Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts
and New York

May 17, 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**
**Wethersfield Police Department**
**250 Silas Deane Highway, Wethersfield, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the Wethersfield Police Department ("WPD") at the above-referenced address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the ground, near the base of the tower. The tower was approved by the Town of Wethersfield ("Town"). Cellco representatives did reach out to municipal officials who indicated that they could not locate any local permits or approvals for the WPD tower. Cellco's shared use of the tower was approved by the Council in May of 2004 (a copy of Cellco's TS-VER-159-040614 approval letter was not available on the Council's website).

Cellco now intends to modify its facility by removing six (6) existing antennas and installing three (3) Samsung 64T64RMMU antennas on Cellco's existing antenna platform. A set of project plans showing Cellco's proposed facility modifications and new antennas specifications are included in Attachment 1.

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 Wethersfield'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 platform.

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 General Power Density table for the modified facility is included in Attachment 2. 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, tower foundation, tower base plate can support Cellco's proposed modifications. Modifications to the antenna mounting device will be required. Copies of the SA and MA are included in Attachment 3. Also included in Attachment 3 is a separate letter prepared by the consulting engineer responsible for the preparation of the SA and MA verifying that the antenna model described in the SA and MA, respectively, as a nL-Sub6 Antenna or VZS01 Antenna, is the Samsung 64T64R model antenna that will be installed on the tower.

A copy of the parcel map and Property owner information is included in Attachment 4. A Certificate of Mailing verifying that this filing was sent to municipal officials is included in Attachment 5.

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:
Gary A. Evans, Wethersfield Town Manger
Peter Gillespie, Wethersfield Director of Planning & Economic Development
Aleksey Tyurin

# ATTACHMENT 1

# HARTFORD 9 CT

## 250 SILAS DEANE HIGHWAY
## WETHERSFIELD, CT 06109

## FUZE PROJECT ID: 16232035
## PSLC: 468180


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

PROJECT TEAM

| | |
|---|---|
| PMI ACCESSED AT: | HTTPS://PMI.VZWSMART.COM |
| SMART TOOL VENDOR PROJECT NUMBER: | 10022557 |
| VZW LOCATION CODE (PSLC): | 468180 |
| FUZE NUMBER: | 16232035 |
| 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 | |

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. REMOVE (3) EXISTING PIPE MOUNTED ANTENNAS.
2. INSTALL (3) NEW ANTENNAS ON EXISTING ANTENNA PIPES.
3. REMOVE (1) EXISTING MAIN OVP.
4. INSTALL (2) NEW 6-OVP'S.
5. REMOVE (1) EXISTING HYBRID CABLE ROUTED FROM THE EQUIPMENT SHELTER TO THE TOWER OVP.
6. INSTALL (2) NEW 6X12 LOW INDUCTANCE HYBRID CABLES ROUTED FROM THE EQUIPMENT SHELTER TO THE TOWER OVPS.
7. INSTALL NEW JUMPER CABLES AS REQUIRED BY RFDS.

NOTE:

1. SCOPE OF WORK BASED ON ANTENNA REC FOR "HARTFORD_9_CT" DATED 11/05/2020. VERIFY SCOPE OF WORK WITH FINAL RFDS PRIOR TO CONSTRUCTION.

SCOPE OF WORK

| SHT. NO. | DESCRIPTION |
|---|---|
| T-1 | TITLE SHEET |
| GN-1 | GENERAL NOTES |
| C-1 | PARTIAL SITE PLAN |
| C-2 | WEST ELEVATION |
| C-3 | ANTENNA PLANS |
| C-4 | CONSTRUCTION DETAILS |
| C-5 | SMART TOOL SECTOR PLANS & ELEVATION DETAILS |

SHEET INDEX

CELLCO PARTNERSHIP
d/b/a verizon WIRELESS

99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

**HARTFORD 9 CT**
**ANTMO**

CONSTRUCTION DRAWINGS

| | | |
|---|---|---|
| A | 01/05/21 | FOR COMMENT |


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


DRAWN BY: JG
REVIEWED BY: CDH
CHECKED BY: BBR
PROJECT NUMBER: 50121487
JOB NUMBER: 50121823

SITE ADDRESS:

250 SILAS DEANE HIGHWAY
WETHERSFIELD, CT 06109

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 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)
   2017 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 EQUIPMENT5 AND/OR HARDWARE ON SITE.


CELLCO PARTNERSHIP
d/b/a verizon WIRELESS
99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108


**HARTFORD 9 CT**
**ANTMO**

| CONSTRUCTION DRAWINGS | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| A | 01/05/21 | FOR COMMENT |

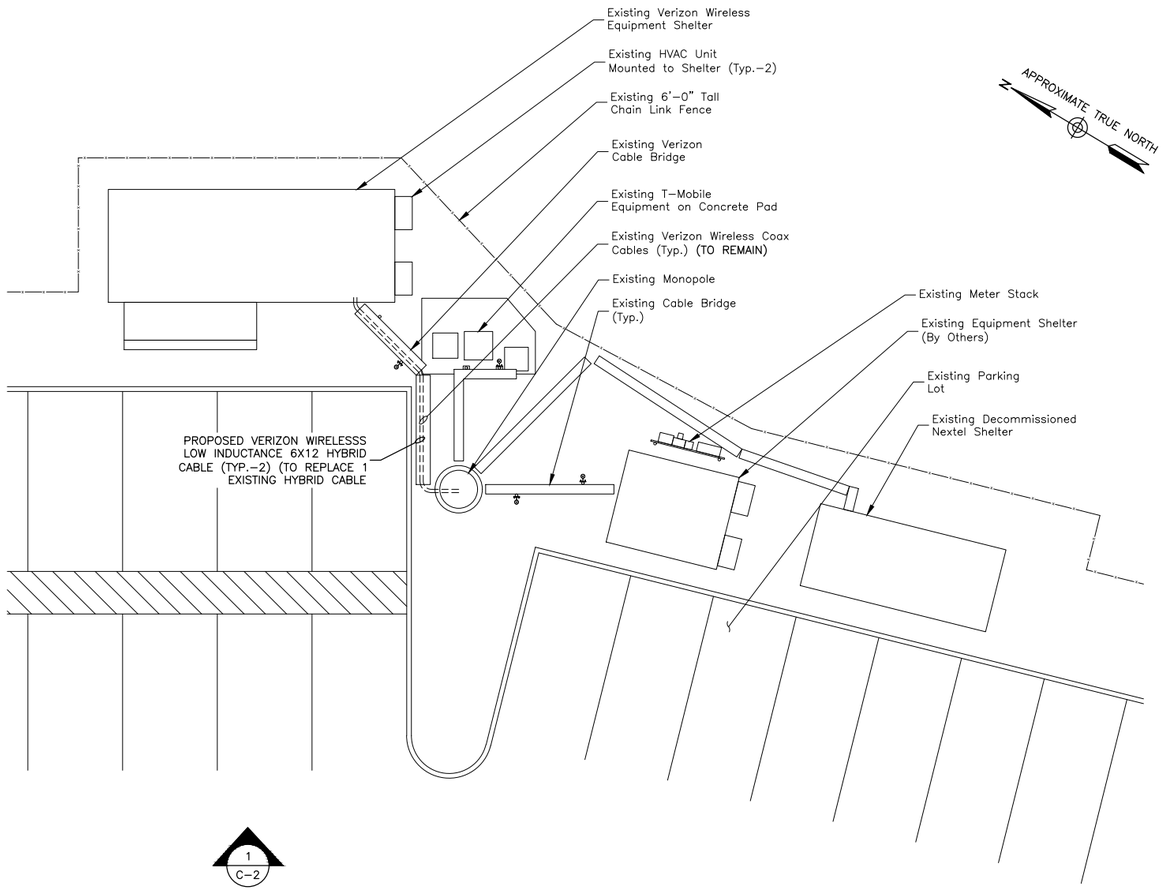

Dewberry®
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.695.3400
FAX: 617.695.3310


DRAWN BY: JG
REVIEWED BY: CDH
CHECKED BY: BBR
PROJECT NUMBER: 50121487
JOB NUMBER: 50121823

SITE ADDRESS:
250 SILAS DEANE HIGHWAY
WETHERSFIELD, CT 06109

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1




1
C–2

**PARTIAL SITE PLAN** 1

SCALE: 1/16"=1' FOR 11"x17"
1/8"=1' FOR 22"x34"

0' 4' 8' 16'

| HYBRID CABLE SCHEDULE* | | |
|---|---|---|
| HYBRID CABLE LENGTH | CABLE SIZE | CABLE COUNT |
| 130'± | 6x12 | 2 |
| *CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE BASE EQUIPMENT OVP TO SECTOR OVP. | | |
| CALCULATION BY: CDH | | |

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. SITE PLAN & ELEVATION BASED ON A SITE VISIT BY DEWBERRY ENGINEERS INC. ON 10/20/20.
4. EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA MAPPING.
5. MOUNT ALL ANTENNAS, COAX, RRH, OVP BOXES, ETC. IN ACCORDANCE WITH TOWER STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 12–30–20, MOUNT ANALYSIS REPORT BY MASER CONSULTING, P.A. DATED 12–16–20 & MOUNT MODIFICATION DRAWINGS BY MASER CONSULTING, P.A. DATED 12–16–20.
6. REUSE EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY AND REPLACE AS NEEDED PER STRUCTURAL ANALYSIS.
7. 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 PERTAINS. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.


CELLCO PARTNERSHIP
d/b/a verizon WIRELESS

99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108


**HARTFORD 9 CT**
**ANTMO**

| CONSTRUCTION DRAWINGS | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| A | 01/05/21 | FOR COMMENT |


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


| | |
|---|---|
| DRAWN BY: | JG |
| REVIEWED BY: | CDH |
| CHECKED BY: | BBR |
| PROJECT NUMBER: | 50121487 |
| JOB NUMBER: | 50121823 |

SITE ADDRESS:

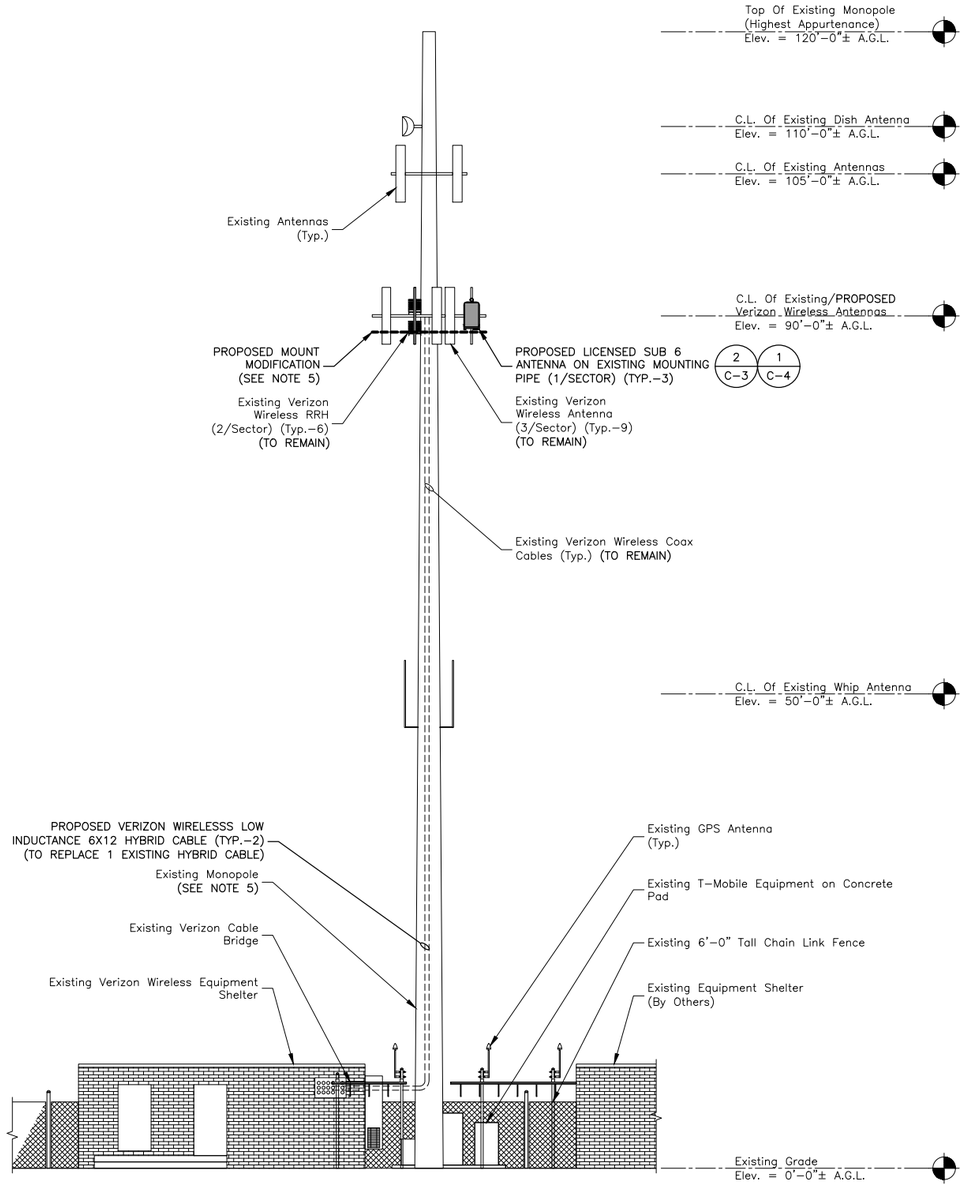
250 SILAS DEANE HIGHWAY
WETHERSFIELD, CT 06109

SHEET TITLE

KEY MAP &
PARTIAL SITE PLAN

SHEET NUMBER

C–1




## WEST ELEVATION

1

SCALE: 1/16"=1' FOR 11"x17"
1/8"=1' FOR 22"x34"

0' 4' 8' 16'

NOTES:

1. ELEVATION SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. SITE PLAN & ELEVATION BASED ON A SITE VISIT BY DEWBERRY ENGINEERS INC. ON 10-20-20.
4. EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA MAPPING.
5. MOUNT ALL ANTENNAS, COAX, RRH, OVP BOXES, ETC. IN ACCORDANCE WITH TOWER STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 12-30-20, MOUNT ANALYSIS REPORT BY MASER CONSULTING, P.A. DATED 12-16-20 & MOUNT MODIFICATION DRAWINGS BY MASER CONSULTING, P.A. DATED 12-16-20.
6. REUSE EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY AND REPLACE AS NEEDED PER STRUCTURAL ANALYSIS.
7. 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 PERTAINS. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

CELLCO PARTNERSHIP
d/b/a verizon WIRELESS

99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

**HARTFORD 9 CT**
**ANTMO**

| CONSTRUCTION DRAWINGS | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| A | 01/05/21 | FOR COMMENT |

Dewberry®

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

DRAWN BY: JG

REVIEWED BY: CDH

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50121823

SITE ADDRESS:

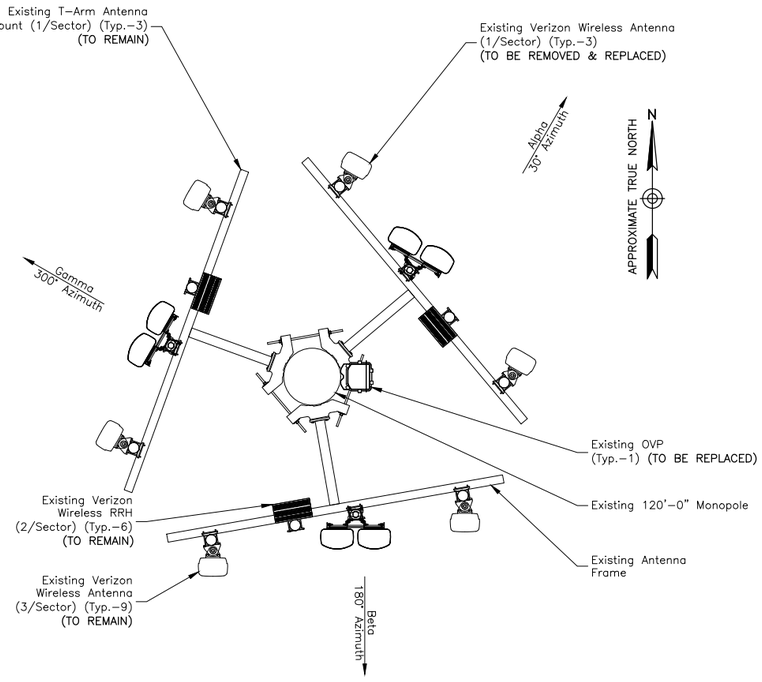
250 SILAS DEANE HIGHWAY
WETHERSFIELD, CT 06109

SHEET TITLE

WEST ELEVATION

SHEET NUMBER

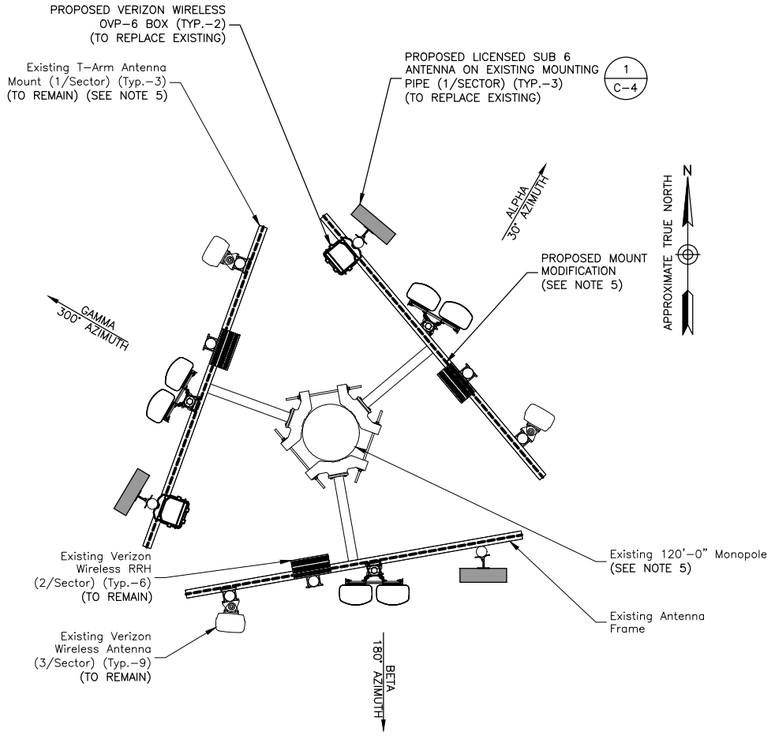
C-2




## EXISTING ANTENNA PLAN 1

SCALE: 3/16"=1' FOR 11"x17"
3/8"=1' FOR 22"x34"

0' 2' 4' 6'




## PROPOSED ANTENNA PLAN 2

SCALE: 3/16"=1' FOR 11"x17"
3/8"=1' FOR 22"x34"

0' 2' 4' 6'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
3. SITE PLAN & ELEVATION BASED ON A SITE VISIT BY DEWBERRY ENGINEERS INC. ON 10-20-20.
4. EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA MAPPING.
5. MOUNT ALL ANTENNAS, COAX, RRH, OVP BOXES, ETC. IN ACCORDANCE WITH TOWER STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 12-30-20, MOUNT ANALYSIS REPORT BY MASER CONSULTING, P.A. DATED 12-16-20 & MOUNT MODIFICATION DRAWINGS BY MASER CONSULTING, P.A. DATED 12-16-20.
6. REUSE EXISTING ANTENNA MOUNTS AND COAX. INSPECT FOR DAMAGE OR DECAY AND REPLACE AS NEEDED PER STRUCTURAL ANALYSIS.
7. 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 PERTAINS. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

CELLCO PARTNERSHIP
d/b/a verizon WIRELESS

99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108

**HARTFORD 9 CT**
**ANTMO**

| CONSTRUCTION DRAWINGS | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| A | 01/05/21 | FOR COMMENT |

Dewberry®

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

| | |
|---|---|
| DRAWN BY: | JG |
| REVIEWED BY: | CDH |
| CHECKED BY: | BBR |
| PROJECT NUMBER: | 50121487 |
| JOB NUMBER: | 50121823 |

SITE ADDRESS:

250 SILAS DEANE HIGHWAY
WETHERSFIELD, CT 06109

SHEET TITLE

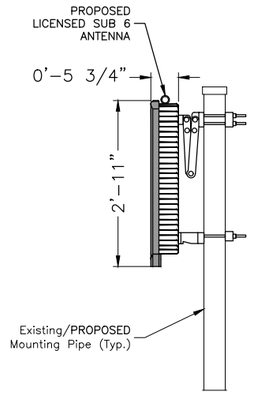
ANTENNA PLANS

SHEET NUMBER

C-3

## GENERAL NOTES:

1. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR PRIOR TO ALL FABRICATION WITH ALL DISCREPANCIES REPORTED IMMEDIATELY TO THE ENGINEER.
2. DO NOT CHANGE SIZE NOR SPACING OF STRUCTURAL ELEMENTS.
3. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
4. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
6. DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
7. 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.
8. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE AND COORDINATE THEIR WORK WITH THE WORK OF OTHERS.
9. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.
10. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
11. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
12. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
13. TURN OVER ALL SALVAGEABLE BUILDING MATERIAL TO BUILDING MANAGER.
14. ALL DISRUPTIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.
15. ALL ROOF PENETRATIONS SHALL BE RESTORED TO MAINTAIN ALL ROOF WARRANTIES AND ENSURE A PERMANENT WATERPROOF SEAL.
16. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START, MORE SPECIFICALLY BEFORE; SEALING ANY FLOOR, WALL OR ROOF PENETRATION, FINAL UTILITY CONNECTIONS, POURING CONCRETE, BACKFILLING UTILITY TRENCHES AND STRUCTURAL POSTS OR MOUNTING CONNECTIONS, FOR ENGINEERING REVIEW AND INSPECTION.

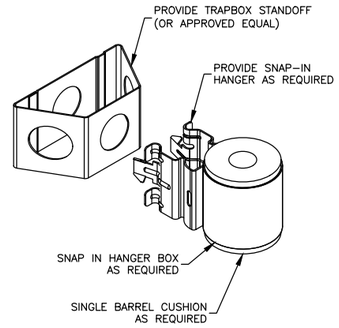



| | |
|---|---|
| MANUFACTURER: | TO BE DETERMINED |
| MODEL: | LICENSED SUB 6 |
| DIMENSIONS: | 35.1"H X 19.7"W X 5.8"D (NOT TO EXCEED) |
| WEIGHT: | 96.6 LBS (NOT TO EXCEED) |

### PIPE MOUNTED ANTENNA DETAIL 1

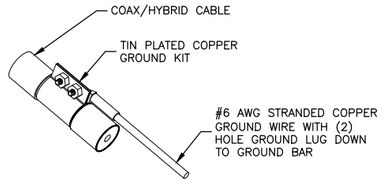
SCALE: 3/8"=1' FOR 11"x17"
3/4"=1' FOR 22"x34"

0' 1' 2' 3'




### JUMPER MOUNT 2

SCALE: N.T.S.

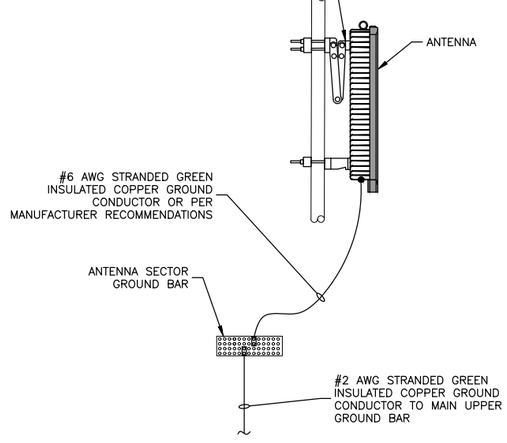



NOTES:

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.




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


CELLCO PARTNERSHIP
d/b/a verizon WIRELESS

99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108


**HARTFORD 9 CT**
**ANTMO**

| CONSTRUCTION DRAWINGS | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| A | 01/05/21 | FOR COMMENT |


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


| | |
|---|---|
| DRAWN BY: | JG |
| REVIEWED BY: | CDH |
| CHECKED BY: | BBR |
| PROJECT NUMBER: | 50121487 |
| JOB NUMBER: | 50121823 |

SITE ADDRESS:

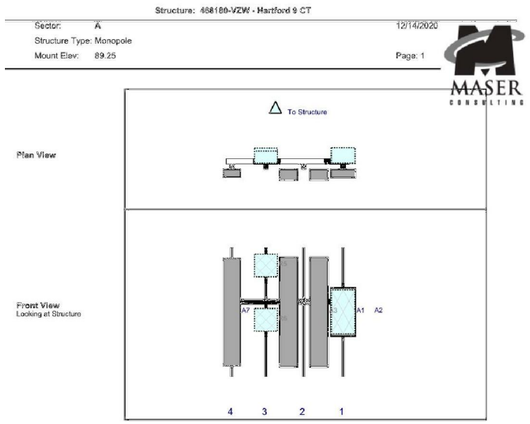
250 SILAS DEANE HIGHWAY
WETHERSFIELD, CT 06109

SHEET TITLE

CONSTRUCTION DETAILS

SHEET NUMBER

C-4

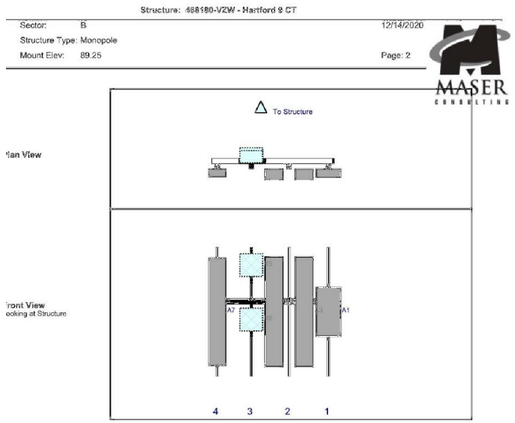



| Ref# | Model | Height (in) | Width (in) | H Dist Frm L. | Pipe # | Pipe Pos V | Ant Pos | C. Ant Frm T. | Ant H Off | Status | Validation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | Licensed Sub 6 Antenna | 32.1 | 16.1 | 77.5 | 1 | a | Front | 42.84 | 0 | Added | |
| A2 | DB-T1-6Z-12AB-0Z | 28.9 | 15.7 | 77.5 | 1 | a | Behind | 42.72 | 0 | Added | |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | a | Front | 42.84 | 10 | Retained | 10/26/2020 |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | b | Front | 42.84 | -10 | Retained | 10/26/2020 |
| R5 | B2/B66A RRH-BR049 | 15 | 15 | 26.5 | 3 | a | Behind | 12 | 0 | Retained | 10/26/2020 |
| R6 | B5/B13 RRH-BR04C | 15 | 15 | 26.5 | 3 | a | Behind | 48 | 0 | Retained | 10/26/2020 |
| A7 | BXA-70063-6CF-EDIN-2 | 71 | 11.2 | 4 | 4 | a | Front | 42.84 | 0 | Retained | 10/26/2020 |

## ALPHA SECTOR

SCALE: N.T.S.

1

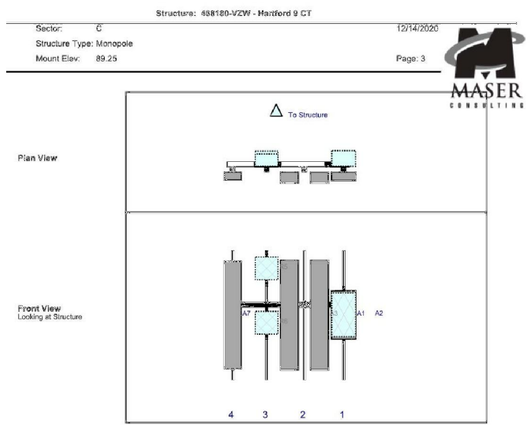



| ff | Model | Height (in) | Width (in) | H Dist Frm L. | Pipe # | Pipe Pos V | Ant Pos | C. Ant Frm T. | Ant H Off | Status | Validation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Licensed Sub 6 Antenna | 32.1 | 16.1 | 77.5 | 1 | a | Front | 42.84 | 0 | Added | |
| | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | a | Front | 42.84 | 10 | Retained | 10/26/2020 |
| | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | b | Front | 42.84 | -10 | Retained | 10/26/2020 |
| | B2/B66A RRH-BR049 | 15 | 15 | 26.5 | 3 | a | Behind | 12 | 0 | Retained | 10/26/2020 |
| | B5/B13 RRH-BR04C | 15 | 15 | 26.5 | 3 | a | Behind | 48 | 0 | Retained | 10/26/2020 |
| | BXA-70063-6CF-EDIN-2 | 71 | 11.2 | 4 | 4 | a | Front | 42.84 | 0 | Retained | 10/26/2020 |

## BETA SECTOR

SCALE: N.T.S.

2




| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | Licensed Sub 6 Antenna | 32.1 | 16.1 | 77.5 | 1 | a | Front | 42.84 | 0 | Added | |
| A2 | DB-T1-6Z-12AB-0Z | 28.9 | 15.7 | 77.5 | 1 | a | Behind | 42.72 | 0 | Added | |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | a | Front | 42.84 | 10 | Retained | 10/26/2020 |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | b | Front | 42.84 | -10 | Retained | 10/26/2020 |
| R5 | B2/B66A RRH-BR049 | 15 | 15 | 26.5 | 3 | a | Behind | 12 | 0 | Retained | 10/26/2020 |
| R6 | B5/B13 RRH-BR04C | 15 | 15 | 26.5 | 3 | a | Behind | 48 | 0 | Retained | 10/26/2020 |
| A7 | BXA-70063-6CF-EDIN-2 | 71 | 11.2 | 4 | 4 | a | Front | 42.84 | 0 | Retained | 10/26/2020 |

## GAMMA SECTOR

SCALE: N.T.S.

3

NOTE:

1. SECTOR PLANS AND ELEVATIONS TAKEN FROM MOUNT ANALYSIS: SMART TOOL# 10022557, MASER PROJECT # 20777293A, FUZE # 16232035 BY MASER CONSULTING P.A. DATED 12/16/2020.


CELLCO PARTNERSHIP
d/b/a verizon WIRELESS

99 EAST RIVER DRIVE
EAST HARTFORD, CT 06108


**HARTFORD 9 CT**
**ANTMO**

| CONSTRUCTION DRAWINGS | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| A | 01/05/21 | FOR COMMENT |


Dewberry®

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


DRAWN BY: JG

REVIEWED BY: CDH

CHECKED BY: BBR

PROJECT NUMBER: 50121487

JOB NUMBER: 50121823

SITE ADDRESS:

250 SILAS DEANE HIGHWAY
WETHERSFIELD, CT 06109

SHEET TITLE

SMART TOOL SECTOR PLANS & ELEVATION DETAILS

SHEET NUMBER

C-5

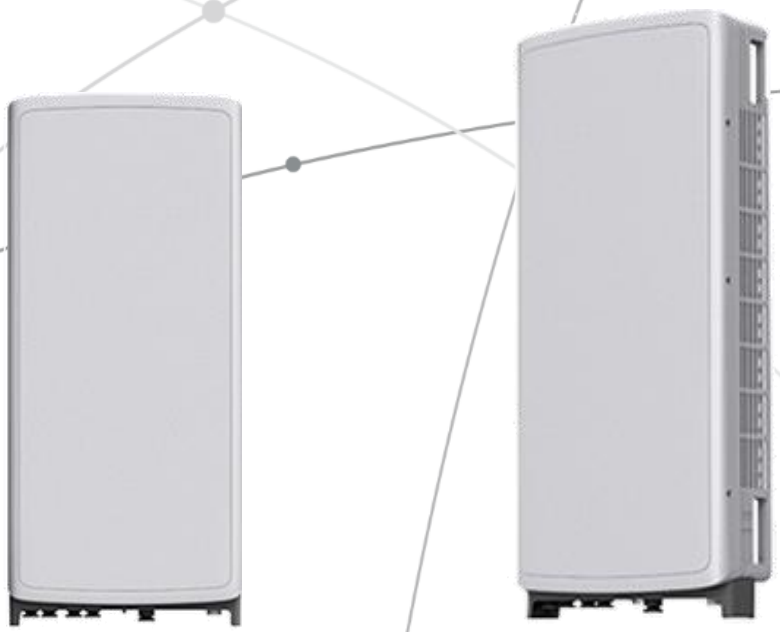
SAMSUNG

# 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

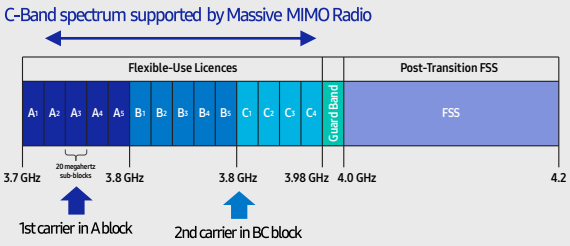


# Points of Differentiation

## Wide Bandwidth

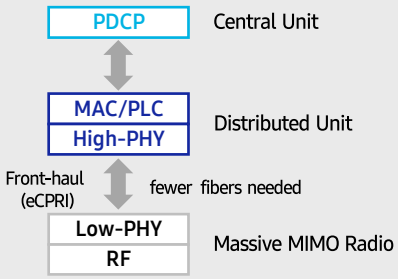
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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.

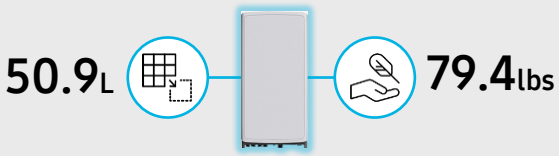
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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 2

| | General | Power | Density | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Site Name: Hartford 9 (Wethersfield)** | | | | | | | | |
| **Tower Height:** Verizon @ 90ft | | | | | | | | |
| **CARRIER** | **# OF CHAN.** | **WATTS ERP** | **HEIGHT** | **CALC. POWER DENS** | **FREQ.** | **MAX. PERMISS. EXP.** | **FRACTION MPE** | **Total** |
| T-Mobile | 2 | 2057 | 105 | 1900 | 0.1510 | 1.0000 | 1.51% | |
| T-Mobile | 2 | 2057 | 105 | 1900 | 0.1510 | 1.0000 | 1.51% | |
| T-Mobile | 2 | 592 | 105 | 600 | 0.0434 | 0.4000 | 1.09% | |
| T-Mobile | 1 | 1578 | 105 | 600 | 0.0579 | 0.4000 | 1.45% | |
| T-Mobile | 2 | 649 | 105 | 700 | 0.0476 | 0.4667 | 1.02% | |
| T-Mobile | 2 | 2204 | 105 | 1900 | 0.1617 | 1.0000 | 1.62% | |
| T-Mobile | 2 | 1295 | 105 | 2100 | 0.0950 | 1.0000 | 0.95% | |
| T-Mobile | 2 | 6413 | 105 | 2500 | 0.4706 | 1.0000 | 4.71% | |
| T-Mobile | 2 | 6413 | 105 | 2500 | 0.4706 | 1.0000 | 4.71% | |
| Town of Weths | 1 | 70 | 55 | 460.25 | 0.0105 | 0.3068 | 0.34% | |
| Town of Weths | 1 | 100 | 110 | 45.86 | 0.0033 | 0.2000 | 0.17% | |
| Nextel | 12 | 100 | 117 | 851 | 0.0350 | 0.5673 | 0.62% | |
| **VZW 700** | **4** | **697** | **90** | **0.0048** | **751** | **0.5007** | **0.97%** | |
| **VZW Cellular** | **4** | **822** | **90** | **0.0057** | **874** | **0.5827** | **0.98%** | |
| **VZW PCS** | **4** | **1593** | **90** | **0.0110** | **1975** | **1.0000** | **1.10%** | |
| **VZW AWS** | **4** | **1571** | **90** | **0.0109** | **2120** | **1.0000** | **1.09%** | |
| **VZW CBAND** | **4** | **6531** | **90** | **0.0453** | **3730.005** | **1.0000** | **4.53%** | |
| | | | | | | | | **28.35%** |
| * Source: Siting Council | | | | | | | | |
| | | | | | | | | |

# ATTACHMENT 3

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
856.797.0412
GDulnik@maserconsulting.com

# Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10022557
Maser Consulting Connecticut Project #: 20777293A

December 16, 2020

| | | |
|---|---|---|
| ***Site Information*** | *Site ID:* | *468180-VZW / Hartford 9 CT* |
| | *Site Name:* | *Hartford 9 CT* |
| | *Carrier Name:* | *Verizon Wireless* |
| | *Address:* | *250 Silas Deane Hwy*<br>*Wethersfield, Connecticut 06109*<br>*Hartford County* |
| | *Latitude:* | *41.720597°* |
| | *Longitude:* | *-72.666044°* |
| ***Structure Information*** | *Tower Type:* | *Monopole* |
| | *Mount Type:* | *6.79-Ft T-Frame* |

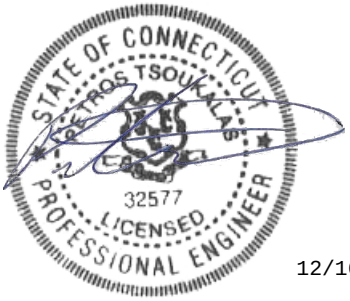
**FUZE ID # 16232035**

## Analysis Results

T-Frame: **55.4% 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***

Report Prepared By: Carol Luengas




12/16/2020

## 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: 674932, dated November 5, 2020* |
| *Mount Mapping Report* | *Delta Oaks Group, Site ID: 468180, dated October 26, 2020* |
| *Previous Mount Analysis* | *Maser Consulting Connecticut Project #: 20777293A Dated November 10, 2020* |
| *Mount Modification Drawings* | *Maser Consulting Connecticut Project #: 20777293A Dated December 16, 2020* |

## Analysis Criteria:

| | | |
|---|---|---|
| Codes and Standards: | ANSI/TIA-222-H | |
| Wind Parameters: | Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$: | 118 mph |
| | Ice Wind Speed (3-sec. Gust): | 50 mph |
| | Design Ice Thickness: | 1.50 in |
| | Risk Category: | II |
| | Exposure Category: | C |
| | Topographic Category: | 1 |
| | Topographic Feature Considered: | N/A |
| | Topographic Method: | N/A |
| | Ground Elevation Factor, $K_e$: | 0.999 |
| Seismic Parameters: | $S_S$: | 0.194 |
| | $S_1$: | 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 |
|---|---|---|---|---|---|
| 89.25 | 88.63 | 3 | - | nL-Sub6 Antenna | Added |
| | | 2 | RFS | DB-T1-6Z-12AB-0Z | |
| | | 6 | Andrew | SBNHH-1D65B | Retained |
| | | 3 | Samsung | B2/B66A RRH-BR049 | |
| | | 3 | Samsung | B5/B13 RRH-BR04C | |
| | | 3 | Amphenol Antel | BXA-70063-6CF EDIN2 | |

## Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut 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 Connecticut 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 by Maser Consulting Connecticut, 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 Connecticut 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 Connecticut.**

## Analysis Results:

| Component | Utilization % | Pass/Fail |
|---|---|---|
| *Antenna Pipe* | *33.5* | *Pass* |
| *Face Horizontal* | *22.9* | *Pass* |
| *Standoff Pipe* | *0.0* | *Pass* |
| *Standoff Arm* | *31.0* | *Pass* |
| *Connection Check* | *55.4* | *Pass* |
| *Proposed Face Horizontal* | *18.5* | *Pass* |
| *Proposed Standoff* | *28.5* | *Pass* |

| **Structure Rating – *(Controlling Utilization of all Components)*** | **55.4%** |
|---|---|

## 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. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter

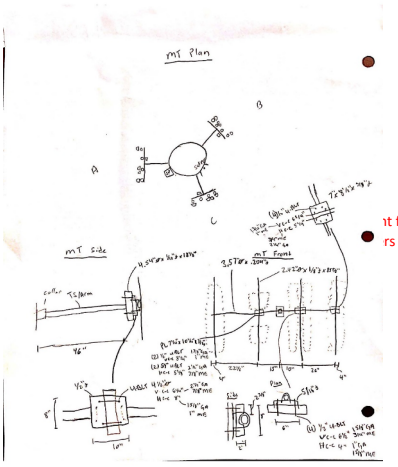
V3.0 Updated on 8-31-2020

# Antenna Mount Mapping Form (PATENT PENDING)

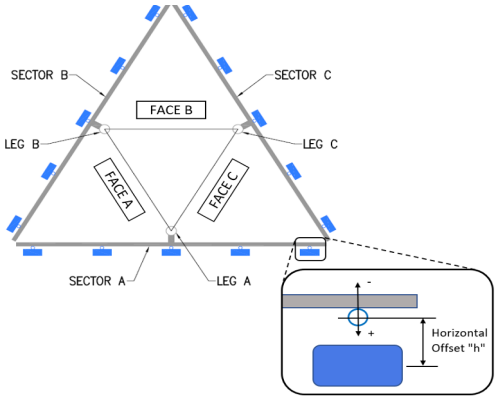
| FCC # |
|---|
| n/a |

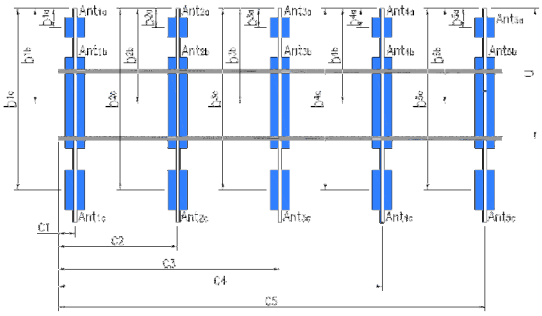
| | | | |
|---|---|---|---|
| **Tower Owner:** | Town of Wethersfield | **Mapping Date:** | 10/26/2020 |
| **Site Name:** | Hartford 9 CT | **Tower Type:** | Monopole |
| **Site Number or ID:** | 468180 | **Tower Height (Ft.):** | Unknown |
| **Mapping Contractor:** | Delta Oaks Group | **Mount Elevation (Ft.):** | 89.25 |






Scanned with CamScanner



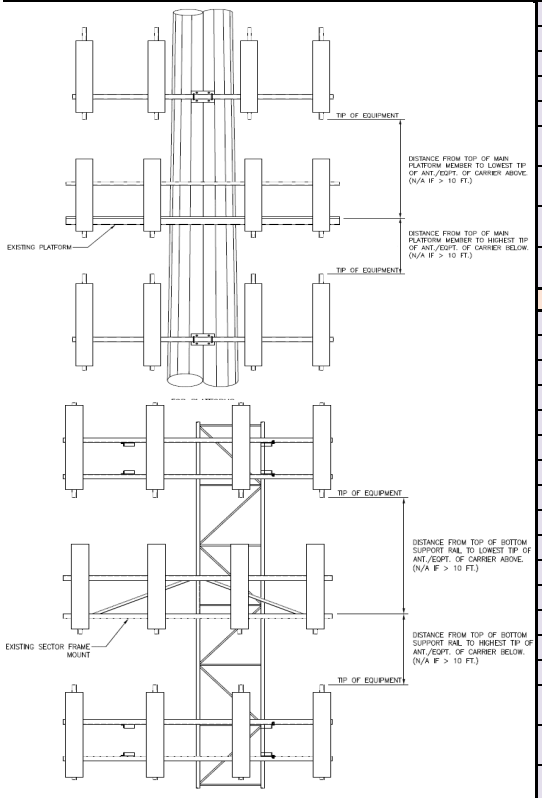
**Antenna Layout (Looking Out From Tower)**

| Mount Pipe Configuration and Geometries [Unit = Inches] | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sector / Position | Mount Pipe Size & Length | Vertical Offset Dimension "u" | Horizontal Offset "C1, C2, C3, etc." | Sector / Position | Mount Pipe Size & Length | Vertical Offset Dimension "u" | Horizontal Offset "C1, C2, C3, etc." |
| A1 | 2.4"x1/8"x85.625" | 36.00 | 4.00 | C1 | 2.4"x1/8"x85.625" | 36.00 | 4.00 |
| A2 | 2.4"x1/8"x85.625" | 36.00 | 26.50 | C2 | 2.4"x1/8"x85.625" | 36.00 | 26.50 |
| A3 | 2.4"x1/8"x85.625" | 36.00 | 51.50 | C3 | 2.4"x1/8"x85.625" | 36.00 | 51.50 |
| A4 | 2.4"x1/8"x85.625" | 36.00 | 77.50 | C4 | 2.4"x1/8"x85.625" | 36.00 | 77.50 |
| A5 | | | | C5 | | | |
| A6 | | | | C6 | | | |
| B1 | 2.4"x1/8"x85.625" | 36.00 | 4.00 | D1 | | | |
| B2 | 2.4"x1/8"x85.625" | 36.00 | 26.50 | D2 | | | |
| B3 | 2.4"x1/8"x85.625" | 36.00 | 51.50 | D3 | | | |
| B4 | 2.4"x1/8"x85.625" | 36.00 | 77.50 | 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. : | | | | | | | 0.00 |
| 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. | | | | | | | |
| (1) RRFDC-3315-PF-48 installed on the pole at 92'-6". | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Tower Face Width at Mount Elev. (ft.): | | | Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.): | | | | 23 |

| | Enter antenna model. If not labeled, enter "Unknown". | | | | | | Mounting Locations [Units are inches and degrees] | | | Photos of antennas |
|---|---|---|---|---|---|---|---|---|---|---|
| Ants. Items | Antenna Models if Known | Width (in.) | Depth (in.) | Height (in.) | Coax Size and Qty | Antenna Center-line (Ft.) | Vertical Distances"$b_{1a}$, $b_{2a}$, $b_{3a}$, $b_{1b}$...." (Inches) | Horiz. Offset "h" (Use "-" if Ant. is behind) | Antenna Azimuth (Degrees) | Photo Numbers |
| **Sector A** | | | | | | | | | | |
| $Ant_{1a}$ | BXA-70063-6CF EDIN2 | 11.20 | 5.20 | 71.00 | , (1) 1 1/4 | 89.25 | 36.00 | 9.50 | 45.00 | 89 |
| $Ant_{1b}$ | | | | | | | | | | |
| $Ant_{1c}$ | | | | | | | | | | |
| $Ant_{2a}$ | SBNHH-1D65B | 11.90 | 7.10 | 72.00 | | 89.3333 | 35.00 | 10.00 | 45.00 | 89 |
| $Ant_{2b}$ | SBNHH-1D65B | 11.90 | 7.10 | 72.00 | | 89.3333 | 35.00 | 10.00 | 45.00 | 89 |
| $Ant_{2c}$ | | | | | | | | | | |
| $Ant_{3a}$ | RADIO | 15.75 | 12.00 | 15.25 | | 91.2708 | 11.75 | 10.00 | | 90 |
| $Ant_{3b}$ | RADIO | 15.75 | 10.25 | 15.25 | | 87.9167 | 52.00 | 10.00 | | 90 |
| $Ant_{3c}$ | | | | | | | | | | |
| $Ant_{4a}$ | BXA-70063-6CF EDIN2 | 11.20 | 5.20 | 71.00 | | 89.25 | 36.00 | 10.50 | 45.00 | 90 |
| $Ant_{4b}$ | | | | | | | | | | |
| $Ant_{4c}$ | | | | | | | | | | |
| $Ant_{5a}$ | | | | | | | | | | |
| $Ant_{5b}$ | | | | | | | | | | |
| $Ant_{5c}$ | | | | | | | | | | |
| Ant on Standoff | | | | | | | | | | |
| Ant on Standoff | | | | | | | | | | |
| Ant on Tower | | | | | | | | | | |
| Ant on Tower | | | | | | | | | | |

| Mount Azimuth (Degree) for Each Sector | | | | Tower Leg Azimuth (Degree) for Each Sector | |
|---|---|---|---|---|---|
| Sector A: | 45.00 | Deg | Leg A: | | Deg |
| Sector B: | 165.00 | Deg | Leg B: | | Deg |
| Sector C: | 285.00 | Deg | Leg C: | | Deg |
| Sector D: | | Deg | Leg D: | | Deg |

| Climbing Facility Information | | | |
|---|---|---|---|
| Location: | 230.00 | Deg | Outside Face B |
| Climbing Facility | Corrosion Type: | | Good condition. |
| | Access: | | Climbing path was unobstructed. |
| | Condition: | | Damaged safety cable. |




| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sector B** | | | | | | | | | | | |
| $Ant_{1a}$ | BXA-70063-6CF EDIN2 | 11.20 | 5.20 | 71.00 | , (1) 1 1/4 | 89.25 | 36.00 | 9.50 | 165.00 | 91 |
| $Ant_{1b}$ | | | | | | | | | | |
| $Ant_{1c}$ | | | | | | | | | | |
| $Ant_{2a}$ | SBNHH-1D65B | 11.90 | 7.10 | 72.00 | | 89.3333 | 35.00 | 10.00 | 165.00 | 86 |
| $Ant_{2b}$ | SBNHH-1D65B | 11.90 | 7.10 | 72.00 | | 89.3333 | 35.00 | 10.00 | 165.00 | 86 |
| $Ant_{2c}$ | | | | | | | | | | |
| $Ant_{3a}$ | RADIO | 15.75 | 12.00 | 15.25 | | 91.2708 | 11.75 | 10.00 | | 86 |
| $Ant_{3b}$ | RADIO | 15.75 | 10.25 | 15.25 | | 87.9167 | 52.00 | 10.00 | | 86 |
| $Ant_{3c}$ | | | | | | | | | | |
| $Ant_{4a}$ | BXA-70063-6CF EDIN2 | 11.20 | 5.20 | 71.00 | | 89.25 | 36.00 | 10.50 | 165.00 | 92 |
| $Ant_{4b}$ | | | | | | | | | | |
| $Ant_{4c}$ | | | | | | | | | | |
| $Ant_{5a}$ | | | | | | | | | | |
| $Ant_{5b}$ | | | | | | | | | | |
| $Ant_{5c}$ | | | | | | | | | | |
| Ant on Standoff | | | | | | | | | | |
| Ant on Standoff | | | | | | | | | | |
| Ant on Tower | | | | | | | | | | |
| Ant on Tower | | | | | | | | | | |
| **Sector C** | | | | | | | | | | |
| $Ant_{1a}$ | BXA-70063-6CF EDIN2 | 11.20 | 5.20 | 71.00 | , (1) 1 1/4 | 89.25 | 36.00 | 9.50 | 285.00 | 93 |
| $Ant_{1b}$ | | | | | | | | | | |
| $Ant_{1c}$ | | | | | | | | | | |
| $Ant_{2a}$ | SBNHH-1D65B | 11.90 | 7.10 | 72.00 | | 89.3333 | 35.00 | 10.00 | 285.00 | 94 |
| $Ant_{2b}$ | SBNHH-1D65B | 11.90 | 7.10 | 72.00 | | 89.3333 | 35.00 | 10.00 | 285.00 | 94 |
| $Ant_{2c}$ | | | | | | | | | | |
| $Ant_{3a}$ | RADIO | 15.75 | 12.00 | 15.25 | | 91.2708 | 11.75 | 10.00 | | 95 |
| $Ant_{3b}$ | RADIO | 15.75 | 10.25 | 15.25 | | 87.9167 | 52.00 | 10.00 | | 95 |
| $Ant_{3c}$ | | | | | | | | | | |
| $Ant_{4a}$ | BXA-70063-6CF EDIN2 | 11.20 | 5.20 | 71.00 | | 89.25 | 36.00 | 10.50 | 285.00 | 95 |
| $Ant_{4b}$ | | | | | | | | | | |
| $Ant_{4c}$ | | | | | | | | | | |
| $Ant_{5a}$ | | | | | | | | | | |
| $Ant_{5b}$ | | | | | | | | | | |
| $Ant_{5c}$ | | | | | | | | | | |
| Ant on Standoff | | | | | | | | | | |
| Ant on Standoff | | | | | | | | | | |
| Ant on Tower | | | | | | | | | | |
| 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 | The top safety cable connection looks like it is installed incorrectly. | 39 |
| 2 | Corrosion on the U-bolts on the mount. | 94 |
| 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. |

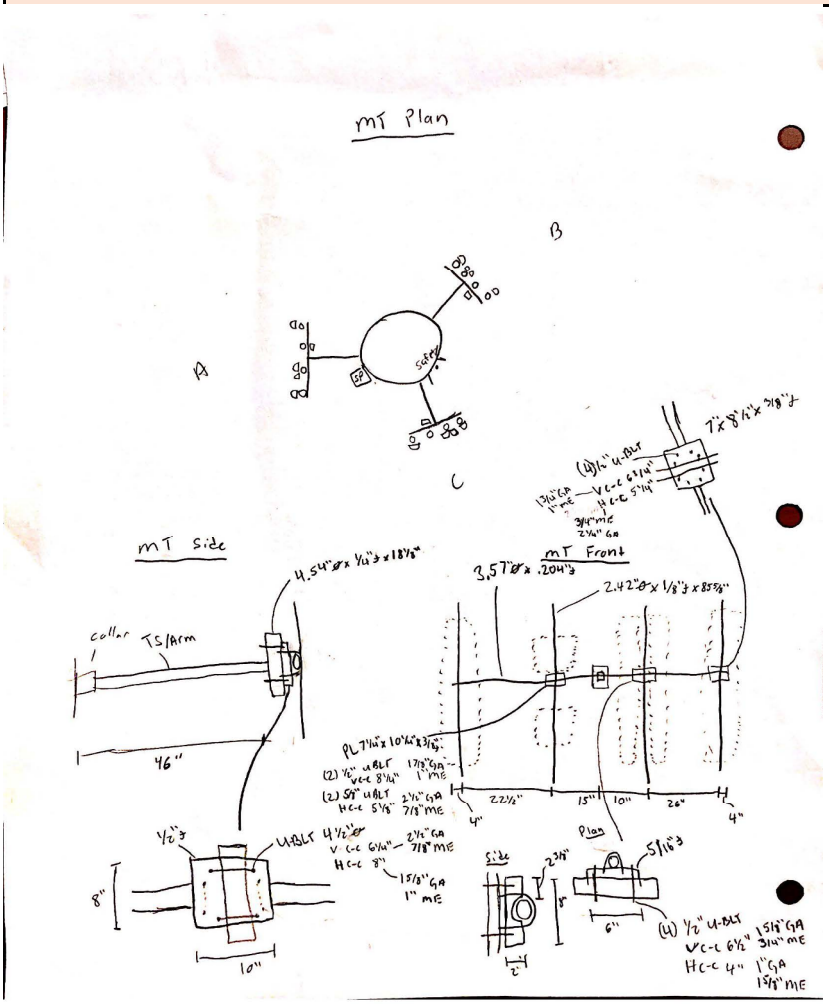
# Antenna Mount Mapping Form (PATENT PENDING)

FCC #: n/a

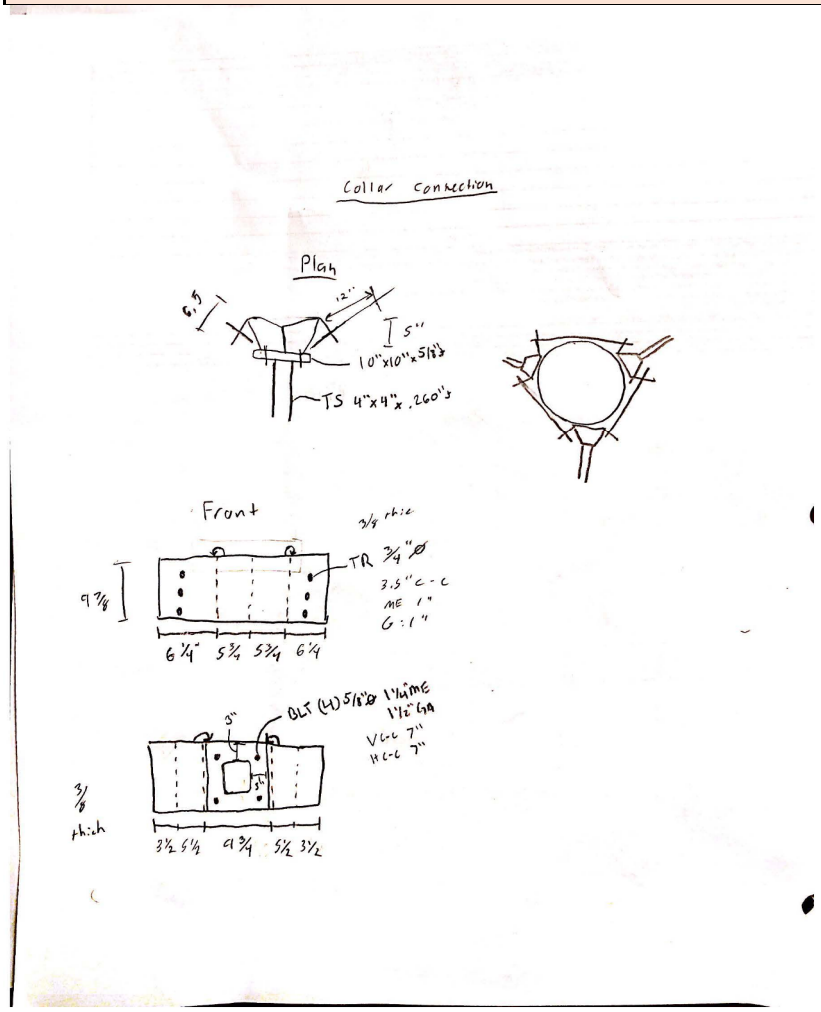
| | | | |
|---|---|---|---|
| **Tower Owner:** | Town of Wethersfield | **Mapping Date:** | 10/26/2020 |
| **Site Name:** | Hartford 9 CT | **Tower Type:** | Monopole |
| **Site Number or ID:** | 468180 | **Tower Height (Ft.):** | Unknown |
| **Mapping Contractor:** | Delta Oaks Group | **Mount Elevation (Ft.):** | 89.25 |

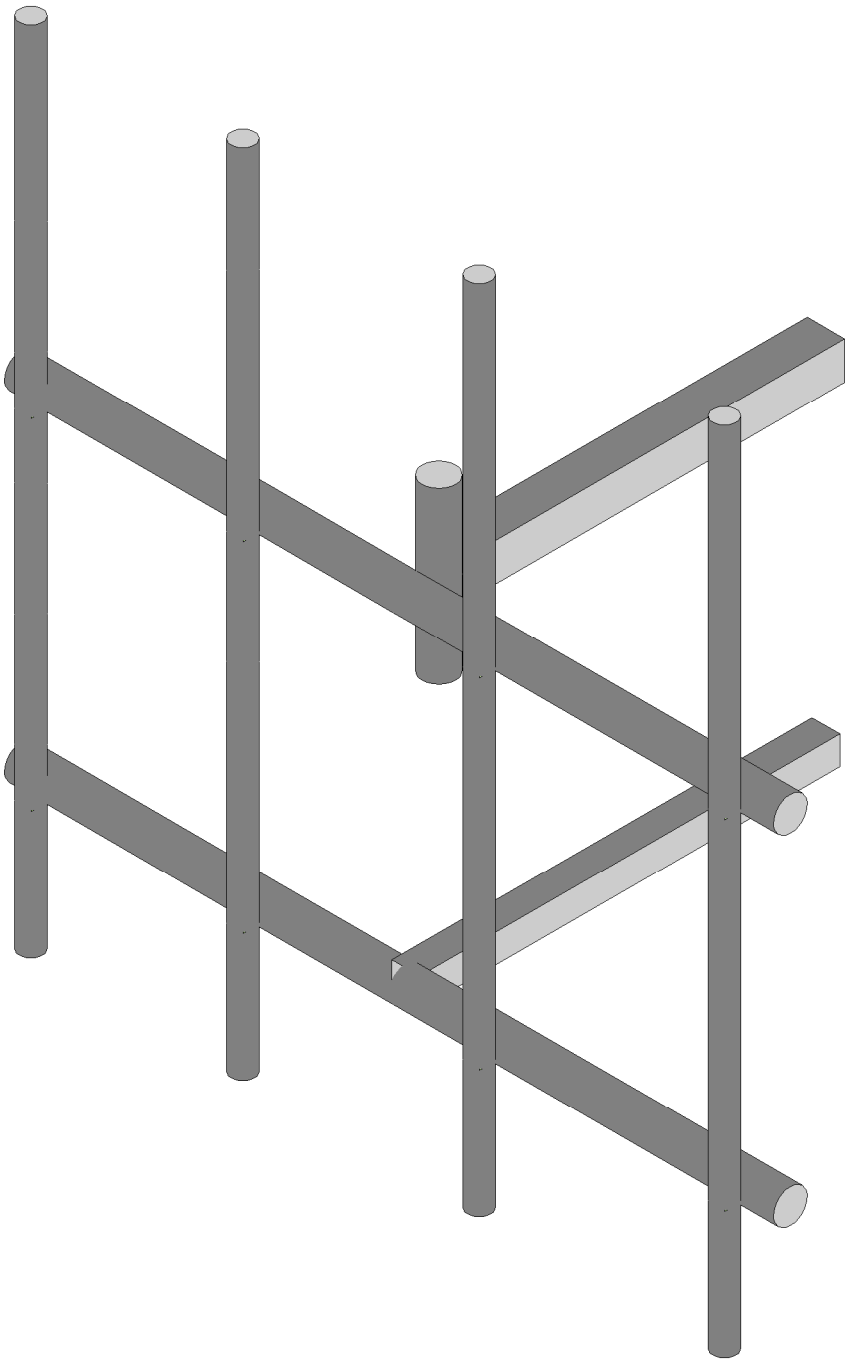


## Please Insert Sketches of the Antenna Mount



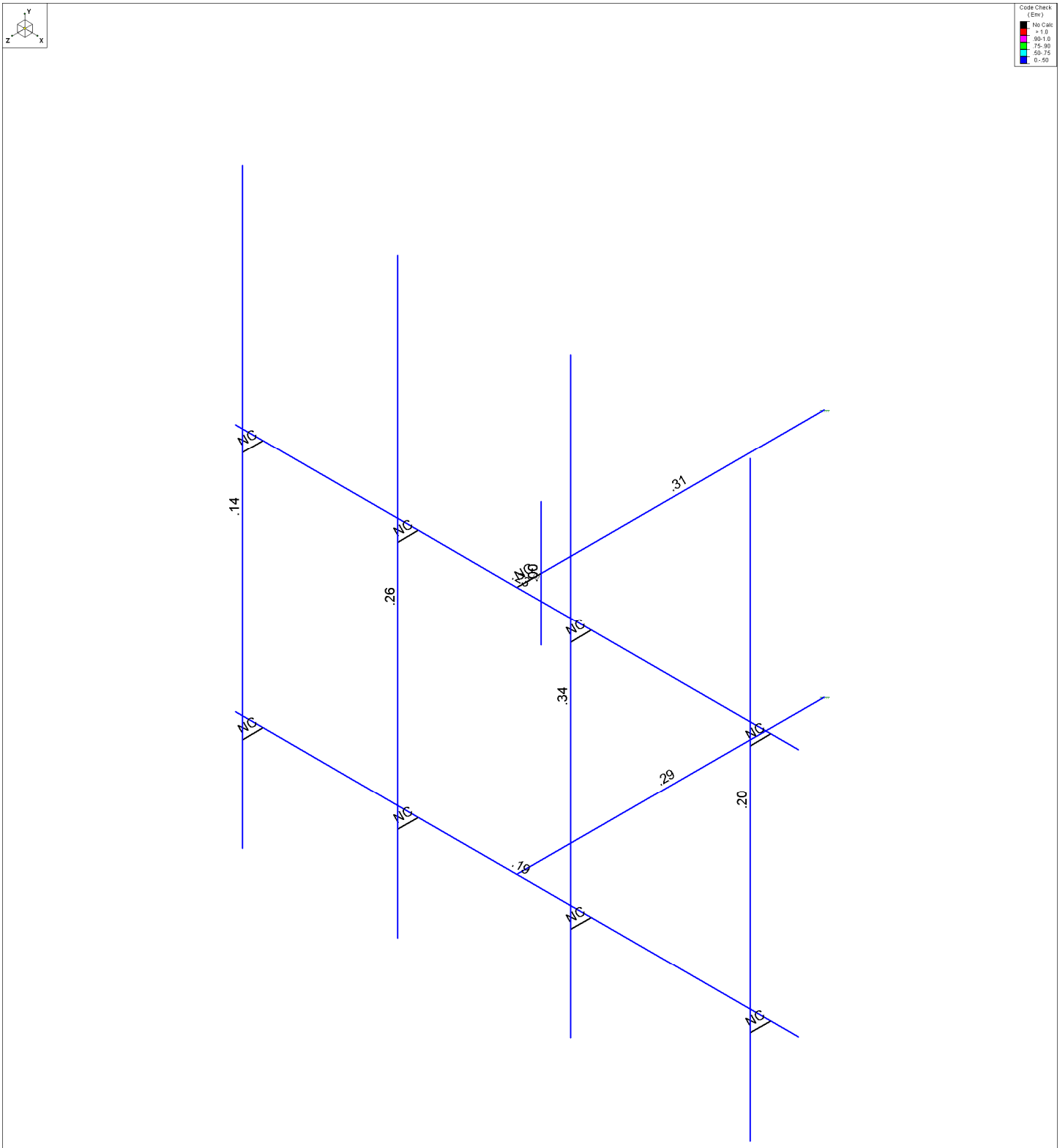
**Please Insert Sketches of the Antenna Mount, cont'd**





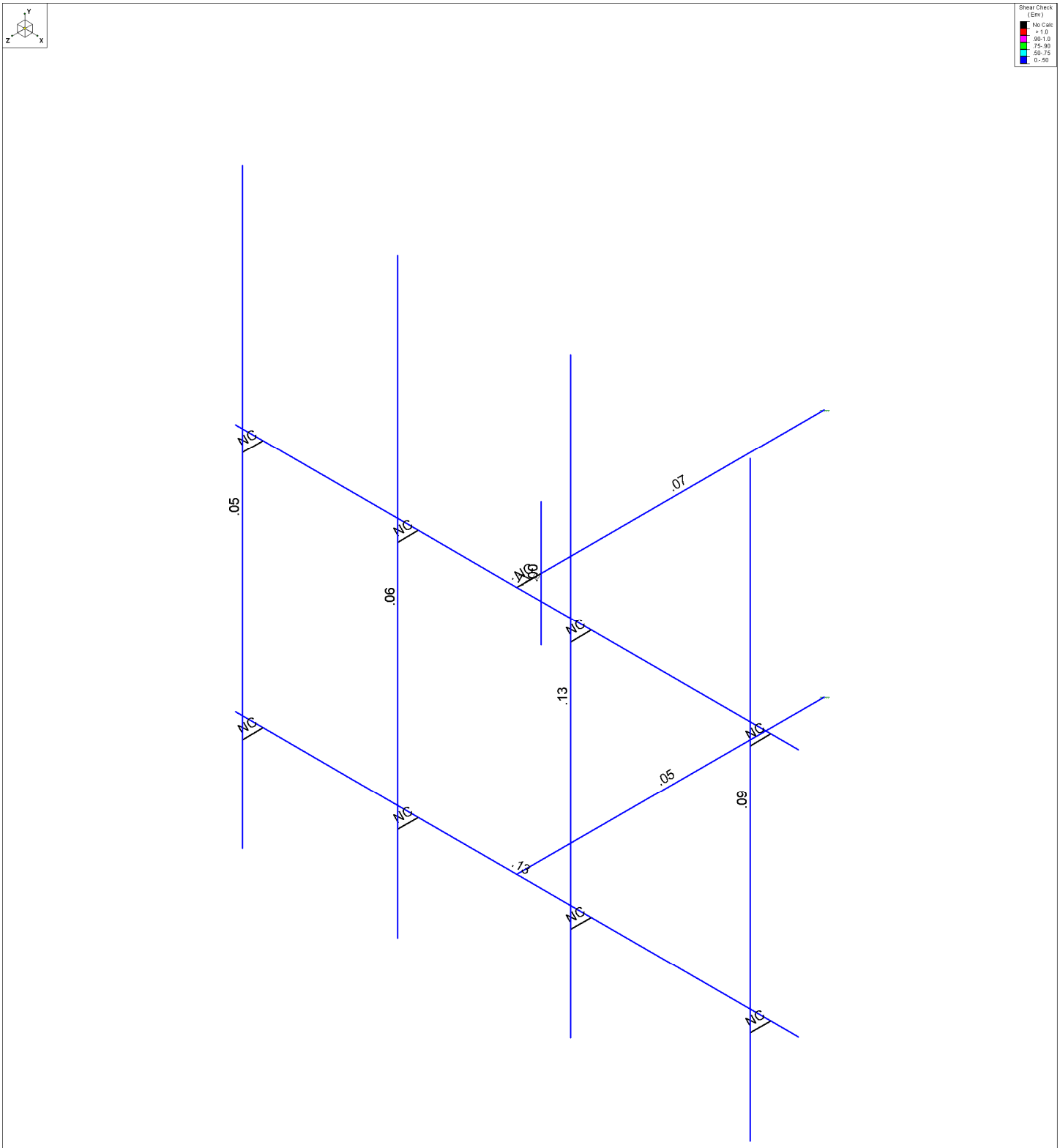
Envelope Only Solution

| | | |
|---|---|---|
| Maser Consulting | 468180-VZW_MT_LOT_SectorA_H | SK - 1 |
| AE | | Dec 14, 2020 at 12:07 PM |
| Project No. 10022557 | | 468180-VZW_MT_LOT_A_H_MOD.... |




Member Code Checks Displayed (Enveloped)
Envelope Only Solution

| | | |
|---|---|---|
| Maser Consulting | 468180-VZW_MT_LOT_SectorA_H | SK - 2 |
| AE | | Dec 14, 2020 at 12:08 PM |
| Project No. 10022557 | | 468180-VZW_MT_LOT_A_H_MOD.... |




Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

| | | |
|---|---|---|
| Maser Consulting | 468180-VZW_MT_LOT_SectorA_H | SK - 3 |
| AE | | Dec 14, 2020 at 12:08 PM |
| Project No. 10022557 | | 468180-VZW_MT_LOT_A_H_MOD.... |

## Basic Load Cases

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

## Basic Load Cases (Continued)

| | BLC Description | Category | X Gravity | Y Gravity | Z Gravity | Joint | Point | Distributed | Area(Me... | Surface(... |
|---|---|---|---|---|---|---|---|---|---|---|
| 54 | Structure Wi (30 Deg) | None | | | | | | 18 | | |
| 55 | Structure Wi (60 Deg) | None | | | | | | 18 | | |
| 56 | Structure Wi (90 Deg) | None | | | | | | 18 | | |
| 57 | Structure Wi (120 Deg) | None | | | | | | 18 | | |
| 58 | Structure Wi (150 Deg) | None | | | | | | 18 | | |
| 59 | Structure Wi (180 Deg) | None | | | | | | 18 | | |
| 60 | Structure Wi (210 Deg) | None | | | | | | 18 | | |
| 61 | Structure Wi (240 Deg) | None | | | | | | 18 | | |
| 62 | Structure Wi (270 Deg) | None | | | | | | 18 | | |
| 63 | Structure Wi (300 Deg) | None | | | | | | 18 | | |
| 64 | Structure Wi (330 Deg) | None | | | | | | 18 | | |
| 65 | Structure Wm (0 Deg) | None | | | | | | 18 | | |
| 66 | Structure Wm (30 Deg) | None | | | | | | 18 | | |
| 67 | Structure Wm (60 Deg) | None | | | | | | 18 | | |
| 68 | Structure Wm (90 Deg) | None | | | | | | 18 | | |
| 69 | Structure Wm (120 Deg) | None | | | | | | 18 | | |
| 70 | Structure Wm (150 Deg) | None | | | | | | 18 | | |
| 71 | Structure Wm (180 Deg) | None | | | | | | 18 | | |
| 72 | Structure Wm (210 Deg) | None | | | | | | 18 | | |
| 73 | Structure Wm (240 Deg) | None | | | | | | 18 | | |
| 74 | Structure Wm (270 Deg) | None | | | | | | 18 | | |
| 75 | Structure Wm (300 Deg) | None | | | | | | 18 | | |
| 76 | Structure Wm (330 Deg) | None | | | | | | 18 | | |
| 77 | Lm1 | None | | | | | 1 | | | |
| 78 | Lm2 | None | | | | | 1 | | | |
| 79 | Lv1 | None | | | | | 1 | | | |
| 80 | Lv2 | None | | | | | 1 | | | |

## Load Combinations

| | Description | So... | P... | S... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... | BLC | Fac... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.2D+1.0Wo (0 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 3 | 1 | 41 | 1 | | | | | | | | | | | | |
| 2 | 1.2D+1.0Wo (30 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 4 | 1 | 42 | 1 | | | | | | | | | | | | |
| 3 | 1.2D+1.0Wo (60 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 5 | 1 | 43 | 1 | | | | | | | | | | | | |
| 4 | 1.2D+1.0Wo (90 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 6 | 1 | 44 | 1 | | | | | | | | | | | | |
| 5 | 1.2D+1.0Wo (120 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 7 | 1 | 45 | 1 | | | | | | | | | | | | |
| 6 | 1.2D+1.0Wo (150 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 8 | 1 | 46 | 1 | | | | | | | | | | | | |
| 7 | 1.2D+1.0Wo (180 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 9 | 1 | 47 | 1 | | | | | | | | | | | | |
| 8 | 1.2D+1.0Wo (210 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 10 | 1 | 48 | 1 | | | | | | | | | | | | |
| 9 | 1.2D+1.0Wo (240 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 11 | 1 | 49 | 1 | | | | | | | | | | | | |
| 10 | 1.2D+1.0Wo (270 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 12 | 1 | 50 | 1 | | | | | | | | | | | | |
| 11 | 1.2D+1.0Wo (300 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 13 | 1 | 51 | 1 | | | | | | | | | | | | |
| 12 | 1.2D+1.0Wo (330 Deg) | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 14 | 1 | 52 | 1 | | | | | | | | | | | | |
| 13 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 15 | 1 | 53 | 1 | | | | | | | | |
| 14 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 16 | 1 | 54 | 1 | | | | | | | | |
| 15 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 17 | 1 | 55 | 1 | | | | | | | | |
| 16 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 18 | 1 | 56 | 1 | | | | | | | | |
| 17 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 19 | 1 | 57 | 1 | | | | | | | | |
| 18 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 20 | 1 | 58 | 1 | | | | | | | | |
| 19 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 21 | 1 | 59 | 1 | | | | | | | | |
| 20 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 22 | 1 | 60 | 1 | | | | | | | | |
| 21 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 23 | 1 | 61 | 1 | | | | | | | | |
| 22 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 24 | 1 | 62 | 1 | | | | | | | | |
| 23 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 25 | 1 | 63 | 1 | | | | | | | | |
| 24 | 1.2D + 1.0Di + 1.0Wi (... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 2 | 1 | 40 | 1 | 26 | 1 | 64 | 1 | | | | | | | | |
| 25 | 1.2D + 1.5Lm1 + 1.0W... | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 27 | 1 | 65 | 1 | | | | | | | | | | |

## Load Combinations (Continued)

| | Description | So.. | P... | S... | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. | BLC | Fac.. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 28 | 1 | 66 | 1 | | | | | | | | | | |
| 27 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 29 | 1 | 67 | 1 | | | | | | | | | | |
| 28 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 30 | 1 | 68 | 1 | | | | | | | | | | |
| 29 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 31 | 1 | 69 | 1 | | | | | | | | | | |
| 30 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 32 | 1 | 70 | 1 | | | | | | | | | | |
| 31 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 33 | 1 | 71 | 1 | | | | | | | | | | |
| 32 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 34 | 1 | 72 | 1 | | | | | | | | | | |
| 33 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 35 | 1 | 73 | 1 | | | | | | | | | | |
| 34 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 36 | 1 | 74 | 1 | | | | | | | | | | |
| 35 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 37 | 1 | 75 | 1 | | | | | | | | | | |
| 36 | 1.2D + 1.5Lm1 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 77 | 1.5 | 38 | 1 | 76 | 1 | | | | | | | | | | |
| 37 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 27 | 1 | 65 | 1 | | | | | | | | | | |
| 38 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 28 | 1 | 66 | 1 | | | | | | | | | | |
| 39 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 29 | 1 | 67 | 1 | | | | | | | | | | |
| 40 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 30 | 1 | 68 | 1 | | | | | | | | | | |
| 41 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 31 | 1 | 69 | 1 | | | | | | | | | | |
| 42 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 32 | 1 | 70 | 1 | | | | | | | | | | |
| 43 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 33 | 1 | 71 | 1 | | | | | | | | | | |
| 44 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 34 | 1 | 72 | 1 | | | | | | | | | | |
| 45 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 35 | 1 | 73 | 1 | | | | | | | | | | |
| 46 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 36 | 1 | 74 | 1 | | | | | | | | | | |
| 47 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 37 | 1 | 75 | 1 | | | | | | | | | | |
| 48 | 1.2D + 1.5Lm2 + 1.0W.. | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 78 | 1.5 | 38 | 1 | 76 | 1 | | | | | | | | | | |
| 49 | 1.2D + 1.5Lv1 | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 79 | 1.5 | | | | | | | | | | | | | | |
| 50 | 1.2D + 1.5Lv2 | Yes | Y | | 1 | 1.2 | 39 | 1.2 | 80 | 1.5 | | | | | | | | | | | | | | |
| 51 | 1.4D | Yes | Y | | 1 | 1.4 | 39 | 1.4 | | | | | | | | | | | | | | | | |
| 52 | Seismic Mass | | Y | | 1 | 1 | 39 | 1 | | | | | | | | | | | | | | | | |
| 53 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | | SY | 1 | SZ | -1 | | | | | | | | | | |
| 54 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | .5 | SY | 1 | SZ | -.866 | | | | | | | | | | |
| 55 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | .866 | SY | 1 | SZ | -.5 | | | | | | | | | | |
| 56 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | 1 | SY | 1 | SZ | | | | | | | | | | | |
| 57 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | .866 | SY | 1 | SZ | .5 | | | | | | | | | | |
| 58 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | .5 | SY | 1 | SZ | .866 | | | | | | | | | | |
| 59 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | | SY | 1 | SZ | 1 | | | | | | | | | | |
| 60 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | -.5 | SY | 1 | SZ | .866 | | | | | | | | | | |
| 61 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | -.866 | SY | 1 | SZ | .5 | | | | | | | | | | |
| 62 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | -1 | SY | 1 | SZ | | | | | | | | | | | |
| 63 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | -.866 | SY | 1 | SZ | -.5 | | | | | | | | | | |
| 64 | 1.2D + 1.0Ev + 1.0Eh (... | | Y | | 1 | 1.2 | 39 | 1.2 | SX | -.5 | SY | 1 | SZ | -.866 | | | | | | | | | | |

## Joint Coordinates and Temperatures

| | Label | X [ft] | Y [ft] | Z [ft] | Temp [F] | Detach From Diap... |
|---|---|---|---|---|---|---|
| 1 | N1 | 0 | 0 | -1.510417 | 0 | |
| 2 | N2 | 0 | 0 | 1.90625 | 0 | |
| 3 | N3 | 0 | -.75 | 1.90625 | 0 | |
| 4 | N4 | 0 | .75 | 1.90625 | 0 | |
| 5 | N5 | 0 | 0 | 2.197917 | 0 | |
| 6 | N6 | 3.395833 | 0 | 2.197917 | 0 | |
| 7 | N7 | -3.395833 | 0 | 2.197917 | 0 | |
| 8 | N15 | -3.0625 | 0 | 2.197917 | 0 | |
| 9 | N16 | -3.0625 | 0 | 2.447917 | 0 | |
| 10 | N17 | -3.0625 | 3 | 2.447917 | 0 | |
| 11 | N18 | -3.0625 | -4.135417 | 2.447917 | 0 | |
| 12 | N21 | 0 | -.375 | 1.90625 | 0 | |
| 13 | N16A | -1.1875 | 0 | 2.197917 | 0 | |

## Joint Coordinates and Temperatures (Continued)

| | Label | X [ft] | Y [ft] | Z [ft] | Temp [F] | Detach From Diap... |
|---|---|---|---|---|---|---|
| 14 | N17A | -1.1875 | 0 | 2.447917 | 0 | |
| 15 | N18A | -1.1875 | 3 | 2.447917 | 0 | |
| 16 | N19 | -1.1875 | -4.135417 | 2.447917 | 0 | |
| 17 | N24 | 0.895833 | 0 | 2.197917 | 0 | |
| 18 | N25 | 0.895833 | 0 | 2.447917 | 0 | |
| 19 | N26 | 0.895833 | 3 | 2.447917 | 0 | |
| 20 | N27 | 0.895833 | -4.135417 | 2.447917 | 0 | |
| 21 | N28 | 3.0625 | 0 | 2.197917 | 0 | |
| 22 | N29 | 3.0625 | 0 | 2.447917 | 0 | |
| 23 | N30 | 3.0625 | 3 | 2.447917 | 0 | |
| 24 | N31 | 3.0625 | -4.135417 | 2.447917 | 0 | |
| 25 | N25A | -3.0625 | -0.56875 | 2.447917 | 0 | |
| 26 | N26A | -3.0625 | 1.43125 | 2.447917 | 0 | |
| 27 | N27A | -3.0625 | -2.56875 | 2.447917 | 0 | |
| 28 | N28A | -3.0625 | 0.43125 | 2.447917 | 0 | |
| 29 | N29A | -3.0625 | -1.56875 | 2.447917 | 0 | |
| 30 | N30A | -1.1875 | -1 | 2.447917 | 0 | |
| 31 | N31A | -1.1875 | 2 | 2.447917 | 0 | |
| 32 | N32 | 0 | -3 | -1.510417 | 0 | |
| 33 | N33 | 0 | -3 | 1.90625 | 0 | |
| 34 | N34 | 0 | -3 | 2.197917 | 0 | |
| 35 | N35 | 3.395833 | -3 | 2.197917 | 0 | |
| 36 | N36 | -3.395833 | -3 | 2.197917 | 0 | |
| 37 | N37 | -3.0625 | -3 | 2.197917 | 0 | |
| 38 | N38 | -3.0625 | -3 | 2.447917 | 0 | |
| 39 | N39 | -1.1875 | -3 | 2.197917 | 0 | |
| 40 | N40 | -1.1875 | -3 | 2.447917 | 0 | |
| 41 | N41 | 0.895833 | -3 | 2.197917 | 0 | |
| 42 | N42 | 0.895833 | -3 | 2.447917 | 0 | |
| 43 | N43 | 3.0625 | -3 | 2.197917 | 0 | |
| 44 | N44 | 3.0625 | -3 | 2.447917 | 0 | |

## Hot Rolled Steel Section Sets

| | Label | Shape | Type | Design List | Material | Design ... | A [in2] | Iyy [in4] | Izz [in4] | J [in4] |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Antenna Pipe | PIPE_2.0 | Column | Pipe | A53 Gr. B | Typical | 1.02 | .627 | .627 | 1.25 |
| 2 | Standoff Arm | HSS4X4X4 | Beam | Tube | A500 Gr.46 | Typical | 3.37 | 7.8 | 7.8 | 12.8 |
| 3 | Standoff Pipe | PIPE_3.0 | Column | Pipe | A53 Gr. B | Typical | 2.07 | 2.85 | 2.85 | 5.69 |
| 4 | Horizontal | PIPE_3.0 | Column | Pipe | A53 Gr. B | Typical | 2.07 | 2.85 | 2.85 | 5.69 |
| 5 | Reinforcement Arm | HSS3X3X4 | Column | Tube | A500 Gr.46 | Typical | 2.44 | 3.02 | 3.02 | 5.08 |

## Hot Rolled Steel Properties

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

## Member Primary Data

| | Label | I Joint | J Joint | K Joint | Rotate(d... | Section/Shape | Type | Design List | Material | Design Rul... |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M1 | N1 | N2 | | | Standoff Arm | Beam | Tube | A500 Gr.... | Typical |
| 2 | M2 | N4 | N3 | | | Standoff Pipe | Column | Pipe | A53 Gr. B | Typical |
| 3 | M4 | N7 | N6 | | | Horizontal | Column | Pipe | A53 Gr. B | Typical |
| 4 | MP4A | N17 | N18 | | | Antenna Pipe | Column | Pipe | A53 Gr. B | Typical |
| 5 | M10 | N15 | N16 | | | RIGID | None | None | RIGID | Typical |
| 6 | M10A | N2 | N5 | | | RIGID | None | None | RIGID | Typical |
| 7 | MP3A | N18A | N19 | | | Antenna Pipe | Column | Pipe | A53 Gr. B | Typical |
| 8 | M10B | N16A | N17A | | | RIGID | None | None | RIGID | Typical |
| 9 | MP2A | N26 | N27 | | | Antenna Pipe | Column | Pipe | A53 Gr. B | Typical |
| 10 | M14 | N24 | N25 | | | RIGID | None | None | RIGID | Typical |
| 11 | MP1A | N30 | N31 | | | Antenna Pipe | Column | Pipe | A53 Gr. B | Typical |
| 12 | M16 | N28 | N29 | | | RIGID | None | None | RIGID | Typical |
| 13 | M13 | N32 | N34 | | | Reinforcement Arm | Column | Tube | A500 Gr.... | Typical |
| 14 | M14A | N36 | N35 | | | Horizontal | Column | Pipe | A53 Gr. B | Typical |
| 15 | M15 | N37 | N38 | | | RIGID | None | None | RIGID | Typical |
| 16 | M17 | N39 | N40 | | | RIGID | None | None | RIGID | Typical |
| 17 | M18 | N41 | N42 | | | RIGID | None | None | RIGID | Typical |
| 18 | M19 | N43 | N44 | | | RIGID | None | None | RIGID | Typical |

## Member Advanced Data

| | Label | I Release | J Release | I Offset[in] | J Offset[in] | T/C Only | Physical | Defl Rat... | Analysis ... | Inactive | Seismic... |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M1 | | | | | | Yes | Default | | | None |
| 2 | M2 | | | | | | Yes | ** NA ** | | | None |
| 3 | M4 | | | | | | Yes | ** NA ** | | | None |
| 4 | MP4A | | | | | | Yes | ** NA ** | | | None |
| 5 | M10 | | | | | | Yes | ** NA ** | | | None |
| 6 | M10A | OOOOXO | | | | | Yes | ** NA ** | | | None |
| 7 | MP3A | | | | | | Yes | ** NA ** | | | None |
| 8 | M10B | | | | | | Yes | ** NA ** | | | None |
| 9 | MP2A | | | | | | Yes | ** NA ** | | | None |
| 10 | M14 | | | | | | Yes | ** NA ** | | | None |
| 11 | MP1A | | | | | | Yes | ** NA ** | | | None |
| 12 | M16 | | | | | | Yes | ** NA ** | | | None |
| 13 | M13 | | | | | | Yes | ** NA ** | | | None |
| 14 | M14A | | | | | | Yes | ** NA ** | | | None |
| 15 | M15 | | | | | | Yes | ** NA ** | | | None |
| 16 | M17 | | | | | | Yes | ** NA ** | | | None |
| 17 | M18 | | | | | | Yes | ** NA ** | | | None |
| 18 | M19 | | | | | | Yes | ** NA ** | | | None |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | Y | -43.55 | 2.57 |
| 2 | MP1A | My | -.022 | 2.57 |
| 3 | MP1A | Mz | 0 | 2.57 |
| 4 | MP1A | Y | -43.55 | 4.57 |
| 5 | MP1A | My | -.022 | 4.57 |
| 6 | MP1A | Mz | 0 | 4.57 |
| 7 | MP1A | Y | -26 | 3.56 |
| 8 | MP1A | My | .024 | 3.56 |
| 9 | MP1A | Mz | 0 | 3.56 |
| 10 | MP2A | Y | -20 | 1.57 |
| 11 | MP2A | My | -.013 | 1.57 |

## Member Point Loads (BLC 1 : Antenna D) (Continued)

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 12 | MP2A | Mz | .017 | 1.57 |
| 13 | MP2A | Y | -20 | 5.57 |
| 14 | MP2A | My | -.013 | 5.57 |
| 15 | MP2A | Mz | .017 | 5.57 |
| 16 | MP2A | Y | -20 | 1.57 |
| 17 | MP2A | My | -.013 | 1.57 |
| 18 | MP2A | Mz | -.017 | 1.57 |
| 19 | MP2A | Y | -20 | 5.57 |
| 20 | MP2A | My | -.013 | 5.57 |
| 21 | MP2A | Mz | -.017 | 5.57 |
| 22 | MP3A | Y | -84.4 | 1 |
| 23 | MP3A | My | .07 | 1 |
| 24 | MP3A | Mz | 0 | 1 |
| 25 | MP3A | Y | -70.3 | 4 |
| 26 | MP3A | My | .053 | 4 |
| 27 | MP3A | Mz | 0 | 4 |
| 28 | MP4A | Y | -8.5 | 1.57 |
| 29 | MP4A | My | -.004 | 1.57 |
| 30 | MP4A | Mz | 0 | 1.57 |
| 31 | MP4A | Y | -8.5 | 5.57 |
| 32 | MP4A | My | -.004 | 5.57 |
| 33 | MP4A | Mz | 0 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | Y | -49.799 | 2.57 |
| 2 | MP1A | My | -.025 | 2.57 |
| 3 | MP1A | Mz | 0 | 2.57 |
| 4 | MP1A | Y | -49.799 | 4.57 |
| 5 | MP1A | My | -.025 | 4.57 |
| 6 | MP1A | Mz | 0 | 4.57 |
| 7 | MP1A | Y | -114.024 | 3.56 |
| 8 | MP1A | My | .105 | 3.56 |
| 9 | MP1A | Mz | 0 | 3.56 |
| 10 | MP2A | Y | -91.716 | 1.57 |
| 11 | MP2A | My | -.061 | 1.57 |
| 12 | MP2A | Mz | .076 | 1.57 |
| 13 | MP2A | Y | -91.716 | 5.57 |
| 14 | MP2A | My | -.061 | 5.57 |
| 15 | MP2A | Mz | .076 | 5.57 |
| 16 | MP2A | Y | -91.716 | 1.57 |
| 17 | MP2A | My | -.061 | 1.57 |
| 18 | MP2A | Mz | -.076 | 1.57 |
| 19 | MP2A | Y | -91.716 | 5.57 |
| 20 | MP2A | My | -.061 | 5.57 |
| 21 | MP2A | Mz | -.076 | 5.57 |
| 22 | MP3A | Y | -68.179 | 1 |
| 23 | MP3A | My | .057 | 1 |
| 24 | MP3A | Mz | 0 | 1 |
| 25 | MP3A | Y | -61.527 | 4 |
| 26 | MP3A | My | .046 | 4 |
| 27 | MP3A | Mz | 0 | 4 |
| 28 | MP4A | Y | -78.175 | 1.57 |
| 29 | MP4A | My | -.033 | 1.57 |
| 30 | MP4A | Mz | 0 | 1.57 |
| 31 | MP4A | Y | -78.175 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 32 | MP4A | My | -.033 | 5.57 |
| 33 | MP4A | Mz | 0 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 0 | 2.57 |
| 2 | MP1A | Z | -80.863 | 2.57 |
| 3 | MP1A | Mx | 0 | 2.57 |
| 4 | MP1A | X | 0 | 4.57 |
| 5 | MP1A | Z | -80.863 | 4.57 |
| 6 | MP1A | Mx | 0 | 4.57 |
| 7 | MP1A | X | 0 | 3.56 |
| 8 | MP1A | Z | -142.545 | 3.56 |
| 9 | MP1A | Mx | 0 | 3.56 |
| 10 | MP2A | X | 0 | 1.57 |
| 11 | MP2A | Z | -153.452 | 1.57 |
| 12 | MP2A | Mx | -.128 | 1.57 |
| 13 | MP2A | X | 0 | 5.57 |
| 14 | MP2A | Z | -153.452 | 5.57 |
| 15 | MP2A | Mx | -.128 | 5.57 |
| 16 | MP2A | X | 0 | 1.57 |
| 17 | MP2A | Z | -153.452 | 1.57 |
| 18 | MP2A | Mx | .128 | 1.57 |
| 19 | MP2A | X | 0 | 5.57 |
| 20 | MP2A | Z | -153.452 | 5.57 |
| 21 | MP2A | Mx | .128 | 5.57 |
| 22 | MP3A | X | 0 | 1 |
| 23 | MP3A | Z | -70.332 | 1 |
| 24 | MP3A | Mx | 0 | 1 |
| 25 | MP3A | X | 0 | 4 |
| 26 | MP3A | Z | -70.332 | 4 |
| 27 | MP3A | Mx | 0 | 4 |
| 28 | MP4A | X | 0 | 1.57 |
| 29 | MP4A | Z | -142.357 | 1.57 |
| 30 | MP4A | Mx | 0 | 1.57 |
| 31 | MP4A | X | 0 | 5.57 |
| 32 | MP4A | Z | -142.357 | 5.57 |
| 33 | MP4A | Mx | 0 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 34.21 | 2.57 |
| 2 | MP1A | Z | -59.253 | 2.57 |
| 3 | MP1A | Mx | -.017 | 2.57 |
| 4 | MP1A | X | 34.21 | 4.57 |
| 5 | MP1A | Z | -59.253 | 4.57 |
| 6 | MP1A | Mx | -.017 | 4.57 |
| 7 | MP1A | X | 65.249 | 3.56 |
| 8 | MP1A | Z | -113.014 | 3.56 |
| 9 | MP1A | Mx | .06 | 3.56 |
| 10 | MP2A | X | 70.229 | 1.57 |
| 11 | MP2A | Z | -121.641 | 1.57 |
| 12 | MP2A | Mx | -.148 | 1.57 |
| 13 | MP2A | X | 70.229 | 5.57 |
| 14 | MP2A | Z | -121.641 | 5.57 |
| 15 | MP2A | Mx | -.148 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 16 | MP2A | X | 70.229 | 1.57 |
| 17 | MP2A | Z | -121.641 | 1.57 |
| 18 | MP2A | Mx | .055 | 1.57 |
| 19 | MP2A | X | 70.229 | 5.57 |
| 20 | MP2A | Z | -121.641 | 5.57 |
| 21 | MP2A | Mx | .055 | 5.57 |
| 22 | MP3A | X | 32.251 | 1 |
| 23 | MP3A | Z | -55.861 | 1 |
| 24 | MP3A | Mx | .027 | 1 |
| 25 | MP3A | X | 31.135 | 4 |
| 26 | MP3A | Z | -53.927 | 4 |
| 27 | MP3A | Mx | .023 | 4 |
| 28 | MP4A | X | 63.158 | 1.57 |
| 29 | MP4A | Z | -109.393 | 1.57 |
| 30 | MP4A | Mx | -.026 | 1.57 |
| 31 | MP4A | X | 63.158 | 5.57 |
| 32 | MP4A | Z | -109.393 | 5.57 |
| 33 | MP4A | Mx | -.026 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 37.699 | 2.57 |
| 2 | MP1A | Z | -21.765 | 2.57 |
| 3 | MP1A | Mx | -.019 | 2.57 |
| 4 | MP1A | X | 37.699 | 4.57 |
| 5 | MP1A | Z | -21.765 | 4.57 |
| 6 | MP1A | Mx | -.019 | 4.57 |
| 7 | MP1A | X | 92.146 | 3.56 |
| 8 | MP1A | Z | -53.201 | 3.56 |
| 9 | MP1A | Mx | .084 | 3.56 |
| 10 | MP2A | X | 99.136 | 1.57 |
| 11 | MP2A | Z | -57.236 | 1.57 |
| 12 | MP2A | Mx | -.114 | 1.57 |
| 13 | MP2A | X | 99.136 | 5.57 |
| 14 | MP2A | Z | -57.236 | 5.57 |
| 15 | MP2A | Mx | -.114 | 5.57 |
| 16 | MP2A | X | 99.136 | 1.57 |
| 17 | MP2A | Z | -57.236 | 1.57 |
| 18 | MP2A | Mx | -.018 | 1.57 |
| 19 | MP2A | X | 99.136 | 5.57 |
| 20 | MP2A | Z | -57.236 | 5.57 |
| 21 | MP2A | Mx | -.018 | 5.57 |
| 22 | MP3A | X | 45.764 | 1 |
| 23 | MP3A | Z | -26.422 | 1 |
| 24 | MP3A | Mx | .038 | 1 |
| 25 | MP3A | X | 39.962 | 4 |
| 26 | MP3A | Z | -23.072 | 4 |
| 27 | MP3A | Mx | .03 | 4 |
| 28 | MP4A | X | 81.61 | 1.57 |
| 29 | MP4A | Z | -47.118 | 1.57 |
| 30 | MP4A | Mx | -.034 | 1.57 |
| 31 | MP4A | X | 81.61 | 5.57 |
| 32 | MP4A | Z | -47.118 | 5.57 |
| 33 | MP4A | Mx | -.034 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 31.086 | 2.57 |
| 2 | MP1A | Z | 0 | 2.57 |
| 3 | MP1A | Mx | -.016 | 2.57 |
| 4 | MP1A | X | 31.086 | 4.57 |
| 5 | MP1A | Z | 0 | 4.57 |
| 6 | MP1A | Mx | -.016 | 4.57 |
| 7 | MP1A | X | 94.354 | 3.56 |
| 8 | MP1A | Z | 0 | 3.56 |
| 9 | MP1A | Mx | .086 | 3.56 |
| 10 | MP2A | X | 101.479 | 1.57 |
| 11 | MP2A | Z | 0 | 1.57 |
| 12 | MP2A | Mx | -.068 | 1.57 |
| 13 | MP2A | X | 101.479 | 5.57 |
| 14 | MP2A | Z | 0 | 5.57 |
| 15 | MP2A | Mx | -.068 | 5.57 |
| 16 | MP2A | X | 101.479 | 1.57 |
| 17 | MP2A | Z | 0 | 1.57 |
| 18 | MP2A | Mx | -.068 | 1.57 |
| 19 | MP2A | X | 101.479 | 5.57 |
| 20 | MP2A | Z | 0 | 5.57 |
| 21 | MP2A | Mx | -.068 | 5.57 |
| 22 | MP3A | X | 47.014 | 1 |
| 23 | MP3A | Z | 0 | 1 |
| 24 | MP3A | Mx | .039 | 1 |
| 25 | MP3A | X | 38.081 | 4 |
| 26 | MP3A | Z | 0 | 4 |
| 27 | MP3A | Mx | .029 | 4 |
| 28 | MP4A | X | 78.195 | 1.57 |
| 29 | MP4A | Z | 0 | 1.57 |
| 30 | MP4A | Mx | -.033 | 1.57 |
| 31 | MP4A | X | 78.195 | 5.57 |
| 32 | MP4A | Z | 0 | 5.57 |
| 33 | MP4A | Mx | -.033 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 37.699 | 2.57 |
| 2 | MP1A | Z | 21.765 | 2.57 |
| 3 | MP1A | Mx | -.019 | 2.57 |
| 4 | MP1A | X | 37.699 | 4.57 |
| 5 | MP1A | Z | 21.765 | 4.57 |
| 6 | MP1A | Mx | -.019 | 4.57 |
| 7 | MP1A | X | 92.146 | 3.56 |
| 8 | MP1A | Z | 53.201 | 3.56 |
| 9 | MP1A | Mx | .084 | 3.56 |
| 10 | MP2A | X | 99.136 | 1.57 |
| 11 | MP2A | Z | 57.236 | 1.57 |
| 12 | MP2A | Mx | -.018 | 1.57 |
| 13 | MP2A | X | 99.136 | 5.57 |
| 14 | MP2A | Z | 57.236 | 5.57 |
| 15 | MP2A | Mx | -.018 | 5.57 |
| 16 | MP2A | X | 99.136 | 1.57 |
| 17 | MP2A | Z | 57.236 | 1.57 |
| 18 | MP2A | Mx | -.114 | 1.57 |
| 19 | MP2A | X | 99.136 | 5.57 |
| 20 | MP2A | Z | 57.236 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 21 | MP2A | Mx | -.114 | 5.57 |
| 22 | MP3A | X | 45.764 | 1 |
| 23 | MP3A | Z | 26.422 | 1 |
| 24 | MP3A | Mx | .038 | 1 |
| 25 | MP3A | X | 39.962 | 4 |
| 26 | MP3A | Z | 23.072 | 4 |
| 27 | MP3A | Mx | .03 | 4 |
| 28 | MP4A | X | 81.61 | 1.57 |
| 29 | MP4A | Z | 47.118 | 1.57 |
| 30 | MP4A | Mx | -.034 | 1.57 |
| 31 | MP4A | X | 81.61 | 5.57 |
| 32 | MP4A | Z | 47.118 | 5.57 |
| 33 | MP4A | Mx | -.034 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 34.21 | 2.57 |
| 2 | MP1A | Z | 59.253 | 2.57 |
| 3 | MP1A | Mx | -.017 | 2.57 |
| 4 | MP1A | X | 34.21 | 4.57 |
| 5 | MP1A | Z | 59.253 | 4.57 |
| 6 | MP1A | Mx | -.017 | 4.57 |
| 7 | MP1A | X | 65.249 | 3.56 |
| 8 | MP1A | Z | 113.014 | 3.56 |
| 9 | MP1A | Mx | .06 | 3.56 |
| 10 | MP2A | X | 70.229 | 1.57 |
| 11 | MP2A | Z | 121.641 | 1.57 |
| 12 | MP2A | Mx | .055 | 1.57 |
| 13 | MP2A | X | 70.229 | 5.57 |
| 14 | MP2A | Z | 121.641 | 5.57 |
| 15 | MP2A | Mx | .055 | 5.57 |
| 16 | MP2A | X | 70.229 | 1.57 |
| 17 | MP2A | Z | 121.641 | 1.57 |
| 18 | MP2A | Mx | -.148 | 1.57 |
| 19 | MP2A | X | 70.229 | 5.57 |
| 20 | MP2A | Z | 121.641 | 5.57 |
| 21 | MP2A | Mx | -.148 | 5.57 |
| 22 | MP3A | X | 32.251 | 1 |
| 23 | MP3A | Z | 55.861 | 1 |
| 24 | MP3A | Mx | .027 | 1 |
| 25 | MP3A | X | 31.135 | 4 |
| 26 | MP3A | Z | 53.927 | 4 |
| 27 | MP3A | Mx | .023 | 4 |
| 28 | MP4A | X | 63.158 | 1.57 |
| 29 | MP4A | Z | 109.393 | 1.57 |
| 30 | MP4A | Mx | -.026 | 1.57 |
| 31 | MP4A | X | 63.158 | 5.57 |
| 32 | MP4A | Z | 109.393 | 5.57 |
| 33 | MP4A | Mx | -.026 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 0 | 2.57 |
| 2 | MP1A | Z | 80.863 | 2.57 |
| 3 | MP1A | Mx | 0 | 2.57 |
| 4 | MP1A | X | 0 | 4.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 5 | MP1A | Z | 80.863 | 4.57 |
| 6 | MP1A | Mx | 0 | 4.57 |
| 7 | MP1A | X | 0 | 3.56 |
| 8 | MP1A | Z | 142.545 | 3.56 |
| 9 | MP1A | Mx | 0 | 3.56 |
| 10 | MP2A | X | 0 | 1.57 |
| 11 | MP2A | Z | 153.452 | 1.57 |
| 12 | MP2A | Mx | .128 | 1.57 |
| 13 | MP2A | X | 0 | 5.57 |
| 14 | MP2A | Z | 153.452 | 5.57 |
| 15 | MP2A | Mx | .128 | 5.57 |
| 16 | MP2A | X | 0 | 1.57 |
| 17 | MP2A | Z | 153.452 | 1.57 |
| 18 | MP2A | Mx | -.128 | 1.57 |
| 19 | MP2A | X | 0 | 5.57 |
| 20 | MP2A | Z | 153.452 | 5.57 |
| 21 | MP2A | Mx | -.128 | 5.57 |
| 22 | MP3A | X | 0 | 1 |
| 23 | MP3A | Z | 70.332 | 1 |
| 24 | MP3A | Mx | 0 | 1 |
| 25 | MP3A | X | 0 | 4 |
| 26 | MP3A | Z | 70.332 | 4 |
| 27 | MP3A | Mx | 0 | 4 |
| 28 | MP4A | X | 0 | 1.57 |
| 29 | MP4A | Z | 142.357 | 1.57 |
| 30 | MP4A | Mx | 0 | 1.57 |
| 31 | MP4A | X | 0 | 5.57 |
| 32 | MP4A | Z | 142.357 | 5.57 |
| 33 | MP4A | Mx | 0 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -34.21 | 2.57 |
| 2 | MP1A | Z | 59.253 | 2.57 |
| 3 | MP1A | Mx | .017 | 2.57 |
| 4 | MP1A | X | -34.21 | 4.57 |
| 5 | MP1A | Z | 59.253 | 4.57 |
| 6 | MP1A | Mx | .017 | 4.57 |
| 7 | MP1A | X | -65.249 | 3.56 |
| 8 | MP1A | Z | 113.014 | 3.56 |
| 9 | MP1A | Mx | -.06 | 3.56 |
| 10 | MP2A | X | -70.229 | 1.57 |
| 11 | MP2A | Z | 121.641 | 1.57 |
| 12 | MP2A | Mx | .148 | 1.57 |
| 13 | MP2A | X | -70.229 | 5.57 |
| 14 | MP2A | Z | 121.641 | 5.57 |
| 15 | MP2A | Mx | .148 | 5.57 |
| 16 | MP2A | X | -70.229 | 1.57 |
| 17 | MP2A | Z | 121.641 | 1.57 |
| 18 | MP2A | Mx | -.055 | 1.57 |
| 19 | MP2A | X | -70.229 | 5.57 |
| 20 | MP2A | Z | 121.641 | 5.57 |
| 21 | MP2A | Mx | -.055 | 5.57 |
| 22 | MP3A | X | -32.251 | 1 |
| 23 | MP3A | Z | 55.861 | 1 |
| 24 | MP3A | Mx | -.027 | 1 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 25 | MP3A | X | -31.135 | 4 |
| 26 | MP3A | Z | 53.927 | 4 |
| 27 | MP3A | Mx | -.023 | 4 |
| 28 | MP4A | X | -63.158 | 1.57 |
| 29 | MP4A | Z | 109.393 | 1.57 |
| 30 | MP4A | Mx | .026 | 1.57 |
| 31 | MP4A | X | -63.158 | 5.57 |
| 32 | MP4A | Z | 109.393 | 5.57 |
| 33 | MP4A | Mx | .026 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -37.699 | 2.57 |
| 2 | MP1A | Z | 21.765 | 2.57 |
| 3 | MP1A | Mx | .019 | 2.57 |
| 4 | MP1A | X | -37.699 | 4.57 |
| 5 | MP1A | Z | 21.765 | 4.57 |
| 6 | MP1A | Mx | .019 | 4.57 |
| 7 | MP1A | X | -92.146 | 3.56 |
| 8 | MP1A | Z | 53.201 | 3.56 |
| 9 | MP1A | Mx | -.084 | 3.56 |
| 10 | MP2A | X | -99.136 | 1.57 |
| 11 | MP2A | Z | 57.236 | 1.57 |
| 12 | MP2A | Mx | .114 | 1.57 |
| 13 | MP2A | X | -99.136 | 5.57 |
| 14 | MP2A | Z | 57.236 | 5.57 |
| 15 | MP2A | Mx | .114 | 5.57 |
| 16 | MP2A | X | -99.136 | 1.57 |
| 17 | MP2A | Z | 57.236 | 1.57 |
| 18 | MP2A | Mx | .018 | 1.57 |
| 19 | MP2A | X | -99.136 | 5.57 |
| 20 | MP2A | Z | 57.236 | 5.57 |
| 21 | MP2A | Mx | .018 | 5.57 |
| 22 | MP3A | X | -45.764 | 1 |
| 23 | MP3A | Z | 26.422 | 1 |
| 24 | MP3A | Mx | -.038 | 1 |
| 25 | MP3A | X | -39.962 | 4 |
| 26 | MP3A | Z | 23.072 | 4 |
| 27 | MP3A | Mx | -.03 | 4 |
| 28 | MP4A | X | -81.61 | 1.57 |
| 29 | MP4A | Z | 47.118 | 1.57 |
| 30 | MP4A | Mx | .034 | 1.57 |
| 31 | MP4A | X | -81.61 | 5.57 |
| 32 | MP4A | Z | 47.118 | 5.57 |
| 33 | MP4A | Mx | .034 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -31.086 | 2.57 |
| 2 | MP1A | Z | 0 | 2.57 |
| 3 | MP1A | Mx | .016 | 2.57 |
| 4 | MP1A | X | -31.086 | 4.57 |
| 5 | MP1A | Z | 0 | 4.57 |
| 6 | MP1A | Mx | .016 | 4.57 |
| 7 | MP1A | X | -94.354 | 3.56 |
| 8 | MP1A | Z | 0 | 3.56 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 9 | MP1A | Mx | -.086 | 3.56 |
| 10 | MP2A | X | -101.479 | 1.57 |
| 11 | MP2A | Z | 0 | 1.57 |
| 12 | MP2A | Mx | .068 | 1.57 |
| 13 | MP2A | X | -101.479 | 5.57 |
| 14 | MP2A | Z | 0 | 5.57 |
| 15 | MP2A | Mx | .068 | 5.57 |
| 16 | MP2A | X | -101.479 | 1.57 |
| 17 | MP2A | Z | 0 | 1.57 |
| 18 | MP2A | Mx | .068 | 1.57 |
| 19 | MP2A | X | -101.479 | 5.57 |
| 20 | MP2A | Z | 0 | 5.57 |
| 21 | MP2A | Mx | .068 | 5.57 |
| 22 | MP3A | X | -47.014 | 1 |
| 23 | MP3A | Z | 0 | 1 |
| 24 | MP3A | Mx | -.039 | 1 |
| 25 | MP3A | X | -38.081 | 4 |
| 26 | MP3A | Z | 0 | 4 |
| 27 | MP3A | Mx | -.029 | 4 |
| 28 | MP4A | X | -78.195 | 1.57 |
| 29 | MP4A | Z | 0 | 1.57 |
| 30 | MP4A | Mx | .033 | 1.57 |
| 31 | MP4A | X | -78.195 | 5.57 |
| 32 | MP4A | Z | 0 | 5.57 |
| 33 | MP4A | Mx | .033 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -37.699 | 2.57 |
| 2 | MP1A | Z | -21.765 | 2.57 |
| 3 | MP1A | Mx | .019 | 2.57 |
| 4 | MP1A | X | -37.699 | 4.57 |
| 5 | MP1A | Z | -21.765 | 4.57 |
| 6 | MP1A | Mx | .019 | 4.57 |
| 7 | MP1A | X | -92.146 | 3.56 |
| 8 | MP1A | Z | -53.201 | 3.56 |
| 9 | MP1A | Mx | -.084 | 3.56 |
| 10 | MP2A | X | -99.136 | 1.57 |
| 11 | MP2A | Z | -57.236 | 1.57 |
| 12 | MP2A | Mx | .018 | 1.57 |
| 13 | MP2A | X | -99.136 | 5.57 |
| 14 | MP2A | Z | -57.236 | 5.57 |
| 15 | MP2A | Mx | .018 | 5.57 |
| 16 | MP2A | X | -99.136 | 1.57 |
| 17 | MP2A | Z | -57.236 | 1.57 |
| 18 | MP2A | Mx | .114 | 1.57 |
| 19 | MP2A | X | -99.136 | 5.57 |
| 20 | MP2A | Z | -57.236 | 5.57 |
| 21 | MP2A | Mx | .114 | 5.57 |
| 22 | MP3A | X | -45.764 | 1 |
| 23 | MP3A | Z | -26.422 | 1 |
| 24 | MP3A | Mx | -.038 | 1 |
| 25 | MP3A | X | -39.962 | 4 |
| 26 | MP3A | Z | -23.072 | 4 |
| 27 | MP3A | Mx | -.03 | 4 |
| 28 | MP4A | X | -81.61 | 1.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 29 | MP4A | Z | -47.118 | 1.57 |
| 30 | MP4A | Mx | .034 | 1.57 |
| 31 | MP4A | X | -81.61 | 5.57 |
| 32 | MP4A | Z | -47.118 | 5.57 |
| 33 | MP4A | Mx | .034 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -34.21 | 2.57 |
| 2 | MP1A | Z | -59.253 | 2.57 |
| 3 | MP1A | Mx | .017 | 2.57 |
| 4 | MP1A | X | -34.21 | 4.57 |
| 5 | MP1A | Z | -59.253 | 4.57 |
| 6 | MP1A | Mx | .017 | 4.57 |
| 7 | MP1A | X | -65.249 | 3.56 |
| 8 | MP1A | Z | -113.014 | 3.56 |
| 9 | MP1A | Mx | -.06 | 3.56 |
| 10 | MP2A | X | -70.229 | 1.57 |
| 11 | MP2A | Z | -121.641 | 1.57 |
| 12 | MP2A | Mx | -.055 | 1.57 |
| 13 | MP2A | X | -70.229 | 5.57 |
| 14 | MP2A | Z | -121.641 | 5.57 |
| 15 | MP2A | Mx | -.055 | 5.57 |
| 16 | MP2A | X | -70.229 | 1.57 |
| 17 | MP2A | Z | -121.641 | 1.57 |
| 18 | MP2A | Mx | .148 | 1.57 |
| 19 | MP2A | X | -70.229 | 5.57 |
| 20 | MP2A | Z | -121.641 | 5.57 |
| 21 | MP2A | Mx | .148 | 5.57 |
| 22 | MP3A | X | -32.251 | 1 |
| 23 | MP3A | Z | -55.861 | 1 |
| 24 | MP3A | Mx | -.027 | 1 |
| 25 | MP3A | X | -31.135 | 4 |
| 26 | MP3A | Z | -53.927 | 4 |
| 27 | MP3A | Mx | -.023 | 4 |
| 28 | MP4A | X | -63.158 | 1.57 |
| 29 | MP4A | Z | -109.393 | 1.57 |
| 30 | MP4A | Mx | .026 | 1.57 |
| 31 | MP4A | X | -63.158 | 5.57 |
| 32 | MP4A | Z | -109.393 | 5.57 |
| 33 | MP4A | Mx | .026 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 0 | 2.57 |
| 2 | MP1A | Z | -17.343 | 2.57 |
| 3 | MP1A | Mx | 0 | 2.57 |
| 4 | MP1A | X | 0 | 4.57 |
| 5 | MP1A | Z | -17.343 | 4.57 |
| 6 | MP1A | Mx | 0 | 4.57 |
| 7 | MP1A | X | 0 | 3.56 |
| 8 | MP1A | Z | -30.745 | 3.56 |
| 9 | MP1A | Mx | 0 | 3.56 |
| 10 | MP2A | X | 0 | 1.57 |
| 11 | MP2A | Z | -31.704 | 1.57 |
| 12 | MP2A | Mx | -.026 | 1.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 13 | MP2A | X | 0 | 5.57 |
| 14 | MP2A | Z | -31.704 | 5.57 |
| 15 | MP2A | Mx | -.026 | 5.57 |
| 16 | MP2A | X | 0 | 1.57 |
| 17 | MP2A | Z | -31.704 | 1.57 |
| 18 | MP2A | Mx | .026 | 1.57 |
| 19 | MP2A | X | 0 | 5.57 |
| 20 | MP2A | Z | -31.704 | 5.57 |
| 21 | MP2A | Mx | .026 | 5.57 |
| 22 | MP3A | X | 0 | 1 |
| 23 | MP3A | Z | -16.286 | 1 |
| 24 | MP3A | Mx | 0 | 1 |
| 25 | MP3A | X | 0 | 4 |
| 26 | MP3A | Z | -16.286 | 4 |
| 27 | MP3A | Mx | 0 | 4 |
| 28 | MP4A | X | 0 | 1.57 |
| 29 | MP4A | Z | -29.584 | 1.57 |
| 30 | MP4A | Mx | 0 | 1.57 |
| 31 | MP4A | X | 0 | 5.57 |
| 32 | MP4A | Z | -29.584 | 5.57 |
| 33 | MP4A | Mx | 0 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 7.451 | 2.57 |
| 2 | MP1A | Z | -12.906 | 2.57 |
| 3 | MP1A | Mx | -.004 | 2.57 |
| 4 | MP1A | X | 7.451 | 4.57 |
| 5 | MP1A | Z | -12.906 | 4.57 |
| 6 | MP1A | Mx | -.004 | 4.57 |
| 7 | MP1A | X | 14.201 | 3.56 |
| 8 | MP1A | Z | -24.598 | 3.56 |
| 9 | MP1A | Mx | .013 | 3.56 |
| 10 | MP2A | X | 14.669 | 1.57 |
| 11 | MP2A | Z | -25.407 | 1.57 |
| 12 | MP2A | Mx | -.031 | 1.57 |
| 13 | MP2A | X | 14.669 | 5.57 |
| 14 | MP2A | Z | -25.407 | 5.57 |
| 15 | MP2A | Mx | -.031 | 5.57 |
| 16 | MP2A | X | 14.669 | 1.57 |
| 17 | MP2A | Z | -25.407 | 1.57 |
| 18 | MP2A | Mx | .011 | 1.57 |
| 19 | MP2A | X | 14.669 | 5.57 |
| 20 | MP2A | Z | -25.407 | 5.57 |
| 21 | MP2A | Mx | .011 | 5.57 |
| 22 | MP3A | X | 7.547 | 1 |
| 23 | MP3A | Z | -13.072 | 1 |
| 24 | MP3A | Mx | .006 | 1 |
| 25 | MP3A | X | 7.321 | 4 |
| 26 | MP3A | Z | -12.68 | 4 |
| 27 | MP3A | Mx | .005 | 4 |
| 28 | MP4A | X | 13.319 | 1.57 |
| 29 | MP4A | Z | -23.069 | 1.57 |
| 30 | MP4A | Mx | -.006 | 1.57 |
| 31 | MP4A | X | 13.319 | 5.57 |
| 32 | MP4A | Z | -23.069 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 33 | MP4A | Mx | -.006 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 8.678 | 2.57 |
| 2 | MP1A | Z | -5.01 | 2.57 |
| 3 | MP1A | Mx | -.004 | 2.57 |
| 4 | MP1A | X | 8.678 | 4.57 |
| 5 | MP1A | Z | -5.01 | 4.57 |
| 6 | MP1A | Mx | -.004 | 4.57 |
| 7 | MP1A | X | 20.541 | 3.56 |
| 8 | MP1A | Z | -11.859 | 3.56 |
| 9 | MP1A | Mx | .019 | 3.56 |
| 10 | MP2A | X | 21.309 | 1.57 |
| 11 | MP2A | Z | -12.303 | 1.57 |
| 12 | MP2A | Mx | -.024 | 1.57 |
| 13 | MP2A | X | 21.309 | 5.57 |
| 14 | MP2A | Z | -12.303 | 5.57 |
| 15 | MP2A | Mx | -.024 | 5.57 |
| 16 | MP2A | X | 21.309 | 1.57 |
| 17 | MP2A | Z | -12.303 | 1.57 |
| 18 | MP2A | Mx | -.004 | 1.57 |
| 19 | MP2A | X | 21.309 | 5.57 |
| 20 | MP2A | Z | -12.303 | 5.57 |
| 21 | MP2A | Mx | -.004 | 5.57 |
| 22 | MP3A | X | 11.009 | 1 |
| 23 | MP3A | Z | -6.356 | 1 |
| 24 | MP3A | Mx | .009 | 1 |
| 25 | MP3A | X | 9.833 | 4 |
| 26 | MP3A | Z | -5.677 | 4 |
| 27 | MP3A | Mx | .007 | 4 |
| 28 | MP4A | X | 17.965 | 1.57 |
| 29 | MP4A | Z | -10.372 | 1.57 |
| 30 | MP4A | Mx | -.007 | 1.57 |
| 31 | MP4A | X | 17.965 | 5.57 |
| 32 | MP4A | Z | -10.372 | 5.57 |
| 33 | MP4A | Mx | -.007 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 7.579 | 2.57 |
| 2 | MP1A | Z | 0 | 2.57 |
| 3 | MP1A | Mx | -.004 | 2.57 |
| 4 | MP1A | X | 7.579 | 4.57 |
| 5 | MP1A | Z | 0 | 4.57 |
| 6 | MP1A | Mx | -.004 | 4.57 |
| 7 | MP1A | X | 21.376 | 3.56 |
| 8 | MP1A | Z | 0 | 3.56 |
| 9 | MP1A | Mx | .02 | 3.56 |
| 10 | MP2A | X | 22.239 | 1.57 |
| 11 | MP2A | Z | 0 | 1.57 |
| 12 | MP2A | Mx | -.015 | 1.57 |
| 13 | MP2A | X | 22.239 | 5.57 |
| 14 | MP2A | Z | 0 | 5.57 |
| 15 | MP2A | Mx | -.015 | 5.57 |
| 16 | MP2A | X | 22.239 | 1.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 17 | MP2A | Z | 0 | 1.57 |
| 18 | MP2A | Mx | -.015 | 1.57 |
| 19 | MP2A | X | 22.239 | 5.57 |
| 20 | MP2A | Z | 0 | 5.57 |
| 21 | MP2A | Mx | -.015 | 5.57 |
| 22 | MP3A | X | 11.521 | 1 |
| 23 | MP3A | Z | 0 | 1 |
| 24 | MP3A | Mx | .01 | 1 |
| 25 | MP3A | X | 9.711 | 4 |
| 26 | MP3A | Z | 0 | 4 |
| 27 | MP3A | Mx | .007 | 4 |
| 28 | MP4A | X | 17.798 | 1.57 |
| 29 | MP4A | Z | 0 | 1.57 |
| 30 | MP4A | Mx | -.007 | 1.57 |
| 31 | MP4A | X | 17.798 | 5.57 |
| 32 | MP4A | Z | 0 | 5.57 |
| 33 | MP4A | Mx | -.007 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 8.678 | 2.57 |
| 2 | MP1A | Z | 5.01 | 2.57 |
| 3 | MP1A | Mx | -.004 | 2.57 |
| 4 | MP1A | X | 8.678 | 4.57 |
| 5 | MP1A | Z | 5.01 | 4.57 |
| 6 | MP1A | Mx | -.004 | 4.57 |
| 7 | MP1A | X | 20.541 | 3.56 |
| 8 | MP1A | Z | 11.859 | 3.56 |
| 9 | MP1A | Mx | .019 | 3.56 |
| 10 | MP2A | X | 21.309 | 1.57 |
| 11 | MP2A | Z | 12.303 | 1.57 |
| 12 | MP2A | Mx | -.004 | 1.57 |
| 13 | MP2A | X | 21.309 | 5.57 |
| 14 | MP2A | Z | 12.303 | 5.57 |
| 15 | MP2A | Mx | -.004 | 5.57 |
| 16 | MP2A | X | 21.309 | 1.57 |
| 17 | MP2A | Z | 12.303 | 1.57 |
| 18 | MP2A | Mx | -.024 | 1.57 |
| 19 | MP2A | X | 21.309 | 5.57 |
| 20 | MP2A | Z | 12.303 | 5.57 |
| 21 | MP2A | Mx | -.024 | 5.57 |
| 22 | MP3A | X | 11.009 | 1 |
| 23 | MP3A | Z | 6.356 | 1 |
| 24 | MP3A | Mx | .009 | 1 |
| 25 | MP3A | X | 9.833 | 4 |
| 26 | MP3A | Z | 5.677 | 4 |
| 27 | MP3A | Mx | .007 | 4 |
| 28 | MP4A | X | 17.965 | 1.57 |
| 29 | MP4A | Z | 10.372 | 1.57 |
| 30 | MP4A | Mx | -.007 | 1.57 |
| 31 | MP4A | X | 17.965 | 5.57 |
| 32 | MP4A | Z | 10.372 | 5.57 |
| 33 | MP4A | Mx | -.007 | 5.57 |

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

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

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 7.451 | 2.57 |
| 2 | MP1A | Z | 12.906 | 2.57 |
| 3 | MP1A | Mx | -.004 | 2.57 |
| 4 | MP1A | X | 7.451 | 4.57 |
| 5 | MP1A | Z | 12.906 | 4.57 |
| 6 | MP1A | Mx | -.004 | 4.57 |
| 7 | MP1A | X | 14.201 | 3.56 |
| 8 | MP1A | Z | 24.598 | 3.56 |
| 9 | MP1A | Mx | .013 | 3.56 |
| 10 | MP2A | X | 14.669 | 1.57 |
| 11 | MP2A | Z | 25.407 | 1.57 |
| 12 | MP2A | Mx | .011 | 1.57 |
| 13 | MP2A | X | 14.669 | 5.57 |
| 14 | MP2A | Z | 25.407 | 5.57 |
| 15 | MP2A | Mx | .011 | 5.57 |
| 16 | MP2A | X | 14.669 | 1.57 |
| 17 | MP2A | Z | 25.407 | 1.57 |
| 18 | MP2A | Mx | -.031 | 1.57 |
| 19 | MP2A | X | 14.669 | 5.57 |
| 20 | MP2A | Z | 25.407 | 5.57 |
| 21 | MP2A | Mx | -.031 | 5.57 |
| 22 | MP3A | X | 7.547 | 1 |
| 23 | MP3A | Z | 13.072 | 1 |
| 24 | MP3A | Mx | .006 | 1 |
| 25 | MP3A | X | 7.321 | 4 |
| 26 | MP3A | Z | 12.68 | 4 |
| 27 | MP3A | Mx | .005 | 4 |
| 28 | MP4A | X | 13.319 | 1.57 |
| 29 | MP4A | Z | 23.069 | 1.57 |
| 30 | MP4A | Mx | -.006 | 1.57 |
| 31 | MP4A | X | 13.319 | 5.57 |
| 32 | MP4A | Z | 23.069 | 5.57 |
| 33 | MP4A | Mx | -.006 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 0 | 2.57 |
| 2 | MP1A | Z | 17.343 | 2.57 |
| 3 | MP1A | Mx | 0 | 2.57 |
| 4 | MP1A | X | 0 | 4.57 |
| 5 | MP1A | Z | 17.343 | 4.57 |
| 6 | MP1A | Mx | 0 | 4.57 |
| 7 | MP1A | X | 0 | 3.56 |
| 8 | MP1A | Z | 30.745 | 3.56 |
| 9 | MP1A | Mx | 0 | 3.56 |
| 10 | MP2A | X | 0 | 1.57 |
| 11 | MP2A | Z | 31.704 | 1.57 |
| 12 | MP2A | Mx | .026 | 1.57 |
| 13 | MP2A | X | 0 | 5.57 |
| 14 | MP2A | Z | 31.704 | 5.57 |
| 15 | MP2A | Mx | .026 | 5.57 |
| 16 | MP2A | X | 0 | 1.57 |
| 17 | MP2A | Z | 31.704 | 1.57 |
| 18 | MP2A | Mx | -.026 | 1.57 |
| 19 | MP2A | X | 0 | 5.57 |
| 20 | MP2A | Z | 31.704 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 21 | MP2A | Mx | -.026 | 5.57 |
| 22 | MP3A | X | 0 | 1 |
| 23 | MP3A | Z | 16.286 | 1 |
| 24 | MP3A | Mx | 0 | 1 |
| 25 | MP3A | X | 0 | 4 |
| 26 | MP3A | Z | 16.286 | 4 |
| 27 | MP3A | Mx | 0 | 4 |
| 28 | MP4A | X | 0 | 1.57 |
| 29 | MP4A | Z | 29.584 | 1.57 |
| 30 | MP4A | Mx | 0 | 1.57 |
| 31 | MP4A | X | 0 | 5.57 |
| 32 | MP4A | Z | 29.584 | 5.57 |
| 33 | MP4A | Mx | 0 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -7.451 | 2.57 |
| 2 | MP1A | Z | 12.906 | 2.57 |
| 3 | MP1A | Mx | .004 | 2.57 |
| 4 | MP1A | X | -7.451 | 4.57 |
| 5 | MP1A | Z | 12.906 | 4.57 |
| 6 | MP1A | Mx | .004 | 4.57 |
| 7 | MP1A | X | -14.201 | 3.56 |
| 8 | MP1A | Z | 24.598 | 3.56 |
| 9 | MP1A | Mx | -.013 | 3.56 |
| 10 | MP2A | X | -14.669 | 1.57 |
| 11 | MP2A | Z | 25.407 | 1.57 |
| 12 | MP2A | Mx | .031 | 1.57 |
| 13 | MP2A | X | -14.669 | 5.57 |
| 14 | MP2A | Z | 25.407 | 5.57 |
| 15 | MP2A | Mx | .031 | 5.57 |
| 16 | MP2A | X | -14.669 | 1.57 |
| 17 | MP2A | Z | 25.407 | 1.57 |
| 18 | MP2A | Mx | -.011 | 1.57 |
| 19 | MP2A | X | -14.669 | 5.57 |
| 20 | MP2A | Z | 25.407 | 5.57 |
| 21 | MP2A | Mx | -.011 | 5.57 |
| 22 | MP3A | X | -7.547 | 1 |
| 23 | MP3A | Z | 13.072 | 1 |
| 24 | MP3A | Mx | -.006 | 1 |
| 25 | MP3A | X | -7.321 | 4 |
| 26 | MP3A | Z | 12.68 | 4 |
| 27 | MP3A | Mx | -.005 | 4 |
| 28 | MP4A | X | -13.319 | 1.57 |
| 29 | MP4A | Z | 23.069 | 1.57 |
| 30 | MP4A | Mx | .006 | 1.57 |
| 31 | MP4A | X | -13.319 | 5.57 |
| 32 | MP4A | Z | 23.069 | 5.57 |
| 33 | MP4A | Mx | .006 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -8.678 | 2.57 |
| 2 | MP1A | Z | 5.01 | 2.57 |
| 3 | MP1A | Mx | .004 | 2.57 |
| 4 | MP1A | X | -8.678 | 4.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 5 | MP1A | Z | 5.01 | 4.57 |
| 6 | MP1A | Mx | .004 | 4.57 |
| 7 | MP1A | X | -20.541 | 3.56 |
| 8 | MP1A | Z | 11.859 | 3.56 |
| 9 | MP1A | Mx | -.019 | 3.56 |
| 10 | MP2A | X | -21.309 | 1.57 |
| 11 | MP2A | Z | 12.303 | 1.57 |
| 12 | MP2A | Mx | .024 | 1.57 |
| 13 | MP2A | X | -21.309 | 5.57 |
| 14 | MP2A | Z | 12.303 | 5.57 |
| 15 | MP2A | Mx | .024 | 5.57 |
| 16 | MP2A | X | -21.309 | 1.57 |
| 17 | MP2A | Z | 12.303 | 1.57 |
| 18 | MP2A | Mx | .004 | 1.57 |
| 19 | MP2A | X | -21.309 | 5.57 |
| 20 | MP2A | Z | 12.303 | 5.57 |
| 21 | MP2A | Mx | .004 | 5.57 |
| 22 | MP3A | X | -11.009 | 1 |
| 23 | MP3A | Z | 6.356 | 1 |
| 24 | MP3A | Mx | -.009 | 1 |
| 25 | MP3A | X | -9.833 | 4 |
| 26 | MP3A | Z | 5.677 | 4 |
| 27 | MP3A | Mx | -.007 | 4 |
| 28 | MP4A | X | -17.965 | 1.57 |
| 29 | MP4A | Z | 10.372 | 1.57 |
| 30 | MP4A | Mx | .007 | 1.57 |
| 31 | MP4A | X | -17.965 | 5.57 |
| 32 | MP4A | Z | 10.372 | 5.57 |
| 33 | MP4A | Mx | .007 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -7.579 | 2.57 |
| 2 | MP1A | Z | 0 | 2.57 |
| 3 | MP1A | Mx | .004 | 2.57 |
| 4 | MP1A | X | -7.579 | 4.57 |
| 5 | MP1A | Z | 0 | 4.57 |
| 6 | MP1A | Mx | .004 | 4.57 |
| 7 | MP1A | X | -21.376 | 3.56 |
| 8 | MP1A | Z | 0 | 3.56 |
| 9 | MP1A | Mx | -.02 | 3.56 |
| 10 | MP2A | X | -22.239 | 1.57 |
| 11 | MP2A | Z | 0 | 1.57 |
| 12 | MP2A | Mx | .015 | 1.57 |
| 13 | MP2A | X | -22.239 | 5.57 |
| 14 | MP2A | Z | 0 | 5.57 |
| 15 | MP2A | Mx | .015 | 5.57 |
| 16 | MP2A | X | -22.239 | 1.57 |
| 17 | MP2A | Z | 0 | 1.57 |
| 18 | MP2A | Mx | .015 | 1.57 |
| 19 | MP2A | X | -22.239 | 5.57 |
| 20 | MP2A | Z | 0 | 5.57 |
| 21 | MP2A | Mx | .015 | 5.57 |
| 22 | MP3A | X | -11.521 | 1 |
| 23 | MP3A | Z | 0 | 1 |
| 24 | MP3A | Mx | -.01 | 1 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 25 | MP3A | X | -9.711 | 4 |
| 26 | MP3A | Z | 0 | 4 |
| 27 | MP3A | Mx | -.007 | 4 |
| 28 | MP4A | X | -17.798 | 1.57 |
| 29 | MP4A | Z | 0 | 1.57 |
| 30 | MP4A | Mx | .007 | 1.57 |
| 31 | MP4A | X | -17.798 | 5.57 |
| 32 | MP4A | Z | 0 | 5.57 |
| 33 | MP4A | Mx | .007 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -8.678 | 2.57 |
| 2 | MP1A | Z | -5.01 | 2.57 |
| 3 | MP1A | Mx | .004 | 2.57 |
| 4 | MP1A | X | -8.678 | 4.57 |
| 5 | MP1A | Z | -5.01 | 4.57 |
| 6 | MP1A | Mx | .004 | 4.57 |
| 7 | MP1A | X | -20.541 | 3.56 |
| 8 | MP1A | Z | -11.859 | 3.56 |
| 9 | MP1A | Mx | -.019 | 3.56 |
| 10 | MP2A | X | -21.309 | 1.57 |
| 11 | MP2A | Z | -12.303 | 1.57 |
| 12 | MP2A | Mx | .004 | 1.57 |
| 13 | MP2A | X | -21.309 | 5.57 |
| 14 | MP2A | Z | -12.303 | 5.57 |
| 15 | MP2A | Mx | .004 | 5.57 |
| 16 | MP2A | X | -21.309 | 1.57 |
| 17 | MP2A | Z | -12.303 | 1.57 |
| 18 | MP2A | Mx | .024 | 1.57 |
| 19 | MP2A | X | -21.309 | 5.57 |
| 20 | MP2A | Z | -12.303 | 5.57 |
| 21 | MP2A | Mx | .024 | 5.57 |
| 22 | MP3A | X | -11.009 | 1 |
| 23 | MP3A | Z | -6.356 | 1 |
| 24 | MP3A | Mx | -.009 | 1 |
| 25 | MP3A | X | -9.833 | 4 |
| 26 | MP3A | Z | -5.677 | 4 |
| 27 | MP3A | Mx | -.007 | 4 |
| 28 | MP4A | X | -17.965 | 1.57 |
| 29 | MP4A | Z | -10.372 | 1.57 |
| 30 | MP4A | Mx | .007 | 1.57 |
| 31 | MP4A | X | -17.965 | 5.57 |
| 32 | MP4A | Z | -10.372 | 5.57 |
| 33 | MP4A | Mx | .007 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -7.451 | 2.57 |
| 2 | MP1A | Z | -12.906 | 2.57 |
| 3 | MP1A | Mx | .004 | 2.57 |
| 4 | MP1A | X | -7.451 | 4.57 |
| 5 | MP1A | Z | -12.906 | 4.57 |
| 6 | MP1A | Mx | .004 | 4.57 |
| 7 | MP1A | X | -14.201 | 3.56 |
| 8 | MP1A | Z | -24.598 | 3.56 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 9 | MP1A | Mx | -.013 | 3.56 |
| 10 | MP2A | X | -14.669 | 1.57 |
| 11 | MP2A | Z | -25.407 | 1.57 |
| 12 | MP2A | Mx | -.011 | 1.57 |
| 13 | MP2A | X | -14.669 | 5.57 |
| 14 | MP2A | Z | -25.407 | 5.57 |
| 15 | MP2A | Mx | -.011 | 5.57 |
| 16 | MP2A | X | -14.669 | 1.57 |
| 17 | MP2A | Z | -25.407 | 1.57 |
| 18 | MP2A | Mx | .031 | 1.57 |
| 19 | MP2A | X | -14.669 | 5.57 |
| 20 | MP2A | Z | -25.407 | 5.57 |
| 21 | MP2A | Mx | .031 | 5.57 |
| 22 | MP3A | X | -7.547 | 1 |
| 23 | MP3A | Z | -13.072 | 1 |
| 24 | MP3A | Mx | -.006 | 1 |
| 25 | MP3A | X | -7.321 | 4 |
| 26 | MP3A | Z | -12.68 | 4 |
| 27 | MP3A | Mx | -.005 | 4 |
| 28 | MP4A | X | -13.319 | 1.57 |
| 29 | MP4A | Z | -23.069 | 1.57 |
| 30 | MP4A | Mx | .006 | 1.57 |
| 31 | MP4A | X | -13.319 | 5.57 |
| 32 | MP4A | Z | -23.069 | 5.57 |
| 33 | MP4A | Mx | .006 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 0 | 2.57 |
| 2 | MP1A | Z | -5.227 | 2.57 |
| 3 | MP1A | Mx | 0 | 2.57 |
| 4 | MP1A | X | 0 | 4.57 |
| 5 | MP1A | Z | -5.227 | 4.57 |
| 6 | MP1A | Mx | 0 | 4.57 |
| 7 | MP1A | X | 0 | 3.56 |
| 8 | MP1A | Z | -9.214 | 3.56 |
| 9 | MP1A | Mx | 0 | 3.56 |
| 10 | MP2A | X | 0 | 1.57 |
| 11 | MP2A | Z | -9.919 | 1.57 |
| 12 | MP2A | Mx | -.008 | 1.57 |
| 13 | MP2A | X | 0 | 5.57 |
| 14 | MP2A | Z | -9.919 | 5.57 |
| 15 | MP2A | Mx | -.008 | 5.57 |
| 16 | MP2A | X | 0 | 1.57 |
| 17 | MP2A | Z | -9.919 | 1.57 |
| 18 | MP2A | Mx | .008 | 1.57 |
| 19 | MP2A | X | 0 | 5.57 |
| 20 | MP2A | Z | -9.919 | 5.57 |
| 21 | MP2A | Mx | .008 | 5.57 |
| 22 | MP3A | X | 0 | 1 |
| 23 | MP3A | Z | -4.546 | 1 |
| 24 | MP3A | Mx | 0 | 1 |
| 25 | MP3A | X | 0 | 4 |
| 26 | MP3A | Z | -4.546 | 4 |
| 27 | MP3A | Mx | 0 | 4 |
| 28 | MP4A | X | 0 | 1.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 29 | MP4A | Z | -9.201 | 1.57 |
| 30 | MP4A | Mx | 0 | 1.57 |
| 31 | MP4A | X | 0 | 5.57 |
| 32 | MP4A | Z | -9.201 | 5.57 |
| 33 | MP4A | Mx | 0 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 2.211 | 2.57 |
| 2 | MP1A | Z | -3.83 | 2.57 |
| 3 | MP1A | Mx | -.001 | 2.57 |
| 4 | MP1A | X | 2.211 | 4.57 |
| 5 | MP1A | Z | -3.83 | 4.57 |
| 6 | MP1A | Mx | -.001 | 4.57 |
| 7 | MP1A | X | 4.217 | 3.56 |
| 8 | MP1A | Z | -7.305 | 3.56 |
| 9 | MP1A | Mx | .004 | 3.56 |
| 10 | MP2A | X | 4.539 | 1.57 |
| 11 | MP2A | Z | -7.862 | 1.57 |
| 12 | MP2A | Mx | -.01 | 1.57 |
| 13 | MP2A | X | 4.539 | 5.57 |
| 14 | MP2A | Z | -7.862 | 5.57 |
| 15 | MP2A | Mx | -.01 | 5.57 |
| 16 | MP2A | X | 4.539 | 1.57 |
| 17 | MP2A | Z | -7.862 | 1.57 |
| 18 | MP2A | Mx | .004 | 1.57 |
| 19 | MP2A | X | 4.539 | 5.57 |
| 20 | MP2A | Z | -7.862 | 5.57 |
| 21 | MP2A | Mx | .004 | 5.57 |
| 22 | MP3A | X | 2.085 | 1 |
| 23 | MP3A | Z | -3.611 | 1 |
| 24 | MP3A | Mx | .002 | 1 |
| 25 | MP3A | X | 2.012 | 4 |
| 26 | MP3A | Z | -3.486 | 4 |
| 27 | MP3A | Mx | .002 | 4 |
| 28 | MP4A | X | 4.082 | 1.57 |
| 29 | MP4A | Z | -7.071 | 1.57 |
| 30 | MP4A | Mx | -.002 | 1.57 |
| 31 | MP4A | X | 4.082 | 5.57 |
| 32 | MP4A | Z | -7.071 | 5.57 |
| 33 | MP4A | Mx | -.002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 2.437 | 2.57 |
| 2 | MP1A | Z | -1.407 | 2.57 |
| 3 | MP1A | Mx | -.001 | 2.57 |
| 4 | MP1A | X | 2.437 | 4.57 |
| 5 | MP1A | Z | -1.407 | 4.57 |
| 6 | MP1A | Mx | -.001 | 4.57 |
| 7 | MP1A | X | 5.956 | 3.56 |
| 8 | MP1A | Z | -3.439 | 3.56 |
| 9 | MP1A | Mx | .005 | 3.56 |
| 10 | MP2A | X | 6.408 | 1.57 |
| 11 | MP2A | Z | -3.7 | 1.57 |
| 12 | MP2A | Mx | -.007 | 1.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 13 | MP2A | X | 6.408 | 5.57 |
| 14 | MP2A | Z | -3.7 | 5.57 |
| 15 | MP2A | Mx | -.007 | 5.57 |
| 16 | MP2A | X | 6.408 | 1.57 |
| 17 | MP2A | Z | -3.7 | 1.57 |
| 18 | MP2A | Mx | -.001 | 1.57 |
| 19 | MP2A | X | 6.408 | 5.57 |
| 20 | MP2A | Z | -3.7 | 5.57 |
| 21 | MP2A | Mx | -.001 | 5.57 |
| 22 | MP3A | X | 2.958 | 1 |
| 23 | MP3A | Z | -1.708 | 1 |
| 24 | MP3A | Mx | .002 | 1 |
| 25 | MP3A | X | 2.583 | 4 |
| 26 | MP3A | Z | -1.491 | 4 |
| 27 | MP3A | Mx | .002 | 4 |
| 28 | MP4A | X | 5.275 | 1.57 |
| 29 | MP4A | Z | -3.046 | 1.57 |
| 30 | MP4A | Mx | -.002 | 1.57 |
| 31 | MP4A | X | 5.275 | 5.57 |
| 32 | MP4A | Z | -3.046 | 5.57 |
| 33 | MP4A | Mx | -.002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 2.009 | 2.57 |
| 2 | MP1A | Z | 0 | 2.57 |
| 3 | MP1A | Mx | -.001 | 2.57 |
| 4 | MP1A | X | 2.009 | 4.57 |
| 5 | MP1A | Z | 0 | 4.57 |
| 6 | MP1A | Mx | -.001 | 4.57 |
| 7 | MP1A | X | 6.099 | 3.56 |
| 8 | MP1A | Z | 0 | 3.56 |
| 9 | MP1A | Mx | .006 | 3.56 |
| 10 | MP2A | X | 6.559 | 1.57 |
| 11 | MP2A | Z | 0 | 1.57 |
| 12 | MP2A | Mx | -.004 | 1.57 |
| 13 | MP2A | X | 6.559 | 5.57 |
| 14 | MP2A | Z | 0 | 5.57 |
| 15 | MP2A | Mx | -.004 | 5.57 |
| 16 | MP2A | X | 6.559 | 1.57 |
| 17 | MP2A | Z | 0 | 1.57 |
| 18 | MP2A | Mx | -.004 | 1.57 |
| 19 | MP2A | X | 6.559 | 5.57 |
| 20 | MP2A | Z | 0 | 5.57 |
| 21 | MP2A | Mx | -.004 | 5.57 |
| 22 | MP3A | X | 3.039 | 1 |
| 23 | MP3A | Z | 0 | 1 |
| 24 | MP3A | Mx | .003 | 1 |
| 25 | MP3A | X | 2.461 | 4 |
| 26 | MP3A | Z | 0 | 4 |
| 27 | MP3A | Mx | .002 | 4 |
| 28 | MP4A | X | 5.054 | 1.57 |
| 29 | MP4A | Z | 0 | 1.57 |
| 30 | MP4A | Mx | -.002 | 1.57 |
| 31 | MP4A | X | 5.054 | 5.57 |
| 32 | MP4A | Z | 0 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 33 | MP4A | Mx | -.002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 2.437 | 2.57 |
| 2 | MP1A | Z | 1.407 | 2.57 |
| 3 | MP1A | Mx | -.001 | 2.57 |
| 4 | MP1A | X | 2.437 | 4.57 |
| 5 | MP1A | Z | 1.407 | 4.57 |
| 6 | MP1A | Mx | -.001 | 4.57 |
| 7 | MP1A | X | 5.956 | 3.56 |
| 8 | MP1A | Z | 3.439 | 3.56 |
| 9 | MP1A | Mx | .005 | 3.56 |
| 10 | MP2A | X | 6.408 | 1.57 |
| 11 | MP2A | Z | 3.7 | 1.57 |
| 12 | MP2A | Mx | -.001 | 1.57 |
| 13 | MP2A | X | 6.408 | 5.57 |
| 14 | MP2A | Z | 3.7 | 5.57 |
| 15 | MP2A | Mx | -.001 | 5.57 |
| 16 | MP2A | X | 6.408 | 1.57 |
| 17 | MP2A | Z | 3.7 | 1.57 |
| 18 | MP2A | Mx | -.007 | 1.57 |
| 19 | MP2A | X | 6.408 | 5.57 |
| 20 | MP2A | Z | 3.7 | 5.57 |
| 21 | MP2A | Mx | -.007 | 5.57 |
| 22 | MP3A | X | 2.958 | 1 |
| 23 | MP3A | Z | 1.708 | 1 |
| 24 | MP3A | Mx | .002 | 1 |
| 25 | MP3A | X | 2.583 | 4 |
| 26 | MP3A | Z | 1.491 | 4 |
| 27 | MP3A | Mx | .002 | 4 |
| 28 | MP4A | X | 5.275 | 1.57 |
| 29 | MP4A | Z | 3.046 | 1.57 |
| 30 | MP4A | Mx | -.002 | 1.57 |
| 31 | MP4A | X | 5.275 | 5.57 |
| 32 | MP4A | Z | 3.046 | 5.57 |
| 33 | MP4A | Mx | -.002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 2.211 | 2.57 |
| 2 | MP1A | Z | 3.83 | 2.57 |
| 3 | MP1A | Mx | -.001 | 2.57 |
| 4 | MP1A | X | 2.211 | 4.57 |
| 5 | MP1A | Z | 3.83 | 4.57 |
| 6 | MP1A | Mx | -.001 | 4.57 |
| 7 | MP1A | X | 4.217 | 3.56 |
| 8 | MP1A | Z | 7.305 | 3.56 |
| 9 | MP1A | Mx | .004 | 3.56 |
| 10 | MP2A | X | 4.539 | 1.57 |
| 11 | MP2A | Z | 7.862 | 1.57 |
| 12 | MP2A | Mx | .004 | 1.57 |
| 13 | MP2A | X | 4.539 | 5.57 |
| 14 | MP2A | Z | 7.862 | 5.57 |
| 15 | MP2A | Mx | .004 | 5.57 |
| 16 | MP2A | X | 4.539 | 1.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 17 | MP2A | Z | 7.862 | 1.57 |
| 18 | MP2A | Mx | -.01 | 1.57 |
| 19 | MP2A | X | 4.539 | 5.57 |
| 20 | MP2A | Z | 7.862 | 5.57 |
| 21 | MP2A | Mx | -.01 | 5.57 |
| 22 | MP3A | X | 2.085 | 1 |
| 23 | MP3A | Z | 3.611 | 1 |
| 24 | MP3A | Mx | .002 | 1 |
| 25 | MP3A | X | 2.012 | 4 |
| 26 | MP3A | Z | 3.486 | 4 |
| 27 | MP3A | Mx | .002 | 4 |
| 28 | MP4A | X | 4.082 | 1.57 |
| 29 | MP4A | Z | 7.071 | 1.57 |
| 30 | MP4A | Mx | -.002 | 1.57 |
| 31 | MP4A | X | 4.082 | 5.57 |
| 32 | MP4A | Z | 7.071 | 5.57 |
| 33 | MP4A | Mx | -.002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | 0 | 2.57 |
| 2 | MP1A | Z | 5.227 | 2.57 |
| 3 | MP1A | Mx | 0 | 2.57 |
| 4 | MP1A | X | 0 | 4.57 |
| 5 | MP1A | Z | 5.227 | 4.57 |
| 6 | MP1A | Mx | 0 | 4.57 |
| 7 | MP1A | X | 0 | 3.56 |
| 8 | MP1A | Z | 9.214 | 3.56 |
| 9 | MP1A | Mx | 0 | 3.56 |
| 10 | MP2A | X | 0 | 1.57 |
| 11 | MP2A | Z | 9.919 | 1.57 |
| 12 | MP2A | Mx | .008 | 1.57 |
| 13 | MP2A | X | 0 | 5.57 |
| 14 | MP2A | Z | 9.919 | 5.57 |
| 15 | MP2A | Mx | .008 | 5.57 |
| 16 | MP2A | X | 0 | 1.57 |
| 17 | MP2A | Z | 9.919 | 1.57 |
| 18 | MP2A | Mx | -.008 | 1.57 |
| 19 | MP2A | X | 0 | 5.57 |
| 20 | MP2A | Z | 9.919 | 5.57 |
| 21 | MP2A | Mx | -.008 | 5.57 |
| 22 | MP3A | X | 0 | 1 |
| 23 | MP3A | Z | 4.546 | 1 |
| 24 | MP3A | Mx | 0 | 1 |
| 25 | MP3A | X | 0 | 4 |
| 26 | MP3A | Z | 4.546 | 4 |
| 27 | MP3A | Mx | 0 | 4 |
| 28 | MP4A | X | 0 | 1.57 |
| 29 | MP4A | Z | 9.201 | 1.57 |
| 30 | MP4A | Mx | 0 | 1.57 |
| 31 | MP4A | X | 0 | 5.57 |
| 32 | MP4A | Z | 9.201 | 5.57 |
| 33 | MP4A | Mx | 0 | 5.57 |

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

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

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -2.211 | 2.57 |
| 2 | MP1A | Z | 3.83 | 2.57 |
| 3 | MP1A | Mx | .001 | 2.57 |
| 4 | MP1A | X | -2.211 | 4.57 |
| 5 | MP1A | Z | 3.83 | 4.57 |
| 6 | MP1A | Mx | .001 | 4.57 |
| 7 | MP1A | X | -4.217 | 3.56 |
| 8 | MP1A | Z | 7.305 | 3.56 |
| 9 | MP1A | Mx | -.004 | 3.56 |
| 10 | MP2A | X | -4.539 | 1.57 |
| 11 | MP2A | Z | 7.862 | 1.57 |
| 12 | MP2A | Mx | .01 | 1.57 |
| 13 | MP2A | X | -4.539 | 5.57 |
| 14 | MP2A | Z | 7.862 | 5.57 |
| 15 | MP2A | Mx | .01 | 5.57 |
| 16 | MP2A | X | -4.539 | 1.57 |
| 17 | MP2A | Z | 7.862 | 1.57 |
| 18 | MP2A | Mx | -.004 | 1.57 |
| 19 | MP2A | X | -4.539 | 5.57 |
| 20 | MP2A | Z | 7.862 | 5.57 |
| 21 | MP2A | Mx | -.004 | 5.57 |
| 22 | MP3A | X | -2.085 | 1 |
| 23 | MP3A | Z | 3.611 | 1 |
| 24 | MP3A | Mx | -.002 | 1 |
| 25 | MP3A | X | -2.012 | 4 |
| 26 | MP3A | Z | 3.486 | 4 |
| 27 | MP3A | Mx | -.002 | 4 |
| 28 | MP4A | X | -4.082 | 1.57 |
| 29 | MP4A | Z | 7.071 | 1.57 |
| 30 | MP4A | Mx | .002 | 1.57 |
| 31 | MP4A | X | -4.082 | 5.57 |
| 32 | MP4A | Z | 7.071 | 5.57 |
| 33 | MP4A | Mx | .002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -2.437 | 2.57 |
| 2 | MP1A | Z | 1.407 | 2.57 |
| 3 | MP1A | Mx | .001 | 2.57 |
| 4 | MP1A | X | -2.437 | 4.57 |
| 5 | MP1A | Z | 1.407 | 4.57 |
| 6 | MP1A | Mx | .001 | 4.57 |
| 7 | MP1A | X | -5.956 | 3.56 |
| 8 | MP1A | Z | 3.439 | 3.56 |
| 9 | MP1A | Mx | -.005 | 3.56 |
| 10 | MP2A | X | -6.408 | 1.57 |
| 11 | MP2A | Z | 3.7 | 1.57 |
| 12 | MP2A | Mx | .007 | 1.57 |
| 13 | MP2A | X | -6.408 | 5.57 |
| 14 | MP2A | Z | 3.7 | 5.57 |
| 15 | MP2A | Mx | .007 | 5.57 |
| 16 | MP2A | X | -6.408 | 1.57 |
| 17 | MP2A | Z | 3.7 | 1.57 |
| 18 | MP2A | Mx | .001 | 1.57 |
| 19 | MP2A | X | -6.408 | 5.57 |
| 20 | MP2A | Z | 3.7 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 21 | MP2A | Mx | .001 | 5.57 |
| 22 | MP3A | X | -2.958 | 1 |
| 23 | MP3A | Z | 1.708 | 1 |
| 24 | MP3A | Mx | -.002 | 1 |
| 25 | MP3A | X | -2.583 | 4 |
| 26 | MP3A | Z | 1.491 | 4 |
| 27 | MP3A | Mx | -.002 | 4 |
| 28 | MP4A | X | -5.275 | 1.57 |
| 29 | MP4A | Z | 3.046 | 1.57 |
| 30 | MP4A | Mx | .002 | 1.57 |
| 31 | MP4A | X | -5.275 | 5.57 |
| 32 | MP4A | Z | 3.046 | 5.57 |
| 33 | MP4A | Mx | .002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -2.009 | 2.57 |
| 2 | MP1A | Z | 0 | 2.57 |
| 3 | MP1A | Mx | .001 | 2.57 |
| 4 | MP1A | X | -2.009 | 4.57 |
| 5 | MP1A | Z | 0 | 4.57 |
| 6 | MP1A | Mx | .001 | 4.57 |
| 7 | MP1A | X | -6.099 | 3.56 |
| 8 | MP1A | Z | 0 | 3.56 |
| 9 | MP1A | Mx | -.006 | 3.56 |
| 10 | MP2A | X | -6.559 | 1.57 |
| 11 | MP2A | Z | 0 | 1.57 |
| 12 | MP2A | Mx | .004 | 1.57 |
| 13 | MP2A | X | -6.559 | 5.57 |
| 14 | MP2A | Z | 0 | 5.57 |
| 15 | MP2A | Mx | .004 | 5.57 |
| 16 | MP2A | X | -6.559 | 1.57 |
| 17 | MP2A | Z | 0 | 1.57 |
| 18 | MP2A | Mx | .004 | 1.57 |
| 19 | MP2A | X | -6.559 | 5.57 |
| 20 | MP2A | Z | 0 | 5.57 |
| 21 | MP2A | Mx | .004 | 5.57 |
| 22 | MP3A | X | -3.039 | 1 |
| 23 | MP3A | Z | 0 | 1 |
| 24 | MP3A | Mx | -.003 | 1 |
| 25 | MP3A | X | -2.461 | 4 |
| 26 | MP3A | Z | 0 | 4 |
| 27 | MP3A | Mx | -.002 | 4 |
| 28 | MP4A | X | -5.054 | 1.57 |
| 29 | MP4A | Z | 0 | 1.57 |
| 30 | MP4A | Mx | .002 | 1.57 |
| 31 | MP4A | X | -5.054 | 5.57 |
| 32 | MP4A | Z | 0 | 5.57 |
| 33 | MP4A | Mx | .002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -2.437 | 2.57 |
| 2 | MP1A | Z | -1.407 | 2.57 |
| 3 | MP1A | Mx | .001 | 2.57 |
| 4 | MP1A | X | -2.437 | 4.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 5 | MP1A | Z | -1.407 | 4.57 |
| 6 | MP1A | Mx | .001 | 4.57 |
| 7 | MP1A | X | -5.956 | 3.56 |
| 8 | MP1A | Z | -3.439 | 3.56 |
| 9 | MP1A | Mx | -.005 | 3.56 |
| 10 | MP2A | X | -6.408 | 1.57 |
| 11 | MP2A | Z | -3.7 | 1.57 |
| 12 | MP2A | Mx | .001 | 1.57 |
| 13 | MP2A | X | -6.408 | 5.57 |
| 14 | MP2A | Z | -3.7 | 5.57 |
| 15 | MP2A | Mx | .001 | 5.57 |
| 16 | MP2A | X | -6.408 | 1.57 |
| 17 | MP2A | Z | -3.7 | 1.57 |
| 18 | MP2A | Mx | .007 | 1.57 |
| 19 | MP2A | X | -6.408 | 5.57 |
| 20 | MP2A | Z | -3.7 | 5.57 |
| 21 | MP2A | Mx | .007 | 5.57 |
| 22 | MP3A | X | -2.958 | 1 |
| 23 | MP3A | Z | -1.708 | 1 |
| 24 | MP3A | Mx | -.002 | 1 |
| 25 | MP3A | X | -2.583 | 4 |
| 26 | MP3A | Z | -1.491 | 4 |
| 27 | MP3A | Mx | -.002 | 4 |
| 28 | MP4A | X | -5.275 | 1.57 |
| 29 | MP4A | Z | -3.046 | 1.57 |
| 30 | MP4A | Mx | .002 | 1.57 |
| 31 | MP4A | X | -5.275 | 5.57 |
| 32 | MP4A | Z | -3.046 | 5.57 |
| 33 | MP4A | Mx | .002 | 5.57 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | MP1A | X | -2.211 | 2.57 |
| 2 | MP1A | Z | -3.83 | 2.57 |
| 3 | MP1A | Mx | .001 | 2.57 |
| 4 | MP1A | X | -2.211 | 4.57 |
| 5 | MP1A | Z | -3.83 | 4.57 |
| 6 | MP1A | Mx | .001 | 4.57 |
| 7 | MP1A | X | -4.217 | 3.56 |
| 8 | MP1A | Z | -7.305 | 3.56 |
| 9 | MP1A | Mx | -.004 | 3.56 |
| 10 | MP2A | X | -4.539 | 1.57 |
| 11 | MP2A | Z | -7.862 | 1.57 |
| 12 | MP2A | Mx | -.004 | 1.57 |
| 13 | MP2A | X | -4.539 | 5.57 |
| 14 | MP2A | Z | -7.862 | 5.57 |
| 15 | MP2A | Mx | -.004 | 5.57 |
| 16 | MP2A | X | -4.539 | 1.57 |
| 17 | MP2A | Z | -7.862 | 1.57 |
| 18 | MP2A | Mx | .01 | 1.57 |
| 19 | MP2A | X | -4.539 | 5.57 |
| 20 | MP2A | Z | -7.862 | 5.57 |
| 21 | MP2A | Mx | .01 | 5.57 |
| 22 | MP3A | X | -2.085 | 1 |
| 23 | MP3A | Z | -3.611 | 1 |
| 24 | MP3A | Mx | -.002 | 1 |

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

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 25 | MP3A | X | -2.012 | 4 |
| 26 | MP3A | Z | -3.486 | 4 |
| 27 | MP3A | Mx | -.002 | 4 |
| 28 | MP4A | X | -4.082 | 1.57 |
| 29 | MP4A | Z | -7.071 | 1.57 |
| 30 | MP4A | Mx | .002 | 1.57 |
| 31 | MP4A | X | -4.082 | 5.57 |
| 32 | MP4A | Z | -7.071 | 5.57 |
| 33 | MP4A | Mx | .002 | 5.57 |

## Member Point Loads (BLC 77 : Lm1)

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | M14A | Y | -500 | %63 |

## Member Point Loads (BLC 78 : Lm2)

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | M14A | Y | -500 | %33 |

## Member Point Loads (BLC 79 : Lv1)

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | M14A | Y | -250 | %50 |

## Member Point Loads (BLC 80 : Lv2)

| | Member Label | Direction | Magnitude[lb,k-ft] | Location[ft,%] |
|---|---|---|---|---|
| 1 | M14A | Y | -250 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | Y | -14.805 | -14.805 | 0 | %100 |
| 2 | M2 | Y | -10.439 | -10.439 | 0 | %100 |
| 3 | M4 | Y | -10.439 | -10.439 | 0 | %100 |
| 4 | MP4A | Y | -8.162 | -8.162 | 0 | %100 |
| 5 | MP3A | Y | -8.162 | -8.162 | 0 | %100 |
| 6 | MP2A | Y | -8.162 | -8.162 | 0 | %100 |
| 7 | MP1A | Y | -8.162 | -8.162 | 0 | %100 |
| 8 | M13 | Y | -11.943 | -11.943 | 0 | %100 |
| 9 | M14A | Y | -10.439 | -10.439 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 0 | 0 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | 0 | 0 | 0 | %100 |
| 4 | M2 | Z | -7.451 | -7.451 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | -12.746 | -12.746 | 0 | %100 |
| 7 | MP4A | X | 0 | 0 | 0 | %100 |
| 8 | MP4A | Z | -7.774 | -7.774 | 0 | %100 |
| 9 | MP3A | X | 0 | 0 | 0 | %100 |
| 10 | MP3A | Z | -7.774 | -7.774 | 0 | %100 |
| 11 | MP2A | X | 0 | 0 | 0 | %100 |
| 12 | MP2A | Z | -7.774 | -7.774 | 0 | %100 |
| 13 | MP1A | X | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 14 | MP1A | Z | -7.774 | -7.774 | 0 | %100 |
| 15 | M13 | X | 0 | 0 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | -12.746 | -12.746 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 1.509 | 1.509 | 0 | %100 |
| 2 | M1 | Z | -2.614 | -2.614 | 0 | %100 |
| 3 | M2 | X | 3.834 | 3.834 | 0 | %100 |
| 4 | M2 | Z | -6.641 | -6.641 | 0 | %100 |
| 5 | M4 | X | 4.78 | 4.78 | 0 | %100 |
| 6 | M4 | Z | -8.279 | -8.279 | 0 | %100 |
| 7 | MP4A | X | 4.032 | 4.032 | 0 | %100 |
| 8 | MP4A | Z | -6.983 | -6.983 | 0 | %100 |
| 9 | MP3A | X | 4.032 | 4.032 | 0 | %100 |
| 10 | MP3A | Z | -6.983 | -6.983 | 0 | %100 |
| 11 | MP2A | X | 4.032 | 4.032 | 0 | %100 |
| 12 | MP2A | Z | -6.983 | -6.983 | 0 | %100 |
| 13 | MP1A | X | 4.032 | 4.032 | 0 | %100 |
| 14 | MP1A | Z | -6.983 | -6.983 | 0 | %100 |
| 15 | M13 | X | 1.237 | 1.237 | 0 | %100 |
| 16 | M13 | Z | -2.142 | -2.142 | 0 | %100 |
| 17 | M14A | X | 4.78 | 4.78 | 0 | %100 |
| 18 | M14A | Z | -8.279 | -8.279 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 7.843 | 7.843 | 0 | %100 |
| 2 | M1 | Z | -4.528 | -4.528 | 0 | %100 |
| 3 | M2 | X | 7.019 | 7.019 | 0 | %100 |
| 4 | M2 | Z | -4.053 | -4.053 | 0 | %100 |
| 5 | M4 | X | 2.76 | 2.76 | 0 | %100 |
| 6 | M4 | Z | -1.593 | -1.593 | 0 | %100 |
| 7 | MP4A | X | 7.485 | 7.485 | 0 | %100 |
| 8 | MP4A | Z | -4.321 | -4.321 | 0 | %100 |
| 9 | MP3A | X | 7.485 | 7.485 | 0 | %100 |
| 10 | MP3A | Z | -4.321 | -4.321 | 0 | %100 |
| 11 | MP2A | X | 7.485 | 7.485 | 0 | %100 |
| 12 | MP2A | Z | -4.321 | -4.321 | 0 | %100 |
| 13 | MP1A | X | 7.485 | 7.485 | 0 | %100 |
| 14 | MP1A | Z | -4.321 | -4.321 | 0 | %100 |
| 15 | M13 | X | 6.427 | 6.427 | 0 | %100 |
| 16 | M13 | Z | -3.71 | -3.71 | 0 | %100 |
| 17 | M14A | X | 2.76 | 2.76 | 0 | %100 |
| 18 | M14A | Z | -1.593 | -1.593 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 12.076 | 12.076 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | 8.323 | 8.323 | 0 | %100 |
| 4 | M2 | Z | 0 | 0 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 6 | M4 | Z | 0 | 0 | 0 | %100 |
| 7 | MP4A | X | 8.933 | 8.933 | 0 | %100 |
| 8 | MP4A | Z | 0 | 0 | 0 | %100 |
| 9 | MP3A | X | 8.933 | 8.933 | 0 | %100 |
| 10 | MP3A | Z | 0 | 0 | 0 | %100 |
| 11 | MP2A | X | 8.933 | 8.933 | 0 | %100 |
| 12 | MP2A | Z | 0 | 0 | 0 | %100 |
| 13 | MP1A | X | 8.933 | 8.933 | 0 | %100 |
| 14 | MP1A | Z | 0 | 0 | 0 | %100 |
| 15 | M13 | X | 9.895 | 9.895 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 7.843 | 7.843 | 0 | %100 |
| 2 | M1 | Z | 4.528 | 4.528 | 0 | %100 |
| 3 | M2 | X | 7.019 | 7.019 | 0 | %100 |
| 4 | M2 | Z | 4.053 | 4.053 | 0 | %100 |
| 5 | M4 | X | 2.76 | 2.76 | 0 | %100 |
| 6 | M4 | Z | 1.593 | 1.593 | 0 | %100 |
| 7 | MP4A | X | 7.485 | 7.485 | 0 | %100 |
| 8 | MP4A | Z | 4.321 | 4.321 | 0 | %100 |
| 9 | MP3A | X | 7.485 | 7.485 | 0 | %100 |
| 10 | MP3A | Z | 4.321 | 4.321 | 0 | %100 |
| 11 | MP2A | X | 7.485 | 7.485 | 0 | %100 |
| 12 | MP2A | Z | 4.321 | 4.321 | 0 | %100 |
| 13 | MP1A | X | 7.485 | 7.485 | 0 | %100 |
| 14 | MP1A | Z | 4.321 | 4.321 | 0 | %100 |
| 15 | M13 | X | 6.427 | 6.427 | 0 | %100 |
| 16 | M13 | Z | 3.71 | 3.71 | 0 | %100 |
| 17 | M14A | X | 2.76 | 2.76 | 0 | %100 |
| 18 | M14A | Z | 1.593 | 1.593 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 1.509 | 1.509 | 0 | %100 |
| 2 | M1 | Z | 2.614 | 2.614 | 0 | %100 |
| 3 | M2 | X | 3.834 | 3.834 | 0 | %100 |
| 4 | M2 | Z | 6.641 | 6.641 | 0 | %100 |
| 5 | M4 | X | 4.78 | 4.78 | 0 | %100 |
| 6 | M4 | Z | 8.279 | 8.279 | 0 | %100 |
| 7 | MP4A | X | 4.032 | 4.032 | 0 | %100 |
| 8 | MP4A | Z | 6.983 | 6.983 | 0 | %100 |
| 9 | MP3A | X | 4.032 | 4.032 | 0 | %100 |
| 10 | MP3A | Z | 6.983 | 6.983 | 0 | %100 |
| 11 | MP2A | X | 4.032 | 4.032 | 0 | %100 |
| 12 | MP2A | Z | 6.983 | 6.983 | 0 | %100 |
| 13 | MP1A | X | 4.032 | 4.032 | 0 | %100 |
| 14 | MP1A | Z | 6.983 | 6.983 | 0 | %100 |
| 15 | M13 | X | 1.237 | 1.237 | 0 | %100 |
| 16 | M13 | Z | 2.142 | 2.142 | 0 | %100 |
| 17 | M14A | X | 4.78 | 4.78 | 0 | %100 |
| 18 | M14A | Z | 8.279 | 8.279 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 0 | 0 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | 0 | 0 | 0 | %100 |
| 4 | M2 | Z | 7.451 | 7.451 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | 12.746 | 12.746 | 0 | %100 |
| 7 | MP4A | X | 0 | 0 | 0 | %100 |
| 8 | MP4A | Z | 7.774 | 7.774 | 0 | %100 |
| 9 | MP3A | X | 0 | 0 | 0 | %100 |
| 10 | MP3A | Z | 7.774 | 7.774 | 0 | %100 |
| 11 | MP2A | X | 0 | 0 | 0 | %100 |
| 12 | MP2A | Z | 7.774 | 7.774 | 0 | %100 |
| 13 | MP1A | X | 0 | 0 | 0 | %100 |
| 14 | MP1A | Z | 7.774 | 7.774 | 0 | %100 |
| 15 | M13 | X | 0 | 0 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | 12.746 | 12.746 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -1.509 | -1.509 | 0 | %100 |
| 2 | M1 | Z | 2.614 | 2.614 | 0 | %100 |
| 3 | M2 | X | -3.834 | -3.834 | 0 | %100 |
| 4 | M2 | Z | 6.641 | 6.641 | 0 | %100 |
| 5 | M4 | X | -4.78 | -4.78 | 0 | %100 |
| 6 | M4 | Z | 8.279 | 8.279 | 0 | %100 |
| 7 | MP4A | X | -4.032 | -4.032 | 0 | %100 |
| 8 | MP4A | Z | 6.983 | 6.983 | 0 | %100 |
| 9 | MP3A | X | -4.032 | -4.032 | 0 | %100 |
| 10 | MP3A | Z | 6.983 | 6.983 | 0 | %100 |
| 11 | MP2A | X | -4.032 | -4.032 | 0 | %100 |
| 12 | MP2A | Z | 6.983 | 6.983 | 0 | %100 |
| 13 | MP1A | X | -4.032 | -4.032 | 0 | %100 |
| 14 | MP1A | Z | 6.983 | 6.983 | 0 | %100 |
| 15 | M13 | X | -1.237 | -1.237 | 0 | %100 |
| 16 | M13 | Z | 2.142 | 2.142 | 0 | %100 |
| 17 | M14A | X | -4.78 | -4.78 | 0 | %100 |
| 18 | M14A | Z | 8.279 | 8.279 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -7.843 | -7.843 | 0 | %100 |
| 2 | M1 | Z | 4.528 | 4.528 | 0 | %100 |
| 3 | M2 | X | -7.019 | -7.019 | 0 | %100 |
| 4 | M2 | Z | 4.053 | 4.053 | 0 | %100 |
| 5 | M4 | X | -2.76 | -2.76 | 0 | %100 |
| 6 | M4 | Z | 1.593 | 1.593 | 0 | %100 |
| 7 | MP4A | X | -7.485 | -7.485 | 0 | %100 |
| 8 | MP4A | Z | 4.321 | 4.321 | 0 | %100 |
| 9 | MP3A | X | -7.485 | -7.485 | 0 | %100 |
| 10 | MP3A | Z | 4.321 | 4.321 | 0 | %100 |
| 11 | MP2A | X | -7.485 | -7.485 | 0 | %100 |
| 12 | MP2A | Z | 4.321 | 4.321 | 0 | %100 |
| 13 | MP1A | X | -7.485 | -7.485 | 0 | %100 |
| 14 | MP1A | Z | 4.321 | 4.321 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 15 | M13 | X | -6.427 | -6.427 | 0 | %100 |
| 16 | M13 | Z | 3.71 | 3.71 | 0 | %100 |
| 17 | M14A | X | -2.76 | -2.76 | 0 | %100 |
| 18 | M14A | Z | 1.593 | 1.593 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -12.076 | -12.076 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | -8.323 | -8.323 | 0 | %100 |
| 4 | M2 | Z | 0 | 0 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | 0 | 0 | 0 | %100 |
| 7 | MP4A | X | -8.933 | -8.933 | 0 | %100 |
| 8 | MP4A | Z | 0 | 0 | 0 | %100 |
| 9 | MP3A | X | -8.933 | -8.933 | 0 | %100 |
| 10 | MP3A | Z | 0 | 0 | 0 | %100 |
| 11 | MP2A | X | -8.933 | -8.933 | 0 | %100 |
| 12 | MP2A | Z | 0 | 0 | 0 | %100 |
| 13 | MP1A | X | -8.933 | -8.933 | 0 | %100 |
| 14 | MP1A | Z | 0 | 0 | 0 | %100 |
| 15 | M13 | X | -9.895 | -9.895 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -7.843 | -7.843 | 0 | %100 |
| 2 | M1 | Z | -4.528 | -4.528 | 0 | %100 |
| 3 | M2 | X | -7.019 | -7.019 | 0 | %100 |
| 4 | M2 | Z | -4.053 | -4.053 | 0 | %100 |
| 5 | M4 | X | -2.76 | -2.76 | 0 | %100 |
| 6 | M4 | Z | -1.593 | -1.593 | 0 | %100 |
| 7 | MP4A | X | -7.485 | -7.485 | 0 | %100 |
| 8 | MP4A | Z | -4.321 | -4.321 | 0 | %100 |
| 9 | MP3A | X | -7.485 | -7.485 | 0 | %100 |
| 10 | MP3A | Z | -4.321 | -4.321 | 0 | %100 |
| 11 | MP2A | X | -7.485 | -7.485 | 0 | %100 |
| 12 | MP2A | Z | -4.321 | -4.321 | 0 | %100 |
| 13 | MP1A | X | -7.485 | -7.485 | 0 | %100 |
| 14 | MP1A | Z | -4.321 | -4.321 | 0 | %100 |
| 15 | M13 | X | -6.427 | -6.427 | 0 | %100 |
| 16 | M13 | Z | -3.71 | -3.71 | 0 | %100 |
| 17 | M14A | X | -2.76 | -2.76 | 0 | %100 |
| 18 | M14A | Z | -1.593 | -1.593 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -1.509 | -1.509 | 0 | %100 |
| 2 | M1 | Z | -2.614 | -2.614 | 0 | %100 |
| 3 | M2 | X | -3.834 | -3.834 | 0 | %100 |
| 4 | M2 | Z | -6.641 | -6.641 | 0 | %100 |
| 5 | M4 | X | -4.78 | -4.78 | 0 | %100 |
| 6 | M4 | Z | -8.279 | -8.279 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 7 | MP4A | X | -4.032 | -4.032 | 0 | %100 |
| 8 | MP4A | Z | -6.983 | -6.983 | 0 | %100 |
| 9 | MP3A | X | -4.032 | -4.032 | 0 | %100 |
| 10 | MP3A | Z | -6.983 | -6.983 | 0 | %100 |
| 11 | MP2A | X | -4.032 | -4.032 | 0 | %100 |
| 12 | MP2A | Z | -6.983 | -6.983 | 0 | %100 |
| 13 | MP1A | X | -4.032 | -4.032 | 0 | %100 |
| 14 | MP1A | Z | -6.983 | -6.983 | 0 | %100 |
| 15 | M13 | X | -1.237 | -1.237 | 0 | %100 |
| 16 | M13 | Z | -2.142 | -2.142 | 0 | %100 |
| 17 | M14A | X | -4.78 | -4.78 | 0 | %100 |
| 18 | M14A | Z | -8.279 | -8.279 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 0 | 0 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | 0 | 0 | 0 | %100 |
| 4 | M2 | Z | -2.765 | -2.765 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | -4.509 | -4.509 | 0 | %100 |
| 7 | MP4A | X | 0 | 0 | 0 | %100 |
| 8 | MP4A | Z | -3.634 | -3.634 | 0 | %100 |
| 9 | MP3A | X | 0 | 0 | 0 | %100 |
| 10 | MP3A | Z | -3.634 | -3.634 | 0 | %100 |
| 11 | MP2A | X | 0 | 0 | 0 | %100 |
| 12 | MP2A | Z | -3.634 | -3.634 | 0 | %100 |
| 13 | MP1A | X | 0 | 0 | 0 | %100 |
| 14 | MP1A | Z | -3.634 | -3.634 | 0 | %100 |
| 15 | M13 | X | 0 | 0 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | -4.509 | -4.509 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | .485 | .485 | 0 | %100 |
| 2 | M1 | Z | -.841 | -.841 | 0 | %100 |
| 3 | M2 | X | 1.402 | 1.402 | 0 | %100 |
| 4 | M2 | Z | -2.428 | -2.428 | 0 | %100 |
| 5 | M4 | X | 1.691 | 1.691 | 0 | %100 |
| 6 | M4 | Z | -2.929 | -2.929 | 0 | %100 |
| 7 | MP4A | X | 1.843 | 1.843 | 0 | %100 |
| 8 | MP4A | Z | -3.192 | -3.192 | 0 | %100 |
| 9 | MP3A | X | 1.843 | 1.843 | 0 | %100 |
| 10 | MP3A | Z | -3.192 | -3.192 | 0 | %100 |
| 11 | MP2A | X | 1.843 | 1.843 | 0 | %100 |
| 12 | MP2A | Z | -3.192 | -3.192 | 0 | %100 |
| 13 | MP1A | X | 1.843 | 1.843 | 0 | %100 |
| 14 | MP1A | Z | -3.192 | -3.192 | 0 | %100 |
| 15 | M13 | X | .442 | .442 | 0 | %100 |
| 16 | M13 | Z | -.765 | -.765 | 0 | %100 |
| 17 | M14A | X | 1.691 | 1.691 | 0 | %100 |
| 18 | M14A | Z | -2.929 | -2.929 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 2.522 | 2.522 | 0 | %100 |
| 2 | M1 | Z | -1.456 | -1.456 | 0 | %100 |
| 3 | M2 | X | 2.496 | 2.496 | 0 | %100 |
| 4 | M2 | Z | -1.441 | -1.441 | 0 | %100 |
| 5 | M4 | X | .976 | .976 | 0 | %100 |
| 6 | M4 | Z | -.564 | -.564 | 0 | %100 |
| 7 | MP4A | X | 3.282 | 3.282 | 0 | %100 |
| 8 | MP4A | Z | -1.895 | -1.895 | 0 | %100 |
| 9 | MP3A | X | 3.282 | 3.282 | 0 | %100 |
| 10 | MP3A | Z | -1.895 | -1.895 | 0 | %100 |
| 11 | MP2A | X | 3.282 | 3.282 | 0 | %100 |
| 12 | MP2A | Z | -1.895 | -1.895 | 0 | %100 |
| 13 | MP1A | X | 3.282 | 3.282 | 0 | %100 |
| 14 | MP1A | Z | -1.895 | -1.895 | 0 | %100 |
| 15 | M13 | X | 2.296 | 2.296 | 0 | %100 |
| 16 | M13 | Z | -1.326 | -1.326 | 0 | %100 |
| 17 | M14A | X | .976 | .976 | 0 | %100 |
| 18 | M14A | Z | -.564 | -.564 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 3.883 | 3.883 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | 2.921 | 2.921 | 0 | %100 |
| 4 | M2 | Z | 0 | 0 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | 0 | 0 | 0 | %100 |
| 7 | MP4A | X | 3.842 | 3.842 | 0 | %100 |
| 8 | MP4A | Z | 0 | 0 | 0 | %100 |
| 9 | MP3A | X | 3.842 | 3.842 | 0 | %100 |
| 10 | MP3A | Z | 0 | 0 | 0 | %100 |
| 11 | MP2A | X | 3.842 | 3.842 | 0 | %100 |
| 12 | MP2A | Z | 0 | 0 | 0 | %100 |
| 13 | MP1A | X | 3.842 | 3.842 | 0 | %100 |
| 14 | MP1A | Z | 0 | 0 | 0 | %100 |
| 15 | M13 | X | 3.535 | 3.535 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 2.522 | 2.522 | 0 | %100 |
| 2 | M1 | Z | 1.456 | 1.456 | 0 | %100 |
| 3 | M2 | X | 2.496 | 2.496 | 0 | %100 |
| 4 | M2 | Z | 1.441 | 1.441 | 0 | %100 |
| 5 | M4 | X | .976 | .976 | 0 | %100 |
| 6 | M4 | Z | .564 | .564 | 0 | %100 |
| 7 | MP4A | X | 3.282 | 3.282 | 0 | %100 |
| 8 | MP4A | Z | 1.895 | 1.895 | 0 | %100 |
| 9 | MP3A | X | 3.282 | 3.282 | 0 | %100 |
| 10 | MP3A | Z | 1.895 | 1.895 | 0 | %100 |
| 11 | MP2A | X | 3.282 | 3.282 | 0 | %100 |
| 12 | MP2A | Z | 1.895 | 1.895 | 0 | %100 |
| 13 | MP1A | X | 3.282 | 3.282 | 0 | %100 |
| 14 | MP1A | Z | 1.895 | 1.895 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 15 | M13 | X | 2.296 | 2.296 | 0 | %100 |
| 16 | M13 | Z | 1.326 | 1.326 | 0 | %100 |
| 17 | M14A | X | .976 | .976 | 0 | %100 |
| 18 | M14A | Z | .564 | .564 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | .485 | .485 | 0 | %100 |
| 2 | M1 | Z | .841 | .841 | 0 | %100 |
| 3 | M2 | X | 1.402 | 1.402 | 0 | %100 |
| 4 | M2 | Z | 2.428 | 2.428 | 0 | %100 |
| 5 | M4 | X | 1.691 | 1.691 | 0 | %100 |
| 6 | M4 | Z | 2.929 | 2.929 | 0 | %100 |
| 7 | MP4A | X | 1.843 | 1.843 | 0 | %100 |
| 8 | MP4A | Z | 3.192 | 3.192 | 0 | %100 |
| 9 | MP3A | X | 1.843 | 1.843 | 0 | %100 |
| 10 | MP3A | Z | 3.192 | 3.192 | 0 | %100 |
| 11 | MP2A | X | 1.843 | 1.843 | 0 | %100 |
| 12 | MP2A | Z | 3.192 | 3.192 | 0 | %100 |
| 13 | MP1A | X | 1.843 | 1.843 | 0 | %100 |
| 14 | MP1A | Z | 3.192 | 3.192 | 0 | %100 |
| 15 | M13 | X | .442 | .442 | 0 | %100 |
| 16 | M13 | Z | .765 | .765 | 0 | %100 |
| 17 | M14A | X | 1.691 | 1.691 | 0 | %100 |
| 18 | M14A | Z | 2.929 | 2.929 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 0 | 0 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | 0 | 0 | 0 | %100 |
| 4 | M2 | Z | 2.765 | 2.765 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | 4.509 | 4.509 | 0 | %100 |
| 7 | MP4A | X | 0 | 0 | 0 | %100 |
| 8 | MP4A | Z | 3.634 | 3.634 | 0 | %100 |
| 9 | MP3A | X | 0 | 0 | 0 | %100 |
| 10 | MP3A | Z | 3.634 | 3.634 | 0 | %100 |
| 11 | MP2A | X | 0 | 0 | 0 | %100 |
| 12 | MP2A | Z | 3.634 | 3.634 | 0 | %100 |
| 13 | MP1A | X | 0 | 0 | 0 | %100 |
| 14 | MP1A | Z | 3.634 | 3.634 | 0 | %100 |
| 15 | M13 | X | 0 | 0 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | 4.509 | 4.509 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -.485 | -.485 | 0 | %100 |
| 2 | M1 | Z | .841 | .841 | 0 | %100 |
| 3 | M2 | X | -1.402 | -1.402 | 0 | %100 |
| 4 | M2 | Z | 2.428 | 2.428 | 0 | %100 |
| 5 | M4 | X | -1.691 | -1.691 | 0 | %100 |
| 6 | M4 | Z | 2.929 | 2.929 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 7 | MP4A | X | -1.843 | -1.843 | 0 | %100 |
| 8 | MP4A | Z | 3.192 | 3.192 | 0 | %100 |
| 9 | MP3A | X | -1.843 | -1.843 | 0 | %100 |
| 10 | MP3A | Z | 3.192 | 3.192 | 0 | %100 |
| 11 | MP2A | X | -1.843 | -1.843 | 0 | %100 |
| 12 | MP2A | Z | 3.192 | 3.192 | 0 | %100 |
| 13 | MP1A | X | -1.843 | -1.843 | 0 | %100 |
| 14 | MP1A | Z | 3.192 | 3.192 | 0 | %100 |
| 15 | M13 | X | -.442 | -.442 | 0 | %100 |
| 16 | M13 | Z | .765 | .765 | 0 | %100 |
| 17 | M14A | X | -1.691 | -1.691 | 0 | %100 |
| 18 | M14A | Z | 2.929 | 2.929 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -2.522 | -2.522 | 0 | %100 |
| 2 | M1 | Z | 1.456 | 1.456 | 0 | %100 |
| 3 | M2 | X | -2.496 | -2.496 | 0 | %100 |
| 4 | M2 | Z | 1.441 | 1.441 | 0 | %100 |
| 5 | M4 | X | -.976 | -.976 | 0 | %100 |
| 6 | M4 | Z | .564 | .564 | 0 | %100 |
| 7 | MP4A | X | -3.282 | -3.282 | 0 | %100 |
| 8 | MP4A | Z | 1.895 | 1.895 | 0 | %100 |
| 9 | MP3A | X | -3.282 | -3.282 | 0 | %100 |
| 10 | MP3A | Z | 1.895 | 1.895 | 0 | %100 |
| 11 | MP2A | X | -3.282 | -3.282 | 0 | %100 |
| 12 | MP2A | Z | 1.895 | 1.895 | 0 | %100 |
| 13 | MP1A | X | -3.282 | -3.282 | 0 | %100 |
| 14 | MP1A | Z | 1.895 | 1.895 | 0 | %100 |
| 15 | M13 | X | -2.296 | -2.296 | 0 | %100 |
| 16 | M13 | Z | 1.326 | 1.326 | 0 | %100 |
| 17 | M14A | X | -.976 | -.976 | 0 | %100 |
| 18 | M14A | Z | .564 | .564 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -3.883 | -3.883 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | -2.921 | -2.921 | 0 | %100 |
| 4 | M2 | Z | 0 | 0 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | 0 | 0 | 0 | %100 |
| 7 | MP4A | X | -3.842 | -3.842 | 0 | %100 |
| 8 | MP4A | Z | 0 | 0 | 0 | %100 |
| 9 | MP3A | X | -3.842 | -3.842 | 0 | %100 |
| 10 | MP3A | Z | 0 | 0 | 0 | %100 |
| 11 | MP2A | X | -3.842 | -3.842 | 0 | %100 |
| 12 | MP2A | Z | 0 | 0 | 0 | %100 |
| 13 | MP1A | X | -3.842 | -3.842 | 0 | %100 |
| 14 | MP1A | Z | 0 | 0 | 0 | %100 |
| 15 | M13 | X | -3.535 | -3.535 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -2.522 | -2.522 | 0 | %100 |
| 2 | M1 | Z | -1.456 | -1.456 | 0 | %100 |
| 3 | M2 | X | -2.496 | -2.496 | 0 | %100 |
| 4 | M2 | Z | -1.441 | -1.441 | 0 | %100 |
| 5 | M4 | X | -.976 | -.976 | 0 | %100 |
| 6 | M4 | Z | -.564 | -.564 | 0 | %100 |
| 7 | MP4A | X | -3.282 | -3.282 | 0 | %100 |
| 8 | MP4A | Z | -1.895 | -1.895 | 0 | %100 |
| 9 | MP3A | X | -3.282 | -3.282 | 0 | %100 |
| 10 | MP3A | Z | -1.895 | -1.895 | 0 | %100 |
| 11 | MP2A | X | -3.282 | -3.282 | 0 | %100 |
| 12 | MP2A | Z | -1.895 | -1.895 | 0 | %100 |
| 13 | MP1A | X | -3.282 | -3.282 | 0 | %100 |
| 14 | MP1A | Z | -1.895 | -1.895 | 0 | %100 |
| 15 | M13 | X | -2.296 | -2.296 | 0 | %100 |
| 16 | M13 | Z | -1.326 | -1.326 | 0 | %100 |
| 17 | M14A | X | -.976 | -.976 | 0 | %100 |
| 18 | M14A | Z | -.564 | -.564 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -.485 | -.485 | 0 | %100 |
| 2 | M1 | Z | -.841 | -.841 | 0 | %100 |
| 3 | M2 | X | -1.402 | -1.402 | 0 | %100 |
| 4 | M2 | Z | -2.428 | -2.428 | 0 | %100 |
| 5 | M4 | X | -1.691 | -1.691 | 0 | %100 |
| 6 | M4 | Z | -2.929 | -2.929 | 0 | %100 |
| 7 | MP4A | X | -1.843 | -1.843 | 0 | %100 |
| 8 | MP4A | Z | -3.192 | -3.192 | 0 | %100 |
| 9 | MP3A | X | -1.843 | -1.843 | 0 | %100 |
| 10 | MP3A | Z | -3.192 | -3.192 | 0 | %100 |
| 11 | MP2A | X | -1.843 | -1.843 | 0 | %100 |
| 12 | MP2A | Z | -3.192 | -3.192 | 0 | %100 |
| 13 | MP1A | X | -1.843 | -1.843 | 0 | %100 |
| 14 | MP1A | Z | -3.192 | -3.192 | 0 | %100 |
| 15 | M13 | X | -.442 | -.442 | 0 | %100 |
| 16 | M13 | Z | -.765 | -.765 | 0 | %100 |
| 17 | M14A | X | -1.691 | -1.691 | 0 | %100 |
| 18 | M14A | Z | -2.929 | -2.929 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 0 | 0 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | 0 | 0 | 0 | %100 |
| 4 | M2 | Z | -.482 | -.482 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | -.824 | -.824 | 0 | %100 |
| 7 | MP4A | X | 0 | 0 | 0 | %100 |
| 8 | MP4A | Z | -.502 | -.502 | 0 | %100 |
| 9 | MP3A | X | 0 | 0 | 0 | %100 |
| 10 | MP3A | Z | -.502 | -.502 | 0 | %100 |
| 11 | MP2A | X | 0 | 0 | 0 | %100 |
| 12 | MP2A | Z | -.502 | -.502 | 0 | %100 |
| 13 | MP1A | X | 0 | 0 | 0 | %100 |
| 14 | MP1A | Z | -.502 | -.502 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 15 | M13 | X | 0 | 0 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | -.824 | -.824 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | .098 | .098 | 0 | %100 |
| 2 | M1 | Z | -.169 | -.169 | 0 | %100 |
| 3 | M2 | X | .248 | .248 | 0 | %100 |
| 4 | M2 | Z | -.429 | -.429 | 0 | %100 |
| 5 | M4 | X | .309 | .309 | 0 | %100 |
| 6 | M4 | Z | -.535 | -.535 | 0 | %100 |
| 7 | MP4A | X | .261 | .261 | 0 | %100 |
| 8 | MP4A | Z | -.451 | -.451 | 0 | %100 |
| 9 | MP3A | X | .261 | .261 | 0 | %100 |
| 10 | MP3A | Z | -.451 | -.451 | 0 | %100 |
| 11 | MP2A | X | .261 | .261 | 0 | %100 |
| 12 | MP2A | Z | -.451 | -.451 | 0 | %100 |
| 13 | MP1A | X | .261 | .261 | 0 | %100 |
| 14 | MP1A | Z | -.451 | -.451 | 0 | %100 |
| 15 | M13 | X | .08 | .08 | 0 | %100 |
| 16 | M13 | Z | -.138 | -.138 | 0 | %100 |
| 17 | M14A | X | .309 | .309 | 0 | %100 |
| 18 | M14A | Z | -.535 | -.535 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | .507 | .507 | 0 | %100 |
| 2 | M1 | Z | -.293 | -.293 | 0 | %100 |
| 3 | M2 | X | .454 | .454 | 0 | %100 |
| 4 | M2 | Z | -.262 | -.262 | 0 | %100 |
| 5 | M4 | X | .178 | .178 | 0 | %100 |
| 6 | M4 | Z | -.103 | -.103 | 0 | %100 |
| 7 | MP4A | X | .484 | .484 | 0 | %100 |
| 8 | MP4A | Z | -.279 | -.279 | 0 | %100 |
| 9 | MP3A | X | .484 | .484 | 0 | %100 |
| 10 | MP3A | Z | -.279 | -.279 | 0 | %100 |
| 11 | MP2A | X | .484 | .484 | 0 | %100 |
| 12 | MP2A | Z | -.279 | -.279 | 0 | %100 |
| 13 | MP1A | X | .484 | .484 | 0 | %100 |
| 14 | MP1A | Z | -.279 | -.279 | 0 | %100 |
| 15 | M13 | X | .415 | .415 | 0 | %100 |
| 16 | M13 | Z | -.24 | -.24 | 0 | %100 |
| 17 | M14A | X | .178 | .178 | 0 | %100 |
| 18 | M14A | Z | -.103 | -.103 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | .781 | .781 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | .538 | .538 | 0 | %100 |
| 4 | M2 | Z | 0 | 0 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 7 | MP4A | X | .577 | .577 | 0 | %100 |
| 8 | MP4A | Z | 0 | 0 | 0 | %100 |
| 9 | MP3A | X | .577 | .577 | 0 | %100 |
| 10 | MP3A | Z | 0 | 0 | 0 | %100 |
| 11 | MP2A | X | .577 | .577 | 0 | %100 |
| 12 | MP2A | Z | 0 | 0 | 0 | %100 |
| 13 | MP1A | X | .577 | .577 | 0 | %100 |
| 14 | MP1A | Z | 0 | 0 | 0 | %100 |
| 15 | M13 | X | .64 | .64 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | .507 | .507 | 0 | %100 |
| 2 | M1 | Z | .293 | .293 | 0 | %100 |
| 3 | M2 | X | .454 | .454 | 0 | %100 |
| 4 | M2 | Z | .262 | .262 | 0 | %100 |
| 5 | M4 | X | .178 | .178 | 0 | %100 |
| 6 | M4 | Z | .103 | .103 | 0 | %100 |
| 7 | MP4A | X | .484 | .484 | 0 | %100 |
| 8 | MP4A | Z | .279 | .279 | 0 | %100 |
| 9 | MP3A | X | .484 | .484 | 0 | %100 |
| 10 | MP3A | Z | .279 | .279 | 0 | %100 |
| 11 | MP2A | X | .484 | .484 | 0 | %100 |
| 12 | MP2A | Z | .279 | .279 | 0 | %100 |
| 13 | MP1A | X | .484 | .484 | 0 | %100 |
| 14 | MP1A | Z | .279 | .279 | 0 | %100 |
| 15 | M13 | X | .415 | .415 | 0 | %100 |
| 16 | M13 | Z | .24 | .24 | 0 | %100 |
| 17 | M14A | X | .178 | .178 | 0 | %100 |
| 18 | M14A | Z | .103 | .103 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | .098 | .098 | 0 | %100 |
| 2 | M1 | Z | .169 | .169 | 0 | %100 |
| 3 | M2 | X | .248 | .248 | 0 | %100 |
| 4 | M2 | Z | .429 | .429 | 0 | %100 |
| 5 | M4 | X | .309 | .309 | 0 | %100 |
| 6 | M4 | Z | .535 | .535 | 0 | %100 |
| 7 | MP4A | X | .261 | .261 | 0 | %100 |
| 8 | MP4A | Z | .451 | .451 | 0 | %100 |
| 9 | MP3A | X | .261 | .261 | 0 | %100 |
| 10 | MP3A | Z | .451 | .451 | 0 | %100 |
| 11 | MP2A | X | .261 | .261 | 0 | %100 |
| 12 | MP2A | Z | .451 | .451 | 0 | %100 |
| 13 | MP1A | X | .261 | .261 | 0 | %100 |
| 14 | MP1A | Z | .451 | .451 | 0 | %100 |
| 15 | M13 | X | .08 | .08 | 0 | %100 |
| 16 | M13 | Z | .138 | .138 | 0 | %100 |
| 17 | M14A | X | .309 | .309 | 0 | %100 |
| 18 | M14A | Z | .535 | .535 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | 0 | 0 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | 0 | 0 | 0 | %100 |
| 4 | M2 | Z | .482 | .482 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | .824 | .824 | 0 | %100 |
| 7 | MP4A | X | 0 | 0 | 0 | %100 |
| 8 | MP4A | Z | .502 | .502 | 0 | %100 |
| 9 | MP3A | X | 0 | 0 | 0 | %100 |
| 10 | MP3A | Z | .502 | .502 | 0 | %100 |
| 11 | MP2A | X | 0 | 0 | 0 | %100 |
| 12 | MP2A | Z | .502 | .502 | 0 | %100 |
| 13 | MP1A | X | 0 | 0 | 0 | %100 |
| 14 | MP1A | Z | .502 | .502 | 0 | %100 |
| 15 | M13 | X | 0 | 0 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | .824 | .824 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -.098 | -.098 | 0 | %100 |
| 2 | M1 | Z | .169 | .169 | 0 | %100 |
| 3 | M2 | X | -.248 | -.248 | 0 | %100 |
| 4 | M2 | Z | .429 | .429 | 0 | %100 |
| 5 | M4 | X | -.309 | -.309 | 0 | %100 |
| 6 | M4 | Z | .535 | .535 | 0 | %100 |
| 7 | MP4A | X | -.261 | -.261 | 0 | %100 |
| 8 | MP4A | Z | .451 | .451 | 0 | %100 |
| 9 | MP3A | X | -.261 | -.261 | 0 | %100 |
| 10 | MP3A | Z | .451 | .451 | 0 | %100 |
| 11 | MP2A | X | -.261 | -.261 | 0 | %100 |
| 12 | MP2A | Z | .451 | .451 | 0 | %100 |
| 13 | MP1A | X | -.261 | -.261 | 0 | %100 |
| 14 | MP1A | Z | .451 | .451 | 0 | %100 |
| 15 | M13 | X | -.08 | -.08 | 0 | %100 |
| 16 | M13 | Z | .138 | .138 | 0 | %100 |
| 17 | M14A | X | -.309 | -.309 | 0 | %100 |
| 18 | M14A | Z | .535 | .535 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -.507 | -.507 | 0 | %100 |
| 2 | M1 | Z | .293 | .293 | 0 | %100 |
| 3 | M2 | X | -.454 | -.454 | 0 | %100 |
| 4 | M2 | Z | .262 | .262 | 0 | %100 |
| 5 | M4 | X | -.178 | -.178 | 0 | %100 |
| 6 | M4 | Z | .103 | .103 | 0 | %100 |
| 7 | MP4A | X | -.484 | -.484 | 0 | %100 |
| 8 | MP4A | Z | .279 | .279 | 0 | %100 |
| 9 | MP3A | X | -.484 | -.484 | 0 | %100 |
| 10 | MP3A | Z | .279 | .279 | 0 | %100 |
| 11 | MP2A | X | -.484 | -.484 | 0 | %100 |
| 12 | MP2A | Z | .279 | .279 | 0 | %100 |
| 13 | MP1A | X | -.484 | -.484 | 0 | %100 |
| 14 | MP1A | Z | .279 | .279 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 15 | M13 | X | -.415 | -.415 | 0 | %100 |
| 16 | M13 | Z | .24 | .24 | 0 | %100 |
| 17 | M14A | X | -.178 | -.178 | 0 | %100 |
| 18 | M14A | Z | .103 | .103 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -.781 | -.781 | 0 | %100 |
| 2 | M1 | Z | 0 | 0 | 0 | %100 |
| 3 | M2 | X | -.538 | -.538 | 0 | %100 |
| 4 | M2 | Z | 0 | 0 | 0 | %100 |
| 5 | M4 | X | 0 | 0 | 0 | %100 |
| 6 | M4 | Z | 0 | 0 | 0 | %100 |
| 7 | MP4A | X | -.577 | -.577 | 0 | %100 |
| 8 | MP4A | Z | 0 | 0 | 0 | %100 |
| 9 | MP3A | X | -.577 | -.577 | 0 | %100 |
| 10 | MP3A | Z | 0 | 0 | 0 | %100 |
| 11 | MP2A | X | -.577 | -.577 | 0 | %100 |
| 12 | MP2A | Z | 0 | 0 | 0 | %100 |
| 13 | MP1A | X | -.577 | -.577 | 0 | %100 |
| 14 | MP1A | Z | 0 | 0 | 0 | %100 |
| 15 | M13 | X | -.64 | -.64 | 0 | %100 |
| 16 | M13 | Z | 0 | 0 | 0 | %100 |
| 17 | M14A | X | 0 | 0 | 0 | %100 |
| 18 | M14A | Z | 0 | 0 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -.507 | -.507 | 0 | %100 |
| 2 | M1 | Z | -.293 | -.293 | 0 | %100 |
| 3 | M2 | X | -.454 | -.454 | 0 | %100 |
| 4 | M2 | Z | -.262 | -.262 | 0 | %100 |
| 5 | M4 | X | -.178 | -.178 | 0 | %100 |
| 6 | M4 | Z | -.103 | -.103 | 0 | %100 |
| 7 | MP4A | X | -.484 | -.484 | 0 | %100 |
| 8 | MP4A | Z | -.279 | -.279 | 0 | %100 |
| 9 | MP3A | X | -.484 | -.484 | 0 | %100 |
| 10 | MP3A | Z | -.279 | -.279 | 0 | %100 |
| 11 | MP2A | X | -.484 | -.484 | 0 | %100 |
| 12 | MP2A | Z | -.279 | -.279 | 0 | %100 |
| 13 | MP1A | X | -.484 | -.484 | 0 | %100 |
| 14 | MP1A | Z | -.279 | -.279 | 0 | %100 |
| 15 | M13 | X | -.415 | -.415 | 0 | %100 |
| 16 | M13 | Z | -.24 | -.24 | 0 | %100 |
| 17 | M14A | X | -.178 | -.178 | 0 | %100 |
| 18 | M14A | Z | -.103 | -.103 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l.. | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 1 | M1 | X | -.098 | -.098 | 0 | %100 |
| 2 | M1 | Z | -.169 | -.169 | 0 | %100 |
| 3 | M2 | X | -.248 | -.248 | 0 | %100 |
| 4 | M2 | Z | -.429 | -.429 | 0 | %100 |
| 5 | M4 | X | -.309 | -.309 | 0 | %100 |
| 6 | M4 | Z | -.535 | -.535 | 0 | %100 |

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

| | Member Label | Direction | Start Magnitude[lb/ft,F,ksf] | End Magnitude[l... | Start Location[ft... | End Location[ft,... |
|---|---|---|---|---|---|---|
| 7 | MP4A | X | -.261 | -.261 | 0 | %100 |
| 8 | MP4A | Z | -.451 | -.451 | 0 | %100 |
| 9 | MP3A | X | -.261 | -.261 | 0 | %100 |
| 10 | MP3A | Z | -.451 | -.451 | 0 | %100 |
| 11 | MP2A | X | -.261 | -.261 | 0 | %100 |
| 12 | MP2A | Z | -.451 | -.451 | 0 | %100 |
| 13 | MP1A | X | -.261 | -.261 | 0 | %100 |
| 14 | MP1A | Z | -.451 | -.451 | 0 | %100 |
| 15 | M13 | X | -.08 | -.08 | 0 | %100 |
| 16 | M13 | Z | -.138 | -.138 | 0 | %100 |
| 17 | M14A | X | -.309 | -.309 | 0 | %100 |
| 18 | M14A | Z | -.535 | -.535 | 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 | Sh... | Loc[ft] ... | | LC | phi*... | phi*... | phi*... | phi*... | ... | Eqn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M1 | HSS4X... | .310 | 0 | 16 | .066 | 0 | y | 50 | 1328... | 1395... | 16.1... | 16.1... | ... | H1-... |
| 2 | M2 | PIPE_... | .000 | .75 | 10 | .000 | .75 | | 4 | 6442... | 65205 | 5.749 | 5.749 | ... | H1-... |
| 3 | M4 | PIPE_... | .229 | 3.396 | 7 | .168 | 3.396 | | 23 | 5093... | 65205 | 5.749 | 5.749 | ... | H1-... |
| 4 | MP4A | PIPE_... | .144 | 3.047 | 8 | .053 | 5.946 | | 5 | 1744... | 32130 | 1.872 | 1.872 | ... | H1-... |
| 5 | MP3A | PIPE_... | .265 | 3.047 | 20 | .058 | 3.047 | | 18 | 1744... | 32130 | 1.872 | 1.872 | ... | H1-... |
| 6 | MP2A | PIPE_... | .335 | 3.047 | 18 | .135 | 5.946 | | 9 | 1744... | 32130 | 1.872 | 1.872 | ... | H1-... |
| 7 | MP1A | PIPE_... | .196 | 3.047 | 17 | .086 | 3.047 | | 8 | 1744... | 32130 | 1.872 | 1.872 | ... | H1-... |
| 8 | M13 | HSS3X... | .285 | 0 | 21 | .051 | 0 | y | 50 | 9070... | 1010... | 8.556 | 8.556 | ... | H1-... |
| 9 | M14A | PIPE_... | .185 | 3.396 | 2 | .130 | 3.396 | | 14 | 5093... | 65205 | 5.749 | 5.749 | ... | H1-... |

## Envelope Joint Reactions

| | Joint | | X [lb] | LC | Y [lb] | LC | Z [lb] | LC | MX [k-ft] | LC | MY [k-ft] | LC | MZ [k-ft] | LC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N1 | max | 946.206 | 9 | 1381.818 | 13 | 1033.254 | 1 | -1.164 | 1 | 3.18 | 9 | .646 | 50 |
| 2 | | min | -1005.324 | 3 | 450.555 | 7 | -1554.417 | 7 | -3.875 | 19 | -3.391 | 3 | -.324 | 38 |
| 3 | N32 | max | 220.011 | 11 | 763.226 | 19 | 928.252 | 13 | -.46 | 1 | 1.506 | 9 | .26 | 50 |
| 4 | | min | -162.025 | 5 | 220.956 | 1 | -195.26 | 7 | -1.818 | 19 | -1.307 | 3 | -.135 | 38 |
| 5 | Totals: | max | 1149.32 | 10 | 2119.895 | 13 | 1749.674 | 1 | | | | | | |
| 6 | | min | -1149.321 | 4 | 768.082 | 7 | -1749.677 | 7 | | | | | | |

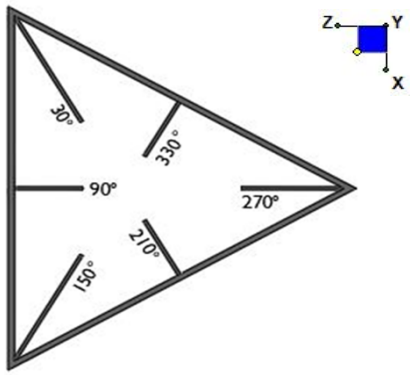
| | | | |
|---|---|---|---|
| Client: | Verizon Wireless | Date: | 12/14/2020 |
| Site Name: | Hartford 9 CT | | |
| Project No. | 20777293A | | |
| Title: | Antenna Mount Analysis | Page: | 1 |

Version 3.1

## I. Mount-to-Tower Connection Check

*RISA Model Data*

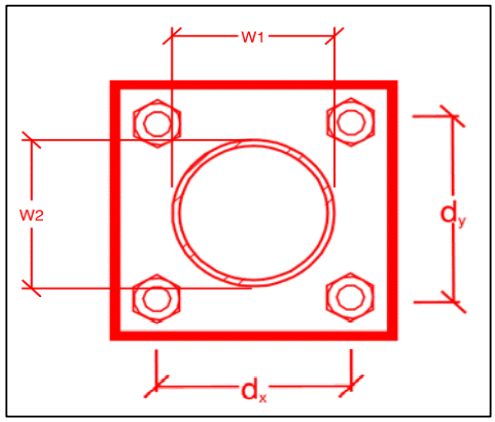
| Nodes *(labeled per RISA)* | Orientation *(per graphic of typical platform)* |
|---|---|
| N32 | 90 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |



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)* : | 6 |
| $d_y$ (in) *(Delta Y of typ. bolt config. sketch)* : | 6 |
| Bolt Type: | A325N |
| Bolt Diameter (in): | 0.625 |
| Required Tensile Strength (kips): | 8.3 |
| Required Shear Strength (kips): | 1.5 |
| Tensile Strength / bolt (kips): | 20.7 |
| Shear Strength / bolt (kips): | 12.4 |
| Tensile Capacity Overall: | **10.1%*** |
| Shear Capacity Overall: | **3.0%** |




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

*Tower Connection Plate and Weld Check*

| | |
|---|---|
| Connecting Standoff Member Shape: | Rect |
| Plate Width (in): | 8.25 |
| Plate Height (in): | 8.25 |
| W1 (in): | 3 |
| W2 (in): | 3 |
| Fy (ksi, plate): | 50 |
| $t_{Plate}$ (in): | 0.625 |
| Weld Size (1/16 in): | 5 |
| Phi*Rn (kip/in): | 6.96 |
| Required Weld Strength (kip/in): | 1.96 |
| Plate Bending Capacity: | **21.5%** |
| Weld Capacity: | **28.2%** |

*Max Plate Bending Strengths*

| | |
|---|---|
| $Mu_{xx}$ *(kip-in)* : | 5.8 |
| Phi*$Mn_{xx}$ *(kip-in)* : | 36.3 |
| $Mu_{yy}$ *(kip-in)* : | 2.0 |
| Phi*$Mn_{yy}$ *(kip-in)* : | 36.3 |

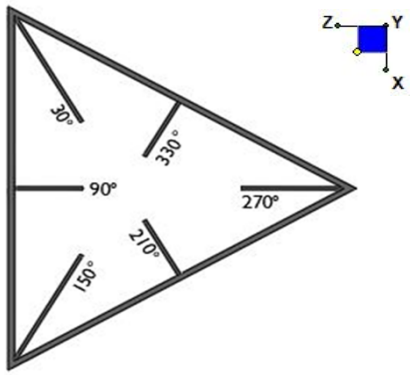
| | | | |
|---|---|---|---|
| Client: | Verizon Wireless | Date: | 12/14/2020 |
| Site Name: | Hartford 9 CT | | |
| Project No. | 20777293A | | |
| Title: | Antenna Mount Analysis | Page: | 1 |

Version 3.1

## I. Mount-to-Tower Connection Check

*RISA Model Data*

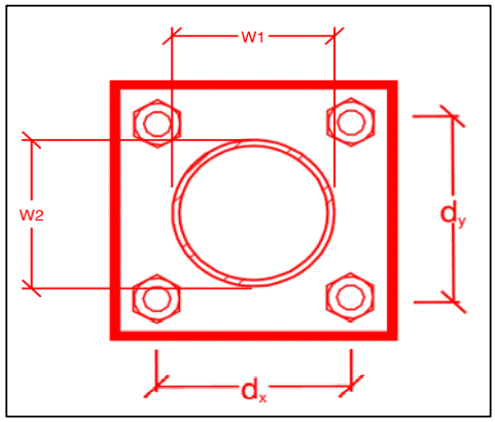
| Nodes *(labeled per RISA)* | Orientation *(per graphic of typical platform)* |
|---|---|
| N1 | 90 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |



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)* : | 7 |
| $d_y$ (in) *(Delta Y of typ. bolt config. sketch)* : | 7 |
| Bolt Type: | A325N |
| Bolt Diameter (in): | 0.625 |
| Required Tensile Strength (kips): | 14.6 |
| Required Shear Strength (kips): | 3.0 |
| Tensile Strength / bolt (kips): | 20.7 |
| Shear Strength / bolt (kips): | 12.4 |
| Tensile Capacity Overall: | **17.7%*** |
| Shear Capacity Overall: | **6.0%** |




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

*Tower Connection Plate and Weld Check*

| | |
|---|---|
| Connecting Standoff Member Shape: | Rect |
| Plate Width (in): | 10 |
| Plate Height (in): | 10 |
| W1 (in): | 4 |
| W2 (in): | 4 |
| Fy (ksi, plate): | 36 |
| $t_{Plate}$ (in): | 0.625 |
| Weld Size (1/16 in): | 3 |
| Phi*Rn (kip/in): | 4.18 |
| Required Weld Strength (kip/in): | 2.31 |
| Plate Bending Capacity: | **42.3%** |
| Weld Capacity: | **55.4%** |

*Max Plate Bending Strengths*

| | |
|---|---|
| $Mu_{xx}$ *(kip-in)* : | 10.4 |
| Phi*$Mn_{xx}$ *(kip-in)* : | 31.6 |
| $Mu_{yy}$ *(kip-in)* : | 2.9 |
| Phi*$Mn_{yy}$ *(kip-in)* : | 31.6 |

MASER CONSULTING
— CONNECTICUT—

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

## Documents & Photos Required from Contractor – Mount Modification

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

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the 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:**

- 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) must be shown.
- Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.
- Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact TES immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded **to** https://pmi.vzwsmart.com as depicted on the drawings

**Photo Requirements:**

- *Base and "During Installation Photos"*
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - "During Installation Photos if provided - must be placed only in this folder
- *Photos taken at ground level*
  - Overall tower structure before and after installation of the modifications
  - Photos of the appropriate mount before and 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 each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
        - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
    - Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
    - Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
    - Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
    - Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (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, a tape drop measurement shall be provided before the elevation change
    - 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.

**Material Certification:**

- Materials utilized must be as per specification on the drawings or the equivalent as validated by TES.

    - If the drawings are as specified on the drawings
        - The contractor should provide the packing list or the materials utilized to perform the mount modification
    - If an equivalent is utilized
        - It is required that the TES certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.

- The contractor must certify that the materials meet these specifications by one of these methods.

☐ The Material utilized was as specified on the TES Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials

☐ The material utilized was an "equivalent" and included as part of the contractor submission is the TES certification, invoices, or specifications validating accepted status

Certifying Individual: Company _____

Name _____

Signature _____

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

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

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

**Issue:**

| |
|---|
| |

**Response:**

| |
|---|
| Replace all rusted U-Bolts on the mount. |

**Schedule A – Photo & Document File Structure**

- VzW Site Number / Name
  - Base & “During Installation” Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb – If Present
  - Certifications – Submission of this document including certifications
  - Specific Required Additional Photos

**Structure: 468180-VZW - Hartford 9 CT**

Sector: **A**

Structure Type: Monopole

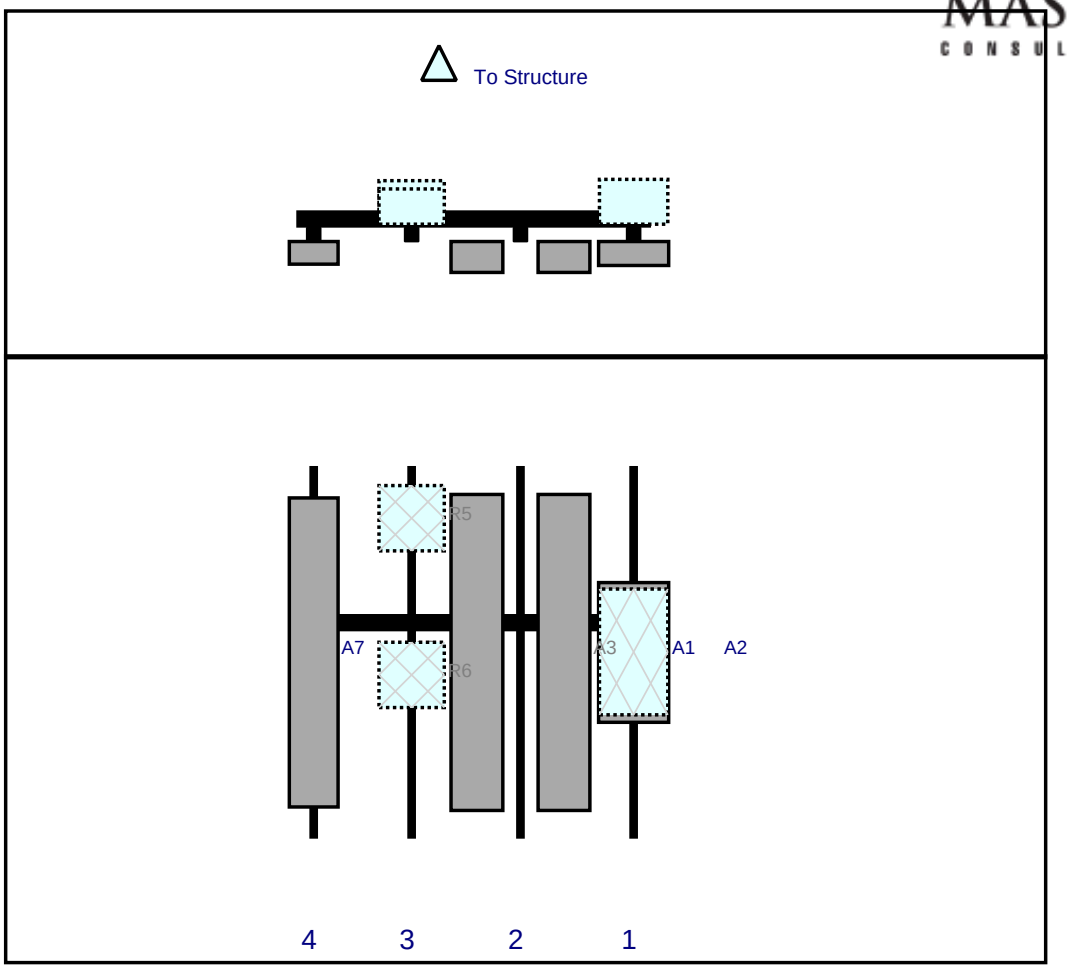
Mount Elev: 89.25

12/14/2020



**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | Licensed Sub 6 Antenna | 32.1 | 16.1 | 77.5 | 1 | a | Front | 42.84 | 0 | Added | |
| A2 | DB-T1-6Z-12AB-0Z | 28.9 | 15.7 | 77.5 | 1 | a | Behind | 42.72 | 0 | Added | |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | a | Front | 42.84 | 10 | Retained | 10/26/2020 |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | b | Front | 42.84 | -10 | Retained | 10/26/2020 |
| R5 | B2/B66A RRH-BR049 | 15 | 15 | 26.5 | 3 | a | Behind | 12 | 0 | Retained | 10/26/2020 |
| R6 | B5/B13 RRH-BR04C | 15 | 15 | 26.5 | 3 | a | Behind | 48 | 0 | Retained | 10/26/2020 |
| A7 | BXA-70063-6CF-EDIN-2 | 71 | 11.2 | 4 | 4 | a | Front | 42.84 | 0 | Retained | 10/26/2020 |

**Structure: 468180-VZW - Hartford 9 CT**

Sector: **B**

12/14/2020

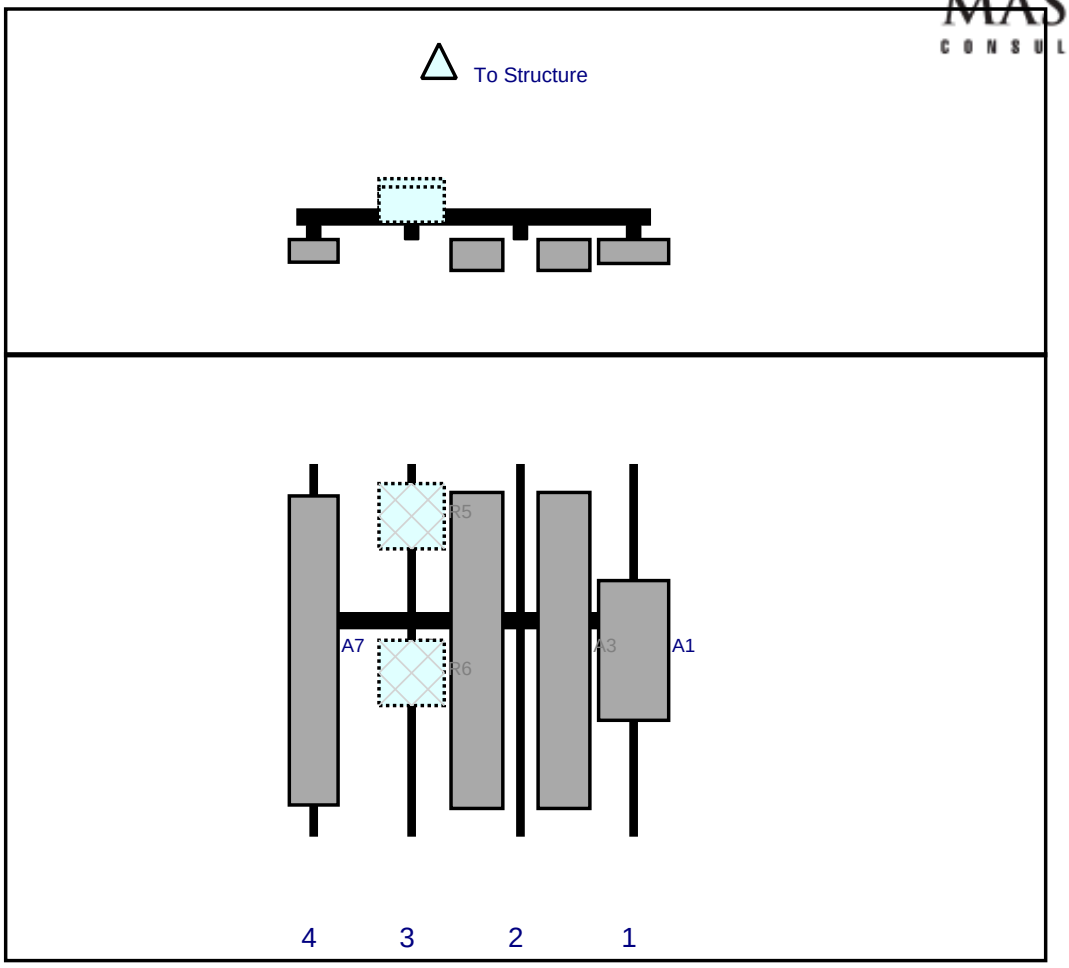
Structure Type: Monopole

Mount Elev: 89.25



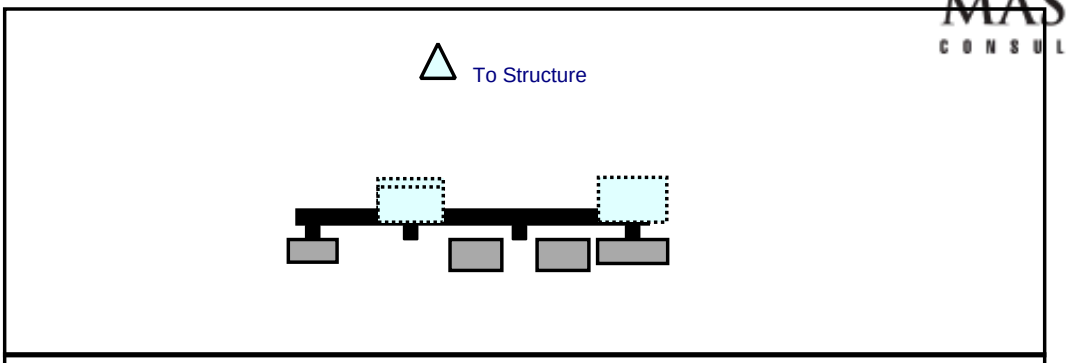
**Plan View**

**Front View**
Looking at Structure

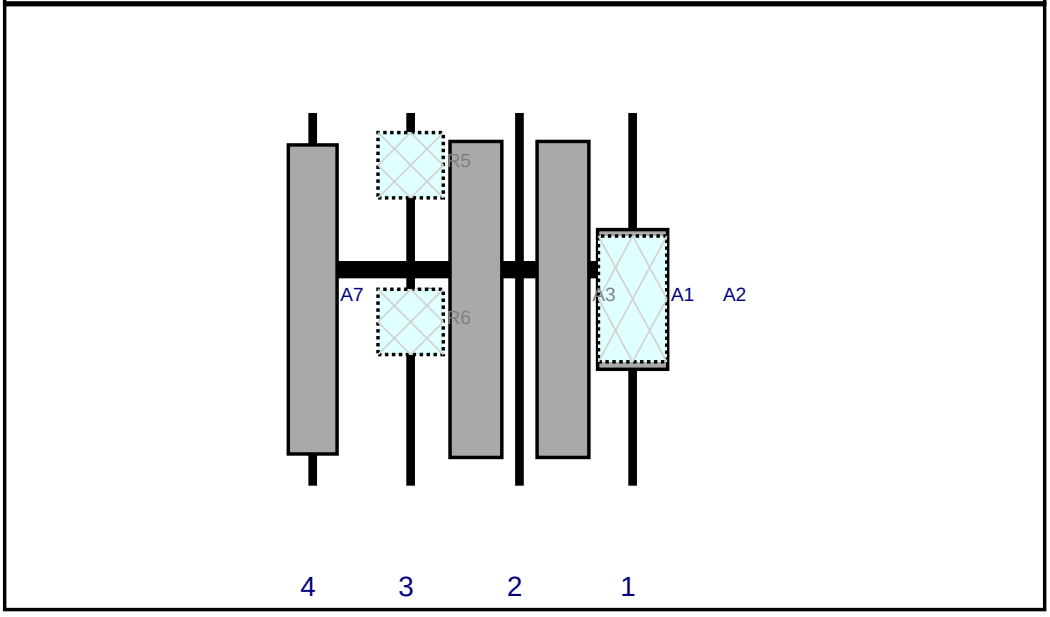



| Ref# | Model | Height (in) | Width (in) | H Dist Frm L. | Pipe # | Pipe Pos V | Ant Pos | C. Ant Frm T. | Ant H Off | Status | Validation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | Licensed Sub 6 Antenna | 32.1 | 16.1 | 77.5 | 1 | a | Front | 42.84 | 0 | Added | |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | a | Front | 42.84 | 10 | Retained | 10/26/2020 |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | b | Front | 42.84 | -10 | Retained | 10/26/2020 |
| R5 | B2/B66A RRH-BR049 | 15 | 15 | 26.5 | 3 | a | Behind | 12 | 0 | Retained | 10/26/2020 |
| R6 | B5/B13 RRH-BR04C | 15 | 15 | 26.5 | 3 | a | Behind | 48 | 0 | Retained | 10/26/2020 |
| A7 | BXA-70063-6CF-EDIN-2 | 71 | 11.2 | 4 | 4 | a | Front | 42.84 | 0 | Retained | 10/26/2020 |

**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | Licensed Sub 6 Antenna | 32.1 | 16.1 | 77.5 | 1 | a | Front | 42.84 | 0 | Added | |
| A2 | DB-T1-6Z-12AB-0Z | 28.9 | 15.7 | 77.5 | 1 | a | Behind | 42.72 | 0 | Added | |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | a | Front | 42.84 | 10 | Retained | 10/26/2020 |
| A3 | SBNHH-1D65B | 72.6 | 11.9 | 51.5 | 2 | b | Front | 42.84 | -10 | Retained | 10/26/2020 |
| R5 | B2/B66A RRH-BR049 | 15 | 15 | 26.5 | 3 | a | Behind | 12 | 0 | Retained | 10/26/2020 |
| R6 | B5/B13 RRH-BR04C | 15 | 15 | 26.5 | 3 | a | Behind | 48 | 0 | Retained | 10/26/2020 |
| A7 | BXA-70063-6CF-EDIN-2 | 71 | 11.2 | 4 | 4 | a | Front | 42.84 | 0 | Retained | 10/26/2020 |

# Maser Consulting Connecticut

MASER CONSULTING
— CONNECTICUT —

| | | |
|---|---|---|
| **Subject** | TIA-222-H Usage | |
| **Site Information** | Site ID: | 468180-VZW / Hartford 9 CT |
| | Site Name: | Hartford 9 CT |
| | Carrier Name: | Verizon Wireless |
| | Address: | 250 Silas Deane Hwy<br>Wethersfield, Connecticut 0610<br>Hartford County |
| | Latitude: | 41.720597° |
| | Longitude: | -72.666044° |
| **Structure Information** | Tower Type: | Monopole |
| | Mount Type: | 6.79-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. The 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 map 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 method, seismic analysis, 30-degree increment wind direction 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 tower site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Petros E. Tsoukalas, PE
Geographic Discipline Leader

## 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 6.79' T-FRAME MOUNT

## SITE NAME: HARTFORD 9 CT
## SITE NUMBER: 468180

## 250 SILAS DEANE HWY
## WETHERSFIELD, CT 06109
## HARTFORD COUNTY

## PROJECT INFORMATION

### SITE INFORMATION

| | |
|---|---|
| LATITUDE: | 41.720597° N |
| LONGITUDE: | 72.666044° W |
| JURISDICTION | HARTFORD COUNTY |

### APPLICANT/LESSEE

| | |
|---|---|
| COMPANY | VERIZON WIRELESS |

### CLIENT REPRESENTATIVE

| | |
|---|---|
| COMPANY | VERIZON WIRELESS |
| ADDRESS | 118 FLANDERS ROAD, 3RD FLOOR |
| CITY, STATE, ZIP | WESTBOROUGH, MA 01518 |
| CONTACT | ANDREW CANDIELLO |
| E-MAIL | ANDREW.CANDIELLO@VERIZONWIRELESS.COM |

### PROJECT MANAGER

| | |
|---|---|
| COMPANY | MASER CONSULTING |
| CONTACT | GREG DULNIK |
| PHONE | (615) 686-2575 |
| E-MAIL | GDULNIK@MASERCONSULTING.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 # | 10022557 |
| VZW LOCATION CODE (PSLC) | 468180 |
| FUZE ID | 16232035 |

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

## REFERENCED DOCUMENTS

FAILING MOUNT ANALYSIS REPORT

| | |
|---|---|
| SMART TOOL PROJECT # | 10017995 |
| MASER CONSULTING PROJECT # | 20777293A |
| ANALYSIS DATE | 11/10/2020 |


MASER CONSULTING CONNECTICUT
WILL BE 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

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTHS SURFACE ANYWHERE IN ANY STATE

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

FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE: AS SHOWN | JOB NUMBER: 20777293A

| REV | DATE | DESCRIPTION | DRAWN BY | CHECKED BY |
|---|---|---|---|---|
| 0 | 12/16/2020 | ISSUED FOR CONSTRUCTION | DEH | PT |

STATE OF CONNECTICUT
PETROS TSOUKALAS
LICENSED PROFESSIONAL ENGINEER

Petros S. Tsoukalas
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER 32577
MASER CONSULTING CONNECTICUT

12/16/20

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:

HARTFORD 9 CT
468180

250 SILAS DEANE HWY
WETHERSFIELD, CT 06109
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 |
|---|---|---|---|---|
| 12 | VZWSMART | VZWSMART-MSK2 | CROSSOVER PLATE | |
| 3 | | VZWSMART-SFK4 | T-ARM KIT | FINAL LENGTH TO BE DETERMINED IN FIELD, CONTRACTOR TO TRIM AS REQUIRED |
| 3 | | VZWSMART-PLK7 | COLLAR MOUNT | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

## OTHER REQUIRED PARTS

| QUANTITY | MANUFACTURER | PART NUMBER | DESCRIPTION | NOTES |
|---|---|---|---|---|
| 3 | - | - | 84" LONG, P3.0 STD PIPE | GALVANIZED - CONTRACTOR TO TRIM AS REQUIRED |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**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


MASER CONSULTING CONNECTICUT
WILL BE 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

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

| SCALE : | JOB NUMBER : |
|---|---|
| AS SHOWN | 20777293A |

| REV | DATE | DESCRIPTION | DRAWN BY | CHECKED BY |
|---|---|---|---|---|
| 0 | 12/16/2020 | ISSUED FOR CONSTRUCTION | DEH | PT |

STATE OF CONNECTICUT · PETROS TSOUKALAS · LICENSED PROFESSIONAL ENGINEER

Petros C. Tsoukalas
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER 32577
MASER CONSULTING CONNECTICUT, PC

12/16/20



SITE NAME:

HARTFORD 9 CT
468180

250 SILAS DEANE HWY
WETHERSFIELD, CT 06109
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

## 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 = 118 MPH

b. EXPOSURE CATEGORY C

c. TOPOGRAPHIC CATEGORY 1

d. MEAN BASE ELEVATION (AMSL) = 35.72'

ICE LOADS

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

b. ICE THICKNESS = 1.5 IN

SEISMIC LOADS

a. SEISMIC DESIGN CATEGORY B

b. SHORT TERM MCER GROUND MOTION, $S_S$ = .194

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 GDULNIK@MASERCONSULTING.COM
   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING 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.


MASER CONSULTING CONNECTICUT
WILL BE 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

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

SCALE: AS SHOWN
JOB NUMBER: 20777293A

| REV | DATE | DESCRIPTION | DRAWN BY | CHECKED BY |
|---|---|---|---|---|
| 0 | 12/16/2020 | ISSUED FOR CONSTRUCTION | DEH | PT |

STATE OF CONNECTICUT — PETROS TSOUKALAS — LICENSED PROFESSIONAL ENGINEER
Petros Tsoukalas
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER/ 32577
MASER CONSULTING CONNECTICUT
12/16/20



SITE NAME:

HARTFORD 9 CT
468180

250 SILAS DEANE HWY
WETHERSFIELD, CT 06109
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:

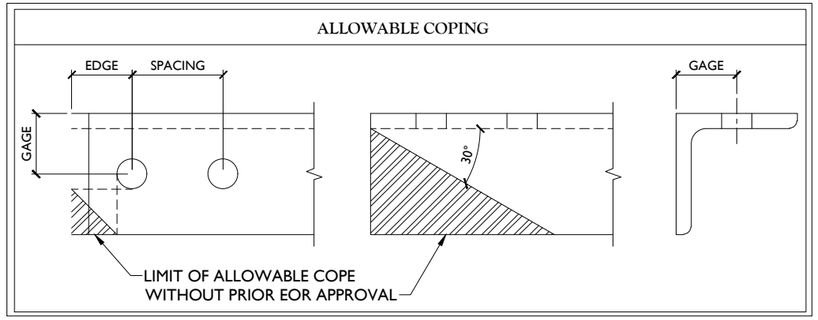
- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

## 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:

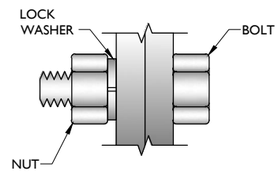
- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATIONS
  - WELD PREPARATION
  - BOLT INSTALLATION
  - FINAL INSTALLED CONDITION
  - SURFACE COATING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

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




| 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.


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

SCALE : AS SHOWN
JOB NUMBER : 20777293A

| REV | DATE | DESCRIPTION | DRAWN BY | CHECKED BY |
|---|---|---|---|---|
| 0 | 12/16/2020 | ISSUED FOR CONSTRUCTION | DEH | PT |

STATE OF CONNECTICUT
PETROS TSOUKALAS
LICENSED PROFESSIONAL ENGINEER
Petros Tsoukalas
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER/32577
MASER CONSULTING CONNECTICUT, LLC
12/16/20



SITE NAME:

HARTFORD 9 CT
468180

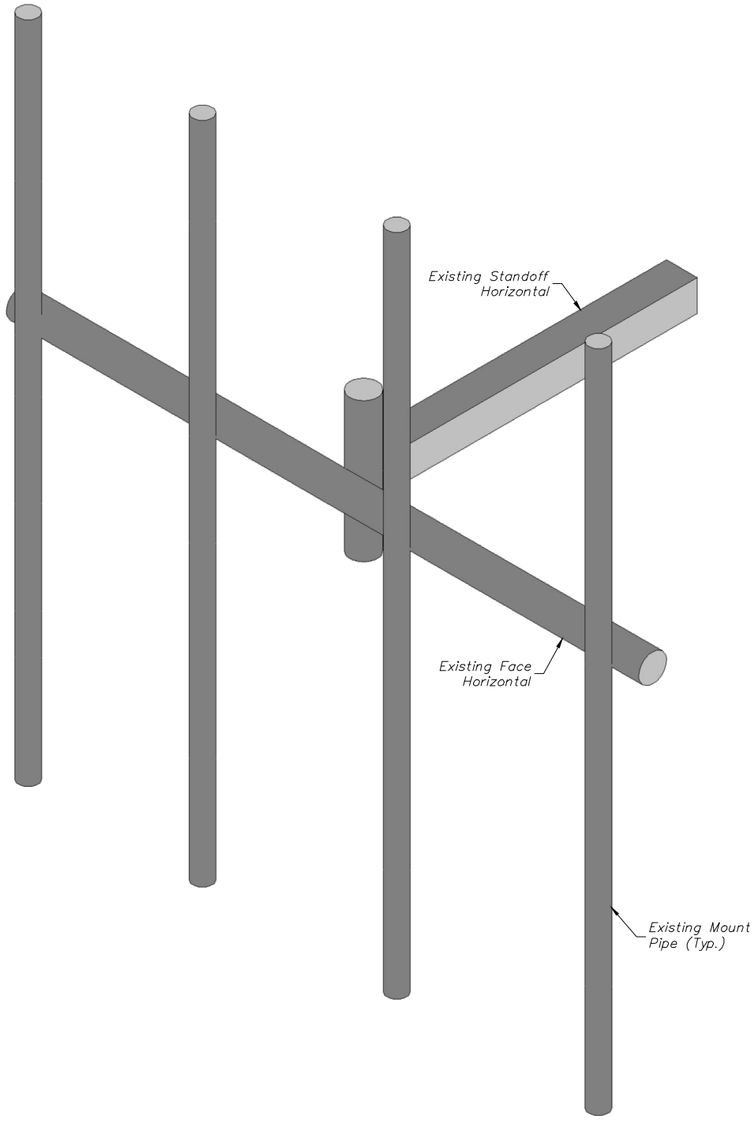
250 SILAS DEANE HWY
WETHERSFIELD, CT 06109
HARTFORD COUNTY


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


SHEET TITLE : MODIFICATION NOTES

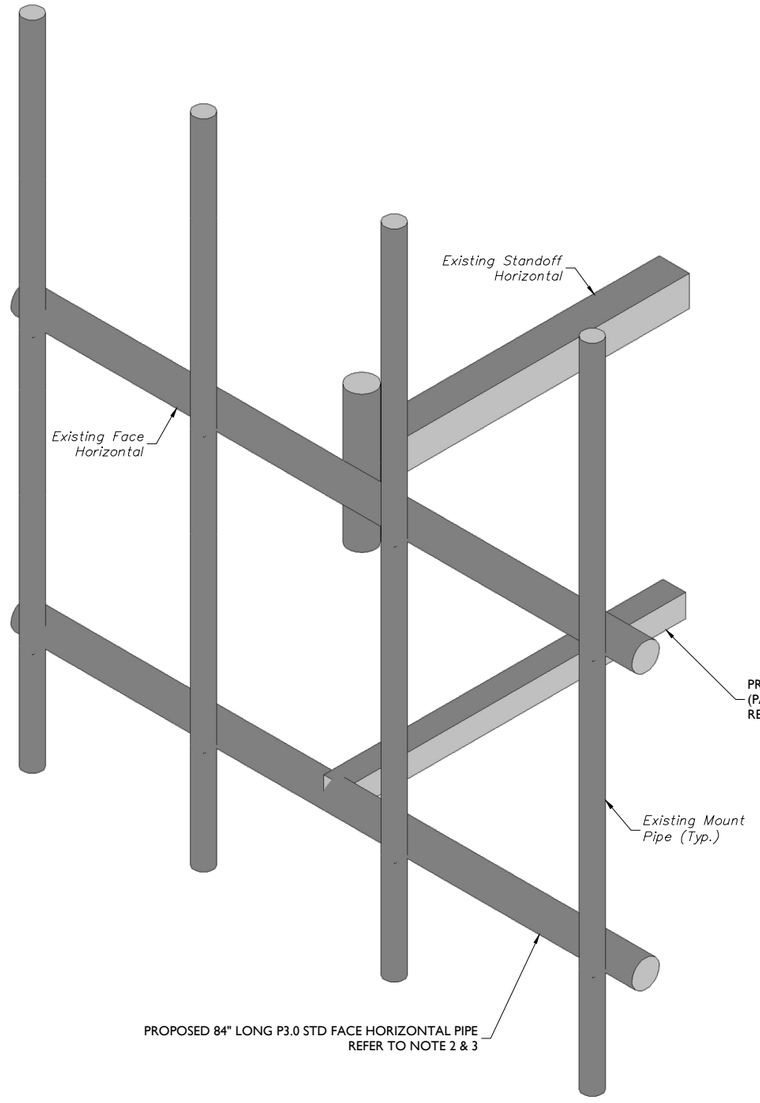
SHEET NUMBER : S-3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.




1 EXISTING FRAME ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.




2 PROPOSED FRAME ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY DELTA OAKS GROUP ON 10/26/2020, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (89'-3") 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. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
3. CONNECT NEW HORIZONTAL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
4. CONNECT PROPOSED STANDOFF (PART #: VZWSMART-SFK4) TO MONOPOLE WITH A COLLAR MOUNT (PART #: VZWSMART-PLK7) .
5. REPLACE ALL RUSTED U-BOLTS ON THE MOUNT.

MASER CONSULTING CONNECTICUT
WILL BE 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

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

| SCALE : | JOB NUMBER : |
|---|---|
| AS SHOWN | 20777293A |

| REV | DATE | DESCRIPTION | DRAWN BY | CHECKED BY |
|---|---|---|---|---|
| 0 | 12/16/2020 | ISSUED FOR CONSTRUCTION | DEH | PT |

STATE OF CONNECTICUT
PETROS TSOUKALAS
LICENSED PROFESSIONAL ENGINEER
Petros Tsoukalas
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER/ 32577
MASER CONSULTING CONNECTICUT
12/16/20



SITE NAME:

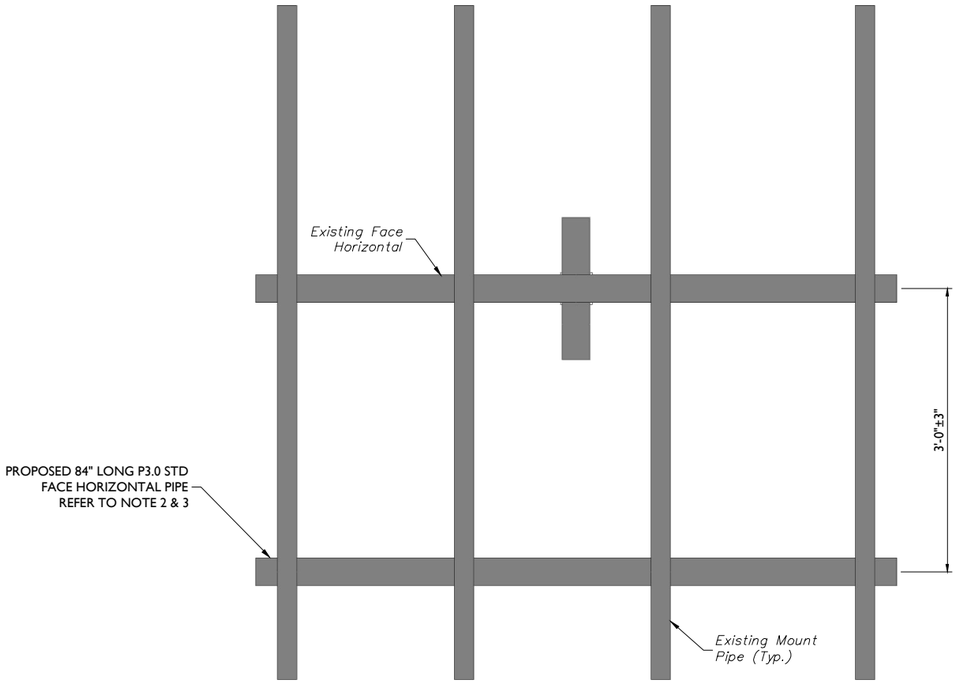
HARTFORD 9 CT
468180

250 SILAS DEANE HWY
WETHERSFIELD, CT 06109
HARTFORD COUNTY

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

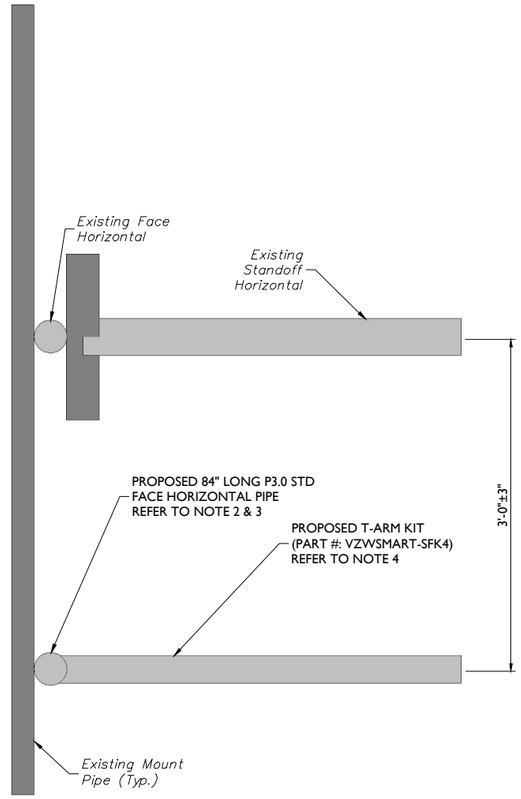
SHEET TITLE :
MODIFICATION DETAILS

SHEET NUMBER :
S-4



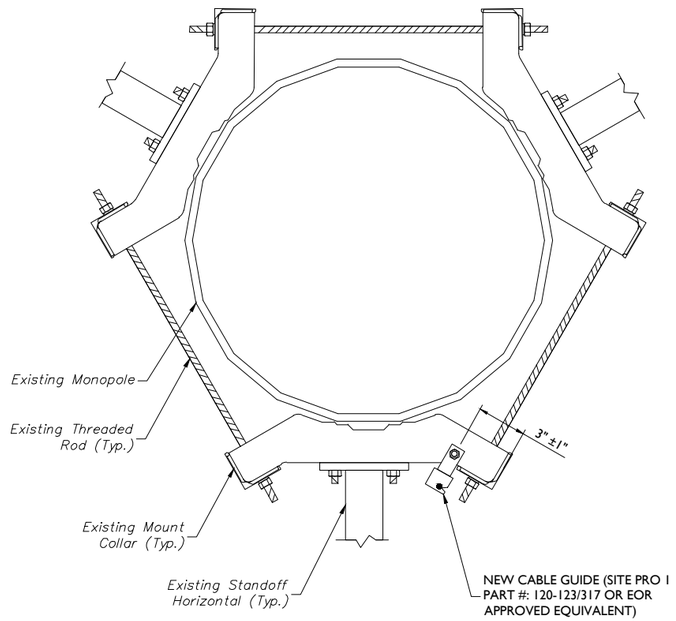

## 1 PROPOSED FRONT ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.




## 2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.




## 3 CABLE GUIDE COLLAR ATTACHMENT - PLAN VIEW

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
3. CONNECT NEW HORIZONTAL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
4. CONNECT PROPOSED STANDOFF (PART #: VZWSMART-SFK4) TO MONOPOLE WITH A COLLAR MOUNT (PART #: VZWSMART-PLK7) .
5. REPLACE ALL RUSTED U-BOLTS ON THE MOUNT.


MASER CONSULTING CONNECTICUT
WILL BE 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 Know what's below. Call before you dig.

PROTECT YOURSELF
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 | 20777293A |

| REV | DATE | DESCRIPTION | DRAWN BY | CHECKED BY |
|---|---|---|---|---|
| 0 | 12/16/2020 | ISSUED FOR CONSTRUCTION | DEH | PT |

STATE OF CONNECTICUT
PETROS TSOUKALAS
LICENSE
PROFESSIONAL ENGINEER

Petros Tsoukalas
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER/ 32577
MASER CONSULTING CONNECTICUT

12/16/20



SITE NAME:

HARTFORD 9 CT
468180

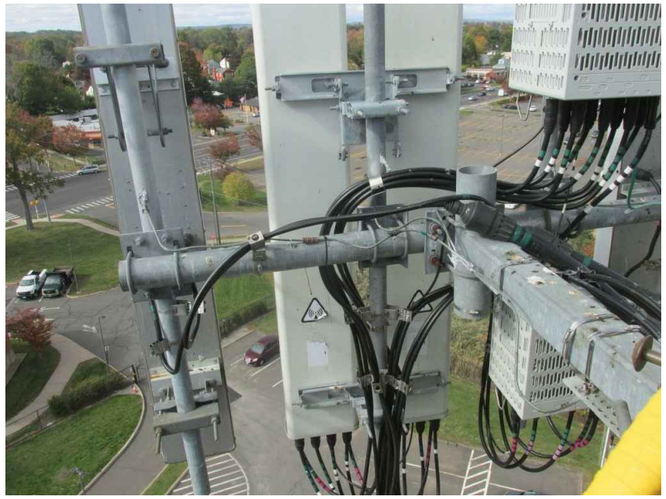
250 SILAS DEANE HWY
WETHERSFIELD, CT 06109
HARTFORD COUNTY


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-5



MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4


MASER CONSULTING CONNECTICUT
WILL BE 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 : AS SHOWN
JOB NUMBER : 20777293A

| REV | DATE | DESCRIPTION | DRAWN BY | CHECKED BY |
|---|---|---|---|---|
| 0 | 12/16/2020 | ISSUED FOR CONSTRUCTION | DEH | PT |

STATE OF CONNECTICUT
PETROS TSOUKALAS
LICENSED PROFESSIONAL ENGINEER
Petros Tsoukalas
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 32577
MASER CONSULTING CONNECTICUT
12/16/20



SITE NAME:

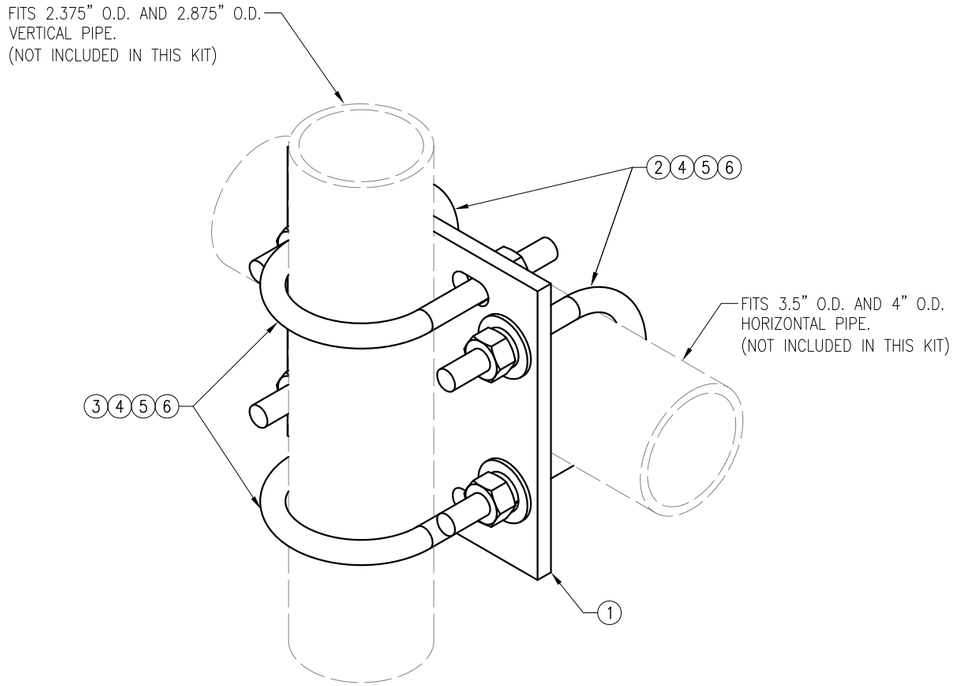
HARTFORD 9 CT
468180

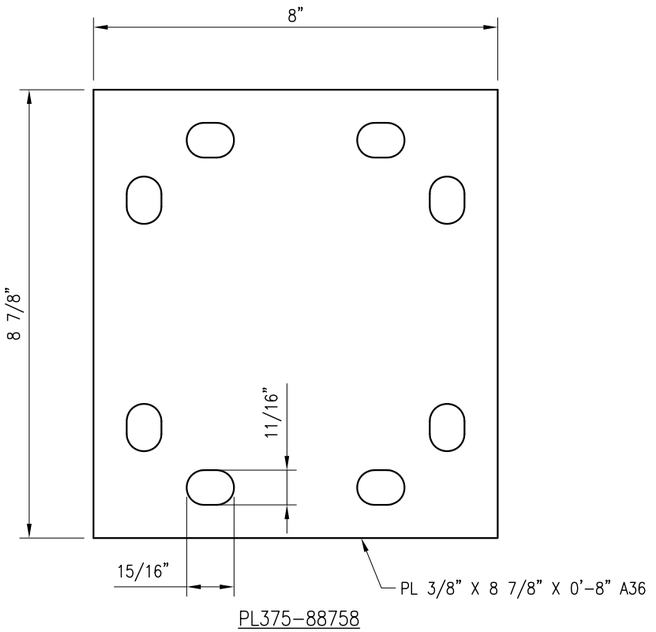
250 SILAS DEANE HWY
WETHERSFIELD, CT 06109
HARTFORD COUNTY


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


SHEET TITLE : MOUNT PHOTOS

SHEET NUMBER : S-6




PL375-88758

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

VZWSMART-MSK2 (CROSSOVER PLATE)

| ITEM NO. | QTY. | PART NO. | DESCRIPTION | SHEET # | WT |
|---|---|---|---|---|---|
| 1 | 1 | PL375-88758 | PL 3/8" X 8 3/4" X 0'-8" A36 | MSK2-F1 | 8 |
| 2 | 2 | MS02-625-4125-600 | RU-BOLT 5/8" X 4 1/8" I.W. X 6" I.L. A36 (OR EQUIV.) | RBC-1 | 3 |
| 3 | 2 | MS02-625-300-500 | RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.) | RBC-1 | 3 |
| 4 | 8 | FW-625 | 5/8" HDG USS FLAT WASHER | --- | 1 |
| 5 | 8 | LW-625 | 5/8" HDG LOCK WASHER | --- | 0 |
| 6 | 8 | NUT-625 | 5/8" HDG HEX NUT | --- | 1 |
| | | | | GALVANIZED WT | 15 |

**VzW SMART Tool© Vendor**

verizon

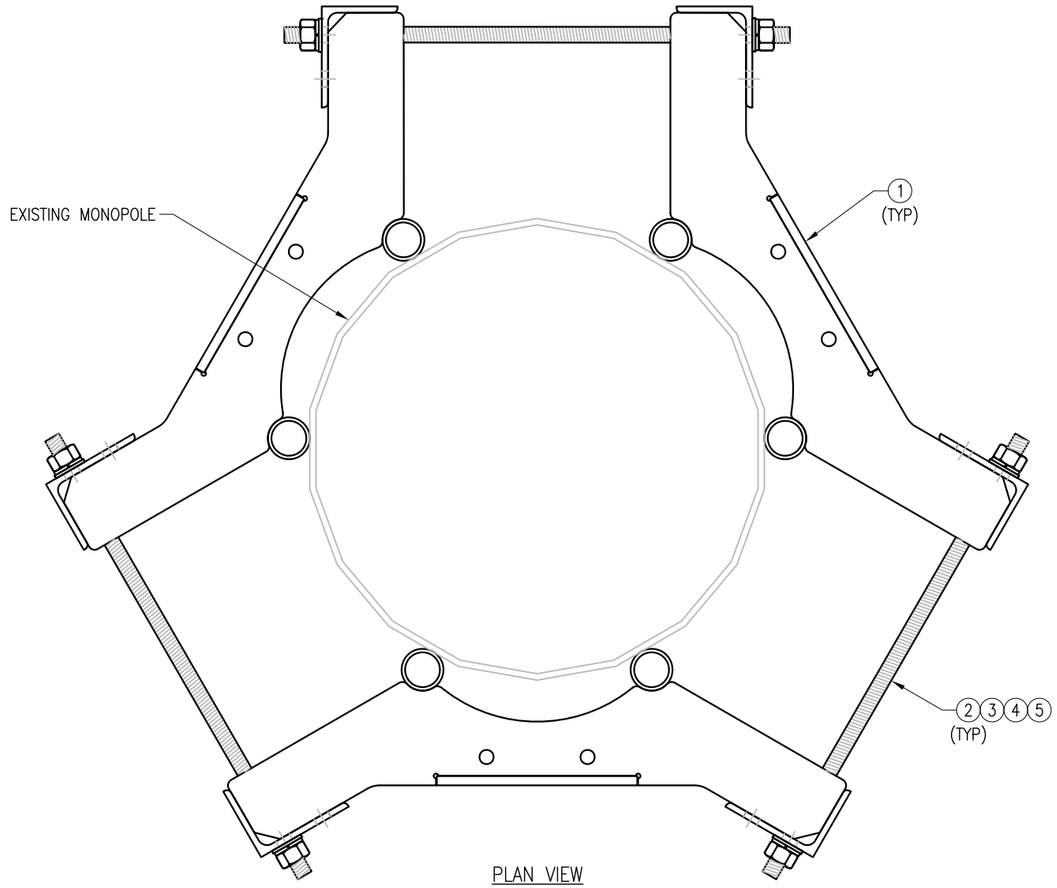
DRAWN BY: H.R | CHECKED BY: HMA

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

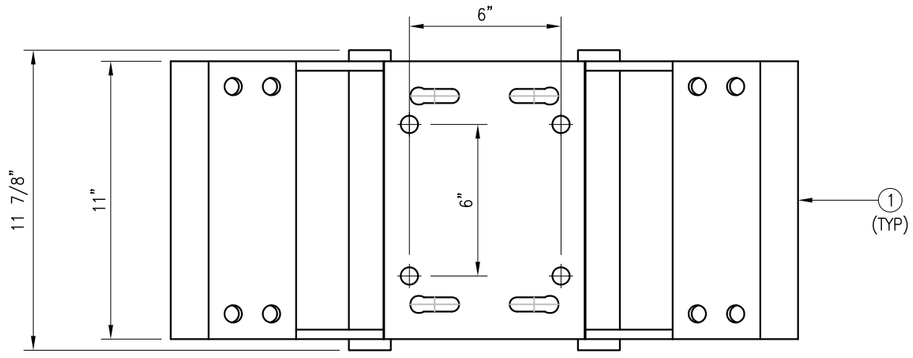
SHEET TITLE:
VZWSMART-MSK2
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK2

REV #: 0




PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY




FRONT VIEW

NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

| ITEM NO. | QTY. | PART NO. | DESCRIPTION | SHEET # | WT |
|---|---|---|---|---|---|
| 1 | 3 | CM-1245 | COLLAR MOUNT ASSEMBLY | PLK7-F1 | 147 |
| 2 | 6 | --- | THREADED ROD 5/8" X 4'-0" A193-B7 | --- | |
| 3 | 12 | FW-625 | 5/8" HDG USS FLAT WASHER | --- | 1 |
| 4 | 12 | LW-625 | 5/8" HDG LOCK WASHER | --- | 0 |
| 5 | 12 | NUT-625 | 5/8" HDG HEX NUT | --- | 1 |
| | | | | GALVANIZED WT | 150 |

**VzW SMART Tool© Vendor**

verizon

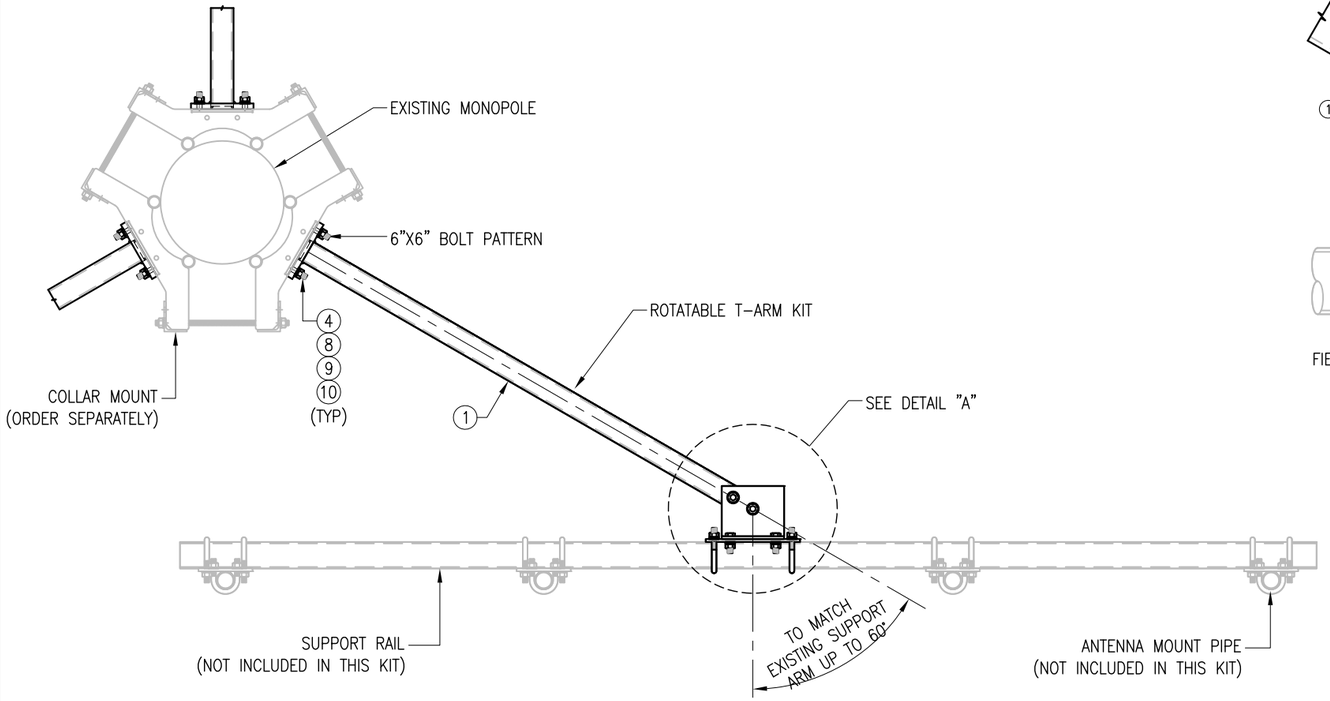
DRAWN BY: BT | CHECKED BY: HMA/KW

| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| 0 | FIRST ISSUE | BT | 05/11/20 |

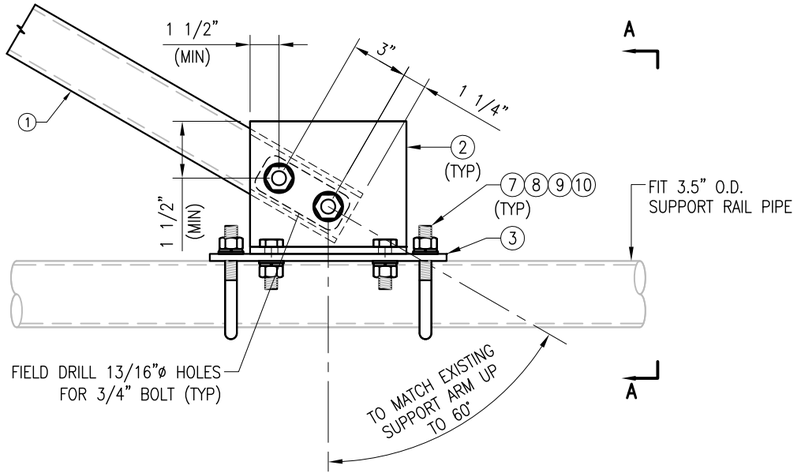
SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7

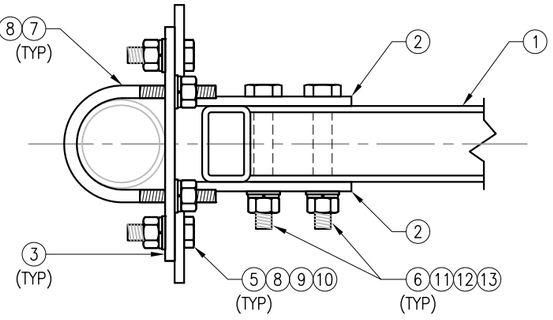
REV #: 0



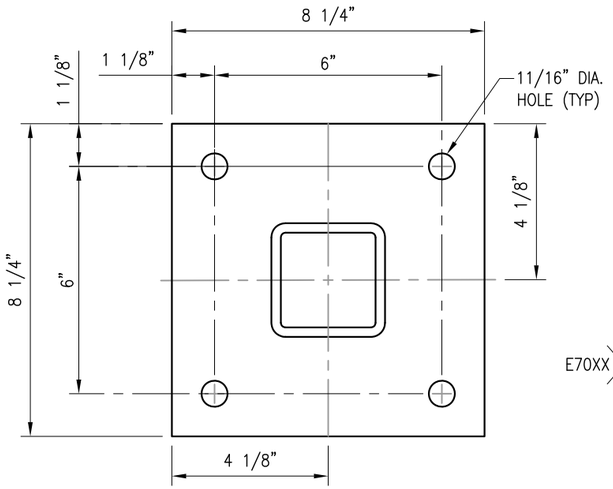

PLAN VIEW
T-ARM KIT



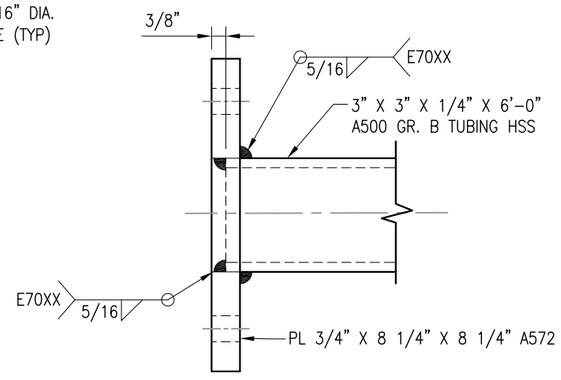

DETAIL "A"




SECTION "A-A"




FRONT VIEW




SIDE VIEW

RO-TAW-6 WELDMENT

VZWSMART-SFK4 (T-ARM KIT)

| ITEM NO. | QTY. | PART NO. | DESCRIPTION | SHEET # | WT |
|---|---|---|---|---|---|
| 1 | 1 | RO-TAW-6 | T-ARM WELDMENT | SFK4-F1 | 71 |
| 2 | 2 | BP825-94375 | PL 3/8" X 8 1/4" X 9 7/16" A36 BEND PLATE | SFK4-F2 | 17 |
| 3 | 1 | PL375-92512025 | PL 3/8" X 9 1/4" X 1'-0 1/2" A36 | SFK4-F3 | 12 |
| 4 | 4 | --- | BOLT 5/8" X 2 1/4" A325 | --- | 0 |
| 5 | 4 | --- | BOLT 5/8" X 2" A325 | --- | 0 |
| 6 | 2 | --- | BOLT 3/4" X 5 1/4" A325 | --- | 0 |
| 7 | 2 | MS02-625-3625-600 | RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.) | RBC-1 | 3 |
| 8 | 12 | FW-625 | 5/8" HDG USS FLAT WASHER | --- | 1 |
| 9 | 12 | LW-625 | 5/8" HDG LOCK WASHER | --- | 0 |
| 10 | 12 | NUT-625 | 5/8" HDG HEX NUT | --- | 1 |
| 11 | 2 | FW-75 | 3/4" HDG USS FLAT WASHER | --- | 0 |
| 12 | 2 | LW-75 | 3/4" HDG LOCK WASHER | --- | 0 |
| 13 | 2 | NUT-75 | 3/4" HDG HEX NUT | --- | 0 |
| | | | | GALVANIZED WT | 106 |

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

**VzW SMART Tool© Vendor**

verizon

DRAWN BY: BT | CHECKED BY: HMA/KW

| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| 0 | FIRST ISSUE | BT | 05/08/20 |

SHEET TITLE:
VZWSMART-SFK4
T-ARM KIT

SHEET NUMBER: VZWSMART-SFK4

REV #: 0

MASER CONSULTING
— CONNECTICUT—

331 Newman Springs Road, Suite 203
Red Bank, NJ 07701
T: 732.383.1950
www.maserconsulting.com

March 29, 2021

Mr. Andrew Leone
Verizon Wireless
20 Alexander Dr.
Wallingford, CT 06492

**Re:** Verizon Wireless antenna Model Clarification for CT Siting Council

Dear Mr. Leone,

This letter is intended to clarify and confirm the antenna naming convention used by Verizon Wireless as a part of an antenna upgrade project on numerous wireless facilities.

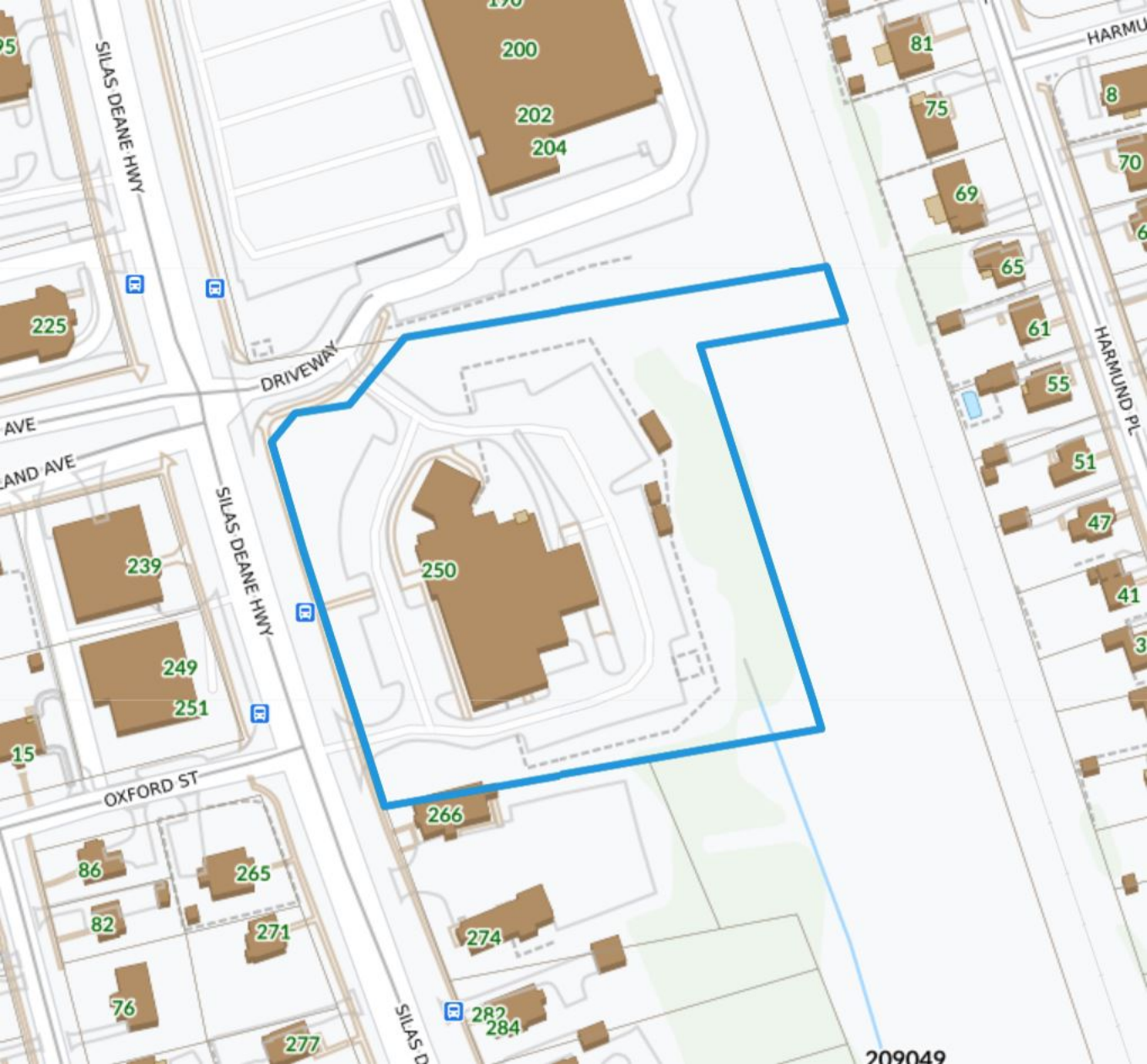
The antenna naming convention "Licensed Sub-6, L-Sub6, nL-Sub6, VZS01" and any other slight variants refer to the 64T64RMMU antenna manufactured by Samsung Electronics. These names are interchangeable and are used in various documents, including but not limited to the "Antenna Mount Analysis".

If you have any questions or comments, or require additional information, please do not hesitate to contact me.

Very truly yours,
MASER CONSULTING CONNECTICUT

Petros Toukalas
Connecticut Professional Engineer
License Number: 32577

# ATTACHMENT 4


SILAS DEANE HWY
DRIVEWAY
AVE
AND AVE
OXFORD ST
HARMUND PL
HARMU
250
200
202
204
225
239
249
251
15
266
274
284
86
82
76
265
271
277
81
75
69
65
61
55
51
47
41
8
70
209049

**Unique ID:** 210010 **Wethersfield** **Card No:** 1of 1

| Location: | 250 SILAS DEANE HWY | Map/Lot: | 210 010 | Zone: | GB | Date Printed: | 08-06-19 |
|---|---|---|---|---|---|---|---|
| 911 Address: | | Exempt | X | Nbhd: | C35 | Last Update: | 07-02-19 |

| Owner Of Record | Volume/Page | Date | Sales Type | Valid | Sale Price |
|---|---|---|---|---|---|
| WETHERSFIELD TOWN OF POLICE FACILITY | 0784 /0051 | 01-12-00 | | NO | 1,300,000 |
| 505 SILAS DEANE HWY WETHERSFIELD , CT 06109 | | | | | |
| **Additional Owners:** | | | | | |
| **Prior Owner History** | | | | | |
| ROBERT JOSEPH L A & SCOVILLE HOMER | 0333 /0023 | 02-28-83 | | NO | 725,000 |
| | / | | | | |
| | / | | | | |
| | / | | | | |
| | / | | | | |

| Permit Number | Date | Cost | New Hous | Status | % Comp | Est Completion | Building Permit |
|---|---|---|---|---|---|---|---|
| M-18-0122 | 12-21-19 | 4,000 | No | Closed | 100 | 06-21-19 | EMERGENCY BURNER REPLACEMENT BOILER #2 |
| E-19-0100 | 04-26-19 | 326,280 | No | Closed | 100 | 06-26-19 | INSTALL & WIRE WPD HQ IP VIDEO SECURITY SYSTEM |
| P-19-0090 | 04-15-19 | 1,500 | No | Closed | 100 | 06-26-19 | CHANGE PENDANT SPRINKLER HEADS TO UPRIGHT HEADS IN 2ND COMPUTER ROOM |
| M-19-0062 | 04-12-19 | 1,500 | No | Closed | 100 | 06-26-19 | INSTALL PAN UNDER HVAC UNIT |
| E-19-0175 | 04-08-19 | 10,000 | Yes | Closed | 100 | 01-01-01 | Install 2 new UPS's , new feeds from MDP-E to mech room to power new UP |
| M-19-0047 | 04-03-19 | 12,575 | No | Closed | 100 | 06-26-19 | REPL DISPATCH COOLING ONLY ROOFTOP UNIT |

| | |
|---|---|
| **Census/Tract** | 4923 |
| **Dev Map** | **Dev Lot** 3 |
| **Date** | 05/14/2018 |
| **Inspector** | EQ |
| **Action** | Measure & List |

**State Item Codes**

| Code | Quantity | Value | Code | Quantity | Value |
|---|---|---|---|---|---|
| 21- Comm Land | 3.52 | 892,460 | | | |
| 22-Comm Bldg | 1.00 | 3,815,190 | | | |
| 25-Comm Outbldg | 4.00 | 662,470 | | | |

**Appraised Value**

| | |
|---|---|
| **Total Land Value** | 1,274,948 |
| **Total Building Value** | 5,450,266 |
| **Total Outbuilding Value** | 946,380 |
| **Total Market Value** | **7,671,594** |

**Acres**

| Land Type | Acres | 490 | Rate | Adj | Influence | Total Value |
|---|---|---|---|---|---|---|
| Primary Site | 1.00 | 0.00 | 500,000 | 1.00 | 150 | 1,250,000 |
| Comm Excess | 2.52 | 0.00 | 10,000 | 0.99 | 0 | 24,948 |
| **Total** | 3.52 | | | | | 1,274,948 |

**Influence Factors**

| Land Type | Influence | Reason | Comment |
|---|---|---|---|
| Primary Site | 150 | Intensive Use | |

**Assessment History (Prior Years as of Oct 1)**

| | Current | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|
| **Land** | 892,460 | 892,460 | 512,300 | 512,300 | 512,300 |
| **Building** | 3,815,190 | 3,815,190 | 3,483,700 | 3,483,700 | 4,303,900 |
| **Outbuilding** | 662,470 | 662,470 | 820,200 | 820,200 | 0 |
| **Total** | **5,370,120** | **5,370,120** | **4,816,200** | **4,816,200** | **4,816,200** |

**490 Appraised Totals**

| Type | Acres | Value | Type | Acres | Value |
|---|---|---|---|---|---|
| | | | **Totals** | | |

**Comments**

CELL POLE 4500 MONTH, 8 CAP RATE
4 X 3000 X 12= 144,000 LESS 25% EXP=
GENERATOR BACKUP/6 HOLDING CELLS
2003 CELL TOWER-180'
108,000/.11 CAP= 981,800
POLICE STATION

**Unique ID:** 210010 **Wethersfield**

| Location: | 250 SILAS DEANE HWY | Unit | |
|---|---|---|---|

| Use | Class | Quality | Stry | WH | Area | BG | Units |
|---|---|---|---|---|---|---|---|
| Police Station | Fireproof Steel | C+ | 2 | 12 | 26,000 | NO | |

**Commercial Building Description**

| | |
|---|---|
| **Building Use** | Jail - Police S |
| **Class** | Steel & Conc |
| **Overall Condition** | Good |
| **Construction Quality** | C+ |
| **Stories** | 2.00 |
| **Year Built** | 2002 |
| **Remodel** | |
| **Percent Complete** | 100 |
| **GLA** | **26,000** |

**Basement**

| | |
|---|---|
| **Basement Area** | |
| **Basement Unfinished Area** | |

**HVAC**

| | | |
|---|---|---|
| **Heating Type** | Forced Hot Air | |
| **Fuel Type** | Natural Gas | |
| **Cooling Type** | Central | 100 % |

**Interior**

| | |
|---|---|
| **Floors** | Vinyl Tile |
| **Walls** | Drywall |
| **Wall Height** | 12 |

**Exterior**

| | |
|---|---|
| **Exterior Walls** | Brick Veneer |
| **Roof Cover** | Asphalt |

**Special Features**

| | |
|---|---|
| Comm Pass Elev | 2 |
| Wet Sprinkler | 26,080 |

**Total Building Value**

**Building** 1 **Value** **5,450,266**

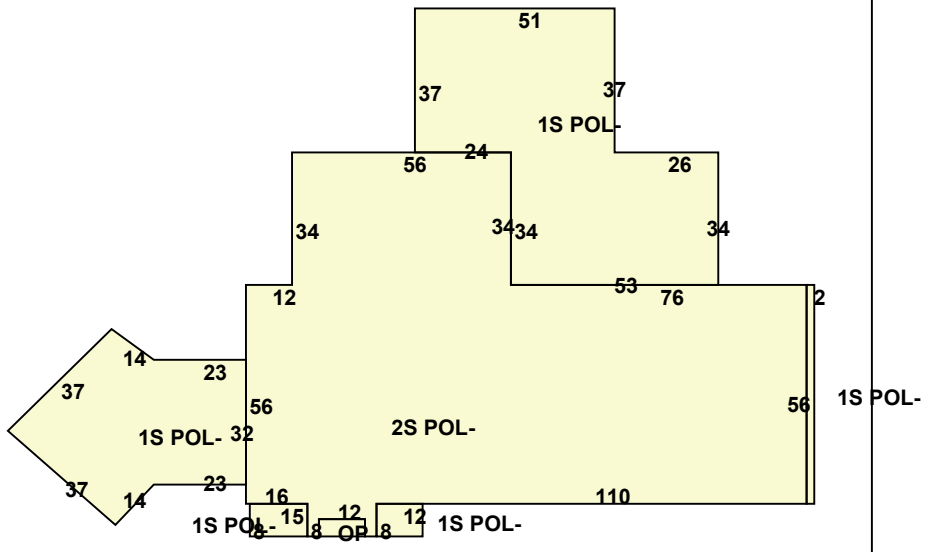
**Valuation Method** C

| Description | Area/Qty | Value |
|---|---|---|
| Base Value | 26,000 | 5,362,500 |
| Central Air | 5,362,500 | 120,656 |
| Commercial Passenger Elev | 2 | 135,000 |
| Wet Sprinklers | 26,080 | 58,680 |
| Value Before Depr. | 0 | 5,676,836 |
| Depr/Adjust Amount | 0 | 227,073 |
| Final Value (After Depr) | 0 | 5,449,763 |

| | | | |
|---|---|---|---|
| **Grade Factor** | 0 | **Physical Depreciation %** | 4 |
| **Functional Depreciation %** | 0 | **Economical Depreciation %** | 0 |

**Attached Component Computations**

| Type | Yr Blt | Condition | Area/Qty | Value |
|---|---|---|---|---|
| Open Porch | 2002 | Average | 48 | 503 |




**Detached Component Computations**

| Type | Year | Condition | Area/Qty | Value |
|---|---|---|---|---|
| Lights in W/PL | 2007 | Average/Good | 17 | 186,048 |
| PreCastConCel | 2007 | Good | 348 | 16,704 |
| Paving | 2002 | Excellent | 43,000 | 68,628 |
| Cell Tower | 2002 | Average | 1 | 675,000 |

| Type | Year | Condition | Area/Qty | Value |
|---|---|---|---|---|

# ATTACHMENT 5

HARTFORD 9

UNITED STATES POSTAL SERVICE®

# 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<br>***Postmark with Date of Receipt.*** |
|---|---|---|---|
| Kenneth C. Baldwin, Esq.<br>Robinson & Cole LLP<br>280 Trumbull Street<br>Hartford, CT 06103 | 2 | | neopost<br>05/17/2021<br>US POSTAGE $002.89⁰<br>ZIP 06103<br>041L12203937<br>OLD STATION 06103<br>USPS |
| | Postmaster, per *(name of receiving employee)* | | |

| USPS® Tracking Number<br>Firm-specific Identifier | Address<br>(Name, Street, City, State, and ZIP Code™) | Postage | Fee | Special Handling | Parcel Airlift |
|---|---|---|---|---|---|
| 1. | Gary A. Evans, Town Manager<br>Town of Wethersfield<br>505 Silas Deane Highway<br>Wethersfield, CT 06109 | | 1.7 | | |
| 2. | Peter Gillespie, Director of Planning & Economic Development<br>Town of Wethersfield<br>505 Silas Deane Highway<br>Wethersfield, CT 06109 | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |