Robinson+Cole

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

November 2, 2021

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
14-20 Isham Road, West Hartford, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the roof of the existing commercial building at the Property. The tower was approved by the Town of West Hartford ("Town") in August of 1997. Cellco's shared use of the tower was approved by the Siting Council ("Council") in September of 2008 (EM-VER-155-080729). A copy of the Town's approval and the Council's EM-VER-155-080729 approval are included in Attachment 1.

Cellco now intends to modify its facility by installing three (3) new Samsung MT6407-77A antennas on Cellco's existing T-Arm antenna mounts. A set of project plans showing Cellco's proposed facility modifications and specifications for the new antennas are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to West Hartford'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).

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas will be installed on Cellco's existing antenna mounts.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, 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 installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative power density table for Cellco's modified facility are included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

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

6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing tower and antenna mounts, with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:

Shari Cantor, Mayor for the Town of West Hartford
Todd Dumais, Town Planner
M&R Gassner Family LLC, the Property Owner
Alex Tyurin, Verizon Wireless

ATTACHMENT 1

**DEPARTMENT OF
COMMUNITY SERVICES**

August 11, 1997

Michael Gassner
10 Isham Road
West Hartford, CT 06107

Subject: 14-20 Isham Road - Site Plan Approval

Dear Mr. Gassner:

Donald R. Foster, Town Planner, has approved the site plan application for the subject property with the following conditions.

1. Site Plan approval is limited to 1,000 square feet of office area to be occupied by "General Communications" with a rooftop communication tower as an accessory use. The tower should be no greater than 100 feet in height.

2. The remaining portion of the building, approximately 13,500 square feet, should remain vacant until such time that a comprehensive site plan is submitted demonstrating compliance with the zoning regulations for additional uses.

Please submit to the Planning Office one (1) mylar of the approved plan, signed and sealed by the professional responsible for preparing the plan.

If you have comments or questions, please call me at 523-3123.

Very truly yours,

mla

Mila Limson
Senior Planner

c: Ron Van Winkle, Director of Community Services
Don Foster, Town Planner
Pat Alair, Asst. Corp. Counsel

14-20Isham

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Internet: ct.gov/csc

Daniel F. Caruso
Chairman

September 16, 2008

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

RE: **EM-VER-155-080729** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 14-20 Isham Road, West Hartford, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies, with the following conditions:

- A letter and/or plans sealed by a Professional Engineer duly licensed in the State of Connecticut shall be provided to the Council prior to the installation of the equipment shelter to certify that the building can support the equipment shelter on the roof.
- The applicant shall take steps to reduce the post-construction percent capacity (regarding the tower mast shear reaction) to not more than 100 percent; and
- A signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that a post-construction percent capacity (regarding the tower mast shear reaction) of not more than 100 percent have been achieved.

The proposed modifications are to be implemented as specified here and in your notice dated July 29, 2008, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/jb

c: The Honorable Scott Slifka, Mayor, Town of West Hartford
Barry M. Feldman, Town Manager, Town of West Hartford
Mila Limson, Town Planner, Town of West Hartford
M&R Gassner Family II, LLC

ATTACHMENT 2

WEST HARTFORD CENTER CT

14-20 ISHAM ROAD
WEST HARTFORD, CT 06107

FUZE PROJECT ID: 16273383

PSLC: 535840

VICINITY MAP N.T.S.

ENGINEER

DEWBERRY ENGINEERS INC.
99 SUMMER ST.
SUITE 700
BOSTON, MA 02110

PHONE # (617) 531-0800

CONTACT: BENJAMIN REVETTE, PE

CONSTRUCTION

VERIZON WIRELESS
118 FLANDERS ROAD
WESTBOROUGH, MA 01581-3956

COORDINATES*:

LATITUDE: 41° 45' 41.60" N
LONGITUDE: 72° 44' 25.35" W
*PER RFDS

GROUND ELEVATION*:

93'±
*PER GOOGLE EARTH

PROJECT INFORMATION

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10073521
VZW LOCATION CODE (PSLC):	535840
FUZE NUMBER:	16273383
PMI AND REQUIREMENTS ALSO IMBEDDED IN MOUNT ANALYSIS REPORT	
MOUNT MODIFICATION REQUIRED?	YES
VZW APPROVED SMART KIT VENDORS	
REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VZW SMART KIT APPROVED VENDORS	
MOUNT MODIFICATION DRAWINGS:	PROJECT# 21777247A DATED 06/23/2021

CONTRACTOR PMI REQUIREMENTS

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

A.D.A. COMPLIANCE:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

1. MODIFY EXISTING ANTENNA MOUNTS IN ACCORDANCE WITH MOUNT MODIFICATION DRAWINGS BY MASER CONSULTING.
2. REMOVE (3) SPARE ANTENNAS.
3. RELOCATE (3) CBRS RRHS ANTENNAS.
4. INSTALL (3) MT6407-77A WITH INTEGRATED RRH ANTENNA/RADIO UNITS.
5. INSTALL NEW JUMPER CABLING BETWEEN OVPS AND ANTENNAS AS REQUIRED.

NOTE:

1. SCOPE OF WORK BASED ON ANTENNA REC FOR WEST HARTFORD CENTER CT DATED 09/20/2021. VERIFY SCOPE OF WORK WITH FINAL RFDS PRIOR TO CONSTRUCTION.
2. THIS PROJECT ASSUMES THAT THE SCOPE OF WORK PROPOSED ON PREVIOUS CONSTRUCTION DRAWINGS BY DEWBERRY ENGINEERS INC. HAVE BEEN CONSTRUCTED IN ACCORDANCE TO THE PLAN. IF THIS IS NOT THE CASE THE CONTRACTOR TO NOTIFY DEWBERRY ENGINEERS INC. & VERIZON WIRELESS CM PRIOR TO CONSTRUCTION.

SCOPE OF WORK

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
C-1	ROOF PLAN
C-2	ELEVATION
C-3	EXISTING & PROPOSED ANTENNA PLANS
C-4	CONSTRUCTION DETAILS
C-5	SMART TOOL SECTOR PLANS & ELEVATION DETAILS
C-6	FINAL EQUIPMENT CONFIGURATION

SHEET INDEX

verizon WIRELESS

VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

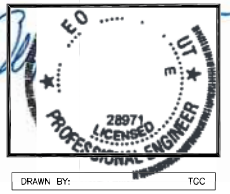
WEST HARTFORD CENTER CT

ANTMO DRAWINGS

1	10/20/21	FOR SUBMITTAL
0	08/26/21	FOR SUBMITTAL
A	08/13/21	FOR REVIEW

Dewberry

Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



DRAWN BY:	TCC
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121956
SITE NUMBER:	

535840

SITE ADDRESS

14-20 ISHAM ROAD
WEST HARTFORD,
CT 06107

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL CONSTRUCTION NOTES :

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND COMPLY WITH VERIZON WIRELESS SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT "DIG SAFE" (888-344-7233) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. 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.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY ENGINEER, VERIZON WIRELESS PROJECT CONSTRUCTION MANAGER, AND LANDLORD IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. ALL ROOF WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED ROOFING CONTRACTOR IN COORDINATION WITH ANY CONTRACTOR WARRANTING THE ROOF TO ENSURE THAT THE WARRANTY IS MAINTAINED.
17. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
18. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
19. CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH THREE AS-BUILT SETS OF DRAWINGS UPON COMPLETION OF WORK.
20. ANTENNAS AND CABLES ARE TYPICALLY PROVIDED BY VERIZON WIRELESS. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH PROJECT MANAGER TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED BY VERIZON WIRELESS. ALL ITEMS NOT PROVIDED BY VERIZON WIRELESS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED BY VERIZON WIRELESS.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH VERIZON WIRELESS PROJECT MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY VERIZON WIRELESS. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
22. GENERAL CONTRACTOR SHALL HAVE A LICENSED HVAC CONTRACTOR START THE HVAC UNITS, SYNCHRONIZE THE THERMOSTATS, ADJUST ALL SETTINGS ON EACH UNIT ACCORDING TO VERIZON WIRELESS CONSTRUCTION MANAGER'S SPECIFICATIONS, AND THOROUGHLY TEST AND BALANCE EACH UNIT TO ENSURE PROPER OPERATION PRIOR TO TURNING THE SITE OVER TO OWNER.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. UNLESS OTHERWISE NOTED VERIZON WIRELESS SHALL PROVIDE ALL REQUIRED RF MATERIAL FOR CONTRACTOR TO INSTALL, INCLUDING ANTENNAS, TMA'S, BIAS-T'S, COMBINERS, PDU, DC BLOCKS, SURGE ARRESTORS, GPS ANTENNA, GPS SURGE ARRESTOR, COAXIAL CABLE.
26. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE PROVIDED BY VERIZON WIRELESS FOR INSTALLATION BY CONTRACTOR.
27. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
28. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
29. 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.
30. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START, MORE SPECIFICALLY OR BEFORE; SEALING ANY FLOOR, WALL OR ROOF PENETRATION, FINAL UTILITY CONNECTIONS, POURING CONCRETE, BACKFILLING UTILITY TRENCHES AND STRUCTURAL POST OR MOUNTING CONNECTIONS, FOR ENGINEERING REVIEW AND INSPECTION.
31. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
32. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER AND LANDLORD.
33. ALL DISRUPTIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.

CODE SPECIFICATIONS:

1. ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

   2018 CONNECTICUT STATE BUILDING CODE WITH THE FOLLOWING APPLICABLE CODES:
   2015 INTERNATIONAL RESIDENTIAL CODE (IRC)
   2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
   2015 INTERNATIONAL BUILDING CODE (IBC)
   2015 INTERNATIONAL MECHANICAL CODE (IMC)
   2017 NATIONAL ELECTRICAL CODE (NEC) (NFPA 70)
   2015 INTERNATIONAL PLUMBING CODE (IPC)
   2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

   IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.
2. ALL STRUCTURAL WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL, 13TH EDITION (AISC 13TH ED.)
3. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI 301) SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
4. ALL REINFORCING STEEL WORK TO BE DONE IN ACCORDANCE WITH THE (ACI 315) MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.

GROUNDING NOTES:

1. GROUNDING SHALL COMPLY WITH NEC ART. 250.
2. GROUNDING CONDUCTORS SHALL BE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR INDOOR USE.
3. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
4. ROUTE GROUNDING CONNECTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NOT BE BENT AT RIGHT ANGLE. ALWAYS MAKE 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY.
5. CONNECTIONS TO GROUNDING BAR SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
6. TEST COMPLETED GROUNDING SYSTEM AND RECORD RESISTANCE VALUES FOR PROJECT CLOSE-OUT DOCUMENTATION. GROUND RESISTANCE SHALL NOT EXCEED 5 OHMS.
7. GROUNDING CONDUCTORS BETWEEN MGB AND WATERMAIN SHALL BE #2/0. BONDING JUMPERS FROM METALLIC SURFACES SHALL BE #2 MINIMUM. ALL GROUND CONDUCTORS AND BONDING JUMPERS SHALL BE SOFT DRAWN ANNEALED, TINNED, BARE STRANDED COPPER WIRE. COAXIAL CABLES SHALL BE GROUNDED AT A MINIMUM OF TWO LOCATIONS USING VERIZON PROVIDED GROUNDING KITS. EXACT LOCATIONS SHALL BE FINALIZED IN THE FIELD BY THE CONSTRUCTION MANAGER.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES, AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

ASTM A-992, GRADE 50	ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE.
ASTM A-36	ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
ASTM A-500, GRADE B	HSS SECTION (SQUARE, RECTANGULAR, ROUND)
ASTM A-325, TYPE SC OR N	ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS.
F1554, GRADE 36	ALL ANCHORS BOLTS, UNLESS NOTED OTHERWISE.
ASTM A-53, GRADE B	STEEL PIPE

3. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 14TH EDITION. WHERE WELD LENGTH IS NOT INDICATED, USE FULL LENGTH WELD. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
4. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA.) SUPPLIED WITH A NUT AND WASHER UNDER TURNED END AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
7. USE PRECAUTIONS & PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
8. ALL EXISTING BEAM AND COLUMN DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
9. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
10. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123/A123M-00 HOT-DIP GALVANIZED FINISH UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED. REPAIR DAMAGED GALVANIZED COATINGS ON GALVANIZED ITEMS WITH GALVANIZED REPAIR PAINT ACCORDING TO ASTM A780 AND MANUFACTURER'S WRITTEN INSTRUCTIONS, PRIOR TO COMPLETION OF WORK. TOUCHUP ALL DAMAGED GALVANIZED STEEL WITH APPROVED COLD ZINC, "GALVANOX", "DRY GALV", "ZINC-IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCHUP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.
11. ALL WELDED COMPONENTS TO BE SHOP WELDED PRIOR TO INSTALLATION. NO WELDING ACTIVITIES IS PERMITTED DURING INSTALLATION OF PROPOSED EQUIPMENTS AND/OR HARDWARE ON SITE.

verizon WIRELESS

VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

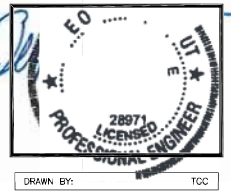
WEST HARTFORD CENTER CT

ANTMO DRAWINGS

1	10/20/21	FOR SUBMITTAL
0	08/26/21	FOR SUBMITTAL
A	08/13/21	FOR REVIEW

Dewberry

Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



DRAWN BY:	TCC
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121956
SITE NUMBER:	

535840

SITE ADDRESS

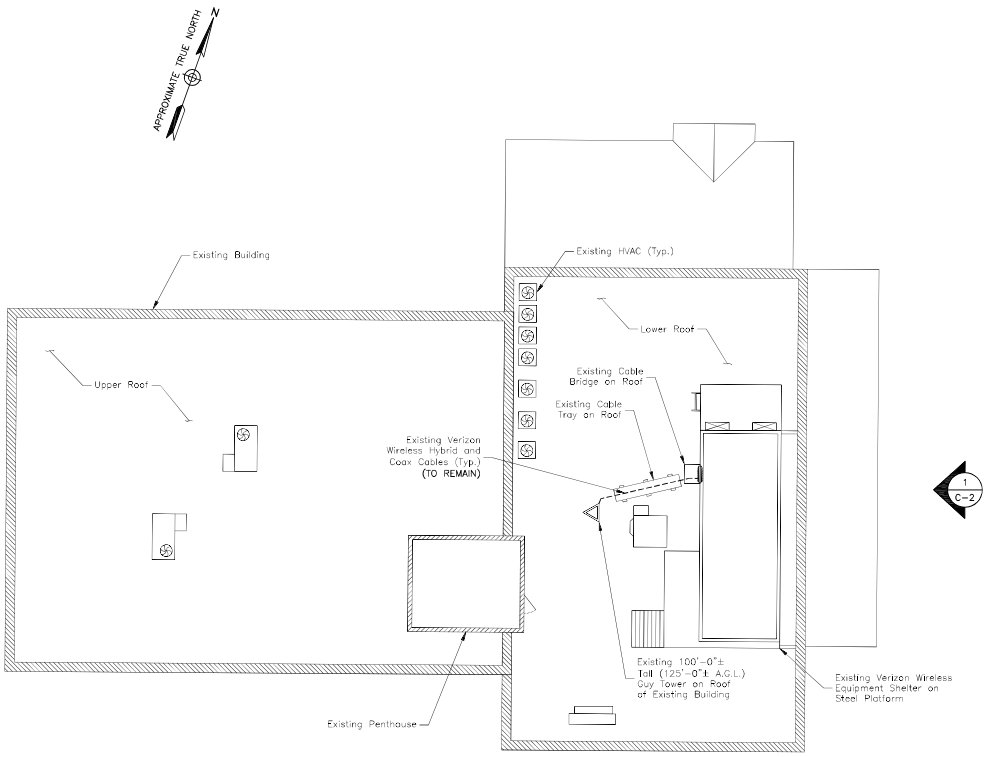
14-20 ISHAM ROAD
WEST HARTFORD,
CT 06107

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1



ROOF PLAN

SCALE: 1"=20' FOR 11"x17"
1"=10' FOR 22"x34"

1

0' 10' 20'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA MAPPING.
4. MOUNT ALL ANTENNAS, COAX, RRH'S, OVP BOXES, ETC. IN ACCORDANCE WITH MOUNT STRUCTURAL ANALYSIS COMPLETED BY MASER CONSULTING. DATED 09/28/21, MOUNT MODIFICATION DRAWINGS COMPLETED BY MASER CONSULTING DATED 06/23/21 & TOWER STRUCTURAL ANALYSIS COMPLETED BY DEWBERRY ENGINEERS INC. DATED 10/20/21.
5. REUSE EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY & REPLACE AS NECESSARY.
6. A.G.L. = ABOVE GROUND LEVEL
7. THIS PROJECT ASSUMES THAT THE SCOPE OF WORK PROPOSED REV.3 CONSTRUCTION DRAWINGS BY DEWBERRY ENGINEERS INC. DATED 04/08/20 HAVE BEEN CONSTRUCTED IN ACCORDANCE TO PLAN. IF THIS IS NOT THE CASE THE CONTRACTOR TO NOTIFY DEWBERRY ENGINEERS INC. & VERIZON WIRELESS CM PRIOR TO CONSTRUCTION.

verizon WIRELESS

VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

WEST HARTFORD CENTER CT

ANTMO DRAWINGS

1	10/20/21	FOR SUBMITTAL
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99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

CONNECTICUT 28971 LICENSED PROFESSIONAL ENGINEER

DRAWN BY:	TCC
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121956
SITE NUMBER:	

535840

SITE ADDRESS

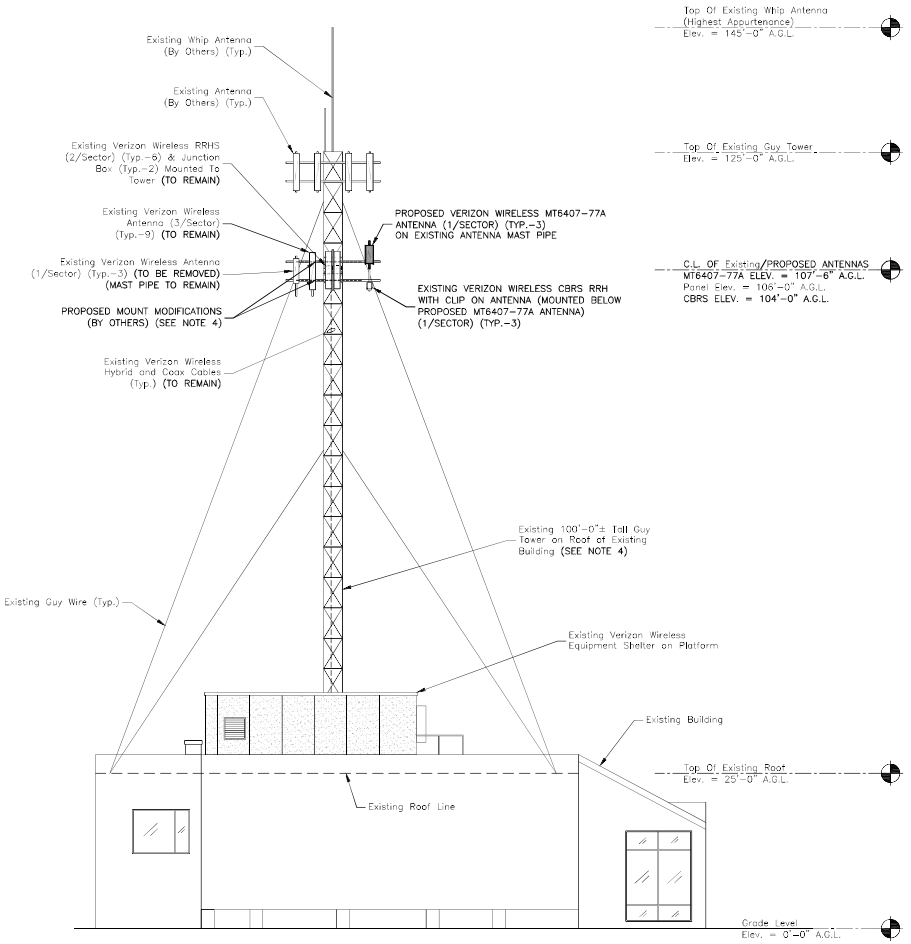
14-20 ISHAM ROAD
WEST HARTFORD,
CT 06107

SHEET TITLE

ROOF PLAN

SHEET NUMBER

C-1



ELEVATION 1

SCALE: 3/64"=1' FOR 11"x17"
3/32"=1' FOR 22"x34"

0' 8' 16' 24'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA MAPPING.
4. MOUNT ALL ANTENNAS, COAX, RRH'S, OVP BOXES, ETC. IN ACCORDANCE WITH MOUNT STRUCTURAL ANALYSIS COMPLETED BY MASER CONSULTING, DATED 09/28/21, MOUNT MODIFICATION DRAWINGS COMPLETED BY MASER CONSULTING DATED 06/23/21 & TOWER STRUCTURAL ANALYSIS COMPLETED BY DEWBERRY ENGINEERS INC. DATED 10/20/21.
5. REUSE EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY & REPLACE AS NECESSARY.
6. A.G.L. = ABOVE GROUND LEVEL
7. THIS PROJECT ASSUMES THAT THE SCOPE OF WORK PROPOSED REV.3 CONSTRUCTION DRAWINGS BY DEWBERRY ENGINEERS INC. DATED 04/06/20 HAVE BEEN CONSTRUCTED IN ACCORDANCE TO PLAN. IF THIS IS NOT THE CASE THE CONTRACTOR TO NOTIFY DEWBERRY ENGINEERS INC. & VERIZON WIRELESS CM PRIOR TO CONSTRUCTION.

verizon WIRELESS

VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

WEST HARTFORD CENTER CT

ANTMO DRAWINGS

1	10/20/21	FOR SUBMITTAL
0	08/26/21	FOR SUBMITTAL
A	08/13/21	FOR REVIEW

Dewberry

Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

CONNECTICUT 28971 LICENSED PROFESSIONAL ENGINEER

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535840

SITE ADDRESS

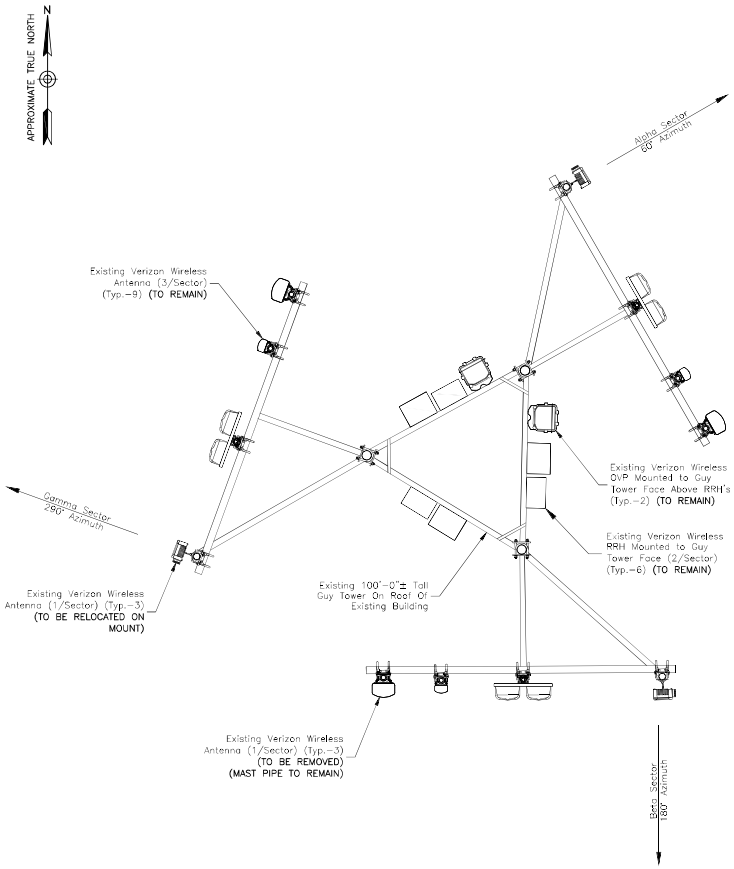
14-20 ISHAM ROAD
WEST HARTFORD,
CT 06107

SHEET TITLE

ELEVATION

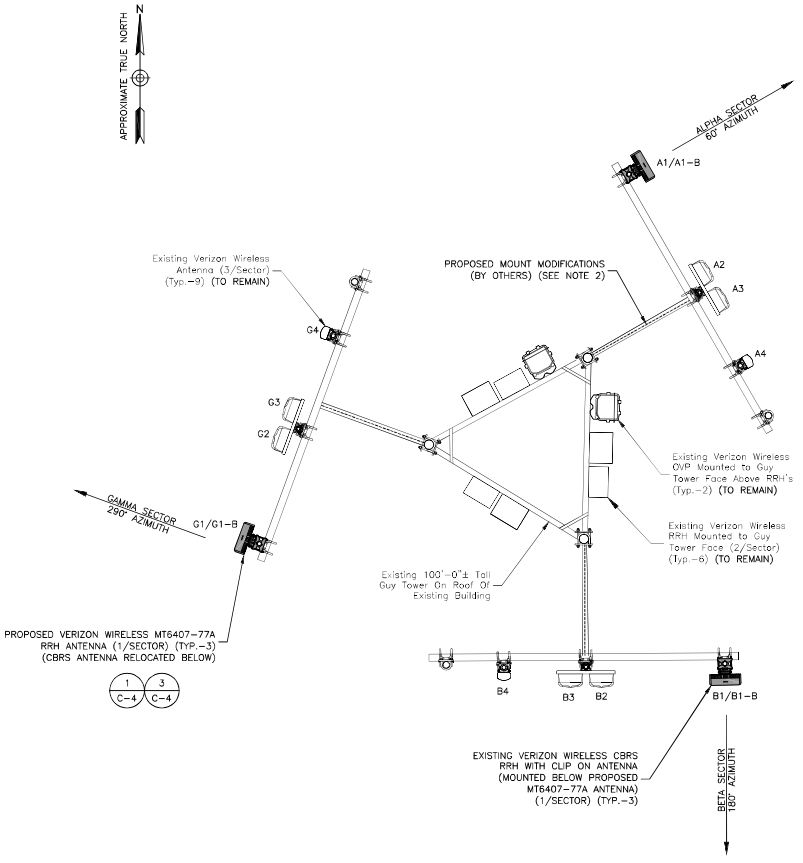
SHEET NUMBER

C-2



EXISTING ANTENNA PLAN 1

SCALE: N.T.S.



PROPOSED ANTENNA PLAN 2

SCALE: N.T.S.

NOTES:

1. AZIMUTHS BASED ON TRUE NORTH.
2. MOUNT ALL ANTENNAS, COAX, RRH'S, OVP BOXES, ETC. IN ACCORDANCE WITH MOUNT STRUCTURAL ANALYSIS COMPLETED BY MASER CONSULTING, DATED 09/28/21, MOUNT MODIFICATION DRAWINGS COMPLETED BY MASER CONSULTING DATED 06/23/21 & TOWER STRUCTURAL ANALYSIS COMPLETED BY DEWBERRY ENGINEERS INC. DATED 10/20/21.

verizon WIRELESS

VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

WEST HARTFORD CENTER CT

ANTMO DRAWINGS		
1	10/20/21	FOR SUBMITTAL
0	08/26/21	FOR SUBMITTAL
A	08/13/21	FOR REVIEW

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BOSTON, MA 02110
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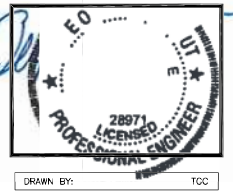

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REVIEWED BY:	CDH
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PROJECT NUMBER:	50121487
JOB NUMBER:	50121956
SITE NUMBER:	

535840

SITE ADDRESS

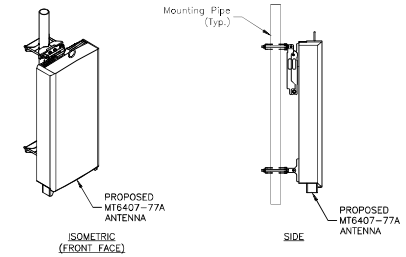
14-20 ISHAM ROAD
WEST HARTFORD,
CT 06107

SHEET TITLE

EXISTING & PROPOSED
ANTENNA PLANS

SHEET NUMBER

C-3



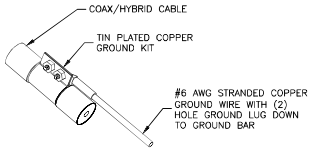
MODEL:	MT6407-77A
DIMENSIONS:	35.1"H X 16.1"W X 5.5"D (NOT TO EXCEED)
WEIGHT:	87.1 LBS (NOT TO EXCEED)

NOTE:

1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. USE APPROPRIATE MOUNTING HARDWARE FOR CONSTRUCTION TYPE.

MT6407-77A ANTENNA DETAILS 1

SCALE: N.T.S.

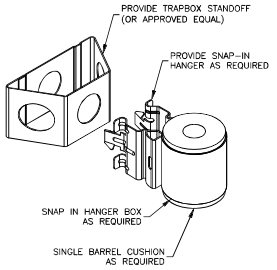


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TIN PLATED COPPER WITH TWO-HOLE LUG, SIZE PER COAX DIAMETER.
3. WEATHER SEAL GROUND KIT PER CARRIER REQUIREMENTS.
4. COAX CABLE GROUND KIT LOCATION & QUANTITY SHALL BE PER CARRIER SPECIFICATIONS & STANDARDS.

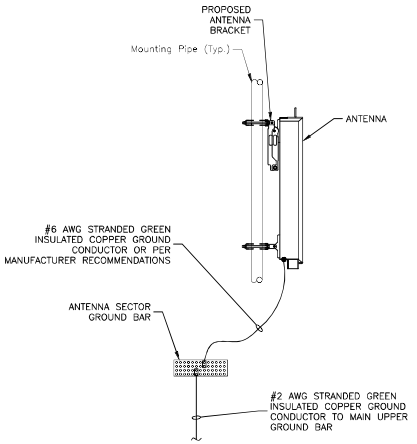
COAX/HYBRID GROUNDING DETAIL 3

SCALE: N.T.S.



JUMPER MOUNT 2

SCALE: N.T.S.



NOTES:

1. VERIFY EXISTING GROUNDING SYSTEM IS INSTALLED PER VERIZON WIRELESS STANDARDS.
2. BOND NEW EQUIPMENT INTO EXISTING GROUND SYSTEM IN ACCORDANCE WITH VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

TYPICAL ANTENNA GROUNDING DETAIL 4

SCALE: N.T.S

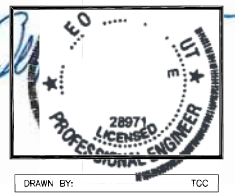
verizon WIRELESS

VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

WEST HARTFORD CENTER CT

ANTMO DRAWINGS		
1	10/20/21	FOR SUBMITTAL
0	08/26/21	FOR SUBMITTAL
A	08/13/21	FOR REVIEW

Dewberry
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310



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SITE NUMBER:	

535840

SITE ADDRESS

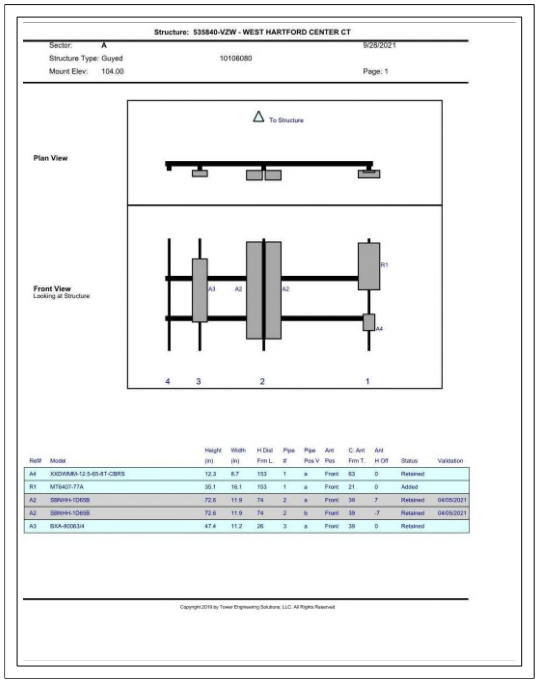
14-20 ISHAM ROAD
WEST HARTFORD,
CT 06107

SHEET TITLE

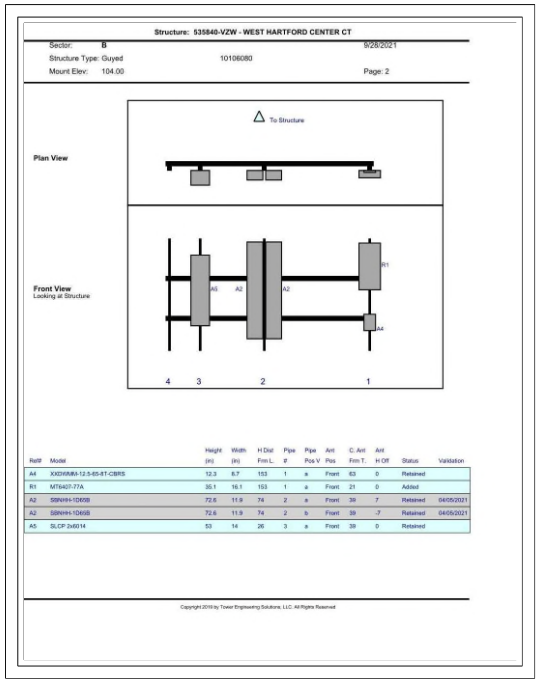
CONSTRUCTION DETAILS

SHEET NUMBER

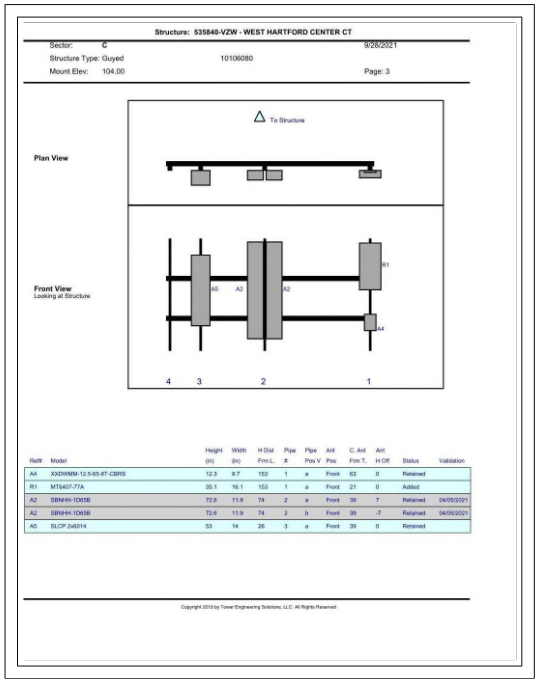
C-4



ALPHA SECTOR
SCALE: N.T.S.
1



BETA SECTOR
SCALE: N.T.S.
2



GAMMA SECTOR
SCALE: N.T.S.
3

NOTE:

1. SECTOR PLANS AND ELEVATIONS TAKEN FROM MOUNT ANALYSIS: SMART TOOL# 10044612, MASER PROJECT # 21777247A, FUZE # 16273383 BY MASER CONSULTING P.A. DATED 09/28/2021.

verizon WIRELESS

VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

WEST HARTFORD CENTER CT

ANTMO DRAWINGS

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Dewberry

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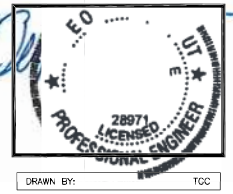

DRAWN BY:	TCC
REVIEWED BY:	CDH
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50121956
SITE NUMBER:	

535840

SITE ADDRESS

14-20 ISHAM ROAD
WEST HARTFORD,
CT 06107

SHEET TITLE

SMART TOOL SECTOR PLANS & ELEVATION DETAILS

SHEET NUMBER

C-5

FINAL EQUIPMENT CONFIGURATION

SECTOR	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (QTY./MODEL)	CENTERLINE	AZIMUTH	OVP	HYBRID CABLE TYPE	FEED LINE LENGTH*
ALPHA	A1	5G	(P) MT6407-77A	SAMSUNG	–	107'-6"±	60°	(2) (E) 6-OVP BOX TO REMAIN	(2) (E) 6X12 HYBRID CABLE TO REMAIN	130'±
	A1-B	LTE CBRS	(E) XXDWMM-12.5-65-8T	SAMSUNG	(1) (E) RT4401-48A	104'-0"±	60°			
	A2	LTE 700/850	(E) SBNHH-1D65B	ANDREW	(1) (E) B5/B13 RFV01U-D2A	106'-0"±	60°			
	A3	LTE 1900/AWS	(E) SBNHH-1D65B	ANDREW	(1) (E) B2/B66A RFV01U-D1A	106'-0"±	60°			
	A4	CDMA 850	(E) BXA-80063/4	ANTEL	–	106'-0"±	60°			
BETA	B1	5G	(P) MT6407-77A	SAMSUNG	–	107'-6"±	180°			
	B1-B	LTE CBRS	(E) XXDWMM-12.5-65-8T	SAMSUNG	(1) (E) T4401-48A	104'-0"±	180°			
	B2	LTE 700/850	(E) SBNHH-1D65B	ANDREW	(1) (E) B5/B13 RFV01U-D2A	106'-0"±	180°			
	B3	LTE 1900/AWS	(E) SBNHH-1D65B	ANDREW	(1) (E) B2/B66A RFV01U-D1A	106'-0"±	180°			
	B4	CDMA 850	(E) SLCP 2X6014	SWEDCOM	–	106'-0"±	180°			
GAMMA	G1	5G	(P) MT6407-77A	SAMSUNG	–	107'-6"±	290°			
	G1-B	LTE CBRS	(E) XXDWMM-12.5-65-8T	SAMSUNG	(1) (E) T4401-48A	104'-0"±	290°			
	G2	LTE 700/850	(E) SBNHH-1D65B	ANDREW	(1) (E) B5/B13 RFV01U-D2A	106'-0"±	290°			
	G3	LTE 1900/AWS	(E) SBNHH-1D65B	ANDREW	(1) (E) B2/B66A RFV01U-D1A	106'-0"±	290°			
	G4	CDMA 850	(E) SLCP 2X6014	SWEDCOM	–	106'-0"±	290°			

*CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE BASE EQUIPMENT OVP TO SECTOR OVP. NO HYBRID CABLES ARE PROPOSED UNDER CURRENT SCOPE OF WORK.

(E) = Existing
(P) = PROPOSED

FINAL EQUIPMENT CONFIGURATION (1)
SCALE: N.T.S.

verizon WIRELESS

VERIZON WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

WEST HARTFORD CENTER CT

ANTMO DRAWINGS

1	10/20/21	FOR SUBMITTAL
0	08/26/21	FOR SUBMITTAL
A	08/13/21	FOR REVIEW

Dewberry
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310

CONNECTICUT 28971 LICENSED PROFESSIONAL ENGINEER

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SITE NUMBER:	

535840

SITE ADDRESS

14-20 ISHAM ROAD
WEST HARTFORD,
CT 06107

SHEET TITLE

FINAL EQUIPMENT CONFIGURATION

SHEET NUMBER

C-6

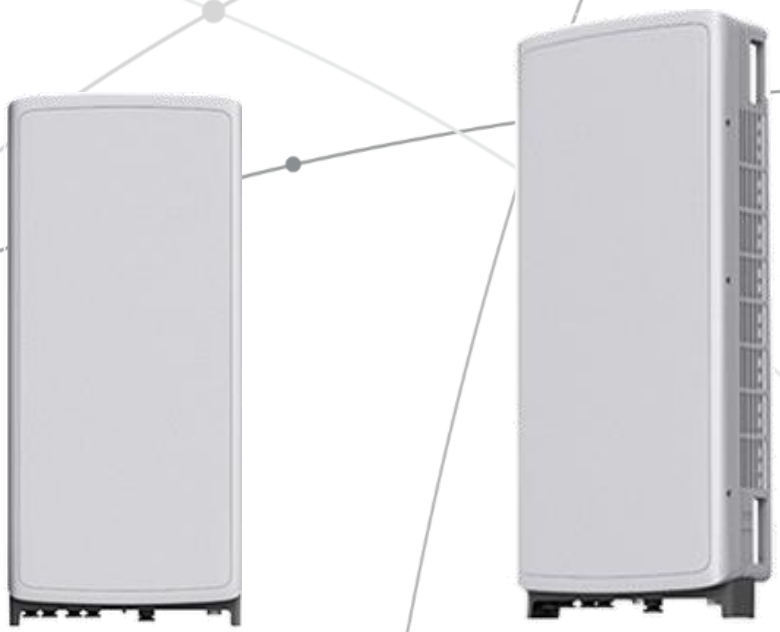
SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

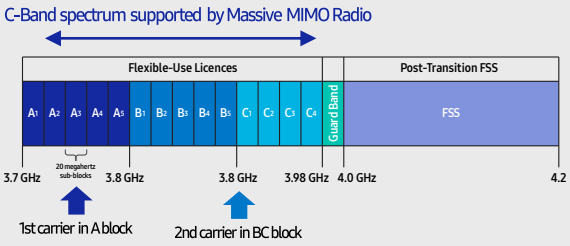


Points of Differentiation

Wide Bandwidth

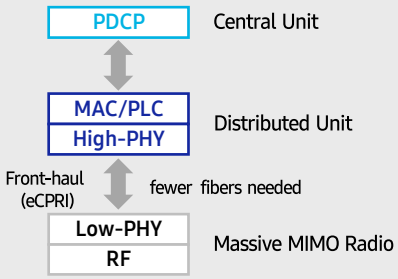
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

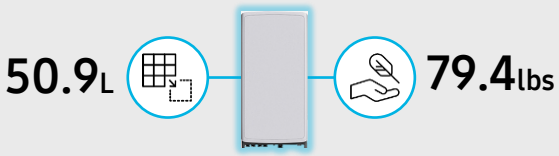
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO(Multi-user MIMO) , it enables to increase user throughput by minimizing interference.

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

ATTACHMENT 3

	General	Power	Density					
Site Name: West Hartford Ctr								
Tower Height: Verizon @ 106ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
Nextel	12	100	123	851	0.0315	0.5673	0.56%	
Clearwire	2	724	114	2495	0.0447	1.0000	0.45%	
Clearwire	1	1239	110	23000	0.0412	1.0000	0.41%	
Clearwire	1	1239	110	23000	0.0412	1.0000	0.41%	
Clearwire	1	2060	119	18000	0.0580	1.0000	0.58%	
MetroPCS AWS	3	727	132	2130	0.0494	1.0000	0.49%	
MetroPCS LTE	1	866	107	2130	0.0305	1.0000	0.31%	
VZW 700	**4**	**698**	**106**	**751**	**0.0089**	**0.5007**	**1.78%**	
VZW CDMA	**2**	**402**	**106**	**869**	**0.0026**	**0.5793**	**0.44%**	
VZW Cellular	**4**	**826**	**106**	**869**	**0.0106**	**0.5793**	**1.83%**	
VZW PCS	**4**	**1593**	**106**	**1980**	**0.0204**	**1.0000**	**2.04%**	
VZW AWS	**4**	**1581**	**106**	**2125**	**0.0202**	**1.0000**	**2.02%**	
VZW CBAND	**4**	**6531**	**106**	**3730**	**0.0836**	**1.0000**	**8.36%**	
VZW CBRS	**4**	**12**	**106**	**3625**	**0.0002**	**1.0000**	**0.02%**	
								19.70%
* Source: Siting Council								

ATTACHMENT 4

Structural Analysis Report For a 100-ft Guyed Tower

Site Name: West Hartford Center CT
Site No.: 535840
Fuze#: 16273383
Site Address: 14-20 Isham Road
West Hartford, CT 06107
Hartford County

Prepared for:
Verizon Wireless
118 Flanders Road
Westborough, MA 01581-3956

October 20, 2021
Rev. 2

Prepared by:
Dewberry Engineers Inc.
99 Summer Street, Suite 700
Boston, MA 02110
Dewberry Project Number: 50121956

Tower Controlling Member	% Capacity	Result
Tower Components	89.2	Sufficient
Foundation	-	Sufficient

Tower/Foundation Previously Reinforced?	YES ☐ / NO ☒
Previous Reinforcement Verified?	YES ☐ / NO ☐ Date: **N/A**
Additional Reinforcement Required?	YES ☐ / NO ☒

Prepared by:

Ashley Deuschle, E.I.T.
Staff Engineer

Reviewed by:

Brandon Kelsey, P.E.
Structural Engineer

Approved by:

Benjamin Revette, P.E.
Associate Vice President

TABLE OF CONTENTS

1.0 INTRODUCTION AND PROJECT SUMMARY

The objective of this report is to assess the proposed installation of new antennas and support equipment on an existing 100-ft. steel guy tower located in Hartford, CT. This report is limited to the analysis of the tower only. The telecommunication upgrade is proposed by Verizon Wireless at a centerline of 107.5 ft and the tower base elevation is set 25' above ground level.

Please refer to the appendices for the structural analysis package regarding the structural analysis.

2.0 CODES, STANDARDS, AND REFERENCES

The structural analysis was completed according to the provisions of the following Codes and standards:

- *2018 Connecticut State Building Code – Amendments to IBC 2015*
- *International Building Code (IBC) 2015,* International Code Council
- ASCE 7-10 Minimum design Loads for Buildings and Other Structures, American Society of Civil Engineers
- *TIA-222-G-4, Structural Standard for Antenna Supporting Structures and Antennas*
- *Steel Construction Manual 14th Ed,* American Institute of Steel Construction
- *Site Visit by Dewberry Engineers Inc. on 02/24/2021*

The analysis was in compliance with the minimum requirements as specified by TIA-222-G for the County of Hartford, CT under the following load parameters:

Risk Category:	II	
Exposure Category:	C	IBC 2015
Design Ultimate Wind Speed	125 mph	2018 CT Bldg. Code
Design Basic Wind Speed	97 mph	Except. #5, Sect. 1609.3.1, Eqn. 16-33, IBC 15
Design Ice Wind Speed:	50 mph	ASCE 7-10 Hazard Tool
Design Ice Thickness:	1.00 in.	ASCE 7-10 Hazard Tool
Serviceability Wind Speed:	60 mph	Sect. 2.8.3, TIA Rev G

The tower geometry, member sizes, existing antenna loading, and foundation design loading were referenced from the following reports:

- Previous structural tower analysis by Dewberry Engineers dated March 18, 2020.
- Structural mount analysis & mod drawings by Maser Consulting dated September 28, 2021.
- Radio Frequency Design Sheet (RFDS Name: West Hartford Center CT) by Verizon Wireless dated September 20, 2021.
- Latest Construction Drawings by Dewberry Engineers, Inc.

3.0 EXISTING AND PROPOSED TOWER LOADING

3.1 Existing (includes Reserved, if applicable) Antenna and Cable Information

Mounting Elevation (ft) AGL	Mounting Elevation (ft) ARL	Center Line Elevation (ft) ARL	Carrier	QTY.	APPURTENANCES DESCRIPTION	COAX
125	100	106	-	1	12' Omni	(1) 1/2" (2) 5/8" (1) 7/8"
		105		1	4 Bay Dipole	
				1	10' Omni	
		103		1	6' Omni	
122	97	98.8	Clearwire	3	LLPX310R-V1	(12) 1-1/4" (1) 2" Flex Conduit (3) 7/8"
		97		3	SP1-22132825WB RRH	
				1	2'x2'x1' Junction Box	
				1	VHLP1-23	
				3	13' Standoff Mount	
119	94	94		1	VHLP1-23	(2) 1/2"
118	93	93		1	VHLP1-23	
106	81	86	VZW	2	OVP Box	(12) 1-5/8" (2) Hybrid
		82		3	B2/B66A RRH	
				3	B5/B13 RRH	
				3	CBRS RRH w/ Clip-on Antenna	
				6	SBNHH-1D65B	
				1	BXA-171063-8BF*	
				2	SACP 2x5516*	
				1	BXA-80063/4CF	
				2	SLCP 2x6014	
		81		1	13' T-Frame	
69	44	48	-	1	4' Yagi	(1) 1/2"
55	30	30		1	4' Yagi	(1) 1-5/8" (1) 1/2"
32	7	7		1	2'x2'x1' Junction Box	-

*Equipment to be removed
AGL: At Grade Line
ARL: At Roof Line (Roofline being elevation 25' above ground)

3.2 Proposed Appurtenance Loading Configuration on Tower:

Mounting Elevation (ft) AGL	Mounting Elevation (ft) ARL	Center Line Elevation (ft) ARL	Carrier	QTY.	APPURTENANCES DESCRIPTION	COAX
108	83	83	VZW	3	VZWSMART-SFK3	-
106	81	82.5		3	MTC6407-77A w/ Integrated RRH	
106	81	81		3	Site Pro 1 R5-REINF	
105.5	80.5	105.5		3	VZWSMART-SFK3	

AGL: At Grade Line
ARL: At Roof Line (Roofline being elevation 25' above ground)

3.3 Final Appurtenance Loading Configuration on Tower:

Mounting Elevation (ft) AGL	Mounting Elevation (ft) ARL	Center Line Elevation (ft) ARL	Carrier	QTY.	APPURTENANCES DESCRIPTION	COAX
106	81	86		2	OVP Box	(12) 1-5/8" (2) Hybrid
		82.5	VZW	3	MTC6407-77A w/ Integrated RRH	
		82		6	SBNHH-1D65B	
				1	BXA-80063/4CF	
				2	SLCP 2x6014	
				3	B2/B66A RRH	
				3	B5/B13 RRH	
				2	OVP Box	
		81		1	Modified 13' T-Frame	
		79		3	XXDWMM-12.5-65-8T-CBRS	

AGL: At Grade Line
ARL: At Roof Line (Roofline being elevation 25’ above ground)

3.4 Method:

Bentley Open Tower, a commercially available engineering software program, was used to create a three-dimensional model of the tower members and calculate primary member stresses under various loading conditions. Selected output from the analysis is included in Appendix A.

4.0 TOWER ANALYSIS RESULTS SUMMARY

4.1 Tower Structure Results

		Summary	
	LEG(4)	53.59	Pass
	LEG ANCHOR ROD(6)	2.06	Pass
	TOPHORIZONTAL(6)	14.22	Pass
	BOTTOMHORIZONTAL(5)	23.57	Pass
	DIAGONAL(4)	[redacted]	
	Guy Cable (Panel 1)	48.85	Pass
	Rating	[redacted]	

Existing 5/8” diameter A36 steel solid rod is calculated separately from OpenTower & determined to have a capacity of **89.2%.**

Table above displays the summary of the ratio (as the percentage) of force in the member to their capacities. Values greater than 100% indicate the maximum force in the member exceeds its capacity.

4.2 Foundation results

Guy forces are transferred to the existing building structure via three (3) 7/8"ø and three (3) 3/4"ø galvanized steel guy wires with turnbuckles. All guy anchorage posts are positively attached to the existing building structure. Connections to the existing building were originally designed by Cianci & Cianci Structural Engineers job no: 97-113-01 dated October 22, 1997.

Review of the guy anchor and tower base connections consisted of a comparison of the proposed reactions and the design reactions obtained from the aforementioned design documents:

Calculated Proposed + Existing Equipment Loading Reactions Compared to Previous Reactions:

Condition	Calculated Foundation Reactions (Rev G) (kip)	Original Design Reactions (Rev F) (kip)	Original Design Reaction x 1.35 (Rev G) (kip)	% Original Reactions	Pass/Fail
Tower Base Vert.	98.55	106.0	143.10	68.9%	Pass
Tower Base Horiz.	0.575	1.6	2.16	26.6%	Pass
Guy Anchor A @ 45' Vert.	29.6055	45.1	60.89	48.6%	Pass
Guy Anchor A @ 45' Horiz.	19.6874	31.7	42.80	46.0%	Pass
Guy Anchor B @ 39' Vert.	33.0701	51.6	69.66	47.5%	Pass
Guy Anchor B @ 39' Horiz.	19.1791	32.0	43.20	44.4%	Pass
Guy Anchor C @ 37.5' Vert.	31.2089	47.8	64.53	48.4%	Pass
Guy Anchor C @ 37.5' Horiz.	19.2708	31.6	42.66	45.2%	Pass

5.0 CONCLUSIONS AND COMMENTARY

After analysis, it was determined that the existing tower structure and foundation **is adequate** to support the proposed forces as a result of the telecommunication upgrade.

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. Dewberry Engineers Inc. reserves the right to add to or modify this report if more information becomes available. The conclusions reached by Dewberry Engineers Inc. in this report are only applicable to the previously mentioned existing structural elements supporting the proposed wireless telecommunications installation. The results of this report are based on the assumption that existing structural elements have been installed per the original design documents, have been well maintained and are uncompromised. This report does not imply that a thorough inspection of the existing structure has been performed. Any deviation of the support condition, loading, location, placement, equipment configuration, etc, will require Dewberry Engineers Inc. to generate an additional structural analysis.

6.0 ASSUMPTIONS

This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. Dewberry Engineers Inc. has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/ available and to have been properly installed.
10. Loading interpreted from photos is accurate to ±5' AGL, antenna size accurate to ±3.3 sf, and coax equal to the number of existing antennas without reserves
11. All co-lo platforms have their elevation based on the attachment point from the main standoff members. Due to this and how Open tower considers the CL of a platform with a handrail kit to be 2' above the main standoff attachment point – co-lo platforms with handrail kits will be represented with a 2' higher elevation in Open Tower then what is shown above.
12. All sector frames have their elevation based on the vertical centerline of the platform – half the distance between the 2 connection points to the tower leg.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and Dewberry Engineering Inc. should be allowed to review any new information to determine its effect on the structural integrity of the tower.

7.0 DISCLAIMER OF WARRANTIES

If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by Dewberry Engineers Inc. in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main

structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

This analysis is limited to the designated maximum wind and seismic conditions per the governing tower standards and code. Wind forces resulting in tower vibrations near the structure's resonant frequencies were not considered in this analysis and are outside the scope of this analysis. Lateral loading from any dynamic response was not evaluated under a time-domain based fatigue analysis.

Dewberry Engineers Inc. does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. Dewberry Engineers Inc. provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to calculate the structural integrity for the existing tower under existing and proposed loadings.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing condition, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from Dewberry Engineering Inc., but are beyond the scope of this report.

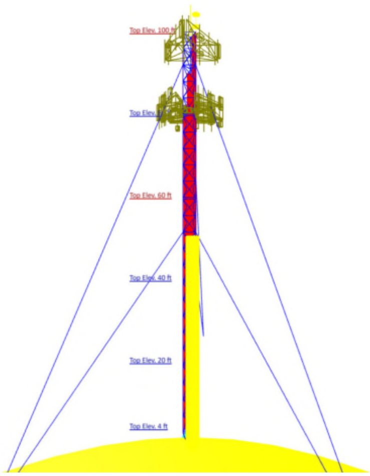
Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connections to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

Dewberry Engineers Inc. makes no warranties, expresses and/or implied in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. Dewberry will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of Dewberry pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

OPEN TOWER OUTPUT FOR PROPOSED LOADING



TOWER DESIGN NOTES

1. Tower is located in WEST HARTFORD, CT, HARTFORD
2. Tower is designed for exposure C, structure class II and topographic category 1 with crest height 0 ft.
3. Tower is designed for 125 mph basic wind in accordance with the TIA-222-G (ASCE 7-05 Wind Maps) Standard.
4. Tower is also designed for 50 mph basic wind with 1 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon 60 mph service wind speed.
6. Tower structural rating : [illegible]. **Structural rating using correct effective length is 89.2%**

GEOMETRY DETAILS

Panel ID	Panel Details	Face Bracing	Plan Bracing	Hip Bracing
1	TW 3.04 TH 20 No. of Bays 5	X Brace, Leg 1, DIA 2, TH 3, BH 3		
2	TW 3.04 TH 20 No. of Bays 5	X Brace, Leg 1, DIA 2, TH 3, BH 3		
3	TW 3.04 TH 20 No. of Bays 5	X Brace, Leg 4, DIA 2, TH 3, BH 3		
4	TW 3.04 TH 20 No. of Bays 5	X Brace, Leg 1, DIA 13, TH 5, BH 5		
5	TW 3.04 TH 16 No. of Bays 4	X Brace, Leg 1, DIA 13, TH 5, BH 5		
6	TW 3.04 TH 4 No. of Bays 1	X Brace, Leg 1, TH 6, BH 7		

SECTION DETAILS

Index	Section	Material
1	RB2	A572 Gr.50
2	RB7/8	A36
3	L2X2X3/16	A36
4	RB2-1/4	A572 Gr.50
5	L2X2X1/8	A36
6	L 3x3x1/8	A36
7	FB 3/8x12	A36
8	FB 3x1/4	A36
9	UPT:3/4(0.75)	UPT:3/4(0.75)
10	UPT:7/8(0.875)	UPT:7/8(0.875)
11	7/8	7/8
12	3/4	3/4
13	RB5/8	A36

LEGENDS

Member Name	Short Name	Member Name	Short Name
DIAGONAL	DIA	TOPHORIZONTAL	TH
BOTTOMHORIZONTAL	BH		

GUY TOWER DETAILS

Attachment Elevation (ft)	Anchor Radius	Attachment Type	Guy Type	Guy Size	Initial Guy Tension
91.96	45,39,37.5	Pull-offs	EHS	3/4	10 %
51.96	45,39,37.5	Pull-offs	EHS	7/8	10 %

LOADING DETAILS

Mount Level(ft)	CL Elevation(ft)	No. of Antennas	Antenna Manufacturer	Antenna Model	No. of FeedLines	FeedLine size(in)
100	106	1	TELEWAVE	ANT220F6		
100	104	1	TELEWAVE	ANT450F6		
100	103	1	TELEWAVE	ANT135F2		
100	102	1	TELEWAVE	ANT450D6-9		
100	100	3	-	-		
97	99.5	3	COMMSCOPE	VHLP1-23		
97	97	3	COMMSCOPE	LLPX310R-V1		
97	97	9	EMPTY	EMPTY_MOUNT		
97	97	3	SAMSUNG TELECOMMUNICATIONS	1.6GHZ RRH		
97	97	3	UPT:Valmont	UPT:13' Clearwire		
90	90	0			11	1-1/4
83	83	3	EMPTY	EMPTY_MOUNT		
83	83	3	UPT:VZWSMART	UPT:VZWSMART-SFK3		
81	83	3	UPT:Samsung	UPT:MT6407-77A		
81	81	3	ANTEL	BXA-80063/4CF		
81	81	6	COMMSCOPE	SBNHH-1D65B		
81	81	6	EMPTY	EMPTY_MOUNT		
81	81	3	RAYCAP	DC06-48-60-0-1E		
81	81	3	SAMSUNG TELECOMMUNICATIONS	RFV01U-D1A		
81	81	3	SAMSUNG TELECOMMUNICATIONS	RFV01U-D2A		
81	81	3	-	-		
81	81	3	MOUNTS	SM 406-1		
81	81	3	UPT:SITE PRO 1	UPT:R5-REINF		
81	78	3	SAMSUNG TELECOMMUNICATIONS	CBRS		
81	78	3	SAMSUNG TELECOMMUNICATIONS	20W CBRS		
80	80	0			12	1-5/8
80	80	0			2	7/8
79.5	79.5	3	EMPTY	EMPTY_MOUNT		
79.5	79.5	3	UPT:VZWSMART	UPT:VZWSMART-SFK3		
44	44	1	LCOM	HG2414SP-120		
44	44	1	-	-		
30	30	1	LCOM	HG2414SP-120		
30	30	1	-	-		
100	100	0			1	5/8
100	100	0			4	7/8
100	100	0			3	1/2
100	100	0			3	1-5/8
100	100	0			1	1-1/4
100	100	0			1	2
100	100	0			1	1/2

GUYTOWER ANCHOR REACTION

Anchor Group	Load Combination	Tension(kip)	Th(kip)	Tv(kip)	Incline Angle
Outer-A	LC -PDELTA 20 1.2D + 1.0Dg + 1.6Wo-210°	35.55	19.69	29.61	56.38
Outer-B	LC -PDELTA 22 1.2D + 1.0Dg + 1.6Wo-270°	38.23	19.18	33.07	59.89
Outer-C	LC -PDELTA 14 1.2D + 1.0Dg + 1.6Wo-30°	36.68	19.27	31.21	58.31

TOWER SUMMARY REACTION

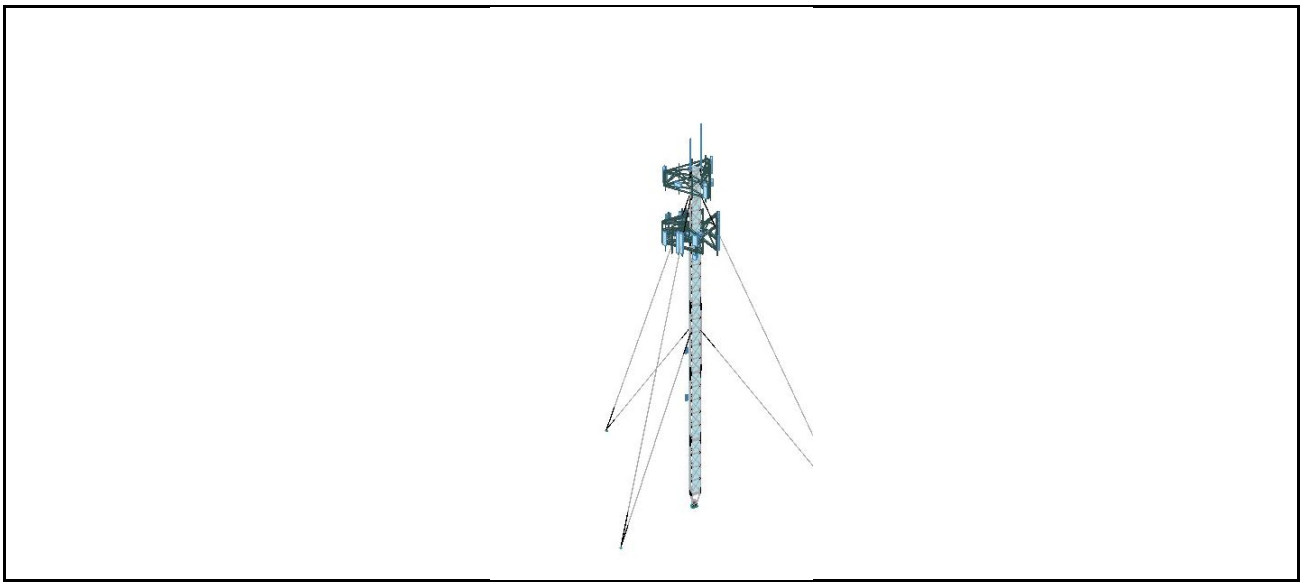
Max Reaction	Load Combination	Moment(kip-ft)	Axial(kips)	Shear(kips)
Compression	LC -PDELTA 7 1.2D + 1.0Dg + 1.0Di + 1.0Ti + 1.0Wi-180°	0.008	33.315	10.896
Shear	LC -PDELTA 7 1.2D + 1.0Dg + 1.0Di + 1.0Ti + 1.0Wi-180°	0.008	33.315	10.896
Total Overturning Moment (1.2D)	LC -PDELTA 19 1.2D + 1.0Dg + 1.6Wo-180°	0.9109	55.106	0.575
Total Overturning Moment (1.0D)	LC -PDELTA 31 1.0D + 1.0Dg + 1.0Ws-180°	0.2855	48.962	0.203
Total Compression	LC -PDELTA 3 1.2D + 1.0Dg + 1.0Di + 1.0Ti + 1.0Wi-60°	0.1681	98.55	0.091
Total Shear	LC -PDELTA 19 1.2D + 1.0Dg + 1.6Wo-180°	0.9109	55.106	0.575

Bentley

DEWBERRY ENGINEERS, INC.
99 SUMMER STREET, SUITE 700,BOSTON,MA, 02110
Phone:

Job : 325091		
Project :		
Client:	Drawn By: AMD	App'd:
Code: TIA-222-G	Date: 8/24/2021 12:00:00 AM	Scale: NTS
Path:	Dwg No:	

Tower Profile



Summary Tower Reaction

Maximum Reaction	*Load Combination*	*Moment (kip-ft)*	*Axial (kip)*	*Shear (kip)*
Compression	LC -PDELTA 7 1.2D + 1.0Dg + 1.0Di + 1.0Ti + 1.0Wi-180°	0.008	33.315	10.896
Shear	LC -PDELTA 7 1.2D + 1.0Dg + 1.0Di + 1.0Ti + 1.0Wi-180°	0.008	33.315	10.896
Total Overturning Moment (1.2D)	LC -PDELTA 19 1.2D + 1.0Dg + 1.6Wo-180°	0.9109	55.106	0.575
Total Overturning Moment (1.0D)	LC -PDELTA 31 1.0D + 1.0Dg + 1.0Ws-180°	0.2855	48.962	0.203
Total Compression	LC -PDELTA 3 1.2D + 1.0Dg + 1.0Di + 1.0Ti + 1.0Wi-60°	0.1681	98.55	0.091
Total Shear	LC -PDELTA 19 1.2D + 1.0Dg + 1.6Wo-180°	0.9109	55.106	0.575

GuyTower Anchor Reaction

Anchor Group	*Load Combination*	*Tension (kip)*	*Th (kip)*	*Tv (kip)*	*Incline Angle*
Outer-A	LC -PDELTA 20 1.2D + 1.0Dg + 1.6Wo-210°	35.5538	19.6874	29.6055	56.3765
Outer-B	LC -PDELTA 22 1.2D + 1.0Dg + 1.6Wo-270°	38.2292	19.1791	33.0701	59.8883

GuyTower Anchor Reaction Cont...

Anchor Group	Load Combination	Tension (kip)	Th (kip)	Tv (kip)	Incline Angle
Outer-C	LC -PDELTA 14 1.2D + 1.0Dg + 1.6Wo-30°	36.6792	19.2708	31.2089	58.3056

Tower Summary

Tower Type	3-Leg Guyed
Tower Height (ft)	100
Base Elevation(ft)	25
Bearing Angle with respect to North	0 deg
State	Connecticut
County	Hartford
Latitude	41.761556
Longitude	-72.740375
Active Scenario	Scenario1

Wind Load Parameters

Design Standard	TIA-222-G (ASCE 7-05 Wind Maps)
Structure Class	II
Wind Speed (mph)	96.82
Service Wind Speed (mph)	60
Ice Wind Speed (mph)	50
Ice Thickness (in)	1

Analysis Parameters

Type of Analysis	Non-Linear

Site Parameters

Wind Direction From True North (deg)	Structure Class	Exposure Category	Topographic Category
All	II	C	1

Tower Geometry

Section ID	Section Range (ft)	Section Length (ft)	Face Bracing	Diagonal Spacing (ft)	Top Width (ft)	Bottom Width (ft)	Top Girt Offset (in)	Bottom Girt Offset (in)
1	100-80	20.0000	X	3.9167	3.0400	3.0400	2.5000	2.5000
2	80-60	20.0000	X	3.9167	3.0400	3.0400	2.5000	2.5000
3	60-40	20.0000	X	3.9167	3.0400	3.0400	2.5000	2.5000
4	40-20	20.0000	X	3.9167	3.0400	3.0400	2.5000	2.5000

Tower Geometry Cont...

Section ID	Section Range (ft)	Section Length (ft)	Face Bracing	Diagonal Spacing (ft)	Top Width (ft)	Bottom Width (ft)	Top Girt Offset (in)	Bottom Girt Offset (in)
5	20-4	16.0000	X	3.8958	3.0400	3.0400	2.5000	2.5000
6	4-0	4.0000	X	2.7884	3.0400	0.7600	2.5390	12.0000

Member Properties

Section ID	Section Range (ft)	Member Class	Section Profile	Member Material	No Of Bolts	Bolt Size (in)	Bolt Material
1	100-80	LEG	RB2	A572 Gr.50	3	0.75	A325 (1/2 to 1)_N
2	80-60	LEG	RB2	A572 Gr.50	3	0.75	A325 (1/2 to 1)_N
3	60-40	LEG	RB2-1/4	A572 Gr.50	3	0.75	A325 (1/2 to 1)_N
4	40-20	LEG	RB2	A572 Gr.50	3	0.75	A325 (1/2 to 1)_N
5	20-4	LEG	RB2	A572 Gr.50	3	0.75	A325 (1/2 to 1)_N
6	4-0	LEG	RB2	A572 Gr.50	4	0.75	A615J
1	100-80	DIAGONAL	RB7/8	A36	0	0	-
2	80-60	DIAGONAL	RB7/8	A36	0	0	-
3	60-40	DIAGONAL	RB7/8	A36	0	0	-
4	40-20	DIAGONAL	RB5/8	A36	0	0	-
5	20-4	DIAGONAL	RB5/8	A36	0	0	-
1	100-80	TOPHORIZONTAL	L2X2X3/16	A36	0	0	-
1	100-80	BOTTOMHORIZONTAL	L2X2X3/16	A36	0	0	-
1	100-80	TORQUEARMBOTTOMSTRAP	FB 3x1/4	A36	0	0.625	A325 (1/2 to 1)_N
2	80-60	TOPHORIZONTAL	L2X2X3/16	A36	0	0	-
2	80-60	BOTTOMHORIZONTAL	L2X2X3/16	A36	0	0	-
3	60-40	TOPHORIZONTAL	L2X2X3/16	A36	0	0	-

Member Properties Cont...

Section ID	Section Range (ft)	Member Class	Section Profile	Member Material	No Of Bolts	Bolt Size (in)	Bolt Material
3	60-40	BOTTOMHORIZONTAL	L2X2X3/16	A36	0	0	-
3	60-40	TORQUEARMBOTTOMSTRAP	FB 3x1/4	A36	0	0.625	A325 (1/2 to 1)_N
4	40-20	TOPHORIZONTAL	L2X2X1/8	A36	0	0	-
4	40-20	BOTTOMHORIZONTAL	L2X2X1/8	A36	0	0	-
5	20-4	TOPHORIZONTAL	L2X2X1/8	A36	0	0	-
5	20-4	BOTTOMHORIZONTAL	L2X2X1/8	A36	0	0	-
6	4-0	TOPHORIZONTAL	L 3x3x1/8	A36	0	0	-
6	4-0	BOTTOMHORIZONTAL	FB 3/8x12	A36	0	0	-

Guy Attachment Details

GuyElev (ft)	AttachType	TaSpread (ft)	TopStrap	BottomStrap	Horizontal	TopDiagonal	BottomDiagonal
91.9583	Pull-offs	0	-	FB 3x1/4	-	-	-
91.9583	Pull-offs	0	-	FB 3x1/4	-	-	-
91.9583	Pull-offs	0	-	FB 3x1/4	-	-	-
51.9583	Pull-offs	0	-	FB 3x1/4	-	-	-
51.9583	Pull-offs	0	-	FB 3x1/4	-	-	-
51.9583	Pull-offs	0	-	FB 3x1/4	-	-	-

Guy Details

Guy Elev (ft)	Anchor Group	Anchor ID	Anchor Radius (ft)	Anchor Elev(ft)	Anchor Azimuth (deg)	Guy Size (in)	Guy Type	Initial Tension (%)	End Fitting Efficiency (%)
91.96	Outer	A	45	0	0	3/4	EHS	10	100

Guy Details Cont...

Guy Elev (ft)	Anchor Group	Anchor ID	Anchor Radius (ft)	Anchor Elev(ft)	Anchor Azimuth (deg)	Guy Size (in)	Guy Type	Initial Tension (%)	End Fitting Efficiency (%)
91.96	Outer	B	39	0	120	3/4	EHS	10	100
91.96	Outer	C	37.5	6.5	240	3/4	EHS	10	100
51.96	Outer	A	45	0	0	7/8	EHS	10	100
51.96	Outer	B	39	0	120	7/8	EHS	10	100
51.96	Outer	C	37.5	6.5	240	7/8	EHS	10	100

Discrete Appurtenances

Mt CL (ft)	Mount Type	Ant CL (ft)	Mfg	Model Number	Location	Horiz. Offset (ft)	Lat. Offset (ft)	Vert. Offset (ft)	Front Area (no ice) (ft2)	Side Area (no ice) (ft2)	Weight(no ice) (lbs)	Ka	Ks (fr)	Ks (Si)	Rel. Azi (deg)
100	-	104	TELEWAVE	ANT450F6	LegA	0	0	4	1.86	1.86	21	1	1	1	0
100	-	102	TELEWAVE	ANT450D6-9	LegB	0	0	2	1.4	1.4	18	1	1	1	0
100	-	106	TELEWAVE	ANT220F6	LegB	0	-0.25	6	3.919	3.919	17	1	1	1	0
100	-	103	TELEWAVE	ANT135F2	LegC	0	0	3	1.65	1.65	0	1	1	1	0
97	UPT:13' Clearwire	97	COMMSCOPE	LLPX310R-V1	LegA	0	-6	0	3.9	1.5	40.8	0.8	1	1	0
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegA	0	-2	0	0	0	0	0.8	1	1	0
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegA	0	2	0	0	0	0	0.8	1	1	0
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegA	0	6	0	0	0	0	0.8	1	1	0
97	UPT:13' Clearwire	97	SAMSUNG TELECOMMUNICATIONS	1.6GHZ RRH	LegA	0	2	0	2.124	0.895	59.5	0.8	1	1	0
97	UPT:13' Clearwire	99.5	COMMSCOPE	VHLP1-23	LegA	0	-6	2.5	1.277	1.277	14	1	1	1	0
97	UPT:13' Clearwire	97	COMMSCOPE	LLPX310R-V1	LegB	0	-6	0	3.9	1.5	40.8	0.8	1	1	0
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegB	0	-2	0	0	0	0	0.8	1	1	0
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegB	0	2	0	0	0	0	0.8	1	1	0

Discrete Appurtenances Cont...

Mt CL (ft)	Mount Type	Ant CL (ft)	Mfg	Model Number	Location	Horiz. Offset (ft)	Lat. Offset (ft)	Vert. Offset (ft)	Front Area (no ice) (ft2)	Side Area (no ice) (ft2)	Weight(no ice) (lbs)	Ka	Ks (fr)	Ks (Si)	Rel. Azi (deg)
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegB	0	6	0	0	0	0	0.8	1	1	0
97	UPT:13' Clearwire	97	SAMSUNG TELECOMMUNICATIONS	1.6GHZ RRH	LegB	0	2	0	2.124	0.895	59.5	0.8	1	1	0
97	UPT:13' Clearwire	99.5	COMMSCOPE	VHLP1-23	LegB	0	-6	2.5	1.277	1.277	14	1	1	1	0
97	UPT:13' Clearwire	97	COMMSCOPE	LLPX310R-V1	LegC	0	-6	0	3.9	1.5	40.8	0.8	1	1	0
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegC	0	-2	0	0	0	0	0.8	1	1	0
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegC	0	2	0	0	0	0	0.8	1	1	0
97	UPT:13' Clearwire	97	EMPTY	EMPTY_MOUNT	LegC	0	6	0	0	0	0	0.8	1	1	0
97	UPT:13' Clearwire	97	SAMSUNG TELECOMMUNICATIONS	1.6GHZ RRH	LegC	0	2	0	2.124	0.895	59.5	0.8	1	1	0
97	UPT:13' Clearwire	99.5	COMMSCOPE	VHLP1-23	LegC	0	-6	2.5	1.277	1.277	14	1	1	1	0
83	UPT:VZWSMART-SFK3	83	EMPTY	EMPTY_MOUNT	LegA	0	0	0	0	0	0	0.8	1	1	0
83	UPT:VZWSMART-SFK3	83	EMPTY	EMPTY_MOUNT	LegB	0	0	0	0	0	0	0.8	1	1	0
83	UPT:VZWSMART-SFK3	83	EMPTY	EMPTY_MOUNT	LegC	0	0	0	0	0	0	0.8	1	1	0
81	SM 406-1	81	ANTEL	BXA-80063/4CF	LegA	0	5	0	4.708	2.248	9.9	0.8	1	1	0
81	SM 406-1	81	EMPTY	EMPTY_MOUNT	LegA	0	3	0	0	0	0	0.8	1	1	0
81	SM 406-1	81	COMMSCOPE	SBNHH-1D65B	LegA	0	1	0	4.16	2.49	40.6	0.8	1	1	0
81	SM 406-1	81	COMMSCOPE	SBNHH-1D65B	LegA	0	0	0	4.16	2.49	40.6	0.8	1	1	0
81	SM 406-1	78	SAMSUNG TELECOMMUNICATIONS	CBRS	LegA	0.25	-4	-3	1.534	0.747	23.14	0.8	1	1	0
81	SM 406-1	78	SAMSUNG TELECOMMUNICATIONS	20W CBRS	LegA	-0.5	-4	-3	0.857	0.42	18.64	0.8	1	1	0
81	SM 406-1	81	ANTEL	BXA-80063/4CF	LegB	0	5	0	4.708	2.248	9.9	0.8	1	1	0

Discrete Appurtenances Cont...

Mt CL (ft)	*Mount Type*	*Ant CL (ft)*	*Mfg*	*Model Number*	*Location*	*Horiz. Offset (ft)*	*Lat. Offset (ft)*	*Vert. Offset (ft)*	*Front Area (no ice) (ft2)*	*Side Area (no ice) (ft2)*	*Weight(no ice) (lbs)*	*Ka*	*Ks (fr)*	*Ks (Si)*	*Rel. Azi (deg)*
81	SM 406-1	81	EMPTY	EMPTY_MOUNT	LegB	0	3	0	0	0	0	0.8	1	1	0
81	SM 406-1	81	COMMSCOPE	SBNHH-1D65B	LegB	0	1	0	4.16	2.49	40.6	0.8	1	1	0
81	SM 406-1	81	COMMSCOPE	SBNHH-1D65B	LegB	0	0	0	4.16	2.49	40.6	0.8	1	1	0
81	SM 406-1	78	SAMSUNG TELECOMMUNICATIONS	CBRS	LegB	0.25	-4	-3	1.534	0.747	23.14	0.8	1	1	0
81	SM 406-1	78	SAMSUNG TELECOMMUNICATIONS	20W CBRS	LegB	-0.5	-4	-3	0.857	0.42	18.64	0.8	1	1	0
81	SM 406-1	81	ANTEL	BXA-80063/4CF	LegC	0	5	0	4.708	2.248	9.9	0.8	1	1	0
81	SM 406-1	81	EMPTY	EMPTY_MOUNT	LegC	0	3	0	0	0	0	0.8	1	1	0
81	SM 406-1	81	COMMSCOPE	SBNHH-1D65B	LegC	0	1	0	4.16	2.49	40.6	0.8	1	1	0
81	SM 406-1	81	COMMSCOPE	SBNHH-1D65B	LegC	0	0	0	4.16	2.49	40.6	0.8	1	1	0
81	SM 406-1	78	SAMSUNG TELECOMMUNICATIONS	CBRS	LegC	0.25	-4	-3	1.534	0.747	23.14	0.8	1	1	0
81	SM 406-1	78	SAMSUNG TELECOMMUNICATIONS	20W CBRS	LegC	-0.5	-4	-3	0.857	0.42	18.64	0.8	1	1	0
81	-	81	SAMSUNG TELECOMMUNICATIONS	RFV01U-D1A	FaceCA	0	1	0	1.875	1.25	84.4	1	1	1	0
81	-	81	SAMSUNG TELECOMMUNICATIONS	RFV01U-D2A	FaceCA	0	0	0	1.875	1.012	70.3	1	1	1	0
81	-	81	RAYCAP	DC06-48-60-0-1E	FaceCA	0	-1	0	0.725	0.725	48	1	1	1	0
81	-	81	SAMSUNG TELECOMMUNICATIONS	RFV01U-D1A	FaceAB	0	1	0	1.875	1.25	84.4	1	1	1	0

Discrete Appurtenances Cont...

Mt CL (ft)	*Mount Type*	*Ant CL (ft)*	*Mfg*	*Model Number*	*Location*	*Horiz. Offset (ft)*	*Lat. Offset (ft)*	*Vert. Offset (ft)*	*Front Area (no ice) (ft2)*	*Side Area (no ice) (ft2)*	*Weight(no ice) (lbs)*	*Ka*	*Ks (fr)*	*Ks (Si)*	*Rel. Azi (deg)*
81	-	81	SAMSUNG TELECOMMUNICATIONS	RFV01U-D2A	FaceAB	0	0	0	1.875	1.012	70.3	1	1	1	0
81	-	81	RAYCAP	DC06-48-60-0-1E	FaceAB	0	-1	0	0.725	0.725	48	1	1	1	0
81	-	81	SAMSUNG TELECOMMUNICATIONS	RFV01U-D1A	FaceBC	0	1	0	1.875	1.25	84.4	1	1	1	0
81	-	81	SAMSUNG TELECOMMUNICATIONS	RFV01U-D2A	FaceBC	0	0	0	1.875	1.012	70.3	1	1	1	0
81	-	81	RAYCAP	DC06-48-60-0-1E	FaceBC	0	-1	0	0.725	0.725	48	1	1	1	0
81	UPT:R5-REINF	81	EMPTY	EMPTY_MOUNT	LegA	0	0	0	0	0	0	0.8	1	1	0
81	UPT:R5-REINF	81	EMPTY	EMPTY_MOUNT	LegB	0	0	0	0	0	0	0.8	1	1	0
81	UPT:R5-REINF	81	EMPTY	EMPTY_MOUNT	LegC	0	0	0	0	0	0	0.8	1	1	0
80	UPT:VZWSMART-SFK3	79.5	EMPTY	EMPTY_MOUNT	LegA	0	0	0	0	0	0	0.8	1	1	0
80	UPT:VZWSMART-SFK3	79.5	EMPTY	EMPTY_MOUNT	LegB	0	0	0	0	0	0	0.8	1	1	0
80	UPT:VZWSMART-SFK3	79.5	EMPTY	EMPTY_MOUNT	LegC	0	0	0	0	0	0	0.8	1	1	0
44	-	44	LCOM	HG2414SP-120	LegA	2	0	0	1.182	0.653	4.4	1	1	1	0
30	-	30	LCOM	HG2414SP-120	LegA	2	0	0	1.182	0.653	4.4	1	1	1	0
81	SM 406-1	83	UPT:Samsung	UPT:MT6407-77A	LegA	0	-4	2	4.897	1.929	87.1	0.8	1	1	0
81	SM 406-1	83	UPT:Samsung	UPT:MT6407-77A	LegB	0	-4	2	4.897	1.929	87.1	0.8	1	1	0
81	SM 406-1	83	UPT:Samsung	UPT:MT6407-77A	LegC	0	-4	2	4.897	1.929	87.1	0.8	1	1	0

Miscellaneous Appurtenances

There is no data of this type

Linear Attachments

Attachment ID	Attachment model	Bottom Elevation (ft)	Top Elevation (ft)	Location	lateral Offset(of face)	lateral Offset(leg) (in)	Area (no ice) (ft2/ft)	Weight (No) (lbs/ft)
1	None	0	100	Face A	0.0000	0.0000	0.0000	0.0000
2	None	0	100	Face B	0.0000	0.0000	0.0000	0.0000
3	None	0	100	Face C	0.0000	0.0000	0.0000	0.0000
4	None	0	100	Leg C	0.0000	0.0000	0.0000	0.0000

Linear Appurtenances

Attachment	Qty	Size (in)	Bottom Elv. (ft)	Top Elv. (ft)	Manufacturer	Model	Weight (No ice) (lbs/ft)
4	1	5/8	0	100	miscl	5/8 Safety Cable	0.4
2	4	7/8	4	100	ANDREW	LDF5-50A	0.33
2	3	1/2	4	100	ANDREW	LDF4-50A	0.15
2	3	1-5/8	4	100	ANDREW	LDF7-50A	0.82
2	1	1-1/4	4	100	ANDREW	LDF6-50A	0.6
2	1	2	4	100	ANDREW	WC166	2.8
2	1	1/2	4	100	ANDREW	LDF4P-50A	0.15
1	12	1-5/8	4	80	ANDREW	LDF7-50A	0.82
1	2	7/8	4	80	RFS/CELWAVE	HB078-05U6S12-20M-01	0.7
3	11	1-1/4	4	90	ANDREW	LDF6-50A	0.6

LEG SUMMARY

Section ID	Tower Elevation (ft)	Member Description	Pu (Comp) (kip)	ϕc Pn(kip)	Pu (Tens) (kip)	ϕt Pn(kip)	Capacity Ratio (%)
1	100-80	RB2	14.6723	74.0936	2.8935	141.372	19.8

LEG SUMMARY Cont...

Section ID	Tower Elevation (ft)	Member Description	Pu (Comp) (kip)	ϕc Pn(kip)	Pu (Tens) (kip)	ϕt Pn(kip)	Capacity Ratio (%)
2	80-60	RB2	35.8938	74.0936	16.2786	141.372	48.44
3	60-40	RB2-1/4	54.9017	107.3925	27.5036	178.9245	51.12
4	40-20	RB2	39.7096	74.0936	0.7459	141.372	53.59
5	20-4	RB2	31.1581	74.6032	0	0	41.77
6	4-0	RB2	34.9823	98.3439	0	0	35.57

LEG BOLT SUMMARY

Section ID	Tower Elevation (ft)	Member Description	Connection Type	Pu (Comp) (kip)	Pu (Tens) (kip)	Applied Force (kip)	Connection Capacity (kip)	Capacity Ratio (%)
1	100-80	RB2	Flange	17.2578	0	5.6951	90.18	6.32
2	80-60	RB2	Flange	41.4689	16.2786	16.2786	90.18	18.05
3	60-40	RB2-1/4	Flange	44.6854	0	14.7462	90.18	16.35
4	40-20	RB2	Flange	31.379	0	10.3551	90.18	11.48
5	20-4	RB2	Flange	33.105	0	10.9247	90.18	12.11
6	4-0	RB2		0	0	0	0	0

LEG DETAILS

Section ID	Tower Elevation (ft)	Member Description	Gov. Axis	K	Lu (ft)	r (in)	KL/r	Area (in2)	Fy (ksi)	Fu (ksi)
1	100-80	RB2	y	1	3.9167	0.5	94.0001	3.1416	50	65
2	80-60	RB2	y	1	3.9167	0.5	94.0001	3.1416	50	65
3	60-40	RB2-1/4	y	1	3.9167	0.5625	83.5558	3.9761	50	65
4	40-20	RB2	y	1	3.9167	0.5	94.0001	3.1416	50	65
5	20-4	RB2	y	1	3.8958	0.5	93.5001	3.1416	50	65

LEG DETAILS Cont...

Section ID	Tower Elevation (ft)	Member Description	Gov. Axis	K	Lu (ft)	r (in)	KL/r	Area (in2)	Fy (ksi)	Fu (ksi)
6	4-0	RB2	y	1	2.9355	0.5	70.4528	3.1416	50	65

Anchor Rod Data (LegA)

Group ID	QTY	Diameter (in)	Material	Bolt Circle (in)	lar (in)	Eta Factor, h
BC1	4	1_F1554 Gr.55_N	F1554 Gr.55	18	0	0.5

Custom Anchor Rod Connection Data (LegA)

Bolt Group	Resist Axial	Resist Shear	Grout Considered	Leg Mod Eccentricity	Consider Anchor Rod Eccentricity	Anchor Rod N.A Shift (in)	Total Eccentricity (in)
1	Yes	Yes	False	0	Yes	0	0
2	Yes	Yes	False	0	Yes	0	0
3	Yes	Yes	False	0	Yes	0	0
4	Yes	Yes	False	0	Yes	0	0

Applied Loads (LegA)

Group ID	Axial Force(kip)	Shear Force(kip)
BC1	3.2737	0.0421

Anchor Rod Summary (LegA)

Anchor Rod Group ID	Critial Load ID	Pu (kip)	ϕPn (kip)	Vu (kip)	ϕVn (kip)	Mu (kip-ft)	ϕMn (kip-ft)	Capacity Ratio
1	57	-0.8184	38.8772	0.0105	17.4947	0	0	2.0049

Anchor Rod Data (LegB)

Group ID	QTY	Diameter (in)	Material	Bolt Circle (in)	lar (in)	Eta Factor, h
BC1	4	1_F1554 Gr.55_N	F1554 Gr.55	18	0	0.5

Custom Anchor Rod Connection Data (LegB)

Bolt Group	Resist Axial	Resist Shear	Grout Considered	Leg Mod Eccentricity	Consider Anchor Rod Eccentricity	Anchor Rod N.A Shift (in)	Total Eccentricity (in)
1	Yes	Yes	False	0	Yes	0	0
2	Yes	Yes	False	0	Yes	0	0
3	Yes	Yes	False	0	Yes	0	0
4	Yes	Yes	False	0	Yes	0	0

Applied Loads (LegB)

Group ID	Axial Force(kip)	Shear Force(kip)
BC1	3.356	0.0309

Anchor Rod Summary (LegB)

Anchor Rod Group ID	Critial Load ID	Pu (kip)	ϕPn (kip)	Vu (kip)	ϕVn (kip)	Mu (kip-ft)	ϕMn (kip-ft)	Capacity Ratio
1	61	-0.839	38.8772	0.0077	17.4947	0	0	2.0553

Anchor Rod Data (LegC)

Group ID	QTY	Diameter (in)	Material	Bolt Circle (in)	lar (in)	Eta Factor, h
BC1	4	1_F1554 Gr.55_N	F1554 Gr.55	18	0	0.5

Custom Anchor Rod Connection Data (LegC)

Bolt Group	Resist Axial	Resist Shear	Grout Considered	Leg Mod Eccentricity	Consider Anchor Rod Eccentricity	Anchor Rod N.A Shift (in)	Total Eccentricity (in)
1	Yes	Yes	False	0	Yes	0	0
2	Yes	Yes	False	0	Yes	0	0
3	Yes	Yes	False	0	Yes	0	0
4	Yes	Yes	False	0	Yes	0	0

Applied Loads (LegC)

Group ID	Axial Force(kip)	Shear Force(kip)
BC1	0.155	0.0017

Anchor Rod Summary (LegC)

Anchor Rod Group ID	Critial Load ID	Pu (kip)	ϕPn (kip)	Vu (kip)	ϕVn (kip)	Mu (kip-ft)	ϕMn (kip-ft)	Capacity Ratio
1	54	-0.0388	38.8772	0.0004	17.4947	0	0	0.0949

DIAGONAL SUMMARY

Section ID	Tower Elevation (ft)	Member Description	Pu (Comp) (kip)	ϕc Pn (kip)	Pu (Tens) (kip)	ϕt Pn (kip)	Capacity Ratio (%)
1	100-80	RB7/8	2.094	10.85	2.1741	19.4821	19.3
2	80-60	RB7/8	4.7294	10.85	2.6317	19.4821	43.59
3	60-40	RB7/8	4.5796	10.85	3.0032	19.4821	42.21
4	40-20	RB5/8	3.0817	2.6424	0.9674	9.9403	116.62
5	20-4	RB5/8	1.8296	2.66	0	0	68.78

DIAGONAL SEGMENT SUMMARY

Section ID	Segment ID	Segment Elevation (ft)	Member Description	Pu (Comp) (kip)	ϕc Pn (kip)	Pu (Tens) (kip)	ϕt Pn (kip)	Capacity Ratio (%)
1	1	100-95.88	RB7/8	0.6508	10.85	0.5821	19.4821	6
1	2	95.88-91.96	RB7/8	2.094	10.85	2.1741	19.4821	19.3
1	3	91.96-88.04	RB7/8	1.5948	10.85	0.4501	19.4821	14.7
1	4	88.04-84.12	RB7/8	1.6124	10.85	0.2505	19.4821	14.86
1	5	84.12-80	RB7/8	1.4935	10.85	0	0	13.77
2	1	80-75.88	RB7/8	3.4292	10.85	1.5816	19.4821	31.61
2	2	75.88-71.96	RB7/8	3.2983	10.85	1.5342	19.4821	30.4
2	3	71.96-68.04	RB7/8	3.7262	10.85	1.9158	19.4821	34.34
2	4	68.04-64.12	RB7/8	3.9387	10.85	2.095	19.4821	36.3
2	5	64.12-60	RB7/8	4.7294	10.85	2.6317	19.4821	43.59
3	1	60-55.88	RB7/8	4.5796	10.85	2.6255	19.4821	42.21
3	2	55.88-51.96	RB7/8	4.4621	10.85	3.0032	19.4821	41.13
3	3	51.96-48.04	RB7/8	4.1335	10.85	1.5415	19.4821	38.1
3	4	48.04-44.12	RB7/8	3.7475	10.85	1.0064	19.4821	34.54
3	5	44.12-40	RB7/8	3.6897	10.85	0.7159	19.4821	34.01
4	1	40-35.87	RB5/8	3.0817	2.6424	0.9674	9.9403	116.62
4	2	35.87-31.96	RB5/8	2.5852	2.6424	0.639	9.9403	97.84
4	3	31.96-28.04	RB5/8	2.2812	2.6424	0.3634	9.9403	86.33
4	4	28.04-24.12	RB5/8	1.9217	2.6424	0.0649	9.9403	72.72
4	5	24.12-20	RB5/8	1.7294	2.6424	0	0	65.45
5	1	20-15.9	RB5/8	1.8296	2.66	0	0	68.78
5	2	15.9-12	RB5/8	1.4766	2.66	0	0	55.51
5	3	12-8.1	RB5/8	1.4745	2.66	0	0	55.43
5	4	8.1-4	RB5/8	1.4238	2.66	0	0	53.53

DIAGONAL DETAIL

Section ID	Tower Elevation (ft)	Member Description	Gov. Axis	K	Lu (ft)	r (in)	KL/r	Area (in2)	Fy (ksi)	Fu (ksi)
1	100-80	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
2	80-60	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
3	60-40	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
4	40-20	RB5/8	y	0.9	2.3431	0.1562	161.9558	0.3068	36	58
5	20-4	RB5/8	y	0.9	2.3353	0.1562	161.4187	0.3068	36	58

DIAGONAL DETAIL SEGMENT

Section ID	Segment ID	Segment Elevation (ft)	Member Description	Gov. Axis	K	Lu (ft)	r (in)	KL/r	Area (in2)	Fy (ksi)	Fu (ksi)
1	1	100-95.88	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
1	2	95.88-91.96	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
1	3	91.96-88.04	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
1	4	88.04-84.12	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
1	5	84.12-80	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
2	1	80-75.88	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
2	2	75.88-71.96	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
2	3	71.96-68.04	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
2	4	68.04-64.12	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
2	5	64.12-60	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
3	1	60-55.88	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
3	2	55.88-51.96	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
3	3	51.96-48.04	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
3	4	48.04-44.12	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
3	5	44.12-40	RB7/8	y	0.938	2.0496	0.2188	105.4445	0.6013	36	58
4	1	40-35.87	RB5/8	y	0.9	2.3431	0.1562	161.9558	0.3068	36	58
4	2	35.87-31.96	RB5/8	y	0.9	2.3431	0.1562	161.9558	0.3068	36	58
4	3	31.96-28.04	RB5/8	y	0.9	2.3431	0.1562	161.9558	0.3068	36	58
4	4	28.04-24.12	RB5/8	y	0.9	2.3431	0.1562	161.9558	0.3068	36	58
4	5	24.12-20	RB5/8	y	0.9	2.3431	0.1562	161.9558	0.3068	36	58
5	1	20-15.9	RB5/8	y	0.9	2.3353	0.1562	161.4187	0.3068	36	58
5	2	15.9-12	RB5/8	y	0.9	2.3353	0.1562	161.4187	0.3068	36	58
5	3	12-8.1	RB5/8	y	0.9	2.3353	0.1562	161.4187	0.3068	36	58
5	4	8.1-4	RB5/8	y	0.9	2.3353	0.1562	161.4187	0.3068	36	58

Each diagonal solid round should have the same effective length of 2.0496 ft.

TOPHORIZONTAL SUMMARY

Section ID	Tower Elevation (ft)	Member Description	Pu (Comp) (kip)	ϕc Pn (kip)	Pu (Tens) (kip)	ϕt Pn (kip)	Capacity Ratio (%)
1	100-80	L2X2X3/16	0.1982	13.1438	1.7597	23.166	7.6
2	80-60	L2X2X3/16	0.1704	13.1438	1.8333	23.166	7.91
3	60-40	L2X2X3/16	0.9467	13.1893	3.0408	23.166	13.13
4	40-20	L2X2X1/8	0.1223	8.9401	1.6959	15.6816	10.81
5	20-4	L2X2X1/8	0	0	1.7609	15.6816	11.23
6	4-0	L 3x3x1/8	0	0	3.3847	23.7946	14.22

TOPHORIZONTAL SEGMENT SUMMARY

Section ID	Segment ID	Segment Elevation (ft)	Member Description	Pu (Comp) (kip)	ϕc Pn (kip)	Pu (Tens) (kip)	ϕt Pn (kip)	Capacity Ratio (%)
1	1	100-95.88	L2X2X3/16	0.0796	13.1438	0.1091	23.166	0.61
1	2	95.88-91.96	L2X2X3/16	0.1982	13.1438	0.1901	23.166	1.51
1	3	91.96-88.04	L2X2X3/16	0	0	1.7597	23.166	7.6
1	4	88.04-84.12	L2X2X3/16	0	0	1.1333	23.166	4.89
1	5	84.12-80	L2X2X3/16	0	0	1.5968	23.166	6.89
2	1	80-75.88	L2X2X3/16	0.1704	13.1438	1.223	23.166	5.28
2	2	75.88-71.96	L2X2X3/16	0	0	1.5317	23.166	6.61
2	3	71.96-68.04	L2X2X3/16	0	0	1.5079	23.166	6.51
2	4	68.04-64.12	L2X2X3/16	0	0	1.6403	23.166	7.08
2	5	64.12-60	L2X2X3/16	0	0	1.8333	23.166	7.91
3	1	60-55.88	L2X2X3/16	0	0	0.7826	23.166	3.38
3	2	55.88-51.96	L2X2X3/16	0.9467	13.1893	2.3481	23.166	10.14
3	3	51.96-48.04	L2X2X3/16	0	0	3.0408	23.166	13.13
3	4	48.04-44.12	L2X2X3/16	0	0	2.604	23.166	11.24
3	5	44.12-40	L2X2X3/16	0	0	2.4874	23.166	10.74
4	1	40-35.87	L2X2X1/8	0.1223	8.9401	1.2341	15.6816	7.87
4	2	35.87-31.96	L2X2X1/8	0	0	1.6525	15.6816	10.54
4	3	31.96-28.04	L2X2X1/8	0	0	1.617	15.6816	10.31
4	4	28.04-24.12	L2X2X1/8	0	0	1.6137	15.6816	10.29
4	5	24.12-20	L2X2X1/8	0	0	1.6959	15.6816	10.81
5	1	20-15.9	L2X2X1/8	0	0	0.9243	15.6816	5.89
5	2	15.9-12	L2X2X1/8	0	0	1.7609	15.6816	11.23
5	3	12-8.1	L2X2X1/8	0	0	1.7411	15.6816	11.1
5	4	8.1-4	L2X2X1/8	0	0	1.6521	15.6816	10.54
6	1	4-0	L 3x3x1/8	0	0	3.3847	23.7946	14.22

TOPHORIZONTAL DETAIL

Section ID	Tower Elevation (ft)	Member Description	Gov. Axis	K	Lu (ft)	r (in)	KL/r	Area (in2)	Fy (ksi)	Fu (ksi)
1	100-80	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
2	80-60	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
3	60-40	L2X2X3/16	z	1.191	2.8525	0.394	103.4391	0.715	36	58
4	40-20	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
5	20-4	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
6	4-0	L 3x3x1/8	z	1.594	2.7463	0.6009	87.4201	0.7344	36	58

TOPHORIZONTAL DETAIL SEGMENT

Section ID	Segment ID	Segment Elevation (ft)	Member Description	Gov. Axis	K	Lu (ft)	r (in)	KL/r	Area (in2)	Fy (ksi)	Fu (ksi)
1	1	100-95.88	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
1	2	95.88-91.96	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
1	3	91.96-88.04	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
1	4	88.04-84.12	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
1	5	84.12-80	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
2	1	80-75.88	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
2	2	75.88-71.96	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
2	3	71.96-68.04	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
2	4	68.04-64.12	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
2	5	64.12-60	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
3	1	60-55.88	L2X2X3/16	z	1.191	2.8525	0.394	103.4391	0.715	36	58
3	2	55.88-51.96	L2X2X3/16	z	1.191	2.8525	0.394	103.4391	0.715	36	58
3	3	51.96-48.04	L2X2X3/16	z	1.191	2.8525	0.394	103.4391	0.715	36	58
3	4	48.04-44.12	L2X2X3/16	z	1.191	2.8525	0.394	103.4391	0.715	36	58
3	5	44.12-40	L2X2X3/16	z	1.191	2.8525	0.394	103.4391	0.715	36	58
4	1	40-35.87	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
4	2	35.87-31.96	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
4	3	31.96-28.04	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
4	4	28.04-24.12	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
4	5	24.12-20	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
5	1	20-15.9	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
5	2	15.9-12	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
5	3	12-8.1	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
5	4	8.1-4	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
6	1	4-0	L 3x3x1/8	z	1.594	2.7463	0.6009	87.4201	0.7344	36	58

BOTTOMHORIZONTAL SUMMARY

Section ID	Tower Elevation (ft)	Member Description	Pu (Comp) (kip)	ϕc Pn (kip)	Pu (Tens) (kip)	ϕt Pn (kip)	Capacity Ratio (%)
1	100-80	L2X2X3/16	0	0	0.6918	23.166	2.99
2	80-60	L2X2X3/16	0.9613	13.1438	1.8518	23.166	7.99
3	60-40	L2X2X3/16	0	0	1.157	23.166	4.99
4	40-20	L2X2X1/8	0	0	0.9059	15.6816	5.78
5	20-4	L2X2X1/8	0	0	3.6961	15.6816	23.57
6	4-0	FB 3/8x12	0.0597	63.993	0	0	0.09

BOTTOMHORIZONTAL SEGMENT SUMMARY

Section ID	Segment ID	Segment Elevation (ft)	Member Description	Pu (Comp) (kip)	ϕc Pn (kip)	Pu (Tens) (kip)	ϕt Pn (kip)	Capacity Ratio (%)
1	5	84.12-80	L2X2X3/16	0	0	0.6918	23.166	2.99
2	5	64.12-60	L2X2X3/16	0.9613	13.1438	1.8518	23.166	7.99
3	5	44.12-40	L2X2X3/16	0	0	1.157	23.166	4.99
4	5	24.12-20	L2X2X1/8	0	0	0.9059	15.6816	5.78
5	4	8.1-4	L2X2X1/8	0	0	3.6961	15.6816	23.57
6	1	4-0	FB 3/8x12	0.0597	63.993	0	0	0.09

BOTTOMHORIZONTAL DETAIL

Section ID	Tower Elevation (ft)	Member Description	Gov. Axis	K	Lu (ft)	r (in)	KL/r	Area (in2)	Fy (ksi)	Fu (ksi)
1	100-80	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
2	80-60	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
3	60-40	L2X2X3/16	z	1.191	2.8525	0.394	103.4391	0.715	36	58
4	40-20	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
5	20-4	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
6	4-0	FB 3/8x12	y	0.975	1.1569	0.1083	125.0678	4.5	36	58

BOTTOMHORIZONTAL DETAIL SEGMENT

Section ID	Segment ID	Segment Elevation (ft)	Member Description	Gov. Axis	K	Lu (ft)	r (in)	KL/r	Area (in2)	Fy (ksi)	Fu (ksi)
1	5	84.12-80	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
2	5	64.12-60	L2X2X3/16	z	1.186	2.8733	0.394	103.7563	0.715	36	58
3	5	44.12-40	L2X2X3/16	z	1.191	2.8525	0.394	103.4391	0.715	36	58
4	5	24.12-20	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
5	4	8.1-4	L2X2X1/8	z	1.193	2.8733	0.398	103.3166	0.484	36	58
6	1	4-0	FB 3/8x12	y	0.975	1.1569	0.1083	125.0678	4.5	36	58

GUY CABLE SUMMARY

Guy Elevation (ft)	Size (in)	Initial Tension (%)	Initial Tension (K)	Breaking Strength (K)	Tu (Tens) (kips)	ϕTn (Tens) (kips)	Capacity Ratio (%)
91.96	3/4	10	5.83	58.3	17.0867	34.98	48.85
51.96	7/8	10	7.97	79.7	21.5842	47.82	45.14

Tower Summary Information

Section ID	Tower Elevation (ft)	Member Type	Member Description	Controlling Component	Pu (kip)	ϕPn (kip)	Capacity Ratio (%)	Result
1	100-80	RB2	LEG	Compression	14.6723	74.0936	19.8	Pass
2	80-60	RB2	LEG	Compression	35.8938	74.0936	48.44	Pass
3	60-40	RB2-1/4	LEG	Compression	54.9017	107.3925	51.12	Pass
4	40-20	RB2	LEG	Compression	39.7096	74.0936	53.59	Pass

Tower Summary Information Cont...

Section ID	Tower Elevation (ft)	Member Type	Member Description	Controlling Component	Pu (kip)	ϕPn (kip)	Capacity Ratio (%)	Result
5	20-4	RB2	LEG	Compression	31.1581	74.6032	41.77	Pass
6	4-0	RB2	LEG	Compression	34.9823	98.3439	35.57	Pass
6	4-0	1_F1554 Gr.55_N	LEG	ANCHOR ROD**	-0.839	38.8772	2.06	Pass
1	100-80	RB7/8	DIAGONAL	Compression	2.094	10.85	19.3	Pass
2	80-60	RB7/8	DIAGONAL	Compression	4.7294	10.85	43.59	Pass
3	60-40	RB7/8	DIAGONAL	Compression	4.5796	10.85	42.21	Pass
4	40-20	RB5/8	DIAGONAL	Compression	3.0817	2.6424	~~116.62~~	~~Fail~~
5	20-4	RB5/8	DIAGONAL	Compression	1.8296	2.66	68.78	Pass
1	100-80	L2X2X3/16	TOPHORIZONTAL	Tension	1.7597	23.166	7.6	Pass
2	80-60	L2X2X3/16	TOPHORIZONTAL	Tension	1.8333	23.166	7.91	Pass
3	60-40	L2X2X3/16	TOPHORIZONTAL	Tension	3.0408	23.166	13.13	Pass
4	40-20	L2X2X1/8	TOPHORIZONTAL	Tension	1.6959	15.6816	10.81	Pass
5	20-4	L2X2X1/8	TOPHORIZONTAL	Tension	1.7609	15.6816	11.23	Pass
6	4-0	L 3x3x1/8	TOPHORIZONTAL	Tension	3.3847	23.7946	14.22	Pass
1	100-80	L2X2X3/16	BOTTOMHORIZONTAL	Tension	0.6918	23.166	2.99	Pass
2	80-60	L2X2X3/16	BOTTOMHORIZONTAL	Tension	1.8518	23.166	7.99	Pass
3	60-40	L2X2X3/16	BOTTOMHORIZONTAL	Tension	1.157	23.166	4.99	Pass
4	40-20	L2X2X1/8	BOTTOMHORIZONTAL	Tension	0.9059	15.6816	5.78	Pass
5	20-4	L2X2X1/8	BOTTOMHORIZONTAL	Tension	3.6961	15.6816	23.57	Pass
6	4-0	FB 3/8x12	BOTTOMHORIZONTAL	Compression	0.0597	63.993	0.09	Pass
	91.96-91.96	3/4	Guy Cable	Tension	17.0867	34.98	48.85	Pass
	51.96-51.96	7/8	Guy Cable	Tension	21.5842	47.82	45.14	Pass
							Summary	
						LEG(4)	53.59	Pass
						LEG ANCHOR ROD(6)	2.06	Pass
						TOPHORIZONTAL(6)	14.22	Pass
						BOTTOMHORIZONTAL(5)	23.57	Pass
						DIAGONAL(4)	~~116.62~~	~~Fail~~
						Guy Cable (Panel 1)	48.85	Pass
						Rating	~~116.62~~	~~Fail~~

OpenTower is not calculating the capacity with the correct effective length. Please see calcs on following pages.

Tower Summary Information Cont...

Section ID	Tower Elevation (ft)	Member Type	Member Description	Controlling Component	Pu (kip)	ϕPn (kip)	Capacity Ratio (%)	Result

** Anchor Rod controlling component -

Dewberry

Job Number	50121956
Made by:	AMD
Date:	8/23/21
Checked by:	BGK
Date:	8/24/21

(West Hartford Center CT) - 5/8 " Solid Rod Check

\\bos-fs\Boston\Projects\50121487\50121956 - West Hartford Center CT\Engineering\Structural\Rev.1\Report Docs\Site Name_Rec & Rod Mount Member Check XX-XX-XX (V1. V1.1

Design Method

**References can be found in the AISC Steel Design Manual 14th Ed.*

LRFD

Tensile Yield Φ : 0.9
Tensile Rupture Φ : 0.75
Compression Φ : 0.9
Flexure Φ : 0.9

Member Properties

F_y = 36.0 ksi
F_u = 58.0 ksi
U = 1.00 *(Table D3.1)*
A_g = 0.307 in² *(Sec. B4.3a)*
A_n = 0.307 in² *(Sec. B4.3b)*
A_e = 0.307 in² *(D3-1)*

D = 5/8
R = 0.31 in

$I = \frac{\pi r^4}{4}$ I = 0.0075 in⁴
$r = \sqrt{\frac{I}{A}}$ r = 0.16 in
$Z = \frac{D^3}{6}$ Z = 0.04 in³
$S = \frac{\pi R^3}{4}$ S = 0.02 in³

Unbraced Length
L= 2.05 ft = 24.6 in

Effective Length Factor (Table C-A-7.1, AISC)
K = 0.90

Check Tension

Tensile Yielding (D2-1) = F_yA_g = 11.045 k **Tensile Yield Controls**
Tensile Rupture (D2-2) = F_uA_e = 17.794 k

P_n = 11.045 k
Φ = 0.90
ΦPn = 9.940 k > 0.967 k OK
STAAD Output

Check Compression

$\frac{KL}{r}$ = 141.7

KL/r = 141.7 > 133.7 $= 4.71\sqrt{\frac{E}{F_y}}$ *Use (E3-3)*

$$F_{cr} = \begin{cases} \left[0.658^{\frac{F_y}{F_e}}\right] F_y & \text{(E3-2)} \\ 0.877\, F_e & \text{(E3-3)} \end{cases} = 12.507 \text{ ksi}$$

$F_e = \frac{\pi^2 E}{\left(\frac{KL}{r}\right)^2}$ = 14.261 ksi *(E3-4)*

P_n *(E3-1)* = $F_{cr}A_g$ = 3.837 k
Φ = 0.9
ΦPn = 3.453 k > 3.082 k OK
STAAD Output

Utilization

Max Utilization of Member **89.2%** **check combined axial & bending*

APPENDIX B

REFERENCE MATERIAL

verizon fuze | RFDS

EAST > North East > New England > New England West > WEST HARTFORD CENTER CT

Brauer, Mark - mark.brauer2@verizonwireless.com - 9/20/2021 8:35:2

Project Details

FUZE Project ID:	16273383
Project Name:	5G L-Sub6 - Carrier Add
Project Alt Name:	WEST HARTFORD CENTER CT - MKT 68 - MODIFICATION
Project Type:	Modification
Modification Type:	VDU_UPGRADE_OR_ADD
Designed Sector Carrier 4G:	18
Designed Sector Carrier 5G:	N/A
Additional Sector Carrier 4G:	N/A
Additional Sector Carrier 5G:	N/A
FP Solution Type & Tech Type:	MODIFICATION;5G_L-Sub6-Prep,5G_Radio Swap
Carrier Aggregation:	false
MPT Id:	
eCIP-0:	false
Suffix:	

Location Information

Site ID:	325091
E-NodeB ID:	0689551,068960
PSLC:	535840
Switch Name:	Windsor 1
Tower Owner:	
Tower Type:	Building with tower
Site Type:	MACRO
Site Sub Type:	SPOKE
Street Address:	14-20 Isham Road
City:	West Hartford
State:	CT
Zip Code:	06107
County:	Hartford
Latitude:	41.761556 / 41° 45' 41.6016" N
Longitude:	-72.740375 / 72° 44' 25.35" W

RFDS Project Scope: Sub 6 add
Sub 6 centerline over CBRS
Update 09/20/2021 - added "removed" antennas (1) BXA-171063-8BF and (2) SACP 2x5516

Antenna Summary

Added

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
					5G	Samsung	MT6407-77A	107.5	109.6	60(1) 180(2) 290(3)	false	false	PHYSICAL	3	

Removed

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
						Antel	BXA-171063-8BF	106	108	60(01)	false	false	PHYSICAL	1	
						Swedcom	SACP 2x5516	106	108.3	180(02) 290(03)	false	false	PHYSICAL	2	

Retained

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
LTE	LTE	LTE	LTE			ANDREW	SBNHH-1D65B	106	109	60(1) 180(2) 290(3)	false	false	PHYSICAL	6	
	CDMA					ANTEL	BXA-80063/4 (97250)	106	108.1	60(D1)	false	false	PHYSICAL	1	
				LTE		SAMSUNG	XXDWMM-12.5-65-8T-CBRS Port1 3550 8DT	104	104.5	60(1) 180(2) 290(3)	false	false	PHYSICAL	3	
	CDMA					SWEDCOM	SLCP 2X6014 (242852)	106	108.2	180(D2) 290(D3)	false	false	PHYSICAL	2	

Added: 3 | Removed: 3 | Retained: 12

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
No data available.														

Removed

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
No data available.														

Retained

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
Mount	Tower							COMMSCOPE	BASMNT-SBS-1-2			PHYSICAL	3	
Coaxial Cables	Tower							N/A	1-5/8" Coax			PHYSICAL	6	
OVP Box	Tower							N/A	6 OVP			PHYSICAL	2	
Hybrid Cable	Tower							N/A	6x12 Hybriflex			PHYSICAL	2	
RRU	Tower			LTE	LTE			Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)			PHYSICAL	3	
RRU	Tower	LTE	LTE					Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)			PHYSICAL	3	
RRU	Tower					LTE		Samsung	CBRS RRH - RT4401-48A			PHYSICAL	3	

Service Info

CBRS 3_5 GHz		0002		5GLS		
Sector	**0019**	**0020**	**0021**	**19**	**20**	**21**
Azimuth	60	180	290	60	180	290
Cell / ENode B ID	068960	068960	068960	068960	068960	068960
Antenna Model	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT
Antenna Make	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG	SAMSUNG
Antenna Centerline(Ft)	106	106	106	104	104	104
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	8	8	8	8	8	8
Tip Height	106.5	106.5	106.5	104.5	104.5	104.5
Regulatory Power	7.72	7.72	7.72	9.72	9.72	9.72
DLEARFCN	55990	55990	55990	55990	55990	55990
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position				4	4	4
Transmitter Id	4083590	4083591	4083592	9038549	9038550	9038552
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

700 MHz LTE		0002		5GLS		
Sector	**D1**	**D2**	**D3**	**01**	**02**	**03**
Azimuth	60	180	290	60	180	290
Cell / ENode B ID	068960	068960	068960	068960	068960	068960
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	106	106	106	106	106	106
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	3	5	5	3	5	5
Tip Height	109	109	109	109	109	109
Regulatory Power	76.99	77.44	77.44	76.99	77.44	77.44
DLEARFCN	5230	5230	5230	5230	5230	5230
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position				2,3	2,3	2,3
Transmitter Id	4083539	4083543	4083547	9038525	9038541	9038545
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHz LTE		0002			5GLS	
Sector	**D1**	**D2**	**D3**	**01**	**02**	**03**
Azimuth	60	180	290	60	180	290
Cell / ENode B ID	068960	068960	068960	068960	068960	068960
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	106	106	106	106	106	106
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	3	5	5	3	5	5
Tip Height	109	109	109	109	109	109
Regulatory Power	364.18	365.53	365.53	364.18	365.53	365.53
DLEARFCN	2450	2450	2450	2450	2450	2450
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position				2,3	2,3	2,3
Transmitter Id	4083542	4083546	4083550	9038539	9038544	9038548
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHz CDMA		0002			5GLS	
Sector	**D1**	**D2**	**D3**	**D1**	**D2**	**D3**
Azimuth	60	180	290	60	180	290
Cell / ENode B ID						
Antenna Model	BXA-80063/4 (97250)	SLCP 2X6014 (242852)	SLCP 2X6014 (242852)	BXA-80063/4 (97250)	SLCP 2X6014 (242852)	SLCP 2X6014 (242852)
Antenna Make	ANTEL	SWEDCOM	SWEDCOM	ANTEL	SWEDCOM	SWEDCOM
Antenna Centerline(Ft)	106	106	106	106	106	106
Mechanical Down-Tilt(Deg.)	0	4	4	0	4	4
Electrical Down-Tilt	0	0	0	0	0	0
Tip Height	108.1	108.2	108.2	108.1	108.2	108.2
Regulatory Power	431.52	496.59	496.59	431.52	496.59	496.59
DLEARFCN	201, 242, 283	201, 242, 283	201, 242, 283	201, 242, 283	201, 242, 283	201, 242, 283
Channel Bandwidth(MHz)	3	3	3	3	3	3
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make						
RRU Model						
Number of Tx, Rx Lines						
Position						
Transmitter Id						
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

1900 MHz LTE

	0002			5GLS		
Sector	**D1**	**D2**	**D3**	**01**	**02**	**03**
Azimuth	60	180	290	60	180	290
Cell / ENode B ID	068960	068960	068960	068960	068960	068960
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	106	106	106	106	106	106
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	1	3	3	1	3	3
Tip Height	109	109	109	109	109	109
Regulatory Power	289.24	283.76	283.76	289.24	283.76	283.76
DLEARFCN	1050	1050	1050	1050	1050	1050
Channel Bandwidth(MHz)	10	10	10	10	10	10
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position				3	3	3
Transmitter Id	4083540	4083544	4083548	9038532	9038542	9038546
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

2100 MHz LTE

	0002			5GLS		
Sector	**D1**	**D2**	**D3**	**01**	**02**	**03**
Azimuth	60	180	290	60	180	290
Cell / ENode B ID	068960	068960	068960	068960	068960	068960
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	106	106	106	106	106	106
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	1	3	3	1	3	3
Tip Height	109	109	109	109	109	109
Regulatory Power	143.23	140.42	140.42	143.23	140.42	140.42
DLEARFCN	2050	2050	2050	2050	2050	2050
Channel Bandwidth(MHz)	20	20	20	20	20	20
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make	Samsung	Samsung	Samsung	Samsung	Samsung	Samsung
RRU Model	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position				2	2	2
Transmitter Id	4083541	4083545	4083549	9038536	9038543	9038547
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

nL-Sub6

	5GLS		
Sector	**0019**	**0020**	**0021**
Azimuth	60	180	290
Cell / ENode B ID			
Antenna Model	MT6407-77A	MT6407-77A	MT6407-77A
Antenna Make	Samsung	Samsung	Samsung
Antenna Centerline(Ft)	107.5	107.5	107.5
Mechanical Down-Tilt(Deg.)	0	0	0
Electrical Down-Tilt	3	3	3
Tip Height	109.6	109.6	109.6
Regulatory Power	0.04	0.04	0.04
DLEARFCN	1	1	1
Channel Bandwidth(MHz)	100	100	100
Total ERP (W)			
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	MT6407-77A	MT6407-77A	MT6407-77A
Number of Tx, Rx Lines	64,64	64,64	64,64
Position	4	4	4
Transmitter Id	9038566	9038567	9038568
Source	ATOLL_API	ATOLL_API	ATOLL_API

Service Comments

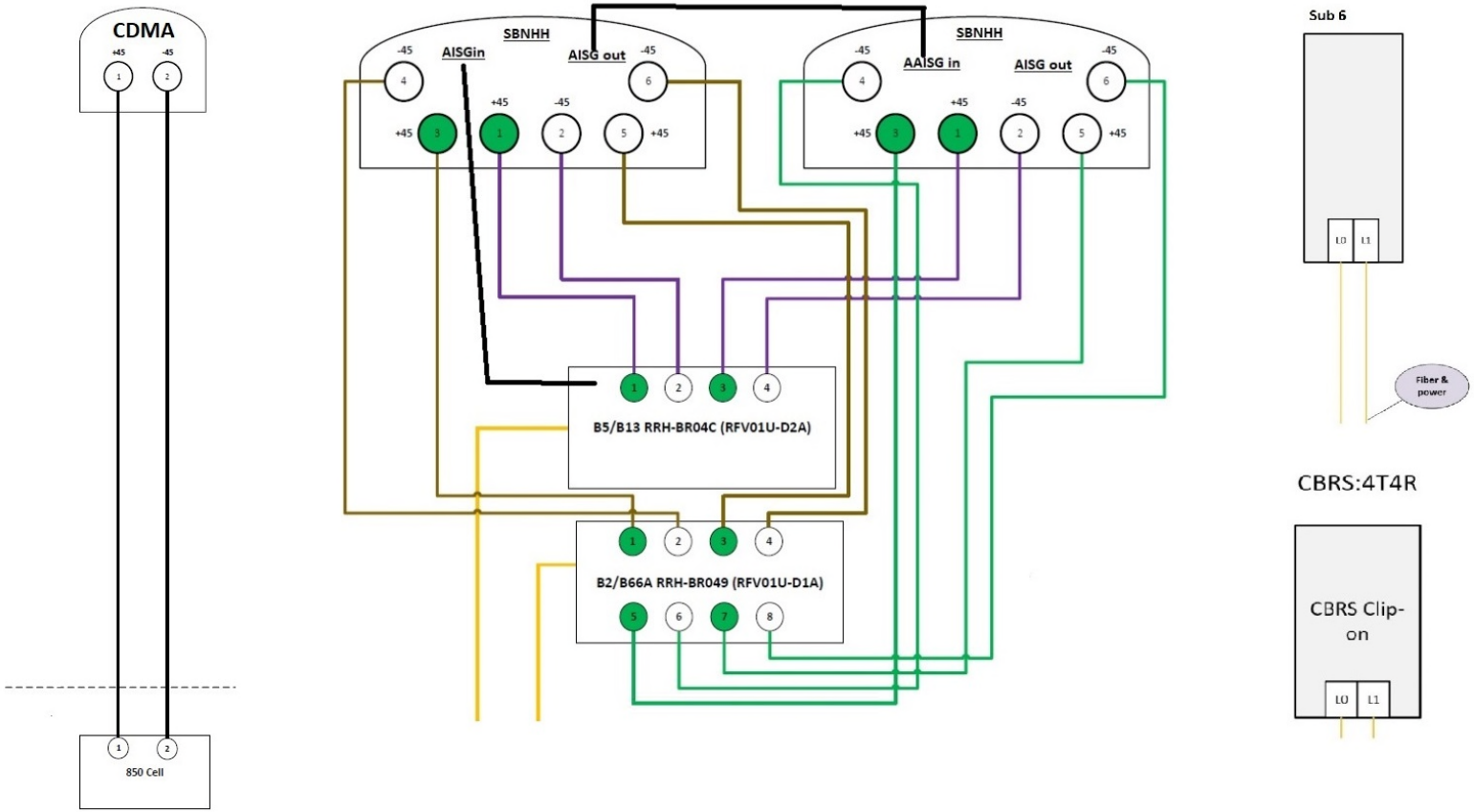
Callsigns Per Antenna

Sector	Antenna Ma	Antenna Mo	Ant CL Height AGL	Tip Height	Azimuth (Tr	Electrical Tilt	Mechanical Tilt	Gain	Beamwidth	Regulatory Power	Callsigns						
											700	850	1900	2100	28 GHz	31 GHz	39 GHz
D1	ANTEL	BXA-80063/4 (97250)	106	108.1	60	0	0	13	63.75	319.91		KNKA404					
D1	ANTEL	BXA-80063/4 (97250)	106	108.1	60	0	0	13	63.75	431.52		KNKA404					
D2	SWEDCOM	SLCP 2X6014 (242852)	106	108.2	180	0	4	14.08	55	496.59		KNKA404					
01	ANDREW	SBNHH-1D65B	106	109	60	3	0	13.335	66	364.18		KNKA404					
01	ANDREW	SBNHH-1D65B	106	109	60	1	0	16.163	61	143.23				WQGA906 WQGB276			
02	ANDREW	SBNHH-1D65B	106	109	180	5	0	13.351	64.5	365.53		KNKA404					
03	ANDREW	SBNHH-1D65B	106	109	290	3	0	16.122	53	283.76			KNLH251 WPOJ730				
02	ANDREW	SBNHH-1D65B	106	109	180	5	0	12.632	69.25	77.44	WQJQ689						
03	ANDREW	SBNHH-1D65B	106	109	290	3	0	16.077	61.75	140.42				WQGA906 WQGB276			
03	ANDREW	SBNHH-1D65B	106	109	290	5	0	12.632	69.25	77.44	WQJQ689						
D3	SWEDCOM	SLCP 2X6014 (242852)	106	108.2	290	0	4	14.08	55	496.59		KNKA404					
D2	SWEDCOM	SLCP 2X6014 (242852)	106	108.2	180	0	4	14.08	55	368.15		KNKA404					
03	ANDREW	SBNHH-1D65B	106	109	290	5	0	13.351	64.5	365.53		KNKA404					
01	ANDREW	SBNHH-1D65B	106	109	60	1	0	16.205	52.75	289.24			KNLH251 WPOJ730				
02	ANDREW	SBNHH-1D65B	106	109	180	3	0	16.122	53	283.76			KNLH251 WPOJ730				
D3	SWEDCOM	SLCP 2X6014 (242852)	106	108.2	290	0	4	14.08	55	368.15		KNKA404					
02	ANDREW	SBNHH-1D65B	106	109	180	3	0	16.077	61.75	140.42				WQGA906 WQGB276			
01	ANDREW	SBNHH-1D65B	106	109	60	3	0	12.607	69	76.99	WQJQ689						

Callsigns

Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq Mi	Status	Action	Approved for Insvc
WQJQ689	*Northeast*	*WU*	*REA001*	*C*	*CT*	*Hartford*	*Cellco Partnership*	*Yes*	*22.000*	*746.000-757.000*	*776.000-787.000*	*.000-.000*	*.000-.000*	*77.44*	*1000*	*1216.19*	*Active*	*added*	*Yes*
KNKA404	*Hartford-New Britain-Bristol, CT*	*CL*	*CMA032*	*A*	*CT*	*Hartford*	*Cellco Partnership*	*Yes*	*25.000*	*824.000-835.000*	*869.000-880.000*	*845.000-846.500*	*890.000-891.500*	*496.59*	*500*	*1216.19*	*Active*	*added*	*Yes*
WPOJ730	*Hartford, CT*	*CW*	*BTA184*	*C*	*CT*	*Hartford*	*Cellco Partnership*	*Yes*	*15.000*	*1895.000-1902.500*	*1975.000-1982.500*	*.000-.000*	*.000-.000*	*289.24*	*1640*	*1216.19*	*Active*	*added*	*Yes*
KNLH251	*Hartford, CT*	*CW*	*BTA184*	*F*	*CT*	*Hartford*	*Cellco Partnership*	*Yes*	*10.000*	*1890.000-1895.000*	*1970.000-1975.000*	*.000-.000*	*.000-.000*	*289.24*	*1640*	*1216.19*	*Active*	*added*	*Yes*
CBRS_CALL	*UNLICENSE*	*3.5 GHz*	*UNLICENSE*	*UNLICENSE*	*CT*	*Hartford*	*UNLICENSE*	*UNLICENSE*	*UNLICENSE*	*UNLICENSE UNLICENSE*	*UNLICENSE UNLICENSE*	*UNLICENSE UNLICENSE*	*UNLICENSE UNLICENSE*	*9.72*		*1216.19*	*Active*	*added*	*No*
WQGB276	*Hartford-New Britain-Bristol, CT*	*AW*	*CMA032*	*A*	*CT*	*Hartford*	*Cellco Partnership*	*Yes*	*20.000*	*1710.000-1720.000*	*2110.000-2120.000*	*.000-.000*	*.000-.000*	*143.23*	*1640*	*1216.19*	*Active*	*added*	*Yes*
WQGA906	*New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA-*	*AW*	*BEA010*	*B*	*CT*	*Hartford*	*Cellco Partnership*	*Yes*	*20.000*	*1720.000-1730.000*	*2120.000-2130.000*	*.000-.000*	*.000-.000*	*143.23*	*1640*	*1216.19*	*Active*	*added*	*Yes*
WPOH943	Hartford, CT	LD	BTA184	A	CT	Hartford	Cellco Partnership	Yes	300.000	29100.000-29250.000	31075.000-31225.000	.000-.000	.000-.000			1216.19	Active		No
WPLM398	Hartford, CT	LD	BTA184	B	CT	Hartford	Cellco Partnership	Yes	150.000	31000.000-31075.000	31225.000-31300.000	.000-.000	.000-.000			1216.19	Active		No
WRBA708	Hartford, CT	UU	BTA184	L1	CT	Hartford	Cellco Partnership	Yes	325.000	27500.000-27600.000	27700.000-27925.000	.000-.000	.000-.000			1216.19	Active		Yes
WRBA709	Hartford, CT	UU	BTA184	L2	CT	Hartford	Cellco Partnership	Yes	325.000	27925.000-28050.000	28150.000-28350.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD609	New York, NY	UU	PEA001	M1	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	37600.000-37700.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD610	New York, NY	UU	PEA001	M10	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38500.000 38600.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD611	New York, NY	UU	PEA001	M2	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	37700.000-37800.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes

WRHD612	New York, NY	UU	PEA001	M3	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	37800.000 37900.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD613	New York, NY	UU	PEA001	M4	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	37900.000 38000.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD614	New York, NY	UU	PEA001	M5	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38000.000 38100.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD615	New York, NY	UU	PEA001	M6	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38100.000- 38200.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD616	New York, NY	UU	PEA001	M7	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38200.000 38300.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD617	New York, NY	UU	PEA001	M8	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38300.000 38400.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD618	New York, NY	UU	PEA001	M9	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38400.000 38500.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD619	New York, NY	UU	PEA001	N1	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38600.000 38700.000	.000-.000	.000-.000	.000-.000			1216.19	Active	N/A	No
WRDG500	New York, NY	UU	PEA001	S2	CT	Hartford	Cellco Partnership	Yes	400.000	37800.000 38200.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes


CDMA
+45
-45
1
2
850 Cell
SBNHH
AISGin
AISG out
-45
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6
+45
3
1
2
5
B5/B13 RRH-BR04C (RFV01U-D2A)
B2/B66A RRH-BR049 (RFV01U-D1A)
7
8
AAISG in
Sub 6
L0
L1
Fiber & power
CBRS:4T4R
CBRS Clip-on

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
(856) 797-0412
peter.albano@colliersengineering.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10106080
Maser Consulting Connecticut Project #: 21777247A (Rev 1)

September 28, 2021

Site Information	*Site ID:*	*535840-VZW/WEST HARTFORD CENTER CT*
	Site Name:	*WEST HARTFORD CENTER CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*14-20 Isham Road* *West Hartford, Connecticut 06107* *Hartford County*
	Latitude:	*41.761556°*
	Longitude:	*-72.740375°*
Structure Information	*Tower Type:*	*125-Ft Guyed*
	Mount Type:	*13.00-Ft T-Frame*

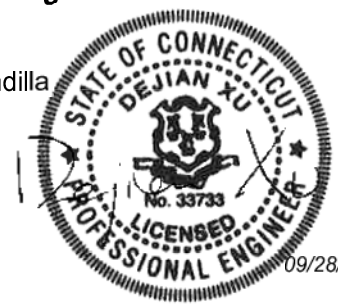
FUZE ID # 16273383

Analysis Results

T-Frame: **67.4% Pass**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings
For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Zachary Bandilla



09/28/2021

Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

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:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 325091, dated September 20, 2021*
Mount Mapping Report	*Roaming Networks Inc., Site ID: PSLC535840, dated April 5, 2021*
Previous Construction Drawings	*Dewberry Engineers Inc., Project #: 50121487, dated March 18, 2020*
Direction Email	*Mark Brauer, dated April 1, 2021*
Previous Mount Analysis	*Maser Consulting Connecticut, Project #: 21777247A (Rev 1), Dated September 24, 2021*
Mount Modification Drawings	*Maser Consulting Connecticut, Project #: 21777247A, Dated June 23, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	117 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.50 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.996
Seismic Parameters:	S_S:	0.187
	S_1:	0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
104.00	107.50	3	Samsung	MT6407-77A	Added
	106.00	6	Andrew	SBNHH-1D65B	Retained
		1	Antel	BXA-80063/4	
		2	Swedcom	SLCP 2x6014	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C*	
		2	Raycap	RHSDC-3315-PF-48*	
	104.00	3	Samsung	XXDWMM-12.5-65-8T-CBRS	

* Equipment is flush mounted directly to the guyed tower. They are not mounted on t-frame mounts and are not included in this mount analysis.

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 Maser Consulting 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 Maser Consulting 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. Maser Consulting 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:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting.

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff Horizontal	*24.7 %*	*Pass*
Face Horizontal	*47.2 %*	*Pass*
Mast Pipe	*10.4 %*	*Pass*
Standoff Bracing	*9.4 %*	*Pass*
Face End Vertical	*30.5 %*	*Pass*
Face Bracing	*67.4 %*	*Pass*
Mount Pipe	*25.1 %*	*Pass*
Tieback	*11.9 %*	*Pass*
V-Brace	*15.8 %*	*Pass*
Connection Check	*19.7 %*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**67.4%**

Recommendation:

The existing mounts will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

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

Attachments:

1. Mount Photos
2. Cost Estimate
3. Mount Mapping Report (for reference only)
4. Analysis Calculations
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter


04/03/2021 08:33:43
WEST HARTFORD CENTER CT


04/03/2021 08:57:52
-72.74057, 41.761825
WEST HARTFORD CENTER CT

V3.0 Updated on 8-31-2020

PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
N/A

Tower Owner:	Gassner Family	**Mapping Date:**	4/5/2021
Site Name:	WEST HARTFORD CENTER CT	**Tower Type:**	Guyed Tower
Site Number or ID:	PSLC535840	**Tower Height (Ft.):**	N/A
Mapping Contractor:	Roaming Networks Inc.	**Mount Elevation (Ft.):**	81.5

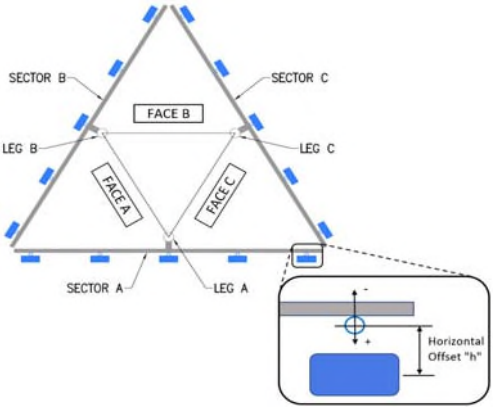
Mount Pipe Configuration and Geometries [Unit = Inches]

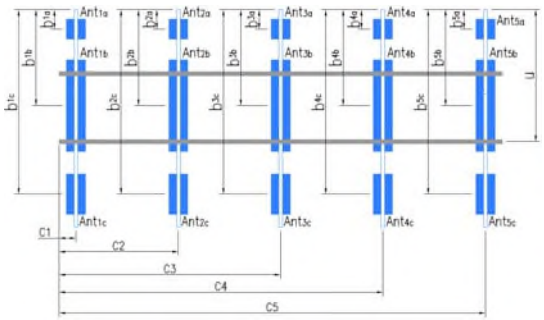
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE 2.4"Ø X 0.12" X 84" LONG	70.00	3.00	C1	PIPE 2.4"Ø X 0.12" X 84" LONG	70.00	3.00
A2	PIPE 2.4"Ø X 0.12" X 84" LONG	60.00	82.00	C2	PIPE 2.4"Ø X 0.12" X 84" LONG	60.00	82.00
A3	PIPE 2.4"Ø X 0.12" X 84" LONG	58.00	130.00	C3	PIPE 2.4"Ø X 0.12" X 84" LONG	58.00	130.00
A4	PIPE 2.4"Ø X 0.12" X 84" LONG	58.00	153.00	C4	PIPE 2.4"Ø X 0.12" X 84" LONG	58.00	153.00
A5				C5			
A6				C6			
B1	PIPE 2.4"Ø X 0.12" X 84" LONG	70.00	3.00	D1			
B2	PIPE 2.4"Ø X 0.12" X 84" LONG	60.00	82.00	D2			
B3	PIPE 2.4"Ø X 0.12" X 84" LONG	58.00	130.00	D3			
B4	PIPE 2.4"Ø X 0.12" X 84" LONG	58.00	153.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	15.00
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.) :	

Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):	3	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	2.2



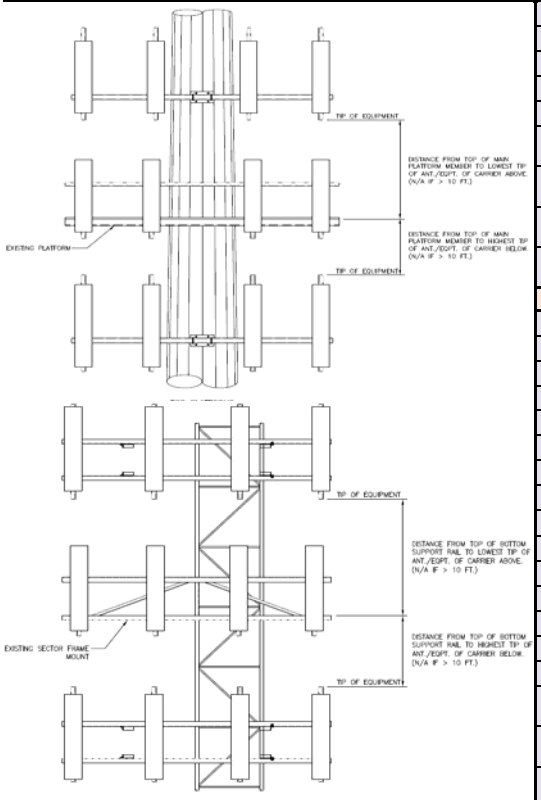


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}	Unknow	6.00	5.50	71.00		83.1667	35.00	7.00	72.00	7,8,9
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNH-1D6565B	11.90	7.10	72.70		83.0833	26.00	10.00	72.00	10
Ant_{2b}	SBNH-1D6565B	11.90	7.10	72.70		83.0833	26.00	10.00	72.00	11
Ant_{2c}										
Ant_{3a}	BXA-171085-8BF	6.10	4.10	48.20		83.3333	21.00	8.00	72.00	4
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	BXA-80053-4CF-EDIN	11.20	4.50	47.40		83.3333	21.00	10.00	72.00	5
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RFV01U-D1A	15.00	10.00	15.00						
Ant on Standoff										
Ant on Tower	RFV01U-D2A	15.00	10.00	15.00						
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	72.00	Deg	Leg A:	30.00	Deg
Sector B:	180.00	Deg	Leg B:	150.00	Deg
Sector C:	313.00	Deg	Leg C:	270.00	Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	284.00	Deg	Sector C
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}	Unknow	6.00	5.50	71.00		83.1667	35.00	7.00	180.00	7,8,9
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNH-1D6565B	11.90	7.10	72.70		83.0833	26.00	10.00	180.00	10
Ant_{2b}	SBNH-1D6565B	11.90	7.10	72.70		83.0833	26.00	10.00	180.00	11
Ant_{2c}										
Ant_{3a}	BXA-171085-8BF	6.10	4.10	48.20		83.3333	21.00	8.00	180.00	4
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	BXA-80053-4CF-EDIN	11.20	4.50	47.40		83.3333	21.00	10.00	173.00	5
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RFV01U-D1A	15.00	10.00	15.00						
Ant on Standoff										
Ant on Tower	RFV01U-D2A	15.00	10.00	15.00						
Ant on Tower										
Sector C										
Ant_{1a}	Unknow	6.00	5.50	71.00		83.1667	35.00	7.00	313.00	7,8,9
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNH-1D6565B	11.90	7.10	72.70		83.0833	26.00	10.00	313.00	10
Ant_{2b}	SBNH-1D6565B	11.90	7.10	72.70		83.0833	26.00	10.00		11
Ant_{2c}										
Ant_{3a}	BXA-171085-8BF	6.10	4.10	48.20		83.3333	21.00	8.00	313.00	4
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	BXA-80053-4CF-EDIN	11.20	4.50	47.40		83.3333	21.00	10.00	313.00	5
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RFV01U-D1A	15.00	10.00	15.00						
Ant on Standoff										
Ant on Tower	RFV01U-D2A	15.00	10.00	15.00						
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

1		
2		
3		
4		
5		
6		
7		
8		

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.

V3.0 Updated on 8-31-2020

PAUL J. FORD & COMPANY

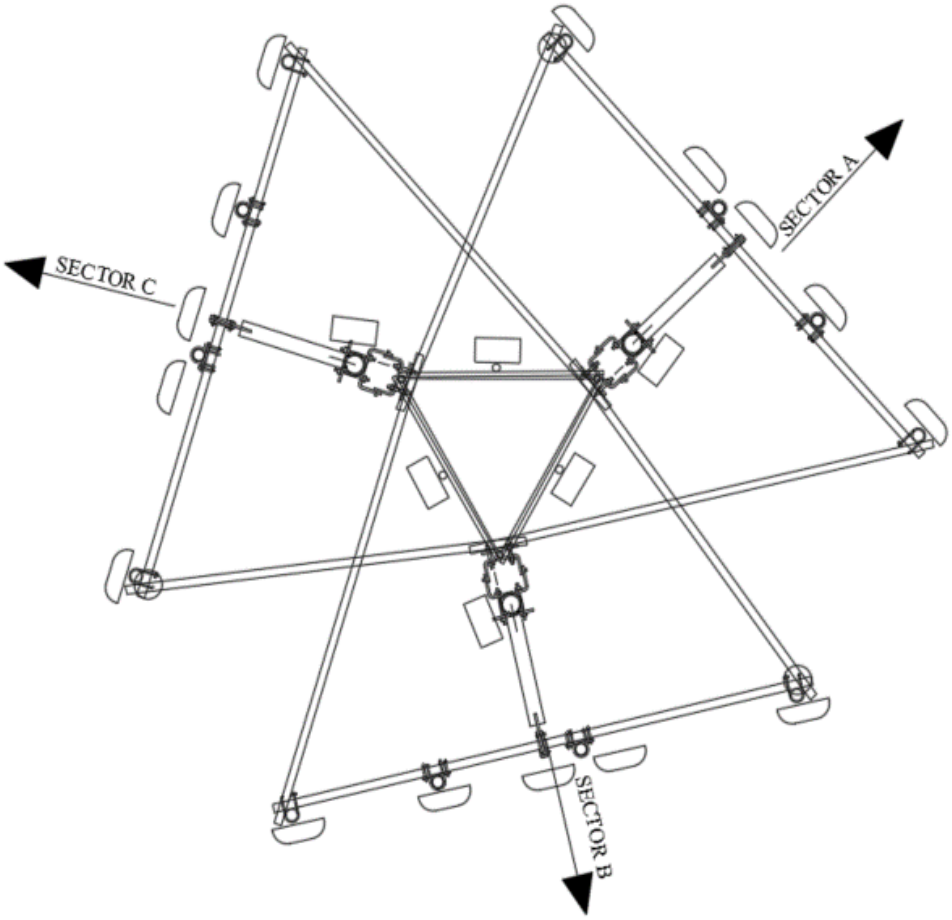
Antenna Mount Mapping Form (PATENT PENDING)

FCC #
N/A

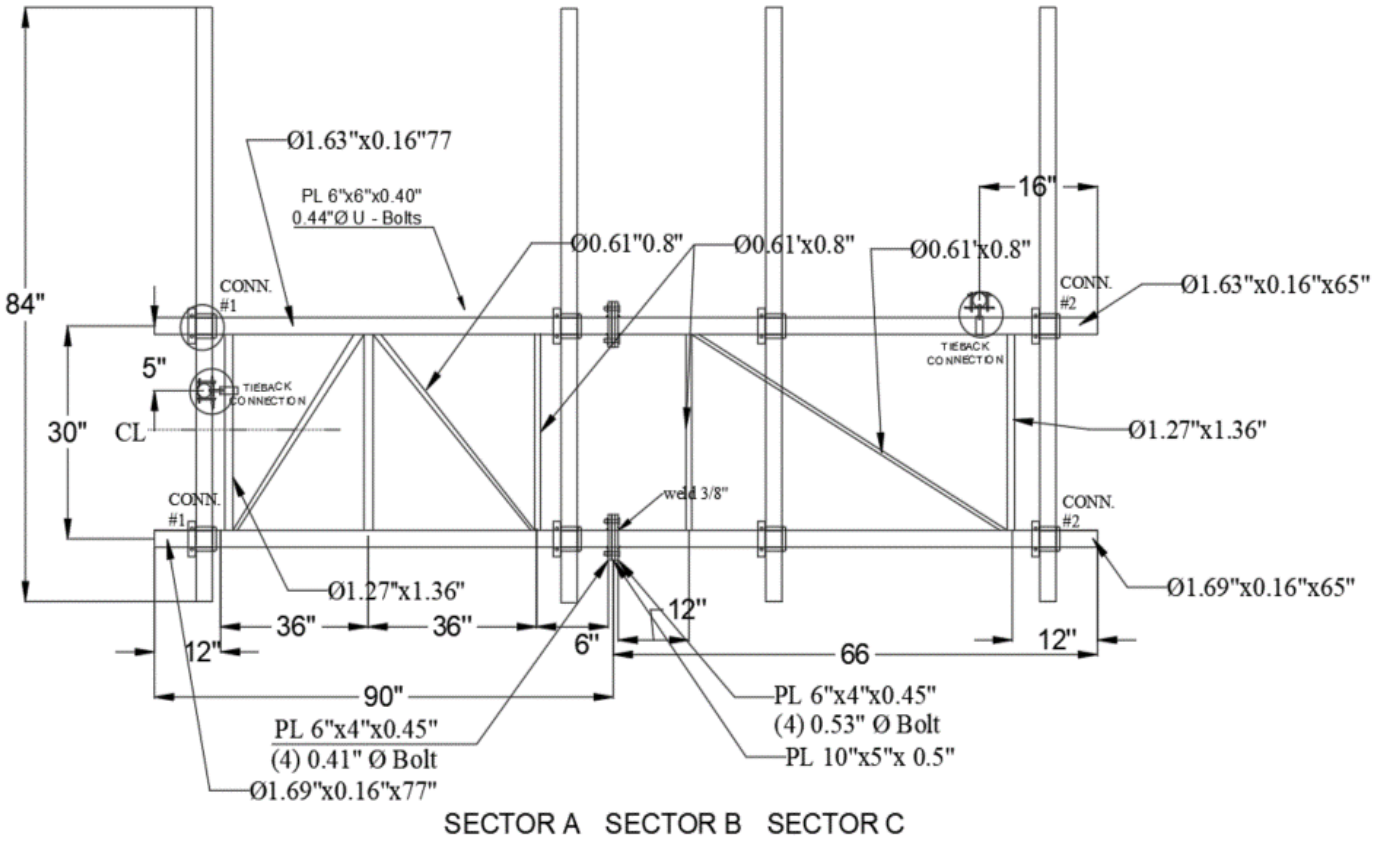
Tower Owner:	Gassner Family	**Mapping Date:**	4/5/2021
Site Name:	WEST HARTFORD CENTER CT	**Tower Type:**	Guyed Tower
Site Number or ID:	PSLC535840	**Tower Height (Ft.):**	N/A
Mapping Contractor:	Roaming Networks Inc.	**Mount Elevation (Ft.):**	81.5

Please Insert Sketches of the Antenna Mount

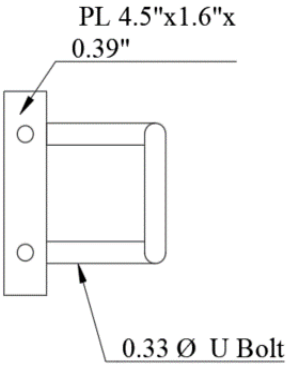
Overall Mount Schematic



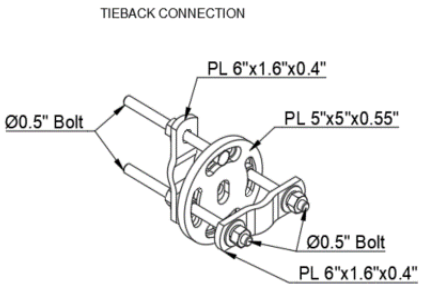
Please Insert Sketches of the Antenna Mount, cont'd



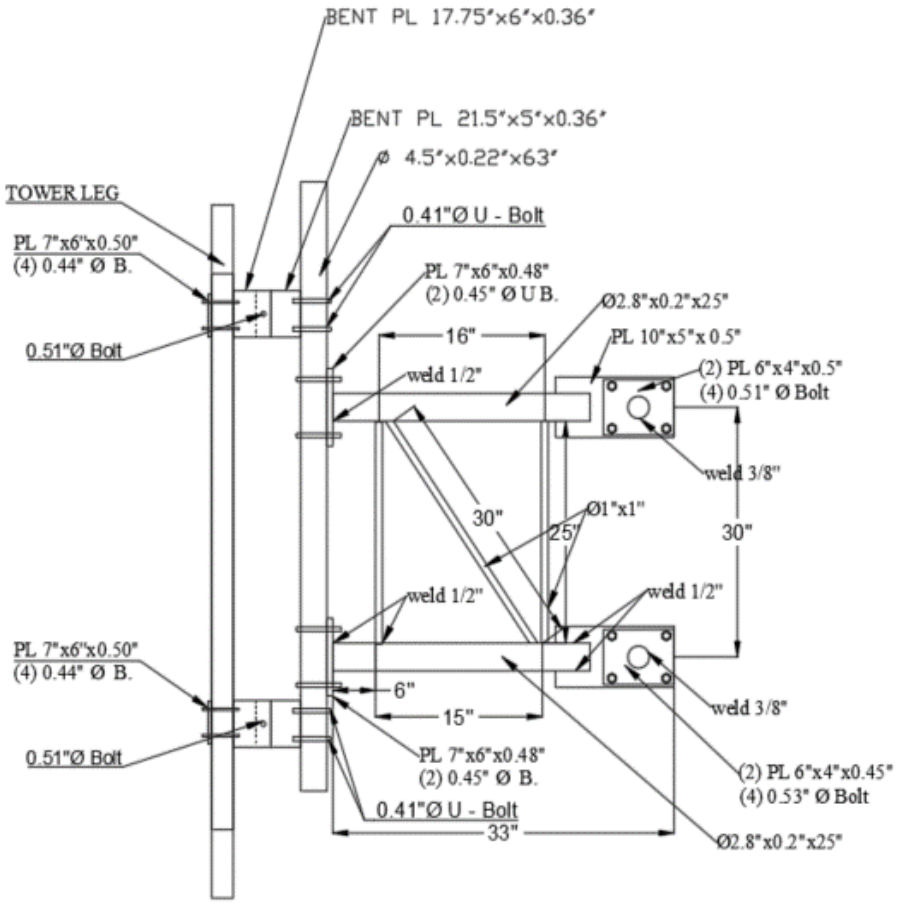
SECTOR A SECTOR B SECTOR C



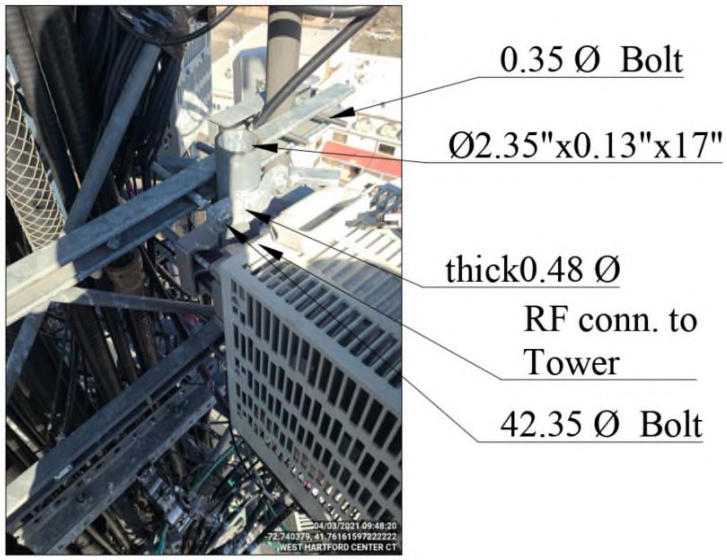
CONN.
#1



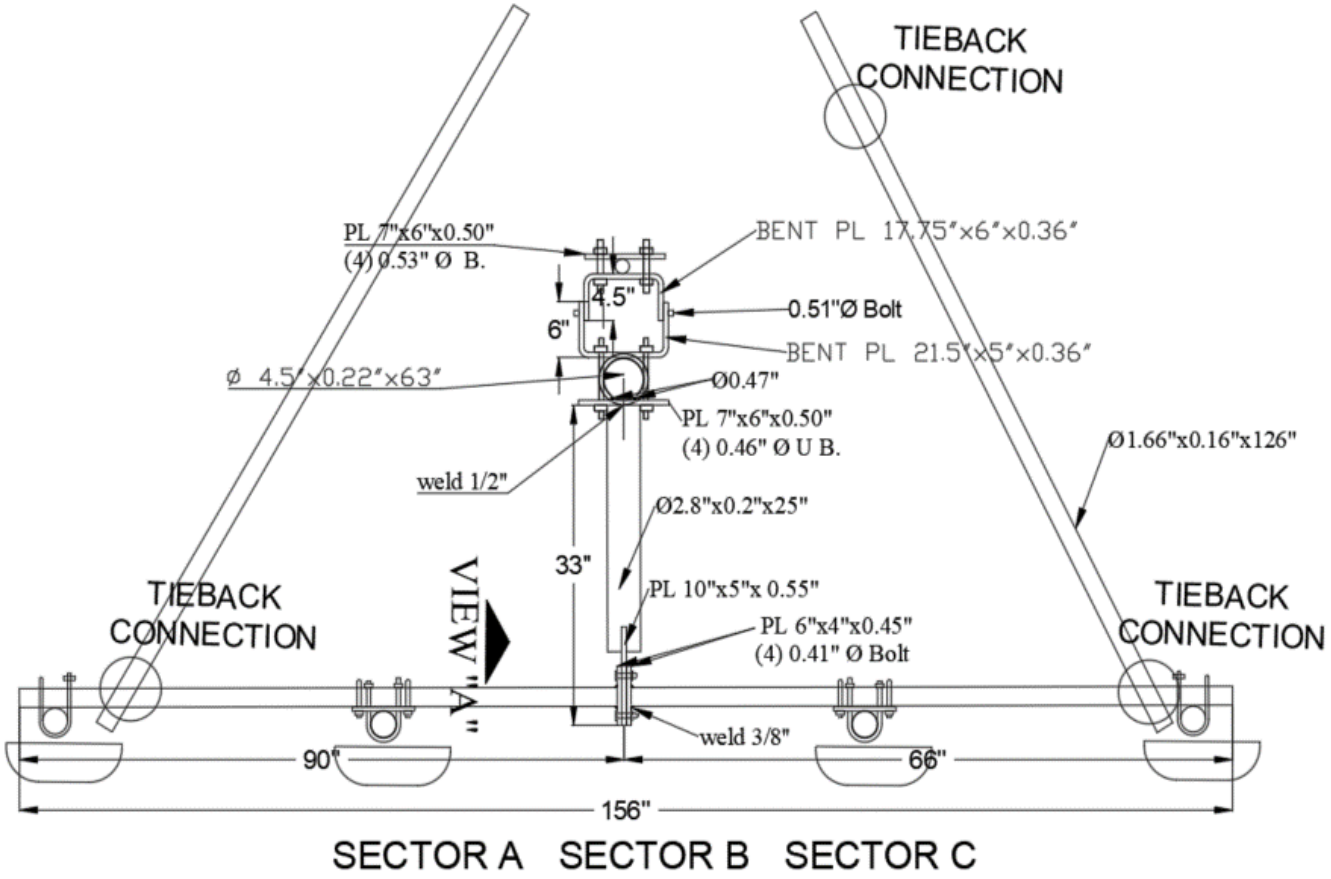
Please Insert Sketches of the Antenna Mount, cont'd

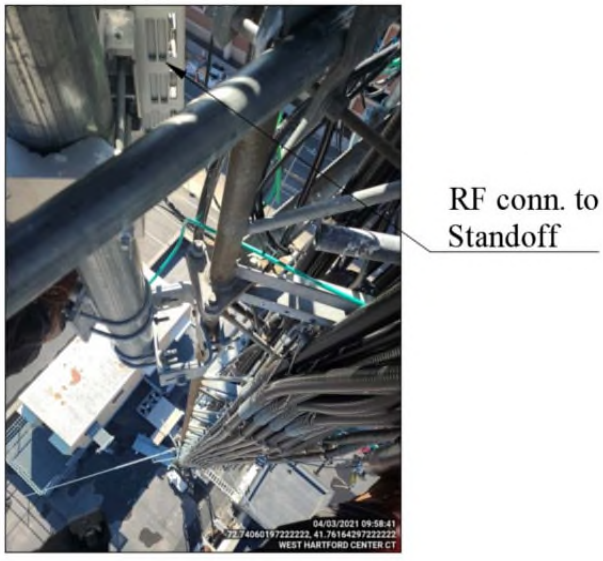


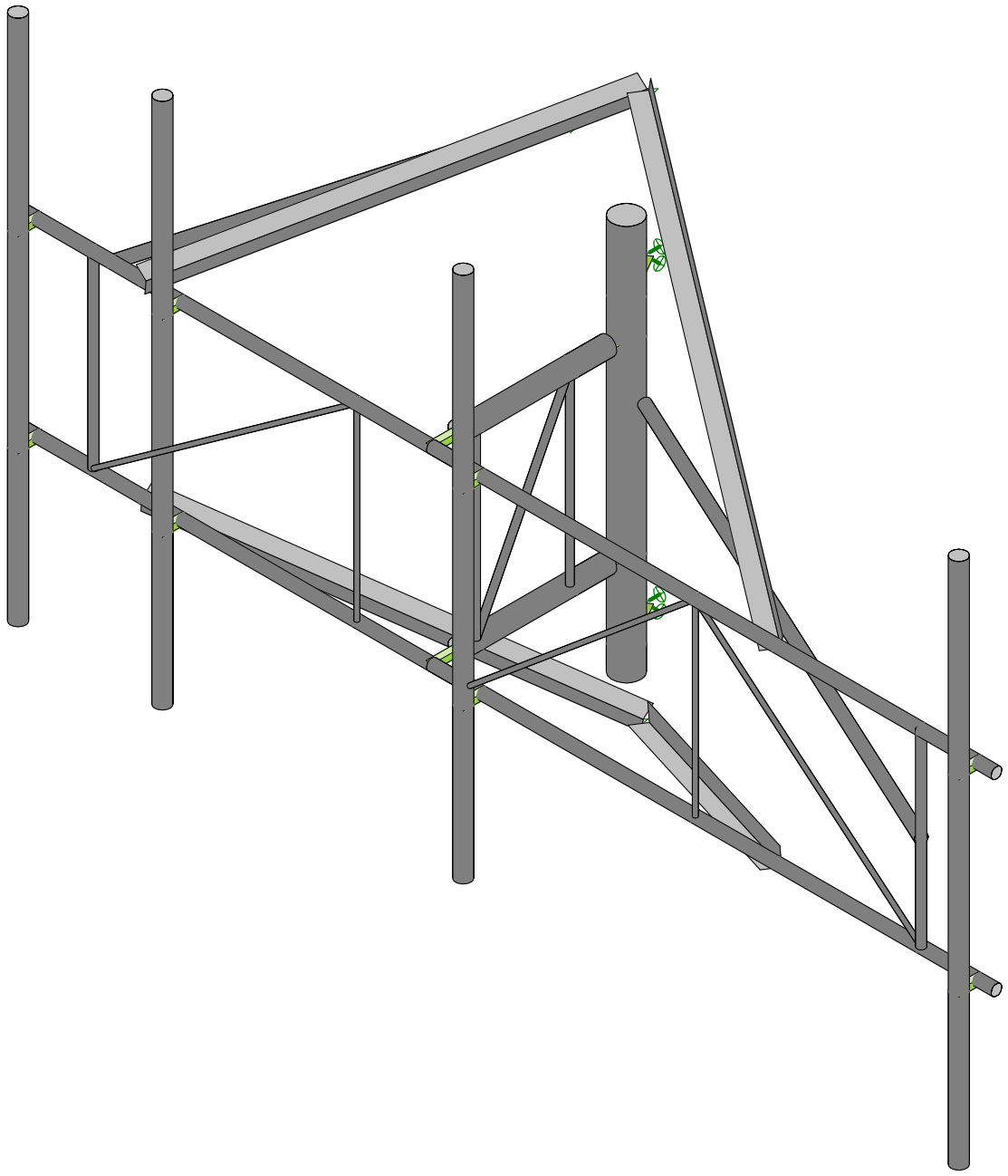
VIEW "A"



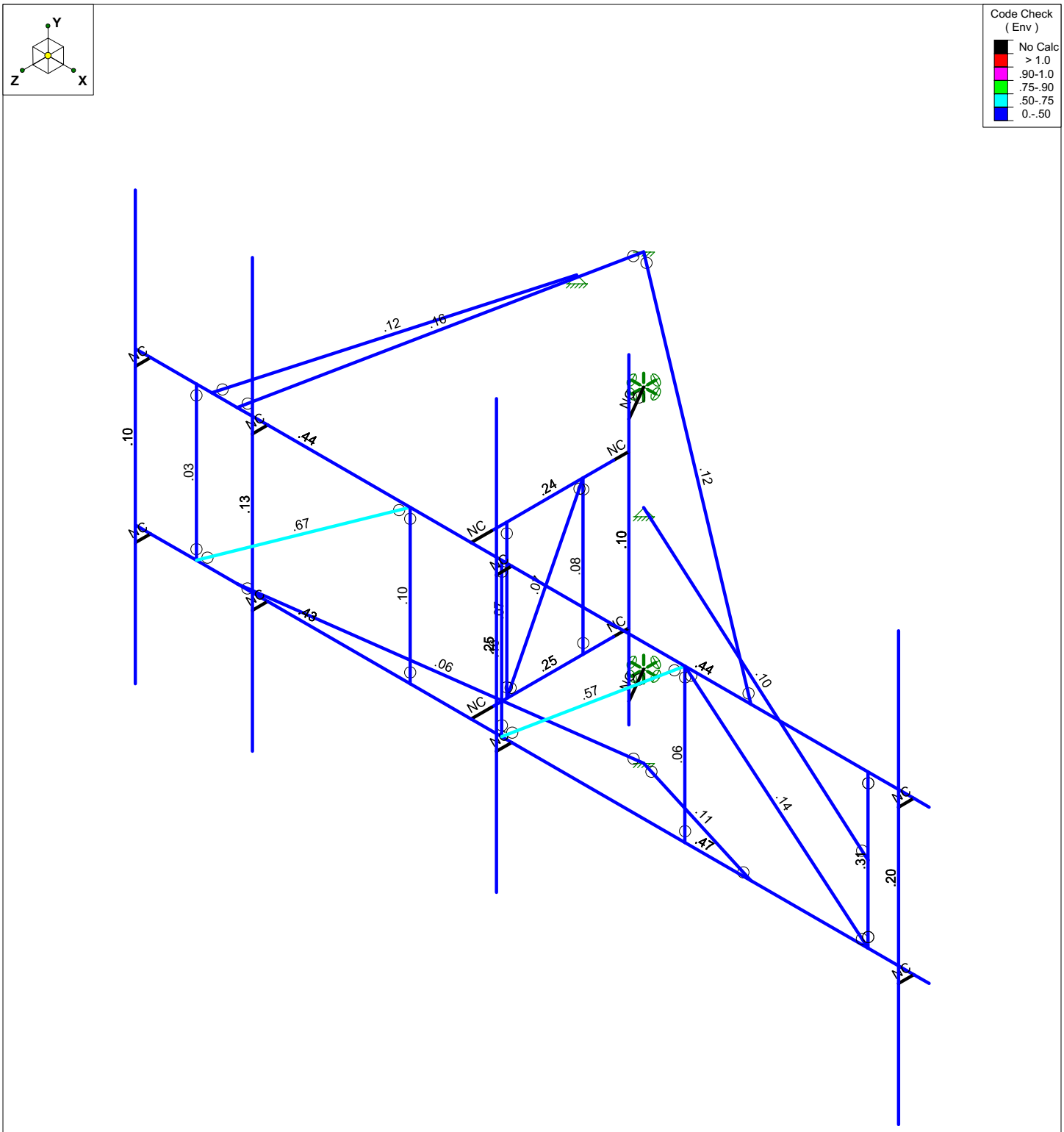
Please Insert Sketches of the Antenna Mount, cont'd





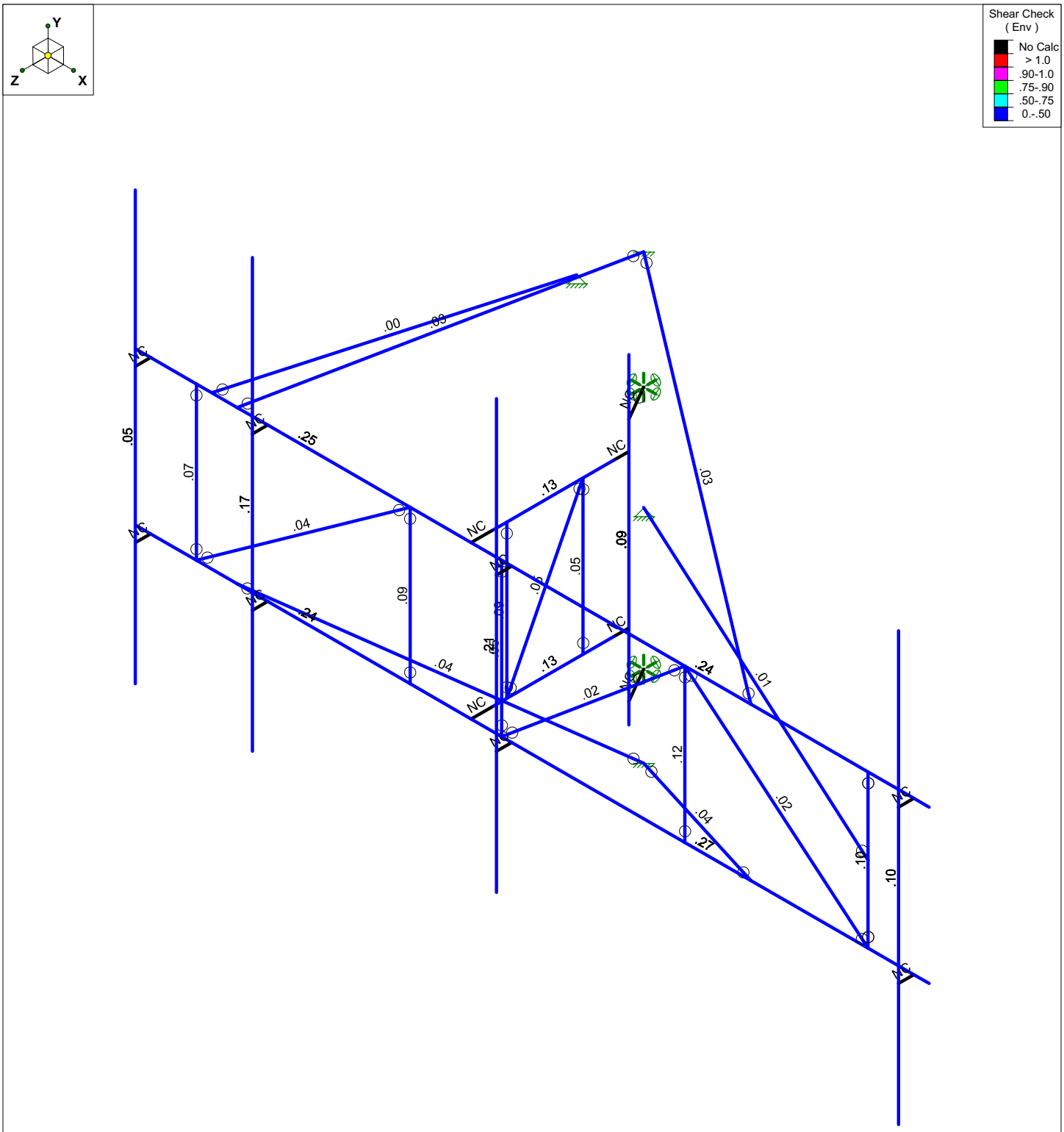


Maser Consulting	535840-VZW_MT_LOT_SectorA_H	SK - 1
AJH		Sept 28, 2021 at 11:19 AM
		MOD_LOADED_535840-VZW_MT...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Maser Consulting	535840-VZW_MT_LOT_SectorA_H	SK - 2
AJH		Sept 28, 2021 at 11:19 AM
		MOD_LOADED_535840-VZW_MT...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Maser Consulting	535840-VZW_MT_LOT_SectorA_H	SK - 3
AJH		Sept 28, 2021 at 11:19 AM
		MOD_LOADED_535840-VZW_MT...

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 Deg)	None					30			
32	Antenna Wm (150 Deg)	None					30			
33	Antenna Wm (180 Deg)	None					30			
34	Antenna Wm (210 Deg)	None					30			
35	Antenna Wm (240 Deg)	None					30			
36	Antenna Wm (270 Deg)	None					30			
37	Antenna Wm (300 Deg)	None					30			
38	Antenna Wm (330 Deg)	None					30			
39	Structure D	None		-1						
40	Structure Di	None						28		
41	Structure Wo (0 Deg)	None						56		
42	Structure Wo (30 Deg)	None						56		
43	Structure Wo (60 Deg)	None						56		
44	Structure Wo (90 Deg)	None						56		
45	Structure Wo (120 D...	None						56		
46	Structure Wo (150 D...	None						56		
47	Structure Wo (180 D...	None						56		
48	Structure Wo (210 D...	None						56		
49	Structure Wo (240 D...	None						56		
50	Structure Wo (270 D...	None						56		
51	Structure Wo (300 D...	None						56		
52	Structure Wo (330 D...	None						56		
53	Structure Wi (0 Deg)	None						56		
54	Structure Wi (30 Deg)	None						56		
55	Structure Wi (60 Deg)	None						56		
56	Structure Wi (90 Deg)	None						56		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
57	Structure Wi (120 De...	None						56		
58	Structure Wi (150 De...	None						56		
59	Structure Wi (180 De...	None						56		
60	Structure Wi (210 De...	None						56		
61	Structure Wi (240 De...	None						56		
62	Structure Wi (270 De...	None						56		
63	Structure Wi (300 De...	None						56		
64	Structure Wi (330 De...	None						56		
65	Structure Wm (0 Deg)	None						56		
66	Structure Wm (30 De...	None						56		
67	Structure Wm (60 De...	None						56		
68	Structure Wm (90 De...	None						56		
69	Structure Wm (120 D...	None						56		
70	Structure Wm (150 D...	None						56		
71	Structure Wm (180 D...	None						56		
72	Structure Wm (210 D...	None						56		
73	Structure Wm (240 D...	None						56		
74	Structure Wm (270 D...	None						56		
75	Structure Wm (300 D...	None						56		
76	Structure Wm (330 D...	None						56		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	Solve	P...	SR...	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										
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										

Load Combinations (Continued)

	Description	Solve	P...	SR...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...	BLC	Fact...
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																

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0.947917	0	
2	N2	0	0	3.28125	0	
3	N3	0	0	2.947917	0	
4	N4	-5.5	0	3.28125	0	
5	N5	7.5	0	3.28125	0	
6	N6	0	0	2.697917	0	
7	N7	0	0	1.447917	0	
8	N8	0	0	0.697917	0	
9	N9	0	2.5	0.947917	0	
10	N10	0	2.5	3.28125	0	
11	N11	0	2.5	2.947917	0	
12	N12	-5.5	2.5	3.28125	0	
13	N13	7.5	2.5	3.28125	0	
14	N14	0	2.5	2.697917	0	
15	N15	0	2.5	1.447917	0	
16	N16	0	2.5	0.697917	0	
17	N17	0	3.875	0.697917	0	
18	N18	0	-1.375	0.697917	0	
19	N41	-1.	0	3.28125	0	
20	N42	-1.	2.5	3.28125	0	
21	N43	3.5	0	3.28125	0	
22	N44	3.5	2.5	3.28125	0	
23	N45	6.5	0	3.28125	0	
24	N46	6.5	2.5	3.28125	0	
25	N47	-4.5	0	3.28125	0	
26	N48	-4.5	2.5	3.28125	0	
27	N53	.5	0	3.28125	0	
28	N54	.5	2.5	3.28125	0	
29	N29	0	2.958333	0.697917	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
30	N30	0	-1.041667	0.697917	0	
31	N31	-0.333333	2.958333	0.120566	0	
32	N32	-0.333333	-1.041667	0.120566	0	
33	N33	7.25	0	3.28125	0	
34	N34	7.25	2.5	3.28125	0	
35	N35	7.25	0	3.53125	0	
36	N36	7.25	2.5	3.53125	0	
37	N37	7.25	5	3.53125	0	
38	N38	7.25	-2	3.53125	0	
39	N39	0.666667	0	3.28125	0	
40	N40	0.666667	2.5	3.28125	0	
41	N41A	0.666667	0	3.53125	0	
42	N42A	0.666667	2.5	3.53125	0	
43	N43A	0.666667	5	3.53125	0	
44	N44A	0.666667	-2	3.53125	0	
45	N45A	-3.333333	0	3.28125	0	
46	N46A	-3.333333	2.5	3.28125	0	
47	N47A	-3.333333	0	3.53125	0	
48	N48A	-3.333333	2.5	3.53125	0	
49	N49	-3.333333	5	3.53125	0	
50	N50	-3.333333	-2	3.53125	0	
51	N51	-5.25	0	3.28125	0	
52	N52	-5.25	2.5	3.28125	0	
53	N53A	-5.25	0	3.53125	0	
54	N54A	-5.25	2.5	3.53125	0	
55	N55	-5.25	5	3.53125	0	
56	N56	-5.25	-2	3.53125	0	
57	N57	-4.25	2.5	3.28125	0	
58	N58	6.5	1.25	3.28125	0	
59	N60	-2.93141	2.5	-1.379434	0	
60	N61	-0.333333	1.25	0.120566	0	
61	N61A	-0.333333	-2.375	0.120566	0	
62	N62	-3.833333	0	3.28125	0	
63	N63	4.583333	0	3.28125	0	
64	N64	-0.333333	4.875	0.120566	0	
65	N65	-3.833333	2.5	3.28125	0	
66	N66	4.583333	2.5	3.28125	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Tieback	PIPE_1.25	Beam	Pipe	A53 Gr. B	Typical	.625	.184	.184	.368
3	Mast Pipe	PIPE_4.0	Column	Wide Fla...	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
4	Standoff Horizontal	PIPE_2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
5	Face End Vertical	SR_1.25	Column	BAR	A53 Gr. B	Typical	1.227	.12	.12	.24
6	Standoff Bracing	SR_1	Column	BAR	A36 Gr.36	Typical	.785	.049	.049	.098
7	Face Bracing	SR_0.625	Column	BAR	A36 Gr.36	Typical	.307	.007	.007	.015
8	Standoff Plate	PL1/2x5	Beam	BAR	A36 Gr.36	Typical	2.5	.052	5.208	.195
9	Face Horizontal	PIPE_1.25X	Beam	Pipe	A53 Gr. B	Typical	.837	.231	.231	.462
10	V-Brace	L2.5x2.5x4	Column	Single A...	A36 Gr.36	Typical	1.19	.692	.692	.026

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Standoff Ho...	2			Lbyy						Lateral
2	M3	Face Horizo...	7.5			Lbyy						Lateral
3	M4	Face Horizo...	5.5			Lbyy						Lateral
4	M6	Standoff Ho...	2			Lbyy						Lateral
5	M8	Face Horizo...	7.5			Lbyy						Lateral
6	M9	Face Horizo...	5.5			Lbyy						Lateral
7	M11	Mast Pipe	5.25			Lbyy						Lateral
8	M14	Standoff Br...	2.5			Lbyy			.7	.7		Lateral
9	M15	Standoff Br...	2.5			Lbyy			.7	.7		Lateral
10	M16	Standoff Br...	2.795			Lbyy			.7	.7		Lateral
11	M26	Face End V...	2.5			Lbyy			.7	.7		Lateral
12	M27	Face Bracing	2.5			Lbyy			.7	.7		Lateral
13	M28	Face Bracing	2.5			Lbyy			.7	.7		Lateral
14	M29	Face End V...	2.5			Lbyy			.7	.7		Lateral
15	M30	Face Bracing	3.905			Lbyy			.7	.7		Lateral
16	M31	Face Bracing	4.301			Lbyy			.7	.7		Lateral
17	M34	Face Bracing	2.5			Lbyy			.7	.7		Lateral
18	M35	Face Bracing	3.905			Lbyy			.7	.7		Lateral
19	MP1A	Mount Pipe	7									Lateral
20	MP2A	Mount Pipe	7									Lateral
21	MP3A	Mount Pipe	7									Lateral
22	MP4A	Mount Pipe	7									Lateral
23	M37	Tieback	4.844			Lbyy						Lateral
24	M38	Tieback	7.529			Lbyy						Lateral
25	M39	V-Brace	5.28									Lateral
26	M40	V-Brace	6.309									Lateral
27	M41	V-Brace	5.28									Lateral
28	M42	V-Brace	6.309									Lateral

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N3			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
2	M3	N5	N2			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
3	M4	N2	N4			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
4	M5	N1	N8			RIGID	None	None	RIGID	Typical
5	M6	N9	N11			Standoff Horiz...	Beam	Pipe	A53 Gr. B	Typical
6	M8	N13	N10			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
7	M9	N10	N12			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
8	M10	N9	N16			RIGID	None	None	RIGID	Typical
9	M11	N18	N17			Mast Pipe	Column	Wide Flange	A53 Gr. B	Typical
10	M14	N6	N14			Standoff Braci...	Column	BAR	A36 Gr.36	Typical
11	M15	N7	N15			Standoff Braci...	Column	BAR	A36 Gr.36	Typical
12	M16	N15	N6			Standoff Braci...	Column	BAR	A36 Gr.36	Typical
13	M26	N45	N46			Face End Verti...	Column	BAR	A53 Gr. B	Typical
14	M27	N43	N44			Face Bracing	Column	BAR	A36 Gr.36	Typical
15	M28	N41	N42			Face Bracing	Column	BAR	A36 Gr.36	Typical
16	M29	N47	N48			Face End Verti...	Column	BAR	A53 Gr. B	Typical
17	M30	N44	N45			Face Bracing	Column	BAR	A36 Gr.36	Typical
18	M31	N42	N47			Face Bracing	Column	BAR	A36 Gr.36	Typical
19	M34	N54	N53			Face Bracing	Column	BAR	A36 Gr.36	Typical
20	M35	N53	N44			Face Bracing	Column	BAR	A36 Gr.36	Typical
21	M33	N3	N2			RIGID	None	None	RIGID	Typical
22	M34A	N11	N10			RIGID	None	None	RIGID	Typical
23	M23	N31	N29			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
24	M24	N32	N30			RIGID	None	None	RIGID	Typical
25	M25	N34	N36			RIGID	None	None	RIGID	Typical
26	M26A	N33	N35			RIGID	None	None	RIGID	Typical
27	MP1A	N37	N38			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
28	M28A	N40	N42A			RIGID	None	None	RIGID	Typical
29	M29A	N39	N41A			RIGID	None	None	RIGID	Typical
30	MP2A	N43A	N44A			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
31	M31A	N46A	N48A			RIGID	None	None	RIGID	Typical
32	M32	N45A	N47A			RIGID	None	None	RIGID	Typical
33	MP3A	N49	N50			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
34	M34B	N52	N54A			RIGID	None	None	RIGID	Typical
35	M35A	N51	N53A			RIGID	None	None	RIGID	Typical
36	MP4A	N55	N56			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
37	M37	N60	N57			Tieback	Beam	Pipe	A53 Gr. B	Typical
38	M38	N61	N58			Tieback	Beam	Pipe	A53 Gr. B	Typical
39	M39	N62	N61A			V-Brace	Column	Single Angle	A36 Gr.36	Typical
40	M40	N63	N61A		270	V-Brace	Column	Single Angle	A36 Gr.36	Typical
41	M41	N65	N64			V-Brace	Column	Single Angle	A36 Gr.36	Typical
42	M42	N66	N64		270	V-Brace	Column	Single Angle	A36 Gr.36	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				None
2	M3						Yes				None
3	M4						Yes				None
4	M5						Yes	** NA **			None
5	M6						Yes				None
6	M8						Yes				None
7	M9						Yes	Default			None
8	M10						Yes	** NA **			None
9	M11						Yes	** NA **			None
10	M14	BenPIN	BenPIN				Yes	** NA **			None
11	M15	BenPIN	BenPIN				Yes	** NA **			None
12	M16	BenPIN	BenPIN				Yes	** NA **			None
13	M26	BenPIN	BenPIN				Yes	** NA **			None
14	M27	BenPIN	BenPIN				Yes	** NA **			None
15	M28	BenPIN	BenPIN				Yes	** NA **			None
16	M29	BenPIN	BenPIN				Yes	** NA **			None
17	M30	BenPIN	BenPIN				Yes	** NA **			None
18	M31	BenPIN	BenPIN				Yes	** NA **			None
19	M34	BenPIN	BenPIN				Yes	** NA **			None
20	M35	BenPIN	BenPIN				Yes	** NA **			None
21	M33						Yes	** NA **			None
22	M34A						Yes	** NA **			None
23	M23	OOOOOX					Yes	** NA **			None
24	M24	OOOOOX					Yes	** NA **			None
25	M25						Yes	** NA **			None
26	M26A						Yes	** NA **			None
27	MP1A						Yes	** NA **			None
28	M28A						Yes	** NA **			None
29	M29A						Yes	** NA **			None
30	MP2A						Yes	** NA **			None
31	M31A						Yes	** NA **			None
32	M32						Yes	** NA **			None
33	MP3A						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
34	M34B						Yes	** NA **			None
35	M35A						Yes	** NA **			None
36	MP4A						Yes	** NA **			None
37	M37		BenPIN				Yes				None
38	M38		BenPIN				Yes				None
39	M39	BenPIN	BenPIN				Yes	** NA **			None
40	M40	BenPIN	BenPIN				Yes	** NA **			None
41	M41	BenPIN	BenPIN				Yes	** NA **			None
42	M42	BenPIN	BenPIN				Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-43.55	.75
2	MP1A	My	-.022	.75
3	MP1A	Mz	0	.75
4	MP1A	Y	-43.55	2.75
5	MP1A	My	-.022	2.75
6	MP1A	Mz	0	2.75
7	MP2A	Y	-20	.75
8	MP2A	My	-.01	.75
9	MP2A	Mz	.012	.75
10	MP2A	Y	-20	5.75
11	MP2A	My	-.01	5.75
12	MP2A	Mz	.012	5.75
13	MP2A	Y	-20	.75
14	MP2A	My	-.01	.75
15	MP2A	Mz	-.012	.75
16	MP2A	Y	-20	5.75
17	MP2A	My	-.01	5.75
18	MP2A	Mz	-.012	5.75
19	MP3A	Y	-4.95	1
20	MP3A	My	-.002	1
21	MP3A	Mz	0	1
22	MP3A	Y	-4.95	5.5
23	MP3A	My	-.002	5.5
24	MP3A	Mz	0	5.5
25	MP1A	Y	-4.4	5.25
26	MP1A	My	-.002	5.25
27	MP1A	Mz	0	5.25
28	M11	Y	-84.4	2
29	M11	My	0	2
30	M11	Mz	0	2

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-54.659	.75
2	MP1A	My	-.027	.75
3	MP1A	Mz	0	.75
4	MP1A	Y	-54.659	2.75
5	MP1A	My	-.027	2.75
6	MP1A	Mz	0	2.75
7	MP2A	Y	-93.339	.75
8	MP2A	My	-.047	.75
9	MP2A	Mz	.054	.75
10	MP2A	Y	-93.339	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2A	My	-.047	5.75
12	MP2A	Mz	.054	5.75
13	MP2A	Y	-93.339	.75
14	MP2A	My	-.047	.75
15	MP2A	Mz	-.054	.75
16	MP2A	Y	-93.339	5.75
17	MP2A	My	-.047	5.75
18	MP2A	Mz	-.054	5.75
19	MP3A	Y	-52.739	1
20	MP3A	My	-.026	1
21	MP3A	Mz	0	1
22	MP3A	Y	-52.739	5.5
23	MP3A	My	-.026	5.5
24	MP3A	Mz	0	5.5
25	MP1A	Y	-21.977	5.25
26	MP1A	My	-.011	5.25
27	MP1A	Mz	0	5.25
28	M11	Y	-69.424	2
29	M11	My	0	2
30	M11	Mz	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.75
2	MP1A	Z	-70.097	.75
3	MP1A	Mx	0	.75
4	MP1A	X	0	2.75
5	MP1A	Z	-70.097	2.75
6	MP1A	Mx	0	2.75
7	MP2A	X	0	.75
8	MP2A	Z	-121.701	.75
9	MP2A	Mx	-.071	.75
10	MP2A	X	0	5.75
11	MP2A	Z	-121.701	5.75
12	MP2A	Mx	-.071	5.75
13	MP2A	X	0	.75
14	MP2A	Z	-121.701	.75
15	MP2A	Mx	.071	.75
16	MP2A	X	0	5.75
17	MP2A	Z	-121.701	5.75
18	MP2A	Mx	.071	5.75
19	MP3A	X	0	1
20	MP3A	Z	-70.396	1
21	MP3A	Mx	0	1
22	MP3A	X	0	5.5
23	MP3A	Z	-70.396	5.5
24	MP3A	Mx	0	5.5
25	MP1A	X	0	5.25
26	MP1A	Z	-26.548	5.25
27	MP1A	Mx	0	5.25
28	M11	X	0	2
29	M11	Z	-41.909	2
30	M11	Mx	0	2

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	29.717	.75
2	MP1A	Z	-51.471	.75
3	MP1A	Mx	-.015	.75
4	MP1A	X	29.717	2.75
5	MP1A	Z	-51.471	2.75
6	MP1A	Mx	-.015	2.75
7	MP2A	X	55.698	.75
8	MP2A	Z	-96.472	.75
9	MP2A	Mx	-.084	.75
10	MP2A	X	55.698	5.75
11	MP2A	Z	-96.472	5.75
12	MP2A	Mx	-.084	5.75
13	MP2A	X	55.698	.75
14	MP2A	Z	-96.472	.75
15	MP2A	Mx	.028	.75
16	MP2A	X	55.698	5.75
17	MP2A	Z	-96.472	5.75
18	MP2A	Mx	.028	5.75
19	MP3A	X	30.59	1
20	MP3A	Z	-52.983	1
21	MP3A	Mx	-.015	1
22	MP3A	X	30.59	5.5
23	MP3A	Z	-52.983	5.5
24	MP3A	Mx	-.015	5.5
25	MP1A	X	10.606	5.25
26	MP1A	Z	-18.37	5.25
27	MP1A	Mx	-.005	5.25
28	M11	X	18.643	2
29	M11	Z	-32.29	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	33.001	.75
2	MP1A	Z	-19.053	.75
3	MP1A	Mx	-.017	.75
4	MP1A	X	33.001	2.75
5	MP1A	Z	-19.053	2.75
6	MP1A	Mx	-.017	2.75
7	MP2A	X	78.623	.75
8	MP2A	Z	-45.393	.75
9	MP2A	Mx	-.066	.75
10	MP2A	X	78.623	5.75
11	MP2A	Z	-45.393	5.75
12	MP2A	Mx	-.066	5.75
13	MP2A	X	78.623	.75
14	MP2A	Z	-45.393	.75
15	MP2A	Mx	-.013	.75
16	MP2A	X	78.623	5.75
17	MP2A	Z	-45.393	5.75
18	MP2A	Mx	-.013	5.75
19	MP3A	X	37.02	1
20	MP3A	Z	-21.373	1
21	MP3A	Mx	-.019	1
22	MP3A	X	37.02	5.5
23	MP3A	Z	-21.373	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP3A	Mx	-.019	5.5
25	MP1A	X	9.129	5.25
26	MP1A	Z	-5.271	5.25
27	MP1A	Mx	-.005	5.25
28	M11	X	36.295	2
29	M11	Z	-20.955	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	27.443	.75
2	MP1A	Z	0	.75
3	MP1A	Mx	-.014	.75
4	MP1A	X	27.443	2.75
5	MP1A	Z	0	2.75
6	MP1A	Mx	-.014	2.75
7	MP2A	X	80.482	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.04	.75
10	MP2A	X	80.482	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	-.04	5.75
13	MP2A	X	80.482	.75
14	MP2A	Z	0	.75
15	MP2A	Mx	-.04	.75
16	MP2A	X	80.482	5.75
17	MP2A	Z	0	5.75
18	MP2A	Mx	-.04	5.75
19	MP3A	X	33.531	1
20	MP3A	Z	0	1
21	MP3A	Mx	-.017	1
22	MP3A	X	33.531	5.5
23	MP3A	Z	0	5.5
24	MP3A	Mx	-.017	5.5
25	MP1A	X	5.206	5.25
26	MP1A	Z	0	5.25
27	MP1A	Mx	-.003	5.25
28	M11	X	51.156	2
29	M11	Z	0	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	33.001	.75
2	MP1A	Z	19.053	.75
3	MP1A	Mx	-.017	.75
4	MP1A	X	33.001	2.75
5	MP1A	Z	19.053	2.75
6	MP1A	Mx	-.017	2.75
7	MP2A	X	78.623	.75
8	MP2A	Z	45.393	.75
9	MP2A	Mx	-.013	.75
10	MP2A	X	78.623	5.75
11	MP2A	Z	45.393	5.75
12	MP2A	Mx	-.013	5.75
13	MP2A	X	78.623	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP2A	Z	45.393	.75
15	MP2A	Mx	-.066	.75
16	MP2A	X	78.623	5.75
17	MP2A	Z	45.393	5.75
18	MP2A	Mx	-.066	5.75
19	MP3A	X	37.02	1
20	MP3A	Z	21.373	1
21	MP3A	Mx	-.019	1
22	MP3A	X	37.02	5.5
23	MP3A	Z	21.373	5.5
24	MP3A	Mx	-.019	5.5
25	MP1A	X	9.129	5.25
26	MP1A	Z	5.271	5.25
27	MP1A	Mx	-.005	5.25
28	M11	X	48.307	2
29	M11	Z	27.89	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	29.717	.75
2	MP1A	Z	51.471	.75
3	MP1A	Mx	-.015	.75
4	MP1A	X	29.717	2.75
5	MP1A	Z	51.471	2.75
6	MP1A	Mx	-.015	2.75
7	MP2A	X	55.698	.75
8	MP2A	Z	96.472	.75
9	MP2A	Mx	.028	.75
10	MP2A	X	55.698	5.75
11	MP2A	Z	96.472	5.75
12	MP2A	Mx	.028	5.75
13	MP2A	X	55.698	.75
14	MP2A	Z	96.472	.75
15	MP2A	Mx	-.084	.75
16	MP2A	X	55.698	5.75
17	MP2A	Z	96.472	5.75
18	MP2A	Mx	-.084	5.75
19	MP3A	X	30.59	1
20	MP3A	Z	52.983	1
21	MP3A	Mx	-.015	1
22	MP3A	X	30.59	5.5
23	MP3A	Z	52.983	5.5
24	MP3A	Mx	-.015	5.5
25	MP1A	X	10.606	5.25
26	MP1A	Z	18.37	5.25
27	MP1A	Mx	-.005	5.25
28	M11	X	25.578	2
29	M11	Z	44.303	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.75
2	MP1A	Z	70.097	.75
3	MP1A	Mx	0	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP1A	X	0	2.75
5	MP1A	Z	70.097	2.75
6	MP1A	Mx	0	2.75
7	MP2A	X	0	.75
8	MP2A	Z	121.701	.75
9	MP2A	Mx	.071	.75
10	MP2A	X	0	5.75
11	MP2A	Z	121.701	5.75
12	MP2A	Mx	.071	5.75
13	MP2A	X	0	.75
14	MP2A	Z	121.701	.75
15	MP2A	Mx	-.071	.75
16	MP2A	X	0	5.75
17	MP2A	Z	121.701	5.75
18	MP2A	Mx	-.071	5.75
19	MP3A	X	0	1
20	MP3A	Z	70.396	1
21	MP3A	Mx	0	1
22	MP3A	X	0	5.5
23	MP3A	Z	70.396	5.5
24	MP3A	Mx	0	5.5
25	MP1A	X	0	5.25
26	MP1A	Z	26.548	5.25
27	MP1A	Mx	0	5.25
28	M11	X	0	2
29	M11	Z	41.909	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-29.717	.75
2	MP1A	Z	51.471	.75
3	MP1A	Mx	.015	.75
4	MP1A	X	-29.717	2.75
5	MP1A	Z	51.471	2.75
6	MP1A	Mx	.015	2.75
7	MP2A	X	-55.698	.75
8	MP2A	Z	96.472	.75
9	MP2A	Mx	.084	.75
10	MP2A	X	-55.698	5.75
11	MP2A	Z	96.472	5.75
12	MP2A	Mx	.084	5.75
13	MP2A	X	-55.698	.75
14	MP2A	Z	96.472	.75
15	MP2A	Mx	-.028	.75
16	MP2A	X	-55.698	5.75
17	MP2A	Z	96.472	5.75
18	MP2A	Mx	-.028	5.75
19	MP3A	X	-30.59	1
20	MP3A	Z	52.983	1
21	MP3A	Mx	.015	1
22	MP3A	X	-30.59	5.5
23	MP3A	Z	52.983	5.5
24	MP3A	Mx	.015	5.5
25	MP1A	X	-10.606	5.25
26	MP1A	Z	18.37	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP1A	Mx	.005	5.25
28	M11	X	-18.643	2
29	M11	Z	32.29	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-33.001	.75
2	MP1A	Z	19.053	.75
3	MP1A	Mx	.017	.75
4	MP1A	X	-33.001	2.75
5	MP1A	Z	19.053	2.75
6	MP1A	Mx	.017	2.75
7	MP2A	X	-78.623	.75
8	MP2A	Z	45.393	.75
9	MP2A	Mx	.066	.75
10	MP2A	X	-78.623	5.75
11	MP2A	Z	45.393	5.75
12	MP2A	Mx	.066	5.75
13	MP2A	X	-78.623	.75
14	MP2A	Z	45.393	.75
15	MP2A	Mx	.013	.75
16	MP2A	X	-78.623	5.75
17	MP2A	Z	45.393	5.75
18	MP2A	Mx	.013	5.75
19	MP3A	X	-37.02	1
20	MP3A	Z	21.373	1
21	MP3A	Mx	.019	1
22	MP3A	X	-37.02	5.5
23	MP3A	Z	21.373	5.5
24	MP3A	Mx	.019	5.5
25	MP1A	X	-9.129	5.25
26	MP1A	Z	5.271	5.25
27	MP1A	Mx	.005	5.25
28	M11	X	-36.295	2
29	M11	Z	20.955	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-27.443	.75
2	MP1A	Z	0	.75
3	MP1A	Mx	.014	.75
4	MP1A	X	-27.443	2.75
5	MP1A	Z	0	2.75
6	MP1A	Mx	.014	2.75
7	MP2A	X	-80.482	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.04	.75
10	MP2A	X	-80.482	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	.04	5.75
13	MP2A	X	-80.482	.75
14	MP2A	Z	0	.75
15	MP2A	Mx	.04	.75
16	MP2A	X	-80.482	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	0	5.75
18	MP2A	Mx	.04	5.75
19	MP3A	X	-33.531	1
20	MP3A	Z	0	1
21	MP3A	Mx	.017	1
22	MP3A	X	-33.531	5.5
23	MP3A	Z	0	5.5
24	MP3A	Mx	.017	5.5
25	MP1A	X	-5.206	5.25
26	MP1A	Z	0	5.25
27	MP1A	Mx	.003	5.25
28	M11	X	-51.156	2
29	M11	Z	0	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-33.001	.75
2	MP1A	Z	-19.053	.75
3	MP1A	Mx	.017	.75
4	MP1A	X	-33.001	2.75
5	MP1A	Z	-19.053	2.75
6	MP1A	Mx	.017	2.75
7	MP2A	X	-78.623	.75
8	MP2A	Z	-45.393	.75
9	MP2A	Mx	.013	.75
10	MP2A	X	-78.623	5.75
11	MP2A	Z	-45.393	5.75
12	MP2A	Mx	.013	5.75
13	MP2A	X	-78.623	.75
14	MP2A	Z	-45.393	.75
15	MP2A	Mx	.066	.75
16	MP2A	X	-78.623	5.75
17	MP2A	Z	-45.393	5.75
18	MP2A	Mx	.066	5.75
19	MP3A	X	-37.02	1
20	MP3A	Z	-21.373	1
21	MP3A	Mx	.019	1
22	MP3A	X	-37.02	5.5
23	MP3A	Z	-21.373	5.5
24	MP3A	Mx	.019	5.5
25	MP1A	X	-9.129	5.25
26	MP1A	Z	-5.271	5.25
27	MP1A	Mx	.005	5.25
28	M11	X	-48.307	2
29	M11	Z	-27.89	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-29.717	.75
2	MP1A	Z	-51.471	.75
3	MP1A	Mx	.015	.75
4	MP1A	X	-29.717	2.75
5	MP1A	Z	-51.471	2.75
6	MP1A	Mx	.015	2.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	-55.698	.75
8	MP2A	Z	-96.472	.75
9	MP2A	Mx	-.028	.75
10	MP2A	X	-55.698	5.75
11	MP2A	Z	-96.472	5.75
12	MP2A	Mx	-.028	5.75
13	MP2A	X	-55.698	.75
14	MP2A	Z	-96.472	.75
15	MP2A	Mx	.084	.75
16	MP2A	X	-55.698	5.75
17	MP2A	Z	-96.472	5.75
18	MP2A	Mx	.084	5.75
19	MP3A	X	-30.59	1
20	MP3A	Z	-52.983	1
21	MP3A	Mx	.015	1
22	MP3A	X	-30.59	5.5
23	MP3A	Z	-52.983	5.5
24	MP3A	Mx	.015	5.5
25	MP1A	X	-10.606	5.25
26	MP1A	Z	-18.37	5.25
27	MP1A	Mx	.005	5.25
28	M11	X	-25.578	2
29	M11	Z	-44.303	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.75
2	MP1A	Z	-15.258	.75
3	MP1A	Mx	0	.75
4	MP1A	X	0	2.75
5	MP1A	Z	-15.258	2.75
6	MP1A	Mx	0	2.75
7	MP2A	X	0	.75
8	MP2A	Z	-25.631	.75
9	MP2A	Mx	-.015	.75
10	MP2A	X	0	5.75
11	MP2A	Z	-25.631	5.75
12	MP2A	Mx	-.015	5.75
13	MP2A	X	0	.75
14	MP2A	Z	-25.631	.75
15	MP2A	Mx	.015	.75
16	MP2A	X	0	5.75
17	MP2A	Z	-25.631	5.75
18	MP2A	Mx	.015	5.75
19	MP3A	X	0	1
20	MP3A	Z	-15.337	1
21	MP3A	Mx	0	1
22	MP3A	X	0	5.5
23	MP3A	Z	-15.337	5.5
24	MP3A	Mx	0	5.5
25	MP1A	X	0	5.25
26	MP1A	Z	-7.029	5.25
27	MP1A	Mx	0	5.25
28	M11	X	0	2
29	M11	Z	-10.3	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	6.566	.75
2	MP1A	Z	-11.373	.75
3	MP1A	Mx	-.003	.75
4	MP1A	X	6.566	2.75
5	MP1A	Z	-11.373	2.75
6	MP1A	Mx	-.003	2.75
7	MP2A	X	11.861	.75
8	MP2A	Z	-20.544	.75
9	MP2A	Mx	-.018	.75
10	MP2A	X	11.861	5.75
11	MP2A	Z	-20.544	5.75
12	MP2A	Mx	-.018	5.75
13	MP2A	X	11.861	.75
14	MP2A	Z	-20.544	.75
15	MP2A	Mx	.006	.75
16	MP2A	X	11.861	5.75
17	MP2A	Z	-20.544	5.75
18	MP2A	Mx	.006	5.75
19	MP3A	X	6.792	1
20	MP3A	Z	-11.763	1
21	MP3A	Mx	-.003	1
22	MP3A	X	6.792	5.5
23	MP3A	Z	-11.763	5.5
24	MP3A	Mx	-.003	5.5
25	MP1A	X	2.931	5.25
26	MP1A	Z	-5.077	5.25
27	MP1A	Mx	-.001	5.25
28	M11	X	4.668	2
29	M11	Z	-8.086	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	7.69	.75
2	MP1A	Z	-4.44	.75
3	MP1A	Mx	-.004	.75
4	MP1A	X	7.69	2.75
5	MP1A	Z	-4.44	2.75
6	MP1A	Mx	-.004	2.75
7	MP2A	X	17.237	.75
8	MP2A	Z	-9.952	.75
9	MP2A	Mx	-.014	.75
10	MP2A	X	17.237	5.75
11	MP2A	Z	-9.952	5.75
12	MP2A	Mx	-.014	5.75
13	MP2A	X	17.237	.75
14	MP2A	Z	-9.952	.75
15	MP2A	Mx	-.003	.75
16	MP2A	X	17.237	5.75
17	MP2A	Z	-9.952	5.75
18	MP2A	Mx	-.003	5.75
19	MP3A	X	8.726	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP3A	Z	-5.038	1
21	MP3A	Mx	-.004	1
22	MP3A	X	8.726	5.5
23	MP3A	Z	-5.038	5.5
24	MP3A	Mx	-.004	5.5
25	MP1A	X	3.057	5.25
26	MP1A	Z	-1.765	5.25
27	MP1A	Mx	-.002	5.25
28	M11	X	8.92	2
29	M11	Z	-5.15	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	6.753	.75
2	MP1A	Z	0	.75
3	MP1A	Mx	-.003	.75
4	MP1A	X	6.753	2.75
5	MP1A	Z	0	2.75
6	MP1A	Mx	-.003	2.75
7	MP2A	X	17.994	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.009	.75
10	MP2A	X	17.994	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	-.009	5.75
13	MP2A	X	17.994	.75
14	MP2A	Z	0	.75
15	MP2A	Mx	-.009	.75
16	MP2A	X	17.994	5.75
17	MP2A	Z	0	5.75
18	MP2A	Mx	-.009	5.75
19	MP3A	X	8.322	1
20	MP3A	Z	0	1
21	MP3A	Mx	-.004	1
22	MP3A	X	8.322	5.5
23	MP3A	Z	0	5.5
24	MP3A	Mx	-.004	5.5
25	MP1A	X	2.363	5.25
26	MP1A	Z	0	5.25
27	MP1A	Mx	-.001	5.25
28	M11	X	12.225	2
29	M11	Z	0	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	7.69	.75
2	MP1A	Z	4.44	.75
3	MP1A	Mx	-.004	.75
4	MP1A	X	7.69	2.75
5	MP1A	Z	4.44	2.75
6	MP1A	Mx	-.004	2.75
7	MP2A	X	17.237	.75
8	MP2A	Z	9.952	.75
9	MP2A	Mx	-.003	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP2A	X	17.237	5.75
11	MP2A	Z	9.952	5.75
12	MP2A	Mx	-.003	5.75
13	MP2A	X	17.237	.75
14	MP2A	Z	9.952	.75
15	MP2A	Mx	-.014	.75
16	MP2A	X	17.237	5.75
17	MP2A	Z	9.952	5.75
18	MP2A	Mx	-.014	5.75
19	MP3A	X	8.726	1
20	MP3A	Z	5.038	1
21	MP3A	Mx	-.004	1
22	MP3A	X	8.726	5.5
23	MP3A	Z	5.038	5.5
24	MP3A	Mx	-.004	5.5
25	MP1A	X	3.057	5.25
26	MP1A	Z	1.765	5.25
27	MP1A	Mx	-.002	5.25
28	M11	X	11.42	2
29	M11	Z	6.594	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	6.566	.75
2	MP1A	Z	11.373	.75
3	MP1A	Mx	-.003	.75
4	MP1A	X	6.566	2.75
5	MP1A	Z	11.373	2.75
6	MP1A	Mx	-.003	2.75
7	MP2A	X	11.861	.75
8	MP2A	Z	20.544	.75
9	MP2A	Mx	.006	.75
10	MP2A	X	11.861	5.75
11	MP2A	Z	20.544	5.75
12	MP2A	Mx	.006	5.75
13	MP2A	X	11.861	.75
14	MP2A	Z	20.544	.75
15	MP2A	Mx	-.018	.75
16	MP2A	X	11.861	5.75
17	MP2A	Z	20.544	5.75
18	MP2A	Mx	-.018	5.75
19	MP3A	X	6.792	1
20	MP3A	Z	11.763	1
21	MP3A	Mx	-.003	1
22	MP3A	X	6.792	5.5
23	MP3A	Z	11.763	5.5
24	MP3A	Mx	-.003	5.5
25	MP1A	X	2.931	5.25
26	MP1A	Z	5.077	5.25
27	MP1A	Mx	-.001	5.25
28	M11	X	6.112	2
29	M11	Z	10.587	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.75
2	MP1A	Z	15.258	.75
3	MP1A	Mx	0	.75
4	MP1A	X	0	2.75
5	MP1A	Z	15.258	2.75
6	MP1A	Mx	0	2.75
7	MP2A	X	0	.75
8	MP2A	Z	25.631	.75
9	MP2A	Mx	.015	.75
10	MP2A	X	0	5.75
11	MP2A	Z	25.631	5.75
12	MP2A	Mx	.015	5.75
13	MP2A	X	0	.75
14	MP2A	Z	25.631	.75
15	MP2A	Mx	-.015	.75
16	MP2A	X	0	5.75
17	MP2A	Z	25.631	5.75
18	MP2A	Mx	-.015	5.75
19	MP3A	X	0	1
20	MP3A	Z	15.337	1
21	MP3A	Mx	0	1
22	MP3A	X	0	5.5
23	MP3A	Z	15.337	5.5
24	MP3A	Mx	0	5.5
25	MP1A	X	0	5.25
26	MP1A	Z	7.029	5.25
27	MP1A	Mx	0	5.25
28	M11	X	0	2
29	M11	Z	10.3	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-6.566	.75
2	MP1A	Z	11.373	.75
3	MP1A	Mx	.003	.75
4	MP1A	X	-6.566	2.75
5	MP1A	Z	11.373	2.75
6	MP1A	Mx	.003	2.75
7	MP2A	X	-11.861	.75
8	MP2A	Z	20.544	.75
9	MP2A	Mx	.018	.75
10	MP2A	X	-11.861	5.75
11	MP2A	Z	20.544	5.75
12	MP2A	Mx	.018	5.75
13	MP2A	X	-11.861	.75
14	MP2A	Z	20.544	.75
15	MP2A	Mx	-.006	.75
16	MP2A	X	-11.861	5.75
17	MP2A	Z	20.544	5.75
18	MP2A	Mx	-.006	5.75
19	MP3A	X	-6.792	1
20	MP3A	Z	11.763	1
21	MP3A	Mx	.003	1
22	MP3A	X	-6.792	5.5
23	MP3A	Z	11.763	5.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP3A	Mx	.003	5.5
25	MP1A	X	-2.931	5.25
26	MP1A	Z	5.077	5.25
27	MP1A	Mx	.001	5.25
28	M11	X	-4.668	2
29	M11	Z	8.086	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-7.69	.75
2	MP1A	Z	4.44	.75
3	MP1A	Mx	.004	.75
4	MP1A	X	-7.69	2.75
5	MP1A	Z	4.44	2.75
6	MP1A	Mx	.004	2.75
7	MP2A	X	-17.237	.75
8	MP2A	Z	9.952	.75
9	MP2A	Mx	.014	.75
10	MP2A	X	-17.237	5.75
11	MP2A	Z	9.952	5.75
12	MP2A	Mx	.014	5.75
13	MP2A	X	-17.237	.75
14	MP2A	Z	9.952	.75
15	MP2A	Mx	.003	.75
16	MP2A	X	-17.237	5.75
17	MP2A	Z	9.952	5.75
18	MP2A	Mx	.003	5.75
19	MP3A	X	-8.726	1
20	MP3A	Z	5.038	1
21	MP3A	Mx	.004	1
22	MP3A	X	-8.726	5.5
23	MP3A	Z	5.038	5.5
24	MP3A	Mx	.004	5.5
25	MP1A	X	-3.057	5.25
26	MP1A	Z	1.765	5.25
27	MP1A	Mx	.002	5.25
28	M11	X	-8.92	2
29	M11	Z	5.15	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-6.753	.75
2	MP1A	Z	0	.75
3	MP1A	Mx	.003	.75
4	MP1A	X	-6.753	2.75
5	MP1A	Z	0	2.75
6	MP1A	Mx	.003	2.75
7	MP2A	X	-17.994	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.009	.75
10	MP2A	X	-17.994	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	.009	5.75
13	MP2A	X	-17.994	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP2A	Z	0	.75
15	MP2A	Mx	.009	.75
16	MP2A	X	-17.994	5.75
17	MP2A	Z	0	5.75
18	MP2A	Mx	.009	5.75
19	MP3A	X	-8.322	1
20	MP3A	Z	0	1
21	MP3A	Mx	.004	1
22	MP3A	X	-8.322	5.5
23	MP3A	Z	0	5.5
24	MP3A	Mx	.004	5.5
25	MP1A	X	-2.363	5.25
26	MP1A	Z	0	5.25
27	MP1A	Mx	.001	5.25
28	M11	X	-12.225	2
29	M11	Z	0	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-7.69	.75
2	MP1A	Z	-4.44	.75
3	MP1A	Mx	.004	.75
4	MP1A	X	-7.69	2.75
5	MP1A	Z	-4.44	2.75
6	MP1A	Mx	.004	2.75
7	MP2A	X	-17.237	.75
8	MP2A	Z	-9.952	.75
9	MP2A	Mx	.003	.75
10	MP2A	X	-17.237	5.75
11	MP2A	Z	-9.952	5.75
12	MP2A	Mx	.003	5.75
13	MP2A	X	-17.237	.75
14	MP2A	Z	-9.952	.75
15	MP2A	Mx	.014	.75
16	MP2A	X	-17.237	5.75
17	MP2A	Z	-9.952	5.75
18	MP2A	Mx	.014	5.75
19	MP3A	X	-8.726	1
20	MP3A	Z	-5.038	1
21	MP3A	Mx	.004	1
22	MP3A	X	-8.726	5.5
23	MP3A	Z	-5.038	5.5
24	MP3A	Mx	.004	5.5
25	MP1A	X	-3.057	5.25
26	MP1A	Z	-1.765	5.25
27	MP1A	Mx	.002	5.25
28	M11	X	-11.42	2
29	M11	Z	-6.594	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-6.566	.75
2	MP1A	Z	-11.373	.75
3	MP1A	Mx	.003	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP1A	X	-6.566	2.75
5	MP1A	Z	-11.373	2.75
6	MP1A	Mx	.003	2.75
7	MP2A	X	-11.861	.75
8	MP2A	Z	-20.544	.75
9	MP2A	Mx	-.006	.75
10	MP2A	X	-11.861	5.75
11	MP2A	Z	-20.544	5.75
12	MP2A	Mx	-.006	5.75
13	MP2A	X	-11.861	.75
14	MP2A	Z	-20.544	.75
15	MP2A	Mx	.018	.75
16	MP2A	X	-11.861	5.75
17	MP2A	Z	-20.544	5.75
18	MP2A	Mx	.018	5.75
19	MP3A	X	-6.792	1
20	MP3A	Z	-11.763	1
21	MP3A	Mx	.003	1
22	MP3A	X	-6.792	5.5
23	MP3A	Z	-11.763	5.5
24	MP3A	Mx	.003	5.5
25	MP1A	X	-2.931	5.25
26	MP1A	Z	-5.077	5.25
27	MP1A	Mx	.001	5.25
28	M11	X	-6.112	2
29	M11	Z	-10.587	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.75
2	MP1A	Z	-4.609	.75
3	MP1A	Mx	0	.75
4	MP1A	X	0	2.75
5	MP1A	Z	-4.609	2.75
6	MP1A	Mx	0	2.75
7	MP2A	X	0	.75
8	MP2A	Z	-8.001	.75
9	MP2A	Mx	-.005	.75
10	MP2A	X	0	5.75
11	MP2A	Z	-8.001	5.75
12	MP2A	Mx	-.005	5.75
13	MP2A	X	0	.75
14	MP2A	Z	-8.001	.75
15	MP2A	Mx	.005	.75
16	MP2A	X	0	5.75
17	MP2A	Z	-8.001	5.75
18	MP2A	Mx	.005	5.75
19	MP3A	X	0	1
20	MP3A	Z	-4.628	1
21	MP3A	Mx	0	1
22	MP3A	X	0	5.5
23	MP3A	Z	-4.628	5.5
24	MP3A	Mx	0	5.5
25	MP1A	X	0	5.25
26	MP1A	Z	-1.745	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP1A	Mx	0	5.25
28	M11	X	0	2
29	M11	Z	-2.755	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	1.954	.75
2	MP1A	Z	-3.384	.75
3	MP1A	Mx	-.000977	.75
4	MP1A	X	1.954	2.75
5	MP1A	Z	-3.384	2.75
6	MP1A	Mx	-.000977	2.75
7	MP2A	X	3.662	.75
8	MP2A	Z	-6.343	.75
9	MP2A	Mx	-.006	.75
10	MP2A	X	3.662	5.75
11	MP2A	Z	-6.343	5.75
12	MP2A	Mx	-.006	5.75
13	MP2A	X	3.662	.75
14	MP2A	Z	-6.343	.75
15	MP2A	Mx	.002	.75
16	MP2A	X	3.662	5.75
17	MP2A	Z	-6.343	5.75
18	MP2A	Mx	.002	5.75
19	MP3A	X	2.011	1
20	MP3A	Z	-3.483	1
21	MP3A	Mx	-.001	1
22	MP3A	X	2.011	5.5
23	MP3A	Z	-3.483	5.5
24	MP3A	Mx	-.001	5.5
25	MP1A	X	.697	5.25
26	MP1A	Z	-1.208	5.25
27	MP1A	Mx	-.000348	5.25
28	M11	X	1.226	2
29	M11	Z	-2.123	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.17	.75
2	MP1A	Z	-1.253	.75
3	MP1A	Mx	-.001	.75
4	MP1A	X	2.17	2.75
5	MP1A	Z	-1.253	2.75
6	MP1A	Mx	-.001	2.75
7	MP2A	X	5.169	.75
8	MP2A	Z	-2.984	.75
9	MP2A	Mx	-.004	.75
10	MP2A	X	5.169	5.75
11	MP2A	Z	-2.984	5.75
12	MP2A	Mx	-.004	5.75
13	MP2A	X	5.169	.75
14	MP2A	Z	-2.984	.75
15	MP2A	Mx	-.000844	.75
16	MP2A	X	5.169	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP2A	Z	-2.984	5.75
18	MP2A	Mx	-.000844	5.75
19	MP3A	X	2.434	1
20	MP3A	Z	-1.405	1
21	MP3A	Mx	-.001	1
22	MP3A	X	2.434	5.5
23	MP3A	Z	-1.405	5.5
24	MP3A	Mx	-.001	5.5
25	MP1A	X	.6	5.25
26	MP1A	Z	-.347	5.25
27	MP1A	Mx	-.0003	5.25
28	M11	X	2.386	2
29	M11	Z	-1.378	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	1.804	.75
2	MP1A	Z	0	.75
3	MP1A	Mx	-.000902	.75
4	MP1A	X	1.804	2.75
5	MP1A	Z	0	2.75
6	MP1A	Mx	-.000902	2.75
7	MP2A	X	5.291	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.003	.75
10	MP2A	X	5.291	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	-.003	5.75
13	MP2A	X	5.291	.75
14	MP2A	Z	0	.75
15	MP2A	Mx	-.003	.75
16	MP2A	X	5.291	5.75
17	MP2A	Z	0	5.75
18	MP2A	Mx	-.003	5.75
19	MP3A	X	2.205	1
20	MP3A	Z	0	1
21	MP3A	Mx	-.001	1
22	MP3A	X	2.205	5.5
23	MP3A	Z	0	5.5
24	MP3A	Mx	-.001	5.5
25	MP1A	X	.342	5.25
26	MP1A	Z	0	5.25
27	MP1A	Mx	-.000171	5.25
28	M11	X	3.363	2
29	M11	Z	0	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.17	.75
2	MP1A	Z	1.253	.75
3	MP1A	Mx	-.001	.75
4	MP1A	X	2.17	2.75
5	MP1A	Z	1.253	2.75
6	MP1A	Mx	-.001	2.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	5.169	.75
8	MP2A	Z	2.984	.75
9	MP2A	Mx	-.000844	.75
10	MP2A	X	5.169	5.75
11	MP2A	Z	2.984	5.75
12	MP2A	Mx	-.000844	5.75
13	MP2A	X	5.169	.75
14	MP2A	Z	2.984	.75
15	MP2A	Mx	-.004	.75
16	MP2A	X	5.169	5.75
17	MP2A	Z	2.984	5.75
18	MP2A	Mx	-.004	5.75
19	MP3A	X	2.434	1
20	MP3A	Z	1.405	1
21	MP3A	Mx	-.001	1
22	MP3A	X	2.434	5.5
23	MP3A	Z	1.405	5.5
24	MP3A	Mx	-.001	5.5
25	MP1A	X	.6	5.25
26	MP1A	Z	.347	5.25
27	MP1A	Mx	-.0003	5.25
28	M11	X	3.176	2
29	M11	Z	1.834	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	1.954	.75
2	MP1A	Z	3.384	.75
3	MP1A	Mx	-.000977	.75
4	MP1A	X	1.954	2.75
5	MP1A	Z	3.384	2.75
6	MP1A	Mx	-.000977	2.75
7	MP2A	X	3.662	.75
8	MP2A	Z	6.343	.75
9	MP2A	Mx	.002	.75
10	MP2A	X	3.662	5.75
11	MP2A	Z	6.343	5.75
12	MP2A	Mx	.002	5.75
13	MP2A	X	3.662	.75
14	MP2A	Z	6.343	.75
15	MP2A	Mx	-.006	.75
16	MP2A	X	3.662	5.75
17	MP2A	Z	6.343	5.75
18	MP2A	Mx	-.006	5.75
19	MP3A	X	2.011	1
20	MP3A	Z	3.483	1
21	MP3A	Mx	-.001	1
22	MP3A	X	2.011	5.5
23	MP3A	Z	3.483	5.5
24	MP3A	Mx	-.001	5.5
25	MP1A	X	.697	5.25
26	MP1A	Z	1.208	5.25
27	MP1A	Mx	-.000348	5.25
28	M11	X	1.682	2
29	M11	Z	2.913	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	.75
2	MP1A	Z	4.609	.75
3	MP1A	Mx	0	.75
4	MP1A	X	0	2.75
5	MP1A	Z	4.609	2.75
6	MP1A	Mx	0	2.75
7	MP2A	X	0	.75
8	MP2A	Z	8.001	.75
9	MP2A	Mx	.005	.75
10	MP2A	X	0	5.75
11	MP2A	Z	8.001	5.75
12	MP2A	Mx	.005	5.75
13	MP2A	X	0	.75
14	MP2A	Z	8.001	.75
15	MP2A	Mx	-.005	.75
16	MP2A	X	0	5.75
17	MP2A	Z	8.001	5.75
18	MP2A	Mx	-.005	5.75
19	MP3A	X	0	1
20	MP3A	Z	4.628	1
21	MP3A	Mx	0	1
22	MP3A	X	0	5.5
23	MP3A	Z	4.628	5.5
24	MP3A	Mx	0	5.5
25	MP1A	X	0	5.25
26	MP1A	Z	1.745	5.25
27	MP1A	Mx	0	5.25
28	M11	X	0	2
29	M11	Z	2.755	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-1.954	.75
2	MP1A	Z	3.384	.75
3	MP1A	Mx	.000977	.75
4	MP1A	X	-1.954	2.75
5	MP1A	Z	3.384	2.75
6	MP1A	Mx	.000977	2.75
7	MP2A	X	-3.662	.75
8	MP2A	Z	6.343	.75
9	MP2A	Mx	.006	.75
10	MP2A	X	-3.662	5.75
11	MP2A	Z	6.343	5.75
12	MP2A	Mx	.006	5.75
13	MP2A	X	-3.662	.75
14	MP2A	Z	6.343	.75
15	MP2A	Mx	-.002	.75
16	MP2A	X	-3.662	5.75
17	MP2A	Z	6.343	5.75
18	MP2A	Mx	-.002	5.75
19	MP3A	X	-2.011	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP3A	Z	3.483	1
21	MP3A	Mx	.001	1
22	MP3A	X	-2.011	5.5
23	MP3A	Z	3.483	5.5
24	MP3A	Mx	.001	5.5
25	MP1A	X	-.697	5.25
26	MP1A	Z	1.208	5.25
27	MP1A	Mx	.000348	5.25
28	M11	X	-1.226	2
29	M11	Z	2.123	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.17	.75
2	MP1A	Z	1.253	.75
3	MP1A	Mx	.001	.75
4	MP1A	X	-2.17	2.75
5	MP1A	Z	1.253	2.75
6	MP1A	Mx	.001	2.75
7	MP2A	X	-5.169	.75
8	MP2A	Z	2.984	.75
9	MP2A	Mx	.004	.75
10	MP2A	X	-5.169	5.75
11	MP2A	Z	2.984	5.75
12	MP2A	Mx	.004	5.75
13	MP2A	X	-5.169	.75
14	MP2A	Z	2.984	.75
15	MP2A	Mx	.000844	.75
16	MP2A	X	-5.169	5.75
17	MP2A	Z	2.984	5.75
18	MP2A	Mx	.000844	5.75
19	MP3A	X	-2.434	1
20	MP3A	Z	1.405	1
21	MP3A	Mx	.001	1
22	MP3A	X	-2.434	5.5
23	MP3A	Z	1.405	5.5
24	MP3A	Mx	.001	5.5
25	MP1A	X	-.6	5.25
26	MP1A	Z	.347	5.25
27	MP1A	Mx	.0003	5.25
28	M11	X	-2.386	2
29	M11	Z	1.378	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-1.804	.75
2	MP1A	Z	0	.75
3	MP1A	Mx	.000902	.75
4	MP1A	X	-1.804	2.75
5	MP1A	Z	0	2.75
6	MP1A	Mx	.000902	2.75
7	MP2A	X	-5.291	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.003	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP2A	X	-5.291	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	.003	5.75
13	MP2A	X	-5.291	.75
14	MP2A	Z	0	.75
15	MP2A	Mx	.003	.75
16	MP2A	X	-5.291	5.75
17	MP2A	Z	0	5.75
18	MP2A	Mx	.003	5.75
19	MP3A	X	-2.205	1
20	MP3A	Z	0	1
21	MP3A	Mx	.001	1
22	MP3A	X	-2.205	5.5
23	MP3A	Z	0	5.5
24	MP3A	Mx	.001	5.5
25	MP1A	X	-.342	5.25
26	MP1A	Z	0	5.25
27	MP1A	Mx	.000171	5.25
28	M11	X	-3.363	2
29	M11	Z	0	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.17	.75
2	MP1A	Z	-1.253	.75
3	MP1A	Mx	.001	.75
4	MP1A	X	-2.17	2.75
5	MP1A	Z	-1.253	2.75
6	MP1A	Mx	.001	2.75
7	MP2A	X	-5.169	.75
8	MP2A	Z	-2.984	.75
9	MP2A	Mx	.000844	.75
10	MP2A	X	-5.169	5.75
11	MP2A	Z	-2.984	5.75
12	MP2A	Mx	.000844	5.75
13	MP2A	X	-5.169	.75
14	MP2A	Z	-2.984	.75
15	MP2A	Mx	.004	.75
16	MP2A	X	-5.169	5.75
17	MP2A	Z	-2.984	5.75
18	MP2A	Mx	.004	5.75
19	MP3A	X	-2.434	1
20	MP3A	Z	-1.405	1
21	MP3A	Mx	.001	1
22	MP3A	X	-2.434	5.5
23	MP3A	Z	-1.405	5.5
24	MP3A	Mx	.001	5.5
25	MP1A	X	-.6	5.25
26	MP1A	Z	-.347	5.25
27	MP1A	Mx	.0003	5.25
28	M11	X	-3.176	2
29	M11	Z	-1.834	2
30	M11	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-1.954	.75
2	MP1A	Z	-3.384	.75
3	MP1A	Mx	.000977	.75
4	MP1A	X	-1.954	2.75
5	MP1A	Z	-3.384	2.75
6	MP1A	Mx	.000977	2.75
7	MP2A	X	-3.662	.75
8	MP2A	Z	-6.343	.75
9	MP2A	Mx	-.002	.75
10	MP2A	X	-3.662	5.75
11	MP2A	Z	-6.343	5.75
12	MP2A	Mx	-.002	5.75
13	MP2A	X	-3.662	.75
14	MP2A	Z	-6.343	.75
15	MP2A	Mx	.006	.75
16	MP2A	X	-3.662	5.75
17	MP2A	Z	-6.343	5.75
18	MP2A	Mx	.006	5.75
19	MP3A	X	-2.011	1
20	MP3A	Z	-3.483	1
21	MP3A	Mx	.001	1
22	MP3A	X	-2.011	5.5
23	MP3A	Z	-3.483	5.5
24	MP3A	Mx	.001	5.5
25	MP1A	X	-.697	5.25
26	MP1A	Z	-1.208	5.25
27	MP1A	Mx	.000348	5.25
28	M11	X	-1.682	2
29	M11	Z	-2.913	2
30	M11	Mx	0	2

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M3	Y	-500	%3

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M3	Y	-500	%91

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M4	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

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

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-9.368	-9.368	0	%100
2	M3	Y	-6.87	-6.87	0	%100
3	M4	Y	-6.87	-6.87	0	%100
4	M6	Y	-9.368	-9.368	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
5	M8	Y	-6.87	-6.87	0	%100
6	M9	Y	-6.87	-6.87	0	%100
7	M11	Y	-12.708	-12.708	0	%100
8	M14	Y	-5.514	-5.514	0	%100
9	M15	Y	-5.514	-5.514	0	%100
10	M16	Y	-5.514	-5.514	0	%100
11	M26	Y	-6.028	-6.028	0	%100
12	M27	Y	-4.743	-4.743	0	%100
13	M28	Y	-4.743	-4.743	0	%100
14	M29	Y	-6.028	-6.028	0	%100
15	M30	Y	-4.743	-4.743	0	%100
16	M31	Y	-4.743	-4.743	0	%100
17	M34	Y	-4.743	-4.743	0	%100
18	M35	Y	-4.743	-4.743	0	%100
19	MP1A	Y	-8.34	-8.34	0	%100
20	MP2A	Y	-8.34	-8.34	0	%100
21	MP3A	Y	-8.34	-8.34	0	%100
22	MP4A	Y	-8.34	-8.34	0	%100
23	M37	Y	-6.87	-6.87	0	%100
24	M38	Y	-6.87	-6.87	0	%100
25	M39	Y	-10.726	-10.726	0	%100
26	M40	Y	-10.726	-10.726	0	%100
27	M41	Y	-10.726	-10.726	0	%100
28	M42	Y	-10.726	-10.726	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-4.952	-4.952	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-4.952	-4.952	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	-4.952	-4.952	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	-4.952	-4.952	0	%100
13	M11	X	0	0	0	%100
14	M11	Z	-9.864	-9.864	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	-2.983	-2.983	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-2.983	-2.983	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-2.386	-2.386	0	%100
21	M26	X	0	0	0	%100
22	M26	Z	-3.66	-3.66	0	%100
23	M27	X	0	0	0	%100
24	M27	Z	-1.864	-1.864	0	%100
25	M28	X	0	0	0	%100
26	M28	Z	-1.864	-1.864	0	%100
27	M29	X	0	0	0	%100
28	M29	Z	-3.66	-3.66	0	%100
29	M30	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
30	M30	Z	-1.864	-1.864	0	%100
31	M31	X	0	0	0	%100
32	M31	Z	-1.864	-1.864	0	%100
33	M34	X	0	0	0	%100
34	M34	Z	-1.864	-1.864	0	%100
35	M35	X	0	0	0	%100
36	M35	Z	-1.864	-1.864	0	%100
37	MP1A	X	0	0	0	%100
38	MP1A	Z	-7.084	-7.084	0	%100
39	MP2A	X	0	0	0	%100
40	MP2A	Z	-7.084	-7.084	0	%100
41	MP3A	X	0	0	0	%100
42	MP3A	Z	-7.084	-7.084	0	%100
43	MP4A	X	0	0	0	%100
44	MP4A	Z	-7.084	-7.084	0	%100
45	M37	X	0	0	0	%100
46	M37	Z	-.367	-.367	0	%100
47	M38	X	0	0	0	%100
48	M38	Z	-4.079	-4.079	0	%100
49	M39	X	0	0	0	%100
50	M39	Z	-7.975	-7.975	0	%100
51	M40	X	0	0	0	%100
52	M40	Z	-9.309	-9.309	0	%100
53	M41	X	0	0	0	%100
54	M41	Z	-7.975	-7.975	0	%100
55	M42	X	0	0	0	%100
56	M42	Z	-9.309	-9.309	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.741	.741	0	%100
2	M1	Z	-1.284	-1.284	0	%100
3	M3	X	1.857	1.857	0	%100
4	M3	Z	-3.216	-3.216	0	%100
5	M4	X	1.857	1.857	0	%100
6	M4	Z	-3.216	-3.216	0	%100
7	M6	X	.741	.741	0	%100
8	M6	Z	-1.284	-1.284	0	%100
9	M8	X	1.857	1.857	0	%100
10	M8	Z	-3.216	-3.216	0	%100
11	M9	X	1.857	1.857	0	%100
12	M9	Z	-3.216	-3.216	0	%100
13	M11	X	4.932	4.932	0	%100
14	M11	Z	-8.543	-8.543	0	%100
15	M14	X	1.491	1.491	0	%100
16	M14	Z	-2.583	-2.583	0	%100
17	M15	X	1.491	1.491	0	%100
18	M15	Z	-2.583	-2.583	0	%100
19	M16	X	1.268	1.268	0	%100
20	M16	Z	-2.196	-2.196	0	%100
21	M26	X	1.83	1.83	0	%100
22	M26	Z	-3.169	-3.169	0	%100
23	M27	X	.932	.932	0	%100
24	M27	Z	-1.615	-1.615	0	%100
25	M28	X	.932	.932	0	%100
26	M28	Z	-1.615	-1.615	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
27	M29	X	1.83	1.83	0	%100
28	M29	Z	-3.169	-3.169	0	%100
29	M30	X	.795	.795	0	%100
30	M30	Z	-1.376	-1.376	0	%100
31	M31	X	.778	.778	0	%100
32	M31	Z	-1.347	-1.347	0	%100
33	M34	X	.932	.932	0	%100
34	M34	Z	-1.615	-1.615	0	%100
35	M35	X	.795	.795	0	%100
36	M35	Z	-1.376	-1.376	0	%100
37	MP1A	X	3.542	3.542	0	%100
38	MP1A	Z	-6.135	-6.135	0	%100
39	MP2A	X	3.542	3.542	0	%100
40	MP2A	Z	-6.135	-6.135	0	%100
41	MP3A	X	3.542	3.542	0	%100
42	MP3A	Z	-6.135	-6.135	0	%100
43	MP4A	X	3.542	3.542	0	%100
44	MP4A	Z	-6.135	-6.135	0	%100
45	M37	X	.149	.149	0	%100
46	M37	Z	-.258	-.258	0	%100
47	M38	X	2.456	2.456	0	%100
48	M38	Z	-4.253	-4.253	0	%100
49	M39	X	1.726	1.726	0	%100
50	M39	Z	-2.99	-2.99	0	%100
51	M40	X	6.202	6.202	0	%100
52	M40	Z	-10.742	-10.742	0	%100
53	M41	X	1.726	1.726	0	%100
54	M41	Z	-2.99	-2.99	0	%100
55	M42	X	6.202	6.202	0	%100
56	M42	Z	-10.742	-10.742	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	3.852	3.852	0	%100
2	M1	Z	-2.224	-2.224	0	%100
3	M3	X	1.072	1.072	0	%100
4	M3	Z	-.619	-.619	0	%100
5	M4	X	1.072	1.072	0	%100
6	M4	Z	-.619	-.619	0	%100
7	M6	X	3.852	3.852	0	%100
8	M6	Z	-2.224	-2.224	0	%100
9	M8	X	1.072	1.072	0	%100
10	M8	Z	-.619	-.619	0	%100
11	M9	X	1.072	1.072	0	%100
12	M9	Z	-.619	-.619	0	%100
13	M11	X	8.543	8.543	0	%100
14	M11	Z	-4.932	-4.932	0	%100
15	M14	X	2.583	2.583	0	%100
16	M14	Z	-1.491	-1.491	0	%100
17	M15	X	2.583	2.583	0	%100
18	M15	Z	-1.491	-1.491	0	%100
19	M16	X	2.454	2.454	0	%100
20	M16	Z	-1.417	-1.417	0	%100
21	M26	X	3.169	3.169	0	%100
22	M26	Z	-1.83	-1.83	0	%100
23	M27	X	1.615	1.615	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
24	M27	Z	-.932	-.932	0	%100
25	M28	X	1.615	1.615	0	%100
26	M28	Z	-.932	-.932	0	%100
27	M29	X	3.169	3.169	0	%100
28	M29	Z	-1.83	-1.83	0	%100
29	M30	X	.9	.9	0	%100
30	M30	Z	-.52	-.52	0	%100
31	M31	X	.813	.813	0	%100
32	M31	Z	-.469	-.469	0	%100
33	M34	X	1.615	1.615	0	%100
34	M34	Z	-.932	-.932	0	%100
35	M35	X	.9	.9	0	%100
36	M35	Z	-.52	-.52	0	%100
37	MP1A	X	6.135	6.135	0	%100
38	MP1A	Z	-3.542	-3.542	0	%100
39	MP2A	X	6.135	6.135	0	%100
40	MP2A	Z	-3.542	-3.542	0	%100
41	MP3A	X	6.135	6.135	0	%100
42	MP3A	Z	-3.542	-3.542	0	%100
43	MP4A	X	6.135	6.135	0	%100
44	MP4A	Z	-3.542	-3.542	0	%100
45	M37	X	2.084	2.084	0	%100
46	M37	Z	-1.203	-1.203	0	%100
47	M38	X	2.865	2.865	0	%100
48	M38	Z	-1.654	-1.654	0	%100
49	M39	X	2.554	2.554	0	%100
50	M39	Z	-1.474	-1.474	0	%100
51	M40	X	8.825	8.825	0	%100
52	M40	Z	-5.095	-5.095	0	%100
53	M41	X	2.554	2.554	0	%100
54	M41	Z	-1.474	-1.474	0	%100
55	M42	X	8.825	8.825	0	%100
56	M42	Z	-5.095	-5.095	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	5.931	5.931	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	M6	X	5.931	5.931	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	0	0	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	0	0	0	%100
13	M11	X	9.864	9.864	0	%100
14	M11	Z	0	0	0	%100
15	M14	X	2.983	2.983	0	%100
16	M14	Z	0	0	0	%100
17	M15	X	2.983	2.983	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	2.983	2.983	0	%100
20	M16	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,F...	Start Location[ft,%]	End Location[ft,%]
21	M26	X	3.66	3.66	0	%100
22	M26	Z	0	0	0	%100
23	M27	X	1.864	1.864	0	%100
24	M27	Z	0	0	0	%100
25	M28	X	1.864	1.864	0	%100
26	M28	Z	0	0	0	%100
27	M29	X	3.66	3.66	0	%100
28	M29	Z	0	0	0	%100
29	M30	X	.764	.764	0	%100
30	M30	Z	0	0	0	%100
31	M31	X	.63	.63	0	%100
32	M31	Z	0	0	0	%100
33	M34	X	1.864	1.864	0	%100
34	M34	Z	0	0	0	%100
35	M35	X	.764	.764	0	%100
36	M35	Z	0	0	0	%100
37	MP1A	X	7.084	7.084	0	%100
38	MP1A	Z	0	0	0	%100
39	MP2A	X	7.084	7.084	0	%100
40	MP2A	Z	0	0	0	%100
41	MP3A	X	7.084	7.084	0	%100
42	MP3A	Z	0	0	0	%100
43	MP4A	X	7.084	7.084	0	%100
44	MP4A	Z	0	0	0	%100
45	M37	X	4.585	4.585	0	%100
46	M37	Z	0	0	0	%100
47	M38	X	.873	.873	0	%100
48	M38	Z	0	0	0	%100
49	M39	X	6.968	6.968	0	%100
50	M39	Z	0	0	0	%100
51	M40	X	4.881	4.881	0	%100
52	M40	Z	0	0	0	%100
53	M41	X	6.968	6.968	0	%100
54	M41	Z	0	0	0	%100
55	M42	X	4.881	4.881	0	%100
56	M42	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,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	3.852	3.852	0	%100
2	M1	Z	2.224	2.224	0	%100
3	M3	X	1.072	1.072	0	%100
4	M3	Z	.619	.619	0	%100
5	M4	X	1.072	1.072	0	%100
6	M4	Z	.619	.619	0	%100
7	M6	X	3.852	3.852	0	%100
8	M6	Z	2.224	2.224	0	%100
9	M8	X	1.072	1.072	0	%100
10	M8	Z	.619	.619	0	%100
11	M9	X	1.072	1.072	0	%100
12	M9	Z	.619	.619	0	%100
13	M11	X	8.543	8.543	0	%100
14	M11	Z	4.932	4.932	0	%100
15	M14	X	2.583	2.583	0	%100
16	M14	Z	1.491	1.491	0	%100
17	M15	X	2.583	2.583	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
18	M15	Z	1.491	1.491	0	%100
19	M16	X	2.454	2.454	0	%100
20	M16	Z	1.417	1.417	0	%100
21	M26	X	3.169	3.169	0	%100
22	M26	Z	1.83	1.83	0	%100
23	M27	X	1.615	1.615	0	%100
24	M27	Z	.932	.932	0	%100
25	M28	X	1.615	1.615	0	%100
26	M28	Z	.932	.932	0	%100
27	M29	X	3.169	3.169	0	%100
28	M29	Z	1.83	1.83	0	%100
29	M30	X	.9	.9	0	%100
30	M30	Z	.52	.52	0	%100
31	M31	X	.813	.813	0	%100
32	M31	Z	.469	.469	0	%100
33	M34	X	1.615	1.615	0	%100
34	M34	Z	.932	.932	0	%100
35	M35	X	.9	.9	0	%100
36	M35	Z	.52	.52	0	%100
37	MP1A	X	6.135	6.135	0	%100
38	MP1A	Z	3.542	3.542	0	%100
39	MP2A	X	6.135	6.135	0	%100
40	MP2A	Z	3.542	3.542	0	%100
41	MP3A	X	6.135	6.135	0	%100
42	MP3A	Z	3.542	3.542	0	%100
43	MP4A	X	6.135	6.135	0	%100
44	MP4A	Z	3.542	3.542	0	%100
45	M37	X	4.03	4.03	0	%100
46	M37	Z	2.327	2.327	0	%100
47	M38	X	.035	.035	0	%100
48	M38	Z	.02	.02	0	%100
49	M39	X	9.951	9.951	0	%100
50	M39	Z	5.745	5.745	0	%100
51	M40	X	1.546	1.546	0	%100
52	M40	Z	.893	.893	0	%100
53	M41	X	9.951	9.951	0	%100
54	M41	Z	5.745	5.745	0	%100
55	M42	X	1.546	1.546	0	%100
56	M42	Z	.893	.893	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.741	.741	0	%100
2	M1	Z	1.284	1.284	0	%100
3	M3	X	1.857	1.857	0	%100
4	M3	Z	3.216	3.216	0	%100
5	M4	X	1.857	1.857	0	%100
6	M4	Z	3.216	3.216	0	%100
7	M6	X	.741	.741	0	%100
8	M6	Z	1.284	1.284	0	%100
9	M8	X	1.857	1.857	0	%100
10	M8	Z	3.216	3.216	0	%100
11	M9	X	1.857	1.857	0	%100
12	M9	Z	3.216	3.216	0	%100
13	M11	X	4.932	4.932	0	%100
14	M11	Z	8.543	8.543	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	M14	X	1.491	1.491	0	%100
16	M14	Z	2.583	2.583	0	%100
17	M15	X	1.491	1.491	0	%100
18	M15	Z	2.583	2.583	0	%100
19	M16	X	1.268	1.268	0	%100
20	M16	Z	2.196	2.196	0	%100
21	M26	X	1.83	1.83	0	%100
22	M26	Z	3.169	3.169	0	%100
23	M27	X	.932	.932	0	%100
24	M27	Z	1.615	1.615	0	%100
25	M28	X	.932	.932	0	%100
26	M28	Z	1.615	1.615	0	%100
27	M29	X	1.83	1.83	0	%100
28	M29	Z	3.169	3.169	0	%100
29	M30	X	.795	.795	0	%100
30	M30	Z	1.376	1.376	0	%100
31	M31	X	.778	.778	0	%100
32	M31	Z	1.347	1.347	0	%100
33	M34	X	.932	.932	0	%100
34	M34	Z	1.615	1.615	0	%100
35	M35	X	.795	.795	0	%100
36	M35	Z	1.376	1.376	0	%100
37	MP1A	X	3.542	3.542	0	%100
38	MP1A	Z	6.135	6.135	0	%100
39	MP2A	X	3.542	3.542	0	%100
40	MP2A	Z	6.135	6.135	0	%100
41	MP3A	X	3.542	3.542	0	%100
42	MP3A	Z	6.135	6.135	0	%100
43	MP4A	X	3.542	3.542	0	%100
44	MP4A	Z	6.135	6.135	0	%100
45	M37	X	1.272	1.272	0	%100
46	M37	Z	2.204	2.204	0	%100
47	M38	X	.822	.822	0	%100
48	M38	Z	1.423	1.423	0	%100
49	M39	X	5.997	5.997	0	%100
50	M39	Z	10.387	10.387	0	%100
51	M40	X	2	2	0	%100
52	M40	Z	3.464	3.464	0	%100
53	M41	X	5.997	5.997	0	%100
54	M41	Z	10.387	10.387	0	%100
55	M42	X	2	2	0	%100
56	M42	Z	3.464	3.464	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	4.952	4.952	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	4.952	4.952	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	4.952	4.952	0	%100
11	M9	X	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,F...	Start Location[ft,%]	End Location[ft,%]
12	M9	Z	4.952	4.952	0	%100
13	M11	X	0	0	0	%100
14	M11	Z	9.864	9.864	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	2.983	2.983	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	2.983	2.983	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	2.386	2.386	0	%100
21	M26	X	0	0	0	%100
22	M26	Z	3.66	3.66	0	%100
23	M27	X	0	0	0	%100
24	M27	Z	1.864	1.864	0	%100
25	M28	X	0	0	0	%100
26	M28	Z	1.864	1.864	0	%100
27	M29	X	0	0	0	%100
28	M29	Z	3.66	3.66	0	%100
29	M30	X	0	0	0	%100
30	M30	Z	1.864	1.864	0	%100
31	M31	X	0	0	0	%100
32	M31	Z	1.864	1.864	0	%100
33	M34	X	0	0	0	%100
34	M34	Z	1.864	1.864	0	%100
35	M35	X	0	0	0	%100
36	M35	Z	1.864	1.864	0	%100
37	MP1A	X	0	0	0	%100
38	MP1A	Z	7.084	7.084	0	%100
39	MP2A	X	0	0	0	%100
40	MP2A	Z	7.084	7.084	0	%100
41	MP3A	X	0	0	0	%100
42	MP3A	Z	7.084	7.084	0	%100
43	MP4A	X	0	0	0	%100
44	MP4A	Z	7.084	7.084	0	%100
45	M37	X	0	0	0	%100
46	M37	Z	.367	.367	0	%100
47	M38	X	0	0	0	%100
48	M38	Z	4.079	4.079	0	%100
49	M39	X	0	0	0	%100
50	M39	Z	7.975	7.975	0	%100
51	M40	X	0	0	0	%100
52	M40	Z	9.309	9.309	0	%100
53	M41	X	0	0	0	%100
54	M41	Z	7.975	7.975	0	%100
55	M42	X	0	0	0	%100
56	M42	Z	9.309	9.309	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.741	-.741	0	%100
2	M1	Z	1.284	1.284	0	%100
3	M3	X	-1.857	-1.857	0	%100
4	M3	Z	3.216	3.216	0	%100
5	M4	X	-1.857	-1.857	0	%100
6	M4	Z	3.216	3.216	0	%100
7	M6	X	-.741	-.741	0	%100
8	M6	Z	1.284	1.284	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
9	M8	X	-1.857	-1.857	0	%100
10	M8	Z	3.216	3.216	0	%100
11	M9	X	-1.857	-1.857	0	%100
12	M9	Z	3.216	3.216	0	%100
13	M11	X	-4.932	-4.932	0	%100
14	M11	Z	8.543	8.543	0	%100
15	M14	X	-1.491	-1.491	0	%100
16	M14	Z	2.583	2.583	0	%100
17	M15	X	-1.491	-1.491	0	%100
18	M15	Z	2.583	2.583	0	%100
19	M16	X	-1.268	-1.268	0	%100
20	M16	Z	2.196	2.196	0	%100
21	M26	X	-1.83	-1.83	0	%100
22	M26	Z	3.169	3.169	0	%100
23	M27	X	-.932	-.932	0	%100
24	M27	Z	1.615	1.615	0	%100
25	M28	X	-.932	-.932	0	%100
26	M28	Z	1.615	1.615	0	%100
27	M29	X	-1.83	-1.83	0	%100
28	M29	Z	3.169	3.169	0	%100
29	M30	X	-.795	-.795	0	%100
30	M30	Z	1.376	1.376	0	%100
31	M31	X	-.778	-.778	0	%100
32	M31	Z	1.347	1.347	0	%100
33	M34	X	-.932	-.932	0	%100
34	M34	Z	1.615	1.615	0	%100
35	M35	X	-.795	-.795	0	%100
36	M35	Z	1.376	1.376	0	%100
37	MP1A	X	-3.542	-3.542	0	%100
38	MP1A	Z	6.135	6.135	0	%100
39	MP2A	X	-3.542	-3.542	0	%100
40	MP2A	Z	6.135	6.135	0	%100
41	MP3A	X	-3.542	-3.542	0	%100
42	MP3A	Z	6.135	6.135	0	%100
43	MP4A	X	-3.542	-3.542	0	%100
44	MP4A	Z	6.135	6.135	0	%100
45	M37	X	-.149	-.149	0	%100
46	M37	Z	.258	.258	0	%100
47	M38	X	-2.456	-2.456	0	%100
48	M38	Z	4.253	4.253	0	%100
49	M39	X	-1.726	-1.726	0	%100
50	M39	Z	2.99	2.99	0	%100
51	M40	X	-6.202	-6.202	0	%100
52	M40	Z	10.742	10.742	0	%100
53	M41	X	-1.726	-1.726	0	%100
54	M41	Z	2.99	2.99	0	%100
55	M42	X	-6.202	-6.202	0	%100
56	M42	Z	10.742	10.742	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-3.852	-3.852	0	%100
2	M1	Z	2.224	2.224	0	%100
3	M3	X	-1.072	-1.072	0	%100
4	M3	Z	.619	.619	0	%100
5	M4	X	-1.072	-1.072	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	M4	Z	.619	.619	0	%100
7	M6	X	-3.852	-3.852	0	%100
8	M6	Z	2.224	2.224	0	%100
9	M8	X	-1.072	-1.072	0	%100
10	M8	Z	.619	.619	0	%100
11	M9	X	-1.072	-1.072	0	%100
12	M9	Z	.619	.619	0	%100
13	M11	X	-8.543	-8.543	0	%100
14	M11	Z	4.932	4.932	0	%100
15	M14	X	-2.583	-2.583	0	%100
16	M14	Z	1.491	1.491	0	%100
17	M15	X	-2.583	-2.583	0	%100
18	M15	Z	1.491	1.491	0	%100
19	M16	X	-2.454	-2.454	0	%100
20	M16	Z	1.417	1.417	0	%100
21	M26	X	-3.169	-3.169	0	%100
22	M26	Z	1.83	1.83	0	%100
23	M27	X	-1.615	-1.615	0	%100
24	M27	Z	.932	.932	0	%100
25	M28	X	-1.615	-1.615	0	%100
26	M28	Z	.932	.932	0	%100
27	M29	X	-3.169	-3.169	0	%100
28	M29	Z	1.83	1.83	0	%100
29	M30	X	-.9	-.9	0	%100
30	M30	Z	.52	.52	0	%100
31	M31	X	-.813	-.813	0	%100
32	M31	Z	.469	.469	0	%100
33	M34	X	-1.615	-1.615	0	%100
34	M34	Z	.932	.932	0	%100
35	M35	X	-.9	-.9	0	%100
36	M35	Z	.52	.52	0	%100
37	MP1A	X	-6.135	-6.135	0	%100
38	MP1A	Z	3.542	3.542	0	%100
39	MP2A	X	-6.135	-6.135	0	%100
40	MP2A	Z	3.542	3.542	0	%100
41	MP3A	X	-6.135	-6.135	0	%100
42	MP3A	Z	3.542	3.542	0	%100
43	MP4A	X	-6.135	-6.135	0	%100
44	MP4A	Z	3.542	3.542	0	%100
45	M37	X	-2.084	-2.084	0	%100
46	M37	Z	1.203	1.203	0	%100
47	M38	X	-2.865	-2.865	0	%100
48	M38	Z	1.654	1.654	0	%100
49	M39	X	-2.554	-2.554	0	%100
50	M39	Z	1.474	1.474	0	%100
51	M40	X	-8.825	-8.825	0	%100
52	M40	Z	5.095	5.095	0	%100
53	M41	X	-2.554	-2.554	0	%100
54	M41	Z	1.474	1.474	0	%100
55	M42	X	-8.825	-8.825	0	%100
56	M42	Z	5.095	5.095	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-5.931	-5.931	0	%100
2	M1	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	M6	X	-5.931	-5.931	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	0	0	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	0	0	0	%100
13	M11	X	-9.864	-9.864	0	%100
14	M11	Z	0	0	0	%100
15	M14	X	-2.983	-2.983	0	%100
16	M14	Z	0	0	0	%100
17	M15	X	-2.983	-2.983	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	-2.983	-2.983	0	%100
20	M16	Z	0	0	0	%100
21	M26	X	-3.66	-3.66	0	%100
22	M26	Z	0	0	0	%100
23	M27	X	-1.864	-1.864	0	%100
24	M27	Z	0	0	0	%100
25	M28	X	-1.864	-1.864	0	%100
26	M28	Z	0	0	0	%100
27	M29	X	-3.66	-3.66	0	%100
28	M29	Z	0	0	0	%100
29	M30	X	-.764	-.764	0	%100
30	M30	Z	0	0	0	%100
31	M31	X	-.63	-.63	0	%100
32	M31	Z	0	0	0	%100
33	M34	X	-1.864	-1.864	0	%100
34	M34	Z	0	0	0	%100
35	M35	X	-.764	-.764	0	%100
36	M35	Z	0	0	0	%100
37	MP1A	X	-7.084	-7.084	0	%100
38	MP1A	Z	0	0	0	%100
39	MP2A	X	-7.084	-7.084	0	%100
40	MP2A	Z	0	0	0	%100
41	MP3A	X	-7.084	-7.084	0	%100
42	MP3A	Z	0	0	0	%100
43	MP4A	X	-7.084	-7.084	0	%100
44	MP4A	Z	0	0	0	%100
45	M37	X	-4.585	-4.585	0	%100
46	M37	Z	0	0	0	%100
47	M38	X	-.873	-.873	0	%100
48	M38	Z	0	0	0	%100
49	M39	X	-6.968	-6.968	0	%100
50	M39	Z	0	0	0	%100
51	M40	X	-4.881	-4.881	0	%100
52	M40	Z	0	0	0	%100
53	M41	X	-6.968	-6.968	0	%100
54	M41	Z	0	0	0	%100
55	M42	X	-4.881	-4.881	0	%100
56	M42	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,F...	Start Location[ft,%]	End Location[ft,%]

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-3.852	-3.852	0	%100
2	M1	Z	-2.224	-2.224	0	%100
3	M3	X	-1.072	-1.072	0	%100
4	M3	Z	-.619	-.619	0	%100
5	M4	X	-1.072	-1.072	0	%100
6	M4	Z	-.619	-.619	0	%100
7	M6	X	-3.852	-3.852	0	%100
8	M6	Z	-2.224	-2.224	0	%100
9	M8	X	-1.072	-1.072	0	%100
10	M8	Z	-.619	-.619	0	%100
11	M9	X	-1.072	-1.072	0	%100
12	M9	Z	-.619	-.619	0	%100
13	M11	X	-8.543	-8.543	0	%100
14	M11	Z	-4.932	-4.932	0	%100
15	M14	X	-2.583	-2.583	0	%100
16	M14	Z	-1.491	-1.491	0	%100
17	M15	X	-2.583	-2.583	0	%100
18	M15	Z	-1.491	-1.491	0	%100
19	M16	X	-2.454	-2.454	0	%100
20	M16	Z	-1.417	-1.417	0	%100
21	M26	X	-3.169	-3.169	0	%100
22	M26	Z	-1.83	-1.83	0	%100
23	M27	X	-1.615	-1.615	0	%100
24	M27	Z	-.932	-.932	0	%100
25	M28	X	-1.615	-1.615	0	%100
26	M28	Z	-.932	-.932	0	%100
27	M29	X	-3.169	-3.169	0	%100
28	M29	Z	-1.83	-1.83	0	%100
29	M30	X	-.9	-.9	0	%100
30	M30	Z	-.52	-.52	0	%100
31	M31	X	-.813	-.813	0	%100
32	M31	Z	-.469	-.469	0	%100
33	M34	X	-1.615	-1.615	0	%100
34	M34	Z	-.932	-.932	0	%100
35	M35	X	-.9	-.9	0	%100
36	M35	Z	-.52	-.52	0	%100
37	MP1A	X	-6.135	-6.135	0	%100
38	MP1A	Z	-3.542	-3.542	0	%100
39	MP2A	X	-6.135	-6.135	0	%100
40	MP2A	Z	-3.542	-3.542	0	%100
41	MP3A	X	-6.135	-6.135	0	%100
42	MP3A	Z	-3.542	-3.542	0	%100
43	MP4A	X	-6.135	-6.135	0	%100
44	MP4A	Z	-3.542	-3.542	0	%100
45	M37	X	-4.03	-4.03	0	%100
46	M37	Z	-2.327	-2.327	0	%100
47	M38	X	-.035	-.035	0	%100
48	M38	Z	-.02	-.02	0	%100
49	M39	X	-9.951	-9.951	0	%100
50	M39	Z	-5.745	-5.745	0	%100
51	M40	X	-1.546	-1.546	0	%100
52	M40	Z	-.893	-.893	0	%100
53	M41	X	-9.951	-9.951	0	%100
54	M41	Z	-5.745	-5.745	0	%100
55	M42	X	-1.546	-1.546	0	%100
56	M42	Z	-.893	-.893	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.741	-.741	0	%100
2	M1	Z	-1.284	-1.284	0	%100
3	M3	X	-1.857	-1.857	0	%100
4	M3	Z	-3.216	-3.216	0	%100
5	M4	X	-1.857	-1.857	0	%100
6	M4	Z	-3.216	-3.216	0	%100
7	M6	X	-.741	-.741	0	%100
8	M6	Z	-1.284	-1.284	0	%100
9	M8	X	-1.857	-1.857	0	%100
10	M8	Z	-3.216	-3.216	0	%100
11	M9	X	-1.857	-1.857	0	%100
12	M9	Z	-3.216	-3.216	0	%100
13	M11	X	-4.932	-4.932	0	%100
14	M11	Z	-8.543	-8.543	0	%100
15	M14	X	-1.491	-1.491	0	%100
16	M14	Z	-2.583	-2.583	0	%100
17	M15	X	-1.491	-1.491	0	%100
18	M15	Z	-2.583	-2.583	0	%100
19	M16	X	-1.268	-1.268	0	%100
20	M16	Z	-2.196	-2.196	0	%100
21	M26	X	-1.83	-1.83	0	%100
22	M26	Z	-3.169	-3.169	0	%100
23	M27	X	-.932	-.932	0	%100
24	M27	Z	-1.615	-1.615	0	%100
25	M28	X	-.932	-.932	0	%100
26	M28	Z	-1.615	-1.615	0	%100
27	M29	X	-1.83	-1.83	0	%100
28	M29	Z	-3.169	-3.169	0	%100
29	M30	X	-.795	-.795	0	%100
30	M30	Z	-1.376	-1.376	0	%100
31	M31	X	-.778	-.778	0	%100
32	M31	Z	-1.347	-1.347	0	%100
33	M34	X	-.932	-.932	0	%100
34	M34	Z	-1.615	-1.615	0	%100
35	M35	X	-.795	-.795	0	%100
36	M35	Z	-1.376	-1.376	0	%100
37	MP1A	X	-3.542	-3.542	0	%100
38	MP1A	Z	-6.135	-6.135	0	%100
39	MP2A	X	-3.542	-3.542	0	%100
40	MP2A	Z	-6.135	-6.135	0	%100
41	MP3A	X	-3.542	-3.542	0	%100
42	MP3A	Z	-6.135	-6.135	0	%100
43	MP4A	X	-3.542	-3.542	0	%100
44	MP4A	Z	-6.135	-6.135	0	%100
45	M37	X	-1.272	-1.272	0	%100
46	M37	Z	-2.204	-2.204	0	%100
47	M38	X	-.822	-.822	0	%100
48	M38	Z	-1.423	-1.423	0	%100
49	M39	X	-5.997	-5.997	0	%100
50	M39	Z	-10.387	-10.387	0	%100
51	M40	X	-2	-2	0	%100
52	M40	Z	-3.464	-3.464	0	%100
53	M41	X	-5.997	-5.997	0	%100
54	M41	Z	-10.387	-10.387	0	%100
55	M42	X	-2	-2	0	%100
56	M42	Z	-3.464	-3.464	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-2.737	-2.737	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-2.555	-2.555	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	-2.737	-2.737	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	-2.555	-2.555	0	%100
13	M11	X	0	0	0	%100
14	M11	Z	-3.572	-3.572	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	-1.832	-1.832	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-1.832	-1.832	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-1.494	-1.494	0	%100
21	M26	X	0	0	0	%100
22	M26	Z	-1.955	-1.955	0	%100
23	M27	X	0	0	0	%100
24	M27	Z	-1.628	-1.628	0	%100
25	M28	X	0	0	0	%100
26	M28	Z	-1.628	-1.628	0	%100
27	M29	X	0	0	0	%100
28	M29	Z	-1.955	-1.955	0	%100
29	M30	X	0	0	0	%100
30	M30	Z	-1.798	-1.798	0	%100
31	M31	X	0	0	0	%100
32	M31	Z	-1.846	-1.846	0	%100
33	M34	X	0	0	0	%100
34	M34	Z	-1.628	-1.628	0	%100
35	M35	X	0	0	0	%100
36	M35	Z	-1.798	-1.798	0	%100
37	MP1A	X	0	0	0	%100
38	MP1A	Z	-3.126	-3.126	0	%100
39	MP2A	X	0	0	0	%100
40	MP2A	Z	-3.126	-3.126	0	%100
41	MP3A	X	0	0	0	%100
42	MP3A	Z	-3.126	-3.126	0	%100
43	MP4A	X	0	0	0	%100
44	MP4A	Z	-3.126	-3.126	0	%100
45	M37	X	0	0	0	%100
46	M37	Z	-.183	-.183	0	%100
47	M38	X	0	0	0	%100
48	M38	Z	-2.255	-2.255	0	%100
49	M39	X	0	0	0	%100
50	M39	Z	-2.498	-2.498	0	%100
51	M40	X	0	0	0	%100
52	M40	Z	-3.01	-3.01	0	%100
53	M41	X	0	0	0	%100
54	M41	Z	-2.498	-2.498	0	%100
55	M42	X	0	0	0	%100
56	M42	Z	-3.01	-3.01	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.289	.289	0	%100
2	M1	Z	-.5	-.5	0	%100
3	M3	X	1.027	1.027	0	%100
4	M3	Z	-1.778	-1.778	0	%100
5	M4	X	.958	.958	0	%100
6	M4	Z	-1.659	-1.659	0	%100
7	M6	X	.289	.289	0	%100
8	M6	Z	-.5	-.5	0	%100
9	M8	X	1.027	1.027	0	%100
10	M8	Z	-1.778	-1.778	0	%100
11	M9	X	.958	.958	0	%100
12	M9	Z	-1.659	-1.659	0	%100
13	M11	X	1.786	1.786	0	%100
14	M11	Z	-3.093	-3.093	0	%100
15	M14	X	.916	.916	0	%100
16	M14	Z	-1.586	-1.586	0	%100
17	M15	X	.916	.916	0	%100
18	M15	Z	-1.586	-1.586	0	%100
19	M16	X	.794	.794	0	%100
20	M16	Z	-1.375	-1.375	0	%100
21	M26	X	.978	.978	0	%100
22	M26	Z	-1.693	-1.693	0	%100
23	M27	X	.814	.814	0	%100
24	M27	Z	-1.409	-1.409	0	%100
25	M28	X	.814	.814	0	%100
26	M28	Z	-1.409	-1.409	0	%100
27	M29	X	.978	.978	0	%100
28	M29	Z	-1.693	-1.693	0	%100
29	M30	X	.766	.766	0	%100
30	M30	Z	-1.327	-1.327	0	%100
31	M31	X	.77	.77	0	%100
32	M31	Z	-1.334	-1.334	0	%100
33	M34	X	.814	.814	0	%100
34	M34	Z	-1.409	-1.409	0	%100
35	M35	X	.766	.766	0	%100
36	M35	Z	-1.327	-1.327	0	%100
37	MP1A	X	1.563	1.563	0	%100
38	MP1A	Z	-2.707	-2.707	0	%100
39	MP2A	X	1.563	1.563	0	%100
40	MP2A	Z	-2.707	-2.707	0	%100
41	MP3A	X	1.563	1.563	0	%100
42	MP3A	Z	-2.707	-2.707	0	%100
43	MP4A	X	1.563	1.563	0	%100
44	MP4A	Z	-2.707	-2.707	0	%100
45	M37	X	.074	.074	0	%100
46	M37	Z	-.129	-.129	0	%100
47	M38	X	1.358	1.358	0	%100
48	M38	Z	-2.351	-2.351	0	%100
49	M39	X	.541	.541	0	%100
50	M39	Z	-.937	-.937	0	%100
51	M40	X	2.005	2.005	0	%100
52	M40	Z	-3.473	-3.473	0	%100
53	M41	X	.541	.541	0	%100
54	M41	Z	-.937	-.937	0	%100
55	M42	X	2.005	2.005	0	%100
56	M42	Z	-3.473	-3.473	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.5	1.5	0	%100
2	M1	Z	-.866	-.866	0	%100
3	M3	X	.593	.593	0	%100
4	M3	Z	-.342	-.342	0	%100
5	M4	X	.553	.553	0	%100
6	M4	Z	-.319	-.319	0	%100
7	M6	X	1.5	1.5	0	%100
8	M6	Z	-.866	-.866	0	%100
9	M8	X	.593	.593	0	%100
10	M8	Z	-.342	-.342	0	%100
11	M9	X	.553	.553	0	%100
12	M9	Z	-.319	-.319	0	%100
13	M11	X	3.093	3.093	0	%100
14	M11	Z	-1.786	-1.786	0	%100
15	M14	X	1.586	1.586	0	%100
16	M14	Z	-.916	-.916	0	%100
17	M15	X	1.586	1.586	0	%100
18	M15	Z	-.916	-.916	0	%100
19	M16	X	1.536	1.536	0	%100
20	M16	Z	-.887	-.887	0	%100
21	M26	X	1.693	1.693	0	%100
22	M26	Z	-.978	-.978	0	%100
23	M27	X	1.409	1.409	0	%100
24	M27	Z	-.814	-.814	0	%100
25	M28	X	1.409	1.409	0	%100
26	M28	Z	-.814	-.814	0	%100
27	M29	X	1.693	1.693	0	%100
28	M29	Z	-.978	-.978	0	%100
29	M30	X	.868	.868	0	%100
30	M30	Z	-.501	-.501	0	%100
31	M31	X	.805	.805	0	%100
32	M31	Z	-.465	-.465	0	%100
33	M34	X	1.409	1.409	0	%100
34	M34	Z	-.814	-.814	0	%100
35	M35	X	.868	.868	0	%100
36	M35	Z	-.501	-.501	0	%100
37	MP1A	X	2.707	2.707	0	%100
38	MP1A	Z	-1.563	-1.563	0	%100
39	MP2A	X	2.707	2.707	0	%100
40	MP2A	Z	-1.563	-1.563	0	%100
41	MP3A	X	2.707	2.707	0	%100
42	MP3A	Z	-1.563	-1.563	0	%100
43	MP4A	X	2.707	2.707	0	%100
44	MP4A	Z	-1.563	-1.563	0	%100
45	M37	X	1.042	1.042	0	%100
46	M37	Z	-.602	-.602	0	%100
47	M38	X	1.584	1.584	0	%100
48	M38	Z	-.914	-.914	0	%100
49	M39	X	.8	.8	0	%100
50	M39	Z	-.462	-.462	0	%100
51	M40	X	2.853	2.853	0	%100
52	M40	Z	-1.647	-1.647	0	%100
53	M41	X	.8	.8	0	%100
54	M41	Z	-.462	-.462	0	%100
55	M42	X	2.853	2.853	0	%100
56	M42	Z	-1.647	-1.647	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.31	2.31	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	M6	X	2.31	2.31	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	0	0	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	0	0	0	%100
13	M11	X	3.572	3.572	0	%100
14	M11	Z	0	0	0	%100
15	M14	X	1.832	1.832	0	%100
16	M14	Z	0	0	0	%100
17	M15	X	1.832	1.832	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	1.868	1.868	0	%100
20	M16	Z	0	0	0	%100
21	M26	X	1.955	1.955	0	%100
22	M26	Z	0	0	0	%100
23	M27	X	1.628	1.628	0	%100
24	M27	Z	0	0	0	%100
25	M28	X	1.628	1.628	0	%100
26	M28	Z	0	0	0	%100
27	M29	X	1.955	1.955	0	%100
28	M29	Z	0	0	0	%100
29	M30	X	.737	.737	0	%100
30	M30	Z	0	0	0	%100
31	M31	X	.624	.624	0	%100
32	M31	Z	0	0	0	%100
33	M34	X	1.628	1.628	0	%100
34	M34	Z	0	0	0	%100
35	M35	X	.737	.737	0	%100
36	M35	Z	0	0	0	%100
37	MP1A	X	3.126	3.126	0	%100
38	MP1A	Z	0	0	0	%100
39	MP2A	X	3.126	3.126	0	%100
40	MP2A	Z	0	0	0	%100
41	MP3A	X	3.126	3.126	0	%100
42	MP3A	Z	0	0	0	%100
43	MP4A	X	3.126	3.126	0	%100
44	MP4A	Z	0	0	0	%100
45	M37	X	2.292	2.292	0	%100
46	M37	Z	0	0	0	%100
47	M38	X	.482	.482	0	%100
48	M38	Z	0	0	0	%100
49	M39	X	2.183	2.183	0	%100
50	M39	Z	0	0	0	%100
51	M40	X	1.578	1.578	0	%100
52	M40	Z	0	0	0	%100
53	M41	X	2.183	2.183	0	%100
54	M41	Z	0	0	0	%100
55	M42	X	1.578	1.578	0	%100
56	M42	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,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.5	1.5	0	%100
2	M1	Z	.866	.866	0	%100
3	M3	X	.593	.593	0	%100
4	M3	Z	.342	.342	0	%100
5	M4	X	.553	.553	0	%100
6	M4	Z	.319	.319	0	%100
7	M6	X	1.5	1.5	0	%100
8	M6	Z	.866	.866	0	%100
9	M8	X	.593	.593	0	%100
10	M8	Z	.342	.342	0	%100
11	M9	X	.553	.553	0	%100
12	M9	Z	.319	.319	0	%100
13	M11	X	3.093	3.093	0	%100
14	M11	Z	1.786	1.786	0	%100
15	M14	X	1.586	1.586	0	%100
16	M14	Z	.916	.916	0	%100
17	M15	X	1.586	1.586	0	%100
18	M15	Z	.916	.916	0	%100
19	M16	X	1.536	1.536	0	%100
20	M16	Z	.887	.887	0	%100
21	M26	X	1.693	1.693	0	%100
22	M26	Z	.978	.978	0	%100
23	M27	X	1.409	1.409	0	%100
24	M27	Z	.814	.814	0	%100
25	M28	X	1.409	1.409	0	%100
26	M28	Z	.814	.814	0	%100
27	M29	X	1.693	1.693	0	%100
28	M29	Z	.978	.978	0	%100
29	M30	X	.868	.868	0	%100
30	M30	Z	.501	.501	0	%100
31	M31	X	.805	.805	0	%100
32	M31	Z	.465	.465	0	%100
33	M34	X	1.409	1.409	0	%100
34	M34	Z	.814	.814	0	%100
35	M35	X	.868	.868	0	%100
36	M35	Z	.501	.501	0	%100
37	MP1A	X	2.707	2.707	0	%100
38	MP1A	Z	1.563	1.563	0	%100
39	MP2A	X	2.707	2.707	0	%100
40	MP2A	Z	1.563	1.563	0	%100
41	MP3A	X	2.707	2.707	0	%100
42	MP3A	Z	1.563	1.563	0	%100
43	MP4A	X	2.707	2.707	0	%100
44	MP4A	Z	1.563	1.563	0	%100
45	M37	X	2.014	2.014	0	%100
46	M37	Z	1.163	1.163	0	%100
47	M38	X	.019	.019	0	%100
48	M38	Z	.011	.011	0	%100
49	M39	X	3.117	3.117	0	%100
50	M39	Z	1.8	1.8	0	%100
51	M40	X	.5	.5	0	%100
52	M40	Z	.289	.289	0	%100
53	M41	X	3.117	3.117	0	%100
54	M41	Z	1.8	1.8	0	%100
55	M42	X	.5	.5	0	%100
56	M42	Z	.289	.289	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.289	.289	0	%100
2	M1	Z	.5	.5	0	%100
3	M3	X	1.027	1.027	0	%100
4	M3	Z	1.778	1.778	0	%100
5	M4	X	.958	.958	0	%100
6	M4	Z	1.659	1.659	0	%100
7	M6	X	.289	.289	0	%100
8	M6	Z	.5	.5	0	%100
9	M8	X	1.027	1.027	0	%100
10	M8	Z	1.778	1.778	0	%100
11	M9	X	.958	.958	0	%100
12	M9	Z	1.659	1.659	0	%100
13	M11	X	1.786	1.786	0	%100
14	M11	Z	3.093	3.093	0	%100
15	M14	X	.916	.916	0	%100
16	M14	Z	1.586	1.586	0	%100
17	M15	X	.916	.916	0	%100
18	M15	Z	1.586	1.586	0	%100
19	M16	X	.794	.794	0	%100
20	M16	Z	1.375	1.375	0	%100
21	M26	X	.978	.978	0	%100
22	M26	Z	1.693	1.693	0	%100
23	M27	X	.814	.814	0	%100
24	M27	Z	1.409	1.409	0	%100
25	M28	X	.814	.814	0	%100
26	M28	Z	1.409	1.409	0	%100
27	M29	X	.978	.978	0	%100
28	M29	Z	1.693	1.693	0	%100
29	M30	X	.766	.766	0	%100
30	M30	Z	1.327	1.327	0	%100
31	M31	X	.77	.77	0	%100
32	M31	Z	1.334	1.334	0	%100
33	M34	X	.814	.814	0	%100
34	M34	Z	1.409	1.409	0	%100
35	M35	X	.766	.766	0	%100
36	M35	Z	1.327	1.327	0	%100
37	MP1A	X	1.563	1.563	0	%100
38	MP1A	Z	2.707	2.707	0	%100
39	MP2A	X	1.563	1.563	0	%100
40	MP2A	Z	2.707	2.707	0	%100
41	MP3A	X	1.563	1.563	0	%100
42	MP3A	Z	2.707	2.707	0	%100
43	MP4A	X	1.563	1.563	0	%100
44	MP4A	Z	2.707	2.707	0	%100
45	M37	X	.636	.636	0	%100
46	M37	Z	1.102	1.102	0	%100
47	M38	X	.454	.454	0	%100
48	M38	Z	.787	.787	0	%100
49	M39	X	1.879	1.879	0	%100
50	M39	Z	3.254	3.254	0	%100
51	M40	X	.647	.647	0	%100
52	M40	Z	1.12	1.12	0	%100
53	M41	X	1.879	1.879	0	%100
54	M41	Z	3.254	3.254	0	%100
55	M42	X	.647	.647	0	%100
56	M42	Z	1.12	1.12	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	2.737	2.737	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	2.555	2.555	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	2.737	2.737	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	2.555	2.555	0	%100
13	M11	X	0	0	0	%100
14	M11	Z	3.572	3.572	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	1.832	1.832	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	1.832	1.832	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	1.494	1.494	0	%100
21	M26	X	0	0	0	%100
22	M26	Z	1.955	1.955	0	%100
23	M27	X	0	0	0	%100
24	M27	Z	1.628	1.628	0	%100
25	M28	X	0	0	0	%100
26	M28	Z	1.628	1.628	0	%100
27	M29	X	0	0	0	%100
28	M29	Z	1.955	1.955	0	%100
29	M30	X	0	0	0	%100
30	M30	Z	1.798	1.798	0	%100
31	M31	X	0	0	0	%100
32	M31	Z	1.846	1.846	0	%100
33	M34	X	0	0	0	%100
34	M34	Z	1.628	1.628	0	%100
35	M35	X	0	0	0	%100
36	M35	Z	1.798	1.798	0	%100
37	MP1A	X	0	0	0	%100
38	MP1A	Z	3.126	3.126	0	%100
39	MP2A	X	0	0	0	%100
40	MP2A	Z	3.126	3.126	0	%100
41	MP3A	X	0	0	0	%100
42	MP3A	Z	3.126	3.126	0	%100
43	MP4A	X	0	0	0	%100
44	MP4A	Z	3.126	3.126	0	%100
45	M37	X	0	0	0	%100
46	M37	Z	.183	.183	0	%100
47	M38	X	0	0	0	%100
48	M38	Z	2.255	2.255	0	%100
49	M39	X	0	0	0	%100
50	M39	Z	2.498	2.498	0	%100
51	M40	X	0	0	0	%100
52	M40	Z	3.01	3.01	0	%100
53	M41	X	0	0	0	%100
54	M41	Z	2.498	2.498	0	%100
55	M42	X	0	0	0	%100
56	M42	Z	3.01	3.01	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.289	-.289	0	%100
2	M1	Z	.5	.5	0	%100
3	M3	X	-1.027	-1.027	0	%100
4	M3	Z	1.778	1.778	0	%100
5	M4	X	-.958	-.958	0	%100
6	M4	Z	1.659	1.659	0	%100
7	M6	X	-.289	-.289	0	%100
8	M6	Z	.5	.5	0	%100
9	M8	X	-1.027	-1.027	0	%100
10	M8	Z	1.778	1.778	0	%100
11	M9	X	-.958	-.958	0	%100
12	M9	Z	1.659	1.659	0	%100
13	M11	X	-1.786	-1.786	0	%100
14	M11	Z	3.093	3.093	0	%100
15	M14	X	-.916	-.916	0	%100
16	M14	Z	1.586	1.586	0	%100
17	M15	X	-.916	-.916	0	%100
18	M15	Z	1.586	1.586	0	%100
19	M16	X	-.794	-.794	0	%100
20	M16	Z	1.375	1.375	0	%100
21	M26	X	-.978	-.978	0	%100
22	M26	Z	1.693	1.693	0	%100
23	M27	X	-.814	-.814	0	%100
24	M27	Z	1.409	1.409	0	%100
25	M28	X	-.814	-.814	0	%100
26	M28	Z	1.409	1.409	0	%100
27	M29	X	-.978	-.978	0	%100
28	M29	Z	1.693	1.693	0	%100
29	M30	X	-.766	-.766	0	%100
30	M30	Z	1.327	1.327	0	%100
31	M31	X	-.77	-.77	0	%100
32	M31	Z	1.334	1.334	0	%100
33	M34	X	-.814	-.814	0	%100
34	M34	Z	1.409	1.409	0	%100
35	M35	X	-.766	-.766	0	%100
36	M35	Z	1.327	1.327	0	%100
37	MP1A	X	-1.563	-1.563	0	%100
38	MP1A	Z	2.707	2.707	0	%100
39	MP2A	X	-1.563	-1.563	0	%100
40	MP2A	Z	2.707	2.707	0	%100
41	MP3A	X	-1.563	-1.563	0	%100
42	MP3A	Z	2.707	2.707	0	%100
43	MP4A	X	-1.563	-1.563	0	%100
44	MP4A	Z	2.707	2.707	0	%100
45	M37	X	-.074	-.074	0	%100
46	M37	Z	.129	.129	0	%100
47	M38	X	-1.358	-1.358	0	%100
48	M38	Z	2.351	2.351	0	%100
49	M39	X	-.541	-.541	0	%100
50	M39	Z	.937	.937	0	%100
51	M40	X	-2.005	-2.005	0	%100
52	M40	Z	3.473	3.473	0	%100
53	M41	X	-.541	-.541	0	%100
54	M41	Z	.937	.937	0	%100
55	M42	X	-2.005	-2.005	0	%100
56	M42	Z	3.473	3.473	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.5	-1.5	0	%100
2	M1	Z	.866	.866	0	%100
3	M3	X	-.593	-.593	0	%100
4	M3	Z	.342	.342	0	%100
5	M4	X	-.553	-.553	0	%100
6	M4	Z	.319	.319	0	%100
7	M6	X	-1.5	-1.5	0	%100
8	M6	Z	.866	.866	0	%100
9	M8	X	-.593	-.593	0	%100
10	M8	Z	.342	.342	0	%100
11	M9	X	-.553	-.553	0	%100
12	M9	Z	.319	.319	0	%100
13	M11	X	-3.093	-3.093	0	%100
14	M11	Z	1.786	1.786	0	%100
15	M14	X	-1.586	-1.586	0	%100
16	M14	Z	.916	.916	0	%100
17	M15	X	-1.586	-1.586	0	%100
18	M15	Z	.916	.916	0	%100
19	M16	X	-1.536	-1.536	0	%100
20	M16	Z	.887	.887	0	%100
21	M26	X	-1.693	-1.693	0	%100
22	M26	Z	.978	.978	0	%100
23	M27	X	-1.409	-1.409	0	%100
24	M27	Z	.814	.814	0	%100
25	M28	X	-1.409	-1.409	0	%100
26	M28	Z	.814	.814	0	%100
27	M29	X	-1.693	-1.693	0	%100
28	M29	Z	.978	.978	0	%100
29	M30	X	-.868	-.868	0	%100
30	M30	Z	.501	.501	0	%100
31	M31	X	-.805	-.805	0	%100
32	M31	Z	.465	.465	0	%100
33	M34	X	-1.409	-1.409	0	%100
34	M34	Z	.814	.814	0	%100
35	M35	X	-.868	-.868	0	%100
36	M35	Z	.501	.501	0	%100
37	MP1A	X	-2.707	-2.707	0	%100
38	MP1A	Z	1.563	1.563	0	%100
39	MP2A	X	-2.707	-2.707	0	%100
40	MP2A	Z	1.563	1.563	0	%100
41	MP3A	X	-2.707	-2.707	0	%100
42	MP3A	Z	1.563	1.563	0	%100
43	MP4A	X	-2.707	-2.707	0	%100
44	MP4A	Z	1.563	1.563	0	%100
45	M37	X	-1.042	-1.042	0	%100
46	M37	Z	.602	.602	0	%100
47	M38	X	-1.584	-1.584	0	%100
48	M38	Z	.914	.914	0	%100
49	M39	X	-.8	-.8	0	%100
50	M39	Z	.462	.462	0	%100
51	M40	X	-2.853	-2.853	0	%100
52	M40	Z	1.647	1.647	0	%100
53	M41	X	-.8	-.8	0	%100
54	M41	Z	.462	.462	0	%100
55	M42	X	-2.853	-2.853	0	%100
56	M42	Z	1.647	1.647	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.31	-2.31	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	M6	X	-2.31	-2.31	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	0	0	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	0	0	0	%100
13	M11	X	-3.572	-3.572	0	%100
14	M11	Z	0	0	0	%100
15	M14	X	-1.832	-1.832	0	%100
16	M14	Z	0	0	0	%100
17	M15	X	-1.832	-1.832	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	-1.868	-1.868	0	%100
20	M16	Z	0	0	0	%100
21	M26	X	-1.955	-1.955	0	%100
22	M26	Z	0	0	0	%100
23	M27	X	-1.628	-1.628	0	%100
24	M27	Z	0	0	0	%100
25	M28	X	-1.628	-1.628	0	%100
26	M28	Z	0	0	0	%100
27	M29	X	-1.955	-1.955	0	%100
28	M29	Z	0	0	0	%100
29	M30	X	-.737	-.737	0	%100
30	M30	Z	0	0	0	%100
31	M31	X	-.624	-.624	0	%100
32	M31	Z	0	0	0	%100
33	M34	X	-1.628	-1.628	0	%100
34	M34	Z	0	0	0	%100
35	M35	X	-.737	-.737	0	%100
36	M35	Z	0	0	0	%100
37	MP1A	X	-3.126	-3.126	0	%100
38	MP1A	Z	0	0	0	%100
39	MP2A	X	-3.126	-3.126	0	%100
40	MP2A	Z	0	0	0	%100
41	MP3A	X	-3.126	-3.126	0	%100
42	MP3A	Z	0	0	0	%100
43	MP4A	X	-3.126	-3.126	0	%100
44	MP4A	Z	0	0	0	%100
45	M37	X	-2.292	-2.292	0	%100
46	M37	Z	0	0	0	%100
47	M38	X	-.482	-.482	0	%100
48	M38	Z	0	0	0	%100
49	M39	X	-2.183	-2.183	0	%100
50	M39	Z	0	0	0	%100
51	M40	X	-1.578	-1.578	0	%100
52	M40	Z	0	0	0	%100
53	M41	X	-2.183	-2.183	0	%100
54	M41	Z	0	0	0	%100
55	M42	X	-1.578	-1.578	0	%100
56	M42	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,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.5	-1.5	0	%100
2	M1	Z	-.866	-.866	0	%100
3	M3	X	-.593	-.593	0	%100
4	M3	Z	-.342	-.342	0	%100
5	M4	X	-.553	-.553	0	%100
6	M4	Z	-.319	-.319	0	%100
7	M6	X	-1.5	-1.5	0	%100
8	M6	Z	-.866	-.866	0	%100
9	M8	X	-.593	-.593	0	%100
10	M8	Z	-.342	-.342	0	%100
11	M9	X	-.553	-.553	0	%100
12	M9	Z	-.319	-.319	0	%100
13	M11	X	-3.093	-3.093	0	%100
14	M11	Z	-1.786	-1.786	0	%100
15	M14	X	-1.586	-1.586	0	%100
16	M14	Z	-.916	-.916	0	%100
17	M15	X	-1.586	-1.586	0	%100
18	M15	Z	-.916	-.916	0	%100
19	M16	X	-1.536	-1.536	0	%100
20	M16	Z	-.887	-.887	0	%100
21	M26	X	-1.693	-1.693	0	%100
22	M26	Z	-.978	-.978	0	%100
23	M27	X	-1.409	-1.409	0	%100
24	M27	Z	-.814	-.814	0	%100
25	M28	X	-1.409	-1.409	0	%100
26	M28	Z	-.814	-.814	0	%100
27	M29	X	-1.693	-1.693	0	%100
28	M29	Z	-.978	-.978	0	%100
29	M30	X	-.868	-.868	0	%100
30	M30	Z	-.501	-.501	0	%100
31	M31	X	-.805	-.805	0	%100
32	M31	Z	-.465	-.465	0	%100
33	M34	X	-1.409	-1.409	0	%100
34	M34	Z	-.814	-.814	0	%100
35	M35	X	-.868	-.868	0	%100
36	M35	Z	-.501	-.501	0	%100
37	MP1A	X	-2.707	-2.707	0	%100
38	MP1A	Z	-1.563	-1.563	0	%100
39	MP2A	X	-2.707	-2.707	0	%100
40	MP2A	Z	-1.563	-1.563	0	%100
41	MP3A	X	-2.707	-2.707	0	%100
42	MP3A	Z	-1.563	-1.563	0	%100
43	MP4A	X	-2.707	-2.707	0	%100
44	MP4A	Z	-1.563	-1.563	0	%100
45	M37	X	-2.014	-2.014	0	%100
46	M37	Z	-1.163	-1.163	0	%100
47	M38	X	-.019	-.019	0	%100
48	M38	Z	-.011	-.011	0	%100
49	M39	X	-3.117	-3.117	0	%100
50	M39	Z	-1.8	-1.8	0	%100
51	M40	X	-.5	-.5	0	%100
52	M40	Z	-.289	-.289	0	%100
53	M41	X	-3.117	-3.117	0	%100
54	M41	Z	-1.8	-1.8	0	%100
55	M42	X	-.5	-.5	0	%100
56	M42	Z	-.289	-.289	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.289	-.289	0	%100
2	M1	Z	-.5	-.5	0	%100
3	M3	X	-1.027	-1.027	0	%100
4	M3	Z	-1.778	-1.778	0	%100
5	M4	X	-.958	-.958	0	%100
6	M4	Z	-1.659	-1.659	0	%100
7	M6	X	-.289	-.289	0	%100
8	M6	Z	-.5	-.5	0	%100
9	M8	X	-1.027	-1.027	0	%100
10	M8	Z	-1.778	-1.778	0	%100
11	M9	X	-.958	-.958	0	%100
12	M9	Z	-1.659	-1.659	0	%100
13	M11	X	-1.786	-1.786	0	%100
14	M11	Z	-3.093	-3.093	0	%100
15	M14	X	-.916	-.916	0	%100
16	M14	Z	-1.586	-1.586	0	%100
17	M15	X	-.916	-.916	0	%100
18	M15	Z	-1.586	-1.586	0	%100
19	M16	X	-.794	-.794	0	%100
20	M16	Z	-1.375	-1.375	0	%100
21	M26	X	-.978	-.978	0	%100
22	M26	Z	-1.693	-1.693	0	%100
23	M27	X	-.814	-.814	0	%100
24	M27	Z	-1.409	-1.409	0	%100
25	M28	X	-.814	-.814	0	%100
26	M28	Z	-1.409	-1.409	0	%100
27	M29	X	-.978	-.978	0	%100
28	M29	Z	-1.693	-1.693	0	%100
29	M30	X	-.766	-.766	0	%100
30	M30	Z	-1.327	-1.327	0	%100
31	M31	X	-.77	-.77	0	%100
32	M31	Z	-1.334	-1.334	0	%100
33	M34	X	-.814	-.814	0	%100
34	M34	Z	-1.409	-1.409	0	%100
35	M35	X	-.766	-.766	0	%100
36	M35	Z	-1.327	-1.327	0	%100
37	MP1A	X	-1.563	-1.563	0	%100
38	MP1A	Z	-2.707	-2.707	0	%100
39	MP2A	X	-1.563	-1.563	0	%100
40	MP2A	Z	-2.707	-2.707	0	%100
41	MP3A	X	-1.563	-1.563	0	%100
42	MP3A	Z	-2.707	-2.707	0	%100
43	MP4A	X	-1.563	-1.563	0	%100
44	MP4A	Z	-2.707	-2.707	0	%100
45	M37	X	-.636	-.636	0	%100
46	M37	Z	-1.102	-1.102	0	%100
47	M38	X	-.454	-.454	0	%100
48	M38	Z	-.787	-.787	0	%100
49	M39	X	-1.879	-1.879	0	%100
50	M39	Z	-3.254	-3.254	0	%100
51	M40	X	-.647	-.647	0	%100
52	M40	Z	-1.12	-1.12	0	%100
53	M41	X	-1.879	-1.879	0	%100
54	M41	Z	-3.254	-3.254	0	%100
55	M42	X	-.647	-.647	0	%100
56	M42	Z	-1.12	-1.12	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-.326	-.326	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	-.326	-.326	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	-.326	-.326	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	-.326	-.326	0	%100
13	M11	X	0	0	0	%100
14	M11	Z	-.649	-.649	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	-.196	-.196	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-.196	-.196	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-.157	-.157	0	%100
21	M26	X	0	0	0	%100
22	M26	Z	-.241	-.241	0	%100
23	M27	X	0	0	0	%100
24	M27	Z	-.123	-.123	0	%100
25	M28	X	0	0	0	%100
26	M28	Z	-.123	-.123	0	%100
27	M29	X	0	0	0	%100
28	M29	Z	-.241	-.241	0	%100
29	M30	X	0	0	0	%100
30	M30	Z	-.123	-.123	0	%100
31	M31	X	0	0	0	%100
32	M31	Z	-.123	-.123	0	%100
33	M34	X	0	0	0	%100
34	M34	Z	-.123	-.123	0	%100
35	M35	X	0	0	0	%100
36	M35	Z	-.123	-.123	0	%100
37	MP1A	X	0	0	0	%100
38	MP1A	Z	-.466	-.466	0	%100
39	MP2A	X	0	0	0	%100
40	MP2A	Z	-.466	-.466	0	%100
41	MP3A	X	0	0	0	%100
42	MP3A	Z	-.466	-.466	0	%100
43	MP4A	X	0	0	0	%100
44	MP4A	Z	-.466	-.466	0	%100
45	M37	X	0	0	0	%100
46	M37	Z	-.024	-.024	0	%100
47	M38	X	0	0	0	%100
48	M38	Z	-.268	-.268	0	%100
49	M39	X	0	0	0	%100
50	M39	Z	-.524	-.524	0	%100
51	M40	X	0	0	0	%100
52	M40	Z	-.612	-.612	0	%100
53	M41	X	0	0	0	%100
54	M41	Z	-.524	-.524	0	%100
55	M42	X	0	0	0	%100
56	M42	Z	-.612	-.612	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.049	.049	0	%100
2	M1	Z	-.084	-.084	0	%100
3	M3	X	.122	.122	0	%100
4	M3	Z	-.211	-.211	0	%100
5	M4	X	.122	.122	0	%100
6	M4	Z	-.211	-.211	0	%100
7	M6	X	.049	.049	0	%100
8	M6	Z	-.084	-.084	0	%100
9	M8	X	.122	.122	0	%100
10	M8	Z	-.211	-.211	0	%100
11	M9	X	.122	.122	0	%100
12	M9	Z	-.211	-.211	0	%100
13	M11	X	.324	.324	0	%100
14	M11	Z	-.562	-.562	0	%100
15	M14	X	.098	.098	0	%100
16	M14	Z	-.17	-.17	0	%100
17	M15	X	.098	.098	0	%100
18	M15	Z	-.17	-.17	0	%100
19	M16	X	.083	.083	0	%100
20	M16	Z	-.144	-.144	0	%100
21	M26	X	.12	.12	0	%100
22	M26	Z	-.208	-.208	0	%100
23	M27	X	.061	.061	0	%100
24	M27	Z	-.106	-.106	0	%100
25	M28	X	.061	.061	0	%100
26	M28	Z	-.106	-.106	0	%100
27	M29	X	.12	.12	0	%100
28	M29	Z	-.208	-.208	0	%100
29	M30	X	.052	.052	0	%100
30	M30	Z	-.09	-.09	0	%100
31	M31	X	.051	.051	0	%100
32	M31	Z	-.089	-.089	0	%100
33	M34	X	.061	.061	0	%100
34	M34	Z	-.106	-.106	0	%100
35	M35	X	.052	.052	0	%100
36	M35	Z	-.09	-.09	0	%100
37	MP1A	X	.233	.233	0	%100
38	MP1A	Z	-.403	-.403	0	%100
39	MP2A	X	.233	.233	0	%100
40	MP2A	Z	-.403	-.403	0	%100
41	MP3A	X	.233	.233	0	%100
42	MP3A	Z	-.403	-.403	0	%100
43	MP4A	X	.233	.233	0	%100
44	MP4A	Z	-.403	-.403	0	%100
45	M37	X	.01	.01	0	%100
46	M37	Z	-.017	-.017	0	%100
47	M38	X	.161	.161	0	%100
48	M38	Z	-.28	-.28	0	%100
49	M39	X	.114	.114	0	%100
50	M39	Z	-.197	-.197	0	%100
51	M40	X	.408	.408	0	%100
52	M40	Z	-.706	-.706	0	%100
53	M41	X	.114	.114	0	%100
54	M41	Z	-.197	-.197	0	%100
55	M42	X	.408	.408	0	%100
56	M42	Z	-.706	-.706	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.253	.253	0	%100
2	M1	Z	-.146	-.146	0	%100
3	M3	X	.07	.07	0	%100
4	M3	Z	-.041	-.041	0	%100
5	M4	X	.07	.07	0	%100
6	M4	Z	-.041	-.041	0	%100
7	M6	X	.253	.253	0	%100
8	M6	Z	-.146	-.146	0	%100
9	M8	X	.07	.07	0	%100
10	M8	Z	-.041	-.041	0	%100
11	M9	X	.07	.07	0	%100
12	M9	Z	-.041	-.041	0	%100
13	M11	X	.562	.562	0	%100
14	M11	Z	-.324	-.324	0	%100
15	M14	X	.17	.17	0	%100
16	M14	Z	-.098	-.098	0	%100
17	M15	X	.17	.17	0	%100
18	M15	Z	-.098	-.098	0	%100
19	M16	X	.161	.161	0	%100
20	M16	Z	-.093	-.093	0	%100
21	M26	X	.208	.208	0	%100
22	M26	Z	-.12	-.12	0	%100
23	M27	X	.106	.106	0	%100
24	M27	Z	-.061	-.061	0	%100
25	M28	X	.106	.106	0	%100
26	M28	Z	-.061	-.061	0	%100
27	M29	X	.208	.208	0	%100
28	M29	Z	-.12	-.12	0	%100
29	M30	X	.059	.059	0	%100
30	M30	Z	-.034	-.034	0	%100
31	M31	X	.053	.053	0	%100
32	M31	Z	-.031	-.031	0	%100
33	M34	X	.106	.106	0	%100
34	M34	Z	-.061	-.061	0	%100
35	M35	X	.059	.059	0	%100
36	M35	Z	-.034	-.034	0	%100
37	MP1A	X	.403	.403	0	%100
38	MP1A	Z	-.233	-.233	0	%100
39	MP2A	X	.403	.403	0	%100
40	MP2A	Z	-.233	-.233	0	%100
41	MP3A	X	.403	.403	0	%100
42	MP3A	Z	-.233	-.233	0	%100
43	MP4A	X	.403	.403	0	%100
44	MP4A	Z	-.233	-.233	0	%100
45	M37	X	.137	.137	0	%100
46	M37	Z	-.079	-.079	0	%100
47	M38	X	.188	.188	0	%100
48	M38	Z	-.109	-.109	0	%100
49	M39	X	.168	.168	0	%100
50	M39	Z	-.097	-.097	0	%100
51	M40	X	.58	.58	0	%100
52	M40	Z	-.335	-.335	0	%100
53	M41	X	.168	.168	0	%100
54	M41	Z	-.097	-.097	0	%100
55	M42	X	.58	.58	0	%100
56	M42	Z	-.335	-.335	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.39	.39	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	M6	X	.39	.39	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	0	0	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	0	0	0	%100
13	M11	X	.649	.649	0	%100
14	M11	Z	0	0	0	%100
15	M14	X	.196	.196	0	%100
16	M14	Z	0	0	0	%100
17	M15	X	.196	.196	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	.196	.196	0	%100
20	M16	Z	0	0	0	%100
21	M26	X	.241	.241	0	%100
22	M26	Z	0	0	0	%100
23	M27	X	.123	.123	0	%100
24	M27	Z	0	0	0	%100
25	M28	X	.123	.123	0	%100
26	M28	Z	0	0	0	%100
27	M29	X	.241	.241	0	%100
28	M29	Z	0	0	0	%100
29	M30	X	.05	.05	0	%100
30	M30	Z	0	0	0	%100
31	M31	X	.041	.041	0	%100
32	M31	Z	0	0	0	%100
33	M34	X	.123	.123	0	%100
34	M34	Z	0	0	0	%100
35	M35	X	.05	.05	0	%100
36	M35	Z	0	0	0	%100
37	MP1A	X	.466	.466	0	%100
38	MP1A	Z	0	0	0	%100
39	MP2A	X	.466	.466	0	%100
40	MP2A	Z	0	0	0	%100
41	MP3A	X	.466	.466	0	%100
42	MP3A	Z	0	0	0	%100
43	MP4A	X	.466	.466	0	%100
44	MP4A	Z	0	0	0	%100
45	M37	X	.301	.301	0	%100
46	M37	Z	0	0	0	%100
47	M38	X	.057	.057	0	%100
48	M38	Z	0	0	0	%100
49	M39	X	.458	.458	0	%100
50	M39	Z	0	0	0	%100
51	M40	X	.321	.321	0	%100
52	M40	Z	0	0	0	%100
53	M41	X	.458	.458	0	%100
54	M41	Z	0	0	0	%100
55	M42	X	.321	.321	0	%100
56	M42	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,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.253	.253	0	%100
2	M1	Z	.146	.146	0	%100
3	M3	X	.07	.07	0	%100
4	M3	Z	.041	.041	0	%100
5	M4	X	.07	.07	0	%100
6	M4	Z	.041	.041	0	%100
7	M6	X	.253	.253	0	%100
8	M6	Z	.146	.146	0	%100
9	M8	X	.07	.07	0	%100
10	M8	Z	.041	.041	0	%100
11	M9	X	.07	.07	0	%100
12	M9	Z	.041	.041	0	%100
13	M11	X	.562	.562	0	%100
14	M11	Z	.324	.324	0	%100
15	M14	X	.17	.17	0	%100
16	M14	Z	.098	.098	0	%100
17	M15	X	.17	.17	0	%100
18	M15	Z	.098	.098	0	%100
19	M16	X	.161	.161	0	%100
20	M16	Z	.093	.093	0	%100
21	M26	X	.208	.208	0	%100
22	M26	Z	.12	.12	0	%100
23	M27	X	.106	.106	0	%100
24	M27	Z	.061	.061	0	%100
25	M28	X	.106	.106	0	%100
26	M28	Z	.061	.061	0	%100
27	M29	X	.208	.208	0	%100
28	M29	Z	.12	.12	0	%100
29	M30	X	.059	.059	0	%100
30	M30	Z	.034	.034	0	%100
31	M31	X	.053	.053	0	%100
32	M31	Z	.031	.031	0	%100
33	M34	X	.106	.106	0	%100
34	M34	Z	.061	.061	0	%100
35	M35	X	.059	.059	0	%100
36	M35	Z	.034	.034	0	%100
37	MP1A	X	.403	.403	0	%100
38	MP1A	Z	.233	.233	0	%100
39	MP2A	X	.403	.403	0	%100
40	MP2A	Z	.233	.233	0	%100
41	MP3A	X	.403	.403	0	%100
42	MP3A	Z	.233	.233	0	%100
43	MP4A	X	.403	.403	0	%100
44	MP4A	Z	.233	.233	0	%100
45	M37	X	.265	.265	0	%100
46	M37	Z	.153	.153	0	%100
47	M38	X	.002	.002	0	%100
48	M38	Z	.001	.001	0	%100
49	M39	X	.654	.654	0	%100
50	M39	Z	.378	.378	0	%100
51	M40	X	.102	.102	0	%100
52	M40	Z	.059	.059	0	%100
53	M41	X	.654	.654	0	%100
54	M41	Z	.378	.378	0	%100
55	M42	X	.102	.102	0	%100
56	M42	Z	.059	.059	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.049	.049	0	%100
2	M1	Z	.084	.084	0	%100
3	M3	X	.122	.122	0	%100
4	M3	Z	.211	.211	0	%100
5	M4	X	.122	.122	0	%100
6	M4	Z	.211	.211	0	%100
7	M6	X	.049	.049	0	%100
8	M6	Z	.084	.084	0	%100
9	M8	X	.122	.122	0	%100
10	M8	Z	.211	.211	0	%100
11	M9	X	.122	.122	0	%100
12	M9	Z	.211	.211	0	%100
13	M11	X	.324	.324	0	%100
14	M11	Z	.562	.562	0	%100
15	M14	X	.098	.098	0	%100
16	M14	Z	.17	.17	0	%100
17	M15	X	.098	.098	0	%100
18	M15	Z	.17	.17	0	%100
19	M16	X	.083	.083	0	%100
20	M16	Z	.144	.144	0	%100
21	M26	X	.12	.12	0	%100
22	M26	Z	.208	.208	0	%100
23	M27	X	.061	.061	0	%100
24	M27	Z	.106	.106	0	%100
25	M28	X	.061	.061	0	%100
26	M28	Z	.106	.106	0	%100
27	M29	X	.12	.12	0	%100
28	M29	Z	.208	.208	0	%100
29	M30	X	.052	.052	0	%100
30	M30	Z	.09	.09	0	%100
31	M31	X	.051	.051	0	%100
32	M31	Z	.089	.089	0	%100
33	M34	X	.061	.061	0	%100
34	M34	Z	.106	.106	0	%100
35	M35	X	.052	.052	0	%100
36	M35	Z	.09	.09	0	%100
37	MP1A	X	.233	.233	0	%100
38	MP1A	Z	.403	.403	0	%100
39	MP2A	X	.233	.233	0	%100
40	MP2A	Z	.403	.403	0	%100
41	MP3A	X	.233	.233	0	%100
42	MP3A	Z	.403	.403	0	%100
43	MP4A	X	.233	.233	0	%100
44	MP4A	Z	.403	.403	0	%100
45	M37	X	.084	.084	0	%100
46	M37	Z	.145	.145	0	%100
47	M38	X	.054	.054	0	%100
48	M38	Z	.094	.094	0	%100
49	M39	X	.394	.394	0	%100
50	M39	Z	.683	.683	0	%100
51	M40	X	.131	.131	0	%100
52	M40	Z	.228	.228	0	%100
53	M41	X	.394	.394	0	%100
54	M41	Z	.683	.683	0	%100
55	M42	X	.131	.131	0	%100
56	M42	Z	.228	.228	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	.326	.326	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	.326	.326	0	%100
7	M6	X	0	0	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	.326	.326	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	.326	.326	0	%100
13	M11	X	0	0	0	%100
14	M11	Z	.649	.649	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	.196	.196	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	.196	.196	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	.157	.157	0	%100
21	M26	X	0	0	0	%100
22	M26	Z	.241	.241	0	%100
23	M27	X	0	0	0	%100
24	M27	Z	.123	.123	0	%100
25	M28	X	0	0	0	%100
26	M28	Z	.123	.123	0	%100
27	M29	X	0	0	0	%100
28	M29	Z	.241	.241	0	%100
29	M30	X	0	0	0	%100
30	M30	Z	.123	.123	0	%100
31	M31	X	0	0	0	%100
32	M31	Z	.123	.123	0	%100
33	M34	X	0	0	0	%100
34	M34	Z	.123	.123	0	%100
35	M35	X	0	0	0	%100
36	M35	Z	.123	.123	0	%100
37	MP1A	X	0	0	0	%100
38	MP1A	Z	.466	.466	0	%100
39	MP2A	X	0	0	0	%100
40	MP2A	Z	.466	.466	0	%100
41	MP3A	X	0	0	0	%100
42	MP3A	Z	.466	.466	0	%100
43	MP4A	X	0	0	0	%100
44	MP4A	Z	.466	.466	0	%100
45	M37	X	0	0	0	%100
46	M37	Z	.024	.024	0	%100
47	M38	X	0	0	0	%100
48	M38	Z	.268	.268	0	%100
49	M39	X	0	0	0	%100
50	M39	Z	.524	.524	0	%100
51	M40	X	0	0	0	%100
52	M40	Z	.612	.612	0	%100
53	M41	X	0	0	0	%100
54	M41	Z	.524	.524	0	%100
55	M42	X	0	0	0	%100
56	M42	Z	.612	.612	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.049	-.049	0	%100
2	M1	Z	.084	.084	0	%100
3	M3	X	-.122	-.122	0	%100
4	M3	Z	.211	.211	0	%100
5	M4	X	-.122	-.122	0	%100
6	M4	Z	.211	.211	0	%100
7	M6	X	-.049	-.049	0	%100
8	M6	Z	.084	.084	0	%100
9	M8	X	-.122	-.122	0	%100
10	M8	Z	.211	.211	0	%100
11	M9	X	-.122	-.122	0	%100
12	M9	Z	.211	.211	0	%100
13	M11	X	-.324	-.324	0	%100
14	M11	Z	.562	.562	0	%100
15	M14	X	-.098	-.098	0	%100
16	M14	Z	.17	.17	0	%100
17	M15	X	-.098	-.098	0	%100
18	M15	Z	.17	.17	0	%100
19	M16	X	-.083	-.083	0	%100
20	M16	Z	.144	.144	0	%100
21	M26	X	-.12	-.12	0	%100
22	M26	Z	.208	.208	0	%100
23	M27	X	-.061	-.061	0	%100
24	M27	Z	.106	.106	0	%100
25	M28	X	-.061	-.061	0	%100
26	M28	Z	.106	.106	0	%100
27	M29	X	-.12	-.12	0	%100
28	M29	Z	.208	.208	0	%100
29	M30	X	-.052	-.052	0	%100
30	M30	Z	.09	.09	0	%100
31	M31	X	-.051	-.051	0	%100
32	M31	Z	.089	.089	0	%100
33	M34	X	-.061	-.061	0	%100
34	M34	Z	.106	.106	0	%100
35	M35	X	-.052	-.052	0	%100
36	M35	Z	.09	.09	0	%100
37	MP1A	X	-.233	-.233	0	%100
38	MP1A	Z	.403	.403	0	%100
39	MP2A	X	-.233	-.233	0	%100
40	MP2A	Z	.403	.403	0	%100
41	MP3A	X	-.233	-.233	0	%100
42	MP3A	Z	.403	.403	0	%100
43	MP4A	X	-.233	-.233	0	%100
44	MP4A	Z	.403	.403	0	%100
45	M37	X	-.01	-.01	0	%100
46	M37	Z	.017	.017	0	%100
47	M38	X	-.161	-.161	0	%100
48	M38	Z	.28	.28	0	%100
49	M39	X	-.114	-.114	0	%100
50	M39	Z	.197	.197	0	%100
51	M40	X	-.408	-.408	0	%100
52	M40	Z	.706	.706	0	%100
53	M41	X	-.114	-.114	0	%100
54	M41	Z	.197	.197	0	%100
55	M42	X	-.408	-.408	0	%100
56	M42	Z	.706	.706	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.253	-.253	0	%100
2	M1	Z	.146	.146	0	%100
3	M3	X	-.07	-.07	0	%100
4	M3	Z	.041	.041	0	%100
5	M4	X	-.07	-.07	0	%100
6	M4	Z	.041	.041	0	%100
7	M6	X	-.253	-.253	0	%100
8	M6	Z	.146	.146	0	%100
9	M8	X	-.07	-.07	0	%100
10	M8	Z	.041	.041	0	%100
11	M9	X	-.07	-.07	0	%100
12	M9	Z	.041	.041	0	%100
13	M11	X	-.562	-.562	0	%100
14	M11	Z	.324	.324	0	%100
15	M14	X	-.17	-.17	0	%100
16	M14	Z	.098	.098	0	%100
17	M15	X	-.17	-.17	0	%100
18	M15	Z	.098	.098	0	%100
19	M16	X	-.161	-.161	0	%100
20	M16	Z	.093	.093	0	%100
21	M26	X	-.208	-.208	0	%100
22	M26	Z	.12	.12	0	%100
23	M27	X	-.106	-.106	0	%100
24	M27	Z	.061	.061	0	%100
25	M28	X	-.106	-.106	0	%100
26	M28	Z	.061	.061	0	%100
27	M29	X	-.208	-.208	0	%100
28	M29	Z	.12	.12	0	%100
29	M30	X	-.059	-.059	0	%100
30	M30	Z	.034	.034	0	%100
31	M31	X	-.053	-.053	0	%100
32	M31	Z	.031	.031	0	%100
33	M34	X	-.106	-.106	0	%100
34	M34	Z	.061	.061	0	%100
35	M35	X	-.059	-.059	0	%100
36	M35	Z	.034	.034	0	%100
37	MP1A	X	-.403	-.403	0	%100
38	MP1A	Z	.233	.233	0	%100
39	MP2A	X	-.403	-.403	0	%100
40	MP2A	Z	.233	.233	0	%100
41	MP3A	X	-.403	-.403	0	%100
42	MP3A	Z	.233	.233	0	%100
43	MP4A	X	-.403	-.403	0	%100
44	MP4A	Z	.233	.233	0	%100
45	M37	X	-.137	-.137	0	%100
46	M37	Z	.079	.079	0	%100
47	M38	X	-.188	-.188	0	%100
48	M38	Z	.109	.109	0	%100
49	M39	X	-.168	-.168	0	%100
50	M39	Z	.097	.097	0	%100
51	M40	X	-.58	-.58	0	%100
52	M40	Z	.335	.335	0	%100
53	M41	X	-.168	-.168	0	%100
54	M41	Z	.097	.097	0	%100
55	M42	X	-.58	-.58	0	%100
56	M42	Z	.335	.335	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.39	-.39	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	M4	X	0	0	0	%100
6	M4	Z	0	0	0	%100
7	M6	X	-.39	-.39	0	%100
8	M6	Z	0	0	0	%100
9	M8	X	0	0	0	%100
10	M8	Z	0	0	0	%100
11	M9	X	0	0	0	%100
12	M9	Z	0	0	0	%100
13	M11	X	-.649	-.649	0	%100
14	M11	Z	0	0	0	%100
15	M14	X	-.196	-.196	0	%100
16	M14	Z	0	0	0	%100
17	M15	X	-.196	-.196	0	%100
18	M15	Z	0	0	0	%100
19	M16	X	-.196	-.196	0	%100
20	M16	Z	0	0	0	%100
21	M26	X	-.241	-.241	0	%100
22	M26	Z	0	0	0	%100
23	M27	X	-.123	-.123	0	%100
24	M27	Z	0	0	0	%100
25	M28	X	-.123	-.123	0	%100
26	M28	Z	0	0	0	%100
27	M29	X	-.241	-.241	0	%100
28	M29	Z	0	0	0	%100
29	M30	X	-.05	-.05	0	%100
30	M30	Z	0	0	0	%100
31	M31	X	-.041	-.041	0	%100
32	M31	Z	0	0	0	%100
33	M34	X	-.123	-.123	0	%100
34	M34	Z	0	0	0	%100
35	M35	X	-.05	-.05	0	%100
36	M35	Z	0	0	0	%100
37	MP1A	X	-.466	-.466	0	%100
38	MP1A	Z	0	0	0	%100
39	MP2A	X	-.466	-.466	0	%100
40	MP2A	Z	0	0	0	%100
41	MP3A	X	-.466	-.466	0	%100
42	MP3A	Z	0	0	0	%100
43	MP4A	X	-.466	-.466	0	%100
44	MP4A	Z	0	0	0	%100
45	M37	X	-.301	-.301	0	%100
46	M37	Z	0	0	0	%100
47	M38	X	-.057	-.057	0	%100
48	M38	Z	0	0	0	%100
49	M39	X	-.458	-.458	0	%100
50	M39	Z	0	0	0	%100
51	M40	X	-.321	-.321	0	%100
52	M40	Z	0	0	0	%100
53	M41	X	-.458	-.458	0	%100
54	M41	Z	0	0	0	%100
55	M42	X	-.321	-.321	0	%100
56	M42	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,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.253	-.253	0	%100
2	M1	Z	-.146	-.146	0	%100
3	M3	X	-.07	-.07	0	%100
4	M3	Z	-.041	-.041	0	%100
5	M4	X	-.07	-.07	0	%100
6	M4	Z	-.041	-.041	0	%100
7	M6	X	-.253	-.253	0	%100
8	M6	Z	-.146	-.146	0	%100
9	M8	X	-.07	-.07	0	%100
10	M8	Z	-.041	-.041	0	%100
11	M9	X	-.07	-.07	0	%100
12	M9	Z	-.041	-.041	0	%100
13	M11	X	-.562	-.562	0	%100
14	M11	Z	-.324	-.324	0	%100
15	M14	X	-.17	-.17	0	%100
16	M14	Z	-.098	-.098	0	%100
17	M15	X	-.17	-.17	0	%100
18	M15	Z	-.098	-.098	0	%100
19	M16	X	-.161	-.161	0	%100
20	M16	Z	-.093	-.093	0	%100
21	M26	X	-.208	-.208	0	%100
22	M26	Z	-.12	-.12	0	%100
23	M27	X	-.106	-.106	0	%100
24	M27	Z	-.061	-.061	0	%100
25	M28	X	-.106	-.106	0	%100
26	M28	Z	-.061	-.061	0	%100
27	M29	X	-.208	-.208	0	%100
28	M29	Z	-.12	-.12	0	%100
29	M30	X	-.059	-.059	0	%100
30	M30	Z	-.034	-.034	0	%100
31	M31	X	-.053	-.053	0	%100
32	M31	Z	-.031	-.031	0	%100
33	M34	X	-.106	-.106	0	%100
34	M34	Z	-.061	-.061	0	%100
35	M35	X	-.059	-.059	0	%100
36	M35	Z	-.034	-.034	0	%100
37	MP1A	X	-.403	-.403	0	%100
38	MP1A	Z	-.233	-.233	0	%100
39	MP2A	X	-.403	-.403	0	%100
40	MP2A	Z	-.233	-.233	0	%100
41	MP3A	X	-.403	-.403	0	%100
42	MP3A	Z	-.233	-.233	0	%100
43	MP4A	X	-.403	-.403	0	%100
44	MP4A	Z	-.233	-.233	0	%100
45	M37	X	-.265	-.265	0	%100
46	M37	Z	-.153	-.153	0	%100
47	M38	X	-.002	-.002	0	%100
48	M38	Z	-.001	-.001	0	%100
49	M39	X	-.654	-.654	0	%100
50	M39	Z	-.378	-.378	0	%100
51	M40	X	-.102	-.102	0	%100
52	M40	Z	-.059	-.059	0	%100
53	M41	X	-.654	-.654	0	%100
54	M41	Z	-.378	-.378	0	%100
55	M42	X	-.102	-.102	0	%100
56	M42	Z	-.059	-.059	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.049	-.049	0	%100
2	M1	Z	-.084	-.084	0	%100
3	M3	X	-.122	-.122	0	%100
4	M3	Z	-.211	-.211	0	%100
5	M4	X	-.122	-.122	0	%100
6	M4	Z	-.211	-.211	0	%100
7	M6	X	-.049	-.049	0	%100
8	M6	Z	-.084	-.084	0	%100
9	M8	X	-.122	-.122	0	%100
10	M8	Z	-.211	-.211	0	%100
11	M9	X	-.122	-.122	0	%100
12	M9	Z	-.211	-.211	0	%100
13	M11	X	-.324	-.324	0	%100
14	M11	Z	-.562	-.562	0	%100
15	M14	X	-.098	-.098	0	%100
16	M14	Z	-.17	-.17	0	%100
17	M15	X	-.098	-.098	0	%100
18	M15	Z	-.17	-.17	0	%100
19	M16	X	-.083	-.083	0	%100
20	M16	Z	-.144	-.144	0	%100
21	M26	X	-.12	-.12	0	%100
22	M26	Z	-.208	-.208	0	%100
23	M27	X	-.061	-.061	0	%100
24	M27	Z	-.106	-.106	0	%100
25	M28	X	-.061	-.061	0	%100
26	M28	Z	-.106	-.106	0	%100
27	M29	X	-.12	-.12	0	%100
28	M29	Z	-.208	-.208	0	%100
29	M30	X	-.052	-.052	0	%100
30	M30	Z	-.09	-.09	0	%100
31	M31	X	-.051	-.051	0	%100
32	M31	Z	-.089	-.089	0	%100
33	M34	X	-.061	-.061	0	%100
34	M34	Z	-.106	-.106	0	%100
35	M35	X	-.052	-.052	0	%100
36	M35	Z	-.09	-.09	0	%100
37	MP1A	X	-.233	-.233	0	%100
38	MP1A	Z	-.403	-.403	0	%100
39	MP2A	X	-.233	-.233	0	%100
40	MP2A	Z	-.403	-.403	0	%100
41	MP3A	X	-.233	-.233	0	%100
42	MP3A	Z	-.403	-.403	0	%100
43	MP4A	X	-.233	-.233	0	%100
44	MP4A	Z	-.403	-.403	0	%100
45	M37	X	-.084	-.084	0	%100
46	M37	Z	-.145	-.145	0	%100
47	M38	X	-.054	-.054	0	%100
48	M38	Z	-.094	-.094	0	%100
49	M39	X	-.394	-.394	0	%100
50	M39	Z	-.683	-.683	0	%100
51	M40	X	-.131	-.131	0	%100
52	M40	Z	-.228	-.228	0	%100
53	M41	X	-.394	-.394	0	%100
54	M41	Z	-.683	-.683	0	%100
55	M42	X	-.131	-.131	0	%100
56	M42	Z	-.228	-.228	0	%100

Member Area Loads

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

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc.....		LC	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn.....	Eqn
1	M1	PIPE_2.5	.247	0	35	.134	1.75		2	49081....	50715	3.596	3.596	1...H1-1b
2	M3	PIPE_1.2...	.472	7.5	36	.268	7.5		33	6442.6...	26365.5	1.032	1.032	3...H1-1b
3	M4	PIPE_1.2...	.432	0	2	.235	0		33	11754....	26365.5	1.032	1.032	3...H1-1b
4	M6	PIPE_2.5	.240	0	33	.134	.5		2	49081....	50715	3.596	3.596	1...H1-1b
5	M8	PIPE_1.2...	.441	2.969	8	.243	7.5		36	6442.6...	26365.5	1.032	1.032	2...H1-1b
6	M9	PIPE_1.2...	.442	3.839	2	.253	0		2	11754....	26365.5	1.032	1.032	3...H1-1b
7	M11	PIPE_4.0	.104	.383	14	.094	.383		14	85371....	93240	10.631	10.631	2...H1-1b
8	M14	SR_1	.073	0	14	.094	0		33	17534....	25434	.423	.423	1...H1-1b*
9	M15	SR_1	.077	0	14	.045	0		33	17534....	25434	.423	.423	1...H1-1b*
10	M16	SR_1	.072	1.398	14	.050	0		33	15977....	25434	.423	.423	1...H1-1b
11	M26	SR_1.25	.305	1.25	1	.098	1.25		7	30679....	38656....	.805	.805	1...H1-1b
12	M27	SR_0.625	.060	0	36	.120	0		33	3585.9...	9946.8	.097	.097	1...H1-1b*
13	M28	SR_0.625	.101	0	2	.094	0		33	3585.9...	9946.8	.097	.097	1...H1-1b*
14	M29	SR_1.25	.027	0	2	.068	0		8	30679....	38656....	.805	.805	1...H1-1b*
15	M30	SR_0.625	.136	1.953	24	.024	0		25	1469.6...	9946.8	.097	.097	1...H1-1b
16	M31	SR_0.625	.674	2.24	8	.040	4.301		2	1211.4...	9946.8	.097	.097	1...H1-1a
17	M34	SR_0.625	.159	2.5	1	.054	0		33	3585.9...	9946.8	.097	.097	1 H1-1b*
18	M35	SR_0.625	.574	1.912	14	.015	3.905		8	1469.6...	9946.8	.097	.097	1...H1-1a
19	MP1A	PIPE_2.0	.198	2.552	32	.099	2.771		8	17855....	32130	1.872	1.872	4...H1-1b
20	MP2A	PIPE_2.0	.251	2.479	7	.210	2.552		33	17855....	32130	1.872	1.872	2...H1-1b
21	MP3A	PIPE_2.0	.130	4.958	2	.175	2.552		9	17855....	32130	1.872	1.872	3...H1-1b
22	MP4A	PIPE_2.0	.099	4.958	50	.046	4.958		8	17855....	32130	1.872	1.872	4...H1-1b
23	M37	PIPE_1.25	.119	4.844	8	.004	4.844		23	10942....	19687.5	.801	.801	1...H1-1b*
24	M38	PIPE_1.25	.098	3.764	13	.006	7.529		20	5092.51	19687.5	.801	.801	1...H1-1b
25	M39	L2.5x2.5x4	.064	2.695	14	.042	5.28	y	33	15523....	38556	1.114	2.222	1...H2-1
26	M40	L2.5x2.5x4	.108	3.22	23	.036	6.309	z	33	10896....	38556	1.114	2.126	1...H2-1
27	M41	L2.5x2.5x4	.158	2.64	2	.031	5.28	y	33	15523....	38556	1.114	2.222	1...H2-1
28	M42	L2.5x2.5x4	.117	3.155	2	.026	0	z	36	10896....	38556	1.114	2.126	1...H2-1

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	N31	max	-48.516	1	666.686	17	72.977	11	.223	8	0	51	.385	8
2		min	-299.073	17	-71.425	11	-1538.147	17	-.235	2	0	1	-.406	2
3	N32	max	304.715	13	1607.86	14	1573.672	14	.225	33	0	51	.389	33
4		min	11.111	7	-254.481	8	-210.584	8	-.074	3	0	1	-.128	3
5	N60	max	351.294	2	23.668	20	1250.15	8	0	51	0	51	0	51
6		min	-360.018	8	5.839	26	-1265.261	2	0	1	0	1	0	1
7	N61	max	358.184	1	35.798	19	178.659	1	0	51	0	51	0	51
8		min	-360.464	7	8.964	12	-184.907	7	0	1	0	1	0	1
9	N61A	max	743.941	32	351.311	14	475.907	2	0	2	.006	33	.009	33
10		min	-437.763	2	-211.625	8	-347.007	8	0	8	-.004	3	-.005	3
11	N64	max	799.354	9	1254.697	8	1591.595	2	.003	2	.003	3	.006	33
12		min	-1027.395	3	-1142.848	2	-1681.524	8	-.003	8	-.005	33	-.004	3
13	Totals:	max	1002.269	10	2528.67	20	1525.826	1						
14		min	-1002.268	4	833.013	2	-1525.838	7						

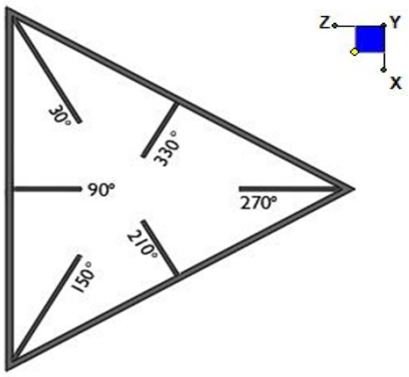
Client:	Verizon Wireless	Date:	9/28/2021
Site Name:	WEST HARTFORD CENTER CT		
Project No.	21777247A		
Title:	Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

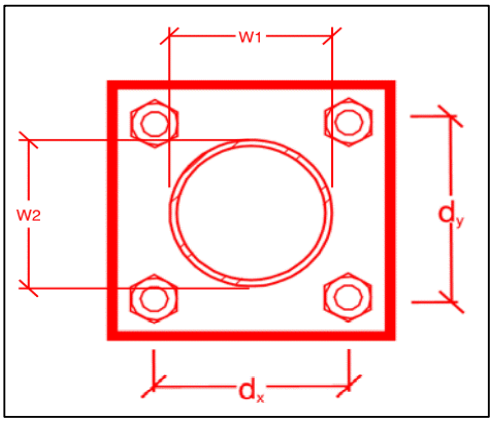
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N31	120
N32	120



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	5.5
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	4
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength (kips):	1.5
Required Shear Strength (kips):	3.0
Tensile Strength / bolt (kips):	6.4
Shear Strength / bolt (kips):	3.8
Tensile Capacity Overall:	**5.9%***
Shear Capacity Overall:	**19.7%**



**Note: Tension reduction not required if tension or shear capacity < 30%*

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

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

---

Purpose – to upload the proper documentation to the SMART Tool in order to allow the SMART Tool engineering vendor 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 modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- If installation of the modification 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 drawings" showing contractor's name, 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 post-modification passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo shall be time and date stamped.
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is 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 of the modifications.
  - Photos of the mount after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- *Photos taken at Mount Elevation*
  - Photos showing the safety climb wire rope above and below the mount prior to modification.
  - Photos showing the climbing facility and safety climb if present.
  - Photos showing each individual sector after installation of modifications. Each entire sector must 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.
- Photos of each installed modification per the modification drawings; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the distances (relative distance between collars) of the installed modifications from the appropriate reference locations shown in the modification drawings.
- Photos showing the installed modifications onto the tower (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, an elevation measurement shall be provided before the elevation change.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by the SMART Tool vendor.
  - If the materials are as specified on the drawings

    The contractor shall provide the packing list, or the materials certifications for the materials utilized to perform the mount modification
    Commscope, Metrosite, Perfect Vision, Sabre, and Site Pro have all agreed to support Verizon vendors with the necessary material certifications
  - If seeking permission to use an equivalent

    It is required that the SMART Tool engineering vendor approval of such is included in the contractor submission package. There may be an additional charge for approval if the equivalent submission doesn't meet specifications as prescribed in the drawings.

☐ All hardware has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified on the SMART Tool engineering vendor Mount Modification Drawings 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 as an "equivalent" and this approval is included as part of the contractor submission.

Antenna & equipment placement and Geometry Confirmation:

☐ 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.

Comments:

Certifying Individual:

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

Was the mount modification completed in conjunction with the equipment change / installation?

☐ Yes ☐ No

Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

Response:

Contractor certifies that the climbing facility / safety climb was not damaged during installation:

☐ Yes ☐ No

Comments:

Structure: 535840-VZW - WEST HARTFORD CENTER CT

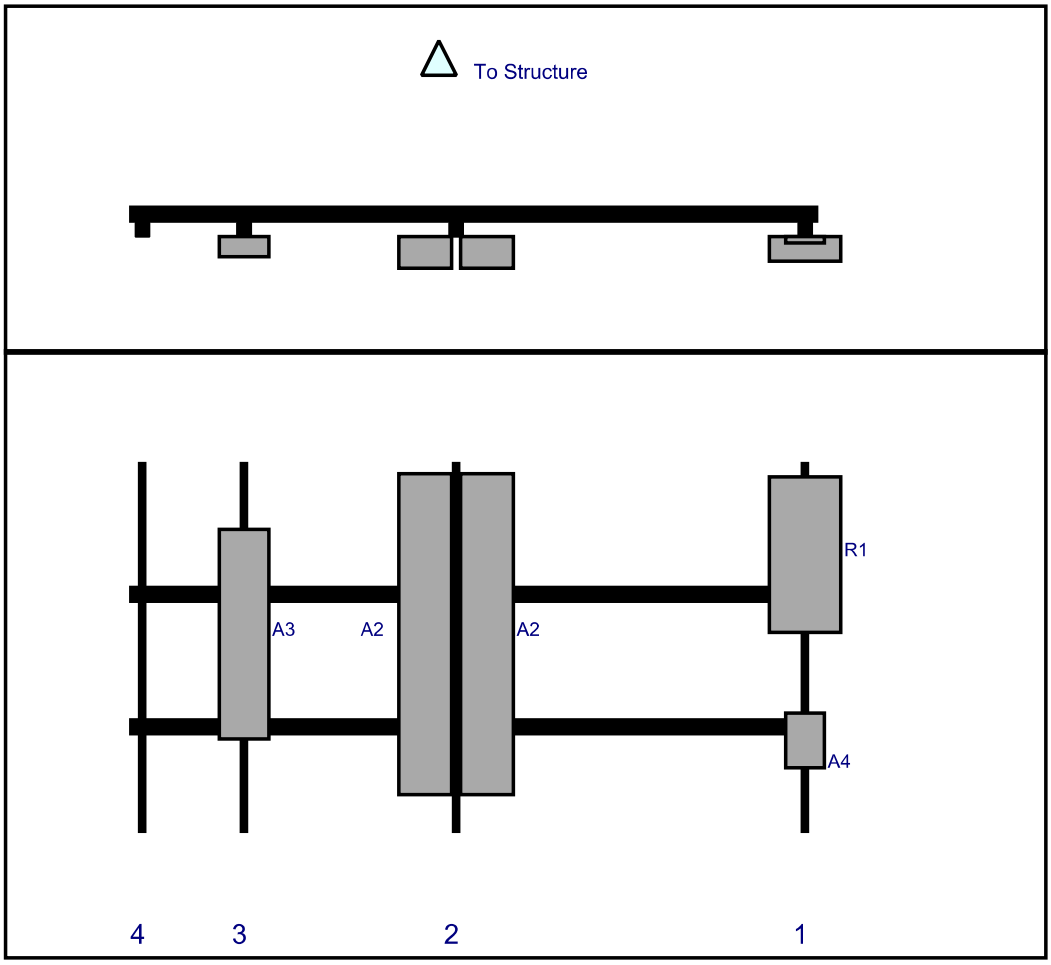
Sector: **A** 9/28/2021

Structure Type: Guyed 10106080

Mount Elev: 104.00 Page: 1

Plan View

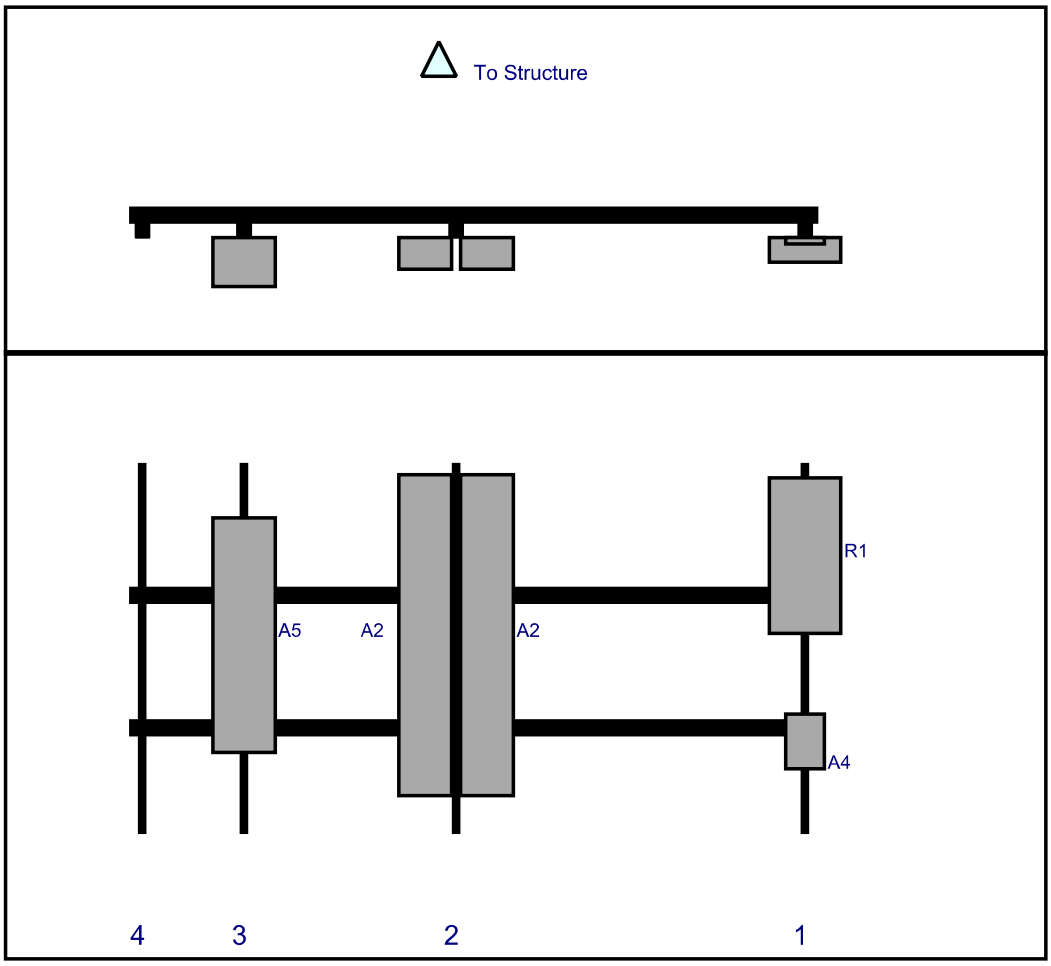
Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A4	XXDWMM-12.5-65-8T-CBRS	12.3	8.7	153	1	a	Front	63	0	Retained	
R1	MT6407-77A	35.1	16.1	153	1	a	Front	21	0	Added	
A2	SBNHH-1D65B	72.6	11.9	74	2	a	Front	39	7	Retained	04/05/2021
A2	SBNHH-1D65B	72.6	11.9	74	2	b	Front	39	-7	Retained	04/05/2021
A3	BXA-80063/4	47.4	11.2	26	3	a	Front	39	0	Retained	

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
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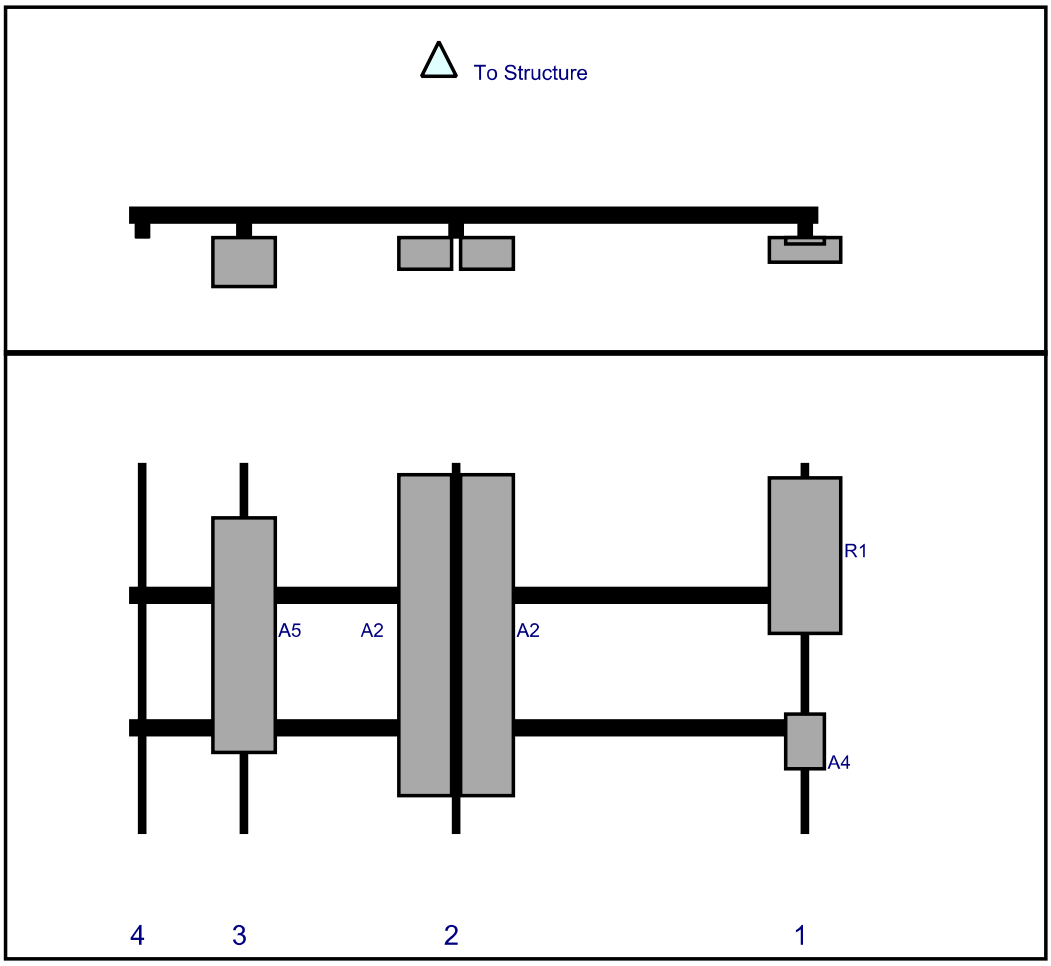
A2	SBNHH-1D65B	72.6	11.9	74	2	b	Front	39	-7	Retained	04/05/2021
A5	SLCP 2x6014	53	14	26	3	a	Front	39	0	Retained	

Plan View

Front View
Looking at Structure



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A2	SBNHH-1D65B	72.6	11.9	74	2	b	Front	39	-7	Retained	04/05/2021
A5	SLCP 2x6014	53	14	26	3	a	Front	39	0	Retained	

Maser Consulting Connecticut

Subject	TIA-222-H Usage	
Site Information	Site ID:	535840-VZW/WEST HARTFORD CENTER CT
	Site Name:	WEST HARTFORD CENTER CT
	Carrier Name:	Verizon Wireless
	Address:	14-20 Isham Road West Hartford, Connecticut 06107 Hartford County
	Latitude:	41.761556°
	Longitude:	-72.740375°
Structure Information	Tower Type:	125-Ft Guyed
	Mount Type:	13.00-Ft T-Frame

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H Standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Dejian Xu

Dejian Xu, PE
Technical Manager

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 13.00' T-FRAME

SITE NAME: WEST HARTFORD CENTER CT
SITE NUMBER: 535840

14-20 ISHAM ROAD
WEST HARTFORD, CT 06107
HARTFORD COUNTY

PROJECT INFORMATION

SITE INFORMATION

LATITUDE: 41.761556° N
LONGITUDE: 72.740375° W
JURISDICTION: HARTFORD COUNTY

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS
ADDRESS: 118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP: WESTBOROUGH, MA 01581
CONTACT: ANDREW CANDIELLO
EMAIL: ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY: MASER CONSULTING CONNECTICUT
CONTACT: PETER ALBANO
PHONE: 856-797-0412
E-MAIL: PETER.ALBANO@COLLIERSENGINEERING.COM

SHEET INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET
S-1	BILL OF MATERIALS
S-2	MODIFICATION NOTES
S-3	MODIFICATION NOTES
S-4	MODIFICATION DETAILS
S-5	MODIFICATION DETAILS
S-6	MOUNT PHOTOS
	SPECIFICATION SHEETS

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10073521
VZW LOCATION CODE (PSLC): 535840
FUZE ID: 16273383

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

REFERENCED DOCUMENTS

FAILING MOUNT ANALYSIS REPORT
SMART TOOL PROJECT #: 10044612
MASER CONSULTING PROJECT #: 21777247A
ANALYSIS DATE: 5/26/2021

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verizon

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ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE:	JOB NUMBER:
AS SHOWN	21777247A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
0	6/23/2021	ISSUED FOR CONSTRUCTION	MSG	DRH

Derek R. Hartzell
STATE OF CONNECTICUT LICENSED PROFESSIONAL ENGINEER
MASER CONSULTING CONNECTICUT
CT. C.O.A. #PEC.0001131
Digitally signed by Derek R. Hartzell
Date: 2021.06.25 12:30:41-04'00'

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
WEST HARTFORD CENTER CT
535840
14-20 ISHAM ROAD
WEST HARTFORD, CT 06107
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
6	VZWSMART	VZWSMART-SFK3	V-BRACING KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2

OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
3	SITE PRO 1	RS-REINF	RS UNIVERSAL PIPE MOUNT REINFORCEMENT KIT	OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING CONNECTICUT FOR APPROVAL OF SUBSTITUTION

NOTE: ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTE: WHEN SPECIFIED, VZWSMART KITS SHALL BE REQUIRED AND WILL BE VERIFIED DURING THE DESKTOP PMI

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-	-	-	-	-
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Derek R. Hartzell
CONNECTICUT PROFESSIONAL ENGINEER
LICENSE NUMBER: 32710
MASER CONSULTING CONNECTICUT
CT. C.O.A. #PEC.0001131
Digitally signed by Derek R. Hartzell
Date: 2021.06.25 12:31:50-04'00'

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SITE NAME:
WEST HARTFORD CENTER CT
535840
14-20 ISHAM ROAD
WEST HARTFORD, CT 06107
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: S-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

GENERAL NOTES

1. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
4. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
6. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
8. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
9. ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-322.
10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOFABRIC, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
11. CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
12. DO NOT SCALE DRAWINGS.
13. DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
14. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
15. THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

DESIGN LOADS

WIND LOADS

a. BASIC WIND SPEED (3 SECOND GUST), V = 117 MPH

b. EXPOSURE CATEGORY B

c. TOPOGRAPHIC CATEGORY 1

d. MEAN BASE ELEVATION (AMSL) = 102.16'

ICE LOADS

a. ICE WIND SPEED (3 SECOND GUST), V = 50 MPH

b. ICE THICKNESS = 1.50 IN

SEISMIC LOADS

a. SEISMIC DESIGN CATEGORY B

b. SHORT TERM MCER GROUND MOTION, S_S = .187

c. LONG TERM MCER GROUND MOTION, S_1 = .055

STRUCTURAL STEEL

1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO PETER.ALBANO@COLLIERSENGINEERING.COM
   b. PROVIDE MASER CONSULTING CONNECTICUT PROJECT # AND MASER CONSULTING CONNECTICUT PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

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STATE OF CONNECTICUT
DEREK R. HARTZELL
LICENSED PROFESSIONAL ENGINEER
32... MASER CONSULTING CONNECTICUT C.T. C.O.A. #PEC.0000131
Digitally signed by Derek R. Hartzell
Date: 2021.06.25 12:31:50-04'00'

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535840
14-20 ISHAM ROAD
WEST HARTFORD, CT 06107
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: MODIFICATION NOTES

SHEET NUMBER: S-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MODIFICATION INSPECTION NOTES

MI CHECKLIST

CONSTRUCTION/ INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
	PRE-CONSTRUCTION
X	MI CHECKLIST DRAWING
X	EOR APPROVED SHOP DRAWINGS
NA	FABRICATION INSPECTION
NA	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
NA	FABRICATOR NDE INSPECTION
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
	CONSTRUCTION
X	CONSTRUCTION INSPECTIONS
NA	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
X	ON SITE COLD GALVANIZING VERIFICATION
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
	POST-CONSTRUCTION
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	VZW PMI DOCUMENTS
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT REQUIRED FOR THE MI REPORT
NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY.

MI INSPECTOR

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

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO EOR.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

RECOMMENDATIONS

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

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

CORRECTION OF FAILING MI'S

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REMEDIATION PLAN:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

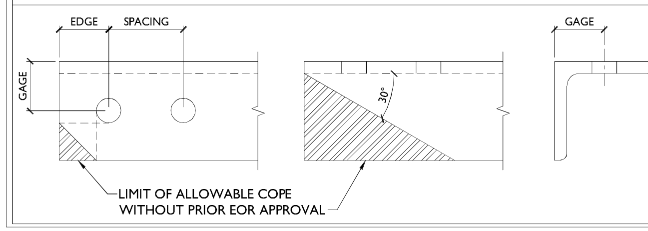
REQUIRED PHOTOS

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

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

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

ALLOWABLE COPING

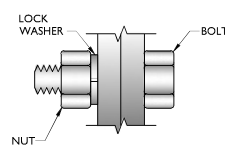


BOLT SCHEDULE (IN.)

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

WORKABLE GAGES (IN.)

LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

NOTES:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

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STATE OF CONNECTICUT DEREK R. HARTZELL LICENSED PROFESSIONAL ENGINEER 32... MASER CONSULTING CONNECTICUT CT. C.O.A. #PEC.0001131
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HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
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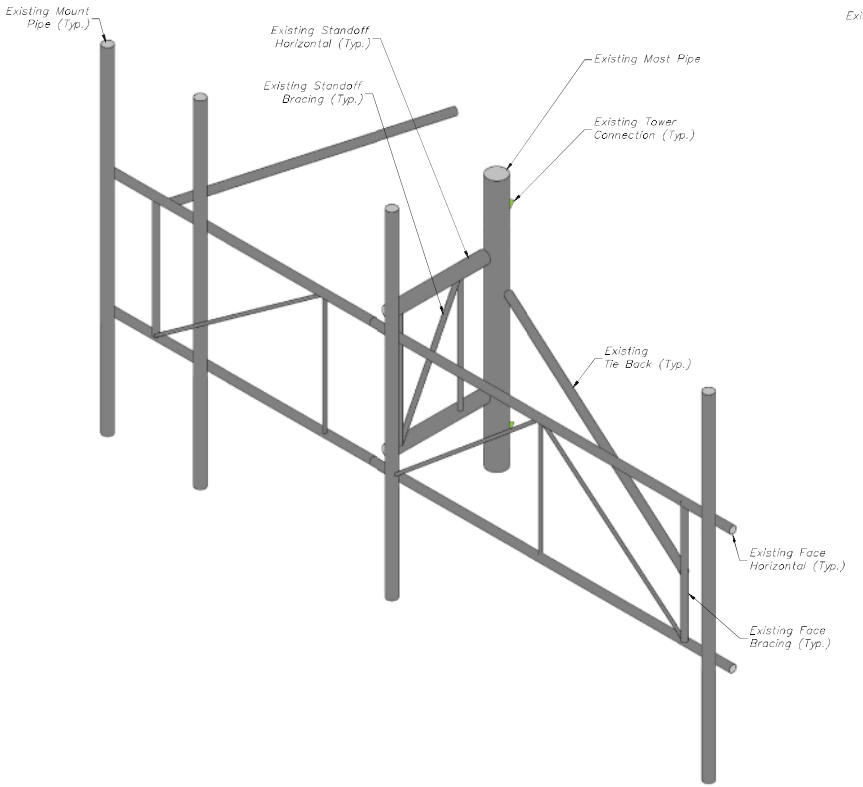
Phone: 856.797.0412
Fax: 856.722.1120

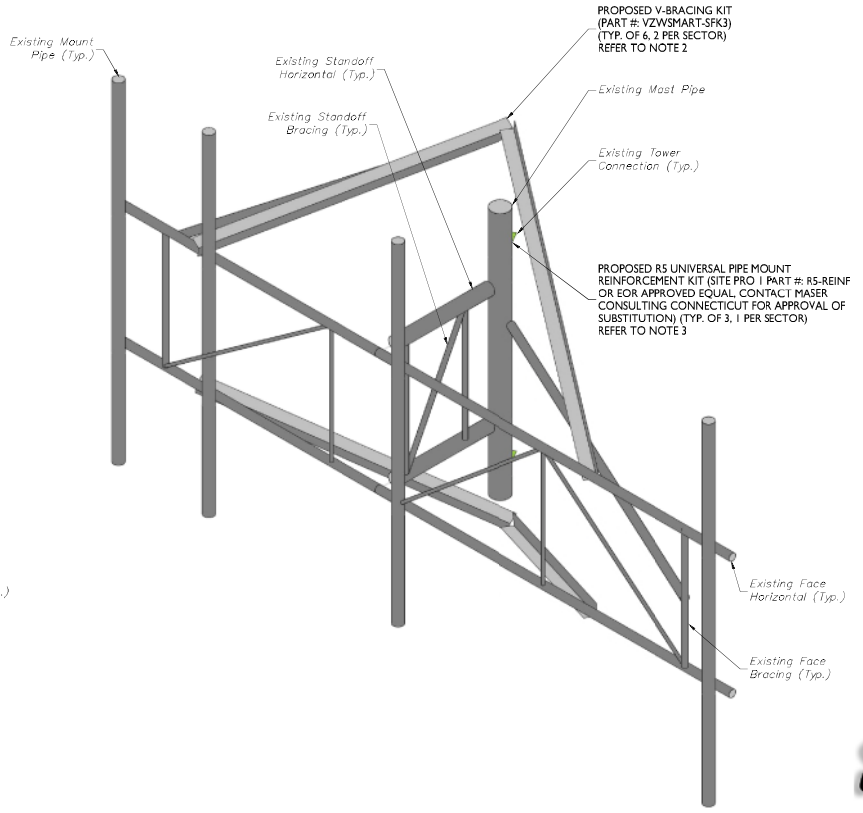
SHEET TITLE: MODIFICATION NOTES

SHEET NUMBER: S-3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 EXISTING T-FRAME ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.



2 PROPOSED T-FRAME ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY ROAMING NETWORKS INC. ON 4/5/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (104'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. CONTRACTOR TO REINFORCE TOWER CONNECTION WITH R5 UNIVERSAL PIPE MOUNT REINFORCEMENT KIT (SITE PRO 1 PART#: R5-REINF OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING CONNECTICUT FOR APPROVAL OF SUBSTITUTION).

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CONNECTICUT LICENSED PROFESSIONAL ENGINEER
MASER CONSULTING CONNECTICUT
CT C.O.A. #PEC.0031
Digitally signed by Derek R. Hartzell
Date: 2021.06.25 12:31:30-04'00'

SITE NAME:
WEST HARTFORD CENTER
CT
535840

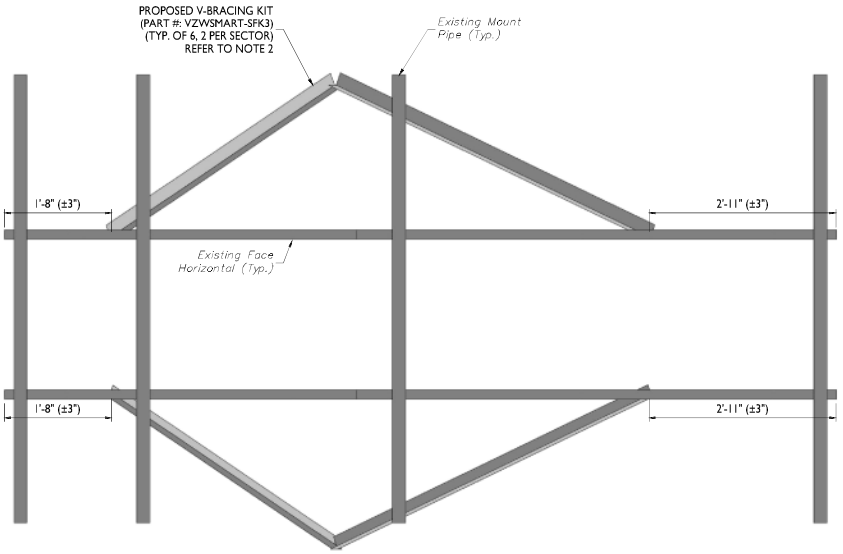
14-20 ISHAM ROAD
WEST HARTFORD, CT 06107
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
MODIFICATION DETAILS

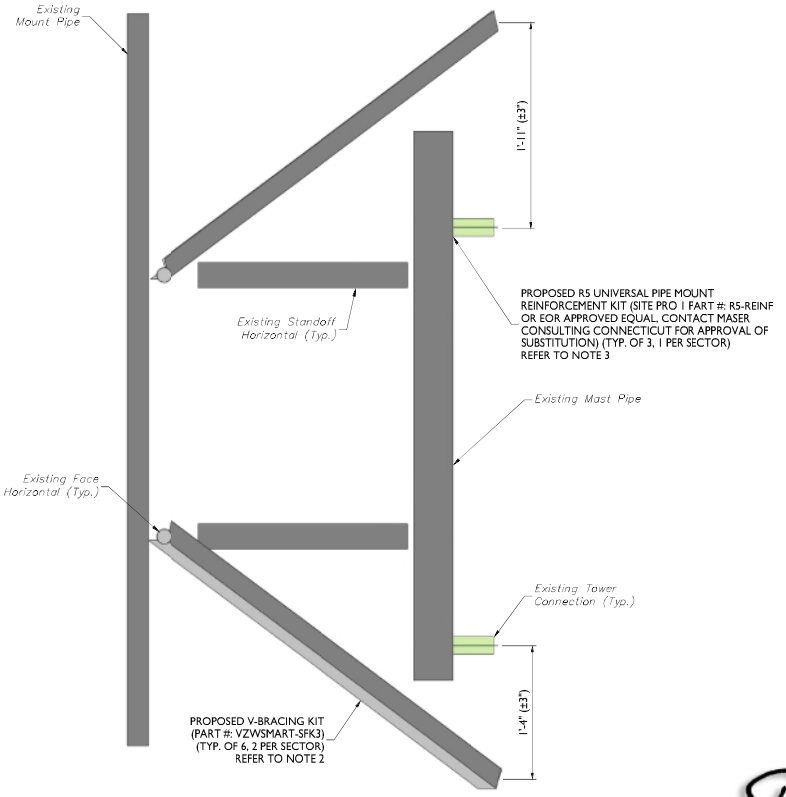
SHEET NUMBER:
S-4

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



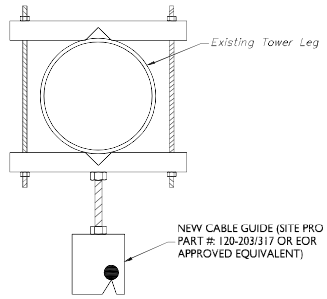
1 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.



3 PROPOSED CABLE GUIDE TOWER LEG ATTACHMENT - PLAN VIEW

SCALE : N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. CONTRACTOR TO REINFORCE TOWER CONNECTION WITH R5 UNIVERSAL PIPE MOUNT REINFORCEMENT KIT (SITE PRO 1 PART#: R5-REINF OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING CONNECTICUT FOR APPROVAL OF SUBSTITUTION).

MASER CONSULTING CONNECTICUT
KNOWN AS COLLIERS ENGINEERING & DESIGN IN 2021
Customer Loyalty through Client Satisfaction
www.maserconsulting.com
Office Locations:
NEW JERSEY, NEW YORK, PENNSYLVANIA, VIRGINIA, FLORIDA, NORTH CAROLINA, SOUTH CAROLINA, NEW MEXICO, MARYLAND, GEORGIA, TEXAS, TENNESSEE, COLORADO

verizon

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE.
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE:	JOB NUMBER:
AS SHOWN	21777247A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	6/23/2021	ISSUED FOR CONSTRUCTION	MSG	DRH

Derek R. Hartzell, P.E.
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
MASER CONSULTING CONNECTICUT
CT P.E.C.A. #PEC.0031

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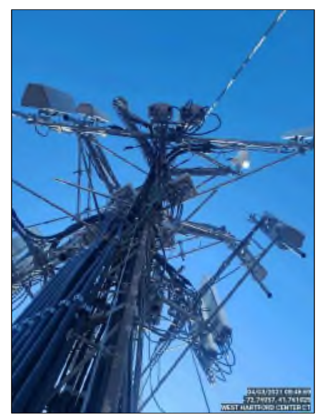
SHEET TITLE:
MODIFICATION DETAILS

SHEET NUMBER:
S-5

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3



MOUNT PHOTO 4

MASER CONSULTING
—CONNECTICUT—
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REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
0	6/23/2021	ISSUED FOR CONSTRUCTION	MSG	DRH

Digitally signed by Derek R. Hartzell
Date: 2021.06.25 12:31:51-04'00'

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

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CT
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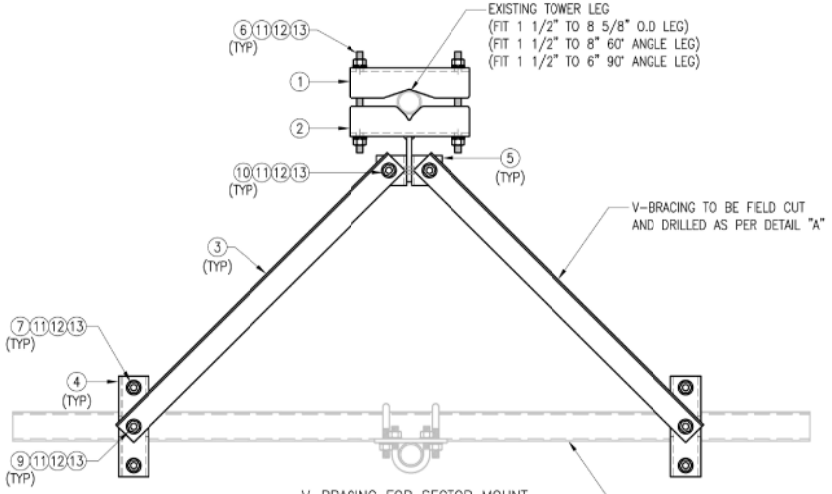
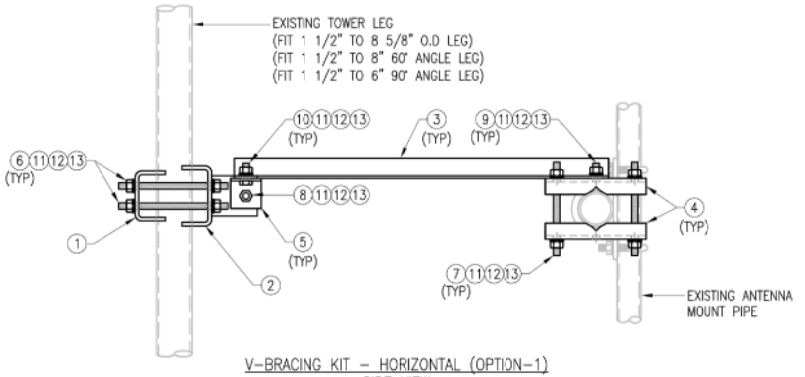
SHEET TITLE:
MOUNT PHOTOS

SHEET NUMBER:
S-6

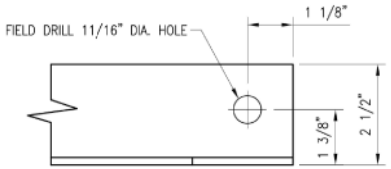
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



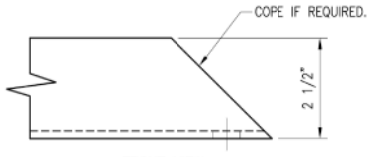
V-BRACING FOR SECTOR MOUNT
PLAN VIEW



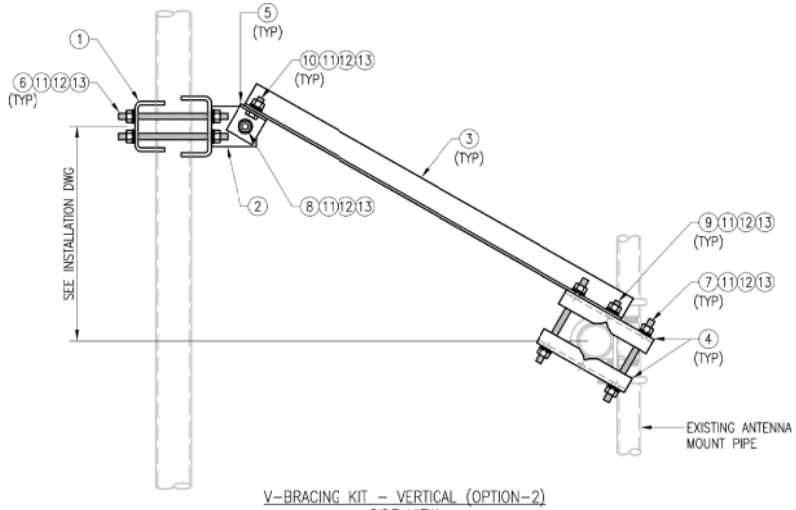
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT - VERTICAL (OPTION-2)
SIDE VIEW

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-SFK3 (V-BRACING KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-12	PL 3/8" X 9 5/8" X 1'-0" A36 BENT PLATE	VBSM-F1	12
2	1	BRKW-VBSM	WELDMENT BRACKET	VBSM-F3	16
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	2	---	BOLT 5/8" X 2" A325	---	--
10	2	---	BOLT 5/8" X 1 3/4" A325	---	--
11	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
12	21	LW-625	5/8" HDG LOCK WASHER	---	0
13	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	122

VzW SMART Tool© Vendor

verizon

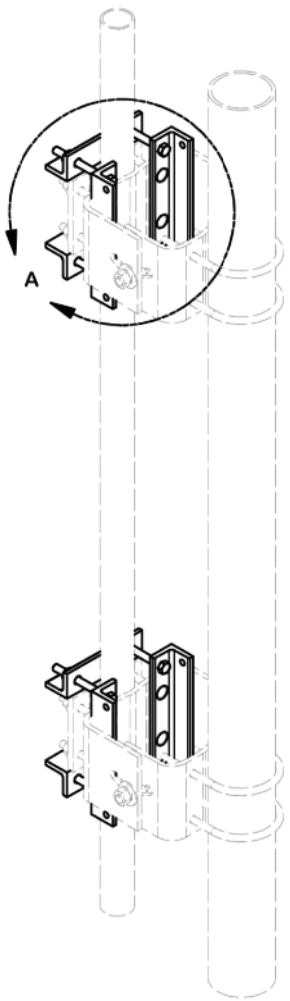
DRAWN BY: H.R. | CHECKED BY: HMA

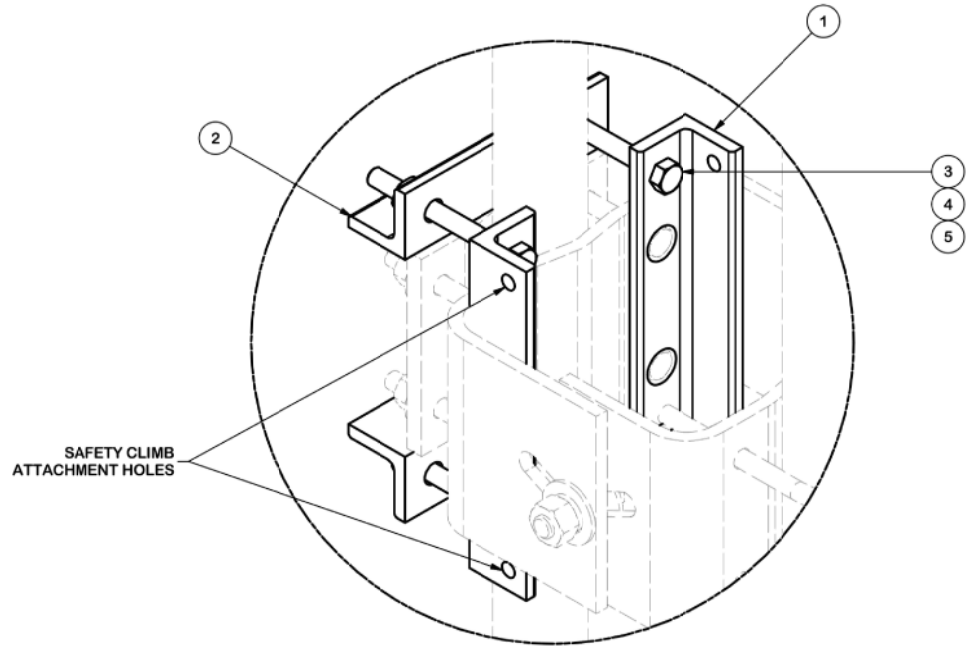
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R.	05/08/20

SHEET TITLE:
VZWSMART-SFK3
V-BRACING KIT

SHEET NUMBER: VZWSMART-SFK3 | REV #: 0

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	4	X-R5-FRA1	REINFORCEMENT ANGLE	10 in	3.84	15.36
2	4	X-R5-RFA2	REINFORCEMENT ANGLE	7 1/8 in	2.86	11.45
3	8	G1208	1/2" x 8" HDG HEX BOLT GR5 FULL THREAD	8 in	0.49	3.94
3	8	G1205	1/2" x 5" HDG HEX BOLT GR5 FULL THREAD	5 in	0.33	2.61
4	8	G12LW	1/2" HDG LOCKWASHER		0.01	0.11
5	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	34.04





DETAIL A

TOLERANCE NOTES

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

DESCRIPTION
R5 UNIVERSAL PIPE MOUNT
REINFORCEMENT KIT

SITE PRO 1
A valmont COMPANY

Engineering Support Team:
1-888-753-7446

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

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	JFS 4/22/2020	5/6/2020	R5-REINF

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 5/6/2020	R5-REINF

ATTACHMENT 5

Map Revised June 2020

AppGeo

CT State Plane (NAD 83)

Parcels
ROW
Private Road
Railroad (MDC)
Survey Tie Line

Building
Other Structure
Deck
Other
Pool

Driveway & Sidewalks
Road Edge

Hydrography (MDC)
Swamp
Water
Rivers/Streams

WEST HARTFORD

Town of West Hartford, CT
Tax Assessor Map

N

Scale:

0 50 100 200 300 Feet

1 inch = 100 feet

E8 F8 G8
E9 F9 G9
E10 F10 G10

Map No.

F9

20 ISHAM ROAD

Sales Print Map It

Location	20 ISHAM ROAD	**Mblu**	F9/ 2901/ 20/ /
Parcel ID	2901 2 20 0001	**Owner**	M + R GASSNER FAMILY II LLC
Assessment	$1,526,910	**Appraisal**	$2,181,300
Vision Id #	10289	**Building Count**	1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2020	$932,700	$1,248,600	$2,181,300

Assessment			
Valuation Year	Improvements	Land	Total
2020	$652,890	$874,020	$1,526,910

Owner of Record

Owner	M + R GASSNER FAMILY II LLC	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	PO BOX 354 MILLDALE, CT 06467	**Book & Page**	2394/0221
		Sale Date	12/31/1998
		Instrument	U

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

WEST HARTFORD CENTER

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103		3	neopost 11/02/2021 US POSTAGE $002.99⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Shari Cantor, Mayor Town of West Hartford 50 South Main Street West Hartford, CT 06107				
2.	Todd Dumais, Town Planner Town of West Hartford 50 South Main Street West Hartford, CT 06107				
3.	M&R Gassner Family LLC P.O. Box 354 West Hartford, CT 06467				
4.					
5.					
6.					