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August 4, 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**
99 East Street (a/k/a 135 East Street), Southington, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a faux tree tower and related equipment on the ground, near the base of the tower. The tower and Cellco's use of the tower were approved by the Siting Council in May of 2015 (Docket No. 455). A copy of the Docket No. 455 Decision and Order is included in Attachment 1.

Cellco now intends to modify its facility by removing six (6) existing antennas and adding three (3) Samsung MT6407-77A antennas and three (3) CBRS antennas on its existing antenna platform. Cellco will also remove six (6) remote radio heads ("RRHs") and install six (6) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and the new antennas and RRH specifications are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Southington's Chief Elected Official and Land Use Officer. Please note, the Town of Southington is the owner of the Property.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas and RRHs will be installed on its 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 and RRHs will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A general power density calculations table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

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

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

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Mark Sciota, Southington Town Manager
David Lavallee, Southington Acting Town Planner
Aleksey Tyurin

ATTACHMENT 1

DOCKET NO. 455 – Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at Southington Tax Assessor Map/Lot 066053, 99 East Street, Southington, Connecticut.	}	Connecticut Siting Council

May 14, 2015

Decision and Order

Pursuant to Connecticut General Statutes §16-50p and the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Cellco Partnership, hereinafter referred to as the Certificate Holder, for a telecommunications facility at the approved site, located at 99 East Street, Southington, Connecticut.

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

1. The tower shall be constructed as a monopine at a height of 90 feet (97-feet with faux tree branches) above ground level to provide the proposed wireless services, sufficient to accommodate the antennas of Cellco and the Town of Southington and other entities, both public and private. The height of the tower may be extended after the date of this Decision and Order pursuant to regulations of the Federal Communications Commission.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Southington for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) final site plan(s) for development of the facility to include specifications for the monopine structure, structure foundation, antennas, and equipment compound including, but not limited to, fence with less than two inch mesh, radio equipment, access road, utility line, and emergency backup generator that employ the governing standard in the State of Connecticut for tower design in accordance with the currently adopted International Building Code;
    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended;
    c) incorporation of Department of Public Health recommendations per its letter dated February 4, 2015 to protect the aquifer protection area; and
    d) Spotted Turtle Protection Plan.

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

4. Upon the establishment of any new federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

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

6. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

7. Any request for extension of the time period referred to in Condition 6 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Southington Any proposed modifications to this Decision and Order shall likewise be so served.

8. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of service. The Certificate Holder may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period.

9. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.

10. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.

11. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

12. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

13. The Certificate Holder shall maintain the facility and associated equipment, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.

14. If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and/or transfer.

15. This Certificate may be surrendered by the Certificate Holder upon written notification and approval by the Council.

We hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed in the Service List, dated December 31, 2014 and notice of issuance published in the Record-Journal.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

ATTACHMENT 2

verizon

SOUTHINGTON EAST CT
99 EAST ST.
SOUTHINGTON, CT 06489

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/EIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2017 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE, AND LOCAL CODES.
2. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, AND ALL TRADES AS APPLICABLE PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO "EXTRA" WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB- CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.

SITE DIRECTIONS

FROM: 20 ALEXANDER DRIVE, WALLINGFORD, CONNECTICUT **TO:** 99 EAST ST., SOUTHINGTON, CT 06489

1.	START OUT GOING NORTH ON ALEXANDER DR TOWARD BARNES INDUSTRIAL RD.	0.18 MI
2.	TURN RIGHT ONTO BARNES INDUSTRIAL RD.	0.11 MI
3.	TAKE THE 1ST LEFT ONTO CT-68.	0.35 MI
4.	TURN RIGHT ONTO RAMP.	0.17 MI
5.	TURN RIGHT ONTO N COLONY RD/US-5 N.	0.30 MI
6.	MERGE ONTO CT-15 N TOWARD HARTFORD.	3.89 MI
7.	MERGE ONTO I-691 W VIA EXIT 6BW TOWARD MERIDEN/WATERBURY.	4.48 MI
8.	TAKE THE CT-322 EXIT, EXIT 4, TOWARD SOUTHINGTON.	0.25 MI
9.	TURN RIGHT ONTO MERIDEN WATERBURY TURNPIKE/CT-322.	0.32 MI
10.	TURN RIGHT ONTO MERIDEN AVE/CT-120..	1.93 MI
11.	TURN RIGHT ONTO EAST ST.	0.18 MI
12.	99 EAST ST, SOUTHINGTON, CT 06489-3911, 99 EAST ST IS ON THE LEFT.	

VICINITY MAP

SCALE: 1" = 1000'

PROJECT SUMMARY

1. THE PROPOSED UPGRADE SCOPE OF WORK AT THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY GENERALLY INCLUDES THE FOLLOWING:

A. AT THE EXISTING MONOPINE MOUNTED ANTENNA SECTORS:

- REMOVE (6) EXISTING NOKIA RRUs.
- REMOVE (6) EXISTING ANDREW SBNHH-1D65B ANTENNAS.
- RETAIN (6) EXISTING ANDREW SBNHH-1D65B ANTENNAS.
- RETAIN (2) OVP-6 BOXES.
- RETAIN (2) 6x12 HYBRIFLEX HYBRID CABLES.
- INSTALL (3) NEW SAMSUNG XXDWMM-12.5-65-8T-CBRS ANTENNAS.
- INSTALL (3) NEW SAMSUNG MT6407-77A ALL-IN-ONE ANTENNA/RRUs.
- INSTALL (3) NEW COMMSCOPE BASMNT-SBS-1-2 DUAL ANTENNA MOUNTS.
- INSTALL (3) NEW SAMSUNG B2/B66A RRH-BR049 & (3) NEW SAMSUNG B5/B13 RRH-BR04C RRUs.
- INSTALL (3) NEW COMMSCOPE CBRS RRH - RT4401-48A RRUs.

PROJECT INFORMATION

SITE NAME:	SOUTHINGTON EAST CT
SITE ADDRESS:	99 EAST ST. SOUTHINGTON, CT 06489
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
CONTACT PERSON:	WALTER CHARCZNSKI (CONSTRUCTION MANAGER) VERIZON WIRELESS (860) 306-1806
ENGINEER:	CENTEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT. 06405 (203) 488-0580
PROJECT COORDINATES:	LATITUDE: 41°-35'-1.117"N LONGITUDE: 72°-51'-52.868"W COORDINATES BASED ON VERIZON WIRELESS RFDS DATED JUNE 07, 2021.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
N-1	NOTES AND SPECIFICATIONS	0
B-1	RF BILL OF MATERIALS	0
C-1	COMPOUND PLAN AND ELEVATION	0
C-2	ANTENNA SECTOR CONFIGURATION DETAILS	0
C-3	RF DETAILS	0
E-1	ELECTRICAL DETAILS AND SPECIFICATIONS	0

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
A	07/15/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
0	07/22/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

SOUTHINGTON EAST CT
99 EAST ST.
SOUTHINGTON, CT 06489

DATE: 07/13/21
SCALE: AS NOTED
JOB NO. 21007.35

TITLE SHEET

T-1

Sheet No. 1 of 7

NOTES AND SPECIFICATIONS

DESIGN BASIS:

GOVERNING CODE: 2015 INTERNATIONAL BUILDING (IBC) AS MODIFIED BY THE 2018 CT STATE BUILDING CODE AND AMENDMENTS.

1. DESIGN CRITERIA:

- RISK CATEGORY: II (BASED ON TABLE 1604.5 OF THE 2015 IBC)
- ULTIMATE DESIGN SPEED (TOWER): 97 MPH (Vasd) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-10) PER 2015 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2018 CONNECTICUT STATE BUILDING CODE.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE GOVERNING BUILDING CODE.
2. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
3. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.
4. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST EXISTING FIELD CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
6. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
7. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.
8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SHORING, BRACING, AND BARRICADES AS MAY BE REQUIRED FOR THE PROTECTION OF EXISTING PROPERTY, CONSTRUCTION WORKERS, AND FOR PUBLIC SAFETY.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING SITE OPERATIONS, COORDINATE WORK WITH NORTHEAST UTILITIES
10. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
11. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

PAINT NOTES

PAINTING SCHEDULE:

1. ANTENNA PANELS:
   - A. SHERWIN WILLIAMS POLANE-B
   - B. COLOR TO BE MATCHED WITH EXISTING TOWER STRUCTURE.
2. COAXIAL CABLES:
   - A. ONE COAT OF DTM BONDING PRIMER (2-5 MILS. DRY FINISH)
   - B. TWO COATS OF DTM ACRYLIC PRIMER/FINISH (2.5-5 MILS. DRY FINISH)
   - C. COLOR TO BE FIELD MATCHED WITH EXISTING STRUCTURE.

EXAMINATION AND PREPARATION:

1. DO NOT APPLY PAINT IN SNOW, RAIN, FOG OR MIST OR WHEN RELATIVE HUMIDITY EXCEEDS 85%. DO NOT APPLY PAINT TO DAMP OR WET SURFACES.
2. VERIFY THAT SUBSTRATE CONDITIONS ARE READY TO RECEIVE WORK. EXAMINE SURFACE SCHEDULED TO BE FINISHED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY CONDITION THAT MAY POTENTIALLY AFFECT PROPER APPLICATION.
3. TEST SHOP APPLIED PRIMER FOR COMPATIBILITY WITH SUBSEQUENT COVER MATERIALS.
4. PERFORM PREPARATION AND CLEANING PROCEDURE IN STRICT ACCORDANCE WITH COATING MANUFACTURER'S INSTRUCTIONS FOR EACH SUBSTRATE CONDITION.
5. CORRECT DEFECTS AND CLEAN SURFACES WHICH AFFECT WORK OF THIS SECTION. REMOVE EXISTING COATINGS THAT EXHIBIT LOOSE SURFACE DEFECTS.
6. IMPERVIOUS SURFACE: REMOVE MILDEW BY SCRUBBING WITH SOLUTION OF TRI-SODIUM PHOSPHATE AND BLEACH. RINSE WITH CLEAN WATER AND ALLOW SURFACE TO DRY.
7. ALUMINUM SURFACE SCHEDULED FOR PAINT FINISH: REMOVE SURFACE CONTAMINATION BY STEAM OR HIGH-PRESSURE WATER. REMOVE OXIDATION WITH ACID ETCH AND SOLVENT WASHING. APPLY ETCHING PRIMER IMMEDIATELY FOLLOWING CLEANING.
8. FERROUS METALS: CLEAN UNGALVANIZED FERROUS METAL SURFACES THAT HAVE NOT BEEN SHOP COATED; REMOVE OIL, GREASE, DIRT, LOOSE MILL SCALE, AND OTHER FOREIGN SUBSTANCES. USE SOLVENT OR MECHANICAL CLEANING METHODS THAT COMPLY WITH THE STEEL STRUCTURES PAINTING COUNCIL'S (SSPC) RECOMMENDATIONS. TOUCH UP BARE AREAS AND SHOP APPLIED PRIME COATS THAT HAVE BEEN DAMAGED. WIRE BRUSH, CLEAN WITH SOLVENTS RECOMMENDED BY PAINT MANUFACTURER, AND TOUCH UP WITH THE SAME PRIMER AS THE SHOP COAT.
9. GALVANIZED SURFACES: CLEAN GALVANIZED SURFACES WITH NON-PETROLEUM-BASED SOLVENTS SO SURFACE IS FREE OF OIL AND SURFACE CONTAMINANTS. REMOVE PRETREATMENT FROM GALVANIZED SHEET METAL FABRICATED FROM COIL STOCK BY MECHANICAL METHODS.
10. ANTENNA PANELS: REMOVE ALL OIL, DUST, GREASE, DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION. PANELS MUST BE WIPED WITH METHYL ETHYL KETONE (MEK).
11. COAXIAL CABLES: REMOVE ALL OIL, DUST, GREASE. DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION.

CLEANING:

1. COLLECT WASTE MATERIAL, WHICH MAY CONSTITUTE A FIRE HAZARD, PLACE IN CLOSED METAL CONTAINERS AND REMOVE DAILY FROM SITE.

APPLICATION:

1. APPLY PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. DO NOT APPLY FINISHES TO SURFACES THAT ARE NOT DRY.
3. APPLY EACH COAT TO UNIFORM FINISH.
4. APPLY EACH COAT OF PAINT SLIGHTLY DARKER THAN PRECEDING COAT UNLESS OTHERWISE APPROVED.
5. SAND METAL LIGHTLY BETWEEN COATS TO ACHIEVE REQUIRED FINISH.
6. VACUUM CLEAN SURFACES FREE OF LOOSE PARTICLES. USE TACK CLOTH JUST PRIOR TO APPLYING NEXT COAT.
7. ALLOW APPLIED COAT TO DRY BEFORE NEXT COAT IS APPLIED.

COMPLETED WORK:

1. SAMPLES: PREPARE 24" X 24" SAMPLE AREA FOR REVIEW.
2. MATCH APPROVED SAMPLES FOR COLOR, TEXTURE AND COVERAGE. REMOVE REFINISH OR REPAINT WORK NOT IN COMPLIANCE WITH SPECIFIED REQUIREMENTS.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	07/22/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
A	07/15/21	ANC	DMD	CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
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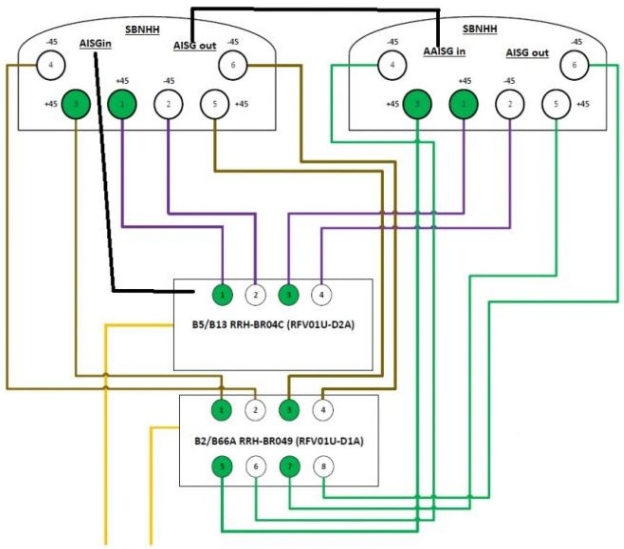
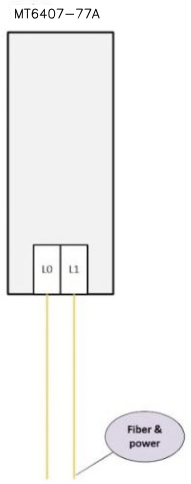
NOTES AND SPECIFICATIONS

N-1

Sheet No. 2 of 7





NOTES:

1. INFORMATION SHOWN HEREIN IS FOR USE BY VERIZON WIRELESS EQUIPMENT OPERATIONS.
2. THIS B.O.M. DRAWING IS BASED ON FACILITY UPGRADE DESIGN DRAWINGS PREPARED BY CENTEK ENGINEERING (REV.0 DATED: 07.22.21), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 06.07.21).

BILL OF MATERIALS		
TECHNOLOGY	QUANTITY	ANTENNA
CBRS 3550	3	SAMSUNG ANTENNA MODEL: XXDWMM-12.5-65-8T-CBRS
5G	3	SAMSUNG ANTENNA MODEL: MT6407-77A

RADIOS	QUANTITY	COMMENTS
LTE 700	3	SAMSUNG MODEL: B5/B13 RRH-BR04C
LTE 850		
LTE PCS 1900	3	SAMSUNG MODEL: B2/B66A RRH-BR049
LTE AWS 2100		
CBRS 3500	3	SAMSUNG MODEL: CBRS RRH - RT4401-48A
5G	3	INTEGRATED INTO MT6407-77A ANTENNA

ANTENNA MOUNT	QUANTITY	COMMENTS
SIDE-BY-SIDE MOUNTING KIT	3	COMMSCOPE MODEL: BASMNT-SBS-1-2

CABLES	QUANTITY	LENGTH EA.	COMMENTS
-	0	-	-

DIPLEXERS	QUANTITY	COMMENTS
LTE 700	0	-
LTE 850		

OVP BOXES	QUANTITY	COMMENTS
OVP BOX	0	-

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
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RF BILL OF MATERIALS

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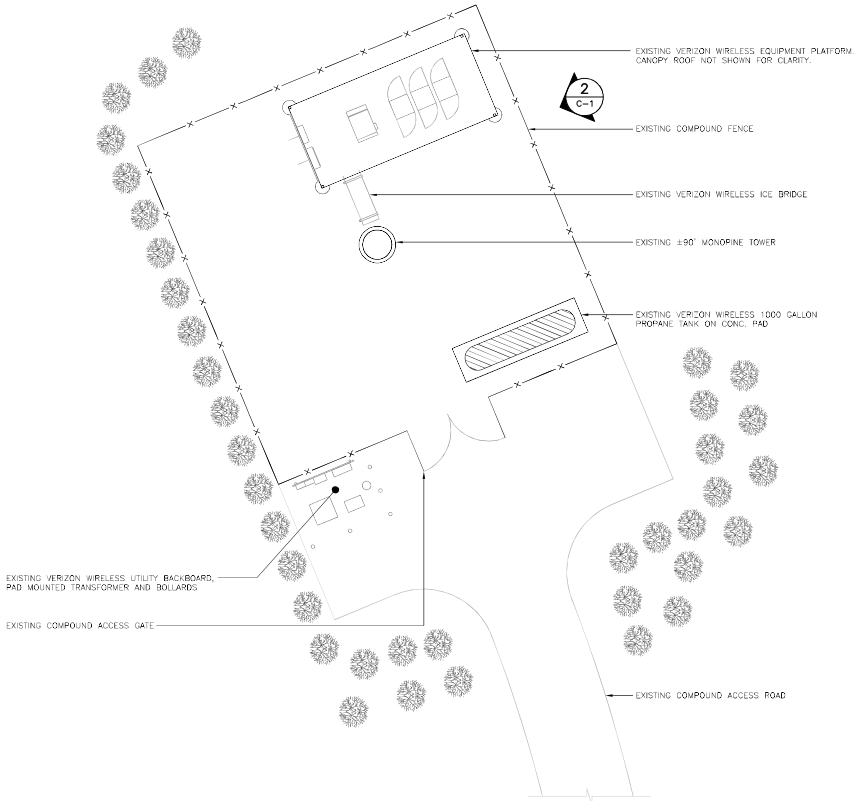
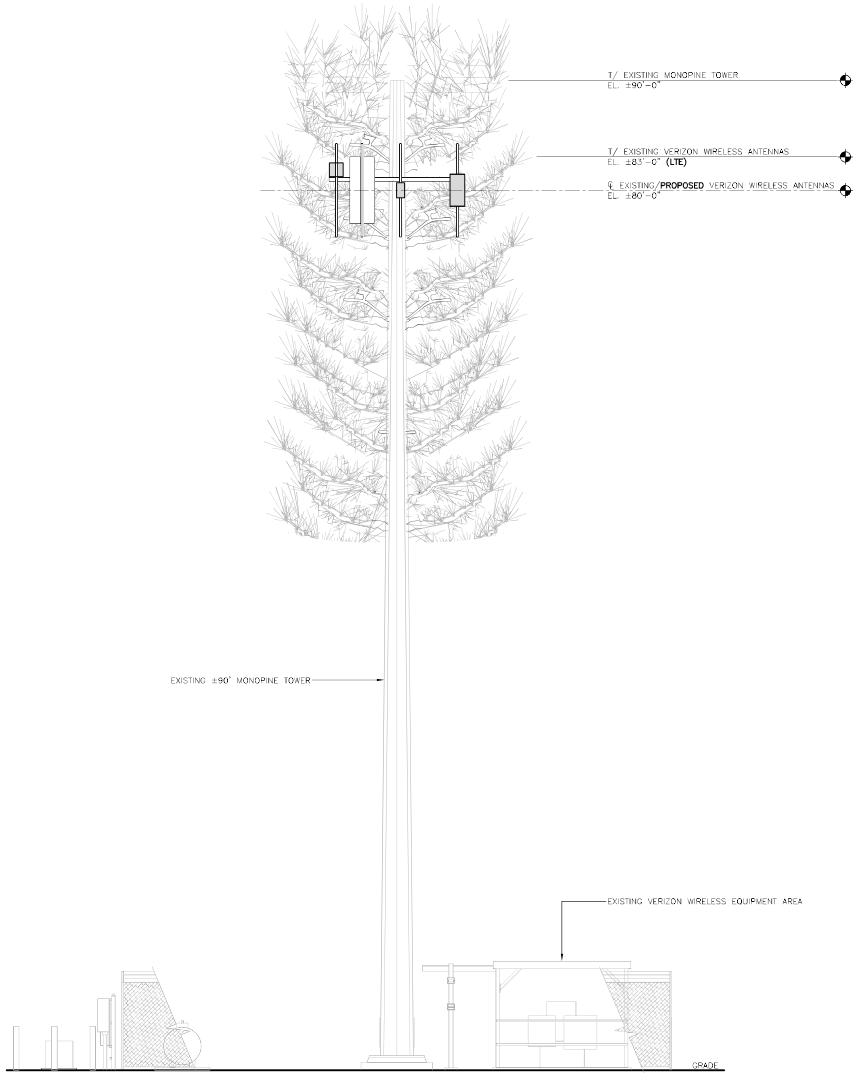
Sheet No. 3 of 7

TOWER STRUCTURAL ANALYSIS:

1. REFER TO PASSING TOWER STRUCTURAL ANALYSIS REPORT PREPARED BY CENTEK ENGINEERING DATED 07/12/2021, CENTEK PROJECT NO. 21007.35 FOR ADDITIONAL INFORMATION.



1 / C-1 **COMPOUND PLAN**
SCALE: 1/8" = 1'-0"
TRUE NORTH



2 / C-1 **EAST ELEVATION - PROPOSED**
SCALE: 3/16" = 1'-0"

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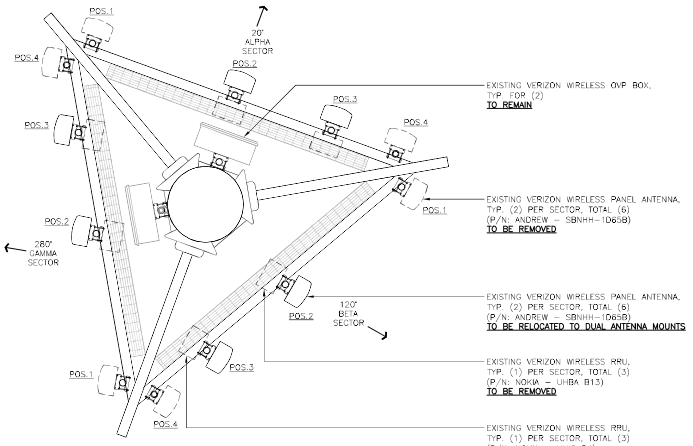
COMPOUND PLAN AND ELEVATION

C-1

Sheet No. 4 of 7

EXISTING ANTENNA CONFIGURATIONS



1 / C-2 **EXISTING SECTOR CONFIGURATION PLAN**
SCALE: 1/2" = 1'-0"

APPROXIMATE NORTH

PROPOSED ANTENNA CONFIGURATIONS

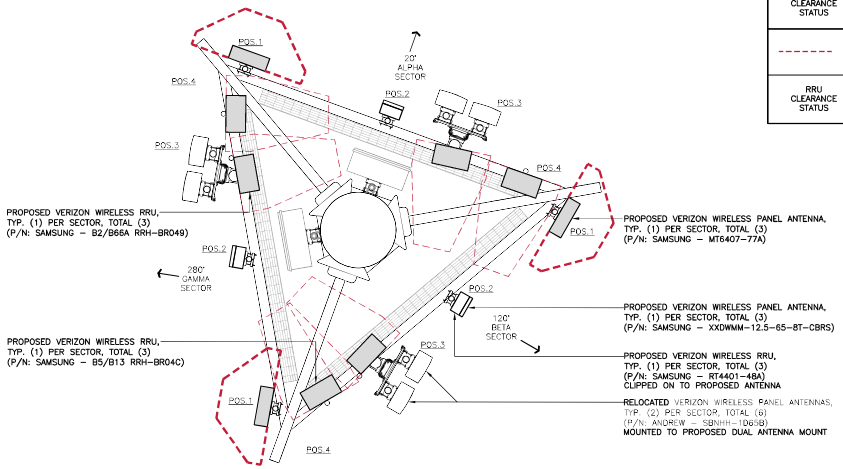
LEGEND		
– – –	VERIZON WIRELESS MT6407-77A REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
ANTENNA CLEARANCE STATUS	ALPHA SECTOR: COMPLIANT BETA SECTOR: COMPLIANT GAMMA SECTOR: COMPLIANT	
– – –	VERIZON WIRELESS RRU REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
RRU CLEARANCE STATUS	ALPHA SECTOR: COMPLIANT BETA SECTOR: COMPLIANT GAMMA SECTOR: COMPLIANT	

ANTENNAS AND RADIO NOTES:

1. COORDINATE FINAL ANTENNA MAST LOCATIONS AND RADIOS WITH EXISTING MONOPINE BRANCHES TO ACCOMMODATE REQUIRED CLEARANCES.
2. PAINT ALL PROPOSED ANTENNAS AND APPURTENANCES TO MATCH THE COLOR OF THE EXISTING ANTENNAS.

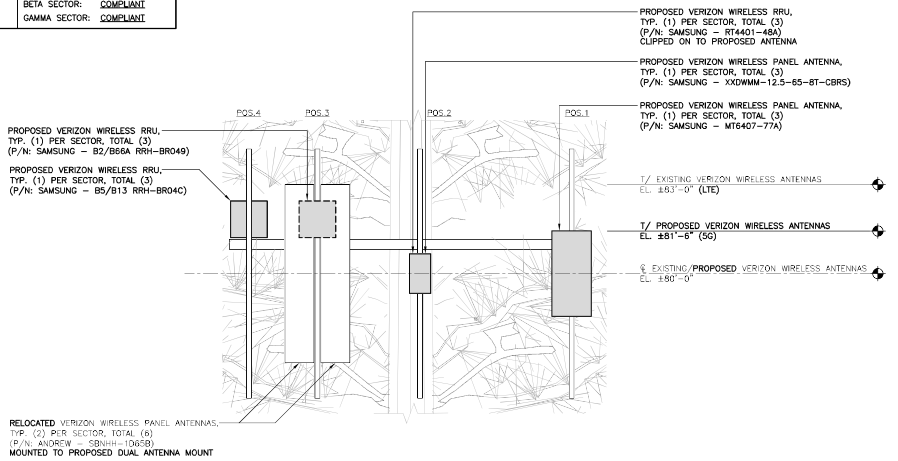
ANTENNA MOUNT ANALYSIS NOTE:

REFER TO FINAL VERIZON WIRELESS PASSING MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING CONNECTICUT DATED 06/23/2021 FOR ADDITIONAL INFORMATION.



2 / C-2 **PROPOSED SECTOR CONFIGURATION PLAN**
SCALE: 1/2" = 1'-0"

APPROXIMATE NORTH



TYPICAL SECTOR

3 / C-2 **PROPOSED SECTOR CONFIGURATION ELEVATION**
SCALE: 1/2" = 1'-0"

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ANTENNA SECTOR CONFIGURATION DETAILS

C-2

Sheet No. 5 of 7

ANTENNA FRONT

SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: MT6407-77A	35.1"h x 16.1"W x 5.5"D (NOT TO EXCEED)	87 LBS. (NOT TO EXCEED)
CLEARANCES AND SERVICE AREA		
TOP: 31.5"	HORIZONTAL DISTANCE: 31.5" (ANT. TO ANT.)	
FRONT, SIDES & BOTTOM: 15.7"	VERTICAL DISTANCE: 63.0" (ANT. TO ANT.)	

NOTES:
1. THIS ANTENNA HAS ITS OWN BUILT-IN RRH.

1 C-3 **SECTOR ANTENNA DETAIL**
NOT TO SCALE

CLIP-ON ANTENNA ONLY

ALL-IN-ONE ANTENNA & RRH

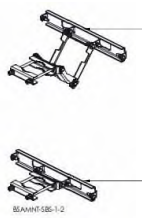
RRH ONLY

CBRS CLIP-ON ANTENNA			CBRS RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	EQUIPMENT	BAND	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: XXDWMM-12.5-65-8T	12.3"H x 8.7"W x 1.4"D	2.9 LBS.	MAKE: SAMSUNG MODEL: CBRS RRH-RT4401-48A	CBRS	12.1"H x 8.5"W x 4.1"D	18.6 LBS.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.

2 C-3 **COMBINED RRH/CLIP-ON ANTENNA DETAIL**
NOT TO SCALE

ELEVATION



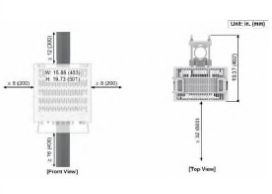
ISOMETRIC

SIDE-BY-SIDE ANTENNA MOUNTING KIT			
MOUNT	DESCRIPTION	SUPPORTED ANTENNAS	GAP BETWEEN ANTENNAS
MAKE: COMMSCOPE MODEL: BASMNT-SBS-1-2	(2) BRACKET KIT FOR MOUNTING (2) ANTENNAS SIDE-BY-SIDE	SBNHH 65" AND 85" NHH 65" AND 85"	3-3/8"

NOTES:
1. MOUNT ACCOMMODATES MAST DIAMETERS FROM 2.375" TO 4.5" (O.D.).
2. CONTRACTOR TO CONFIRM MOUNT MAKE/MODEL AND QUANTITY WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.

3 C-3 **PROPOSED SIDE-BY-SIDE ANTENNA MOUNT**
NOT TO SCALE

RRH ISOMETRIC



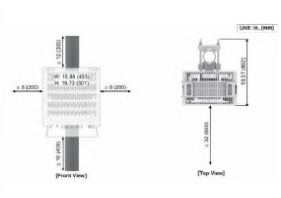
RRH CLEARANCES

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: B2/B66A RRH-BR049 (RFV01U-D1A)	B2: PCS (1900 MHz) B66: AWS (2100 MHz)	15.0"H x 15.0"W x 10.0"D	84.4 LBS.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.

4 C-3 **DUAL-BAND AWS/PCS RADIO UNIT DETAIL**
NOT TO SCALE

RRH ISOMETRIC



RRH CLEARANCES

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: B5/B13 RRH-BR04C (RFV01U-D2A)	B5: 850 MHz B13: 700 MHz	15.0"H x 15.0"W x 8.1"D	70.3 LBS.

NOTES:
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.

5 C-3 **DUAL-BAND 700/850 MHZ RADIO UNIT DETAIL**
NOT TO SCALE

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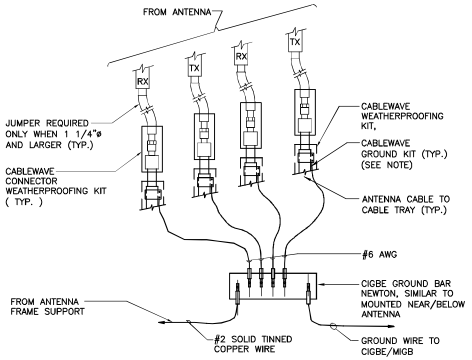
RF DETAILS

C-3

Sheet No. 6 of 7

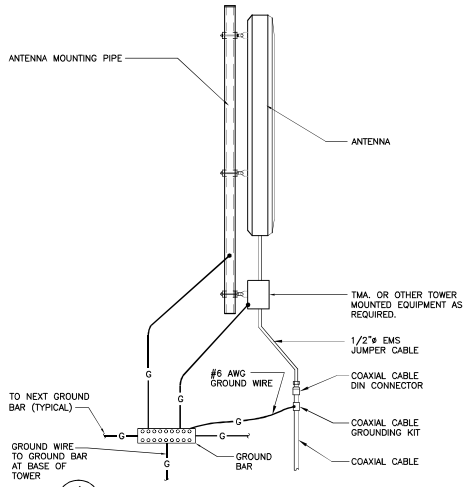


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

1 E-1 CONNECTION OF GROUND WIRES TO GROUND BAR

NOT TO SCALE

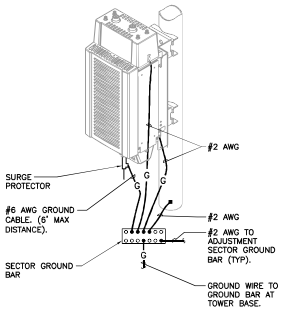


4 E-1 TYPICAL ANTENNA GROUNDING DETAIL

NOT TO SCALE

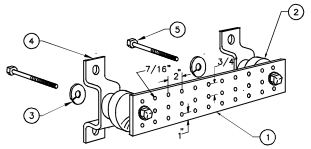
EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:

1. AT TOP OF THE CABINET
2. AT RIGHT SIDE OF THE CABINET.



2 E-1 RRH POLE MOUNT GROUNDING

NOT TO SCALE

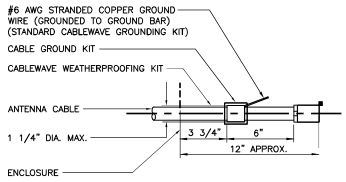


NOTES

1. TINNED COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056.
5. 5/8-11 x 1" STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS.

5 E-1 GROUND BAR DETAIL

NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

3 E-1 ANTENNA CABLE GROUNDING DETAIL

NOT TO SCALE

ELECTRICAL SPECIFICATIONS

SECTION 16010

1.01. SCOPE OF WORK

A. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE (MAKE READY FOR OPERATION) ALL THE ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. CELLULAR GROUNDING SYSTEMS CONSISTING OF ANTENNA GROUNDING, GROUND BARS, ETC.

1.02. GENERAL REQUIREMENTS

A. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES THAT MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS THAT MAY BE REQUIRED BY THE LOCAL AUTHORITY.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.

E. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.

F. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.

G. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.

H. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE (1) WEEK PRIOR TO FINAL PUNCH LIST.

I. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

J. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.

K. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.

L. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH OWNER'S SPECIFICATIONS, AND REQUIREMENTS OF ALL LOCAL AUTHORITIES HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPROPRIATE INDIVIDUALS TO OBTAIN ALL SUCH SPECIFICATIONS AND REQUIREMENTS. NOTHING CONTAINED IN, OR OMITTED FROM, THESE DOCUMENTS SHALL RELIEVE CONTRACTOR FROM THIS OBLIGATION.

SECTION 16450

1.01. GROUNDING

A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.

B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.

C. EQUIPMENT GROUNDING CONDUCTOR:

1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122.

2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE #12 AWG COPPER.

D. CELLULAR GROUNDING SYSTEM:

PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:

1. GROUND BARS
2. ANTENNA GROUND CONNECTIONS AND PLATES.

E. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY N.E.C., MFG. SPECIFICATIONS, AND OWNER'S SPECIFICATIONS.

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ELECTRICAL DETAILS AND SPECIFICATIONS

E-1

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[CBRS] Clip-on Antenna Specifications

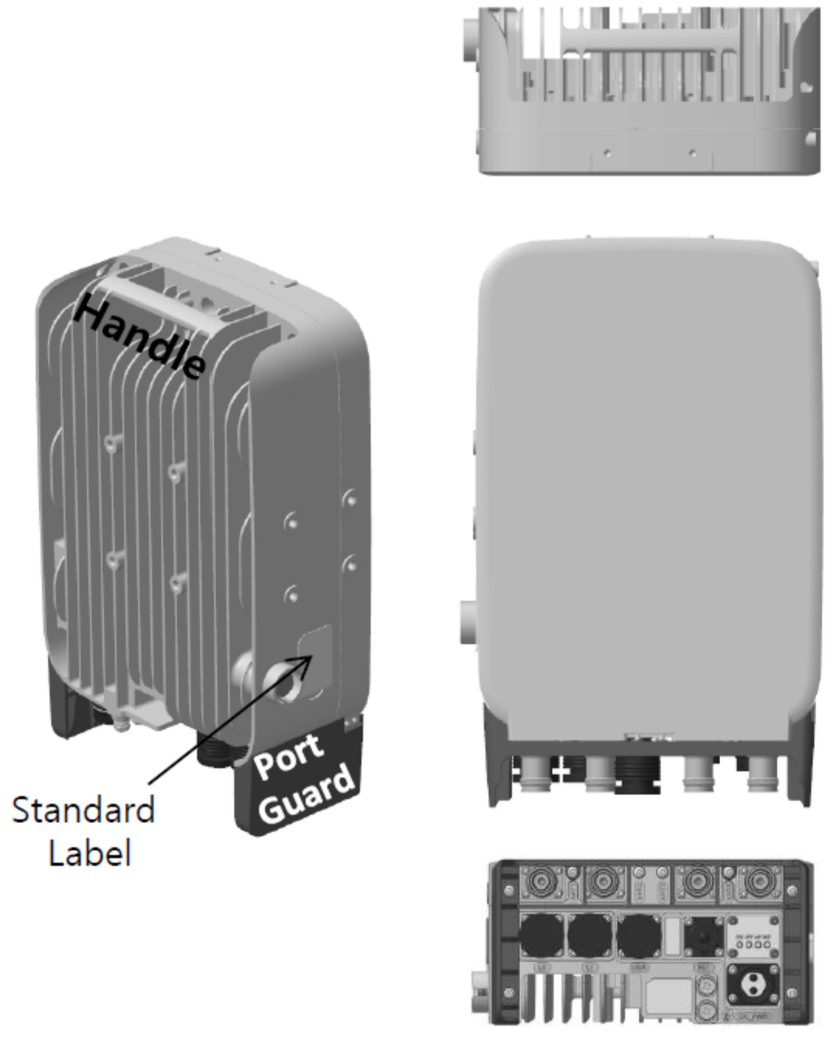
VzW accepted IP45 in FLD, but IP55 is Samsung Spec.

Items	Clip-on Antenna, BASTA**
Antenna Gain	12.5 ± 0.5 dBi (Max 13 dBi)
Horizontal BW (-3dB)	65° ± 5°
Vertical BW (-3dB)	17° ±3°
Electrical Tilt	8° (fixed) ±2°
Front-to-Back Ratio	> 25 dB
Port-to-Port Tracking	< 3 dB
VSWR	< 1.5
Isolation	> 25 dB
Ingress Protection	**IP55**
Size	220(W)×313(H)×34.3(D) mm (*) (8.7 x 12.3 x 1.4 inch.)
Weight	< **2.0** kg [Typ. 1.3 kg]
It is required that the radio should be weatherproofed properly with JMA WPS Boot with external antenna or with Weatherproof Boot for clip-on antennas.	

Antenna includes integrated cable with connector
* Design is subject to minor change

** Ant. spec. follows NGMN recommendations on Base Station Antenna Standards (BASTA). For example, 'mean ± tolerance of 86.6%' is applied to double-sided specification of statistical RF parameters.

[CBRS RRH] Spec.



Current Size: 216 x 307 x 105.5 mm (6.99L)
(8.5 x 12.1 x 4.1 inch., excluding Port Guard)
Design is subject to minor change

Item	Specification
Band	Band 48 (3.5 GHz)
Frequency	3550~3700 MHz
IBW	150 MHz
OBW	80 MHz
# of Carriers	5/10/15/20 MHz x 4 carriers
RF Chain	4TX / 4RX
RF Output Power & EIRP	4 path x 5 W (Total: 20 W = 43 dBm) (EIRP: 47 dBm / 10 MHz)
RX Sensitivity	Typical : -101.5 dBm @ 1 Rx (3GPP 36.104, Wide Area)
Modulation	256-QAM support (1024-QAM with 1~2dB power back-off)
Input Power	-48 VDC (-38 to -57 VDC, 1 SKU), with clip-on AC-DC converter (Option)
Power Consumption	About 160 Watt @ 100% RF load, typical conditions
Volume	**Under 7L** (w/o Antenna), Under 9.6L (with antenna)
Weight	**Under 8.0 kg** (**18.64** lb) (w/o Antenna), Under 10.5 Kg (with ant.)
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (W/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 Category A
	[B48] : FCC 47 CFR 96.41 e)
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP, single mode, duplex or Bi-Di
CPRI Cascade	Not supported
# of Antenna Port	4
External Alarm (UDA)	4
RET	AISG 2.2
TMA & built-in Bias-T I//F and PIM cancellation	Not supported
Mounting Options	Pole, wall, tower, back to back, side by side (for external ant), 3 RRH with Clip-on Antenna on the pole
Antenna Type	Integrated (Clip-on) antenna (Option), External antenna (Option)
NB-IoT	Not Supported (HW Resource reserved for 1 Guard Band NB-IoT per LTE carrier)
Spectrum Analyzer	TX/RX Support
External Alarm (UDA)	4
5G NR	Support with S/W upgrade
XRAN	Support with S/W upgrade

SAMSUNG

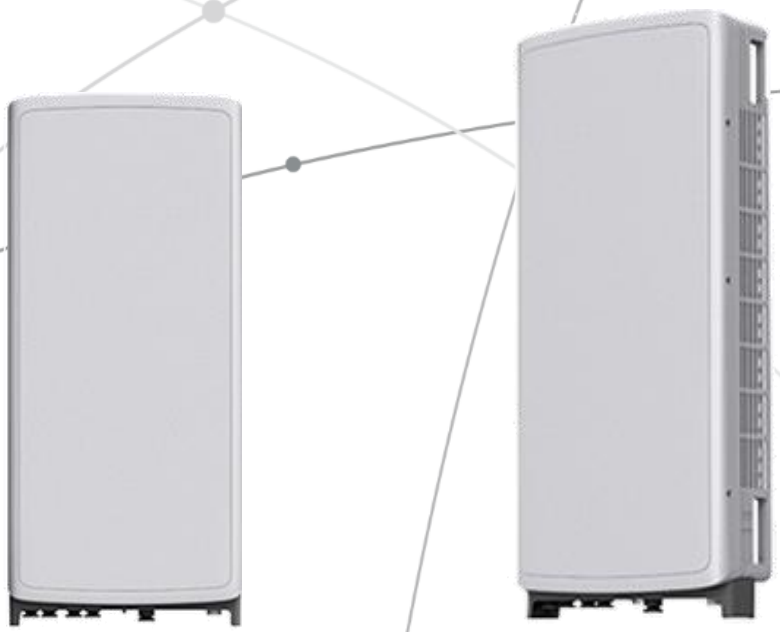
SAMSUNG

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

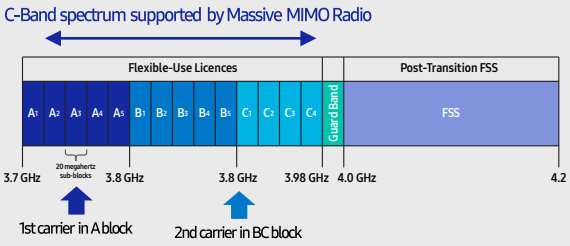


Points of Differentiation

Wide Bandwidth

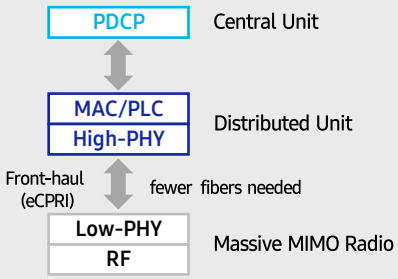
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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.

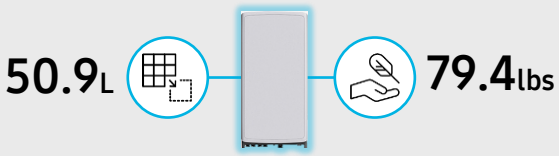
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

SAMSUNG

Dual-Band Radio Unit
AWS/PCS (B66/B2)
RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
    B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)
    B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)
Instantaneous Bandwidth:
    70MHz(B66) + 60MHz(B2)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 255mm (36.8L)
Weight: 38.3kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

SAMSUNG

Dual-Band Radio Unit
700/850MHz (B13/B5)
RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
B13: DL(746-756MHz)/UL(777-787MHz)
B5: DL(869-894MHz)/UL(824-849MHz)
Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 207mm (29.9L)
Weight: 31.9kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

ATTACHMENT 3

Site Name: ***SOUTHINGTON EAST CT***
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW 700	751	4	713	2852	80	0.0160	0.5007	3.20%
VZW Cellular	869	4	845	3380	80	0.0190	0.5793	3.28%
VZW PCS	1980	4	1630	6520	80	0.0366	1.0000	3.66%
VZW AWS	2125	4	1599	6396	80	0.0359	1.0000	3.59%
VZW CBAND	3730	4	6531	26124	80	0.1468	1.0000	14.68%
VZW CBRS	3625	4	12	48	80	0.0003	1.0000	0.03%
Total Percentage of Maximum Permissible Exposure								28.44%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992
**Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council's November 10, 2015 Memorandum for Exempt Modification filings

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used.

ATTACHMENT 4

CENTEK engineering

Centered on Solutions℠

Structural Analysis Report

90-ft Existing EEI Monopine

Proposed Verizon
Antenna Upgrade

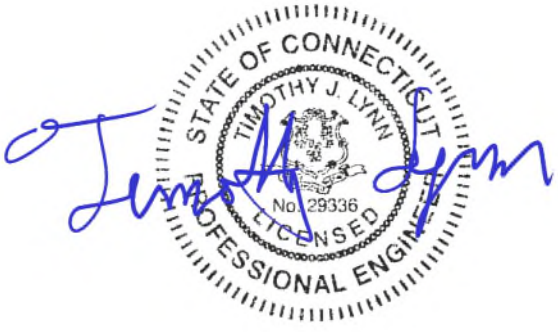
Site Ref: Southington East CT

99 East Street
Southington, CT

CENTEK Project No. 21007.35

Date: July 12, 2021

Max Stress Ratio = 44.6%



Prepared for:

Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

63-2 North Branford Road, Branford, CT 06405 203.488.0580 Fax 203.488.8587 www.CentekEng.com

Table of Contents

Introduction

The purpose of this report is to summarize the results of the non-linear, P-Δ structural analysis of the antenna upgrade proposed by Verizon on the existing monopole (tower) located in Southington, Connecticut.

The host tower is a 90-ft tall, two-section, eighteen sided, tapered monopole, originally designed and manufactured by Engineered Endeavors; dated April 1, 2015. The tower geometry and structure member sizes were obtained from the aforementioned documents. Antenna and appurtenance information were obtained from a Verizon RF data sheet.

The tower is made up of two (2) tapered vertical sections consisting of A572-65 pole sections. The vertical tower sections are slip joint connected. The diameter of the pole (flat-flat) is 31.0-in at the top and 52.5-in at the base.

Antenna and Appurtenance Summary

The existing, proposed and future loads considered in this analysis consist of the following:

- VERIZON (EXISTING TO REMAIN):
  Antennas: Six (6) Andrew SBNHH-1D65B panel antennas, two (2) OVP Boxes on a low profile platform with a RAD center elevation of 80-ft above grade.
  Coax Cables: Two (2) 6x12 Hybrid flex cables running on the inside of the existing tower.
- VERIZON (EXISTING TO REMOVE):
  Antennas: Six (6) Andrew SBNHH-1D65B panel antennas, three (3) Nokia B13 RRH 4X30 remote radio units and three (3) Nokia B4 RRH 2x50-4R remote radio units on a low profile platform with a RAD center elevation of 80-ft above grade.
- **VERIZON (PROPOSED):**
  Antennas: Three (3) Samsung MT6407-77A panel antennas, three (3) Samsung XXDWMM-12.5-65-8T-CBRS, three (3) Samsung B2/B66A RRH-BR049 remote radio heads and three (3) Samsung B5/B13 RRH-BR04C remote radio heads on a low profile platform with a RAD center elevation of 80-ft above grade.

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents or reinforcement drawings.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All coax cables to be installed as indicated in this report.

Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower, and the model assumes that the tower members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (3-second gust) with no ice and the applicable wind and ice combination to determine stresses in members as per guidelines of TIA-222-G-2005 entitled "Structural Standard for Antenna Support Structures and Antennas", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Load and Resistance Factor Design (LRFD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix N of the CSBC[1] and the wind speed data available in the TIA-222-G-2005 Standard.

Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-G-2005, gravity loads of the tower structure and its components, and the application of 1.00" radial ice on the tower structure and its components.

Basic Wind Speed:	Southington; v = 97 mph	*[Appendix N of the 2018 CT Building Code]*
Load Cases:	Load Case 1; 97 mph wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.	*[Appendix N of the 2018 CT Building Code]*
	Load Case 2; 50 mph wind speed w/ 1.00" radial ice plus gravity load – used in calculation of tower stresses.	*[Annex B of TIA-222-G-2005]*

[1] The 2015 International Building Code as amended by the 2018 Connecticut State Building Code (CSBC).

Tower Capacity

- Calculated stresses were found to be within allowable limits. This tower was found to be at **27.5%** of its total capacity.

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Pole Shaft (L2)	48.16'-1.00'	27.5%	**PASS**

Foundation and Anchors

The existing foundation consists of a one (1) 7-ft square x 3.0-ft tall pier on a 36-ft square x 3.0-ft thick reinforced concrete mat. The existing foundation properties were obtained from the aforementioned design documents. The base of the tower is connected to the foundation by means of (24) 2.25"∅, ASTM A615-75 anchor bolts embedded approximately 5-ft into the concrete foundation structure.

- The tower base reactions developed from the governing Load Case were used in the verification of the foundation and its anchors:

Location	Vector	Proposed Reactions
Base	Shear	31 kips
	Compression	34 kips
	Moment	1978 kip-ft

- The foundation was found to be within allowable limits.

Foundation	Design Limit	TIA-222-G Section 9.4 FS(1)	Proposed Loading (FS)(1)	Result
Reinforced Concrete Pad and Pier	OTM(2)	1.0	7.38	**PASS**

Note 1: FS denotes Factor of Safety.
Note 2: OTM denotes Overturning Moment

The anchor bolts and base plate were found to be within allowable limits.

Tower Component	Design Limit	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Tension	21.5%	**PASS**
Base Plate	Bending	44.6%	**PASS**

Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed modified antenna configuration.

The analysis is based, in part, on the information provided to this office by Verizon. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Timothy J. Lynn, PE
Structural Engineer

STATE OF CONNECTICUT
TIMOTHY J. LYNN
No. 29336
LICENSED
PROFESSIONAL ENGINEER

Prepared by:

Fernando J. Palacios
Engineer

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the "as new" condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

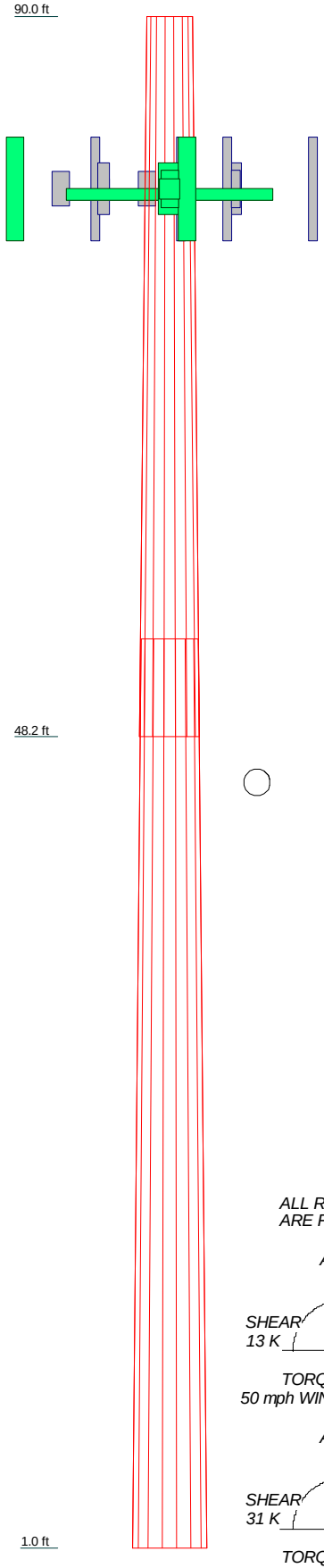
GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

tnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, tnxTower, formerly ERITower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

tnxTower Features:

- tnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided self-supporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-G (2005) standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD 9th Edition or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	41.845	18	0.375	5.690	31.000	41.550	A572-65	6.1
2	52.845	18	0.563		39.365	52.500		14.6



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Pine Branches	88	B5/B13 RRH (Verizon - Proposed)	80
Pine Branches	83	(2) DB-T1-6Z-8AB-0Z (Verizon - Existing)	80
(2) SBNHH-1D65B (Verizon - Existing)	80	EEI Low Profile Platform (Verizon - Existing)	80
B2/B66A RRH (Verizon - Proposed)	80	XXDWMM-12.5-65-8T-CBRS (Verizon - Proposed)	80
B5/B13 RRH (Verizon - Proposed)	80	MT6407-77A (Verizon - Proposed)	80
XXDWMM-12.5-65-8T-CBRS (Verizon - Proposed)	80	Pine Branches	78
MT6407-77A (Verizon - Proposed)	80	Pine Branches	73
(2) SBNHH-1D65B (Verizon - Existing)	80	Pine Branches	68
B2/B66A RRH (Verizon - Proposed)	80	Pine Branches	63
B5/B13 RRH (Verizon - Proposed)	80	Pine Branches	58
XXDWMM-12.5-65-8T-CBRS (Verizon - Proposed)	80	Pine Branches	53
MT6407-77A (Verizon - Proposed)	80	Pine Branches	48
(2) SBNHH-1D65B (Verizon - Existing)	80		
B2/B66A RRH (Verizon - Proposed)	80		

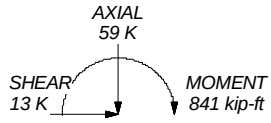
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

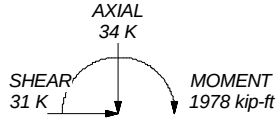
TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-G Standard.
2. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
3. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Structure Class II.
6. Topographic Category 1 with Crest Height of 0.000 ft
7. Weld together tower sections have flange connections.
8. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
9. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
10. Welds are fabricated with ER-70S-6 electrodes.
11. TOWER RATING: 27.5%

ALL REACTIONS ARE FACTORED



TORQUE 0 kip-ft
50 mph WIND - 1.000 in ICE



TORQUE 1 kip-ft
REACTIONS - 97 mph WIND

Centek Engineering Inc.
63-2 North Branford Rd.
Branford, CT 06405
Phone: (203) 488-0580
FAX: (203) 488-8587

Job:	***21007.35 - Southington East***		
Project:	***90' EEI Monopine - 99 East St., Southington, CT***		
Client: Verizon Wireless		Drawn by: TJL	App'd:
Code: TIA-222-G		Date: 07/12/21	Scale: NTS
Path: J:\Jobs\2100\700.WI\35_Southington East CT\05_Structural\Backup Documentation\tnxTower\90' EEI Monopine_Southington.eri			Dwg No. E-1

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Basic wind speed of 97 mph.
Structure Class II.
Exposure Category C.
Topographic Category 1.
Crest Height 0.000 ft.
Nominal ice thickness of 1.000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
Weld together tower sections have flange connections..
Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..
Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..
Welds are fabricated with ER-70S-6 electrodes..
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification		Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks		Consider Feed Line Torque
	Always Use Max Kz		Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-G Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-G Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	90.000-48.155	41.845	5.690	18	31.000	41.550	0.375	1.500	A572-65 (65 ksi)
L2	48.155-1.000	52.845		18	39.365	52.500	0.563	2.250	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	31.420	36.451	4319.206	10.872	15.748	274.270	8644.096	18.229	4.796	12.789
	42.133	49.009	10497.272	14.617	21.107	497.327	21008.357	24.509	6.653	17.741
L2	41.322	69.278	13178.334	13.775	19.998	658.995	26374.009	34.645	5.938	10.557
	53.223	92.728	31601.669	18.438	26.670	1184.914	63244.921	46.373	8.250	14.667

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 90.000-48.155				1	1	1			
L2 48.155-1.000				1	1	1			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
HYBRIFLEX 1-5/8" (Verizon - Existing)	C	No	Yes	Inside Pole	80.000 - 4.000	2	No Ice	0.000	0.002
							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	90.000-48.155	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.121
L2	48.155-1.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.000	0.168

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	90.000-48.155	A	2.151	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.121
L2	48.155-1.000	A	1.943	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.000	0.168

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
XXDWMM-12.5-65-8T-CBR	A	From Face	3.000	0.000	80.000	No Ice	1.539	0.755	0.043
S			-4.000			1/2" Ice	1.696	0.874	0.055
(Verizon - Proposed)			0.000			1" Ice	1.860	1.001	0.069
MT6407-77A	A	From Face	3.000	0.000	80.000	No Ice	4.709	1.840	0.000
(Verizon - Proposed)			0.000			1/2" Ice	4.997	2.063	0.029
			0.000			1" Ice	5.293	2.292	0.063
(2) SBNHH-1D65B	A	From Face	3.000	0.000	80.000	No Ice	8.079	5.342	0.042
(Verizon - Existing)			4.000			1/2" Ice	8.535	5.795	0.092
			0.000			1" Ice	8.998	6.255	0.148
B2/B66A RRH	A	From Face	3.000	0.000	80.000	No Ice	2.537	1.610	0.060
(Verizon - Proposed)			0.000			1/2" Ice	2.750	1.791	0.080
			0.000			1" Ice	2.970	1.978	0.103
B5/B13 RRH	A	From Face	3.000	0.000	80.000	No Ice	1.865	1.016	0.070
(Verizon - Proposed)			0.000			1/2" Ice	2.035	1.148	0.086
			0.000			1" Ice	2.212	1.288	0.106
XXDWMM-12.5-65-8T-CBR	B	From Face	3.000	0.000	80.000	No Ice	1.539	0.755	0.043
S			-4.000			1/2" Ice	1.696	0.874	0.055
(Verizon - Proposed)			0.000			1" Ice	1.860	1.001	0.069
MT6407-77A	B	From Face	3.000	0.000	80.000	No Ice	4.709	1.840	0.000
(Verizon - Proposed)			0.000			1/2" Ice	4.997	2.063	0.029
			0.000			1" Ice	5.293	2.292	0.063
(2) SBNHH-1D65B	B	From Face	3.000	0.000	80.000	No Ice	8.079	5.342	0.042
(Verizon - Existing)			4.000			1/2" Ice	8.535	5.795	0.092
			0.000			1" Ice	8.998	6.255	0.148
B2/B66A RRH	B	From Face	3.000	0.000	80.000	No Ice	2.537	1.610	0.060
(Verizon - Proposed)			0.000			1/2" Ice	2.750	1.791	0.080
			0.000			1" Ice	2.970	1.978	0.103
B5/B13 RRH	B	From Face	3.000	0.000	80.000	No Ice	1.865	1.016	0.070
(Verizon - Proposed)			0.000			1/2" Ice	2.035	1.148	0.086
			0.000			1" Ice	2.212	1.288	0.106
XXDWMM-12.5-65-8T-CBR	C	From Face	3.000	0.000	80.000	No Ice	1.539	0.755	0.043
S			-4.000			1/2" Ice	1.696	0.874	0.055
(Verizon - Proposed)			0.000			1" Ice	1.860	1.001	0.069
MT6407-77A	C	From Face	3.000	0.000	80.000	No Ice	4.709	1.840	0.000
(Verizon - Proposed)			0.000			1/2" Ice	4.997	2.063	0.029

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000			1" Ice	5.293	2.292	0.063
(2) SBNHH-1D65B	C	From Face	3.000	0.000	80.000	No Ice	8.079	5.342	0.042
(Verizon - Existing)			4.000			1/2" Ice	8.535	5.795	0.092
			0.000			1" Ice	8.998	6.255	0.148
B2/B66A RRH	C	From Face	3.000	0.000	80.000	No Ice	2.537	1.610	0.060
(Verizon - Proposed)			0.000			1/2" Ice	2.750	1.791	0.080
			0.000			1" Ice	2.970	1.978	0.103
B5/B13 RRH	C	From Face	3.000	0.000	80.000	No Ice	1.865	1.016	0.070
(Verizon - Proposed)			0.000			1/2" Ice	2.035	1.148	0.086
			0.000			1" Ice	2.212	1.288	0.106
(2) DB-T1-6Z-8AB-0Z	A	From Face	3.000	0.000	80.000	No Ice	4.800	2.000	0.044
(Verizon - Existing)			0.000			1/2" Ice	5.070	2.193	0.080
			0.000			1" Ice	5.348	2.393	0.120
EEI Low Profile Platform	A	None		0.000	80.000	No Ice	22.500	22.500	1.500
(Verizon - Existing)						1/2" Ice	28.200	28.200	2.250
						1" Ice	33.900	33.900	3.000
Pine Branches	C	None		0.000	88.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
Pine Branches	C	None		0.000	83.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
Pine Branches	C	None		0.000	78.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
Pine Branches	C	None		0.000	73.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
Pine Branches	C	None		0.000	68.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
Pine Branches	C	None		0.000	63.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
Pine Branches	C	None		0.000	58.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
Pine Branches	C	None		0.000	53.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000
Pine Branches	C	None		0.000	48.000	No Ice	45.000	45.000	0.600
						1/2" Ice	65.000	65.000	0.800
						1" Ice	85.000	85.000	1.000

Tower Pressures - No Ice

$G_H = 1.100$

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	68.397	1.168	0.027	128.244	A	0.000	128.244	128.244	100.00	0.000	0.000
90.000-48.155					B	0.000	128.244		100.00	0.000	0.000
					C	0.000	128.244		100.00	0.000	0.000
L2	24.668	0.943	0.021	185.761	A	0.000	185.761	185.761	100.00	0.000	0.000
48.155-1.000					B	0.000	185.761		100.00	0.000	0.000
					C	0.000	185.761		100.00	0.000	0.000

Tower Pressure - With Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z ksf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	68.397	1.168	0.007	2.151	143.246	A	0.000	143.246	143.246	100.00	0.000	0.000
90.000-48.155						B	0.000	143.246		100.00	0.000	0.000
						C	0.000	143.246		100.00	0.000	0.000
L2 48.155-1.000	24.668	0.943	0.006	1.943	202.668	A	0.000	202.668	202.668	100.00	0.000	0.000
						B	0.000	202.668		100.00	0.000	0.000
						C	0.000	202.668		100.00	0.000	0.000

Tower Pressure - Service

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1	68.397	1.168	0.009	128.244	A	0.000	128.244	128.244	100.00	0.000	0.000
90.000-48.155					B	0.000	128.244		100.00	0.000	0.000
					C	0.000	128.244		100.00	0.000	0.000
L2	24.668	0.943	0.007	185.761	A	0.000	185.761	185.761	100.00	0.000	0.000
48.155-1.000					B	0.000	185.761		100.00	0.000	0.000
					C	0.000	185.761		100.00	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.65	0.027	1	1	128.244	2.444	0.058	C
90.000-48.155			B	1	0.65		1	1	128.244			
			C	1	0.65		1	1	128.244			
L2	0.168	14.566	A	1	0.65	0.021	1	1	185.761	2.827	0.060	C
48.155-1.000			B	1	0.65		1	1	185.761			
			C	1	0.65		1	1	185.761			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
Sum Weight:	0.289	20.650						OTM	231.645 kip-ft	5.271		

Tower Forces - No Ice - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.65	0.027	1	1	128.244	2.444	0.058	C
90.000-48.155			B	1	0.65		1	1	128.244			
			C	1	0.65		1	1	128.244			
L2	0.168	14.566	A	1	0.65	0.021	1	1	185.761	2.827	0.060	C
48.155-1.000			B	1	0.65		1	1	185.761			
			C	1	0.65		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	231.645 kip-ft	5.271		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.65	0.027	1	1	128.244	2.444	0.058	C
90.000-48.155			B	1	0.65		1	1	128.244			
			C	1	0.65		1	1	128.244			
L2	0.168	14.566	A	1	0.65	0.021	1	1	185.761	2.827	0.060	C
48.155-1.000			B	1	0.65		1	1	185.761			
			C	1	0.65		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	231.645 kip-ft	5.271		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.65	0.027	1	1	128.244	2.444	0.058	C
90.000-48.155			B	1	0.65		1	1	128.244			
			C	1	0.65		1	1	128.244			
L2	0.168	14.566	A	1	0.65	0.021	1	1	185.761	2.827	0.060	C
48.155-1.000			B	1	0.65		1	1	185.761			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
			C	1	0.65		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	231.645 kip-ft	5.271		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	10.354	A	1	1.2	0.007	1	1	143.246	1.339	0.032	C
90.000-48.155			B	1	1.2		1	1	143.246			
			C	1	1.2		1	1	143.246			
L2	0.168	20.059	A	1	1.2	0.006	1	1	201.029	1.501	0.032	C
48.155-1.000			B	1	1.2		1	1	201.029			
			C	1	1.2		1	1	201.029			
Sum Weight:	0.289	30.413						OTM	125.779 kip-ft	2.840		

Tower Forces - With Ice - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	10.354	A	1	1.2	0.007	1	1	143.246	1.339	0.032	C
90.000-48.155			B	1	1.2		1	1	143.246			
			C	1	1.2		1	1	143.246			
L2	0.168	20.059	A	1	1.2	0.006	1	1	201.029	1.501	0.032	C
48.155-1.000			B	1	1.2		1	1	201.029			
			C	1	1.2		1	1	201.029			
Sum Weight:	0.289	30.413						OTM	125.779 kip-ft	2.840		

Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	10.354	A	1	1.2	0.007	1	1	143.246	1.339	0.032	C
90.000-48.155			B	1	1.2		1	1	143.246			
			C	1	1.2		1	1	143.246			
L2	0.168	20.059	A	1	1.2	0.006	1	1	201.029	1.501	0.032	C

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
48.155-1.000			B	1	1.2		1	1	201.029			
			C	1	1.2		1	1	201.029			
Sum Weight:	0.289	30.413						OTM	125.779 kip-ft	2.840		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	10.354	A	1	1.2	0.007	1	1	143.246	1.339	0.032	C
90.000-48.155			B	1	1.2		1	1	143.246			
			C	1	1.2		1	1	143.246			
L2	0.168	20.059	A	1	1.2	0.006	1	1	201.029	1.501	0.032	C
48.155-1.000			B	1	1.2		1	1	201.029			
			C	1	1.2		1	1	201.029			
Sum Weight:	0.289	30.413						OTM	125.779 kip-ft	2.840		

Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.65	0.009	1	1	128.244	0.837	0.020	C
90.000-48.155			B	1	0.65		1	1	128.244			
			C	1	0.65		1	1	128.244			
L2	0.168	14.566	A	1	0.65	0.007	1	1	185.761	0.968	0.021	C
48.155-1.000			B	1	0.65		1	1	185.761			
			C	1	0.65		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	79.301 kip-ft	1.805		

Tower Forces - Service - Wind 45 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.65	0.009	1	1	128.244	0.837	0.020	C
90.000-48.155			B	1	0.65		1	1	128.244			
			C	1	0.65		1	1	128.244			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L2	0.168	14.566	A	1	0.65	0.007	1	1	185.761	0.968	0.021	C
48.155-1.000			B	1	0.65		1	1	185.761			
			C	1	0.65		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	79.301 kip-ft	1.805		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.65	0.009	1	1	128.244	0.837	0.020	C
90.000-48.155			B	1	0.65		1	1	128.244			
			C	1	0.65		1	1	128.244			
L2	0.168	14.566	A	1	0.65	0.007	1	1	185.761	0.968	0.021	C
48.155-1.000			B	1	0.65		1	1	185.761			
			C	1	0.65		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	79.301 kip-ft	1.805		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	q_z ksf	D_F	D_R	A_E ft^2	F K	w klf	Ctrl. Face
L1	0.121	6.084	A	1	0.65	0.009	1	1	128.244	0.837	0.020	C
90.000-48.155			B	1	0.65		1	1	128.244			
			C	1	0.65		1	1	128.244			
L2	0.168	14.566	A	1	0.65	0.007	1	1	185.761	0.968	0.021	C
48.155-1.000			B	1	0.65		1	1	185.761			
			C	1	0.65		1	1	185.761			
Sum Weight:	0.289	20.650						OTM	79.301 kip-ft	1.805		

Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Leg Weight	20.650					
Bracing Weight	0.000					

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Total Member Self-Weight	20.650			-0.193	0.335	
Total Weight	28.698			-0.193	0.335	
Wind 0 deg - No Ice		-0.059	-19.504	-1220.115	4.993	-0.370
Wind 30 deg - No Ice		9.735	-16.861	-1054.348	-608.281	-0.428
Wind 45 deg - No Ice		13.798	-13.750	-859.515	-862.790	-0.413
Wind 60 deg - No Ice		16.920	-9.701	-606.120	-1058.477	-0.370
Wind 90 deg - No Ice		19.572	0.059	4.465	-1224.966	-0.214
Wind 120 deg - No Ice		16.979	9.803	613.802	-1063.135	0.000
Wind 135 deg - No Ice		13.881	13.833	865.715	-869.377	0.111
Wind 150 deg - No Ice		9.837	16.920	1058.619	-616.349	0.214
Wind 180 deg - No Ice		0.059	19.504	1219.729	-4.323	0.370
Wind 210 deg - No Ice		-9.735	16.861	1053.961	608.951	0.428
Wind 225 deg - No Ice		-13.798	13.750	859.128	863.460	0.413
Wind 240 deg - No Ice		-16.920	9.701	605.734	1059.148	0.370
Wind 270 deg - No Ice		-19.572	-0.059	-4.852	1225.636	0.214
Wind 300 deg - No Ice		-16.979	-9.803	-614.188	1063.806	0.000
Wind 315 deg - No Ice		-13.881	-13.833	-866.102	870.047	-0.111
Wind 330 deg - No Ice		-9.837	-16.920	-1059.006	617.019	-0.214
Member Ice	9.763					
Total Weight Ice	52.795			-1.035	1.793	
Wind 0 deg - Ice		-0.018	-12.999	-825.649	3.181	-0.143
Wind 30 deg - Ice		6.494	-11.248	-714.478	-410.114	-0.165
Wind 45 deg - Ice		9.193	-9.179	-583.144	-581.449	-0.159
Wind 60 deg - Ice		11.266	-6.484	-412.140	-713.038	-0.143
Wind 90 deg - Ice		13.019	0.018	0.353	-824.424	-0.082
Wind 120 deg - Ice		11.284	6.515	412.474	-714.426	0.000
Wind 135 deg - Ice		9.218	9.204	583.036	-583.412	0.043
Wind 150 deg - Ice		6.525	11.266	713.796	-412.518	0.082
Wind 180 deg - Ice		0.018	12.999	823.579	0.405	0.143
Wind 210 deg - Ice		-6.494	11.248	712.408	413.699	0.165
Wind 225 deg - Ice		-9.193	9.179	581.074	585.035	0.159
Wind 240 deg - Ice		-11.266	6.484	410.070	716.623	0.143
Wind 270 deg - Ice		-13.019	-0.018	-2.423	828.009	0.082
Wind 300 deg - Ice		-11.284	-6.515	-414.544	718.011	0.000
Wind 315 deg - Ice		-9.218	-9.204	-585.107	586.997	-0.043
Wind 330 deg - Ice		-6.525	-11.266	-715.866	416.103	-0.082
Total Weight	28.698			-0.193	0.335	
Wind 0 deg - Service		-0.020	-6.677	-417.818	1.930	-0.127
Wind 30 deg - Service		3.333	-5.772	-361.070	-208.017	-0.146
Wind 45 deg - Service		4.723	-4.707	-294.371	-295.145	-0.141
Wind 60 deg - Service		5.792	-3.321	-207.625	-362.136	-0.127
Wind 90 deg - Service		6.700	0.020	1.401	-419.131	-0.073
Wind 120 deg - Service		5.813	3.356	210.000	-363.731	0.000
Wind 135 deg - Service		4.752	4.736	296.240	-297.400	0.038
Wind 150 deg - Service		3.368	5.792	362.278	-210.779	0.073
Wind 180 deg - Service		0.020	6.677	417.431	-1.260	0.127
Wind 210 deg - Service		-3.333	5.772	360.683	208.687	0.146
Wind 225 deg - Service		-4.723	4.707	293.984	295.815	0.141
Wind 240 deg - Service		-5.792	3.321	207.238	362.806	0.127
Wind 270 deg - Service		-6.700	-0.020	-1.788	419.801	0.073
Wind 300 deg - Service		-5.813	-3.356	-210.387	364.401	0.000
Wind 315 deg - Service		-4.752	-4.736	-296.626	298.070	-0.038
Wind 330 deg - Service		-3.368	-5.792	-362.665	211.449	-0.073

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 45 deg - No Ice
7	0.9 Dead+1.6 Wind 45 deg - No Ice
8	1.2 Dead+1.6 Wind 60 deg - No Ice
9	0.9 Dead+1.6 Wind 60 deg - No Ice
10	1.2 Dead+1.6 Wind 90 deg - No Ice
11	0.9 Dead+1.6 Wind 90 deg - No Ice
12	1.2 Dead+1.6 Wind 120 deg - No Ice
13	0.9 Dead+1.6 Wind 120 deg - No Ice
14	1.2 Dead+1.6 Wind 135 deg - No Ice
15	0.9 Dead+1.6 Wind 135 deg - No Ice
16	1.2 Dead+1.6 Wind 150 deg - No Ice
17	0.9 Dead+1.6 Wind 150 deg - No Ice
18	1.2 Dead+1.6 Wind 180 deg - No Ice
19	0.9 Dead+1.6 Wind 180 deg - No Ice
20	1.2 Dead+1.6 Wind 210 deg - No Ice
21	0.9 Dead+1.6 Wind 210 deg - No Ice
22	1.2 Dead+1.6 Wind 225 deg - No Ice
23	0.9 Dead+1.6 Wind 225 deg - No Ice
24	1.2 Dead+1.6 Wind 240 deg - No Ice
25	0.9 Dead+1.6 Wind 240 deg - No Ice
26	1.2 Dead+1.6 Wind 270 deg - No Ice
27	0.9 Dead+1.6 Wind 270 deg - No Ice
28	1.2 Dead+1.6 Wind 300 deg - No Ice
29	0.9 Dead+1.6 Wind 300 deg - No Ice
30	1.2 Dead+1.6 Wind 315 deg - No Ice
31	0.9 Dead+1.6 Wind 315 deg - No Ice
32	1.2 Dead+1.6 Wind 330 deg - No Ice
33	0.9 Dead+1.6 Wind 330 deg - No Ice
34	1.2 Dead+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
39	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
40	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
41	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp
42	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
43	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
44	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
45	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp
46	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
47	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
48	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
49	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp
50	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
51	Dead+Wind 0 deg - Service
52	Dead+Wind 30 deg - Service
53	Dead+Wind 45 deg - Service
54	Dead+Wind 60 deg - Service
55	Dead+Wind 90 deg - Service
56	Dead+Wind 120 deg - Service
57	Dead+Wind 135 deg - Service
58	Dead+Wind 150 deg - Service
59	Dead+Wind 180 deg - Service
60	Dead+Wind 210 deg - Service
61	Dead+Wind 225 deg - Service
62	Dead+Wind 240 deg - Service

Comb. No.	Description
63	Dead+Wind 270 deg - Service
64	Dead+Wind 300 deg - Service
65	Dead+Wind 315 deg - Service
66	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	90 - 48.155	Pole	Max Tension	34	0.000	0.000	0.000
			Max. Compression	34	-30.533	1.860	1.074
			Max. Mx	26	-13.871	457.181	2.718
			Max. My	2	-13.874	2.887	454.139
			Max. Vy	26	-22.436	457.181	2.718
			Max. Vx	2	-22.326	2.887	454.139
			Max. Torque	21			-0.683
L2	48.155 - 1	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	34	-59.198	1.860	1.074
			Max. Mx	26	-34.426	1974.003	7.743
			Max. My	2	-34.426	7.915	1965.163
			Max. Vy	26	-31.328	1974.003	7.743
			Max. Vx	2	-31.219	7.915	1965.163
			Max. Torque	21			-0.683

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	48	59.198	11.284	6.515
	Max. H_x	27	25.829	31.315	0.094
	Max. H_z	2	34.438	0.094	31.206
	Max. M_x	2	1965.163	0.094	31.206
	Max. M_z	10	1973.190	-31.315	-0.094
	Max. Torsion	5	0.683	-15.576	26.978
	Min. Vert	7	25.829	-22.076	21.999
	Min. H_x	10	34.438	-31.315	-0.094
	Min. H_z	18	34.438	-0.094	-31.206
	Min. M_x	18	-1964.693	-0.094	-31.206
	Min. M_z	26	-1974.003	31.315	0.094
	Min. Torsion	21	-0.683	15.576	-26.978

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	28.698	0.000	0.000	-0.193	0.335	0.000
1.2 Dead+1.6 Wind 0 deg - No Ice	34.438	-0.094	-31.206	-1965.163	7.915	-0.591

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
0.9 Dead+1.6 Wind 0 deg - No Ice	25.829	-0.094	-31.206	-1961.794	7.798	-0.591
1.2 Dead+1.6 Wind 30 deg - No Ice	34.438	15.576	-26.978	-1698.159	-979.890	-0.683
0.9 Dead+1.6 Wind 30 deg - No Ice	25.829	15.576	-26.978	-1695.240	-978.342	-0.683
1.2 Dead+1.6 Wind 45 deg - No Ice	34.438	22.076	-21.999	-1384.340	-1389.829	-0.660
0.9 Dead+1.6 Wind 45 deg - No Ice	25.829	22.076	-21.999	-1381.950	-1387.590	-0.660
1.2 Dead+1.6 Wind 60 deg - No Ice	34.438	27.072	-15.521	-976.197	-1705.025	-0.592
0.9 Dead+1.6 Wind 60 deg - No Ice	25.829	27.072	-15.521	-974.495	-1702.254	-0.592
1.2 Dead+1.6 Wind 90 deg - No Ice	34.438	31.315	0.094	7.273	-1973.190	-0.342
0.9 Dead+1.6 Wind 90 deg - No Ice	25.829	31.315	0.094	7.318	-1969.966	-0.342
1.2 Dead+1.6 Wind 120 deg - No Ice	34.438	27.167	15.685	988.730	-1712.531	0.000
0.9 Dead+1.6 Wind 120 deg - No Ice	25.829	27.167	15.685	987.123	-1709.747	0.000
1.2 Dead+1.6 Wind 135 deg - No Ice	34.438	22.210	22.133	1394.487	-1400.445	0.177
0.9 Dead+1.6 Wind 135 deg - No Ice	25.829	22.210	22.133	1392.196	-1398.186	0.177
1.2 Dead+1.6 Wind 150 deg - No Ice	34.438	15.739	27.072	1705.196	-992.894	0.342
0.9 Dead+1.6 Wind 150 deg - No Ice	25.829	15.739	27.072	1702.382	-991.321	0.342
1.2 Dead+1.6 Wind 180 deg - No Ice	34.438	0.094	31.206	1964.693	-7.101	0.592
0.9 Dead+1.6 Wind 180 deg - No Ice	25.829	0.094	31.206	1961.443	-7.190	0.592
1.2 Dead+1.6 Wind 210 deg - No Ice	34.438	-15.576	26.978	1697.689	980.704	0.683
0.9 Dead+1.6 Wind 210 deg - No Ice	25.829	-15.576	26.978	1694.889	978.950	0.683
1.2 Dead+1.6 Wind 225 deg - No Ice	34.438	-22.076	21.999	1383.870	1390.642	0.660
0.9 Dead+1.6 Wind 225 deg - No Ice	25.829	-22.076	21.999	1381.599	1388.198	0.660
1.2 Dead+1.6 Wind 240 deg - No Ice	34.438	-27.072	15.521	975.727	1705.838	0.591
0.9 Dead+1.6 Wind 240 deg - No Ice	25.829	-27.072	15.521	974.144	1702.862	0.591
1.2 Dead+1.6 Wind 270 deg - No Ice	34.438	-31.315	-0.094	-7.743	1974.003	0.341
0.9 Dead+1.6 Wind 270 deg - No Ice	25.829	-31.315	-0.094	-7.670	1970.575	0.341
1.2 Dead+1.6 Wind 300 deg - No Ice	34.438	-27.167	-15.685	-989.200	1713.345	0.000
0.9 Dead+1.6 Wind 300 deg - No Ice	25.829	-27.167	-15.685	-987.474	1710.355	0.000
1.2 Dead+1.6 Wind 315 deg - No Ice	34.438	-22.210	-22.133	-1394.957	1401.259	-0.177
0.9 Dead+1.6 Wind 315 deg - No Ice	25.829	-22.210	-22.133	-1392.547	1398.795	-0.177
1.2 Dead+1.6 Wind 330 deg - No Ice	34.438	-15.739	-27.072	-1705.665	993.707	-0.341
0.9 Dead+1.6 Wind 330 deg -	25.829	-15.739	-27.072	-1702.733	991.929	-0.341

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
No Ice						
1.2 Dead+1.0 Ice+1.0 Temp	59.198	0.000	0.000	-1.074	1.860	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	59.198	-0.018	-12.999	-837.179	3.316	-0.141
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	59.198	6.494	-11.248	-724.461	-415.726	-0.163
1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp	59.198	9.193	-9.179	-591.301	-589.444	-0.157
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	59.198	11.266	-6.484	-417.920	-722.863	-0.141
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	59.198	13.019	0.018	0.308	-835.799	-0.081
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	59.198	11.284	6.515	418.159	-724.273	0.000
1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp	59.198	9.218	9.204	591.093	-591.437	0.042
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	59.198	6.525	11.266	723.669	-418.167	0.081
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	59.198	0.018	12.999	834.978	0.497	0.141
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	59.198	-6.494	11.248	722.260	419.539	0.163
1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp	59.198	-9.193	9.179	589.099	593.258	0.157
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	59.198	-11.266	6.484	415.718	726.677	0.141
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	59.198	-13.019	-0.018	-2.510	839.613	0.081
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	59.198	-11.284	-6.515	-420.361	728.086	0.000
1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp	59.198	-9.218	-9.204	-593.294	595.251	-0.042
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	59.198	-6.525	-11.266	-725.871	421.980	-0.081
Dead+Wind 0 deg - Service	28.698	-0.020	-6.677	-420.157	1.943	-0.127
Dead+Wind 30 deg - Service	28.698	3.333	-5.772	-363.090	-209.179	-0.146
Dead+Wind 45 deg - Service	28.698	4.723	-4.707	-296.018	-296.795	-0.141
Dead+Wind 60 deg - Service	28.698	5.792	-3.321	-208.787	-364.161	-0.127
Dead+Wind 90 deg - Service	28.698	6.700	0.020	1.409	-421.476	-0.073
Dead+Wind 120 deg - Service	28.698	5.813	3.356	211.175	-365.766	0.000
Dead+Wind 135 deg - Service	28.698	4.752	4.736	297.897	-299.064	0.038
Dead+Wind 150 deg - Service	28.698	3.368	5.792	364.304	-211.958	0.073
Dead+Wind 180 deg - Service	28.698	0.020	6.677	419.766	-1.266	0.127
Dead+Wind 210 deg - Service	28.698	-3.333	5.772	362.700	209.856	0.146
Dead+Wind 225 deg - Service	28.698	-4.723	4.707	295.628	297.472	0.141
Dead+Wind 240 deg - Service	28.698	-5.792	3.321	208.396	364.838	0.127
Dead+Wind 270 deg - Service	28.698	-6.700	-0.020	-1.800	422.153	0.073
Dead+Wind 300 deg - Service	28.698	-5.813	-3.356	-211.566	366.442	0.000
Dead+Wind 315 deg - Service	28.698	-4.752	-4.736	-298.288	299.741	-0.038
Dead+Wind 330 deg - Service	28.698	-3.368	-5.792	-364.695	212.635	-0.073

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.000	-28.698	0.000	0.000	28.698	0.000	0.000%
2	-0.094	-34.438	-31.206	0.094	34.438	31.206	0.000%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
3	-0.094	-25.829	-31.206	0.094	25.829	31.206	0.000%
4	15.576	-34.438	-26.978	-15.576	34.438	26.978	0.000%
5	15.576	-25.829	-26.978	-15.576	25.829	26.978	0.000%
6	22.076	-34.438	-21.999	-22.076	34.438	21.999	0.000%
7	22.076	-25.829	-21.999	-22.076	25.829	21.999	0.000%
8	27.072	-34.438	-15.521	-27.072	34.438	15.521	0.000%
9	27.072	-25.829	-15.521	-27.072	25.829	15.521	0.000%
10	31.315	-34.438	0.094	-31.315	34.438	-0.094	0.000%
11	31.315	-25.829	0.094	-31.315	25.829	-0.094	0.000%
12	27.167	-34.438	15.685	-27.167	34.438	-15.685	0.000%
13	27.167	-25.829	15.685	-27.167	25.829	-15.685	0.000%
14	22.210	-34.438	22.133	-22.210	34.438	-22.133	0.000%
15	22.210	-25.829	22.133	-22.210	25.829	-22.133	0.000%
16	15.739	-34.438	27.072	-15.739	34.438	-27.072	0.000%
17	15.739	-25.829	27.072	-15.739	25.829	-27.072	0.000%
18	0.094	-34.438	31.206	-0.094	34.438	-31.206	0.000%
19	0.094	-25.829	31.206	-0.094	25.829	-31.206	0.000%
20	-15.576	-34.438	26.978	15.576	34.438	-26.978	0.000%
21	-15.576	-25.829	26.978	15.576	25.829	-26.978	0.000%
22	-22.076	-34.438	21.999	22.076	34.438	-21.999	0.000%
23	-22.076	-25.829	21.999	22.076	25.829	-21.999	0.000%
24	-27.072	-34.438	15.521	27.072	34.438	-15.521	0.000%
25	-27.072	-25.829	15.521	27.072	25.829	-15.521	0.000%
26	-31.315	-34.438	-0.094	31.315	34.438	0.094	0.000%
27	-31.315	-25.829	-0.094	31.315	25.829	0.094	0.000%
28	-27.167	-34.438	-15.685	27.167	34.438	15.685	0.000%
29	-27.167	-25.829	-15.685	27.167	25.829	15.685	0.000%
30	-22.210	-34.438	-22.133	22.210	34.438	22.133	0.000%
31	-22.210	-25.829	-22.133	22.210	25.829	22.133	0.000%
32	-15.739	-34.438	-27.072	15.739	34.438	27.072	0.000%
33	-15.739	-25.829	-27.072	15.739	25.829	27.072	0.000%
34	0.000	-59.198	0.000	0.000	59.198	0.000	0.000%
35	-0.018	-59.198	-12.999	0.018	59.198	12.999	0.000%
36	6.494	-59.198	-11.248	-6.494	59.198	11.248	0.000%
37	9.193	-59.198	-9.179	-9.193	59.198	9.179	0.000%
38	11.266	-59.198	-6.484	-11.266	59.198	6.484	0.000%
39	13.019	-59.198	0.018	-13.019	59.198	-0.018	0.000%
40	11.284	-59.198	6.515	-11.284	59.198	-6.515	0.000%
41	9.218	-59.198	9.204	-9.218	59.198	-9.204	0.000%
42	6.525	-59.198	11.266	-6.525	59.198	-11.266	0.000%
43	0.018	-59.198	12.999	-0.018	59.198	-12.999	0.000%
44	-6.494	-59.198	11.248	6.494	59.198	-11.248	0.000%
45	-9.193	-59.198	9.179	9.193	59.198	-9.179	0.000%
46	-11.266	-59.198	6.484	11.266	59.198	-6.484	0.000%
47	-13.019	-59.198	-0.018	13.019	59.198	0.018	0.000%
48	-11.284	-59.198	-6.515	11.284	59.198	6.515	0.000%
49	-9.218	-59.198	-9.204	9.218	59.198	9.204	0.000%
50	-6.525	-59.198	-11.266	6.525	59.198	11.266	0.000%
51	-0.020	-28.698	-6.677	0.020	28.698	6.677	0.000%
52	3.333	-28.698	-5.772	-3.333	28.698	5.772	0.000%
53	4.723	-28.698	-4.707	-4.723	28.698	4.707	0.000%
54	5.792	-28.698	-3.321	-5.792	28.698	3.321	0.000%
55	6.700	-28.698	0.020	-6.700	28.698	-0.020	0.000%
56	5.813	-28.698	3.356	-5.813	28.698	-3.356	0.000%
57	4.752	-28.698	4.736	-4.752	28.698	-4.736	0.000%
58	3.368	-28.698	5.792	-3.368	28.698	-5.792	0.000%
59	0.020	-28.698	6.677	-0.020	28.698	-6.677	0.000%
60	-3.333	-28.698	5.772	3.333	28.698	-5.772	0.000%
61	-4.723	-28.698	4.707	4.723	28.698	-4.707	0.000%
62	-5.792	-28.698	3.321	5.792	28.698	-3.321	0.000%
63	-6.700	-28.698	-0.020	6.700	28.698	0.020	0.000%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
64	-5.813	-28.698	-3.356	5.813	28.698	3.356	0.000%
65	-4.752	-28.698	-4.736	4.752	28.698	4.736	0.000%
66	-3.368	-28.698	-5.792	3.368	28.698	5.792	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00000001
3	Yes	4	0.00000001	0.00000001
4	Yes	4	0.00000001	0.00001252
5	Yes	4	0.00000001	0.00000760
6	Yes	4	0.00000001	0.00001567
7	Yes	4	0.00000001	0.00000952
8	Yes	4	0.00000001	0.00001456
9	Yes	4	0.00000001	0.00000888
10	Yes	4	0.00000001	0.00000001
11	Yes	4	0.00000001	0.00000001
12	Yes	4	0.00000001	0.00001377
13	Yes	4	0.00000001	0.00000837
14	Yes	4	0.00000001	0.00001581
15	Yes	4	0.00000001	0.00000959
16	Yes	4	0.00000001	0.00001324
17	Yes	4	0.00000001	0.00000804
18	Yes	4	0.00000001	0.00000001
19	Yes	4	0.00000001	0.00000001
20	Yes	4	0.00000001	0.00001472
21	Yes	4	0.00000001	0.00000898
22	Yes	4	0.00000001	0.00001566
23	Yes	4	0.00000001	0.00000951
24	Yes	4	0.00000001	0.00001264
25	Yes	4	0.00000001	0.00000767
26	Yes	4	0.00000001	0.00000001
27	Yes	4	0.00000001	0.00000001
28	Yes	4	0.00000001	0.00001381
29	Yes	4	0.00000001	0.00000839
30	Yes	4	0.00000001	0.00001585
31	Yes	4	0.00000001	0.00000961
32	Yes	4	0.00000001	0.00001438
33	Yes	4	0.00000001	0.00000875
34	Yes	4	0.00000001	0.00000001
35	Yes	4	0.00000001	0.00007054
36	Yes	4	0.00000001	0.00007301
37	Yes	4	0.00000001	0.00007388
38	Yes	4	0.00000001	0.00007297
39	Yes	4	0.00000001	0.00007017
40	Yes	4	0.00000001	0.00007297
41	Yes	4	0.00000001	0.00007386
42	Yes	4	0.00000001	0.00007293
43	Yes	4	0.00000001	0.00007017
44	Yes	4	0.00000001	0.00007313
45	Yes	4	0.00000001	0.00007411
46	Yes	4	0.00000001	0.00007330
47	Yes	4	0.00000001	0.00007082
48	Yes	4	0.00000001	0.00007382

49	Yes	4	0.00000001	0.00007472
50	Yes	4	0.00000001	0.00007372
51	Yes	4	0.00000001	0.00000001
52	Yes	4	0.00000001	0.00000001
53	Yes	4	0.00000001	0.00000001
54	Yes	4	0.00000001	0.00000001
55	Yes	4	0.00000001	0.00000001
56	Yes	4	0.00000001	0.00000001
57	Yes	4	0.00000001	0.00000001
58	Yes	4	0.00000001	0.00000001
59	Yes	4	0.00000001	0.00000001
60	Yes	4	0.00000001	0.00000001
61	Yes	4	0.00000001	0.00000001
62	Yes	4	0.00000001	0.00000001
63	Yes	4	0.00000001	0.00000001
64	Yes	4	0.00000001	0.00000001
65	Yes	4	0.00000001	0.00000001
66	Yes	4	0.00000001	0.00000001

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	90 - 48.155	2.535	64	0.211	0.000
L2	53.845 - 1	1.029	64	0.167	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
88.000	Pine Branches	64	2.443	0.210	0.000	115926
83.000	Pine Branches	64	2.213	0.205	0.000	82804
80.000	XXDWMM-12.5-65-8T-CBRS	64	2.077	0.203	0.000	57963
78.000	Pine Branches	64	1.987	0.201	0.000	48303
73.000	Pine Branches	64	1.767	0.196	0.000	34096
68.000	Pine Branches	64	1.556	0.190	0.000	26347
63.000	Pine Branches	64	1.356	0.183	0.000	21468
58.000	Pine Branches	64	1.171	0.175	0.000	18117
53.000	Pine Branches	64	1.001	0.165	0.000	16670
48.000	Pine Branches	64	0.850	0.154	0.000	18025

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	90 - 48.155	11.846	28	0.987	0.002
L2	53.845 - 1	4.809	28	0.779	0.001

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
88.000	Pine Branches	28	11.415	0.979	0.001	24851
83.000	Pine Branches	28	10.342	0.959	0.001	17750
80.000	XXDWMM-12.5-65-8T-CBRS	28	9.705	0.947	0.001	12425
78.000	Pine Branches	28	9.286	0.938	0.001	10354
73.000	Pine Branches	28	8.258	0.914	0.001	7309
68.000	Pine Branches	28	7.272	0.886	0.001	5647
63.000	Pine Branches	28	6.339	0.854	0.001	4601
58.000	Pine Branches	28	5.472	0.816	0.001	3883
53.000	Pine Branches	28	4.681	0.771	0.001	3573
48.000	Pine Branches	28	3.975	0.719	0.001	3863

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	90 - 48.155 (1)	TP41.55x31x0.375	41.845	0.000	0.0	47.301	-13.869	3462.130	0.004
L2	48.155 - 1 (2)	TP52.5x39.365x0.563	52.845	0.000	0.0	92.728	-34.426	6889.220	0.005

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	90 - 48.155 (1)	TP41.55x31x0.375	458.679	2824.808	0.162	0.000	2824.808	0.000
L2	48.155 - 1 (2)	TP52.5x39.365x0.563	1978.400	7336.100	0.270	0.000	7336.100	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	90 - 48.155 (1)	TP41.55x31x0.375	22.491	1731.060	0.013	0.000	5664.575	0.000
L2	48.155 - 1 (2)	TP52.5x39.365x0.563	31.383	3444.610	0.009	0.000	14714.083	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	90 - 48.155 (1)	0.004	0.162	0.000	0.013	0.000	0.167 ✔	1.000	4.8.2 ✔
L2	48.155 - 1 (2)	0.005	0.270	0.000	0.009	0.000	0.275 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	90 - 48.155	Pole	TP41.55x31x0.375	1	-13.869	3462.130	16.7	Pass
L2	48.155 - 1	Pole	TP52.5x39.365x0.563	2	-34.426	6889.220	27.5	Pass
							Summary	
						Pole (L2)	27.5	Pass
						RATING =	**27.5**	**Pass**

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Subject:	Anchor Bolt and Baseplate Analysis
Location:	90-FT EEI Monopine Southington, CT
Rev. 0: 7/12/21	Prepared by: T.J.L. Checked by: C.F.C. Job No. 21007.35

Anchor Bolt and Base Plate Analysis:

Input Data:

Tower Reactions:

Overturning Moment =	$M_u := 1978 \cdot ft \cdot kips$	(Input From tnxTower)
Shear Force =	$Shear := 31 \cdot kips$	(Input From tnxTower)
Axial Force =	$R_u := 34 \cdot kips$	(Input From tnxTower)

Anchor Bolt Data:

ASTMA615 Grade 75

Number of Anchor Bolts =	$N := 24$	(User Input)
Diameter of Bolt Circle =	$D_{BC} := 60 \cdot in$	(User Input)
Bolt "Column" Distance =	$l := 3.0 \cdot in$	(User Input)
Bolt Ultimate Strength =	$F_u := 100 \cdot ksi$	(User Input)
Bolt Yield Strength =	$F_y := 75 \cdot ksi$	(User Input)
Bolt Modulus =	$E := 29000 \cdot ksi$	(User Input)
Diameter of Anchor Bolts =	$D := 2.25 \cdot in$	(User Input)
Threads per Inch =	$n := 4.5$	(User Input)
Top of Concrete to Bot Leveling Nut =	$l_{ar} := 2 \cdot in$	(User Input)
Anchor Rod Force Correction Factor =	$n_c = 1$	Table 2-1 Addendum 3

Base Plate Data:

Use AST MA572 Grade 50

Plate Yield Strength =	$F_{yf} := 50 \cdot ksi$	(User Input)
Base Plate Thickness =	$t_{TP} := 3 \cdot in$	(User Input)
Base Plate Diameter =	$D_{OD} := 66 \cdot in$	(User Input)
Outer Pole Diameter =	$D_T := 52.5 \cdot in$	(User Input)
Pole Wall Thickness =	$t_T := 0.5625 \cdot in$	(User Input)
Pole Design Yield Strength =	$F_{yp} := 65 \cdot ksi$	(User Input)
	$\eta := 0.5$	For Ungrouted Base Plate per TIA-222-G Section 4.9.9

Anchor Bolt Analysis:

Gross Area of Bolt = $A_g := \frac{\pi}{4} \cdot D^2 = 3.976 \cdot in^2$

Net Area of Bolt = $A_n := \frac{\pi}{4} \cdot \left(D - \frac{0.9743 \cdot in}{n} \right)^2 = 3.248 \cdot in^2$

Tensile Root Diameter = $d_{rt} := D - \frac{0.9743 \cdot in}{n} = 2.033 \cdot in$

Plastic Section Modulus = $Z := \frac{d_{rt}^3}{6} = 1.401 \cdot in^3$

Maximum Anchor Rod Force = $P_u := \frac{n_c \cdot \pi \cdot M_u}{N \cdot D_{BC}} + \frac{R_u}{N} = 53.2 \cdot kips$

Maximum Shear Force = $V_u := \frac{Shear}{N} = 1.3 \cdot kips$

Design Tensile Strength = $\Phi R_{nt} := 0.8 \cdot F_u \cdot A_n = 259.815 \cdot k$

Bolt % of Capacity = $\frac{\left(P_u + \frac{V_u}{\eta} \right)}{\Phi R_{nt}} \cdot 100 = 21.5$

Condition1 = $Condition1 := if\left[\frac{\left(P_u + \frac{V_u}{\eta} \right)}{\Phi R_{nt}} \le 1.00, "OK", "Overstressed" \right]$

Condition1 = "OK"

Design Shear Strength = $\Phi R_{nv} := 0.75 \cdot 0.45 \cdot F_u \cdot A_g = 134.193 \cdot k$

Design Flexural Strength = $\Phi R_{nm} := 0.9 \cdot F_y \cdot Z = 94.597 \cdot in \cdot k$

$M_u := \begin{cases} 0 & \text{if } l_{ar} < D \\ 0.65 \cdot l_{ar} \cdot V_u & \text{otherwise} \end{cases} = 0 \cdot in \cdot k$

Bolt % of Capacity = $\left[\left(\frac{V_u}{\Phi R_{nv}} \right)^2 + \left(\frac{P_u}{\Phi R_{nt}} + \frac{M_u}{\Phi R_{nm}} \right)^2 \right] \cdot 100 = 4.2$

Condition2 = $Condition2 := if\left[\left(\frac{V_u}{\Phi R_{nv}} \right)^2 + \left(\frac{P_u}{\Phi R_{nt}} + \frac{M_u}{\Phi R_{nm}} \right)^2 \le 1.00, "OK", "Overstressed" \right]$

Condition2 = "OK"

Base Plate Analysis:

Strength Resistance Factor for Yielding due to Bending = $\phi_b := 0.9$

Strength Resistance Factor for Yielding due to Shear = $\phi_v := 1.0$

Outside Fillet Horizontal Leg Dimension = $w_1 := 0.25 \cdot in$

Effective Pole Outside Diameter = $D_e := D_T + w_1 = 52.75 \cdot in$

Effective Base Plate Outside Diameter = $D_{oe} := \begin{cases} D_{OD} & \text{if } D_{OD} \le \left(D_{BC} + 6 \cdot t_{TP}\right) \\ \left(D_{BC} + 6 \cdot t_{TP}\right) & \text{otherwise} \end{cases} = 66 \cdot in$

Half-Angle Between Radial Lines Extending from Pole Centerline Through Midpoints Between Adjacent Anchor Rods = $\theta_1 := \frac{\pi}{N} = 0.131$

Angle Defining Limiting Effective Base Plate Width Based on Plate Thickness = $\theta_2 := \operatorname{asin}\left(\frac{12 \cdot t_{TP}}{D_{BC}}\right) = 0.644$

Angle Defining Limiting Effective Base Plate Width Based on Distance Between Anchor Rod Bolt Circle and Effective Pole Outside Diameter = $\theta_3 := \operatorname{acos}\left(\frac{D_{BC} + D_e}{2 \cdot D_{BC}}\right) = 0.349$

Governing Angle Defining Effective Base Plate Width Resisting Bending = $\theta := \min\left(\theta_1, \theta_2, \theta_3\right) = 0.131$

Effective Moment Arm of Anchor Rod Force = $x := 0.5 \cdot \left(D_{BC} - D_e\right) = 3.625 \cdot in$

Effective Base Plate Width Resisting Bending from Transverse Bend Line = $B_{et} := D_{BC} \cdot \sin(\theta) = 7.832 \cdot in$

Effective Base Plate Width Resisting Bending from Radial Bend Lines = $B_{er} := \left(D_{oe} - D_e\right) \cdot \sin(\theta) = 1.729 \cdot in$

Total Effective Base Plate Width Resisting Bending = $B_{eff} := B_{et} + B_{er} = 9.561 \cdot in$

Required Base Plate Thickness = $t_{TP.Req} := \sqrt{\frac{4 \cdot P_u \cdot x}{\phi_b \cdot F_{yf} \cdot B_{eff}}} = 1.339 \cdot in$

Plate Bending Stress % of Capacity = $\frac{t_{TP.Req}}{t_{TP}} = 44.6 \cdot \%$

Condition2 = $Condition3 := \text{if}\left(\frac{t_{TP.Req}}{t_{TP}} < 1.00, \text{"Ok"}, \text{"Overstressed"}\right)$

Condition3 = "Ok"

Required Base Plate Thickness = $t_{TP.Req} := \frac{\phi_b \cdot t_T \cdot F_{yp}}{\phi_v \cdot 0.6 \cdot F_{yf}} = 1.097 \cdot in$

Plate Bending Stress % of Capacity = $\frac{t_{TP.Req}}{t_{TP}} = 36.6 \cdot \%$

Condition2 = $Condition4 := \text{if}\left(\frac{t_{TP.Req}}{t_{TP}} < 1.00, \text{"Ok"}, \text{"Overstressed"}\right)$

Condition4 = "Ok"

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Subject:	FOUNDATION ANALYSIS
Location:	190-ft EEI Monopine Southington, CT
Rev. 0: 7/12/21	Prepared by: T.J.L Checked by: C.F.C. Job no. 21007.35

Standard Monopole Foundation:

Input Data:

Tower Data

Overturning Moment =	$OM := 1978 \cdot ft \cdot kips$	(User Input)	
Shear Force =	$Shear := 31 \cdot kip$	(User Input)	
Axial Force =	$Axial := 34 \cdot kip$	(User Input)	
Tower Height =	$H_t := 90 \cdot ft$	(User Input)	

Footing Data:

Overall Depth of Footing =	$D_f := 6.0 \cdot ft$	(User Input)	
Length of Pier =	$L_p := 3.0 \cdot ft$	(User Input)	
Extension of Pier Above Grade =	$L_{pag} := 1.0 \cdot ft$	(User Input)	
Diameter of Pier =	$d_p := 7.0 \cdot ft$	(User Input)	
Thickness of Footing =	$T_f := 3.0 \cdot ft$	(User Input)	
Width of Footing =	$W_f := 36.0 \cdot ft$	(User Input)	

Anchor Bolt Data:

Length of Anchor Bolts=	$L_{st} := 72 \cdot in$	(User Input)	
Projection of Anchor Bolts Above Pier =	$A_{BP} := 12.0 \cdot in$	(User Input)	
Anchor Bolt Diameter =	$d_{anchor} := 2.25 \cdot in$	(User Input)	
Base Plate Bolt Circle =	$MP := 60 \cdot in$	(User Input)	

Material Properties:

Concrete Compressive Strength =	$f_c := 4000 \cdot psi$	(User Input)	
Steel Reinforcment Yield Strength =	$f_y := 60000 \cdot psi$	(User Input)	
Anchor Bolt Yield Strength =	$f_{ya} := 75000 \cdot psi$	(User Input)	
Internal Friction Angle of Soil =	$\Phi_s := 30 \cdot deg$	(User Input)	
Ultimate Soil Bearing Capacity =	$q_u := 4000 \cdot psf$	(User Input)	
Allowable Soil Bearing Capacity =	$q_a := \frac{q_u}{2} = 2000 \cdot psf$	(User Input)	
Unit Weight of Soil =	$\gamma_{soil} := 120 \cdot pcf$	(User Input)	
Unit Weight of Concrete =	$\gamma_{conc} := 150 \cdot pcf$	(User Input)	
Foundation Bouyancy =	$Bouyancy := 0$	(User Input)	(Yes=1 / No=0)
Depth to Neglect =	$n := 0 \cdot ft$	(User Input)	
Cohesion of Clay Type Soil =	$c := 0 \cdot ksf$	(User Input)	(Use 0 for Sandy Soil)
Seismic Zone Factor =	$Z := 2$	(User Input)	(UBC-1997 Fig 23-2)
Coefficient of Friction Between Concrete =	$\mu := 0.45$	(User Input)	

Pier Reinforcement:

Bar Size =	$BS_{pier} := 9$	(User Input)	
Bar Diameter =	$d_{bpier} := 1.128 \cdot in$	(User Input)	
Number of Bars =	$NB_{pier} := 44$	(User Input)	
Clear Cover of Reinforcement =	$Cvr_{pier} := 3 \cdot in$	(User Input)	
Reinforcement Location Factor =	$\alpha_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Coating Factor =	$\beta_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Concrete Strength Factor =	$\lambda_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Reinforcement Size Factor =	$\gamma_{pier} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Diameter of Tie =	$d_{Tie} := 0.5 \cdot in$	(User Input)	

Pad Reinforcement:

Bar Size =	$BS_{top} := 9$	(User Input)	(Top of Pad)
Bar Diameter =	$d_{btop} := 1.128 \cdot in$	(User Input)	(Top of Pad)
Number of Bars =	$NB_{top} := 25$	(User Input)	(Top of Pad)
Bar Size =	$BS_{bot} := 9$	(User Input)	(Bottom of Pad)
Bar Diameter =	$d_{bbot} := 1.128 \cdot in$	(User Input)	(Bottom of Pad)
Number of Bars =	$NB_{bot} := 57$	(User Input)	(Bottom of Pad)
Clear Cover of Reinforcement =	$Cvr_{pad} := 3.0 \cdot in$	(User Input)	
Reinforcement Location Factor =	$\alpha_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Coating Factor =	$\beta_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Concrete Strength Factor =	$\lambda_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Reinforcement Size Factor =	$\gamma_{pad} := 1.0$	(User Input)	(ACI-2008 12.2.4)

Calculated Factors:

Pier Reinforcement Bar Area = $A_{bpier} := \frac{\pi \cdot d_{bpier}^2}{4} = 0.999 \cdot in^2$

Pad Top Reinforcement Bar Area = $A_{btop} := \frac{\pi \cdot d_{btop}^2}{4} = 0.999 \cdot in^2$

Pad Bottom Reinforcement Bar Area = $A_{bbot} := \frac{\pi \cdot d_{bbot}^2}{4} = 0.999 \cdot in^2$

Coefficient of Lateral Soil Pressure = $K_p := \frac{1 + \sin(\Phi_s)}{1 - \sin(\Phi_s)} = 3$

Stability of Footing:

Adjusted Concrete Unit Weight = $\gamma_c := if(Bouyancy = 1, \gamma_{conc} - 62.4pcf, \gamma_{conc}) = 150 \cdot pcf$

Adjusted Soil Unit Weight = $\gamma_s := if(Bouyancy = 1, \gamma_{soil} - 62.4pcf, \gamma_{soil}) = 120 \cdot pcf$

Passive Pressure = $P_{pn} := K_p \cdot \gamma_s \cdot n + c \cdot 2 \cdot \sqrt{K_p} = 0 \cdot ksf$

$P_{pt} := K_p \cdot \gamma_s \cdot (D_f - T_f) + c \cdot 2 \cdot \sqrt{K_p} = 1.08 \cdot ksf$

$P_{top} := if[n < (D_f - T_f), P_{pt}, P_{pn}] = 1.08 \cdot ksf$

$P_{bot} := K_p \cdot \gamma_s \cdot D_f + c \cdot 2 \cdot \sqrt{K_p} = 2.16 \cdot ksf$

$P_{ave} := \frac{P_{top} + P_{bot}}{2} = 1.62 \cdot ksf$

$T_p := if[n < (D_f - T_f), T_f, (D_f - n)] = 3$

$A_p := W_f \cdot T_p = 108$

Ultimate Shear = $S_u := P_{ave} \cdot A_p = 174.96 \cdot kip$

Weight of Concrete Pad = $WT_c := \left[\left(W_f^2 \cdot T_f\right) + d_p^2 L_p\right] \cdot \gamma_c = 605.25 \cdot kip$

Weight of Soil Above Footing = $WT_{s1} := \left[\left(W_f^2 - d_p^2\right) \cdot \left(\left|L_p - L_{pag} - n\right|\right)\right] \cdot \gamma_s = 299.28 \cdot kip$

Weight of Soil Wedge at Back Face = $WT_{s2} := \left(\frac{D_f^2 \cdot \tan(\Phi_s)}{2} \cdot W_f\right) \cdot \gamma_s = 44.895 \cdot kip$

Weight of Soil Wedge at back face Corners = $WT_{s3} := 2 \cdot \left[(D_f)^3 \cdot \frac{\tan(\Phi_s)}{3}\right] \cdot \gamma_s = 9.977 \cdot kips$

Total Weight = $WT_{tot} := WT_c + WT_{s1} + Axial = 938.53 \cdot kip$

Resisting Weight = $WT_R := 0.9 \cdot WT_c + 0.75 \cdot WT_{s1} + 0.75 \cdot Axial = 794.685 \cdot kip$

Resisting Moment = $M_r := (WT_R) \cdot \frac{W_f}{2} + 0.75 \cdot S_u \cdot \frac{T_f}{3} + 0.75 \cdot \left[\left(WT_{s2} + WT_{s3}\right) \cdot \left(W_f + \frac{D_f \cdot \tan(\Phi_s)}{3}\right)\right] = 15965 \cdot kip \cdot ft$

Overturning Moment = $M_{ot} := OM + Shear \cdot (L_p + T_f) = 2164 \cdot kip \cdot ft$

Factor of Safety Actual = $FS := \frac{M_r}{M_{ot}} = 7.38$

Factor of Safety Required = $FS_{req} := 1$

$OverTurning\_Moment\_Check := if(FS \geq FS_{req}, "Okay", "No Good")$

$OverTurning\_Moment\_Check = "Okay"$

Shear Capacity in Pier:

Shear Resistance of Pier = $S_p := \frac{P_{ave} \cdot A_p + \mu \cdot WT_{tot}}{FS_{req}} = 597.299 \cdot kips$

$Shear\_Check := if(S_p > Shear, "Okay", "No Good")$

$Shear\_Check = "Okay"$

Bearing Pressure Caused by Footing:

Area of the Mat = $A_{mat} := W_f^2 = 1.296 \times 10^3$

Section Modulus of Mat = $S := \frac{W_f^3}{6} = 7776 \cdot ft^3$

Maximum Pressure in Mat = $P_{max} := \frac{WT_{tot}}{A_{mat}} + \frac{M_{ot}}{S} = 1.002 \cdot ksf$

$Max\_Pressure\_Check := if(P_{max} < .75 \cdot q_u, "Okay", "No Good")$

$Max\_Pressure\_Check = "Okay"$

Minimum Pressure in Mat = $P_{min} := \frac{WT_{tot}}{A_{mat}} - \frac{M_{ot}}{S} = 0.446 \cdot ksf$

$Min\_Pressure\_Check := if\left[(P_{min} \geq 0) \cdot (P_{min} < .75 \cdot q_u), "Okay", "No Good"\right]$

$Min\_Pressure\_Check = "Okay"$

Distance to Resultant of Pressure Distribution = $X_p := \frac{P_{max}}{\frac{P_{max} - P_{min}}{W_f}} \cdot \frac{1}{3} = 21.613$

Distance to Kern = $X_k := \frac{W_f}{6} = 6$ Since Resultant Force is Not in Kern, Area to which Pressure is Applied Must be Reduced.

Eccentricity = $e := \frac{M_{ot}}{WT_{tot}} = 2.306$

Adjusted Soil Pressure = $P_a := \frac{2 \cdot WT_{tot}}{3 \cdot W_f \cdot \left(\frac{W_f}{2} - e\right)} = 1.107 \cdot ksf$

$q_{adj} := if(P_{min} < 0, P_a, P_{max}) = 1.002 \cdot ksf$

$Pressure\_Check := if(q_{adj} < .75 \cdot q_u, "Okay", "No Good")$

$Pressure\_Check = "Okay"$

Concrete Bearing Capacity:

Strength Reduction Factor = $\Phi_c := 0.65$ (ACI-2008 9.3.2.2)

Bearing Strength Between Pier and Pad = $P_b := \Phi_c \cdot 0.85 \cdot f_c \cdot \frac{\pi \cdot d_p^2}{4} = 1.225 \times 10^4 \cdot kips$ (ACI-2008 10.14)

$Bearing\_Check := if(P_b > Axial, "Okay", "No Good")$

Bearing_Check = "Okay"

Shear Strength of Concrete:

Beam Shear: (Critical section located at a distance d from the face of Pier) (ACI 11.3.1.1)

$\phi_c := 0.85$ (ACI 9.3.2.5)

$d := T_f - Cvr_{pad} - d_{bbot} = 2.656$

$d_1 := \frac{W_f}{2} - \frac{d_p}{2}$

$d_2 := d_1 - d$

$L := \left(\frac{W_f}{2} - e\right) \cdot 3$

$Slope := if\left(L > W_f, \frac{P_{max} - P_{min}}{W_f}, \frac{q_{adj}}{L}\right)$

$V_{req} := \left[\left(q_{adj} - Slope \cdot d_1\right) + \left(\frac{Slope \cdot d_1}{2}\right)\right] \cdot W_f \cdot d_1$

$V_{Avail} := \phi_c \cdot 2 \cdot \sqrt{f_c \cdot psi} \cdot W_f \cdot d$ (ACI-2008 11.2.1.1)

$Beam\_Shear\_Check := if(V_{req} < V_{Avail}, "Okay", "No Good")$

Beam_Shear_Check = "Okay"

Punching Shear: (Critical Section Located at a distance of d/2 from the face of pier) (ACI 11.11.1.2)

Critical Perimeter of Punching Shear = $b_o := \left(d_p + d\right) \cdot \pi = 30.3$

Area Included Inside Perimeter = $A_{bo} := \frac{\pi \cdot \left(d_p + d\right)^2}{4} = 73.2$

Area Outside of Perimeter = $A_{out} := A_{mat} - A_{bo} = 1.2 \times 10^3$

Guess Value = $v_u := 1ksf$

(From "Foundation Analysis and design", By Joseph Bowles, Eq. 8-9)

Given $d^2 + d_p \cdot d = \frac{WT_{tot}}{\pi \cdot v_u}$

$v_u := Find(v_u) = 11.6 \cdot ksf$

$V_u := v_u \cdot d \cdot W_f = 1.1 \times 10^3 \cdot kips$

Required Shear Strength = $V_{req} := V_u = 1.1 \times 10^3 \cdot kips$

Available Shear Strength = $V_{Avail} := \phi_c \cdot 4 \cdot \sqrt{f_c \cdot psi} \cdot b_o \cdot d = 2494.9 \cdot kip$ (ACI-2008 11.11.2.1)

$Punching\_Shear\_Check := if(V_{req} < V_{Avail}, "Okay", "No Good")$

Punching_Shear_Check = "Okay"

Steel Reinforcement in Pad:

Required Reinforcement for Bending:

Strength Reduction Factor = $\phi_m := .90$ (ACI-2008 9.3.2.1)

$q_b := q_{adj} - d_1 \cdot Slope = 0.778 \cdot ksf$

Maximum Bending at Face of Pier = $M_n := \frac{1}{\phi_m} \cdot \left[(q_{adj} - q_b) \cdot \frac{d_1^2}{3} + q_b \cdot \frac{d_1^2}{2} \right] \cdot W_f = 3901.1 \cdot kip \cdot ft$

$$\beta := \begin{cases} 0.85 & \text{if } 2500 \cdot psi \le f_c \le 4000 \cdot psi \\ 0.65 & \text{if } f_c > 8000 \cdot psi \\ \left[0.85 - \left[\frac{\left(\frac{f_c}{psi} - 4000 \right)}{1000} \right] \cdot 0.5 \right] & \text{otherwise} \end{cases} = 0.85$$

(ACI-200810.2.7.3)

$R_n := \frac{M_n}{W_f \cdot d^2} = 106.7 \cdot psi$

$\rho := \frac{0.85 \cdot f_c}{f_y} \left(1 - \sqrt{1 - \frac{2 \cdot R_n}{0.85 \cdot f_c}} \right) = 0.0018$

$\rho_{min} := \rho = 0.00181$

Required Reinforcement for Temperature and Shrinkage:

$$\rho_{sh} := \begin{cases} .0018 & \text{if } f_y \geq 60000 \cdot psi \\ .0020 & \text{otherwise} \end{cases}$$ (ACI-2008 7.12.2.1)

Check Bottom Bars:

$$As := \begin{cases} \rho_{min} \cdot W_f \cdot d & \text{if } \rho_{min} > \frac{\rho_{sh}}{2} \\ \rho_{sh} \cdot W_f \cdot \frac{d}{2} & \text{otherwise} \end{cases} = 24.877 \cdot in^2$$

$As_{prov} := A_{bbot} \cdot NB_{bot} = 57 \cdot in^2$

$Pad\_Reinforcement\_Bot := if(As_{prov} > As, "Okay", "No Good")$

Pad_Reinforcement_Bot = "Okay"

Check top Bars:

$As := \rho_{sh} \cdot \left(W_f \cdot \frac{d}{2}\right) = 12.4 \cdot in^2$

$As_{prov} := A_{btop} \cdot NB_{top} = 25 \cdot in^2$

$Pad\_Reinforcement\_Top := if(As_{prov} > As, "Okay", "No Good")$

Pad_Reinforcement_Top = "Okay"

Developement Length Pad Reinforcement:

Bar Spacing =

$$B_{sPad} := \frac{W_f - 2 \cdot Cvr_{pad} - NB_{bot} \cdot d_{bbot}}{NB_{bot} - 1} = 6.46 \cdot in$$

Spacing or Cover Dimension =

$$c := if\left(Cvr_{pad} < \frac{B_{sPad}}{2}, Cvr_{pad}, \frac{B_{sPad}}{2}\right) = 3 \cdot in$$

Transverse Reinforcement Index =

$k_{tr} := 0$ (ACI-2008 12.2.3)

$$L_{dbt} := \frac{3 \cdot f_y \alpha_{pad} \cdot \beta_{pad} \cdot \gamma_{pad} \cdot \lambda_{pad}}{40 \cdot \sqrt{f_c \cdot psi} \cdot \frac{c + k_{tr}}{d_{bbot}}} \cdot d_{bbot} = 30.2 \cdot in$$

Minimum Development Length =

$L_{dbmin} := 12 \cdot in$ (ACI-2008 12.2.1)

$L_{dbtCheck} := if(L_{dbt} \geq L_{dbmin}, "Use L.dbt", "Use L.dbmin")$

Available Length in Pad =

$$L_{Pad} := \frac{W_f}{2} - \frac{d_p}{2} - Cvr_{pad} = 171 \cdot in$$

$Lpad\_Check := if(L_{Pad} > L_{dbt}, "Okay", "No Good")$

Lpad_Check = "Okay"

Steel Reinforcement in Pier:

Area of Pier = $A_p := d_p^2 = 7056 \cdot in^2$

$A_{smin} := 0.01 \cdot 0.5 \cdot A_p = 35.28 \cdot in^2$ (ACI-2008 10.8.4 & 10.9.1)

$A_{sprov} := NB_{pier} \cdot A_{bpier} = 43.97 \cdot in^2$

Steel_Area_Check := if(A_sprov > A_smin, "Okay", "No Good")

Steel_Area_Check = "Okay"

NOTE: Anchor Bolts are not accounted for in reinforcement calculation and will provide additional reinforcement to satisfy minimum requirement of steel.

Bar Spacing In Pier = $B_{sPier} := \frac{d_p \cdot \pi}{NB_{pier}} - d_{bpier} = 4.87 \cdot in$

Diameter of Reinforcement Cage = $Diam_{cage} := d_p - 2 \cdot Cvr_{pier} = 78 \cdot in$

Maximum Moment in Pier = $M_p := \left[OM + Shear \cdot \left(L_p + \frac{A_{BP}}{2} \right) \right] = 25038 \cdot in \cdot kips$

Pier Check evaluated from outside program and results are listed below;

$(D \ N \ n \ P_u \ M_{xu}) := \left(d_p \cdot 12 \ \ NB_{pier} \ \ BS_{pier} \ \ \frac{Axial \cdot 1.333}{kips} \ \ \frac{M_p}{in \cdot kips} \right)$

$(D \ N \ n \ P_u \ M_{xu}) = (84 \ \ 44 \ \ 9 \ \ 45.3 \ \ 25038)$

$(\phi P_n \ \ \phi M_{xn} \ \ f_{sp} \ \ \rho) := (0 \ \ 0 \ \ 0 \ \ 0)$

$(\phi P_n \ \ \phi M_{xn} \ \ f_{sp} \ \ \rho) := \phi P'_n(D, N, n, P_u, M_{xu})^T$

$(\phi P_n \ \ \phi M_{xn} \ \ f_{sp} \ \ \rho) = (152.2 \ \ 84087.8 \ \ -60 \ \ 0)$

Axial_Load_Check := if(φP_n ≥ P_u, "Okay", "No Good")

Axial_Load_Check = "Okay"

Bending_Check := if(φM_xn ≥ M_xu, "Okay", "No Good")

Bending_Check = "Okay"

Development Length Pier Reinforcement:

Available Length in Foundation:

$L_{pier} := L_p - Cvr_{pier} = 33 \cdot in$

$L_{pad} := T_f - Cvr_{pad} = 33 \cdot in$

Tension: (ACI-2008 12.2.3)

Spacing or Cover Dimension =

$c := if\left(Cvr_{pier} < \frac{B_{sPier}}{2}, Cvr_{pier}, \frac{B_{sPier}}{2}\right) = 2.435 \cdot in$

Transverse Reinforcement = $k_{tr} := 0$ (ACI-2008 12.2.3)

$L_{dbt} := \frac{3 \cdot f_y \alpha_{pier} \cdot \beta_{pier} \cdot \gamma_{pier} \cdot \lambda_{pier}}{40 \cdot \sqrt{f_c \cdot psi} \cdot \left(\frac{c + k_{tr}}{d_{bpier}}\right)} \cdot d_{bpier} = 37.18 \cdot in$

Minimum Development Length = $L_{dh} := \frac{1200 \cdot d_{bpier}}{\sqrt{\frac{f_c}{psi}}} \cdot .7 = 14.982 \cdot in$ (ACI 12.2.1)

Pier reinforcement bars are standard 90 degree hooks and therefore developement in the pad is computed as follows:

$L_{db} := \max\left(L_{dbt}, L_{dbmin}\right)$

$L_{tension\_Check} := if\left(L_{pier} + L_{pad} > L_{dbt}, "Okay", "No Good"\right)$

$L_{tension\_Check} = "Okay"$

Compression: (ACI-2008 12.3.2)

$L_{dbc1} := \frac{.02 \cdot d_{bpier} \cdot f_y}{\sqrt{f_c \cdot psi}} = 21.402 \cdot in$

$L_{dbmin} := 0.0003 \cdot \frac{in^2}{lb} \cdot \left(d_{bpier} \cdot f_y\right) = 20.304 \cdot in$

$L_{dbc} := if\left(L_{dbc1} \geq L_{dbmin}, L_{dbc1}, L_{dbmin}\right) = 21.402 \cdot in$

$L_{compression\_Check} := if\left(L_{pier} + L_{pad} > L_{dbc}, "Okay", "No Good"\right)$

$L_{compression\_Check} = "Okay"$

verizon fuze | RFDS

EAST > North East > New England > New England West > SOUTHINGTON EAST CT - A

Brauer, Mark - mark.brauer2@verizonwireless.com - 6/7/2021 14:59:35

Project Details

FUZE Project ID:	16092565
Project Name:	850 ADD
Project Alt Name:	Southington east CT
Project Type:	Modification
Modification Type:	VDU_UPGRADE_OR_ADD
Designed Sector Carrier 4G:	15
Designed Sector Carrier 5G:	3
Additional Sector Carrier 4G:	N/A
Additional Sector Carrier 5G:	N/A
FP Solution Type & Tech Type:	MODIFICATION;4G_CBRS,4G_PCS,5G_850,5G_L-Sub6-Prep
Carrier Aggregation:	false
MPT Id:	806790
eCIP-0:	false
Suffix:	

Location Information

Site ID:	2358807
E-NodeB ID:	0649158,0064158,064158
PSLC:	468340
Switch Name:	Wallingford 1
Tower Owner:	
Tower Type:	Other
Site Type:	MACRO
Site Sub Type:	TRADITIONAL
Street Address:	99 East Street
City:	Southington
State:	CT
Zip Code:	06489
County:	Hartford
Latitude:	41.58364361 / 41° 35' 1.117" N
Longitude:	-72.86468556 / 72° 51' 52.868" W

RFDS Project Scope:

n77 add
CBRS add
PCS add
850 add
Side by side brackets for existing SBNHH antennas
SBNHH are not smart biasT will require AISG cables if none exist
Update - 06/07/2021
Added: None
Removed: None
Retained: (2) LI 6x12 Hybrid cables (2) 6 OVPs

Antenna Summary

Added

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
				LTE		SAMSUNG	XXDWMM-12.5-65-8T-CBRS Port1 3550 8DT	80	80.5	20(A) 120(B) 280(C)	false	false	PHYSICAL	3
					5G	Samsung	MT6407-77A	80	81.5	20(A) 120(B) 280(C)	false	false	PHYSICAL	3

Removed

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
						ANDREW	SBNHH-1D65B	80	83	20(A) 120(B) 280(C)	false	false	PHYSICAL	6

Retained

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
LTE	5G	LTE	LTE			ANDREW	SBNHH-1D65B	80	83	20(A) 120(B) 280(C)	true	true	PHYSICAL	6

Added: 6 | Removed: 6 | Retained: 6

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Mount	Tower							Commscope	BASMNT-SBS-1-2			PHYSICAL	3
RRU	Tower			LTE	LTE			Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)			PHYSICAL	3
RRU	Tower	LTE	5G					Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)			PHYSICAL	3
RRU	Tower					LTE		Samsung	CBRS RRH - RT4401-48A			PHYSICAL	3
RRU	Tower						5G	Samsung	MT6407-77A			PHYSICAL	3

Removed

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
RRU	Tower	LTE						Nokia	UHBA B13 RRH 4x30			PHYSICAL	3
RRU	Tower				LTE			Nokia	UHIC B4 RRH 2x60-4R			PHYSICAL	3

Retained

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
OVP Box	Tower							N/A	6 OVP			PHYSICAL	2
Hybrid Cable	Tower							N/A	6x12 Hybriflex			PHYSICAL	2

Service Info

700 MHz LTE		0000		5GLS		
Sector	**D1**	**D2**	**D3**	**01**	**02**	**03**
Azimuth	20	120	280	20	120	280
Cell / ENode B ID	064158	064158	064158	064158	064158	064158
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	80	80	80	80	80	80
Mechanical Down-Tilt(Deg.)	2	4	4	0	0	0
Electrical Down-Tilt	3	6	6	3	6	6
Tip Height	83	83	83	83	83	83
Regulatory Power	119.25	119.91	119.91	78.79	79.22	79.22
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHBA B13 RRH 4x30	UHBA B13 RRH 4x30	UHBA B13 RRH 4x30	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines	2,4	2,4	2,4	4,4	4,4	4,4
Position						
Transmitter Id	1966067	1966069	1966071	7793740	7793742	7793744
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

850 MHz 5GNR				5GLS		
Sector				**0001**	**0002**	**0003**
Azimuth				20	120	280
Cell / ENode B ID				0649158	0649158	0649158
Antenna Model				SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make				ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)				80	80	80
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				3	6	6
Tip Height				83	83	83
Regulatory Power				353.05	355.74	355.74
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				10397438	10397439	10397440
Source				ATOLL_API	ATOLL_API	ATOLL_API

1900 MHz LTE				5GLS		
Sector				**01**	**02**	**03**
Azimuth				20	120	280
Cell / ENode B ID				064158	064158	064158
Antenna Model				SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make				ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)				80	80	80
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				2	2	2
Tip Height				83	83	83
Regulatory Power				297.07	297.07	297.07
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				7694123	7694124	7694125
Source				ATOLL_API	ATOLL_API	ATOLL_API

2100 MHz LTE

		0000				
Sector	**D1**	**D2**	**D3**	**01**	**02**	**03**
Azimuth	20	120	280	20	120	280
Cell / ENode B ID	064158	064158	064158	064158	064158	064158
Antenna Model	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B	SBNHH-1D65B
Antenna Make	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	80	80	80	80	80	80
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	2	2	2	2
Tip Height	83	83	83	83	83	83
Regulatory Power	220.61	220.61	220.61	145.76	145.76	145.76
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make	Nokia	Nokia	Nokia	Samsung	Samsung	Samsung
RRU Model	UHIC B4 RRH 2x60-4R	UHIC B4 RRH 2x60-4R	UHIC B4 RRH 2x60-4R	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
Number of Tx, Rx Lines	2,4	2,4	2,4	4,4	4,4	4,4
Position						
Transmitter Id	1966068	1966070	1966072	7793741	7793743	7793745
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

CBRS 3.5 GHz

				5GLS		
Sector				**19**	**20**	**21**
Azimuth				20	120	280
Cell / ENode B ID				064158	064158	064158
Antenna Model				XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT	XXDWMM-12.5-65-8T-C BRS_Port1_3550_8DT
Antenna Make				SAMSUNG	SAMSUNG	SAMSUNG
Antenna Centerline(Ft)				80	80	80
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				8	8	8
Tip Height				80.5	80.5	80.5
Regulatory Power				4.97	4.97	4.97
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A	CBRS RRH - RT4401-48A
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				10397462	10397463	10397464
Source				ATOLL_API	ATOLL_API	ATOLL_API

nL-Sub6

				5GLS		
Sector				**0001**	**0002**	**0003**
Azimuth				20	120	280
Cell / ENode B ID				0649158	0649158	0649158
Antenna Model				MT6407-77A	MT6407-77A	MT6407-77A
Antenna Make				Samsung	Samsung	Samsung
Antenna Centerline(Ft)				80	80	80
Mechanical Down-Tilt(Deg.)				0	0	0
Electrical Down-Tilt				6	6	6
Tip Height				81.5	81.5	81.5
Regulatory Power				751.94	751.94	751.94
Total ERP (W)						
TMA Make						
TMA Model						
RRU Make				Samsung	Samsung	Samsung
RRU Model				MT6407-77A	MT6407-77A	MT6407-77A
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				7793746	7793747	7793748
Source				ATOLL_API	ATOLL_API	ATOLL_API

Service Comments

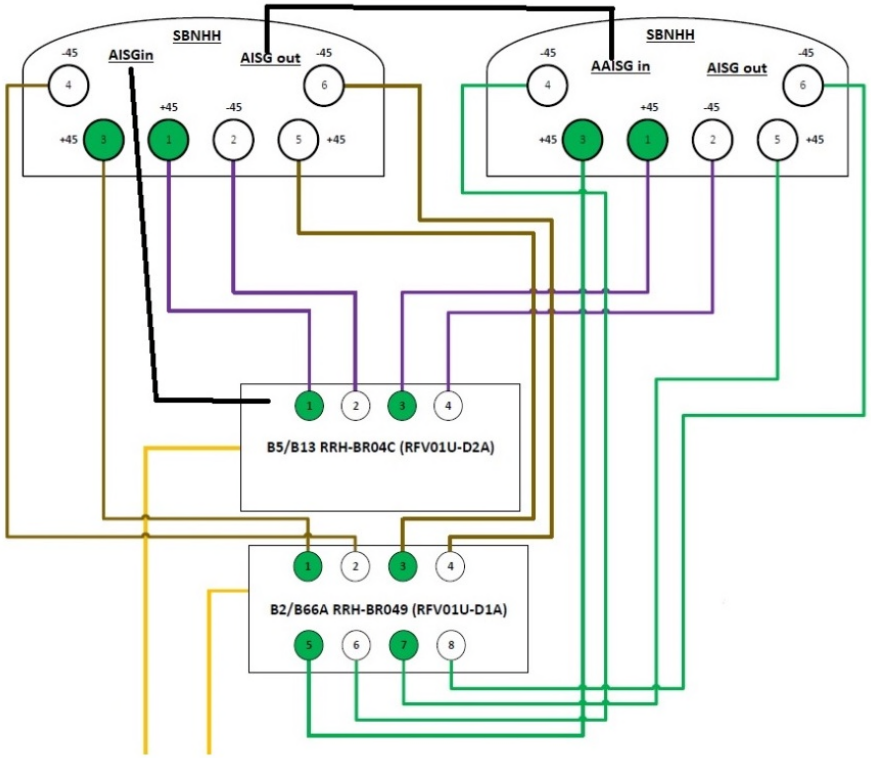
Callsigns Per Antenna

Sector	Antenna Ma	Antenna Mo	Ant CL Height AGL	Tip Height	Azimuth (TI	Electrical Tilt	Mechanical Tilt	Gain	Beamwidth	Regulatory Power	Callsigns						
											700	850	1900	2100	28 GHz	31 GHz	39 GHz
0001	ANDREW	SBNHH-1D65B	80	83	20	3	0	13.335	66	353.05		KNKA404					
03	ANDREW	SBNHH-1D65B	80	83	280	2	0	16.221001	53	297.07			KNLH251 WPOJ730				
03	ANDREW	SBNHH-1D65B	80	83	280	2	0	16.139	61.5	145.76				WQGA906 WQGB276			
01	ANDREW	SBNHH-1D65B	80	83	20	2	0	16.221001	53	297.07			KNLH251 WPOJ730				
0002	ANDREW	SBNHH-1D65B	80	83	120	6	0	13.368	64.5	355.74		KNKA404					
01	ANDREW	SBNHH-1D65B	80	83	20	3	0	12.607	69	78.79	WQJQ689						
21	SAMSUNG	XXDWMM-12.5-65-8T-	80	80.5	280	8	0	10.448	64.7	4.97							
02	ANDREW	SBNHH-1D65B	80	83	120	6	0	12.631	69.25	79.22	WQJQ689						
0003	ANDREW	SBNHH-1D65B	80	83	280	6	0	13.368	64.5	355.74		KNKA404					
02	ANDREW	SBNHH-1D65B	80	83	120	2	0	16.221001	53	297.07			KNLH251 WPOJ730				
20	SAMSUNG	XXDWMM-12.5-65-8T-	80	80.5	120	8	0	10.448	64.7	4.97							
19	SAMSUNG	XXDWMM-12.5-65-8T-	80	80.5	20	8	0	10.448	64.7	4.97							
02	ANDREW	SBNHH-1D65B	80	83	120	2	0	16.139	61.5	145.76				WQGA906 WQGB276			
01	ANDREW	SBNHH-1D65B	80	83	20	2	0	16.139	61.5	145.76				WQGA906 WQGB276			
03	ANDREW	SBNHH-1D65B	80	83	280	6	0	12.631	69.25	79.22	WQJQ689						

Callsigns

Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHZ	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq Mi	Status	Action	Approved for Insvc
WQJQ689	Northeast	WU	REA001	C	CT	Hartford	Cellco Partnership	Yes	22.000	746.000-757.000	776.000-787.000	.000-.000	.000-.000	79.22	1000	1216.19	Active	added	Yes
KNKA404	Hartford-New Britain-Bristol, CT	CL	CMA032	A	CT	Hartford	Cellco Partnership	Yes	25.000	824.000-835.000	869.000-880.000	845.000-846.500	890.000-891.500	355.74	400	1216.19	Active	added	Yes
WPOJ730	Hartford, CT	CW	BTA184	C	CT	Hartford	Cellco Partnership	Yes	15.000	1895.000-1902.500	1975.000 1982.500	.000-.000	.000-.000	297.07	1640	1216.19	Active	added	Yes
KNLH251	Hartford, CT	CW	BTA184	F	CT	Hartford	Cellco Partnership	Yes	10.000	1890.000-1895.000	1970.000 1975.000	.000-.000	.000-.000	297.07	1640	1216.19	Active	added	Yes
CBRS_CALL	UNLICENSE	3.5 GHz	UNLICENSE	UNLICENSE	CT	Hartford	UNLICENSE	UNLICENSE	UNLICENSE	UNLICENSED-UNLICE	UNLICENSED-UNLICE	UNLICENSED-UNLICE	UNLICENSED-UNLICE	4.97		1216.19	Active	added	No
WRLD513	D09003 - Hartford, CT	PL	D09003	0	CT	Hartford	Verizon Wireless Network Procure LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000	4.97		.00	Active	added	Yes
WRLD514	D09003 - Hartford, CT	PL	D09003	0	CT	Hartford	Verizon Wireless Network Procure LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000	4.97		.00	Active	added	Yes
WRLD515	D09003 - Hartford, CT	PL	D09003	0	CT	Hartford	Verizon Wireless Network Procure LP	Yes	100.000	3550.000-3650.000	.000-.000	.000-.000	.000-.000	4.97		.00	Active	added	Yes
WQGB276	Hartford-New Britain-Bristol, CT	AW	CMA032	A	CT	Hartford	Cellco Partnership	Yes	20.000	1710.000 1720.000	2110.000 2120.000	.000-.000	.000-.000	145.76	1640	1216.19	Active	added	Yes
WQGA906	New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA-	AW	BEA010	B	CT	Hartford	Cellco Partnership	Yes	20.000	1720.000 1730.000	2120.000 2130.000	.000-.000	.000-.000	145.76	1640	1216.19	Active	added	Yes
WPOH943	Hartford, CT	LD	BTA184	A	CT	Hartford	Cellco Partnership	Yes	300.000	29100.000-29250.000	31075.000-31225.000	.000-.000	.000-.000			1216.19	Active		No
WPLM398	Hartford, CT	LD	BTA184	B	CT	Hartford	Cellco Partnership	Yes	150.000	31000.000-31075.000	31225.000-31300.000	.000-.000	.000-.000			1216.19	Active		No
WRBA708	Hartford, CT	UU	BTA184	L1	CT	Hartford	Cellco Partnership	Yes	325.000	27500.000-27600.000	27700.000-27925.000	.000-.000	.000-.000			1216.19	Active		Yes
WRBA709	Hartford, CT	UU	BTA184	L2	CT	Hartford	Cellco Partnership	Yes	325.000	27925.000-28050.000	28150.000-28350.000	.000-.000	.000-.000			1216.19	Active		Yes

WRHD609	New York, NY	UU	PEA001	M1	CT	Hartford	Straight Path um, LLC	Yes	100.000	37600.000-37700.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD610	New York, NY	UU	PEA001	M10	CT	Hartford	Straight Path um, LLC	Yes	100.000	38500.000-38600.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD611	New York, NY	UU	PEA001	M2	CT	Hartford	Straight Path um, LLC	Yes	100.000	37700.000-37800.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD612	New York, NY	UU	PEA001	M3	CT	Hartford	Straight Path um, LLC	Yes	100.000	37800.000-37900.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD613	New York, NY	UU	PEA001	M4	CT	Hartford	Straight Path um, LLC	Yes	100.000	37900.000-38000.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD614	New York, NY	UU	PEA001	M5	CT	Hartford	Straight Path um, LLC	Yes	100.000	38000.000-38100.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD615	New York, NY	UU	PEA001	M6	CT	Hartford	Straight Path um, LLC	Yes	100.000	38100.000-38200.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD616	New York, NY	UU	PEA001	M7	CT	Hartford	Straight Path um, LLC	Yes	100.000	38200.000-38300.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD617	New York, NY	UU	PEA001	M8	CT	Hartford	Straight Path um, LLC	Yes	100.000	38300.000-38400.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD618	New York, NY	UU	PEA001	M9	CT	Hartford	Straight Path um, LLC	Yes	100.000	38400.000-38500.00	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD619	New York, NY	UU	PEA001	N1	CT	Hartford	Straight Path um, LLC	Yes	100.000	38600.000-38700.00	.000-.000	.000-.000	.000-.000			1216.19	Active	N/A	No
PEND1050	Northeast	CC	REA001	A	CT	Hartford	Cellco Partnership	Yes	100.000	3700.000-3800.000	.000-.000	.000-.000	.000-.000			1216.19	Active		No



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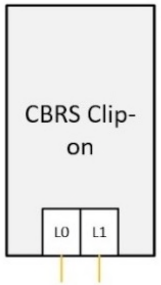
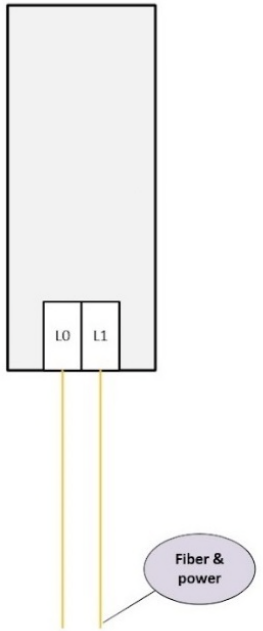


Sub 6



Maser Consulting Connecticut
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856 797 0412
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Antenna Mount Analysis Report and PMI Requirements

Mount Analysis

SMART Tool Project #: 10059064
Maser Consulting Connecticut Project #: 21777816A

June 23, 2021

Site Information	*Site ID:*	*468340-VZW / SOUTHINGTON EAST CT - A*
	Site Name:	*SOUTHINGTON EAST CT - A*
	Carrier Name:	*Verizon Wireless*
	Address:	*99 East Street* *Southington, Connecticut 06489* *Hartford County*
	Latitude:	*41.58364361°*
	Longitude:	*-72.86468556°*
Structure Information	*Tower Type:*	*89.75-Ft Monopole*
	Mount Type:	*12.33-Ft Platform*

FUZE ID # 16092565

Analysis Results

Platform: **77.8% 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: Selene Chen

06/23/2021

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 2358807, dated June 4, 2021*
Mount Mapping Report	*Hudson Design Group, LLC., Site ID: 468340, dated May 26, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust),	118 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.993
Seismic Parameters:	S_S:	0.198
	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 mount:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
			Andrew		Retained
			Samsung		Added
			Samsung		
			Samsung		
			Samsung		
			Raycap		

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

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

Standard Conditions:

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

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		Pass
Face Horizontal		Pass
Standoff Horizontal		Pass
Equipment Pipe		Pass
Connection Check		Pass

Structure Rating – *(Controlling Utilization of all Components)*	**77.8%**

Recommendation:

The existing mount is **SUFFICIENT** for the final loading configuration and do not require modifications.

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:

Mount Photos
Mount Mapping Report (for reference only)
Analysis Calculations
Contractor Required Post Installation Inspection (PMI) Report Deliverables
Antenna Placement Diagrams
TIA Adoption and Wind Speed Usage Letter

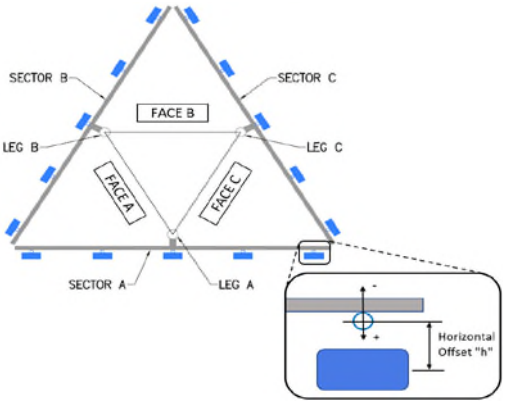
V4.0 Updated on 3-31-2021

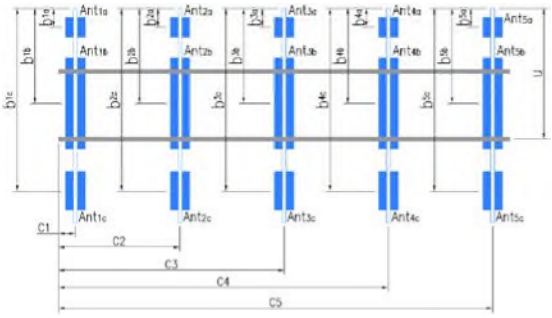
Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	VERION WIRELESS	**Mapping Date:**	5/26/2021
Site Name:	SOUTHINGTON EAST CT	**Tower Type:**	Monopole
Site Number or ID:	468340	**Tower Height (Ft.):**	89.75
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	**Mount Elevation (Ft.):**	81.16

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





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" STD. PIPE X 102" LONG	39.00	8.00	C1	2" STD. PIPE X 102" LONG	39.00	8.00
A2	2" STD. PIPE X 102" LONG	39.00	70.00	C2	2" STD. PIPE X 102" LONG	39.00	7.00
A3	2" STD. PIPE X 102" LONG	39.00	112.00	C3	2" STD. PIPE X 102" LONG	39.00	112.00
A4	2" STD. PIPE X 102" LONG	39.00	140.00	C4	2" STD. PIPE X 102" LONG	39.00	140.00
A5				C5			
A6				C6			
B1	2" STD. PIPE X 102" LONG	39.00	8.00	D1			
B2	2" STD. PIPE X 102" LONG	39.00	70.00	D2			
B3	2" STD. PIPE X 102" LONG	39.00	112.00	D3			
B4	2" STD. PIPE X 102" LONG	39.00	140.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	
Please enter additional infomation or comments below.	
TOWER IS A MONOPINE MODEL W/ .375" WALL THICKNESS	

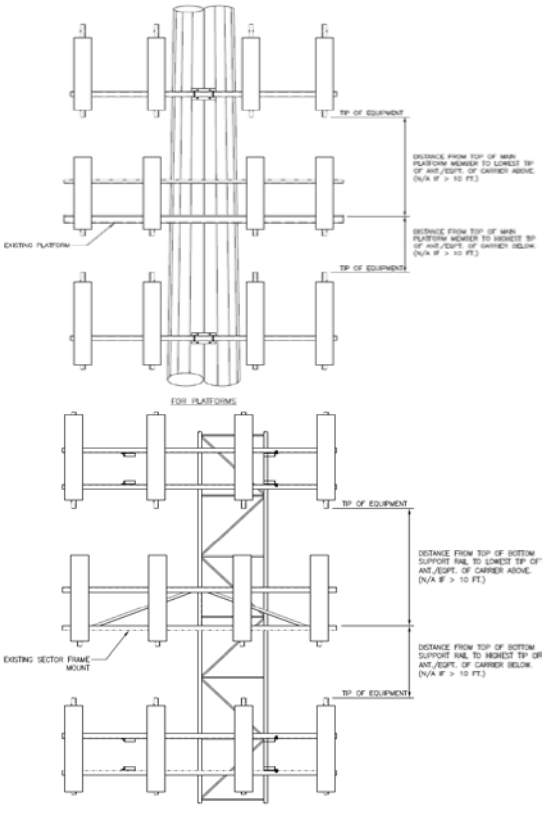
Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	31
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			0.438

	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}	B4 RRH	11.00	6.00	36.00		82.3267	25.00	-7.00		139,143
Ant_{1b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	30.00	71,79
Ant_{1c}										
Ant_{2a}	B13 RRH4X30	12.00	8.00	21.00		83.2433	14.00	-6.00		173
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	30.00	79
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	30.00	79,138
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	30.00	79,138
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

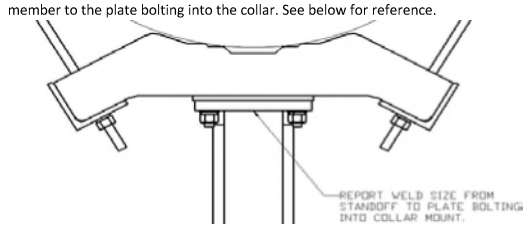
Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	30.00	Deg	Leg A:		Deg
Sector B:	150.00	Deg	Leg B:		Deg
Sector C:	270.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	225.00	Deg	N/A
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.

Please insert a photo of the mount centerline measurement here.



For T-Arms/Platforms on monopoles, record the weld size from the main standoff member to the plate bolting into the collar. See below for reference.



Sector B										
Ant_{1a}	B4 RRH	11.00	6.00	36.00		82.3267	25.00	-7.00		138,143
Ant_{1b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	130.00	79,138
Ant_{1c}										
Ant_{2a}	B13 RRH4X30	12.00	8.00	21.00		83.2433	14.00	-6.00		173,198
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	130.00	79,198
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	130.00	79,159
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	130.00	79,159
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFD-3315-PF-48	15.00	10.00	28.00			3.50	9.00		176,194
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	B4 RRH	11.00	6.00	36.00		82.3267	25.00	-7.00		141,143
Ant_{1b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	280.00	79,141
Ant_{1c}										
Ant_{2a}	B13 RRH4X30	12.00	8.00	21.00		83.2433	14.00	-6.00		140,173
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	280.00	79,140
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	280.00	79,139
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		80.2433	50.00	10.00	280.00	79,139
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFD-3315-PF-48	15.00	10.00	28.00			3.50	9.00		139,176
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 #

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

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

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

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

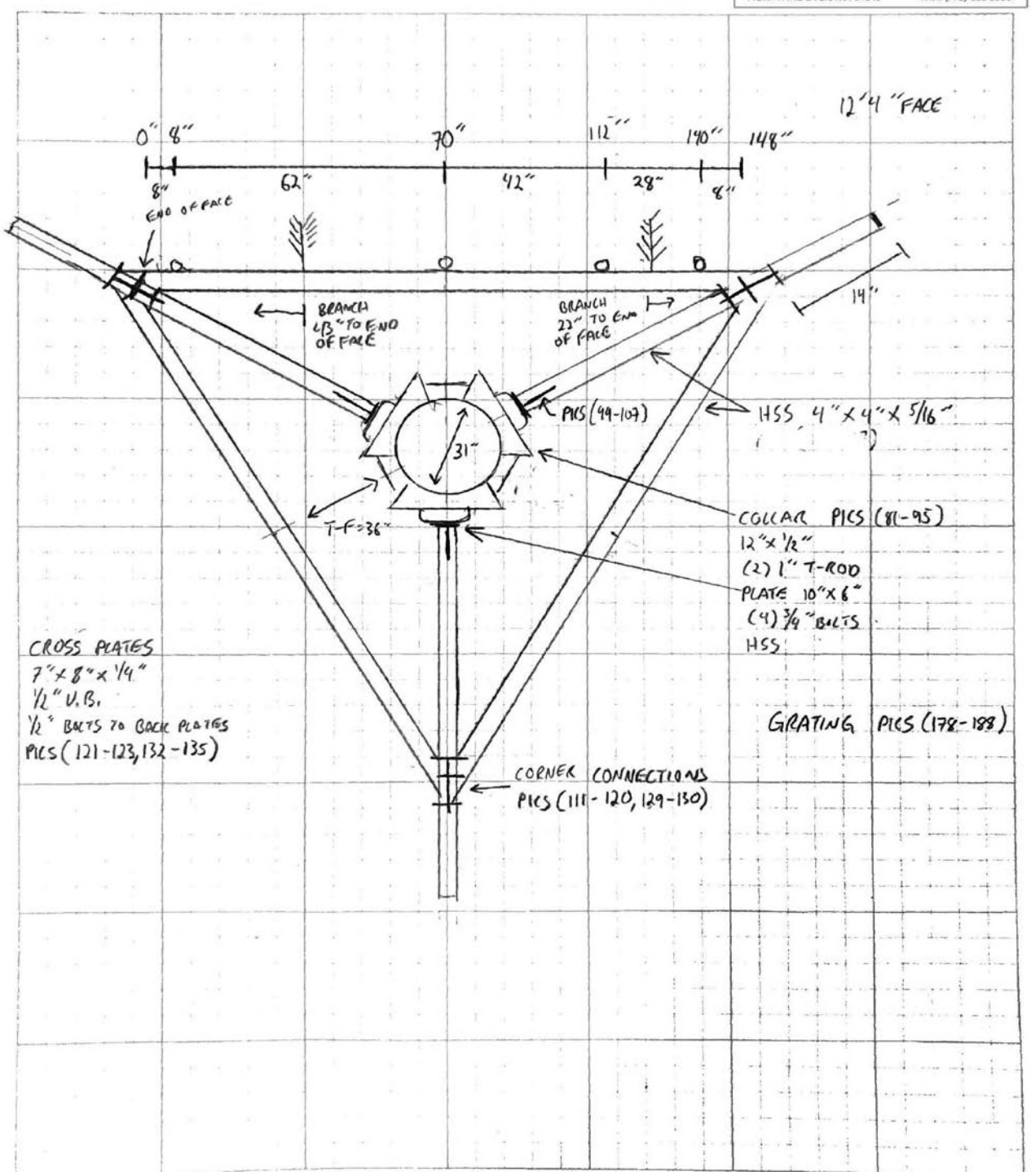
FCC #

Tower Owner:	VERION WIRELESS	**Mapping Date:**	5/26/2021
Site Name:	SOUTHINGTON EAST CT	**Tower Type:**	Monopole
Site Number or ID:	468340	**Tower Height (Ft.):**	89.75
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	**Mount Elevation (Ft.):**	81.16

Please Insert Sketches of the Antenna Mount

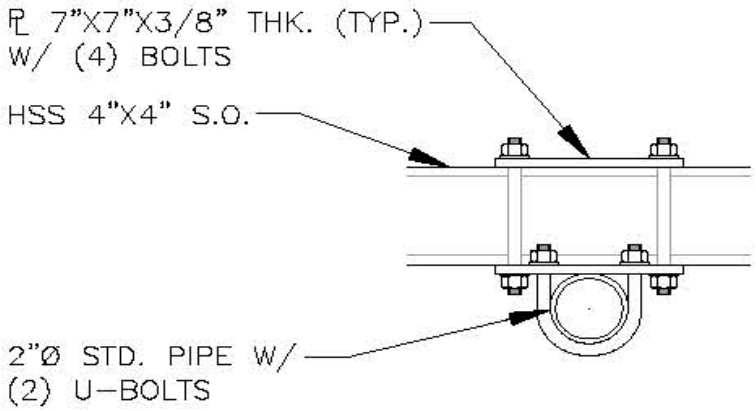
DATE: 05262021
Project Name:
Project No.: SOUTHINGTON EAST
Design By: _____ Chk'd By: _____ Page ____ of ____

HDG HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

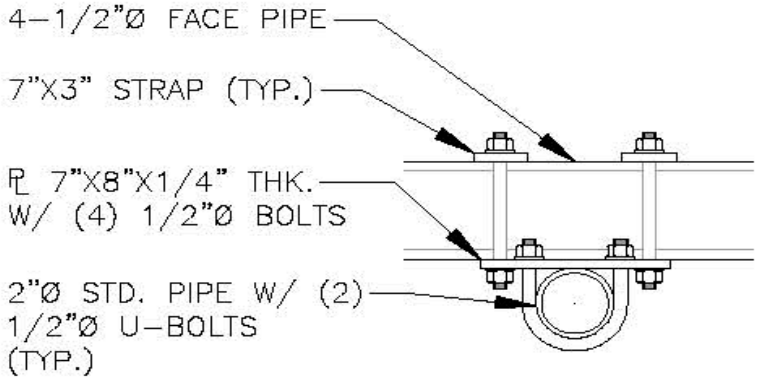


157132

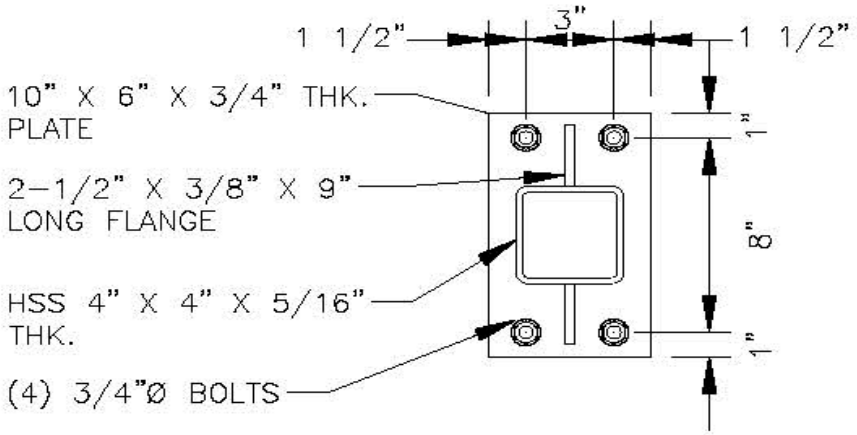
Please Insert Sketches of the Antenna Mount, cont'd



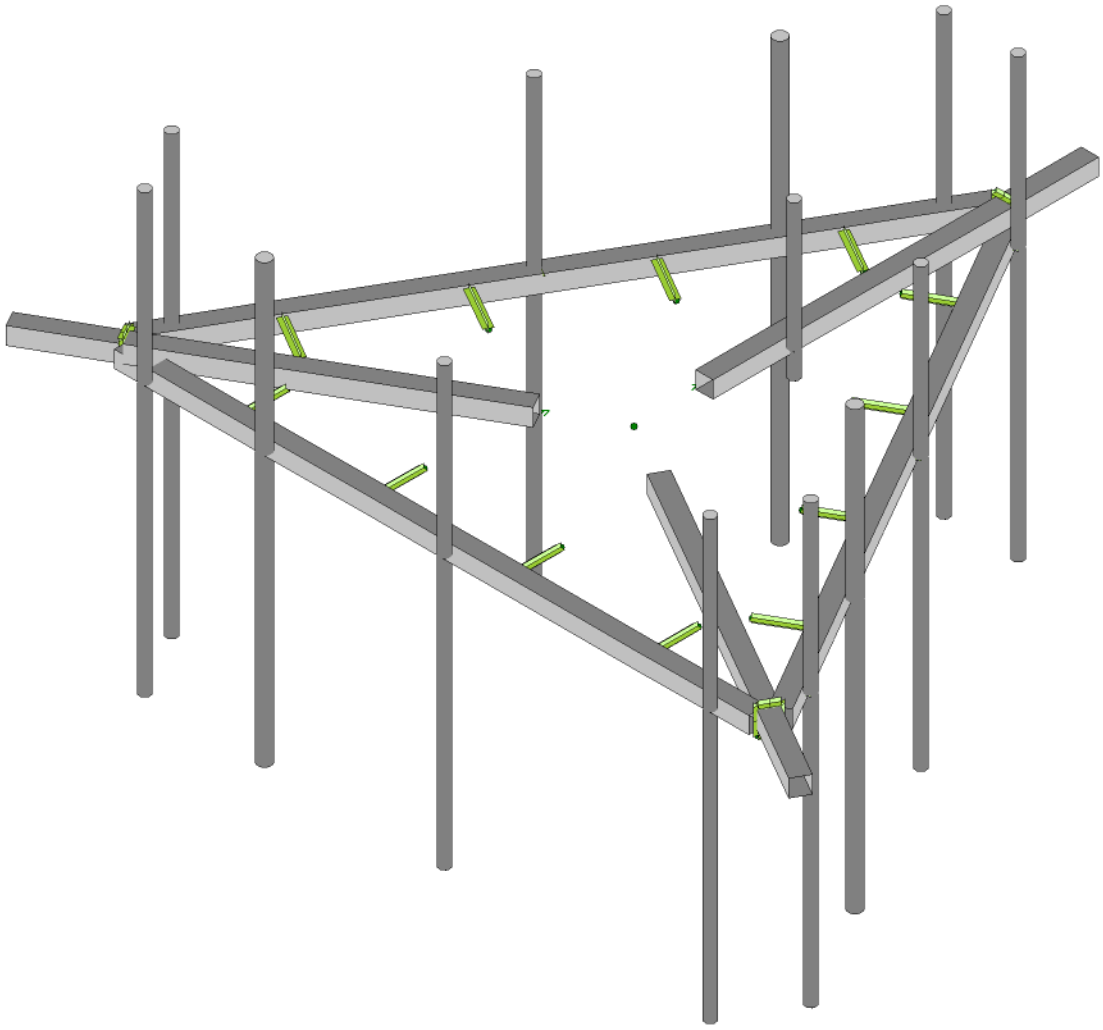
S.O. MOUNT DETAIL



CROSSOVER PLATE DETAIL

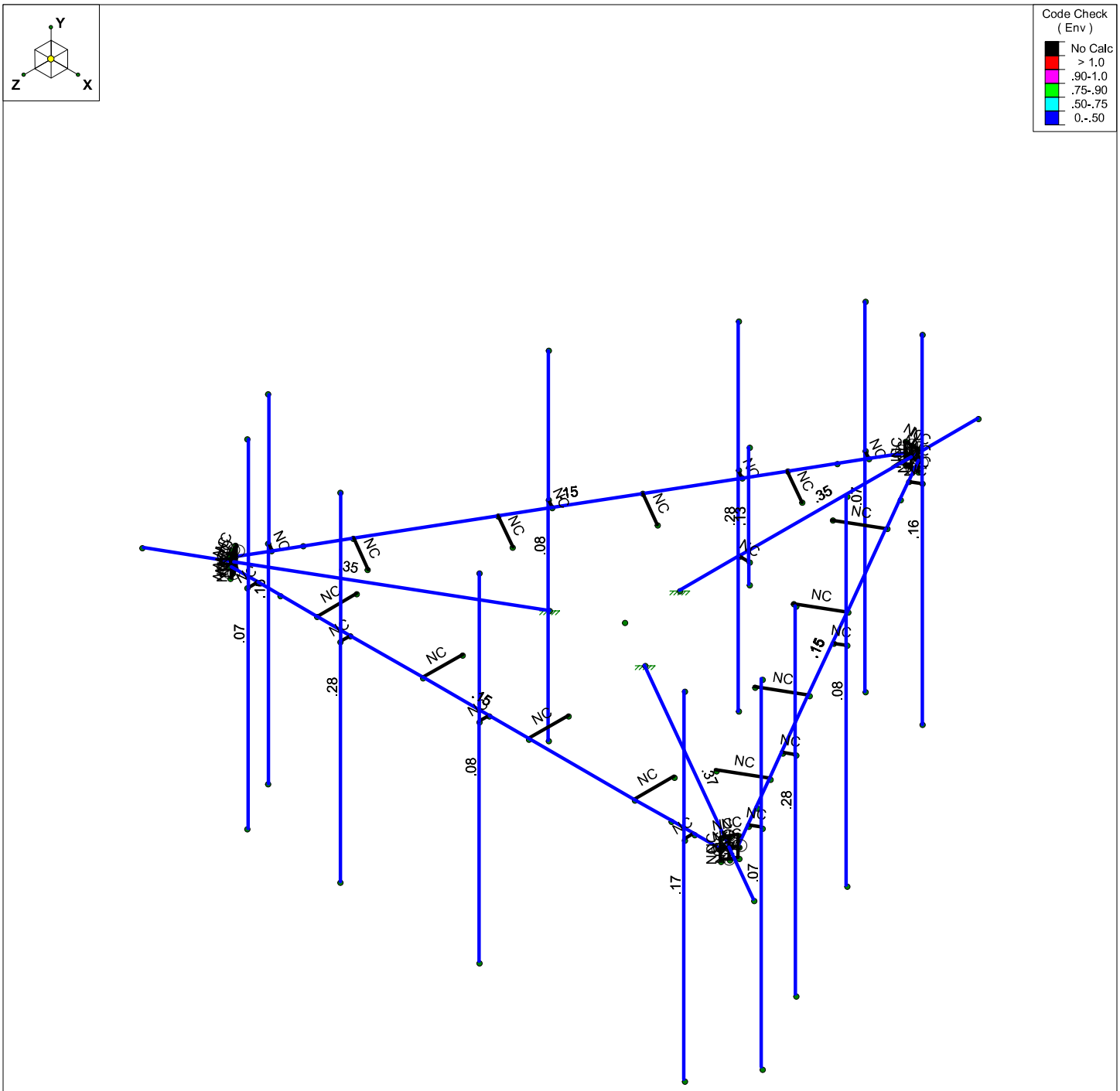


STANDOFF TO RING
MOUNT CONNECTION



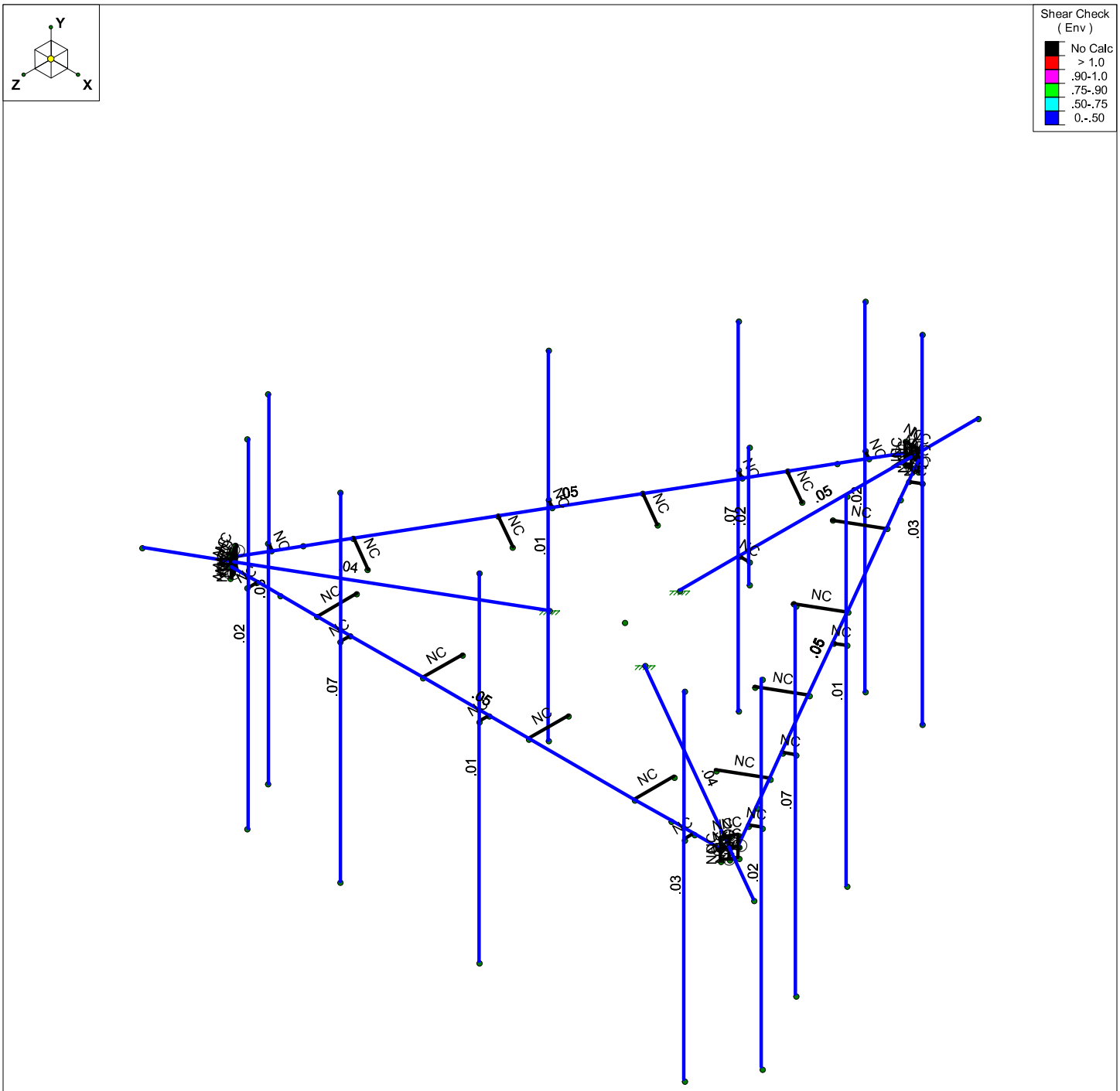
Envelope Only Solution

		SK - 1
		June 23, 2021 at 1:04 PM
		468340-VZW_MT_LO_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 2
		June 23, 2021 at 1:04 PM
		468340-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 3
		June 23, 2021 at 1:05 PM
		468340-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					84			
2	Antenna Di	None					84			
3	Antenna Wo (0 Deg)	None					84			
4	Antenna Wo (30 Deg)	None					84			
5	Antenna Wo (60 Deg)	None					84			
6	Antenna Wo (90 Deg)	None					84			
7	Antenna Wo (120 Deg)	None					84			
8	Antenna Wo (150 Deg)	None					84			
9	Antenna Wo (180 Deg)	None					84			
10	Antenna Wo (210 Deg)	None					84			
11	Antenna Wo (240 Deg)	None					84			
12	Antenna Wo (270 Deg)	None					84			
13	Antenna Wo (300 Deg)	None					84			
14	Antenna Wo (330 Deg)	None					84			
15	Antenna Wi (0 Deg)	None					84			
16	Antenna Wi (30 Deg)	None					84			
17	Antenna Wi (60 Deg)	None					84			
18	Antenna Wi (90 Deg)	None					84			
19	Antenna Wi (120 Deg)	None					84			
20	Antenna Wi (150 Deg)	None					84			
21	Antenna Wi (180 Deg)	None					84			
22	Antenna Wi (210 Deg)	None					84			
23	Antenna Wi (240 Deg)	None					84			
24	Antenna Wi (270 Deg)	None					84			
25	Antenna Wi (300 Deg)	None					84			
26	Antenna Wi (330 Deg)	None					84			
27	Antenna Wm (0 Deg)	None					84			
28	Antenna Wm (30 Deg)	None					84			
29	Antenna Wm (60 Deg)	None					84			
30	Antenna Wm (90 Deg)	None					84			
31	Antenna Wm (120 De...	None					84			
32	Antenna Wm (150 De...	None					84			
33	Antenna Wm (180 De...	None					84			
34	Antenna Wm (210 De...	None					84			
35	Antenna Wm (240 De...	None					84			
36	Antenna Wm (270 De...	None					84			
37	Antenna Wm (300 De...	None					84			
38	Antenna Wm (330 De...	None					84			
39	Structure D	None		-1					3	
40	Structure Di	None						19	3	
41	Structure Wo (0 Deg)	None						38		
42	Structure Wo (30 Deg)	None						38		
43	Structure Wo (60 Deg)	None						38		
44	Structure Wo (90 Deg)	None						38		
45	Structure Wo (120 D...	None						38		
46	Structure Wo (150 D...	None						38		
47	Structure Wo (180 D...	None						38		
48	Structure Wo (210 D...	None						38		
49	Structure Wo (240 D...	None						38		
50	Structure Wo (270 D...	None						38		
51	Structure Wo (300 D...	None						38		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
52	Structure Wo (330 D...	None						38		
53	Structure Wi (0 Deg)	None						38		
54	Structure Wi (30 Deg)	None						38		
55	Structure Wi (60 Deg)	None						38		
56	Structure Wi (90 Deg)	None						38		
57	Structure Wi (120 De...	None						38		
58	Structure Wi (150 De...	None						38		
59	Structure Wi (180 De...	None						38		
60	Structure Wi (210 De...	None						38		
61	Structure Wi (240 De...	None						38		
62	Structure Wi (270 De...	None						38		
63	Structure Wi (300 De...	None						38		
64	Structure Wi (330 De...	None						38		
65	Structure Wm (0 Deg)	None						38		
66	Structure Wm (30 D...	None						38		
67	Structure Wm (60 D...	None						38		
68	Structure Wm (90 D...	None						38		
69	Structure Wm (120 ...	None						38		
70	Structure Wm (150 ...	None						38		
71	Structure Wm (180 ...	None						38		
72	Structure Wm (210 ...	None						38		
73	Structure Wm (240 ...	None						38		
74	Structure Wm (270 ...	None						38		
75	Structure Wm (300 ...	None						38		
76	Structure Wm (330 ...	None						38		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	BLC 39 Transient Are...	None						36		
82	BLC 40 Transient Are...	None						36		

Load Combinations

	Description	Solve	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.0Wo (0...	Yes	Y		1	1.2	39	1.2	3	1	41	1										
2	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	4	1	42	1										
3	1.2D+1.0Wo (6...	Yes	Y		1	1.2	39	1.2	5	1	43	1										
4	1.2D+1.0Wo (9...	Yes	Y		1	1.2	39	1.2	6	1	44	1										
5	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	7	1	45	1										
6	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	8	1	46	1										
7	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	9	1	47	1										
8	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	10	1	48	1										
9	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	11	1	49	1										
10	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	12	1	50	1										
11	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	13	1	51	1										
12	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	14	1	52	1										
13	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1						
14	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1						
15	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1						
16	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1						

Load Combinations (Continued)

	Description	Solve	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
17	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 ...	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 + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + ...		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	N3	0	0	-1.385417	0	
2	N27	0	0	-8.885417	0	
3	CP	0	0	0	0	
4	N5	0	0	-7.21875	0	
5	N6	0.166667	0	-7.21875	0	
6	N7	-0.166667	0	-7.21875	0	
7	N8	0	.25	-7.21875	0	
8	N9	0.166667	.25	-7.21875	0	
9	N10	-0.166667	.25	-7.21875	0	
10	N11	0	-.25	-7.21875	0	
11	N12	0.166667	-.25	-7.21875	0	
12	N13	-0.166667	-.25	-7.21875	0	
13	N15	-6.251621	0	3.609375	0	
14	N16	-6.334954	0	3.465037	0	
15	N17	-6.168288	0	3.753713	0	
16	N18	-6.251621	.25	3.609375	0	
17	N19	-6.334954	.25	3.465037	0	
18	N20	-6.168288	.25	3.753713	0	
19	N21	-6.251621	-.25	3.609375	0	
20	N22	-6.334954	-.25	3.465037	0	
21	N23	-6.168288	-.25	3.753713	0	
22	N26	6.251621	0	3.609375	0	
23	N27A	6.168288	0	3.753713	0	
24	N28	6.334954	0	3.465037	0	
25	N29	6.251621	.25	3.609375	0	
26	N30	6.168288	.25	3.753713	0	
27	N31	6.334954	.25	3.465037	0	
28	N32	6.251621	-.25	3.609375	0	
29	N33	6.168288	-.25	3.753713	0	
30	N34	6.334954	-.25	3.465037	0	
31	N35	5.501621	0	3.753713	0	
32	N36	5.501621	0	4.003713	0	
33	N37	5.501621	3.25	4.003713	0	
34	N38	5.501621	-5.25	4.003713	0	
35	N39	0.334954	0	3.753713	0	
36	N40	0.334954	0	4.003713	0	
37	N41	0.334954	3.25	4.003713	0	
38	N42	0.334954	-5.25	4.003713	0	
39	N43	-3.165046	0	3.753713	0	
40	N44	-3.165046	0	4.003713	0	
41	N45	-3.165046	3.25	4.003713	0	
42	N46	-3.165046	-5.25	4.003713	0	
43	N47	-5.498379	0	3.753713	0	
44	N48	-5.498379	0	4.003713	0	
45	N49	-5.498379	3.25	4.003713	0	
46	N50	-5.498379	-5.25	4.003713	0	
47	N51	.5	0	-6.6414	0	
48	N52	0.716506	0	-6.7664	0	
49	N53	0.716506	3.25	-6.7664	0	
50	N54	0.716506	-5.25	-6.7664	0	
51	N55	3.083333	0	-2.166935	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
52	N56	3.29984	0	-2.291935	0	
53	N57	3.29984	3.25	-2.291935	0	
54	N58	3.29984	-5.25	-2.291935	0	
55	N59	4.833333	0	0.864154	0	
56	N60	5.04984	0	0.739154	0	
57	N61	5.04984	3.25	0.739154	0	
58	N62	5.04984	-5.25	0.739154	0	
59	N63	6	0	2.88488	0	
60	N64	6.216506	0	2.75988	0	
61	N65	6.216506	3.25	2.75988	0	
62	N66	6.216506	-5.25	2.75988	0	
63	N67	-6.001621	0	2.887687	0	
64	N68	-6.218127	0	2.762687	0	
65	N69	-6.218127	3.25	2.762687	0	
66	N70	-6.218127	-5.25	2.762687	0	
67	N71	-3.418288	0	-1.586777	0	
68	N72	-3.634794	0	-1.711777	0	
69	N73	-3.634794	3.25	-1.711777	0	
70	N74	-3.634794	-5.25	-1.711777	0	
71	N75	-1.668288	0	-4.617866	0	
72	N76	-1.884794	0	-4.742866	0	
73	N77	-1.884794	3.25	-4.742866	0	
74	N78	-1.884794	-5.25	-4.742866	0	
75	N79	-0.501621	0	-6.638592	0	
76	N80	-0.718127	0	-6.763592	0	
77	N81	-0.718127	3.25	-6.763592	0	
78	N82	-0.718127	-5.25	-6.763592	0	
79	N83	1.333333	0	3.753713	0	
80	N84	-1.333333	0	3.753713	0	
81	N85	4	0	3.753713	0	
82	N87	1.333333	0	2.753713	0	
83	N88	-1.333333	0	2.753713	0	
84	N89	4	0	2.753713	0	
85	N89A	-4	0	3.753713	0	
86	N90	-4	0	2.753713	0	
87	N91	-4.918288	0	3.753713	0	
88	N92	4.918288	0	3.753713	0	
89	N93	2.584144	0	-3.031557	0	
90	N94	3.917477	0	-0.722156	0	
91	N95	1.25081	0	-5.340958	0	
92	N96	1.718118	0	-2.531557	0	
93	N97	3.051452	0	-0.222156	0	
94	N98	0.384785	0	-4.840958	0	
95	N99	5.25081	0	1.587245	0	
96	N100	4.384785	0	2.087245	0	
97	N101	5.709954	0	2.382506	0	
98	N102	0.791667	0	-6.136218	0	
99	N103	-3.917477	0	-0.722156	0	
100	N104	-2.584144	0	-3.031557	0	
101	N105	-5.25081	0	1.587245	0	
102	N106	-3.051452	0	-0.222156	0	
103	N107	-1.718118	0	-2.531557	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
104	N108	-4.384785	0	2.087245	0	
105	N109	-1.25081	0	-5.340958	0	
106	N110	-0.384785	0	-4.840958	0	
107	N111	-0.791667	0	-6.136218	0	
108	N112	-5.709954	0	2.382506	0	
109	N109A	-1.199806	0	0.692708	0	
110	N110A	-7.694997	0	4.442708	0	
111	N111A	1.199806	0	0.692708	0	
112	N112A	7.694997	0	4.442708	0	
113	N113	0	0	-2.885417	0	
114	N114	.25	0	-2.885417	0	
115	N115	.25	2.5	-2.885417	0	
116	N116	.25	-.5	-2.885417	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rul...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	HSS4X4X5	Beam	SquareTube	A500 Gr.B ...	Typical	4.1	9.14	9.14	15.3
2	Standoff Horizontal	HSS4X4X5	Beam	SquareTube	A500 Gr.B ...	Typical	4.1	9.14	9.14	15.3
3	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Pipe 2.5	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
8	Q235	29000	11154	.3	.65	.49	35	1.5	58	1.2

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M4	N3	N27			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
2	M2	N7	N5			RIGID	None	None	RIGID	Typical
3	M3	N6	N5			RIGID	None	None	RIGID	Typical
4	M4A	N10	N8			RIGID	None	None	RIGID	Typical
5	M5	N9	N8			RIGID	None	None	RIGID	Typical
6	M6	N13	N11			RIGID	None	None	RIGID	Typical
7	M7	N12	N11			RIGID	None	None	RIGID	Typical
8	M8	N8	N5			RIGID	None	None	RIGID	Typical
9	M9	N11	N5			RIGID	None	None	RIGID	Typical
10	M10	N7	N10			RIGID	None	None	RIGID	Typical
11	M11	N6	N9			RIGID	None	None	RIGID	Typical
12	M12	N7	N13			RIGID	None	None	RIGID	Typical
13	M13	N6	N12			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
14	M15	N17	N15			RIGID	None	None	RIGID	Typical
15	M16	N16	N15			RIGID	None	None	RIGID	Typical
16	M17	N20	N18			RIGID	None	None	RIGID	Typical
17	M18	N19	N18			RIGID	None	None	RIGID	Typical
18	M19	N23	N21			RIGID	None	None	RIGID	Typical
19	M20	N22	N21			RIGID	None	None	RIGID	Typical
20	M21	N18	N15			RIGID	None	None	RIGID	Typical
21	M22	N21	N15			RIGID	None	None	RIGID	Typical
22	M23	N17	N20			RIGID	None	None	RIGID	Typical
23	M24	N16	N19			RIGID	None	None	RIGID	Typical
24	M25	N17	N23			RIGID	None	None	RIGID	Typical
25	M26	N16	N22			RIGID	None	None	RIGID	Typical
26	M28	N28	N26			RIGID	None	None	RIGID	Typical
27	M29	N27A	N26			RIGID	None	None	RIGID	Typical
28	M30	N31	N29			RIGID	None	None	RIGID	Typical
29	M31	N30	N29			RIGID	None	None	RIGID	Typical
30	M32	N34	N32			RIGID	None	None	RIGID	Typical
31	M33	N33	N32			RIGID	None	None	RIGID	Typical
32	M34	N29	N26			RIGID	None	None	RIGID	Typical
33	M35	N32	N26			RIGID	None	None	RIGID	Typical
34	M36	N28	N31			RIGID	None	None	RIGID	Typical
35	M37	N27A	N30			RIGID	None	None	RIGID	Typical
36	M38	N28	N34			RIGID	None	None	RIGID	Typical
37	M39	N27A	N33			RIGID	None	None	RIGID	Typical
38	M40	N17	N27A			Face Horizontal	Beam	SquareTube	A500 Gr.B...	Typical
39	M41	N28	N6			Face Horizontal	Beam	SquareTube	A500 Gr.B...	Typical
40	M42	N7	N16			Face Horizontal	Beam	SquareTube	A500 Gr.B...	Typical
41	M43	N36	N35			RIGID	None	None	RIGID	Typical
42	MP1A	N37	N38			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
43	M45	N40	N39			RIGID	None	None	RIGID	Typical
44	MP2A	N41	N42			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
45	M47	N44	N43			RIGID	None	None	RIGID	Typical
46	MP3A	N45	N46			Pipe 2.5	Column	Pipe	A53 Gr.B	Typical
47	M49	N48	N47			RIGID	None	None	RIGID	Typical
48	MP4A	N49	N50			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
49	M51	N52	N51			RIGID	None	None	RIGID	Typical
50	MP1C	N53	N54			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
51	M53	N56	N55			RIGID	None	None	RIGID	Typical
52	MP2C	N57	N58			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
53	M55	N60	N59			RIGID	None	None	RIGID	Typical
54	MP3C	N61	N62			Pipe 2.5	Column	Pipe	A53 Gr.B	Typical
55	M57	N64	N63			RIGID	None	None	RIGID	Typical
56	MP4C	N65	N66			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
57	M59	N68	N67			RIGID	None	None	RIGID	Typical
58	MP1B	N69	N70			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
59	M61	N72	N71			RIGID	None	None	RIGID	Typical
60	MP2B	N73	N74			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
61	M63	N76	N75			RIGID	None	None	RIGID	Typical
62	MP3B	N77	N78			Pipe 2.5	Column	Pipe	A53 Gr.B	Typical
63	M65	N80	N79			RIGID	None	None	RIGID	Typical
64	MP4B	N81	N82			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
65	M67	N84	N88			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
66	M68	N83	N87			RIGID	None	None	RIGID	Typical
67	M69	N85	N89			RIGID	None	None	RIGID	Typical
68	M70	N89A	N90			RIGID	None	None	RIGID	Typical
69	M71	N94	N97			RIGID	None	None	RIGID	Typical
70	M72	N93	N96			RIGID	None	None	RIGID	Typical
71	M73	N95	N98			RIGID	None	None	RIGID	Typical
72	M74	N99	N100			RIGID	None	None	RIGID	Typical
73	M75	N104	N107			RIGID	None	None	RIGID	Typical
74	M76	N103	N106			RIGID	None	None	RIGID	Typical
75	M77	N105	N108			RIGID	None	None	RIGID	Typical
76	M78	N109	N110			RIGID	None	None	RIGID	Typical
77	M77A	N109A	N110A			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
78	M78A	N111A	N112A			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
79	M79	N113	N114			RIGID	None	None	RIGID	Typical
80	OVP	N115	N116			Mount Pipe	Column	Pipe	A53 Gr.B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M4						Yes				None
2	M2		BenPIN				Yes	** NA **			None
3	M3		BenPIN				Yes	** NA **			None
4	M4A						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M8		BenPIN				Yes	** NA **			None
9	M9		BenPIN				Yes	** NA **			None
10	M10						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M15		BenPIN				Yes	** NA **			None
15	M16		BenPIN				Yes	** NA **			None
16	M17						Yes	** NA **			None
17	M18						Yes	** NA **			None
18	M19						Yes	** NA **			None
19	M20						Yes	** NA **			None
20	M21		BenPIN				Yes	** NA **			None
21	M22		BenPIN				Yes	** NA **			None
22	M23						Yes	** NA **			None
23	M24						Yes	** NA **			None
24	M25						Yes	** NA **			None
25	M26						Yes	** NA **			None
26	M28		BenPIN				Yes	** NA **			None
27	M29		BenPIN				Yes	** NA **			None
28	M30						Yes	** NA **			None
29	M31						Yes	** NA **			None
30	M32						Yes	** NA **			None
31	M33						Yes	** NA **			None
32	M34		BenPIN				Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
33	M35		BenPIN				Yes	** NA **			None
34	M36						Yes	** NA **			None
35	M37						Yes	** NA **			None
36	M38						Yes	** NA **			None
37	M39						Yes	** NA **			None
38	M40						Yes				None
39	M41						Yes				None
40	M42						Yes				None
41	M43						Yes	** NA **			None
42	MP1A						Yes	** NA **			None
43	M45						Yes	** NA **			None
44	MP2A						Yes	** NA **			None
45	M47						Yes	** NA **			None
46	MP3A						Yes	** NA **			None
47	M49						Yes	** NA **			None
48	MP4A						Yes	** NA **			None
49	M51						Yes	** NA **			None
50	MP1C						Yes	** NA **			None
51	M53						Yes	** NA **			None
52	MP2C						Yes	** NA **			None
53	M55						Yes	** NA **			None
54	MP3C						Yes	** NA **			None
55	M57						Yes	** NA **			None
56	MP4C						Yes	** NA **			None
57	M59						Yes	** NA **			None
58	MP1B						Yes	** NA **			None
59	M61						Yes	** NA **			None
60	MP2B						Yes	** NA **			None
61	M63						Yes	** NA **			None
62	MP3B						Yes	** NA **			None
63	M65						Yes	** NA **			None
64	MP4B						Yes	** NA **			None
65	M67						Yes	** NA **			None
66	M68						Yes	** NA **			None
67	M69						Yes	** NA **			None
68	M70						Yes	** NA **			None
69	M71						Yes	** NA **			None
70	M72						Yes	** NA **			None
71	M73						Yes	** NA **			None
72	M74						Yes	** NA **			None
73	M75						Yes	** NA **			None
74	M76						Yes	** NA **			None
75	M77						Yes	** NA **			None
76	M78						Yes	** NA **			None
77	M77A						Yes				None
78	M78A						Yes				None
79	M79						Yes	** NA **			None
80	OVP						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-20	2
2	MP3A	My	-.017	2
3	MP3A	Mz	-.012	2
4	MP3A	Y	-20	6
5	MP3A	My	-.017	6
6	MP3A	Mz	-.012	6
7	MP3B	Y	-20	2
8	MP3B	My	.014	2
9	MP3B	Mz	-.014	2
10	MP3B	Y	-20	6
11	MP3B	My	.014	6
12	MP3B	Mz	-.014	6
13	MP3C	Y	-20	2
14	MP3C	My	-.009	2
15	MP3C	Mz	.018	2
16	MP3C	Y	-20	6
17	MP3C	My	-.009	6
18	MP3C	Mz	.018	6
19	MP3A	Y	-20	2
20	MP3A	My	-.017	2
21	MP3A	Mz	.012	2
22	MP3A	Y	-20	6
23	MP3A	My	-.017	6
24	MP3A	Mz	.012	6
25	MP3B	Y	-20	2
26	MP3B	My	-.009	2
27	MP3B	Mz	-.018	2
28	MP3B	Y	-20	6
29	MP3B	My	-.009	6
30	MP3B	Mz	-.018	6
31	MP3C	Y	-20	2
32	MP3C	My	.014	2
33	MP3C	Mz	.014	2
34	MP3C	Y	-20	6
35	MP3C	My	.014	6
36	MP3C	Mz	.014	6
37	MP2A	Y	-4.4	4
38	MP2A	My	-.001	4
39	MP2A	Mz	0	4
40	MP2B	Y	-4.4	4
41	MP2B	My	.000191	4
42	MP2B	Mz	-.001	4
43	MP2C	Y	-4.4	4
44	MP2C	My	.000191	4
45	MP2C	Mz	.001	4
46	MP1A	Y	-43.55	3
47	MP1A	My	-.036	3
48	MP1A	Mz	0	3
49	MP1A	Y	-43.55	5
50	MP1A	My	-.036	5
51	MP1A	Mz	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
52	MP1B	Y	-43.55	3
53	MP1B	My	.006	3
54	MP1B	Mz	-.036	3
55	MP1B	Y	-43.55	5
56	MP1B	My	.006	5
57	MP1B	Mz	-.036	5
58	MP1C	Y	-43.55	3
59	MP1C	My	.006	3
60	MP1C	Mz	.036	3
61	MP1C	Y	-43.55	5
62	MP1C	My	.006	5
63	MP1C	Mz	.036	5
64	MP3A	Y	-84.4	2.5
65	MP3A	My	.042	2.5
66	MP3A	Mz	0	2.5
67	MP3B	Y	-84.4	2.5
68	MP3B	My	-.021	2.5
69	MP3B	Mz	.037	2.5
70	MP3C	Y	-84.4	2.5
71	MP3C	My	-.021	2.5
72	MP3C	Mz	-.037	2.5
73	MP4A	Y	-70.3	2.5
74	MP4A	My	.035	2.5
75	MP4A	Mz	0	2.5
76	MP4B	Y	-70.3	2.5
77	MP4B	My	-.018	2.5
78	MP4B	Mz	.03	2.5
79	MP4C	Y	-70.3	2.5
80	MP4C	My	-.018	2.5
81	MP4C	Mz	-.03	2.5
82	OVP	Y	-32	1
83	OVP	My	0	1
84	OVP	Mz	0	1

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-57.567	2
2	MP3A	My	-.048	2
3	MP3A	Mz	-.034	2
4	MP3A	Y	-57.567	6
5	MP3A	My	-.048	6
6	MP3A	Mz	-.034	6
7	MP3B	Y	-57.567	2
8	MP3B	My	.041	2
9	MP3B	Mz	-.041	2
10	MP3B	Y	-57.567	6
11	MP3B	My	.041	6
12	MP3B	Mz	-.041	6
13	MP3C	Y	-57.567	2
14	MP3C	My	-.025	2
15	MP3C	Mz	.053	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP3C	Y	-57.567	6
17	MP3C	My	-.025	6
18	MP3C	Mz	.053	6
19	MP3A	Y	-57.567	2
20	MP3A	My	-.048	2
21	MP3A	Mz	.034	2
22	MP3A	Y	-57.567	6
23	MP3A	My	-.048	6
24	MP3A	Mz	.034	6
25	MP3B	Y	-57.567	2
26	MP3B	My	-.025	2
27	MP3B	Mz	-.053	2
28	MP3B	Y	-57.567	6
29	MP3B	My	-.025	6
30	MP3B	Mz	-.053	6
31	MP3C	Y	-57.567	2
32	MP3C	My	.041	2
33	MP3C	Mz	.041	2
34	MP3C	Y	-57.567	6
35	MP3C	My	.041	6
36	MP3C	Mz	.041	6
37	MP2A	Y	-12.579	4
38	MP2A	My	-.003	4
39	MP2A	Mz	0	4
40	MP2B	Y	-12.579	4
41	MP2B	My	.000546	4
42	MP2B	Mz	-.003	4
43	MP2C	Y	-12.579	4
44	MP2C	My	.000546	4
45	MP2C	Mz	.003	4
46	MP1A	Y	-33.561	3
47	MP1A	My	-.028	3
48	MP1A	Mz	0	3
49	MP1A	Y	-33.561	5
50	MP1A	My	-.028	5
51	MP1A	Mz	0	5
52	MP1B	Y	-33.561	3
53	MP1B	My	.005	3
54	MP1B	Mz	-.028	3
55	MP1B	Y	-33.561	5
56	MP1B	My	.005	5
57	MP1B	Mz	-.028	5
58	MP1C	Y	-33.561	3
59	MP1C	My	.005	3
60	MP1C	Mz	.028	3
61	MP1C	Y	-33.561	5
62	MP1C	My	.005	5
63	MP1C	Mz	.028	5
64	MP3A	Y	-42.276	2.5
65	MP3A	My	.021	2.5
66	MP3A	Mz	0	2.5
67	MP3B	Y	-42.276	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
68	MP3B	My	-.011	2.5
69	MP3B	Mz	.018	2.5
70	MP3C	Y	-42.276	2.5
71	MP3C	My	-.011	2.5
72	MP3C	Mz	-.018	2.5
73	MP4A	Y	-38.003	2.5
74	MP4A	My	.019	2.5
75	MP4A	Mz	0	2.5
76	MP4B	Y	-38.003	2.5
77	MP4B	My	-.01	2.5
78	MP4B	Mz	.016	2.5
79	MP4C	Y	-38.003	2.5
80	MP4C	My	-.01	2.5
81	MP4C	Mz	-.016	2.5
82	OVP	Y	-82.926	1
83	OVP	My	0	1
84	OVP	Mz	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	-149.469	2
3	MP3A	Mx	.087	2
4	MP3A	X	0	6
5	MP3A	Z	-149.469	6
6	MP3A	Mx	.087	6
7	MP3B	X	0	2
8	MP3B	Z	-100.371	2
9	MP3B	Mx	.072	2
10	MP3B	X	0	6
11	MP3B	Z	-100.371	6
12	MP3B	Mx	.072	6
13	MP3C	X	0	2
14	MP3C	Z	-100.371	2
15	MP3C	Mx	-.093	2
16	MP3C	X	0	6
17	MP3C	Z	-100.371	6
18	MP3C	Mx	-.093	6
19	MP3A	X	0	2
20	MP3A	Z	-149.469	2
21	MP3A	Mx	-.087	2
22	MP3A	X	0	6
23	MP3A	Z	-149.469	6
24	MP3A	Mx	-.087	6
25	MP3B	X	0	2
26	MP3B	Z	-100.371	2
27	MP3B	Mx	.093	2
28	MP3B	X	0	6
29	MP3B	Z	-100.371	6
30	MP3B	Mx	.093	6
31	MP3C	X	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP3C	Z	-100.371	2
33	MP3C	Mx	-.072	2
34	MP3C	X	0	6
35	MP3C	Z	-100.371	6
36	MP3C	Mx	-.072	6
37	MP2A	X	0	4
38	MP2A	Z	-32.605	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	-7.184	4
42	MP2B	Mx	.002	4
43	MP2C	X	0	4
44	MP2C	Z	-7.184	4
45	MP2C	Mx	-.002	4
46	MP1A	X	0	3
47	MP1A	Z	-86.091	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	-86.091	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	-35.284	3
54	MP1B	Mx	.029	3
55	MP1B	X	0	5
56	MP1B	Z	-35.284	5
57	MP1B	Mx	.029	5
58	MP1C	X	0	3
59	MP1C	Z	-35.284	3
60	MP1C	Mx	-.029	3
61	MP1C	X	0	5
62	MP1C	Z	-35.284	5
63	MP1C	Mx	-.029	5
64	MP3A	X	0	2.5
65	MP3A	Z	-68.506	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	-51.471	2.5
69	MP3B	Mx	-.022	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	-51.471	2.5
72	MP3C	Mx	.022	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	-68.506	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	-44.946	2.5
78	MP4B	Mx	-.019	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	-44.946	2.5
81	MP4C	Mx	.019	2.5
82	OVP	X	0	1
83	OVP	Z	-144.611	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	68.406	2
2	MP3A	Z	-118.483	2
3	MP3A	Mx	.012	2
4	MP3A	X	68.406	6
5	MP3A	Z	-118.483	6
6	MP3A	Mx	.012	6
7	MP3B	X	52.383	2
8	MP3B	Z	-90.73	2
9	MP3B	Mx	.103	2
10	MP3B	X	52.383	6
11	MP3B	Z	-90.73	6
12	MP3B	Mx	.103	6
13	MP3C	X	59.881	2
14	MP3C	Z	-103.716	2
15	MP3C	Mx	-.121	2
16	MP3C	X	59.881	6
17	MP3C	Z	-103.716	6
18	MP3C	Mx	-.121	6
19	MP3A	X	68.406	2
20	MP3A	Z	-118.483	2
21	MP3A	Mx	-.126	2
22	MP3A	X	68.406	6
23	MP3A	Z	-118.483	6
24	MP3A	Mx	-.126	6
25	MP3B	X	52.383	2
26	MP3B	Z	-90.73	2
27	MP3B	Mx	.061	2
28	MP3B	X	52.383	6
29	MP3B	Z	-90.73	6
30	MP3B	Mx	.061	6
31	MP3C	X	59.881	2
32	MP3C	Z	-103.716	2
33	MP3C	Mx	-.032	2
34	MP3C	X	59.881	6
35	MP3C	Z	-103.716	6
36	MP3C	Mx	-.032	6
37	MP2A	X	13.026	4
38	MP2A	Z	-22.562	4
39	MP2A	Mx	-.003	4
40	MP2B	X	4.73	4
41	MP2B	Z	-8.193	4
42	MP2B	Mx	.002	4
43	MP2C	X	8.612	4
44	MP2C	Z	-14.916	4
45	MP2C	Mx	-.003	4
46	MP1A	X	36.497	3
47	MP1A	Z	-63.215	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
48	MP1A	Mx	-.03	3
49	MP1A	X	36.497	5
50	MP1A	Z	-63.215	5
51	MP1A	Mx	-.03	5
52	MP1B	X	19.916	3
53	MP1B	Z	-34.496	3
54	MP1B	Mx	.031	3
55	MP1B	X	19.916	5
56	MP1B	Z	-34.496	5
57	MP1B	Mx	.031	5
58	MP1C	X	27.675	3
59	MP1C	Z	-47.934	3
60	MP1C	Mx	-.035	3
61	MP1C	X	27.675	5
62	MP1C	Z	-47.934	5
63	MP1C	Mx	-.035	5
64	MP3A	X	31.414	2.5
65	MP3A	Z	-54.411	2.5
66	MP3A	Mx	.016	2.5
67	MP3B	X	22.897	2.5
68	MP3B	Z	-39.658	2.5
69	MP3B	Mx	-.023	2.5
70	MP3C	X	31.414	2.5
71	MP3C	Z	-54.411	2.5
72	MP3C	Mx	.016	2.5
73	MP4A	X	30.326	2.5
74	MP4A	Z	-52.527	2.5
75	MP4A	Mx	.015	2.5
76	MP4B	X	18.546	2.5
77	MP4B	Z	-32.123	2.5
78	MP4B	Mx	-.019	2.5
79	MP4C	X	30.326	2.5
80	MP4C	Z	-52.527	2.5
81	MP4C	Mx	.015	2.5
82	OVP	X	64.022	1
83	OVP	Z	-110.89	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	96.562	2
2	MP3A	Z	-55.75	2
3	MP3A	Mx	-.048	2
4	MP3A	X	96.562	6
5	MP3A	Z	-55.75	6
6	MP3A	Mx	-.048	6
7	MP3B	X	111.329	2
8	MP3B	Z	-64.276	2
9	MP3B	Mx	.126	2
10	MP3B	X	111.329	6
11	MP3B	Z	-64.276	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP3B	Mx	.126	6
13	MP3C	X	124.315	2
14	MP3C	Z	-71.773	2
15	MP3C	Mx	-.12	2
16	MP3C	X	124.315	6
17	MP3C	Z	-71.773	6
18	MP3C	Mx	-.12	6
19	MP3A	X	96.562	2
20	MP3A	Z	-55.75	2
21	MP3A	Mx	-.113	2
22	MP3A	X	96.562	6
23	MP3A	Z	-55.75	6
24	MP3A	Mx	-.113	6
25	MP3B	X	111.329	2
26	MP3B	Z	-64.276	2
27	MP3B	Mx	.011	2
28	MP3B	X	111.329	6
29	MP3B	Z	-64.276	6
30	MP3B	Mx	.011	6
31	MP3C	X	124.315	2
32	MP3C	Z	-71.773	2
33	MP3C	Mx	.038	2
34	MP3C	X	124.315	6
35	MP3C	Z	-71.773	6
36	MP3C	Mx	.038	6
37	MP2A	X	11.212	4
38	MP2A	Z	-6.473	4
39	MP2A	Mx	-.003	4
40	MP2B	X	18.858	4
41	MP2B	Z	-10.888	4
42	MP2B	Mx	.003	4
43	MP2C	X	25.581	4
44	MP2C	Z	-14.769	4
45	MP2C	Mx	-.003	4
46	MP1A	X	40.531	3
47	MP1A	Z	-23.401	3
48	MP1A	Mx	-.034	3
49	MP1A	X	40.531	5
50	MP1A	Z	-23.401	5
51	MP1A	Mx	-.034	5
52	MP1B	X	55.812	3
53	MP1B	Z	-32.223	3
54	MP1B	Mx	.035	3
55	MP1B	X	55.812	5
56	MP1B	Z	-32.223	5
57	MP1B	Mx	.035	5
58	MP1C	X	69.25	3
59	MP1C	Z	-39.981	3
60	MP1C	Mx	-.023	3
61	MP1C	X	69.25	5
62	MP1C	Z	-39.981	5
63	MP1C	Mx	-.023	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
64	MP3A	X	44.576	2.5
65	MP3A	Z	-25.736	2.5
66	MP3A	Mx	.022	2.5
67	MP3B	X	44.576	2.5
68	MP3B	Z	-25.736	2.5
69	MP3B	Mx	-.022	2.5
70	MP3C	X	59.328	2.5
71	MP3C	Z	-34.253	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	38.924	2.5
74	MP4A	Z	-22.473	2.5
75	MP4A	Mx	.019	2.5
76	MP4B	X	38.924	2.5
77	MP4B	Z	-22.473	2.5
78	MP4B	Mx	-.019	2.5
79	MP4C	X	59.328	2.5
80	MP4C	Z	-34.253	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	99.193	1
83	OVP	Z	-57.269	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	98.845	2
2	MP3A	Z	0	2
3	MP3A	Mx	-.082	2
4	MP3A	X	98.845	6
5	MP3A	Z	0	6
6	MP3A	Mx	-.082	6
7	MP3B	X	147.942	2
8	MP3B	Z	0	2
9	MP3B	Mx	.106	2
10	MP3B	X	147.942	6
11	MP3B	Z	0	6
12	MP3B	Mx	.106	6
13	MP3C	X	147.942	2
14	MP3C	Z	0	2
15	MP3C	Mx	-.064	2
16	MP3C	X	147.942	6
17	MP3C	Z	0	6
18	MP3C	Mx	-.064	6
19	MP3A	X	98.845	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.082	2
22	MP3A	X	98.845	6
23	MP3A	Z	0	6
24	MP3A	Mx	-.082	6
25	MP3B	X	147.942	2
26	MP3B	Z	0	2
27	MP3B	Mx	-.064	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP3B	X	147.942	6
29	MP3B	Z	0	6
30	MP3B	Mx	-.064	6
31	MP3C	X	147.942	2
32	MP3C	Z	0	2
33	MP3C	Mx	.106	2
34	MP3C	X	147.942	6
35	MP3C	Z	0	6
36	MP3C	Mx	.106	6
37	MP2A	X	6.394	4
38	MP2A	Z	0	4
39	MP2A	Mx	-.002	4
40	MP2B	X	31.814	4
41	MP2B	Z	0	4
42	MP2B	Mx	.001	4
43	MP2C	X	31.814	4
44	MP2C	Z	0	4
45	MP2C	Mx	.001	4
46	MP1A	X	33.704	3
47	MP1A	Z	0	3
48	MP1A	Mx	-.028	3
49	MP1A	X	33.704	5
50	MP1A	Z	0	5
51	MP1A	Mx	-.028	5
52	MP1B	X	84.511	3
53	MP1B	Z	0	3
54	MP1B	Mx	.012	3
55	MP1B	X	84.511	5
56	MP1B	Z	0	5
57	MP1B	Mx	.012	5
58	MP1C	X	84.511	3
59	MP1C	Z	0	3
60	MP1C	Mx	.012	3
61	MP1C	X	84.511	5
62	MP1C	Z	0	5
63	MP1C	Mx	.012	5
64	MP3A	X	45.793	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	.023	2.5
67	MP3B	X	62.828	2.5
68	MP3B	Z	0	2.5
69	MP3B	Mx	-.016	2.5
70	MP3C	X	62.828	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	-.016	2.5
73	MP4A	X	37.092	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	.019	2.5
76	MP4B	X	60.653	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	-.015	2.5
79	MP4C	X	60.653	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP4C	Z	0	2.5
81	MP4C	Mx	-.015	2.5
82	OVP	X	117.6	1
83	OVP	Z	0	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	96.562	2
2	MP3A	Z	55.75	2
3	MP3A	Mx	-.113	2
4	MP3A	X	96.562	6
5	MP3A	Z	55.75	6
6	MP3A	Mx	-.113	6
7	MP3B	X	124.315	2
8	MP3B	Z	71.773	2
9	MP3B	Mx	.038	2
10	MP3B	X	124.315	6
11	MP3B	Z	71.773	6
12	MP3B	Mx	.038	6
13	MP3C	X	111.329	2
14	MP3C	Z	64.276	2
15	MP3C	Mx	.011	2
16	MP3C	X	111.329	6
17	MP3C	Z	64.276	6
18	MP3C	Mx	.011	6
19	MP3A	X	96.562	2
20	MP3A	Z	55.75	2
21	MP3A	Mx	-.048	2
22	MP3A	X	96.562	6
23	MP3A	Z	55.75	6
24	MP3A	Mx	-.048	6
25	MP3B	X	124.315	2
26	MP3B	Z	71.773	2
27	MP3B	Mx	-.12	2
28	MP3B	X	124.315	6
29	MP3B	Z	71.773	6
30	MP3B	Mx	-.12	6
31	MP3C	X	111.329	2
32	MP3C	Z	64.276	2
33	MP3C	Mx	.126	2
34	MP3C	X	111.329	6
35	MP3C	Z	64.276	6
36	MP3C	Mx	.126	6
37	MP2A	X	11.212	4
38	MP2A	Z	6.473	4
39	MP2A	Mx	-.003	4
40	MP2B	X	25.581	4
41	MP2B	Z	14.769	4
42	MP2B	Mx	-.003	4
43	MP2C	X	18.858	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
44	MP2C	Z	10.888	4
45	MP2C	Mx	.003	4
46	MP1A	X	40.531	3
47	MP1A	Z	23.401	3
48	MP1A	Mx	-.034	3
49	MP1A	X	40.531	5
50	MP1A	Z	23.401	5
51	MP1A	Mx	-.034	5
52	MP1B	X	69.25	3
53	MP1B	Z	39.981	3
54	MP1B	Mx	-.023	3
55	MP1B	X	69.25	5
56	MP1B	Z	39.981	5
57	MP1B	Mx	-.023	5
58	MP1C	X	55.812	3
59	MP1C	Z	32.223	3
60	MP1C	Mx	.035	3
61	MP1C	X	55.812	5
62	MP1C	Z	32.223	5
63	MP1C	Mx	.035	5
64	MP3A	X	44.576	2.5
65	MP3A	Z	25.736	2.5
66	MP3A	Mx	.022	2.5
67	MP3B	X	59.328	2.5
68	MP3B	Z	34.253	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	44.576	2.5
71	MP3C	Z	25.736	2.5
72	MP3C	Mx	-.022	2.5
73	MP4A	X	38.924	2.5
74	MP4A	Z	22.473	2.5
75	MP4A	Mx	.019	2.5
76	MP4B	X	59.328	2.5
77	MP4B	Z	34.253	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	38.924	2.5
80	MP4C	Z	22.473	2.5
81	MP4C	Mx	-.019	2.5
82	OVP	X	116.192	1
83	OVP	Z	67.084	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	68.406	2
2	MP3A	Z	118.483	2
3	MP3A	Mx	-.126	2
4	MP3A	X	68.406	6
5	MP3A	Z	118.483	6
6	MP3A	Mx	-.126	6
7	MP3B	X	59.881	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP3B	Z	103.716	2
9	MP3B	Mx	-.032	2
10	MP3B	X	59.881	6
11	MP3B	Z	103.716	6
12	MP3B	Mx	-.032	6
13	MP3C	X	52.383	2
14	MP3C	Z	90.73	2
15	MP3C	Mx	.061	2
16	MP3C	X	52.383	6
17	MP3C	Z	90.73	6
18	MP3C	Mx	.061	6
19	MP3A	X	68.406	2
20	MP3A	Z	118.483	2
21	MP3A	Mx	.012	2
22	MP3A	X	68.406	6
23	MP3A	Z	118.483	6
24	MP3A	Mx	.012	6
25	MP3B	X	59.881	2
26	MP3B	Z	103.716	2
27	MP3B	Mx	-.121	2
28	MP3B	X	59.881	6
29	MP3B	Z	103.716	6
30	MP3B	Mx	-.121	6
31	MP3C	X	52.383	2
32	MP3C	Z	90.73	2
33	MP3C	Mx	.103	2
34	MP3C	X	52.383	6
35	MP3C	Z	90.73	6
36	MP3C	Mx	.103	6
37	MP2A	X	13.026	4
38	MP2A	Z	22.562	4
39	MP2A	Mx	-.003	4
40	MP2B	X	8.612	4
41	MP2B	Z	14.916	4
42	MP2B	Mx	-.003	4
43	MP2C	X	4.73	4
44	MP2C	Z	8.193	4
45	MP2C	Mx	.002	4
46	MP1A	X	36.497	3
47	MP1A	Z	63.215	3
48	MP1A	Mx	-.03	3
49	MP1A	X	36.497	5
50	MP1A	Z	63.215	5
51	MP1A	Mx	-.03	5
52	MP1B	X	27.675	3
53	MP1B	Z	47.934	3
54	MP1B	Mx	-.035	3
55	MP1B	X	27.675	5
56	MP1B	Z	47.934	5
57	MP1B	Mx	-.035	5
58	MP1C	X	19.916	3
59	MP1C	Z	34.496	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP1C	Mx	.031	3
61	MP1C	X	19.916	5
62	MP1C	Z	34.496	5
63	MP1C	Mx	.031	5
64	MP3A	X	31.414	2.5
65	MP3A	Z	54.411	2.5
66	MP3A	Mx	.016	2.5
67	MP3B	X	31.414	2.5
68	MP3B	Z	54.411	2.5
69	MP3B	Mx	.016	2.5
70	MP3C	X	22.897	2.5
71	MP3C	Z	39.658	2.5
72	MP3C	Mx	-.023	2.5
73	MP4A	X	30.326	2.5
74	MP4A	Z	52.527	2.5
75	MP4A	Mx	.015	2.5
76	MP4B	X	30.326	2.5
77	MP4B	Z	52.527	2.5
78	MP4B	Mx	.015	2.5
79	MP4C	X	18.546	2.5
80	MP4C	Z	32.123	2.5
81	MP4C	Mx	-.019	2.5
82	OVP	X	73.836	1
83	OVP	Z	127.888	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	149.469	2
3	MP3A	Mx	-.087	2
4	MP3A	X	0	6
5	MP3A	Z	149.469	6
6	MP3A	Mx	-.087	6
7	MP3B	X	0	2
8	MP3B	Z	100.371	2
9	MP3B	Mx	-.072	2
10	MP3B	X	0	6
11	MP3B	Z	100.371	6
12	MP3B	Mx	-.072	6
13	MP3C	X	0	2
14	MP3C	Z	100.371	2
15	MP3C	Mx	.093	2
16	MP3C	X	0	6
17	MP3C	Z	100.371	6
18	MP3C	Mx	.093	6
19	MP3A	X	0	2
20	MP3A	Z	149.469	2
21	MP3A	Mx	.087	2
22	MP3A	X	0	6
23	MP3A	Z	149.469	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP3A	Mx	.087	6
25	MP3B	X	0	2
26	MP3B	Z	100.371	2
27	MP3B	Mx	-.093	2
28	MP3B	X	0	6
29	MP3B	Z	100.371	6
30	MP3B	Mx	-.093	6
31	MP3C	X	0	2
32	MP3C	Z	100.371	2
33	MP3C	Mx	.072	2
34	MP3C	X	0	6
35	MP3C	Z	100.371	6
36	MP3C	Mx	.072	6
37	MP2A	X	0	4
38	MP2A	Z	32.605	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	7.184	4
42	MP2B	Mx	-.002	4
43	MP2C	X	0	4
44	MP2C	Z	7.184	4
45	MP2C	Mx	.002	4
46	MP1A	X	0	3
47	MP1A	Z	86.091	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	86.091	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	35.284	3
54	MP1B	Mx	-.029	3
55	MP1B	X	0	5
56	MP1B	Z	35.284	5
57	MP1B	Mx	-.029	5
58	MP1C	X	0	3
59	MP1C	Z	35.284	3
60	MP1C	Mx	.029	3
61	MP1C	X	0	5
62	MP1C	Z	35.284	5
63	MP1C	Mx	.029	5
64	MP3A	X	0	2.5
65	MP3A	Z	68.506	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	51.471	2.5
69	MP3B	Mx	.022	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	51.471	2.5
72	MP3C	Mx	-.022	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	68.506	2.5
75	MP4A	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
76	MP4B	X	0	2.5
77	MP4B	Z	44.946	2.5
78	MP4B	Mx	.019	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	44.946	2.5
81	MP4C	Mx	-.019	2.5
82	OVP	X	0	1
83	OVP	Z	144.611	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-68.406	2
2	MP3A	Z	118.483	2
3	MP3A	Mx	-.012	2
4	MP3A	X	-68.406	6
5	MP3A	Z	118.483	6
6	MP3A	Mx	-.012	6
7	MP3B	X	-52.383	2
8	MP3B	Z	90.73	2
9	MP3B	Mx	-.103	2
10	MP3B	X	-52.383	6
11	MP3B	Z	90.73	6
12	MP3B	Mx	-.103	6
13	MP3C	X	-59.881	2
14	MP3C	Z	103.716	2
15	MP3C	Mx	.121	2
16	MP3C	X	-59.881	6
17	MP3C	Z	103.716	6
18	MP3C	Mx	.121	6
19	MP3A	X	-68.406	2
20	MP3A	Z	118.483	2
21	MP3A	Mx	.126	2
22	MP3A	X	-68.406	6
23	MP3A	Z	118.483	6
24	MP3A	Mx	.126	6
25	MP3B	X	-52.383	2
26	MP3B	Z	90.73	2
27	MP3B	Mx	-.061	2
28	MP3B	X	-52.383	6
29	MP3B	Z	90.73	6
30	MP3B	Mx	-.061	6
31	MP3C	X	-59.881	2
32	MP3C	Z	103.716	2
33	MP3C	Mx	.032	2
34	MP3C	X	-59.881	6
35	MP3C	Z	103.716	6
36	MP3C	Mx	.032	6
37	MP2A	X	-13.026	4
38	MP2A	Z	22.562	4
39	MP2A	Mx	.003	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
40	MP2B	X	-4.73	4
41	MP2B	Z	8.193	4
42	MP2B	Mx	-.002	4
43	MP2C	X	-8.612	4
44	MP2C	Z	14.916	4
45	MP2C	Mx	.003	4
46	MP1A	X	-36.497	3
47	MP1A	Z	63.215	3
48	MP1A	Mx	.03	3
49	MP1A	X	-36.497	5
50	MP1A	Z	63.215	5
51	MP1A	Mx	.03	5
52	MP1B	X	-19.916	3
53	MP1B	Z	34.496	3
54	MP1B	Mx	-.031	3
55	MP1B	X	-19.916	5
56	MP1B	Z	34.496	5
57	MP1B	Mx	-.031	5
58	MP1C	X	-27.675	3
59	MP1C	Z	47.934	3
60	MP1C	Mx	.035	3
61	MP1C	X	-27.675	5
62	MP1C	Z	47.934	5
63	MP1C	Mx	.035	5
64	MP3A	X	-31.414	2.5
65	MP3A	Z	54.411	2.5
66	MP3A	Mx	-.016	2.5
67	MP3B	X	-22.897	2.5
68	MP3B	Z	39.658	2.5
69	MP3B	Mx	.023	2.5
70	MP3C	X	-31.414	2.5
71	MP3C	Z	54.411	2.5
72	MP3C	Mx	-.016	2.5
73	MP4A	X	-30.326	2.5
74	MP4A	Z	52.527	2.5
75	MP4A	Mx	-.015	2.5
76	MP4B	X	-18.546	2.5
77	MP4B	Z	32.123	2.5
78	MP4B	Mx	.019	2.5
79	MP4C	X	-30.326	2.5
80	MP4C	Z	52.527	2.5
81	MP4C	Mx	-.015	2.5
82	OVP	X	-64.022	1
83	OVP	Z	110.89	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-96.562	2
2	MP3A	Z	55.75	2
3	MP3A	Mx	.048	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP3A	X	-96.562	6
5	MP3A	Z	55.75	6
6	MP3A	Mx	.048	6
7	MP3B	X	-111.329	2
8	MP3B	Z	64.276	2
9	MP3B	Mx	-.126	2
10	MP3B	X	-111.329	6
11	MP3B	Z	64.276	6
12	MP3B	Mx	-.126	6
13	MP3C	X	-124.315	2
14	MP3C	Z	71.773	2
15	MP3C	Mx	.12	2
16	MP3C	X	-124.315	6
17	MP3C	Z	71.773	6
18	MP3C	Mx	.12	6
19	MP3A	X	-96.562	2
20	MP3A	Z	55.75	2
21	MP3A	Mx	.113	2
22	MP3A	X	-96.562	6
23	MP3A	Z	55.75	6
24	MP3A	Mx	.113	6
25	MP3B	X	-111.329	2
26	MP3B	Z	64.276	2
27	MP3B	Mx	-.011	2
28	MP3B	X	-111.329	6
29	MP3B	Z	64.276	6
30	MP3B	Mx	-.011	6
31	MP3C	X	-124.315	2
32	MP3C	Z	71.773	2
33	MP3C	Mx	-.038	2
34	MP3C	X	-124.315	6
35	MP3C	Z	71.773	6
36	MP3C	Mx	-.038	6
37	MP2A	X	-11.212	4
38	MP2A	Z	6.473	4
39	MP2A	Mx	.003	4
40	MP2B	X	-18.858	4
41	MP2B	Z	10.888	4
42	MP2B	Mx	-.003	4
43	MP2C	X	-25.581	4
44	MP2C	Z	14.769	4
45	MP2C	Mx	.003	4
46	MP1A	X	-40.531	3
47	MP1A	Z	23.401	3
48	MP1A	Mx	.034	3
49	MP1A	X	-40.531	5
50	MP1A	Z	23.401	5
51	MP1A	Mx	.034	5
52	MP1B	X	-55.812	3
53	MP1B	Z	32.223	3
54	MP1B	Mx	-.035	3
55	MP1B	X	-55.812	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
56	MP1B	Z	32.223	5
57	MP1B	Mx	-.035	5
58	MP1C	X	-69.25	3
59	MP1C	Z	39.981	3
60	MP1C	Mx	.023	3
61	MP1C	X	-69.25	5
62	MP1C	Z	39.981	5
63	MP1C	Mx	.023	5
64	MP3A	X	-44.576	2.5
65	MP3A	Z	25.736	2.5
66	MP3A	Mx	-.022	2.5
67	MP3B	X	-44.576	2.5
68	MP3B	Z	25.736	2.5
69	MP3B	Mx	.022	2.5
70	MP3C	X	-59.328	2.5
71	MP3C	Z	34.253	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	-38.924	2.5
74	MP4A	Z	22.473	2.5
75	MP4A	Mx	-.019	2.5
76	MP4B	X	-38.924	2.5
77	MP4B	Z	22.473	2.5
78	MP4B	Mx	.019	2.5
79	MP4C	X	-59.328	2.5
80	MP4C	Z	34.253	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	-99.193	1
83	OVP	Z	57.269	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-98.845	2
2	MP3A	Z	0	2
3	MP3A	Mx	.082	2
4	MP3A	X	-98.845	6
5	MP3A	Z	0	6
6	MP3A	Mx	.082	6
7	MP3B	X	-147.942	2
8	MP3B	Z	0	2
9	MP3B	Mx	-.106	2
10	MP3B	X	-147.942	6
11	MP3B	Z	0	6
12	MP3B	Mx	-.106	6
13	MP3C	X	-147.942	2
14	MP3C	Z	0	2
15	MP3C	Mx	.064	2
16	MP3C	X	-147.942	6
17	MP3C	Z	0	6
18	MP3C	Mx	.064	6
19	MP3A	X	-98.845	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP3A	Z	0	2
21	MP3A	Mx	.082	2
22	MP3A	X	-98.845	6
23	MP3A	Z	0	6
24	MP3A	Mx	.082	6
25	MP3B	X	-147.942	2
26	MP3B	Z	0	2
27	MP3B	Mx	.064	2
28	MP3B	X	-147.942	6
29	MP3B	Z	0	6
30	MP3B	Mx	.064	6
31	MP3C	X	-147.942	2
32	MP3C	Z	0	2
33	MP3C	Mx	-.106	2
34	MP3C	X	-147.942	6
35	MP3C	Z	0	6
36	MP3C	Mx	-.106	6
37	MP2A	X	-6.394	4
38	MP2A	Z	0	4
39	MP2A	Mx	.002	4
40	MP2B	X	-31.814	4
41	MP2B	Z	0	4
42	MP2B	Mx	-.001	4
43	MP2C	X	-31.814	4
44	MP2C	Z	0	4
45	MP2C	Mx	-.001	4
46	MP1A	X	-33.704	3
47	MP1A	Z	0	3
48	MP1A	Mx	.028	3
49	MP1A	X	-33.704	5
50	MP1A	Z	0	5
51	MP1A	Mx	.028	5
52	MP1B	X	-84.511	3
53	MP1B	Z	0	3
54	MP1B	Mx	-.012	3
55	MP1B	X	-84.511	5
56	MP1B	Z	0	5
57	MP1B	Mx	-.012	5
58	MP1C	X	-84.511	3
59	MP1C	Z	0	3
60	MP1C	Mx	-.012	3
61	MP1C	X	-84.511	5
62	MP1C	Z	0	5
63	MP1C	Mx	-.012	5
64	MP3A	X	-45.793	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	-.023	2.5
67	MP3B	X	-62.828	2.5
68	MP3B	Z	0	2.5
69	MP3B	Mx	.016	2.5
70	MP3C	X	-62.828	2.5
71	MP3C	Z	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP3C	Mx	.016	2.5
73	MP4A	X	-37.092	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	-.019	2.5
76	MP4B	X	-60.653	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	.015	2.5
79	MP4C	X	-60.653	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	.015	2.5
82	OVP	X	-117.6	1
83	OVP	Z	0	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-96.562	2
2	MP3A	Z	-55.75	2
3	MP3A	Mx	.113	2
4	MP3A	X	-96.562	6
5	MP3A	Z	-55.75	6
6	MP3A	Mx	.113	6
7	MP3B	X	-124.315	2
8	MP3B	Z	-71.773	2
9	MP3B	Mx	-.038	2
10	MP3B	X	-124.315	6
11	MP3B	Z	-71.773	6
12	MP3B	Mx	-.038	6
13	MP3C	X	-111.329	2
14	MP3C	Z	-64.276	2
15	MP3C	Mx	-.011	2
16	MP3C	X	-111.329	6
17	MP3C	Z	-64.276	6
18	MP3C	Mx	-.011	6
19	MP3A	X	-96.562	2
20	MP3A	Z	-55.75	2
21	MP3A	Mx	.048	2
22	MP3A	X	-96.562	6
23	MP3A	Z	-55.75	6
24	MP3A	Mx	.048	6
25	MP3B	X	-124.315	2
26	MP3B	Z	-71.773	2
27	MP3B	Mx	.12	2
28	MP3B	X	-124.315	6
29	MP3B	Z	-71.773	6
30	MP3B	Mx	.12	6
31	MP3C	X	-111.329	2
32	MP3C	Z	-64.276	2
33	MP3C	Mx	-.126	2
34	MP3C	X	-111.329	6
35	MP3C	Z	-64.276	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
36	MP3C	Mx	-.126	6
37	MP2A	X	-11.212	4
38	MP2A	Z	-6.473	4
39	MP2A	Mx	.003	4
40	MP2B	X	-25.581	4
41	MP2B	Z	-14.769	4
42	MP2B	Mx	.003	4
43	MP2C	X	-18.858	4
44	MP2C	Z	-10.888	4
45	MP2C	Mx	-.003	4
46	MP1A	X	-40.531	3
47	MP1A	Z	-23.401	3
48	MP1A	Mx	.034	3
49	MP1A	X	-40.531	5
50	MP1A	Z	-23.401	5
51	MP1A	Mx	.034	5
52	MP1B	X	-69.25	3
53	MP1B	Z	-39.981	3
54	MP1B	Mx	.023	3
55	MP1B	X	-69.25	5
56	MP1B	Z	-39.981	5
57	MP1B	Mx	.023	5
58	MP1C	X	-55.812	3
59	MP1C	Z	-32.223	3
60	MP1C	Mx	-.035	3
61	MP1C	X	-55.812	5
62	MP1C	Z	-32.223	5
63	MP1C	Mx	-.035	5
64	MP3A	X	-44.576	2.5
65	MP3A	Z	-25.736	2.5
66	MP3A	Mx	-.022	2.5
67	MP3B	X	-59.328	2.5
68	MP3B	Z	-34.253	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	-44.576	2.5
71	MP3C	Z	-25.736	2.5
72	MP3C	Mx	.022	2.5
73	MP4A	X	-38.924	2.5
74	MP4A	Z	-22.473	2.5
75	MP4A	Mx	-.019	2.5
76	MP4B	X	-59.328	2.5
77	MP4B	Z	-34.253	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	-38.924	2.5
80	MP4C	Z	-22.473	2.5
81	MP4C	Mx	.019	2.5
82	OVP	X	-116.192	1
83	OVP	Z	-67.084	1
84	OVP	Mx	0	1

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-68.406	2
2	MP3A	Z	-118.483	2
3	MP3A	Mx	.126	2
4	MP3A	X	-68.406	6
5	MP3A	Z	-118.483	6
6	MP3A	Mx	.126	6
7	MP3B	X	-59.881	2
8	MP3B	Z	-103.716	2
9	MP3B	Mx	.032	2
10	MP3B	X	-59.881	6
11	MP3B	Z	-103.716	6
12	MP3B	Mx	.032	6
13	MP3C	X	-52.383	2
14	MP3C	Z	-90.73	2
15	MP3C	Mx	-.061	2
16	MP3C	X	-52.383	6
17	MP3C	Z	-90.73	6
18	MP3C	Mx	-.061	6
19	MP3A	X	-68.406	2
20	MP3A	Z	-118.483	2
21	MP3A	Mx	-.012	2
22	MP3A	X	-68.406	6
23	MP3A	Z	-118.483	6
24	MP3A	Mx	-.012	6
25	MP3B	X	-59.881	2
26	MP3B	Z	-103.716	2
27	MP3B	Mx	.121	2
28	MP3B	X	-59.881	6
29	MP3B	Z	-103.716	6
30	MP3B	Mx	.121	6
31	MP3C	X	-52.383	2
32	MP3C	Z	-90.73	2
33	MP3C	Mx	-.103	2
34	MP3C	X	-52.383	6
35	MP3C	Z	-90.73	6
36	MP3C	Mx	-.103	6
37	MP2A	X	-13.026	4
38	MP2A	Z	-22.562	4
39	MP2A	Mx	.003	4
40	MP2B	X	-8.612	4
41	MP2B	Z	-14.916	4
42	MP2B	Mx	.003	4
43	MP2C	X	-4.73	4
44	MP2C	Z	-8.193	4
45	MP2C	Mx	-.002	4
46	MP1A	X	-36.497	3
47	MP1A	Z	-63.215	3
48	MP1A	Mx	.03	3
49	MP1A	X	-36.497	5
50	MP1A	Z	-63.215	5
51	MP1A	Mx	.03	5
52	MP1B	X	-27.675	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	-47.934	3
54	MP1B	Mx	.035	3
55	MP1B	X	-27.675	5
56	MP1B	Z	-47.934	5
57	MP1B	Mx	.035	5
58	MP1C	X	-19.916	3
59	MP1C	Z	-34.496	3
60	MP1C	Mx	-.031	3
61	MP1C	X	-19.916	5
62	MP1C	Z	-34.496	5
63	MP1C	Mx	-.031	5
64	MP3A	X	-31.414	2.5
65	MP3A	Z	-54.411	2.5
66	MP3A	Mx	-.016	2.5
67	MP3B	X	-31.414	2.5
68	MP3B	Z	-54.411	2.5
69	MP3B	Mx	-.016	2.5
70	MP3C	X	-22.897	2.5
71	MP3C	Z	-39.658	2.5
72	MP3C	Mx	.023	2.5
73	MP4A	X	-30.326	2.5
74	MP4A	Z	-52.527	2.5
75	MP4A	Mx	-.015	2.5
76	MP4B	X	-30.326	2.5
77	MP4B	Z	-52.527	2.5
78	MP4B	Mx	-.015	2.5
79	MP4C	X	-18.546	2.5
80	MP4C	Z	-32.123	2.5
81	MP4C	Mx	.019	2.5
82	OVP	X	-73.836	1
83	OVP	Z	-127.888	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	-29.443	2
3	MP3A	Mx	.017	2
4	MP3A	X	0	6
5	MP3A	Z	-29.443	6
6	MP3A	Mx	.017	6
7	MP3B	X	0	2
8	MP3B	Z	-20.54	2
9	MP3B	Mx	.015	2
10	MP3B	X	0	6
11	MP3B	Z	-20.54	6
12	MP3B	Mx	.015	6
13	MP3C	X	0	2
14	MP3C	Z	-20.54	2
15	MP3C	Mx	-.019	2
16	MP3C	X	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	-20.54	6
18	MP3C	Mx	-.019	6
19	MP3A	X	0	2
20	MP3A	Z	-29.443	2
21	MP3A	Mx	-.017	2
22	MP3A	X	0	6
23	MP3A	Z	-29.443	6
24	MP3A	Mx	-.017	6
25	MP3B	X	0	2
26	MP3B	Z	-20.54	2
27	MP3B	Mx	.019	2
28	MP3B	X	0	6
29	MP3B	Z	-20.54	6
30	MP3B	Mx	.019	6
31	MP3C	X	0	2
32	MP3C	Z	-20.54	2
33	MP3C	Mx	-.015	2
34	MP3C	X	0	6
35	MP3C	Z	-20.54	6
36	MP3C	Mx	-.015	6
37	MP2A	X	0	4
38	MP2A	Z	-7.488	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	-2.324	4
42	MP2B	Mx	.000572	4
43	MP2C	X	0	4
44	MP2C	Z	-2.324	4
45	MP2C	Mx	-.000572	4
46	MP1A	X	0	3
47	MP1A	Z	-17.355	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	-17.355	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	-7.661	3
54	MP1B	Mx	.006	3
55	MP1B	X	0	5
56	MP1B	Z	-7.661	5
57	MP1B	Mx	.006	5
58	MP1C	X	0	3
59	MP1C	Z	-7.661	3
60	MP1C	Mx	-.006	3
61	MP1C	X	0	5
62	MP1C	Z	-7.661	5
63	MP1C	Mx	-.006	5
64	MP3A	X	0	2.5
65	MP3A	Z	-14.585	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	-11.239	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP3B	Mx	-.005	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	-11.239	2.5
72	MP3C	Mx	.005	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	-14.585	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	-9.968	2.5
78	MP4B	Mx	-.004	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	-9.968	2.5
81	MP4C	Mx	.004	2.5
82	OVP	X	0	1
83	OVP	Z	-29.282	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	13.574	2
2	MP3A	Z	-23.511	2
3	MP3A	Mx	.002	2
4	MP3A	X	13.574	6
5	MP3A	Z	-23.511	6
6	MP3A	Mx	.002	6
7	MP3B	X	10.669	2
8	MP3B	Z	-18.479	2
9	MP3B	Mx	.021	2
10	MP3B	X	10.669	6
11	MP3B	Z	-18.479	6
12	MP3B	Mx	.021	6
13	MP3C	X	12.028	2
14	MP3C	Z	-20.833	2
15	MP3C	Mx	-.024	2
16	MP3C	X	12.028	6
17	MP3C	Z	-20.833	6
18	MP3C	Mx	-.024	6
19	MP3A	X	13.574	2
20	MP3A	Z	-23.511	2
21	MP3A	Mx	-.025	2
22	MP3A	X	13.574	6
23	MP3A	Z	-23.511	6
24	MP3A	Mx	-.025	6
25	MP3B	X	10.669	2
26	MP3B	Z	-18.479	2
27	MP3B	Mx	.012	2
28	MP3B	X	10.669	6
29	MP3B	Z	-18.479	6
30	MP3B	Mx	.012	6
31	MP3C	X	12.028	2
32	MP3C	Z	-20.833	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	-.006	2
34	MP3C	X	12.028	6
35	MP3C	Z	-20.833	6
36	MP3C	Mx	-.006	6
37	MP2A	X	3.078	4
38	MP2A	Z	-5.332	4
39	MP2A	Mx	-.00077	4
40	MP2B	X	1.393	4
41	MP2B	Z	-2.413	4
42	MP2B	Mx	.000655	4
43	MP2C	X	2.182	4
44	MP2C	Z	-3.779	4
45	MP2C	Mx	-.000836	4
46	MP1A	X	7.428	3
47	MP1A	Z	-12.866	3
48	MP1A	Mx	-.006	3
49	MP1A	X	7.428	5
50	MP1A	Z	-12.866	5
51	MP1A	Mx	-.006	5
52	MP1B	X	4.264	3
53	MP1B	Z	-7.386	3
54	MP1B	Mx	.007	3
55	MP1B	X	4.264	5
56	MP1B	Z	-7.386	5
57	MP1B	Mx	.007	5
58	MP1C	X	5.745	3
59	MP1C	Z	-9.95	3
60	MP1C	Mx	-.007	3
61	MP1C	X	5.745	5
62	MP1C	Z	-9.95	5
63	MP1C	Mx	-.007	5
64	MP3A	X	6.735	2.5
65	MP3A	Z	-11.665	2.5
66	MP3A	Mx	.003	2.5
67	MP3B	X	5.062	2.5
68	MP3B	Z	-8.768	2.5
69	MP3B	Mx	-.005	2.5
70	MP3C	X	6.735	2.5
71	MP3C	Z	-11.665	2.5
72	MP3C	Mx	.003	2.5
73	MP4A	X	6.523	2.5
74	MP4A	Z	-11.298	2.5
75	MP4A	Mx	.003	2.5
76	MP4B	X	4.214	2.5
77	MP4B	Z	-7.3	2.5
78	MP4B	Mx	-.004	2.5
79	MP4C	X	6.523	2.5
80	MP4C	Z	-11.298	2.5
81	MP4C	Mx	.003	2.5
82	OVP	X	13.095	1
83	OVP	Z	-22.682	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	19.536	2
2	MP3A	Z	-11.279	2
3	MP3A	Mx	-.01	2
4	MP3A	X	19.536	6
5	MP3A	Z	-11.279	6
6	MP3A	Mx	-.01	6
7	MP3B	X	22.214	2
8	MP3B	Z	-12.825	2
9	MP3B	Mx	.025	2
10	MP3B	X	22.214	6
11	MP3B	Z	-12.825	6
12	MP3B	Mx	.025	6
13	MP3C	X	24.569	2
14	MP3C	Z	-14.185	2
15	MP3C	Mx	-.024	2
16	MP3C	X	24.569	6
17	MP3C	Z	-14.185	6
18	MP3C	Mx	-.024	6
19	MP3A	X	19.536	2
20	MP3A	Z	-11.279	2
21	MP3A	Mx	-.023	2
22	MP3A	X	19.536	6
23	MP3A	Z	-11.279	6
24	MP3A	Mx	-.023	6
25	MP3B	X	22.214	2
26	MP3B	Z	-12.825	2
27	MP3B	Mx	.002	2
28	MP3B	X	22.214	6
29	MP3B	Z	-12.825	6
30	MP3B	Mx	.002	6
31	MP3C	X	24.569	2
32	MP3C	Z	-14.185	2
33	MP3C	Mx	.007	2
34	MP3C	X	24.569	6
35	MP3C	Z	-14.185	6
36	MP3C	Mx	.007	6
37	MP2A	X	3.026	4
38	MP2A	Z	-1.747	4
39	MP2A	Mx	-.000756	4
40	MP2B	X	4.579	4
41	MP2B	Z	-2.644	4
42	MP2B	Mx	.00085	4
43	MP2C	X	5.945	4
44	MP2C	Z	-3.432	4
45	MP2C	Mx	-.000587	4
46	MP1A	X	8.538	3
47	MP1A	Z	-4.929	3
48	MP1A	Mx	-.007	3
49	MP1A	X	8.538	5
50	MP1A	Z	-4.929	5
51	MP1A	Mx	-.007	5
52	MP1B	X	11.453	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	-6.613	3
54	MP1B	Mx	.007	3
55	MP1B	X	11.453	5
56	MP1B	Z	-6.613	5
57	MP1B	Mx	.007	5
58	MP1C	X	14.017	3
59	MP1C	Z	-8.093	3
60	MP1C	Mx	-.005	3
61	MP1C	X	14.017	5
62	MP1C	Z	-8.093	5
63	MP1C	Mx	-.005	5
64	MP3A	X	9.733	2.5
65	MP3A	Z	-5.62	2.5
66	MP3A	Mx	.005	2.5
67	MP3B	X	9.733	2.5
68	MP3B	Z	-5.62	2.5
69	MP3B	Mx	-.005	2.5
70	MP3C	X	12.631	2.5
71	MP3C	Z	-7.292	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	8.632	2.5
74	MP4A	Z	-4.984	2.5
75	MP4A	Mx	.004	2.5
76	MP4B	X	8.632	2.5
77	MP4B	Z	-4.984	2.5
78	MP4B	Mx	-.004	2.5
79	MP4C	X	12.631	2.5
80	MP4C	Z	-7.292	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	20.499	1
83	OVP	Z	-11.835	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	20.264	2
2	MP3A	Z	0	2
3	MP3A	Mx	-.017	2
4	MP3A	X	20.264	6
5	MP3A	Z	0	6
6	MP3A	Mx	-.017	6
7	MP3B	X	29.166	2
8	MP3B	Z	0	2
9	MP3B	Mx	.021	2
10	MP3B	X	29.166	6
11	MP3B	Z	0	6
12	MP3B	Mx	.021	6
13	MP3C	X	29.166	2
14	MP3C	Z	0	2
15	MP3C	Mx	-.013	2
16	MP3C	X	29.166	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	0	6
18	MP3C	Mx	-.013	6
19	MP3A	X	20.264	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.017	2
22	MP3A	X	20.264	6
23	MP3A	Z	0	6
24	MP3A	Mx	-.017	6
25	MP3B	X	29.166	2
26	MP3B	Z	0	2
27	MP3B	Mx	-.013	2
28	MP3B	X	29.166	6
29	MP3B	Z	0	6
30	MP3B	Mx	-.013	6
31	MP3C	X	29.166	2
32	MP3C	Z	0	2
33	MP3C	Mx	.021	2
34	MP3C	X	29.166	6
35	MP3C	Z	0	6
36	MP3C	Mx	.021	6
37	MP2A	X	2.163	4
38	MP2A	Z	0	4
39	MP2A	Mx	-.000541	4
40	MP2B	X	7.327	4
41	MP2B	Z	0	4
42	MP2B	Mx	.000318	4
43	MP2C	X	7.327	4
44	MP2C	Z	0	4
45	MP2C	Mx	.000318	4
46	MP1A	X	7.36	3
47	MP1A	Z	0	3
48	MP1A	Mx	-.006	3
49	MP1A	X	7.36	5
50	MP1A	Z	0	5
51	MP1A	Mx	-.006	5
52	MP1B	X	17.054	3
53	MP1B	Z	0	3
54	MP1B	Mx	.002	3
55	MP1B	X	17.054	5
56	MP1B	Z	0	5
57	MP1B	Mx	.002	5
58	MP1C	X	17.054	3
59	MP1C	Z	0	3
60	MP1C	Mx	.002	3
61	MP1C	X	17.054	5
62	MP1C	Z	0	5
63	MP1C	Mx	.002	5
64	MP3A	X	10.124	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	.005	2.5
67	MP3B	X	13.47	2.5
68	MP3B	Z	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP3B	Mx	-.003	2.5
70	MP3C	X	13.47	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	-.003	2.5
73	MP4A	X	8.429	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	.004	2.5
76	MP4B	X	13.046	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	-.003	2.5
79	MP4C	X	13.046	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	-.003	2.5
82	OVP	X	24.242	1
83	OVP	Z	0	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	19.536	2
2	MP3A	Z	11.279	2
3	MP3A	Mx	-.023	2
4	MP3A	X	19.536	6
5	MP3A	Z	11.279	6
6	MP3A	Mx	-.023	6
7	MP3B	X	24.569	2
8	MP3B	Z	14.185	2
9	MP3B	Mx	.007	2
10	MP3B	X	24.569	6
11	MP3B	Z	14.185	6
12	MP3B	Mx	.007	6
13	MP3C	X	22.214	2
14	MP3C	Z	12.825	2
15	MP3C	Mx	.002	2
16	MP3C	X	22.214	6
17	MP3C	Z	12.825	6
18	MP3C	Mx	.002	6
19	MP3A	X	19.536	2
20	MP3A	Z	11.279	2
21	MP3A	Mx	-.01	2
22	MP3A	X	19.536	6
23	MP3A	Z	11.279	6
24	MP3A	Mx	-.01	6
25	MP3B	X	24.569	2
26	MP3B	Z	14.185	2
27	MP3B	Mx	-.024	2
28	MP3B	X	24.569	6
29	MP3B	Z	14.185	6
30	MP3B	Mx	-.024	6
31	MP3C	X	22.214	2
32	MP3C	Z	12.825	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	.025	2
34	MP3C	X	22.214	6
35	MP3C	Z	12.825	6
36	MP3C	Mx	.025	6
37	MP2A	X	3.026	4
38	MP2A	Z	1.747	4
39	MP2A	Mx	-.000756	4
40	MP2B	X	5.945	4
41	MP2B	Z	3.432	4
42	MP2B	Mx	-.000587	4
43	MP2C	X	4.579	4
44	MP2C	Z	2.644	4
45	MP2C	Mx	.00085	4
46	MP1A	X	8.538	3
47	MP1A	Z	4.929	3
48	MP1A	Mx	-.007	3
49	MP1A	X	8.538	5
50	MP1A	Z	4.929	5
51	MP1A	Mx	-.007	5
52	MP1B	X	14.017	3
53	MP1B	Z	8.093	3
54	MP1B	Mx	-.005	3
55	MP1B	X	14.017	5
56	MP1B	Z	8.093	5
57	MP1B	Mx	-.005	5
58	MP1C	X	11.453	3
59	MP1C	Z	6.613	3
60	MP1C	Mx	.007	3
61	MP1C	X	11.453	5
62	MP1C	Z	6.613	5
63	MP1C	Mx	.007	5
64	MP3A	X	9.733	2.5
65	MP3A	Z	5.62	2.5
66	MP3A	Mx	.005	2.5
67	MP3B	X	12.631	2.5
68	MP3B	Z	7.292	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	9.733	2.5
71	MP3C	Z	5.62	2.5
72	MP3C	Mx	-.005	2.5
73	MP4A	X	8.632	2.5
74	MP4A	Z	4.984	2.5
75	MP4A	Mx	.004	2.5
76	MP4B	X	12.631	2.5
77	MP4B	Z	7.292	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	8.632	2.5
80	MP4C	Z	4.984	2.5
81	MP4C	Mx	-.004	2.5
82	OVP	X	23.671	1
83	OVP	Z	13.667	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	13.574	2
2	MP3A	Z	23.511	2
3	MP3A	Mx	-.025	2
4	MP3A	X	13.574	6
5	MP3A	Z	23.511	6
6	MP3A	Mx	-.025	6
7	MP3B	X	12.028	2
8	MP3B	Z	20.833	2
9	MP3B	Mx	-.006	2
10	MP3B	X	12.028	6
11	MP3B	Z	20.833	6
12	MP3B	Mx	-.006	6
13	MP3C	X	10.669	2
14	MP3C	Z	18.479	2
15	MP3C	Mx	.012	2
16	MP3C	X	10.669	6
17	MP3C	Z	18.479	6
18	MP3C	Mx	.012	6
19	MP3A	X	13.574	2
20	MP3A	Z	23.511	2
21	MP3A	Mx	.002	2
22	MP3A	X	13.574	6
23	MP3A	Z	23.511	6
24	MP3A	Mx	.002	6
25	MP3B	X	12.028	2
26	MP3B	Z	20.833	2
27	MP3B	Mx	-.024	2
28	MP3B	X	12.028	6
29	MP3B	Z	20.833	6
30	MP3B	Mx	-.024	6
31	MP3C	X	10.669	2
32	MP3C	Z	18.479	2
33	MP3C	Mx	.021	2
34	MP3C	X	10.669	6
35	MP3C	Z	18.479	6
36	MP3C	Mx	.021	6
37	MP2A	X	3.078	4
38	MP2A	Z	5.332	4
39	MP2A	Mx	-.00077	4
40	MP2B	X	2.182	4
41	MP2B	Z	3.779	4
42	MP2B	Mx	-.000836	4
43	MP2C	X	1.393	4
44	MP2C	Z	2.413	4
45	MP2C	Mx	.000655	4
46	MP1A	X	7.428	3
47	MP1A	Z	12.866	3
48	MP1A	Mx	-.006	3
49	MP1A	X	7.428	5
50	MP1A	Z	12.866	5
51	MP1A	Mx	-.006	5
52	MP1B	X	5.745	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	9.95	3
54	MP1B	Mx	-.007	3
55	MP1B	X	5.745	5
56	MP1B	Z	9.95	5
57	MP1B	Mx	-.007	5
58	MP1C	X	4.264	3
59	MP1C	Z	7.386	3
60	MP1C	Mx	.007	3
61	MP1C	X	4.264	5
62	MP1C	Z	7.386	5
63	MP1C	Mx	.007	5
64	MP3A	X	6.735	2.5
65	MP3A	Z	11.665	2.5
66	MP3A	Mx	.003	2.5
67	MP3B	X	6.735	2.5
68	MP3B	Z	11.665	2.5
69	MP3B	Mx	.003	2.5
70	MP3C	X	5.062	2.5
71	MP3C	Z	8.768	2.5
72	MP3C	Mx	-.005	2.5
73	MP4A	X	6.523	2.5
74	MP4A	Z	11.298	2.5
75	MP4A	Mx	.003	2.5
76	MP4B	X	6.523	2.5
77	MP4B	Z	11.298	2.5
78	MP4B	Mx	.003	2.5
79	MP4C	X	4.214	2.5
80	MP4C	Z	7.3	2.5
81	MP4C	Mx	-.004	2.5
82	OVP	X	14.926	1
83	OVP	Z	25.853	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	29.443	2
3	MP3A	Mx	-.017	2
4	MP3A	X	0	6
5	MP3A	Z	29.443	6
6	MP3A	Mx	-.017	6
7	MP3B	X	0	2
8	MP3B	Z	20.54	2
9	MP3B	Mx	-.015	2
10	MP3B	X	0	6
11	MP3B	Z	20.54	6
12	MP3B	Mx	-.015	6
13	MP3C	X	0	2
14	MP3C	Z	20.54	2
15	MP3C	Mx	.019	2
16	MP3C	X	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	20.54	6
18	MP3C	Mx	.019	6
19	MP3A	X	0	2
20	MP3A	Z	29.443	2
21	MP3A	Mx	.017	2
22	MP3A	X	0	6
23	MP3A	Z	29.443	6
24	MP3A	Mx	.017	6
25	MP3B	X	0	2
26	MP3B	Z	20.54	2
27	MP3B	Mx	-.019	2
28	MP3B	X	0	6
29	MP3B	Z	20.54	6
30	MP3B	Mx	-.019	6
31	MP3C	X	0	2
32	MP3C	Z	20.54	2
33	MP3C	Mx	.015	2
34	MP3C	X	0	6
35	MP3C	Z	20.54	6
36	MP3C	Mx	.015	6
37	MP2A	X	0	4
38	MP2A	Z	7.488	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	2.324	4
42	MP2B	Mx	-.000572	4
43	MP2C	X	0	4
44	MP2C	Z	2.324	4
45	MP2C	Mx	.000572	4
46	MP1A	X	0	3
47	MP1A	Z	17.355	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	17.355	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	7.661	3
54	MP1B	Mx	-.006	3
55	MP1B	X	0	5
56	MP1B	Z	7.661	5
57	MP1B	Mx	-.006	5
58	MP1C	X	0	3
59	MP1C	Z	7.661	3
60	MP1C	Mx	.006	3
61	MP1C	X	0	5
62	MP1C	Z	7.661	5
63	MP1C	Mx	.006	5
64	MP3A	X	0	2.5
65	MP3A	Z	14.585	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	11.239	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP3B	Mx	.005	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	11.239	2.5
72	MP3C	Mx	-.005	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	14.585	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	9.968	2.5
78	MP4B	Mx	.004	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	9.968	2.5
81	MP4C	Mx	-.004	2.5
82	OVP	X	0	1
83	OVP	Z	29.282	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-13.574	2
2	MP3A	Z	23.511	2
3	MP3A	Mx	-.002	2
4	MP3A	X	-13.574	6
5	MP3A	Z	23.511	6
6	MP3A	Mx	-.002	6
7	MP3B	X	-10.669	2
8	MP3B	Z	18.479	2
9	MP3B	Mx	-.021	2
10	MP3B	X	-10.669	6
11	MP3B	Z	18.479	6
12	MP3B	Mx	-.021	6
13	MP3C	X	-12.028	2
14	MP3C	Z	20.833	2
15	MP3C	Mx	.024	2
16	MP3C	X	-12.028	6
17	MP3C	Z	20.833	6
18	MP3C	Mx	.024	6
19	MP3A	X	-13.574	2
20	MP3A	Z	23.511	2
21	MP3A	Mx	.025	2
22	MP3A	X	-13.574	6
23	MP3A	Z	23.511	6
24	MP3A	Mx	.025	6
25	MP3B	X	-10.669	2
26	MP3B	Z	18.479	2
27	MP3B	Mx	-.012	2
28	MP3B	X	-10.669	6
29	MP3B	Z	18.479	6
30	MP3B	Mx	-.012	6
31	MP3C	X	-12.028	2
32	MP3C	Z	20.833	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	.006	2
34	MP3C	X	-12.028	6
35	MP3C	Z	20.833	6
36	MP3C	Mx	.006	6
37	MP2A	X	-3.078	4
38	MP2A	Z	5.332	4
39	MP2A	Mx	.00077	4
40	MP2B	X	-1.393	4
41	MP2B	Z	2.413	4
42	MP2B	Mx	-.000655	4
43	MP2C	X	-2.182	4
44	MP2C	Z	3.779	4
45	MP2C	Mx	.000836	4
46	MP1A	X	-7.428	3
47	MP1A	Z	12.866	3
48	MP1A	Mx	.006	3
49	MP1A	X	-7.428	5
50	MP1A	Z	12.866	5
51	MP1A	Mx	.006	5
52	MP1B	X	-4.264	3
53	MP1B	Z	7.386	3
54	MP1B	Mx	-.007	3
55	MP1B	X	-4.264	5
56	MP1B	Z	7.386	5
57	MP1B	Mx	-.007	5
58	MP1C	X	-5.745	3
59	MP1C	Z	9.95	3
60	MP1C	Mx	.007	3
61	MP1C	X	-5.745	5
62	MP1C	Z	9.95	5
63	MP1C	Mx	.007	5
64	MP3A	X	-6.735	2.5
65	MP3A	Z	11.665	2.5
66	MP3A	Mx	-.003	2.5
67	MP3B	X	-5.062	2.5
68	MP3B	Z	8.768	2.5
69	MP3B	Mx	.005	2.5
70	MP3C	X	-6.735	2.5
71	MP3C	Z	11.665	2.5
72	MP3C	Mx	-.003	2.5
73	MP4A	X	-6.523	2.5
74	MP4A	Z	11.298	2.5
75	MP4A	Mx	-.003	2.5
76	MP4B	X	-4.214	2.5
77	MP4B	Z	7.3	2.5
78	MP4B	Mx	.004	2.5
79	MP4C	X	-6.523	2.5
80	MP4C	Z	11.298	2.5
81	MP4C	Mx	-.003	2.5
82	OVP	X	-13.095	1
83	OVP	Z	22.682	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-19.536	2
2	MP3A	Z	11.279	2
3	MP3A	Mx	.01	2
4	MP3A	X	-19.536	6
5	MP3A	Z	11.279	6
6	MP3A	Mx	.01	6
7	MP3B	X	-22.214	2
8	MP3B	Z	12.825	2
9	MP3B	Mx	-.025	2
10	MP3B	X	-22.214	6
11	MP3B	Z	12.825	6
12	MP3B	Mx	-.025	6
13	MP3C	X	-24.569	2
14	MP3C	Z	14.185	2
15	MP3C	Mx	.024	2
16	MP3C	X	-24.569	6
17	MP3C	Z	14.185	6
18	MP3C	Mx	.024	6
19	MP3A	X	-19.536	2
20	MP3A	Z	11.279	2
21	MP3A	Mx	.023	2
22	MP3A	X	-19.536	6
23	MP3A	Z	11.279	6
24	MP3A	Mx	.023	6
25	MP3B	X	-22.214	2
26	MP3B	Z	12.825	2
27	MP3B	Mx	-.002	2
28	MP3B	X	-22.214	6
29	MP3B	Z	12.825	6
30	MP3B	Mx	-.002	6
31	MP3C	X	-24.569	2
32	MP3C	Z	14.185	2
33	MP3C	Mx	-.007	2
34	MP3C	X	-24.569	6
35	MP3C	Z	14.185	6
36	MP3C	Mx	-.007	6
37	MP2A	X	-3.026	4
38	MP2A	Z	1.747	4
39	MP2A	Mx	.000756	4
40	MP2B	X	-4.579	4
41	MP2B	Z	2.644	4
42	MP2B	Mx	-.00085	4
43	MP2C	X	-5.945	4
44	MP2C	Z	3.432	4
45	MP2C	Mx	.000587	4
46	MP1A	X	-8.538	3
47	MP1A	Z	4.929	3
48	MP1A	Mx	.007	3
49	MP1A	X	-8.538	5
50	MP1A	Z	4.929	5
51	MP1A	Mx	.007	5
52	MP1B	X	-11.453	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	6.613	3
54	MP1B	Mx	-.007	3
55	MP1B	X	-11.453	5
56	MP1B	Z	6.613	5
57	MP1B	Mx	-.007	5
58	MP1C	X	-14.017	3
59	MP1C	Z	8.093	3
60	MP1C	Mx	.005	3
61	MP1C	X	-14.017	5
62	MP1C	Z	8.093	5
63	MP1C	Mx	.005	5
64	MP3A	X	-9.733	2.5
65	MP3A	Z	5.62	2.5
66	MP3A	Mx	-.005	2.5
67	MP3B	X	-9.733	2.5
68	MP3B	Z	5.62	2.5
69	MP3B	Mx	.005	2.5
70	MP3C	X	-12.631	2.5
71	MP3C	Z	7.292	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	-8.632	2.5
74	MP4A	Z	4.984	2.5
75	MP4A	Mx	-.004	2.5
76	MP4B	X	-8.632	2.5
77	MP4B	Z	4.984	2.5
78	MP4B	Mx	.004	2.5
79	MP4C	X	-12.631	2.5
80	MP4C	Z	7.292	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	-20.499	1
83	OVP	Z	11.835	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-20.264	2
2	MP3A	Z	0	2
3	MP3A	Mx	.017	2
4	MP3A	X	-20.264	6
5	MP3A	Z	0	6
6	MP3A	Mx	.017	6
7	MP3B	X	-29.166	2
8	MP3B	Z	0	2
9	MP3B	Mx	-.021	2
10	MP3B	X	-29.166	6
11	MP3B	Z	0	6
12	MP3B	Mx	-.021	6
13	MP3C	X	-29.166	2
14	MP3C	Z	0	2
15	MP3C	Mx	.013	2
16	MP3C	X	-29.166	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	0	6
18	MP3C	Mx	.013	6
19	MP3A	X	-20.264	2
20	MP3A	Z	0	2
21	MP3A	Mx	.017	2
22	MP3A	X	-20.264	6
23	MP3A	Z	0	6
24	MP3A	Mx	.017	6
25	MP3B	X	-29.166	2
26	MP3B	Z	0	2
27	MP3B	Mx	.013	2
28	MP3B	X	-29.166	6
29	MP3B	Z	0	6
30	MP3B	Mx	.013	6
31	MP3C	X	-29.166	2
32	MP3C	Z	0	2
33	MP3C	Mx	-.021	2
34	MP3C	X	-29.166	6
35	MP3C	Z	0	6
36	MP3C	Mx	-.021	6
37	MP2A	X	-2.163	4
38	MP2A	Z	0	4
39	MP2A	Mx	.000541	4
40	MP2B	X	-7.327	4
41	MP2B	Z	0	4
42	MP2B	Mx	-.000318	4
43	MP2C	X	-7.327	4
44	MP2C	Z	0	4
45	MP2C	Mx	-.000318	4
46	MP1A	X	-7.36	3
47	MP1A	Z	0	3
48	MP1A	Mx	.006	3
49	MP1A	X	-7.36	5
50	MP1A	Z	0	5
51	MP1A	Mx	.006	5
52	MP1B	X	-17.054	3
53	MP1B	Z	0	3
54	MP1B	Mx	-.002	3
55	MP1B	X	-17.054	5
56	MP1B	Z	0	5
57	MP1B	Mx	-.002	5
58	MP1C	X	-17.054	3
59	MP1C	Z	0	3
60	MP1C	Mx	-.002	3
61	MP1C	X	-17.054	5
62	MP1C	Z	0	5
63	MP1C	Mx	-.002	5
64	MP3A	X	-10.124	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	-.005	2.5
67	MP3B	X	-13.47	2.5
68	MP3B	Z	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP3B	Mx	.003	2.5
70	MP3C	X	-13.47	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	.003	2.5
73	MP4A	X	-8.429	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	-.004	2.5
76	MP4B	X	-13.046	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	.003	2.5
79	MP4C	X	-13.046	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	.003	2.5
82	OVP	X	-24.242	1
83	OVP	Z	0	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-19.536	2
2	MP3A	Z	-11.279	2
3	MP3A	Mx	.023	2
4	MP3A	X	-19.536	6
5	MP3A	Z	-11.279	6
6	MP3A	Mx	.023	6
7	MP3B	X	-24.569	2
8	MP3B	Z	-14.185	2
9	MP3B	Mx	-.007	2
10	MP3B	X	-24.569	6
11	MP3B	Z	-14.185	6
12	MP3B	Mx	-.007	6
13	MP3C	X	-22.214	2
14	MP3C	Z	-12.825	2
15	MP3C	Mx	-.002	2
16	MP3C	X	-22.214	6
17	MP3C	Z	-12.825	6
18	MP3C	Mx	-.002	6
19	MP3A	X	-19.536	2
20	MP3A	Z	-11.279	2
21	MP3A	Mx	.01	2
22	MP3A	X	-19.536	6
23	MP3A	Z	-11.279	6
24	MP3A	Mx	.01	6
25	MP3B	X	-24.569	2
26	MP3B	Z	-14.185	2
27	MP3B	Mx	.024	2
28	MP3B	X	-24.569	6
29	MP3B	Z	-14.185	6
30	MP3B	Mx	.024	6
31	MP3C	X	-22.214	2
32	MP3C	Z	-12.825	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	-.025	2
34	MP3C	X	-22.214	6
35	MP3C	Z	-12.825	6
36	MP3C	Mx	-.025	6
37	MP2A	X	-3.026	4
38	MP2A	Z	-1.747	4
39	MP2A	Mx	.000756	4
40	MP2B	X	-5.945	4
41	MP2B	Z	-3.432	4
42	MP2B	Mx	.000587	4
43	MP2C	X	-4.579	4
44	MP2C	Z	-2.644	4
45	MP2C	Mx	-.00085	4
46	MP1A	X	-8.538	3
47	MP1A	Z	-4.929	3
48	MP1A	Mx	.007	3
49	MP1A	X	-8.538	5
50	MP1A	Z	-4.929	5
51	MP1A	Mx	.007	5
52	MP1B	X	-14.017	3
53	MP1B	Z	-8.093	3
54	MP1B	Mx	.005	3
55	MP1B	X	-14.017	5
56	MP1B	Z	-8.093	5
57	MP1B	Mx	.005	5
58	MP1C	X	-11.453	3
59	MP1C	Z	-6.613	3
60	MP1C	Mx	-.007	3
61	MP1C	X	-11.453	5
62	MP1C	Z	-6.613	5
63	MP1C	Mx	-.007	5
64	MP3A	X	-9.733	2.5
65	MP3A	Z	-5.62	2.5
66	MP3A	Mx	-.005	2.5
67	MP3B	X	-12.631	2.5
68	MP3B	Z	-7.292	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	-9.733	2.5
71	MP3C	Z	-5.62	2.5
72	MP3C	Mx	.005	2.5
73	MP4A	X	-8.632	2.5
74	MP4A	Z	-4.984	2.5
75	MP4A	Mx	-.004	2.5
76	MP4B	X	-12.631	2.5
77	MP4B	Z	-7.292	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	-8.632	2.5
80	MP4C	Z	-4.984	2.5
81	MP4C	Mx	.004	2.5
82	OVP	X	-23.671	1
83	OVP	Z	-13.667	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-13.574	2
2	MP3A	Z	-23.511	2
3	MP3A	Mx	.025	2
4	MP3A	X	-13.574	6
5	MP3A	Z	-23.511	6
6	MP3A	Mx	.025	6
7	MP3B	X	-12.028	2
8	MP3B	Z	-20.833	2
9	MP3B	Mx	.006	2
10	MP3B	X	-12.028	6
11	MP3B	Z	-20.833	6
12	MP3B	Mx	.006	6
13	MP3C	X	-10.669	2
14	MP3C	Z	-18.479	2
15	MP3C	Mx	-.012	2
16	MP3C	X	-10.669	6
17	MP3C	Z	-18.479	6
18	MP3C	Mx	-.012	6
19	MP3A	X	-13.574	2
20	MP3A	Z	-23.511	2
21	MP3A	Mx	-.002	2
22	MP3A	X	-13.574	6
23	MP3A	Z	-23.511	6
24	MP3A	Mx	-.002	6
25	MP3B	X	-12.028	2
26	MP3B	Z	-20.833	2
27	MP3B	Mx	.024	2
28	MP3B	X	-12.028	6
29	MP3B	Z	-20.833	6
30	MP3B	Mx	.024	6
31	MP3C	X	-10.669	2
32	MP3C	Z	-18.479	2
33	MP3C	Mx	-.021	2
34	MP3C	X	-10.669	6
35	MP3C	Z	-18.479	6
36	MP3C	Mx	-.021	6
37	MP2A	X	-3.078	4
38	MP2A	Z	-5.332	4
39	MP2A	Mx	.00077	4
40	MP2B	X	-2.182	4
41	MP2B	Z	-3.779	4
42	MP2B	Mx	.000836	4
43	MP2C	X	-1.393	4
44	MP2C	Z	-2.413	4
45	MP2C	Mx	-.000655	4
46	MP1A	X	-7.428	3
47	MP1A	Z	-12.866	3
48	MP1A	Mx	.006	3
49	MP1A	X	-7.428	5
50	MP1A	Z	-12.866	5
51	MP1A	Mx	.006	5
52	MP1B	X	-5.745	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	-9.95	3
54	MP1B	Mx	.007	3
55	MP1B	X	-5.745	5
56	MP1B	Z	-9.95	5
57	MP1B	Mx	.007	5
58	MP1C	X	-4.264	3
59	MP1C	Z	-7.386	3
60	MP1C	Mx	-.007	3
61	MP1C	X	-4.264	5
62	MP1C	Z	-7.386	5
63	MP1C	Mx	-.007	5
64	MP3A	X	-6.735	2.5
65	MP3A	Z	-11.665	2.5
66	MP3A	Mx	-.003	2.5
67	MP3B	X	-6.735	2.5
68	MP3B	Z	-11.665	2.5
69	MP3B	Mx	-.003	2.5
70	MP3C	X	-5.062	2.5
71	MP3C	Z	-8.768	2.5
72	MP3C	Mx	.005	2.5
73	MP4A	X	-6.523	2.5
74	MP4A	Z	-11.298	2.5
75	MP4A	Mx	-.003	2.5
76	MP4B	X	-6.523	2.5
77	MP4B	Z	-11.298	2.5
78	MP4B	Mx	-.003	2.5
79	MP4C	X	-4.214	2.5
80	MP4C	Z	-7.3	2.5
81	MP4C	Mx	.004	2.5
82	OVP	X	-14.926	1
83	OVP	Z	-25.853	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	-9.661	2
3	MP3A	Mx	.006	2
4	MP3A	X	0	6
5	MP3A	Z	-9.661	6
6	MP3A	Mx	.006	6
7	MP3B	X	0	2
8	MP3B	Z	-6.488	2
9	MP3B	Mx	.005	2
10	MP3B	X	0	6
11	MP3B	Z	-6.488	6
12	MP3B	Mx	.005	6
13	MP3C	X	0	2
14	MP3C	Z	-6.488	2
15	MP3C	Mx	-.006	2
16	MP3C	X	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	-6.488	6
18	MP3C	Mx	-.006	6
19	MP3A	X	0	2
20	MP3A	Z	-9.661	2
21	MP3A	Mx	-.006	2
22	MP3A	X	0	6
23	MP3A	Z	-9.661	6
24	MP3A	Mx	-.006	6
25	MP3B	X	0	2
26	MP3B	Z	-6.488	2
27	MP3B	Mx	.006	2
28	MP3B	X	0	6
29	MP3B	Z	-6.488	6
30	MP3B	Mx	.006	6
31	MP3C	X	0	2
32	MP3C	Z	-6.488	2
33	MP3C	Mx	-.005	2
34	MP3C	X	0	6
35	MP3C	Z	-6.488	6
36	MP3C	Mx	-.005	6
37	MP2A	X	0	4
38	MP2A	Z	-2.107	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	-.464	4
42	MP2B	Mx	.000114	4
43	MP2C	X	0	4
44	MP2C	Z	-.464	4
45	MP2C	Mx	-.000114	4
46	MP1A	X	0	3
47	MP1A	Z	-5.565	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	-5.565	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	-2.281	3
54	MP1B	Mx	.002	3
55	MP1B	X	0	5
56	MP1B	Z	-2.281	5
57	MP1B	Mx	.002	5
58	MP1C	X	0	3
59	MP1C	Z	-2.281	3
60	MP1C	Mx	-.002	3
61	MP1C	X	0	5
62	MP1C	Z	-2.281	5
63	MP1C	Mx	-.002	5
64	MP3A	X	0	2.5
65	MP3A	Z	-4.428	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	-3.327	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP3B	Mx	-.001	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	-3.327	2.5
72	MP3C	Mx	.001	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	-4.428	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	-2.905	2.5
78	MP4B	Mx	-.001	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	-2.905	2.5
81	MP4C	Mx	.001	2.5
82	OVP	X	0	1
83	OVP	Z	-9.347	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	4.422	2
2	MP3A	Z	-7.658	2
3	MP3A	Mx	.000782	2
4	MP3A	X	4.422	6
5	MP3A	Z	-7.658	6
6	MP3A	Mx	.000782	6
7	MP3B	X	3.386	2
8	MP3B	Z	-5.865	2
9	MP3B	Mx	.007	2
10	MP3B	X	3.386	6
11	MP3B	Z	-5.865	6
12	MP3B	Mx	.007	6
13	MP3C	X	3.87	2
14	MP3C	Z	-6.704	2
15	MP3C	Mx	-.008	2
16	MP3C	X	3.87	6
17	MP3C	Z	-6.704	6
18	MP3C	Mx	-.008	6
19	MP3A	X	4.422	2
20	MP3A	Z	-7.658	2
21	MP3A	Mx	-.008	2
22	MP3A	X	4.422	6
23	MP3A	Z	-7.658	6
24	MP3A	Mx	-.008	6
25	MP3B	X	3.386	2
26	MP3B	Z	-5.865	2
27	MP3B	Mx	.004	2
28	MP3B	X	3.386	6
29	MP3B	Z	-5.865	6
30	MP3B	Mx	.004	6
31	MP3C	X	3.87	2
32	MP3C	Z	-6.704	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	-.002	2
34	MP3C	X	3.87	6
35	MP3C	Z	-6.704	6
36	MP3C	Mx	-.002	6
37	MP2A	X	.842	4
38	MP2A	Z	-1.458	4
39	MP2A	Mx	-.00021	4
40	MP2B	X	.306	4
41	MP2B	Z	-.53	4
42	MP2B	Mx	.000144	4
43	MP2C	X	.557	4
44	MP2C	Z	-.964	4
45	MP2C	Mx	-.000213	4
46	MP1A	X	2.359	3
47	MP1A	Z	-4.086	3
48	MP1A	Mx	-.002	3
49	MP1A	X	2.359	5
50	MP1A	Z	-4.086	5
51	MP1A	Mx	-.002	5
52	MP1B	X	1.287	3
53	MP1B	Z	-2.23	3
54	MP1B	Mx	.002	3
55	MP1B	X	1.287	5
56	MP1B	Z	-2.23	5
57	MP1B	Mx	.002	5
58	MP1C	X	1.789	3
59	MP1C	Z	-3.098	3
60	MP1C	Mx	-.002	3
61	MP1C	X	1.789	5
62	MP1C	Z	-3.098	5
63	MP1C	Mx	-.002	5
64	MP3A	X	2.03	2.5
65	MP3A	Z	-3.517	2.5
66	MP3A	Mx	.001	2.5
67	MP3B	X	1.48	2.5
68	MP3B	Z	-2.563	2.5
69	MP3B	Mx	-.001	2.5
70	MP3C	X	2.03	2.5
71	MP3C	Z	-3.517	2.5
72	MP3C	Mx	.001	2.5
73	MP4A	X	1.96	2.5
74	MP4A	Z	-3.395	2.5
75	MP4A	Mx	.00098	2.5
76	MP4B	X	1.199	2.5
77	MP4B	Z	-2.076	2.5
78	MP4B	Mx	-.001	2.5
79	MP4C	X	1.96	2.5
80	MP4C	Z	-3.395	2.5
81	MP4C	Mx	.00098	2.5
82	OVP	X	4.138	1
83	OVP	Z	-7.168	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	6.241	2
2	MP3A	Z	-3.604	2
3	MP3A	Mx	-.003	2
4	MP3A	X	6.241	6
5	MP3A	Z	-3.604	6
6	MP3A	Mx	-.003	6
7	MP3B	X	7.196	2
8	MP3B	Z	-4.155	2
9	MP3B	Mx	.008	2
10	MP3B	X	7.196	6
11	MP3B	Z	-4.155	6
12	MP3B	Mx	.008	6
13	MP3C	X	8.035	2
14	MP3C	Z	-4.639	2
15	MP3C	Mx	-.008	2
16	MP3C	X	8.035	6
17	MP3C	Z	-4.639	6
18	MP3C	Mx	-.008	6
19	MP3A	X	6.241	2
20	MP3A	Z	-3.604	2
21	MP3A	Mx	-.007	2
22	MP3A	X	6.241	6
23	MP3A	Z	-3.604	6
24	MP3A	Mx	-.007	6
25	MP3B	X	7.196	2
26	MP3B	Z	-4.155	2
27	MP3B	Mx	.000738	2
28	MP3B	X	7.196	6
29	MP3B	Z	-4.155	6
30	MP3B	Mx	.000738	6
31	MP3C	X	8.035	2
32	MP3C	Z	-4.639	2
33	MP3C	Mx	.002	2
34	MP3C	X	8.035	6
35	MP3C	Z	-4.639	6
36	MP3C	Mx	.002	6
37	MP2A	X	.725	4
38	MP2A	Z	-.418	4
39	MP2A	Mx	-.000181	4
40	MP2B	X	1.219	4
41	MP2B	Z	-.704	4
42	MP2B	Mx	.000226	4
43	MP2C	X	1.653	4
44	MP2C	Z	-.955	4
45	MP2C	Mx	-.000163	4
46	MP1A	X	2.62	3
47	MP1A	Z	-1.513	3
48	MP1A	Mx	-.002	3
49	MP1A	X	2.62	5
50	MP1A	Z	-1.513	5
51	MP1A	Mx	-.002	5
52	MP1B	X	3.607	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	-2.083	3
54	MP1B	Mx	.002	3
55	MP1B	X	3.607	5
56	MP1B	Z	-2.083	5
57	MP1B	Mx	.002	5
58	MP1C	X	4.476	3
59	MP1C	Z	-2.584	3
60	MP1C	Mx	-.001	3
61	MP1C	X	4.476	5
62	MP1C	Z	-2.584	5
63	MP1C	Mx	-.001	5
64	MP3A	X	2.881	2.5
65	MP3A	Z	-1.663	2.5
66	MP3A	Mx	.001	2.5
67	MP3B	X	2.881	2.5
68	MP3B	Z	-1.663	2.5
69	MP3B	Mx	-.001	2.5
70	MP3C	X	3.835	2.5
71	MP3C	Z	-2.214	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	2.516	2.5
74	MP4A	Z	-1.453	2.5
75	MP4A	Mx	.001	2.5
76	MP4B	X	2.516	2.5
77	MP4B	Z	-1.453	2.5
78	MP4B	Mx	-.001	2.5
79	MP4C	X	3.835	2.5
80	MP4C	Z	-2.214	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	6.412	1
83	OVP	Z	-3.702	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	6.389	2
2	MP3A	Z	0	2
3	MP3A	Mx	-.005	2
4	MP3A	X	6.389	6
5	MP3A	Z	0	6
6	MP3A	Mx	-.005	6
7	MP3B	X	9.562	2
8	MP3B	Z	0	2
9	MP3B	Mx	.007	2
10	MP3B	X	9.562	6
11	MP3B	Z	0	6
12	MP3B	Mx	.007	6
13	MP3C	X	9.562	2
14	MP3C	Z	0	2
15	MP3C	Mx	-.004	2
16	MP3C	X	9.562	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	0	6
18	MP3C	Mx	-.004	6
19	MP3A	X	6.389	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.005	2
22	MP3A	X	6.389	6
23	MP3A	Z	0	6
24	MP3A	Mx	-.005	6
25	MP3B	X	9.562	2
26	MP3B	Z	0	2
27	MP3B	Mx	-.004	2
28	MP3B	X	9.562	6
29	MP3B	Z	0	6
30	MP3B	Mx	-.004	6
31	MP3C	X	9.562	2
32	MP3C	Z	0	2
33	MP3C	Mx	.007	2
34	MP3C	X	9.562	6
35	MP3C	Z	0	6
36	MP3C	Mx	.007	6
37	MP2A	X	.413	4
38	MP2A	Z	0	4
39	MP2A	Mx	-.000103	4
40	MP2B	X	2.056	4
41	MP2B	Z	0	4
42	MP2B	Mx	8.9e-5	4
43	MP2C	X	2.056	4
44	MP2C	Z	0	4
45	MP2C	Mx	8.9e-5	4
46	MP1A	X	2.179	3
47	MP1A	Z	0	3
48	MP1A	Mx	-.002	3
49	MP1A	X	2.179	5
50	MP1A	Z	0	5
51	MP1A	Mx	-.002	5
52	MP1B	X	5.463	3
53	MP1B	Z	0	3
54	MP1B	Mx	.000791	3
55	MP1B	X	5.463	5
56	MP1B	Z	0	5
57	MP1B	Mx	.000791	5
58	MP1C	X	5.463	3
59	MP1C	Z	0	3
60	MP1C	Mx	.000791	3
61	MP1C	X	5.463	5
62	MP1C	Z	0	5
63	MP1C	Mx	.000791	5
64	MP3A	X	2.96	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	.001	2.5
67	MP3B	X	4.061	2.5
68	MP3B	Z	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP3B	Mx	-.001	2.5
70	MP3C	X	4.061	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	-.001	2.5
73	MP4A	X	2.398	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	.001	2.5
76	MP4B	X	3.92	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	-.00098	2.5
79	MP4C	X	3.92	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	-.00098	2.5
82	OVP	X	7.601	1
83	OVP	Z	0	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	6.241	2
2	MP3A	Z	3.604	2
3	MP3A	Mx	-.007	2
4	MP3A	X	6.241	6
5	MP3A	Z	3.604	6
6	MP3A	Mx	-.007	6
7	MP3B	X	8.035	2
8	MP3B	Z	4.639	2
9	MP3B	Mx	.002	2
10	MP3B	X	8.035	6
11	MP3B	Z	4.639	6
12	MP3B	Mx	.002	6
13	MP3C	X	7.196	2
14	MP3C	Z	4.155	2
15	MP3C	Mx	.000738	2
16	MP3C	X	7.196	6
17	MP3C	Z	4.155	6
18	MP3C	Mx	.000738	6
19	MP3A	X	6.241	2
20	MP3A	Z	3.604	2
21	MP3A	Mx	-.003	2
22	MP3A	X	6.241	6
23	MP3A	Z	3.604	6
24	MP3A	Mx	-.003	6
25	MP3B	X	8.035	2
26	MP3B	Z	4.639	2
27	MP3B	Mx	-.008	2
28	MP3B	X	8.035	6
29	MP3B	Z	4.639	6
30	MP3B	Mx	-.008	6
31	MP3C	X	7.196	2
32	MP3C	Z	4.155	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	.008	2
34	MP3C	X	7.196	6
35	MP3C	Z	4.155	6
36	MP3C	Mx	.008	6
37	MP2A	X	.725	4
38	MP2A	Z	.418	4
39	MP2A	Mx	-.000181	4
40	MP2B	X	1.653	4
41	MP2B	Z	.955	4
42	MP2B	Mx	-.000163	4
43	MP2C	X	1.219	4
44	MP2C	Z	.704	4
45	MP2C	Mx	.000226	4
46	MP1A	X	2.62	3
47	MP1A	Z	1.513	3
48	MP1A	Mx	-.002	3
49	MP1A	X	2.62	5
50	MP1A	Z	1.513	5
51	MP1A	Mx	-.002	5
52	MP1B	X	4.476	3
53	MP1B	Z	2.584	3
54	MP1B	Mx	-.001	3
55	MP1B	X	4.476	5
56	MP1B	Z	2.584	5
57	MP1B	Mx	-.001	5
58	MP1C	X	3.607	3
59	MP1C	Z	2.083	3
60	MP1C	Mx	.002	3
61	MP1C	X	3.607	5
62	MP1C	Z	2.083	5
63	MP1C	Mx	.002	5
64	MP3A	X	2.881	2.5
65	MP3A	Z	1.663	2.5
66	MP3A	Mx	.001	2.5
67	MP3B	X	3.835	2.5
68	MP3B	Z	2.214	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	2.881	2.5
71	MP3C	Z	1.663	2.5
72	MP3C	Mx	-.001	2.5
73	MP4A	X	2.516	2.5
74	MP4A	Z	1.453	2.5
75	MP4A	Mx	.001	2.5
76	MP4B	X	3.835	2.5
77	MP4B	Z	2.214	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	2.516	2.5
80	MP4C	Z	1.453	2.5
81	MP4C	Mx	-.001	2.5
82	OVP	X	7.51	1
83	OVP	Z	4.336	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	4.422	2
2	MP3A	Z	7.658	2
3	MP3A	Mx	-.008	2
4	MP3A	X	4.422	6
5	MP3A	Z	7.658	6
6	MP3A	Mx	-.008	6
7	MP3B	X	3.87	2
8	MP3B	Z	6.704	2
9	MP3B	Mx	-.002	2
10	MP3B	X	3.87	6
11	MP3B	Z	6.704	6
12	MP3B	Mx	-.002	6
13	MP3C	X	3.386	2
14	MP3C	Z	5.865	2
15	MP3C	Mx	.004	2
16	MP3C	X	3.386	6
17	MP3C	Z	5.865	6
18	MP3C	Mx	.004	6
19	MP3A	X	4.422	2
20	MP3A	Z	7.658	2
21	MP3A	Mx	.000782	2
22	MP3A	X	4.422	6
23	MP3A	Z	7.658	6
24	MP3A	Mx	.000782	6
25	MP3B	X	3.87	2
26	MP3B	Z	6.704	2
27	MP3B	Mx	-.008	2
28	MP3B	X	3.87	6
29	MP3B	Z	6.704	6
30	MP3B	Mx	-.008	6
31	MP3C	X	3.386	2
32	MP3C	Z	5.865	2
33	MP3C	Mx	.007	2
34	MP3C	X	3.386	6
35	MP3C	Z	5.865	6
36	MP3C	Mx	.007	6
37	MP2A	X	.842	4
38	MP2A	Z	1.458	4
39	MP2A	Mx	-.00021	4
40	MP2B	X	.557	4
41	MP2B	Z	.964	4
42	MP2B	Mx	-.000213	4
43	MP2C	X	.306	4
44	MP2C	Z	.53	4
45	MP2C	Mx	.000144	4
46	MP1A	X	2.359	3
47	MP1A	Z	4.086	3
48	MP1A	Mx	-.002	3
49	MP1A	X	2.359	5
50	MP1A	Z	4.086	5
51	MP1A	Mx	-.002	5
52	MP1B	X	1.789	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	3.098	3
54	MP1B	Mx	-.002	3
55	MP1B	X	1.789	5
56	MP1B	Z	3.098	5
57	MP1B	Mx	-.002	5
58	MP1C	X	1.287	3
59	MP1C	Z	2.23	3
60	MP1C	Mx	.002	3
61	MP1C	X	1.287	5
62	MP1C	Z	2.23	5
63	MP1C	Mx	.002	5
64	MP3A	X	2.03	2.5
65	MP3A	Z	3.517	2.5
66	MP3A	Mx	.001	2.5
67	MP3B	X	2.03	2.5
68	MP3B	Z	3.517	2.5
69	MP3B	Mx	.001	2.5
70	MP3C	X	1.48	2.5
71	MP3C	Z	2.563	2.5
72	MP3C	Mx	-.001	2.5
73	MP4A	X	1.96	2.5
74	MP4A	Z	3.395	2.5
75	MP4A	Mx	.00098	2.5
76	MP4B	X	1.96	2.5
77	MP4B	Z	3.395	2.5
78	MP4B	Mx	.00098	2.5
79	MP4C	X	1.199	2.5
80	MP4C	Z	2.076	2.5
81	MP4C	Mx	-.001	2.5
82	OVP	X	4.773	1
83	OVP	Z	8.266	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	2
2	MP3A	Z	9.661	2
3	MP3A	Mx	-.006	2
4	MP3A	X	0	6
5	MP3A	Z	9.661	6
6	MP3A	Mx	-.006	6
7	MP3B	X	0	2
8	MP3B	Z	6.488	2
9	MP3B	Mx	-.005	2
10	MP3B	X	0	6
11	MP3B	Z	6.488	6
12	MP3B	Mx	-.005	6
13	MP3C	X	0	2
14	MP3C	Z	6.488	2
15	MP3C	Mx	.006	2
16	MP3C	X	0	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	6.488	6
18	MP3C	Mx	.006	6
19	MP3A	X	0	2
20	MP3A	Z	9.661	2
21	MP3A	Mx	.006	2
22	MP3A	X	0	6
23	MP3A	Z	9.661	6
24	MP3A	Mx	.006	6
25	MP3B	X	0	2
26	MP3B	Z	6.488	2
27	MP3B	Mx	-.006	2
28	MP3B	X	0	6
29	MP3B	Z	6.488	6
30	MP3B	Mx	-.006	6
31	MP3C	X	0	2
32	MP3C	Z	6.488	2
33	MP3C	Mx	.005	2
34	MP3C	X	0	6
35	MP3C	Z	6.488	6
36	MP3C	Mx	.005	6
37	MP2A	X	0	4
38	MP2A	Z	2.107	4
39	MP2A	Mx	0	4
40	MP2B	X	0	4
41	MP2B	Z	.464	4
42	MP2B	Mx	-.000114	4
43	MP2C	X	0	4
44	MP2C	Z	.464	4
45	MP2C	Mx	.000114	4
46	MP1A	X	0	3
47	MP1A	Z	5.565	3
48	MP1A	Mx	0	3
49	MP1A	X	0	5
50	MP1A	Z	5.565	5
51	MP1A	Mx	0	5
52	MP1B	X	0	3
53	MP1B	Z	2.281	3
54	MP1B	Mx	-.002	3
55	MP1B	X	0	5
56	MP1B	Z	2.281	5
57	MP1B	Mx	-.002	5
58	MP1C	X	0	3
59	MP1C	Z	2.281	3
60	MP1C	Mx	.002	3
61	MP1C	X	0	5
62	MP1C	Z	2.281	5
63	MP1C	Mx	.002	5
64	MP3A	X	0	2.5
65	MP3A	Z	4.428	2.5
66	MP3A	Mx	0	2.5
67	MP3B	X	0	2.5
68	MP3B	Z	3.327	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP3B	Mx	.001	2.5
70	MP3C	X	0	2.5
71	MP3C	Z	3.327	2.5
72	MP3C	Mx	-.001	2.5
73	MP4A	X	0	2.5
74	MP4A	Z	4.428	2.5
75	MP4A	Mx	0	2.5
76	MP4B	X	0	2.5
77	MP4B	Z	2.905	2.5
78	MP4B	Mx	.001	2.5
79	MP4C	X	0	2.5
80	MP4C	Z	2.905	2.5
81	MP4C	Mx	-.001	2.5
82	OVP	X	0	1
83	OVP	Z	9.347	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-4.422	2
2	MP3A	Z	7.658	2
3	MP3A	Mx	-.000782	2
4	MP3A	X	-4.422	6
5	MP3A	Z	7.658	6
6	MP3A	Mx	-.000782	6
7	MP3B	X	-3.386	2
8	MP3B	Z	5.865	2
9	MP3B	Mx	-.007	2
10	MP3B	X	-3.386	6
11	MP3B	Z	5.865	6
12	MP3B	Mx	-.007	6
13	MP3C	X	-3.87	2
14	MP3C	Z	6.704	2
15	MP3C	Mx	.008	2
16	MP3C	X	-3.87	6
17	MP3C	Z	6.704	6
18	MP3C	Mx	.008	6
19	MP3A	X	-4.422	2
20	MP3A	Z	7.658	2
21	MP3A	Mx	.008	2
22	MP3A	X	-4.422	6
23	MP3A	Z	7.658	6
24	MP3A	Mx	.008	6
25	MP3B	X	-3.386	2
26	MP3B	Z	5.865	2
27	MP3B	Mx	-.004	2
28	MP3B	X	-3.386	6
29	MP3B	Z	5.865	6
30	MP3B	Mx	-.004	6
31	MP3C	X	-3.87	2
32	MP3C	Z	6.704	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	.002	2
34	MP3C	X	-3.87	6
35	MP3C	Z	6.704	6
36	MP3C	Mx	.002	6
37	MP2A	X	-.842	4
38	MP2A	Z	1.458	4
39	MP2A	Mx	.00021	4
40	MP2B	X	-.306	4
41	MP2B	Z	.53	4
42	MP2B	Mx	-.000144	4
43	MP2C	X	-.557	4
44	MP2C	Z	.964	4
45	MP2C	Mx	.000213	4
46	MP1A	X	-2.359	3
47	MP1A	Z	4.086	3
48	MP1A	Mx	.002	3
49	MP1A	X	-2.359	5
50	MP1A	Z	4.086	5
51	MP1A	Mx	.002	5
52	MP1B	X	-1.287	3
53	MP1B	Z	2.23	3
54	MP1B	Mx	-.002	3
55	MP1B	X	-1.287	5
56	MP1B	Z	2.23	5
57	MP1B	Mx	-.002	5
58	MP1C	X	-1.789	3
59	MP1C	Z	3.098	3
60	MP1C	Mx	.002	3
61	MP1C	X	-1.789	5
62	MP1C	Z	3.098	5
63	MP1C	Mx	.002	5
64	MP3A	X	-2.03	2.5
65	MP3A	Z	3.517	2.5
66	MP3A	Mx	-.001	2.5
67	MP3B	X	-1.48	2.5
68	MP3B	Z	2.563	2.5
69	MP3B	Mx	.001	2.5
70	MP3C	X	-2.03	2.5
71	MP3C	Z	3.517	2.5
72	MP3C	Mx	-.001	2.5
73	MP4A	X	-1.96	2.5
74	MP4A	Z	3.395	2.5
75	MP4A	Mx	-.00098	2.5
76	MP4B	X	-1.199	2.5
77	MP4B	Z	2.076	2.5
78	MP4B	Mx	.001	2.5
79	MP4C	X	-1.96	2.5
80	MP4C	Z	3.395	2.5
81	MP4C	Mx	-.00098	2.5
82	OVP	X	-4.138	1
83	OVP	Z	7.168	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-6.241	2
2	MP3A	Z	3.604	2
3	MP3A	Mx	.003	2
4	MP3A	X	-6.241	6
5	MP3A	Z	3.604	6
6	MP3A	Mx	.003	6
7	MP3B	X	-7.196	2
8	MP3B	Z	4.155	2
9	MP3B	Mx	-.008	2
10	MP3B	X	-7.196	6
11	MP3B	Z	4.155	6
12	MP3B	Mx	-.008	6
13	MP3C	X	-8.035	2
14	MP3C	Z	4.639	2
15	MP3C	Mx	.008	2
16	MP3C	X	-8.035	6
17	MP3C	Z	4.639	6
18	MP3C	Mx	.008	6
19	MP3A	X	-6.241	2
20	MP3A	Z	3.604	2
21	MP3A	Mx	.007	2
22	MP3A	X	-6.241	6
23	MP3A	Z	3.604	6
24	MP3A	Mx	.007	6
25	MP3B	X	-7.196	2
26	MP3B	Z	4.155	2
27	MP3B	Mx	-.000738	2
28	MP3B	X	-7.196	6
29	MP3B	Z	4.155	6
30	MP3B	Mx	-.000738	6
31	MP3C	X	-8.035	2
32	MP3C	Z	4.639	2
33	MP3C	Mx	-.002	2
34	MP3C	X	-8.035	6
35	MP3C	Z	4.639	6
36	MP3C	Mx	-.002	6
37	MP2A	X	-.725	4
38	MP2A	Z	.418	4
39	MP2A	Mx	.000181	4
40	MP2B	X	-1.219	4
41	MP2B	Z	.704	4
42	MP2B	Mx	-.000226	4
43	MP2C	X	-1.653	4
44	MP2C	Z	.955	4
45	MP2C	Mx	.000163	4
46	MP1A	X	-2.62	3
47	MP1A	Z	1.513	3
48	MP1A	Mx	.002	3
49	MP1A	X	-2.62	5
50	MP1A	Z	1.513	5
51	MP1A	Mx	.002	5
52	MP1B	X	-3.607	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	2.083	3
54	MP1B	Mx	-.002	3
55	MP1B	X	-3.607	5
56	MP1B	Z	2.083	5
57	MP1B	Mx	-.002	5
58	MP1C	X	-4.476	3
59	MP1C	Z	2.584	3
60	MP1C	Mx	.001	3
61	MP1C	X	-4.476	5
62	MP1C	Z	2.584	5
63	MP1C	Mx	.001	5
64	MP3A	X	-2.881	2.5
65	MP3A	Z	1.663	2.5
66	MP3A	Mx	-.001	2.5
67	MP3B	X	-2.881	2.5
68	MP3B	Z	1.663	2.5
69	MP3B	Mx	.001	2.5
70	MP3C	X	-3.835	2.5
71	MP3C	Z	2.214	2.5
72	MP3C	Mx	0	2.5
73	MP4A	X	-2.516	2.5
74	MP4A	Z	1.453	2.5
75	MP4A	Mx	-.001	2.5
76	MP4B	X	-2.516	2.5
77	MP4B	Z	1.453	2.5
78	MP4B	Mx	.001	2.5
79	MP4C	X	-3.835	2.5
80	MP4C	Z	2.214	2.5
81	MP4C	Mx	0	2.5
82	OVP	X	-6.412	1
83	OVP	Z	3.702	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-6.389	2
2	MP3A	Z	0	2
3	MP3A	Mx	.005	2
4	MP3A	X	-6.389	6
5	MP3A	Z	0	6
6	MP3A	Mx	.005	6
7	MP3B	X	-9.562	2
8	MP3B	Z	0	2
9	MP3B	Mx	-.007	2
10	MP3B	X	-9.562	6
11	MP3B	Z	0	6
12	MP3B	Mx	-.007	6
13	MP3C	X	-9.562	2
14	MP3C	Z	0	2
15	MP3C	Mx	.004	2
16	MP3C	X	-9.562	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	0	6
18	MP3C	Mx	.004	6
19	MP3A	X	-6.389	2
20	MP3A	Z	0	2
21	MP3A	Mx	.005	2
22	MP3A	X	-6.389	6
23	MP3A	Z	0	6
24	MP3A	Mx	.005	6
25	MP3B	X	-9.562	2
26	MP3B	Z	0	2
27	MP3B	Mx	.004	2
28	MP3B	X	-9.562	6
29	MP3B	Z	0	6
30	MP3B	Mx	.004	6
31	MP3C	X	-9.562	2
32	MP3C	Z	0	2
33	MP3C	Mx	-.007	2
34	MP3C	X	-9.562	6
35	MP3C	Z	0	6
36	MP3C	Mx	-.007	6
37	MP2A	X	-.413	4
38	MP2A	Z	0	4
39	MP2A	Mx	.000103	4
40	MP2B	X	-2.056	4
41	MP2B	Z	0	4
42	MP2B	Mx	-8.9e-5	4
43	MP2C	X	-2.056	4
44	MP2C	Z	0	4
45	MP2C	Mx	-8.9e-5	4
46	MP1A	X	-2.179	3
47	MP1A	Z	0	3
48	MP1A	Mx	.002	3
49	MP1A	X	-2.179	5
50	MP1A	Z	0	5
51	MP1A	Mx	.002	5
52	MP1B	X	-5.463	3
53	MP1B	Z	0	3
54	MP1B	Mx	-.000791	3
55	MP1B	X	-5.463	5
56	MP1B	Z	0	5
57	MP1B	Mx	-.000791	5
58	MP1C	X	-5.463	3
59	MP1C	Z	0	3
60	MP1C	Mx	-.000791	3
61	MP1C	X	-5.463	5
62	MP1C	Z	0	5
63	MP1C	Mx	-.000791	5
64	MP3A	X	-2.96	2.5
65	MP3A	Z	0	2.5
66	MP3A	Mx	-.001	2.5
67	MP3B	X	-4.061	2.5
68	MP3B	Z	0	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP3B	Mx	.001	2.5
70	MP3C	X	-4.061	2.5
71	MP3C	Z	0	2.5
72	MP3C	Mx	.001	2.5
73	MP4A	X	-2.398	2.5
74	MP4A	Z	0	2.5
75	MP4A	Mx	-.001	2.5
76	MP4B	X	-3.92	2.5
77	MP4B	Z	0	2.5
78	MP4B	Mx	.00098	2.5
79	MP4C	X	-3.92	2.5
80	MP4C	Z	0	2.5
81	MP4C	Mx	.00098	2.5
82	OVP	X	-7.601	1
83	OVP	Z	0	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-6.241	2
2	MP3A	Z	-3.604	2
3	MP3A	Mx	.007	2
4	MP3A	X	-6.241	6
5	MP3A	Z	-3.604	6
6	MP3A	Mx	.007	6
7	MP3B	X	-8.035	2
8	MP3B	Z	-4.639	2
9	MP3B	Mx	-.002	2
10	MP3B	X	-8.035	6
11	MP3B	Z	-4.639	6
12	MP3B	Mx	-.002	6
13	MP3C	X	-7.196	2
14	MP3C	Z	-4.155	2
15	MP3C	Mx	-.000738	2
16	MP3C	X	-7.196	6
17	MP3C	Z	-4.155	6
18	MP3C	Mx	-.000738	6
19	MP3A	X	-6.241	2
20	MP3A	Z	-3.604	2
21	MP3A	Mx	.003	2
22	MP3A	X	-6.241	6
23	MP3A	Z	-3.604	6
24	MP3A	Mx	.003	6
25	MP3B	X	-8.035	2
26	MP3B	Z	-4.639	2
27	MP3B	Mx	.008	2
28	MP3B	X	-8.035	6
29	MP3B	Z	-4.639	6
30	MP3B	Mx	.008	6
31	MP3C	X	-7.196	2
32	MP3C	Z	-4.155	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	-.008	2
34	MP3C	X	-7.196	6
35	MP3C	Z	-4.155	6
36	MP3C	Mx	-.008	6
37	MP2A	X	-.725	4
38	MP2A	Z	-.418	4
39	MP2A	Mx	.000181	4
40	MP2B	X	-1.653	4
41	MP2B	Z	-.955	4
42	MP2B	Mx	.000163	4
43	MP2C	X	-1.219	4
44	MP2C	Z	-.704	4
45	MP2C	Mx	-.000226	4
46	MP1A	X	-2.62	3
47	MP1A	Z	-1.513	3
48	MP1A	Mx	.002	3
49	MP1A	X	-2.62	5
50	MP1A	Z	-1.513	5
51	MP1A	Mx	.002	5
52	MP1B	X	-4.476	3
53	MP1B	Z	-2.584	3
54	MP1B	Mx	.001	3
55	MP1B	X	-4.476	5
56	MP1B	Z	-2.584	5
57	MP1B	Mx	.001	5
58	MP1C	X	-3.607	3
59	MP1C	Z	-2.083	3
60	MP1C	Mx	-.002	3
61	MP1C	X	-3.607	5
62	MP1C	Z	-2.083	5
63	MP1C	Mx	-.002	5
64	MP3A	X	-2.881	2.5
65	MP3A	Z	-1.663	2.5
66	MP3A	Mx	-.001	2.5
67	MP3B	X	-3.835	2.5
68	MP3B	Z	-2.214	2.5
69	MP3B	Mx	0	2.5
70	MP3C	X	-2.881	2.5
71	MP3C	Z	-1.663	2.5
72	MP3C	Mx	.001	2.5
73	MP4A	X	-2.516	2.5
74	MP4A	Z	-1.453	2.5
75	MP4A	Mx	-.001	2.5
76	MP4B	X	-3.835	2.5
77	MP4B	Z	-2.214	2.5
78	MP4B	Mx	0	2.5
79	MP4C	X	-2.516	2.5
80	MP4C	Z	-1.453	2.5
81	MP4C	Mx	.001	2.5
82	OVP	X	-7.51	1
83	OVP	Z	-4.336	1
84	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-4.422	2
2	MP3A	Z	-7.658	2
3	MP3A	Mx	.008	2
4	MP3A	X	-4.422	6
5	MP3A	Z	-7.658	6
6	MP3A	Mx	.008	6
7	MP3B	X	-3.87	2
8	MP3B	Z	-6.704	2
9	MP3B	Mx	.002	2
10	MP3B	X	-3.87	6
11	MP3B	Z	-6.704	6
12	MP3B	Mx	.002	6
13	MP3C	X	-3.386	2
14	MP3C	Z	-5.865	2
15	MP3C	Mx	-.004	2
16	MP3C	X	-3.386	6
17	MP3C	Z	-5.865	6
18	MP3C	Mx	-.004	6
19	MP3A	X	-4.422	2
20	MP3A	Z	-7.658	2
21	MP3A	Mx	-.000782	2
22	MP3A	X	-4.422	6
23	MP3A	Z	-7.658	6
24	MP3A	Mx	-.000782	6
25	MP3B	X	-3.87	2
26	MP3B	Z	-6.704	2
27	MP3B	Mx	.008	2
28	MP3B	X	-3.87	6
29	MP3B	Z	-6.704	6
30	MP3B	Mx	.008	6
31	MP3C	X	-3.386	2
32	MP3C	Z	-5.865	2
33	MP3C	Mx	-.007	2
34	MP3C	X	-3.386	6
35	MP3C	Z	-5.865	6
36	MP3C	Mx	-.007	6
37	MP2A	X	-.842	4
38	MP2A	Z	-1.458	4
39	MP2A	Mx	.00021	4
40	MP2B	X	-.557	4
41	MP2B	Z	-.964	4
42	MP2B	Mx	.000213	4
43	MP2C	X	-.306	4
44	MP2C	Z	-.53	4
45	MP2C	Mx	-.000144	4
46	MP1A	X	-2.359	3
47	MP1A	Z	-4.086	3
48	MP1A	Mx	.002	3
49	MP1A	X	-2.359	5
50	MP1A	Z	-4.086	5
51	MP1A	Mx	.002	5
52	MP1B	X	-1.789	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
53	MP1B	Z	-3.098	3
54	MP1B	Mx	.002	3
55	MP1B	X	-1.789	5
56	MP1B	Z	-3.098	5
57	MP1B	Mx	.002	5
58	MP1C	X	-1.287	3
59	MP1C	Z	-2.23	3
60	MP1C	Mx	-.002	3
61	MP1C	X	-1.287	5
62	MP1C	Z	-2.23	5
63	MP1C	Mx	-.002	5
64	MP3A	X	-2.03	2.5
65	MP3A	Z	-3.517	2.5
66	MP3A	Mx	-.001	2.5
67	MP3B	X	-2.03	2.5
68	MP3B	Z	-3.517	2.5
69	MP3B	Mx	-.001	2.5
70	MP3C	X	-1.48	2.5
71	MP3C	Z	-2.563	2.5
72	MP3C	Mx	.001	2.5
73	MP4A	X	-1.96	2.5
74	MP4A	Z	-3.395	2.5
75	MP4A	Mx	-.00098	2.5
76	MP4B	X	-1.96	2.5
77	MP4B	Z	-3.395	2.5
78	MP4B	Mx	-.00098	2.5
79	MP4C	X	-1.199	2.5
80	MP4C	Z	-2.076	2.5
81	MP4C	Mx	.001	2.5
82	OVP	X	-4.773	1
83	OVP	Z	-8.266	1
84	OVP	Mx	0	1

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M40	Y	-500	%24.5

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M40	Y	-500	%95

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M40	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M40	Y	-250	%50

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	Y	-9.023	-9.023	0	%100
2	M40	Y	-9.023	-9.023	0	%100
3	M41	Y	-9.023	-9.023	0	%100
4	M42	Y	-9.023	-9.023	0	%100
5	MP1A	Y	-4.636	-4.636	0	%100
6	MP2A	Y	-4.636	-4.636	0	%100
7	MP3A	Y	-5.305	-5.305	0	%100
8	MP4A	Y	-4.636	-4.636	0	%100
9	MP1C	Y	-4.636	-4.636	0	%100
10	MP2C	Y	-4.636	-4.636	0	%100
11	MP3C	Y	-5.305	-5.305	0	%100
12	MP4C	Y	-4.636	-4.636	0	%100
13	MP1B	Y	-4.636	-4.636	0	%100
14	MP2B	Y	-4.636	-4.636	0	%100
15	MP3B	Y	-5.305	-5.305	0	%100
16	MP4B	Y	-4.636	-4.636	0	%100
17	M77A	Y	-9.023	-9.023	0	%100
18	M78A	Y	-9.023	-9.023	0	%100
19	OVP	Y	-4.636	-4.636	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	-15.264	-15.264	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	-3.816	-3.816	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	-3.816	-3.816	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	-8.701	-8.701	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-8.701	-8.701	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-10.532	-10.532	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-8.701	-8.701	0	%100
17	MP1C	X	0	0	0	%100
18	MP1C	Z	-8.701	-8.701	0	%100
19	MP2C	X	0	0	0	%100
20	MP2C	Z	-8.701	-8.701	0	%100
21	MP3C	X	0	0	0	%100
22	MP3C	Z	-10.532	-10.532	0	%100
23	MP4C	X	0	0	0	%100
24	MP4C	Z	-8.701	-8.701	0	%100
25	MP1B	X	0	0	0	%100
26	MP1B	Z	-8.701	-8.701	0	%100
27	MP2B	X	0	0	0	%100
28	MP2B	Z	-8.701	-8.701	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
29	MP3B	X	0	0	0	%100
30	MP3B	Z	-10.532	-10.532	0	%100
31	MP4B	X	0	0	0	%100
32	MP4B	Z	-8.701	-8.701	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	-11.003	-11.003	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	-11.003	-11.003	0	%100
37	OVP	X	0	0	0	%100
38	OVP	Z	-7.115	-7.115	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	1.834	1.834	0	%100
2	M4	Z	-3.176	-3.176	0	%100
3	M40	X	5.724	5.724	0	%100
4	M40	Z	-9.914	-9.914	0	%100
5	M41	X	5.724	5.724	0	%100
6	M41	Z	-9.914	-9.914	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	4.35	4.35	0	%100
10	MP1A	Z	-7.535	-7.535	0	%100
11	MP2A	X	4.35	4.35	0	%100
12	MP2A	Z	-7.535	-7.535	0	%100
13	MP3A	X	5.266	5.266	0	%100
14	MP3A	Z	-9.121	-9.121	0	%100
15	MP4A	X	4.35	4.35	0	%100
16	MP4A	Z	-7.535	-7.535	0	%100
17	MP1C	X	4.35	4.35	0	%100
18	MP1C	Z	-7.535	-7.535	0	%100
19	MP2C	X	4.35	4.35	0	%100
20	MP2C	Z	-7.535	-7.535	0	%100
21	MP3C	X	5.266	5.266	0	%100
22	MP3C	Z	-9.121	-9.121	0	%100
23	MP4C	X	4.35	4.35	0	%100
24	MP4C	Z	-7.535	-7.535	0	%100
25	MP1B	X	4.35	4.35	0	%100
26	MP1B	Z	-7.535	-7.535	0	%100
27	MP2B	X	4.35	4.35	0	%100
28	MP2B	Z	-7.535	-7.535	0	%100
29	MP3B	X	5.266	5.266	0	%100
30	MP3B	Z	-9.121	-9.121	0	%100
31	MP4B	X	4.35	4.35	0	%100
32	MP4B	Z	-7.535	-7.535	0	%100
33	M77A	X	1.834	1.834	0	%100
34	M77A	Z	-3.176	-3.176	0	%100
35	M78A	X	7.335	7.335	0	%100
36	M78A	Z	-12.705	-12.705	0	%100
37	OVP	X	3.557	3.557	0	%100
38	OVP	Z	-6.162	-6.162	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	9.529	9.529	0	%100
2	M4	Z	-5.502	-5.502	0	%100
3	M40	X	3.305	3.305	0	%100
4	M40	Z	-1.908	-1.908	0	%100
5	M41	X	13.219	13.219	0	%100
6	M41	Z	-7.632	-7.632	0	%100
7	M42	X	3.305	3.305	0	%100
8	M42	Z	-1.908	-1.908	0	%100
9	MP1A	X	7.535	7.535	0	%100
10	MP1A	Z	-4.35	-4.35	0	%100
11	MP2A	X	7.535	7.535	0	%100
12	MP2A	Z	-4.35	-4.35	0	%100
13	MP3A	X	9.121	9.121	0	%100
14	MP3A	Z	-5.266	-5.266	0	%100
15	MP4A	X	7.535	7.535	0	%100
16	MP4A	Z	-4.35	-4.35	0	%100
17	MP1C	X	7.535	7.535	0	%100
18	MP1C	Z	-4.35	-4.35	0	%100
19	MP2C	X	7.535	7.535	0	%100
20	MP2C	Z	-4.35	-4.35	0	%100
21	MP3C	X	9.121	9.121	0	%100
22	MP3C	Z	-5.266	-5.266	0	%100
23	MP4C	X	7.535	7.535	0	%100
24	MP4C	Z	-4.35	-4.35	0	%100
25	MP1B	X	7.535	7.535	0	%100
26	MP1B	Z	-4.35	-4.35	0	%100
27	MP2B	X	7.535	7.535	0	%100
28	MP2B	Z	-4.35	-4.35	0	%100
29	MP3B	X	9.121	9.121	0	%100
30	MP3B	Z	-5.266	-5.266	0	%100
31	MP4B	X	7.535	7.535	0	%100
32	MP4B	Z	-4.35	-4.35	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	9.529	9.529	0	%100
36	M78A	Z	-5.502	-5.502	0	%100
37	OVP	X	6.162	6.162	0	%100
38	OVP	Z	-3.557	-3.557	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	14.671	14.671	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	0	0	0	%100
5	M41	X	11.448	11.448	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	11.448	11.448	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	8.701	8.701	0	%100
10	MP1A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	8.701	8.701	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	10.532	10.532	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	8.701	8.701	0	%100
16	MP4A	Z	0	0	0	%100
17	MP1C	X	8.701	8.701	0	%100
18	MP1C	Z	0	0	0	%100
19	MP2C	X	8.701	8.701	0	%100
20	MP2C	Z	0	0	0	%100
21	MP3C	X	10.532	10.532	0	%100
22	MP3C	Z	0	0	0	%100
23	MP4C	X	8.701	8.701	0	%100
24	MP4C	Z	0	0	0	%100
25	MP1B	X	8.701	8.701	0	%100
26	MP1B	Z	0	0	0	%100
27	MP2B	X	8.701	8.701	0	%100
28	MP2B	Z	0	0	0	%100
29	MP3B	X	10.532	10.532	0	%100
30	MP3B	Z	0	0	0	%100
31	MP4B	X	8.701	8.701	0	%100
32	MP4B	Z	0	0	0	%100
33	M77A	X	3.668	3.668	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	3.668	3.668	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	7.115	7.115	0	%100
38	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	9.529	9.529	0	%100
2	M4	Z	5.502	5.502	0	%100
3	M40	X	3.305	3.305	0	%100
4	M40	Z	1.908	1.908	0	%100
5	M41	X	3.305	3.305	0	%100
6	M41	Z	1.908	1.908	0	%100
7	M42	X	13.219	13.219	0	%100
8	M42	Z	7.632	7.632	0	%100
9	MP1A	X	7.535	7.535	0	%100
10	MP1A	Z	4.35	4.35	0	%100
11	MP2A	X	7.535	7.535	0	%100
12	MP2A	Z	4.35	4.35	0	%100
13	MP3A	X	9.121	9.121	0	%100
14	MP3A	Z	5.266	5.266	0	%100
15	MP4A	X	7.535	7.535	0	%100
16	MP4A	Z	4.35	4.35	0	%100
17	MP1C	X	7.535	7.535	0	%100
18	MP1C	Z	4.35	4.35	0	%100
19	MP2C	X	7.535	7.535	0	%100
20	MP2C	Z	4.35	4.35	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	MP3C	X	9.121	9.121	0	%100
22	MP3C	Z	5.266	5.266	0	%100
23	MP4C	X	7.535	7.535	0	%100
24	MP4C	Z	4.35	4.35	0	%100
25	MP1B	X	7.535	7.535	0	%100
26	MP1B	Z	4.35	4.35	0	%100
27	MP2B	X	7.535	7.535	0	%100
28	MP2B	Z	4.35	4.35	0	%100
29	MP3B	X	9.121	9.121	0	%100
30	MP3B	Z	5.266	5.266	0	%100
31	MP4B	X	7.535	7.535	0	%100
32	MP4B	Z	4.35	4.35	0	%100
33	M77A	X	9.529	9.529	0	%100
34	M77A	Z	5.502	5.502	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	6.162	6.162	0	%100
38	OVP	Z	3.557	3.557	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	1.834	1.834	0	%100
2	M4	Z	3.176	3.176	0	%100
3	M40	X	5.724	5.724	0	%100
4	M40	Z	9.914	9.914	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	5.724	5.724	0	%100
8	M42	Z	9.914	9.914	0	%100
9	MP1A	X	4.35	4.35	0	%100
10	MP1A	Z	7.535	7.535	0	%100
11	MP2A	X	4.35	4.35	0	%100
12	MP2A	Z	7.535	7.535	0	%100
13	MP3A	X	5.266	5.266	0	%100
14	MP3A	Z	9.121	9.121	0	%100
15	MP4A	X	4.35	4.35	0	%100
16	MP4A	Z	7.535	7.535	0	%100
17	MP1C	X	4.35	4.35	0	%100
18	MP1C	Z	7.535	7.535	0	%100
19	MP2C	X	4.35	4.35	0	%100
20	MP2C	Z	7.535	7.535	0	%100
21	MP3C	X	5.266	5.266	0	%100
22	MP3C	Z	9.121	9.121	0	%100
23	MP4C	X	4.35	4.35	0	%100
24	MP4C	Z	7.535	7.535	0	%100
25	MP1B	X	4.35	4.35	0	%100
26	MP1B	Z	7.535	7.535	0	%100
27	MP2B	X	4.35	4.35	0	%100
28	MP2B	Z	7.535	7.535	0	%100
29	MP3B	X	5.266	5.266	0	%100
30	MP3B	Z	9.121	9.121	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
31	MP4B	X	4.35	4.35	0	%100
32	MP4B	Z	7.535	7.535	0	%100
33	M77A	X	7.335	7.335	0	%100
34	M77A	Z	12.705	12.705	0	%100
35	M78A	X	1.834	1.834	0	%100
36	M78A	Z	3.176	3.176	0	%100
37	OVP	X	3.557	3.557	0	%100
38	OVP	Z	6.162	6.162	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	15.264	15.264	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	3.816	3.816	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	3.816	3.816	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	8.701	8.701	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	8.701	8.701	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	10.532	10.532	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	8.701	8.701	0	%100
17	MP1C	X	0	0	0	%100
18	MP1C	Z	8.701	8.701	0	%100
19	MP2C	X	0	0	0	%100
20	MP2C	Z	8.701	8.701	0	%100
21	MP3C	X	0	0	0	%100
22	MP3C	Z	10.532	10.532	0	%100
23	MP4C	X	0	0	0	%100
24	MP4C	Z	8.701	8.701	0	%100
25	MP1B	X	0	0	0	%100
26	MP1B	Z	8.701	8.701	0	%100
27	MP2B	X	0	0	0	%100
28	MP2B	Z	8.701	8.701	0	%100
29	MP3B	X	0	0	0	%100
30	MP3B	Z	10.532	10.532	0	%100
31	MP4B	X	0	0	0	%100
32	MP4B	Z	8.701	8.701	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	11.003	11.003	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	11.003	11.003	0	%100
37	OVP	X	0	0	0	%100
38	OVP	Z	7.115	7.115	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-1.834	-1.834	0	%100
2	M4	Z	3.176	3.176	0	%100
3	M40	X	-5.724	-5.724	0	%100
4	M40	Z	9.914	9.914	0	%100
5	M41	X	-5.724	-5.724	0	%100
6	M41	Z	9.914	9.914	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	-4.35	-4.35	0	%100
10	MP1A	Z	7.535	7.535	0	%100
11	MP2A	X	-4.35	-4.35	0	%100
12	MP2A	Z	7.535	7.535	0	%100
13	MP3A	X	-5.266	-5.266	0	%100
14	MP3A	Z	9.121	9.121	0	%100
15	MP4A	X	-4.35	-4.35	0	%100
16	MP4A	Z	7.535	7.535	0	%100
17	MP1C	X	-4.35	-4.35	0	%100
18	MP1C	Z	7.535	7.535	0	%100
19	MP2C	X	-4.35	-4.35	0	%100
20	MP2C	Z	7.535	7.535	0	%100
21	MP3C	X	-5.266	-5.266	0	%100
22	MP3C	Z	9.121	9.121	0	%100
23	MP4C	X	-4.35	-4.35	0	%100
24	MP4C	Z	7.535	7.535	0	%100
25	MP1B	X	-4.35	-4.35	0	%100
26	MP1B	Z	7.535	7.535	0	%100
27	MP2B	X	-4.35	-4.35	0	%100
28	MP2B	Z	7.535	7.535	0	%100
29	MP3B	X	-5.266	-5.266	0	%100
30	MP3B	Z	9.121	9.121	0	%100
31	MP4B	X	-4.35	-4.35	0	%100
32	MP4B	Z	7.535	7.535	0	%100
33	M77A	X	-1.834	-1.834	0	%100
34	M77A	Z	3.176	3.176	0	%100
35	M78A	X	-7.335	-7.335	0	%100
36	M78A	Z	12.705	12.705	0	%100
37	OVP	X	-3.557	-3.557	0	%100
38	OVP	Z	6.162	6.162	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-9.529	-9.529	0	%100
2	M4	Z	5.502	5.502	0	%100
3	M40	X	-3.305	-3.305	0	%100
4	M40	Z	1.908	1.908	0	%100
5	M41	X	-13.219	-13.219	0	%100
6	M41	Z	7.632	7.632	0	%100
7	M42	X	-3.305	-3.305	0	%100
8	M42	Z	1.908	1.908	0	%100
9	MP1A	X	-7.535	-7.535	0	%100
10	MP1A	Z	4.35	4.35	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	-7.535	-7.535	0	%100
12	MP2A	Z	4.35	4.35	0	%100
13	MP3A	X	-9.121	-9.121	0	%100
14	MP3A	Z	5.266	5.266	0	%100
15	MP4A	X	-7.535	-7.535	0	%100
16	MP4A	Z	4.35	4.35	0	%100
17	MP1C	X	-7.535	-7.535	0	%100
18	MP1C	Z	4.35	4.35	0	%100
19	MP2C	X	-7.535	-7.535	0	%100
20	MP2C	Z	4.35	4.35	0	%100
21	MP3C	X	-9.121	-9.121	0	%100
22	MP3C	Z	5.266	5.266	0	%100
23	MP4C	X	-7.535	-7.535	0	%100
24	MP4C	Z	4.35	4.35	0	%100
25	MP1B	X	-7.535	-7.535	0	%100
26	MP1B	Z	4.35	4.35	0	%100
27	MP2B	X	-7.535	-7.535	0	%100
28	MP2B	Z	4.35	4.35	0	%100
29	MP3B	X	-9.121	-9.121	0	%100
30	MP3B	Z	5.266	5.266	0	%100
31	MP4B	X	-7.535	-7.535	0	%100
32	MP4B	Z	4.35	4.35	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	-9.529	-9.529	0	%100
36	M78A	Z	5.502	5.502	0	%100
37	OVP	X	-6.162	-6.162	0	%100
38	OVP	Z	3.557	3.557	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-14.671	-14.671	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	0	0	0	%100
5	M41	X	-11.448	-11.448	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	-11.448	-11.448	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	-8.701	-8.701	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	-8.701	-8.701	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-10.532	-10.532	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	-8.701	-8.701	0	%100
16	MP4A	Z	0	0	0	%100
17	MP1C	X	-8.701	-8.701	0	%100
18	MP1C	Z	0	0	0	%100
19	MP2C	X	-8.701	-8.701	0	%100
20	MP2C	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	MP3C	X	-10.532	-10.532	0	%100
22	MP3C	Z	0	0	0	%100
23	MP4C	X	-8.701	-8.701	0	%100
24	MP4C	Z	0	0	0	%100
25	MP1B	X	-8.701	-8.701	0	%100
26	MP1B	Z	0	0	0	%100
27	MP2B	X	-8.701	-8.701	0	%100
28	MP2B	Z	0	0	0	%100
29	MP3B	X	-10.532	-10.532	0	%100
30	MP3B	Z	0	0	0	%100
31	MP4B	X	-8.701	-8.701	0	%100
32	MP4B	Z	0	0	0	%100
33	M77A	X	-3.668	-3.668	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	-3.668	-3.668	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	-7.115	-7.115	0	%100
38	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-9.529	-9.529	0	%100
2	M4	Z	-5.502	-5.502	0	%100
3	M40	X	-3.305	-3.305	0	%100
4	M40	Z	-1.908	-1.908	0	%100
5	M41	X	-3.305	-3.305	0	%100
6	M41	Z	-1.908	-1.908	0	%100
7	M42	X	-13.219	-13.219	0	%100
8	M42	Z	-7.632	-7.632	0	%100
9	MP1A	X	-7.535	-7.535	0	%100
10	MP1A	Z	-4.35	-4.35	0	%100
11	MP2A	X	-7.535	-7.535	0	%100
12	MP2A	Z	-4.35	-4.35	0	%100
13	MP3A	X	-9.121	-9.121	0	%100
14	MP3A	Z	-5.266	-5.266	0	%100
15	MP4A	X	-7.535	-7.535	0	%100
16	MP4A	Z	-4.35	-4.35	0	%100
17	MP1C	X	-7.535	-7.535	0	%100
18	MP1C	Z	-4.35	-4.35	0	%100
19	MP2C	X	-7.535	-7.535	0	%100
20	MP2C	Z	-4.35	-4.35	0	%100
21	MP3C	X	-9.121	-9.121	0	%100
22	MP3C	Z	-5.266	-5.266	0	%100
23	MP4C	X	-7.535	-7.535	0	%100
24	MP4C	Z	-4.35	-4.35	0	%100
25	MP1B	X	-7.535	-7.535	0	%100
26	MP1B	Z	-4.35	-4.35	0	%100
27	MP2B	X	-7.535	-7.535	0	%100
28	MP2B	Z	-4.35	-4.35	0	%100
29	MP3B	X	-9.121	-9.121	0	%100
30	MP3B	Z	-5.266	-5.266	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
31	MP4B	X	-7.535	-7.535	0	%100
32	MP4B	Z	-4.35	-4.35	0	%100
33	M77A	X	-9.529	-9.529	0	%100
34	M77A	Z	-5.502	-5.502	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	-6.162	-6.162	0	%100
38	OVP	Z	-3.557	-3.557	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-1.834	-1.834	0	%100
2	M4	Z	-3.176	-3.176	0	%100
3	M40	X	-5.724	-5.724	0	%100
4	M40	Z	-9.914	-9.914	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	-5.724	-5.724	0	%100
8	M42	Z	-9.914	-9.914	0	%100
9	MP1A	X	-4.35	-4.35	0	%100
10	MP1A	Z	-7.535	-7.535	0	%100
11	MP2A	X	-4.35	-4.35	0	%100
12	MP2A	Z	-7.535	-7.535	0	%100
13	MP3A	X	-5.266	-5.266	0	%100
14	MP3A	Z	-9.121	-9.121	0	%100
15	MP4A	X	-4.35	-4.35	0	%100
16	MP4A	Z	-7.535	-7.535	0	%100
17	MP1C	X	-4.35	-4.35	0	%100
18	MP1C	Z	-7.535	-7.535	0	%100
19	MP2C	X	-4.35	-4.35	0	%100
20	MP2C	Z	-7.535	-7.535	0	%100
21	MP3C	X	-5.266	-5.266	0	%100
22	MP3C	Z	-9.121	-9.121	0	%100
23	MP4C	X	-4.35	-4.35	0	%100
24	MP4C	Z	-7.535	-7.535	0	%100
25	MP1B	X	-4.35	-4.35	0	%100
26	MP1B	Z	-7.535	-7.535	0	%100
27	MP2B	X	-4.35	-4.35	0	%100
28	MP2B	Z	-7.535	-7.535	0	%100
29	MP3B	X	-5.266	-5.266	0	%100
30	MP3B	Z	-9.121	-9.121	0	%100
31	MP4B	X	-4.35	-4.35	0	%100
32	MP4B	Z	-7.535	-7.535	0	%100
33	M77A	X	-7.335	-7.335	0	%100
34	M77A	Z	-12.705	-12.705	0	%100
35	M78A	X	-1.834	-1.834	0	%100
36	M78A	Z	-3.176	-3.176	0	%100
37	OVP	X	-3.557	-3.557	0	%100
38	OVP	Z	-6.162	-6.162	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	-4.18	-4.18	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	-1.045	-1.045	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	-1.045	-1.045	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	-3.001	-3.001	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-3.001	-3.001	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-3.33	-3.33	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-3.001	-3.001	0	%100
17	MP1C	X	0	0	0	%100
18	MP1C	Z	-3.001	-3.001	0	%100
19	MP2C	X	0	0	0	%100
20	MP2C	Z	-3.001	-3.001	0	%100
21	MP3C	X	0	0	0	%100
22	MP3C	Z	-3.33	-3.33	0	%100
23	MP4C	X	0	0	0	%100
24	MP4C	Z	-3.001	-3.001	0	%100
25	MP1B	X	0	0	0	%100
26	MP1B	Z	-3.001	-3.001	0	%100
27	MP2B	X	0	0	0	%100
28	MP2B	Z	-3.001	-3.001	0	%100
29	MP3B	X	0	0	0	%100
30	MP3B	Z	-3.33	-3.33	0	%100
31	MP4B	X	0	0	0	%100
32	MP4B	Z	-3.001	-3.001	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	-3.055	-3.055	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	-3.055	-3.055	0	%100
37	OVP	X	0	0	0	%100
38	OVP	Z	-2.489	-2.489	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	.509	.509	0	%100
2	M4	Z	-.882	-.882	0	%100
3	M40	X	1.567	1.567	0	%100
4	M40	Z	-2.715	-2.715	0	%100
5	M41	X	1.567	1.567	0	%100
6	M41	Z	-2.715	-2.715	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	1.501	1.501	0	%100
10	MP1A	Z	-2.599	-2.599	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	1.501	1.501	0	%100
12	MP2A	Z	-2.599	-2.599	0	%100
13	MP3A	X	1.665	1.665	0	%100
14	MP3A	Z	-2.884	-2.884	0	%100
15	MP4A	X	1.501	1.501	0	%100
16	MP4A	Z	-2.599	-2.599	0	%100
17	MP1C	X	1.501	1.501	0	%100
18	MP1C	Z	-2.599	-2.599	0	%100
19	MP2C	X	1.501	1.501	0	%100
20	MP2C	Z	-2.599	-2.599	0	%100
21	MP3C	X	1.665	1.665	0	%100
22	MP3C	Z	-2.884	-2.884	0	%100
23	MP4C	X	1.501	1.501	0	%100
24	MP4C	Z	-2.599	-2.599	0	%100
25	MP1B	X	1.501	1.501	0	%100
26	MP1B	Z	-2.599	-2.599	0	%100
27	MP2B	X	1.501	1.501	0	%100
28	MP2B	Z	-2.599	-2.599	0	%100
29	MP3B	X	1.665	1.665	0	%100
30	MP3B	Z	-2.884	-2.884	0	%100
31	MP4B	X	1.501	1.501	0	%100
32	MP4B	Z	-2.599	-2.599	0	%100
33	M77A	X	.509	.509	0	%100
34	M77A	Z	-.882	-.882	0	%100
35	M78A	X	2.037	2.037	0	%100
36	M78A	Z	-3.527	-3.527	0	%100
37	OVP	X	1.244	1.244	0	%100
38	OVP	Z	-2.155	-2.155	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	2.646	2.646	0	%100
2	M4	Z	-1.527	-1.527	0	%100
3	M40	X	.905	.905	0	%100
4	M40	Z	-.522	-.522	0	%100
5	M41	X	3.62	3.62	0	%100
6	M41	Z	-2.09	-2.09	0	%100
7	M42	X	.905	.905	0	%100
8	M42	Z	-.522	-.522	0	%100
9	MP1A	X	2.599	2.599	0	%100
10	MP1A	Z	-1.501	-1.501	0	%100
11	MP2A	X	2.599	2.599	0	%100
12	MP2A	Z	-1.501	-1.501	0	%100
13	MP3A	X	2.884	2.884	0	%100
14	MP3A	Z	-1.665	-1.665	0	%100
15	MP4A	X	2.599	2.599	0	%100
16	MP4A	Z	-1.501	-1.501	0	%100
17	MP1C	X	2.599	2.599	0	%100
18	MP1C	Z	-1.501	-1.501	0	%100
19	MP2C	X	2.599	2.599	0	%100
20	MP2C	Z	-1.501	-1.501	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	MP3C	X	2.884	2.884	0	%100
22	MP3C	Z	-1.665	-1.665	0	%100
23	MP4C	X	2.599	2.599	0	%100
24	MP4C	Z	-1.501	-1.501	0	%100
25	MP1B	X	2.599	2.599	0	%100
26	MP1B	Z	-1.501	-1.501	0	%100
27	MP2B	X	2.599	2.599	0	%100
28	MP2B	Z	-1.501	-1.501	0	%100
29	MP3B	X	2.884	2.884	0	%100
30	MP3B	Z	-1.665	-1.665	0	%100
31	MP4B	X	2.599	2.599	0	%100
32	MP4B	Z	-1.501	-1.501	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	2.646	2.646	0	%100
36	M78A	Z	-1.527	-1.527	0	%100
37	OVP	X	2.155	2.155	0	%100
38	OVP	Z	-1.244	-1.244	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	4.073	4.073	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	0	0	0	%100
5	M41	X	3.135	3.135	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	3.135	3.135	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	3.001	3.001	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	3.001	3.001	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	3.33	3.33	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	3.001	3.001	0	%100
16	MP4A	Z	0	0	0	%100
17	MP1C	X	3.001	3.001	0	%100
18	MP1C	Z	0	0	0	%100
19	MP2C	X	3.001	3.001	0	%100
20	MP2C	Z	0	0	0	%100
21	MP3C	X	3.33	3.33	0	%100
22	MP3C	Z	0	0	0	%100
23	MP4C	X	3.001	3.001	0	%100
24	MP4C	Z	0	0	0	%100
25	MP1B	X	3.001	3.001	0	%100
26	MP1B	Z	0	0	0	%100
27	MP2B	X	3.001	3.001	0	%100
28	MP2B	Z	0	0	0	%100
29	MP3B	X	3.33	3.33	0	%100
30	MP3B	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
31	MP4B	X	3.001	3.001	0	%100
32	MP4B	Z	0	0	0	%100
33	M77A	X	1.018	1.018	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	1.018	1.018	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	2.489	2.489	0	%100
38	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	2.646	2.646	0	%100
2	M4	Z	1.527	1.527	0	%100
3	M40	X	.905	.905	0	%100
4	M40	Z	.522	.522	0	%100
5	M41	X	.905	.905	0	%100
6	M41	Z	.522	.522	0	%100
7	M42	X	3.62	3.62	0	%100
8	M42	Z	2.09	2.09	0	%100
9	MP1A	X	2.599	2.599	0	%100
10	MP1A	Z	1.501	1.501	0	%100
11	MP2A	X	2.599	2.599	0	%100
12	MP2A	Z	1.501	1.501	0	%100
13	MP3A	X	2.884	2.884	0	%100
14	MP3A	Z	1.665	1.665	0	%100
15	MP4A	X	2.599	2.599	0	%100
16	MP4A	Z	1.501	1.501	0	%100
17	MP1C	X	2.599	2.599	0	%100
18	MP1C	Z	1.501	1.501	0	%100
19	MP2C	X	2.599	2.599	0	%100
20	MP2C	Z	1.501	1.501	0	%100
21	MP3C	X	2.884	2.884	0	%100
22	MP3C	Z	1.665	1.665	0	%100
23	MP4C	X	2.599	2.599	0	%100
24	MP4C	Z	1.501	1.501	0	%100
25	MP1B	X	2.599	2.599	0	%100
26	MP1B	Z	1.501	1.501	0	%100
27	MP2B	X	2.599	2.599	0	%100
28	MP2B	Z	1.501	1.501	0	%100
29	MP3B	X	2.884	2.884	0	%100
30	MP3B	Z	1.665	1.665	0	%100
31	MP4B	X	2.599	2.599	0	%100
32	MP4B	Z	1.501	1.501	0	%100
33	M77A	X	2.646	2.646	0	%100
34	M77A	Z	1.527	1.527	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	2.155	2.155	0	%100
38	OVP	Z	1.244	1.244	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	.509	.509	0	%100
2	M4	Z	.882	.882	0	%100
3	M40	X	1.567	1.567	0	%100
4	M40	Z	2.715	2.715	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	1.567	1.567	0	%100
8	M42	Z	2.715	2.715	0	%100
9	MP1A	X	1.501	1.501	0	%100
10	MP1A	Z	2.599	2.599	0	%100
11	MP2A	X	1.501	1.501	0	%100
12	MP2A	Z	2.599	2.599	0	%100
13	MP3A	X	1.665	1.665	0	%100
14	MP3A	Z	2.884	2.884	0	%100
15	MP4A	X	1.501	1.501	0	%100
16	MP4A	Z	2.599	2.599	0	%100
17	MP1C	X	1.501	1.501	0	%100
18	MP1C	Z	2.599	2.599	0	%100
19	MP2C	X	1.501	1.501	0	%100
20	MP2C	Z	2.599	2.599	0	%100
21	MP3C	X	1.665	1.665	0	%100
22	MP3C	Z	2.884	2.884	0	%100
23	MP4C	X	1.501	1.501	0	%100
24	MP4C	Z	2.599	2.599	0	%100
25	MP1B	X	1.501	1.501	0	%100
26	MP1B	Z	2.599	2.599	0	%100
27	MP2B	X	1.501	1.501	0	%100
28	MP2B	Z	2.599	2.599	0	%100
29	MP3B	X	1.665	1.665	0	%100
30	MP3B	Z	2.884	2.884	0	%100
31	MP4B	X	1.501	1.501	0	%100
32	MP4B	Z	2.599	2.599	0	%100
33	M77A	X	2.037	2.037	0	%100
34	M77A	Z	3.527	3.527	0	%100
35	M78A	X	.509	.509	0	%100
36	M78A	Z	.882	.882	0	%100
37	OVP	X	1.244	1.244	0	%100
38	OVP	Z	2.155	2.155	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	4.18	4.18	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	1.045	1.045	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	1.045	1.045	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	3.001	3.001	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	0	0	0	%100
12	MP2A	Z	3.001	3.001	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	3.33	3.33	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	3.001	3.001	0	%100
17	MP1C	X	0	0	0	%100
18	MP1C	Z	3.001	3.001	0	%100
19	MP2C	X	0	0	0	%100
20	MP2C	Z	3.001	3.001	0	%100
21	MP3C	X	0	0	0	%100
22	MP3C	Z	3.33	3.33	0	%100
23	MP4C	X	0	0	0	%100
24	MP4C	Z	3.001	3.001	0	%100
25	MP1B	X	0	0	0	%100
26	MP1B	Z	3.001	3.001	0	%100
27	MP2B	X	0	0	0	%100
28	MP2B	Z	3.001	3.001	0	%100
29	MP3B	X	0	0	0	%100
30	MP3B	Z	3.33	3.33	0	%100
31	MP4B	X	0	0	0	%100
32	MP4B	Z	3.001	3.001	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	3.055	3.055	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	3.055	3.055	0	%100
37	OVP	X	0	0	0	%100
38	OVP	Z	2.489	2.489	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-.509	-.509	0	%100
2	M4	Z	.882	.882	0	%100
3	M40	X	-1.567	-1.567	0	%100
4	M40	Z	2.715	2.715	0	%100
5	M41	X	-1.567	-1.567	0	%100
6	M41	Z	2.715	2.715	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	-1.501	-1.501	0	%100
10	MP1A	Z	2.599	2.599	0	%100
11	MP2A	X	-1.501	-1.501	0	%100
12	MP2A	Z	2.599	2.599	0	%100
13	MP3A	X	-1.665	-1.665	0	%100
14	MP3A	Z	2.884	2.884	0	%100
15	MP4A	X	-1.501	-1.501	0	%100
16	MP4A	Z	2.599	2.599	0	%100
17	MP1C	X	-1.501	-1.501	0	%100
18	MP1C	Z	2.599	2.599	0	%100
19	MP2C	X	-1.501	-1.501	0	%100
20	MP2C	Z	2.599	2.599	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	MP3C	X	-1.665	-1.665	0	%100
22	MP3C	Z	2.884	2.884	0	%100
23	MP4C	X	-1.501	-1.501	0	%100
24	MP4C	Z	2.599	2.599	0	%100
25	MP1B	X	-1.501	-1.501	0	%100
26	MP1B	Z	2.599	2.599	0	%100
27	MP2B	X	-1.501	-1.501	0	%100
28	MP2B	Z	2.599	2.599	0	%100
29	MP3B	X	-1.665	-1.665	0	%100
30	MP3B	Z	2.884	2.884	0	%100
31	MP4B	X	-1.501	-1.501	0	%100
32	MP4B	Z	2.599	2.599	0	%100
33	M77A	X	-.509	-.509	0	%100
34	M77A	Z	.882	.882	0	%100
35	M78A	X	-2.037	-2.037	0	%100
36	M78A	Z	3.527	3.527	0	%100
37	OVP	X	-1.244	-1.244	0	%100
38	OVP	Z	2.155	2.155	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-2.646	-2.646	0	%100
2	M4	Z	1.527	1.527	0	%100
3	M40	X	-.905	-.905	0	%100
4	M40	Z	.522	.522	0	%100
5	M41	X	-3.62	-3.62	0	%100
6	M41	Z	2.09	2.09	0	%100
7	M42	X	-.905	-.905	0	%100
8	M42	Z	.522	.522	0	%100
9	MP1A	X	-2.599	-2.599	0	%100
10	MP1A	Z	1.501	1.501	0	%100
11	MP2A	X	-2.599	-2.599	0	%100
12	MP2A	Z	1.501	1.501	0	%100
13	MP3A	X	-2.884	-2.884	0	%100
14	MP3A	Z	1.665	1.665	0	%100
15	MP4A	X	-2.599	-2.599	0	%100
16	MP4A	Z	1.501	1.501	0	%100
17	MP1C	X	-2.599	-2.599	0	%100
18	MP1C	Z	1.501	1.501	0	%100
19	MP2C	X	-2.599	-2.599	0	%100
20	MP2C	Z	1.501	1.501	0	%100
21	MP3C	X	-2.884	-2.884	0	%100
22	MP3C	Z	1.665	1.665	0	%100
23	MP4C	X	-2.599	-2.599	0	%100
24	MP4C	Z	1.501	1.501	0	%100
25	MP1B	X	-2.599	-2.599	0	%100
26	MP1B	Z	1.501	1.501	0	%100
27	MP2B	X	-2.599	-2.599	0	%100
28	MP2B	Z	1.501	1.501	0	%100
29	MP3B	X	-2.884	-2.884	0	%100
30	MP3B	Z	1.665	1.665	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
31	MP4B	X	-2.599	-2.599	0	%100
32	MP4B	Z	1.501	1.501	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	-2.646	-2.646	0	%100
36	M78A	Z	1.527	1.527	0	%100
37	OVP	X	-2.155	-2.155	0	%100
38	OVP	Z	1.244	1.244	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-4.073	-4.073	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	0	0	0	%100
5	M41	X	-3.135	-3.135	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	-3.135	-3.135	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	-3.001	-3.001	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	-3.001	-3.001	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-3.33	-3.33	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	-3.001	-3.001	0	%100
16	MP4A	Z	0	0	0	%100
17	MP1C	X	-3.001	-3.001	0	%100
18	MP1C	Z	0	0	0	%100
19	MP2C	X	-3.001	-3.001	0	%100
20	MP2C	Z	0	0	0	%100
21	MP3C	X	-3.33	-3.33	0	%100
22	MP3C	Z	0	0	0	%100
23	MP4C	X	-3.001	-3.001	0	%100
24	MP4C	Z	0	0	0	%100
25	MP1B	X	-3.001	-3.001	0	%100
26	MP1B	Z	0	0	0	%100
27	MP2B	X	-3.001	-3.001	0	%100
28	MP2B	Z	0	0	0	%100
29	MP3B	X	-3.33	-3.33	0	%100
30	MP3B	Z	0	0	0	%100
31	MP4B	X	-3.001	-3.001	0	%100
32	MP4B	Z	0	0	0	%100
33	M77A	X	-1.018	-1.018	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	-1.018	-1.018	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	-2.489	-2.489	0	%100
38	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-2.646	-2.646	0	%100
2	M4	Z	-1.527	-1.527	0	%100
3	M40	X	-.905	-.905	0	%100
4	M40	Z	-.522	-.522	0	%100
5	M41	X	-.905	-.905	0	%100
6	M41	Z	-.522	-.522	0	%100
7	M42	X	-3.62	-3.62	0	%100
8	M42	Z	-2.09	-2.09	0	%100
9	MP1A	X	-2.599	-2.599	0	%100
10	MP1A	Z	-1.501	-1.501	0	%100
11	MP2A	X	-2.599	-2.599	0	%100
12	MP2A	Z	-1.501	-1.501	0	%100
13	MP3A	X	-2.884	-2.884	0	%100
14	MP3A	Z	-1.665	-1.665	0	%100
15	MP4A	X	-2.599	-2.599	0	%100
16	MP4A	Z	-1.501	-1.501	0	%100
17	MP1C	X	-2.599	-2.599	0	%100
18	MP1C	Z	-1.501	-1.501	0	%100
19	MP2C	X	-2.599	-2.599	0	%100
20	MP2C	Z	-1.501	-1.501	0	%100
21	MP3C	X	-2.884	-2.884	0	%100
22	MP3C	Z	-1.665	-1.665	0	%100
23	MP4C	X	-2.599	-2.599	0	%100
24	MP4C	Z	-1.501	-1.501	0	%100
25	MP1B	X	-2.599	-2.599	0	%100
26	MP1B	Z	-1.501	-1.501	0	%100
27	MP2B	X	-2.599	-2.599	0	%100
28	MP2B	Z	-1.501	-1.501	0	%100
29	MP3B	X	-2.884	-2.884	0	%100
30	MP3B	Z	-1.665	-1.665	0	%100
31	MP4B	X	-2.599	-2.599	0	%100
32	MP4B	Z	-1.501	-1.501	0	%100
33	M77A	X	-2.646	-2.646	0	%100
34	M77A	Z	-1.527	-1.527	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	-2.155	-2.155	0	%100
38	OVP	Z	-1.244	-1.244	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-.509	-.509	0	%100
2	M4	Z	-.882	-.882	0	%100
3	M40	X	-1.567	-1.567	0	%100
4	M40	Z	-2.715	-2.715	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	-1.567	-1.567	0	%100
8	M42	Z	-2.715	-2.715	0	%100
9	MP1A	X	-1.501	-1.501	0	%100
10	MP1A	Z	-2.599	-2.599	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	-1.501	-1.501	0	%100
12	MP2A	Z	-2.599	-2.599	0	%100
13	MP3A	X	-1.665	-1.665	0	%100
14	MP3A	Z	-2.884	-2.884	0	%100
15	MP4A	X	-1.501	-1.501	0	%100
16	MP4A	Z	-2.599	-2.599	0	%100
17	MP1C	X	-1.501	-1.501	0	%100
18	MP1C	Z	-2.599	-2.599	0	%100
19	MP2C	X	-1.501	-1.501	0	%100
20	MP2C	Z	-2.599	-2.599	0	%100
21	MP3C	X	-1.665	-1.665	0	%100
22	MP3C	Z	-2.884	-2.884	0	%100
23	MP4C	X	-1.501	-1.501	0	%100
24	MP4C	Z	-2.599	-2.599	0	%100
25	MP1B	X	-1.501	-1.501	0	%100
26	MP1B	Z	-2.599	-2.599	0	%100
27	MP2B	X	-1.501	-1.501	0	%100
28	MP2B	Z	-2.599	-2.599	0	%100
29	MP3B	X	-1.665	-1.665	0	%100
30	MP3B	Z	-2.884	-2.884	0	%100
31	MP4B	X	-1.501	-1.501	0	%100
32	MP4B	Z	-2.599	-2.599	0	%100
33	M77A	X	-2.037	-2.037	0	%100
34	M77A	Z	-3.527	-3.527	0	%100
35	M78A	X	-.509	-.509	0	%100
36	M78A	Z	-.882	-.882	0	%100
37	OVP	X	-1.244	-1.244	0	%100
38	OVP	Z	-2.155	-2.155	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	-.987	-.987	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	-.247	-.247	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	-.247	-.247	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	-.562	-.562	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-.562	-.562	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-.681	-.681	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-.562	-.562	0	%100
17	MP1C	X	0	0	0	%100
18	MP1C	Z	-.562	-.562	0	%100
19	MP2C	X	0	0	0	%100
20	MP2C	Z	-.562	-.562	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	MP3C	X	0	0	0	%100
22	MP3C	Z	-.681	-.681	0	%100
23	MP4C	X	0	0	0	%100
24	MP4C	Z	-.562	-.562	0	%100
25	MP1B	X	0	0	0	%100
26	MP1B	Z	-.562	-.562	0	%100
27	MP2B	X	0	0	0	%100
28	MP2B	Z	-.562	-.562	0	%100
29	MP3B	X	0	0	0	%100
30	MP3B	Z	-.681	-.681	0	%100
31	MP4B	X	0	0	0	%100
32	MP4B	Z	-.562	-.562	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	-.711	-.711	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	-.711	-.711	0	%100
37	OVP	X	0	0	0	%100
38	OVP	Z	-.46	-.46	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	.119	.119	0	%100
2	M4	Z	-.205	-.205	0	%100
3	M40	X	.37	.37	0	%100
4	M40	Z	-.641	-.641	0	%100
5	M41	X	.37	.37	0	%100
6	M41	Z	-.641	-.641	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	.281	.281	0	%100
10	MP1A	Z	-.487	-.487	0	%100
11	MP2A	X	.281	.281	0	%100
12	MP2A	Z	-.487	-.487	0	%100
13	MP3A	X	.34	.34	0	%100
14	MP3A	Z	-.59	-.59	0	%100
15	MP4A	X	.281	.281	0	%100
16	MP4A	Z	-.487	-.487	0	%100
17	MP1C	X	.281	.281	0	%100
18	MP1C	Z	-.487	-.487	0	%100
19	MP2C	X	.281	.281	0	%100
20	MP2C	Z	-.487	-.487	0	%100
21	MP3C	X	.34	.34	0	%100
22	MP3C	Z	-.59	-.59	0	%100
23	MP4C	X	.281	.281	0	%100
24	MP4C	Z	-.487	-.487	0	%100
25	MP1B	X	.281	.281	0	%100
26	MP1B	Z	-.487	-.487	0	%100
27	MP2B	X	.281	.281	0	%100
28	MP2B	Z	-.487	-.487	0	%100
29	MP3B	X	.34	.34	0	%100
30	MP3B	Z	-.59	-.59	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
31	MP4B	X	.281	.281	0	%100
32	MP4B	Z	-.487	-.487	0	%100
33	M77A	X	.119	.119	0	%100
34	M77A	Z	-.205	-.205	0	%100
35	M78A	X	.474	.474	0	%100
36	M78A	Z	-.821	-.821	0	%100
37	OVP	X	.23	.23	0	%100
38	OVP	Z	-.398	-.398	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	.616	.616	0	%100
2	M4	Z	-.356	-.356	0	%100
3	M40	X	.214	.214	0	%100
4	M40	Z	-.123	-.123	0	%100
5	M41	X	.854	.854	0	%100
6	M41	Z	-.493	-.493	0	%100
7	M42	X	.214	.214	0	%100
8	M42	Z	-.123	-.123	0	%100
9	MP1A	X	.487	.487	0	%100
10	MP1A	Z	-.281	-.281	0	%100
11	MP2A	X	.487	.487	0	%100
12	MP2A	Z	-.281	-.281	0	%100
13	MP3A	X	.59	.59	0	%100
14	MP3A	Z	-.34	-.34	0	%100
15	MP4A	X	.487	.487	0	%100
16	MP4A	Z	-.281	-.281	0	%100
17	MP1C	X	.487	.487	0	%100
18	MP1C	Z	-.281	-.281	0	%100
19	MP2C	X	.487	.487	0	%100
20	MP2C	Z	-.281	-.281	0	%100
21	MP3C	X	.59	.59	0	%100
22	MP3C	Z	-.34	-.34	0	%100
23	MP4C	X	.487	.487	0	%100
24	MP4C	Z	-.281	-.281	0	%100
25	MP1B	X	.487	.487	0	%100
26	MP1B	Z	-.281	-.281	0	%100
27	MP2B	X	.487	.487	0	%100
28	MP2B	Z	-.281	-.281	0	%100
29	MP3B	X	.59	.59	0	%100
30	MP3B	Z	-.34	-.34	0	%100
31	MP4B	X	.487	.487	0	%100
32	MP4B	Z	-.281	-.281	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	.616	.616	0	%100
36	M78A	Z	-.356	-.356	0	%100
37	OVP	X	.398	.398	0	%100
38	OVP	Z	-.23	-.23	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	.948	.948	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	0	0	0	%100
5	M41	X	.74	.74	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	.74	.74	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	.562	.562	0	%100
10	MP1A	Z	0	0	0	%100
11	MP2A	X	.562	.562	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	.681	.681	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	.562	.562	0	%100
16	MP4A	Z	0	0	0	%100
17	MP1C	X	.562	.562	0	%100
18	MP1C	Z	0	0	0	%100
19	MP2C	X	.562	.562	0	%100
20	MP2C	Z	0	0	0	%100
21	MP3C	X	.681	.681	0	%100
22	MP3C	Z	0	0	0	%100
23	MP4C	X	.562	.562	0	%100
24	MP4C	Z	0	0	0	%100
25	MP1B	X	.562	.562	0	%100
26	MP1B	Z	0	0	0	%100
27	MP2B	X	.562	.562	0	%100
28	MP2B	Z	0	0	0	%100
29	MP3B	X	.681	.681	0	%100
30	MP3B	Z	0	0	0	%100
31	MP4B	X	.562	.562	0	%100
32	MP4B	Z	0	0	0	%100
33	M77A	X	.237	.237	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	.237	.237	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	.46	.46	0	%100
38	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	.616	.616	0	%100
2	M4	Z	.356	.356	0	%100
3	M40	X	.214	.214	0	%100
4	M40	Z	.123	.123	0	%100
5	M41	X	.214	.214	0	%100
6	M41	Z	.123	.123	0	%100
7	M42	X	.854	.854	0	%100
8	M42	Z	.493	.493	0	%100
9	MP1A	X	.487	.487	0	%100
10	MP1A	Z	.281	.281	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	.487	.487	0	%100
12	MP2A	Z	.281	.281	0	%100
13	MP3A	X	.59	.59	0	%100
14	MP3A	Z	.34	.34	0	%100
15	MP4A	X	.487	.487	0	%100
16	MP4A	Z	.281	.281	0	%100
17	MP1C	X	.487	.487	0	%100
18	MP1C	Z	.281	.281	0	%100
19	MP2C	X	.487	.487	0	%100
20	MP2C	Z	.281	.281	0	%100
21	MP3C	X	.59	.59	0	%100
22	MP3C	Z	.34	.34	0	%100
23	MP4C	X	.487	.487	0	%100
24	MP4C	Z	.281	.281	0	%100
25	MP1B	X	.487	.487	0	%100
26	MP1B	Z	.281	.281	0	%100
27	MP2B	X	.487	.487	0	%100
28	MP2B	Z	.281	.281	0	%100
29	MP3B	X	.59	.59	0	%100
30	MP3B	Z	.34	.34	0	%100
31	MP4B	X	.487	.487	0	%100
32	MP4B	Z	.281	.281	0	%100
33	M77A	X	.616	.616	0	%100
34	M77A	Z	.356	.356	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	.398	.398	0	%100
38	OVP	Z	.23	.23	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	.119	.119	0	%100
2	M4	Z	.205	.205	0	%100
3	M40	X	.37	.37	0	%100
4	M40	Z	.641	.641	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	.37	.37	0	%100
8	M42	Z	.641	.641	0	%100
9	MP1A	X	.281	.281	0	%100
10	MP1A	Z	.487	.487	0	%100
11	MP2A	X	.281	.281	0	%100
12	MP2A	Z	.487	.487	0	%100
13	MP3A	X	.34	.34	0	%100
14	MP3A	Z	.59	.59	0	%100
15	MP4A	X	.281	.281	0	%100
16	MP4A	Z	.487	.487	0	%100
17	MP1C	X	.281	.281	0	%100
18	MP1C	Z	.487	.487	0	%100
19	MP2C	X	.281	.281	0	%100
20	MP2C	Z	.487	.487	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	MP3C	X	.34	.34	0	%100
22	MP3C	Z	.59	.59	0	%100
23	MP4C	X	.281	.281	0	%100
24	MP4C	Z	.487	.487	0	%100
25	MP1B	X	.281	.281	0	%100
26	MP1B	Z	.487	.487	0	%100
27	MP2B	X	.281	.281	0	%100
28	MP2B	Z	.487	.487	0	%100
29	MP3B	X	.34	.34	0	%100
30	MP3B	Z	.59	.59	0	%100
31	MP4B	X	.281	.281	0	%100
32	MP4B	Z	.487	.487	0	%100
33	M77A	X	.474	.474	0	%100
34	M77A	Z	.821	.821	0	%100
35	M78A	X	.119	.119	0	%100
36	M78A	Z	.205	.205	0	%100
37	OVP	X	.23	.23	0	%100
38	OVP	Z	.398	.398	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	.987	.987	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	.247	.247	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	.247	.247	0	%100
9	MP1A	X	0	0	0	%100
10	MP1A	Z	.562	.562	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	.562	.562	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	.681	.681	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	.562	.562	0	%100
17	MP1C	X	0	0	0	%100
18	MP1C	Z	.562	.562	0	%100
19	MP2C	X	0	0	0	%100
20	MP2C	Z	.562	.562	0	%100
21	MP3C	X	0	0	0	%100
22	MP3C	Z	.681	.681	0	%100
23	MP4C	X	0	0	0	%100
24	MP4C	Z	.562	.562	0	%100
25	MP1B	X	0	0	0	%100
26	MP1B	Z	.562	.562	0	%100
27	MP2B	X	0	0	0	%100
28	MP2B	Z	.562	.562	0	%100
29	MP3B	X	0	0	0	%100
30	MP3B	Z	.681	.681	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
31	MP4B	X	0	0	0	%100
32	MP4B	Z	.562	.562	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	.711	.711	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	.711	.711	0	%100
37	OVP	X	0	0	0	%100
38	OVP	Z	.46	.46	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-.119	-.119	0	%100
2	M4	Z	.205	.205	0	%100
3	M40	X	-.37	-.37	0	%100
4	M40	Z	.641	.641	0	%100
5	M41	X	-.37	-.37	0	%100
6	M41	Z	.641	.641	0	%100
7	M42	X	0	0	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	-.281	-.281	0	%100
10	MP1A	Z	.487	.487	0	%100
11	MP2A	X	-.281	-.281	0	%100
12	MP2A	Z	.487	.487	0	%100
13	MP3A	X	-.34	-.34	0	%100
14	MP3A	Z	.59	.59	0	%100
15	MP4A	X	-.281	-.281	0	%100
16	MP4A	Z	.487	.487	0	%100
17	MP1C	X	-.281	-.281	0	%100
18	MP1C	Z	.487	.487	0	%100
19	MP2C	X	-.281	-.281	0	%100
20	MP2C	Z	.487	.487	0	%100
21	MP3C	X	-.34	-.34	0	%100
22	MP3C	Z	.59	.59	0	%100
23	MP4C	X	-.281	-.281	0	%100
24	MP4C	Z	.487	.487	0	%100
25	MP1B	X	-.281	-.281	0	%100
26	MP1B	Z	.487	.487	0	%100
27	MP2B	X	-.281	-.281	0	%100
28	MP2B	Z	.487	.487	0	%100
29	MP3B	X	-.34	-.34	0	%100
30	MP3B	Z	.59	.59	0	%100
31	MP4B	X	-.281	-.281	0	%100
32	MP4B	Z	.487	.487	0	%100
33	M77A	X	-.119	-.119	0	%100
34	M77A	Z	.205	.205	0	%100
35	M78A	X	-.474	-.474	0	%100
36	M78A	Z	.821	.821	0	%100
37	OVP	X	-.23	-.23	0	%100
38	OVP	Z	.398	.398	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-.616	-.616	0	%100
2	M4	Z	.356	.356	0	%100
3	M40	X	-.214	-.214	0	%100
4	M40	Z	.123	.123	0	%100
5	M41	X	-.854	-.854	0	%100
6	M41	Z	.493	.493	0	%100
7	M42	X	-.214	-.214	0	%100
8	M42	Z	.123	.123	0	%100
9	MP1A	X	-.487	-.487	0	%100
10	MP1A	Z	.281	.281	0	%100
11	MP2A	X	-.487	-.487	0	%100
12	MP2A	Z	.281	.281	0	%100
13	MP3A	X	-.59	-.59	0	%100
14	MP3A	Z	.34	.34	0	%100
15	MP4A	X	-.487	-.487	0	%100
16	MP4A	Z	.281	.281	0	%100
17	MP1C	X	-.487	-.487	0	%100
18	MP1C	Z	.281	.281	0	%100
19	MP2C	X	-.487	-.487	0	%100
20	MP2C	Z	.281	.281	0	%100
21	MP3C	X	-.59	-.59	0	%100
22	MP3C	Z	.34	.34	0	%100
23	MP4C	X	-.487	-.487	0	%100
24	MP4C	Z	.281	.281	0	%100
25	MP1B	X	-.487	-.487	0	%100
26	MP1B	Z	.281	.281	0	%100
27	MP2B	X	-.487	-.487	0	%100
28	MP2B	Z	.281	.281	0	%100
29	MP3B	X	-.59	-.59	0	%100
30	MP3B	Z	.34	.34	0	%100
31	MP4B	X	-.487	-.487	0	%100
32	MP4B	Z	.281	.281	0	%100
33	M77A	X	0	0	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	-.616	-.616	0	%100
36	M78A	Z	.356	.356	0	%100
37	OVP	X	-.398	-.398	0	%100
38	OVP	Z	.23	.23	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-.948	-.948	0	%100
2	M4	Z	0	0	0	%100
3	M40	X	0	0	0	%100
4	M40	Z	0	0	0	%100
5	M41	X	-.74	-.74	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	-.74	-.74	0	%100
8	M42	Z	0	0	0	%100
9	MP1A	X	-.562	-.562	0	%100
10	MP1A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP2A	X	-.562	-.562	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-.681	-.681	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	-.562	-.562	0	%100
16	MP4A	Z	0	0	0	%100
17	MP1C	X	-.562	-.562	0	%100
18	MP1C	Z	0	0	0	%100
19	MP2C	X	-.562	-.562	0	%100
20	MP2C	Z	0	0	0	%100
21	MP3C	X	-.681	-.681	0	%100
22	MP3C	Z	0	0	0	%100
23	MP4C	X	-.562	-.562	0	%100
24	MP4C	Z	0	0	0	%100
25	MP1B	X	-.562	-.562	0	%100
26	MP1B	Z	0	0	0	%100
27	MP2B	X	-.562	-.562	0	%100
28	MP2B	Z	0	0	0	%100
29	MP3B	X	-.681	-.681	0	%100
30	MP3B	Z	0	0	0	%100
31	MP4B	X	-.562	-.562	0	%100
32	MP4B	Z	0	0	0	%100
33	M77A	X	-.237	-.237	0	%100
34	M77A	Z	0	0	0	%100
35	M78A	X	-.237	-.237	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	-.46	-.46	0	%100
38	OVP	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-.616	-.616	0	%100
2	M4	Z	-.356	-.356	0	%100
3	M40	X	-.214	-.214	0	%100
4	M40	Z	-.123	-.123	0	%100
5	M41	X	-.214	-.214	0	%100
6	M41	Z	-.123	-.123	0	%100
7	M42	X	-.854	-.854	0	%100
8	M42	Z	-.493	-.493	0	%100
9	MP1A	X	-.487	-.487	0	%100
10	MP1A	Z	-.281	-.281	0	%100
11	MP2A	X	-.487	-.487	0	%100
12	MP2A	Z	-.281	-.281	0	%100
13	MP3A	X	-.59	-.59	0	%100
14	MP3A	Z	-.34	-.34	0	%100
15	MP4A	X	-.487	-.487	0	%100
16	MP4A	Z	-.281	-.281	0	%100
17	MP1C	X	-.487	-.487	0	%100
18	MP1C	Z	-.281	-.281	0	%100
19	MP2C	X	-.487	-.487	0	%100
20	MP2C	Z	-.281	-.281	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	MP3C	X	-.59	-.59	0	%100
22	MP3C	Z	-.34	-.34	0	%100
23	MP4C	X	-.487	-.487	0	%100
24	MP4C	Z	-.281	-.281	0	%100
25	MP1B	X	-.487	-.487	0	%100
26	MP1B	Z	-.281	-.281	0	%100
27	MP2B	X	-.487	-.487	0	%100
28	MP2B	Z	-.281	-.281	0	%100
29	MP3B	X	-.59	-.59	0	%100
30	MP3B	Z	-.34	-.34	0	%100
31	MP4B	X	-.487	-.487	0	%100
32	MP4B	Z	-.281	-.281	0	%100
33	M77A	X	-.616	-.616	0	%100
34	M77A	Z	-.356	-.356	0	%100
35	M78A	X	0	0	0	%100
36	M78A	Z	0	0	0	%100
37	OVP	X	-.398	-.398	0	%100
38	OVP	Z	-.23	-.23	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M4	X	-.119	-.119	0	%100
2	M4	Z	-.205	-.205	0	%100
3	M40	X	-.37	-.37	0	%100
4	M40	Z	-.641	-.641	0	%100
5	M41	X	0	0	0	%100
6	M41	Z	0	0	0	%100
7	M42	X	-.37	-.37	0	%100
8	M42	Z	-.641	-.641	0	%100
9	MP1A	X	-.281	-.281	0	%100
10	MP1A	Z	-.487	-.487	0	%100
11	MP2A	X	-.281	-.281	0	%100
12	MP2A	Z	-.487	-.487	0	%100
13	MP3A	X	-.34	-.34	0	%100
14	MP3A	Z	-.59	-.59	0	%100
15	MP4A	X	-.281	-.281	0	%100
16	MP4A	Z	-.487	-.487	0	%100
17	MP1C	X	-.281	-.281	0	%100
18	MP1C	Z	-.487	-.487	0	%100
19	MP2C	X	-.281	-.281	0	%100
20	MP2C	Z	-.487	-.487	0	%100
21	MP3C	X	-.34	-.34	0	%100
22	MP3C	Z	-.59	-.59	0	%100
23	MP4C	X	-.281	-.281	0	%100
24	MP4C	Z	-.487	-.487	0	%100
25	MP1B	X	-.281	-.281	0	%100
26	MP1B	Z	-.487	-.487	0	%100
27	MP2B	X	-.281	-.281	0	%100
28	MP2B	Z	-.487	-.487	0	%100
29	MP3B	X	-.34	-.34	0	%100
30	MP3B	Z	-.59	-.59	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
31	MP4B	X	-.281	-.281	0	%100
32	MP4B	Z	-.487	-.487	0	%100
33	M77A	X	-.474	-.474	0	%100
34	M77A	Z	-.821	-.821	0	%100
35	M78A	X	-.119	-.119	0	%100
36	M78A	Z	-.205	-.205	0	%100
37	OVP	X	-.23	-.23	0	%100
38	OVP	Z	-.398	-.398	0	%100

Member Distributed Loads (BLC 81 : BLC 39 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M40	Y	-.171	-3.181	0	2.056
2	M40	Y	-3.181	-4.651	2.056	4.112
3	M40	Y	-4.651	-4.135	4.112	6.168
4	M40	Y	-4.135	-4.651	6.168	8.224
5	M40	Y	-4.651	-3.182	8.224	10.28
6	M40	Y	-3.182	-.171	10.28	12.337
7	M67	Y	-12.453	-12.453	7.216e-16	1
8	M68	Y	-12.453	-12.453	4.996e-16	1
9	M69	Y	-2.549	-7.147	0	.5
10	M69	Y	-7.147	-11.745	.5	1
11	M70	Y	-2.555	-7.15	0	.5
12	M70	Y	-7.15	-11.746	.5	1
13	M42	Y	-.171	-3.182	0	2.056
14	M42	Y	-3.182	-4.651	2.056	4.112
15	M42	Y	-4.651	-4.135	4.112	6.168
16	M42	Y	-4.135	-4.651	6.168	8.224
17	M42	Y	-4.651	-3.181	8.224	10.28
18	M42	Y	-3.181	-.171	10.28	12.337
19	M75	Y	-12.453	-12.453	3.923e-13	1
20	M76	Y	-12.453	-12.453	5.443e-14	1
21	M77	Y	-2.555	-7.15	0	.5
22	M77	Y	-7.15	-11.746	.5	1
23	M78	Y	-2.549	-7.147	0	.5
24	M78	Y	-7.147	-11.745	.5	1
25	M41	Y	-.171	-3.182	0	2.056
26	M41	Y	-3.182	-4.651	2.056	4.112
27	M41	Y	-4.651	-4.135	4.112	6.168
28	M41	Y	-4.135	-4.651	6.168	8.224
29	M41	Y	-4.651	-3.181	8.224	10.28
30	M41	Y	-3.181	-.171	10.28	12.337
31	M71	Y	-12.453	-12.453	6.811e-14	1
32	M72	Y	-12.453	-12.453	4.058e-13	1
33	M73	Y	-2.555	-7.15	0	.5
34	M73	Y	-7.15	-11.746	.5	1
35	M74	Y	-2.549	-7.147	0	.5
36	M74	Y	-7.147	-11.745	.5	1

Member Distributed Loads (BLC 82 : BLC 40 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M40	Y	-.194	-3.605	0	2.056

Member Distributed Loads (BLC 82 : BLC 40 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
2	M40	Y	-3.605	-5.271	2.056	4.112
3	M40	Y	-5.271	-4.686	4.112	6.168
4	M40	Y	-4.686	-5.271	6.168	8.224
5	M40	Y	-5.271	-3.606	8.224	10.28
6	M40	Y	-3.606	-.194	10.28	12.337
7	M67	Y	-14.114	-14.114	7.216e-16	1
8	M68	Y	-14.114	-14.114	4.996e-16	1
9	M69	Y	-2.889	-8.1	0	.5
10	M69	Y	-8.1	-13.311	.5	1
11	M70	Y	-2.895	-8.104	0	.5
12	M70	Y	-8.104	-13.312	.5	1
13	M42	Y	-.194	-3.606	0	2.056
14	M42	Y	-3.606	-5.271	2.056	4.112
15	M42	Y	-5.271	-4.686	4.112	6.168
16	M42	Y	-4.686	-5.271	6.168	8.224
17	M42	Y	-5.271	-3.605	8.224	10.28
18	M42	Y	-3.605	-.194	10.28	12.337
19	M75	Y	-14.114	-14.114	3.923e-13	1
20	M76	Y	-14.114	-14.114	5.443e-14	1
21	M77	Y	-2.895	-8.104	0	.5
22	M77	Y	-8.104	-13.312	.5	1
23	M78	Y	-2.889	-8.1	0	.5
24	M78	Y	-8.1	-13.311	.5	1
25	M41	Y	-.194	-3.606	0	2.056
26	M41	Y	-3.606	-5.271	2.056	4.112
27	M41	Y	-5.271	-4.686	4.112	6.168
28	M41	Y	-4.686	-5.271	6.168	8.224
29	M41	Y	-5.271	-3.605	8.224	10.28
30	M41	Y	-3.605	-.194	10.28	12.337
31	M71	Y	-14.114	-14.114	6.811e-14	1
32	M72	Y	-14.114	-14.114	4.058e-13	1
33	M73	Y	-2.895	-8.104	0	.5
34	M73	Y	-8.104	-13.312	.5	1
35	M74	Y	-2.889	-8.1	0	.5
36	M74	Y	-8.1	-13.311	.5	1

Member Area Loads (BLC 39 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N91	N90	N89	N92	Y	Two Way	-.009
2	N112	N108	N110	N111	Y	Two Way	-.009
3	N102	N98	N100	N101	Y	Two Way	-.009

Member Area Loads (BLC 40 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N91	N90	N89	N92	Y	Two Way	-.01
2	N112	N108	N110	N111	Y	Two Way	-.01
3	N102	N98	N100	N101	Y	Two Way	-.01

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	N3	max	699.498	10	2010.549	19	2017.485	1	6.612	19	1.556	4	.211	4
2		min	-699.534	4	809.539	1	-2016.269	7	2.679	1	-1.556	10	-.185	10
3	N109A	max	1718.586	9	1912.318	15	1072.025	3	-1.189	9	1.256	12	-2.059	9
4		min	-1717.699	3	755.149	9	-1072.933	9	-3.334	15	-1.256	6	-5.774	15
5	N111A	max	1785.397	11	1911.903	23	959.871	11	-1.188	5	1.254	8	6.1	47
6		min	-1786.516	5	756.04	5	-960.574	5	-3.522	47	-1.253	2	2.057	5
7	Totals:	max	3904.854	10	5640.065	14	3638.616	1						
8		min	-3904.856	4	3072.321	8	-3638.622	7						

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	M4	HSS4X4X5	.351	0	17	.049	0	y	17	132933.8...	169740	19.285	19.285	2....	H1-1b
2	M40	HSS4X4X5	.154	0	7	.049	0	z	1	87616.552	169740	19.285	19.285	2....	H1-1b
3	M41	HSS4X4X5	.152	0	3	.048	0	z	9	87616.552	169740	19.285	19.285	2....	H1-1b
4	M42	HSS4X4X5	.155	0	11	.047	0	z	5	87616.552	169740	19.285	19.285	2....	H1-1b
5	MP1A	PIPE_2.0	.166	3.276	1	.031	3.276		6	13511.278	32130	1.872	1.872	1....	H1-1b
6	MP2A	PIPE_2.0	.077	3.276	1	.009	3.276		8	13511.278	32130	1.872	1.872	1	H1-1b
7	MP3A	PIPE_2.5	.278	3.276	1	.069	3.276		9	28077.395	50715	3.596	3.596	1....	H1-1b
8	MP4A	PIPE_2.0	.075	3.188	1	.019	3.188		9	13511.278	32130	1.872	1.872	2....	H1-1b
9	MP1C	PIPE_2.0	.165	3.276	10	.032	3.276		11	13511.278	32130	1.872	1.872	2....	H1-1b
10	MP2C	PIPE_2.0	.077	3.276	10	.009	3.276		3	13511.278	32130	1.872	1.872	2....	H1-1b
11	MP3C	PIPE_2.5	.275	3.276	10	.069	3.276		6	28077.395	50715	3.596	3.596	2....	H1-1b
12	MP4C	PIPE_2.0	.075	3.188	9	.019	3.188		5	13511.278	32130	1.872	1.872	2....	H1-1b
13	MP1B	PIPE_2.0	.165	3.276	4	.032	3.276		9	13511.278	32130	1.872	1.872	2....	H1-1b
14	MP2B	PIPE_2.0	.077	3.276	4	.009	3.276		11	13511.278	32130	1.872	1.872	2....	H1-1b
15	MP3B	PIPE_2.5	.275	3.276	4	.069	3.276		2	28077.395	50715	3.596	3.596	2....	H1-1b
16	MP4B	PIPE_2.0	.075	3.188	5	.019	3.188		1	13511.278	32130	1.872	1.872	2....	H1-1b
17	M77A	HSS4X4X5	.349	0	15	.042	0	y	15	132933.8...	169740	19.285	19.285	2....	H1-1b
18	M78A	HSS4X4X5	.366	0	45	.042	0	y	23	132933.8...	169740	19.285	19.285	2....	H1-1b
19	OVP	PIPE_2.0	.131	2.5	12	.017	2.5		12	28843.414	32130	1.872	1.872	1....	H1-1b

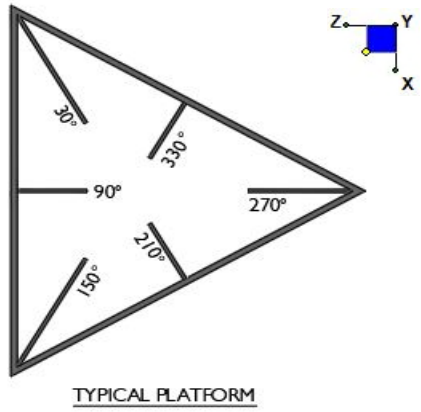
Client:	Verizon Wireless	Date:	6/23/2021
Site Name:	SOUTHINGTON EAST CT - A		
Project No.	21777816A		
Title:	Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

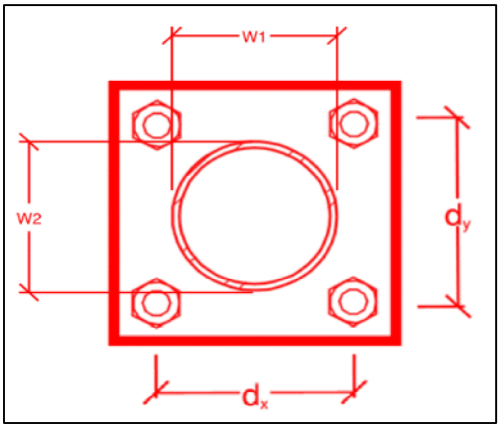
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N109A	30
N111A	150
N3	270



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)*:	3
d_y (in) *(Delta Y of typ. bolt config. sketch)*:	8
Bolt Type:	A325N
Bolt Diameter (in):	0.75
Required Tensile Strength (kips):	21.3
Required Shear Strength (kips):	2.9
Tensile Strength / bolt (kips):	29.8
Shear Strength / bolt (kips):	17.9
Tensile Capacity Overall:	**17.8%***
Shear Capacity Overall:	**4.1%**



**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):	6
Plate Height (in):	10
W1 (in):	4
W2 (in):	4
Fy (ksi, plate):	36
t_{Plate} (in):	0.75
Weld Size (1/16 in):	7
Phi*Rn (kip/in):	9.74
Required Weld Strength (kip/in):	3.97
Plate Bending Capacity:	**77.8%**
Weld Capacity:	**40.8%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)*:	21.3
$Phi*Mn_{xx}$ *(kip-in)*:	27.3
Mu_{yy} *(kip-in)*:	0.0
$Phi*Mn_{yy}$ *(kip-in)*:	45.6

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

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

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

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact Maser Consulting Connecticut 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 equipment 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 equipment.

- 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
- 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.

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 any other information the contractor deems necessary to share that was identified:

Issue:

Contractor to replace Position 3 mount pipes with 102" long P2.5 STD pipes, connect to face horizontal using crossover plates (Site Pro 1 Part #: SQCX4-K or EOR approved equivalent). Top of mount pipes is 39" above existing face horizontal. Contractor to install new 36" long P2.0 STD pipe on the existing standoff horizontal member between Beta & Gamma sector for new OVP - connect to standoff using crossover plates (Site Pro 1 Part #: SQCX4-K or EOR approved equivalent)

Response:

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

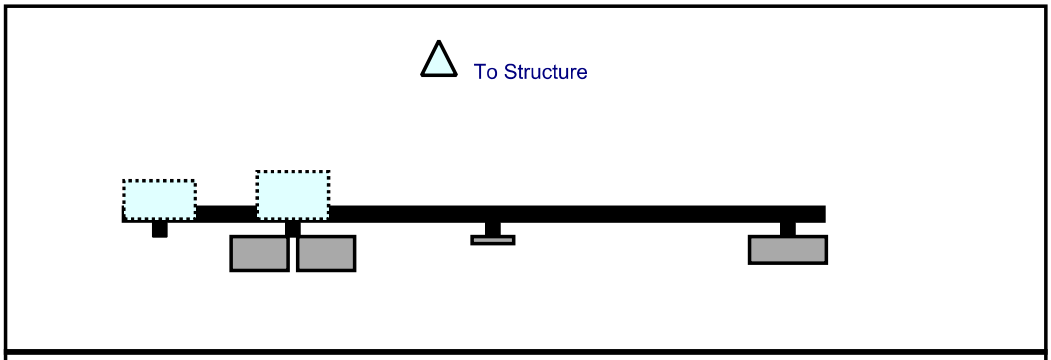
Structure: 468340-VZW - SOUTHINGTON EAST CT - A

Sector: **A** 6/23/2021

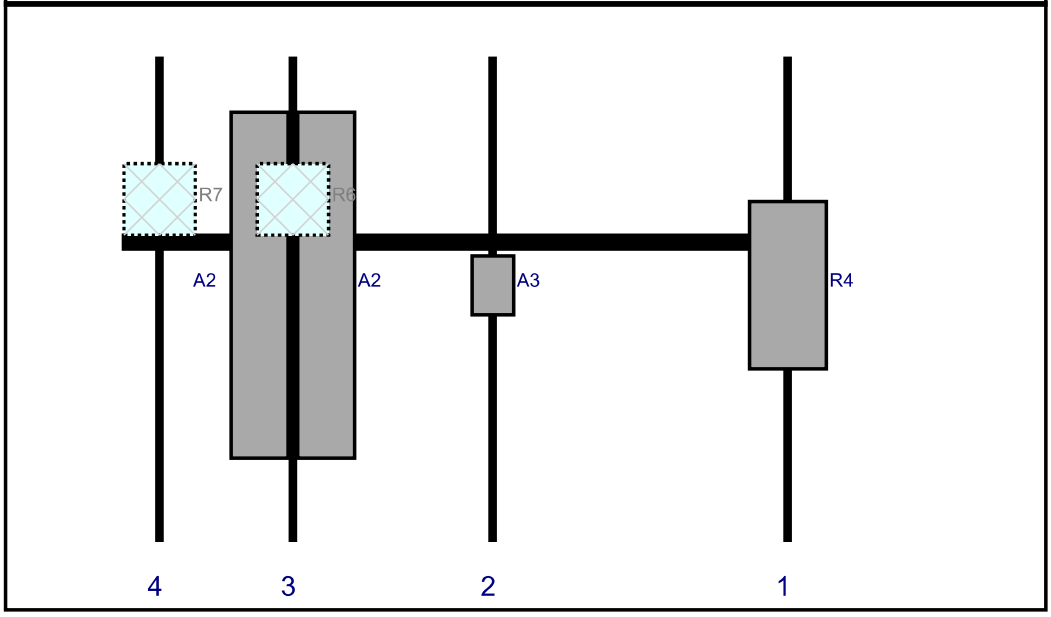
Structure Type: Monopole 10059064

Mount Elev: 81.00 Page: 1

Plan View



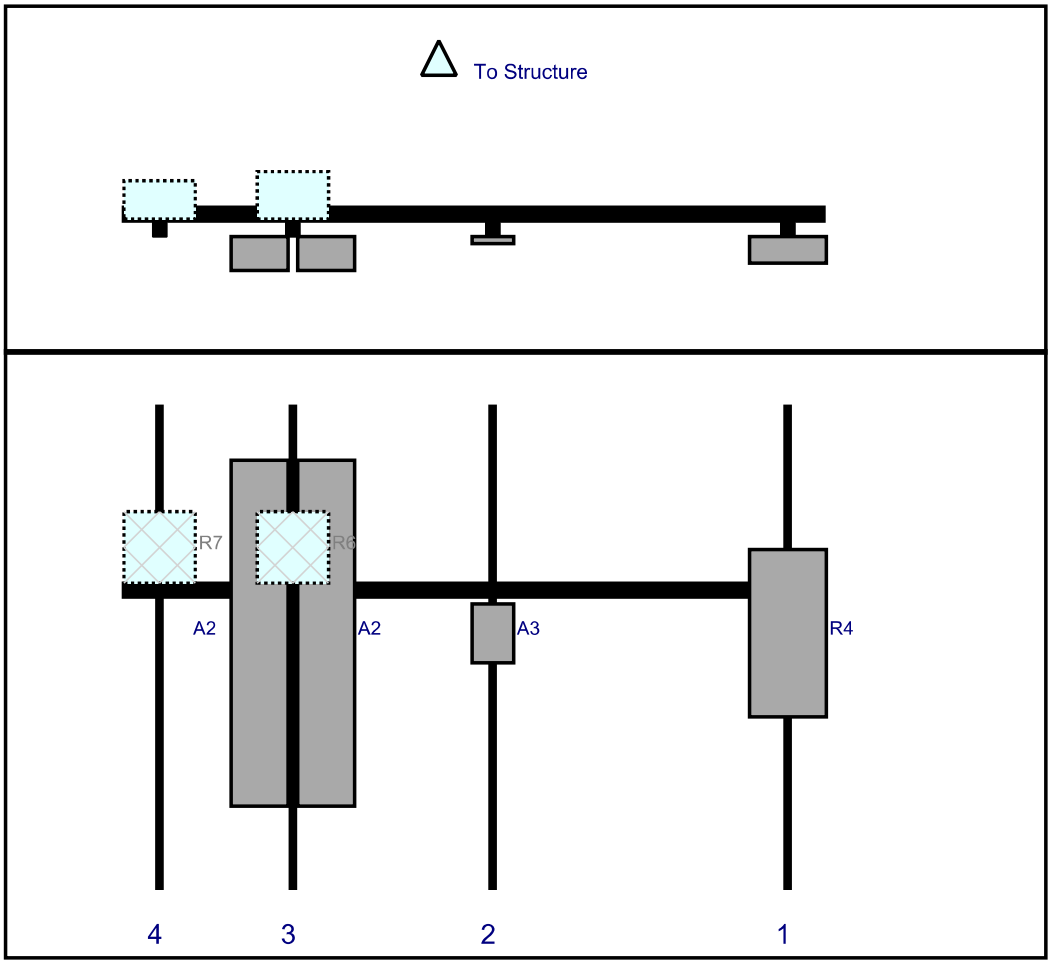
Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R4	MT6407-77A	35.1	16.1	140	1	a	Front	48	0	Added	
A3	XXDWMM-12.5-65	12.3	8.7	78	2	a	Front	48	0	Added	
A2	SBNHH-1D65B	72.6	11.9	36	3	a	Front	48	-7	Retained	05/26/2021
A2	SBNHH-1D65B	72.6	11.9	36	3	b	Front	48	7	Retained	05/26/2021
R6	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	36	3	a	Behind	30	0	Added	
R7	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	8	4	a	Behind	30	0	Added	

Plan View

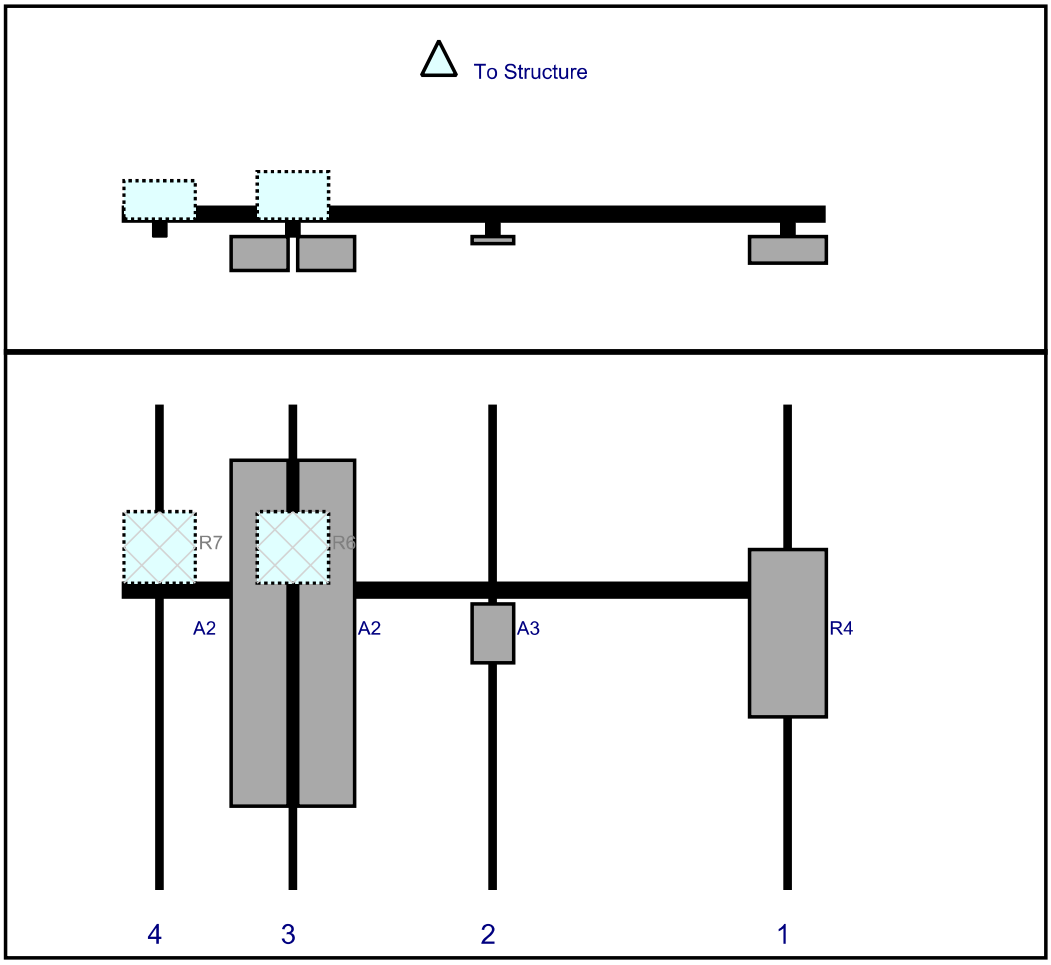
Front View
Looking at Structure



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
R4	MT6407-77A	35.1	16.1	140	1	a	Front	48	0	Added	
A3	XXDWMM-12.5-65	12.3	8.7	78	2	a	Front	48	0	Added	
A2	SBNHH-1D65B	72.6	11.9	36	3	a	Front	48	-7	Retained	05/26/2021
A2	SBNHH-1D65B	72.6	11.9	36	3	b	Front	48	7	Retained	05/26/2021
R6	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	36	3	a	Behind	30	0	Added	
R7	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	8	4	a	Behind	30	0	Added	

Plan View

Front View
Looking at Structure



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A2	SBNHH-1D65B	72.6	11.9	36	3	b	Front	48	7	Retained	05/26/2021
R6	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	36	3	a	Behind	30	0	Added	
R7	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	8	4	a	Behind	30	0	Added	

MASER CONSULTING
—CONNECTICUT—

Maser Consulting Connecticut

Subject TIA-222-H Adoption and Wind Speed Usage

Site Information	*Site ID:*	*468340-VZW / SOUTHINGTON EAST CT - A*
	Site Name:	*SOUTHINGTON EAST CT - A*
	Carrier Name:	*Verizon Wireless*
	Address:	*99 East Street* *Southington, Connecticut 06489* *Hartford County*
	Latitude:	*41.583644°*
	Longitude:	*-72.864686°*
Structure Information	*Tower Type:*	*89.75-Ft Monopole*
	Mount Type:	*12.33-Ft Platform*

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 maps by ASCE 7 based on updated studies of the wind data.

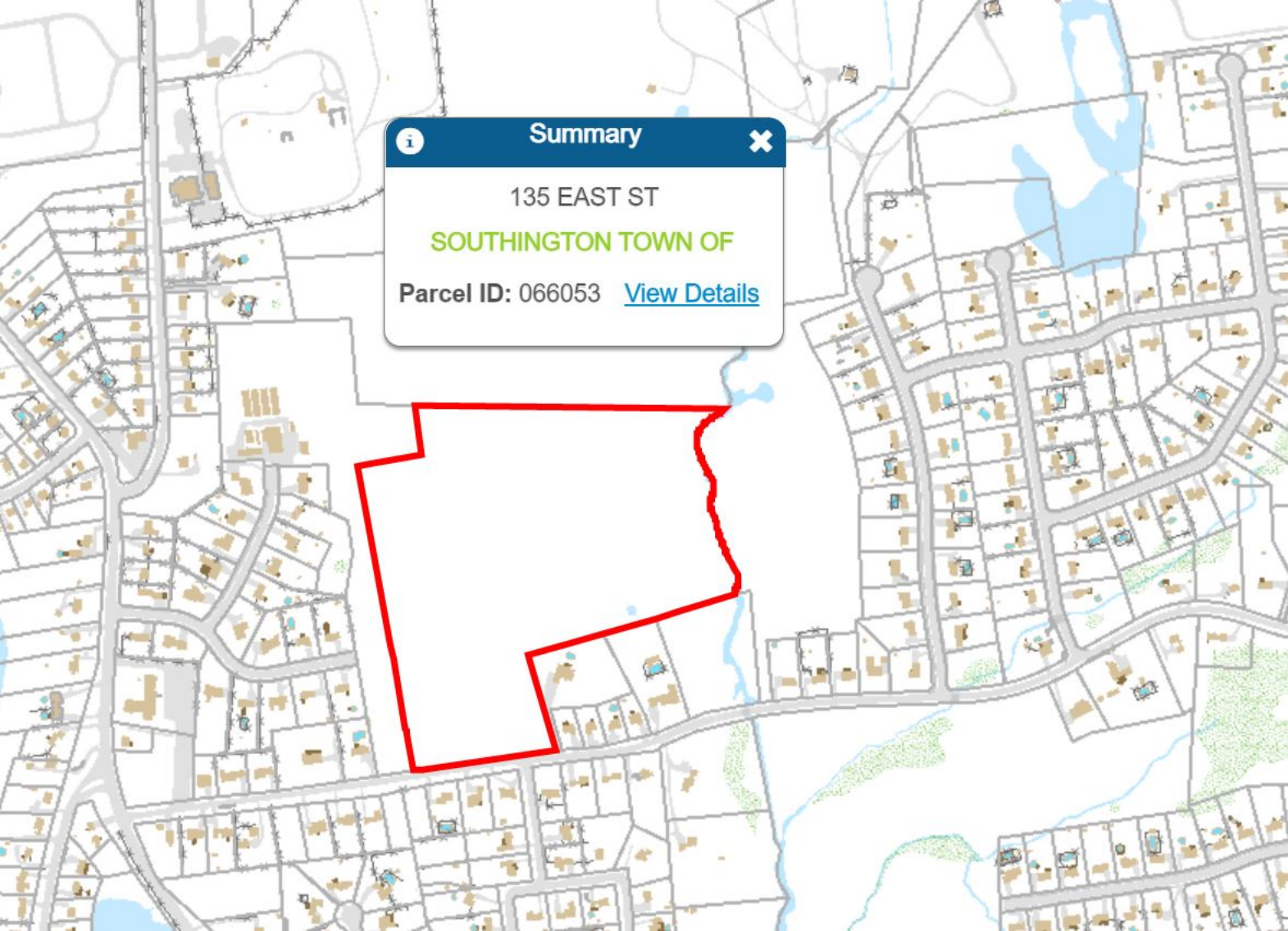
The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural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

Sincerely,

Dejian Xu

Dejian Xu, PE
Technical Manager

ATTACHMENT 5


Summary
135 EAST ST
SOUTHINGTON TOWN OF
Parcel ID: 066053
View Details

SOUTHINGTON,CT

135 EAST ST

Location
135 EAST ST
Mblu
066/ / 053/ /
Acct#
1482
Owner
SOUTHINGTON TOWN OF
Assessment
$442,800
Appraisal
$632,570
PID
5182
Building Count
1

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2020	$0	$632,570	$632,570

Assessment

Valuation Year	Improvements	Land	Total
2020	$0	$442,800	$442,800

Owner of Record

Owner SOUTHINGTON TOWN OF
Co-Owner
Address 75 MAIN ST
SOUTHINGTON, CT 06489
Sale Price $0
Certificate
Book & Page 0950/0192
Sale Date 01/29/2004
Instrument 29

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
SOUTHINGTON TOWN OF	$0		0950/0192	29	01/29/2004

Building Information
Building 1 : Section 1
Year Built:
Living Area: 0
Building Percent Good:

Building Attributes

Field	Description
Style	Vacant
Model	
Grade:	
Stories	
Occupancy	
Exterior Wall 1	

Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Whirlpool Tubs	
Fin Bsmt Area	
Fin Bsmt Quality	
Bsmt Garages	
.	
Bsmt Type	
Attic Type	
Cath Ceiling	

Building Photo

Building Layout

Building Sub-Areas (sq ft) Legend

No Data for Building Sub-Areas

Extra Features

Extra Features Legend

No Data for Extra Features

Land

Land Use

Use Code	903V
Description	Municipality Lnd
Zone	R-20/25
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	26.97
Depth	

Outbuildings

Outbuildings Legend

No Data for Outbuildings

Valuation History

Appraisal

Valuation Year	Improvements	Land	Total
2020	$0	$632,570	$632,570
2019	$0	$294,630	$294,630
2018	$0	$294,630	$294,630
2017	$0	$294,630	$294,630
2016	$0	$294,630	$294,630

Assessment

Valuation Year	Improvements	Land	Total
2020	$0	$442,800	$442,800
2019	$0	$206,240	$206,240
2018	$0	$206,240	$206,240
2017	$0	$206,240	$206,240
2016	$0	$206,240	$206,240

closecloseclose

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

SOUTHINGTON EAST

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	2	2	neopost 08/04/2021 US POSTAGE $002.89⁰ ZIP 06103 041L12203837
	Postmaster, per *(name of receiving employee)* V.P		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Mark Sciota, Town Manager Town of Southington 75 Main Street Southington, CT 06489				
2.	David Lavallee, Acting Town Planner Town of Southington ~~Municipal Center~~ ~~196 North Main Street~~ Southington, CT 06489				
3.					
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103
AUG - 4 2021
USPS

See Reverse for Instructions