County	:	**Fairfield**
Date	:	**June 22, 2020**
Max Usage	:	**75%**
Result	:	**Contingent Pass**

Prepared By:
Steven McGinnis
Structural Engineer II

Reviewed By:

ESHA KAUSHAL MODI
STATE OF CONNECTICUT
32593
LICENSED PROFESSIONAL ENGINEER

Authorized by "EOR"
22 Jun 2020 05:08:51 cosign

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 182 ft.

Supporting Documents

Mount Mapping	ProVertic Project #CT2152, dated March 16, 2018
Radio Frequency Data Sheet	RFDS ID #CTL02152, dated April 7, 2020
Reference Photos	Site photos from 2019

Analysis

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

Basic Wind Speed:	116 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Codes:	ANSI/TIA-222-H/ 2018 IBC/ Georgia State Amendments
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.235, S1 = 0.057
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

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

- Mount Pipe E must be installed to support additional equipment; new mount pipe(s) were considered to be PST 2.0 x 72" long, connected via (2) 1/2"Ø U-Bolts to the existing top and bottom face horizontals.

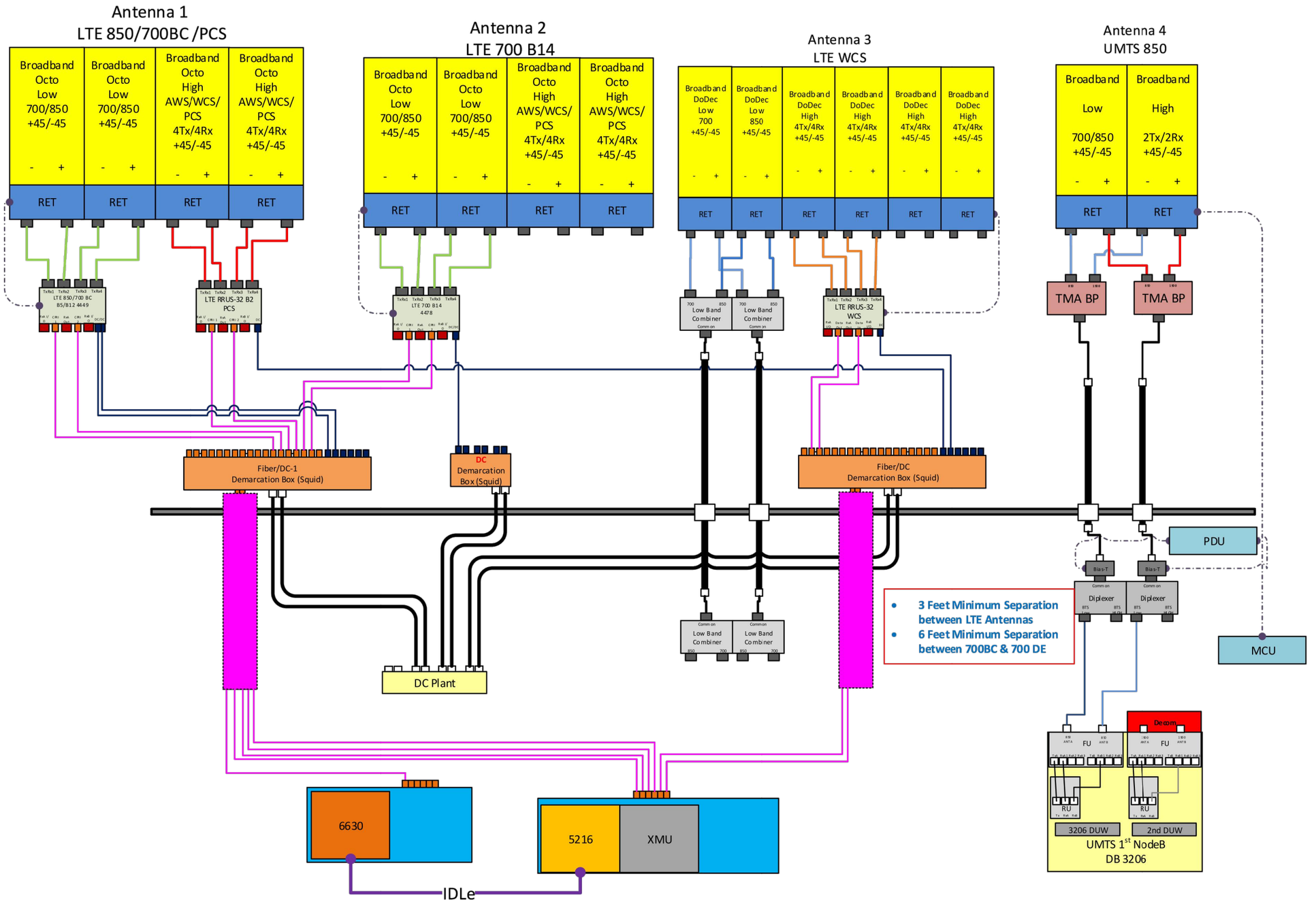
If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

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

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	A



1 PLUMBING DIAGRAM

SCALE: NOT TO SCALE

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

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	A

EXHIBIT 2

AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	**Redding, CT**
ATC Site Number	:	**302522**
Engineering Number	:	**13222841_C8_01**
Mount Elevation	:	**182 ft**
Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**MRCTB047220**
Carrier Site Number	:	**CTL02152**
Site Location	:	**100 Old Redding Road** **Redding, CT 06896-2721** **41.28708333 , -73.4382**
County	:	**Fairfield**
Date	:	**June 22, 2020**
Max Usage	:	**75%**
Result	:	**Contingent Pass**

Prepared By:
Steven McGinnis
Structural Engineer II

Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

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Codes:	ANSI/TIA-222-H/ 2018 IBC/ Georgia State Amendments
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.235, S1 = 0.057
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If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

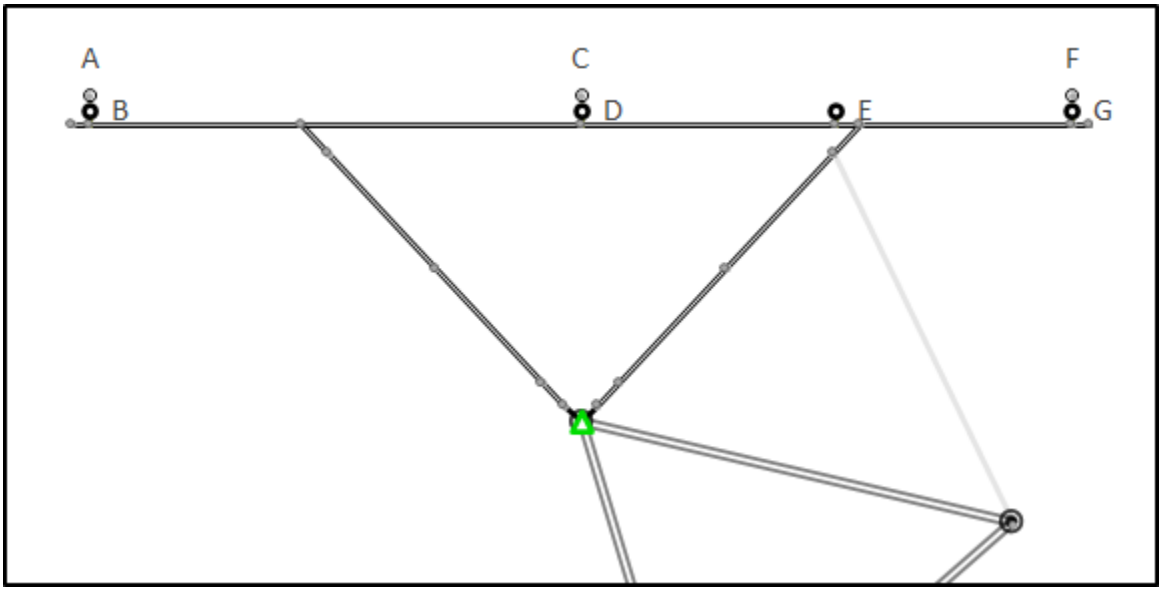
Application Loading

Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
182.0	184.0	1	CCI DMP65R-BU8D
		2	CCI OPA65R-BU6D
		2	CCI DMP65R-BU6DA
		1	CCI OPA65R-BU8D
		3	Powerwave Allgon 7770
		2	Quintel QS66512-2
		1	CCI TPA-65R-LCUUUU-H8
		6	Powerwave Allgon LGP21401
		6	Kaelus DBC0061F1V51-2
		1	Raycap DC6-48-60-18-8F ("Squid")
		2	Raycap DC6-48-60-18-8C
		3	Ericsson RRUS 32 B30 (53 lbs)
		3	Ericsson RRUS 32 B2
		3	Ericsson RRUS 4449 B5, B12
		3	Ericsson RRUS 4478 B14
18.0	18.0	1	PCTEL GPS-TMG-HR-26N

Structure Usages

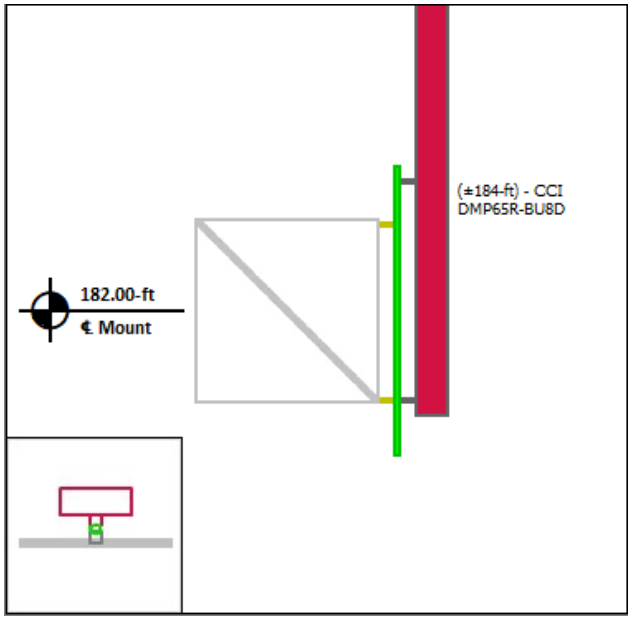
Structural Component	Controlling Usage	Pass/Fail
Horizontals	75%	Pass
Verticals	56%	Pass
Diagonals	50%	Pass
Tie-Backs	9%	Pass
Mount Pipes	50%	Pass

Mount Layout

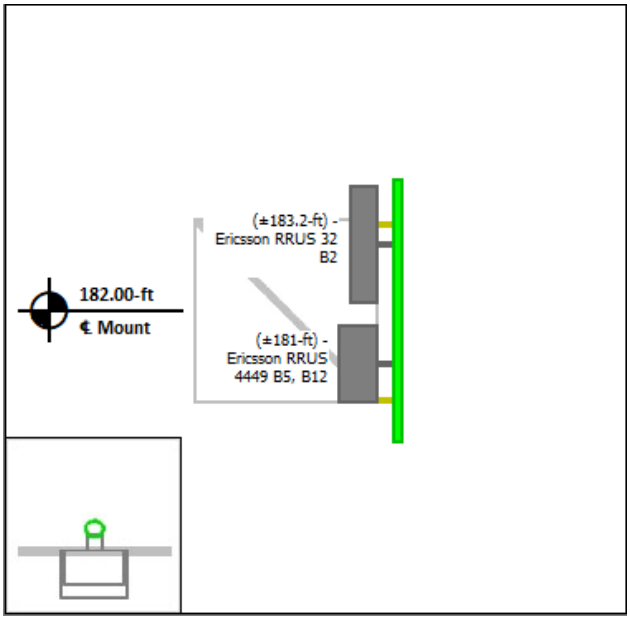


Equipment Layout

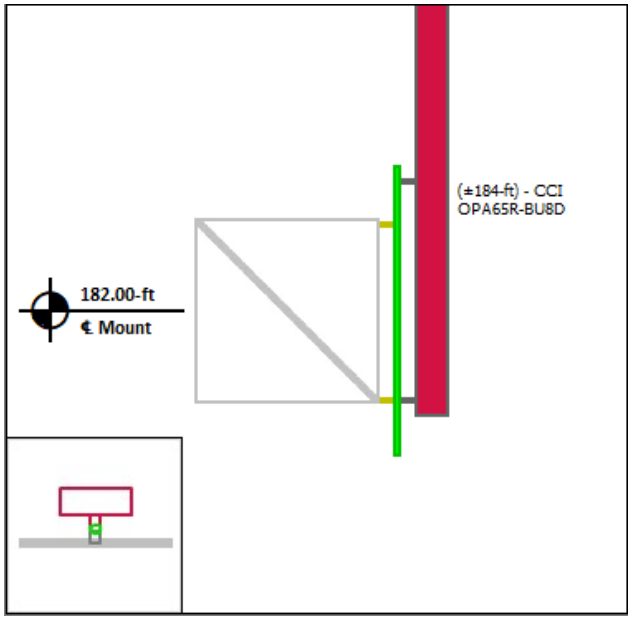
Mount Pipe A



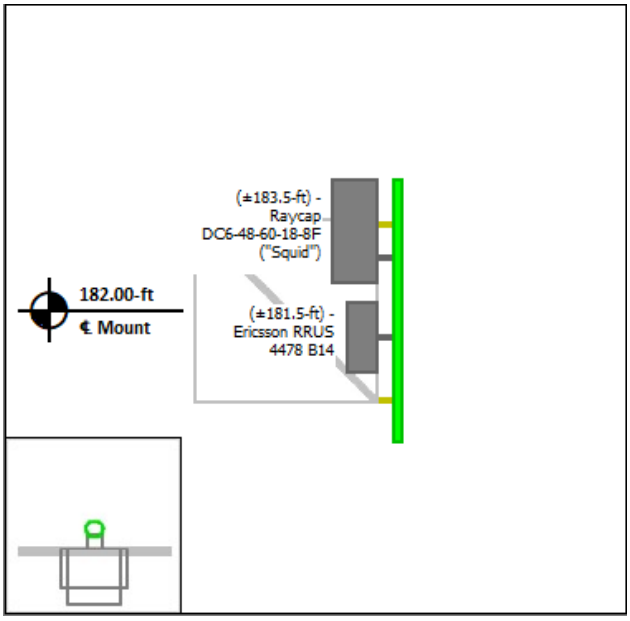
Mount Pipe B



Mount Pipe C

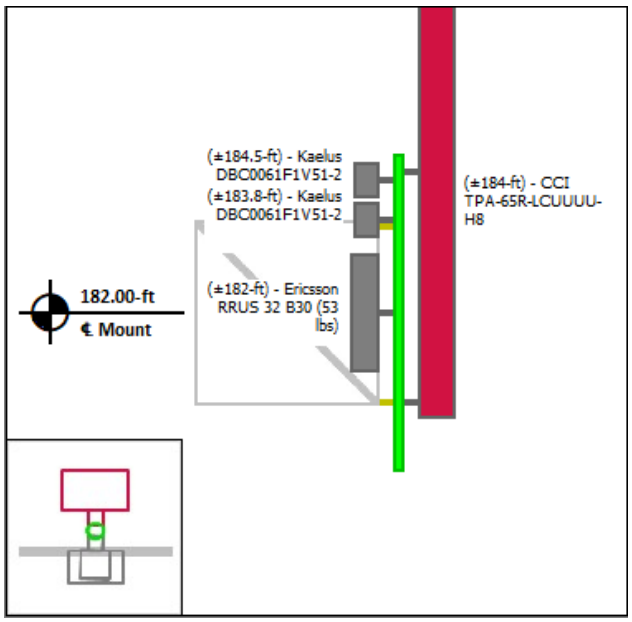


Mount Pipe D

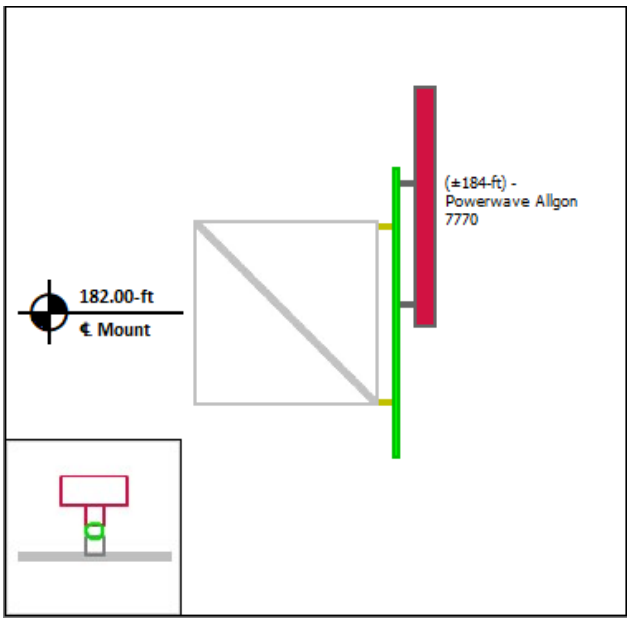


Equipment Layout Cont'd.

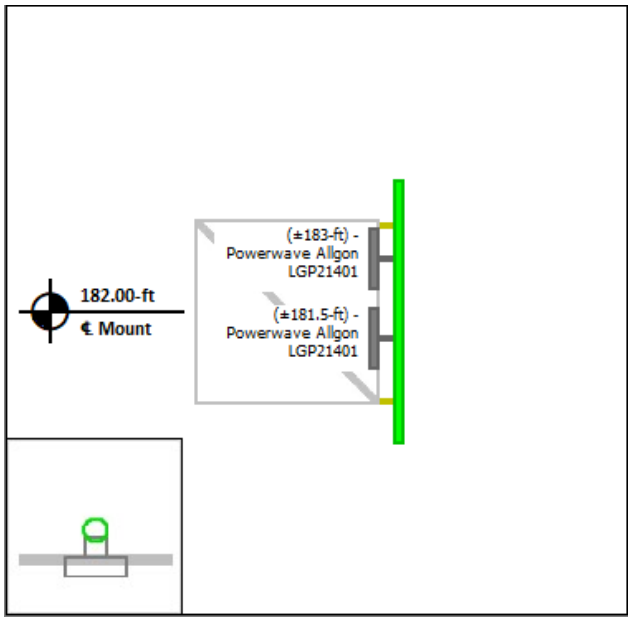
Mount Pipe E



Mount Pipe F



Mount Pipe G



Standard Conditions

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

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

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

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

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

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

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

AMERICAN TOWER®
CORPORATION

Site Number:	*302522*
Project Number:	*13222841_C8_01*
Carrier:	*AT&T Mobility*
Mount Elevation:	*182 ft*
Date:	6/22/2020

Mount Analysis Force Calculations

Wind & Ice Load Calculations			
Velocity Pressure Coefficient	K_z	1.17	
Topographic Factor	K_{zt}	1.00	
Rooftop Wind Speed-up Factor	K_s	1.00	
Shielding Factor	K_a	0.90	
Ground Elevation Factor	K_e	1.00	
Wind Direction Probability Factor	K_d	0.95	
Basic Wind Speed	V	116	mph
Velocity Pressure	q_z	38.4	psf
Height Escalation Factor	K_{iz}	1.19	
Thickness of Radial Glaze Ice	T_{iz}	1.19	in

Seismic Load Calculations			
Short Period DSRAP	S_{DS}	0.251	
1 Second DSRAP	S_{D1}	0.091	
Importance Factor	I	1.0	
Response Modification Coefficient	R	2.0	
Seismic Response Coefficient	C_S	0.125	
Amplification Factor	A	1.0	
Total Weight	W	1062.5	lbs
Total Shear Force	V_S	133.2	lbs
Horizontal Seismic Load	Eh	133.2	lbs
Vertical Seismic Load	Ev	53.3	lbs

Antenna Calculations

Equipment	Height	Width	Depth	Weight	EPA_N	EPA_T	EPA_{Ni}	EPA_{Ti}
Model #	in	in	in	lbs	sqft	sqft	sqft	sqft
CCI DMP65R-BU8D	96.0	20.7	7.7	95.7	17.87	3.08	20.41	4.13
CCI OPA65R-BU6D	71.2	21.0	7.8	63.2	N/A	N/A		
CCI DMP65R-BU6DA	71.2	20.7	7.7	79.4	N/A	N/A		
CCI OPA65R-BU8D	96.0	21.0	7.8	76.5	18.09	3.12	20.63	4.17
Powerwave Allgon 7770	55.0	11.0	5.0	35.0	5.51	1.43	6.99	2.20
Quintel QS66512-2	72.0	12.0	9.6	111.0	N/A	N/A		
CCI TPA-65R-LCUUUU-H8	96.0	14.4	8.6	81.6	13.30	3.44	15.87	4.50
Powerwave Allgon LGP21401	14.4	9.2	2.6	14.1	1.10	0.20	1.62	0.44
Kaelus DBC0061F1V51-2	8.0	6.5	6.2	25.5	0.43	0.41	0.77	0.74
Raycap DC6-48-60-18-8F ("Squid")	24.0	11.0	11.0	31.8	2.20	2.20	2.94	2.94
Raycap DC6-48-60-18-8C	20.1	18.2	6.4	16.0	N/A	N/A		
Ericsson RRUS 32 B30 (53 lbs)	27.2	12.1	7.0	53.0	2.74	1.67	3.57	2.43
Ericsson RRUS 32 B2	27.2	12.1	7.0	53.0	2.74	1.67	3.57	2.43
Ericsson RRUS 4449 B5, B12	17.9	13.2	9.4	71.0	1.97	1.40	2.63	1.99
Ericsson RRUS 4478 B14	16.5	13.4	7.7	59.9	1.84	1.06	2.48	1.58
PCTEL GPS-TMG-HR-26N	5.0	3.2	3.2	0.6	N/A	N/A		

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N001	96	96	96	0	
2	N002	145.5	96	156	0	
3	N003	46.5	96	156	0	
4	N004	186	96	156	0	
5	N005	6	96	156	0	
6	N006	93	96	99	0	
7	N007	99	96	99	0	
8	N008	96	54	96	0	
9	N009	145.5	54	156	0	
10	N010	46.5	54	156	0	
11	N011	186	54	156	0	
12	N012	6	54	156	0	
13	N013	93	54	99	0	
14	N014	99	54	99	0	
15	N015	89.20724	96	103.64919	0	
16	N016	89.20724	54	103.64919	0	
17	N017	70.243438	96	126.895141	0	
18	N018	70.243438	54	126.895141	0	
19	N019	51.279636	96	150.141091	0	
20	N020	51.279636	54	150.141091	0	
21	N021	102.79276	96	103.64919	0	
22	N022	102.79276	54	103.64919	0	
23	N023	121.756562	96	126.895141	0	
24	N024	121.756562	54	126.895141	0	
25	N025	140.720364	96	150.141091	0	
26	N026	140.720364	54	150.141091	0	
27	N027	19.5	75	75	0	
28	N028	140.720364	93	150.141091	0	
29	N029	140.720364	57	150.141091	0	
30	N030	51.279636	93	150.141091	0	
31	N031	51.279636	57	150.141091	0	
32	N032	51.279636	75	150.141091	0	
33	N033	183	96	159	0	
34	N034	9	96	159	0	
35	N035	96	96	159	0	
36	N036	183	96	156	0	
37	N037	183	54	159	0	
38	N038	183	54	156	0	
39	N039	96	96	156	0	
40	N040	96	54	159	0	
41	N041	96	54	156	0	
42	N042	9	96	156	0	
43	N043	9	54	159	0	
44	N044	9	54	156	0	
45	N045	183	102	162	0	
46	N046	96	102	162	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
47	N047	9	102	162	0	
48	N048	183	102	159	0	
49	N049	183	60	162	0	
50	N050	183	60	159	0	
51	N051	96	102	159	0	
52	N052	96	60	162	0	
53	N053	96	60	159	0	
54	N054	9	102	159	0	
55	N055	9	60	162	0	
56	N056	9	60	159	0	
57	N057	51	96	159	0	
58	N058	51	96	156	0	
59	N059	51	54	159	0	
60	N060	51	54	156	0	
61	MP1t	183	105.75	159	0	
62	MP1b	183	45.75	159	0	
63	MP2t	9	105.75	159	0	
64	MP2b	9	45.75	159	0	
65	MP3t	96	105.75	159	0	
66	MP3b	96	45.75	159	0	
67	MP4t	183	114.75	162	0	
68	MP4b	183	48.75	162	0	
69	MP5t	96	114.75	162	0	
70	MP5b	96	48.75	162	0	
71	MP6t	9	114.75	162	0	
72	MP6b	9	48.75	162	0	
73	MP7t	51	111.75	159	0	
74	MP7b	51	39.75	159	0	
75	NAL1	0	138.75	186	0	
76	NAL2	0	33.75	186	0	
77	NAL3	192	138.75	186	0	
78	NAL4	192	33.75	186	0	
79	NAL5	192	138.75	51	0	
80	NAL6	192	33.75	51	0	

Joint Boundary Conditions

	Joint Label	X [lb/in]	Y [lb/in]	Z [lb/in]	X Rot.[k-in/rad]	Y Rot.[k-in/rad]	Z Rot.[k-in/rad]
1	N001	Reaction	Reaction	Reaction	Reaction		Reaction
2	N008	Reaction	Reaction	Reaction	Reaction		Reaction
3	N027	Reaction	Reaction	Reaction			

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	H001	N004	N005			HSS2.875X0.1...	Beam	None	A500 Gr. ...	Typical
2	H002	N007	N002			HSS2.375X0.1...	Beam	None	A572-50	Typical
3	H003	N006	N003			HSS2.375X0.1...	Beam	None	A572-50	Typical
4	H004	N011	N012			HSS2.875X0.1...	Beam	None	A500 Gr. ...	Typical
5	H005	N008	N013		90	PL 3.5x0.35	Beam	None	A36	Typical
6	H006	N008	N014		90	PL 3.5x0.35	Beam	None	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
7	H007	N014	N009			HSS2.375X0.1...	Beam	None	A572-50	Typical
8	H008	N013	N010			HSS2.375X0.1...	Beam	None	A572-50	Typical
9	H009	N001	N007		90	PL 3.5x0.35	Beam	None	A36	Typical
10	H010	N001	N006		90	PL 3.5x0.35	Beam	None	A36	Typical
11	V011	N015	N016			P1.5x0.065	Column	None	A500 Gr. ...	Typical
12	V012	N017	N018			P1.5x0.065	Column	None	A500 Gr. ...	Typical
13	D013	N015	N018			P1.5x0.065	Column	None	A500 Gr. ...	Typical
14	D014	N017	N020			P1.5x0.065	Column	None	A500 Gr. ...	Typical
15	V015	N023	N024			P1.5x0.065	Column	None	A500 Gr. ...	Typical
16	V016	N021	N022			P1.5x0.065	Column	None	A500 Gr. ...	Typical
17	D017	N021	N024			P1.5x0.065	Column	None	A500 Gr. ...	Typical
18	D018	N023	N026			P1.5x0.065	Column	None	A500 Gr. ...	Typical
19	TB019	N032	N027			HSS2.375X0.1...	Beam	None	A500 Gr. ...	Typical
20	V020	N028	N029			HSS2.375X0.1...	Column	None	A500 Gr. ...	Typical
21	V021	N025	N028		50	PL3.5x0.375	Column	None	A36	Typical
22	V022	N029	N026		50	PL3.5x0.375	Column	None	A36	Typical
23	V023	N019	N030		120	PL3.5x0.375	Column	None	A36	Typical
24	V024	N030	N031			HSS2.375X0.1...	Column	None	A500 Gr. ...	Typical
25	V025	N020	N031		60	PL3.5x0.375	Column	None	A36	Typical
26	U026	N033	N036			(2) 1/2 U-Bolts	Beam	None	A36	Typical
27	U027	N037	N038			(2) 1/2 U-Bolts	Beam	None	A36	Typical
28	U028	N035	N039			(2) 1/2 U-Bolts	Beam	None	A36	Typical
29	U029	N040	N041			(2) 1/2 U-Bolts	Beam	None	A36	Typical
30	U030	N034	N042			(2) 1/2 U-Bolts	Beam	None	A36	Typical
31	U031	N043	N044			(2) 1/2 U-Bolts	Beam	None	A36	Typical
32	U032	N045	N048			(1) 5/8 U-Bolt	Beam	None	A36	Typical
33	U033	N049	N050			(1) 5/8 U-Bolt	Beam	None	A36	Typical
34	U034	N046	N051			(1) 5/8 U-Bolt	Beam	None	A36	Typical
35	U035	N052	N053			(1) 5/8 U-Bolt	Beam	None	A36	Typical
36	U036	N047	N054			(1) 5/8 U-Bolt	Beam	None	A36	Typical
37	U037	N055	N056			(1) 5/8 U-Bolt	Beam	None	A36	Typical
38	U038	N057	N058			(2) 1/2 U-Bolts	Beam	None	A36	Typical
39	U039	N059	N060			(2) 1/2 U-Bolts	Beam	None	A36	Typical
40	MP1	MP1t	MP1b			HSS2.375X0.1...	Column	None	A500 Gr. ...	Typical
41	MP2	MP2t	MP2b			HSS2.375X0.1...	Column	None	A500 Gr. ...	Typical
42	MP3	MP3t	MP3b			HSS2.375X0.1...	Column	None	A500 Gr. ...	Typical
43	MP4	MP4t	MP4b			HSS1.900X0.1...	Column	None	A500 Gr. ...	Typical
44	MP5	MP5t	MP5b			HSS1.900X0.1...	Column	None	A500 Gr. ...	Typical
45	MP6	MP6t	MP6b			HSS1.900X0.1...	Column	None	A500 Gr. ...	Typical
46	MP7	MP7t	MP7b			PIPE_2.0	Column	None	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic ...
1	H001						Yes				None
2	H002						Yes				None
3	H003						Yes				None
4	H004						Yes				None
5	H005						Yes				None
6	H006						Yes				None
7	H007						Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
8	H008						Yes				None
9	H009						Yes				None
10	H010						Yes				None
11	V011	BenPIN	BenPIN				Yes	** NA **			None
12	V012	BenPIN	BenPIN				Yes	** NA **			None
13	D013	BenPIN	BenPIN				Yes	** NA **			None
14	D014	BenPIN	BenPIN				Yes	** NA **			None
15	V015	BenPIN	BenPIN				Yes	** NA **			None
16	V016	BenPIN	BenPIN				Yes	** NA **			None
17	D017	BenPIN	BenPIN				Yes	** NA **			None
18	D018	BenPIN	BenPIN				Yes	** NA **			None
19	TB019	BenPIN					Yes				None
20	V020						Yes	** NA **			None
21	V021	BenPIN					Yes	** NA **			None
22	V022		BenPIN				Yes	** NA **			None
23	V023	BenPIN					Yes	** NA **			None
24	V024						Yes	** NA **			None
25	V025	BenPIN					Yes	** NA **			None
26	U026						Yes			Exclude	None
27	U027						Yes			Exclude	None
28	U028						Yes			Exclude	None
29	U029						Yes			Exclude	None
30	U030						Yes			Exclude	None
31	U031						Yes			Exclude	None
32	U032	OOOXOX					Yes			Exclude	None
33	U033	OOOXOX					Yes			Exclude	None
34	U034	OOOXOX					Yes			Exclude	None
35	U035	OOOXOX					Yes			Exclude	None
36	U036	OOOXOX					Yes			Exclude	None
37	U037	OOOXOX					Yes			Exclude	None
38	U038						Yes			Exclude	None
39	U039						Yes			Exclude	None
40	MP1						Yes	** NA **			None
41	MP2						Yes	** NA **			None
42	MP3						Yes	** NA **			None
43	MP4						Yes	** NA **			None
44	MP5						Yes	** NA **			None
45	MP6						Yes	** NA **			None
46	MP7						Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	H001	HSS2.875X...	180						1	1		Lateral
2	H002	HSS2.375X...	73.561						.65	.65		Lateral
3	H003	HSS2.375X...	73.561						.65	.65		Lateral
4	H004	HSS2.875X...	180						1	1		Lateral
5	H005	PL 3.5x0.35	4.243						1	1		Lateral
6	H006	PL 3.5x0.35	4.243						1	1		Lateral
7	H007	HSS2.375X...	73.561						.65	.65		Lateral
8	H008	HSS2.375X...	73.561						.65	.65		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
9	H009	PL 3.5x0.35	4.243						1	1		Lateral
10	H010	PL 3.5x0.35	4.243						1	1		Lateral
11	V011	P1.5x0.065	42						1	1		Lateral
12	V012	P1.5x0.065	42						1	1		Lateral
13	D013	P1.5x0.065	51.614						1	1		Lateral
14	D014	P1.5x0.065	51.614						1	1		Lateral
15	V015	P1.5x0.065	42						1	1		Lateral
16	V016	P1.5x0.065	42						1	1		Lateral
17	D017	P1.5x0.065	51.614						1	1		Lateral
18	D018	P1.5x0.065	51.614						1	1		Lateral
19	TB019	HSS2.375X...	81.585						1	1		Lateral
20	V020	HSS2.375X...	36						.65	.65		Lateral
21	V021	PL3.5x0.375	3						2.1	2.1		Lateral
22	V022	PL3.5x0.375	3						2.1	2.1		Lateral
23	V023	PL3.5x0.375	3						2.1	2.1		Lateral
24	V024	HSS2.375X...	36						.65	.65		Lateral
25	V025	PL3.5x0.375	3						2.1	2.1		Lateral
26	U026	(2) 1/2 U-B...	3						.5	.5		Lateral
27	U027	(2) 1/2 U-B...	3						.5	.5		Lateral
28	U028	(2) 1/2 U-B...	3						.5	.5		Lateral
29	U029	(2) 1/2 U-B...	3						.5	.5		Lateral
30	U030	(2) 1/2 U-B...	3						.5	.5		Lateral
31	U031	(2) 1/2 U-B...	3						.5	.5		Lateral
32	U032	(1) 5/8 U-Bolt	3						.5	.5		Lateral
33	U033	(1) 5/8 U-Bolt	3						.5	.5		Lateral
34	U034	(1) 5/8 U-Bolt	3						.5	.5		Lateral
35	U035	(1) 5/8 U-Bolt	3						.5	.5		Lateral
36	U036	(1) 5/8 U-Bolt	3						.5	.5		Lateral
37	U037	(1) 5/8 U-Bolt	3						.5	.5		Lateral
38	U038	(2) 1/2 U-B...	3						.5	.5		Lateral
39	U039	(2) 1/2 U-B...	3						.5	.5		Lateral
40	MP1	HSS2.375X...	60						2.1	2.1		Lateral
41	MP2	HSS2.375X...	60						2.1	2.1		Lateral
42	MP3	HSS2.375X...	60						2.1	2.1		Lateral
43	MP4	HSS1.900X...	66						2.1	2.1		Lateral
44	MP5	HSS1.900X...	66						2.1	2.1		Lateral
45	MP6	HSS1.900X...	66						2.1	2.1		Lateral
46	MP7	PIPE_2.0	72						2.1	2.1		Lateral

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm (/1E...	Density[lb/f...	Yield[psi]	Ry	Fu[psi]	Rt
1	A36	2.9e+7	1.115e+7	.3	.65	490	36000	1.5	58000	1.2
2	A572-50	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
3	A500 Gr. B [RND]	2.9e+7	1.115e+7	.3	.65	527	42000	1.4	58000	1.3
4	A500 Gr. B [SQR]	2.9e+7	1.115e+7	.3	.65	527	46000	1.4	58000	1.3
5	A500 Gr. C	2.9e+7	1.115e+7	.3	.65	190	46000	1.4	62000	1.3
6	A1085	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
7	A53 Gr. B	2.9e+7	1.115e+7	.3	.65	490	35000	1.6	60000	1.2
8	A992	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
9	SAE J429 Gr. 2	2.9e+7	1.115e+7	.3	.65	490	57000	1.1	74000	1.1

Joint Loads and Enforced Displacements (BLC 18 : Lv (7))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N004	L	Y	-250

Joint Loads and Enforced Displacements (BLC 19 : Lm (1))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP1t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 20 : Lm (2))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP2t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 21 : Lm (3))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP3t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 22 : Lm (4))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP4t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 23 : Lm (5))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP5t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 24 : Lm (6))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP6t	L	Y	-500

Joint Loads and Enforced Displacements (BLC 25 : Lm (7))

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	MP7t	L	Y	-500

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-53	14.25
2	MP1	Y	-71	41.25
3	MP2	Y	-14.1	17.25
4	MP2	Y	-14.1	35.25
5	MP3	Y	-31.8	17.25
6	MP3	Y	-59.9	35.25
7	MP4	Y	-47.85	2.85
8	MP4	Y	-47.85	52.5
9	MP5	Y	-38.25	2.85
10	MP5	Y	-38.25	52.5
11	MP6	Y	-17.5	3
12	MP6	Y	-17.5	30.25
13	MP7	Y	-40.8	3.45
14	MP7	Y	-40.8	55.5

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
15	MP7	Y	-53	35.25
16	MP7	Y	-25.5	5.25
17	MP7	Y	-25.5	14.25

Member Point Loads (BLC 2 : Ice)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-56.59	14.25
2	MP1	Y	-49.563	41.25
3	MP2	Y	-20.574	17.25
4	MP2	Y	-20.574	35.25
5	MP3	Y	-60.054	17.25
6	MP3	Y	-42.946	35.25
7	MP4	Y	-125.27	2.85
8	MP4	Y	-125.27	52.5
9	MP5	Y	-126.99	2.85
10	MP5	Y	-126.99	52.5
11	MP6	Y	-43.603	3
12	MP6	Y	-43.603	30.25
13	MP7	Y	-102.991	3.45
14	MP7	Y	-102.991	55.5
15	MP7	Y	-56.59	35.25
16	MP7	Y	-15.464	5.25
17	MP7	Y	-15.464	14.25

Member Point Loads (BLC 3 : Wind -Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-95.02	14.25
2	MP1	Z	-68.216	41.25
3	MP2	Z	-38.248	17.25
4	MP2	Z	-38.248	35.25
5	MP3	Z	-76.219	17.25
6	MP3	My	38.11	17.25
7	MP3	Z	-63.834	35.25
8	MP4	Z	-551.809	2.85
9	MP4	Z	-67.339	52.5
10	MP5	Z	-558.533	2.85
11	MP5	Z	-68.16	52.5
12	MP6	Z	-154.075	3
13	MP6	Z	-36.768	30.25
14	MP7	Z	-391.665	3.45
15	MP7	Z	-69.039	55.5
16	MP7	Z	-47.51	35.25
17	MP7	Z	-7.506	5.25
18	MP7	Z	-7.63	14.25

Member Point Loads (BLC 4 : Wind -X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-57.792	14.25
2	MP1	X	-48.578	41.25
3	MP2	X	-6.914	17.25

Member Point Loads (BLC 4 : Wind -X) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
4	MP2	X	-6.914	35.25
5	MP3	Mz	38.11	17.25
6	MP3	X	-36.681	35.25
7	MP4	X	-95.102	2.85
8	MP4	X	-11.606	52.5
9	MP5	X	-96.337	2.85
10	MP5	X	-11.756	52.5
11	MP6	X	-40.002	3
12	MP6	X	-9.546	30.25
13	MP7	X	-101.32	3.45
14	MP7	X	-17.86	55.5
15	MP7	X	-57.792	35.25
16	MP7	X	-14.32	5.25
17	MP7	X	-14.58	14.25

Member Point Loads (BLC 5 : Wind -Z (Ice))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-28.576	14.25
2	MP1	Z	-22.953	41.25
3	MP2	Z	-17.811	17.25
4	MP2	Z	-17.811	35.25
5	MP3	My	12.814	17.25
6	MP3	Z	-22.13	35.25
7	MP4	Z	-78.529	2.85
8	MP4	Z	-9.583	52.5
9	MP5	Z	-78.547	2.85
10	MP5	Z	-9.585	52.5
11	MP6	Z	-41.356	3
12	MP6	Z	-9.869	30.25
13	MP7	Z	-75.885	3.45
14	MP7	Z	-13.376	55.5
15	MP7	Z	-14.288	35.25
16	MP7	Z	-5.785	5.25
17	MP7	Z	-5.884	14.25

Member Point Loads (BLC 6 : Wind -X (Ice))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-26.366	14.25
2	MP1	X	-20.348	41.25
3	MP2	X	-8.497	17.25
4	MP2	X	-8.497	35.25
5	MP3	Mz	12.814	17.25
6	MP3	X	-18.222	35.25
7	MP4	X	-32.411	2.85
8	MP4	X	-3.955	52.5
9	MP5	X	-32.442	2.85
10	MP5	X	-3.959	52.5
11	MP6	X	-21.548	3
12	MP6	X	-5.142	30.25
13	MP7	X	-31.179	3.45
14	MP7	X	-5.496	55.5

Member Point Loads (BLC 6 : Wind -X (Ice)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
15	MP7	X	-26.366	35.25
16	MP7	X	-11.365	5.25
17	MP7	X	-11.565	14.25

Member Point Loads (BLC 7 : Wind -Z (Working))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-6.355	14.25
2	MP1	Z	-4.563	41.25
3	MP2	Z	-2.558	17.25
4	MP2	Z	-2.558	35.25
5	MP3	My	2.549	17.25
6	MP3	Z	-4.269	35.25
7	MP4	Z	-36.908	2.85
8	MP4	Z	-4.504	52.5
9	MP5	Z	-37.357	2.85
10	MP5	Z	-4.559	52.5
11	MP6	Z	-10.305	3
12	MP6	Z	-2.459	30.25
13	MP7	Z	-26.196	3.45
14	MP7	Z	-4.618	55.5
15	MP7	Z	-3.178	35.25
16	MP7	Z	-.502	5.25
17	MP7	Z	-.51	14.25

Member Point Loads (BLC 8 : Wind -X (Working))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-3.865	14.25
2	MP1	X	-3.249	41.25
3	MP2	X	-.462	17.25
4	MP2	X	-.462	35.25
5	MP3	Mz	2.549	17.25
6	MP3	X	-2.453	35.25
7	MP4	X	-6.361	2.85
8	MP4	X	-.776	52.5
9	MP5	X	-6.443	2.85
10	MP5	X	-.786	52.5
11	MP6	X	-2.675	3
12	MP6	X	-.638	30.25
13	MP7	X	-6.777	3.45
14	MP7	X	-1.195	55.5
15	MP7	X	-3.865	35.25
16	MP7	X	-.958	5.25
17	MP7	X	-.975	14.25

Member Point Loads (BLC 12 : Lv (1))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H001	Y	-250	%50

Member Point Loads (BLC 13 : Lv (2))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

Member Point Loads (BLC 13 : Lv (2)) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H002	Y	-250	%50

Member Point Loads (BLC 14 : Lv (3))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H003	Y	-250	%50

Member Point Loads (BLC 15 : Lv (4))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H004	Y	-250	%50

Member Point Loads (BLC 16 : Lv (5))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H007	Y	-250	%50

Member Point Loads (BLC 17 : Lv (6))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H008	Y	-250	%50

Member Distributed Loads (BLC 2 : Ice)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Y	-6.033	-6.033	0	%100
2	H002	Y	-5.29	-5.29	0	%100
3	H003	Y	-5.29	-5.29	0	%100
4	H004	Y	-6.033	-6.033	0	%100
5	H005	Y	-2.198	-2.198	0	%100
6	H006	Y	-2.198	-2.198	0	%100
7	H007	Y	-5.29	-5.29	0	%100
8	H008	Y	-5.29	-5.29	0	%100
9	H009	Y	-1.888	-1.888	0	%100
10	H010	Y	-1.888	-1.888	0	%100
11	V011	Y	-4.228	-4.228	0	%100
12	V012	Y	-4.228	-4.228	0	%100
13	D013	Y	-4.228	-4.228	0	%100
14	D014	Y	-4.228	-4.228	0	%100
15	V015	Y	-4.228	-4.228	0	%100
16	V016	Y	-4.228	-4.228	0	%100
17	D017	Y	-4.228	-4.228	0	%100
18	D018	Y	-4.228	-4.228	0	%100
19	TB019	Y	-5.29	-5.29	0	%100
20	V020	Y	-5.29	-5.29	0	%100
21	V021	Y	-2.198	-2.198	0	%100
22	V022	Y	-2.198	-2.198	0	%100
23	V023	Y	-2.198	-2.198	0	%100
24	V024	Y	-5.29	-5.29	0	%100
25	V025	Y	-2.198	-2.198	0	%100
26	MP1	Y	-5.29	-5.29	0	%100
27	MP2	Y	-5.29	-5.29	0	%100
28	MP3	Y	-5.29	-5.29	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
29	MP4	Y	-4.584	-4.584	0	%100
30	MP5	Y	-4.584	-4.584	0	%100
31	MP6	Y	-4.584	-4.584	0	%100
32	MP7	Y	-5.29	-5.29	0	%100

Member Distributed Loads (BLC 5 : Wind -Z (Ice))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-2.622	-2.622	0	%100
2	H002	Z	-2.622	-2.622	0	%100
3	H003	Z	-2.622	-2.622	0	%100
4	H004	Z	-2.622	-2.622	0	%100
5	H005	Z	-2.622	-2.622	0	%100
6	H006	Z	-2.622	-2.622	0	%100
7	H007	Z	-2.622	-2.622	0	%100
8	H008	Z	-2.622	-2.622	0	%100
9	H009	Z	-2.622	-2.622	0	%100
10	H010	Z	-2.622	-2.622	0	%100
11	V011	Z	-2.622	-2.622	0	%100
12	V012	Z	-2.622	-2.622	0	%100
13	D013	Z	-2.622	-2.622	0	%100
14	D014	Z	-2.622	-2.622	0	%100
15	V015	Z	-2.622	-2.622	0	%100
16	V016	Z	-2.622	-2.622	0	%100
17	D017	Z	-2.622	-2.622	0	%100
18	D018	Z	-2.622	-2.622	0	%100
19	TB019	Z	-2.622	-2.622	0	%100
20	V020	Z	-2.622	-2.622	0	%100
21	V021	Z	-2.622	-2.622	0	%100
22	V022	Z	-2.622	-2.622	0	%100
23	V023	Z	-2.622	-2.622	0	%100
24	V024	Z	-2.622	-2.622	0	%100
25	V025	Z	-2.622	-2.622	0	%100
26	MP1	Z	-2.622	-2.622	0	%100
27	MP2	Z	-2.622	-2.622	0	%100
28	MP3	Z	-2.622	-2.622	0	%100
29	MP4	Z	-2.622	-2.622	0	%100
30	MP5	Z	-2.622	-2.622	0	%100
31	MP6	Z	-2.622	-2.622	0	%100
32	MP7	Z	-2.622	-2.622	0	%100

Member Distributed Loads (BLC 6 : Wind -X (Ice))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	X	-2.625	-2.625	0	%100
2	H002	X	-2.625	-2.625	0	%100
3	H003	X	-2.625	-2.625	0	%100
4	H004	X	-2.625	-2.625	0	%100
5	H005	X	-2.625	-2.625	0	%100
6	H006	X	-2.625	-2.625	0	%100
7	H007	X	-2.625	-2.625	0	%100
8	H008	X	-2.625	-2.625	0	%100
9	H009	X	-2.625	-2.625	0	%100

Member Distributed Loads (BLC 6 : Wind -X (Ice)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
10	H010	X	-2.625	-2.625	0	%100
11	V011	X	-2.625	-2.625	0	%100
12	V012	X	-2.625	-2.625	0	%100
13	D013	X	-2.625	-2.625	0	%100
14	D014	X	-2.625	-2.625	0	%100
15	V015	X	-2.625	-2.625	0	%100
16	V016	X	-2.625	-2.625	0	%100
17	D017	X	-2.625	-2.625	0	%100
18	D018	X	-2.625	-2.625	0	%100
19	TB019	X	-2.625	-2.625	0	%100
20	V020	X	-2.625	-2.625	0	%100
21	V021	X	-2.625	-2.625	0	%100
22	V022	X	-2.625	-2.625	0	%100
23	V023	X	-2.625	-2.625	0	%100
24	V024	X	-2.625	-2.625	0	%100
25	V025	X	-2.625	-2.625	0	%100
26	MP1	X	-2.625	-2.625	0	%100
27	MP2	X	-2.625	-2.625	0	%100
28	MP3	X	-2.625	-2.625	0	%100
29	MP4	X	-2.625	-2.625	0	%100
30	MP5	X	-2.625	-2.625	0	%100
31	MP6	X	-2.625	-2.625	0	%100
32	MP7	X	-2.625	-2.625	0	%100

Member Distributed Loads (BLC 9 : Ev -Y (Seismic))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Y	-.375	-.375	0	%100
2	H002	Y	-.375	-.375	0	%100
3	H003	Y	-.375	-.375	0	%100
4	H004	Y	-.375	-.375	0	%100
5	H005	Y	-.375	-.375	0	%100
6	H006	Y	-.375	-.375	0	%100
7	H007	Y	-.375	-.375	0	%100
8	H008	Y	-.375	-.375	0	%100
9	H009	Y	-.375	-.375	0	%100
10	H010	Y	-.375	-.375	0	%100
11	V011	Y	-.375	-.375	0	%100
12	V012	Y	-.375	-.375	0	%100
13	D013	Y	-.375	-.375	0	%100
14	D014	Y	-.375	-.375	0	%100
15	V015	Y	-.375	-.375	0	%100
16	V016	Y	-.375	-.375	0	%100
17	D017	Y	-.375	-.375	0	%100
18	D018	Y	-.375	-.375	0	%100
19	TB019	Y	-.375	-.375	0	%100
20	V020	Y	-.375	-.375	0	%100
21	V021	Y	-.375	-.375	0	%100
22	V022	Y	-.375	-.375	0	%100
23	V023	Y	-.375	-.375	0	%100
24	V024	Y	-.375	-.375	0	%100
25	V025	Y	-.375	-.375	0	%100

Member Distributed Loads (BLC 9 : Ev -Y (Seismic)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
26	MP1	Y	-.375	-.375	0	%100
27	MP2	Y	-.375	-.375	0	%100
28	MP3	Y	-.375	-.375	0	%100
29	MP4	Y	-.375	-.375	0	%100
30	MP5	Y	-.375	-.375	0	%100
31	MP6	Y	-.375	-.375	0	%100
32	MP7	Y	-.375	-.375	0	%100

Member Distributed Loads (BLC 10 : Eh -Z (Seismic))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-.938	-.938	0	%100
2	H002	Z	-.938	-.938	0	%100
3	H003	Z	-.938	-.938	0	%100
4	H004	Z	-.938	-.938	0	%100
5	H005	Z	-.938	-.938	0	%100
6	H006	Z	-.938	-.938	0	%100
7	H007	Z	-.938	-.938	0	%100
8	H008	Z	-.938	-.938	0	%100
9	H009	Z	-.938	-.938	0	%100
10	H010	Z	-.938	-.938	0	%100
11	V011	Z	-.938	-.938	0	%100
12	V012	Z	-.938	-.938	0	%100
13	D013	Z	-.938	-.938	0	%100
14	D014	Z	-.938	-.938	0	%100
15	V015	Z	-.938	-.938	0	%100
16	V016	Z	-.938	-.938	0	%100
17	D017	Z	-.938	-.938	0	%100
18	D018	Z	-.938	-.938	0	%100
19	TB019	Z	-.938	-.938	0	%100
20	V020	Z	-.938	-.938	0	%100
21	V021	Z	-.938	-.938	0	%100
22	V022	Z	-.938	-.938	0	%100
23	V023	Z	-.938	-.938	0	%100
24	V024	Z	-.938	-.938	0	%100
25	V025	Z	-.938	-.938	0	%100
26	MP1	Z	-.938	-.938	0	%100
27	MP2	Z	-.938	-.938	0	%100
28	MP3	Z	-.938	-.938	0	%100
29	MP4	Z	-.938	-.938	0	%100
30	MP5	Z	-.938	-.938	0	%100
31	MP6	Z	-.938	-.938	0	%100
32	MP7	Z	-.938	-.938	0	%100

Member Distributed Loads (BLC 11 : Eh -X (Seismic))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	X	-.938	-.938	0	%100
2	H002	X	-.938	-.938	0	%100
3	H003	X	-.938	-.938	0	%100
4	H004	X	-.938	-.938	0	%100
5	H005	X	-.938	-.938	0	%100
6	H006	X	-.938	-.938	0	%100

Member Distributed Loads (BLC 11 : Eh -X (Seismic)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
7	H007	X	-.938	-.938	0	%100
8	H008	X	-.938	-.938	0	%100
9	H009	X	-.938	-.938	0	%100
10	H010	X	-.938	-.938	0	%100
11	V011	X	-.938	-.938	0	%100
12	V012	X	-.938	-.938	0	%100
13	D013	X	-.938	-.938	0	%100
14	D014	X	-.938	-.938	0	%100
15	V015	X	-.938	-.938	0	%100
16	V016	X	-.938	-.938	0	%100
17	D017	X	-.938	-.938	0	%100
18	D018	X	-.938	-.938	0	%100
19	TB019	X	-.938	-.938	0	%100
20	V020	X	-.938	-.938	0	%100
21	V021	X	-.938	-.938	0	%100
22	V022	X	-.938	-.938	0	%100
23	V023	X	-.938	-.938	0	%100
24	V024	X	-.938	-.938	0	%100
25	V025	X	-.938	-.938	0	%100
26	MP1	X	-.938	-.938	0	%100
27	MP2	X	-.938	-.938	0	%100
28	MP3	X	-.938	-.938	0	%100
29	MP4	X	-.938	-.938	0	%100
30	MP5	X	-.938	-.938	0	%100
31	MP6	X	-.938	-.938	0	%100
32	MP7	X	-.938	-.938	0	%100

Member Distributed Loads (BLC 26 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-15.421	-15.421	0	180
2	H002	Z	-8.056	-8.056	0	73.561
3	H003	Z	-8.056	-8.056	0	73.561
4	H004	Z	-15.421	-15.421	0	180
5	H005	Z	-1.325	-1.325	0	4.243
6	H006	Z	-1.325	-1.325	0	4.243
7	H007	Z	-8.056	-8.056	0	73.561
8	H008	Z	-8.056	-8.056	0	73.561
9	H009	Z	-1.325	-1.325	0	4.243
10	H010	Z	-1.325	-1.325	0	4.243
11	V011	Z	-8.032	-8.032	0	42
12	V012	Z	-8.032	-8.032	0	42
13	D013	Z	-7.171	-7.171	0	51.614
14	D014	Z	-7.171	-7.171	0	51.614
15	V015	Z	-8.032	-8.032	0	42
16	V016	Z	-8.032	-8.032	0	42
17	D017	Z	-7.171	-7.171	0	51.614
18	D018	Z	-7.171	-7.171	0	51.614
19	TB019	Z	-4.964	-4.964	0	81.585
20	V020	Z	-12.744	-12.744	0	36
21	V021	Z	-13.584	-13.584	0	3
22	V022	Z	-13.584	-13.584	0	3

Member Distributed Loads (BLC 26 : BLC 3 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
23	V023	Z	-11.109	-11.109	0	3
24	V024	Z	-12.744	-12.744	0	36
25	V025	Z	-11.109	-11.109	0	3
26	MP1	Z	-12.744	-12.744	0	60
27	MP2	Z	-12.744	-12.744	0	60
28	MP3	Z	-12.744	-12.744	0	60
29	MP4	Z	-10.173	-10.173	0	66
30	MP5	Z	-10.173	-10.173	0	66
31	MP6	Z	-10.173	-10.173	0	66
32	MP7	Z	-12.717	-12.717	0	72

Member Distributed Loads (BLC 27 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H002	X	-9.875	-9.875	0	73.561
2	H003	X	-9.875	-9.875	0	73.561
3	H005	X	-1.325	-1.325	0	4.243
4	H006	X	-1.325	-1.325	0	4.243
5	H007	X	-9.875	-9.875	0	73.561
6	H008	X	-9.875	-9.875	0	73.561
7	H009	X	-1.325	-1.325	0	4.243
8	H010	X	-1.325	-1.325	0	4.243
9	V011	X	-8.032	-8.032	0	42
10	V012	X	-8.032	-8.032	0	42
11	D013	X	-7.47	-7.47	0	51.614
12	D014	X	-7.47	-7.47	0	51.614
13	V015	X	-8.032	-8.032	0	42
14	V016	X	-8.032	-8.032	0	42
15	D017	X	-7.47	-7.47	0	51.614
16	D018	X	-7.47	-7.47	0	51.614
17	TB019	X	-11.737	-11.737	0	81.585
18	V020	X	-12.744	-12.744	0	36
19	V021	X	-15.647	-15.647	0	3
20	V022	X	-15.647	-15.647	0	3
21	V023	X	-17.234	-17.234	0	3
22	V024	X	-12.744	-12.744	0	36
23	V025	X	-17.234	-17.234	0	3
24	U026	X	-5.354	-5.354	0	3
25	U027	X	-5.354	-5.354	0	3
26	U028	X	-5.354	-5.354	0	3
27	U029	X	-5.354	-5.354	0	3
28	U030	X	-5.354	-5.354	0	3
29	U031	X	-5.354	-5.354	0	3
30	U032	X	-6.693	-6.693	0	3
31	U033	X	-6.693	-6.693	0	3
32	U034	X	-6.693	-6.693	0	3
33	U035	X	-6.693	-6.693	0	3
34	U036	X	-6.693	-6.693	0	3
35	U037	X	-6.693	-6.693	0	3
36	U038	X	-5.354	-5.354	0	3
37	U039	X	-5.354	-5.354	0	3
38	MP1	X	-12.744	-12.744	0	60

Member Distributed Loads (BLC 27 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
39	MP2	X	-12.744	-12.744	0	60
40	MP3	X	-12.744	-12.744	0	60
41	MP4	X	-10.173	-10.173	0	66
42	MP5	X	-10.173	-10.173	0	66
43	MP6	X	-10.173	-10.173	0	66
44	MP7	X	-12.717	-12.717	0	72

Member Distributed Loads (BLC 28 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-2.865	-2.865	0	180
2	H002	Z	-1.497	-1.497	0	73.561
3	H003	Z	-1.497	-1.497	0	73.561
4	H004	Z	-2.865	-2.865	0	180
5	H005	Z	-.246	-.246	0	4.243
6	H006	Z	-.246	-.246	0	4.243
7	H007	Z	-1.497	-1.497	0	73.561
8	H008	Z	-1.497	-1.497	0	73.561
9	H009	Z	-.246	-.246	0	4.243
10	H010	Z	-.246	-.246	0	4.243
11	V011	Z	-1.492	-1.492	0	42
12	V012	Z	-1.492	-1.492	0	42
13	D013	Z	-1.332	-1.332	0	51.614
14	D014	Z	-1.332	-1.332	0	51.614
15	V015	Z	-1.492	-1.492	0	42
16	V016	Z	-1.492	-1.492	0	42
17	D017	Z	-1.332	-1.332	0	51.614
18	D018	Z	-1.332	-1.332	0	51.614
19	TB019	Z	-.922	-.922	0	81.585
20	V020	Z	-2.368	-2.368	0	36
21	V021	Z	-2.524	-2.524	0	3
22	V022	Z	-2.524	-2.524	0	3
23	V023	Z	-2.064	-2.064	0	3
24	V024	Z	-2.368	-2.368	0	36
25	V025	Z	-2.064	-2.064	0	3
26	MP1	Z	-2.368	-2.368	0	60
27	MP2	Z	-2.368	-2.368	0	60
28	MP3	Z	-2.368	-2.368	0	60
29	MP4	Z	-1.89	-1.89	0	66
30	MP5	Z	-1.89	-1.89	0	66
31	MP6	Z	-1.89	-1.89	0	66
32	MP7	Z	-2.363	-2.363	0	72

Member Distributed Loads (BLC 29 : BLC 6 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H002	X	-1.835	-1.835	0	73.561
2	H003	X	-1.835	-1.835	0	73.561
3	H005	X	-.246	-.246	0	4.243
4	H006	X	-.246	-.246	0	4.243
5	H007	X	-1.835	-1.835	0	73.561
6	H008	X	-1.835	-1.835	0	73.561
7	H009	X	-.246	-.246	0	4.243

Member Distributed Loads (BLC 29 : BLC 6 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
8	H010	X	-.246	-.246	0	4.243
9	V011	X	-1.492	-1.492	0	42
10	V012	X	-1.492	-1.492	0	42
11	D013	X	-1.388	-1.388	0	51.614
12	D014	X	-1.388	-1.388	0	51.614
13	V015	X	-1.492	-1.492	0	42
14	V016	X	-1.492	-1.492	0	42
15	D017	X	-1.388	-1.388	0	51.614
16	D018	X	-1.388	-1.388	0	51.614
17	TB019	X	-2.181	-2.181	0	81.585
18	V020	X	-2.368	-2.368	0	36
19	V021	X	-2.907	-2.907	0	3
20	V022	X	-2.907	-2.907	0	3
21	V023	X	-3.202	-3.202	0	3
22	V024	X	-2.368	-2.368	0	36
23	V025	X	-3.202	-3.202	0	3
24	U026	X	-.995	-.995	0	3
25	U027	X	-.995	-.995	0	3
26	U028	X	-.995	-.995	0	3
27	U029	X	-.995	-.995	0	3
28	U030	X	-.995	-.995	0	3
29	U031	X	-.995	-.995	0	3
30	U032	X	-1.244	-1.244	0	3
31	U033	X	-1.244	-1.244	0	3
32	U034	X	-1.244	-1.244	0	3
33	U035	X	-1.244	-1.244	0	3
34	U036	X	-1.244	-1.244	0	3
35	U037	X	-1.244	-1.244	0	3
36	U038	X	-.995	-.995	0	3
37	U039	X	-.995	-.995	0	3
38	MP1	X	-2.368	-2.368	0	60
39	MP2	X	-2.368	-2.368	0	60
40	MP3	X	-2.368	-2.368	0	60
41	MP4	X	-1.89	-1.89	0	66
42	MP5	X	-1.89	-1.89	0	66
43	MP6	X	-1.89	-1.89	0	66
44	MP7	X	-2.363	-2.363	0	72

Member Distributed Loads (BLC 30 : BLC 7 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H001	Z	-1.032	-1.032	0	180
2	H002	Z	-.539	-.539	0	73.561
3	H003	Z	-.539	-.539	0	73.561
4	H004	Z	-1.032	-1.032	0	180
5	H005	Z	-.089	-.089	0	4.243
6	H006	Z	-.089	-.089	0	4.243
7	H007	Z	-.539	-.539	0	73.561
8	H008	Z	-.539	-.539	0	73.561
9	H009	Z	-.089	-.089	0	4.243
10	H010	Z	-.089	-.089	0	4.243
11	V011	Z	-.537	-.537	0	42

Member Distributed Loads (BLC 30 : BLC 7 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
12	V012	Z	-.537	-.537	0	42
13	D013	Z	-.48	-.48	0	51.614
14	D014	Z	-.48	-.48	0	51.614
15	V015	Z	-.537	-.537	0	42
16	V016	Z	-.537	-.537	0	42
17	D017	Z	-.48	-.48	0	51.614
18	D018	Z	-.48	-.48	0	51.614
19	TB019	Z	-.332	-.332	0	81.585
20	V020	Z	-.852	-.852	0	36
21	V021	Z	-.909	-.909	0	3
22	V022	Z	-.909	-.909	0	3
23	V023	Z	-.743	-.743	0	3
24	V024	Z	-.852	-.852	0	36
25	V025	Z	-.743	-.743	0	3
26	MP1	Z	-.852	-.852	0	60
27	MP2	Z	-.852	-.852	0	60
28	MP3	Z	-.852	-.852	0	60
29	MP4	Z	-.681	-.681	0	66
30	MP5	Z	-.681	-.681	0	66
31	MP6	Z	-.681	-.681	0	66
32	MP7	Z	-.851	-.851	0	72

Member Distributed Loads (BLC 31 : BLC 8 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	H002	X	-.661	-.661	0	73.561
2	H003	X	-.661	-.661	0	73.561
3	H005	X	-.089	-.089	0	4.243
4	H006	X	-.089	-.089	0	4.243
5	H007	X	-.661	-.661	0	73.561
6	H008	X	-.661	-.661	0	73.561
7	H009	X	-.089	-.089	0	4.243
8	H010	X	-.089	-.089	0	4.243
9	V011	X	-.537	-.537	0	42
10	V012	X	-.537	-.537	0	42
11	D013	X	-.5	-.5	0	51.614
12	D014	X	-.5	-.5	0	51.614
13	V015	X	-.537	-.537	0	42
14	V016	X	-.537	-.537	0	42
15	D017	X	-.5	-.5	0	51.614
16	D018	X	-.5	-.5	0	51.614
17	TB019	X	-.785	-.785	0	81.585
18	V020	X	-.852	-.852	0	36
19	V021	X	-1.047	-1.047	0	3
20	V022	X	-1.047	-1.047	0	3
21	V023	X	-1.153	-1.153	0	3
22	V024	X	-.852	-.852	0	36
23	V025	X	-1.153	-1.153	0	3
24	U026	X	-.358	-.358	0	3
25	U027	X	-.358	-.358	0	3
26	U028	X	-.358	-.358	0	3
27	U029	X	-.358	-.358	0	3

Member Distributed Loads (BLC 31 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
28	U030	X	-.358	-.358	0	3
29	U031	X	-.358	-.358	0	3
30	U032	X	-.448	-.448	0	3
31	U033	X	-.448	-.448	0	3
32	U034	X	-.448	-.448	0	3
33	U035	X	-.448	-.448	0	3
34	U036	X	-.448	-.448	0	3
35	U037	X	-.448	-.448	0	3
36	U038	X	-.358	-.358	0	3
37	U039	X	-.358	-.358	0	3
38	MP1	X	-.852	-.852	0	60
39	MP2	X	-.852	-.852	0	60
40	MP3	X	-.852	-.852	0	60
41	MP4	X	-.681	-.681	0	66
42	MP5	X	-.681	-.681	0	66
43	MP6	X	-.681	-.681	0	66
44	MP7	X	-.851	-.851	0	72

Member Area Loads (BLC 3 : Wind -Z)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-64.253

Member Area Loads (BLC 4 : Wind -X)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-64.253

Member Area Loads (BLC 5 : Wind -Z (Ice))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-11.938

Member Area Loads (BLC 6 : Wind -X (Ice))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-11.938

Member Area Loads (BLC 7 : Wind -Z (Working))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL1	NAL2	NAL4	NAL3	PZ	Open Structure	-4.298

Member Area Loads (BLC 8 : Wind -X (Working))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	NAL3	NAL4	NAL6	NAL5	PX	Open Structure	-4.298

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Dead	DL		-1			17			
2	Ice	IL					17	32		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
3	Wind -Z	WLZ					18		1	
4	Wind -X	WLX					17		1	
5	Wind -Z (Ice)	WL-Z					17	32	1	
6	Wind -X (Ice)	WL-X					17	32	1	
7	Wind -Z (Working)	WLZP1					17		1	
8	Wind -X (Working)	WLXP1					17		1	
9	Ev -Y (Seismic)	ELY						32		
10	Eh -Z (Seismic)	ELZ						32		
11	Eh -X (Seismic)	ELX						32		
12	Lv (1)	LL					1			
13	Lv (2)	LL					1			
14	Lv (3)	LL					1			
15	Lv (4)	LL					1			
16	Lv (5)	LL					1			
17	Lv (6)	LL					1			
18	Lv (7)	LL				1				
19	Lm (1)	LL				1				
20	Lm (2)	LL				1				
21	Lm (3)	LL				1				
22	Lm (4)	LL				1				
23	Lm (5)	LL				1				
24	Lm (6)	LL				1				
25	Lm (7)	LL				1				
26	BLC 3 Transient Area...	None						32		
27	BLC 4 Transient Area...	None						44		
28	BLC 5 Transient Area...	None						32		
29	BLC 6 Transient Area...	None						44		
30	BLC 7 Transient Area...	None						32		
31	BLC 8 Transient Area...	None						44		

Load Combinations

	Description	Sol...	PD...	SR...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
1	1.4D	Yes	Y		DL	1.4																				
2	1.2D + 1.0...	Yes	Y		DL	1.2	W...	.001	W...	1																
3	1.2D + 1.0...	Yes	Y		DL	1.2	W...	.5	W...	.866																
4	1.2D + 1.0...	Yes	Y		DL	1.2	W...	.866	W...	.5																
5	1.2D + 1.0...	Yes	Y		DL	1.2	W...	1	W...	.001																
6	1.2D + 1.0...	Yes	Y		DL	1.2	W...	.866	W...	-.5																
7	1.2D + 1.0...	Yes	Y		DL	1.2	W...	.5	W...	-.866																
8	1.2D + 1.0...	Yes	Y		DL	1.2	W...	.001	W...	-1																
9	1.2D + 1.0...	Yes	Y		DL	1.2	W...	-.5	W...	-.866																
10	1.2D + 1.0...	Yes	Y		DL	1.2	W...	-.866	W...	-.5																
11	1.2D + 1.0...	Yes	Y		DL	1.2	W...	-1	W...	.001																
12	1.2D + 1.0...	Yes	Y		DL	1.2	W...	-.866	W...	.5																
13	1.2D + 1.0...	Yes	Y		DL	1.2	W...	-.5	W...	.866																
14	0.9D + 1.0...	Yes	Y		DL	.9	W...	.001	W...	1																
15	0.9D + 1.0...	Yes	Y		DL	.9	W...	.5	W...	.866																
16	0.9D + 1.0...	Yes	Y		DL	.9	W...	.866	W...	.5																
17	0.9D + 1.0...	Yes	Y		DL	.9	W...	1	W...	.001																
18	0.9D + 1.0...	Yes	Y		DL	.9	W...	.866	W...	-.5																

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
19	0.9D + 1.0..	Yes	Y		DL	.9	W...	.5	W...	-.866																
20	0.9D + 1.0..	Yes	Y		DL	.9	W...	.001	W...	-1																
21	0.9D + 1.0..	Yes	Y		DL	.9	W...	-.5	W...	-.866																
22	0.9D + 1.0..	Yes	Y		DL	.9	W...	-.866	W...	-.5																
23	0.9D + 1.0..	Yes	Y		DL	.9	W...	-1	W...	.001																
24	0.9D + 1.0..	Yes	Y		DL	.9	W...	-.866	W...	.5																
25	0.9D + 1.0..	Yes	Y		DL	.9	W...	-.5	W...	.866																
26	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	.001	W...	1														
27	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	.5	W...	.866														
28	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	.866	W...	.5														
29	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	1	W...	.001														
30	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	.866	W...	-.5														
31	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	.5	W...	-.866														
32	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	.001	W...	-1														
33	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	-.5	W...	-.866														
34	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	-.866	W...	-.5														
35	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	-1	W...	.001														
36	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	-.866	W...	.5														
37	1.2D + 1.0..	Yes	Y		DL	1.2	IL	1	W...	-.5	W...	.866														
38	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	1	ELX	.001														
39	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	.866	ELX	.5														
40	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	.5	ELX	.866														
41	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	.001	ELX	1														
42	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	-.5	ELX	.866														
43	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	-.866	ELX	.5														
44	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	-1	ELX	.001														
45	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	-.866	ELX	-.5														
46	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	-.5	ELX	-.866														
47	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	.001	ELX	-1														
48	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	.5	ELX	-.866														
49	1.2D + 1.0..	Yes	Y		DL	1.2	ELY	1	ELZ	.866	ELX	-.5														
50	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	1	ELX	.001														
51	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	.866	ELX	.5														
52	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	.5	ELX	.866														
53	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	.001	ELX	1														
54	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	-.5	ELX	.866														
55	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	-.866	ELX	.5														
56	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	-1	ELX	.001														
57	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	-.866	ELX	-.5														
58	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	-.5	ELX	-.866														
59	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	.001	ELX	-1														
60	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	.5	ELX	-.866														
61	0.9D + 1.0..	Yes	Y		DL	.9	ELY	1	ELZ	.866	ELX	-.5														
62	1.2D + 1.5..	Yes	Y		DL	1.2	12	1.5																		
63	1.2D + 1.5..	Yes	Y		DL	1.2	13	1.5																		
64	1.2D + 1.5..	Yes	Y		DL	1.2	14	1.5																		
65	1.2D + 1.5..	Yes	Y		DL	1.2	15	1.5																		
66	1.2D + 1.5..	Yes	Y		DL	1.2	16	1.5																		
67	1.2D + 1.5..	Yes	Y		DL	1.2	17	1.5																		
68	1.2D + 1.5..	Yes	Y		DL	1.2	18	1.5																		
69	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	.001	W...	1														
70	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	.5	W...	.866														

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
71	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	.866	W...	.5														
72	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	1	W...	.001														
73	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	.866	W...	-.5														
74	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	.5	W...	-.866														
75	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	.001	W...	-1														
76	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	-.5	W...	-.866														
77	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	-.866	W...	-.5														
78	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	-1	W...	.001														
79	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	-.866	W...	.5														
80	1.2D + 1.5..	Yes	Y		DL	1.2	19	1.5	W...	-.5	W...	.866														
81	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	.001	W...	1														
82	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	.5	W...	.866														
83	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	.866	W...	.5														
84	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	1	W...	.001														
85	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	.866	W...	-.5														
86	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	.5	W...	-.866														
87	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	.001	W...	-1														
88	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	-.5	W...	-.866														
89	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	-.866	W...	-.5														
90	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	-1	W...	.001														
91	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	-.866	W...	.5														
92	1.2D + 1.5..	Yes	Y		DL	1.2	20	1.5	W...	-.5	W...	.866														
93	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	.001	W...	1														
94	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	.5	W...	.866														
95	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	.866	W...	.5														
96	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	1	W...	.001														
97	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	.866	W...	-.5														
98	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	.5	W...	-.866														
99	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	.001	W...	-1														
100	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	-.5	W...	-.866														
101	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	-.866	W...	-.5														
102	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	-1	W...	.001														
103	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	-.866	W...	.5														
104	1.2D + 1.5..	Yes	Y		DL	1.2	21	1.5	W...	-.5	W...	.866														
105	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	.001	W...	1														
106	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	.5	W...	.866														
107	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	.866	W...	.5														
108	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	1	W...	.001														
109	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	.866	W...	-.5														
110	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	.5	W...	-.866														
111	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	.001	W...	-1														
112	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	-.5	W...	-.866														
113	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	-.866	W...	-.5														
114	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	-1	W...	.001														
115	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	-.866	W...	.5														
116	1.2D + 1.5..	Yes	Y		DL	1.2	22	1.5	W...	-.5	W...	.866														
117	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	.001	W...	1														
118	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	.5	W...	.866														
119	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	.866	W...	.5														
120	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	1	W...	.001														
121	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	.866	W...	-.5														
122	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	.5	W...	-.866														

Load Combinations (Continued)

	Description	Sol..	PD..	SR..	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
123	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	.001	W...	-1														
124	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	-.5	W...	-.866														
125	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	-.866	W...	-.5														
126	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	-1	W...	.001														
127	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	-.866	W...	.5														
128	1.2D + 1.5..	Yes	Y		DL	1.2	23	1.5	W...	-.5	W...	.866														
129	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	.001	W...	1														
130	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	.5	W...	.866														
131	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	.866	W...	.5														
132	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	1	W...	.001														
133	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	.866	W...	-.5														
134	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	.5	W...	-.866														
135	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	.001	W...	-1														
136	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	-.5	W...	-.866														
137	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	-.866	W...	-.5														
138	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	-1	W...	.001														
139	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	-.866	W...	.5														
140	1.2D + 1.5..	Yes	Y		DL	1.2	24	1.5	W...	-.5	W...	.866														
141	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	.001	W...	1														
142	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	.5	W...	.866														
143	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	.866	W...	.5														
144	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	1	W...	.001														
145	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	.866	W...	-.5														
146	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	.5	W...	-.866														
147	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	.001	W...	-1														
148	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	-.5	W...	-.866														
149	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	-.866	W...	-.5														
150	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	-1	W...	.001														
151	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	-.866	W...	.5														
152	1.2D + 1.5..	Yes	Y		DL	1.2	25	1.5	W...	-.5	W...	.866														

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N001	max	1444.932	132	1626.629	32	2160.002	14	-52.125	14	0	152	143.857	79
2		min	-1646.29	114	489.31	14	-5184.461	8	-257.906	33	0	1	-114.589	85
3	N008	max	1604.331	108	1464.698	27	4593.937	36	-52.21	14	0	152	138.456	79
4		min	-1402.16	138	455.606	21	436.915	18	-243.325	33	0	1	-111.326	85
5	N027	max	603.675	17	31.388	35	1337.138	17	0	152	0	152	0	152
6		min	-607.928	23	8.394	18	-1338.893	23	0	1	0	1	0	1
7	Totals:	max	1740.82	17	3117.131	37	3795.532	14						
8		min	-1740.82	11	959.596	14	-3795.532	8						

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

	Member	Shape	Code C...	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc [...	phi*Pnt [l...	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	H001	HSS2.875X0...	.586	39.375	8	.124	39.375		2	9413.012	55944	4000.5	4000.5	1...	H1-1b
2	H002	HSS2.375X0...	.260	73.561	2	.094	0		69	28525.759	37035	2220	2220	2...	H1-1b
3	H003	HSS2.375X0...	.246	5.364	86	.087	0		83	28525.759	37035	2220	2220	2...	H1-1b
4	H004	HSS2.875X0...	.279	39.375	116	.079	39.375		13	9413.012	55944	4000.5	4000.5	1...	H1-1b
5	H005	PL 3.5x0.35	.676	0	88	.200	0	y	82	36171.56	39690	289.406	2894.063	2...	H1-1b

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

	Member	Shape	Code C...	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc [...	phi*Pnt [l...	phi*Mn y...	phi*Mn z...	Cb	Eqn
6	H006	PL 3.5x0.35	.727	0	35	.229	0	y	69	36171.56	39690	289.406	2894.063	1....	H1-1b
7	H007	HSS2.375X0...	.279	6.13	79	.090	0		80	28525.759	37035	2220	2220	1....	H1-1b
8	H008	HSS2.375X0...	.263	6.13	82	.083	0		83	28525.759	37035	2220	2220	2....	H1-1b
9	H009	PL 3.5x0.35	.749	0	78	.234	4.243	y	69	36171.56	39690	289.406	2894.063	2....	H1-1b
10	H010	PL 3.5x0.35	.711	0	85	.198	4.243	y	83	36171.56	39690	289.406	2894.063	2....	H1-1b
11	V011	P1.5x0.065	.130	42	84	.025	0		10	7277.539	11076.612	421.915	421.915	1....	H1-1b*
12	V012	P1.5x0.065	.255	22.75	85	.022	0		11	7277.539	11076.612	421.915	421.915	1....	H1-1a
13	D013	P1.5x0.065	.235	25.807	26	.021	51.614		10	5873.701	11076.612	421.915	421.915	1....	H1-1a
14	D014	P1.5x0.065	.113	25.807	37	.018	0		4	5873.701	11076.612	421.915	421.915	1....	H1-1b
15	V015	P1.5x0.065	.278	22.75	77	.022	0		11	7277.539	11076.612	421.915	421.915	1....	H1-1a
16	V016	P1.5x0.065	.135	42	79	.025	0		10	7277.539	11076.612	421.915	421.915	1....	H1-1b*
17	D017	P1.5x0.065	.249	25.269	37	.018	51.614		10	5873.701	11076.612	421.915	421.915	1....	H1-1a
18	D018	P1.5x0.065	.226	25.269	109	.031	0		9	5873.701	11076.612	421.915	421.915	1....	H1-1a
19	TB019	HSS2.375X0...	.089	81.585	17	.004	0		11	16429.6	31109.4	1864.8	1864.8	1....	H1-1b*
20	V020	HSS2.375X0...	.028	36	112	.011	0		13	35825.941	37800	2245.95	2245.95	1....	H1-1b*
21	V021	PL3.5x0.375	.028	3	112	.077	0	y	13	35580.287	42525	332.227	3100.781	1....	H1-1b*
22	V022	PL3.5x0.375	.029	3	112	.077	3	y	13	35580.287	42525	332.227	3100.781	1....	H1-1b*
23	V023	PL3.5x0.375	.453	3	5	.070	0	y	12	35580.287	42525	332.227	3100.781	1....	H1-1b
24	V024	HSS2.375X0...	.563	18	5	.068	18		11	35825.941	37800	2245.95	2245.95	1....	H1-1b
25	V025	PL3.5x0.375	.454	3	5	.070	0	y	12	35580.287	42525	332.227	3100.781	1....	H1-1b
26	MP1	HSS2.375X0...	.363	51.25	71	.205	51.25		8	7499.104	31109.4	1864.8	1864.8	1....	H1-1b
27	MP2	HSS2.375X0...	.279	51.25	91	.062	51.25		8	7499.104	31109.4	1864.8	1864.8	1....	H1-1b
28	MP3	HSS2.375X0...	.149	9.375	14	.085	9.375		8	7499.104	31109.4	1864.8	1864.8	1....	H1-1b
29	MP4	HSS1.900X0...	.479	13.063	8	.110	13.063		8	2951.801	23587.2	1121.4	1121.4	1....	H1-1b
30	MP5	HSS1.900X0...	.504	13.063	8	.080	12.375		8	2951.801	23587.2	1121.4	1121.4	1....	H1-1b
31	MP6	HSS1.900X0...	.269	12.375	135	.037	13.063		8	2951.801	23587.2	1121.4	1121.4	1....	H1-1a
32	MP7	PIPE_2.0	.240	15.75	20	.077	15.75		2	6195.892	32130	1871.625	1871.625	1....	H1-1b

EXHIBIT 3

FILE COPY

DOCKET NO. 167 - An application of Springwich Cellular Limited Partnership for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telecommunications facility located approximately 2,000 feet east southeast of the intersection of Old Redding Road and Mountain Road with an alternate site located approximately 2,400 feet east of the intersection of Old Redding Road and Mountain Road, in the Town of Redding, Connecticut.	}	Connecticut Siting Council August 9, 1995

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 cellular telecommunications tower and equipment building at the proposed prime site and the alternate access road in Redding, 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 (Certificate) as provided by General Statutes § 16-50k be issued to Springwich Cellular Limited Partnership (Springwich) for the construction, operation, and maintenance of a cellular telecommunications tower, associated equipment, and building at the proposed prime site located approximately 2,000 feet east southeast of the intersection of Old Redding Road and Mountain Road in the Town of Redding, Connecticut.

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

1. The self-supporting lattice tower shall be no taller than necessary to provide the proposed communication service and the tower shall not exceed a height of 180 feet above ground level (AGL).

2. The Certificate holder shall prepare a Development and Management (D&M) Plan for this site and access road 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 detailed plans for the tower location and tower foundation, the placement of all antennas to be attached to the tower, equipment building, access road, utility line, and security fence; site clearing and tree trimming; and water drainage and erosion and sediment controls consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. Springwich shall provide the Council with a statement of intent and schedule to remove the existing Department of Motor Vehicle (DMV) tower on Fire Tower Road in Redding prior to submission of the D&M Plan to the Council. Springwich must arrange to have the DMV tower removed within one year of the completion of construction of Springwich's tower.

4. No salt or chemicals may be used during access road maintenance to clear snow and ice.

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

6. The Certificate holder shall provide the Council a measurement of electromagnetic radio frequency power density at such time when Springwich, the Connecticut State Police, the DMV, and the Northwest Connecticut Public Safety Communications Center broadcast equipment is fully operational. The Certificate holder shall provide the Council a remeasured report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally measured.

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

8. If the facility does not initially provide cellular or public safety services following completion of construction or if the facility permanently ceases to provide both cellular and public safety services, this Decision and Order shall be void and the Certificate holder shall dismantle the tower, remove all associated equipment, and restore the site. Reapplication for any continued or new use shall be made to the Council before any such use is made.

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 approval 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 notify the Council upon completion of construction and provide the final cost to construct the facility.

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 Danbury News Times and the Redding Pilot.

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**
Springwich Cellular Ltd. Partnership	Peter J. Tyrrell, Sr. Attorney Springwich Cellular Ltd. Partnership 227 Church St., Rm. 1021 New Haven, CT 06510

PARTIES	ITS REPRESENTATIVE
George Vermilyea and the Neighbors Opposed to the Tower ("NOT")	c/o Marie Burroughs 11 Mine Hill Rd. West Redding, CT 06893 and David Silverstone, Esq. Silverstone & Koontz, P.C. 227 Lawrence St. Hartford, CT 06106
Town of Redding	Michael N. LaVelle, Esq. Pullman & Comley, LLC 850 Main St., P.O. Box 7006 Bridgeport, CT 06601-7006
State of Connecticut, Department of Public Safety, Division of State Police	Stephen R. Sarnoski Assistant Attorney General MacKenzie Hall 110 Sherman St. Hartford, CT 06105

The Hon. John E. Stripp
State Representative
Legislative Office Building
Room 4200
Hartford, CT 06106-1591

The Hon. Judith G. Freedman
State Senator
Legislative office Building
Room 3100
Hartford, CT 06106-1591

INTERVENOR

Robert J. Kaufman
100 Old Redding Rd.
West Redding, CT 06896

CERTIFICATION

The Undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in Docket No. 167, an application of Springwich Cellular Limited Partnership for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telecommunications facility located approximately 2,000 feet east southeast of the intersection of Old Redding Road and Mountain Road with an alternate site located approximately 2,400 feet east of the intersection of Old Redding Road and Mountain Road, in the Town of Redding, Connecticut, and voted as follows to approve the prime site:

Council Members	Vote Cast
Mortimer A. Gelston Chairman	YES
Commissioner Reginald J. Smith Designee: Gerald J. Heffernan	YES
Commissioner Sidney J. Holbrook Designee: Brian Emerick	YES
William J. Huber	ABSTAIN
Gloria Dibble Pond	NO
William H. Smith	YES
Colin C. Tait	NO
Edward S. Wilensky	ABSTAIN
Dana J. Wright	ABSENT

Dated at New Britain, Connecticut, August 9, 1995.

NEW ENGLAND BUSINESS FORMS BETHEL CT. (203) 798-8410

Banton Const 8-30-96

BUILDING OFFICE

REDDING, CONNECTICUT 06875
TEL. (203) 938-2558

CERTIFICATE OF OCCUPANCY

BUILDING PERMIT NO. 8134

AUTHORIZED BY James Hennessey

DATE CERTIFICATE ISSUED _____

DATE PERMIT ISSUED August 30, 1996

PERMIT TO: Construct Communication Tower (TYPE OF IMPROVEMENT) (____) (NO.) STORY Communication Tower (PROPOSED USE) NUMBER OF DWELLING UNITS None

AT: (STREET & NO.) 100 Redding Rd. Old ZONING DISTRICT R-2

PROPERTY OWNER KAUFMAN, Robert J. ADDRESS 100 Old Redding Rd. Redding, CT 06896

ASSESSOR'S MAP # 76 BLOCK # 23 LOT # 3 LOT SIZE _____

APPLICANT Banton Construction Co., Inc. LIC # 529516 PHONE 203-934-5582

ADDRESS 25 (NO.) High St. (STREET) West Haven (CITY) CT (STATE) 06516 (ZIP CODE)

BUILDING IS TO BE _____ FEET WIDE BY _____ FEET LONG AREA OR VOLUME _____ (CUBIC / SQ. FEET)

CONSTRUCTION TYPE Masonry - Type I USE GROUP Communication

REMARKS NOTE: Additional fee for actual tower: $645. paid 9/30/96.

*Bldg. Permit Fee: $2690
C. O. Fee: 15

OWNER Robert J. Kaufman

ADDRESS 100 Old Redding Rd. Redding, CT 06896

BUILDING DEPARTMENT
TOWN OF REDDING

BY _____
JAMES HENNESSEY
Chief Building Official

DEPT. FILE COPY

EXHIBIT 4

100 OLD REDDING RD

Location	100 OLD REDDING RD	**Mblu**	35/ / 46/ C/
Acct#	3546C	**Owner**	KAUFMAN ROBERT J
Assessment	$268,400	**Appraisal**	$383,500
PID	100605	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$23,500	$360,000	$383,500
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$16,400	$252,000	$268,400

Owner of Record

Owner	KAUFMAN ROBERT J	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	100 OLD REDDING RD REDDING, CT 06896	**Book & Page**	0117/0510
		Sale Date	06/15/1983
		Instrument	XX

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
KAUFMAN ROBERT J	$0		0117/0510	XX	06/15/1983

Building Information

Building 1 : Section 1

Year Built:	
Living Area:	0
Replacement Cost:	$0
Building Percent Good:	
Replacement Cost Less Depreciation:	$0

Building Attributes

Field	Description
Style	Colonial
Model	
Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms	
Full Bathrooms	
Half Bathrooms	
Total Xtra Fixtrs	
Total Rooms	
Bath Style:	
Kitchen Style:	
Fireplaces	
Cndtn	
Whirlpool Tubs	
Usrfld 104	
Fin Bsmt Area	
Fin Bsmt Qual	
Bsmt Garages	
Num Park	
Fireplaces	
Usrfld 108	
Usrfld 102	
Usrfld 100	

Building Photo

(http://images.vgsi.com/photos/ReddingCTPhotos//default.jpg)

Building Layout

Building Layout

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend

No Data for Extra Features

Land

Land Use

Use Code	435
Description	Cell Site Vac Lnd
Zone	R-2
Neighborhood	
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0.00
Frontage	
Depth	
Assessed Value	$252,000
Appraised Value	$360,000

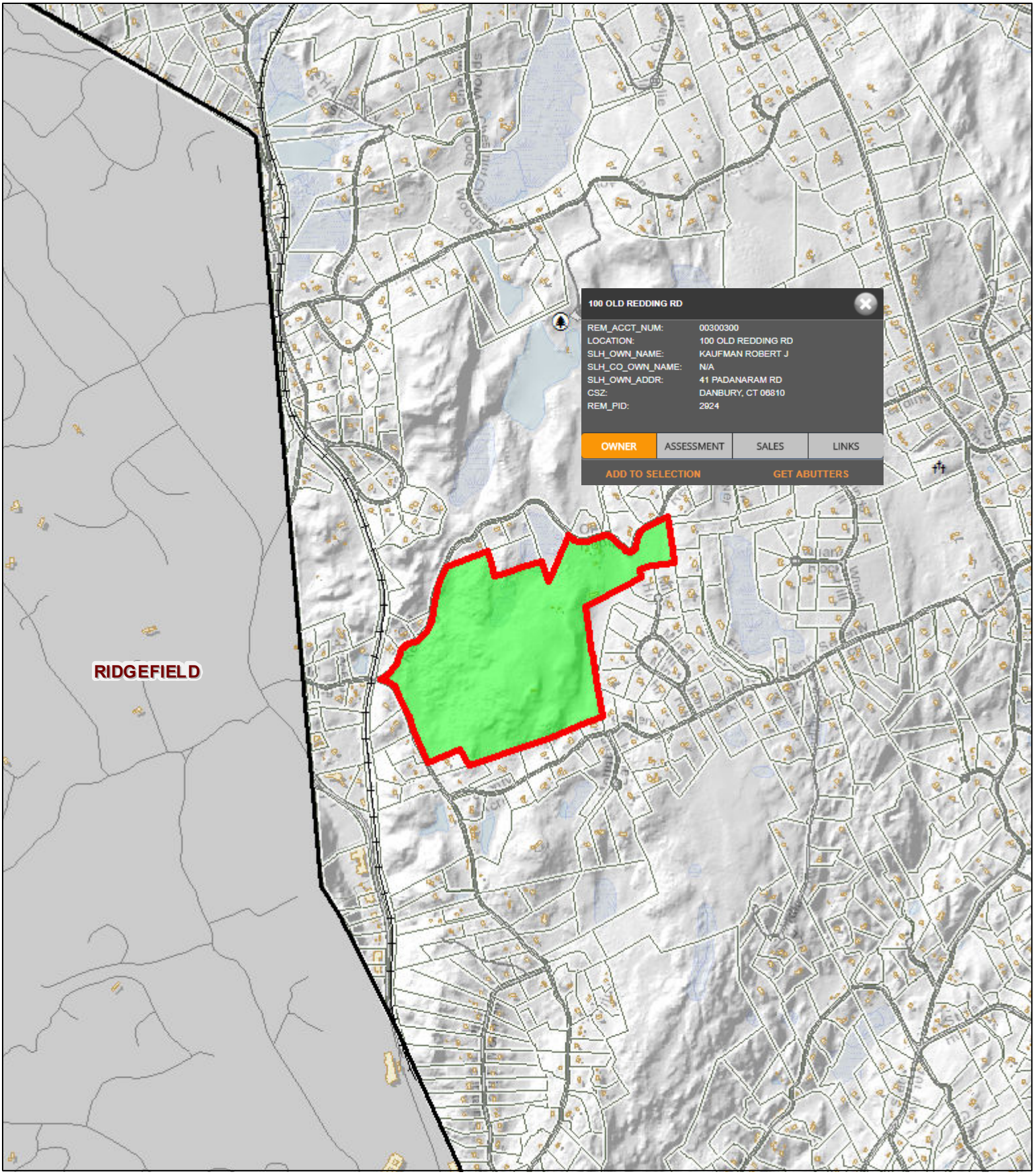
Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
SHD1	Shed	BR	Brick/Frame	1080.00 S.F.	$15,700	1
SHD1	Shed	FR	Frame	600.00 S.F.	$4,900	1
SHD1	Shed	BR	Brick/Frame	200.00 S.F.	$2,900	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$23,500	$360,000	$383,500
2017	$23,500	$360,000	$383,500
2016	$23,500	$360,000	$383,500

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$16,400	$252,000	$268,400
2017	$16,400	$252,000	$268,400
2016	$16,400	$252,000	$268,400



100 Old Redding Road

N
W E
S

0 550 1,100 2,200 Feet

EXHIBIT 5

Lawrence Behr Associates INC
www.lbagroup.com

NIER Study Report

SITE NAME:

302522 Redding

LOCATION:

Redding, Connecticut

COMPANY:

American Tower Corporation
Woburn, Massachusetts

July 9th , 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

302522 Redding

Redding, 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 302522 Redding is located at 100 Old Redding Road in Redding, Connecticut at coordinates 41.28708, -73.43819. The support structure is a 182' monopole. The installation consists of seven antenna levels with radiation centers of 66', 88', 143', 147', 160' 172' and 184' 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.

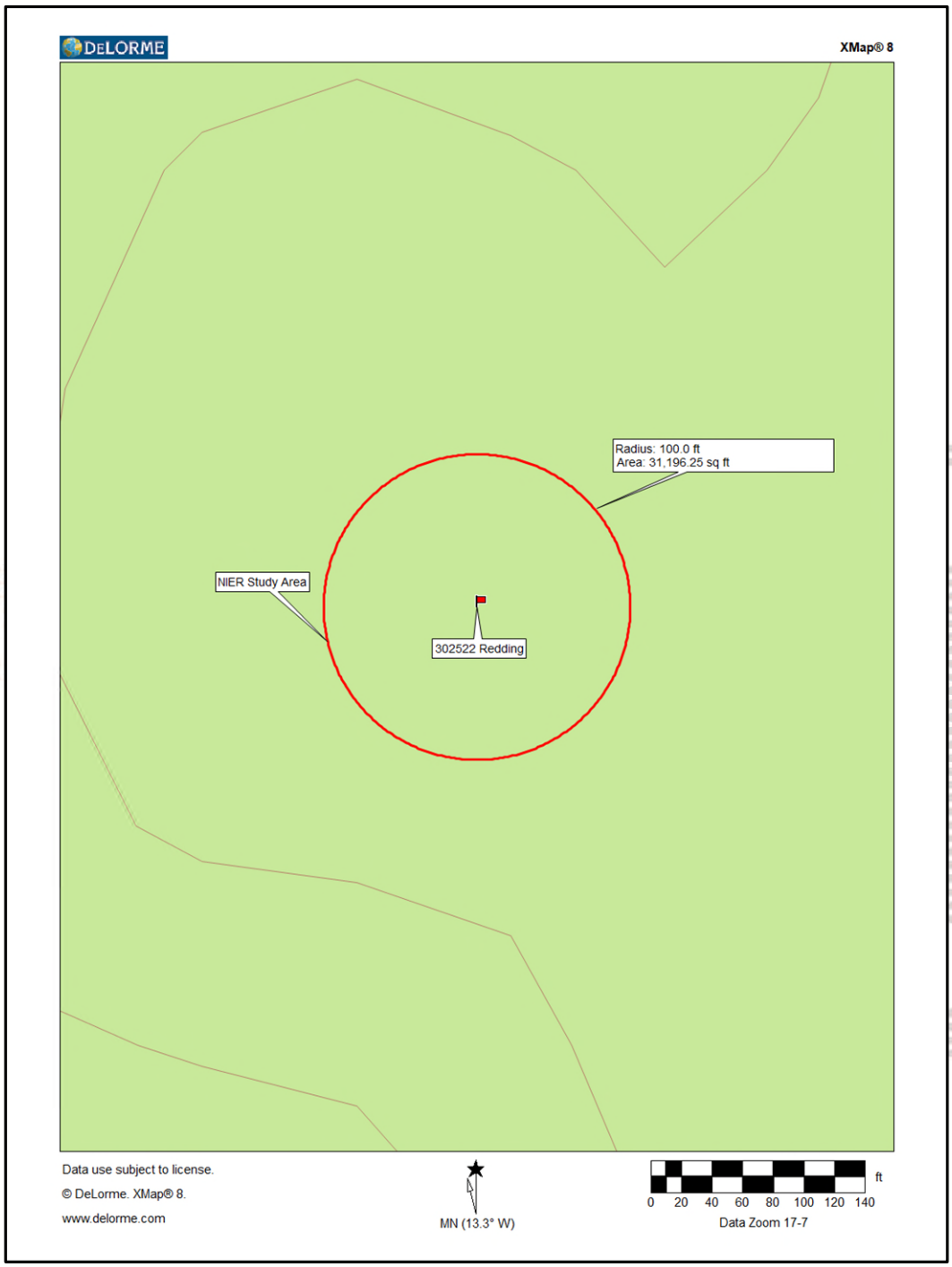
POWER DENSITY CALCULATIONS

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 9th, 2020

Kathryn G. Tesh
Wireless Services Manager

APPENDIX 1 *Topographic Map*



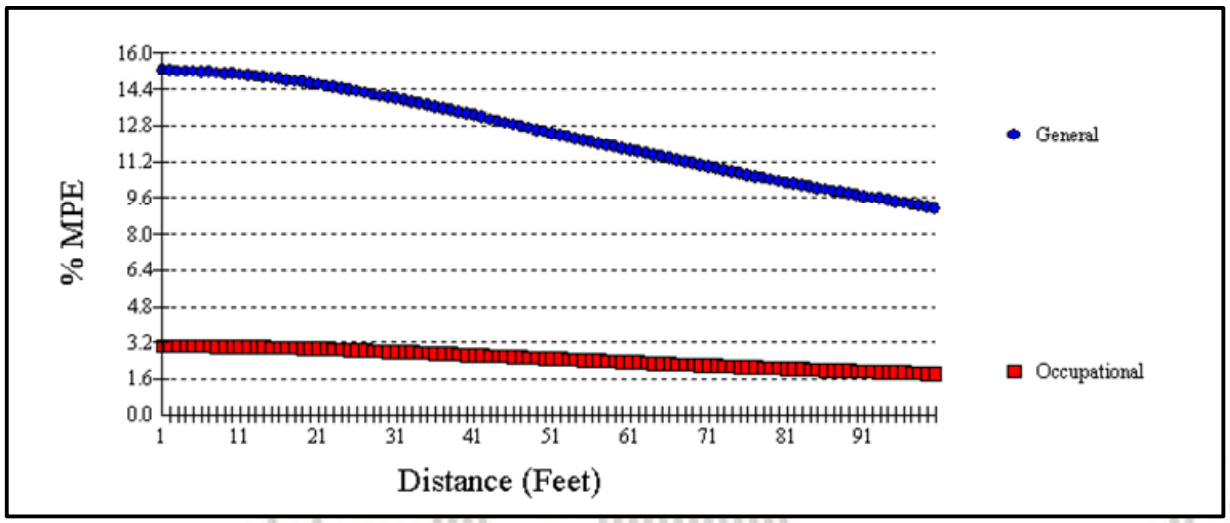
APPENDIX 2 *Satellite Photo*

APPENDIX 3 *Load List*

Proposed	Customer	RAD Height (ft)	Equipment Quantity	Equipment Type	Manufacturer	Model Number	Line Quantity	Line size	Mount Type	Azimuths	TX Power	ERP	TX Frequency	RX Frequency
No	AT&T MOBILITY	185	3	PANEL	Powerwave Allgon	7770.00	6	1 1/4" Coax	Sector Frame	23/143/263			1930-1935, 880-894	1850-1855, 835-849
No	AT&T MOBILITY	184	1	PANEL	CCI	HPA-65R-BUU-H8			Sector Frame	350				
No	AT&T MOBILITY	184	2	PANEL	Quintel	QS66512-2	4	1 1/4" Coax	Sector Frame	110/230			2345-2360, 716-728, 734-746	2305-2320, 704-716
No	AT&T MOBILITY	184	1	PANEL	CCI	TPA-65R-LCUUUU-H8	2	1 1/4" Coax	Sector Frame	350			2345-2360, 716-728, 734-746	2305-2320, 704-716
No	AT&T MOBILITY	184	2	PANEL	CCI	HPA-65R-BUU-H6			Sector Frame	110/230				
No	VERIZON WIRELESS	172	6	PANEL	Commscope	SBNHH-1D65B	6	1 5/8" Coax	Sector Frame	330/90/190			1970-1975, 2145-2155, 746-757	1745-1755, 1890-1895, 776-787
No	VERIZON WIRELESS	172	4	PANEL	Andrew	DB844G65ZAXY	4	1 5/8" Coax	Sector Frame	330/190			869-880, 890-892	824-835, 845-847
No	VERIZON WIRELESS	172	2	PANEL	RFS	APL868013-42T0	2	1 5/8" Coax	Sector Frame	90			869-880, 890-892	824-835, 845-847
No	SPRINT NEXTEL	160	1	PANEL	RFS	APXVSPP18-C-A20	1	1 1/4" Hybriflex Cable	Sector Frame	320			1950-1965, 1990-1995	1870-1885, 1910-1915, 1950-1965, 1990-1995
No	SPRINT NEXTEL	160	2	PANEL	RFS	APXVSPP18-C-A20	2	1 1/4" Hybriflex Cable	Sector Frame	70/210			1950-1965, 1990-1995	1870-1885, 1910-1915, 1950-1965, 1990-1995
No	SPRINT NEXTEL	160	3	PANEL	Commscope	DT465B-2XR			Sector Frame	320/70/210			2496-2690, 806-869	2496-2690, 806-869
No	CONNECTICUT STATE POLICE DEPT OF PUBLIC	148	2	OMNI		OGT9-840	2	1 5/8" Coax	Side Arm	280/70				
No	METRO PCS INC	147	3	PANEL	Ericsson	AIR 21, 1.3M, B4A B2P (90.4 lbs)	3	1 5/8" Coax	Sector Frame	60/180/310			1710-1755, 1850-1910	1930-1990, 2110-2155
No	METRO PCS INC	147	3	PANEL	Ericsson	AIR 21, 1.3M, B2A B4P (91.5 lbs)			Sector Frame	60/180/310				
No	METRO PCS INC	147	3	PANEL	Andrew	LNX-6515DS-VTM	3	1 5/8" Coax	Sector Frame	60/180/310				
No	CONNECTICUT STATE POLICE DEPT OF PUBLIC	143	1	OMNI		DB810K-XT	1	1 5/8" Coax	Side Arm	140			852	807
No	CONNECTICUT STATE POLICE DEPT OF PUBLIC	143	1	OMNI		SC479-HF1LDF	1	1 5/8" Coax	Side Arm	135			854	809
No	CONNECTICUT STATE POLICE DEPT OF PUBLIC	136	2	OMNI		OGT9-840	2	1 5/8" Coax	Side Arm	280/70				
No	CONNECTICUT STATE POLICE DEPT OF PUBLIC	132	2	PANEL	Generic	96" x 12" Panel	2	1 5/8" Coax	Side Arm	160				
No	CONNECTICUT STATE POLICE DEPT OF PUBLIC	118	3	OMNI		SC479-HF1LDF	3	1 5/8" Coax	Side Arm	360			854	809
Yes	CONNECTICUT STATE POLICE DEPT OF PUBLIC	100	1	OMNI		DS1F03P36D-D	2	7/8" Coax	Stand-Off	0			154	160
No	EVERSOURCE ENERGY	88	1	DIPOLE		SD210D	2	7/8" Coax	Side Arm	Dipole			217-218	219-220
No	OTHER	86	1	OMNI		12' Omni	1	7/8" Coax	Side Arm	Omni				
No	CONNECTICUT STATE POLICE DEPT OF PUBLIC	66	1	DIPOLE		DB264-A	1	7/8" Coax	Side Arm	310			154	154

APPENDIX 4

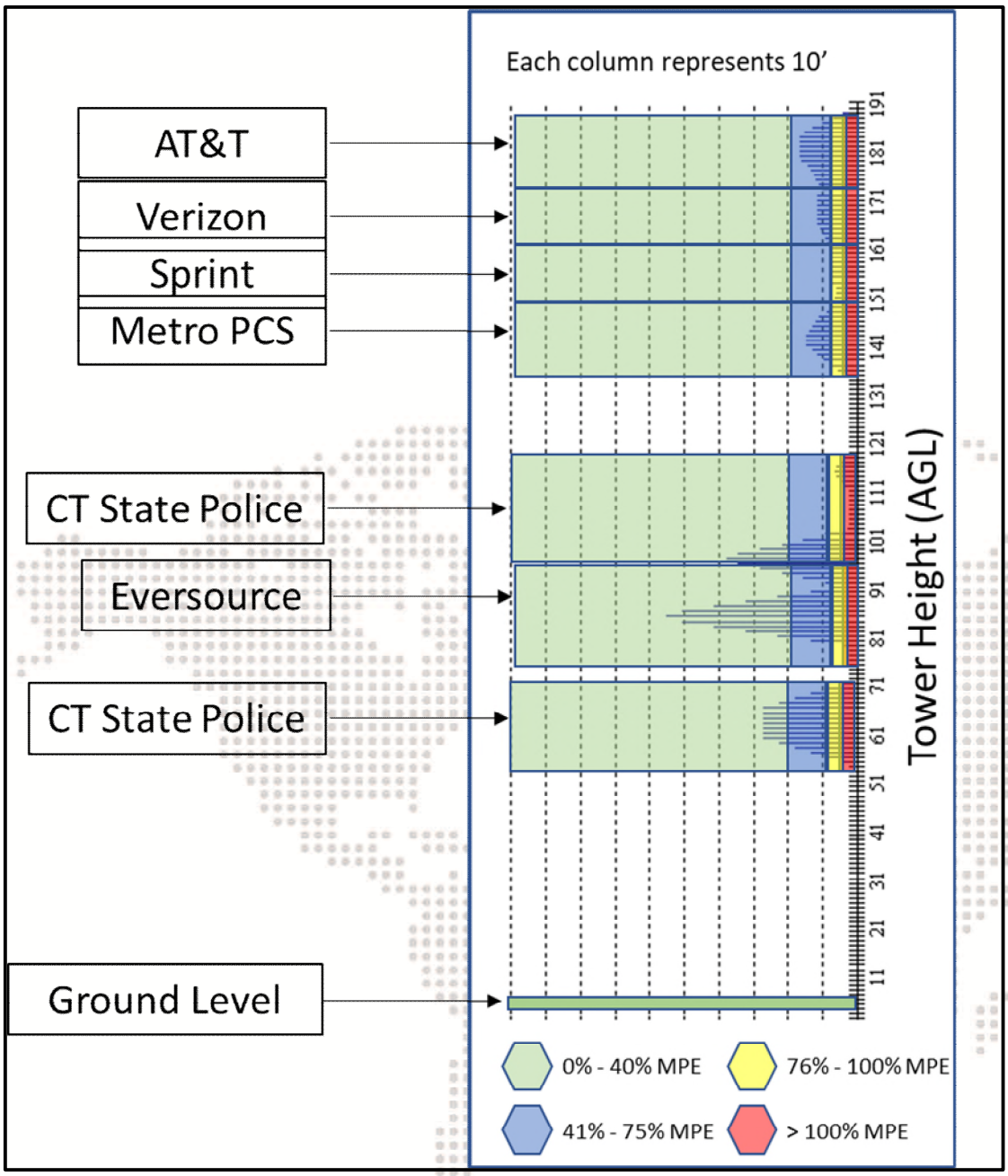
FCC OET-65 MPE Limit Study



General Population MPE (@1'):	15.2113%
Occupational MPE (@1'):	3.0423%
Maximum Power Density (@1'):	0.0595 mW/cm²

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

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**180 ft Self Supported Tower**
ATC Site Name	:	**Redding, CT**
ATC Asset Number	:	**302522**
Engineering Number	:	**13222841_C3_03**
Proposed Carrier	:	**AT&T MOBILITY**
Carrier Site Name	:	**MRCTB047220**
Carrier Site Number	:	**CTL02152**
Site Location	:	**100 Old Redding Road** **Redding, CT 06896-2721** **41.287100,-73.438200**
County	:	**Fairfield**
Date	:	**June 24, 2020**
Max Usage	:	**91%**
Result	:	**Pass**

Prepared By:
Lucas Tait
Structural Engineer I

L Tait

Reviewed By:

COA: PEC.0001553

AMERICAN TOWER®
CORPORATION

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 180 ft self supported tower to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	Rohn Drawing #C951762, dated December 26, 1995
Foundation Drawing	Rohn Drawing #A953313-1, dated January 12, 1996
Geotechnical Report	SoilTesting Job #591, dated December 26, 1995

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, Vasd) / 120 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" 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 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
184.0	6	Powerwave Allgon LGP21401	Sector Frame	(1) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (12) 1 1/4" Coax	AT&T MOBILITY
	3	Kaelus DBC0061F1V51-2			
	1	Raycap DC6-48-60-18-8F ("Squid")			
	1	Raycap DC6-48-60-18-8C			
	1	CCI TPA-65R-LCUUUU-H8			
	3	Ericsson RRUS 32 B30 (53 lbs)			
	3	Powerwave Allgon 7770.00			
	2	Quintel QS66512-2			
	3	Ericsson RRUS 32 B2			
172.0	3	Alcatel-Lucent RRH2X60-1900	Sector Frame	(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	6	RFS FD9R6004/1C-3L			
	3	Alcatel-Lucent B25 RRH4x30			
	6	Commscope SBNHH-1D65B			
	2	RFS DB-T1-6Z-8AB-0Z			
	4	Andrew DB844G65ZAXY			
	2	RFS APL868013-42T0			
	3	Alcatel-Lucent RRH2x60 700			
164.0	12	Decibel DB844H90E-XY	Sector Frame	-	SPRINT NEXTEL
157.0	3	RFS APXVSPP18-C-A20	Sector Frame	(4) 1 1/4" Hybriflex Cable	
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	Alcatel-Lucent 1900 MHz 4X45 RRH			
	3	Alcatel-Lucent 800 MHz RRH			
	3	Alcatel-Lucent RRH2x50-08			
	3	Commscope DT465B-2XR			
147.0	3	Ericsson Radio 4449 B12,B71	Sector Frame	(4) 1 1/4" Hybriflex Cable (12) 1 5/8" Coax (1) 1 5/8" Hybriflex	METRO PCS INC
	3	RFS APXVAARR24_43-U-NA20			
	6	Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs)			
143.0	1	Andrew Microwaves DB810K-XT	Side Arm	(3) 1 5/8" Coax (1) 1/2" Coax	CONNECTICUT STATE POLICE DEPT OF PUBLIC
	1	Sinclair SC479-HF1LDF			
142.0	1	Bird 432E-83I-01-T			
135.0	1	Generic 24" x 24" Ice Shield	Side Arm	(8) 1 5/8" Coax (1) 3/8" Coax (1) 1/2" Coax (2) EW63	
134.0	1	Generic 24" x 24" Ice Shield			
	2	Sinclair SE419-SF3P4LDF			
132.0	1	Bird 432-83H-01-T			
	2	Generic 96" x 12" Panel			
131.0	1	Morad VHF 156-DELUXE			
130.0	1	Amphenol Antel WPA-700120-4CF-EDIN-X			
129.0	1	RFS PA6-65AC	Side Arm		
128.0	1	RFS PA6-65AC			
125.0	1	Sinclair SE419-SF3P4LDF			
122.0	3	Sinclair SC479-HF1LDF			
120.5	1	Decibel DB586	Stand Off	(1) 7/8" Coax	EVERSOURCE ENERGY
115.5	1	Decibel DB586	Stand Off	(1) 7/8" Coax	

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
100.0	1	dbSpectra DS1F03P36D-D	Stand-Off	(2) 7/8" Coax	CONNECTICUT STATE POLICE DEPT OF PUBLIC
90.0	1	PCTEL GPS-TMG-HR-26N	Stand-Off	(1) 1/2" Coax	SPRINT NEXTEL
88.0	1	Sinclair SD210D	Side Arm	(2) 7/8" Coax	EVERSOURCE ENERGY
86.0	1	Generic 12' Omni	Side Arm	(1) 7/8" Coax	OTHER
66.0	1	Andrew DB264-A	Leg	(1) 7/8" Coax	CONNECTICUT STATE POLICE DEPT OF PUBLIC
30.0	1	Generic 2" x 4" GPS	Leg	(1) 1/2" Coax	VERIZON WIRELESS
18.0	1	PCTEL GPS-TMG-HR-26N	Leg	(1) 1/2" Coax	AT&T MOBILITY

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
184.0	3	Ericsson RRUS 11 (Band 12) (55 lb)	-	(1) 0.29" (7.5mm) Fiber (2) 0.74" (18.7mm) 8 AWG 7	AT&T MOBILITY
	1	CCI HPA-65R-BUU-H8			
	2	CCI HPA-65R-BUU-H6			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
184.0	3	Kaelus DBC0061F1V51-2	Sector Frame	(2) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (2) 2" conduit	AT&T MOBILITY
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC6-48-60-18-8C			
	2	CCI DMP65R-BU6DA			
	2	CCI OPA65R-BU6D			
	1	CCI DMP65R-BU8D			
	1	CCI OPA65R-BU8D			

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

Install proposed coax alongside existing AT&T MOBILITY coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	91%	Pass
Diagonals	82%	Pass
Horizontals	28%	Pass
Anchor Bolts	63%	Pass
Leg Bolts	66%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Uplift (Kips)	287.6	388.3	316.2	81%
Axial (Kips)	321.3	433.8	363.5	84%
Shear (Kips)	56.4	76.1	63.6	83%
* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1				

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
184.0	Kaelus DBC0061F1V51-2	AT&T MOBILITY	0.434	0.071	0.303
	Ericsson RRUS 4478 B14				
	Ericsson RRUS 4449 B5, B12				
	Raycap DC6-48-60-18-8C				
	CCI DMP65R-BU6DA				
	CCI OPA65R-BU6D				
	CCI DMP65R-BU8D				
	CCI OPA65R-BU8D				
129.0	RFS PA6-65AC	CONNECTICUT STATE POLICE DEPT OF PUBLIC	0.213	0.025	0.196
128.0	RFS PA6-65AC				

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

Standard Conditions

All engineering services 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:

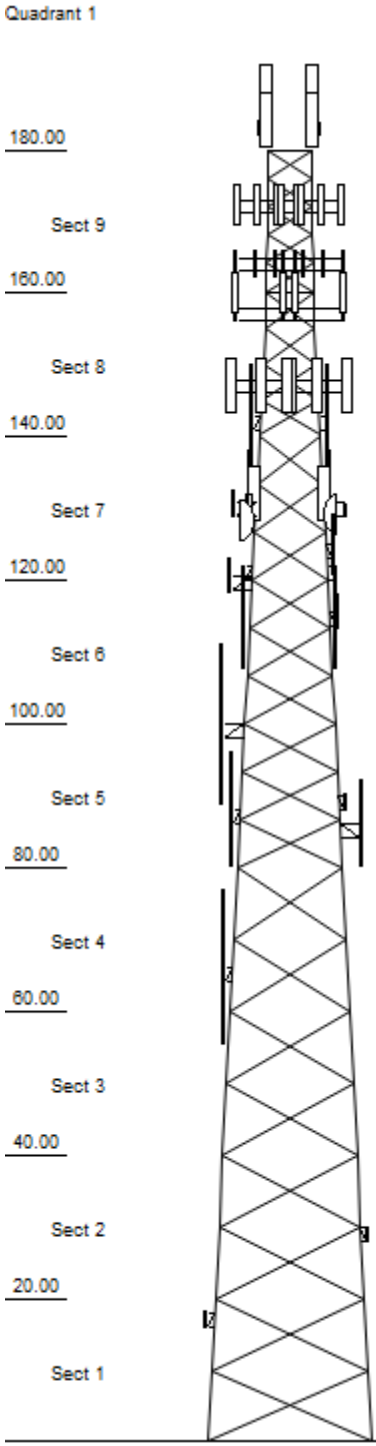
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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.



Loads: 93 mph no ice
50 mph w/ 1" radial ice
Site Class: D Ss: 0.23 S1: 0.06
60 mph Serviceability

Job Information

Client : AT&T MOBILITY			
Tower : 302522	Location : Redding, CT	Base Width :	23.00 ft
Code : ANSI/TIA-222-G		Top Width :	6.65 ft
		Tower Ht :	180.00 ft
		Shape :	Triangle

Sections Properties

Section	Leg Members	Diagonal Members	Horizontal Members
1	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 4X4X0.3125	
2	PSP 50 ksi ROHN 8 EHS	SAE 50 ksi 4X4X0.25	
3	PX 50 ksi 6" DIA PIPE	SAE 50 ksi 4X4X0.25	
4	PX 50 ksi 6" DIA PIPE	SAE 50 ksi 3.5X3.5X0.25	
5 - 6	PX 50 ksi 5" DIA PIPE	SAE 50 ksi 3X3X0.25	
7	PX 50 ksi 4" DIA PIPE	SAE 36 ksi 2.5X2.5X0.25	
8	PST 50 ksi 3" DIA PIPE	SAE 36 ksi 2X2X0.25	SAE 36 ksi 2X2X0.25
9	PST 50 ksi 2-1/2" DIA PIPE	SAE 36 ksi 1.75X1.75X0.1875	SAE 36 ksi 2X2X0.125

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
184.00	Panel	1	CCI OPA65R-BU8D
184.00	Panel	1	CCI DMP65R-BU8D
184.00	Panel	1	CCI TPA-65R-LCUUUU-H8
184.00	Panel	2	CCI OPA65R-BU6D
184.00	Panel	2	CCI DMP65R-BU6DA
184.00	Panel	2	Quintel QS66512-2
184.00	Panel	3	Powerwave Allgon 7770.00
184.00		3	Ericsson RRUS 32 B30 (53 lbs)
184.00		3	Ericsson RRUS 32 B2
184.00		1	Raycap DC6-48-60-18-8C
184.00		1	Raycap DC6-48-60-18-8C
184.00		3	Ericsson RRUS 4449 B5, B12
184.00		3	Ericsson RRUS 4478 B14
184.00		1	Raycap DC6-48-60-18-8F ("Squid
184.00		6	Powerwave Allgon LGP21401
184.00		3	Kaelus DBC0061F1V51-2
184.00		3	Kaelus DBC0061F1V51-2
180.00	Mounting Frame	3	Round Sector Frames
172.00	Mounting Frame	3	Round Sector Frame
172.00	Panel	6	Commscope SBNHH-1D65B
172.00		2	RFS DB-T1-6Z-8AB-0Z
172.00	Panel	4	Andrew DB844G65ZAXY
172.00	Panel	2	RFS APL868013-42T0
172.00		3	Alcatel-Lucent RRH2x60 700
172.00		3	Alcatel-Lucent B25 RRH4x30
172.00		3	Alcatel-Lucent RRH2X60-1900
172.00		6	RFS FD9R6004/1C-3L
164.00	Mounting Frame	3	Round Sector Frame
164.00	Panel	12	Decibel DB844H90E-XY
157.00	Mounting Frame	3	Round Sector Frames
157.00	Panel	3	Commscope DT465B-2XR
157.00	Panel	3	RFS APXVSPP18-C-A20
157.00		3	Alcatel-Lucent TD-RRH8x20-25 w
157.00		3	Alcatel-Lucent 1900 MHz 4X45 R
157.00		3	Alcatel-Lucent 800 MHz RRH
157.00		3	Alcatel-Lucent RRH2x50-08
147.00	Mounting Frame	3	Perfect Vision PV-SFA12-B Sect
147.00	Panel	3	RFS APXVAARR24_43-U-NA20
147.00	Panel	6	Ericsson AIR 21, 1.3M, B4A B2P
147.00		3	Ericsson Radio 4449 B12,B71
143.00	Whip	1	Sinclair SC479-HF1LDF
143.00	Whip	1	Andrew Microwaves DB810K-XT
142.50	Straight Arm	2	Round Side Arm
142.00		1	Bird 432E-83I-01-T
136.00	Straight Arm	2	Round Side Arm

Job Information

Client : AT&T MOBILITY

Tower : 302522 **Location :** Redding, CT **Base Width :** 23.00 ft

Code : ANSI/TIA-222-G **Top Width :** 6.65 ft

Tower Ht : 180.00 ft

Shape : Triangle

135.00	Other	1	Generic 24" x 24" Ice Shield
134.00	Whip	2	Sinclair SE419-SF3P4LDF
134.00	Other	1	Generic 24" x 24" Ice Shield
132.00	Panel	2	Generic 96" x 12" Panel
132.00		1	Bird 432-83H-01-T
131.00	Straight Arm	2	Round Side Arm
131.00	Whip	1	Morad VHF 156-DELUXE
130.00	Panel	1	Amphenol Antel WPA-700120-4CF-
129.00	Dish	1	RFS PA6-65AC
128.00	Dish	1	RFS PA6-65AC
127.00	Straight Arm	1	Round Side Arms
125.00	Whip	1	Sinclair SE419-SF3P4LDF
122.00	Whip	3	Sinclair SC479-HF1LDF
121.00	Straight Arm	1	Round Side Arm
120.50	Straight Arm	1	Stand-Off
120.50	Whip	1	Decibel DB586
115.50	Whip	1	Decibel DB586
115.00	Straight Arm	2	Stand-Off
100.00	Straight Arm	1	Stand-Off
100.00	Straight Arm	1	Generic Flat Stand-Off
100.00	Whip	1	dbSpectra DS1F03P36D-D
91.00	Straight Arm	1	Stand-Off
90.00	Whip	1	PCTEL GPS-TMG-HR-26N
88.00	Whip	1	Sinclair SD210D
86.00	Straight Arm	1	Side Arms
86.00	Whip	1	Generic 12' Omni
66.00	Whip	1	Andrew DB264-A
30.00	Whip	1	Generic 2" x 4" GPS
18.00	Whip	1	PCTEL GPS-TMG-HR-26N

Linear Appurtenance

Elev (ft) From	To	Qty	Description
0.00	184.00	2	2" conduit
0.00	184.00	12	1 1/4" Coax
0.00	184.00	2	0.78" (19.7mm) 8 AWG
0.00	184.00	2	0.78" (19.7mm) 8 AWG
0.00	184.00	2	0.39" (10mm) Fiber T
0.00	184.00	1	0.39" (10mm) Fiber T
0.00	180.00	1	Wave Guide
0.00	172.00	1	Wave Guide
0.00	172.00	2	1 5/8" Hybriflex
0.00	172.00	12	1 5/8" Coax
0.00	164.00	1	Wave Guide
0.00	157.00	4	1 1/4" Hybriflex Cab
0.00	147.00	1	Wave Guide
0.00	147.00	1	1 5/8" Hybriflex
0.00	147.00	12	1 5/8" Coax
0.00	147.00	3	1 1/4" Hybriflex Cab
0.00	147.00	1	1 1/4" Hybriflex Cab
0.00	143.00	2	1 5/8" Coax
0.00	142.50	1	Wave Guide
0.00	142.00	1	1/2" Coax
0.00	142.00	1	1 5/8" Coax
0.00	134.00	2	1 5/8" Coax
0.00	132.00	1	3/8" Coax
0.00	132.00	2	1 5/8" Coax
0.00	131.00	1	1/2" Coax
0.00	129.00	1	EW63
0.00	128.00	1	EW63
0.00	125.00	1	1 5/8" Coax

Job Information

Client :	**AT&T MOBILITY**		
Tower :	**302522**	**Location :** **Redding, CT**	**Base Width :** **23.00 ft**
Code :	**ANSI/TIA-222-G**		**Top Width :** **6.65 ft**
			Tower Ht : **180.00 ft**
			Shape : **Triangle**

0.00	122.00	3	1 5/8" Coax
0.00	120.50	1	7/8" Coax
0.00	115.50	1	7/8" Coax
0.00	100.00	2	7/8" Coax
0.00	90.00	1	1/2" Coax
0.00	88.00	2	7/8" Coax
0.00	86.00	1	7/8" Coax
0.00	66.00	1	7/8" Coax
0.00	30.00	1	1/2" Coax
0.00	18.00	1	1/2" Coax

Global Base Foundation Design Loads

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	6,827.25	62.08	63.56
DL + WL + IL	2,563.00	225.60	24.73

Individual Base Foundation Design Loads

Vertical (kip)	Uplift (kip)	Horizontal (kip)
363.45	316.20	39.21

Site Number:	302522	Code:	ANSI/TIA-222-G	
Site Name:	Redding, CT	Engineering Number:	13222841_C3_03	6/24/2020 2:34:20 PM
Customer:	AT&T MOBILITY			

Analysis Parameters

Location:	Fairfield County, CT	Height (ft):	180
Code:	ANSI/TIA-222-G	Base Elevation (ft):	0.00
Shape:	Triangle	Bottom Face Width (ft):	23.00
Tower Manufacturer:	Rohn	Top Face Width (ft):	6.65
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:			
Ke:			

Ice & Wind Parameters

Structure Class:	II	Design Windspeed Without Ice:	93 mph
Exposure Category:	B	Design Windspeed With Ice:	50 mph
Topographic Category:	1	Operational Windspeed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	1.00 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	0.97				
T_L (sec):	6	p:	1.3	C_S:	0.031
S_S:	0.235	S_1:	0.057	C_S, Max:	0.031
F_a:	1.600	F_V:	2.400	C_S, Min:	0.030
S_{ds}:	0.251	S_{d1}:	0.091		

Load Cases

1.2D + 1.6W Normal	93 mph Normal with No Ice
1.2D + 1.6W 60 deg	93 mph 60 degree with No Ice
1.2D + 1.6W 90 deg	93 mph 90 degree with No Ice
0.9D + 1.6W Normal	93 mph Normal with No Ice (Reduced DL)
0.9D + 1.6W 60 deg	93 mph 60 deg with No Ice (Reduced DL)
0.9D + 1.6W 90 deg	93 mph 90 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	50 mph Normal with 1.00 in Radial Ice
1.2D + 1.0Di + 1.0Wi 60 deg	50 mph 60 deg with 1.00 in Radial Ice
1.2D + 1.0Di + 1.0Wi 90 deg	50 mph 90 deg with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E Normal	Seismic Normal
(1.2 + 0.2Sds) * DL + E 60 deg	Seismic 60 deg
(1.2 + 0.2Sds) * DL + E 90 deg	Seismic 90 deg
(0.9 - 0.2Sds) * DL + E Normal	Seismic (Reduced DL) Normal
(0.9 - 0.2Sds) * DL + E 60 deg	Seismic (Reduced DL) 60 deg
(0.9 - 0.2Sds) * DL + E 90 deg	Seismic (Reduced DL) 90 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 60 deg	Serviceability - 60 mph Wind 60 deg
1.0D + 1.0W Service 90 deg	Serviceability - 60 mph Wind 90 deg

Site Number: 302522 Code: ANSI/TIA-222-G

Site Name: Redding, CT Engineering Number: 13222841_C3_03 6/24/2020 2:34:20 PM

Customer: AT&T MOBILITY

Tower Loading

Discrete Appurtenance Properties 1.2D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
184.0	Kaelus	3	26	0.4	0.7	6.5	6.2	0.80	0.50	1.0	15.7	22.17	16	92
184.0	Kaelus	3	26	0.4	0.7	6.5	6.2	0.80	0.50	1.0	15.7	22.17	16	92
184.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	1.0	79.9	22.17	80	102
184.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	1.0	35.5	22.17	35	38
184.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	22.14	67	216
184.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.14	71	256
184.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	1.0	49.0	22.17	49	19
184.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	1.0	49.0	22.17	49	19
184.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	1.0	133.0	22.17	133	191
184.0	Ericsson RRUS 32	3	53	2.7	2.3	12.1	7.0	0.80	0.67	1.0	133.0	22.17	133	191
184.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	2.0	519.0	22.21	260	126
184.0	Quintel QS66512-2	2	111	8.1	6.0	12.0	9.6	0.80	0.80	1.0	313.9	22.17	314	266
184.0	CCI DMP65R-BU6DA	2	79	12.7	5.9	20.7	7.7	0.80	0.72	0.0	0.0	22.14	441	191
184.0	CCI OPA65R-BU6D	2	63	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	22.14	446	152
184.0	CCI TPA-65R-	1	82	13.3	8.0	14.4	8.6	0.80	1.00	1.0	320.8	22.17	321	98
184.0	CCI DMP65R-BU8D	1	96	17.9	8.0	20.7	7.7	0.80	1.00	0.0	0.0	22.14	430	115
184.0	CCI OPA65R-BU8D	1	77	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	22.14	436	92
180.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.00	649	1080
172.0	RFS FD9R6004/1C-3L	6	3	0.3	0.5	6.5	1.5	0.80	0.50	0.0	0.0	21.72	22	22
172.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.50	0.0	0.0	21.72	66	155
172.0	Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	21.72	101	191
172.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.67	0.0	0.0	21.72	102	204
172.0	RFS APL868013-	2	6	3.6	4.0	6.0	8.0	0.80	0.79	0.0	0.0	21.72	135	15
172.0	Andrew	4	12	4.3	4.0	10.0	8.5	0.80	0.75	0.0	0.0	21.72	308	58
172.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	0.0	0.0	21.72	163	106
172.0	Commscope SBNHH-	6	51	8.2	6.1	11.9	7.1	0.80	0.69	0.0	0.0	21.72	799	365
172.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	21.72	641	1080
164.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	21.42	738	202
164.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	21.42	632	1080
157.0	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	3.0	177.2	21.27	59	190
157.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	3.0	297.8	21.27	99	191
157.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	3.0	324.0	21.27	108	216
157.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	3.0	514.1	21.27	171	252
157.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	3.0	1153.2	21.27	384	205
157.0	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	3.0	1307.6	21.27	436	209
157.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	21.16	699	1080
147.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	20.76	56	266
147.0	Ericsson AIR 21,	6	90	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	20.76	578	651
147.0	Perfect Vision PV-	3	592	18.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	20.76	775	2131
147.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	20.76	864	460
143.0	Andrew Microwaves	1	35	4.3	14.5	3.0	3.0	1.00	1.00	0.0	0.0	20.60	122	42
143.0	Sinclair SC479-	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	20.60	141	41
142.5	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	20.58	236	360
142.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.90	1.00	0.0	0.0	20.56	30	30
136.0	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	20.31	233	360
135.0	Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	0.90	1.00	-2.0	39.5	20.18	20	60
134.0	Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	0.90	1.00	-1.0	19.8	20.18	20	60
134.0	Sinclair SE419-	2	24	9.5	8.6	2.9	8.5	1.00	1.00	0.0	0.0	20.22	525	58
132.0	Bird 432-83H-01-T	1	25	1.4	1.2	12.0	7.0	0.90	1.00	0.0	0.0	20.13	35	30
132.0	Generic 96" x 12"	2	45	11.5	8.0	12.0	6.0	0.90	0.76	0.0	0.0	20.13	430	108
131.0	Morad VHF 156-	1	1	0.3	3.3	0.8	0.8	1.00	1.00	0.0	0.0	20.09	7	1
131.0	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	20.09	230	360
130.0	Amphenol Antel	1	7	2.7	4.0	5.6	5.6	0.90	1.00	0.0	0.0	20.05	66	8
129.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	20.00	1280	334

Site Number: 302522 Code: ANSI/TIA-222-G

Site Name: Redding, CT Engineering Number: 13222841_C3_03 6/24/2020 2:34:20 PM

Customer: AT&T MOBILITY

Tower Loading

128.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	19.96	1277	334
127.0	Round Side Arms	1	100	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.91	135	120
125.0	Sinclair SE419-	1	24	9.5	8.6	2.9	8.5	1.00	1.00	0.0	0.0	19.82	257	29
122.0	Sinclair SC479-	3	34	5.0	14.4	3.5	3.5	1.00	1.00	-4.0	1600.7	19.50	400	122
121.0	Round Side Arm	1	100	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.64	134	120
120.5	Decibel DB586	1	8	0.7	4.9	1.5	1.5	1.00	1.00	0.0	0.0	19.62	20	10
120.5	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.62	80	120
115.5	Decibel DB586	1	8	0.7	4.9	1.5	1.5	1.00	1.00	0.0	0.0	19.38	20	10
115.0	Stand-Off	2	100	3.0	0.0	0.0	0.0	0.90	0.90	0.0	0.0	19.36	128	240
100.0	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.60	76	120
100.0	dbSpectra	1	93	5.6	22.3	2.5	2.5	1.00	1.00	0.0	0.0	18.60	141	112
100.0	Generic Flat Stand-	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.60	159	225
91.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.10	74	60
90.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	2.0	4.4	18.16	2	1
88.00	Sinclair SD210D	1	40	4.4	16.0	41.0	4.0	1.00	1.00	0.0	0.0	17.93	109	48
86.00	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.0	17.81	87	48
86.00	Side Arms	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.81	153	180
66.00	Andrew DB264-A	1	36	5.9	21.5	0.0	0.0	1.00	1.00	0.0	0.0	16.52	133	43
30.00	Generic 2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	1.00	1.00	0.0	0.0	13.19	1	6
18.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	13.17	2	1
	Totals	167	13718	1001.7									18643	16462

Discrete Appurtenance Properties 0.9D + 1.6W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
184.0	Kaelus	3	26	0.4	0.7	6.5	6.2	0.80	0.50	1.0	15.7	22.17	16	69
184.0	Kaelus	3	26	0.4	0.7	6.5	6.2	0.80	0.50	1.0	15.7	22.17	16	69
184.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	1.0	79.9	22.17	80	76
184.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	1.0	35.5	22.17	35	29
184.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	22.14	67	162
184.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	22.14	71	192
184.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	1.0	49.0	22.17	49	14
184.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	1.0	49.0	22.17	49	14
184.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	1.0	133.0	22.17	133	143
184.0	Ericsson RRUS 32	3	53	2.7	2.3	12.1	7.0	0.80	0.67	1.0	133.0	22.17	133	143
184.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	2.0	519.0	22.21	260	95
184.0	Quintel QS66512-2	2	111	8.1	6.0	12.0	9.6	0.80	0.80	1.0	313.9	22.17	314	200
184.0	CCI DMP65R-BU6DA	2	79	12.7	5.9	20.7	7.7	0.80	0.72	0.0	0.0	22.14	441	143
184.0	CCI OPA65R-BU6D	2	63	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	22.14	446	114
184.0	CCI TPA-65R-	1	82	13.3	8.0	14.4	8.6	0.80	1.00	1.0	320.8	22.17	321	73
184.0	CCI DMP65R-BU8D	1	96	17.9	8.0	20.7	7.7	0.80	1.00	0.0	0.0	22.14	430	86
184.0	CCI OPA65R-BU8D	1	77	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	22.14	436	69
180.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	22.00	649	810
172.0	RFS FD9R6004/1C-3L	6	3	0.3	0.5	6.5	1.5	0.80	0.50	0.0	0.0	21.72	22	17
172.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.50	0.0	0.0	21.72	66	116
172.0	Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	21.72	101	143
172.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.67	0.0	0.0	21.72	102	153
172.0	RFS APL868013-	2	6	3.6	4.0	6.0	8.0	0.80	0.79	0.0	0.0	21.72	135	11
172.0	Andrew	4	12	4.3	4.0	10.0	8.5	0.80	0.75	0.0	0.0	21.72	308	43
172.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	0.0	0.0	21.72	163	79
172.0	Commscope SBNHH-	6	51	8.2	6.1	11.9	7.1	0.80	0.69	0.0	0.0	21.72	799	274
172.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	21.72	641	810
164.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	21.42	738	151
164.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	21.42	632	810
157.0	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	3.0	177.2	21.27	59	143

Tower Loading

157.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	3.0	297.8	21.27	99	143
157.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	3.0	324.0	21.27	108	162
157.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	3.0	514.1	21.27	171	189
157.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	3.0	1153.2	21.27	384	154
157.0	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	3.0	1307.6	21.27	436	157
157.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	21.16	699	810
147.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	20.76	56	200
147.0	Ericsson AIR 21,	6	90	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	20.76	578	488
147.0	Perfect Vision PV-	3	592	18.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	20.76	775	1598
147.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	20.76	864	345
143.0	Andrew Microwaves	1	35	4.3	14.5	3.0	3.0	1.00	1.00	0.0	0.0	20.60	122	32
143.0	Sinclair SC479-	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	20.60	141	31
142.5	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	20.58	236	270
142.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.90	1.00	0.0	0.0	20.56	30	23
136.0	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	20.31	233	270
135.0	Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	0.90	1.00	-2.0	39.5	20.18	20	45
134.0	Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	0.90	1.00	-1.0	19.8	20.18	20	45
134.0	Sinclair SE419-	2	24	9.5	8.6	2.9	8.5	1.00	1.00	0.0	0.0	20.22	525	43
132.0	Bird 432-83H-01-T	1	25	1.4	1.2	12.0	7.0	0.90	1.00	0.0	0.0	20.13	35	23
132.0	Generic 96" x 12"	2	45	11.5	8.0	12.0	6.0	0.90	0.76	0.0	0.0	20.13	430	81
131.0	Morad VHF 156-	1	1	0.3	3.3	0.8	0.8	1.00	1.00	0.0	0.0	20.09	7	1
131.0	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	20.09	230	270
130.0	Amphenol Antel	1	7	2.7	4.0	5.6	5.6	0.90	1.00	0.0	0.0	20.05	66	6
129.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	20.00	1280	250
128.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	19.96	1277	250
127.0	Round Side Arms	1	100	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.91	135	90
125.0	Sinclair SE419-	1	24	9.5	8.6	2.9	8.5	1.00	1.00	0.0	0.0	19.82	257	22
122.0	Sinclair SC479-	3	34	5.0	14.4	3.5	3.5	1.00	1.00	-4.0	1600.7	19.50	400	92
121.0	Round Side Arm	1	100	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.64	134	90
120.5	Decibel DB586	1	8	0.7	4.9	1.5	1.5	1.00	1.00	0.0	0.0	19.62	20	7
120.5	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	19.62	80	90
115.5	Decibel DB586	1	8	0.7	4.9	1.5	1.5	1.00	1.00	0.0	0.0	19.38	20	7
115.0	Stand-Off	2	100	3.0	0.0	0.0	0.0	0.90	0.90	0.0	0.0	19.36	128	180
100.0	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.60	76	90
100.0	dbSpectra	1	93	5.6	22.3	2.5	2.5	1.00	1.00	0.0	0.0	18.60	141	84
100.0	Generic Flat Stand-	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.60	159	169
91.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	18.10	74	45
90.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	2.0	4.4	18.16	2	1
88.00	Sinclair SD210D	1	40	4.4	16.0	41.0	4.0	1.00	1.00	0.0	0.0	17.93	109	36
86.00	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.0	17.81	87	36
86.00	Side Arms	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	17.81	153	135
66.00	Andrew DB264-A	1	36	5.9	21.5	0.0	0.0	1.00	1.00	0.0	0.0	16.52	133	32
30.00	Generic 2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	1.00	1.00	0.0	0.0	13.19	1	5
18.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	13.17	2	1
	Totals	167	13718	1001.7									18643	12347

Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
184.0	Kaelus	3	50	1.0	0.7	6.5	6.2	0.80	0.50	1.0	6.8	6.41	7	167
184.0	Kaelus	3	50	1.0	0.7	6.5	6.2	0.80	0.50	1.0	6.8	6.41	7	167
184.0	Powerwave Allgon	6	48	2.1	1.2	9.2	2.6	0.80	0.50	1.0	27.1	6.41	27	304
184.0	Raycap DC6-48-60-	1	115	2.4	2.0	11.0	11.0	0.80	1.00	1.0	10.5	6.41	11	122
184.0	Ericsson RRUS 4478	3	135	3.1	1.4	13.4	7.7	0.80	0.50	0.0	0.0	6.40	20	440
184.0	Ericsson RRUS 4449	3	158	3.2	1.5	13.2	9.4	0.80	0.50	0.0	0.0	6.40	21	517

Tower Loading

184.0	Raycap DC6-48-60-	1	95	3.1	1.7	18.2	6.4	0.80	1.00	1.0	13.3	6.41	13	98
184.0	Raycap DC6-48-60-	1	95	3.1	1.7	18.2	6.4	0.80	1.00	1.0	13.3	6.41	13	98
184.0	Ericsson RRUS 32 B2	3	153	4.3	2.3	12.1	7.0	0.80	0.67	1.0	37.9	6.41	38	489
184.0	Ericsson RRUS 32	3	153	4.3	2.3	12.1	7.0	0.80	0.67	1.0	37.9	6.41	38	489
184.0	Powerwave Allgon	3	232	7.0	4.6	11.0	5.0	0.80	0.65	2.0	118.7	6.42	59	718
184.0	Quintel QS66512-2	2	381	11.9	6.0	12.0	9.6	0.80	0.80	1.0	83.0	6.41	83	806
184.0	CCI DMP65R-BU6DA	2	428	16.5	5.9	20.7	7.7	0.80	0.72	0.0	0.0	6.40	103	888
184.0	CCI OPA65R-BU6D	2	417	16.7	5.9	21.0	7.8	0.80	0.72	0.0	0.0	6.40	104	859
184.0	CCI TPA-65R-	1	456	18.3	8.0	14.4	8.6	0.80	1.00	1.0	80.0	6.41	80	472
184.0	CCI DMP65R-BU8D	1	556	22.9	8.0	20.7	7.7	0.80	1.00	0.0	0.0	6.40	99	575
184.0	CCI OPA65R-BU8D	1	543	23.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	6.40	100	558
180.0	Round Sector	3	798	36.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.36	300	2573
172.0	RFS FD9R6004/1C-3L	6	14	0.8	0.5	6.5	1.5	0.80	0.50	0.0	0.0	6.28	11	87
172.0	Alcatel-Lucent	3	118	3.1	1.7	11.2	7.2	0.80	0.50	0.0	0.0	6.28	20	379
172.0	Alcatel-Lucent B25	3	135	3.5	1.8	12.0	7.2	0.80	0.67	0.0	0.0	6.28	30	436
172.0	Alcatel-Lucent	3	149	3.5	1.8	12.0	9.0	0.80	0.67	0.0	0.0	6.28	30	480
172.0	RFS APL868013-	2	126	6.1	4.0	6.0	8.0	0.80	0.79	0.0	0.0	6.28	41	254
172.0	Andrew	4	212	5.6	4.0	10.0	8.5	0.80	0.75	0.0	0.0	6.28	72	857
172.0	RFS DB-T1-6Z-8AB-	2	214	6.7	2.0	24.0	10.0	0.80	0.72	0.0	0.0	6.28	41	446
172.0	Commscope SBNHH-	6	288	12.0	6.1	11.9	7.1	0.80	0.69	0.0	0.0	6.28	212	1790
172.0	Round Sector Frame	3	798	36.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.28	296	2573
164.0	Decibel DB844H90E-	12	177	4.3	4.0	6.5	8.0	0.80	0.73	0.0	0.0	6.19	157	2153
164.0	Round Sector Frame	3	798	36.8	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.19	292	2573
157.0	Alcatel-Lucent	3	132	2.9	1.3	13.0	9.8	0.80	0.50	3.0	53.7	6.15	18	428
157.0	Alcatel-Lucent 800	3	152	3.4	1.6	13.0	10.8	0.80	0.67	3.0	86.8	6.15	29	487
157.0	Alcatel-Lucent 1900	3	168	3.8	2.1	11.1	10.7	0.80	0.67	3.0	94.9	6.15	32	539
157.0	Alcatel-Lucent TD-	3	196	5.8	2.2	18.6	6.7	0.80	0.61	3.0	133.6	6.15	45	631
157.0	RFS APXVSPP18-C-	3	287	11.8	6.0	11.8	7.0	0.80	0.69	3.0	305.1	6.15	102	897
157.0	Commscope	3	328	12.8	6.0	13.8	8.2	0.80	0.69	3.0	332.3	6.15	111	1019
157.0	Round Sector	3	791	36.5	0.0	0.0	0.0	0.75	0.75	0.0	0.0	6.12	320	2554
147.0	Ericsson Radio 4449	3	149	2.8	1.2	13.2	9.3	0.80	0.50	0.0	0.0	6.00	17	491
147.0	Ericsson AIR 21,	6	285	9.0	4.7	12.1	7.9	0.80	0.70	0.0	0.0	6.00	154	1818
147.0	Perfect Vision PV-	3	1143	35.1	0.0	0.0	0.0	0.75	0.67	0.0	0.0	6.00	270	3784
147.0	RFS	3	652	25.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	6.00	194	2034
143.0	Andrew Microwaves	1	181	11.3	14.5	3.0	3.0	1.00	1.00	0.0	0.0	5.95	57	188
143.0	Sinclair SC479-	1	200	11.9	14.4	3.5	3.5	1.00	1.00	0.0	0.0	5.95	60	207
142.5	Round Side Arm	2	248	8.8	0.0	0.0	0.0	0.90	0.90	0.0	0.0	5.95	72	555
142.0	Bird 432E-83I-01-T	1	79	2.2	1.0	12.0	7.5	0.90	1.00	0.0	0.0	5.94	10	84
136.0	Round Side Arm	2	246	8.8	0.0	0.0	0.0	0.90	0.90	0.0	0.0	5.87	71	553
135.0	Generic 24" x 24"	1	172	1.9	0.3	24.0	24.0	0.90	1.00	-2.0	17.0	5.83	9	182
134.0	Generic 24" x 24"	1	172	1.9	0.3	24.0	24.0	0.90	1.00	-1.0	8.5	5.83	9	182
134.0	Sinclair SE419-	2	219	13.9	8.6	2.9	8.5	1.00	1.00	0.0	0.0	5.84	139	448
132.0	Bird 432-83H-01-T	1	82	2.4	1.2	12.0	7.0	0.90	1.00	0.0	0.0	5.82	11	87
132.0	Generic 96" x 12"	2	330	15.7	8.0	12.0	6.0	0.90	0.76	0.0	0.0	5.82	106	677
131.0	Morad VHF 156-	1	41	1.3	3.3	0.8	0.8	1.00	1.00	0.0	0.0	5.81	7	41
131.0	Round Side Arm	2	246	8.8	0.0	0.0	0.0	0.90	0.90	0.0	0.0	5.81	70	553
130.0	Amphenol Antel	1	99	4.8	4.0	5.6	5.6	0.90	1.00	0.0	0.0	5.79	21	101
129.0	RFS PA6-65AC	1	900	53.1	6.0	72.0	0.0	1.00	1.00	0.0	0.0	5.78	261	956
128.0	RFS PA6-65AC	1	900	53.1	6.0	72.0	0.0	1.00	1.00	0.0	0.0	5.77	260	956
127.0	Round Side Arms	1	164	8.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.76	41	184
125.0	Sinclair SE419-	1	219	13.9	8.6	2.9	8.5	1.00	1.00	0.0	0.0	5.73	68	224
122.0	Sinclair SC479-	3	195	11.7	14.4	3.5	3.5	1.00	1.00	-4.0	671.7	5.64	168	605
121.0	Round Side Arm	1	163	7.5	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.68	36	183
120.5	Decibel DB586	1	78	2.3	4.9	1.5	1.5	1.00	1.00	0.0	0.0	5.67	11	80
120.5	Stand-Off	1	163	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.67	24	183
115.5	Decibel DB586	1	78	2.3	4.9	1.5	1.5	1.00	1.00	0.0	0.0	5.60	11	80
115.0	Stand-Off	2	163	5.0	0.0	0.0	0.0	0.90	0.90	0.0	0.0	5.59	39	366
100.0	Stand-Off	1	162	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.38	23	182
100.0	dbSpectra	1	275	15.6	22.3	2.5	2.5	1.00	1.00	0.0	0.0	5.38	71	294

Tower Loading

100.0	Generic Flat Stand-	1	357	10.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.38	47	394
91.00	Stand-Off	1	125	5.7	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.23	25	135
90.00	PCTEL GPS-TMG-HR-	1	7	0.3	0.4	3.2	3.2	1.00	1.00	2.0	2.8	5.25	1	7
88.00	Sinclair SD210D	1	204	18.4	16.0	41.0	4.0	1.00	1.00	0.0	0.0	5.18	81	212
86.00	Generic 12' Omni	1	155	9.1	12.0	3.0	3.0	1.00	1.00	0.0	0.0	5.15	40	163
86.00	Side Arms	1	243	9.4	0.0	0.0	0.0	1.00	1.00	0.0	0.0	5.15	41	273
66.00	Andrew DB264-A	1	265	29.5	21.5	0.0	0.0	1.00	1.00	0.0	0.0	4.77	120	272
30.00	Generic 2" x 4" GPS	1	8	0.2	0.2	4.0	2.0	1.00	1.00	0.0	0.0	3.81	1	9
18.00	PCTEL GPS-TMG-HR-	1	6	0.3	0.4	3.2	3.2	1.00	1.00	0.0	0.0	3.81	1	6
	Totals	167	43927	1703.7									5630	46670

Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc.(ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
184.0	Kaelus	3	26	0.4	0.7	6.5	6.2	0.80	0.50	1.0	4.1	9.23	4	77
184.0	Kaelus	3	26	0.4	0.7	6.5	6.2	0.80	0.50	1.0	4.1	9.23	4	77
184.0	Powerwave Allgon	6	14	1.1	1.2	9.2	2.6	0.80	0.50	1.0	20.8	9.23	21	85
184.0	Raycap DC6-48-60-	1	32	1.5	2.0	11.0	11.0	0.80	1.00	1.0	9.2	9.23	9	32
184.0	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.80	0.50	0.0	0.0	9.21	17	180
184.0	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.80	0.50	0.0	0.0	9.21	19	213
184.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	1.0	12.7	9.23	13	16
184.0	Raycap DC6-48-60-	1	16	2.0	1.7	18.2	6.4	0.80	1.00	1.0	12.7	9.23	13	16
184.0	Ericsson RRUS 32 B2	3	53	2.7	2.3	12.1	7.0	0.80	0.67	1.0	34.6	9.23	35	159
184.0	Ericsson RRUS 32	3	53	2.7	2.3	12.1	7.0	0.80	0.67	1.0	34.6	9.23	35	159
184.0	Powerwave Allgon	3	35	5.5	4.6	11.0	5.0	0.80	0.65	2.0	135.0	9.24	68	105
184.0	Quintel QS66512-2	2	111	8.1	6.0	12.0	9.6	0.80	0.80	1.0	81.7	9.23	82	222
184.0	CCI DMP65R-BU6DA	2	79	12.7	5.9	20.7	7.7	0.80	0.72	0.0	0.0	9.21	115	159
184.0	CCI OPA65R-BU6D	2	63	12.9	5.9	21.0	7.8	0.80	0.72	0.0	0.0	9.21	116	126
184.0	CCI TPA-65R-	1	82	13.3	8.0	14.4	8.6	0.80	1.00	1.0	83.5	9.23	83	82
184.0	CCI DMP65R-BU8D	1	96	17.9	8.0	20.7	7.7	0.80	1.00	0.0	0.0	9.21	112	96
184.0	CCI OPA65R-BU8D	1	77	18.1	8.0	21.0	7.8	0.80	1.00	0.0	0.0	9.21	113	77
180.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	9.16	169	900
172.0	RFS FD9R6004/1C-3L	6	3	0.3	0.5	6.5	1.5	0.80	0.50	0.0	0.0	9.04	6	19
172.0	Alcatel-Lucent	3	43	1.9	1.7	11.2	7.2	0.80	0.50	0.0	0.0	9.04	17	129
172.0	Alcatel-Lucent B25	3	53	2.1	1.8	12.0	7.2	0.80	0.67	0.0	0.0	9.04	26	159
172.0	Alcatel-Lucent	3	57	2.2	1.8	12.0	9.0	0.80	0.67	0.0	0.0	9.04	27	170
172.0	RFS APL868013-	2	6	3.6	4.0	6.0	8.0	0.80	0.79	0.0	0.0	9.04	35	13
172.0	Andrew	4	12	4.3	4.0	10.0	8.5	0.80	0.75	0.0	0.0	9.04	80	48
172.0	RFS DB-T1-6Z-8AB-	2	44	4.8	2.0	24.0	10.0	0.80	0.72	0.0	0.0	9.04	42	88
172.0	Commscope SBNHH-	6	51	8.2	6.1	11.9	7.1	0.80	0.69	0.0	0.0	9.04	208	304
172.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	9.04	167	900
164.0	Decibel DB844H90E-	12	14	3.6	4.0	6.5	8.0	0.80	0.73	0.0	0.0	8.92	192	168
164.0	Round Sector Frame	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.92	165	900
157.0	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	3.0	46.1	8.85	15	159
157.0	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.67	3.0	77.5	8.85	26	159
157.0	Alcatel-Lucent 1900	3	60	2.3	2.1	11.1	10.7	0.80	0.67	3.0	84.3	8.85	28	180
157.0	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	3.0	133.7	8.85	45	210
157.0	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	3.0	300.0	8.85	100	171
157.0	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	3.0	340.2	8.85	113	174
157.0	Round Sector	3	300	14.4	0.0	0.0	0.0	0.75	0.75	0.0	0.0	8.81	182	900
147.0	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	8.64	14	222
147.0	Ericsson AIR 21,	6	90	6.1	4.7	12.1	7.9	0.80	0.70	0.0	0.0	8.64	150	542
147.0	Perfect Vision PV-	3	592	18.2	0.0	0.0	0.0	0.75	0.67	0.0	0.0	8.64	202	1776
147.0	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	8.64	225	384
143.0	Andrew Microwaves	1	35	4.3	14.5	3.0	3.0	1.00	1.00	0.0	0.0	8.57	32	35

Site Number: 302522 Code: ANSI/TIA-222-G

Site Name: Redding, CT Engineering Number: 13222841_C3_03 6/24/2020 2:34:21 PM

Customer: AT&T MOBILITY

Tower Loading

143.0	Sinclair SC479-	1	34	5.0	14.4	3.5	3.5	1.00	1.00	0.0	0.0	8.57	37	34
142.5	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	8.57	61	300
142.0	Bird 432E-83I-01-T	1	25	1.2	1.0	12.0	7.5	0.90	1.00	0.0	0.0	8.56	8	25
136.0	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	8.45	61	300
135.0	Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	0.90	1.00	-2.0	10.3	8.40	5	50
134.0	Generic 24" x 24"	1	50	0.8	0.3	24.0	24.0	0.90	1.00	-1.0	5.1	8.40	5	50
134.0	Sinclair SE419-	2	24	9.5	8.6	2.9	8.5	1.00	1.00	0.0	0.0	8.42	137	48
132.0	Bird 432-83H-01-T	1	25	1.4	1.2	12.0	7.0	0.90	1.00	0.0	0.0	8.38	9	25
132.0	Generic 96" x 12"	2	45	11.5	8.0	12.0	6.0	0.90	0.76	0.0	0.0	8.38	112	90
131.0	Morad VHF 156-	1	1	0.3	3.3	0.8	0.8	1.00	1.00	0.0	0.0	8.36	2	1
131.0	Round Side Arm	2	150	5.2	0.0	0.0	0.0	0.90	0.90	0.0	0.0	8.36	60	300
130.0	Amphenol Antel	1	7	2.7	4.0	5.6	5.6	0.90	1.00	0.0	0.0	8.34	17	7
129.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	8.33	333	278
128.0	RFS PA6-65AC	1	278	47.0	6.0	72.0	0.0	1.00	1.00	0.0	0.0	8.31	332	278
127.0	Round Side Arms	1	100	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.29	35	100
125.0	Sinclair SE419-	1	24	9.5	8.6	2.9	8.5	1.00	1.00	0.0	0.0	8.25	67	24
122.0	Sinclair SC479-	3	34	5.0	14.4	3.5	3.5	1.00	1.00	-4.0	416.4	8.12	104	102
121.0	Round Side Arm	1	100	5.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.17	35	100
120.5	Decibel DB586	1	8	0.7	4.9	1.5	1.5	1.00	1.00	0.0	0.0	8.17	5	8
120.5	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	8.17	21	100
115.5	Decibel DB586	1	8	0.7	4.9	1.5	1.5	1.00	1.00	0.0	0.0	8.07	5	8
115.0	Stand-Off	2	100	3.0	0.0	0.0	0.0	0.90	0.90	0.0	0.0	8.06	33	200
100.0	Stand-Off	1	100	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.74	20	100
100.0	dbSpectra	1	93	5.6	22.3	2.5	2.5	1.00	1.00	0.0	0.0	7.74	37	93
100.0	Generic Flat Stand-	1	188	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.74	41	188
91.00	Stand-Off	1	50	3.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.54	19	50
90.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	2.0	1.2	7.56	1	1
88.00	Sinclair SD210D	1	40	4.4	16.0	41.0	4.0	1.00	1.00	0.0	0.0	7.46	28	40
86.00	Generic 12' Omni	1	40	3.6	12.0	3.0	3.0	1.00	1.00	0.0	0.0	7.41	23	40
86.00	Side Arms	1	150	6.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	7.41	40	150
66.00	Andrew DB264-A	1	36	5.9	21.5	0.0	0.0	1.00	1.00	0.0	0.0	6.87	34	36
30.00	Generic 2" x 4" GPS	1	5	0.0	0.2	4.0	2.0	1.00	1.00	0.0	0.0	5.49	0	5
18.00	PCTEL GPS-TMG-HR-	1	1	0.1	0.4	3.2	3.2	1.00	1.00	0.0	0.0	5.48	0	1
	Totals	167	13718	1001.7									4850	13718

Tower Loading

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	184.0	0.39" (10mm) Fiber	1	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	184.0	0.39" (10mm) Fiber	2	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	184.0	0.78" (19.7mm) 8	2	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	184.0	0.78" (19.7mm) 8	2	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	184.0	1 1/4" Coax	12	1.55	0.63	50	1	Block	0.00	N	1.00	1.00	0.00
0.00	184.0	2" conduit	2	2.38	3.65	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	180.0	Wave Guide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	172.0	1 5/8" Coax	12	1.98	0.82	50	3	Block	0.00	N	1.00	1.00	0.00
0.00	172.0	1 5/8" Hybriflex	2	1.98	1.30	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	172.0	Wave Guide	1	1.50	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	164.0	Wave Guide	1	1.50	6.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	157.0	1 1/4" Hybriflex	4	1.54	1.00	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	147.0	1 1/4" Hybriflex	1	1.54	1.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	147.0	1 1/4" Hybriflex	3	1.54	1.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	147.0	1 5/8" Coax	12	1.98	0.82	50	1	Block	0.00	N	1.00	1.00	0.00
0.00	147.0	1 5/8" Hybriflex	1	1.98	1.30	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	147.0	Wave Guide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	143.0	1 5/8" Coax	2	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	142.5	Wave Guide	1	1.50	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	142.0	1 5/8" Coax	1	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	142.0	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	134.0	1 5/8" Coax	2	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	132.0	1 5/8" Coax	2	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	132.0	3/8" Coax	1	0.44	0.08	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	131.0	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	129.0	EW63	1	2.01	0.51	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	128.0	EW63	1	2.01	0.51	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	125.0	1 5/8" Coax	1	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	122.0	1 5/8" Coax	3	1.98	0.82	100	1	Individual	0.00	N	1.00	1.00	0.01
0.00	120.5	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	115.5	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	100.0	7/8" Coax	2	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	90.00	1/2" Coax	1	0.63	0.15	100	2	Individual	0.00	N	1.00	1.00	0.00
0.00	88.00	7/8" Coax	2	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	86.00	7/8" Coax	1	1.09	0.33	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	66.00	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	30.00	1/2" Coax	1	0.63	0.15	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	18.00	1/2" Coax	1	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.01

Site Number: 302522 Code: ANSI/TIA-222-G

Site Name: Redding, CT Engineering Number: 13222841_C3_03 6/24/2020 2:34:21 PM

Customer: AT&T MOBILITY

Equivalent Lateral Force Method

(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):	0.06
Long-Period Transition Period (T_L - Seconds):	6
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.25
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s:	0.03
Lower Limit C_s:	0.03
Period based on Rayleigh Method (sec):	0.97
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.23
Total Unfactored Dead Load:	51.73 k
Seismic Base Shear (E):	2.12 k

LoadCase (1.2 + 0.2Sds) * DL + E Seismic

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	1,586	891,235	0.060	127	1,983
8	150.00	2,416	1,163,09	0.078	166	3,020
7	130.00	3,470	1,400,57	0.094	200	4,338
6	110.00	4,247	1,395,00	0.094	199	5,309
5	90.00	4,428	1,135,63	0.076	162	5,535
4	70.00	4,861	914,664	0.062	130	6,077
3	50.00	5,187	644,667	0.043	92	6,485
2	30.00	5,604	371,026	0.025	53	7,006
1	10.00	6,215	106,217	0.007	15	7,770
Kaelus DBC0061F1V51-2	180.00	76	46,113	0.003	7	96
Kaelus DBC0061F1V51-2	180.00	76	46,113	0.003	7	96
Powerwave Allgon LGP21401	180.00	85	50,996	0.003	7	106
Raycap DC6-48-60-18-8F ("Squid")	180.00	32	19,169	0.001	3	40
Ericsson RRUS 4478 B14	180.00	180	108,321	0.007	15	225
Ericsson RRUS 4449 B5, B12	180.00	213	128,394	0.009	18	266
Raycap DC6-48-60-18-8C	180.00	16	9,645	0.001	1	20
Raycap DC6-48-60-18-8C	180.00	16	9,645	0.001	1	20
Ericsson RRUS 32 B2	180.00	159	95,843	0.006	14	199
Ericsson RRUS 32 B30 (53 lbs)	180.00	159	95,843	0.006	14	199
Powerwave Allgon 7770.00	180.00	105	63,293	0.004	9	131
Quintel QS66512-2	180.00	222	133,819	0.009	19	278
CCI DMP65R-BU6DA	180.00	159	95,723	0.006	14	199
CCI OPA65R-BU6D	180.00	126	76,192	0.005	11	158
CCI TPA-65R-LCUUUU-H8	180.00	82	49,187	0.003	7	102
CCI DMP65R-BU8D	180.00	96	57,687	0.004	8	120

Equivalent Lateral Force Method

CCI OPA65R-BU8D	180.00	76	46,113	0.003	7	96
Round Sector Frames	180.00	900	542,509	0.036	77	1,125
RFS FD9R6004/1C-3L	172.00	19	10,601	0.001	2	23
Alcatel-Lucent RRH2X60-1900	172.00	129	73,522	0.005	10	161
Alcatel-Lucent B25 RRH4x30	172.00	159	90,620	0.006	13	199
Alcatel-Lucent RRH2x60 700	172.00	170	96,946	0.007	14	213
RFS APL868013-42T0	172.00	13	7,181	0.000	1	16
Andrew DB844G65ZAXY	172.00	48	27,357	0.002	4	60
RFS DB-T1-6Z-8AB-0Z	172.00	88	50,154	0.003	7	110
Commscope SBNHH-1D65B	172.00	304	173,374	0.012	25	380
Round Sector Frame	172.00	900	512,941	0.035	73	1,125
Decibel DB844H90E-XY	164.00	168	90,289	0.006	13	210
Round Sector Frame	164.00	900	483,692	0.033	69	1,125
Alcatel-Lucent RRH2x50-08	157.00	159	80,826	0.005	12	198
Alcatel-Lucent 800 MHz RRH	157.00	159	80,979	0.005	12	199
Alcatel-Lucent 1900 MHz 4X45 RRH	157.00	180	91,674	0.006	13	225
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	157.00	210	106,953	0.007	15	263
RFS APXVSPP18-C-A20	157.00	171	87,090	0.006	12	214
Commscope DT465B-2XR	157.00	174	88,618	0.006	13	218
Round Sector Frames	157.00	900	458,369	0.031	65	1,125
Ericsson Radio 4449 B12,B71	147.00	222	104,254	0.007	15	278
Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs	147.00	542	254,717	0.017	36	678
Perfect Vision PV-SFA12-B Sector	147.00	1,776	834,029	0.056	119	2,220
RFS APXVAARR24_43-U-NA20	147.00	384	180,190	0.012	26	480
Andrew Microwaves DB810K-XT	143.00	35	15,887	0.001	2	44
Sinclair SC479-HF1LDF	143.00	34	15,433	0.001	2	43
Round Side Arm	142.50	300	135,586	0.009	19	375
Bird 432E-83I-01-T	142.00	25	11,250	0.001	2	31
Round Side Arm	136.00	300	128,003	0.009	18	375
Generic 24" x 24" Ice Shield	135.00	50	21,141	0.001	3	63
Generic 24" x 24" Ice Shield	134.00	50	20,948	0.001	3	63
Sinclair SE419-SF3P4LDF	134.00	48	20,110	0.001	3	60
Bird 432-83H-01-T	132.00	25	10,281	0.001	1	31
Generic 96" x 12" Panel	132.00	90	37,013	0.002	5	113
Morad VHF 156-DELUXE	131.00	1	367	0.000	0	1
Round Side Arm	131.00	300	122,227	0.008	17	375
Amphenol Antel WPA-700120-4CF-EDIN-	130.00	7	2,744	0.000	0	9
RFS PA6-65AC	129.00	278	111,135	0.007	16	348
RFS PA6-65AC	128.00	278	110,074	0.007	16	348
Round Side Arms	127.00	100	39,214	0.003	6	125
Sinclair SE419-SF3P4LDF	125.00	24	9,229	0.001	1	30
Sinclair SC479-HF1LDF	122.00	102	38,066	0.003	5	128
Round Side Arm	121.00	100	36,943	0.002	5	125
Decibel DB586	120.50	8	3,051	0.000	0	10
Stand-Off	120.50	100	36,755	0.002	5	125
Decibel DB586	115.50	8	2,895	0.000	0	10
Stand-Off	115.00	200	69,396	0.005	10	250
Stand-Off	100.00	100	29,207	0.002	4	125
dbSpectra DS1F03P36D-D	100.00	93	27,162	0.002	4	116
Generic Flat Stand-Off	100.00	188	54,762	0.004	8	234
Stand-Off	91.00	50	13,000	0.001	2	63
PCTEL GPS-TMG-HR-26N	90.00	1	154	0.000	0	1
Sinclair SD210D	88.00	40	9,979	0.001	1	50
Generic 12' Omni	86.00	40	9,700	0.001	1	50
Side Arms	86.00	150	36,377	0.002	5	188

Equivalent Lateral Force Method

Andrew DB264-A	66.00	36	6,300	0.000	1	45
Generic 2" x 4" GPS	30.00	5	331	0.000	0	6
PCTEL GPS-TMG-HR-26N	18.00	1	21	0.000	0	1
		51,733	14,865,834	1.000	2,118	64,673

LoadCase (0.9 - 0.2Sds) * DL + E — Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	1,586	891,235	0.060	127	1,348
8	150.00	2,416	1,163,09	0.078	166	2,053
7	130.00	3,470	1,400,57	0.094	200	2,949
6	110.00	4,247	1,395,00	0.094	199	3,609
5	90.00	4,428	1,135,63	0.076	162	3,763
4	70.00	4,861	914,664	0.062	130	4,131
3	50.00	5,187	644,667	0.043	92	4,409
2	30.00	5,604	371,026	0.025	53	4,763
1	10.00	6,215	106,217	0.007	15	5,282
Kaelus DBC0061F1V51-2	180.00	76	46,113	0.003	7	65
Kaelus DBC0061F1V51-2	180.00	76	46,113	0.003	7	65
Powerwave Allgon LGP21401	180.00	85	50,996	0.003	7	72
Raycap DC6-48-60-18-8F ("Squid")	180.00	32	19,169	0.001	3	27
Ericsson RRUS 4478 B14	180.00	180	108,321	0.007	15	153
Ericsson RRUS 4449 B5, B12	180.00	213	128,394	0.009	18	181
Raycap DC6-48-60-18-8C	180.00	16	9,645	0.001	1	14
Raycap DC6-48-60-18-8C	180.00	16	9,645	0.001	1	14
Ericsson RRUS 32 B2	180.00	159	95,843	0.006	14	135
Ericsson RRUS 32 B30 (53 lbs)	180.00	159	95,843	0.006	14	135
Powerwave Allgon 7770.00	180.00	105	63,293	0.004	9	89
Quintel QS66512-2	180.00	222	133,819	0.009	19	189
CCI DMP65R-BU6DA	180.00	159	95,723	0.006	14	135
CCI OPA65R-BU6D	180.00	126	76,192	0.005	11	107
CCI TPA-65R-LCUUUU-H8	180.00	82	49,187	0.003	7	69
CCI DMP65R-BU8D	180.00	96	57,687	0.004	8	81
CCI OPA65R-BU8D	180.00	76	46,113	0.003	7	65
Round Sector Frames	180.00	900	542,509	0.036	77	765
RFS FD9R6004/1C-3L	172.00	19	10,601	0.001	2	16
Alcatel-Lucent RRH2X60-1900	172.00	129	73,522	0.005	10	110
Alcatel-Lucent B25 RRH4x30	172.00	159	90,620	0.006	13	135
Alcatel-Lucent RRH2x60 700	172.00	170	96,946	0.007	14	145
RFS APL868013-42T0	172.00	13	7,181	0.000	1	11
Andrew DB844G65ZAXY	172.00	48	27,357	0.002	4	41
RFS DB-T1-6Z-8AB-0Z	172.00	88	50,154	0.003	7	75
Commscope SBNHH-1D65B	172.00	304	173,374	0.012	25	259
Round Sector Frame	172.00	900	512,941	0.035	73	765
Decibel DB844H90E-XY	164.00	168	90,289	0.006	13	143
Round Sector Frame	164.00	900	483,692	0.033	69	765
Alcatel-Lucent RRH2x50-08	157.00	159	80,826	0.005	12	135
Alcatel-Lucent 800 MHz RRH	157.00	159	80,979	0.005	12	135
Alcatel-Lucent 1900 MHz 4X45 RRH	157.00	180	91,674	0.006	13	153
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	157.00	210	106,953	0.007	15	178
RFS APXVSPP18-C-A20	157.00	171	87,090	0.006	12	145
Commscope DT465B-2XR	157.00	174	88,618	0.006	13	148
Round Sector Frames	157.00	900	458,369	0.031	65	765

Equivalent Lateral Force Method

Ericsson Radio 4449 B12,B71	147.00	222	104,254	0.007	15	189
Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs	147.00	542	254,717	0.017	36	461
Perfect Vision PV-SFA12-B Sector	147.00	1,776	834,029	0.056	119	1,509
RFS APXVAARR24_43-U-NA20	147.00	384	180,190	0.012	26	326
Andrew Microwaves DB810K-XT	143.00	35	15,887	0.001	2	30
Sinclair SC479-HF1LDF	143.00	34	15,433	0.001	2	29
Round Side Arm	142.50	300	135,586	0.009	19	255
Bird 432E-83I-01-T	142.00	25	11,250	0.001	2	21
Round Side Arm	136.00	300	128,003	0.009	18	255
Generic 24" x 24" Ice Shield	135.00	50	21,141	0.001	3	42
Generic 24" x 24" Ice Shield	134.00	50	20,948	0.001	3	42
Sinclair SE419-SF3P4LDF	134.00	48	20,110	0.001	3	41
Bird 432-83H-01-T	132.00	25	10,281	0.001	1	21
Generic 96" x 12" Panel	132.00	90	37,013	0.002	5	76
Morad VHF 156-DELUXE	131.00	1	367	0.000	0	1
Round Side Arm	131.00	300	122,227	0.008	17	255
Amphenol Antel WPA-700120-4CF-EDIN-	130.00	7	2,744	0.000	0	6
RFS PA6-65AC	129.00	278	111,135	0.007	16	236
RFS PA6-65AC	128.00	278	110,074	0.007	16	236
Round Side Arms	127.00	100	39,214	0.003	6	85
Sinclair SE419-SF3P4LDF	125.00	24	9,229	0.001	1	20
Sinclair SC479-HF1LDF	122.00	102	38,066	0.003	5	87
Round Side Arm	121.00	100	36,943	0.002	5	85
Decibel DB586	120.50	8	3,051	0.000	0	7
Stand-Off	120.50	100	36,755	0.002	5	85
Decibel DB586	115.50	8	2,895	0.000	0	7
Stand-Off	115.00	200	69,396	0.005	10	170
Stand-Off	100.00	100	29,207	0.002	4	85
dbSpectra DS1F03P36D-D	100.00	93	27,162	0.002	4	79
Generic Flat Stand-Off	100.00	188	54,762	0.004	8	159
Stand-Off	91.00	50	13,000	0.001	2	42
PCTEL GPS-TMG-HR-26N	90.00	1	154	0.000	0	1
Sinclair SD210D	88.00	40	9,979	0.001	1	34
Generic 12' Omni	86.00	40	9,700	0.001	1	34
Side Arms	86.00	150	36,377	0.002	5	127
Andrew DB264-A	66.00	36	6,300	0.000	1	31
Generic 2" x 4" GPS	30.00	5	331	0.000	0	4
PCTEL GPS-TMG-HR-26N	18.00	1	21	0.000	0	1
		51,733	14,865,834	1.000	2,118	43,966

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):	0.06
Importance Factor (I_e):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v:	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.25
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Period Based on Rayleigh Method (sec):	0.97
Redundancy Factor (p):	1.30

LoadCase (1.2 + 0.2Sds) * DL + E Seismic

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	1,586	1.686	1.069	0.793	0.339	233	1,983
8	150.00	2,416	1.312	0.138	0.347	0.116	122	3,020
7	130.00	3,470	0.986	-0.113	0.124	0.013	20	4,338
6	110.00	4,247	0.706	-0.089	0.031	0.007	13	5,309
5	90.00	4,428	0.472	-0.006	0.006	0.040	76	5,535
4	70.00	4,861	0.286	0.048	0.013	0.057	119	6,077
3	50.00	5,187	0.146	0.068	0.031	0.054	121	6,485
2	30.00	5,604	0.053	0.071	0.042	0.046	112	7,006
1	10.00	6,215	0.006	0.047	0.027	0.029	78	7,770
Kaelus DBC0061F1V51-2	180.00	76	1.890	1.980	1.140	0.498	17	96
Kaelus DBC0061F1V51-2	180.00	76	1.890	1.980	1.140	0.498	17	96
Powerwave Allgon LGP21401	180.00	85	1.890	1.980	1.140	0.498	18	106
Raycap DC6-48-60-18-8F ("Squid")	180.00	32	1.890	1.980	1.140	0.498	7	40
Ericsson RRUS 4478 B14	180.00	180	1.890	1.980	1.140	0.498	39	225
Ericsson RRUS 4449 B5, B12	180.00	213	1.890	1.980	1.140	0.498	46	266
Raycap DC6-48-60-18-8C	180.00	16	1.890	1.980	1.140	0.498	3	20
Raycap DC6-48-60-18-8C	180.00	16	1.890	1.980	1.140	0.498	3	20
Ericsson RRUS 32 B2	180.00	159	1.890	1.980	1.140	0.498	34	199
Ericsson RRUS 32 B30 (53 lbs)	180.00	159	1.890	1.980	1.140	0.498	34	199
Powerwave Allgon 7770.00	180.00	105	1.890	1.980	1.140	0.498	23	131
Quintel QS66512-2	180.00	222	1.890	1.980	1.140	0.498	48	278
CCI DMP65R-BU6DA	180.00	159	1.890	1.980	1.140	0.498	34	199
CCI OPA65R-BU6D	180.00	126	1.890	1.980	1.140	0.498	27	158
CCI TPA-65R-LCUUUU-H8	180.00	82	1.890	1.980	1.140	0.498	18	102
CCI DMP65R-BU8D	180.00	96	1.890	1.980	1.140	0.498	21	120
CCI OPA65R-BU8D	180.00	76	1.890	1.980	1.140	0.498	17	96
Round Sector Frames	180.00	900	1.890	1.980	1.140	0.498	194	1,125
RFS FD9R6004/1C-3L	172.00	19	1.726	1.222	0.855	0.368	3	23
Alcatel-Lucent RRH2X60-1900	172.00	129	1.726	1.222	0.855	0.368	21	161
Alcatel-Lucent B25 RRH4x30	172.00	159	1.726	1.222	0.855	0.368	25	199
Alcatel-Lucent RRH2x60 700	172.00	170	1.726	1.222	0.855	0.368	27	213
RFS APL868013-42T0	172.00	13	1.726	1.222	0.855	0.368	2	16
Andrew DB844G65ZAXY	172.00	48	1.726	1.222	0.855	0.368	8	60
RFS DB-T1-6Z-8AB-0Z	172.00	88	1.726	1.222	0.855	0.368	14	110
Commscope SBNHH-1D65B	172.00	304	1.726	1.222	0.855	0.368	49	380
Round Sector Frame	172.00	900	1.726	1.222	0.855	0.368	144	1,125
Decibel DB844H90E-XY	164.00	168	1.569	0.685	0.629	0.259	19	210
Round Sector Frame	164.00	900	1.569	0.685	0.629	0.259	101	1,125
Alcatel-Lucent RRH2x50-08	157.00	159	1.438	0.359	0.472	0.180	12	198
Alcatel-Lucent 800 MHz RRH	157.00	159	1.438	0.359	0.472	0.180	12	199

Equivalent Modal Analysis Method

Alcatel-Lucent 1900 MHz 4X45	157.00	180	1.438	0.359	0.472	0.180	14	225
Alcatel-Lucent TD-RRH8x20-25	157.00	210	1.438	0.359	0.472	0.180	16	263
RFS APXVSPP18-C-A20	157.00	171	1.438	0.359	0.472	0.180	13	214
Commscope DT465B-2XR	157.00	174	1.438	0.359	0.472	0.180	14	218
Round Sector Frames	157.00	900	1.438	0.359	0.472	0.180	70	1,125
Ericsson Radio 4449 B12,B71	147.00	222	1.261	0.069	0.302	0.093	9	278
Ericsson AIR 21, 1.3M, B4A B2P	147.00	542	1.261	0.069	0.302	0.093	22	678
Perfect Vision PV-SFA12-B	147.00	1,776	1.261	0.069	0.302	0.093	72	2,220
RFS APXVAARR24_43-U-NA20	147.00	384	1.261	0.069	0.302	0.093	16	480
Andrew Microwaves DB810K-XT	143.00	35	1.193	-0.002	0.249	0.067	1	44
Sinclair SC479-HF1LDF	143.00	34	1.193	-0.002	0.249	0.067	1	43
Round Side Arm	142.50	300	1.185	-0.009	0.243	0.064	8	375
Bird 432E-83I-01-T	142.00	25	1.176	-0.017	0.237	0.061	1	31
Round Side Arm	136.00	300	1.079	-0.081	0.174	0.032	4	375
Generic 24" x 24" Ice Shield	135.00	50	1.063	-0.088	0.165	0.028	1	63
Generic 24" x 24" Ice Shield	134.00	50	1.047	-0.095	0.156	0.025	1	63
Sinclair SE419-SF3P4LDF	134.00	48	1.047	-0.095	0.156	0.025	1	60
Bird 432-83H-01-T	132.00	25	1.016	-0.105	0.140	0.018	0	31
Generic 96" x 12" Panel	132.00	90	1.016	-0.105	0.140	0.018	1	113
Morad VHF 156-DELUXE	131.00	1	1.001	-0.110	0.132	0.016	0	1
Round Side Arm	131.00	300	1.001	-0.110	0.132	0.016	2	375
Amphenol Antel WPA-700120-	130.00	7	0.986	-0.113	0.124	0.013	0	9
RFS PA6-65AC	129.00	278	0.971	-0.116	0.117	0.011	1	348
RFS PA6-65AC	128.00	278	0.956	-0.118	0.111	0.009	1	348
Round Side Arms	127.00	100	0.941	-0.120	0.104	0.007	0	125
Sinclair SE419-SF3P4LDF	125.00	24	0.911	-0.122	0.092	0.004	0	30
Sinclair SC479-HF1LDF	122.00	102	0.868	-0.121	0.076	0.001	0	128
Round Side Arm	121.00	100	0.854	-0.120	0.071	0.001	0	125
Decibel DB586	120.50	8	0.847	-0.119	0.068	0.001	0	10
Stand-Off	120.50	100	0.847	-0.119	0.068	0.001	0	125
Decibel DB586	115.50	8	0.778	-0.108	0.048	0.002	0	10
Stand-Off	115.00	200	0.771	-0.106	0.046	0.002	0	250
Stand-Off	100.00	100	0.583	-0.047	0.013	0.023	1	125
dbSpectra DS1F03P36D-D	100.00	93	0.583	-0.047	0.013	0.023	1	116
Generic Flat Stand-Off	100.00	188	0.583	-0.047	0.013	0.023	2	234
Stand-Off	91.00	50	0.483	-0.010	0.006	0.038	1	63
PCTEL GPS-TMG-HR-26N	90.00	1	0.472	-0.006	0.006	0.040	0	1
Sinclair SD210D	88.00	40	0.452	0.001	0.006	0.042	1	50
Generic 12' Omni	86.00	40	0.431	0.008	0.006	0.045	1	50
Side Arms	86.00	150	0.431	0.008	0.006	0.045	3	188
Andrew DB264-A	66.00	36	0.254	0.055	0.017	0.057	1	45
Generic 2" x 4" GPS	30.00	5	0.053	0.071	0.042	0.046	0	6
PCTEL GPS-TMG-HR-26N	18.00	1	0.019	0.063	0.037	0.039	0	1
		51,733	100.544	49.989	38.661	16.041	2,209	64,673

LoadCase (0.9 - 0.2Sds) * DL + E Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	a	b	c	S_{az}	Horizontal Force (lb)	Vertical Force (lb)
9	170.00	1,586	1.686	1.069	0.793	0.339	233	1,348
8	150.00	2,416	1.312	0.138	0.347	0.116	122	2,053
7	130.00	3,470	0.986	-0.113	0.124	0.013	20	2,949
6	110.00	4,247	0.706	-0.089	0.031	0.007	13	3,609
5	90.00	4,428	0.472	-0.006	0.006	0.040	76	3,763
4	70.00	4,861	0.286	0.048	0.013	0.057	119	4,131
3	50.00	5,187	0.146	0.068	0.031	0.054	121	4,409
2	30.00	5,604	0.053	0.071	0.042	0.046	112	4,763
1	10.00	6,215	0.006	0.047	0.027	0.029	78	5,282
Kaelus DBC0061F1V51-2	180.00	76	1.890	1.980	1.140	0.498	17	65
Kaelus DBC0061F1V51-2	180.00	76	1.890	1.980	1.140	0.498	17	65
Powerwave Allgon LGP21401	180.00	85	1.890	1.980	1.140	0.498	18	72
Raycap DC6-48-60-18-8F ("Squid")	180.00	32	1.890	1.980	1.140	0.498	7	27
Ericsson RRUS 4478 B14	180.00	180	1.890	1.980	1.140	0.498	39	153

Equivalent Modal Analysis Method

Ericsson RRUS 4449 B5, B12	180.00	213	1.890	1.980	1.140	0.498	46	181
Raycap DC6-48-60-18-8C	180.00	16	1.890	1.980	1.140	0.498	3	14
Raycap DC6-48-60-18-8C	180.00	16	1.890	1.980	1.140	0.498	3	14
Ericsson RRUS 32 B2	180.00	159	1.890	1.980	1.140	0.498	34	135
Ericsson RRUS 32 B30 (53 lbs)	180.00	159	1.890	1.980	1.140	0.498	34	135
Powerwave Allgon 7770.00	180.00	105	1.890	1.980	1.140	0.498	23	89
Quintel QS66512-2	180.00	222	1.890	1.980	1.140	0.498	48	189
CCI DMP65R-BU6DA	180.00	159	1.890	1.980	1.140	0.498	34	135
CCI OPA65R-BU6D	180.00	126	1.890	1.980	1.140	0.498	27	107
CCI TPA-65R-LCUUUU-H8	180.00	82	1.890	1.980	1.140	0.498	18	69
CCI DMP65R-BU8D	180.00	96	1.890	1.980	1.140	0.498	21	81
CCI OPA65R-BU8D	180.00	76	1.890	1.980	1.140	0.498	17	65
Round Sector Frames	180.00	900	1.890	1.980	1.140	0.498	194	765
RFS FD9R6004/1C-3L	172.00	19	1.726	1.222	0.855	0.368	3	16
Alcatel-Lucent RRH2X60-1900	172.00	129	1.726	1.222	0.855	0.368	21	110
Alcatel-Lucent B25 RRH4x30	172.00	159	1.726	1.222	0.855	0.368	25	135
Alcatel-Lucent RRH2x60 700	172.00	170	1.726	1.222	0.855	0.368	27	145
RFS APL868013-42T0	172.00	13	1.726	1.222	0.855	0.368	2	11
Andrew DB844G65ZAXY	172.00	48	1.726	1.222	0.855	0.368	8	41
RFS DB-T1-6Z-8AB-0Z	172.00	88	1.726	1.222	0.855	0.368	14	75
Commscope SBNHH-1D65B	172.00	304	1.726	1.222	0.855	0.368	49	259
Round Sector Frame	172.00	900	1.726	1.222	0.855	0.368	144	765
Decibel DB844H90E-XY	164.00	168	1.569	0.685	0.629	0.259	19	143
Round Sector Frame	164.00	900	1.569	0.685	0.629	0.259	101	765
Alcatel-Lucent RRH2x50-08	157.00	159	1.438	0.359	0.472	0.180	12	135
Alcatel-Lucent 800 MHz RRH	157.00	159	1.438	0.359	0.472	0.180	12	135
Alcatel-Lucent 1900 MHz 4X45	157.00	180	1.438	0.359	0.472	0.180	14	153
Alcatel-Lucent TD-RRH8x20-25	157.00	210	1.438	0.359	0.472	0.180	16	178
RFS APXVSPP18-C-A20	157.00	171	1.438	0.359	0.472	0.180	13	145
Commscope DT465B-2XR	157.00	174	1.438	0.359	0.472	0.180	14	148
Round Sector Frames	157.00	900	1.438	0.359	0.472	0.180	70	765
Ericsson Radio 4449 B12,B71	147.00	222	1.261	0.069	0.302	0.093	9	189
Ericsson AIR 21, 1.3M, B4A B2P	147.00	542	1.261	0.069	0.302	0.093	22	461
Perfect Vision PV-SFA12-B	147.00	1,776	1.261	0.069	0.302	0.093	72	1,509
RFS APXVAARR24_43-U-NA20	147.00	384	1.261	0.069	0.302	0.093	16	326
Andrew Microwaves DB810K-XT	143.00	35	1.193	-0.002	0.249	0.067	1	30
Sinclair SC479-HF1LDF	143.00	34	1.193	-0.002	0.249	0.067	1	29
Round Side Arm	142.50	300	1.185	-0.009	0.243	0.064	8	255
Bird 432E-83I-01-T	142.00	25	1.176	-0.017	0.237	0.061	1	21
Round Side Arm	136.00	300	1.079	-0.081	0.174	0.032	4	255
Generic 24" x 24" Ice Shield	135.00	50	1.063	-0.088	0.165	0.028	1	42
Generic 24" x 24" Ice Shield	134.00	50	1.047	-0.095	0.156	0.025	1	42
Sinclair SE419-SF3P4LDF	134.00	48	1.047	-0.095	0.156	0.025	1	41
Bird 432-83H-01-T	132.00	25	1.016	-0.105	0.140	0.018	0	21
Generic 96" x 12" Panel	132.00	90	1.016	-0.105	0.140	0.018	1	76
Morad VHF 156-DELUXE	131.00	1	1.001	-0.110	0.132	0.016	0	1
Round Side Arm	131.00	300	1.001	-0.110	0.132	0.016	2	255
Amphenol Antel WPA-700120-	130.00	7	0.986	-0.113	0.124	0.013	0	6
RFS PA6-65AC	129.00	278	0.971	-0.116	0.117	0.011	1	236
RFS PA6-65AC	128.00	278	0.956	-0.118	0.111	0.009	1	236
Round Side Arms	127.00	100	0.941	-0.120	0.104	0.007	0	85
Sinclair SE419-SF3P4LDF	125.00	24	0.911	-0.122	0.092	0.004	0	20
Sinclair SC479-HF1LDF	122.00	102	0.868	-0.121	0.076	0.001	0	87
Round Side Arm	121.00	100	0.854	-0.120	0.071	0.001	0	85
Decibel DB586	120.50	8	0.847	-0.119	0.068	0.001	0	7
Stand-Off	120.50	100	0.847	-0.119	0.068	0.001	0	85
Decibel DB586	115.50	8	0.778	-0.108	0.048	0.002	0	7
Stand-Off	115.00	200	0.771	-0.106	0.046	0.002	0	170
Stand-Off	100.00	100	0.583	-0.047	0.013	0.023	1	85
dbSpectra DS1F03P36D-D	100.00	93	0.583	-0.047	0.013	0.023	1	79
Generic Flat Stand-Off	100.00	188	0.583	-0.047	0.013	0.023	2	159
Stand-Off	91.00	50	0.483	-0.010	0.006	0.038	1	42
PCTEL GPS-TMG-HR-26N	90.00	1	0.472	-0.006	0.006	0.040	0	1
Sinclair SD210D	88.00	40	0.452	0.001	0.006	0.042	1	34
Generic 12' Omni	86.00	40	0.431	0.008	0.006	0.045	1	34

Equivalent Modal Analysis Method

Side Arms	86.00	150	0.431	0.008	0.006	0.045	3	127
Andrew DB264-A	66.00	36	0.254	0.055	0.017	0.057	1	31
Generic 2" x 4" GPS	30.00	5	0.053	0.071	0.042	0.046	0	4
PCTEL GPS-TMG-HR-26N	18.00	1	0.019	0.063	0.037	0.039	0	1
		51,733	100.544	49.989	38.661	16.041	2,209	43,966

Force/Stress Summary

Section: 1 SSV Bot Elev (ft): 0.00 Height (ft): 20.000

Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 8 EHS	-353.99	1.2D + 1.6W Normal	10.02	100	100	100	41.2	50.0	386.43	0	0	0.00	0.00	91	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 4X4X0.3125	-11.77	1.2D + 1.6W 90 deg	24.62	50	50	50	189.2	50.0	15.15	1	1	17.89	29.25	77	Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PSP - ROHN 8 EHS	308.89	0.9D + 1.6W 60 deg	50	65	437.40	0	0	0.00	0.00		70	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 4X4X0.3125	11.62	1.2D + 1.6W 90 deg	50	65	77.75	1	1	17.89	17.67	22.47	65	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	284.11	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	326.98	1.2D + 1.6W Normal	0.00	0		
Bot Tension	318.32	0.9D + 1.6W 60 deg	605.74	63	10	1" A354-BC
Bot Compression	364.24	1.2D + 1.6W Normal	0.00	0		

Section: 2 SSV Bot Elev (ft): 20.00 Height (ft): 20.000

Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	PSP - ROHN 8 EHS	-317.35	1.2D + 1.6W Normal	10.02	100	100	100	41.2	50.0	386.43	0	0	0.00	0.00	82	Member X
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG	SAE - 4X4X0.25	-11.99	1.2D + 1.6W 90 deg	22.81	50	50	50	172.2	43.5	14.79	1	1	17.89	23.40	81	Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	PSP - ROHN 8 EHS	276.59	0.9D + 1.6W 60 deg	50	65	437.40	0	0	0.00	0.00		63	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG	SAE - 4X4X0.25	11.63	1.2D + 1.6W 90 deg	50	65	62.93	1	1	17.89	14.14	17.98	82	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	249.75	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	287.65	1.2D + 1.6W Normal	0.00	0		
Bot Tension	284.11	0.9D + 1.6W 60 deg	436.14	65	8	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 3 SSV Bot Elev (ft): 40.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	-278.06	1.2D + 1.6W Normal	10.02	100	100	100	54.8	50.0	303.54	0	0	0.00	0.00	91	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 4X4X0.25	-11.02	1.2D + 1.6W 90 deg	21.00	50	50	50	158.5	43.5	17.45	1	1	17.89	23.40	63	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	242.65	0.9D + 1.6W 60 deg	50	65	378.00	0	0	0.00	0.00		64	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 4X4X0.25	10.79	1.2D + 1.6W 90 deg	50	65	62.93	1	1	17.89	14.14	17.98	76	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	215.27	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	247.98	1.2D + 1.6W Normal	0.00	0		
Bot Tension	249.75	0.9D + 1.6W 60 deg	436.14	57	8	1 A325
Bot Compression	0.00		0.00	0		

Section: 4 SSV Bot Elev (ft): 60.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	-237.08	1.2D + 1.6W Normal	10.02	100	100	100	54.8	50.0	303.58	0	0	0.00	0.00	78	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	-11.29	1.2D + 1.6W 90 deg	19.17	50	50	50	167.2	50.0	13.66	1	1	17.89	23.40	82	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 6" DIA PIPE	206.78	0.9D + 1.6W 60 deg	50	65	378.00	0	0	0.00	0.00		54	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3.5X3.5X0.25	11.05	1.2D + 1.6W 90 deg	50	65	53.79	1	1	17.89	14.14	17.98	78	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	176.22	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	203.95	1.2D + 1.6W Normal	0.00	0		
Bot Tension	215.27	0.9D + 1.6W 60 deg	327.10	66	6	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 5 SSV Bot Elev (ft): 80.00 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	-196.55	1.2D + 1.6W Normal	6.68	100	100	100	43.6	50.0	238.95	0	0	0.00	0.00	82	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	-9.65	1.2D + 1.6W 90 deg	15.97	50	50	50	161.9	50.0	12.41	1	1	17.89	23.40	77	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	170.85	0.9D + 1.6W 60 deg	50	65	274.50	0	0	0.00	0.00		62	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3X3X0.25	9.51	1.2D + 1.6W 90 deg	50	65	44.65	1	1	17.89	14.14	14.93	67	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	136.02	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	158.47	1.2D + 1.6W Normal	0.00	0		
Bot Tension	176.22	0.9D + 1.6W 60 deg	327.10	54	6	1 A325
Bot Compression	0.00		0.00	0		

Section: 6 SSV Bot Elev (ft): 100.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	-150.80	1.2D + 1.6W Normal	6.68	100	100	100	43.6	50.0	238.95	0	0	0.00	0.00	63	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 3X3X0.25	-9.05	1.2D + 1.6W 90 deg	14.16	50	50	50	143.6	50.0	15.78	1	1	17.89	23.40	57	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 5" DIA PIPE	129.91	0.9D + 1.6W 60 deg	50	65	274.50	0	0	0.00	0.00		47	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 3X3X0.25	8.94	1.2D + 1.6W 90 deg	50	65	44.65	1	1	17.89	14.14	14.93	63	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	92.59	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	110.66	1.2D + 1.6W Normal	0.00	0		
Bot Tension	136.02	0.9D + 1.6W 60 deg	327.10	42	6	1 A325
Bot Compression	0.00		0.00	0		

Force/Stress Summary

Section: 7 SSV Bot Elev (ft): 120.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	-102.52	1.2D + 1.6W Normal	6.68	100	100	100	54.2	50.0	160.15	0	0	0.00	0.00	64	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	-8.38	1.2D + 1.6W 90 deg	12.42	50	50	50	151.9	36.0	11.65	1	1	17.89	20.88	71	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PX - 4" DIA PIPE	85.80	0.9D + 1.6W 60 deg	50	65	198.45	0	0	0.00	0.00		43	Member
HORIZ	0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG SAE - 2.5X2.5X0.25	8.29	1.2D + 1.6W 90 deg	36	58	31.69	1	1	17.89	12.61	11.96	69	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	51.99	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	65.41	1.2D + 1.6W Normal	0.00	0		
Bot Tension	92.59	0.9D + 1.6W 60 deg	218.07	42	4	1 A325
Bot Compression	0.00		0.00	0		

Section: 8 SSV Bot Elev (ft): 140.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 3" DIA PIPE	-60.07	1.2D + 1.6W Normal	4.95	100	100	100	51.2	50.0	82.87	0	0	0.00	0.00	72	Member X
HORIZ SAE - 2X2X0.25	-0.35	1.2D + 1.6W Normal	6.689	100	100	100	205.3	36.0	5.04	1	1	12.43	17.40	6	Member Z
DIAG SAE - 2X2X0.25	-5.43	1.2D + 1.6W 90 deg	9.813	50	50	50	150.6	36.0	9.37	1	1	12.43	17.40	57	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 3" DIA PIPE	53.23	0.9D + 1.6W 60 deg	50	65	100.35	0	0	0.00	0.00		53	Member
HORIZ SAE - 2X2X0.25	0.37	1.2D + 1.6W 60 deg	36	58	24.55	1	1	12.43	10.44	9.11	4	Blk Shear
DIAG SAE - 2X2X0.25	5.34	1.2D + 1.6W 90 deg	36	58	24.55	1	1	12.43	10.44	9.11	58	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	21.81	0.9D + 1.6W 60 deg	0.00	0	0	
Top Compression	27.89	1.2D + 1.6W Normal	0.00	0		
Bot Tension	51.99	0.9D + 1.6W 60 deg	166.22	31	4	0.875" A325
Bot Compression	0.00		0.00	0		

Site Number: 302522 Code: ANSI/TIA-222-G

Site Name: Redding, CT Engineering Number: 13222841_C3_03 6/24/2020 2:34:21 PM

Customer: AT&T MOBILITY

Force/Stress Summary

Section: 9 SSV Bot Elev (ft): 160.0 Height (ft): 20.000

Max Compression Member	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-23.96	1.2D + 1.6W Normal	3.95	100	100	100	50.1	50.0	63.85	0	0	0.00	0.00	37	Member X
HORIZ SAE - 2X2X0.125	-0.77	1.2D + 1.6W 60 deg	6.647	100	100	100	200.4	36.0	2.70	1	1	12.43	8.70	28	Member Z
DIAG SAE - 1.75X1.75X0.18	-4.12	1.2D + 1.6W 90 deg	7.764	50	50	50	135.8	36.0	7.61	1	1	12.43	13.05	54	Member Z

Max Tension Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	21.56	1.2D + 1.6W 60 deg	50	65	76.68	0	0	0.00	0.00		28	Member
HORIZ SAE - 2X2X0.125	1.08	1.2D + 1.6W Normal	36	58	12.60	1	1	12.43	5.22	4.55	23	Blk Shear
DIAG SAE - 1.75X1.75X0.18	4.03	1.2D + 1.6W 90 deg	36	58	15.67	1	1	12.43	7.83	5.81	69	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension	0.00		0.00	0	0	
Top Compression	3.98	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension	21.81	0.9D + 1.6W 60 deg	120.41	18	4	0.75" A325
Bot Compression	0.00		0.00	0		

Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal	**13.28**	**00.00**	**0**	**1**	**0.00**	**363.45**	**-39.21**	
	13.28	**00.00**	**120**	**1a**	**13.38**	**-150.69**	**-12.17**	
	13.28	**00.00**	**240**	**1b**	**-13.38**	**-150.69**	**-12.17**	
1.2D + 1.6W 60 deg	**13.28**	**00.00**	**0**	**1**	**-3.60**	**186.93**	**-19.61**	
	13.28	**00.00**	**120**	**1a**	**-18.77**	**186.64**	**6.68**	
	13.28	**00.00**	**240**	**1b**	**-30.59**	**-311.50**	**-17.66**	
1.2D + 1.6W 90 deg	**13.28**	**00.00**	**0**	**1**	**-4.25**	**20.70**	**-1.33**	
	13.28	**00.00**	**120**	**1a**	**-29.84**	**310.52**	**14.81**	
	13.28	**00.00**	**240**	**1b**	**-27.66**	**-269.13**	**-13.48**	
0.9D + 1.6W Normal	**13.28**	**00.00**	**0**	**1**	**0.00**	**357.79**	**-38.85**	
	13.28	**00.00**	**120**	**1a**	**13.68**	**-155.61**	**-12.36**	
	13.28	**00.00**	**240**	**1b**	**-13.68**	**-155.61**	**-12.36**	
0.9D + 1.6W 60 deg	**13.28**	**00.00**	**0**	**1**	**-3.61**	**181.52**	**-19.25**	
	13.28	**00.00**	**120**	**1a**	**-18.47**	**181.23**	**6.50**	
	13.28	**00.00**	**240**	**1b**	**-30.89**	**-316.20**	**-17.83**	
0.9D + 1.6W 90 deg	**13.28**	**00.00**	**0**	**1**	**-4.26**	**15.53**	**-0.98**	
	13.28	**00.00**	**120**	**1a**	**-29.53**	**304.93**	**14.63**	
	13.28	**00.00**	**240**	**1b**	**-27.97**	**-273.89**	**-13.65**	
1.2D + 1.0Di + 1.0Wi Normal	**13.28**	**00.00**	**0**	**1**	**0.00**	**203.87**	**-16.56**	
	13.28	**00.00**	**120**	**1a**	**3.96**	**10.86**	**-4.09**	
	13.28	**00.00**	**240**	**1b**	**-3.96**	**10.86**	**-4.09**	
1.2D + 1.0Di + 1.0Wi 60 deg	**13.28**	**00.00**	**0**	**1**	**-1.52**	**138.97**	**-9.14**	
	13.28	**00.00**	**120**	**1a**	**-8.67**	**138.91**	**3.25**	
	13.28	**00.00**	**240**	**1b**	**-10.96**	**-52.28**	**-6.33**	
1.2D + 1.0Di + 1.0Wi 90 deg	**13.28**	**00.00**	**0**	**1**	**-1.77**	**75.20**	**-1.88**	
	13.28	**00.00**	**120**	**1a**	**-12.98**	**185.86**	**6.48**	
	13.28	**00.00**	**240**	**1b**	**-9.76**	**-35.46**	**-4.60**	
(1.2 + 0.2Sds) * DL + E Normal M1	**13.28**	**00.00**	**0**	**1**	**0.00**	**34.60**	**-2.79**	
	13.28	**00.00**	**120**	**1a**	**-0.75**	**13.74**	**0.35**	
	13.28	**00.00**	**240**	**1b**	**0.75**	**13.74**	**0.35**	
(1.2 + 0.2Sds) * DL + E Normal M2	**13.28**	**00.00**	**0**	**1**	**0.00**	**35.92**	**-2.85**	
	13.28	**00.00**	**120**	**1a**	**-0.72**	**13.08**	**0.35**	
	13.28	**00.00**	**240**	**1b**	**0.72**	**13.08**	**0.35**	
(1.2 + 0.2Sds) * DL + E 60 deg M1	**13.28**	**00.00**	**0**	**1**	**-0.07**	**27.65**	**-2.13**	
	13.28	**00.00**	**120**	**1a**	**-1.88**	**27.65**	**1.00**	
	13.28	**00.00**	**240**	**1b**	**0.15**	**6.79**	**0.09**	
(1.2 + 0.2Sds) * DL + E 60 deg M2	**13.28**	**00.00**	**0**	**1**	**-0.06**	**28.31**	**-2.16**	
	13.28	**00.00**	**120**	**1a**	**-1.90**	**28.31**	**1.03**	
	13.28	**00.00**	**240**	**1b**	**0.10**	**5.47**	**0.06**	
(1.2 + 0.2Sds) * DL + E 90 deg M1	**13.28**	**00.00**	**0**	**1**	**-0.08**	**20.69**	**-1.48**	
	13.28	**00.00**	**120**	**1a**	**-2.28**	**32.74**	**1.27**	
	13.28	**00.00**	**240**	**1b**	**0.28**	**8.65**	**0.21**	
(1.2 + 0.2Sds) * DL + E 90 deg M2	**13.28**	**00.00**	**0**	**1**	**-0.07**	**20.69**	**-1.48**	
	13.28	**00.00**	**120**	**1a**	**-2.32**	**33.88**	**1.30**	

	13.28	**00.00**	**240**	**1b**	**0.24**	**7.51**	**0.18**
(0.9 - 0.2Sds) * DL + E Normal M1	**13.28**	**00.00**	**0**	**1**	**0.00**	**27.95**	**-2.31**
	13.28	**00.00**	**120**	**1a**	**-0.34**	**7.13**	**0.11**
	13.28	**00.00**	**240**	**1b**	**0.34**	**7.13**	**0.11**
(0.9 - 0.2Sds) * DL + E Normal M2	**13.28**	**00.00**	**0**	**1**	**0.00**	**29.26**	**-2.37**
	13.28	**00.00**	**120**	**1a**	**-0.31**	**6.47**	**0.11**
	13.28	**00.00**	**240**	**1b**	**0.31**	**6.47**	**0.11**
(0.9 - 0.2Sds) * DL + E 60 deg M1	**13.28**	**00.00**	**0**	**1**	**-0.07**	**21.01**	**-1.66**
	13.28	**00.00**	**120**	**1a**	**-1.47**	**21.01**	**0.77**
	13.28	**00.00**	**240**	**1b**	**-0.26**	**0.19**	**-0.15**
(0.9 - 0.2Sds) * DL + E 60 deg M2	**13.28**	**00.00**	**0**	**1**	**-0.06**	**21.67**	**-1.69**
	13.28	**00.00**	**120**	**1a**	**-1.49**	**21.67**	**0.79**
	13.28	**00.00**	**240**	**1b**	**-0.31**	**-1.12**	**-0.18**
(0.9 - 0.2Sds) * DL + E 90 deg M1	**13.28**	**00.00**	**0**	**1**	**-0.09**	**14.07**	**-1.01**
	13.28	**00.00**	**120**	**1a**	**-1.87**	**26.09**	**1.03**
	13.28	**00.00**	**240**	**1b**	**-0.13**	**2.05**	**-0.02**
(0.9 - 0.2Sds) * DL + E 90 deg M2	**13.28**	**00.00**	**0**	**1**	**-0.07**	**14.07**	**-1.01**
	13.28	**00.00**	**120**	**1a**	**-1.91**	**27.23**	**1.06**
	13.28	**00.00**	**240**	**1b**	**-0.17**	**0.91**	**-0.06**
1.0D + 1.0W Service Normal	**13.28**	**00.00**	**0**	**1**	**0.00**	**106.81**	**-11.14**
	13.28	**00.00**	**120**	**1a**	**2.79**	**-27.54**	**-2.78**
	13.28	**00.00**	**240**	**1b**	**-2.79**	**-27.54**	**-2.78**
1.0D + 1.0W Service 60 deg	**13.28**	**00.00**	**0**	**1**	**-0.96**	**60.69**	**-5.98**
	13.28	**00.00**	**120**	**1a**	**-5.66**	**60.61**	**2.16**
	13.28	**00.00**	**240**	**1b**	**-7.30**	**-69.57**	**-4.21**
1.0D + 1.0W Service 90 deg	**13.28**	**00.00**	**0**	**1**	**-1.13**	**17.24**	**-1.18**
	13.28	**00.00**	**120**	**1a**	**-8.57**	**92.98**	**4.30**
	13.28	**00.00**	**240**	**1b**	**-6.54**	**-58.49**	**-3.12**

Max Uplift:	316.20 (kip)	Moment Ice:	2,563.00 (kip-ft)	Moment:	6,827.25 (kip-ft)	1.2D + 1.6W Normal	
Max Down:	363.45 (kip)	Total Down Ice:	225.60 (kip)	Total Down:	62.08 (kip)		
Max Shear:	39.21 (kip)	Total Shear Ice:	24.73 (kip)	Total Shear:	63.56 (kip)		

Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
93 mph Normal with No Ice	20.00	0.027	0.0019	0.1337	0.1337
93 mph Normal with No Ice	30.00	0.055	0.0016	0.1834	0.1834
93 mph Normal with No Ice	70.00	0.255	0.0054	0.3960	0.3961
93 mph Normal with No Ice	86.67	0.384	0.0120	0.5015	0.5017
93 mph Normal with No Ice	93.33	0.444	0.0166	0.5426	0.5428
93 mph Normal with No Ice	100.00	0.510	0.0213	0.5848	0.5852
93 mph Normal with No Ice	113.33	0.654	0.0307	0.6645	0.6652
93 mph Normal with No Ice	120.00	0.733	0.0366	0.6822	0.6830
93 mph Normal with No Ice	126.67	0.817	0.0544	0.7508	0.7527
93 mph Normal with No Ice	133.33	0.905	0.0747	0.7692	0.7728
93 mph Normal with No Ice	140.25	1.002	0.0953	0.8906	0.8906
93 mph Normal with No Ice	145.19	1.074	0.1453	0.8656	0.8777
93 mph Normal with No Ice	155.06	1.229	0.2404	1.0294	1.0571
93 mph Normal with No Ice	164.20	1.384	0.2564	0.9900	1.0226
93 mph Normal with No Ice	172.10	1.525	0.2572	1.0306	1.0622
93 mph Normal with No Ice	180.00	1.666	0.2577	1.1646	1.1927
93 mph 60 degree with No Ice	20.00	0.026	-0.0073	0.1288	0.1290
93 mph 60 degree with No Ice	30.00	0.053	-0.0098	0.1773	0.1775
93 mph 60 degree with No Ice	70.00	0.247	0.0274	0.3837	0.3843
93 mph 60 degree with No Ice	86.67	0.373	0.0401	0.4860	0.4869
93 mph 60 degree with No Ice	93.33	0.432	0.0473	0.5256	0.5272
93 mph 60 degree with No Ice	100.00	0.496	0.0545	0.5665	0.5685
93 mph 60 degree with No Ice	113.33	0.637	0.0688	0.6402	0.6439
93 mph 60 degree with No Ice	120.00	0.714	0.0768	0.6784	0.6827
93 mph 60 degree with No Ice	126.67	0.795	0.0994	0.7231	0.7299
93 mph 60 degree with No Ice	133.33	0.881	0.1235	0.7438	0.7470
93 mph 60 degree with No Ice	140.25	0.975	0.1500	0.8670	0.8798
93 mph 60 degree with No Ice	145.19	1.046	0.2065	0.8220	0.8382
93 mph 60 degree with No Ice	155.06	1.196	0.3159	0.8545	0.8968
93 mph 60 degree with No Ice	164.20	1.347	0.3410	0.9551	1.0027
93 mph 60 degree with No Ice	172.10	1.483	0.3580	0.9900	1.0493
93 mph 60 degree with No Ice	180.00	1.620	0.3731	0.9578	1.0083
93 mph 90 degree with No Ice	20.00	0.026	-0.0105	0.1333	0.1337
93 mph 90 degree with No Ice	30.00	0.053	-0.0143	0.1781	0.1783
93 mph 90 degree with No Ice	70.00	0.248	-0.0363	0.3858	0.3873
93 mph 90 degree with No Ice	86.67	0.375	-0.0487	0.4882	0.4906
93 mph 90 degree with No Ice	93.33	0.434	-0.0546	0.5280	0.5305
93 mph 90 degree with No Ice	100.00	0.499	-0.0606	0.5689	0.5720
93 mph 90 degree with No Ice	113.33	0.640	-0.0719	0.6418	0.6444
93 mph 90 degree with No Ice	120.00	0.718	-0.0779	0.6861	0.6872
93 mph 90 degree with No Ice	126.67	0.800	-0.0957	0.7242	0.7270
93 mph 90 degree with No Ice	133.33	0.886	-0.1128	0.7475	0.7560
93 mph 90 degree with No Ice	140.25	0.980	-0.1347	0.8592	0.8619
93 mph 90 degree with No Ice	145.19	1.051	-0.1726	0.8209	0.8389
93 mph 90 degree with No Ice	155.06	1.202	-0.2470	0.8027	0.8398
93 mph 90 degree with No Ice	164.20	1.354	-0.2516	0.9589	0.9914
93 mph 90 degree with No Ice	172.10	1.490	-0.2529	0.9887	1.0205
93 mph 90 degree with No Ice	180.00	1.627	-0.2540	0.8919	0.9273
93 mph Normal with No Ice (Reduced DL)	20.00	0.027	0.0019	0.1334	0.1334
93 mph Normal with No Ice (Reduced DL)	30.00	0.055	0.0016	0.1831	0.1831
93 mph Normal with No Ice (Reduced DL)	70.00	0.255	0.0054	0.3953	0.3954
93 mph Normal with No Ice (Reduced DL)	86.67	0.383	0.0120	0.5005	0.5007
93 mph Normal with No Ice (Reduced DL)	93.33	0.444	0.0167	0.5414	0.5417
93 mph Normal with No Ice (Reduced DL)	100.00	0.509	0.0213	0.5836	0.5840
93 mph Normal with No Ice (Reduced DL)	113.33	0.653	0.0307	0.6630	0.6637

93 mph Normal with No Ice (Reduced DL)	120.00	0.732	0.0366	0.6806	0.6815
93 mph Normal with No Ice (Reduced DL)	126.67	0.816	0.0543	0.7490	0.7510
93 mph Normal with No Ice (Reduced DL)	133.33	0.903	0.0747	0.7673	0.7710
93 mph Normal with No Ice (Reduced DL)	140.25	1.000	0.0953	0.8883	0.8883
93 mph Normal with No Ice (Reduced DL)	145.19	1.072	0.1453	0.8633	0.8755
93 mph Normal with No Ice (Reduced DL)	155.06	1.226	0.2403	1.0268	1.0546
93 mph Normal with No Ice (Reduced DL)	164.20	1.381	0.2562	0.9874	1.0201
93 mph Normal with No Ice (Reduced DL)	172.10	1.521	0.2570	1.0280	1.0596
93 mph Normal with No Ice (Reduced DL)	180.00	1.662	0.2576	1.1617	1.1899
93 mph 60 deg with No Ice (Reduced DL)	20.00	0.026	-0.0073	0.1287	0.1289
93 mph 60 deg with No Ice (Reduced DL)	30.00	0.053	-0.0098	0.1771	0.1773
93 mph 60 deg with No Ice (Reduced DL)	70.00	0.247	0.0274	0.3830	0.3836
93 mph 60 deg with No Ice (Reduced DL)	86.67	0.372	0.0401	0.4851	0.4859
93 mph 60 deg with No Ice (Reduced DL)	93.33	0.431	0.0473	0.5246	0.5261
93 mph 60 deg with No Ice (Reduced DL)	100.00	0.495	0.0545	0.5653	0.5672
93 mph 60 deg with No Ice (Reduced DL)	113.33	0.636	0.0687	0.6387	0.6424
93 mph 60 deg with No Ice (Reduced DL)	120.00	0.712	0.0767	0.6770	0.6813
93 mph 60 deg with No Ice (Reduced DL)	126.67	0.794	0.0994	0.7214	0.7282
93 mph 60 deg with No Ice (Reduced DL)	133.33	0.880	0.1234	0.7421	0.7452
93 mph 60 deg with No Ice (Reduced DL)	140.25	0.973	0.1499	0.8648	0.8777
93 mph 60 deg with No Ice (Reduced DL)	145.19	1.043	0.2063	0.8201	0.8360
93 mph 60 deg with No Ice (Reduced DL)	155.06	1.194	0.3157	0.8523	0.8943
93 mph 60 deg with No Ice (Reduced DL)	164.20	1.344	0.3407	0.9525	1.0003
93 mph 60 deg with No Ice (Reduced DL)	172.10	1.479	0.3576	0.9873	1.0468
93 mph 60 deg with No Ice (Reduced DL)	180.00	1.616	0.3727	0.9551	1.0057
93 mph 90 deg with No Ice (Reduced DL)	20.00	0.026	-0.0105	0.1331	0.1335
93 mph 90 deg with No Ice (Reduced DL)	30.00	0.053	-0.0143	0.1778	0.1780
93 mph 90 deg with No Ice (Reduced DL)	70.00	0.248	-0.0363	0.3850	0.3866
93 mph 90 deg with No Ice (Reduced DL)	86.67	0.374	-0.0486	0.4873	0.4897
93 mph 90 deg with No Ice (Reduced DL)	93.33	0.434	-0.0545	0.5269	0.5294
93 mph 90 deg with No Ice (Reduced DL)	100.00	0.498	-0.0605	0.5676	0.5708
93 mph 90 deg with No Ice (Reduced DL)	113.33	0.639	-0.0719	0.6404	0.6430
93 mph 90 deg with No Ice (Reduced DL)	120.00	0.716	-0.0779	0.6845	0.6856
93 mph 90 deg with No Ice (Reduced DL)	126.67	0.798	-0.0957	0.7224	0.7253
93 mph 90 deg with No Ice (Reduced DL)	133.33	0.884	-0.1129	0.7457	0.7542
93 mph 90 deg with No Ice (Reduced DL)	140.25	0.978	-0.1347	0.8570	0.8597
93 mph 90 deg with No Ice (Reduced DL)	145.19	1.049	-0.1726	0.8189	0.8368
93 mph 90 deg with No Ice (Reduced DL)	155.06	1.200	-0.2471	0.8003	0.8376
93 mph 90 deg with No Ice (Reduced DL)	164.20	1.351	-0.2517	0.9564	0.9890
93 mph 90 deg with No Ice (Reduced DL)	172.10	1.487	-0.2530	0.9860	1.0180
93 mph 90 deg with No Ice (Reduced DL)	180.00	1.623	-0.2542	0.8891	0.9247
50 mph Normal with 1.00 in Radial Ice	20.00	0.010	0.0016	0.0510	0.0510
50 mph Normal with 1.00 in Radial Ice	30.00	0.021	0.0019	0.0712	0.0712
50 mph Normal with 1.00 in Radial Ice	70.00	0.095	0.0020	0.1466	0.1466
50 mph Normal with 1.00 in Radial Ice	86.67	0.143	0.0013	0.1836	0.1836
50 mph Normal with 1.00 in Radial Ice	93.33	0.165	0.0006	0.1975	0.1975
50 mph Normal with 1.00 in Radial Ice	100.00	0.189	0.0001	0.2124	0.2124
50 mph Normal with 1.00 in Radial Ice	113.33	0.241	0.0016	0.2398	0.2398
50 mph Normal with 1.00 in Radial Ice	120.00	0.269	0.0028	0.2458	0.2458
50 mph Normal with 1.00 in Radial Ice	126.67	0.299	0.0075	0.2692	0.2693
50 mph Normal with 1.00 in Radial Ice	133.33	0.331	0.0131	0.2757	0.2760
50 mph Normal with 1.00 in Radial Ice	140.25	0.365	0.0187	0.3178	0.3178
50 mph Normal with 1.00 in Radial Ice	145.19	0.391	0.0329	0.3082	0.3099
50 mph Normal with 1.00 in Radial Ice	155.06	0.446	0.0595	0.3574	0.3623
50 mph Normal with 1.00 in Radial Ice	164.20	0.501	0.0641	0.3483	0.3541
50 mph Normal with 1.00 in Radial Ice	172.10	0.551	0.0643	0.3620	0.3665
50 mph Normal with 1.00 in Radial Ice	180.00	0.600	0.0645	0.3973	0.4025
50 mph 60 deg with 1.00 in Radial Ice	20.00	0.011	-0.0026	0.0525	0.0525
50 mph 60 deg with 1.00 in Radial Ice	30.00	0.023	-0.0034	0.0738	0.0738
50 mph 60 deg with 1.00 in Radial Ice	70.00	0.096	-0.0074	0.1454	0.1454
50 mph 60 deg with 1.00 in Radial Ice	86.67	0.143	-0.0092	0.1819	0.1819
50 mph 60 deg with 1.00 in Radial Ice	93.33	0.165	-0.0099	0.1955	0.1956

50 mph 60 deg with 1.00 in Radial Ice	100.00	0.188	-0.0107	0.2102	0.2103
50 mph 60 deg with 1.00 in Radial Ice	113.33	0.240	-0.0119	0.2359	0.2361
50 mph 60 deg with 1.00 in Radial Ice	120.00	0.268	-0.0127	0.2487	0.2490
50 mph 60 deg with 1.00 in Radial Ice	126.67	0.298	-0.0160	0.2651	0.2656
50 mph 60 deg with 1.00 in Radial Ice	133.33	0.329	0.0208	0.2718	0.2720
50 mph 60 deg with 1.00 in Radial Ice	140.25	0.363	0.0267	0.3150	0.3162
50 mph 60 deg with 1.00 in Radial Ice	145.19	0.389	0.0393	0.2977	0.3002
50 mph 60 deg with 1.00 in Radial Ice	155.06	0.443	0.0634	0.3112	0.3162
50 mph 60 deg with 1.00 in Radial Ice	164.20	0.497	0.0674	0.3430	0.3456
50 mph 60 deg with 1.00 in Radial Ice	172.10	0.546	0.0691	0.3546	0.3584
50 mph 60 deg with 1.00 in Radial Ice	180.00	0.595	0.0707	0.3453	0.3467
50 mph 90 deg with 1.00 in Radial Ice	20.00	0.011	-0.0032	0.0518	0.0519
50 mph 90 deg with 1.00 in Radial Ice	30.00	0.022	-0.0042	0.0730	0.0731
50 mph 90 deg with 1.00 in Radial Ice	70.00	0.095	-0.0093	0.1456	0.1457
50 mph 90 deg with 1.00 in Radial Ice	86.67	0.143	-0.0118	0.1821	0.1822
50 mph 90 deg with 1.00 in Radial Ice	93.33	0.165	-0.0128	0.1958	0.1960
50 mph 90 deg with 1.00 in Radial Ice	100.00	0.188	-0.0139	0.2105	0.2106
50 mph 90 deg with 1.00 in Radial Ice	113.33	0.240	-0.0157	0.2357	0.2358
50 mph 90 deg with 1.00 in Radial Ice	120.00	0.268	-0.0168	0.2520	0.2521
50 mph 90 deg with 1.00 in Radial Ice	126.67	0.298	-0.0213	0.2644	0.2647
50 mph 90 deg with 1.00 in Radial Ice	133.33	0.329	-0.0257	0.2733	0.2745
50 mph 90 deg with 1.00 in Radial Ice	140.25	0.364	-0.0314	0.3109	0.3113
50 mph 90 deg with 1.00 in Radial Ice	145.19	0.389	-0.0407	0.2984	0.3012
50 mph 90 deg with 1.00 in Radial Ice	155.06	0.443	-0.0592	0.2988	0.3046
50 mph 90 deg with 1.00 in Radial Ice	164.20	0.498	-0.0599	0.3432	0.3484
50 mph 90 deg with 1.00 in Radial Ice	172.10	0.546	-0.0602	0.3531	0.3582
50 mph 90 deg with 1.00 in Radial Ice	180.00	0.595	-0.0605	0.3287	0.3342
Seismic Normal M1	20.00	0.001	0.0002	0.0056	0.0056
Seismic Normal M1	30.00	0.002	0.0003	0.0075	0.0075
Seismic Normal M1	70.00	0.011	0.0007	0.0170	0.0170
Seismic Normal M1	86.67	0.016	0.0008	0.0220	0.0221
Seismic Normal M1	93.33	0.019	0.0008	0.0241	0.0241
Seismic Normal M1	100.00	0.022	0.0009	0.0262	0.0262
Seismic Normal M1	113.33	0.028	0.0010	0.0301	0.0301
Seismic Normal M1	120.00	0.032	0.0010	0.0320	0.0320
Seismic Normal M1	126.67	0.036	0.0010	0.0345	0.0345
Seismic Normal M1	133.33	0.040	0.0009	0.0361	0.0361
Seismic Normal M1	140.25	0.044	0.0010	0.0422	0.0422
Seismic Normal M1	145.19	0.048	0.0006	0.0405	0.0405
Seismic Normal M1	155.06	0.055	0.0000	0.0439	0.0439
Seismic Normal M1	164.20	0.063	0.0001	0.0459	0.0459
Seismic Normal M1	172.10	0.069	0.0000	0.0475	0.0475
Seismic Normal M1	180.00	0.075	0.0001	0.0472	0.0472
Seismic Normal M2	20.00	0.001	0.0002	0.0060	0.0060
Seismic Normal M2	30.00	0.002	0.0003	0.0081	0.0081
Seismic Normal M2	70.00	0.012	0.0005	0.0190	0.0190
Seismic Normal M2	86.67	0.018	0.0006	0.0250	0.0251
Seismic Normal M2	93.33	0.021	0.0006	0.0278	0.0278
Seismic Normal M2	100.00	0.024	0.0006	0.0306	0.0306
Seismic Normal M2	113.33	0.032	0.0007	0.0363	0.0363
Seismic Normal M2	120.00	0.037	0.0006	0.0391	0.0391
Seismic Normal M2	126.67	0.041	0.0006	0.0432	0.0432
Seismic Normal M2	133.33	0.047	0.0004	0.0460	0.0460
Seismic Normal M2	140.25	0.052	0.0004	0.0555	0.0555
Seismic Normal M2	145.19	0.057	0.0003	0.0545	0.0545
Seismic Normal M2	155.06	0.067	0.0015	0.0610	0.0611
Seismic Normal M2	164.20	0.077	0.0017	0.0660	0.0661
Seismic Normal M2	172.10	0.087	0.0014	0.0689	0.0689
Seismic Normal M2	180.00	0.096	0.0012	0.0683	0.0683
Seismic 60 deg M1	20.00	0.001	-0.0002	0.0056	0.0056
Seismic 60 deg M1	30.00	0.002	-0.0003	0.0073	0.0073
Seismic 60 deg M1	70.00	0.011	-0.0007	0.0170	0.0170

Seismic 60 deg M1	86.67	0.016	-0.0008	0.0220	0.0220
Seismic 60 deg M1	93.33	0.019	-0.0008	0.0242	0.0242
Seismic 60 deg M1	100.00	0.022	-0.0009	0.0262	0.0262
Seismic 60 deg M1	113.33	0.028	-0.0010	0.0301	0.0301
Seismic 60 deg M1	120.00	0.032	-0.0010	0.0318	0.0318
Seismic 60 deg M1	126.67	0.036	-0.0010	0.0347	0.0347
Seismic 60 deg M1	133.33	0.040	-0.0009	0.0358	0.0358
Seismic 60 deg M1	140.25	0.044	-0.0010	0.0432	0.0432
Seismic 60 deg M1	145.19	0.048	-0.0006	0.0400	0.0400
Seismic 60 deg M1	155.06	0.055	0.0000	0.0434	0.0434
Seismic 60 deg M1	164.20	0.062	0.0001	0.0462	0.0462
Seismic 60 deg M1	172.10	0.069	0.0000	0.0474	0.0474
Seismic 60 deg M1	180.00	0.075	-0.0001	0.0470	0.0470
Seismic 60 deg M2	20.00	0.001	-0.0002	0.0059	0.0059
Seismic 60 deg M2	30.00	0.002	-0.0003	0.0079	0.0079
Seismic 60 deg M2	70.00	0.011	-0.0005	0.0190	0.0190
Seismic 60 deg M2	86.67	0.018	-0.0006	0.0250	0.0250
Seismic 60 deg M2	93.33	0.021	-0.0006	0.0279	0.0279
Seismic 60 deg M2	100.00	0.024	-0.0006	0.0306	0.0306
Seismic 60 deg M2	113.33	0.032	-0.0007	0.0363	0.0363
Seismic 60 deg M2	120.00	0.036	-0.0006	0.0388	0.0388
Seismic 60 deg M2	126.67	0.041	-0.0006	0.0434	0.0434
Seismic 60 deg M2	133.33	0.046	-0.0004	0.0457	0.0457
Seismic 60 deg M2	140.25	0.052	-0.0004	0.0566	0.0566
Seismic 60 deg M2	145.19	0.057	0.0003	0.0539	0.0539
Seismic 60 deg M2	155.06	0.067	0.0015	0.0603	0.0603
Seismic 60 deg M2	164.20	0.077	0.0017	0.0663	0.0663
Seismic 60 deg M2	172.10	0.087	0.0014	0.0688	0.0688
Seismic 60 deg M2	180.00	0.096	0.0012	0.0682	0.0682
Seismic 90 deg M1	20.00	0.001	-0.0003	0.0056	0.0056
Seismic 90 deg M1	30.00	0.002	-0.0004	0.0075	0.0075
Seismic 90 deg M1	70.00	0.011	-0.0008	0.0170	0.0170
Seismic 90 deg M1	86.67	0.016	-0.0009	0.0220	0.0220
Seismic 90 deg M1	93.33	0.019	-0.0010	0.0242	0.0242
Seismic 90 deg M1	100.00	0.022	-0.0010	0.0262	0.0262
Seismic 90 deg M1	113.33	0.028	-0.0011	0.0301	0.0301
Seismic 90 deg M1	120.00	0.032	-0.0011	0.0320	0.0320
Seismic 90 deg M1	126.67	0.036	-0.0011	0.0347	0.0347
Seismic 90 deg M1	133.33	0.040	-0.0011	0.0361	0.0362
Seismic 90 deg M1	140.25	0.044	-0.0011	0.0425	0.0425
Seismic 90 deg M1	145.19	0.048	-0.0007	0.0404	0.0404
Seismic 90 deg M1	155.06	0.055	0.0000	0.0438	0.0438
Seismic 90 deg M1	164.20	0.063	0.0001	0.0463	0.0463
Seismic 90 deg M1	172.10	0.069	0.0000	0.0475	0.0475
Seismic 90 deg M1	180.00	0.075	-0.0001	0.0471	0.0471
Seismic 90 deg M2	20.00	0.001	-0.0002	0.0060	0.0060
Seismic 90 deg M2	30.00	0.002	-0.0003	0.0080	0.0080
Seismic 90 deg M2	70.00	0.012	-0.0006	0.0190	0.0190
Seismic 90 deg M2	86.67	0.018	-0.0007	0.0250	0.0251
Seismic 90 deg M2	93.33	0.021	-0.0007	0.0279	0.0279
Seismic 90 deg M2	100.00	0.024	-0.0007	0.0306	0.0306
Seismic 90 deg M2	113.33	0.032	-0.0008	0.0363	0.0363
Seismic 90 deg M2	120.00	0.037	-0.0007	0.0390	0.0390
Seismic 90 deg M2	126.67	0.041	-0.0007	0.0433	0.0433
Seismic 90 deg M2	133.33	0.047	-0.0005	0.0462	0.0462
Seismic 90 deg M2	140.25	0.052	-0.0005	0.0556	0.0556
Seismic 90 deg M2	145.19	0.057	0.0003	0.0547	0.0547
Seismic 90 deg M2	155.06	0.067	0.0018	0.0613	0.0614
Seismic 90 deg M2	164.20	0.077	0.0019	0.0667	0.0667
Seismic 90 deg M2	172.10	0.087	0.0016	0.0689	0.0689
Seismic 90 deg M2	180.00	0.096	0.0014	0.0683	0.0683
Seismic (Reduced DL) Normal M1	20.00	0.001	0.0002	0.0055	0.0055

Seismic (Reduced DL) Normal M1	30.00	0.002	0.0003	0.0074	0.0074
Seismic (Reduced DL) Normal M1	70.00	0.011	0.0007	0.0170	0.0170
Seismic (Reduced DL) Normal M1	86.67	0.016	0.0008	0.0220	0.0220
Seismic (Reduced DL) Normal M1	93.33	0.019	0.0008	0.0240	0.0240
Seismic (Reduced DL) Normal M1	100.00	0.022	0.0009	0.0261	0.0261
Seismic (Reduced DL) Normal M1	113.33	0.028	0.0010	0.0299	0.0300
Seismic (Reduced DL) Normal M1	120.00	0.032	0.0010	0.0318	0.0318
Seismic (Reduced DL) Normal M1	126.67	0.036	0.0010	0.0344	0.0344
Seismic (Reduced DL) Normal M1	133.33	0.040	0.0009	0.0359	0.0359
Seismic (Reduced DL) Normal M1	140.25	0.044	0.0010	0.0422	0.0422
Seismic (Reduced DL) Normal M1	145.19	0.048	0.0006	0.0402	0.0402
Seismic (Reduced DL) Normal M1	155.06	0.055	0.0000	0.0436	0.0436
Seismic (Reduced DL) Normal M1	164.20	0.062	0.0001	0.0458	0.0458
Seismic (Reduced DL) Normal M1	172.10	0.069	0.0000	0.0473	0.0473
Seismic (Reduced DL) Normal M1	180.00	0.075	0.0001	0.0470	0.0470
Seismic (Reduced DL) Normal M2	20.00	0.001	0.0002	0.0059	0.0059
Seismic (Reduced DL) Normal M2	30.00	0.002	0.0003	0.0080	0.0080
Seismic (Reduced DL) Normal M2	70.00	0.012	0.0005	0.0189	0.0189
Seismic (Reduced DL) Normal M2	86.67	0.018	0.0006	0.0250	0.0250
Seismic (Reduced DL) Normal M2	93.33	0.021	0.0006	0.0277	0.0277
Seismic (Reduced DL) Normal M2	100.00	0.024	0.0006	0.0305	0.0305
Seismic (Reduced DL) Normal M2	113.33	0.032	0.0006	0.0362	0.0362
Seismic (Reduced DL) Normal M2	120.00	0.036	0.0006	0.0389	0.0389
Seismic (Reduced DL) Normal M2	126.67	0.041	0.0006	0.0430	0.0430
Seismic (Reduced DL) Normal M2	133.33	0.046	0.0004	0.0458	0.0458
Seismic (Reduced DL) Normal M2	140.25	0.052	0.0004	0.0555	0.0555
Seismic (Reduced DL) Normal M2	145.19	0.057	0.0003	0.0543	0.0543
Seismic (Reduced DL) Normal M2	155.06	0.067	0.0015	0.0607	0.0608
Seismic (Reduced DL) Normal M2	164.20	0.077	0.0017	0.0659	0.0659
Seismic (Reduced DL) Normal M2	172.10	0.087	0.0014	0.0685	0.0685
Seismic (Reduced DL) Normal M2	180.00	0.096	0.0012	0.0681	0.0681
Seismic (Reduced DL) 60 deg M1	20.00	0.001	-0.0002	0.0053	0.0053
Seismic (Reduced DL) 60 deg M1	30.00	0.002	-0.0003	0.0073	0.0073
Seismic (Reduced DL) 60 deg M1	70.00	0.010	-0.0007	0.0170	0.0170
Seismic (Reduced DL) 60 deg M1	86.67	0.016	-0.0008	0.0219	0.0219
Seismic (Reduced DL) 60 deg M1	93.33	0.019	-0.0008	0.0241	0.0241
Seismic (Reduced DL) 60 deg M1	100.00	0.022	-0.0009	0.0261	0.0261
Seismic (Reduced DL) 60 deg M1	113.33	0.028	-0.0010	0.0300	0.0300
Seismic (Reduced DL) 60 deg M1	120.00	0.032	-0.0010	0.0316	0.0316
Seismic (Reduced DL) 60 deg M1	126.67	0.036	-0.0010	0.0346	0.0346
Seismic (Reduced DL) 60 deg M1	133.33	0.040	-0.0009	0.0357	0.0357
Seismic (Reduced DL) 60 deg M1	140.25	0.044	-0.0010	0.0429	0.0429
Seismic (Reduced DL) 60 deg M1	145.19	0.048	-0.0006	0.0398	0.0398
Seismic (Reduced DL) 60 deg M1	155.06	0.055	0.0000	0.0431	0.0431
Seismic (Reduced DL) 60 deg M1	164.20	0.062	0.0001	0.0460	0.0460
Seismic (Reduced DL) 60 deg M1	172.10	0.069	0.0000	0.0472	0.0472
Seismic (Reduced DL) 60 deg M1	180.00	0.075	-0.0001	0.0469	0.0469
Seismic (Reduced DL) 60 deg M2	20.00	0.001	-0.0002	0.0057	0.0057
Seismic (Reduced DL) 60 deg M2	30.00	0.002	-0.0003	0.0078	0.0079
Seismic (Reduced DL) 60 deg M2	70.00	0.011	-0.0005	0.0189	0.0190
Seismic (Reduced DL) 60 deg M2	86.67	0.018	-0.0006	0.0249	0.0249
Seismic (Reduced DL) 60 deg M2	93.33	0.021	-0.0006	0.0277	0.0277
Seismic (Reduced DL) 60 deg M2	100.00	0.024	-0.0006	0.0305	0.0305
Seismic (Reduced DL) 60 deg M2	113.33	0.032	-0.0006	0.0361	0.0361
Seismic (Reduced DL) 60 deg M2	120.00	0.036	-0.0006	0.0386	0.0386
Seismic (Reduced DL) 60 deg M2	126.67	0.041	-0.0006	0.0432	0.0432
Seismic (Reduced DL) 60 deg M2	133.33	0.046	-0.0004	0.0456	0.0456
Seismic (Reduced DL) 60 deg M2	140.25	0.052	-0.0004	0.0562	0.0562
Seismic (Reduced DL) 60 deg M2	145.19	0.057	0.0003	0.0539	0.0539
Seismic (Reduced DL) 60 deg M2	155.06	0.067	0.0015	0.0602	0.0602
Seismic (Reduced DL) 60 deg M2	164.20	0.077	0.0017	0.0661	0.0661
Seismic (Reduced DL) 60 deg M2	172.10	0.087	0.0014	0.0686	0.0686

Seismic (Reduced DL) 60 deg M2	180.00	0.096	0.0012	0.0679	0.0679
Seismic (Reduced DL) 90 deg M1	20.00	0.001	-0.0003	0.0054	0.0054
Seismic (Reduced DL) 90 deg M1	30.00	0.002	-0.0004	0.0074	0.0074
Seismic (Reduced DL) 90 deg M1	70.00	0.011	-0.0008	0.0170	0.0170
Seismic (Reduced DL) 90 deg M1	86.67	0.016	-0.0009	0.0220	0.0220
Seismic (Reduced DL) 90 deg M1	93.33	0.019	-0.0010	0.0240	0.0241
Seismic (Reduced DL) 90 deg M1	100.00	0.022	-0.0010	0.0261	0.0261
Seismic (Reduced DL) 90 deg M1	113.33	0.028	-0.0011	0.0300	0.0300
Seismic (Reduced DL) 90 deg M1	120.00	0.032	-0.0011	0.0318	0.0318
Seismic (Reduced DL) 90 deg M1	126.67	0.036	-0.0011	0.0345	0.0345
Seismic (Reduced DL) 90 deg M1	133.33	0.040	-0.0011	0.0360	0.0361
Seismic (Reduced DL) 90 deg M1	140.25	0.044	-0.0011	0.0422	0.0422
Seismic (Reduced DL) 90 deg M1	145.19	0.048	-0.0007	0.0403	0.0403
Seismic (Reduced DL) 90 deg M1	155.06	0.055	0.0000	0.0437	0.0437
Seismic (Reduced DL) 90 deg M1	164.20	0.062	0.0001	0.0461	0.0461
Seismic (Reduced DL) 90 deg M1	172.10	0.069	0.0000	0.0473	0.0473
Seismic (Reduced DL) 90 deg M1	180.00	0.075	-0.0001	0.0469	0.0469
Seismic (Reduced DL) 90 deg M2	20.00	0.001	-0.0002	0.0058	0.0058
Seismic (Reduced DL) 90 deg M2	30.00	0.002	-0.0003	0.0080	0.0080
Seismic (Reduced DL) 90 deg M2	70.00	0.012	-0.0006	0.0189	0.0190
Seismic (Reduced DL) 90 deg M2	86.67	0.018	-0.0007	0.0250	0.0250
Seismic (Reduced DL) 90 deg M2	93.33	0.021	-0.0007	0.0277	0.0277
Seismic (Reduced DL) 90 deg M2	100.00	0.024	-0.0007	0.0305	0.0305
Seismic (Reduced DL) 90 deg M2	113.33	0.032	-0.0007	0.0362	0.0362
Seismic (Reduced DL) 90 deg M2	120.00	0.036	-0.0007	0.0388	0.0388
Seismic (Reduced DL) 90 deg M2	126.67	0.041	-0.0007	0.0431	0.0431
Seismic (Reduced DL) 90 deg M2	133.33	0.046	-0.0005	0.0461	0.0461
Seismic (Reduced DL) 90 deg M2	140.25	0.052	-0.0005	0.0553	0.0553
Seismic (Reduced DL) 90 deg M2	145.19	0.057	0.0003	0.0545	0.0545
Seismic (Reduced DL) 90 deg M2	155.06	0.067	0.0018	0.0612	0.0612
Seismic (Reduced DL) 90 deg M2	164.20	0.077	0.0019	0.0665	0.0665
Seismic (Reduced DL) 90 deg M2	172.10	0.087	0.0016	0.0686	0.0686
Seismic (Reduced DL) 90 deg M2	180.00	0.096	0.0014	0.0680	0.0680
Serviceability - 60 mph Wind Normal	20.00	0.007	0.0005	0.0352	0.0352
Serviceability - 60 mph Wind Normal	30.00	0.015	0.0004	0.0480	0.0480
Serviceability - 60 mph Wind Normal	70.00	0.067	0.0014	0.1033	0.1033
Serviceability - 60 mph Wind Normal	86.67	0.100	0.0031	0.1308	0.1308
Serviceability - 60 mph Wind Normal	93.33	0.116	0.0043	0.1415	0.1416
Serviceability - 60 mph Wind Normal	100.00	0.133	0.0055	0.1525	0.1526
Serviceability - 60 mph Wind Normal	113.33	0.171	0.0080	0.1732	0.1734
Serviceability - 60 mph Wind Normal	120.00	0.191	0.0095	0.1779	0.1779
Serviceability - 60 mph Wind Normal	126.67	0.213	0.0141	0.1957	0.1962
Serviceability - 60 mph Wind Normal	133.33	0.236	0.0194	0.2004	0.2013
Serviceability - 60 mph Wind Normal	140.25	0.261	0.0248	0.2317	0.2317
Serviceability - 60 mph Wind Normal	145.19	0.280	0.0379	0.2256	0.2287
Serviceability - 60 mph Wind Normal	155.06	0.321	0.0626	0.2683	0.2755
Serviceability - 60 mph Wind Normal	164.20	0.361	0.0666	0.2576	0.2660
Serviceability - 60 mph Wind Normal	172.10	0.397	0.0668	0.2682	0.2763
Serviceability - 60 mph Wind Normal	180.00	0.434	0.0670	0.3031	0.3104
Serviceability - 60 mph Wind 60 deg	20.00	0.007	-0.0022	0.0335	0.0335
Serviceability - 60 mph Wind 60 deg	30.00	0.014	-0.0030	0.0462	0.0463
Serviceability - 60 mph Wind 60 deg	70.00	0.064	-0.0076	0.1002	0.1003
Serviceability - 60 mph Wind 60 deg	86.67	0.097	-0.0101	0.1268	0.1269
Serviceability - 60 mph Wind 60 deg	93.33	0.113	-0.0112	0.1370	0.1372
Serviceability - 60 mph Wind 60 deg	100.00	0.129	-0.0124	0.1477	0.1479
Serviceability - 60 mph Wind 60 deg	113.33	0.166	-0.0147	0.1669	0.1674
Serviceability - 60 mph Wind 60 deg	120.00	0.186	-0.0158	0.1764	0.1771
Serviceability - 60 mph Wind 60 deg	126.67	0.207	0.0199	0.1884	0.1895
Serviceability - 60 mph Wind 60 deg	133.33	0.230	0.0249	0.1939	0.1944
Serviceability - 60 mph Wind 60 deg	140.25	0.254	0.0305	0.2256	0.2276
Serviceability - 60 mph Wind 60 deg	145.19	0.272	0.0423	0.2141	0.2160
Serviceability - 60 mph Wind 60 deg	155.06	0.311	0.0650	0.2229	0.2281

Serviceability - 60 mph Wind 60 deg	164.20	0.351	0.0685	0.2486	0.2545
Serviceability - 60 mph Wind 60 deg	172.10	0.386	0.0697	0.2575	0.2656
Serviceability - 60 mph Wind 60 deg	180.00	0.422	0.0709	0.2489	0.2537
Serviceability - 60 mph Wind 90 deg	20.00	0.007	-0.0027	0.0349	0.0350
Serviceability - 60 mph Wind 90 deg	30.00	0.014	-0.0037	0.0467	0.0467
Serviceability - 60 mph Wind 90 deg	70.00	0.065	-0.0094	0.1007	0.1010
Serviceability - 60 mph Wind 90 deg	86.67	0.098	-0.0126	0.1273	0.1279
Serviceability - 60 mph Wind 90 deg	93.33	0.113	-0.0142	0.1377	0.1383
Serviceability - 60 mph Wind 90 deg	100.00	0.130	-0.0157	0.1484	0.1490
Serviceability - 60 mph Wind 90 deg	113.33	0.167	-0.0187	0.1673	0.1678
Serviceability - 60 mph Wind 90 deg	120.00	0.187	-0.0202	0.1789	0.1791
Serviceability - 60 mph Wind 90 deg	126.67	0.209	-0.0248	0.1888	0.1893
Serviceability - 60 mph Wind 90 deg	133.33	0.231	-0.0293	0.1946	0.1968
Serviceability - 60 mph Wind 90 deg	140.25	0.256	-0.0349	0.2236	0.2243
Serviceability - 60 mph Wind 90 deg	145.19	0.274	-0.0448	0.2136	0.2183
Serviceability - 60 mph Wind 90 deg	155.06	0.313	-0.0641	0.2089	0.2185
Serviceability - 60 mph Wind 90 deg	164.20	0.353	-0.0652	0.2495	0.2578
Serviceability - 60 mph Wind 90 deg	172.10	0.388	-0.0655	0.2572	0.2654
Serviceability - 60 mph Wind 90 deg	180.00	0.424	-0.0657	0.2320	0.2411

Maximum Reactions Summary

	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
Anchor Group	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	62.08	225.60	363.45	39.21	63.56	24.73	6827.25	2563.00

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