

Derek Maheux Program Manager  
c/o Cellco Partnership d/b/a Verizon Wireless  
Centerline Communications, LLC  
750 West Center Street, Suite 301  
West Bridgewater, MA 02379  
Mobile: (508)649-3407  
[Dmaheux@clinellc.com](mailto:Dmaheux@clinellc.com)

September 22, 2023

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

**RE: Notice of Exempt Modification // Site: FALLS VILLAGE CT (ATC: 415121)  
188 Route 7, Falls Village, CT 06031  
N 41.94462209 // W -73.36053416**

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antenna at the 149-ft level on the existing 150 ft Monopine Tower, located at 188 Route 7, Falls Village, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the installation of two (2) interference mitigation filters on Verizon Wireless existing antenna platform and mounting assembly.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §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 Bethany's Chief Elected Official and Land Use Officer.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated September 7, 2023, by A.T Engineering Services, LLC, a structural analysis dated August 21, 2023, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated August 2, 2023, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated August 28, 2023, by Tower Engineering Professionals.

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the 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 new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis and a structural mount analysis, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings.

For the foregoing reasons, Verizon Wireless 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,

*Derek Maheux*

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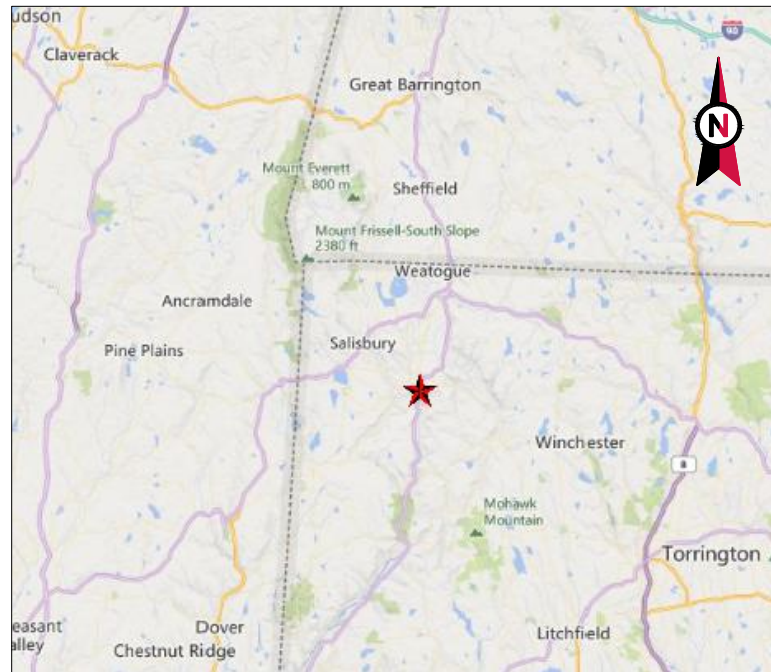
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Attachments: Exhibit 1 – Construction Drawings  
Exhibit 2 – Property Card and GIS  
Exhibit 3 – Structural Analysis  
Exhibit 4 – Mount Analysis  
Exhibit 5 – RF Emissions Analysis Report Evaluation  
Exhibit 6 – Available Original Tower Approval Records  
Exhibit 7 – Notice Deliver Confirmations

cc: Henry W. Todd – First Selectman – Chief Elected Official  
Janell Mullen - Town Planning Consultant & Zoning Enforcement Officer - as P&Z official  
American Tower Corporation - as tower owner  
Cellco Partnership dba Verizon Wireless – as ground owner

# EXHIBIT 1





VICINITY MAP




**AMERICAN TOWER®**

ATC SITE NAME: FALLS VILLAGE CT PCS CT  
 ATC SITE NUMBER: 415121  
 VERIZON SITE NAME: FALLS VILLAGE, CT  
 VERIZON SITE NUMBER: 5000247941  
 SITE ADDRESS: 188 ROUTE 7  
 FALLS VILLAGE, CT 06031



LOCATION MAP



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

THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	08/22/23
1	UPDATE COMPLIANCE CODES	AP	09/07/23

ATC SITE NUMBER:  
415121  
 ATC SITE NAME:  
FALLS VILLAGE CT PCS CT  
 VERIZON SITE NAME:  
FALLS VILLAGE, CT  
 SITE ADDRESS:  
188 ROUTE 7  
FALLS VILLAGE, CT 06031



VERIZON AMENDMENT DRAWINGS

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
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. 2020 NFPA 70, NATIONAL ELECTRIC CODE (NEC) 2. 2022 CONNECTICUT STATE BUILDING CODE 3. 2021 INTERNATIONAL BUILDING CODE (IBC)  DESIGN CRITERIA FROM TOWER STRUCTURAL ANALYSIS: BASIC WIND SPEED: 114 MPH (3-SECOND GUST) BASIC WIND SPEED W/ ICE: 40 MPH (3-SECOND GUST) W/ 1.00" RADIAL ICE CONCURRENT CODE(S): ANSI/TIA-222-H / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE  EXPOSURE CATEGORY: B RISK CATEGORY: II TOPO FACTOR PROCEDURE: METHOD 1 TOPOGRAPHIC CATEGORY: 1 SPECTRAL RESPONSE: S <sub>s</sub> =0.17, S <sub>z</sub> =0.05 SITE CLASS: D - STIFF SOIL - DEFAULT  INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 08/21/23.	<u>SITE ADDRESS:</u> 188 ROUTE 7 FALLS VILLAGE, CT 06031 COUNTY: LITCHFIELD  <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.94462209 LONGITUDE: -73.36053416 GROUND ELEVATION: 655' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:  INSTALL (1) DUAL SWIVEL MOUNT AND (2) FILTER(S)  EXISTING (12) ANTENNA(S), (6) RRR(S), (1) OVP, AND (1) 2.00" HYBRID CABLE TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518  <u>PROPERTY OWNER:</u> FALLS VILLAGE VOLUNTEER FIRE DEPARTMENT 188 ROUTE 7 FALLS VILLAGE, CT 06031	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. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).	G-001 TITLE SHEET G-002 GENERAL NOTES C-101 DETAILED SITE PLAN C-201 TOWER ELEVATION C-401 ANTENNA INFORMATION & SCHEDULE C-501 CONSTRUCTION DETAILS E-501 GROUNDING DETAILS R-601 SUPPLEMENTAL	CONTRACTOR PMI REQUIREMENTS  PMI ACCESSED AT: <a href="https://pmi.vzsmart.com">HTTPS://PMI.VZSMART.COM</a> SMART TOOL VENDOR PROJECT NUMBER: 10208059 VZW LOCATION CODE (PSLC): 5000247941 ***PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT  MOUNT MODIFICATION REQUIRED: NO VZW APPROVED SMART KIT VENDORS: REFER TO MOUNT MODIFICATION DRAWINGS PAGES FOR VZW SMART KIT APPROVED VENDORS			
<u>UTILITY COMPANIES</u>  POWER COMPANY: EVERSOURCE PHONE: (888) 783-6617  TELEPHONE COMPANY: UNKNOWN PHONE: N/A	<u>PROJECT LOCATION DIRECTIONS</u>  COMING FROM WATERBURY TAKE ROUTE 8 NORTH TOWARDS TORRINGTON TAKE EXIT 44 END OF EXIT GO STRAIGHT TO THE NEXT TRAFFIC LIGHT AND MAKE A LEFT ON ROUTE 4 WEST. FOLLOW ROUTE 4 FOR ABOUT 6 MILES INTO GOSHEN AND MAKE A RIGHT ONTO ROUTE 63 NORTH AT ROTARY CONTINUE ABOUT 10 MILES AND MAKE A LEFT ONTO ROUTE 126 NORTH AFTER 2 MILES MAKE A LEFT ONTO ROUTE 7 SOUTH SITE IS ABOUT 1.7 MILES ON YOUR RIGHT. LOOK FOR MONOPINE, GATE COMBO IS 4667						



ATC JOB NO: 14519763\_GO  
 CUSTOMER ID: FALLS VILLAGE, CT  
 CUSTOMER #: 5000247941

TITLE SHEET

SHEET NUMBER: **G-001**  
 REVISION: **1**



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**GENERAL CONSTRUCTION NOTES:**

1. OWNER FURNISHED MATERIALS, VERIZON "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 VERIZON 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 VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON 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 VERIZON 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 VERIZON 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 VERIZON 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 VERIZON 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 VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON 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 VERIZON 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. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. 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.
31. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
32. 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 VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. 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.
34. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON 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.
35. VERIZON 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 VERIZON OR THEIR ARCHITECT/ENGINEER.

- B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

**SPECIAL CONSTRUCTION**

**ANTENNA INSTALLATION NOTES:**

1. WORK INCLUDED:
  - A. ANTENNA AND COAXIAL/HYBRID CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
  - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND VERIZON SPECIFICATIONS.
  - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
  - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
  - E. INSTALL COAXIAL/HYBRID 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/HYBRID CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
2. ANTENNA AND COAXIAL/HYBRID CABLE GROUNDING:
  - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.

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



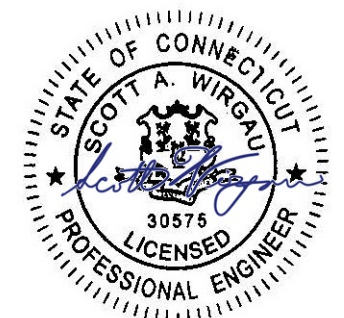
**AMERICAN TOWER®**  
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ATC SITE NUMBER:  
 415121  
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 VERIZON SITE NAME:  
**FALLS VILLAGE, CT**  
 SITE ADDRESS:  
 188 ROUTE 7  
 FALLS VILLAGE, CT 06031

SEAL:



Digitally Signed: 2023-09-07



ATC JOB NO:	14519763_G0
CUSTOMER ID:	FALLS VILLAGE, CT
CUSTOMER #:	5000247941

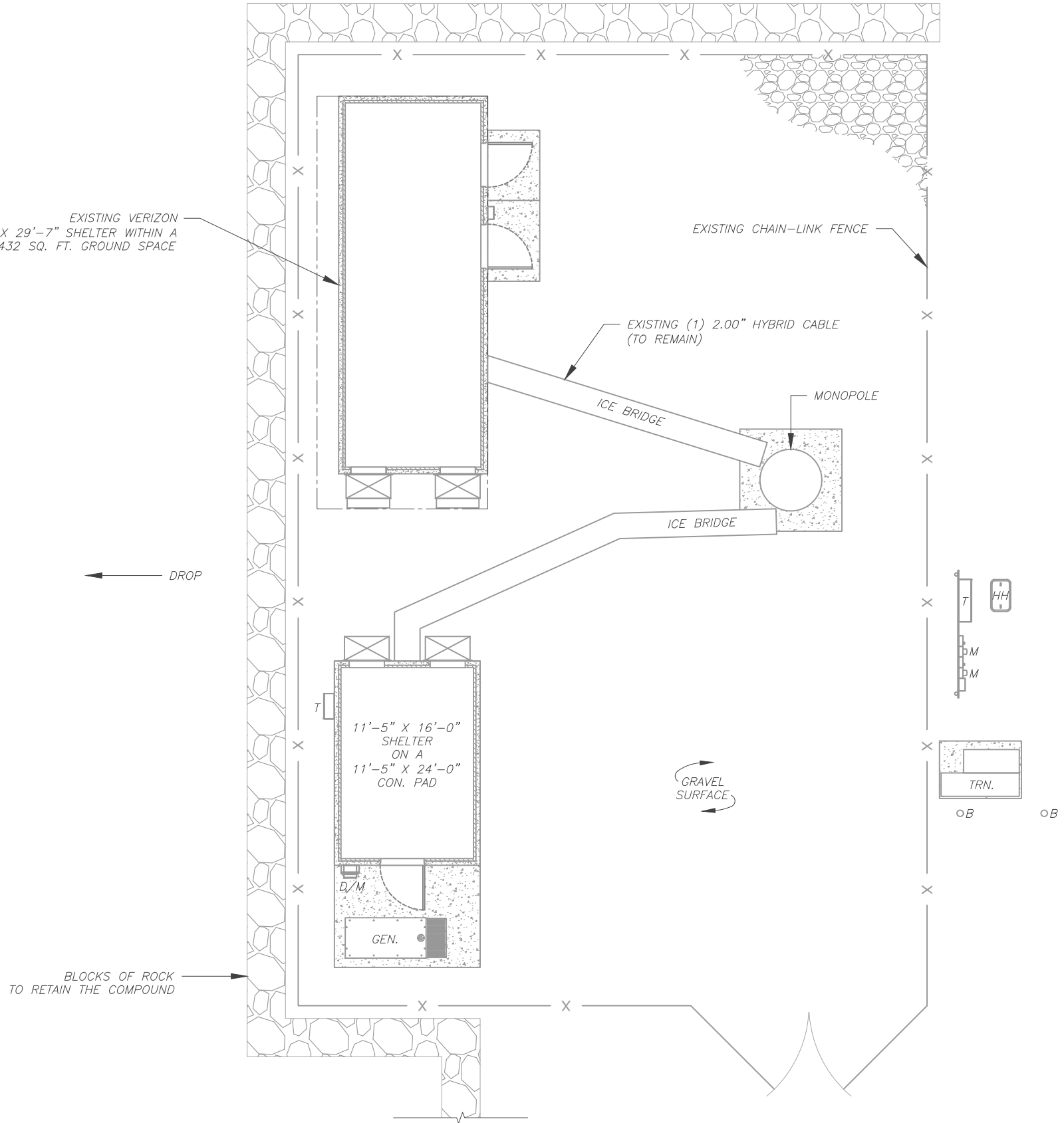
**GENERAL NOTES**

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

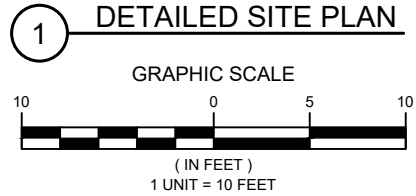
- THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
- ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE 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.
- NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

EXISTING VERIZON  
11'-8" X 29'-7" SHELTER WITHIN A  
432 SQ. FT. GROUND SPACE



**LEGEND**

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
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
---	CHAINLINK FENCE



**AMERICAN TOWER®**  
**A.T. ENGINEERING SERVICES LLC**  
 3500 REGENCY PARKWAY  
 SUITE 100  
 CARY, NC 27518  
 PHONE: (919) 468-0112  
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Digitally Signed: 2023-09-07

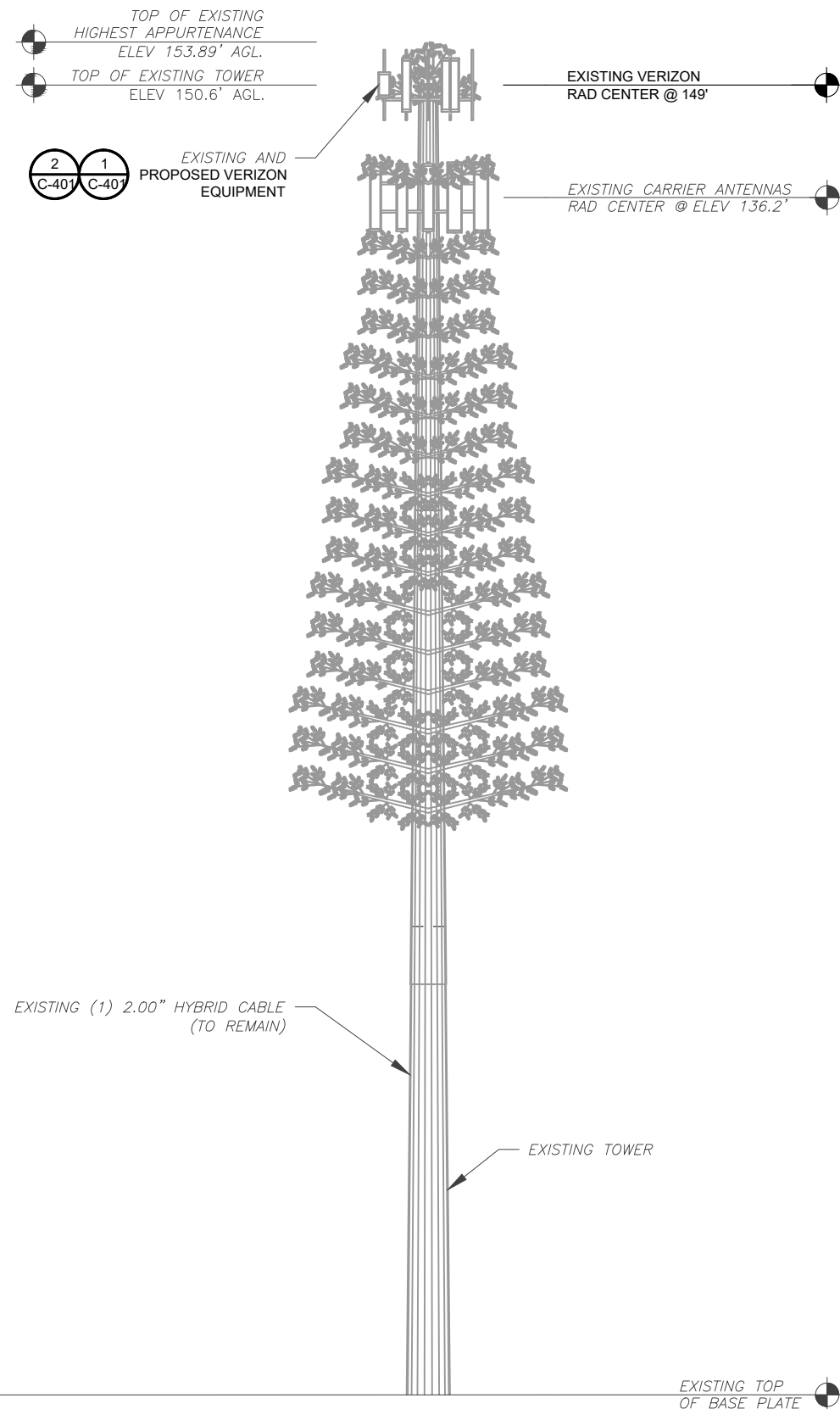
**verizon**

ATC JOB NO:	14519763_G0
CUSTOMER ID:	FALLS VILLAGE, CT
CUSTOMER #:	5000247941

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

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PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN CT, PC, DATED 08/02/23, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



**1 TOWER ELEVATION**  
SCALE: N.T.S.

- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
  - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
  - TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.



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A.T. ENGINEERING SERVICES LLC  
3500 REGENCY PARKWAY  
SUITE 100  
CARY, NC 27518  
PHONE: (919) 468-0112  
PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	08/22/23

ATC SITE NUMBER:  
415121  
ATC SITE NAME:  
FALLS VILLAGE CT PCS CT  
VERIZON SITE NAME:  
FALLS VILLAGE, CT  
SITE ADDRESS:  
188 ROUTE 7  
FALLS VILLAGE, CT 06031



Digitally Signed: 2023-09-07



ATC JOB NO:	14519763_GO
CUSTOMER ID:	FALLS VILLAGE, CT
CUSTOMER #:	5000247941

**TOWER ELEVATION**

SHEET NUMBER: <b>C-201</b>	REVISION: <b>0</b>
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0	FOR CONSTRUCTION	MNC	08/22/23

ATC SITE NUMBER:  
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**FALLS VILLAGE, CT**  
 SITE ADDRESS:  
 188 ROUTE 7  
 FALLS VILLAGE, CT 06031



Digitally Signed: 2023-09-07

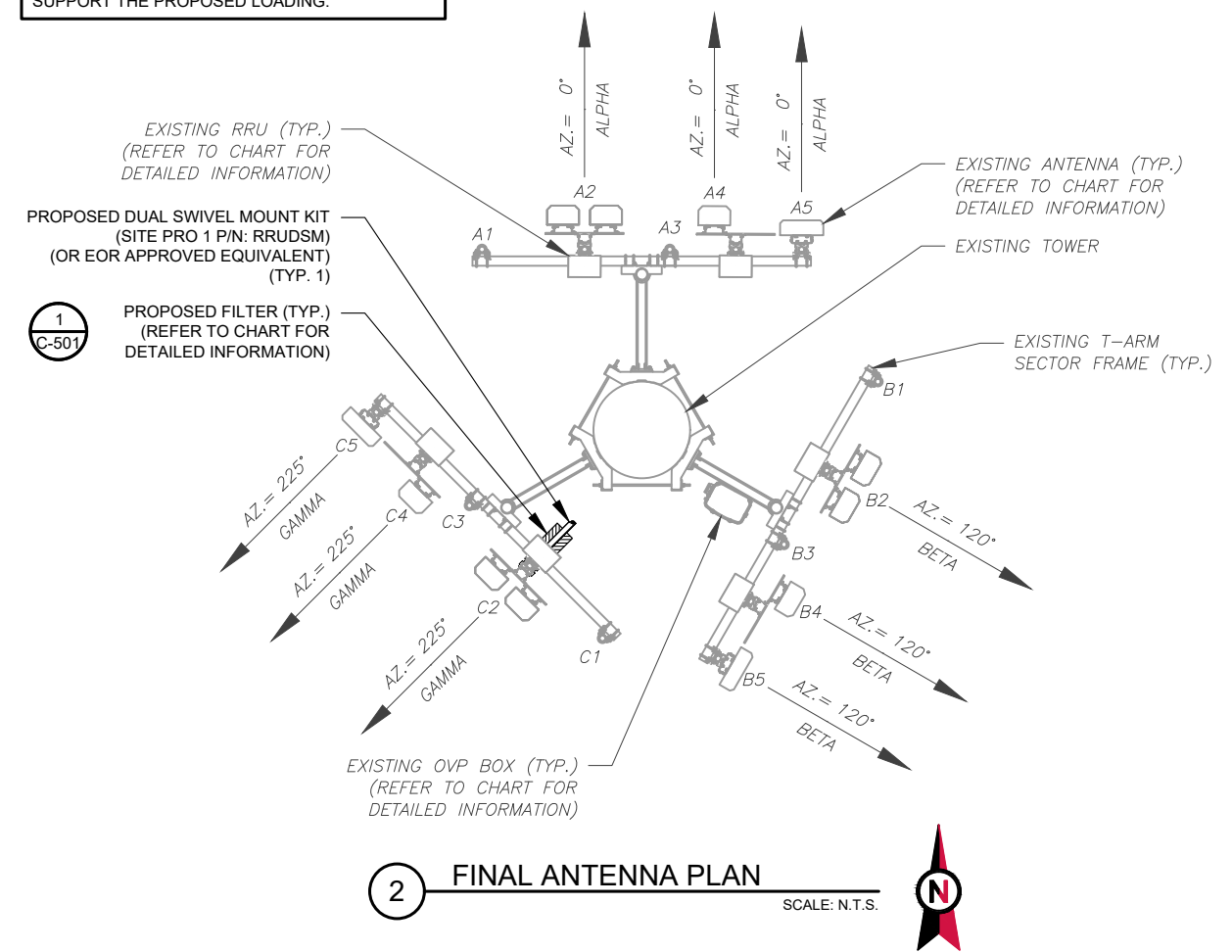
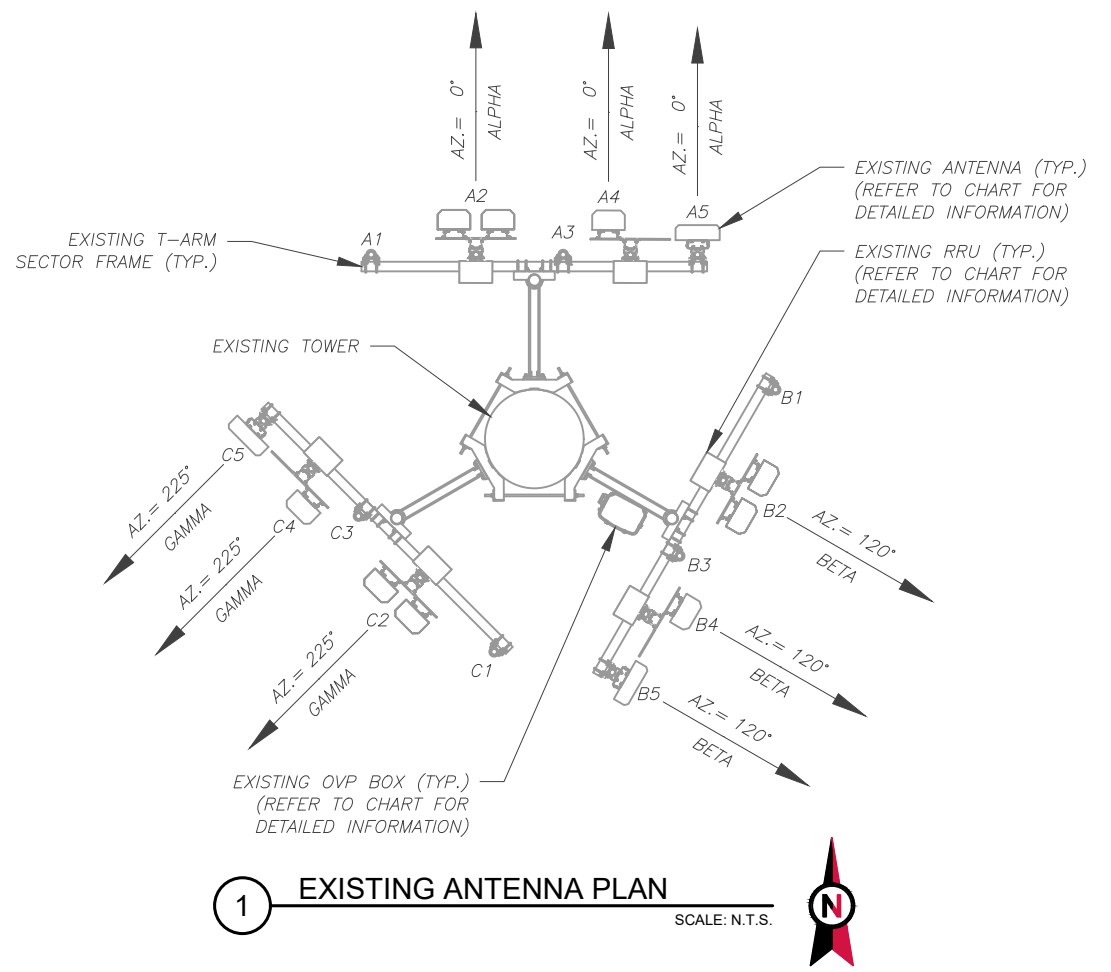


ATC JOB NO: 14519763\_GO  
 CUSTOMER ID: FALLS VILLAGE, CT  
 CUSTOMER #: 5000247941

**ANTENNA INFORMATION & SCHEDULE**

SHEET NUMBER:  
**C-401**  
 REVISION:  
**0**

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN CT, PC, DATED 08/02/23, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	149'	0°	A1	-	-	-	-	-
			A2	(2) SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4439D-25A	RMN
			A3	-	-	-	-	-
			A4	SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4440D-13A	RMN
			A5	MT6407-77A	L-SUB6	RMN	-	-
BETA	149'	120°	B1	-	-	-	-	-
			B2	(2) SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4439D-25A	RMN
			B3	-	-	-	-	-
			B4	SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4440D-13A	RMN
			B5	MT6407-77A	L-SUB6	RMN	-	-
GAMMA	149'	225°	C1	-	-	-	-	-
			C2	(2) SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4439D-25A	RMN
			C3	-	-	-	-	-
			C4	SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4440D-13A	RMN
			C5	MT6407-77A	L-SUB6	RMN	-	-

**NOTES**

- CONFIRM WITH VERIZON REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

**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 ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	149'	0°	A1	-	-	-	-	-
			A2	(2) SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4439D-25A	RMN
			A3	-	-	-	-	-
			A4	SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4440D-13A	RMN
			A5	MT6407-77A	L-SUB6	RMN	-	-
BETA	149'	120°	B1	-	-	-	-	-
			B2	(2) SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4439D-25A	RMN
			B3	-	-	-	-	-
			B4	SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4440D-13A	RMN
			B5	MT6407-77A	L-SUB6	RMN	-	-
GAMMA	149'	225°	C1	-	-	-	-	-
			C2	(2) SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4439D-25A (2) KA-6030	RMN ADD
			C3	-	-	-	-	-
			C4	SBNHH-1D65B	L700,L850,L1900, LAWS	RMN	RF4440D-13A	RMN
			C5	MT6407-77A	L-SUB6	RMN	-	-

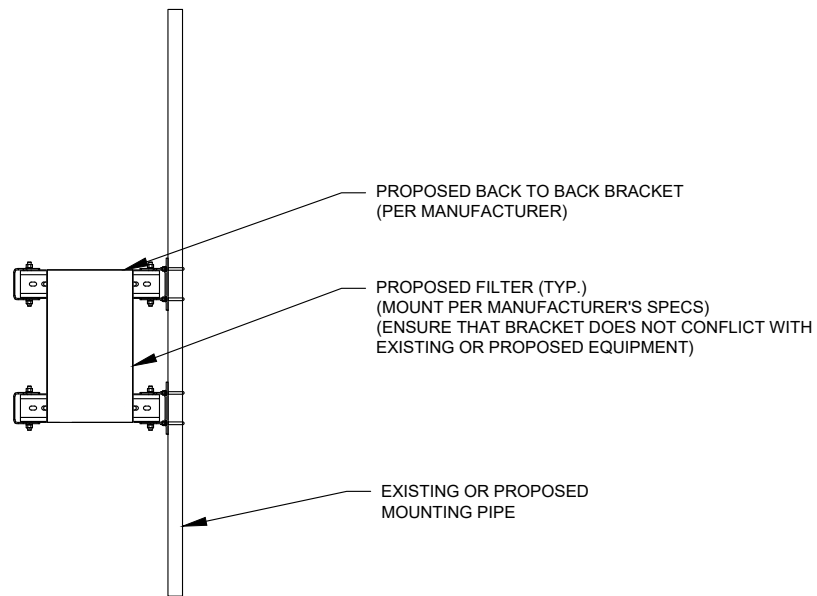
EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
(1) RVZDC-6627-PF-48	RMN	(1) 2.00" HYBRID CABLE	RMN

**3 EQUIPMENT SCHEDULES**

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
(1) RVZDC-6627-PF-48	RMN	(1) 2.00" HYBRID CABLE	RMN



EXISTING/PROPOSED MOUNTS AND/OR MOUNT MODIFICATIONS NOT SHOWN FOR CLARITY. REFER TO ANTENNA PLANS, MOUNT ANALYSES AND/OR MOUNT MODIFICATION DOCUMENTS FOR ADDITIONAL DETAIL.



1 PROPOSED FILTER MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



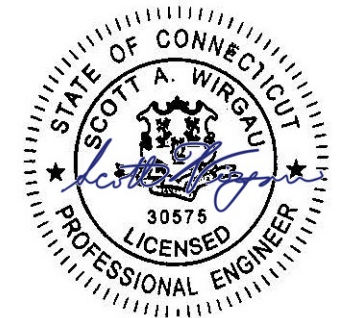
**AMERICAN TOWER®**  
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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	08/22/23

ATC SITE NUMBER:  
415121  
 ATC SITE NAME:  
**FALLS VILLAGE CT PCS CT**  
 VERIZON SITE NAME:  
**FALLS VILLAGE, CT**  
 SITE ADDRESS:  
 188 ROUTE 7  
 FALLS VILLAGE, CT 06031

SEAL:



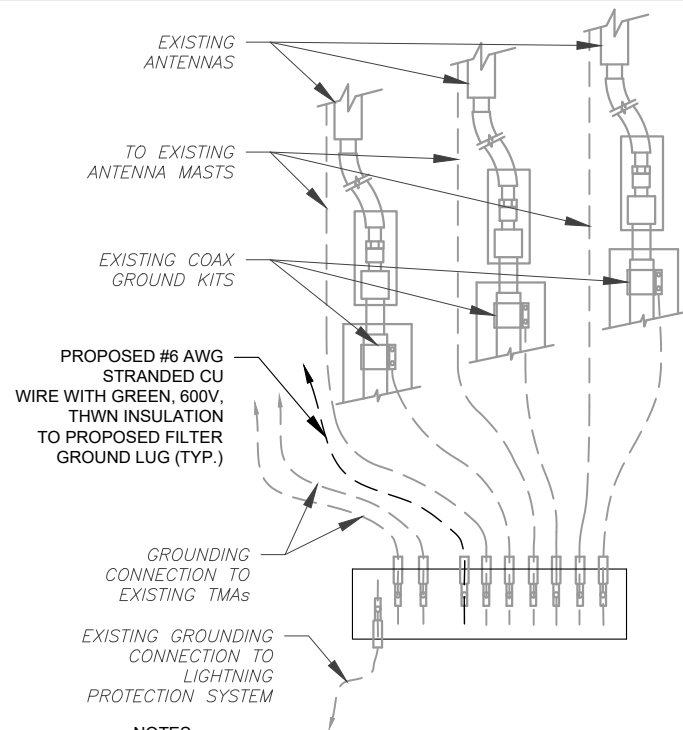
Digitally Signed: 2023-09-07



ATC JOB NO: 14519763\_G0  
 CUSTOMER ID: FALLS VILLAGE, CT  
 CUSTOMER #: 5000247941

**CONSTRUCTION  
 DETAILS**

SHEET NUMBER: **C-501**      REVISION: **0**

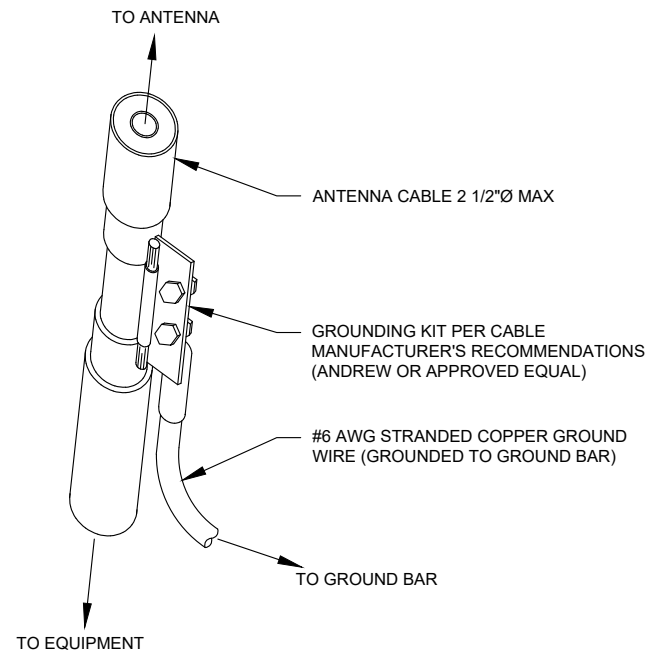


**NOTES:**

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

**1 TYPICAL ANTENNA GROUNDING DIAGRAM**

SCALE: N.T.S.

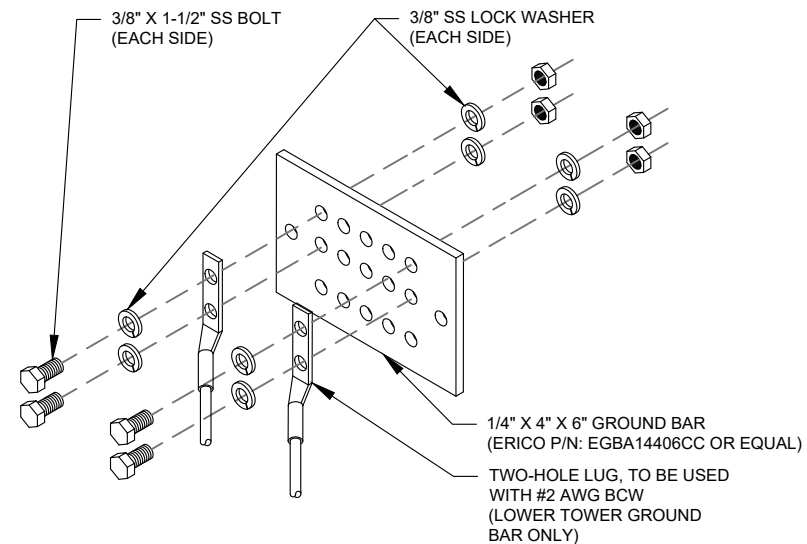


**GROUND KIT NOTES:**

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

**2 CABLE GROUND KIT CONNECTION DETAIL**

SCALE: N.T.S.



**GROUND BAR NOTES:**

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

**3 TOWER GROUND BAR DETAIL**

SCALE: N.T.S.



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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MNC	08/22/23

ATC SITE NUMBER:  
415121

ATC SITE NAME:

**FALLS VILLAGE CT PCS CT**

VERIZON SITE NAME:

**FALLS VILLAGE, CT**

SITE ADDRESS:  
188 ROUTE 7  
FALLS VILLAGE, CT 06031

SEAL:



Digitally Signed: 2023-09-07



ATC JOB NO: 14519763\_G0  
 CUSTOMER ID: FALLS VILLAGE, CT  
 CUSTOMER #: 5000247941

**GROUNDING DETAILS**

SHEET NUMBER: **E-501**      REVISION: **0**

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Colliers Engineering & Design CT, PC  
 1055 Washington Boulevard  
 Stamford, CT 06901  
 203.324.0800  
 peter.albano@collierseng.com

Mount Structural Analysis Report  
 (3) 10.00-Ft T-Arms

August 2, 2023  
 Site ID: 5000247941-VZW / FALLS VILLAGE CT  
 Page | 5

**Requirements:**

The existing mount is **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

If required, ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other. Separate review fees will apply.

**Attachments:**

1. Contractor Required Post Installation Inspection (PMI) Report Deliverables
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

**Antenna Mount Analysis Report and PMI Requirements**

Mount ReAnalysis

SMART Tool Project #: 10208059  
 Colliers Engineering & Design CT, PC Project #: 23777214

August 2, 2023

**Site Information**

Site ID: 5000247941-VZW / FALLS VILLAGE CT  
 Site Name: FALLS VILLAGE CT  
 Carrier Name: Verizon Wireless  
 Address: Route 7  
 Falls Village, Connecticut 06031  
 Litchfield County  
 Latitude: 41.944556°  
 Longitude: -73.360481°

**Structure Information**

Tower Type: 151-Ft Monopole  
 Mount Type: 10.00-Ft T-Arm

FUZE ID # 17123776

**Analysis Results**

T-Arm: 96.5 % Pass\*

\*Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.

**\*\*\*Contractor PMI Requirements:**

Included at the end of this MA report  
 Available & Submitted via portal at <https://pmi.vzwsmart.com>

For additional questions and support, please reach out to:  
[pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

Report Prepared By: Gilberto Martinez



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

SUPPLEMENTAL

SHEET NUMBER: <b>R-601</b>	REVISION: <b>0</b>
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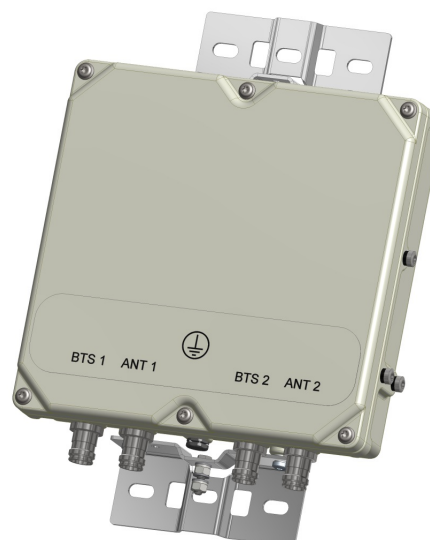
# KA-6030

## TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

The KA-6030 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the KA-6030 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the KA-6030 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.

### FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available



### TECHNICAL SPECIFICATIONS

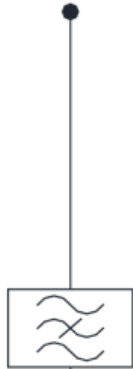
BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	
<b>ELECTRICAL</b>		
Impedance	50Ohms	
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm	
<b>DC / AISG</b>		
Passband	0 - 13MHz	
Insertion loss	0.3dB maximum	
Return loss	15dB minimum	
Input voltage range	± 33V	
DC current rating	2A continuous, 4A peak	
Compliance	3GPP TS 25.461	
<b>ENVIRONMENTAL</b>		
For further details of environmental compliance, please contact Kaelus.		
Temperature range	-20°C to +60°C   -4°F to +140°F	
Ingress protection	IP67	
Altitude	2600m   8530ft	
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.	
MTBF	>1,000,000 hours	
Compliance	ETSI EN 300 019 class 4.1H, RoHS, NEBS GR-487-CORE	
<b>MECHANICAL</b>		
Dimensions H x D x W	269 x 277 x 80mm   10.60 x 10.90 x 3.15in (Excluding brackets and connectors)	
Weight	8.0 kg   17.6 lbs (no bracket)	
Finish	Powder coated, light grey (RAL7035)	
Connectors	RF: 4.3-10 (F) x 4	
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.	

## ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
KA-6030-2032	TWIN, 2 in / 2 out	DC/AISG PASS	4.3-10 (F)

ELECTRICAL BLOCK DIAGRAM

ANT1



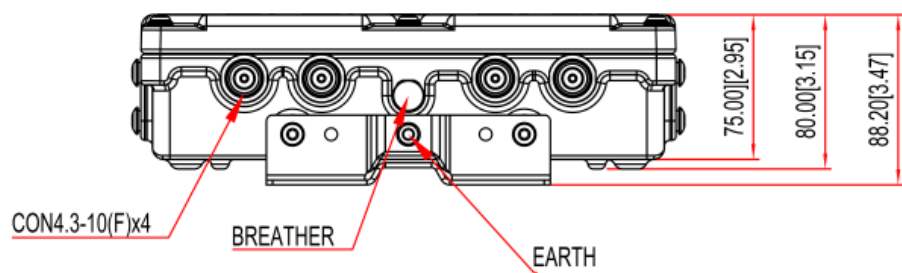
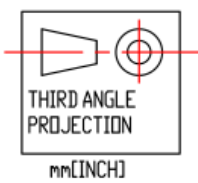
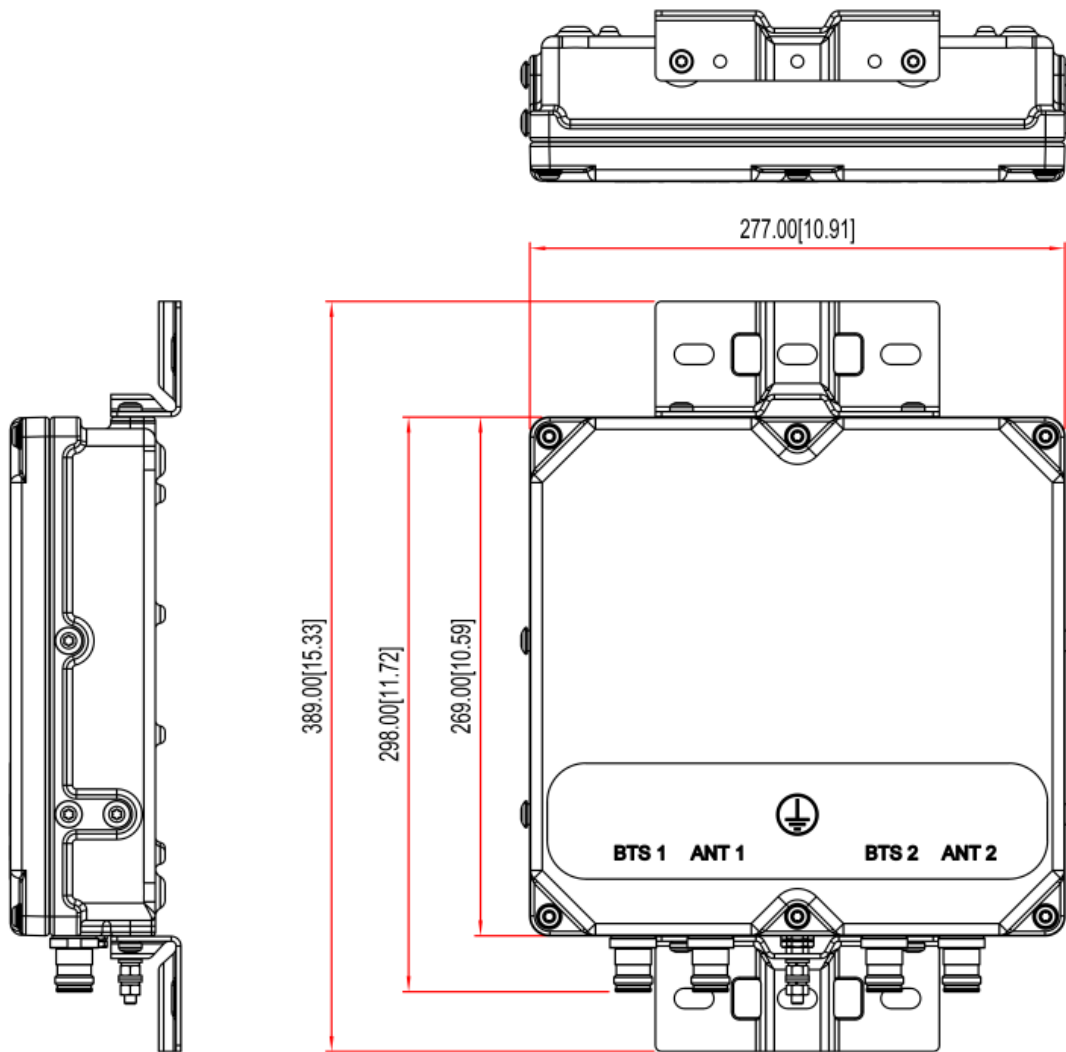
BTS1

ANT2



BTS2

MECHANICAL BLOCK DIAGRAM



# EXHIBIT 2





# 188 RT 7 S

**Location** 188 RT 7 S

**Mblu** 15 / 11/1T /

**Acct#** 14105233

**Owner** CELLCO PARTNERSHIP

**Assessment** \$136,000

**Appraisal** \$194,200

**PID** 100810

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2022	\$32,200	\$162,000	\$194,200

Assessment			
Valuation Year	Improvements	Land	Total
2022	\$22,600	\$113,400	\$136,000

## Owner of Record

**Owner** CELLCO PARTNERSHIP  
**Co-Owner** DBA VERIZON WIRELESS  
**Address** PO BOX 2549  
ADDISON, TX 75001

**Sale Price** \$0  
**Certificate**  
**Book & Page** 0071/0600  
**Sale Date** 07/28/2008  
**Instrument** 25

## Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
CELLCO PARTNERSHIP	\$0		0071/0600	25	07/28/2008

## 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:	Outbuildings
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:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Cndtn	
Fin Bsmt Qual	
FBM Area	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

### Building Photo



(<https://images.vgsi.com/photos/CanaanCTPhotos/A00\00\11\34.jpg>)

### Building Layout

 Building Layout

([https://images.vgsi.com/photos/CanaanCTPhotos/Sketches/100810\\_1176](https://images.vgsi.com/photos/CanaanCTPhotos/Sketches/100810_1176))

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** 300  
**Description** Industrial Vacant  
**Zone** R80  
**Neighborhood** 6  
**Alt Land Appr Category** No

### Land Line Valuation

**Size (Acres)** 0  
**Frontage**  
**Depth**  
**Assessed Value** \$113,400  
**Appraised Value** \$162,000

## Outbuildings

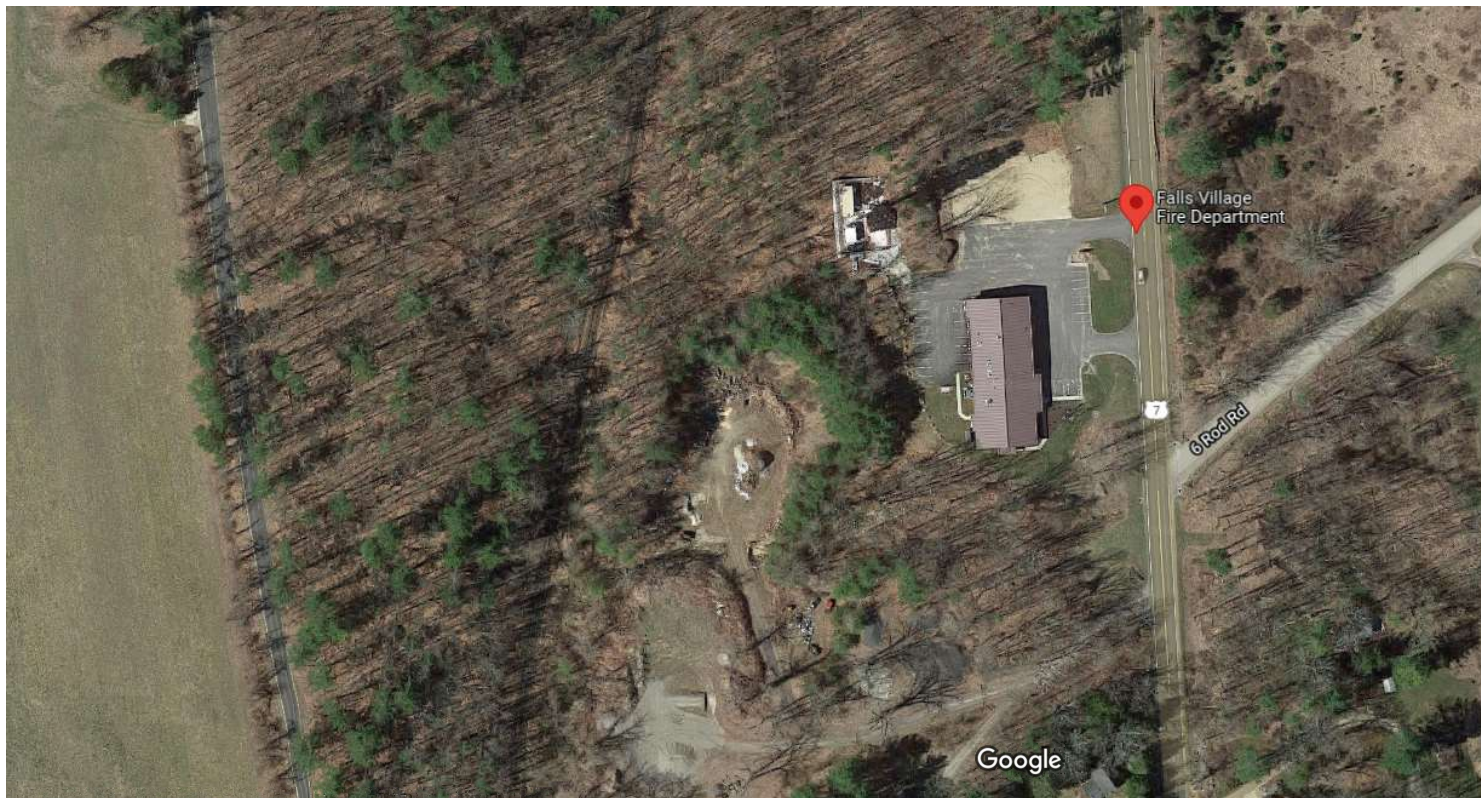
Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
TAB	Telecomm Accessory Bldg			360.00 Units	\$19,400	1
TAB	Telecomm Accessory Bldg			192.00 Units	\$10,400	1
FN4	Fence 8' Chain			248.00 L.F.	\$2,000	1
PAT2	Patio - Good			96.00 S.F.	\$400	1

## Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2021	\$32,200	\$0	\$32,200
2018	\$32,200	\$0	\$32,200
2016	\$38,900	\$0	\$38,900

Assessment			
Valuation Year	Improvements	Land	Total
2021	\$22,600	\$0	\$22,600
2018	\$22,600	\$0	\$22,600
2016	\$27,200	\$0	\$27,200

# Falls Village Fire Department



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## Falls Village Fire Department

Fire station

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188 US-7S, Falls Village, CT 06031

Open now: Open 24 hours

(860) 824-5298

WJVR+R5 Falls Village, Canaan, CT

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# EXHIBIT 3





**AMERICAN TOWER®**  
CORPORATION

## Structural Analysis Report

**Structure** : 149 ft Monopine  
**ATC Asset Name** : Falls Village CT PCS CT  
**ATC Asset Number** : 415121  
**Engineering Number** : 14519763\_C3\_03  
**Proposed Carrier** : VERIZON WIRELESS  
**Carrier Site Name** : Falls Village, CT  
**Carrier Site Number** : 5000247941  
**Site Location** : 188 Route 7  
Falls Village, CT 06031-1608  
41.9446° N, 73.3605° W  
**County** : Litchfield  
**Date** : August 21, 2023  
**Max Usage** : 84%  
**Analysis Result** : Pass

Created By:

Kyle MacPetrie  
Structural Engineer II



**COA: PEC.0001553**

## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 149 ft Monopine tower to reflect the change in loading by VERIZON WIRELESS.

## Supporting Documents

<b>Tower:</b>	EI Drawing #16975-P01, dated February 6, 2013
<b>Foundation:</b>	EI Drawing #16975-FND, dated February 6, 2013
<b>Geotechnical:</b>	Terracon Project #J2095143, dated April 30, 2009

## Analysis

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

<b>Basic Wind Speed:</b>	114 mph (3-second gust)
<b>Basic Wind Speed w/ Ice:</b>	40 mph (3-second gust) w/ 1.00" radial ice concurrent
<b>Code(s):</b>	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 1
<b>Topographic Category:</b>	1
<b>Spectral Response:</b>	$S_s = 0.17$ , $S_1 = 0.05$
<b>Site Class:</b>	D - Stiff Soil - Default

## 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 Engineering via email at [Engineering@americantower.com](mailto:Engineering@americantower.com). Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

### Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	66.9%	1.2D + 1.0W	Pass
Base Plate @ 0.0 ft	59.1%	Rods	Pass
Mat & Pier	84.5%	Flexure [Steel (Pier)]	Pass

### Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	5,540.6	70.7	49.9

*\*Reactions shown reflect the results from the Load Case with maximum Moment*

Structure base reactions were analyzed using available geotechnical and foundation information.



**VERIZON WIRELESS Final Loading**

Elev (ft)	Qty	Equipment	Lines
149.0	2	Kaelus KA-6030	(1) 2.00" (50.8mm) Hybrid
	2	Raycap RVZDC-6627-PF-48	
	3	Samsung MT6407-77A	
	3	Samsung RF4439d-25A	
	3	Samsung RF4440d-13A	
	9	Commscope SBNHH-1D65B	
146.0	1	VZW Unused Reserve (17804.96 sqin)	-
	3	Light Sector Frame	

**Other Existing/Reserved Loading**

Elev (ft)	Qty	Equipment	Lines	Carrier
147.0	1	PINE BRANCH	-	-
142.0	1	PINE BRANCH	-	-
137.0	1	PINE BRANCH	-	-
135.0	3	CCI HPA-65R-BUU-H8	(2) 0.39" (10mm) Fiber Trunk (8) 0.78" (19.7mm) 8 AWG 6 (3) 1/2" Coax (4) 3" conduit	AT&T MOBILITY
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Ericsson RRUS 8843 B2, B66A		
	3	Light Sector Frame		
	4	Raycap DC6-48-60-18-8F(32.8 lbs)		
	6	Ericsson RRUS-11		
	6	Kathrein Scala 80010966		
9	Ericsson RRUS 12 w/ RRUS A2 (80 lb)			
132.0	1	PINE BRANCH	-	-
127.0	1	PINE BRANCH	-	-
122.0	1	PINE BRANCH	-	-
117.0	1	PINE BRANCH	-	-
112.0	1	PINE BRANCH	-	-
107.0	1	PINE BRANCH	-	-
102.0	1	PINE BRANCH	-	-
97.0	1	PINE BRANCH	-	-
92.0	1	PINE BRANCH	-	-
87.0	1	PINE BRANCH	-	-
82.0	1	PINE BRANCH	-	-
77.0	1	PINE BRANCH	-	-
72.0	1	PINE BRANCH	-	-
67.0	1	PINE BRANCH	-	-
62.0	1	PINE BRANCH	-	-

*(If table breaks across pages, please see previous page for data in merged cells)*

## **Standard Conditions**

All engineering services performed by A.T. Engineering Services LLC 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 Services LLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC 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 Services LLC, 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 Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

**ANALYSIS PARAMETERS**

Nominal Wind: 114 mph	Ice Wind: 40 mph w/ 1" ice	Service Wind: 60 mph
Risk Category: II	Exposure: B	S <sub>z</sub> : 0.167 S <sub>t</sub> : 0.054
Topo Category: 1	Topo Factor: Method 1	Topo Feature:
Structure Height: 149 ft	Base Elevation: 0.00 ft	Structure Type: Taper
Base Diameter: 58.5 in	Base Rotation: 0°	Taper: 0.2350 (in/ft)

**POLE SECTION PROPERTIES**

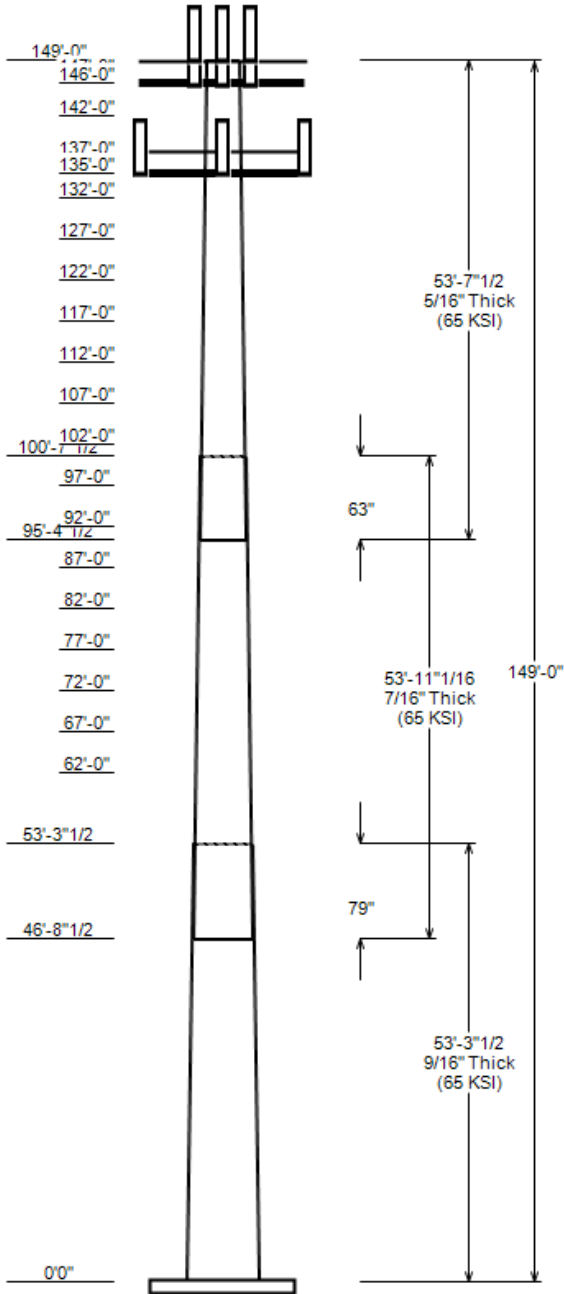
Section	Length (ft)	Flat Diameter (in)		Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
		Top	Bottom					
1	53.290	45.98	58.50	0.562		0.000	18 Sides	65
2	53.920	35.74	48.40	0.438	Slip Joint	79.000	18 Sides	65
3	53.623	25.00	37.60	0.312	Slip Joint	63.000	18 Sides	65

**DISCRETE APPURTENANCE**

Elev (ft)	Description
149.0	(2) Kaelus KA-6030
149.0	(3) Samsung RF4440d-13A
149.0	(3) Samsung RF4439d-25A
149.0	(2) Raycap RVZDC-6627-PF-48
149.0	(3) Samsung MT6407-77A
149.0	(9) Commscope SBNHH-1D65B
147.0	(1) PINE BRANCH
146.0	(3) Generic Flat Light Sector Fram
146.0	(1) VZW Unused Reserve (17804.96 s
142.0	(1) PINE BRANCH
137.0	(1) PINE BRANCH
135.0	(4) Raycap DC6-48-60-18-8F(32.8 lb
135.0	(3) Ericsson RRUS 8843 B2, B66A
135.0	(3) Ericsson RRUS 4478 B14
135.0	(3) Ericsson RRUS 4449 B5, B12
135.0	(9) Ericsson RRUS 12 w/ RRUS A2 (8
135.0	(6) Ericsson RRUS-11
135.0	(3) CCI HPA-65R-BUU-H8
135.0	(6) Kathrein Scala 80010966
135.0	(3) Generic Flat Light Sector Fram
132.0	(1) PINE BRANCH
127.0	(1) PINE BRANCH
122.0	(1) PINE BRANCH
117.0	(1) PINE BRANCH
112.0	(1) PINE BRANCH
107.0	(1) PINE BRANCH
102.0	(1) PINE BRANCH
97.0	(1) PINE BRANCH
92.0	(1) PINE BRANCH
87.0	(1) PINE BRANCH
82.0	(1) PINE BRANCH
77.0	(1) PINE BRANCH
72.0	(1) PINE BRANCH
67.0	(1) PINE BRANCH
62.0	(1) PINE BRANCH

**LINEAR APPURTENANCE**

Elev To (ft)	Description
149.0	(1) 2.00" (50.8mm) Hybrid
135.0	(4) 3" conduit
135.0	(3) 1/2" Coax
135.0	(8) 0.78" (19.7mm) 8 AWG 6
135.0	(2) 0.39" (10mm) Fiber Trunk



**GLOBAL BASE REACTIONS**

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	5540.55	70.72	49.87
0.9D + 1.0W	5486.48	53.02	49.84
1.2D + 1.0Di + 1.0Wi	1014.96	90.59	9.13
1.2D + 1.0Ev + 1.0Eh	217.38	70.50	1.77
0.9D - 1.0Ev + 1.0Eh	214.52	49.32	1.77
1.0D + 1.0W	1365.65	58.99	12.35

ANALYSIS PARAMETERS

<b>Location:</b>	Litchfield County,CT	<b>Height:</b>	149 ft
<b>Type and Shape:</b>	Taper, 18 Sides	<b>Base Diameter:</b>	58.50 in
<b>Manufacturer:</b>	EEL	<b>Top Diameter:</b>	25.00 in
<b>K<sub>d</sub> (non-service):</b>	0.95	<b>Taper:</b>	0.2350 in/ft
<b>K<sub>e</sub>:</b>	0.98	<b>Rotation:</b>	0.000°

ICE & WIND PARAMETERS

<b>Risk Category:</b>	II	<b>Design Wind Speed:</b>	114 mph
<b>Exposure Category:</b>	B	<b>Design Wind Speed w/ Ice:</b>	40 mph
<b>Topo Factor Procedure:</b>	Method 1	<b>Design Ice Thickness:</b>	1.00 in
<b>Topographic Category:</b>	1	<b>Service Wind Speed:</b>	60 mph
<b>Crest Height:</b>	0 ft	<b>HMSL:</b>	655.00 ft

SEISMIC PARAMETERS

<b>Analysis Method:</b>	Equivalent Lateral Force Method		
<b>Site Class:</b>	D - Stiff Soil	<b>Period Based on Rayleigh Method (sec):</b>	2.19
<b>T<sub>L</sub> (sec):</b>	6	<b>P:</b>	1
<b>S<sub>s</sub>:</b>	0.167	<b>S<sub>1</sub>:</b>	0.054
<b>F<sub>a</sub>:</b>	1.600	<b>F<sub>v</sub>:</b>	2.400
<b>S<sub>ds</sub>:</b>	0.178	<b>S<sub>d1</sub>:</b>	0.086
		<b>C<sub>s</sub>:</b>	0.030
		<b>C<sub>s</sub> Max:</b>	0.030
		<b>C<sub>s</sub> Min:</b>	0.030

LOAD CASES

1.2D + 1.0W	114 mph Wind with No Ice
0.9D + 1.0W	114 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40 mph Wind with 1" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top							
							Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	53.29	0.5625	65		0.00	16,730	58.50	0.000	103.44	43,867.8	16.93	104.00	45.98	53.29	81.09	21,135.	13.00	81.75	0.2349	
2-18	53.92	0.4375	65	Slip	79.00	10,607	48.40	46.710	66.61	19,361.6	18.10	110.64	35.74	100.63	49.02	7,717.9	12.99	81.69	0.2349	
3-18	53.62	0.3125	65	Slip	63.00	5,608	37.60	95.377	36.98	6,495.1	19.80	120.31	25.00	149.00	24.49	1,885.9	12.70	80.01	0.2349	
<b>Total Shaft Weight</b>						<b>32,945</b>														

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Vert Ecc (ft)	No Ice			Ice			
				Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor	
149.00	Commscope SBNHH-1D65B	9	0.80	3.100	50.70	8.173	0.69	167.79	10.061	0.69
149.00	Raycap RVZDC-6627-PF-48	2	0.80	0.000	32.00	3.781	0.77	105.16	4.663	0.77
149.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	149.60	5.722	0.61
149.00	Samsung RF4439d-25A	3	0.80	0.000	74.70	2.500	0.50	128.03	3.198	0.50
149.00	Samsung RF4440d-13A	3	0.80	0.000	70.30	1.875	0.50	110.55	2.477	0.50
149.00	Kaelus KA-6030	2	0.80	0.000	17.60	0.963	0.50	33.33	1.399	0.50
147.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	878.58	65.893	1.00
146.00	Generic Flat Light Sector Fram	3	0.75	0.000	800.00	17.900	0.67	1542.36	27.949	0.67
146.00	VZW Unused Reserve (17804.96 s	1	0.80	0.000	1264.70	123.646	0.90	1851.49	181.015	0.90
142.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	877.51	65.813	1.00
137.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	876.51	65.738	1.00
135.00	CCI HPA-65R-BUU-H8	3	0.80	1.300	68.00	12.976	0.67	237.66	15.340	0.67
135.00	Kathrein Scala 80010966	6	0.80	2.200	114.60	17.363	0.63	326.62	19.799	0.63
135.00	Generic Flat Light Sector Fram	3	0.75	0.000	800.00	17.900	0.67	1536.00	27.863	0.67
135.00	Ericsson RRUS-11	6	0.80	1.900	55.00	3.792	0.50	114.28	4.640	0.50
135.00	Ericsson RRUS 12 w/ RRUS A2 (8	9	0.80	1.800	80.00	3.145	0.50	143.22	3.910	0.50
135.00	Ericsson RRUS 4449 B5, B12	3	0.80	3.900	71.00	1.969	0.50	113.56	2.585	0.50
135.00	Ericsson RRUS 4478 B14	3	0.80	3.800	59.90	1.842	0.50	96.41	2.434	0.50
135.00	Ericsson RRUS 8843 B2, B66A	3	0.80	3.900	72.00	1.639	0.50	112.47	2.197	0.50
135.00	Raycap DC6-48-60-18-8F(32.8 lb	4	0.80	0.500	32.80	1.470	1.00	73.54	1.931	1.00
132.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	875.48	65.661	1.00
127.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	874.41	65.581	1.00
122.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	873.30	65.497	1.00
117.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	872.15	65.411	1.00
112.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	870.95	65.321	1.00
107.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	869.71	65.228	1.00
102.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	868.49	65.137	1.00
97.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	867.10	65.032	1.00
92.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	865.62	64.922	1.00
87.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	864.13	64.809	1.00
82.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	862.55	64.691	1.00
77.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	860.88	64.566	1.00
72.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	859.11	64.433	1.00
67.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	857.23	64.292	1.00
62.00	PINE BRANCH	1	1.00	0.000	600.00	45.000	1.00	855.21	64.141	1.00
<b>Totals</b>	<b>Row Count: 35</b>	<b>84</b>			<b>20,781.50</b>			<b>35,575.96</b>		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/Row	Distance Between Rows (in)	Distance Between Cols (in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	149.00	1	2.00" (50.8mm) Hybrid	2	3.09	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	135.00	8	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	135.00	4	3" conduit	3.5	7.58	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	135.00	3	1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	135.00	2	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY

SEGMENT PROPERTIES												
Seg Top Elev (ft)	Description	(Max Length: 5 ft)	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fy (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	Weight (lb)
0.00			0.5625	58.500	103.436	43,867.80	16.93	104.00	81.5	1477.0	0.0	0.0
5.00			0.5625	57.326	101.340	41,253.80	16.56	101.91	81.9	1417.4	0.0	1,742.0
10.00			0.5625	56.151	99.243	38,745.80	16.19	99.82	82.4	1359.1	0.0	1,706.3
15.00			0.5625	54.977	97.146	36,341.50	15.82	97.74	82.6	1302.0	0.0	1,670.7
20.00			0.5625	53.802	95.049	34,038.80	15.45	95.65	82.6	1246.1	0.0	1,635.0
25.00			0.5625	52.628	92.953	31,835.50	15.09	93.56	82.6	1191.5	0.0	1,599.3
30.00			0.5625	51.453	90.856	29,729.40	14.72	91.47	82.6	1138.0	0.0	1,563.7
35.00			0.5625	50.279	88.759	27,718.30	14.35	89.38	82.6	1085.8	0.0	1,528.0
40.00			0.5625	49.104	86.662	25,799.90	13.98	87.30	82.6	1034.9	0.0	1,492.3
45.00			0.5625	47.930	84.566	23,972.20	13.61	85.21	82.6	985.1	0.0	1,456.6
46.71	Bot - Section 2		0.5625	47.529	83.850	23,368.70	13.49	84.50	82.6	968.4	0.0	489.0
50.00			0.5625	46.756	82.469	22,233.00	13.25	83.12	82.6	936.6	0.0	1,672.3
53.29	Top - Section 1		0.4375	46.858	64.458	17,548.70	17.47	107.10	80.8	737.6	0.0	1,643.2
55.00			0.4375	46.456	63.900	17,097.10	17.31	106.19	81	724.9	0.0	373.4
60.00			0.4375	45.282	62.270	15,821.30	16.84	103.50	81.6	688.2	0.0	1,073.3
62.00			0.4375	44.812	61.617	15,329.20	16.65	102.43	81.8	673.8	0.0	421.6
65.00			0.4375	44.107	60.639	14,610.50	16.37	100.82	82.2	652.4	0.0	624.0
67.00			0.4375	43.637	59.986	14,144.00	16.18	99.74	82.4	638.4	0.0	410.5
70.00			0.4375	42.933	59.008	13,463.10	15.89	98.13	82.6	617.6	0.0	607.4
72.00			0.4375	42.463	58.356	13,021.50	15.70	97.06	82.6	604.0	0.0	399.4
75.00			0.4375	41.758	57.377	12,377.40	15.42	95.45	82.6	583.8	0.0	590.7
77.00			0.4375	41.289	56.725	11,960.10	15.23	94.37	82.6	570.5	0.0	388.3
80.00			0.4375	40.584	55.746	11,351.70	14.95	92.76	82.6	550.9	0.0	574.1
82.00			0.4375	40.114	55.094	10,957.90	14.76	91.69	82.6	538.0	0.0	377.2
85.00			0.4375	39.409	54.116	10,384.40	14.47	90.08	82.6	519.0	0.0	557.4
87.00			0.4375	38.940	53.463	10,013.30	14.28	89.01	82.6	506.5	0.0	366.1
90.00			0.4375	38.235	52.485	9,473.50	14.00	87.39	82.6	488.0	0.0	540.8
92.00			0.4375	37.765	51.832	9,124.70	13.81	86.32	82.6	475.9	0.0	355.0
95.00			0.4375	37.061	50.854	8,617.60	13.53	84.71	82.6	458.0	0.0	524.1
95.38	Bot - Section 3		0.4375	36.972	50.731	8,555.30	13.49	84.51	82.6	455.8	0.0	65.1
97.00			0.4375	36.591	50.202	8,290.20	13.34	83.64	82.6	446.2	0.0	482.0
100.00			0.4375	35.886	49.223	7,814.90	13.05	82.03	82.6	428.9	0.0	877.6
100.63	Top - Section 2		0.3125	36.364	35.757	5,871.70	19.11	116.36	78.9	318.0	0.0	181.2
102.00			0.3125	36.041	35.437	5,715.50	18.93	115.33	79.1	312.3	0.0	166.4
105.00			0.3125	35.337	34.738	5,383.90	18.53	113.08	79.6	300.1	0.0	358.2
107.00			0.3125	34.867	34.272	5,170.20	18.26	111.57	79.9	292.1	0.0	234.8
110.00			0.3125	34.162	33.574	4,860.30	17.87	109.32	80.4	280.2	0.0	346.3
112.00			0.3125	33.692	33.108	4,660.70	17.60	107.82	80.7	272.5	0.0	226.9
115.00			0.3125	32.988	32.409	4,371.70	17.20	105.56	81.2	261.0	0.0	334.4
117.00			0.3125	32.518	31.943	4,185.90	16.94	104.06	81.5	253.5	0.0	219.0
120.00			0.3125	31.813	31.244	3,917.10	16.54	101.80	81.9	242.5	0.0	322.5
122.00			0.3125	31.344	30.778	3,744.40	16.27	100.30	82.3	235.3	0.0	211.0
125.00			0.3125	30.639	30.079	3,495.10	15.88	98.04	82.6	224.7	0.0	310.6
127.00			0.3125	30.169	29.613	3,335.20	15.61	96.54	82.6	217.7	0.0	203.1
130.00			0.3125	29.464	28.914	3,104.60	15.21	94.29	82.6	207.5	0.0	298.7
132.00			0.3125	28.995	28.448	2,956.90	14.95	92.78	82.6	200.9	0.0	195.2
135.00			0.3125	28.290	27.749	2,744.20	14.55	90.53	82.6	191.1	0.0	286.8
137.00			0.3125	27.820	27.283	2,608.30	14.29	89.02	82.6	184.7	0.0	187.3
140.00			0.3125	27.116	26.584	2,413.00	13.89	86.77	82.6	175.3	0.0	274.9
142.00			0.3125	26.646	26.118	2,288.30	13.62	85.27	82.6	169.1	0.0	179.3
145.00			0.3125	25.941	25.420	2,109.50	13.23	83.01	82.6	160.2	0.0	263.1
146.00			0.3125	25.706	25.187	2,052.00	13.09	82.26	82.6	157.2	0.0	86.1
147.00			0.3125	25.471	24.954	1,995.60	12.96	81.51	82.6	154.3	0.0	85.3
149.00			0.3125	25.002	24.488	1,885.90	12.70	80.01	82.6	148.6	0.0	168.2
<b>Total:</b>												<b>32,945.7</b>

CALCULATED FORCES													
Load Case: 1.2D + 1.0W			114 mph Wind with No Ice										23 Iterations
Gust Response Factor:		1.10											
Dead load Factor:		1.20											
Wind Load Factor:		1.00											
Seg	Pu	Vu	Tu	Mu	Mu	Resultant	Phi	Phi	Phi	Phi	Total	Rotation	Ratio

CALCULATED FORCES

Elev (ft)	FY (-) (kips)	FX (-) (kips)	MY (ft-kips)	MZ (ft-kips)	MX (ft-kips)	Moment (ft-kips)	Pn (kips)	Vn (kips)	Tn (ft-kips)	Mn (ft-kips)	Deflect (in)	(deg)	
0.00	-70.72	-49.87	0.00	-5,540.6	0.00	5,540.55	7,586.22	1,815.31	9,500.17	9,026.97	0	0	0.624
5.00	-68.24	-49.66	0.00	-5,291.2	0.00	5,291.21	7,471.93	1,778.51	9,118.97	8,709.02	0.09	-0.18	0.617
10.00	-65.81	-49.44	0.00	-5,042.9	0.00	5,042.94	7,356.01	1,741.71	8,745.59	8,394.77	0.37	-0.35	0.610
15.00	-63.42	-49.22	0.00	-4,795.7	0.00	4,795.74	7,217.48	1,704.92	8,380.00	8,060.91	0.84	-0.53	0.605
20.00	-61.07	-49.00	0.00	-4,549.6	0.00	4,549.65	7,061.70	1,668.12	8,022.22	7,714.96	1.5	-0.72	0.599
25.00	-58.77	-48.77	0.00	-4,304.7	0.00	4,304.66	6,905.92	1,631.32	7,672.25	7,376.60	2.35	-0.9	0.593
30.00	-56.51	-48.54	0.00	-4,060.8	0.00	4,060.81	6,750.14	1,594.52	7,330.08	7,045.83	3.4	-1.09	0.586
35.00	-54.29	-48.29	0.00	-3,818.1	0.00	3,818.12	6,594.37	1,557.72	6,995.72	6,722.64	4.64	-1.28	0.577
40.00	-52.12	-48.02	0.00	-3,576.7	0.00	3,576.68	6,438.59	1,520.93	6,669.16	6,407.04	6.08	-1.47	0.567
45.00	-50.04	-47.82	0.00	-3,336.6	0.00	3,336.57	6,282.81	1,484.13	6,350.41	6,099.03	7.72	-1.66	0.556
46.71	-49.30	-47.68	0.00	-3,255.0	0.00	3,254.96	6,229.64	1,471.57	6,243.39	5,995.63	8.33	-1.72	0.552
50.00	-47.04	-47.45	0.00	-3,097.9	0.00	3,097.94	6,127.03	1,447.33	6,039.46	5,798.61	9.56	-1.85	0.543
53.29	-44.85	-47.25	0.00	-2,941.8	0.00	2,941.83	4,690.13	1,131.24	4,743.28	4,472.73	10.88	-1.98	0.669
55.00	-44.21	-47.08	0.00	-2,861.0	0.00	2,861.03	4,660.50	1,121.45	4,661.57	4,405.65	11.6	-2.05	0.661
60.00	-42.57	-46.86	0.00	-2,625.6	0.00	2,625.64	4,572.76	1,092.83	4,426.70	4,211.35	13.87	-2.27	0.635
62.00	-41.22	-45.37	0.00	-2,531.9	0.00	2,531.94	4,537.20	1,081.38	4,334.45	4,134.41	14.84	-2.37	0.623
65.00	-40.25	-45.21	0.00	-2,395.8	0.00	2,395.84	4,483.38	1,064.21	4,197.91	4,019.86	16.38	-2.5	0.607
67.00	-38.93	-43.68	0.00	-2,305.4	0.00	2,305.43	4,447.18	1,052.76	4,108.09	3,944.07	17.45	-2.6	0.595
70.00	-37.99	-43.51	0.00	-2,174.4	0.00	2,174.39	4,383.99	1,035.59	3,975.18	3,823.98	19.12	-2.73	0.579
72.00	-36.69	-41.95	0.00	-2,087.4	0.00	2,087.37	4,335.53	1,024.14	3,887.79	3,739.48	20.28	-2.82	0.568
75.00	-35.77	-41.78	0.00	-1,961.5	0.00	1,961.53	4,262.83	1,006.97	3,758.53	3,614.49	22.1	-2.95	0.553
77.00	-34.50	-40.18	0.00	-1,878.0	0.00	1,877.98	4,214.37	995.52	3,673.56	3,532.34	23.36	-3.04	0.541
80.00	-33.61	-40.00	0.00	-1,757.4	0.00	1,757.45	4,141.67	978.35	3,547.94	3,410.90	25.31	-3.17	0.525
82.00	-32.37	-38.37	0.00	-1,677.5	0.00	1,677.46	4,093.21	966.90	3,465.41	3,331.11	26.66	-3.26	0.513
85.00	-31.50	-38.18	0.00	-1,562.4	0.00	1,562.36	4,020.51	949.73	3,343.43	3,213.21	28.74	-3.38	0.496
87.00	-30.29	-36.52	0.00	-1,486.0	0.00	1,485.99	3,972.05	938.28	3,263.32	3,135.78	30.18	-3.47	0.483
90.00	-29.45	-36.33	0.00	-1,376.4	0.00	1,376.43	3,899.35	921.11	3,144.99	3,021.42	32.4	-3.59	0.465
92.00	-28.26	-34.64	0.00	-1,303.8	0.00	1,303.77	3,850.89	909.66	3,067.31	2,946.36	33.92	-3.67	0.451
95.00	-27.46	-34.49	0.00	-1,199.8	0.00	1,199.85	3,778.19	892.49	2,952.61	2,835.53	36.26	-3.79	0.432
95.38	-27.35	-34.43	0.00	-1,186.9	0.00	1,186.86	3,769.06	890.33	2,938.37	2,821.77	36.56	-3.8	0.429
97.00	-26.04	-32.71	0.00	-1,131.0	0.00	1,130.97	3,729.73	881.04	2,877.36	2,762.83	37.86	-3.86	0.418
100.00	-24.82	-32.52	0.00	-1,032.8	0.00	1,032.84	3,657.03	863.87	2,766.31	2,655.55	40.33	-3.98	0.397
100.63	-24.56	-32.44	0.00	-1,012.5	0.00	1,012.46	2,539.98	627.54	2,043.48	1,882.60	40.85	-4	0.550
102.00	-23.64	-30.73	0.00	-967.9	0.00	967.91	2,524.08	621.92	2,007.08	1,853.93	42.01	-4.05	0.534
105.00	-23.03	-30.55	0.00	-875.7	0.00	875.71	2,488.92	609.66	1,928.70	1,791.74	44.6	-4.19	0.501
107.00	-22.01	-28.80	0.00	-814.6	0.00	814.60	2,465.15	601.48	1,877.32	1,750.61	46.37	-4.28	0.477
110.00	-21.42	-28.61	0.00	-728.2	0.00	728.22	2,429.01	589.22	1,801.54	1,689.46	49.1	-4.4	0.442
112.00	-20.43	-26.83	0.00	-671.0	0.00	671.00	2,404.59	581.04	1,751.89	1,649.05	50.96	-4.49	0.418
115.00	-19.86	-26.64	0.00	-590.5	0.00	590.51	2,367.47	568.77	1,678.71	1,589.00	53.81	-4.6	0.382
117.00	-18.89	-24.83	0.00	-537.2	0.00	537.24	2,342.39	560.59	1,630.80	1,549.35	55.75	-4.67	0.357
120.00	-18.34	-24.64	0.00	-462.7	0.00	462.74	2,304.29	548.33	1,560.22	1,490.48	58.72	-4.78	0.320
122.00	-17.40	-22.81	0.00	-413.4	0.00	413.45	2,278.56	540.15	1,514.04	1,451.64	60.73	-4.84	0.294
125.00	-16.88	-22.62	0.00	-345.0	0.00	345.02	2,234.71	527.89	1,446.07	1,391.06	63.8	-4.93	0.257
127.00	-15.96	-20.77	0.00	-299.8	0.00	299.78	2,200.10	519.71	1,401.62	1,348.08	65.88	-4.98	0.231
130.00	-15.46	-20.58	0.00	-237.5	0.00	237.47	2,148.17	507.44	1,336.25	1,284.87	69.02	-5.05	0.194
132.00	-14.56	-18.71	0.00	-196.3	0.00	196.32	2,113.55	499.26	1,293.54	1,243.58	71.14	-5.09	0.166
135.00	-8.44	-13.14	0.00	-132.6	0.00	132.57	2,061.63	487.00	1,230.77	1,182.90	74.35	-5.14	0.117
137.00	-7.65	-11.26	0.00	-106.3	0.00	106.28	2,027.01	478.82	1,189.79	1,143.30	76.51	-5.16	0.097
140.00	-7.32	-11.07	0.00	-72.5	0.00	72.51	1,975.09	466.56	1,129.63	1,085.15	79.76	-5.19	0.071
142.00	-6.54	-9.18	0.00	-50.4	0.00	50.36	1,940.47	458.38	1,090.38	1,047.23	81.93	-5.2	0.052
145.00	-6.23	-9.03	0.00	-22.8	0.00	22.83	1,888.54	446.11	1,032.82	991.61	85.2	-5.22	0.027
146.00	-2.14	-4.24	0.00	-13.8	0.00	13.80	1,871.23	442.02	1,013.98	973.41	86.3	-5.22	0.015
147.00	-1.48	-2.40	0.00	-9.6	0.00	9.56	1,853.93	437.94	995.31	955.38	87.39	-5.22	0.011
149.00	0.00	-2.25	0.00	-4.8	0.00	4.76	1,819.31	429.76	958.49	919.82	89.57	-5.22	0.005

CALCULATED FORCES

Load Case: 0.9D + 1.0W

114 mph Wind with No Ice (Reduced DL)

23 Iterations

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-53.02	-49.84	0.00	-5,486.5	0.00	5,486.48	7,586.22	1,815.31	9,500.17	9,026.97	0	0	0.616
5.00	-51.12	-49.57	0.00	-5,237.3	0.00	5,237.28	7,471.93	1,778.51	9,118.97	8,709.02	0.09	-0.17	0.609
10.00	-49.26	-49.31	0.00	-4,989.4	0.00	4,989.42	7,356.01	1,741.71	8,745.59	8,394.77	0.37	-0.35	0.602
15.00	-47.44	-49.04	0.00	-4,742.9	0.00	4,742.89	7,217.48	1,704.92	8,380.00	8,060.91	0.83	-0.53	0.596
20.00	-45.64	-48.77	0.00	-4,497.7	0.00	4,497.69	7,061.70	1,668.12	8,022.22	7,714.96	1.49	-0.71	0.590
25.00	-43.88	-48.50	0.00	-4,253.8	0.00	4,253.84	6,905.92	1,631.32	7,672.25	7,376.60	2.33	-0.89	0.584
30.00	-42.15	-48.23	0.00	-4,011.3	0.00	4,011.32	6,750.14	1,594.52	7,330.08	7,045.83	3.36	-1.08	0.576
35.00	-40.45	-47.95	0.00	-3,770.2	0.00	3,770.17	6,594.37	1,557.72	6,995.72	6,722.64	4.59	-1.26	0.568
40.00	-38.79	-47.65	0.00	-3,530.4	0.00	3,530.44	6,438.59	1,520.93	6,669.16	6,407.04	6.01	-1.45	0.558
45.00	-37.20	-47.42	0.00	-3,292.2	0.00	3,292.21	6,282.81	1,484.13	6,350.41	6,099.03	7.64	-1.64	0.547
46.71	-36.63	-47.27	0.00	-3,211.3	0.00	3,211.28	6,229.64	1,471.57	6,243.39	5,995.63	8.23	-1.7	0.543
50.00	-34.92	-47.03	0.00	-3,055.6	0.00	3,055.60	6,127.03	1,447.33	6,039.46	5,798.61	9.45	-1.83	0.534
53.29	-33.25	-46.83	0.00	-2,900.9	0.00	2,900.88	4,690.13	1,131.24	4,743.28	4,472.73	10.76	-1.96	0.657
55.00	-32.75	-46.63	0.00	-2,820.8	0.00	2,820.80	4,660.50	1,121.45	4,661.57	4,405.65	11.47	-2.02	0.649
60.00	-31.49	-46.39	0.00	-2,587.7	0.00	2,587.66	4,572.76	1,092.83	4,426.70	4,211.35	13.71	-2.25	0.623
62.00	-30.48	-44.89	0.00	-2,494.9	0.00	2,494.88	4,537.20	1,081.38	4,334.45	4,134.41	14.67	-2.34	0.612
65.00	-29.73	-44.72	0.00	-2,360.2	0.00	2,360.21	4,483.38	1,064.21	4,197.91	4,019.86	16.19	-2.47	0.596
67.00	-28.74	-43.19	0.00	-2,270.8	0.00	2,270.77	4,447.18	1,052.76	4,108.09	3,944.07	17.24	-2.56	0.584
70.00	-28.01	-43.01	0.00	-2,141.2	0.00	2,141.21	4,383.99	1,035.59	3,975.18	3,823.98	18.9	-2.7	0.568
72.00	-27.04	-41.44	0.00	-2,055.2	0.00	2,055.19	4,335.53	1,024.14	3,887.79	3,739.48	20.05	-2.79	0.557
75.00	-26.34	-41.26	0.00	-1,930.9	0.00	1,930.87	4,262.83	1,006.97	3,758.53	3,614.49	21.84	-2.92	0.542
77.00	-25.39	-39.66	0.00	-1,848.4	0.00	1,848.35	4,214.37	995.52	3,673.56	3,532.34	23.08	-3	0.531
80.00	-24.71	-39.48	0.00	-1,729.4	0.00	1,729.36	4,141.67	978.35	3,547.94	3,410.90	25.01	-3.13	0.515
82.00	-23.78	-37.85	0.00	-1,650.4	0.00	1,650.41	4,093.21	966.90	3,465.41	3,331.11	26.34	-3.21	0.503
85.00	-23.12	-37.66	0.00	-1,536.9	0.00	1,536.86	4,020.51	949.73	3,343.43	3,213.21	28.4	-3.34	0.486
87.00	-22.21	-36.00	0.00	-1,461.5	0.00	1,461.54	3,972.05	938.28	3,263.32	3,135.78	29.81	-3.42	0.473
90.00	-21.57	-35.81	0.00	-1,353.5	0.00	1,353.54	3,899.35	921.11	3,144.99	3,021.42	32	-3.54	0.455
92.00	-20.69	-34.13	0.00	-1,281.9	0.00	1,281.92	3,850.89	909.66	3,067.31	2,946.36	33.5	-3.62	0.442
95.00	-20.09	-33.98	0.00	-1,179.5	0.00	1,179.54	3,778.19	892.49	2,952.61	2,835.53	35.81	-3.74	0.423
95.38	-20.00	-33.92	0.00	-1,166.7	0.00	1,166.74	3,769.06	890.33	2,938.37	2,821.77	36.11	-3.75	0.420
97.00	-19.03	-32.21	0.00	-1,111.7	0.00	1,111.68	3,729.73	881.04	2,877.36	2,762.83	37.39	-3.81	0.409
100.00	-18.11	-32.03	0.00	-1,015.0	0.00	1,015.05	3,657.03	863.87	2,766.31	2,655.55	39.82	-3.92	0.389
100.63	-17.91	-31.95	0.00	-995.0	0.00	994.98	2,539.98	627.54	2,043.48	1,882.60	40.34	-3.94	0.538
102.00	-17.24	-30.25	0.00	-951.1	0.00	951.10	2,524.08	621.92	2,007.08	1,853.93	41.48	-3.99	0.522
105.00	-16.77	-30.07	0.00	-860.3	0.00	860.34	2,488.92	609.66	1,928.70	1,791.74	44.03	-4.13	0.489
107.00	-16.03	-28.32	0.00	-800.2	0.00	800.20	2,465.15	601.48	1,877.32	1,750.61	45.78	-4.22	0.466
110.00	-15.57	-28.14	0.00	-715.2	0.00	715.23	2,429.01	589.22	1,801.54	1,689.46	48.47	-4.34	0.432
112.00	-14.85	-26.37	0.00	-659.0	0.00	658.96	2,404.59	581.04	1,751.89	1,649.05	50.3	-4.42	0.408
115.00	-14.42	-26.18	0.00	-579.9	0.00	579.87	2,367.47	568.77	1,678.71	1,589.00	53.12	-4.54	0.373
117.00	-13.72	-24.39	0.00	-527.5	0.00	527.51	2,342.39	560.59	1,630.80	1,549.35	55.03	-4.61	0.348
120.00	-13.30	-24.20	0.00	-454.4	0.00	454.35	2,304.29	548.33	1,560.22	1,490.48	57.96	-4.71	0.313
122.00	-12.62	-22.39	0.00	-406.0	0.00	405.95	2,278.56	540.15	1,514.04	1,451.64	59.94	-4.77	0.287
125.00	-12.23	-22.20	0.00	-338.8	0.00	338.79	2,234.71	527.89	1,446.07	1,391.06	62.96	-4.85	0.251
127.00	-11.57	-20.37	0.00	-294.4	0.00	294.39	2,200.10	519.71	1,401.62	1,348.08	65.01	-4.91	0.225
130.00	-11.19	-20.18	0.00	-233.3	0.00	233.29	2,148.17	507.44	1,336.25	1,284.87	68.11	-4.97	0.188
132.00	-10.56	-18.33	0.00	-192.9	0.00	192.93	2,113.55	499.26	1,293.54	1,243.58	70.2	-5.01	0.161
135.00	-6.07	-12.92	0.00	-130.3	0.00	130.30	2,061.63	487.00	1,230.77	1,182.90	73.36	-5.06	0.114
137.00	-5.51	-11.06	0.00	-104.5	0.00	104.46	2,027.01	478.82	1,189.79	1,143.30	75.49	-5.08	0.095
140.00	-5.27	-10.88	0.00	-71.3	0.00	71.30	1,975.09	466.56	1,129.63	1,085.15	78.69	-5.11	0.069
142.00	-4.72	-9.00	0.00	-49.5	0.00	49.54	1,940.47	458.38	1,090.38	1,047.23	80.83	-5.13	0.050
145.00	-4.49	-8.86	0.00	-22.5	0.00	22.52	1,888.54	446.11	1,032.82	991.61	84.05	-5.14	0.025
146.00	-1.52	-4.18	0.00	-13.7	0.00	13.66	1,871.23	442.02	1,013.98	973.41	85.13	-5.14	0.015
147.00	-1.06	-2.36	0.00	-9.5	0.00	9.48	1,853.93	437.94	995.31	955.38	86.21	-5.15	0.011
149.00	0.00	-2.25	0.00	-4.8	0.00	4.76	1,819.31	429.76	958.49	919.82	88.36	-5.15	0.005



CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi													40 mph Wind with 1" Radial Ice		22 Iterations
Gust Response Factor:		1.10	Ice Dead Load Factor			1.00	Ice Importance Factor						1.00		
Dead Load Factor:		1.20													
Wind Load Factor:		1.00													
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio		
0.00	-90.59	-9.13	0.00	-1,015.0	0.00	1,014.96	7,586.22	1,815.31	9,500.17	9,026.97	0	0	0.124		
5.00	-87.98	-9.09	0.00	-969.3	0.00	969.30	7,471.93	1,778.51	9,118.97	8,709.02	0.02	-0.03	0.123		
10.00	-85.39	-9.05	0.00	-923.8	0.00	923.83	7,356.01	1,741.71	8,745.59	8,394.77	0.07	-0.06	0.122		
15.00	-82.83	-9.02	0.00	-878.6	0.00	878.56	7,217.48	1,704.92	8,380.00	8,060.91	0.15	-0.1	0.120		
20.00	-80.31	-8.97	0.00	-833.5	0.00	833.48	7,061.70	1,668.12	8,022.22	7,714.96	0.27	-0.13	0.119		
25.00	-77.83	-8.93	0.00	-788.6	0.00	788.61	6,905.92	1,631.32	7,672.25	7,376.60	0.43	-0.17	0.118		
30.00	-75.39	-8.89	0.00	-744.0	0.00	743.95	6,750.14	1,594.52	7,330.08	7,045.83	0.62	-0.2	0.117		
35.00	-73.00	-8.84	0.00	-699.5	0.00	699.49	6,594.37	1,557.72	6,995.72	6,722.64	0.85	-0.23	0.115		
40.00	-70.65	-8.79	0.00	-655.3	0.00	655.27	6,438.59	1,520.93	6,669.16	6,407.04	1.11	-0.27	0.113		
45.00	-68.35	-8.76	0.00	-611.3	0.00	611.30	6,282.81	1,484.13	6,350.41	6,099.03	1.41	-0.3	0.111		
46.71	-67.58	-8.73	0.00	-596.4	0.00	596.36	6,229.64	1,471.57	6,243.39	5,995.63	1.53	-0.32	0.110		
50.00	-65.21	-8.69	0.00	-567.6	0.00	567.61	6,127.03	1,447.33	6,039.46	5,798.61	1.75	-0.34	0.109		
53.29	-62.87	-8.65	0.00	-539.0	0.00	539.03	4,690.13	1,131.24	4,743.28	4,472.73	1.99	-0.36	0.134		
55.00	-62.24	-8.62	0.00	-524.2	0.00	524.24	4,660.50	1,121.45	4,661.57	4,405.65	2.13	-0.37	0.132		
60.00	-60.40	-8.58	0.00	-481.2	0.00	481.15	4,572.76	1,092.83	4,426.70	4,211.35	2.54	-0.42	0.128		
62.00	-58.77	-8.31	0.00	-464.0	0.00	464.01	4,537.20	1,081.38	4,334.45	4,134.41	2.72	-0.43	0.125		
65.00	-57.70	-8.28	0.00	-439.1	0.00	439.07	4,483.38	1,064.21	4,197.91	4,019.86	3	-0.46	0.122		
67.00	-56.07	-8.01	0.00	-422.5	0.00	422.51	4,447.18	1,052.76	4,108.09	3,944.07	3.2	-0.48	0.120		
70.00	-55.02	-7.98	0.00	-398.5	0.00	398.49	4,383.99	1,035.59	3,975.18	3,823.98	3.5	-0.5	0.117		
72.00	-53.41	-7.70	0.00	-382.5	0.00	382.54	4,335.53	1,024.14	3,887.79	3,739.48	3.72	-0.52	0.115		
75.00	-52.39	-7.66	0.00	-359.4	0.00	359.45	4,262.83	1,006.97	3,758.53	3,614.49	4.05	-0.54	0.112		
77.00	-50.79	-7.38	0.00	-344.1	0.00	344.13	4,214.37	995.52	3,673.56	3,532.34	4.28	-0.56	0.110		
80.00	-49.79	-7.34	0.00	-322.0	0.00	322.00	4,141.67	978.35	3,547.94	3,410.90	4.64	-0.58	0.106		
82.00	-48.21	-7.05	0.00	-307.3	0.00	307.32	4,093.21	966.90	3,465.41	3,331.11	4.88	-0.6	0.104		
85.00	-47.24	-7.01	0.00	-286.2	0.00	286.18	4,020.51	949.73	3,343.43	3,213.21	5.27	-0.62	0.101		
87.00	-45.67	-6.71	0.00	-272.2	0.00	272.16	3,972.05	938.28	3,263.32	3,135.78	5.53	-0.64	0.098		
90.00	-44.72	-6.67	0.00	-252.0	0.00	252.03	3,899.35	921.11	3,144.99	3,021.42	5.94	-0.66	0.095		
92.00	-43.17	-6.37	0.00	-238.7	0.00	238.69	3,850.89	909.66	3,067.31	2,946.36	6.22	-0.67	0.092		
95.00	-42.24	-6.34	0.00	-219.6	0.00	219.59	3,778.19	892.49	2,952.61	2,835.53	6.65	-0.69	0.089		
95.38	-42.12	-6.32	0.00	-217.2	0.00	217.21	3,769.06	890.33	2,938.37	2,821.77	6.7	-0.7	0.088		
97.00	-40.46	-6.01	0.00	-206.9	0.00	206.94	3,729.73	881.04	2,877.36	2,762.83	6.94	-0.71	0.086		
100.00	-39.11	-5.97	0.00	-188.9	0.00	188.92	3,657.03	863.87	2,766.31	2,655.55	7.39	-0.73	0.082		
100.63	-38.83	-5.96	0.00	-185.2	0.00	185.17	2,539.98	627.54	2,043.48	1,882.60	7.49	-0.73	0.114		
102.00	-37.57	-5.65	0.00	-177.0	0.00	176.99	2,524.08	621.92	2,007.08	1,853.93	7.7	-0.74	0.110		
105.00	-36.84	-5.61	0.00	-160.1	0.00	160.06	2,488.92	609.66	1,928.70	1,791.74	8.17	-0.77	0.104		
107.00	-35.44	-5.29	0.00	-148.8	0.00	148.84	2,465.15	601.48	1,877.32	1,750.61	8.5	-0.78	0.099		
110.00	-34.73	-5.25	0.00	-133.0	0.00	132.98	2,429.01	589.22	1,801.54	1,689.46	9	-0.81	0.093		
112.00	-33.34	-4.92	0.00	-122.5	0.00	122.47	2,404.59	581.04	1,751.89	1,649.05	9.34	-0.82	0.088		
115.00	-32.65	-4.89	0.00	-107.7	0.00	107.70	2,367.47	568.77	1,678.71	1,589.00	9.86	-0.84	0.082		
117.00	-31.27	-4.55	0.00	-97.9	0.00	97.93	2,342.39	560.59	1,630.80	1,549.35	10.22	-0.86	0.077		
120.00	-30.61	-4.51	0.00	-84.3	0.00	84.27	2,304.29	548.33	1,560.22	1,490.48	10.76	-0.87	0.070		
122.00	-29.24	-4.18	0.00	-75.2	0.00	75.25	2,278.56	540.15	1,514.04	1,451.64	11.13	-0.89	0.065		
125.00	-28.59	-4.14	0.00	-62.7	0.00	62.72	2,234.71	527.89	1,446.07	1,391.06	11.69	-0.9	0.058		
127.00	-27.23	-3.79	0.00	-54.4	0.00	54.45	2,200.10	519.71	1,401.62	1,348.08	12.07	-0.91	0.053		
130.00	-26.60	-3.75	0.00	-43.1	0.00	43.07	2,148.17	507.44	1,336.25	1,284.87	12.65	-0.92	0.046		
132.00	-25.26	-3.40	0.00	-35.6	0.00	35.57	2,113.55	499.26	1,293.54	1,243.58	13.04	-0.93	0.041		
135.00	-14.31	-2.44	0.00	-24.2	0.00	24.24	2,061.63	487.00	1,230.77	1,182.90	13.63	-0.94	0.027		
137.00	-13.07	-2.09	0.00	-19.4	0.00	19.36	2,027.01	478.82	1,189.79	1,143.30	14.02	-0.94	0.023		
140.00	-12.60	-2.05	0.00	-13.1	0.00	13.10	1,975.09	466.56	1,129.63	1,085.15	14.62	-0.95	0.018		
142.00	-11.37	-1.69	0.00	-9.0	0.00	9.00	1,940.47	458.38	1,090.38	1,047.23	15.02	-0.95	0.014		
145.00	-10.92	-1.66	0.00	-3.9	0.00	3.92	1,888.54	446.11	1,032.82	991.61	15.62	-0.95	0.010		
146.00	-4.19	-0.74	0.00	-2.3	0.00	2.26	1,871.23	442.02	1,013.98	973.41	15.82	-0.96	0.005		
147.00	-3.11	-0.40	0.00	-1.5	0.00	1.52	1,853.93	437.94	995.31	955.38	16.02	-0.96	0.003		
149.00	0.00	-0.35	0.00	-0.7	0.00	0.72	1,819.31	429.76	958.49	919.82	16.42	-0.96	0.001		

CALCULATED FORCES

Load Case: 1.0D + 1.0W

60 mph Wind with No Ice

22 Iterations

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-58.99	-12.35	0.00	-1,365.6	0.00	1,365.65	7,586.22	1,815.31	9,500.17	9,026.97	0	0	0.159
5.00	-57.05	-12.29	0.00	-1,303.9	0.00	1,303.88	7,471.93	1,778.51	9,118.97	8,709.02	0.02	-0.04	0.157
10.00	-55.14	-12.23	0.00	-1,242.4	0.00	1,242.42	7,356.01	1,741.71	8,745.59	8,394.77	0.09	-0.09	0.156
15.00	-53.26	-12.17	0.00	-1,181.3	0.00	1,181.26	7,217.48	1,704.92	8,380.00	8,060.91	0.21	-0.13	0.154
20.00	-51.42	-12.11	0.00	-1,120.4	0.00	1,120.42	7,061.70	1,668.12	8,022.22	7,714.96	0.37	-0.18	0.153
25.00	-49.62	-12.04	0.00	-1,059.9	0.00	1,059.88	6,905.92	1,631.32	7,672.25	7,376.60	0.58	-0.22	0.151
30.00	-47.86	-11.98	0.00	-999.7	0.00	999.66	6,750.14	1,594.52	7,330.08	7,045.83	0.84	-0.27	0.149
35.00	-46.13	-11.91	0.00	-939.8	0.00	939.76	6,594.37	1,557.72	6,995.72	6,722.64	1.14	-0.31	0.147
40.00	-44.43	-11.84	0.00	-880.2	0.00	880.19	6,438.59	1,520.93	6,669.16	6,407.04	1.5	-0.36	0.144
45.00	-42.77	-11.79	0.00	-821.0	0.00	820.97	6,282.81	1,484.13	6,350.41	6,099.03	1.9	-0.41	0.141
46.71	-42.22	-11.75	0.00	-800.8	0.00	800.85	6,229.64	1,471.57	6,243.39	5,995.63	2.05	-0.42	0.140
50.00	-40.41	-11.70	0.00	-762.1	0.00	762.14	6,127.03	1,447.33	6,039.46	5,798.61	2.36	-0.46	0.138
53.29	-38.63	-11.65	0.00	-723.7	0.00	723.66	4,690.13	1,131.24	4,743.28	4,472.73	2.68	-0.49	0.170
55.00	-38.19	-11.60	0.00	-703.7	0.00	703.74	4,660.50	1,121.45	4,661.57	4,405.65	2.86	-0.5	0.168
60.00	-36.91	-11.54	0.00	-645.7	0.00	645.74	4,572.76	1,092.83	4,426.70	4,211.35	3.42	-0.56	0.162
62.00	-35.81	-11.17	0.00	-622.6	0.00	622.65	4,537.20	1,081.38	4,334.45	4,134.41	3.66	-0.58	0.159
65.00	-35.07	-11.13	0.00	-589.1	0.00	589.13	4,483.38	1,064.21	4,197.91	4,019.86	4.03	-0.62	0.154
67.00	-33.98	-10.75	0.00	-566.9	0.00	566.86	4,447.18	1,052.76	4,108.09	3,944.07	4.3	-0.64	0.151
70.00	-33.25	-10.71	0.00	-534.6	0.00	534.60	4,383.99	1,035.59	3,975.18	3,823.98	4.71	-0.67	0.147
72.00	-32.17	-10.32	0.00	-513.2	0.00	513.17	4,335.53	1,024.14	3,887.79	3,739.48	5	-0.69	0.145
75.00	-31.46	-10.28	0.00	-482.2	0.00	482.20	4,262.83	1,006.97	3,758.53	3,614.49	5.44	-0.73	0.141
77.00	-30.40	-9.89	0.00	-461.6	0.00	461.64	4,214.37	995.52	3,673.56	3,532.34	5.75	-0.75	0.138
80.00	-29.70	-9.84	0.00	-432.0	0.00	431.98	4,141.67	978.35	3,547.94	3,410.90	6.23	-0.78	0.134
82.00	-28.65	-9.44	0.00	-412.3	0.00	412.30	4,093.21	966.90	3,465.41	3,331.11	6.56	-0.8	0.131
85.00	-27.97	-9.39	0.00	-384.0	0.00	383.99	4,020.51	949.73	3,343.43	3,213.21	7.08	-0.83	0.127
87.00	-26.93	-8.98	0.00	-365.2	0.00	365.21	3,972.05	938.28	3,263.32	3,135.78	7.43	-0.85	0.123
90.00	-26.27	-8.93	0.00	-338.3	0.00	338.26	3,899.35	921.11	3,144.99	3,021.42	7.98	-0.88	0.119
92.00	-25.24	-8.52	0.00	-320.4	0.00	320.40	3,850.89	909.66	3,067.31	2,946.36	8.35	-0.9	0.115
95.00	-24.60	-8.48	0.00	-294.8	0.00	294.85	3,778.19	892.49	2,952.61	2,835.53	8.93	-0.93	0.111
95.38	-24.52	-8.47	0.00	-291.6	0.00	291.65	3,769.06	890.33	2,938.37	2,821.77	9	-0.94	0.110
97.00	-23.38	-8.04	0.00	-277.9	0.00	277.91	3,729.73	881.04	2,877.36	2,762.83	9.32	-0.95	0.107
100.00	-22.38	-8.00	0.00	-253.8	0.00	253.79	3,657.03	863.87	2,766.31	2,655.55	9.93	-0.98	0.102
100.63	-22.18	-7.98	0.00	-248.8	0.00	248.78	2,539.98	627.54	2,043.48	1,882.60	10.06	-0.98	0.141
102.00	-21.36	-7.56	0.00	-237.8	0.00	237.82	2,524.08	621.92	2,007.08	1,853.93	10.34	-1	0.137
105.00	-20.89	-7.51	0.00	-215.2	0.00	215.16	2,488.92	609.66	1,928.70	1,791.74	10.98	-1.03	0.129
107.00	-19.98	-7.08	0.00	-200.1	0.00	200.13	2,465.15	601.48	1,877.32	1,750.61	11.42	-1.05	0.123
110.00	-19.51	-7.03	0.00	-178.9	0.00	178.91	2,429.01	589.22	1,801.54	1,689.46	12.09	-1.08	0.114
112.00	-18.62	-6.59	0.00	-164.8	0.00	164.84	2,404.59	581.04	1,751.89	1,649.05	12.55	-1.1	0.108
115.00	-18.16	-6.55	0.00	-145.1	0.00	145.07	2,367.47	568.77	1,678.71	1,589.00	13.25	-1.13	0.099
117.00	-17.27	-6.10	0.00	-132.0	0.00	131.98	2,342.39	560.59	1,630.80	1,549.35	13.73	-1.15	0.093
120.00	-16.83	-6.05	0.00	-113.7	0.00	113.68	2,304.29	548.33	1,560.22	1,490.48	14.46	-1.17	0.084
122.00	-15.95	-5.60	0.00	-101.6	0.00	101.57	2,278.56	540.15	1,514.04	1,451.64	14.96	-1.19	0.077
125.00	-15.53	-5.56	0.00	-84.8	0.00	84.77	2,234.71	527.89	1,446.07	1,391.06	15.71	-1.21	0.068
127.00	-14.65	-5.10	0.00	-73.7	0.00	73.66	2,200.10	519.71	1,401.62	1,348.08	16.22	-1.22	0.061
130.00	-14.24	-5.05	0.00	-58.4	0.00	58.36	2,148.17	507.44	1,336.25	1,284.87	17	-1.24	0.052
132.00	-13.37	-4.59	0.00	-48.3	0.00	48.26	2,113.55	499.26	1,293.54	1,243.58	17.52	-1.25	0.045
135.00	-7.92	-3.23	0.00	-32.6	0.00	32.60	2,061.63	487.00	1,230.77	1,182.90	18.31	-1.26	0.031
137.00	-7.13	-2.77	0.00	-26.1	0.00	26.13	2,027.01	478.82	1,189.79	1,143.30	18.84	-1.27	0.026
140.00	-6.85	-2.72	0.00	-17.8	0.00	17.83	1,975.09	466.56	1,129.63	1,085.15	19.64	-1.28	0.020
142.00	-6.08	-2.25	0.00	-12.4	0.00	12.39	1,940.47	458.38	1,090.38	1,047.23	20.18	-1.28	0.015
145.00	-5.80	-2.22	0.00	-5.6	0.00	5.62	1,888.54	446.11	1,032.82	991.61	20.98	-1.28	0.009
146.00	-2.08	-1.05	0.00	-3.4	0.00	3.41	1,871.23	442.02	1,013.98	973.41	21.25	-1.28	0.005
147.00	-1.40	-0.59	0.00	-2.4	0.00	2.36	1,853.93	437.94	995.31	955.38	21.52	-1.28	0.003
149.00	0.00	-0.56	0.00	-1.2	0.00	1.18	1,819.31	429.76	958.49	919.82	22.06	-1.28	0.001

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

(Based on ASCE7-16 Chapters 11, 12 and 15)

Spectral Response Acceleration for Short Period ( $S_S$ ):	0.167
Spectral Response Acceleration at 1.0 Second Period ( $S_1$ ):	0.054
Long-Period Transition Period ( $T_L$ – Seconds):	6
Importance Factor ( $I_e$ ):	1.000
Site Coefficient $F_a$ :	1.600
Site Coefficient $F_v$ :	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.178
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.086
Seismic Response Coefficient ( $C_s$ ):	0.030
Upper Limit $C_s$ :	0.030
Lower Limit $C_s$ :	0.030
Period based on Rayleigh Method (sec):	2.190
Redundancy Factor ( $\rho$ ):	1.000
Seismic Force Distribution Exponent ( $k$ ):	1.850
Total Unfactored Dead Load:	58.990 k
Seismic Base Shear (E):	1.770 k

SEISMIC FORCES

Segment	Seismic	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
53		148	174	1,782	0.007	13	216
52		146.5	88	886	0.004	6	109
51		145.5	89	883	0.004	6	110
50		143.5	272	2,628	0.011	19	336
49		141	186	1,733	0.007	12	229
48		138.5	284	2,569	0.010	18	351
47		136	193	1,690	0.007	12	239
46		133.5	403	3,402	0.014	24	498
45		131	273	2,223	0.009	16	337
44		128.5	415	3,264	0.013	23	513
43		126	281	2,129	0.009	15	347
42		123.5	427	3,120	0.013	22	527
41		121	288	2,031	0.008	14	356
40		118.5	439	2,972	0.012	21	542
39		116	296	1,930	0.008	14	366
38		113.5	451	2,819	0.011	20	557
37		111	304	1,827	0.007	13	376
36		108.5	462	2,662	0.011	19	571
35		106	312	1,722	0.007	12	386
34		103.5	474	2,502	0.010	18	586
33		101.3133	219	1,113	0.004	8	271
32		100.3133	205	1,023	0.004	7	254
31		98.5	994	4,784	0.019	34	1,228
30		96.1883	545	2,511	0.010	18	673
29		95.1883	80	360	0.002	3	98
28		93.5	640	2,800	0.011	20	791
27		91	432	1,798	0.007	13	534
26		88.5	657	2,595	0.010	19	812
25		86	443	1,662	0.007	12	548
24		83.5	674	2,390	0.010	17	832
23		81	455	1,525	0.006	11	562
22		78.5	690	2,185	0.009	16	853
21		76	466	1,389	0.006	10	575
20		73.5	707	1,982	0.008	14	873
19		71	477	1,254	0.005	9	589
18		68.5	723	1,781	0.007	13	894
17		66	488	1,121	0.004	8	603
16		63.5	740	1,584	0.006	11	915

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
15	61	499	991	0.004	7	617
14	57.5	1,267	2,257	0.009	16	1,565
13	54.145	440	701	0.003	5	543
12	51.645	1,770	2,586	0.010	18	2,188
11	48.3533	1,800	2,328	0.009	17	2,224
10	45.8533	555	651	0.003	5	686
9	42.5	1,650	1,682	0.007	12	2,039
8	37.5	1,686	1,363	0.006	10	2,083
7	32.5	1,721	1,069	0.004	8	2,127
6	27.5	1,757	801	0.003	6	2,171
5	22.5	1,793	564	0.002	4	2,215
4	17.5	1,828	362	0.002	3	2,259
3	12.5	1,864	198	0.001	1	2,303
2	7.5	1,900	79	0.000	1	2,347
1	2.5	1,936	11	0.000	0	2,392
Kaelus KA-6030	149	35	364	0.002	3	43
Samsung RF4440d-13A	149	211	2,181	0.009	16	261
Samsung RF4439d-25A	149	224	2,318	0.009	17	277
Raycap RVZDC-6627-PF-48	149	64	662	0.003	5	79
Samsung MT6407-77A	149	245	2,532	0.010	18	302
Commscope SBNHH-1D65B	149	456	4,720	0.019	34	564
PINE BRANCH	147	600	6,053	0.024	43	741
PINE BRANCH	142	600	5,678	0.023	40	741
PINE BRANCH	137	600	5,314	0.021	38	741
PINE BRANCH	132	600	4,962	0.020	35	741
PINE BRANCH	127	600	4,620	0.019	33	741
PINE BRANCH	122	600	4,290	0.017	31	741
PINE BRANCH	117	600	3,970	0.016	28	741
PINE BRANCH	112	600	3,663	0.015	26	741
PINE BRANCH	107	600	3,366	0.014	24	741
PINE BRANCH	102	600	3,081	0.012	22	741
PINE BRANCH	97	600	2,808	0.011	20	741
PINE BRANCH	92	600	2,547	0.010	18	741
PINE BRANCH	87	600	2,297	0.009	16	741
PINE BRANCH	82	600	2,059	0.008	15	741
PINE BRANCH	77	600	1,833	0.007	13	741
PINE BRANCH	72	600	1,619	0.006	12	741
PINE BRANCH	67	600	1,418	0.006	10	741
PINE BRANCH	62	600	1,228	0.005	9	741
Generic Flat Light Sector Frame	146	2,400	23,908	0.096	171	2,966
Generic Flat Light Sector Frame	135	2,400	20,687	0.083	148	2,966
VZW Unused Reserve (17804.96 sqin)	146	1,265	12,599	0.051	90	1,563
Raycap DC6-48-60-18-8F(32.8 lbs)	135	131	1,131	0.005	8	162
Ericsson RRUS 8843 B2, B66A	135	216	1,862	0.008	13	267
Ericsson RRUS 4478 B14	135	180	1,549	0.006	11	222
Ericsson RRUS 4449 B5, B12	135	213	1,836	0.007	13	263
Ericsson RRUS 12 w/ RRUS A2 (80 lb)	135	720	6,206	0.025	44	890
Ericsson RRUS-11	135	330	2,845	0.012	20	408
CCI HPA-65R-BUU-H8	135	204	1,758	0.007	13	252
Kathrein Scala 80010966	135	688	5,927	0.024	42	850
<b>Totals:</b>		<b>58,995</b>	<b>248,164</b>	<b>1.001</b>	<b>1,770</b>	<b>72,896</b>

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
53	148	174	1,782	0.007	13	151
52	146.5	88	886	0.004	6	76
51	145.5	89	883	0.004	6	77
50	143.5	272	2,628	0.011	19	235
49	141	186	1,733	0.007	12	160

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
48	138.5	284	2,569	0.010	18	246
47	136	193	1,690	0.007	12	167
46	133.5	403	3,402	0.014	24	348
45	131	273	2,223	0.009	16	236
44	128.5	415	3,264	0.013	23	359
43	126	281	2,129	0.009	15	242
42	123.5	427	3,120	0.013	22	369
41	121	288	2,031	0.008	14	249
40	118.5	439	2,972	0.012	21	379
39	116	296	1,930	0.008	14	256
38	113.5	451	2,819	0.011	20	389
37	111	304	1,827	0.007	13	263
36	108.5	462	2,662	0.011	19	400
35	106	312	1,722	0.007	12	270
34	103.5	474	2,502	0.010	18	410
33	101.3133	219	1,113	0.004	8	190
32	100.3133	205	1,023	0.004	7	178
31	98.5	994	4,784	0.019	34	859
30	96.1883	545	2,511	0.010	18	471
29	95.1883	80	360	0.002	3	69
28	93.5	640	2,800	0.011	20	553
27	91	432	1,798	0.007	13	374
26	88.5	657	2,595	0.010	19	568
25	86	443	1,662	0.007	12	383
24	83.5	674	2,390	0.010	17	582
23	81	455	1,525	0.006	11	393
22	78.5	690	2,185	0.009	16	597
21	76	466	1,389	0.006	10	403
20	73.5	707	1,982	0.008	14	611
19	71	477	1,254	0.005	9	412
18	68.5	723	1,781	0.007	13	625
17	66	488	1,121	0.004	8	422
16	63.5	740	1,584	0.006	11	640
15	61	499	991	0.004	7	431
14	57.5	1,267	2,257	0.009	16	1,095
13	54.145	440	701	0.003	5	380
12	51.645	1,770	2,586	0.010	18	1,530
11	48.3533	1,800	2,328	0.009	17	1,556
10	45.8533	555	651	0.003	5	480
9	42.5	1,650	1,682	0.007	12	1,426
8	37.5	1,686	1,363	0.006	10	1,457
7	32.5	1,721	1,069	0.004	8	1,488
6	27.5	1,757	801	0.003	6	1,519
5	22.5	1,793	564	0.002	4	1,550
4	17.5	1,828	362	0.002	3	1,581
3	12.5	1,864	198	0.001	1	1,611
2	7.5	1,900	79	0.000	1	1,642
1	2.5	1,936	11	0.000	0	1,673
Kaelus KA-6030	149	35	364	0.002	3	30
Samsung RF4440d-13A	149	211	2,181	0.009	16	182
Samsung RF4439d-25A	149	224	2,318	0.009	17	194
Raycap RVZDC-6627-PF-48	149	64	662	0.003	5	55
Samsung MT6407-77A	149	245	2,532	0.010	18	212
Commscope SBNHH-1D65B	149	456	4,720	0.019	34	394
PINE BRANCH	147	600	6,053	0.024	43	519
PINE BRANCH	142	600	5,678	0.023	40	519
PINE BRANCH	137	600	5,314	0.021	38	519
PINE BRANCH	132	600	4,962	0.020	35	519
PINE BRANCH	127	600	4,620	0.019	33	519
PINE BRANCH	122	600	4,290	0.017	31	519
PINE BRANCH	117	600	3,970	0.016	28	519

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
PINE BRANCH	112	600	3,663	0.015	26	519
PINE BRANCH	107	600	3,366	0.014	24	519
PINE BRANCH	102	600	3,081	0.012	22	519
PINE BRANCH	97	600	2,808	0.011	20	519
PINE BRANCH	92	600	2,547	0.010	18	519
PINE BRANCH	87	600	2,297	0.009	16	519
PINE BRANCH	82	600	2,059	0.008	15	519
PINE BRANCH	77	600	1,833	0.007	13	519
PINE BRANCH	72	600	1,619	0.006	12	519
PINE BRANCH	67	600	1,418	0.006	10	519
PINE BRANCH	62	600	1,228	0.005	9	519
Generic Flat Light Sector Frame	146	2,400	23,908	0.096	171	2,074
Generic Flat Light Sector Frame	135	2,400	20,687	0.083	148	2,074
VZW Unused Reserve (17804.96 sqin)	146	1,265	12,599	0.051	90	1,093
Raycap DC6-48-60-18-8F(32.8 lbs)	135	131	1,131	0.005	8	113
Ericsson RRUS 8843 B2, B66A	135	216	1,862	0.008	13	187
Ericsson RRUS 4478 B14	135	180	1,549	0.006	11	155
Ericsson RRUS 4449 B5, B12	135	213	1,836	0.007	13	184
Ericsson RRUS 12 w/ RRUS A2 (80 lb)	135	720	6,206	0.025	44	622
Ericsson RRUS-11	135	330	2,845	0.012	20	285
CCI HPA-65R-BUU-H8	135	204	1,758	0.007	13	176
Kathrein Scala 80010966	135	688	5,927	0.024	42	594
<b>Totals:</b>		<b>58,995</b>	<b>248,164</b>	<b>1.001</b>	<b>1,770</b>	<b>50,994</b>

1.2D + 1.0Ev + 1.0Eh

Seismic

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-70.50	-1.77	0.00	-217.38	0.00	217.38	7,586.22	1,815.31	9,500	9,026.97	0.00	0.00	0.03
5.00	-68.16	-1.78	0.00	-208.51	0.00	208.51	7,471.93	1,778.51	9,119	8,709.02	0.00	-0.01	0.03
10.00	-65.85	-1.79	0.00	-199.61	0.00	199.61	7,356.01	1,741.71	8,746	8,394.77	0.01	-0.01	0.03
15.00	-63.59	-1.79	0.00	-190.67	0.00	190.67	7,217.48	1,704.92	8,380	8,060.91	0.03	-0.02	0.03
20.00	-61.38	-1.80	0.00	-181.71	0.00	181.71	7,061.70	1,668.12	8,022	7,714.96	0.06	-0.03	0.03
25.00	-59.21	-1.80	0.00	-172.74	0.00	172.74	6,905.92	1,631.32	7,672	7,376.60	0.09	-0.04	0.03
30.00	-57.08	-1.79	0.00	-163.76	0.00	163.76	6,750.14	1,594.52	7,330	7,045.83	0.13	-0.04	0.03
35.00	-55.00	-1.79	0.00	-154.79	0.00	154.79	6,594.37	1,557.72	6,996	6,722.64	0.18	-0.05	0.03
40.00	-52.96	-1.78	0.00	-145.84	0.00	145.84	6,438.59	1,520.93	6,669	6,407.04	0.24	-0.06	0.03
45.00	-52.27	-1.78	0.00	-136.92	0.00	136.92	6,282.81	1,484.13	6,350	6,099.03	0.31	-0.07	0.03
46.71	-50.05	-1.77	0.00	-133.88	0.00	133.88	6,229.64	1,471.57	6,243	5,995.63	0.33	-0.07	0.03
50.00	-47.86	-1.75	0.00	-128.06	0.00	128.06	6,127.03	1,447.33	6,039	5,798.61	0.38	-0.07	0.03
53.29	-47.32	-1.75	0.00	-122.30	0.00	122.30	4,690.13	1,131.24	4,743	4,472.73	0.43	-0.08	0.04
55.00	-45.75	-1.73	0.00	-119.31	0.00	119.31	4,660.50	1,121.45	4,662	4,405.65	0.46	-0.08	0.04
60.00	-45.13	-1.73	0.00	-110.64	0.00	110.64	4,572.76	1,092.83	4,427	4,211.35	0.55	-0.09	0.04
62.00	-43.48	-1.71	0.00	-107.18	0.00	107.18	4,537.20	1,081.38	4,334	4,134.41	0.59	-0.10	0.04
65.00	-42.87	-1.71	0.00	-102.04	0.00	102.04	4,483.38	1,064.21	4,198	4,019.86	0.66	-0.10	0.04
67.00	-41.24	-1.69	0.00	-98.62	0.00	98.62	4,447.18	1,052.76	4,108	3,944.07	0.70	-0.11	0.03
70.00	-40.65	-1.68	0.00	-93.57	0.00	93.57	4,383.99	1,035.59	3,975	3,823.98	0.77	-0.11	0.03
72.00	-39.03	-1.65	0.00	-90.21	0.00	90.21	4,335.53	1,024.14	3,888	3,739.48	0.82	-0.12	0.03
75.00	-38.46	-1.65	0.00	-85.25	0.00	85.25	4,262.83	1,006.97	3,759	3,614.49	0.89	-0.12	0.03
77.00	-36.86	-1.62	0.00	-81.96	0.00	81.96	4,214.37	995.52	3,674	3,532.34	0.94	-0.12	0.03
80.00	-36.30	-1.61	0.00	-77.12	0.00	77.12	4,141.67	978.35	3,548	3,410.90	1.02	-0.13	0.03
82.00	-34.73	-1.57	0.00	-73.90	0.00	73.90	4,093.21	966.90	3,465	3,331.11	1.08	-0.13	0.03
85.00	-34.18	-1.56	0.00	-69.18	0.00	69.18	4,020.51	949.73	3,343	3,213.21	1.16	-0.14	0.03
87.00	-32.63	-1.53	0.00	-66.05	0.00	66.05	3,972.05	938.28	3,263	3,135.78	1.22	-0.14	0.03
90.00	-32.09	-1.52	0.00	-61.47	0.00	61.47	3,899.35	921.11	3,145	3,021.42	1.32	-0.15	0.03
92.00	-30.56	-1.48	0.00	-58.44	0.00	58.44	3,850.89	909.66	3,067	2,946.36	1.38	-0.15	0.03
95.00	-30.46	-1.48	0.00	-54.01	0.00	54.01	3,778.19	892.49	2,953	2,835.53	1.48	-0.16	0.03
95.38	-29.79	-1.46	0.00	-53.45	0.00	53.45	3,769.06	890.33	2,938	2,821.77	1.49	-0.16	0.03
97.00	-27.82	-1.40	0.00	-51.09	0.00	51.09	3,729.73	881.04	2,877	2,762.83	1.54	-0.16	0.03

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
100.00	-27.57	-1.39	0.00	-46.89	0.00	46.89	3,657.03	863.87	2,766	2,655.55	1.65	-0.17	0.03
100.63	-27.30	-1.38	0.00	-46.02	0.00	46.02	2,539.98	627.54	2,043	1,882.60	1.67	-0.17	0.04
102.00	-25.97	-1.34	0.00	-44.12	0.00	44.12	2,524.08	621.92	2,007	1,853.93	1.72	-0.17	0.03
105.00	-25.58	-1.33	0.00	-40.09	0.00	40.09	2,488.92	609.66	1,929	1,791.74	1.83	-0.18	0.03
107.00	-24.27	-1.29	0.00	-37.43	0.00	37.43	2,465.15	601.48	1,877	1,750.61	1.90	-0.18	0.03
110.00	-23.89	-1.27	0.00	-33.57	0.00	33.57	2,429.01	589.22	1,802	1,689.46	2.02	-0.19	0.03
112.00	-22.60	-1.23	0.00	-31.02	0.00	31.02	2,404.59	581.04	1,752	1,649.05	2.09	-0.19	0.03
115.00	-22.23	-1.21	0.00	-27.35	0.00	27.35	2,367.47	568.77	1,679	1,589.00	2.22	-0.20	0.03
117.00	-20.95	-1.16	0.00	-24.92	0.00	24.92	2,342.39	560.59	1,631	1,549.35	2.30	-0.20	0.03
120.00	-20.59	-1.15	0.00	-21.44	0.00	21.44	2,304.29	548.33	1,560	1,490.48	2.43	-0.20	0.02
122.00	-19.32	-1.09	0.00	-19.15	0.00	19.15	2,278.56	540.15	1,514	1,451.64	2.51	-0.21	0.02
125.00	-18.97	-1.07	0.00	-15.89	0.00	15.89	2,234.71	527.89	1,446	1,391.06	2.64	-0.21	0.02
127.00	-17.72	-1.01	0.00	-13.74	0.00	13.74	2,200.10	519.71	1,402	1,348.08	2.73	-0.21	0.02
130.00	-17.38	-1.00	0.00	-10.70	0.00	10.70	2,148.17	507.44	1,336	1,284.87	2.87	-0.22	0.02
132.00	-16.14	-0.93	0.00	-8.70	0.00	8.70	2,113.55	499.26	1,294	1,243.58	2.96	-0.22	0.02
135.00	-9.63	-0.58	0.00	-5.90	0.00	5.90	2,061.63	487.00	1,231	1,182.90	3.09	-0.22	0.01
137.00	-8.54	-0.52	0.00	-4.73	0.00	4.73	2,027.01	478.82	1,190	1,143.30	3.19	-0.22	0.01
140.00	-8.31	-0.51	0.00	-3.16	0.00	3.16	1,975.09	466.56	1,130	1,085.15	3.33	-0.22	0.01
142.00	-7.23	-0.45	0.00	-2.14	0.00	2.14	1,940.47	458.38	1,090	1,047.23	3.42	-0.22	0.01
145.00	-7.12	-0.44	0.00	-0.79	0.00	0.79	1,888.54	446.11	1,033	991.61	3.56	-0.22	0.01
146.00	-2.48	-0.16	0.00	-0.35	0.00	0.35	1,871.23	442.02	1,014	973.41	3.61	-0.22	0.00
147.00	-1.53	-0.10	0.00	-0.19	0.00	0.19	1,853.93	437.94	995	955.38	3.65	-0.22	0.00
149.00	0.00	-0.09	0.00	0.00	0.00	0.00	1,819.31	429.76	958	919.82	3.75	-0.22	0.00

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

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-49.32	-1.77	0.00	-214.52	0.00	214.52	7,586.22	1,815.31	9,500	9,026.97	0.00	0.00	0.03
5.00	-47.68	-1.78	0.00	-205.67	0.00	205.67	7,471.93	1,778.51	9,119	8,709.02	0.00	-0.01	0.03
10.00	-46.07	-1.78	0.00	-196.79	0.00	196.79	7,356.01	1,741.71	8,746	8,394.77	0.01	-0.01	0.03
15.00	-44.49	-1.78	0.00	-187.89	0.00	187.89	7,217.48	1,704.92	8,380	8,060.91	0.03	-0.02	0.03
20.00	-42.94	-1.78	0.00	-178.98	0.00	178.98	7,061.70	1,668.12	8,022	7,714.96	0.06	-0.03	0.03
25.00	-41.42	-1.78	0.00	-170.07	0.00	170.07	6,905.92	1,631.32	7,672	7,376.60	0.09	-0.04	0.03
30.00	-39.93	-1.78	0.00	-161.16	0.00	161.16	6,750.14	1,594.52	7,330	7,045.83	0.13	-0.04	0.03
35.00	-38.47	-1.77	0.00	-152.27	0.00	152.27	6,594.37	1,557.72	6,996	6,722.64	0.18	-0.05	0.03
40.00	-37.04	-1.76	0.00	-143.41	0.00	143.41	6,438.59	1,520.93	6,669	6,407.04	0.24	-0.06	0.03
45.00	-36.56	-1.76	0.00	-134.59	0.00	134.59	6,282.81	1,484.13	6,350	6,099.03	0.30	-0.07	0.03
46.71	-35.01	-1.75	0.00	-131.58	0.00	131.58	6,229.64	1,471.57	6,243	5,995.63	0.33	-0.07	0.03
50.00	-33.48	-1.73	0.00	-125.83	0.00	125.83	6,127.03	1,447.33	6,039	5,798.61	0.38	-0.07	0.03
53.29	-33.10	-1.73	0.00	-120.14	0.00	120.14	4,690.13	1,131.24	4,743	4,472.73	0.43	-0.08	0.03
55.00	-32.00	-1.71	0.00	-117.19	0.00	117.19	4,660.50	1,121.45	4,662	4,405.65	0.46	-0.08	0.03
60.00	-31.57	-1.71	0.00	-108.63	0.00	108.63	4,572.76	1,092.83	4,427	4,211.35	0.55	-0.09	0.03
62.00	-30.41	-1.69	0.00	-105.22	0.00	105.22	4,537.20	1,081.38	4,334	4,134.41	0.59	-0.09	0.03
65.00	-29.99	-1.68	0.00	-100.15	0.00	100.15	4,483.38	1,064.21	4,198	4,019.86	0.65	-0.10	0.03
67.00	-28.85	-1.66	0.00	-96.79	0.00	96.79	4,447.18	1,052.76	4,108	3,944.07	0.69	-0.10	0.03
70.00	-28.44	-1.65	0.00	-91.81	0.00	91.81	4,383.99	1,035.59	3,975	3,823.98	0.76	-0.11	0.03
72.00	-27.31	-1.63	0.00	-88.51	0.00	88.51	4,335.53	1,024.14	3,888	3,739.48	0.80	-0.11	0.03
75.00	-26.90	-1.62	0.00	-83.63	0.00	83.63	4,262.83	1,006.97	3,759	3,614.49	0.88	-0.12	0.03
77.00	-25.79	-1.59	0.00	-80.39	0.00	80.39	4,214.37	995.52	3,674	3,532.34	0.93	-0.12	0.03
80.00	-25.39	-1.58	0.00	-75.63	0.00	75.63	4,141.67	978.35	3,548	3,410.90	1.01	-0.13	0.03
82.00	-24.29	-1.55	0.00	-72.47	0.00	72.47	4,093.21	966.90	3,465	3,331.11	1.06	-0.13	0.03
85.00	-23.91	-1.54	0.00	-67.83	0.00	67.83	4,020.51	949.73	3,343	3,213.21	1.15	-0.14	0.03
87.00	-22.82	-1.50	0.00	-64.75	0.00	64.75	3,972.05	938.28	3,263	3,135.78	1.20	-0.14	0.03
90.00	-22.45	-1.49	0.00	-60.25	0.00	60.25	3,899.35	921.11	3,145	3,021.42	1.29	-0.15	0.03
92.00	-21.38	-1.45	0.00	-57.28	0.00	57.28	3,850.89	909.66	3,067	2,946.36	1.36	-0.15	0.03
95.00	-21.31	-1.45	0.00	-52.93	0.00	52.93	3,778.19	892.49	2,953	2,835.53	1.45	-0.16	0.02
95.38	-20.84	-1.43	0.00	-52.38	0.00	52.38	3,769.06	890.33	2,938	2,821.77	1.47	-0.16	0.02
97.00	-19.46	-1.37	0.00	-50.06	0.00	50.06	3,729.73	881.04	2,877	2,762.83	1.52	-0.16	0.02

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
100.00	-19.28	-1.37	0.00	-45.94	0.00	45.94	3,657.03	863.87	2,766	2,655.55	1.62	-0.16	0.02
100.63	-19.09	-1.36	0.00	-45.09	0.00	45.09	2,539.98	627.54	2,043	1,882.60	1.64	-0.16	0.03
102.00	-18.16	-1.32	0.00	-43.22	0.00	43.22	2,524.08	621.92	2,007	1,853.93	1.69	-0.17	0.03
105.00	-17.89	-1.31	0.00	-39.27	0.00	39.27	2,488.92	609.66	1,929	1,791.74	1.80	-0.17	0.03
107.00	-16.98	-1.26	0.00	-36.66	0.00	36.66	2,465.15	601.48	1,877	1,750.61	1.87	-0.18	0.03
110.00	-16.71	-1.25	0.00	-32.88	0.00	32.88	2,429.01	589.22	1,802	1,689.46	1.98	-0.18	0.03
112.00	-15.81	-1.20	0.00	-30.38	0.00	30.38	2,404.59	581.04	1,752	1,649.05	2.06	-0.19	0.03
115.00	-15.55	-1.19	0.00	-26.78	0.00	26.78	2,367.47	568.77	1,679	1,589.00	2.18	-0.19	0.02
117.00	-14.65	-1.14	0.00	-24.41	0.00	24.41	2,342.39	560.59	1,631	1,549.35	2.26	-0.20	0.02
120.00	-14.40	-1.12	0.00	-21.00	0.00	21.00	2,304.29	548.33	1,560	1,490.48	2.38	-0.20	0.02
122.00	-13.51	-1.07	0.00	-18.75	0.00	18.75	2,278.56	540.15	1,514	1,451.64	2.47	-0.20	0.02
125.00	-13.27	-1.05	0.00	-15.56	0.00	15.56	2,234.71	527.89	1,446	1,391.06	2.60	-0.21	0.02
127.00	-12.40	-0.99	0.00	-13.45	0.00	13.45	2,200.10	519.71	1,402	1,348.08	2.68	-0.21	0.02
130.00	-12.16	-0.98	0.00	-10.48	0.00	10.48	2,148.17	507.44	1,336	1,284.87	2.82	-0.21	0.01
132.00	-11.29	-0.91	0.00	-8.52	0.00	8.52	2,113.55	499.26	1,294	1,243.58	2.91	-0.21	0.01
135.00	-6.73	-0.57	0.00	-5.78	0.00	5.78	2,061.63	487.00	1,231	1,182.90	3.04	-0.22	0.01
137.00	-5.97	-0.51	0.00	-4.64	0.00	4.64	2,027.01	478.82	1,190	1,143.30	3.13	-0.22	0.01
140.00	-5.81	-0.50	0.00	-3.09	0.00	3.09	1,975.09	466.56	1,130	1,085.15	3.27	-0.22	0.01
142.00	-5.06	-0.44	0.00	-2.09	0.00	2.09	1,940.47	458.38	1,090	1,047.23	3.36	-0.22	0.01
145.00	-4.98	-0.43	0.00	-0.78	0.00	0.78	1,888.54	446.11	1,033	991.61	3.50	-0.22	0.00
146.00	-1.74	-0.15	0.00	-0.34	0.00	0.34	1,871.23	442.02	1,014	973.41	3.54	-0.22	0.00
147.00	-1.07	-0.10	0.00	-0.19	0.00	0.19	1,853.93	437.94	995	955.38	3.59	-0.22	0.00
149.00	0.00	-0.09	0.00	0.00	0.00	0.00	1,819.31	429.76	958	919.82	3.68	-0.22	0.00



ANALYSIS SUMMARY

Load Case	Base Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	49.87	0.00	70.72	0.00	0.00	5540.55	53.29	0.67
0.9D + 1.0W	49.84	0.00	53.02	0.00	0.00	5486.48	53.29	0.66
1.2D + 1.0Di + 1.0Wi	9.13	0.00	90.59	0.00	0.00	1014.96	53.29	0.13
1.2D + 1.0Ev + 1.0Eh	1.80	0.00	70.50	0.00	0.00	217.38	53.29	0.04
0.9D - 1.0Ev + 1.0Eh	1.78	0.00	49.32	0.00	0.00	214.52	53.29	0.03
1.0D + 1.0W	12.35	0.00	58.99	0.00	0.00	1365.65	53.29	0.17

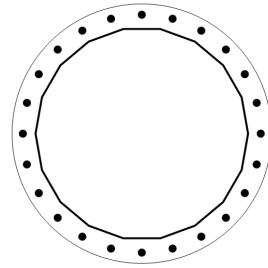
**BASE PLATE ANALYSIS @ 0 FT**

**APPLIED REACTIONS**

Moment (k-ft)	Axial (k)	Shear (k)
5540.55	70.72	49.87

**PLATE PARAMETERS (ID# 26494)**

Width:	72	in
Shape:	Round	
Thickness:	3	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	4.5	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	15	°



**ANCHOR ROD PARAMETERS**

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F <sub>y</sub> (ksi)	F <sub>u</sub> (ksi)	Spacing (in)	Offset (°)
Original [ID#27189]	Radial	24	2.25	66	A615-75	75	100	-	-

**COMPONENT PROPERTIES**

Component	ID	Gross Area (in <sup>2</sup> )	Net Area (in <sup>2</sup> )	Individual Inertia (in <sup>4</sup> )	Moment of Inertia (in <sup>4</sup> )	Threads/in
Pole	58.5"Ø x 0.5625" (18 Sides)	101.8650	-	-	42752.77	-
Bolt Group	Original (24) 2.25"Ø	3.9761	3.2477	0.8393	39152.11	4.5

**REACTION DISTRIBUTION**

Component	ID	Moment M <sub>u</sub> (k-ft)	Axial Load P <sub>u</sub> (k)	Shear V <sub>u</sub> (k)	Moment Factor
Pole	58.5"Ø x 0.5625" (18 Sides)	5540.6	70.72	49.87	1.000
Bolt Group	Original (24) 2.25"Ø	5540.6	-	49.87	1.000

**BASE PLATE BEND LINE ANALYSIS @ 0 FT**

**POLE PROPERTIES**

Flat-to-Flat Diameter:	58.62	in
Point-to-Point Diameter:	59.53	in
Orientation Offset:	-	°

Flat Width:	10.337	in
Flat Radians:	0.349	rad

**PLATE PROPERTIES**

Neutral Axis:	15	°
Bend Line Limits:	1.438 to 2.227	rad

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in <sup>3</sup> )	Applied Moment M <sub>u</sub> (k-in)	Moment Capacity ΦM <sub>n</sub> (k-in)	Flexure Result M <sub>u</sub> /ΦM <sub>n</sub>
Flats	37.123	0.00	83.526	867.0	3758.7	23.1%
Corners	35.654	0.00	80.222	631.3	3610.0	17.5%
Circumferential	38.777	0.00	87.249	1002.2	3926.2	25.5%

**PLASTIC ANCHOR ROD ANALYSIS**

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P <sub>u</sub> (k)	Applied Shear Load V <sub>u</sub> (k)	Compressive Capacity ΦP <sub>n</sub> (k)	Plastic Result
Original	24	2.25	144.0	3.3	243.6	59.1%

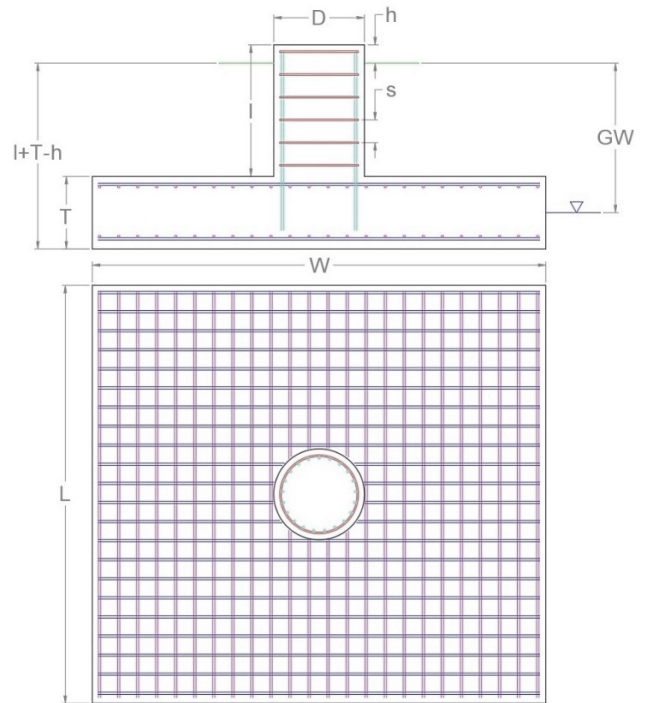


**APPLIED GLOBAL REACTIONS**

Moment (k-ft)	Axial (k)	Shear (k)
5,540.55	70.72	49.87

**FOUNDATION PARAMETERS**

Mat Length:	L	30	ft
Mat Width:	W	30	ft
Mat Thickness:	T	3	ft
Base Depth:	L+T-h	5	ft
Pier Shape:		Square	
Pier Width:	D	7	ft
Pier Height above Grade:	h	1	ft
Concrete Compressive Strength:		4,000	psi
Mat Top Rebar:		(46) #7 bars [60 ksi]	
Mat Bottom Rebar:		(46) #10 bars [60 ksi]	
Pier Vertical Rebar:		(53) #8 bars [60 ksi]	
Pier Rebar Ties:	s	#4 bars @ 6.0" c/c [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	6	ft
Tower Leg Count		1	



**SOIL PARAMETERS**

Water Table Depth [BGL]:	GW	41	ft
Soil Unit Weight:		120	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		10,000	psf
Bearing Pressure Type:		Net	
Coefficient of Shear Friction:		0.5	

**SOIL STRENGTH ANALYSIS**

Soil Strength Reduction Factor, $\Phi_s$	Uplift Strength Reduction Factor, $\Phi_s$	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

**SOIL OVERTURNING ANALYSIS**

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$
5,839.77	9,317.64	62.7% <span style="float: right;">✔</span>

**SOIL BEARING ANALYSIS**

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$
2,031.00	7,950.00	Diagonal to Pad Edge	25.6% <span style="float: right;">✔</span>

**SOIL SLIDING SHEAR ANALYSIS**

Applied Shear Force, $V_u$ (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$
49.87	0.00	420.0	37.80	287.18	17.0% <span style="float: right;">✔</span>

**MAT REINFORCING STEEL STRENGTH ANALYSIS**

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, $\Phi_b$	Strength Shear Reduction Factor, $\Phi_v$	Strength Compression Reduction Factor, $\Phi_c$
29,000	0.9	0.75	0.65

**MAT REINFORCING ONE WAY SHEAR ANALYSIS**

One Way Design Shear, $V_u$ (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$
521.68	1,084.35	Parallel to Pad Edge	48.1%

**MAT REINFORCING PUNCHING SHEAR ANALYSIS**

Punching Shear Design Stress, $v_u$ (psi)	Nominal Punching Shear Capacity, $\Phi_c v_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c v_n$
53.8	189.7	28.4%

**MAT REINFORCING MOMENT TRANSFER ANALYSIS**

Moment Transfer Effective Flexural Width, $w_f$ (in)	Neutral Axis Depth (in)	Pier Moment at Joint, $M_{ut}$ (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6 M_{ut} / \Phi M_{sc,f}$
16.00	2.97	0.00	53,211.5	0.0%

**MAT REINFORCING FLEXURE ANALYSIS – UPPER STEEL**

Factored Moment, $M_u$ (k-ft)	Nominal Flexural Capacity, $\Phi M_n$ (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$
3,169.69	3,871.94	Parallel to Pad Edge	81.9%

**MAT REINFORCING FLEXURE ANALYSIS – LOWER STEEL**

Factored Moment, $M_u$ (k-ft)	Nominal Flexural Capacity, $\Phi M_n$ (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$
5,645.40	8,026.80	Parallel to Pad Edge	70.3%

**PIER REINFORCING STEEL STRENGTH ANALYSIS**

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, $\Phi_b$	Strength Shear Reduction Factor, $\Phi_v$	Strength Compression Reduction Factor, $\Phi_c$
76.00	29,000	0.9	0.75	0.65

**PIER REINFORCING MOMENT ANALYSIS**

Design Moment, $M_u$ (k-ft)	Nominal Moment Capacity, $\Phi_u M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u / \Phi_u M_n$
5,690.16	6,734.68	0.006	84.5%

**PIER REINFORCING COMPRESSION ANALYSIS**

Design Compression, $P_u$ (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$
70.72	12,425.63	0.6%

**PIER REINFORCING SHEAR ANALYSIS**

Design Shear, $V_u$ (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$
49.87	874.35	5.7%

# EXHIBIT 4



Colliers Engineering & Design CT, PC  
1055 Washington Boulevard  
Stamford, CT 06901  
203.324.0800  
peter.albano@collierseng.com

---

## Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10208059  
Colliers Engineering & Design CT, PC Project #: 23777214

August 2, 2023

### Site Information

Site ID: 5000247941-VZW / FALLS VILLAGE CT  
Site Name: FALLS VILLAGE CT  
Carrier Name: Verizon Wireless  
Address: Route 7  
Falls Village, Connecticut 06031  
Litchfield County  
Latitude: 41.944556°  
Longitude: -73.360481°

### Structure Information

Tower Type: 151-Ft Monopole  
Mount Type: 10.00-Ft T-Arm

FUZE ID # 17123776

### Analysis Results

T-Arm: 96.5 % Pass\*

**\*Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

### \*\*\*Contractor PMI Requirements:

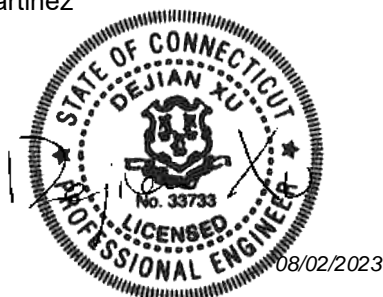
Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

For additional questions and support, please reach out to:

[pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

Report Prepared By: Gilberto Martinez



## **Executive Summary:**

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

## **Sources of Information:**

<b>Document Type</b>	<b>Remarks</b>
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS Site ID: 1582860, dated October 7, 2021</i>
<i>Final Loading Configuration</i>	<i>Filter Add Scope Provided by Verizon Wireless</i>
<i>Previous Mount Modification Drawings</i>	<i>Maser Consulting Connecticut, Project # 21777475A, dated November 16, 2021</i>
<i>Post Modification Inspection Report</i>	<i>Colliers Engineering &amp; Design Project #21777475, dated May 31, 2023</i>

## **Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : 115 mph Ice Wind Speed (3-sec. Gust): 40 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: C Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, $K_e$ : 0.977
Seismic Parameters:	$S_s$ : 0.166 g $S_1$ : 0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, $L_v$ : 250 lbs. Maintenance Live Load, $L_m$ : 500 lbs.
Analysis Software:	RISA-3D (V17)

**Final Loading Configuration:**

The following equipment has been considered for the analysis of the mount:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
148.00	150.00	3	Samsung	MT6407-77A	Retained
		9	Andrew	SBNHH-1D65B	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4440d-13A	
		1	Raycap	RVZDC-6627-PF-48	
		2	KAelus	KA-6030	Added

The recent mount mapping reported existing OVP units. It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

**Standard Conditions:**

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.



6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
  - o Channel, Solid Round, Angle, Plate      ASTM A36 (Gr. 36)
  - o HSS (Rectangular)                              ASTM 500 (Gr. B-46)
  - o Pipe    ASTM A53 (Gr. B-35)
  - o Threaded Rod                                      F1554 (Gr. 36)
  - o Bolts    ASTM A325

**Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design.**

**Analysis Results:**

Component	Utilization %	Pass/Fail
Standoff Arm	24.6 %	Pass
Standoff Pipe	0.1 %	Pass
Face Horizontal	17.7 %	Pass
Antenna Pipe	29.9 %	Pass
MOD Standoff	22.8 %	Pass
MOD Face Horizontal	16.5 %	Pass
Mount Connection	96.5 %	Pass

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>96.5%</b>
---	--------------

**Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:**

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	11.2	2.1	22.6	13.5
0.5	14.4	3.0	30.6	19.2
1	17.3	3.4	38.3	24.4

Notes:

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector(s).
- Ka factors included in (EPA)a calculations

## **Requirements:**

The existing mount is **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.
---

If required, ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other. Separate review fees will apply.

## **Attachments:**

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

# Mount Desktop – Post Modification Inspection (PMI) Report Requirements

## Documents & Photos Required from Contractor – **Passing Mount Analysis**

Passing Mount Analysis requires a PMI due to a modification in loading.

Electronic pdf version of this can be downloaded at <https://pmi.vzwsmart.com>.

For additional questions and support, please reach out to [pmisupport@colliersengineering.com](mailto:pmisupport@colliersengineering.com)

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PSLC #: 5000247941

SMART Project #: 10208059

Fuze Project ID: 17123776

**Purpose** – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

### **Base Requirements:**

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide “as built mount drawings” showing contractor’s name, contact information, preparer’s signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: <https://pmi.vzwsmart.com>

### **Photo Requirements:**

- Photos taken at ground level
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation.
  - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- Photos taken at Mount Elevation
  - Photos showing the safety climb wire rope above and below the mount prior to installation.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.

- These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.

**Antenna & equipment placement and Geometry Confirmation:**

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.
- The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

- The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

**Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:**

**Issue:**

Contractor shall install the proposed filter units on new Site Pro 1 Dual Swivel Mount Kit (Part #: RRUDSM or EOR approved equivalent) in the location shown in the placement diagrams.

**Response:**

**Special Instruction Confirmation:**

- The contractor has read and acknowledges the above special instructions.
- All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.
- The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

- The material utilized was approved by a SMART Tool engineering vendor as an “equivalent” and this approval is included as part of the contractor submission.

**Comments:**

--

**Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:**

Yes       No

**Contractor certifies no new damage created during the current installation:**

Yes       No

**Contractor to certify the condition of the safety climb and verify no damage when leaving the site:**

Safety Climb in Good Condition                       Safety Climb Damaged

**Certifying Individual:**

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

Se tor: A  
 Str t re Type: Mo opole  
 Mo t Elev: 148.00

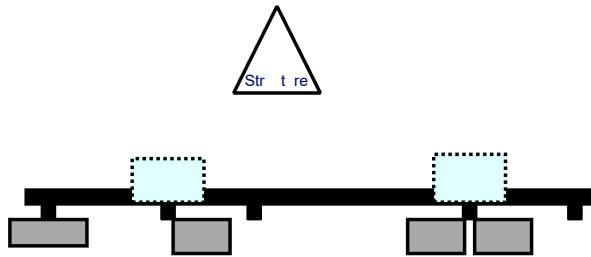
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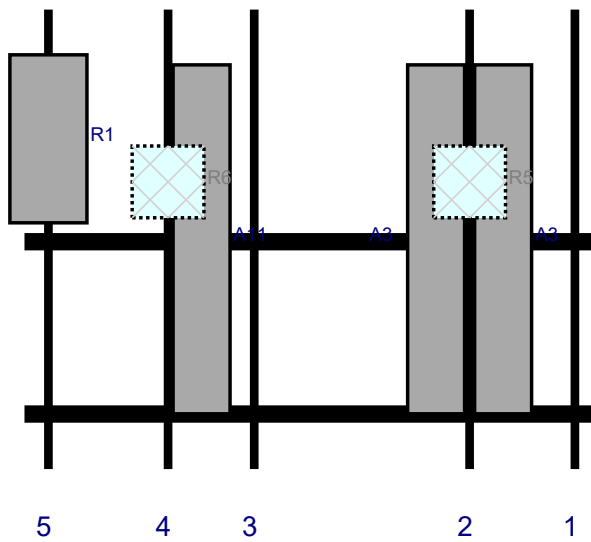


P ge: 1

Plan View



Front View - Looking at Structure



Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A3	SBNHH-1D65B	72.9	11.9	93	2		Fro t	48	7	Ret i ed	05/31/2023
A3	SBNHH-1D65B	72.9	11.9	93	2		Fro t	48	-7	Ret i ed	05/31/2023
R5	RF4439d-25A	15	15	93	2		Behi d	36	0	Ret i ed	05/31/2023
A11	SBNHH-1D65B	72.9	11.9	30	4		Fro t	48	7	Ret i ed	05/31/2023
R6	RF4440d-13A	15	15	30	4		Behi d	36	0	Ret i ed	05/31/2023
R1	MT6407-77A	35.1	16.1	5	5		Fro t	27	0	Ret i ed	05/31/2023

Se tor: **B**  
 Str t re Type: Mo opole  
 Mo t Elev: 148.00

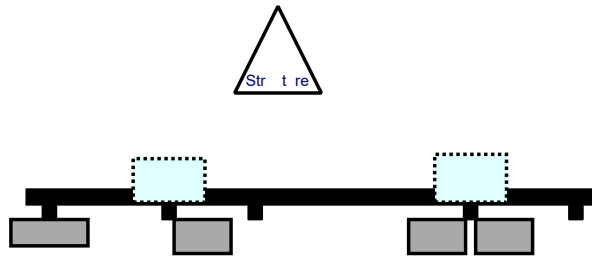
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8/2/2023

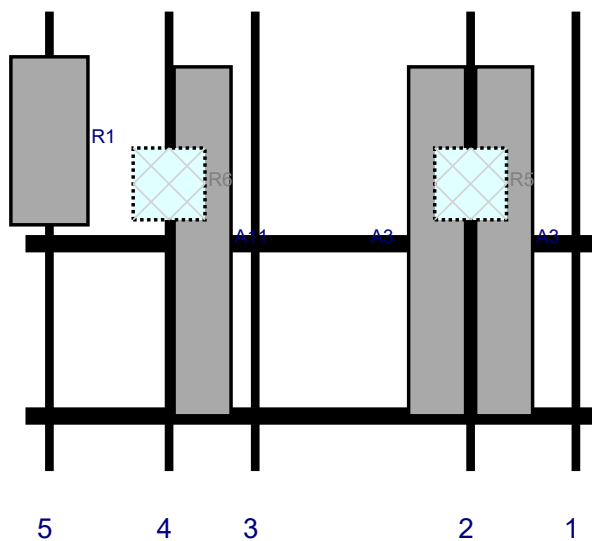


P ge: 2

Plan View



Front View - Looking at Structure



Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A3	SBNHH-1D65B	72.9	11.9	93	2		Fro t	48	7	Ret i ed	05/31/2023
A3	SBNHH-1D65B	72.9	11.9	93	2		Fro t	48	-7	Ret i ed	05/31/2023
R5	RF4439d-25A	15	15	93	2		Behi d	36	0	Ret i ed	05/31/2023
A11	SBNHH-1D65B	72.9	11.9	30	4		Fro t	48	7	Ret i ed	05/31/2023
R6	RF4440d-13A	15	15	30	4		Behi d	36	0	Ret i ed	05/31/2023
R1	MT6407-77A	35.1	16.1	5	5		Fro t	27	0	Ret i ed	05/31/2023

Se tor: C

8/2/2023

Str t re Type: Mo opole

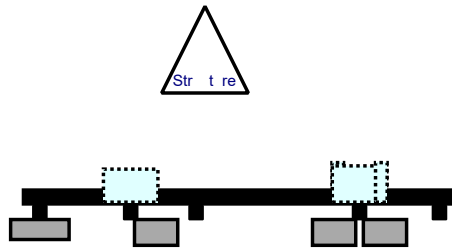
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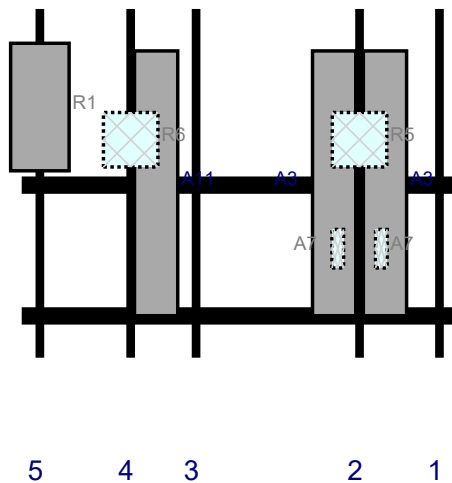
Mo t Elev: 148.00

P ge: 3

Plan View



Front View - Looking at Structure



5 4 3 2 1

Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A3	SBNHH-1D65B	72.9	11.9	93	2		Fro t	48	7	Ret i ed	05/31/2023
A3	SBNHH-1D65B	72.9	11.9	93	2		Fro t	48	-7	Ret i ed	05/31/2023
R5	RF4439d-25A	15	15	93	2		Behi d	36	0	Ret i ed	05/31/2023
A7	A-6030	10.6	3.2	93	2		Behi d	66	6	Added	
A7	A-6030	10.6	3.2	93	2		Behi d	66	-6	Added	
A11	SBNHH-1D65B	72.9	11.9	30	4		Fro t	48	7	Ret i ed	05/31/2023
R6	RF4440d-13A	15	15	30	4		Behi d	36	0	Ret i ed	05/31/2023
R1	MT6407-77A	35.1	16.1	5	5		Fro t	27	0	Ret i ed	05/31/2023





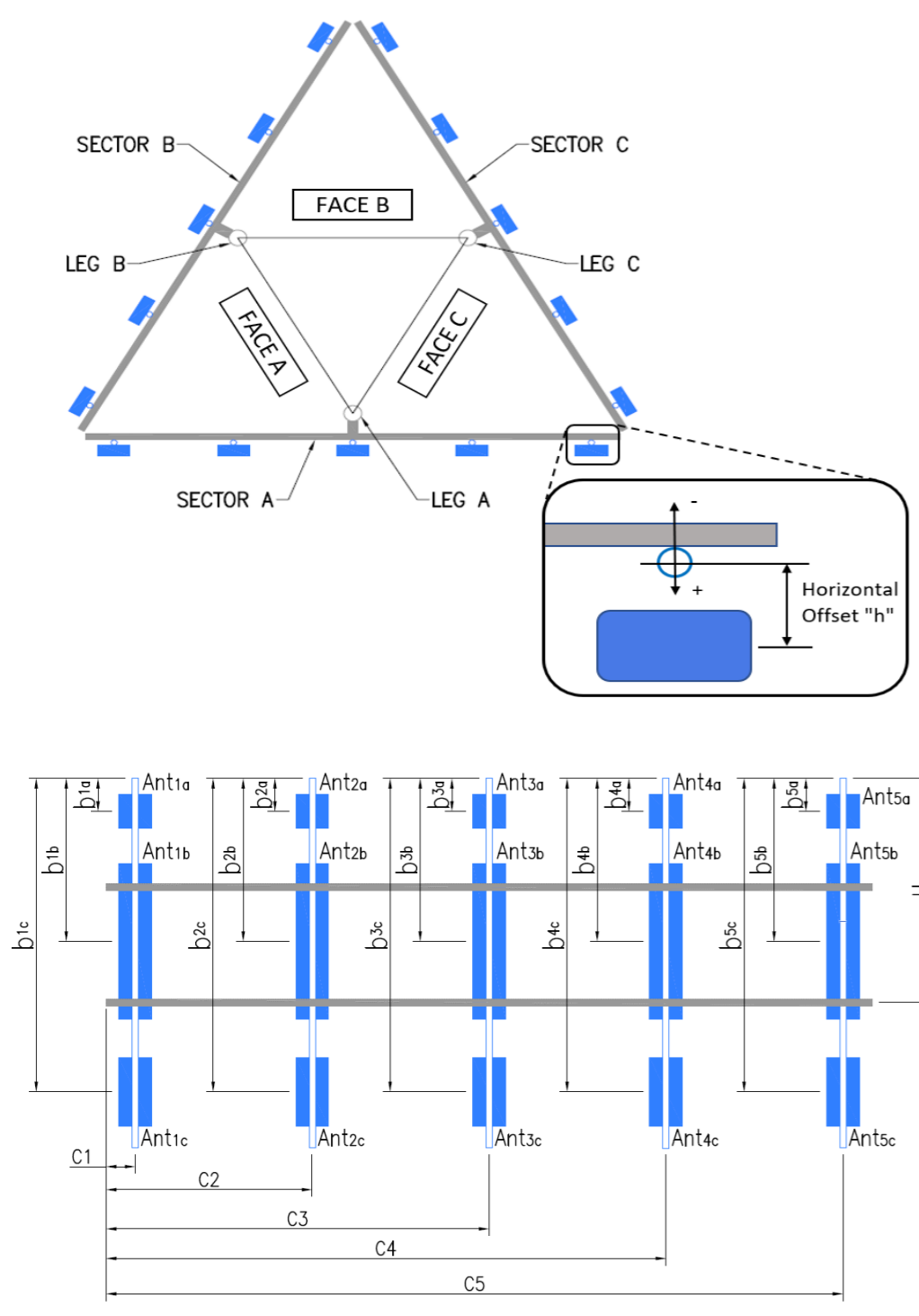
	<b>Antenna Mount Mapping Form (PATENT PENDING)</b>			<b>FCC #</b>
	<b>Tower Owner:</b>	OTHER	<b>Mapping Date:</b>	4.12.21
	<b>Site Name:</b>	FALLS VILLAGE CT	<b>Tower Type:</b>	Monopole
	<b>Site Number or ID:</b>	468318	<b>Tower Height (Ft.):</b>	150.66
<b>Mapping Contractor:</b>	HUDSON DESIGN GROUP,LLC.	<b>Mount Elevation (Ft.):</b>	147.16	

This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.

Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.

Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2" STD PIPE X 75" LONG	48.00	5.00	C1	2" STD PIPE X 75" LONG	48.00	5.00
A2	2" STD PIPE X 75" LONG	48.00	30.00	C2	2" STD PIPE X 75" LONG	48.00	30.00
A3	2" STD PIPE X 75" LONG	48.00	48.00	C3	2" STD PIPE X 75" LONG	48.00	48.00
A4	2" STD PIPE X 75" LONG	48.00	71.00	C4	2" STD PIPE X 75" LONG	48.00	71.00
A5	2" STD PIPE X 75" LONG	48.00	93.00	C5	2" STD PIPE X 75" LONG	48.00	93.00
A6	2" STD PIPE X 75" LONG	48.00	115.00	C6	2" STD PIPE X 75" LONG	48.00	115.00
B1	2" STD PIPE X 75" LONG	48.00	5.00	D1			
B2	2" STD PIPE X 75" LONG	48.00	30.00	D2			
B3	2" STD PIPE X 75" LONG	48.00	48.00	D3			
B4	2" STD PIPE X 75" LONG	48.00	71.00	D4			
B5	2" STD PIPE X 75" LONG	48.00	93.00	D5			
B6	2" STD PIPE X 75" LONG	48.00	115.00	D6			
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							42.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :							
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :							10
Please enter additional information or comments below.							
Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):		26			
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.							

Ants. Items	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b <sub>1a</sub> , b <sub>2a</sub> , b <sub>3a</sub> , b <sub>1b</sub> ..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	
<b>Sector A</b>										
Ant <sub>1a</sub>										
Ant <sub>1b</sub>										
Ant <sub>1c</sub>										
Ant <sub>2a</sub>	B66a RRH 4X45	12.00	7.00	25.50		145.41	27.00	-7.00		63
Ant <sub>2b</sub>	SBNHH-1D65B (2)	12.00	7.00	73.00		145.41	27.00	9.00	30.00	63
Ant <sub>2c</sub>										
Ant <sub>3a</sub>										
Ant <sub>3b</sub>										
Ant <sub>3c</sub>										
Ant <sub>4a</sub>										
Ant <sub>4b</sub>										
Ant <sub>4c</sub>										
Ant <sub>5a</sub>	B13 RRH 4X30	12.00	7.00	20.50		145.41	27.00	-7.00		65
Ant <sub>5b</sub>	SBNHH-1D65B (2)	12.00	7.00	73.00		145.41	27.00	9.00	30.00	65
Ant <sub>5c</sub>										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										



**Antenna Layout (Looking Out From Tower)**



**Observed Safety and Structural Issues During the Mount Mapping**

Issue #	Description of Issue	Photo #
1		
2		
3		
4		
5		
6		
7		
8		

**Observed Obstructions to Tower Lighting System**

If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.		Photo #
Description of Obstruction:		
Type of Light:	Photo #	Additional Comments:
Lighting Technology:	Photo #	
Elevation (AGL) at base of light (Ft.):	Photo #	
Is a service loop available?	Photo #	
Is beacon installed on an extension?	Photo #	

**Mapping Notes**

1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

**Standard Conditions**

1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.



### Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	OTHER	Mapping Date:	4.12.21
Site Name:	FALLS VILLAGE CT	Tower Type:	Monopole
Site Number or ID:	468318	Tower Height (Ft.):	150.66
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (Ft.):	147.16

This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.

Please Insert Sketches of the Antenna Mount

DATE: 4-12-21  
 Project Name: Falls Village CT  
 Project No.: \_\_\_\_\_  
 Design By: Josh Chk'd By: \_\_\_\_\_ Page \_\_\_\_ of \_\_\_\_

45 BEECHWOOD DRIVE  
NORTH ANDOVER, MA 01845  
TEL: (978) 357-8130  
FAX: (978) 354-5184

Mount 2: 147' 2"  
T.O.T.: 150' 8"

Ant. Pipe: 2 3/8" x 6' 3" x 1/2"  
 Face HSS: 4" x 4" x 10'  
 Gaskets: 2 1/2" x 3" x 3/8"  
 Welder Plate: 9 1/2" x 13" x 1/2"  
 - Bolts: 3/4"  
 Gigger Plate: 23 1/4" x 13" x 1/2"  
 - Bolts: 3/4"  
 Stand off Pipe: 4 1/2" x 1/4" x 27"  
 Stand off HSS: 4" x 4" x 3/16" x 22"  
 Flange: 10" x 6" x 1/2"  
 - Bolts: 3/4"  
 Collar: 12" x 1/2"  
 - T.R.: (2) 3/4"  
 Tower: 20" x 1/4"  
 Tower to Face: 39"

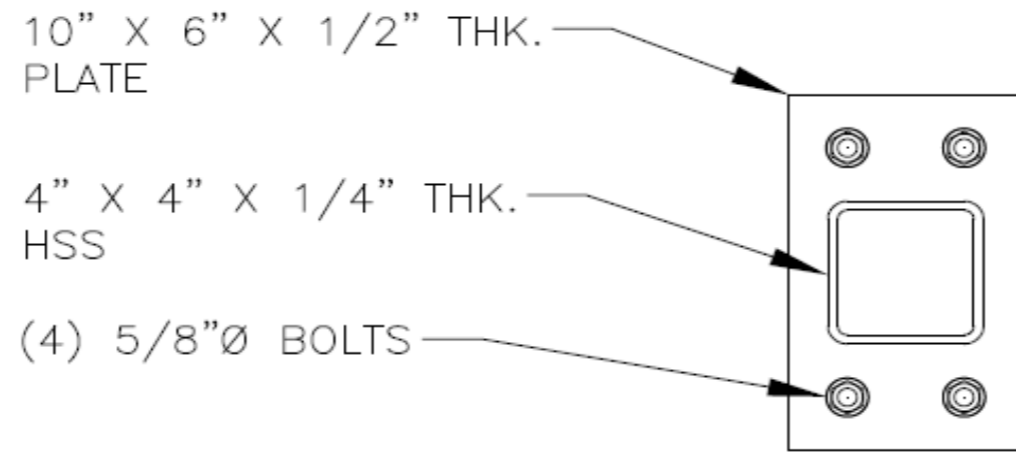
  

Inventory

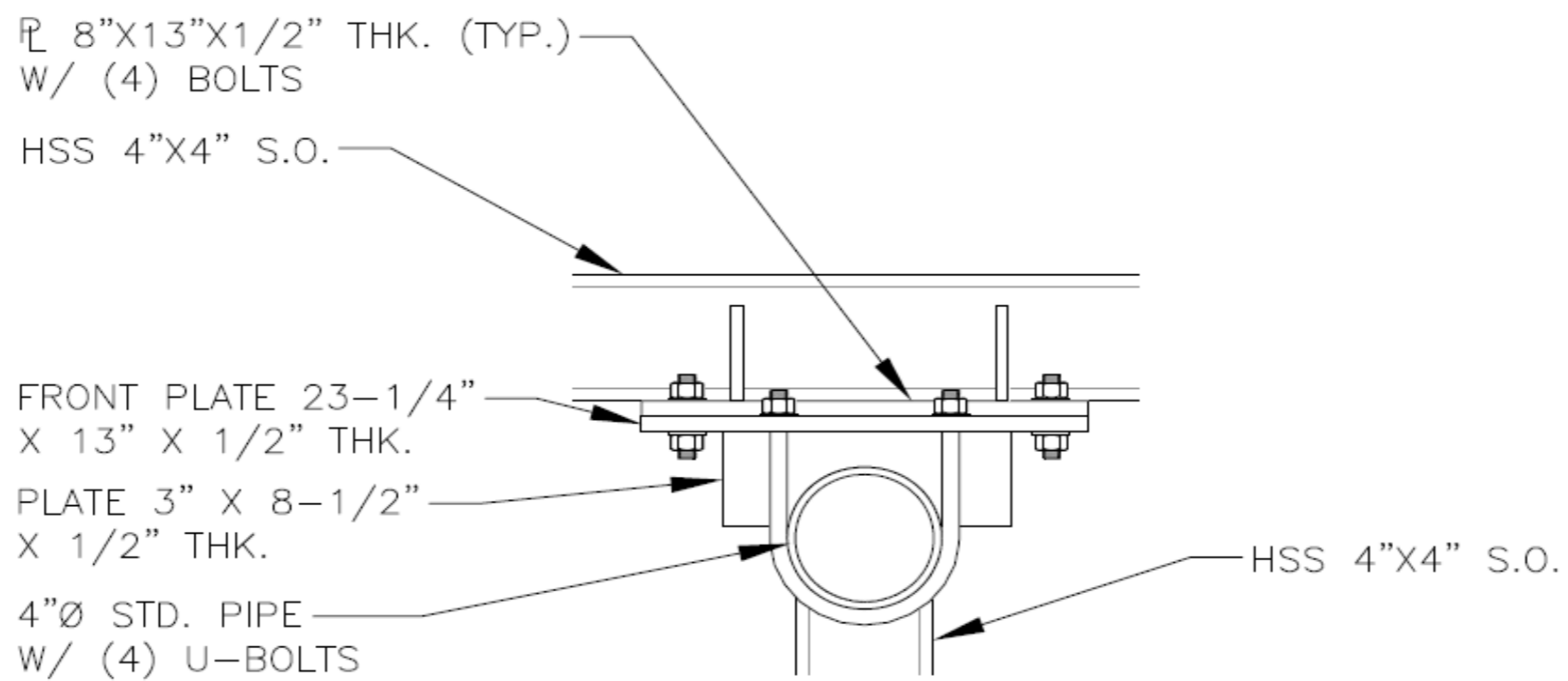
Ant: JBNHH-10450

AH: (1) B13  
(3) B664

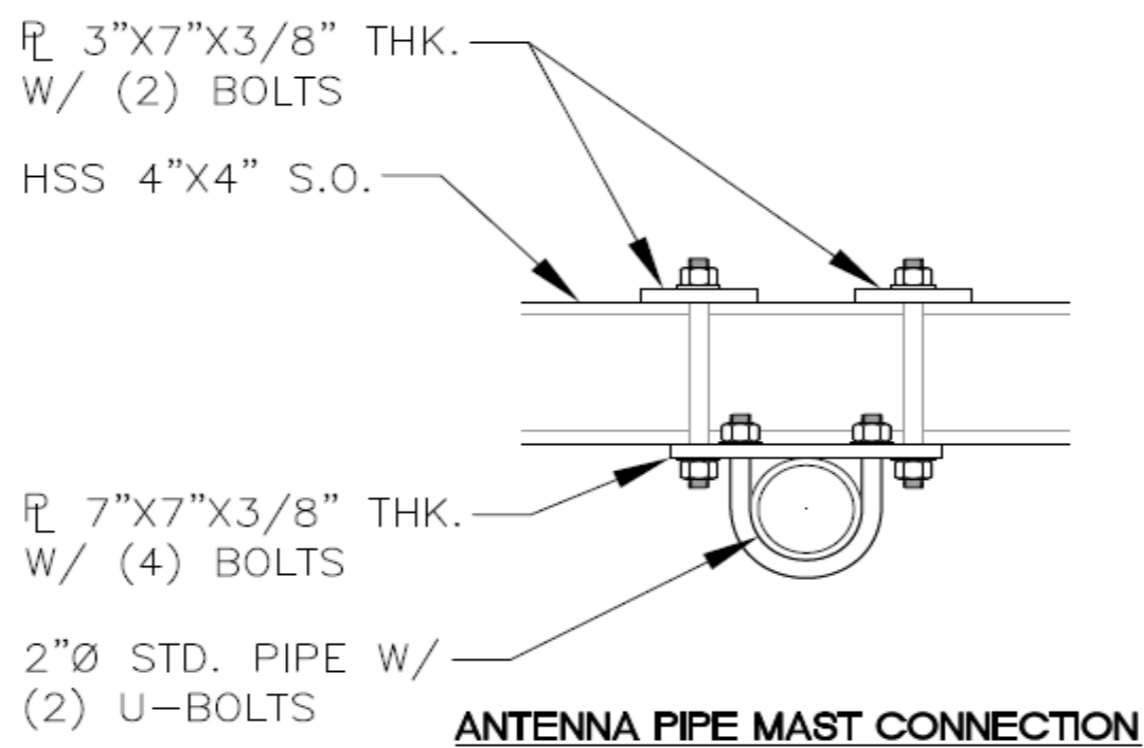
(2) cap on stand off HSS



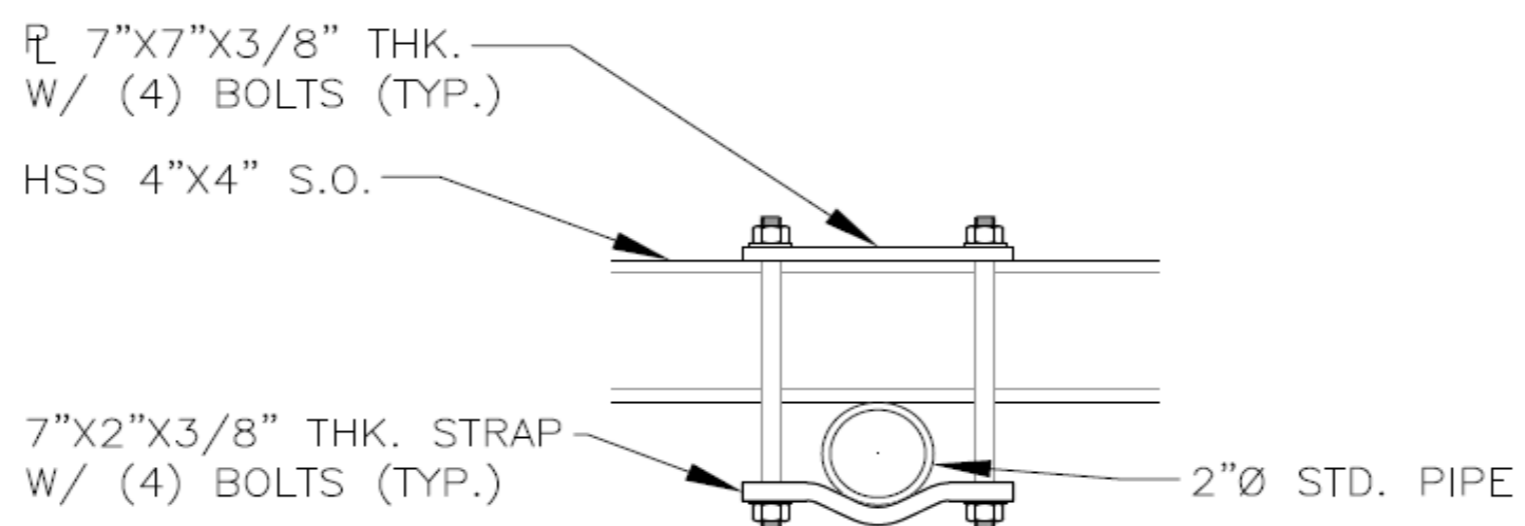
**STANDOFF TO RING MOUNT CONNECTION**



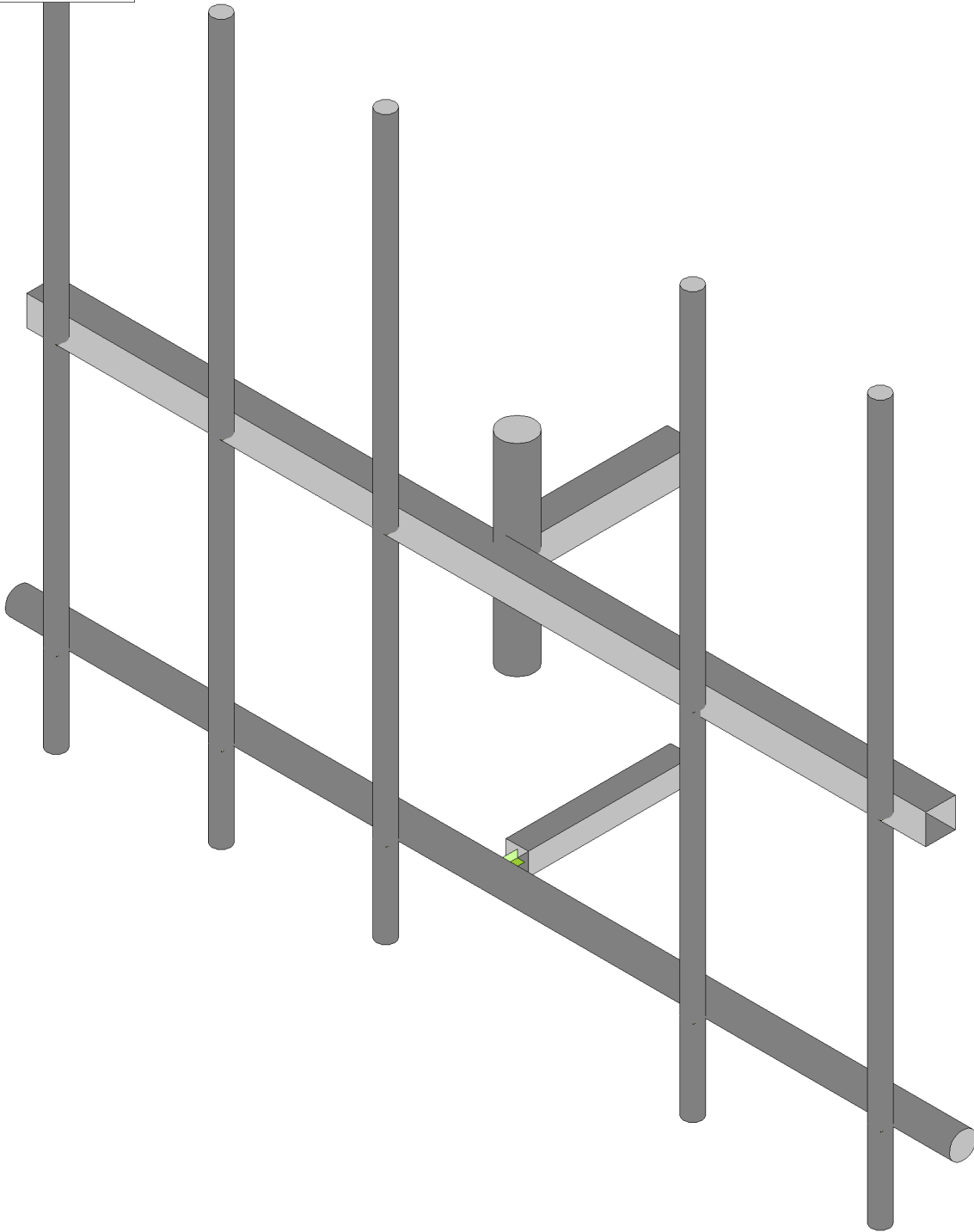
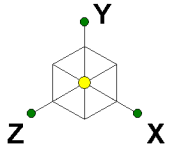
**STANDOFF FACE MOUNT DETAIL**



**ANTENNA PIPE MAST CONNECTION**



**OVP MOUNT DETAIL**



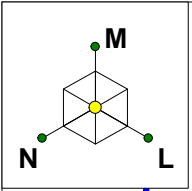
Loads: BLC 81, Antenna Ev

SK - 3

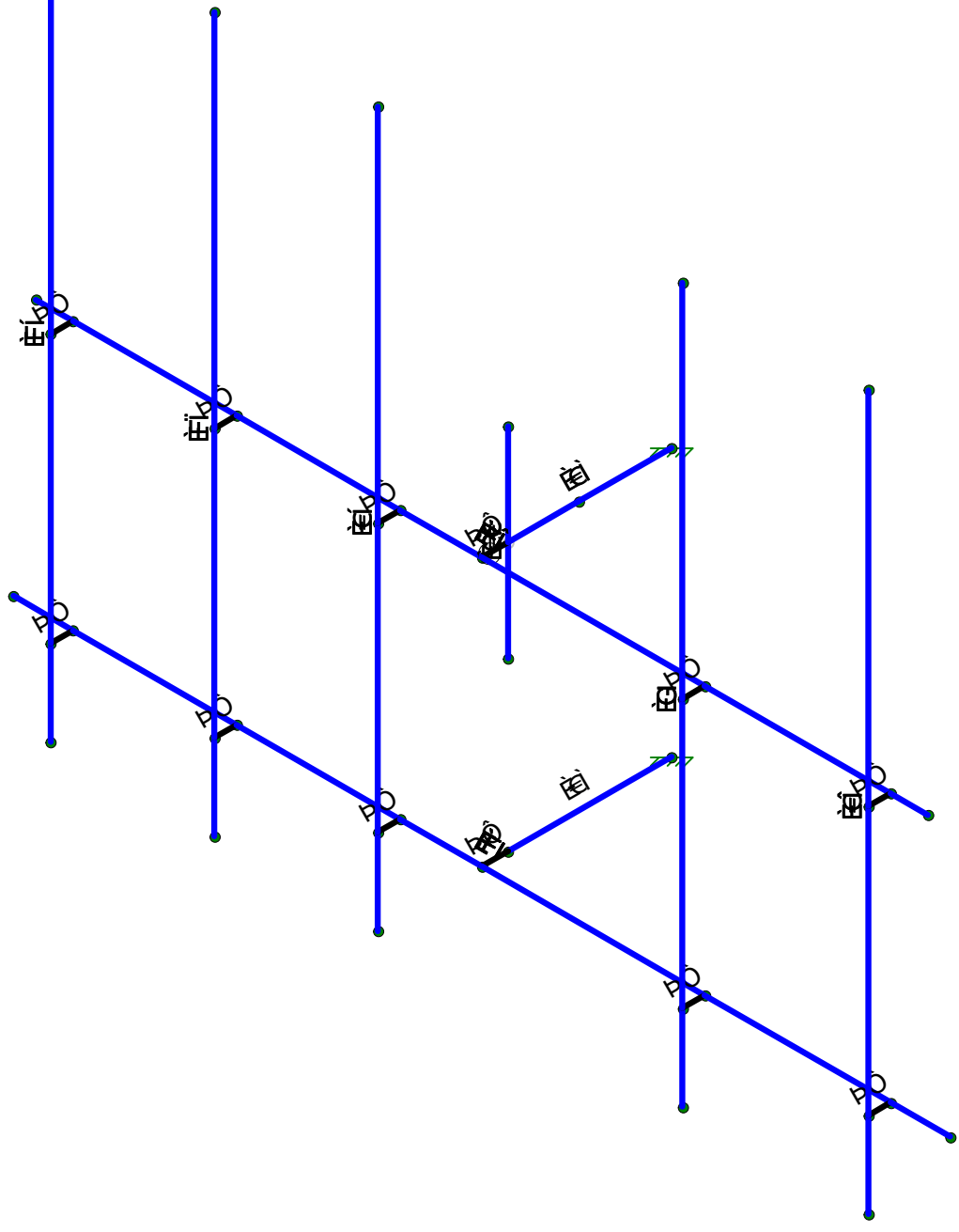
Aug 1, 2023 at 6:03 PM

5000247941-VZW\_MT\_LOT\_A\_H.r3d



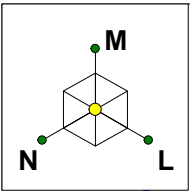


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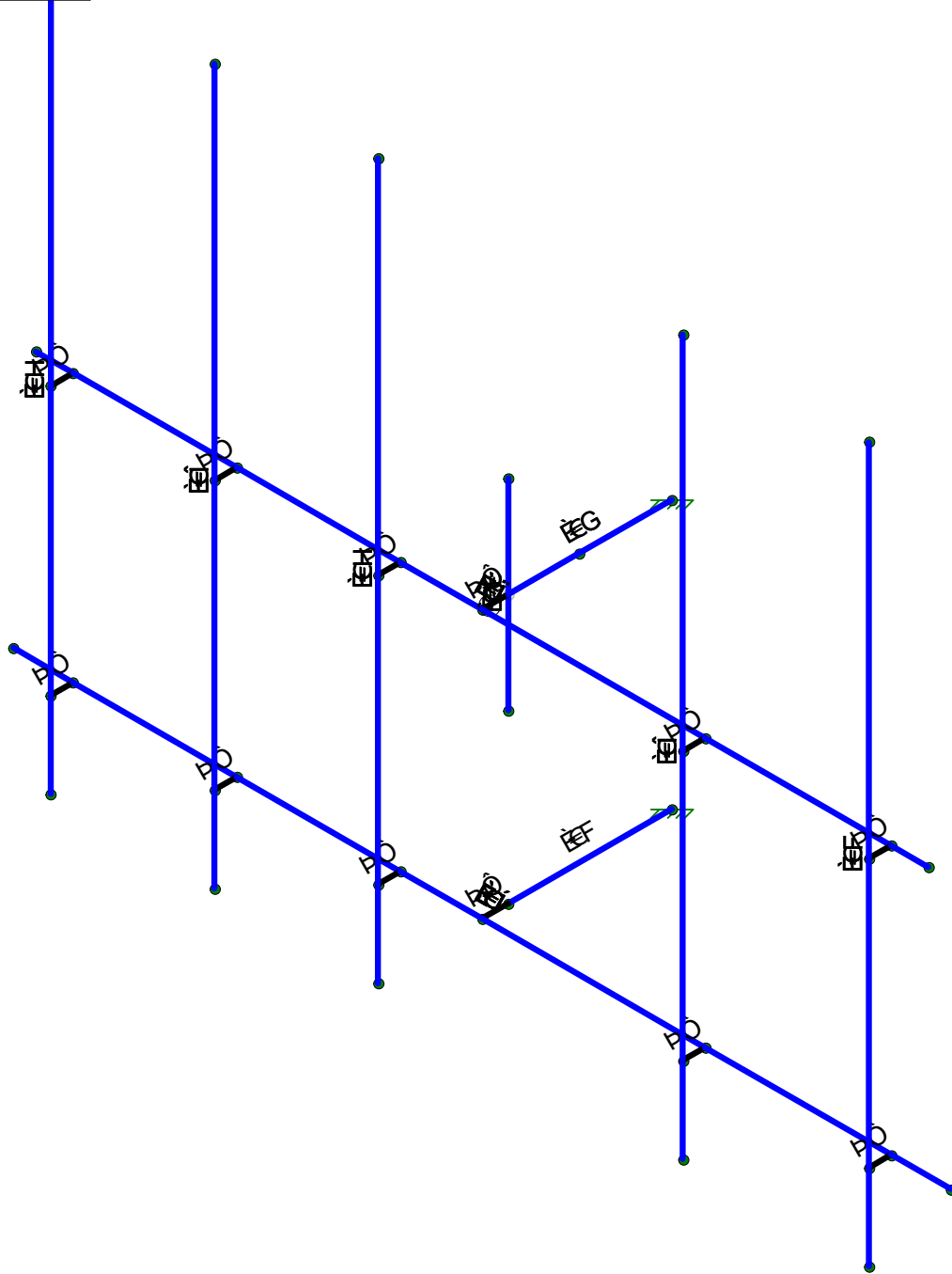


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**Basic Load Cases**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	Antenna D	None					30		
2	Antenna Di	None					30		
3	Antenna Wo (0 Deg)	None					30		
4	Antenna Wo (30 Deg)	None					30		
5	Antenna Wo (60 Deg)	None					30		
6	Antenna Wo (90 Deg)	None					30		
7	Antenna Wo (120 Deg)	None					30		
8	Antenna Wo (150 Deg)	None					30		
9	Antenna Wo (180 Deg)	None					30		
10	Antenna Wo (210 Deg)	None					30		
11	Antenna Wo (240 Deg)	None					30		
12	Antenna Wo (270 Deg)	None					30		
13	Antenna Wo (300 Deg)	None					30		
14	Antenna Wo (330 Deg)	None					30		
15	Antenna Wi (0 Deg)	None					30		
16	Antenna Wi (30 Deg)	None					30		
17	Antenna Wi (60 Deg)	None					30		
18	Antenna Wi (90 Deg)	None					30		
19	Antenna Wi (120 Deg)	None					30		
20	Antenna Wi (150 Deg)	None					30		
21	Antenna Wi (180 Deg)	None					30		
22	Antenna Wi (210 Deg)	None					30		
23	Antenna Wi (240 Deg)	None					30		
24	Antenna Wi (270 Deg)	None					30		
25	Antenna Wi (300 Deg)	None					30		
26	Antenna Wi (330 Deg)	None					30		
27	Antenna Wm (0 Deg)	None					30		
28	Antenna Wm (30 Deg)	None					30		
29	Antenna Wm (60 Deg)	None					30		
30	Antenna Wm (90 Deg)	None					30		
31	Antenna Wm (120 De..	None					30		
32	Antenna Wm (150 De..	None					30		
33	Antenna Wm (180 De..	None					30		
34	Antenna Wm (210 De..	None					30		
35	Antenna Wm (240 De..	None					30		
36	Antenna Wm (270 De..	None					30		
37	Antenna Wm (300 De..	None					30		
38	Antenna Wm (330 De..	None					30		
39	Structure D	None		-1					
40	Structure Di	None						10	
41	Structure Wo (0 Deg)	None						20	
42	Structure Wo (30 Deg)	None						20	
43	Structure Wo (60 Deg)	None						20	
44	Structure Wo (90 Deg)	None						20	
45	Structure Wo (120 D...	None						20	
46	Structure Wo (150 D...	None						20	
47	Structure Wo (180 D...	None						20	
48	Structure Wo (210 D...	None						20	
49	Structure Wo (240 D...	None						20	
50	Structure Wo (270 D...	None						20	
51	Structure Wo (300 D...	None						20	
52	Structure Wo (330 D...	None						20	
53	Structure Wi (0 Deg)	None						20	
54	Structure Wi (30 Deg)	None						20	
55	Structure Wi (60 Deg)	None						20	
56	Structure Wi (90 Deg)	None						20	
57	Structure Wi (120 De..	None						20	
58	Structure Wi (150 De..	None						20	

**Basic Load Cases (Continued)**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
59	Structure Wi (180 De...	None						20	
60	Structure Wi (210 De...	None						20	
61	Structure Wi (240 De...	None						20	
62	Structure Wi (270 De...	None						20	
63	Structure Wi (300 De...	None						20	
64	Structure Wi (330 De...	None						20	
65	Structure Wm (0 Deg)	None						20	
66	Structure Wm (30 De...	None						20	
67	Structure Wm (60 De...	None						20	
68	Structure Wm (90 De...	None						20	
69	Structure Wm (120 D...	None						20	
70	Structure Wm (150 D...	None						20	
71	Structure Wm (180 D...	None						20	
72	Structure Wm (210 D...	None						20	
73	Structure Wm (240 D...	None						20	
74	Structure Wm (270 D...	None						20	
75	Structure Wm (300 D...	None						20	
76	Structure Wm (330 D...	None						20	
77	Lm1	None					1		
78	Lm2	None					1		
79	Lv1	None					1		
80	Lv2	None					1		
81	Antenna Ev	None					30		
82	Antenna Eh (0 Deg)	None					20		
83	Antenna Eh (90 Deg)	None					20		
84	Structure Ev	ELY							
85	Structure Eh (0 Deg)	ELZ			-0.3				
86	Structure Eh (90 Deg)	ELX	.03						

**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..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..
1	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	3	1	41	1							
2	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	4	1	42	1							
3	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	5	1	43	1							
4	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	6	1	44	1							
5	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	7	1	45	1							
6	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	8	1	46	1							
7	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	9	1	47	1							
8	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	10	1	48	1							
9	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	11	1	49	1							
10	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	12	1	50	1							
11	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	13	1	51	1							
12	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	14	1	52	1							
13	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1			
14	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1			
15	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1			
16	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1			
17	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1			
18	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1			
19	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1			
20	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1			
21	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1			
22	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1			
23	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1			
24	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1			
25	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1					
26	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1					

**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.					
27	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1						
28	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1						
29	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1						
30	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1						
31	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1						
32	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1						
33	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1						
34	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1						
35	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1						
36	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1						
37	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1						
38	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1						
39	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1						
40	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1						
41	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1						
42	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1						
43	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1						
44	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1						
45	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1						
46	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1						
47	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1						
48	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1						
49	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	79	1.5										
50	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	80	1.5										
51	1.4D	Yes	Y		1	1.4	39	1.4												
52	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	1	83	ELZ	1	ELX		
53	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5	ELZ	.866	ELX	.5
54	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866	ELZ	.5	ELX	.866
55	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1
56	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866	ELZ	-.5	ELX	.866
57	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5	ELZ	-.866	ELX	.5
58	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX	
59	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5
60	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866
61	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1
62	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866	ELZ	.5	ELX	-.866
63	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5	ELZ	.866	ELX	-.5
64	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX	
65	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5	ELZ	.866	ELX	.5
66	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866	ELZ	.5	ELX	.866
67	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1
68	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866	ELZ	-.5	ELX	.866
69	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5	ELZ	-.866	ELX	.5
70	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX	
71	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5	ELZ	-.866	ELX	-.5
72	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866	ELZ	-.5	ELX	-.866
73	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1
74	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866	ELZ	.5	ELX	-.866
75	0.9D - 1.0...	Yes	Y		1	.9	39	.9	81	-1	ELY	-1	82	.866	83	-.5	ELZ	.866	ELX	-.5

**Joint Coordinates and Temperatures**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0.708333	0	
2	N2	0	0	2.541667	0	
3	N3	0	-1.125	2.541667	0	
4	N4	0	1.125	2.541667	0	
5	N5	0	0	2.833333	0	

### Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
6	N6	5	0	2.833333	0	
7	N7	-5	0	2.833333	0	
8	N11	4.583333	0	2.833333	0	
9	N12	4.583333	0	3.083333	0	
10	N13	4.583333	4.041667	3.083333	0	
11	N14	4.583333	-3.958333	3.083333	0	
12	N15	-4.583333	0	2.833333	0	
13	N16	-4.583333	0	3.083333	0	
14	N17	-4.583333	4.041667	3.083333	0	
15	N18	-4.583333	-3.958333	3.083333	0	
16	N24	0	0	1.75	0	
17	N28	2.5	0	2.833333	0	
18	N29	2.5	0	3.083333	0	
19	N30	2.5	4.041667	3.083333	0	
20	N31	2.5	-3.958333	3.083333	0	
21	N28A	-0.916667	0	2.833333	0	
22	N29A	-0.916667	0	3.083333	0	
23	N30A	-0.916667	4.041667	3.083333	0	
24	N31A	-0.916667	-3.958333	3.083333	0	
25	N32A	-2.75	0	2.833333	0	
26	N33A	-2.75	0	3.083333	0	
27	N34A	-2.75	4.041667	3.083333	0	
28	N35A	-2.75	-3.958333	3.083333	0	
29	N32	0	-3	0.708333	0	
30	N33	0	-3	2.541667	0	
31	N34	0	-3	2.833333	0	
32	N35	5.25	-3	2.833333	0	
33	N36	-5.25	-3	2.833333	0	
34	N37	4.583333	-3	2.833333	0	
35	N38	4.583333	-3	3.083333	0	
36	N39	-4.583333	-3	2.833333	0	
37	N40	-4.583333	-3	3.083333	0	
38	N41	2.5	-3	2.833333	0	
39	N42	2.5	-3	3.083333	0	
40	N43	-0.916667	-3	2.833333	0	
41	N44	-0.916667	-3	3.083333	0	
42	N45	-2.75	-3	2.833333	0	
43	N46	-2.75	-3	3.083333	0	

### Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Standoff Arm	HSS4X4X3	Beam	Tube	A500 Gr.46	Typical	2.58	6.21	6.21	10
3	Standoff Pipe	PIPE 4.0	Beam	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
4	Face Horizo...	HSS4X4X3	Beam	Tube	A500 Gr.46	Typical	2.58	6.21	6.21	10
5	Proposed Fa...	PIPE 3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
6	Proposed St...	HSS3X3X4	Beam	Tube	A500 Gr.46	Typical	2.44	3.02	3.02	5.08

### Hot Rolled Steel Properties

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

**Hot Rolled Steel Properties (Continued)**

	Label	E [ksj]	G [ksj]	Nu	Therm (/1E...Density[k/ft...	Yield[ksj]	Ry	Fu[ksj]	Rt	
7	A500 Gr 50	29000	11154	.3	.65	.49	50	1.5	58	1.2

**Member Primary Data**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Standoff Arm	Beam	Tube	A500 Gr.46	Typical
2	M2	N4	N3			Standoff Pipe	Beam	Pipe	A53 Gr. B	Typical
3	M4	N7	N6			Face Horizontal	Beam	Tube	A500 Gr.46	Typical
4	MP1A	N13	N14			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
5	M8	N11	N12			RIGID	None	None	RIGID	Typical
6	MP5A	N17	N18			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
7	M10	N15	N16			RIGID	None	None	RIGID	Typical
8	M10A	N2	N5			RIGID	None	None	RIGID	Typical
9	MP2A	N30	N31			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
10	M16	N28	N29			RIGID	None	None	RIGID	Typical
11	MP3A	N30A	N31A			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
12	M16A	N28A	N29A			RIGID	None	None	RIGID	Typical
13	MP4A	N34A	N35A			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
14	M18A	N32A	N33A			RIGID	None	None	RIGID	Typical
15	M17	N32	N33			Proposed Stan...	Beam	Tube	A500 Gr.46	Typical
16	M18	N36	N35			Proposed Fac...	Beam	Pipe	A53 Gr. B	Typical
17	M19	N37	N38			RIGID	None	None	RIGID	Typical
18	M20	N39	N40			RIGID	None	None	RIGID	Typical
19	M21	N33	N34			RIGID	None	None	RIGID	Typical
20	M22	N41	N42			RIGID	None	None	RIGID	Typical
21	M23	N43	N44			RIGID	None	None	RIGID	Typical
22	M24	N45	N46			RIGID	None	None	RIGID	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	M1						Yes	Default			None
2	M2						Yes				None
3	M4						Yes	Default			None
4	MP1A						Yes				None
5	M8						Yes	** NA **			None
6	MP5A						Yes				None
7	M10						Yes	** NA **			None
8	M10A	OOOOXO					Yes	** NA **			None
9	MP2A						Yes				None
10	M16						Yes	** NA **			None
11	MP3A						Yes				None
12	M16A						Yes	** NA **			None
13	MP4A						Yes				None
14	M18A						Yes	** NA **			None
15	M17						Yes	Default			None
16	M18						Yes				None
17	M19						Yes	** NA **			None
18	M20						Yes	** NA **			None
19	M21						Yes	** NA **			None
20	M22						Yes	** NA **			None
21	M23						Yes	** NA **			None
22	M24						Yes	** NA **			None

**Member Point Loads (BLC 1 : Antenna D)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	Y	-43.55	1.5
2	MP5A	My	.01	1.5
3	MP5A	Mz	-.01	1.5
4	MP5A	Y	-43.55	3
5	MP5A	My	.01	3
6	MP5A	Mz	-.01	3
7	MP2A	Y	-20.3	2
8	MP2A	My	.001	2
9	MP2A	Mz	-.018	2
10	MP2A	Y	-20.3	6
11	MP2A	My	.001	6
12	MP2A	Mz	-.018	6
13	MP2A	Y	-20.3	2
14	MP2A	My	.018	2
15	MP2A	Mz	-.001	2
16	MP2A	Y	-20.3	6
17	MP2A	My	.018	6
18	MP2A	Mz	-.001	6
19	MP2A	Y	-74.7	3
20	MP2A	My	-.018	3
21	MP2A	Mz	.018	3
22	MP4A	Y	-70.3	3
23	MP4A	My	.017	3
24	MP4A	Mz	-.017	3
25	MP4A	Y	-20.3	2
26	MP4A	My	.001	2
27	MP4A	Mz	-.018	2
28	MP4A	Y	-20.3	6
29	MP4A	My	.001	6
30	MP4A	Mz	-.018	6

**Member Point Loads (BLC 2 : Antenna Di)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	Y	-35.937	1.5
2	MP5A	My	.008	1.5
3	MP5A	Mz	-.008	1.5
4	MP5A	Y	-35.937	3
5	MP5A	My	.008	3
6	MP5A	Mz	-.008	3
7	MP2A	Y	-61.847	2
8	MP2A	My	.004	2
9	MP2A	Mz	-.055	2
10	MP2A	Y	-61.847	6
11	MP2A	My	.004	6
12	MP2A	Mz	-.055	6
13	MP2A	Y	-61.847	2
14	MP2A	My	.055	2
15	MP2A	Mz	-.004	2
16	MP2A	Y	-61.847	6
17	MP2A	My	.055	6
18	MP2A	Mz	-.004	6
19	MP2A	Y	-45.249	3
20	MP2A	My	-.011	3
21	MP2A	Mz	.011	3
22	MP4A	Y	-43.092	3
23	MP4A	My	.01	3
24	MP4A	Mz	-.01	3



**Member Point Loads (BLC 2 : Antenna Di) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
25	MP4A	Y	-61.847	2
26	MP4A	My	.004	2
27	MP4A	Mz	-.055	2
28	MP4A	Y	-61.847	6
29	MP4A	My	.004	6
30	MP4A	Mz	-.055	6

**Member Point Loads (BLC 3 : Antenna Wo (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	0	1.5
2	MP5A	Z	-51.339	1.5
3	MP5A	Mx	.012	1.5
4	MP5A	X	0	3
5	MP5A	Z	-51.339	3
6	MP5A	Mx	.012	3
7	MP2A	X	0	2
8	MP2A	Z	-76.765	2
9	MP2A	Mx	.068	2
10	MP2A	X	0	6
11	MP2A	Z	-76.765	6
12	MP2A	Mx	.068	6
13	MP2A	X	0	2
14	MP2A	Z	-76.765	2
15	MP2A	Mx	.005	2
16	MP2A	X	0	6
17	MP2A	Z	-76.765	6
18	MP2A	Mx	.005	6
19	MP2A	X	0	3
20	MP2A	Z	-50.327	3
21	MP2A	Mx	-.012	3
22	MP4A	X	0	3
23	MP4A	Z	-48.384	3
24	MP4A	Mx	.011	3
25	MP4A	X	0	2
26	MP4A	Z	-76.765	2
27	MP4A	Mx	.068	2
28	MP4A	X	0	6
29	MP4A	Z	-76.765	6
30	MP4A	Mx	.068	6

**Member Point Loads (BLC 4 : Antenna Wo (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	14.829	1.5
2	MP5A	Z	-25.684	1.5
3	MP5A	Mx	.01	1.5
4	MP5A	X	14.829	3
5	MP5A	Z	-25.684	3
6	MP5A	Mx	.01	3
7	MP2A	X	25.137	2
8	MP2A	Z	-43.539	2
9	MP2A	Mx	.04	2
10	MP2A	X	25.137	6
11	MP2A	Z	-43.539	6
12	MP2A	Mx	.04	6
13	MP2A	X	25.137	2
14	MP2A	Z	-43.539	2
15	MP2A	Mx	.025	2
16	MP2A	X	25.137	6

**Member Point Loads (BLC 4 : Antenna Wo (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
17	MP2A	Z	-43.539	6
18	MP2A	Mx	.025	6
19	MP2A	X	20.872	3
20	MP2A	Z	-36.152	3
21	MP2A	Mx	-.013	3
22	MP4A	X	19.059	3
23	MP4A	Z	-33.012	3
24	MP4A	Mx	.012	3
25	MP4A	X	25.137	2
26	MP4A	Z	-43.539	2
27	MP4A	Mx	.04	2
28	MP4A	X	25.137	6
29	MP4A	Z	-43.539	6
30	MP4A	Mx	.04	6

**Member Point Loads (BLC 5 : Antenna Wo (60 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	25.684	1.5
2	MP5A	Z	-14.829	1.5
3	MP5A	Mx	.01	1.5
4	MP5A	X	25.684	3
5	MP5A	Z	-14.829	3
6	MP5A	Mx	.01	3
7	MP2A	X	43.539	2
8	MP2A	Z	-25.137	2
9	MP2A	Mx	.025	2
10	MP2A	X	43.539	6
11	MP2A	Z	-25.137	6
12	MP2A	Mx	.025	6
13	MP2A	X	43.539	2
14	MP2A	Z	-25.137	2
15	MP2A	Mx	.04	2
16	MP2A	X	43.539	6
17	MP2A	Z	-25.137	6
18	MP2A	Mx	.04	6
19	MP2A	X	36.152	3
20	MP2A	Z	-20.872	3
21	MP2A	Mx	-.013	3
22	MP4A	X	33.012	3
23	MP4A	Z	-19.059	3
24	MP4A	Mx	.012	3
25	MP4A	X	43.539	2
26	MP4A	Z	-25.137	2
27	MP4A	Mx	.025	2
28	MP4A	X	43.539	6
29	MP4A	Z	-25.137	6
30	MP4A	Mx	.025	6

**Member Point Loads (BLC 6 : Antenna Wo (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	51.339	1.5
2	MP5A	Z	0	1.5
3	MP5A	Mx	.012	1.5
4	MP5A	X	51.339	3
5	MP5A	Z	0	3
6	MP5A	Mx	.012	3
7	MP2A	X	76.765	2
8	MP2A	Z	0	2

**Member Point Loads (BLC 6 : Antenna Wo (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
9	MP2A	Mx	.005	2
10	MP2A	X	76.765	6
11	MP2A	Z	0	6
12	MP2A	Mx	.005	6
13	MP2A	X	76.765	2
14	MP2A	Z	0	2
15	MP2A	Mx	.068	2
16	MP2A	X	76.765	6
17	MP2A	Z	0	6
18	MP2A	Mx	.068	6
19	MP2A	X	50.327	3
20	MP2A	Z	0	3
21	MP2A	Mx	-.012	3
22	MP4A	X	48.384	3
23	MP4A	Z	0	3
24	MP4A	Mx	.011	3
25	MP4A	X	76.765	2
26	MP4A	Z	0	2
27	MP4A	Mx	.005	2
28	MP4A	X	76.765	6
29	MP4A	Z	0	6
30	MP4A	Mx	.005	6

**Member Point Loads (BLC 7 : Antenna Wo (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	63.238	1.5
2	MP5A	Z	36.511	1.5
3	MP5A	Mx	.006	1.5
4	MP5A	X	63.238	3
5	MP5A	Z	36.511	3
6	MP5A	Mx	.006	3
7	MP2A	X	89.423	2
8	MP2A	Z	51.628	2
9	MP2A	Mx	-.04	2
10	MP2A	X	89.423	6
11	MP2A	Z	51.628	6
12	MP2A	Mx	-.04	6
13	MP2A	X	89.423	2
14	MP2A	Z	51.628	2
15	MP2A	Mx	.076	2
16	MP2A	X	89.423	6
17	MP2A	Z	51.628	6
18	MP2A	Mx	.076	6
19	MP2A	X	51.017	3
20	MP2A	Z	29.455	3
21	MP2A	Mx	-.005	3
22	MP4A	X	50.792	3
23	MP4A	Z	29.325	3
24	MP4A	Mx	.005	3
25	MP4A	X	89.423	2
26	MP4A	Z	51.628	2
27	MP4A	Mx	-.04	2
28	MP4A	X	89.423	6
29	MP4A	Z	51.628	6
30	MP4A	Mx	-.04	6

**Member Point Loads (BLC 8 : Antenna Wo (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
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**Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	36.511	1.5
2	MP5A	Z	63.238	1.5
3	MP5A	Mx	-.006	1.5
4	MP5A	X	36.511	3
5	MP5A	Z	63.238	3
6	MP5A	Mx	-.006	3
7	MP2A	X	51.628	2
8	MP2A	Z	89.423	2
9	MP2A	Mx	-.076	2
10	MP2A	X	51.628	6
11	MP2A	Z	89.423	6
12	MP2A	Mx	-.076	6
13	MP2A	X	51.628	2
14	MP2A	Z	89.423	2
15	MP2A	Mx	.04	2
16	MP2A	X	51.628	6
17	MP2A	Z	89.423	6
18	MP2A	Mx	.04	6
19	MP2A	X	29.455	3
20	MP2A	Z	51.017	3
21	MP2A	Mx	.005	3
22	MP4A	X	29.325	3
23	MP4A	Z	50.792	3
24	MP4A	Mx	-.005	3
25	MP4A	X	51.628	2
26	MP4A	Z	89.423	2
27	MP4A	Mx	-.076	2
28	MP4A	X	51.628	6
29	MP4A	Z	89.423	6
30	MP4A	Mx	-.076	6

**Member Point Loads (BLC 9 : Antenna Wo (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	0	1.5
2	MP5A	Z	51.339	1.5
3	MP5A	Mx	-.012	1.5
4	MP5A	X	0	3
5	MP5A	Z	51.339	3
6	MP5A	Mx	-.012	3
7	MP2A	X	0	2
8	MP2A	Z	76.765	2
9	MP2A	Mx	-.068	2
10	MP2A	X	0	6
11	MP2A	Z	76.765	6
12	MP2A	Mx	-.068	6
13	MP2A	X	0	2
14	MP2A	Z	76.765	2
15	MP2A	Mx	-.005	2
16	MP2A	X	0	6
17	MP2A	Z	76.765	6
18	MP2A	Mx	-.005	6
19	MP2A	X	0	3
20	MP2A	Z	50.327	3
21	MP2A	Mx	.012	3
22	MP4A	X	0	3
23	MP4A	Z	48.384	3
24	MP4A	Mx	-.011	3
25	MP4A	X	0	2

**Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
26	MP4A	Z	76.765	2
27	MP4A	Mx	-.068	2
28	MP4A	X	0	6
29	MP4A	Z	76.765	6
30	MP4A	Mx	-.068	6

**Member Point Loads (BLC 10 : Antenna Wo (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-14.829	1.5
2	MP5A	Z	25.684	1.5
3	MP5A	Mx	-.01	1.5
4	MP5A	X	-14.829	3
5	MP5A	Z	25.684	3
6	MP5A	Mx	-.01	3
7	MP2A	X	-25.137	2
8	MP2A	Z	43.539	2
9	MP2A	Mx	-.04	2
10	MP2A	X	-25.137	6
11	MP2A	Z	43.539	6
12	MP2A	Mx	-.04	6
13	MP2A	X	-25.137	2
14	MP2A	Z	43.539	2
15	MP2A	Mx	-.025	2
16	MP2A	X	-25.137	6
17	MP2A	Z	43.539	6
18	MP2A	Mx	-.025	6
19	MP2A	X	-20.872	3
20	MP2A	Z	36.152	3
21	MP2A	Mx	.013	3
22	MP4A	X	-19.059	3
23	MP4A	Z	33.012	3
24	MP4A	Mx	-.012	3
25	MP4A	X	-25.137	2
26	MP4A	Z	43.539	2
27	MP4A	Mx	-.04	2
28	MP4A	X	-25.137	6
29	MP4A	Z	43.539	6
30	MP4A	Mx	-.04	6

**Member Point Loads (BLC 11 : Antenna Wo (240 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-25.684	1.5
2	MP5A	Z	14.829	1.5
3	MP5A	Mx	-.01	1.5
4	MP5A	X	-25.684	3
5	MP5A	Z	14.829	3
6	MP5A	Mx	-.01	3
7	MP2A	X	-43.539	2
8	MP2A	Z	25.137	2
9	MP2A	Mx	-.025	2
10	MP2A	X	-43.539	6
11	MP2A	Z	25.137	6
12	MP2A	Mx	-.025	6
13	MP2A	X	-43.539	2
14	MP2A	Z	25.137	2
15	MP2A	Mx	-.04	2
16	MP2A	X	-43.539	6
17	MP2A	Z	25.137	6

**Member Point Loads (BLC 11 : Antenna Wo (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
18	MP2A	Mx	-.04	6
19	MP2A	X	-36.152	3
20	MP2A	Z	20.872	3
21	MP2A	Mx	.013	3
22	MP4A	X	-33.012	3
23	MP4A	Z	19.059	3
24	MP4A	Mx	-.012	3
25	MP4A	X	-43.539	2
26	MP4A	Z	25.137	2
27	MP4A	Mx	-.025	2
28	MP4A	X	-43.539	6
29	MP4A	Z	25.137	6
30	MP4A	Mx	-.025	6

**Member Point Loads (BLC 12 : Antenna Wo (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-51.339	1.5
2	MP5A	Z	0	1.5
3	MP5A	Mx	-.012	1.5
4	MP5A	X	-51.339	3
5	MP5A	Z	0	3
6	MP5A	Mx	-.012	3
7	MP2A	X	-76.765	2
8	MP2A	Z	0	2
9	MP2A	Mx	-.005	2
10	MP2A	X	-76.765	6
11	MP2A	Z	0	6
12	MP2A	Mx	-.005	6
13	MP2A	X	-76.765	2
14	MP2A	Z	0	2
15	MP2A	Mx	-.068	2
16	MP2A	X	-76.765	6
17	MP2A	Z	0	6
18	MP2A	Mx	-.068	6
19	MP2A	X	-50.327	3
20	MP2A	Z	0	3
21	MP2A	Mx	.012	3
22	MP4A	X	-48.384	3
23	MP4A	Z	0	3
24	MP4A	Mx	-.011	3
25	MP4A	X	-76.765	2
26	MP4A	Z	0	2
27	MP4A	Mx	-.005	2
28	MP4A	X	-76.765	6
29	MP4A	Z	0	6
30	MP4A	Mx	-.005	6

**Member Point Loads (BLC 13 : Antenna Wo (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-63.238	1.5
2	MP5A	Z	-36.511	1.5
3	MP5A	Mx	-.006	1.5
4	MP5A	X	-63.238	3
5	MP5A	Z	-36.511	3
6	MP5A	Mx	-.006	3
7	MP2A	X	-89.423	2
8	MP2A	Z	-51.628	2
9	MP2A	Mx	.04	2

**Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
10	MP2A	X	-89.423	6
11	MP2A	Z	-51.628	6
12	MP2A	Mx	.04	6
13	MP2A	X	-89.423	2
14	MP2A	Z	-51.628	2
15	MP2A	Mx	-.076	2
16	MP2A	X	-89.423	6
17	MP2A	Z	-51.628	6
18	MP2A	Mx	-.076	6
19	MP2A	X	-51.017	3
20	MP2A	Z	-29.455	3
21	MP2A	Mx	.005	3
22	MP4A	X	-50.792	3
23	MP4A	Z	-29.325	3
24	MP4A	Mx	-.005	3
25	MP4A	X	-89.423	2
26	MP4A	Z	-51.628	2
27	MP4A	Mx	.04	2
28	MP4A	X	-89.423	6
29	MP4A	Z	-51.628	6
30	MP4A	Mx	.04	6

**Member Point Loads (BLC 14 : Antenna Wo (330 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-36.511	1.5
2	MP5A	Z	-63.238	1.5
3	MP5A	Mx	.006	1.5
4	MP5A	X	-36.511	3
5	MP5A	Z	-63.238	3
6	MP5A	Mx	.006	3
7	MP2A	X	-51.628	2
8	MP2A	Z	-89.423	2
9	MP2A	Mx	.076	2
10	MP2A	X	-51.628	6
11	MP2A	Z	-89.423	6
12	MP2A	Mx	.076	6
13	MP2A	X	-51.628	2
14	MP2A	Z	-89.423	2
15	MP2A	Mx	-.04	2
16	MP2A	X	-51.628	6
17	MP2A	Z	-89.423	6
18	MP2A	Mx	-.04	6
19	MP2A	X	-29.455	3
20	MP2A	Z	-51.017	3
21	MP2A	Mx	-.005	3
22	MP4A	X	-29.325	3
23	MP4A	Z	-50.792	3
24	MP4A	Mx	.005	3
25	MP4A	X	-51.628	2
26	MP4A	Z	-89.423	2
27	MP4A	Mx	.076	2
28	MP4A	X	-51.628	6
29	MP4A	Z	-89.423	6
30	MP4A	Mx	.076	6

**Member Point Loads (BLC 15 : Antenna Wi (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	0	1.5

**Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
2	MP5A	Z	-8.934	1.5
3	MP5A	Mx	.002	1.5
4	MP5A	X	0	3
5	MP5A	Z	-8.934	3
6	MP5A	Mx	.002	3
7	MP2A	X	0	2
8	MP2A	Z	-18.022	2
9	MP2A	Mx	.016	2
10	MP2A	X	0	6
11	MP2A	Z	-18.022	6
12	MP2A	Mx	.016	6
13	MP2A	X	0	2
14	MP2A	Z	-18.022	2
15	MP2A	Mx	.001	2
16	MP2A	X	0	6
17	MP2A	Z	-18.022	6
18	MP2A	Mx	.001	6
19	MP2A	X	0	3
20	MP2A	Z	-8.93	3
21	MP2A	Mx	-.002	3
22	MP4A	X	0	3
23	MP4A	Z	-8.642	3
24	MP4A	Mx	.002	3
25	MP4A	X	0	2
26	MP4A	Z	-18.022	2
27	MP4A	Mx	.016	2
28	MP4A	X	0	6
29	MP4A	Z	-18.022	6
30	MP4A	Mx	.016	6

**Member Point Loads (BLC 16 : Antenna Wi (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	X	2.911	1.5
2	MP5A	Z	-5.042	1.5
3	MP5A	Mx	.002	1.5
4	MP5A	X	2.911	3
5	MP5A	Z	-5.042	3
6	MP5A	Mx	.002	3
7	MP2A	X	7.579	2
8	MP2A	Z	-13.127	2
9	MP2A	Mx	.012	2
10	MP2A	X	7.579	6
11	MP2A	Z	-13.127	6
12	MP2A	Mx	.012	6
13	MP2A	X	7.579	2
14	MP2A	Z	-13.127	2
15	MP2A	Mx	.007	2
16	MP2A	X	7.579	6
17	MP2A	Z	-13.127	6
18	MP2A	Mx	.007	6
19	MP2A	X	3.772	3
20	MP2A	Z	-6.532	3
21	MP2A	Mx	-.002	3
22	MP4A	X	3.502	3
23	MP4A	Z	-6.066	3
24	MP4A	Mx	.002	3
25	MP4A	X	7.579	2
26	MP4A	Z	-13.127	2



**Member Point Loads (BLC 16 : Antenna Wi (30 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
27	MP4A	Mx	.012	2
28	MP4A	X	7.579	6
29	MP4A	Z	-13.127	6
30	MP4A	Mx	.012	6

**Member Point Loads (BLC 17 : Antenna Wi (60 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	5.042	1.5
2	MP5A	Z	-2.911	1.5
3	MP5A	Mx	.002	1.5
4	MP5A	X	5.042	3
5	MP5A	Z	-2.911	3
6	MP5A	Mx	.002	3
7	MP2A	X	13.127	2
8	MP2A	Z	-7.579	2
9	MP2A	Mx	.007	2
10	MP2A	X	13.127	6
11	MP2A	Z	-7.579	6
12	MP2A	Mx	.007	6
13	MP2A	X	13.127	2
14	MP2A	Z	-7.579	2
15	MP2A	Mx	.012	2
16	MP2A	X	13.127	6
17	MP2A	Z	-7.579	6
18	MP2A	Mx	.012	6
19	MP2A	X	6.532	3
20	MP2A	Z	-3.772	3
21	MP2A	Mx	-.002	3
22	MP4A	X	6.066	3
23	MP4A	Z	-3.502	3
24	MP4A	Mx	.002	3
25	MP4A	X	13.127	2
26	MP4A	Z	-7.579	2
27	MP4A	Mx	.007	2
28	MP4A	X	13.127	6
29	MP4A	Z	-7.579	6
30	MP4A	Mx	.007	6

**Member Point Loads (BLC 18 : Antenna Wi (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	8.934	1.5
2	MP5A	Z	0	1.5
3	MP5A	Mx	.002	1.5
4	MP5A	X	8.934	3
5	MP5A	Z	0	3
6	MP5A	Mx	.002	3
7	MP2A	X	18.022	2
8	MP2A	Z	0	2
9	MP2A	Mx	.001	2
10	MP2A	X	18.022	6
11	MP2A	Z	0	6
12	MP2A	Mx	.001	6
13	MP2A	X	18.022	2
14	MP2A	Z	0	2
15	MP2A	Mx	.016	2
16	MP2A	X	18.022	6
17	MP2A	Z	0	6
18	MP2A	Mx	.016	6

**Member Point Loads (BLC 18 : Antenna Wi (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
19	MP2A	X	8.93	3
20	MP2A	Z	0	3
21	MP2A	Mx	-.002	3
22	MP4A	X	8.642	3
23	MP4A	Z	0	3
24	MP4A	Mx	.002	3
25	MP4A	X	18.022	2
26	MP4A	Z	0	2
27	MP4A	Mx	.001	2
28	MP4A	X	18.022	6
29	MP4A	Z	0	6
30	MP4A	Mx	.001	6

**Member Point Loads (BLC 19 : Antenna Wi (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	10.432	1.5
2	MP5A	Z	6.023	1.5
3	MP5A	Mx	.001	1.5
4	MP5A	X	10.432	3
5	MP5A	Z	6.023	3
6	MP5A	Mx	.001	3
7	MP2A	X	18.087	2
8	MP2A	Z	10.443	2
9	MP2A	Mx	-.008	2
10	MP2A	X	18.087	6
11	MP2A	Z	10.443	6
12	MP2A	Mx	-.008	6
13	MP2A	X	18.087	2
14	MP2A	Z	10.443	2
15	MP2A	Mx	.015	2
16	MP2A	X	18.087	6
17	MP2A	Z	10.443	6
18	MP2A	Mx	.015	6
19	MP2A	X	8.936	3
20	MP2A	Z	5.159	3
21	MP2A	Mx	-.00089	3
22	MP4A	X	8.902	3
23	MP4A	Z	5.14	3
24	MP4A	Mx	.000887	3
25	MP4A	X	18.087	2
26	MP4A	Z	10.443	2
27	MP4A	Mx	-.008	2
28	MP4A	X	18.087	6
29	MP4A	Z	10.443	6
30	MP4A	Mx	-.008	6

**Member Point Loads (BLC 20 : Antenna Wi (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	6.023	1.5
2	MP5A	Z	10.432	1.5
3	MP5A	Mx	-.001	1.5
4	MP5A	X	6.023	3
5	MP5A	Z	10.432	3
6	MP5A	Mx	-.001	3
7	MP2A	X	10.443	2
8	MP2A	Z	18.087	2
9	MP2A	Mx	-.015	2
10	MP2A	X	10.443	6

**Member Point Loads (BLC 20 : Antenna Wi (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
11	MP2A	Z	18.087	6
12	MP2A	Mx	-.015	6
13	MP2A	X	10.443	2
14	MP2A	Z	18.087	2
15	MP2A	Mx	.008	2
16	MP2A	X	10.443	6
17	MP2A	Z	18.087	6
18	MP2A	Mx	.008	6
19	MP2A	X	5.159	3
20	MP2A	Z	8.936	3
21	MP2A	Mx	.00089	3
22	MP4A	X	5.14	3
23	MP4A	Z	8.902	3
24	MP4A	Mx	-.000887	3
25	MP4A	X	10.443	2
26	MP4A	Z	18.087	2
27	MP4A	Mx	-.015	2
28	MP4A	X	10.443	6
29	MP4A	Z	18.087	6
30	MP4A	Mx	-.015	6

**Member Point Loads (BLC 21 : Antenna Wi (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	0	1.5
2	MP5A	Z	8.934	1.5
3	MP5A	Mx	-.002	1.5
4	MP5A	X	0	3
5	MP5A	Z	8.934	3
6	MP5A	Mx	-.002	3
7	MP2A	X	0	2
8	MP2A	Z	18.022	2
9	MP2A	Mx	-.016	2
10	MP2A	X	0	6
11	MP2A	Z	18.022	6
12	MP2A	Mx	-.016	6
13	MP2A	X	0	2
14	MP2A	Z	18.022	2
15	MP2A	Mx	-.001	2
16	MP2A	X	0	6
17	MP2A	Z	18.022	6
18	MP2A	Mx	-.001	6
19	MP2A	X	0	3
20	MP2A	Z	8.93	3
21	MP2A	Mx	.002	3
22	MP4A	X	0	3
23	MP4A	Z	8.642	3
24	MP4A	Mx	-.002	3
25	MP4A	X	0	2
26	MP4A	Z	18.022	2
27	MP4A	Mx	-.016	2
28	MP4A	X	0	6
29	MP4A	Z	18.022	6
30	MP4A	Mx	-.016	6

**Member Point Loads (BLC 22 : Antenna Wi (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-2.911	1.5
2	MP5A	Z	5.042	1.5

**Member Point Loads (BLC 22 : Antenna Wi (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
3	MP5A	Mx	-.002	1.5
4	MP5A	X	-2.911	3
5	MP5A	Z	5.042	3
6	MP5A	Mx	-.002	3
7	MP2A	X	-7.579	2
8	MP2A	Z	13.127	2
9	MP2A	Mx	-.012	2
10	MP2A	X	-7.579	6
11	MP2A	Z	13.127	6
12	MP2A	Mx	-.012	6
13	MP2A	X	-7.579	2
14	MP2A	Z	13.127	2
15	MP2A	Mx	-.007	2
16	MP2A	X	-7.579	6
17	MP2A	Z	13.127	6
18	MP2A	Mx	-.007	6
19	MP2A	X	-3.772	3
20	MP2A	Z	6.532	3
21	MP2A	Mx	.002	3
22	MP4A	X	-3.502	3
23	MP4A	Z	6.066	3
24	MP4A	Mx	-.002	3
25	MP4A	X	-7.579	2
26	MP4A	Z	13.127	2
27	MP4A	Mx	-.012	2
28	MP4A	X	-7.579	6
29	MP4A	Z	13.127	6
30	MP4A	Mx	-.012	6

**Member Point Loads (BLC 23 : Antenna Wi (240 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-5.042	1.5
2	MP5A	Z	2.911	1.5
3	MP5A	Mx	-.002	1.5
4	MP5A	X	-5.042	3
5	MP5A	Z	2.911	3
6	MP5A	Mx	-.002	3
7	MP2A	X	-13.127	2
8	MP2A	Z	7.579	2
9	MP2A	Mx	-.007	2
10	MP2A	X	-13.127	6
11	MP2A	Z	7.579	6
12	MP2A	Mx	-.007	6
13	MP2A	X	-13.127	2
14	MP2A	Z	7.579	2
15	MP2A	Mx	-.012	2
16	MP2A	X	-13.127	6
17	MP2A	Z	7.579	6
18	MP2A	Mx	-.012	6
19	MP2A	X	-6.532	3
20	MP2A	Z	3.772	3
21	MP2A	Mx	.002	3
22	MP4A	X	-6.066	3
23	MP4A	Z	3.502	3
24	MP4A	Mx	-.002	3
25	MP4A	X	-13.127	2
26	MP4A	Z	7.579	2
27	MP4A	Mx	-.007	2

**Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
28	MP4A	X	-13.127	6
29	MP4A	Z	7.579	6
30	MP4A	Mx	-.007	6

**Member Point Loads (BLC 24 : Antenna Wi (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	X	-8.934	1.5
2	MP5A	Z	0	1.5
3	MP5A	Mx	-.002	1.5
4	MP5A	X	-8.934	3
5	MP5A	Z	0	3
6	MP5A	Mx	-.002	3
7	MP2A	X	-18.022	2
8	MP2A	Z	0	2
9	MP2A	Mx	-.001	2
10	MP2A	X	-18.022	6
11	MP2A	Z	0	6
12	MP2A	Mx	-.001	6
13	MP2A	X	-18.022	2
14	MP2A	Z	0	2
15	MP2A	Mx	-.016	2
16	MP2A	X	-18.022	6
17	MP2A	Z	0	6
18	MP2A	Mx	-.016	6
19	MP2A	X	-8.93	3
20	MP2A	Z	0	3
21	MP2A	Mx	.002	3
22	MP4A	X	-8.642	3
23	MP4A	Z	0	3
24	MP4A	Mx	-.002	3
25	MP4A	X	-18.022	2
26	MP4A	Z	0	2
27	MP4A	Mx	-.001	2
28	MP4A	X	-18.022	6
29	MP4A	Z	0	6
30	MP4A	Mx	-.001	6

**Member Point Loads (BLC 25 : Antenna Wi (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	X	-10.432	1.5
2	MP5A	Z	-6.023	1.5
3	MP5A	Mx	-.001	1.5
4	MP5A	X	-10.432	3
5	MP5A	Z	-6.023	3
6	MP5A	Mx	-.001	3
7	MP2A	X	-18.087	2
8	MP2A	Z	-10.443	2
9	MP2A	Mx	.008	2
10	MP2A	X	-18.087	6
11	MP2A	Z	-10.443	6
12	MP2A	Mx	.008	6
13	MP2A	X	-18.087	2
14	MP2A	Z	-10.443	2
15	MP2A	Mx	-.015	2
16	MP2A	X	-18.087	6
17	MP2A	Z	-10.443	6
18	MP2A	Mx	-.015	6
19	MP2A	X	-8.936	3

**Member Point Loads (BLC 25 : Antenna Wi (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
20	MP2A	Z	-5.159	3
21	MP2A	Mx	.00089	3
22	MP4A	X	-8.902	3
23	MP4A	Z	-5.14	3
24	MP4A	Mx	-.000887	3
25	MP4A	X	-18.087	2
26	MP4A	Z	-10.443	2
27	MP4A	Mx	.008	2
28	MP4A	X	-18.087	6
29	MP4A	Z	-10.443	6
30	MP4A	Mx	.008	6

**Member Point Loads (BLC 26 : Antenna Wi (330 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-6.023	1.5
2	MP5A	Z	-10.432	1.5
3	MP5A	Mx	.001	1.5
4	MP5A	X	-6.023	3
5	MP5A	Z	-10.432	3
6	MP5A	Mx	.001	3
7	MP2A	X	-10.443	2
8	MP2A	Z	-18.087	2
9	MP2A	Mx	.015	2
10	MP2A	X	-10.443	6
11	MP2A	Z	-18.087	6
12	MP2A	Mx	.015	6
13	MP2A	X	-10.443	2
14	MP2A	Z	-18.087	2
15	MP2A	Mx	-.008	2
16	MP2A	X	-10.443	6
17	MP2A	Z	-18.087	6
18	MP2A	Mx	-.008	6
19	MP2A	X	-5.159	3
20	MP2A	Z	-8.936	3
21	MP2A	Mx	-.00089	3
22	MP4A	X	-5.14	3
23	MP4A	Z	-8.902	3
24	MP4A	Mx	.000887	3
25	MP4A	X	-10.443	2
26	MP4A	Z	-18.087	2
27	MP4A	Mx	.015	2
28	MP4A	X	-10.443	6
29	MP4A	Z	-18.087	6
30	MP4A	Mx	.015	6

**Member Point Loads (BLC 27 : Antenna Wm (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	0	1.5
2	MP5A	Z	-3.494	1.5
3	MP5A	Mx	.000824	1.5
4	MP5A	X	0	3
5	MP5A	Z	-3.494	3
6	MP5A	Mx	.000824	3
7	MP2A	X	0	2
8	MP2A	Z	-5.224	2
9	MP2A	Mx	.005	2
10	MP2A	X	0	6
11	MP2A	Z	-5.224	6

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
12	MP2A	Mx	.005	6
13	MP2A	X	0	2
14	MP2A	Z	-5.224	2
15	MP2A	Mx	.000308	2
16	MP2A	X	0	6
17	MP2A	Z	-5.224	6
18	MP2A	Mx	.000308	6
19	MP2A	X	0	3
20	MP2A	Z	-3.425	3
21	MP2A	Mx	-.000807	3
22	MP4A	X	0	3
23	MP4A	Z	-3.293	3
24	MP4A	Mx	.000776	3
25	MP4A	X	0	2
26	MP4A	Z	-5.224	2
27	MP4A	Mx	.005	2
28	MP4A	X	0	6
29	MP4A	Z	-5.224	6
30	MP4A	Mx	.005	6

**Member Point Loads (BLC 28 : Antenna Wm (30 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	1.009	1.5
2	MP5A	Z	-1.748	1.5
3	MP5A	Mx	.00065	1.5
4	MP5A	X	1.009	3
5	MP5A	Z	-1.748	3
6	MP5A	Mx	.00065	3
7	MP2A	X	1.711	2
8	MP2A	Z	-2.963	2
9	MP2A	Mx	.003	2
10	MP2A	X	1.711	6
11	MP2A	Z	-2.963	6
12	MP2A	Mx	.003	6
13	MP2A	X	1.711	2
14	MP2A	Z	-2.963	2
15	MP2A	Mx	.002	2
16	MP2A	X	1.711	6
17	MP2A	Z	-2.963	6
18	MP2A	Mx	.002	6
19	MP2A	X	1.42	3
20	MP2A	Z	-2.46	3
21	MP2A	Mx	-.000915	3
22	MP4A	X	1.297	3
23	MP4A	Z	-2.247	3
24	MP4A	Mx	.000835	3
25	MP4A	X	1.711	2
26	MP4A	Z	-2.963	2
27	MP4A	Mx	.003	2
28	MP4A	X	1.711	6
29	MP4A	Z	-2.963	6
30	MP4A	Mx	.003	6

**Member Point Loads (BLC 29 : Antenna Wm (60 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	1.748	1.5
2	MP5A	Z	-1.009	1.5
3	MP5A	Mx	.00065	1.5

**Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
4	MP5A	X	1.748	3
5	MP5A	Z	-1.009	3
6	MP5A	Mx	.00065	3
7	MP2A	X	2.963	2
8	MP2A	Z	-1.711	2
9	MP2A	Mx	.002	2
10	MP2A	X	2.963	6
11	MP2A	Z	-1.711	6
12	MP2A	Mx	.002	6
13	MP2A	X	2.963	2
14	MP2A	Z	-1.711	2
15	MP2A	Mx	.003	2
16	MP2A	X	2.963	6
17	MP2A	Z	-1.711	6
18	MP2A	Mx	.003	6
19	MP2A	X	2.46	3
20	MP2A	Z	-1.42	3
21	MP2A	Mx	-.000915	3
22	MP4A	X	2.247	3
23	MP4A	Z	-1.297	3
24	MP4A	Mx	.000835	3
25	MP4A	X	2.963	2
26	MP4A	Z	-1.711	2
27	MP4A	Mx	.002	2
28	MP4A	X	2.963	6
29	MP4A	Z	-1.711	6
30	MP4A	Mx	.002	6

**Member Point Loads (BLC 30 : Antenna Wm (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	X	3.494	1.5
2	MP5A	Z	0	1.5
3	MP5A	Mx	.000824	1.5
4	MP5A	X	3.494	3
5	MP5A	Z	0	3
6	MP5A	Mx	.000824	3
7	MP2A	X	5.224	2
8	MP2A	Z	0	2
9	MP2A	Mx	.000308	2
10	MP2A	X	5.224	6
11	MP2A	Z	0	6
12	MP2A	Mx	.000308	6
13	MP2A	X	5.224	2
14	MP2A	Z	0	2
15	MP2A	Mx	.005	2
16	MP2A	X	5.224	6
17	MP2A	Z	0	6
18	MP2A	Mx	.005	6
19	MP2A	X	3.425	3
20	MP2A	Z	0	3
21	MP2A	Mx	-.000807	3
22	MP4A	X	3.293	3
23	MP4A	Z	0	3
24	MP4A	Mx	.000776	3
25	MP4A	X	5.224	2
26	MP4A	Z	0	2
27	MP4A	Mx	.000308	2
28	MP4A	X	5.224	6



**Member Point Loads (BLC 30 : Antenna Wm (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
29	MP4A	Z	0	6
30	MP4A	Mx	.000308	6

**Member Point Loads (BLC 31 : Antenna Wm (120 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	4.304	1.5
2	MP5A	Z	2.485	1.5
3	MP5A	Mx	.000429	1.5
4	MP5A	X	4.304	3
5	MP5A	Z	2.485	3
6	MP5A	Mx	.000429	3
7	MP2A	X	6.085	2
8	MP2A	Z	3.513	2
9	MP2A	Mx	-.003	2
10	MP2A	X	6.085	6
11	MP2A	Z	3.513	6
12	MP2A	Mx	-.003	6
13	MP2A	X	6.085	2
14	MP2A	Z	3.513	2
15	MP2A	Mx	.005	2
16	MP2A	X	6.085	6
17	MP2A	Z	3.513	6
18	MP2A	Mx	.005	6
19	MP2A	X	3.472	3
20	MP2A	Z	2.004	3
21	MP2A	Mx	-.000346	3
22	MP4A	X	3.457	3
23	MP4A	Z	1.996	3
24	MP4A	Mx	.000344	3
25	MP4A	X	6.085	2
26	MP4A	Z	3.513	2
27	MP4A	Mx	-.003	2
28	MP4A	X	6.085	6
29	MP4A	Z	3.513	6
30	MP4A	Mx	-.003	6

**Member Point Loads (BLC 32 : Antenna Wm (150 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	2.485	1.5
2	MP5A	Z	4.304	1.5
3	MP5A	Mx	-.000429	1.5
4	MP5A	X	2.485	3
5	MP5A	Z	4.304	3
6	MP5A	Mx	-.000429	3
7	MP2A	X	3.513	2
8	MP2A	Z	6.085	2
9	MP2A	Mx	-.005	2
10	MP2A	X	3.513	6
11	MP2A	Z	6.085	6
12	MP2A	Mx	-.005	6
13	MP2A	X	3.513	2
14	MP2A	Z	6.085	2
15	MP2A	Mx	.003	2
16	MP2A	X	3.513	6
17	MP2A	Z	6.085	6
18	MP2A	Mx	.003	6
19	MP2A	X	2.004	3
20	MP2A	Z	3.472	3

**Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
21	MP2A	Mx	.000346	3
22	MP4A	X	1.996	3
23	MP4A	Z	3.457	3
24	MP4A	Mx	-.000344	3
25	MP4A	X	3.513	2
26	MP4A	Z	6.085	2
27	MP4A	Mx	-.005	2
28	MP4A	X	3.513	6
29	MP4A	Z	6.085	6
30	MP4A	Mx	-.005	6

**Member Point Loads (BLC 33 : Antenna Wm (180 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	X	0	1.5
2	MP5A	Z	3.494	1.5
3	MP5A	Mx	-.000824	1.5
4	MP5A	X	0	3
5	MP5A	Z	3.494	3
6	MP5A	Mx	-.000824	3
7	MP2A	X	0	2
8	MP2A	Z	5.224	2
9	MP2A	Mx	-.005	2
10	MP2A	X	0	6
11	MP2A	Z	5.224	6
12	MP2A	Mx	-.005	6
13	MP2A	X	0	2
14	MP2A	Z	5.224	2
15	MP2A	Mx	-.000308	2
16	MP2A	X	0	6
17	MP2A	Z	5.224	6
18	MP2A	Mx	-.000308	6
19	MP2A	X	0	3
20	MP2A	Z	3.425	3
21	MP2A	Mx	.000807	3
22	MP4A	X	0	3
23	MP4A	Z	3.293	3
24	MP4A	Mx	-.000776	3
25	MP4A	X	0	2
26	MP4A	Z	5.224	2
27	MP4A	Mx	-.005	2
28	MP4A	X	0	6
29	MP4A	Z	5.224	6
30	MP4A	Mx	-.005	6

**Member Point Loads (BLC 34 : Antenna Wm (210 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	X	-1.009	1.5
2	MP5A	Z	1.748	1.5
3	MP5A	Mx	-.00065	1.5
4	MP5A	X	-1.009	3
5	MP5A	Z	1.748	3
6	MP5A	Mx	-.00065	3
7	MP2A	X	-1.711	2
8	MP2A	Z	2.963	2
9	MP2A	Mx	-.003	2
10	MP2A	X	-1.711	6
11	MP2A	Z	2.963	6
12	MP2A	Mx	-.003	6

**Member Point Loads (BLC 34 : Antenna Wm (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
13	MP2A	X	-1.711	2
14	MP2A	Z	2.963	2
15	MP2A	Mx	-.002	2
16	MP2A	X	-1.711	6
17	MP2A	Z	2.963	6
18	MP2A	Mx	-.002	6
19	MP2A	X	-1.42	3
20	MP2A	Z	2.46	3
21	MP2A	Mx	.000915	3
22	MP4A	X	-1.297	3
23	MP4A	Z	2.247	3
24	MP4A	Mx	-.000835	3
25	MP4A	X	-1.711	2
26	MP4A	Z	2.963	2
27	MP4A	Mx	-.003	2
28	MP4A	X	-1.711	6
29	MP4A	Z	2.963	6
30	MP4A	Mx	-.003	6

**Member Point Loads (BLC 35 : Antenna Wm (240 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-1.748	1.5
2	MP5A	Z	1.009	1.5
3	MP5A	Mx	-.00065	1.5
4	MP5A	X	-1.748	3
5	MP5A	Z	1.009	3
6	MP5A	Mx	-.00065	3
7	MP2A	X	-2.963	2
8	MP2A	Z	1.711	2
9	MP2A	Mx	-.002	2
10	MP2A	X	-2.963	6
11	MP2A	Z	1.711	6
12	MP2A	Mx	-.002	6
13	MP2A	X	-2.963	2
14	MP2A	Z	1.711	2
15	MP2A	Mx	-.003	2
16	MP2A	X	-2.963	6
17	MP2A	Z	1.711	6
18	MP2A	Mx	-.003	6
19	MP2A	X	-2.46	3
20	MP2A	Z	1.42	3
21	MP2A	Mx	.000915	3
22	MP4A	X	-2.247	3
23	MP4A	Z	1.297	3
24	MP4A	Mx	-.000835	3
25	MP4A	X	-2.963	2
26	MP4A	Z	1.711	2
27	MP4A	Mx	-.002	2
28	MP4A	X	-2.963	6
29	MP4A	Z	1.711	6
30	MP4A	Mx	-.002	6

**Member Point Loads (BLC 36 : Antenna Wm (270 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	-3.494	1.5
2	MP5A	Z	0	1.5
3	MP5A	Mx	-.000824	1.5
4	MP5A	X	-3.494	3

**Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
5	MP5A	Z	0	3
6	MP5A	Mx	-0.000824	3
7	MP2A	X	-5.224	2
8	MP2A	Z	0	2
9	MP2A	Mx	-0.000308	2
10	MP2A	X	-5.224	6
11	MP2A	Z	0	6
12	MP2A	Mx	-0.000308	6
13	MP2A	X	-5.224	2
14	MP2A	Z	0	2
15	MP2A	Mx	-0.005	2
16	MP2A	X	-5.224	6
17	MP2A	Z	0	6
18	MP2A	Mx	-0.005	6
19	MP2A	X	-3.425	3
20	MP2A	Z	0	3
21	MP2A	Mx	.000807	3
22	MP4A	X	-3.293	3
23	MP4A	Z	0	3
24	MP4A	Mx	-0.000776	3
25	MP4A	X	-5.224	2
26	MP4A	Z	0	2
27	MP4A	Mx	-0.000308	2
28	MP4A	X	-5.224	6
29	MP4A	Z	0	6
30	MP4A	Mx	-0.000308	6

**Member Point Loads (BLC 37 : Antenna Wm (300 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	X	-4.304	1.5
2	MP5A	Z	-2.485	1.5
3	MP5A	Mx	-0.000429	1.5
4	MP5A	X	-4.304	3
5	MP5A	Z	-2.485	3
6	MP5A	Mx	-0.000429	3
7	MP2A	X	-6.085	2
8	MP2A	Z	-3.513	2
9	MP2A	Mx	.003	2
10	MP2A	X	-6.085	6
11	MP2A	Z	-3.513	6
12	MP2A	Mx	.003	6
13	MP2A	X	-6.085	2
14	MP2A	Z	-3.513	2
15	MP2A	Mx	-0.005	2
16	MP2A	X	-6.085	6
17	MP2A	Z	-3.513	6
18	MP2A	Mx	-0.005	6
19	MP2A	X	-3.472	3
20	MP2A	Z	-2.004	3
21	MP2A	Mx	.000346	3
22	MP4A	X	-3.457	3
23	MP4A	Z	-1.996	3
24	MP4A	Mx	-0.000344	3
25	MP4A	X	-6.085	2
26	MP4A	Z	-3.513	2
27	MP4A	Mx	.003	2
28	MP4A	X	-6.085	6
29	MP4A	Z	-3.513	6

**Member Point Loads (BLC 37 : Antenna Wm (300 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
30	MP4A	Mx	.003	6

**Member Point Loads (BLC 38 : Antenna Wm (330 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	X	-2.485	1.5
2	MP5A	Z	-4.304	1.5
3	MP5A	Mx	.000429	1.5
4	MP5A	X	-2.485	3
5	MP5A	Z	-4.304	3
6	MP5A	Mx	.000429	3
7	MP2A	X	-3.513	2
8	MP2A	Z	-6.085	2
9	MP2A	Mx	.005	2
10	MP2A	X	-3.513	6
11	MP2A	Z	-6.085	6
12	MP2A	Mx	.005	6
13	MP2A	X	-3.513	2
14	MP2A	Z	-6.085	2
15	MP2A	Mx	-.003	2
16	MP2A	X	-3.513	6
17	MP2A	Z	-6.085	6
18	MP2A	Mx	-.003	6
19	MP2A	X	-2.004	3
20	MP2A	Z	-3.472	3
21	MP2A	Mx	-.000346	3
22	MP4A	X	-1.996	3
23	MP4A	Z	-3.457	3
24	MP4A	Mx	.000344	3
25	MP4A	X	-3.513	2
26	MP4A	Z	-6.085	2
27	MP4A	Mx	.005	2
28	MP4A	X	-3.513	6
29	MP4A	Z	-6.085	6
30	MP4A	Mx	.005	6

**Member Point Loads (BLC 77 : Lm1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M4	Y	-500	%22

**Member Point Loads (BLC 78 : Lm2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M4	Y	-500	%75

**Member Point Loads (BLC 79 : Lv1)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M4	Y	-250	%50

**Member Point Loads (BLC 80 : Lv2)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M4	Y	-250	%100

**Member Point Loads (BLC 81 : Antenna Ev)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP5A	Y	0	1.5
2	MP5A	My	0	1.5
3	MP5A	Mz	0	1.5

**Member Point Loads (BLC 81 : Antenna Ev) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
4	MP5A	Y	0	3
5	MP5A	My	0	3
6	MP5A	Mz	0	3
7	MP2A	Y	0	2
8	MP2A	My	0	2
9	MP2A	Mz	0	2
10	MP2A	Y	0	6
11	MP2A	My	0	6
12	MP2A	Mz	0	6
13	MP2A	Y	0	2
14	MP2A	My	0	2
15	MP2A	Mz	0	2
16	MP2A	Y	0	6
17	MP2A	My	0	6
18	MP2A	Mz	0	6
19	MP2A	Y	0	3
20	MP2A	My	0	3
21	MP2A	Mz	0	3
22	MP4A	Y	0	3
23	MP4A	My	0	3
24	MP4A	Mz	0	3
25	MP4A	Y	0	2
26	MP4A	My	0	2
27	MP4A	Mz	0	2
28	MP4A	Y	0	6
29	MP4A	My	0	6
30	MP4A	Mz	0	6

**Member Point Loads (BLC 82 : Antenna Eh (0 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	Z	-1.306	1.5
2	MP5A	Mx	.000308	1.5
3	MP5A	Z	-1.306	3
4	MP5A	Mx	.000308	3
5	MP2A	Z	-.609	2
6	MP2A	Mx	.000538	2
7	MP2A	Z	-.609	6
8	MP2A	Mx	.000538	6
9	MP2A	Z	-.609	2
10	MP2A	Mx	3.6e-5	2
11	MP2A	Z	-.609	6
12	MP2A	Mx	3.6e-5	6
13	MP2A	Z	-2.241	3
14	MP2A	Mx	-.000528	3
15	MP4A	Z	-2.109	3
16	MP4A	Mx	.000497	3
17	MP4A	Z	-.609	2
18	MP4A	Mx	.000538	2
19	MP4A	Z	-.609	6
20	MP4A	Mx	.000538	6

**Member Point Loads (BLC 83 : Antenna Eh (90 Deg))**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP5A	X	1.306	1.5
2	MP5A	Mx	.000308	1.5
3	MP5A	X	1.306	3
4	MP5A	Mx	.000308	3
5	MP2A	X	.609	2

**Member Point Loads (BLC 83 : Antenna Eh (90 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
6	MP2A	Mx	3.6e-5	2
7	MP2A	X	.609	6
8	MP2A	Mx	3.6e-5	6
9	MP2A	X	.609	2
10	MP2A	Mx	.000538	2
11	MP2A	X	.609	6
12	MP2A	Mx	.000538	6
13	MP2A	X	2.241	3
14	MP2A	Mx	-.000528	3
15	MP4A	X	2.109	3
16	MP4A	Mx	.000497	3
17	MP4A	X	.609	2
18	MP4A	Mx	3.6e-5	2
19	MP4A	X	.609	6
20	MP4A	Mx	3.6e-5	6

**Member Distributed Loads (BLC 40 : Structure Di)**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	Y	-9.68	-9.68	0	%100
2	M2	Y	-8.037	-8.037	0	%100
3	M4	Y	-9.68	-9.68	0	%100
4	MP1A	Y	-5.021	-5.021	0	%100
5	MP5A	Y	-5.021	-5.021	0	%100
6	MP2A	Y	-5.021	-5.021	0	%100
7	MP3A	Y	-5.021	-5.021	0	%100
8	MP4A	Y	-5.021	-5.021	0	%100
9	M17	Y	-7.672	-7.672	0	%100
10	M18	Y	-6.618	-6.618	0	%100

**Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-10.195	-10.195	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-16.193	-16.193	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-9.23	-9.23	0	%100
9	MP5A	X	0	0	0	%100
10	MP5A	Z	-9.23	-9.23	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-9.23	-9.23	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-9.23	-9.23	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-9.23	-9.23	0	%100
17	M17	X	0	0	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	-13.602	-13.602	0	%100

**Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.544	1.544	0	%100
2	M1	Z	-2.675	-2.675	0	%100

**Member Distributed Loads (BLC 42 : Structure Wo (30 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
3	M2	X	5.097	5.097	0	%100
4	M2	Z	-8.829	-8.829	0	%100
5	M4	X	6.072	6.072	0	%100
6	M4	Z	-10.518	-10.518	0	%100
7	MP1A	X	4.615	4.615	0	%100
8	MP1A	Z	-7.993	-7.993	0	%100
9	MP5A	X	4.615	4.615	0	%100
10	MP5A	Z	-7.993	-7.993	0	%100
11	MP2A	X	4.615	4.615	0	%100
12	MP2A	Z	-7.993	-7.993	0	%100
13	MP3A	X	4.615	4.615	0	%100
14	MP3A	Z	-7.993	-7.993	0	%100
15	MP4A	X	4.615	4.615	0	%100
16	MP4A	Z	-7.993	-7.993	0	%100
17	M17	X	1.101	1.101	0	%100
18	M17	Z	-1.907	-1.907	0	%100
19	M18	X	5.101	5.101	0	%100
20	M18	Z	-8.835	-8.835	0	%100

**Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	8.024	8.024	0	%100
2	M1	Z	-4.633	-4.633	0	%100
3	M2	X	8.829	8.829	0	%100
4	M2	Z	-5.097	-5.097	0	%100
5	M4	X	3.506	3.506	0	%100
6	M4	Z	-2.024	-2.024	0	%100
7	MP1A	X	7.993	7.993	0	%100
8	MP1A	Z	-4.615	-4.615	0	%100
9	MP5A	X	7.993	7.993	0	%100
10	MP5A	Z	-4.615	-4.615	0	%100
11	MP2A	X	7.993	7.993	0	%100
12	MP2A	Z	-4.615	-4.615	0	%100
13	MP3A	X	7.993	7.993	0	%100
14	MP3A	Z	-4.615	-4.615	0	%100
15	MP4A	X	7.993	7.993	0	%100
16	MP4A	Z	-4.615	-4.615	0	%100
17	M17	X	5.72	5.72	0	%100
18	M17	Z	-3.303	-3.303	0	%100
19	M18	X	2.945	2.945	0	%100
20	M18	Z	-1.7	-1.7	0	%100

**Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	12.354	12.354	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	10.195	10.195	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	9.23	9.23	0	%100
8	MP1A	Z	0	0	0	%100
9	MP5A	X	9.23	9.23	0	%100
10	MP5A	Z	0	0	0	%100
11	MP2A	X	9.23	9.23	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	9.23	9.23	0	%100
14	MP3A	Z	0	0	0	%100



**Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
15	MP4A	X	9.23	9.23	0	%100
16	MP4A	Z	0	0	0	%100
17	M17	X	8.807	8.807	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	0	0	0	%100

**Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	8.024	8.024	0	%100
2	M1	Z	4.633	4.633	0	%100
3	M2	X	8.829	8.829	0	%100
4	M2	Z	5.097	5.097	0	%100
5	M4	X	3.506	3.506	0	%100
6	M4	Z	2.024	2.024	0	%100
7	MP1A	X	7.993	7.993	0	%100
8	MP1A	Z	4.615	4.615	0	%100
9	MP5A	X	7.993	7.993	0	%100
10	MP5A	Z	4.615	4.615	0	%100
11	MP2A	X	7.993	7.993	0	%100
12	MP2A	Z	4.615	4.615	0	%100
13	MP3A	X	7.993	7.993	0	%100
14	MP3A	Z	4.615	4.615	0	%100
15	MP4A	X	7.993	7.993	0	%100
16	MP4A	Z	4.615	4.615	0	%100
17	M17	X	5.72	5.72	0	%100
18	M17	Z	3.303	3.303	0	%100
19	M18	X	2.945	2.945	0	%100
20	M18	Z	1.7	1.7	0	%100

**Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.544	1.544	0	%100
2	M1	Z	2.675	2.675	0	%100
3	M2	X	5.097	5.097	0	%100
4	M2	Z	8.829	8.829	0	%100
5	M4	X	6.072	6.072	0	%100
6	M4	Z	10.518	10.518	0	%100
7	MP1A	X	4.615	4.615	0	%100
8	MP1A	Z	7.993	7.993	0	%100
9	MP5A	X	4.615	4.615	0	%100
10	MP5A	Z	7.993	7.993	0	%100
11	MP2A	X	4.615	4.615	0	%100
12	MP2A	Z	7.993	7.993	0	%100
13	MP3A	X	4.615	4.615	0	%100
14	MP3A	Z	7.993	7.993	0	%100
15	MP4A	X	4.615	4.615	0	%100
16	MP4A	Z	7.993	7.993	0	%100
17	M17	X	1.101	1.101	0	%100
18	M17	Z	1.907	1.907	0	%100
19	M18	X	5.101	5.101	0	%100
20	M18	Z	8.835	8.835	0	%100

**Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100

**Member Distributed Loads (BLC 47 : Structure Wo (180 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
3	M2	X	0	0	0	%100
4	M2	Z	10.195	10.195	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	16.193	16.193	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	9.23	9.23	0	%100
9	MP5A	X	0	0	0	%100
10	MP5A	Z	9.23	9.23	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	9.23	9.23	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	9.23	9.23	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	9.23	9.23	0	%100
17	M17	X	0	0	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	13.602	13.602	0	%100

**Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.544	-1.544	0	%100
2	M1	Z	2.675	2.675	0	%100
3	M2	X	-5.097	-5.097	0	%100
4	M2	Z	8.829	8.829	0	%100
5	M4	X	-6.072	-6.072	0	%100
6	M4	Z	10.518	10.518	0	%100
7	MP1A	X	-4.615	-4.615	0	%100
8	MP1A	Z	7.993	7.993	0	%100
9	MP5A	X	-4.615	-4.615	0	%100
10	MP5A	Z	7.993	7.993	0	%100
11	MP2A	X	-4.615	-4.615	0	%100
12	MP2A	Z	7.993	7.993	0	%100
13	MP3A	X	-4.615	-4.615	0	%100
14	MP3A	Z	7.993	7.993	0	%100
15	MP4A	X	-4.615	-4.615	0	%100
16	MP4A	Z	7.993	7.993	0	%100
17	M17	X	-1.101	-1.101	0	%100
18	M17	Z	1.907	1.907	0	%100
19	M18	X	-5.101	-5.101	0	%100
20	M18	Z	8.835	8.835	0	%100

**Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-8.024	-8.024	0	%100
2	M1	Z	4.633	4.633	0	%100
3	M2	X	-8.829	-8.829	0	%100
4	M2	Z	5.097	5.097	0	%100
5	M4	X	-3.506	-3.506	0	%100
6	M4	Z	2.024	2.024	0	%100
7	MP1A	X	-7.993	-7.993	0	%100
8	MP1A	Z	4.615	4.615	0	%100
9	MP5A	X	-7.993	-7.993	0	%100
10	MP5A	Z	4.615	4.615	0	%100
11	MP2A	X	-7.993	-7.993	0	%100
12	MP2A	Z	4.615	4.615	0	%100
13	MP3A	X	-7.993	-7.993	0	%100
14	MP3A	Z	4.615	4.615	0	%100

**Member Distributed Loads (BLC 49 : Structure Wo (240 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
15	MP4A	X	-7.993	-7.993	0	%100
16	MP4A	Z	4.615	4.615	0	%100
17	M17	X	-5.72	-5.72	0	%100
18	M17	Z	3.303	3.303	0	%100
19	M18	X	-2.945	-2.945	0	%100
20	M18	Z	1.7	1.7	0	%100

**Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-12.354	-12.354	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-10.195	-10.195	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	-9.23	-9.23	0	%100
8	MP1A	Z	0	0	0	%100
9	MP5A	X	-9.23	-9.23	0	%100
10	MP5A	Z	0	0	0	%100
11	MP2A	X	-9.23	-9.23	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-9.23	-9.23	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	-9.23	-9.23	0	%100
16	MP4A	Z	0	0	0	%100
17	M17	X	-8.807	-8.807	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	0	0	0	%100

**Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-8.024	-8.024	0	%100
2	M1	Z	-4.633	-4.633	0	%100
3	M2	X	-8.829	-8.829	0	%100
4	M2	Z	-5.097	-5.097	0	%100
5	M4	X	-3.506	-3.506	0	%100
6	M4	Z	-2.024	-2.024	0	%100
7	MP1A	X	-7.993	-7.993	0	%100
8	MP1A	Z	-4.615	-4.615	0	%100
9	MP5A	X	-7.993	-7.993	0	%100
10	MP5A	Z	-4.615	-4.615	0	%100
11	MP2A	X	-7.993	-7.993	0	%100
12	MP2A	Z	-4.615	-4.615	0	%100
13	MP3A	X	-7.993	-7.993	0	%100
14	MP3A	Z	-4.615	-4.615	0	%100
15	MP4A	X	-7.993	-7.993	0	%100
16	MP4A	Z	-4.615	-4.615	0	%100
17	M17	X	-5.72	-5.72	0	%100
18	M17	Z	-3.303	-3.303	0	%100
19	M18	X	-2.945	-2.945	0	%100
20	M18	Z	-1.7	-1.7	0	%100

**Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.544	-1.544	0	%100
2	M1	Z	-2.675	-2.675	0	%100

**Member Distributed Loads (BLC 52 : Structure Wo (330 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
3	M2	X	-5.097	-5.097	0	%100
4	M2	Z	-8.829	-8.829	0	%100
5	M4	X	-6.072	-6.072	0	%100
6	M4	Z	-10.518	-10.518	0	%100
7	MP1A	X	-4.615	-4.615	0	%100
8	MP1A	Z	-7.993	-7.993	0	%100
9	MP5A	X	-4.615	-4.615	0	%100
10	MP5A	Z	-7.993	-7.993	0	%100
11	MP2A	X	-4.615	-4.615	0	%100
12	MP2A	Z	-7.993	-7.993	0	%100
13	MP3A	X	-4.615	-4.615	0	%100
14	MP3A	Z	-7.993	-7.993	0	%100
15	MP4A	X	-4.615	-4.615	0	%100
16	MP4A	Z	-7.993	-7.993	0	%100
17	M17	X	-1.101	-1.101	0	%100
18	M17	Z	-1.907	-1.907	0	%100
19	M18	X	-5.101	-5.101	0	%100
20	M18	Z	-8.835	-8.835	0	%100

**Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-2.199	-2.199	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-3.06	-3.06	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-2.215	-2.215	0	%100
9	MP5A	X	0	0	0	%100
10	MP5A	Z	-2.215	-2.215	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-2.215	-2.215	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-2.215	-2.215	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-2.215	-2.215	0	%100
17	M17	X	0	0	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	-2.746	-2.746	0	%100

**Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.285	.285	0	%100
2	M1	Z	-.493	-.493	0	%100
3	M2	X	1.1	1.1	0	%100
4	M2	Z	-1.904	-1.904	0	%100
5	M4	X	1.147	1.147	0	%100
6	M4	Z	-1.987	-1.987	0	%100
7	MP1A	X	1.108	1.108	0	%100
8	MP1A	Z	-1.918	-1.918	0	%100
9	MP5A	X	1.108	1.108	0	%100
10	MP5A	Z	-1.918	-1.918	0	%100
11	MP2A	X	1.108	1.108	0	%100
12	MP2A	Z	-1.918	-1.918	0	%100
13	MP3A	X	1.108	1.108	0	%100
14	MP3A	Z	-1.918	-1.918	0	%100

**Member Distributed Loads (BLC 54 : Structure Wi (30 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
15	MP4A	X	1.108	1.108	0	%100
16	MP4A	Z	-1.918	-1.918	0	%100
17	M17	X	.231	.231	0	%100
18	M17	Z	-.4	-.4	0	%100
19	M18	X	1.03	1.03	0	%100
20	M18	Z	-1.783	-1.783	0	%100

**Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.48	1.48	0	%100
2	M1	Z	-.855	-.855	0	%100
3	M2	X	1.904	1.904	0	%100
4	M2	Z	-1.1	-1.1	0	%100
5	M4	X	.662	.662	0	%100
6	M4	Z	-.382	-.382	0	%100
7	MP1A	X	1.918	1.918	0	%100
8	MP1A	Z	-1.108	-1.108	0	%100
9	MP5A	X	1.918	1.918	0	%100
10	MP5A	Z	-1.108	-1.108	0	%100
11	MP2A	X	1.918	1.918	0	%100
12	MP2A	Z	-1.108	-1.108	0	%100
13	MP3A	X	1.918	1.918	0	%100
14	MP3A	Z	-1.108	-1.108	0	%100
15	MP4A	X	1.918	1.918	0	%100
16	MP4A	Z	-1.108	-1.108	0	%100
17	M17	X	1.201	1.201	0	%100
18	M17	Z	-.693	-.693	0	%100
19	M18	X	.594	.594	0	%100
20	M18	Z	-.343	-.343	0	%100

**Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	2.279	2.279	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	2.199	2.199	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	2.215	2.215	0	%100
8	MP1A	Z	0	0	0	%100
9	MP5A	X	2.215	2.215	0	%100
10	MP5A	Z	0	0	0	%100
11	MP2A	X	2.215	2.215	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	2.215	2.215	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	2.215	2.215	0	%100
16	MP4A	Z	0	0	0	%100
17	M17	X	1.849	1.849	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	0	0	0	%100

**Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.48	1.48	0	%100
2	M1	Z	.855	.855	0	%100

**Member Distributed Loads (BLC 57 : Structure Wi (120 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
3	M2	X	1.904	1.904	0	%100
4	M2	Z	1.1	1.1	0	%100
5	M4	X	.662	.662	0	%100
6	M4	Z	.382	.382	0	%100
7	MP1A	X	1.918	1.918	0	%100
8	MP1A	Z	1.108	1.108	0	%100
9	MP5A	X	1.918	1.918	0	%100
10	MP5A	Z	1.108	1.108	0	%100
11	MP2A	X	1.918	1.918	0	%100
12	MP2A	Z	1.108	1.108	0	%100
13	MP3A	X	1.918	1.918	0	%100
14	MP3A	Z	1.108	1.108	0	%100
15	MP4A	X	1.918	1.918	0	%100
16	MP4A	Z	1.108	1.108	0	%100
17	M17	X	1.201	1.201	0	%100
18	M17	Z	.693	.693	0	%100
19	M18	X	.594	.594	0	%100
20	M18	Z	.343	.343	0	%100

**Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.285	.285	0	%100
2	M1	Z	.493	.493	0	%100
3	M2	X	1.1	1.1	0	%100
4	M2	Z	1.904	1.904	0	%100
5	M4	X	1.147	1.147	0	%100
6	M4	Z	1.987	1.987	0	%100
7	MP1A	X	1.108	1.108	0	%100
8	MP1A	Z	1.918	1.918	0	%100
9	MP5A	X	1.108	1.108	0	%100
10	MP5A	Z	1.918	1.918	0	%100
11	MP2A	X	1.108	1.108	0	%100
12	MP2A	Z	1.918	1.918	0	%100
13	MP3A	X	1.108	1.108	0	%100
14	MP3A	Z	1.918	1.918	0	%100
15	MP4A	X	1.108	1.108	0	%100
16	MP4A	Z	1.918	1.918	0	%100
17	M17	X	.231	.231	0	%100
18	M17	Z	.4	.4	0	%100
19	M18	X	1.03	1.03	0	%100
20	M18	Z	1.783	1.783	0	%100

**Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	2.199	2.199	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	3.06	3.06	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	2.215	2.215	0	%100
9	MP5A	X	0	0	0	%100
10	MP5A	Z	2.215	2.215	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	2.215	2.215	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	2.215	2.215	0	%100

**Member Distributed Loads (BLC 59 : Structure Wi (180 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
15	MP4A	X	0	0	0	%100
16	MP4A	Z	2.215	2.215	0	%100
17	M17	X	0	0	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	2.746	2.746	0	%100

**Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.285	-.285	0	%100
2	M1	Z	.493	.493	0	%100
3	M2	X	-1.1	-1.1	0	%100
4	M2	Z	1.904	1.904	0	%100
5	M4	X	-1.147	-1.147	0	%100
6	M4	Z	1.987	1.987	0	%100
7	MP1A	X	-1.108	-1.108	0	%100
8	MP1A	Z	1.918	1.918	0	%100
9	MP5A	X	-1.108	-1.108	0	%100
10	MP5A	Z	1.918	1.918	0	%100
11	MP2A	X	-1.108	-1.108	0	%100
12	MP2A	Z	1.918	1.918	0	%100
13	MP3A	X	-1.108	-1.108	0	%100
14	MP3A	Z	1.918	1.918	0	%100
15	MP4A	X	-1.108	-1.108	0	%100
16	MP4A	Z	1.918	1.918	0	%100
17	M17	X	-.231	-.231	0	%100
18	M17	Z	.4	.4	0	%100
19	M18	X	-1.03	-1.03	0	%100
20	M18	Z	1.783	1.783	0	%100

**Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.48	-1.48	0	%100
2	M1	Z	.855	.855	0	%100
3	M2	X	-1.904	-1.904	0	%100
4	M2	Z	1.1	1.1	0	%100
5	M4	X	-.662	-.662	0	%100
6	M4	Z	.382	.382	0	%100
7	MP1A	X	-1.918	-1.918	0	%100
8	MP1A	Z	1.108	1.108	0	%100
9	MP5A	X	-1.918	-1.918	0	%100
10	MP5A	Z	1.108	1.108	0	%100
11	MP2A	X	-1.918	-1.918	0	%100
12	MP2A	Z	1.108	1.108	0	%100
13	MP3A	X	-1.918	-1.918	0	%100
14	MP3A	Z	1.108	1.108	0	%100
15	MP4A	X	-1.918	-1.918	0	%100
16	MP4A	Z	1.108	1.108	0	%100
17	M17	X	-1.201	-1.201	0	%100
18	M17	Z	.693	.693	0	%100
19	M18	X	-.594	-.594	0	%100
20	M18	Z	.343	.343	0	%100

**Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-2.279	-2.279	0	%100
2	M1	Z	0	0	0	%100

**Member Distributed Loads (BLC 62 : Structure Wi (270 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
3	M2	X	-2.199	-2.199	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	-2.215	-2.215	0	%100
8	MP1A	Z	0	0	0	%100
9	MP5A	X	-2.215	-2.215	0	%100
10	MP5A	Z	0	0	0	%100
11	MP2A	X	-2.215	-2.215	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-2.215	-2.215	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	-2.215	-2.215	0	%100
16	MP4A	Z	0	0	0	%100
17	M17	X	-1.849	-1.849	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	0	0	0	%100

**Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.48	-1.48	0	%100
2	M1	Z	-0.855	-0.855	0	%100
3	M2	X	-1.904	-1.904	0	%100
4	M2	Z	-1.1	-1.1	0	%100
5	M4	X	-0.662	-0.662	0	%100
6	M4	Z	-0.382	-0.382	0	%100
7	MP1A	X	-1.918	-1.918	0	%100
8	MP1A	Z	-1.108	-1.108	0	%100
9	MP5A	X	-1.918	-1.918	0	%100
10	MP5A	Z	-1.108	-1.108	0	%100
11	MP2A	X	-1.918	-1.918	0	%100
12	MP2A	Z	-1.108	-1.108	0	%100
13	MP3A	X	-1.918	-1.918	0	%100
14	MP3A	Z	-1.108	-1.108	0	%100
15	MP4A	X	-1.918	-1.918	0	%100
16	MP4A	Z	-1.108	-1.108	0	%100
17	M17	X	-1.201	-1.201	0	%100
18	M17	Z	-0.693	-0.693	0	%100
19	M18	X	-0.594	-0.594	0	%100
20	M18	Z	-0.343	-0.343	0	%100

**Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-0.285	-0.285	0	%100
2	M1	Z	-0.493	-0.493	0	%100
3	M2	X	-1.1	-1.1	0	%100
4	M2	Z	-1.904	-1.904	0	%100
5	M4	X	-1.147	-1.147	0	%100
6	M4	Z	-1.987	-1.987	0	%100
7	MP1A	X	-1.108	-1.108	0	%100
8	MP1A	Z	-1.918	-1.918	0	%100
9	MP5A	X	-1.108	-1.108	0	%100
10	MP5A	Z	-1.918	-1.918	0	%100
11	MP2A	X	-1.108	-1.108	0	%100
12	MP2A	Z	-1.918	-1.918	0	%100
13	MP3A	X	-1.108	-1.108	0	%100
14	MP3A	Z	-1.918	-1.918	0	%100



**Member Distributed Loads (BLC 64 : Structure Wi (330 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
15	MP4A	X	-1.108	-1.108	0	%100
16	MP4A	Z	-1.918	-1.918	0	%100
17	M17	X	-.231	-.231	0	%100
18	M17	Z	-.4	-.4	0	%100
19	M18	X	-1.03	-1.03	0	%100
20	M18	Z	-1.783	-1.783	0	%100

**Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-.696	-.696	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-1.105	-1.105	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-.63	-.63	0	%100
9	MP5A	X	0	0	0	%100
10	MP5A	Z	-.63	-.63	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-.63	-.63	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-.63	-.63	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-.63	-.63	0	%100
17	M17	X	0	0	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	-.928	-.928	0	%100

**Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.105	.105	0	%100
2	M1	Z	-.183	-.183	0	%100
3	M2	X	.348	.348	0	%100
4	M2	Z	-.602	-.602	0	%100
5	M4	X	.414	.414	0	%100
6	M4	Z	-.718	-.718	0	%100
7	MP1A	X	.315	.315	0	%100
8	MP1A	Z	-.545	-.545	0	%100
9	MP5A	X	.315	.315	0	%100
10	MP5A	Z	-.545	-.545	0	%100
11	MP2A	X	.315	.315	0	%100
12	MP2A	Z	-.545	-.545	0	%100
13	MP3A	X	.315	.315	0	%100
14	MP3A	Z	-.545	-.545	0	%100
15	MP4A	X	.315	.315	0	%100
16	MP4A	Z	-.545	-.545	0	%100
17	M17	X	.075	.075	0	%100
18	M17	Z	-.13	-.13	0	%100
19	M18	X	.348	.348	0	%100
20	M18	Z	-.603	-.603	0	%100

**Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.548	.548	0	%100
2	M1	Z	-.316	-.316	0	%100

**Member Distributed Loads (BLC 67 : Structure Wm (60 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
3	M2	X	.602	.602	0	%100
4	M2	Z	-.348	-.348	0	%100
5	M4	X	.239	.239	0	%100
6	M4	Z	-.138	-.138	0	%100
7	MP1A	X	.545	.545	0	%100
8	MP1A	Z	-.315	-.315	0	%100
9	MP5A	X	.545	.545	0	%100
10	MP5A	Z	-.315	-.315	0	%100
11	MP2A	X	.545	.545	0	%100
12	MP2A	Z	-.315	-.315	0	%100
13	MP3A	X	.545	.545	0	%100
14	MP3A	Z	-.315	-.315	0	%100
15	MP4A	X	.545	.545	0	%100
16	MP4A	Z	-.315	-.315	0	%100
17	M17	X	.39	.39	0	%100
18	M17	Z	-.225	-.225	0	%100
19	M18	X	.201	.201	0	%100
20	M18	Z	-.116	-.116	0	%100

**Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.843	.843	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	.696	.696	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	.63	.63	0	%100
8	MP1A	Z	0	0	0	%100
9	MP5A	X	.63	.63	0	%100
10	MP5A	Z	0	0	0	%100
11	MP2A	X	.63	.63	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	.63	.63	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	.63	.63	0	%100
16	MP4A	Z	0	0	0	%100
17	M17	X	.601	.601	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	0	0	0	%100

**Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.548	.548	0	%100
2	M1	Z	.316	.316	0	%100
3	M2	X	.602	.602	0	%100
4	M2	Z	.348	.348	0	%100
5	M4	X	.239	.239	0	%100
6	M4	Z	.138	.138	0	%100
7	MP1A	X	.545	.545	0	%100
8	MP1A	Z	.315	.315	0	%100
9	MP5A	X	.545	.545	0	%100
10	MP5A	Z	.315	.315	0	%100
11	MP2A	X	.545	.545	0	%100
12	MP2A	Z	.315	.315	0	%100
13	MP3A	X	.545	.545	0	%100
14	MP3A	Z	.315	.315	0	%100

**Member Distributed Loads (BLC 69 : Structure Wm (120 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
15	MP4A	X	.545	.545	0	%100
16	MP4A	Z	.315	.315	0	%100
17	M17	X	.39	.39	0	%100
18	M17	Z	.225	.225	0	%100
19	M18	X	.201	.201	0	%100
20	M18	Z	.116	.116	0	%100

**Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.105	.105	0	%100
2	M1	Z	.183	.183	0	%100
3	M2	X	.348	.348	0	%100
4	M2	Z	.602	.602	0	%100
5	M4	X	.414	.414	0	%100
6	M4	Z	.718	.718	0	%100
7	MP1A	X	.315	.315	0	%100
8	MP1A	Z	.545	.545	0	%100
9	MP5A	X	.315	.315	0	%100
10	MP5A	Z	.545	.545	0	%100
11	MP2A	X	.315	.315	0	%100
12	MP2A	Z	.545	.545	0	%100
13	MP3A	X	.315	.315	0	%100
14	MP3A	Z	.545	.545	0	%100
15	MP4A	X	.315	.315	0	%100
16	MP4A	Z	.545	.545	0	%100
17	M17	X	.075	.075	0	%100
18	M17	Z	.13	.13	0	%100
19	M18	X	.348	.348	0	%100
20	M18	Z	.603	.603	0	%100

**Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	.696	.696	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	1.105	1.105	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	.63	.63	0	%100
9	MP5A	X	0	0	0	%100
10	MP5A	Z	.63	.63	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	.63	.63	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	.63	.63	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	.63	.63	0	%100
17	M17	X	0	0	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	.928	.928	0	%100

**Member Distributed Loads (BLC 72 : Structure Wm (210 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.105	-.105	0	%100
2	M1	Z	.183	.183	0	%100

**Member Distributed Loads (BLC 72 : Structure Wm (210 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
3	M2	X	-.348	-.348	0	%100
4	M2	Z	.602	.602	0	%100
5	M4	X	-.414	-.414	0	%100
6	M4	Z	.718	.718	0	%100
7	MP1A	X	-.315	-.315	0	%100
8	MP1A	Z	.545	.545	0	%100
9	MP5A	X	-.315	-.315	0	%100
10	MP5A	Z	.545	.545	0	%100
11	MP2A	X	-.315	-.315	0	%100
12	MP2A	Z	.545	.545	0	%100
13	MP3A	X	-.315	-.315	0	%100
14	MP3A	Z	.545	.545	0	%100
15	MP4A	X	-.315	-.315	0	%100
16	MP4A	Z	.545	.545	0	%100
17	M17	X	-.075	-.075	0	%100
18	M17	Z	.13	.13	0	%100
19	M18	X	-.348	-.348	0	%100
20	M18	Z	.603	.603	0	%100

**Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.548	-.548	0	%100
2	M1	Z	.316	.316	0	%100
3	M2	X	-.602	-.602	0	%100
4	M2	Z	.348	.348	0	%100
5	M4	X	-.239	-.239	0	%100
6	M4	Z	.138	.138	0	%100
7	MP1A	X	-.545	-.545	0	%100
8	MP1A	Z	.315	.315	0	%100
9	MP5A	X	-.545	-.545	0	%100
10	MP5A	Z	.315	.315	0	%100
11	MP2A	X	-.545	-.545	0	%100
12	MP2A	Z	.315	.315	0	%100
13	MP3A	X	-.545	-.545	0	%100
14	MP3A	Z	.315	.315	0	%100
15	MP4A	X	-.545	-.545	0	%100
16	MP4A	Z	.315	.315	0	%100
17	M17	X	-.39	-.39	0	%100
18	M17	Z	.225	.225	0	%100
19	M18	X	-.201	-.201	0	%100
20	M18	Z	.116	.116	0	%100

**Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.843	-.843	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-.696	-.696	0	%100
4	M2	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	MP1A	X	-.63	-.63	0	%100
8	MP1A	Z	0	0	0	%100
9	MP5A	X	-.63	-.63	0	%100
10	MP5A	Z	0	0	0	%100
11	MP2A	X	-.63	-.63	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-.63	-.63	0	%100
14	MP3A	Z	0	0	0	%100

**Member Distributed Loads (BLC 74 : Structure Wm (270 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
15	MP4A	X	-0.63	-0.63	0	%100
16	MP4A	Z	0	0	0	%100
17	M17	X	-0.601	-0.601	0	%100
18	M17	Z	0	0	0	%100
19	M18	X	0	0	0	%100
20	M18	Z	0	0	0	%100

**Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-0.548	-0.548	0	%100
2	M1	Z	-0.316	-0.316	0	%100
3	M2	X	-0.602	-0.602	0	%100
4	M2	Z	-0.348	-0.348	0	%100
5	M4	X	-0.239	-0.239	0	%100
6	M4	Z	-0.138	-0.138	0	%100
7	MP1A	X	-0.545	-0.545	0	%100
8	MP1A	Z	-0.315	-0.315	0	%100
9	MP5A	X	-0.545	-0.545	0	%100
10	MP5A	Z	-0.315	-0.315	0	%100
11	MP2A	X	-0.545	-0.545	0	%100
12	MP2A	Z	-0.315	-0.315	0	%100
13	MP3A	X	-0.545	-0.545	0	%100
14	MP3A	Z	-0.315	-0.315	0	%100
15	MP4A	X	-0.545	-0.545	0	%100
16	MP4A	Z	-0.315	-0.315	0	%100
17	M17	X	-0.39	-0.39	0	%100
18	M17	Z	-0.225	-0.225	0	%100
19	M18	X	-0.201	-0.201	0	%100
20	M18	Z	-0.116	-0.116	0	%100

**Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-0.105	-0.105	0	%100
2	M1	Z	-0.183	-0.183	0	%100
3	M2	X	-0.348	-0.348	0	%100
4	M2	Z	-0.602	-0.602	0	%100
5	M4	X	-0.414	-0.414	0	%100
6	M4	Z	-0.718	-0.718	0	%100
7	MP1A	X	-0.315	-0.315	0	%100
8	MP1A	Z	-0.545	-0.545	0	%100
9	MP5A	X	-0.315	-0.315	0	%100
10	MP5A	Z	-0.545	-0.545	0	%100
11	MP2A	X	-0.315	-0.315	0	%100
12	MP2A	Z	-0.545	-0.545	0	%100
13	MP3A	X	-0.315	-0.315	0	%100
14	MP3A	Z	-0.545	-0.545	0	%100
15	MP4A	X	-0.315	-0.315	0	%100
16	MP4A	Z	-0.545	-0.545	0	%100
17	M17	X	-0.075	-0.075	0	%100
18	M17	Z	-0.13	-0.13	0	%100
19	M18	X	-0.348	-0.348	0	%100
20	M18	Z	-0.603	-0.603	0	%100

**Member Area Loads**

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

**Envelope Joint Reactions**

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	1296.95	11	1154.767	13	1007.886	1	-604	12	2.366	11	.503	40
2		min	-1049.896	5	396.023	70	-1306.215	7	-1.961	18	-1.91	5	-.726	34
3	N32	max	244.922	50	698.079	19	350.971	1	-.214	12	.662	12	.251	40
4		min	-527.533	26	191.224	12	-52.638	7	-1.08	18	-1.117	6	-.365	34
5	Totals:	max	1195.595	11	1798.47	18	1358.858	1						
6		min	-1195.595	5	637.619	64	-1358.853	7						

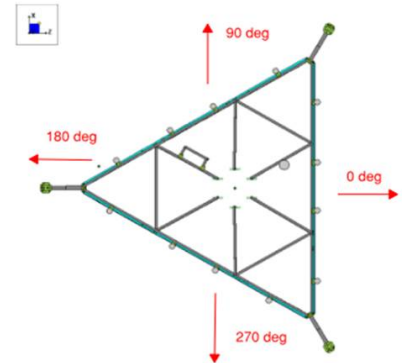
**Envelope AISC 15th(360-16): LRFD Steel Code Checks**

	Member	Shape	Code ...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [...]	phi*Pnt [...]	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	M1	HSS4X4X3	.246	0	11	.103	0	y	34	105376....	106812	12.662	12.662	2...	H1-1b
2	M2	PIPE 4.0	.001	1.125	7	.000	1.125		7	91742.236	93240	10.631	10.631	1	H1-1b
3	M4	HSS4X4X3	.177	5	12	.080	5	z	12	71423.92	106812	12.662	12.662	1...	H1-1b
4	MP1A	PIPE 2.0	.172	4.083	50	.028	4.083		6	14916.096	32130	1.872	1.872	3...	H1-1b
5	MP5A	PIPE 2.0	.199	4	12	.041	4.083		12	14916.096	32130	1.872	1.872	1...	H1-1b
6	MP2A	PIPE 2.0	.299	4	11	.062	2.917		7	14916.096	32130	1.872	1.872	1...	H1-1b
7	MP3A	PIPE 2.0	.170	4.083	32	.058	4.083		6	14916.096	32130	1.872	1.872	3...	H1-1b
8	MP4A	PIPE 2.0	.211	4	11	.078	7		6	14916.096	32130	1.872	1.872	1...	H1-1b
9	M17	HSS3X3X4	.228	0	30	.071	0	y	34	98393.432	101016	8.556	8.556	1...	H1-1b
10	M18	PIPE 3.0	.165	5.25	12	.075	5.25		23	36138.4	65205	5.749	5.749	1...	H1-1b

**I. Mount-to-Tower Connection Check**

Custom Orientation Required  Yes

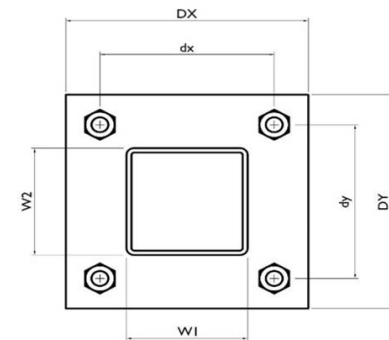
Nodes (labeled per Risa)	Orientation (per graphic of typical platform)
N1	0



Tower Connection Bolt Checks  Yes

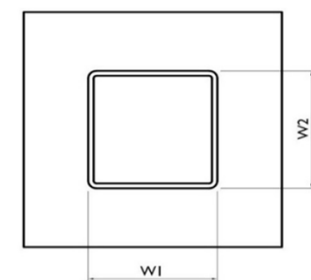
Bolt Orientation  Parallel

Bolt Quantity per Reaction:	4
$d_x$ (in) (Delta X of typ. bolt config. sketch):	3
$d_y$ (in) (Delta Y of typ. bolt config. sketch):	8
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	5.2
Required Shear Strength / bolt (kips):	0.5
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	<b>24.9%</b>



Tower Connection Baseplate Checks  Yes

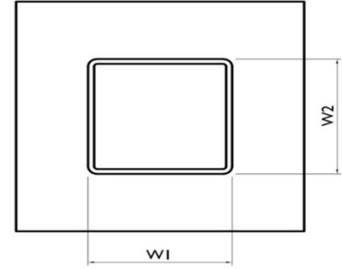
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, $D_x$ (in):	6
Plate Height, $D_y$ (in):	10
$W1$ (in):	4
$W2$ (in):	4
Member Thickness (in):	0.25
Stiffener location $a_1$ (in):	
Stiffener location $b_1$ (in):	
Stiffener location $a_2$ (in):	
Stiffener location $b_2$ (in):	
$F_y$ (ksi, plate):	36
Plate Thickness (in):	0.5
Length of Yield Line, $L_y$ (in):	4.90
Bolt Eccentricity, $e$ (in):	1.86
$M_u$ (kip-in):	9.58
$\Phi * M_n$ (kip-in):	9.92
Plate Bending Utilization:	<b>96.5%</b>



Tower Connection Weld Checks

Weld Shape:  
 Weld Stiffener Configuration:  
 Stiffener Notch Length, n (in):  
 Weld Size (1/16 in):  
 W1 (in):  
 W2 (in):  
 Weld Total Length (in):  
 Z<sub>x</sub> (in<sup>3</sup>/in):  
 Z<sub>y</sub> (in<sup>3</sup>/in):  
 J<sub>p</sub> (in<sup>4</sup>/in):  
 c<sub>x</sub> (in)  
 c<sub>y</sub> (in)  
 Required combined strength (kip/in):  
 Weld Capacity (kip/in):  
 Weld Utilization:

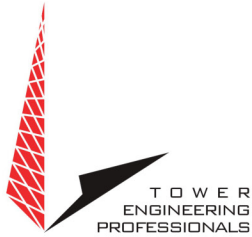
Yes
Rectangle
None
4
4
4
16.00
21.33
21.33
85.33
2.25
2.25
1.17
5.57
<b>21.1%</b>





# EXHIBIT 5





RF Design and Services  
326 Tryon Road  
Raleigh, North Carolina 27603  
(612) 965-8225  
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## Non-Ionizing Electromagnetic Radiation (NIER) Study

*Site Number:*

415121

*Site Name:*

Falls Village CT PCS CT

*Location:*

Falls Village, Connecticut

*Tenants:*

AT&T Mobility, & Verizon Wireless

*Prepared For:*

American Tower, Inc.  
Woburn, Massachusetts

August 28<sup>th</sup>, 2023

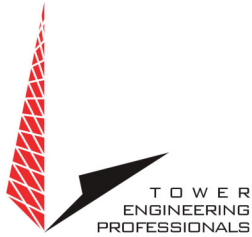
77119 P-405146

Prepared By:

Adam Carlson MS, CBRE, CPI  
Program Manager RF Design & Service  
Tower Engineering Professionals

Approved By:

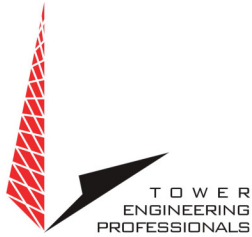
A circular professional engineer seal for the State of Connecticut, featuring the text "STATE OF CONNECTICUT", "SCOTT C. BRANTLEY", "1983", and "PROFESSIONAL ENGINEER". A blue ink signature is written over the seal, and the date "08/31/23" is written in blue ink below it.



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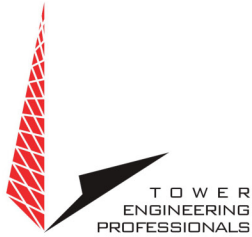
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## Disclaimer Notice

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## Non-Ionizing Electromagnetic Radiation (NIER) Study

415121 Falls Village CT PCS CT  
Falls Village, Connecticut

### INTRODUCTION

Tower Engineering Professionals RF Design & Services Division (TEP-RF) of Raleigh, North Carolina, has been retained by American Tower, Inc. (ATC), of Woburn, Massachusetts to evaluate the RF emissions compared to the Maximum Permissible Exposure (MPE) limit for facilities at this location. This evaluation uses compliance standards as outlined in Federal Communications Commission (FCC) document OET-65.

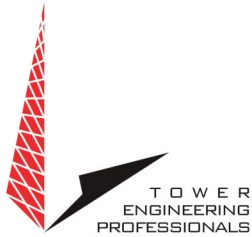
### SITE AND FACILITY CONSIDERATIONS

Site 415121 Falls Village CT PCS CT is located at 188 Route 7, in Falls Village, Connecticut at coordinates 41.944622, -73.360534. The support structure is a 151' monopine. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are AT&T Mobility (AT&T) & Verizon Wireless (VZW). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

### POWER DENSITY CALCULATIONS

Power densities were calculated based on FCC MPE limits for both General Population/Uncontrolled and Occupational/Controlled environments.

For the purpose of this study, a radius of 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.



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All data used in this study was collected from one or more of the following sources:

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 415121 Falls Village CT PCS CT.RF NIER Study sent 8/14/23.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

### SITE MITIGATION & CONTROL

In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the base of the tower and all compound access points to alert workers of potential exposure to RF fields while working on or near the antennae.

TEP recommends that all personnel working on this tower be trained in RF safety procedures and carry a personal RF monitor at all times.

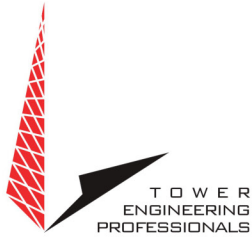
### COMPLIANCE DETERMINATION

This installation **IS** in compliance with current FCC MPE limits as described in FCC OET-65.

## APPENDIX 1 Site Photos



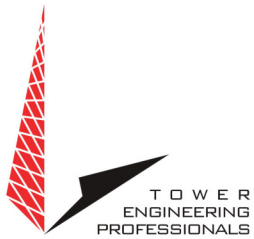
Aerial View of Site



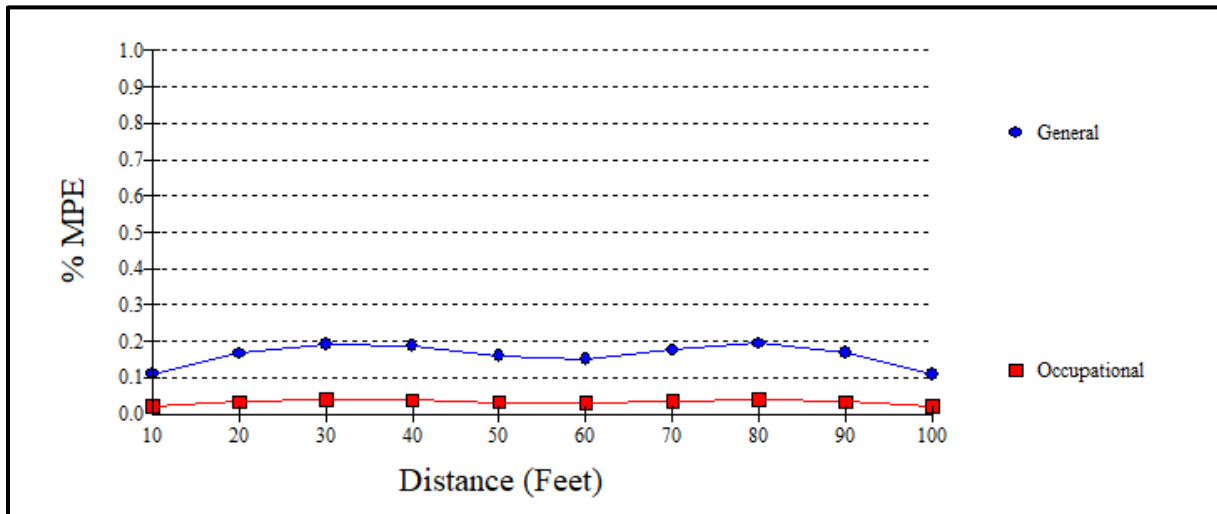
## Appendix 2.1 Antenna Inventory

415121 Falls Village CT PCS CT							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azimuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	Verizon	Samsung	MT6407-77A	3700/3800/3900	000	18286	149
2	Verizon	Samsung	MT6407-77A	3700/3800/3900	120	18286	149
3	Verizon	Samsung	MT6407-77A	3700/3800/3900	255	18286	149
4	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	000	26630	149
5	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	120	26630	149
6	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	255	26630	149
7	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	000	26630	149
8	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	120	26630	149
9	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	255	26630	149
10	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	000	26630	149
11	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	120	26630	149
12	Verizon	Commscope	SBNHH-1D65-B	700/800/1900/2100	255	26630	149
13	AT&T	CCI	HPA-65R-BUU	700/800/1900/2100	030	63835	135
14	AT&T	CCI	HPA-65R-BUU	700/800/1900/2100	180	63835	135
15	AT&T	CCI	HPA-65R-BUU	700/800/1900/2100	290	63835	135
16	AT&T	Scala	80010966	1900/2100	030	16872	135
17	AT&T	Scala	80010966	1900/2100	180	16872	135
18	AT&T	Scala	80010966	1900/2100	290	16872	135
19	AT&T	Scala	80010966	1900/2100	030	16872	135
20	AT&T	Scala	80010966	1900/2100	180	16872	135
21	AT&T	Scala	80010966	1900/2100	290	16872	135



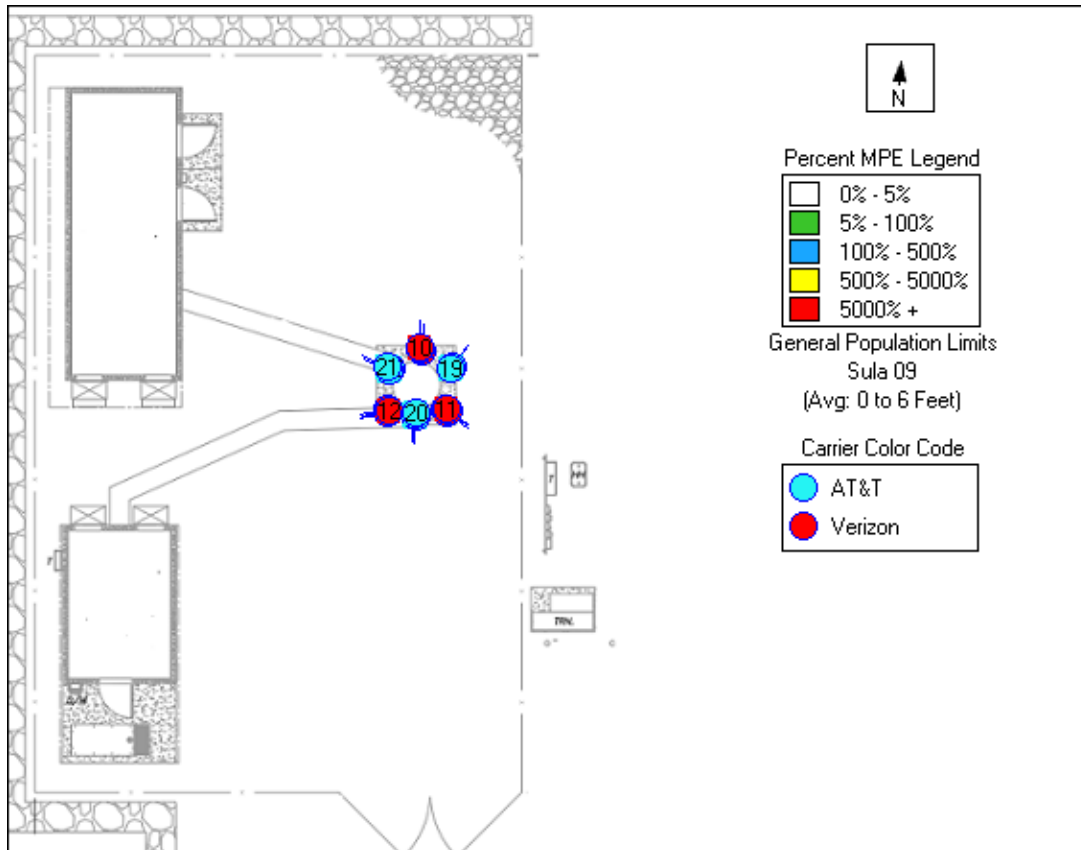


### Appendix 3.1 MPE Limit Study



Maximum Power Density (@80'):	0.0013 mW/cm <sup>2</sup>
General Population MPE (@80'):	0.1948%
Occupational MPE (@80'):	0.0390

## Appendix 3.2 MPE Limit Study





## Appendix 4 Information Pertaining to MPE Studies

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

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

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

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



MPE limits are defined in terms of power density (units of milliwatts per centimeter squared:  $\text{mW}/\text{cm}^2$ ), electric field strength (units of volts per meter:  $\text{V}/\text{m}$ ) and magnetic field strength (units of amperes per meter:  $\text{A}/\text{m}$ ). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

**Occupational/controlled exposure** limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

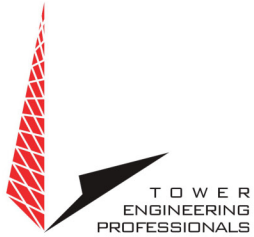
**General population/uncontrolled exposure** limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.



## Appendix 5 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.

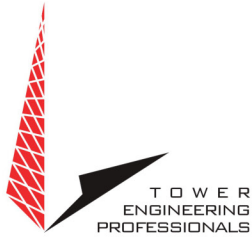


The FCC's limits for exposure at different frequencies are shown in the following Tables.

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 <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	900/F <sup>2</sup>	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

f = frequency

\* = Plane-wave equivalent power density



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

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

f = frequency

\* = Plane-wave equivalent power density

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

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



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

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65.

### **Cylindrical Model (Near Field Predictions)**

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

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

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length





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

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

Where:

S = Power Density

$\theta_{BW}$  = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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



### Spherical Model (Far Field Predictions)

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

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

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

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

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

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

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

# EXHIBIT 6



<p><b>DOCKET NO. 360</b> - Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 188 Route 7 South, Falls Village (Canaan), Connecticut.</p>	<p>} } }</p>	<p>Connecticut  Siting  Council</p>
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March 12, 2009

**Decision and Order**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Cellco Partnership d/b/a Verizon Wireless, hereinafter referred to as the Certificate Holder, for a telecommunications facility at 188 Route 7 South, Falls Village (Canaan), 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 Certificate Holder shall confer with the National Park Service, State Historic Preservation Office, and the Town of Canaan (Board of Selectmen and Planning and Zoning Commission) as to the appropriate design of the tower structure. Documentation of discussion and justification of a recommended tower design shall be submitted as part of the Development and Management Plan.
2. The tower shall be constructed, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of Verizon Wireless and other entities, both public and private, but such tower shall not exceed a height of 150 feet above ground level, or in the case of a monopine no taller than 157 feet. The height at the top of the antennas shall not exceed 153 feet above ground level.
3. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Canaan for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and
  - b) construction plans for site clearing, grading, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
4. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case

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

5. Upon the establishment of any new state or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
6. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
7. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Canaan public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
8. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.
9. Any request for extension of the time period referred to in Condition 8 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Canaan. Any proposed modifications to this Decision and Order shall likewise be so served.
10. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
11. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.
12. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation

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

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**

Cellco Partnership d/b/a Verizon Wireless

**Intervenor**

Dina Jaeger  
167 Beebe Hill Road  
Falls Village, CT 06031

**Representative**

Sandy Carter, Regulatory Manager  
Verizon Wireless  
99 East River Drive  
East Hartford, CT 06108

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597

**Representative**

Gabriel North Seymour P.C.  
200 Route 126  
Falls Village, CT 06031

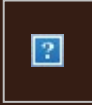
Whitney North Seymour, Jr.  
425 Lexington Avenue, Room 1721  
New York, NY 10017

# EXHIBIT 7



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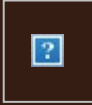
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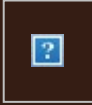
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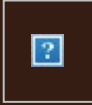
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<b>Ship To:</b>	VERIZON WIRELESS 1 VERIZON WAY BASKING RIDGE, NJ 079201025 US
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