Robinson+Cole

KENNETH C. BALDWIN

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

Also admitted in Massachusetts and New York

June 13, 2024

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**
203 Davis Road, Chaplin, 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 related equipment on an existing tower and associated equipment on the ground, near the base of the tower. The tower was approved by the Town of Chaplin ('Town") in August of 2000. Cellco's shared use of the tower was approved by the Siting Council ("Council") in October of 2007 (EM-VER-024-070917). A copy of the Town's approval and Cellco's exempt modification approval are included in Attachment 1.

Cellco now intends to modify its facility by removing six (6) antennas and six (6) remote radio heads ("RRHs") and installing nine (9) new antennas and six (6) new RRHs on its existing antenna platform, utilizing new antenna mounts. A set of project plans showing Cellco's proposed facility modifications and the specifications for Cellco's new antennas and RRHs 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 Chaplin's Chief Elected Official and Land Use Officer. A copy of this letter is also being sent to 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 new antennas and RRHs will be installed at the same height on the tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Included in Attachment 3 is a Calculated Radio Frequency Emissions Report demonstrating that the proposed modified facility will comply with the FCC safety standards. 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 Report ("SA") and Antenna Mount Analysis Report ("MA"), the existing tower, tower foundation and new antenna mounts, with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Juan Roman III, First Selectman
James Gigliotti, Zoning Official
Pearl Truman, Property Owner
Aleksey Tyurin

ATTACHMENT 1

№ ~~10000~~ 1008

TOWN OF CHAPLIN
DEPARTMENT OF BUILDING INSPECTION
APPLICATION FOR BUILDING PERMIT AND PLAN EXAMINATION
TELEPHONE NO. 455-0570

1. 203 (Number) DAVIS ROAD (Street/Road) MAP 57 PARCEL 29-1 (Assessor's Map - Block - Lot No.)
2. TRUMAN J. PEARL & LYN D. PEARL (OWNER'S NAME) AND 203 DAVIS ROAD, CHAPLIN, CT. 06235 (ADDRESS) TEL. NO
3. SBA, INC. (APPLICANT'S NAME) 80 EASTERN BLVD. (AND ADDRESS) GLASTONBURY, CT. 06033 860.659-9101 (TEL. NO.)
4. INSTALLATION OF A TELECOMMUNICATIONS FACILITY TO INCLUDE A 175 FT. TOWER, FENCED COMPOUND AND ASSOCIATED POWER & TELEPHONE UTILITIES. (Type of Improvement)
5. (Type of Heating System) (Fireplace) (Woodstove)
6. (No. of Bedrooms) (No. of Baths) (Type of Sewage) (Type of Water Supply) (Principal Type of Frame)
7. (Proposed Use of Structure)
8. THIS APPLICATION MUST BE ACCOMPANIED BY A PROPER SITE PLAN AND BUILDING PLANS AND COPIES OF THE FOLLOWING APPROVALS SHOULD BE ATTACHED IF REQUIRED:
   - SEPTIC PERMIT
   - WETLANDS PERMIT
   - TOWN OR STATE DRIVEWAY PERMIT
   - LAND USE/ZONING PERMIT
   - PROOF OF WORKMAN'S COMP.
   - ADDITIONAL INFORMATION MAY BE REQUIRED ON COMMERCIAL APPLICATIONS.

ESTIMATED COST $240,000

PERMIT FEE: 1680.00

RECEIPT NO: # 80755

EDUCATION FEE 38.40

THE OWNER OF THIS BUILDING AND THE UNDERSIGNED AGREE TO CONFORM TO THE CONNECTICUT STATE BUILDING CODE AND TO NOTIFY THE BUILDING OFFICIAL OF ANY CHANGES IN PLANS FOR WHICH THIS PERMIT IS REQUESTED.

Signature of Applicant — Date 8/1/00

OWNER'S APPROVAL

Electrical Contractor — Address — Signature — Lic. No.

Plumbing Contractor — Address — Signature — Lic. No.

Heating/Cooling Contractor — Address — Signature — Lic. No.

Concrete Contractor — General Contractor

APPROVED Zoning Official Raymond M. Purdy 8/8/00

Date **BUILDING OFFICIAL**

THIS PERMIT BECOMES NULL AND VOID IF ACTIVITY IS NOT COMMENCED WITHIN 12 MONTHS FROM DATE OF ISSUANCE.

White: Building Office Yellow: Assessor Pink: File Gold: Owner

№ 1008

TOWN OF CHAPLIN
DEPARTMENT OF BUILDING INSPECTION
APPLICATION FOR BUILDING PERMIT AND PLAN EXAMINATION
TELEPHONE NO. 455-0570

1. 203 (Number) Davis Road (Street/Road) ..... MAP 57 Parcel 29-1 (Assessor's Map - Block - Lot No.)
2. TRUMAN J. Pearl & Lyn D. Pearl (OWNER'S NAME) AND 203 Davis Road Chaplin CT 06235 (ADDRESS) (TEL. NO.)
3. SBA, INC. NEXTEL & SPRINT PCS (APPLICANT'S NAME) AND 80 Eastern Blvd. Glastonbury CT 06033 (ADDRESS) (860)659-4101 (TEL. NO.)

4. Installation of a 185' Telecommunication Tower including Radio Equipment shelter for Nextel Communications and Radio Equipment enclosed in steel ice protection covers. (Type of Improvement)
5. For Sprint PCS. All equipment to be enclosed in a 70'x70' Chain Link Fence (Type of Heating System) (Fireplace) (Woodstove)
6. N/A (No. of Bedrooms) N/A (No. of Baths) N/A (Type of Sewage) N/A (Type of Water Supply) (Principal Type of Frame)
7. Telecommunication facility (Proposed Use of Structure)
8. THIS APPLICATION MUST BE ACCOMPANIED BY A PROPER SITE PLAN AND BUILDING PLANS AND COPIES OF THE FOLLOWING APPROVALS SHOULD BE ATTACHED IF REQUIRED:
   - SEPTIC PERMIT
   - WETLANDS PERMIT
   - TOWN OR STATE DRIVEWAY PERMIT
   - LAND USE/ZONING PERMIT
   - PROOF OF WORKMAN'S COMP.
   - ADDITIONAL INFORMATION MAY BE REQUIRED ON COMMERCIAL APPLICATIONS.

ESTIMATED COST 240,000

PERMIT FEE: 1680.00

RECEIPT NO: V# 80755

EDUCATION FEE 38.40

Sean Derian/Wetlands Agent. 9-26-00

THE OWNER OF THIS BUILDING AND THE UNDERSIGNED AGREE TO CONFORM TO THE CONNECTICUT STATE BUILDING CODE AND TO NOTIFY THE BUILDING OFFICIAL OF ANY CHANGES IN PLANS FOR WHICH THIS PERMIT IS REQUESTED.

T. Pearson — Signature of Applicant — 8/1/00 — Date

Electrical Contractor ..... Address ..... Signature ..... Lic. No.

Plumbing Contractor ..... Address ..... Signature ..... Lic. No.

Heating/Cooling Contractor ..... Address ..... Signature ..... Lic. No.

Concrete Contractor ..... General Contractor

Also see application 1011

APPROVED 8/28/00 — Date — **BUILDING OFFICIAL**

THIS PERMIT BECOMES NULL AND VOID IF ACTIVITY IS NOT COMMENCED WITHIN 12 MONTHS FROM DATE OF ISSUANCE.

White: Building Office Yellow: Assessor Pink: File Gold: Owner

CERTIFICATE OF USE AND OCCUPANCE

DEPARTMENT OF BUILDING INSPECTIONS

CHAPLIN, CONNECTICUT

Certificate No. 542

This is to certify that SBA, NEXTEL & SPRINT Map No.....

Located at Street 263 Davis Road Block.....

Building Permit No. 1008 Lot No.....

conforms substantially to the requirements of the Connecticut State Building Code, Santitation Code, and all the Zoning Ordinance of the Town of Chaplin and is hereby approved for occupancy as indicated below:

Type fo Construction TOWER Use Group Communications

Conditions.....

.....

.....

Occupancy Load _____

Live Loads _____

Fire Grading _____

Type of Structure Unipole w/ NEXTEL & SPRINT ANTENN

Date 9-4-01

.....

BUILDING OFFICIAL

Any change or extention of the use herein approved requires a new certificate

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

Daniel F. Caruso
Chairman

October 1, 2007

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

RE: **EM-VER-024-070917** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 203 Davis Road, Chaplin, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on September 25, 2007, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies, with the condition that the modifications specified on page 5 of the structural analysis report sealed by John Irving Mathis, P.E. are performed prior to the antenna installation and that a signed letter from a Professional Engineer is submitted to the Council to certify that the modifications have been properly completed.

The proposed modifications are to be implemented as specified here and in your notice dated September 17, 2007, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

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

Thank you for your attention and cooperation.

Very truly yours,

Daniel F. Caruso

Daniel F. Caruso
Chairman

DFC/MP/cm

c: The Honorable Rusty Lanzit, First Selectman, Town of Chaplin
Raymond Murphy, Zoning Enforcement Officer, Town of Chaplin
SBA Towers

G:\EM\BAM-VERIZON\Chaplin\dc092807.DOC

ATTACHMENT 2

ANTENNA MOUNT REINFORCEMENT NOTE:
PRIOR TO THE COMMENCEMENT OF THE UPGRADE WORK SHOWN ON THESE DRAWINGS, THE EXISTING VERIZON TRI-SECTOR ANTENNA MOUNTING FRAME LOCATED ON THE EXISTING MONOPOLE SHALL BE REINFORCED AS PER THE MOUNT MODIFICATION DRAWINGS PREPARED BY COLLIERS ENGINEERING & DESIGN (PROJECT #20777851).

SBA APPROVED
By Stephen Roth at 3:16:54 PM, 5/14/2024

verizon

20 ALEXANDER DRIVE, 2nd FLOOR
WALLINGFORD, CT 06492

MANSFIELD NE CT

203 DAVIS ROAD
CHAPLIN, CT 06235
WINDHAM COUNTY

PROJECT TYPE: UPGRADE TO EXISTING WIRELESS TELECOMMUNICATIONS INSTALLATION ON EXISTING 175'± MONOPOLE

SUPPORTING DOCUMENTS

RADIO FREQUENCY (RF) DESIGN DATE: 10/9/23
ANTENNA MOUNT STRUCTURAL ANALYSIS DATE: 03/07/24 (BY COLLIERS ENGINEERING & DESIGN)
ANTENNA SUPPORT STRUCTURE (175'± MONOPOLE) STRUCTURAL ANALYSIS DATE: 01/29/24 (BY TOWER ENGINEERING SOLUTIONS)

SITE INFORMATION

VERIZON LOCATION CODE:	467573
VERIZON SITE NAME:	MANSFIELD NE CT
SBA SITE NUMBER:	CT00113-S
SBA SITE NAME:	NORTH CHAPLIN
SBA COLLO APP NUMBER:	249271, V1
MDG LOCATION ID:	5000247838
FUZE PROJECT ID:	16272193
SITE ADDRESS:	203 DAVIS ROAD CHAPLIN, CT 06235
PROPERTY OWNER:	TRUMAN J. PEARL 203 DAVIS ROAD CHAPLIN, CT 06235
TOWER OWNER:	SBA TOWERS, LLC 8051 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561 226 9523
COUNTY	WINDHAM COUNTY, CT
ZONING DISTRICT:	(RAR) RURAL AGRICULTURAL RESIDENCE
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	175'±
STRUCTURE HEIGHT W/APPURTENANCE:	181'±
GROUND ELEVATION:	494'±
TOTAL AMSL:	675'±
SITE CONTROL POINT:	CENTER OF EXISTING MONOPOLE N 41°-47-36.55" (41.7935°) (NAD '83) W 72°-09-36.04" (-72.1602°) (NAD '83)
ARCHITECT/ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACES THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
2. NEW CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
   - BUILDING CODE: 2022 CONNECTICUT STATE BUILDING CODE
   - ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE
   - STRUCTURAL CODE: TIA/EIA-222-H STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811

VICINITY MAP

SCALE: 1"=1000'

DRIVING DIRECTIONS

FROM WALLINGFORD, TAKE CT 68 EAST. TAKE SHARP LEFT FOR I 91 NORTH TOWARD HARTFORD. MERGE ONTO I 91 NORTH. USE LEFT 2 LANES TO TAKE EXIT 29 FOR US 5 NORTH/CT 15 NORTH/I 84 EAST TOWARD EAST HARTFORD/BOSTON. MERGE ONTO US 5 NORTH. CONTINUE ONTO CT 15 NORTH. USE LEFT 3 LANES TO MERGE ONTO I 84 EAST TOWARD BOSTON. TAKE EXIT 69 FOR CT 74 TOWARD US 44/WILLINGTON/PUTNAM. TURN RIGHT ONTO CT 74 EAST. TURN LEFT ONTO US 44 EAST. TURN RIGHT ONTO CT 89 SOUTH. TURN LEFT ONTO MT HOPE ROAD/TOWER HILL ROAD. CONTINUE TO FOLLOW TOWER HILL ROAD. TAKE SLIGHT RIGHT ONTO FEDERAL ROAD. TURN RIGHT ONTO DAVIS ROAD. THE SITE IS LOCATED ON THE LEFT HAND SIDE.

SHEET INDEX

DWG.	DESCRIPTION	REV.
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RF01	RF DATA	1
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MM01	MOUNT MODIFICATION DRAWINGS I	1
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DO NOT SCALE DRAWINGS

ALL PLANS, EXISTING DIMENSIONS AND CONDITIONS AT THE PROPOSED PROJECT SITE SHALL BE VERIFIED IN THE FIELD DURING THE CONSTRUCTION PHASE. THE PROJECT OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES IMMEDIATELY PRIOR TO PROCEEDING WITH THE PROPOSED WORK AFFECTED BY SUCH DISCREPANCIES. IN THE EVENT OF LACK OF SUCH NOTIFICATION, SUCH DISCREPANCIES SHALL BECOME THE RESPONSIBILITY OF THE PREVAILING CONTRACTOR RESPONSIBLE FOR CONSTRUCTION.

PROJECT DESCRIPTION

1. THIS IS AN UNMANNED AND RESTRICTED ACCESS EQUIPMENT INSTALLATION AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC WIRELESS TELECOMMUNICATIONS SERVICE.
2. THIS FACILITY DOES NOT, NOR WILL IT CONSUME UNRECOVERABLE ENERGY.
3. NO PORTABLE WATER SUPPLY IS OR WILL BE PROVIDED AT THIS LOCATION.
4. NO WASTE WATER IS OR WILL BE GENERATED AT THIS LOCATION.
5. NO SOLID WASTE IS OR WILL BE GENERATED AT THIS LOCATION.

SCOPE OF WORK

REMOVE:
- (6) ANTENNAS
- (6) RADIOS

INSTALL:
- (1) HANDRAIL KIT
- (3) SIDE-BY-SIDE ANTENNA BRACKETS
- (9) ANTENNAS
- (6) RADIOS
- (3) DIPLEXERS

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492
(203) 741-7338

SBA
SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720

CHAPPELL ENGINEERING ASSOCIATES, LLC
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25987
LICENSED PROFESSIONAL CIVIL ENGINEER
4/24/2024

CHECKED BY: JMT
APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CAC
0	04/11/24	ISSUED FOR REVIEW	CAC

PROJECT NAME & ADDRESS
MANSFIELD NE CT
203 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE:	467573
MDG LOCATION ID:	5000247838
FUZE PROJECT ID:	16272193

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T01

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – VERIZON WIRELESS
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – VERIZON WIRELESS
   OEM – ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

14. SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC. 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACK FILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS & POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.

15. CONSTRUCTION SHALL COMPLY WITH VERIZON WIRELESS NETWORK STANDARD #NSTD123 TO THE MAXIMUM EXTENT FEASIBLE UNLESS PRECLUDED OR LIMITED BY DESIGN SHOWN ON THESE DRAWINGS.

16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

17. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

18. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.

6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.

9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE VERIZON WIRELESS SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH......3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER ....2 IN.
   #5 AND SMALLER & WWF ....1½ IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER
   OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL ....¾ IN.
   BEAMS AND COLUMNS ....1½ IN.

5. A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE. UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

7. CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
   FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND VERIZON WIRELESS SPECIFICATION 23252-000-3PS-GET-00001 UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.

3. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾"Ø) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.

4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ⅝" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.

5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL.

7. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

4. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.

5. AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E), AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, VERIZON WIRELESS ANTENNA PLATFORM LOCATION AND ANTENNAS TO BE REPLACED.

2. COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

3. CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

2. SUBCONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.

3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.

5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.

6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANEL BOARD AND CIRCUIT ID'S).

8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.

23. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.

24. CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

25. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS

27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON- CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492
(203) 741-7338

SBA

SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720

CHAPPELL ENGINEERING ASSOCIATES, LLC

R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT ★ JAMES M. FITZGERALD No. 25997 LICENSED PROFESSIONAL CIVIL ENGINEER ★
4/24/2024

CHECKED BY:	JMT
APPROVED BY:	JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CJC
0	04/16/24	ISSUED FOR REVIEW	CJC

PROJECT NAME & ADDRESS

MANSFIELD NE CT

200 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE:	467673
MDG LOCATION ID:	[illegible]
FUZE PROJECT ID:	16272163

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN01

15°±
TRUE NORTH
MAGNETIC

SITE PLAN

SCALE: 1" = 50'-0"

0 50' 100' 150'

1 A01

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WALLINGFORD, CT 06492
(203) 741-7338

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STATE OF CONNECTICUT ★ JAMES M. FITZGERALD No. 25997 LICENSED ★ PROFESSIONAL CIVIL ENGINEER

4/24/2024

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CMC
0	04/18/24	ISSUED FOR REVIEW	CMC

PROJECT NAME & ADDRESS

MANSFIELD NE CT

200 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE:	[illegible]
MDG LOCATION ID:	[illegible]
FUZE PROJECT ID:	[illegible]

SHEET TITLE

SITE PLAN

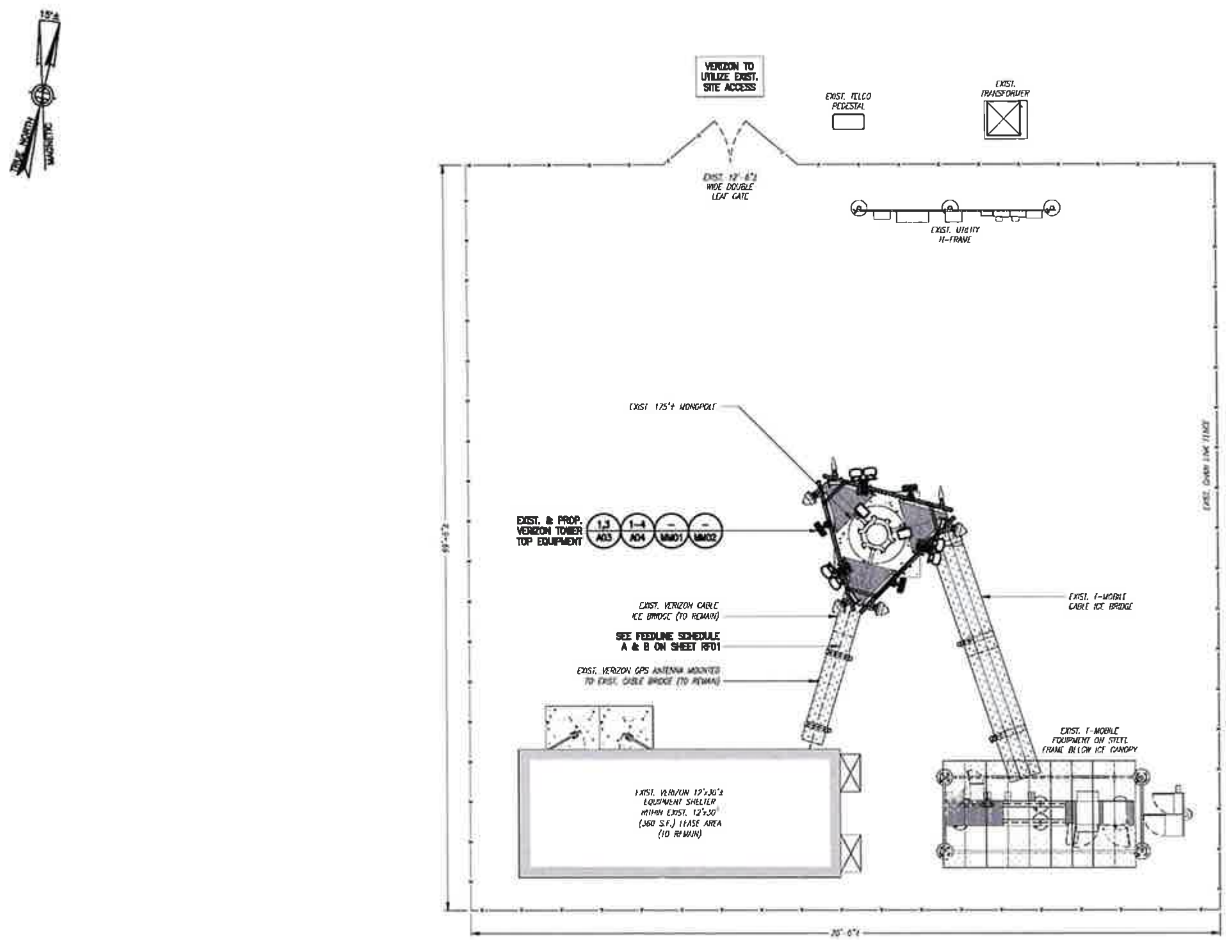
SHEET NUMBER

A01

SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE VERIZON RAD VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS).

ANTENNA MOUNT REINFORCEMENT NOTE:
PRIOR TO THE COMMENCEMENT OF THE UPGRADE WORK SHOWN ON THESE DRAWINGS, THE EXISTING VERIZON TRI-SECTOR ANTENNA MOUNTING FRAME LOCATED ON THE EXISTING MONOPOLE SHALL BE REINFORCED AS PER THE MOUNT MODIFICATION DRAWINGS PREPARED BY COLLIERS ENGINEERING & DESIGN (PROJECT #20777651).



COMPOUND PLAN (1 / A02)
SCALE: 3/16" = 1'-0"
0 5'-4" 10'-8" 16'-0"

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20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492
(203) 741-7338

SBA
SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720

CHAPPELL ENGINEERING ASSOCIATES, LLC
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT * JAMES M. FITZGERALD No. 25997 LICENSED PROFESSIONAL CIVIL ENGINEER
4/24/2024

CHECKED BY: JMT
APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CRC
0	04/18/24	ISSUED FOR REVIEW	CRC

PROJECT NAME & ADDRESS
MANSFIELD NE CT
2?0 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE:	467673
MDG LOCATION ID:	5000347638
FUZE PROJECT ID:	16272163

SHEET TITLE
COMPOUND PLAN

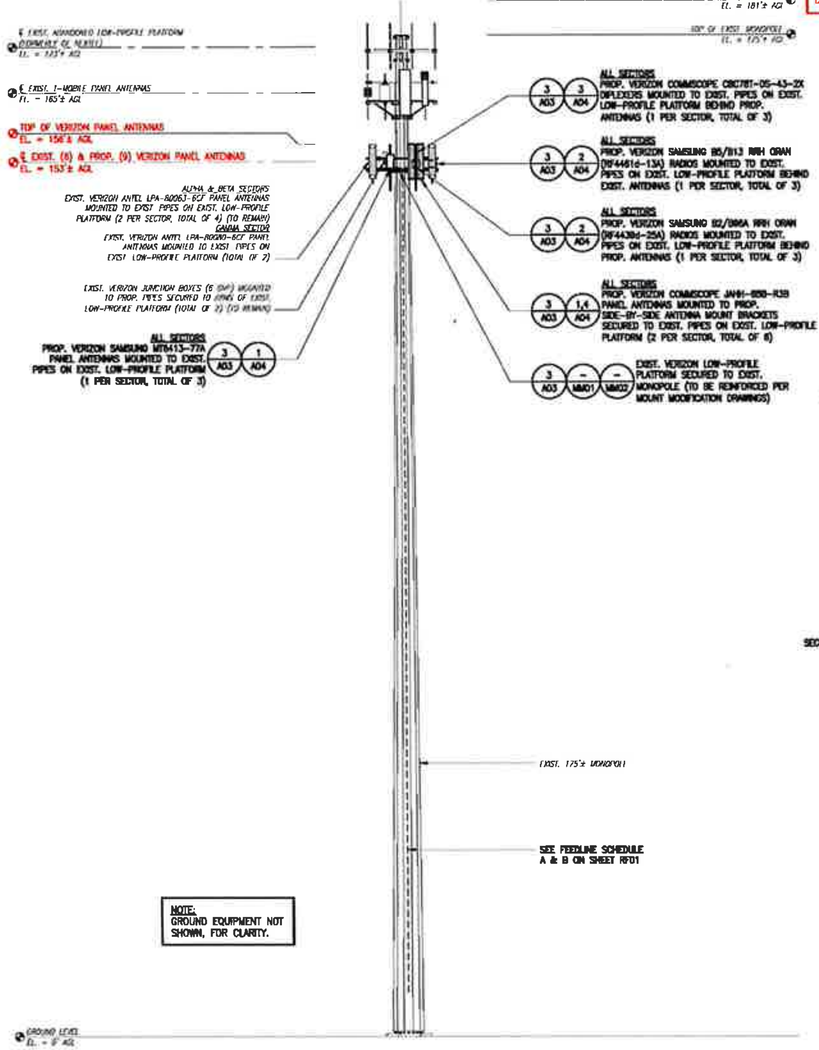
SHEET NUMBER
A02

SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL CONSTRUCTION NOTE (SBA-PROVIDED ANTENNA MOUNT STRUCTURAL MOD SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT THE VERIZON RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED BY OTHERS)

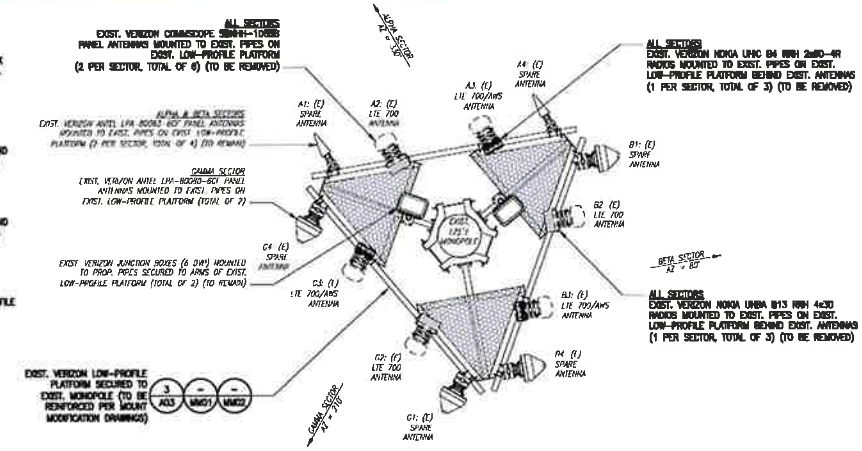
ANTENNA MOUNT REINFORCEMENT NOTE:
PRIOR TO THE COMMENCEMENT OF THE UPGRADE WORK SHOWN ON THESE DRAWINGS, THE EXISTING VERIZON TRI-SECTOR ANTENNA MOUNTING FRAME LOCATED ON THE EXISTING MONOPOLE SHALL BE REINFORCED AS PER THE MOUNT MODIFICATION DRAWINGS PREPARED BY COLLIERS ENGINEERING & DESIGN (PROJECT #20777651).

RAD CENTER NOTE:
VERIZON ANTENNA AND MOUNT RAD CENTER SHOWN IN ELEVATION ARE ACCORDING TO STRUCTURAL ANALYSIS DONE BY OTHERS AND MAY DIFFER FROM RAD CENTER ON RFDS PROVIDED BY VERIZON.

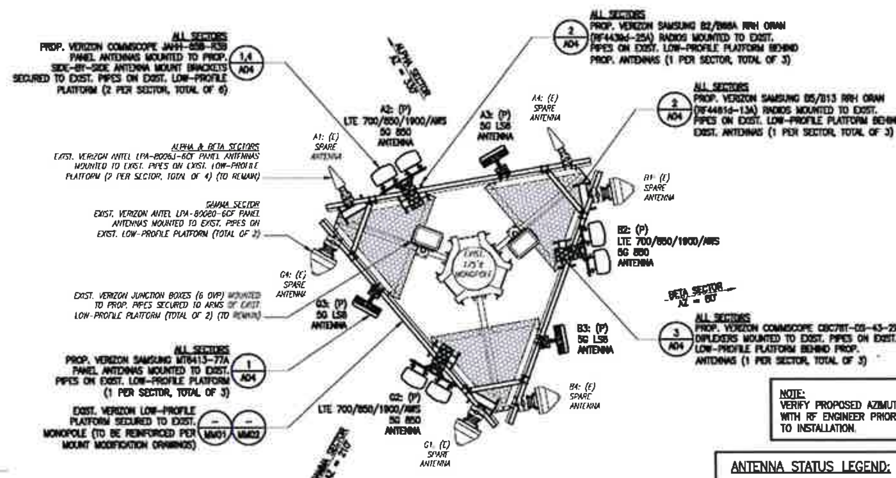

TOP OF EXIST. LIGHTNING ROD (HIGHEST APPURTENANCE) EL. = 181'± AGL
TOP OF EXIST. MONOPOLE EL. = 175'± AGL
℄ EXIST. ABANDONED LOW-PROFILE PLATFORM (FORMERLY OF NEXTEL) EL. = 173'± AGL
℄ EXIST. T-MOBILE PANEL ANTENNAS EL. = 165'± AGL
TOP OF VERIZON PANEL ANTENNAS EL. = 156'± AGL
℄ EXIST. (6) & PROP. (9) VERIZON PANEL ANTENNAS EL. = 153'± AGL
ALPHA & BETA SECTORS EXIST. VERIZON ANTEL LPA-80063-6CF PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (2 PER SECTOR, TOTAL OF 4) (TO REMAIN)
GAMMA SECTOR EXIST. VERIZON ANTEL LPA-80080-6CF PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (TOTAL OF 2)
EXIST. VERIZON JUNCTION BOXES (6 OVP) MOUNTED TO PROP. PIPES SECURED TO ARMS OF EXIST. LOW-PROFILE PLATFORM (TOTAL OF 2) (TO REMAIN)
ALL SECTORS PROP. VERIZON SAMSUNG MT6413-77A PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (1 PER SECTOR, TOTAL OF 3) 3/A03 1/A04
3/A03 3/A04 ALL SECTORS PROP. VERIZON COMMSCOPE CBC78T-DS-43-2X DIPLEXERS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM BEHIND PROP. ANTENNAS (1 PER SECTOR, TOTAL OF 3)
3/A03 2/A04 ALL SECTORS PROP. VERIZON SAMSUNG B5/B13 RRH ORAN (RF4461d-13A) RADIOS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM BEHIND EXIST. ANTENNAS (1 PER SECTOR, TOTAL OF 3)
3/A03 2/A04 ALL SECTORS PROP. VERIZON SAMSUNG B2/B66A RRH ORAN (RF4439d-25A) RADIOS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM BEHIND PROP. ANTENNAS (1 PER SECTOR, TOTAL OF 3)
3/A03 1,4/A04 ALL SECTORS PROP. VERIZON COMMSCOPE JAHH-65B-R3B PANEL ANTENNAS MOUNTED TO PROP. SIDE-BY-SIDE ANTENNA MOUNT BRACKETS SECURED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (2 PER SECTOR, TOTAL OF 6)
3/A03 –/MM01 –/MM02 EXIST. VERIZON LOW-PROFILE PLATFORM SECURED TO EXIST. MONOPOLE (TO BE REINFORCED PER MOUNT MODIFICATION DRAWINGS)
EXIST. 175'± MONOPOLE
SEE FEEDLINE SCHEDULE A & B ON SHEET RF01
GROUND LEVEL EL. = 0' AGL

NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

TOWER ELEVATION (1/A03)
SCALE: 1" = 10'-0"
0 10'-0" 20'-0" 30'-0"


ALL SECTORS EXIST. VERIZON COMMSCOPE SBNHH-1D65B PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (2 PER SECTOR, TOTAL OF 6) (TO BE REMOVED)
ALPHA & BETA SECTORS EXIST. VERIZON ANTEL LPA-80063-6CF PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (2 PER SECTOR, TOTAL OF 4) (TO REMAIN)
GAMMA SECTOR EXIST. VERIZON ANTEL LPA-80080-6CF PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (TOTAL OF 2)
EXIST. VERIZON JUNCTION BOXES (6 OVP) MOUNTED TO PROP. PIPES SECURED TO ARMS OF EXIST. LOW-PROFILE PLATFORM (TOTAL OF 2) (TO REMAIN)
EXIST. VERIZON LOW-PROFILE PLATFORM SECURED TO EXIST. MONOPOLE (TO BE REINFORCED PER MOUNT MODIFICATION DRAWINGS) 3/A03 –/MM01 –/MM02
ALPHA SECTOR AZ = 330°
BETA SECTOR AZ = 80°
GAMMA SECTOR AZ = 210°
A1: (E) SPARE ANTENNA
A2: (E) LTE 700 ANTENNA
A3: (E) LTE 700/AWS ANTENNA
A4: (E) SPARE ANTENNA
B1: (E) SPARE ANTENNA
B2: (E) LTE 700 ANTENNA
B3: (E) LTE 700/AWS ANTENNA
B4: (E) SPARE ANTENNA
C1: (E) SPARE ANTENNA
C2: (E) LTE 700 ANTENNA
C3: (E) LTE 700/AWS ANTENNA
C4: (E) SPARE ANTENNA
EXIST. 175'± MONOPOLE
ALL SECTORS EXIST. VERIZON NOKIA UHIC B4 RRH 2x60-4R RADIOS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM BEHIND EXIST. ANTENNAS (1 PER SECTOR, TOTAL OF 3) (TO BE REMOVED)
ALL SECTORS EXIST. VERIZON NOKIA UHBA B13 RRH 4x30 RADIOS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM BEHIND EXIST. ANTENNAS (1 PER SECTOR, TOTAL OF 3) (TO BE REMOVED)

EXISTING ANTENNA PLAN (2/A03)
SCALE: N.T.S.


ALL SECTORS PROP. VERIZON COMMSCOPE JAHH-65B-R3B PANEL ANTENNAS MOUNTED TO PROP. SIDE-BY-SIDE ANTENNA MOUNT BRACKETS SECURED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (2 PER SECTOR, TOTAL OF 6) 1,4/A04
ALPHA & BETA SECTORS EXIST. VERIZON ANTEL LPA-80063-6CF PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (2 PER SECTOR, TOTAL OF 4) (TO REMAIN)
GAMMA SECTOR EXIST. VERIZON ANTEL LPA-80080-6CF PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (TOTAL OF 2)
EXIST. VERIZON JUNCTION BOXES (6 OVP) MOUNTED TO PROP. PIPES SECURED TO ARMS OF EXIST. LOW-PROFILE PLATFORM (TOTAL OF 2) (TO REMAIN)
ALL SECTORS PROP. VERIZON SAMSUNG MT6413-77A PANEL ANTENNAS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM (1 PER SECTOR, TOTAL OF 3) 1/A04
EXIST. VERIZON LOW-PROFILE PLATFORM SECURED TO EXIST. MONOPOLE (TO BE REINFORCED PER MOUNT MODIFICATION DRAWINGS) –/MM01 –/MM02
ALPHA SECTOR AZ = 330°
BETA SECTOR AZ = 80°
GAMMA SECTOR AZ = 210°
A1: (E) SPARE ANTENNA
A2: (P) LTE 700/850/1900/AWS 5G 850 ANTENNA
A3: (P) 5G L58 ANTENNA
A4: (E) SPARE ANTENNA
B1: (E) SPARE ANTENNA
B2: (P) LTE 700/850/1900/AWS 5G 850 ANTENNA
B3: (P) 5G L58 ANTENNA
B4: (E) SPARE ANTENNA
C1: (E) SPARE ANTENNA
C2: (P) LTE 700/850/1900/AWS 5G 850 ANTENNA
C3: (P) 5G L58 ANTENNA
C4: (E) SPARE ANTENNA
EXIST. 175'± MONOPOLE
2/A04 ALL SECTORS PROP. VERIZON SAMSUNG B2/B66A RRH ORAN (RF4439d-25A) RADIOS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM BEHIND PROP. ANTENNAS (1 PER SECTOR, TOTAL OF 3)
2/A04 ALL SECTORS PROP. VERIZON SAMSUNG B5/B13 RRH ORAN (RF4461d-13A) RADIOS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM BEHIND EXIST. ANTENNAS (1 PER SECTOR, TOTAL OF 3)
3/A04 ALL SECTORS PROP. VERIZON COMMSCOPE CBC78T-DS-43-2X DIPLEXERS MOUNTED TO EXIST. PIPES ON EXIST. LOW-PROFILE PLATFORM BEHIND PROP. ANTENNAS (1 PER SECTOR, TOTAL OF 3)

NOTE:
VERIFY PROPOSED AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

ANTENNA STATUS LEGEND:
EMPTY – EMPTY PIPE
(E) – EXISTING
(P) – INSTALL
(F) – FUTURE

PROPOSED ANTENNA PLAN (3/A03)
SCALE: N.T.S.

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492
(203) 741-7338

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WESTBOROUGH, MA 01581
(508) 251-0720

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201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT ★ JAMES M. FITZGERALD ★ No. 25997 LICENSED PROFESSIONAL CIVIL ENGINEER
9/24/2024

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CJC
0	04/18/24	ISSUED FOR REVIEW	CJC

PROJECT NAME & ADDRESS

MANSFIELD NE CT

200 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE:	469573
MDG LOCATION ID:	[illegible]
FUZE PROJECT ID:	16272193

SHEET TITLE

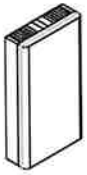
TOWER ELEVATION & ANTENNA PLANS

SHEET NUMBER

A03

COMMSCOPE JAHH-65B-R3B ANTENNA

DIMENSIONS: 72.0"H x 13.6"W x 8.2"D
WEIGHT: 64.4 lbs
QUANTITY: 2 PER SECTOR, TOTAL OF 6
SECTORS: ALPHA, BETA, GAMMA



SAMSUNG MT6413-77A ANTENNA

DIMENSIONS: 28.9"H x 15.8"W x 8.5"D
WEIGHT: 57.3 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3
SECTORS: ALPHA, BETA, GAMMA

ANTENNA DETAILS (1/A04)
SCALE: N.T.S.

SAMSUNG RF4439d-25A B2/B66A RADIO

DIMENSIONS: 18.0"H x 18.0"W x 10.0"D
WEIGHT: 74.7 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3
SECTORS: ALPHA, BETA, GAMMA

SAMSUNG RF4461d-13A B5/B13 RADIO

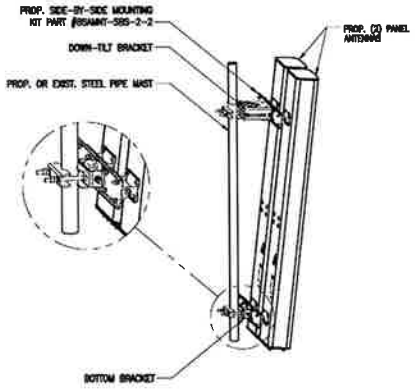
DIMENSIONS: 18.0"H x 18.0"W x 10.2"D
WEIGHT: 79.1 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3
SECTORS: ALPHA, BETA, GAMMA

RADIO DETAILS (2/A04)
SCALE: N.T.S.

COMMSCOPE CBC78T-DS-43-2X
4-PACK 700/850MHz DIPLEXER

DIMENSIONS: 8.4"H x 8.8"W x 9.6"D
WEIGHT: 20.7 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3
SECTORS: ALPHA, BETA, GAMMA

DIPLEXER DETAIL (3/A04)
SCALE: N.T.S.



COMMSCOPE SAMNT-SBS-2-2
SIDE-BY-SIDE ANTENNA MOUNT BRACKET

WEIGHT: 67.4 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3
SECTORS: ALPHA, BETA, GAMMA
NOTE: MOUNT ANTENNA PER MANUFACTURER'S SPECIFICATION

TYPICAL SIDE-BY-SIDE ANTENNA MOUNT KIT (4/A04)
SCALE: N.T.S.

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492
(203) 741-7338

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MARLBOROUGH, MA 01752
(508) 481-7400
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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
4/24/2024

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CHC
0	04/15/24	ISSUED FOR REVIEW	CHC

PROJECT NAME & ADDRESS

MANSFIELD NE CT

210 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE:	457073
MDG LOCATION ID:	[illegible]
FUZE PROJECT ID:	16272183

SHEET TITLE

SITE DETAILS

SHEET NUMBER

A04

EXISTING EQUIPMENT CONFIGURATION

SECTOR	EQUIPMENT MAKE & MODEL	QTY	POS	AZIMUTH (TRUE NORTH)	ANTENNA RAD	BAND	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	EQUIPMENT STATUS	H (IN)	W (IN)	D (IN)	WEIGHT (LBS)	HYBRID CABLE SIZE & QTY
ALPHA	ANTEL LPA-80063-6CF PANEL ANTENNA	1	1	330°	153'± AGL	SPARE	-	-	ETR	70.9	15.0	12.1	27.0	EXIST. (6) 1-5/8" COAXIAL CABLES EXIST. (2) 6x12 HYBRID CABLES
	COMMSCOPE SBNHH-1D65B PANEL ANTENNA	1	2	330°	153'± AGL	LTE 700	0°	4°	ETRE	72.6	11.9	7.1	42.5	
	COMMSCOPE SBNHH-1D65B PANEL ANTENNA	1	3	330°	153'± AGL	LTE 700/AWS	0°/0°	4°/4°	ETRE	72.6	11.9	7.1	45.5	
	ANTEL LPA-80063-6CF PANEL ANTENNA	1	4	330°	153'± AGL	SPARE	-	-	ETR	70.9	15.0	12.1	27.0	
BETA	ANTEL LPA-80063-6CF PANEL ANTENNA	1	1	80°	153'± AGL	SPARE	-	-	ETR	70.9	15.0	13.1	27.0	
	COMMSCOPE SBNHH-1D65B PANEL ANTENNA	1	2	80°	153'± AGL	LTE 700	0°	6°	ETRE	72.6	11.9	7.1	42.5	
	COMMSCOPE SBNHH-1D65B PANEL ANTENNA	1	3	80°	153'± AGL	LTE 700/AWS	0°/0°	6°/6°	ETRE	72.6	11.9	7.1	45.5	
	ANTEL LPA-80063-6CF PANEL ANTENNA	1	4	80°	153'± AGL	SPARE	-	-	ETR	70.9	15.0	12.1	27.0	
GAMMA	ANTEL LPA-80080-6CF PANEL ANTENNA	1	1	210°	153'± AGL	SPARE	-	-	ETR	70.5	5.0	13.2	21.0	
	COMMSCOPE SBNHH-1D65B PANEL ANTENNA	1	2	210°	153'± AGL	LTE 700	0°	3°	ETRE	72.6	11.9	7.1	42.5	
	COMMSCOPE SBNHH-1D65B PANEL ANTENNA	1	2	210°	153'± AGL	LTE 700/AWS	0°/0°	3°/4°	ETRE	72.6	11.9	7.1	45.5	
	ANTEL LPA-80080-6CF PANEL ANTENNA	1	4	210°	153'± AGL	SPARE	-	-	ETR	70.5	5.0	13.2	21.0	
ALL	NOKIA AHHA B13 RRH 4x30 RADIOS	3	2	-	-	-	-	-	ETRE	21.4	12.0	7.2	51.0	
	NOKIA AHHC B4 RRH 2x60-4R RADIOS	3	2	-	-	-	-	-	ETRE	26.8	10.9	5.7	55.0	
	6 OVP	2	-	-	-	-	-	-	ETR	29.6	16.5	12.6	32.0	

FINAL EQUIPMENT CONFIGURATION

SECTOR	EQUIPMENT MAKE & MODEL	QTY	POS	AZIMUTH (TRUE NORTH)	ANTENNA RAD	BAND	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	EQUIPMENT STATUS	H (IN)	W (IN)	D (IN)	WEIGHT (LBS)	HYBRID CABLE SIZE & QTY
ALPHA	ANTEL LPA-80063-6CF PANEL ANTENNA	1	1	330°	153'± AGL	SPARE	-	-	ETR	70.9	15.0	12.1	27.0	EXIST. (6) 1-5/8" COAXIAL CABLES EXIST. (2) 6x12 HYBRID CABLES
	COMMSCOPE JAHH-65B-R3B PANEL ANTENNA	1	2L	330°	153'± AGL	LTE 700/850/AWS 5G 850	0°/0°/0° 0°	4°/4°/2° 4°	NEW	72.0	13.8	8.2	84.4	
	COMMSCOPE JAHH-65B-R3B PANEL ANTENNA	1	2R	330°	153'± AGL	LTE 700/850/1900 5G 850	0°/0°/0° 0°	4°/4°/2° 4°	NEW	72.0	13.8	8.2	84.4	
	SAMSUNG MT6413-77A PANEL ANTENNA	1	3	330°	153'± AGL	5G L58	0°	3°	NEW	28.9	15.8	5.5	57.3	
	ANTEL LPA-80063-6CF PANEL ANTENNA	1	4	330°	153'± AGL	SPARE	-	-	ETR	70.9	15.0	13.1	27.0	
BETA	ANTEL LPA-80063-6CF PANEL ANTENNA	1	1	80°	153'± AGL	SPARE	-	-	ETR	70.9	15.0	13.1	27.0	
	COMMSCOPE JAHH-65B-R3B PANEL ANTENNA	1	2L	80°	153'± AGL	LTE 700/850/AWS 5G 850	0°/0°/0° 0°	6°/6°/2° 6°	NEW	72.0	13.8	8.2	84.4	
	COMMSCOPE JAHH-65B-R3B PANEL ANTENNA	1	2R	80°	153'± AGL	LTE 700/850/1900 5G 850	0°/0°/0° 0°	6°/6°/2° 6°	NEW	72.0	13.8	8.2	84.4	
	SAMSUNG MT6413-77A PANEL ANTENNA	1	3	80°	153'± AGL	5G L58	0°	3°	NEW	28.9	15.8	5.5	57.3	
	ANTEL LPA-80063-6CF PANEL ANTENNA	1	4	80°	153'± AGL	SPARE	-	-	ETR	70.9	15.0	12.1	27.0	
GAMMA	ANTEL LPA-80080-6CF PANEL ANTENNA	1	1	210°	153'± AGL	SPARE	-	-	ETR	70.5	5.0	13.2	21.0	
	COMMSCOPE JAHH-65B-R3B PANEL ANTENNA	1	2L	210°	153'± AGL	LTE 700/850/AWS 5G 850	0°/0°/0° 0°	3°/3°/2° 3°	NEW	72.0	13.8	8.2	84.4	
	COMMSCOPE JAHH-65B-R3B PANEL ANTENNA	1	2R	210°	153'± AGL	LTE 700/850/1900 5G 850	0°/0°/0° 0°	3°/3°/2° 3°	NEW	72.0	13.8	8.2	84.4	
	SAMSUNG MT6413-77A PANEL ANTENNA	1	3	210°	153'± AGL	5G L58	0°	3°	NEW	28.9	15.8	5.5	57.3	
	ANTEL LPA-80080-6CF PANEL ANTENNA	1	4	210°	153'± AGL	SPARE	-	-	ETR	70.5	5.0	13.2	21.0	
ALL	SAMSUNG B5/B13 RF4461d-13A RADIOS	3	1	-	-	-	-	-	NEW	15.0	15.0	10.2	79.1	
	SAMSUNG B2/B66A RF4439d-25A RADIOS	3	2	-	-	-	-	-	NEW	15.0	15.0	10.0	74.7	
	COMMSCOPE CBC78T-DS-43-2X DIPLEXERS	3	2	-	-	-	-	-	NEW	6.4	6.9	9.8	20.7	
	6 OVP	2	-	-	-	-	-	-	ETR	29.6	16.5	12.6	32.0	

NOTES:
1. "ETR" DENOTES "EXISTING TO REMAIN".
2. "ETRE" DENOTES "EXISTING TO BE REMOVED".
3. "NEW" DENOTES "NEW TO BE INSTALLED".
3. WEIGHTS LISTED ARE WITHOUT MOUNTING BRACKETS.
4. INFORMATION IS BASED ON RFDS DATED 10/06/23.

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (1) 1/2" COAXIAL CABLE FOR GPS ANTENNA (6) 1-5/8" COAXIAL CABLES (2) 6x12 HYBRID CABLES EXISTING TO BE REMOVED: NONE	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: NONE	

NOTE:
EXISTING VERIZON EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS, RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
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MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT ★ JAMES M. FITZGERALD ★ No. 25697 LICENSED PROFESSIONAL CIVIL ENGINEER
4/24/2024

CHECKED BY: JMT
APPROVED BY: JMT

SUBMITTALS

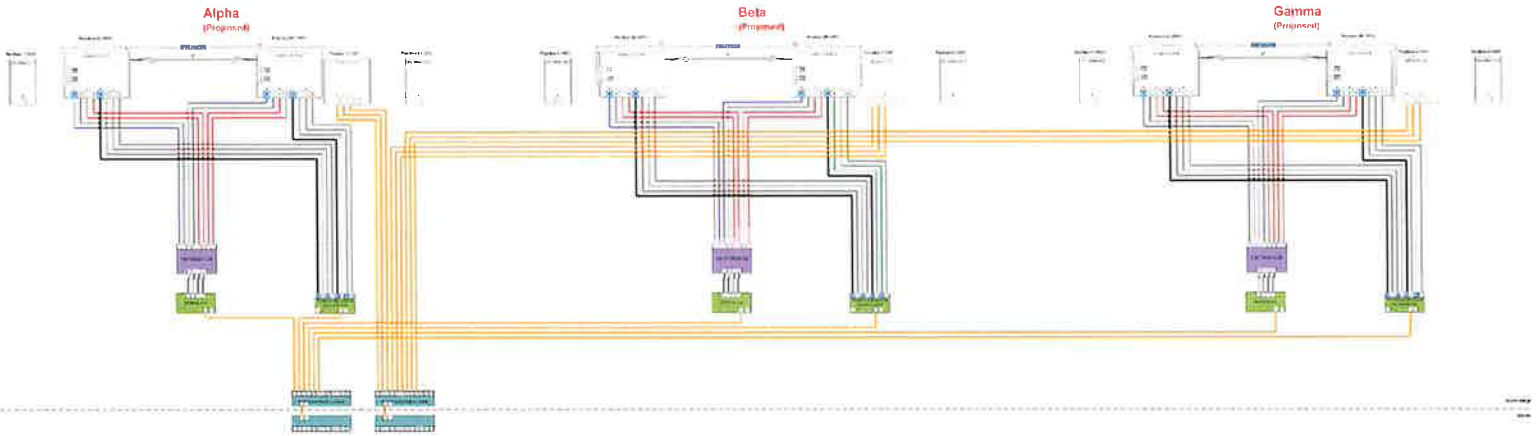
REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CNC
0	04/19/24	ISSUED FOR REVIEW	CNC

PROJECT NAME & ADDRESS
MANSFIELD NE CT
200 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE: 467673
MDG LOCATION ID: 5000047838
FUZE PROJECT ID: 16072193

SHEET TITLE
RF DATA

SHEET NUMBER
RF01



RF PLUMBING DIAGRAM
SCALE: N.T.S.

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492
(203) 741-7338

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201 BOSTON POST ROAD WEST, SUITE 101
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(508) 481-7400
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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25987
LICENSED
PROFESSIONAL CIVIL ENGINEER
4/30/2024

CHECKED BY: JMT
APPROVED BY: JMT

SUBMITTALS

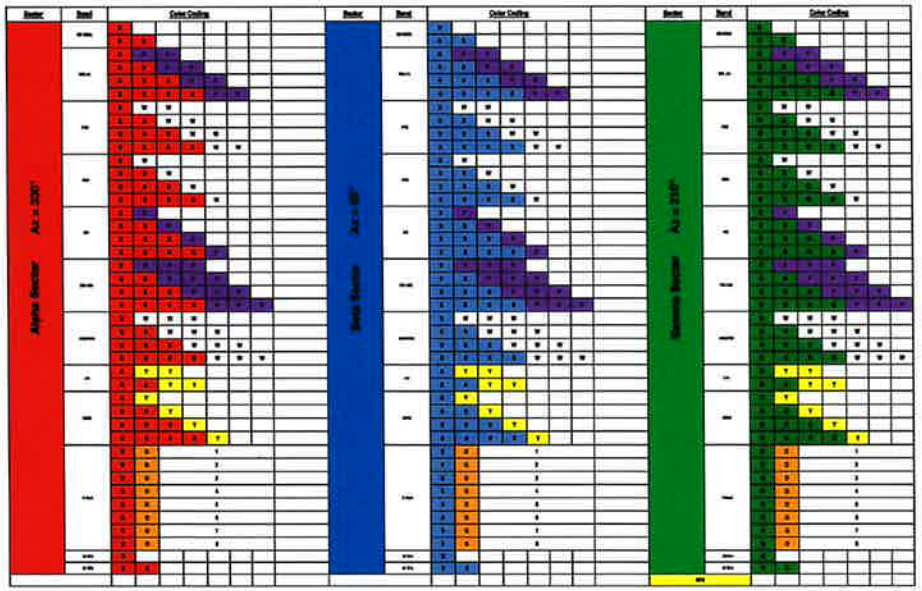
REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CBC
0	04/15/24	ISSUED FOR REVIEW	CBC

PROJECT NAME & ADDRESS
MANSFIELD NE CT
909 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE: 467873
MDG LOCATION ID: [redacted]
FUZE PROJECT ID: 16872183

SHEET TITLE
RF PLUMBING DIAGRAM

SHEET NUMBER
RF02



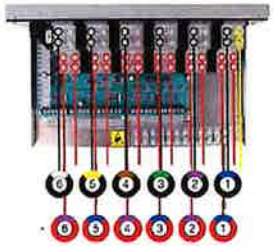
CABLE NOTE:
SEE FEEDLINE SCHEDULE A & B ON SHEET RF01
FOR EXISTING & PROPOSED CABLE QUANTITIES.

LINE COLOR CODE SPECIFICATIONS (1 / RF03)
SCALE: N.T.S.

Hybrid Cable on Towers

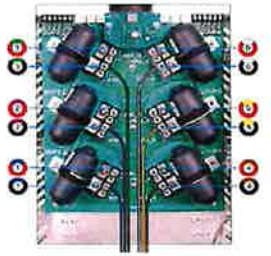
Hybrid Cable 1

Sector	Identification Color	-48V	RTN
700 Alpha	Blue		
AWS Alpha	Violet		
PCS Alpha	Green		
850 Alpha	Brown		
Spare	Yellow		
Spare	White		



Hybrid Cable 2

Sector	Identification Color	-48V	RTN
700 Beta	Blue		
AWS Beta	Violet		
PCS Beta	Green		
850 Beta	Brown		
Spare	Yellow		
Spare	White		



HYBRID CABLE COLOR CODE SPECIFICATIONS (2 / RF03)
SCALE: N.T.S.

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492
(203) 741-7338

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WESTBOROUGH, MA 01581
(508) 251-0720

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R.K. EXECUTIVE CENTRE
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MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
4/24/2024

CHECKED BY: JMT
APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CHC
0	04/15/24	ISSUED FOR REVIEW	CHC

PROJECT NAME & ADDRESS
MANSFIELD NE CT
270 DAVIS ROAD
CHAPLIN, CT 06235

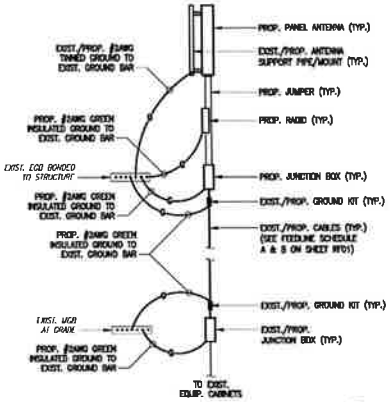
VZW LOCATION CODE: 468873
MDG LOCATION ID: [redacted]
FUZE PROJECT ID: [redacted]

SHEET TITLE
RF COLOR CODE SPECIFICATIONS

SHEET NUMBER
RF03

GROUNDING GENERAL NOTES

1. ALL EXTERIOR CONDUCTORS SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNLESS OTHERWISE NOTED. MINIMUM BEND RADIUS SHALL BE EIGHT (8) INCHES.
2. ALL WIRE-TO-WIRE CONNECTIONS SHALL BE THREE-CLAMP, C TAP COMPRESSION (T&B #64740 ORANGE OR EQUIVALENT). ALL GROUND BAR CONNECTIONS SHALL BE TWO-HOLE, LONG-BARREL TYPE COMPRESSION LUGS (T&B OR EQUIVALENT). ALL OTHER CONNECTIONS TO STEEL SURFACES SHALL USE LUG-TYPE CONNECTORS.
3. MECHANICALLY BOND ANTENNA MOUNTS WITH #2 AWG, BARE, STRANDED CONDUCTORS.
4. ALL GROUNDING WORK SHALL COMPLY WITH VERIZON WIRELESS STANDARDS.
5. CONNECT GROUND CONDUCTOR TO EXISTING GROUNDING SYSTEM. ATTACH TO WALLS, PARAPET, CABLE TRAY, ETC. WITH A CLAMPS AS NECESSARY. REMOVE PAINT, FIREPROOFING, MILL SCALE, ETC. TO ACHIEVE GOOD CAD WELD GROUND CONNECTION.
6. CONNECT TO HALO GROUND USING C-TAP (#64730).
7. CONNECT TO ENCLOSURES USING BLUE GROUND LUGS.
8. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC (CADWELD) CONNECTIONS.
9. ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
10. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
11. ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP & HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
12. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
13. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
14. MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATION FOR FACILITY GROUNDING, USING FALL OF POTENTIAL METHOD.
15. ANTENNA GROUND KITS SHALL BE FURNISHED BY VERIZON & INSTALLED BY CONTRACTOR.



TYP. ANTENNA GROUNDING RISER
SCALE: N.T.S. — 1 / E01

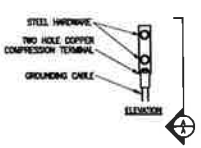
LEGEND

GROUNDING SYMBOLS

- GROUND ROD/TEST (OBSERVATION) WELL
- GROUND ROD
- CADWELD TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- GROUNDING WIRE
- REPRESENTS DETAIL NUMBER

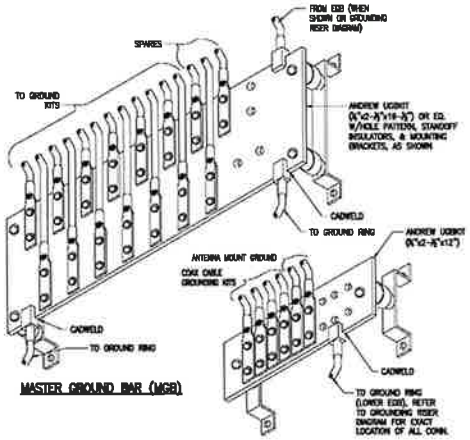
ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
BCW	BARE COPPER WIRE
GPS	GLOBAL POSITIONING SYSTEM
PCS	PERSONAL COMMUNICATION SYSTEM
RWY	RACEWAY
TYP.	TYPICAL
RGS	RIGID GALVANIZED STEEL
EMT	ELECTRICAL METALLIC TUBING
DWG	DRAWING
IGR	INTERIOR GROUND RING (HALO)
GEN	GENERATOR
GR	GROWTH
CCBE	COAX GROUND BAR EXTERNAL
CGBE	COAX ISOLATED GROUND BAR EXTERNAL
MGB	MASTER GROUND BAR
PVC	RIGID (SCH. 40) POLYVINYL CHLORIDE CONDUIT
EBH	ETHERNET BACK HAUL



NOTES:
1. "DOUBLING UP" OR "STACKING " OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

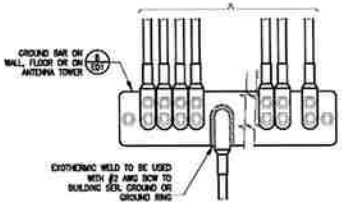
TYP. GROUND BAR CONNECTION
SCALE: N.T.S. — 2 / E01



MASTER GROUND BAR (MGB)

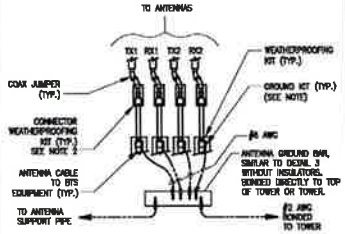
EQUIPMENT GROUND BAR (EGB)

GROUND BAR DETAILS
SCALE: N.T.S. — 5 / E01



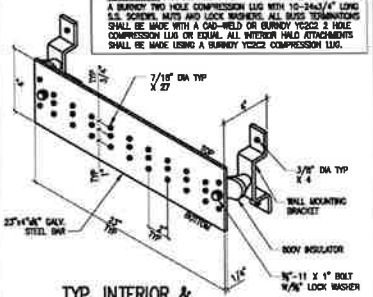
NOTE:
GROUND BARS AT THE BOTTOM OF TOWER SHALL ONLY USE EXOTHERMIC WELDS.

INSTALLATION OF GROUND WIRE TO GROUND BAR
SCALE: N.T.S. — 3 / E01

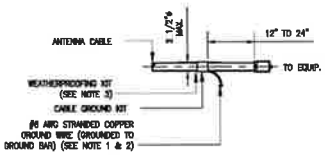


CONN. OF GROUND WIRE TO GROUND BAR (TOWER)
SCALE: N.T.S. — 4 / E01

NOTES:
1. SURFACE PREPARATION: ALL CONNECTIONS MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE MADE BARE TO ENSURE PROPER CONTACT. NO WASHERS SHALL BE ALLOWED BETWEEN THE ITEMS BEING GROUNDED. ALL CONNECTIONS SHALL HAVE AN ANTI-OXIDANT AGENT APPLIED PRIOR TO INSTALLATION.
2. BUSS PREPARATION: ALL GALV. STEEL BUSSES SHALL BE CLEANED, POLISHED AND AN ANTI-OXIDANT APPLIED. NO FINGERPRINTS OR DISCOLORED STEEL WILL BE PERMITTED.
3. TERMINATIONS: ALL EQUIPMENT TERMINATIONS SHALL BE MADE WITH A BURNDY TWO HOLE COMPRESSION LUG WITH 10-24x3/4" LONG S.S. SCREWS, NUTS AND LOCK WASHERS. ALL BUSS TERMINATIONS SHALL BE MADE WITH A CAD-WELD OR BURNDY YC2C2 2 HOLE COMPRESSION LUG OR EQUAL. ALL INTERIOR HALO ATTACHMENTS SHALL BE MADE USING A BURNDY YC2C2 COMPRESSION LUG.

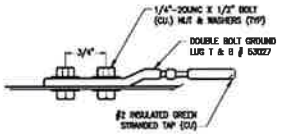


TYP. INTERIOR & EXTERIOR GROUND BAR
SCALE: N.T.S. — 5 / E01

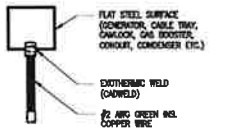


NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND & ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE & PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED.

CONN. OF CABLE GROUND KIT TO ANTENNA CABLE
SCALE: N.T.S. — 7 / E01



TYP. EQUIPMENT GROUND CONNECTION
SCALE: N.T.S. — 6 / E01



TYP. CADWELD #2 GREEN TO FLAT STEEL SURFACE
SCALE: N.T.S. — 8 / E01

verizon
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492
(203) 741-7338

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SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581
(508) 251-0720

CHAPPELL ENGINEERING ASSOCIATES, LLC
R.K. EXECUTIVE CENTRE
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MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25987
LICENSED
PROFESSIONAL CIVIL ENGINEER
4/24/2024

CHECKED BY: JMF

APPROVED BY: JMF

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CMC
0	04/15/24	ISSUED FOR REVIEW	CMC

PROJECT NAME & NUMBER
MANSFIELD NE CT
203 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE:	467873
MDG LOCATION ID:	[illegible]
FUZE PROJECT ID:	[illegible]

SHEET TITLE
GROUNDING NOTES & DETAILS

SHEET NUMBER
E01

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' PLATFORM

TOWER OWNER: SBA TOWERS, LLC
TOWER OWNER SITE NUMBER: CT03113

CARRIER SITE NAME: MANSFIELD NE
CARRIER SITE NUMBER: 5000247838
FUZE ID: 16272193

203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

LATITUDE: 41.793486° N
LONGITUDE: 72.160178° W

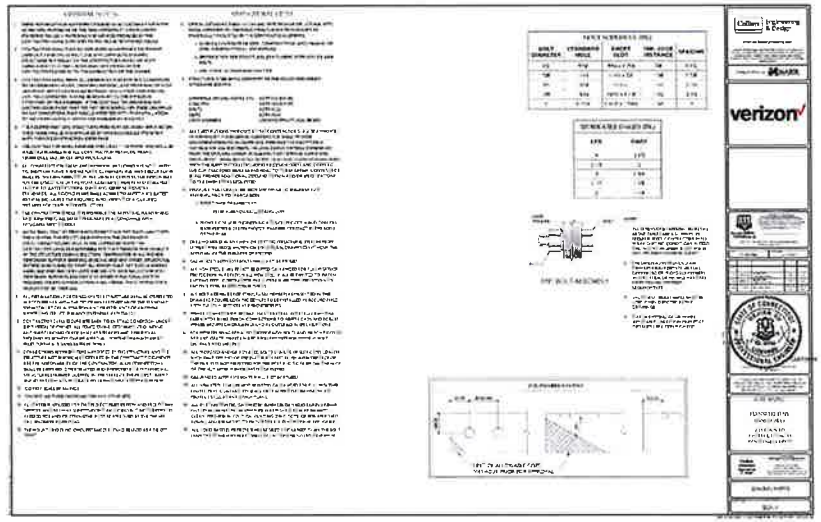
DESIGN CRITERIA

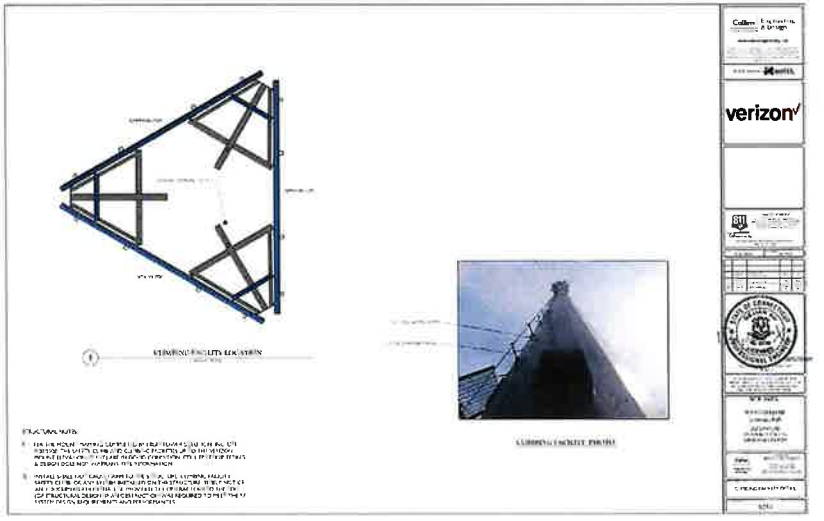
PROJECT INFORMATION

SHEET INDEX

BILL OF MATERIALS

VZW SMART KITS / APPROVED VENDORS





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4/24/2024

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CMC
0	04/15/24	ISSUED FOR REVIEW	CMC

PROJECT NAME & ADDRESS

MANSFIELD NE CT

203 DAVIS ROAD
CHAPLIN, CT 06235

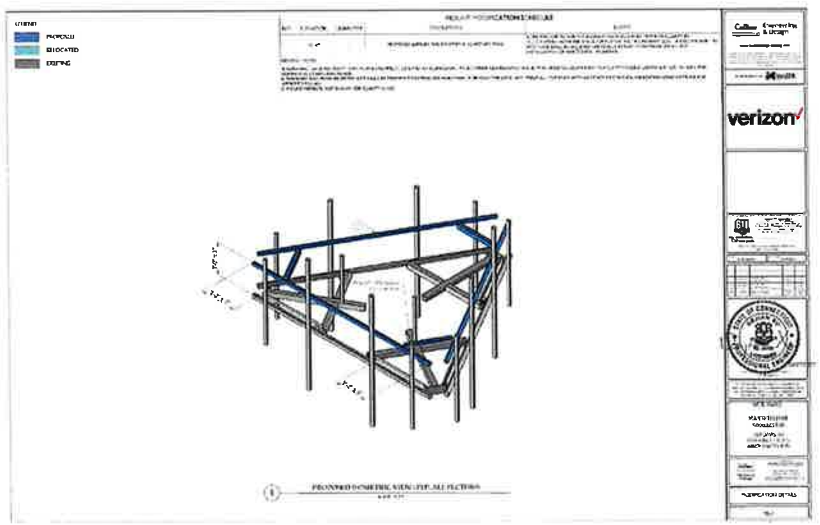
VZW LOCATION CODE:	467673
MDG LOCATION ID:	[illegible]
FUZE PROJECT ID:	16272193

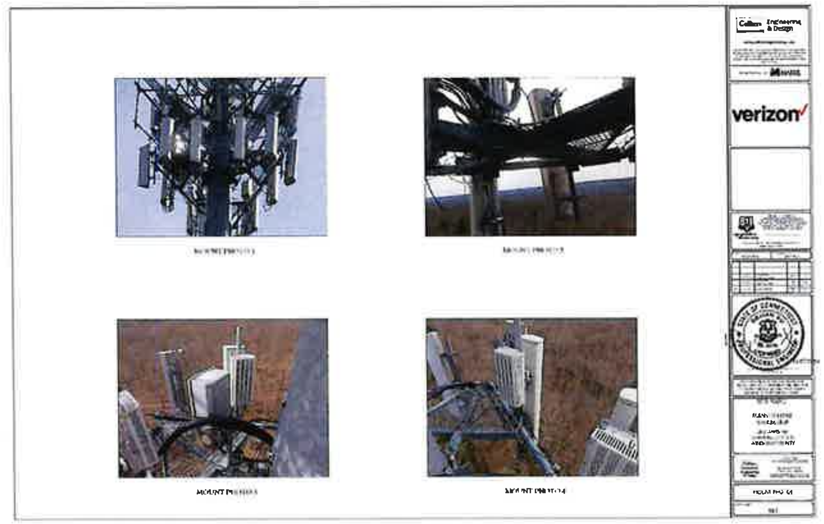
SHEET TITLE

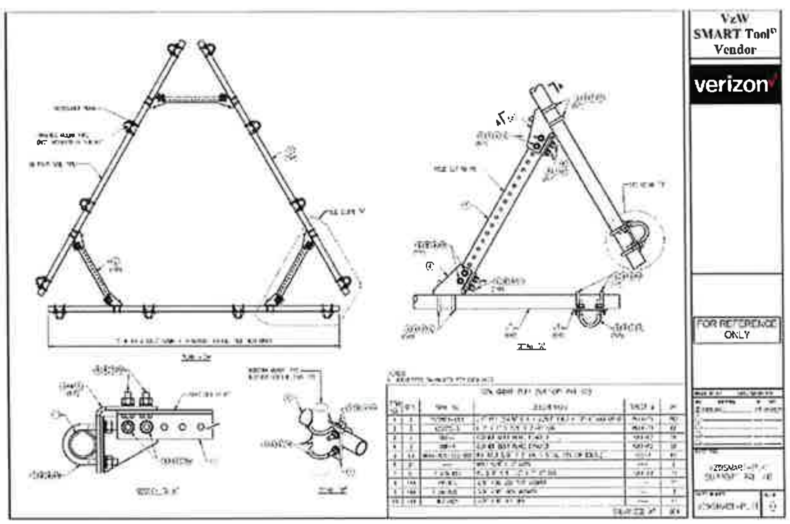
MOUNT MODIFICATION DRAWINGS I

SHEET NUMBER

MM01







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WALLINGFORD, CT 06492
(203) 741-7336

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WESTBOROUGH, MA 01581
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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
4/24/2024

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/24/24	ISSUED FOR CONSTRUCTION	CJC
0	04/18/24	ISSUED FOR REVIEW	CJC

PROJECT NAME & ADDRESS

MANSFIELD NE CT

203 DAVIS ROAD
CHAPLIN, CT 06235

VZW LOCATION CODE: [illegible]
MDG LOCATION ID: [illegible]
FUZE PROJECT ID: [illegible]

SHEET TITLE

MOUNT MODIFICATION DRAWINGS II

SHEET NUMBER

MM02

JAHH-65B-R3B

8-port sector antenna, 2x 698–787, 2x 824-894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB(Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Effective Projective Area (EPA), frontal	0.28 m^2 | 3.014 ft^2
Effective Projective Area (EPA), lateral	0.24 m^2 | 2.583 ft^2
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Aluminum | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male

Dimensions

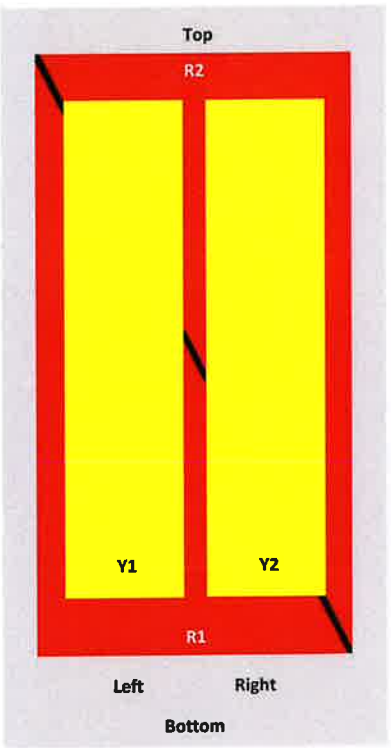
Width	350 mm | 13.78 in

JAHH-65B-R3B

Length	1828 mm | 71.969 in
Depth	208 mm | 8.189 in

Array Layout

JAHH-65A-R3B JAHH-65B-R3B JAHH-65C-R3B



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-798	1-2	1	ANxxxxxxxxxxxxxx1
R2	824-894	3-4	2	ANxxxxxxxxxxxxxx2
Y1	1695-2360	5-6	3	ANxxxxxxxxxxxxxx3
Y2	1695-2360	7-8		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz
Polarization	±45°

Remote Electrical Tilt (RET) Information, Electrical

Protocol	3GPP/AISG 2.0 (Single RET)
Power Consumption, idle state, maximum	2 W

JAHH-65B-R3B

Power Consumption, normal conditions, maximum	13 W
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 5
Internal RET	High band (1) | Low band (2)

Electrical Specifications

Frequency Band, MHz	**698–787**	**824–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain, dBi	14.5	15.8	18	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	200	200	300	300	300	250

Electrical Specifications, BASTA

Frequency Band, MHz	**698–787**	**824–894**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
Gain by Beam Tilt, average, dBi	2 ° | 14.3 8 ° | 14.3 14 ° | 14.3	2 ° | 15.0 8 ° | 14.9 14 ° | 15.4	0 ° | 17.2 5 ° | 17.6 10 ° | 17.6	0 ° | 17.6 5 ° | 18.2 10 ° | 18.2	0 ° | 17.7 5 ° | 18.3 10 ° | 18.3	0 ° | 17.9 5 ° | 18.7 10 ° | 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24

JAHH-65B-R3B

CPR at Sector, dB	11	12	11	11	11	8

Mechanical Specifications

Wind Loading at Velocity, frontal	301.0 N @ 150 km/h | 67.7 lbf @ 150 km/h
Wind Loading at Velocity, lateral	254.0 N @ 150 km/h | 57.1 lbf @ 150 km/h
Wind Loading at Velocity, maximum	143.4 lbf @ 150 km/h | 638.0 N @ 150 km/h
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	456 mm | 17.953 in
Depth, packed	357 mm | 14.055 in
Length, packed	1975 mm | 77.756 in
Net Weight, without mounting kit	29.2 kg | 64.375 lb
Weight, gross	42.5 kg | 93.696 lb

Regulatory Compliance/Certifications

Agency	**Classification**
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted

Included Products

BSAMNT-3	—	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

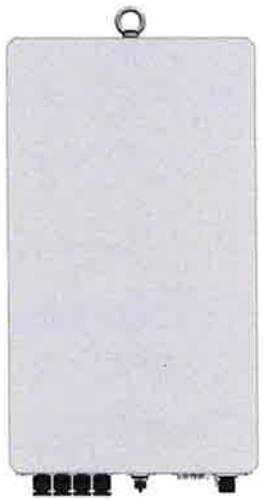
Performance Note	Severe environmental conditions may degrade optimum performance

C-band 64T64R

SAMSUNG

Gen 2

Gen 2 : Higher conducted power radio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features



※ Preliminary Design: External appearance and mechanical design can be subject to change

Gen 2. 64T64R C-band MMU Dimensions	
Size (WxHxD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Weight	**26kg (57.3 lb)**

Item	Gen 2 64T64R (MT6413-77A)
Air Technology	NR n77/TDD
Frequency	3700 – 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	20(HW ready)/40/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dBi)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @(1Rx, 18.36MHz with 30kHz,51RBs)
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1,287W (100% load, room temp.)
Size (WHD)	**400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)**
Volume	**41.1L**
Weight	**26kg (57.3 lb)**
Operating Temperature	-40°C - 55°C (w/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 38.104 FCC 47 CFR 27.53 : < -13dBm/MHz < -40 dBm/MHz @ above 4 GHz <-50 dBm /MHz @ 4,040 ~ 4,050 MHz, <-60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di (Option: Duplex)
Mounting Options	Pole, wall
NB-IoT	Not support
External Alarm	4RX
Fronthaul Interface	eCPRI

SAMSUNG

AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code	RF4439d-25A

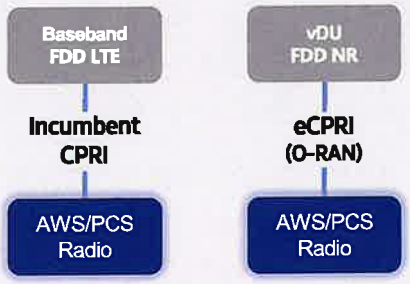
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

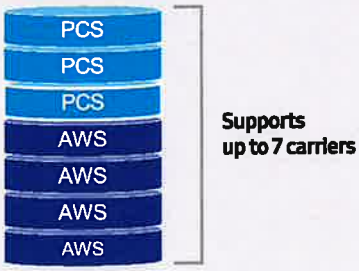
A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.

Optimum Spectrum Utilization

The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.

- **2 FH connectivity**
- **O-RAN capability**
- **More carriers and spectrum**

Same as an incumbent radio volume

Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

SAMSUNG

Specifications

Item	Specification	
Air Interface	LTE, NR(HW resource ready)	
Band	Band13 (700MHz)	Band5 (850MHz)
Frequency	DL: 746~756MHz UL: 777~787MHz	DL: 869~894MHz UL: 824~849MHz
IBW	10MHz	25MHz
OBW	10MHz	25MHz
Carrier Bandwidth	LTE/NR 5*/10MHz	LTE 5/10MHz NR 5/10/15/20MHz
# of carriers	2C*	3C
Total # of carriers	4C + B13 (SDL) 1C	
RF Chain	4T4R/2T4R/2T2R/1T2R 2T2R+2T2R bi-sector	
RF Output Power	Total : 320W	
	4 x 40W or 2 x 60W	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support	
RX Sensitivity	Typ. -104.5dBm @1Rx (25RBs 5MHz)	
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)	
Input Power	-48VDC (-38VDC to -57VDC)	
Power Consumption	1,165 Watt @ 100% RF load, room temperature	
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)	
Volume	37.5 L	
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)	
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)	
Cooling	Natural convection	
Unwanted Emission	3GPP 36.104	3GPP 36.104
	FCC 47 CFR 27.53 c), f)	FCC 47 CFR 22.917
	-	-69 dBm/100 kHz per path @ 896 ~901MHz
CPRI Cascade	Not supported	
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP+, single mode, Duplex (Option: Bi-di)	
RET & TMA Interface	AISG 3.0	
Bias-T	4 ports (2 ports per band)	
Mounting Options	Pole, wall	
NB-IoT	2GB+2IB or 4IB	2SA+2GB or 2GB+2IB or 4GB
PIM Cancellation	Support	
# of antenna port	4	
External Alarm	4	
Fronthaul Interface	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)	
CPRI compression	Not Support	

* 5MHz supporting in B13(700MHz) depends on 3GPP std. and UE capability. External filters in interferer and victim sides for Mexican boarder to support 5MHz service need to be considered
** Finger guard is not needed.

ATTACHMENT 3

C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions Report

Mansfield NE

203 Davis Road, Chaplin, CT

June 13, 2024

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List of Figures

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modification of Verizon's antenna arrays mounted at 153' on an existing monopole tower located at 203 Davis Road in Chaplin, CT. The coordinates of the tower are 41° 47' 36.55" N, 72° 09' 36.64" W.

Verizon is proposing the following:

1) Install nine (9) multi-band antennas, three (3) per sector to support its commercial LTE and 5G network.

This report considers the planned antenna configuration for Verizon[1] as well as existing antenna configuration for T-Mobile[2] to derive the resulting % MPE of its proposed modification.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment C of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment C contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

[1] As referenced to Verizon's Radio Frequency Design Sheet updated 06/10/2023.

[2] As referenced to T-Mobile's Connecticut Siting Council Notice of Exempt Modification – 203 Davis Road, Chaplin, Connecticut, dated 3/15/20222.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{\text{GRF}^2 \times 1.64 \times \text{ERP}}{4\pi \times R^2}\right) \text{X Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor (GRF) of 1.6

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

4. Antenna Inventory

Table 1 below outlines Verizon's proposed antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachments C.

Operator	Sector / Azimuth	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
Verizon	Alpha / 330°	700	160	14.5	4509	JAHH-65B-R3B	67	0	6	153
		850	160	15.8	6083		65			
		1900	160	18.4	11069		63			
		2100	240	18.5	16991		65			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	153
	Beta / 80°	700	160	14.5	4509	JAHH-65B-R3B	67	0	6	153
		850	160	15.8	6083		65			
		1900	160	18.4	11069		63			
		2100	240	18.5	16991		65			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	153
	Gamma / 210°	700	160	14.5	4509	JAHH-65B-R3B	67	0	6	153
		850	160	15.8	6083		65			
		1900	160	18.4	11069		63			
		2100	240	18.5	16991		65			
		3700	320	25.5	113540	MT6413-77A	-	0	2.46	153

Table 1: Proposed Antenna Inventory[3,4]

[3] Antenna heights are in referenced to Verizon's Radio Frequency Design Sheet updated 06/10/2023.

[4] Transmit power assumes 0 dB of cable loss.

5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

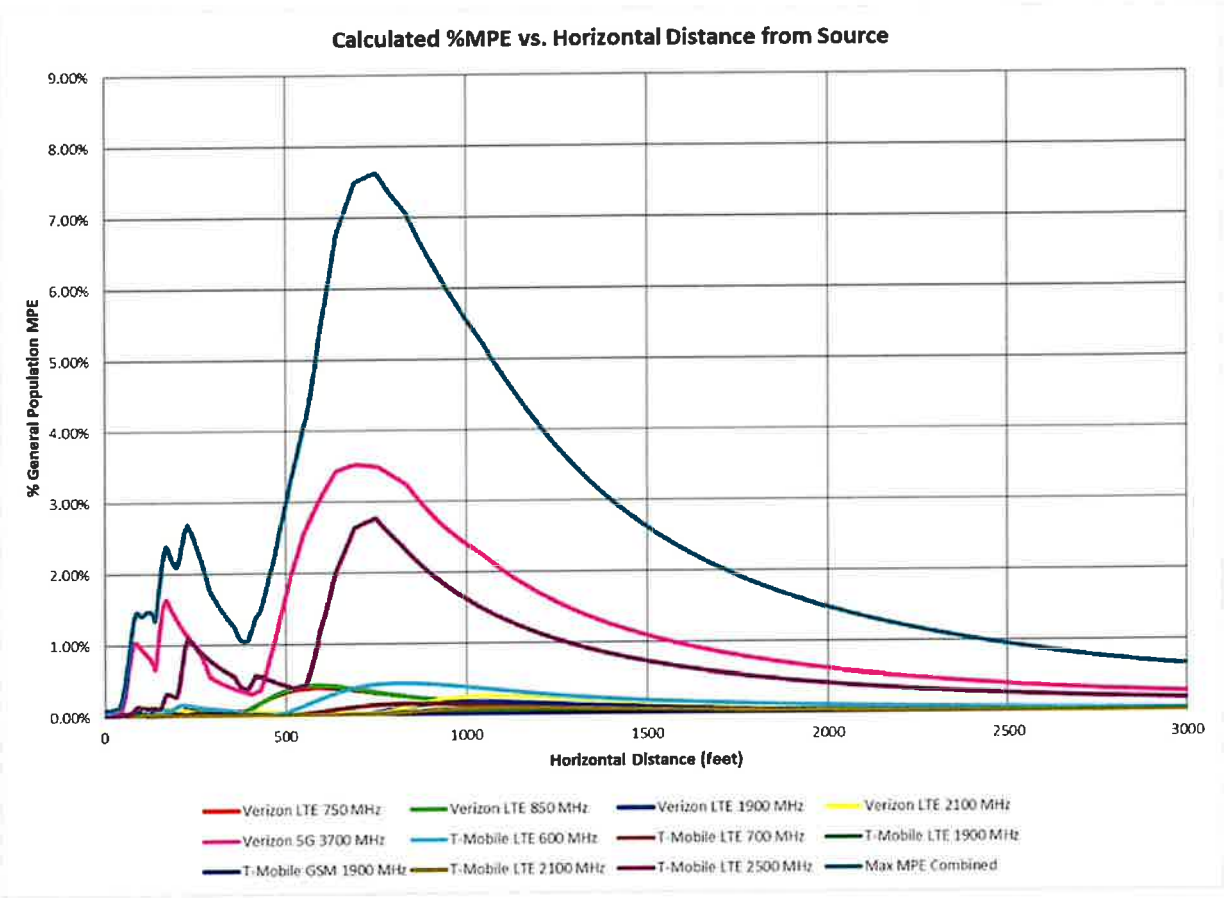


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (7.62% of the General Population limit) is calculated to occur at a horizontal distance of 748 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 748 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm^2)	Limit (mW/cm^2)	% MPE
T-Mobile GSM 1900 MHz	1	15.0	165.0	748	0.000022	1.000	0.00%
T-Mobile LTE 1900 MHz	1	140.0	165.0	748	0.000208	1.000	0.02%
T-Mobile LTE 2100 MHz	1	140.0	165.0	748	0.000139	1.000	0.01%
T-Mobile LTE 2500 MHz	1	240.0	165.0	748	0.027680	1.000	2.77%
T-Mobile LTE 600 MHz	1	240.0	165.0	748	0.001759	0.400	0.44%
T-Mobile LTE 700 MHz	1	80.0	165.0	748	0.000687	0.467	0.15%
Verizon 5G 3700 MHz	1	320.0	153.0	748	0.034963	1.000	3.50%
Verizon LTE 1900 MHz	1	160.0	153.0	748	0.000480	1.000	0.05%
Verizon LTE 2100 MHz	1	240.0	153.0	748	0.000351	1.000	0.04%
Verizon LTE 750 MHz	1	160.0	153.0	748	0.001602	0.500	0.32%
Verizon LTE 850 MHz	1	160.0	153.0	748	0.001868	0.567	0.33%
						Total	**7.62%**

Table 2: Maximum Percent of General Population Exposure Values[5] [6]

[5] Frequencies listed are representative of the operating band and are not the specific operating frequency.

[6] The total % MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

6. Conclusion

The above analysis verifies that RF exposure levels from the site with Verizon's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **7.62%** of the FCC limit (General Population/Uncontrolled). This maximum cumulative percent of MPE value is calculated to occur 748 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Report Prepared By: Ram Acharya
RF Engineer
C Squared Systems, LLC

June 13, 2024
Date

Reviewed/Approved By: Martin Lavin
Senior RF Engineer
C Squared Systems, LLC

June 13, 2024
Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2019, IEEE Standard Safety Levels With Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2021, IEEE Recommended Practice for Measurements and Computations of Electric, Magnetic, and Electromagnetic Fields with Respect to Human Exposure to Such Fields, 0 Hz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[7]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure[8]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

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

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

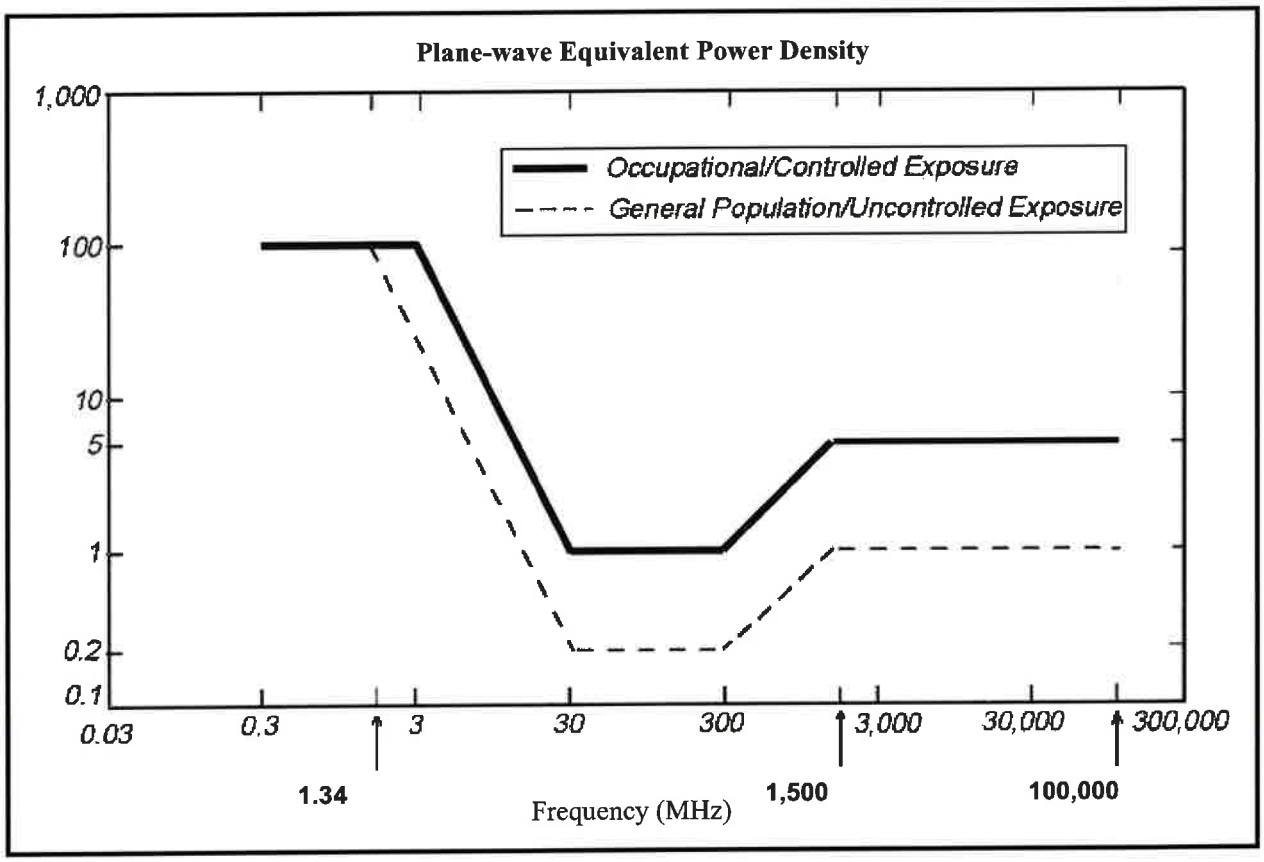
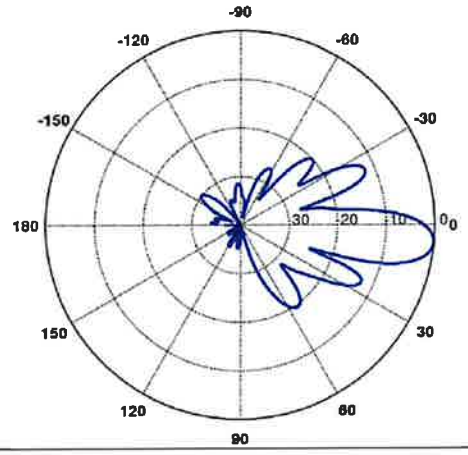


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Verizon Antenna Model Data Sheets and Electrical Patterns

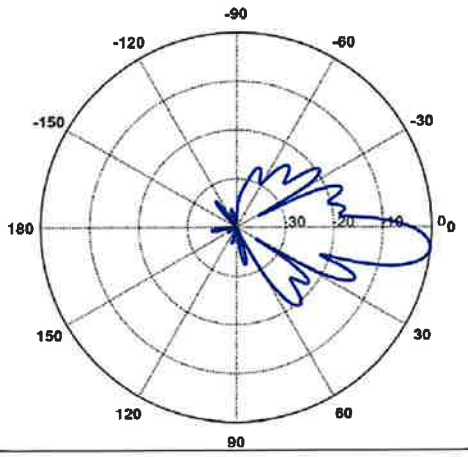
750 MHz

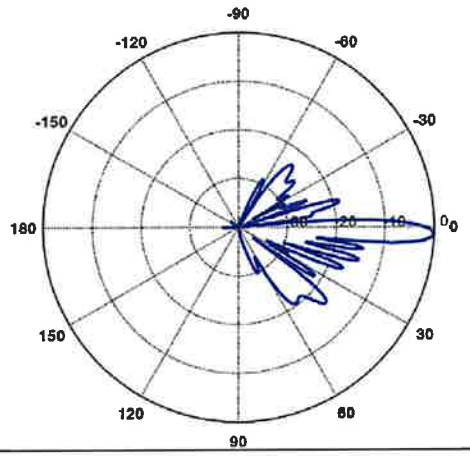
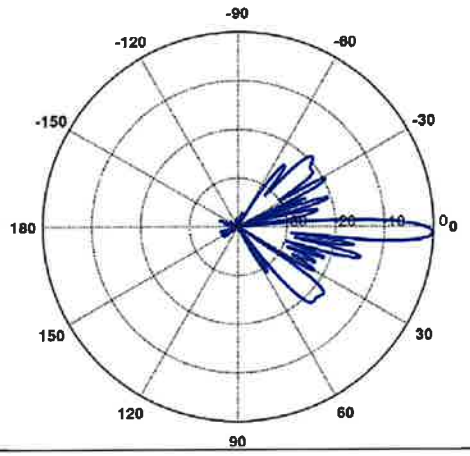
Manufacturer:	COMMSCOPE
Model #:	JAHH-65B-R3B
Frequency Band:	698-787 MHz
Gain:	14.5 dBi
Vertical Beamwidth:	12.4°
Horizontal Beamwidth:	67°
Polarization:	±45°
Dimensions (L x W x D):	71.96" x 13.78" x 8.2"



850 MHz

Manufacturer:	COMMSCOPE
Model #:	JAHH-65B-R3B
Frequency Band:	824-894 MHz
Gain:	15.8 dBi
Vertical Beamwidth:	5.7°
Horizontal Beamwidth:	63°
Polarization:	±45°
Dimensions (L x W x D):	71.96" x 13.78" x 8.2"



1900 MHz Manufacturer: COMMSCOPE Model #: JAHH-65B-R3B Frequency Band: 1850-1990 MHz Gain: 18.4 dBi Vertical Beamwidth: 4.9° Horizontal Beamwidth: 65° Polarization: ±45° Dimensions (L x W x D): 71.96" x 13.78" x 8.2"	
2100 MHz Manufacturer: COMMSCOPE Model #: JAHH-65B-R3B Frequency Band: 1920-2200 MHz Gain: 18.5 dBi Vertical Beamwidth: 4.9° Horizontal Beamwidth: 65° Polarization: ±45° Dimensions (L x W x D): 71.96" x 13.78" x 8.2"	

ATTACHMENT 4

TES
A CONGRUEX® COMPANY

Tower Engineering Solutions, LLC
1320 Greenway Drive, Suite 600, Irving, Texas 75038
Phone: (972) 483-0607, Fax: (972) 975-9615

Structural Analysis Report

Structure Information	*Tower Type*	*Existing 175 ft Nudd Corporation Monopole*
Customer Information	*Name*	SBA Communications Corp
	Site Number	CT03113-S
	Site Name	North Chaplin
Carrier Information	*Name*	*Verizon*
	Site ID / Name	*5000247838 / MANSFIELD NE CT*
	App #	*249271, V1*
Site Information	*Address:*	*203 Davis Road* *Chaplin, Connecticut 06235, Windham County*
	Latitude:	*41.793486°*
	Longitude:	*-72.160178°*

Analysis Result:

Max Structural Usage: **50.7% [Pass]**

Max Foundation Usage**: 56.0% [Pass]**

Additional Usage Caused by Mount Modification: +1.2%

Report Prepared By: Sital Shrestha

STATE OF CONNECTICUT
JARRYD TIBBETTS
No. 34170
LICENSED
PROFESSIONAL ENGINEER

4/2/2024

Introduction

The purpose of this report is to summarize the analysis results on the 175 ft Nudd Corporation Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Document Type	Remarks
Tower Drawings	Fred A. Nudd Corporation Project # 7678; 10125-056 Dated 07/2000
Foundation Drawing	Fred A. Nudd Corporation Project # 7678; 10125-056 Dated 07/2000
Geotechnical Report	FDH, Project # 1206274EG1 Dated 08/20/2012
Mount Analysis	Colliers Engineering & Design, Project No. 10221772, dated 02/07/2024

Analysis Criteria

The comprehensive analysis was performed in accordance with the requirements and stipulations of the TIA-222-H. In accordance with this standard, the structure was analyzed using TESPoles, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Codes and Standards	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code	
Wind Parameters	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125.0 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00"
	Service Load Wind Speed:	60 mph + 0" Radial ice
	Exposure Category:	B
	Risk Category:	II
	Ground Elevation Factor (K_e):	0.982
Topographic Parameters	Method:	Method 1
	Feature Type:	Flat
	Crest Height (H):	0 ft
	Length of Feature (L):	0.0 ft
	Distance to crest (x):	0.0 ft
Seismic Parameters:	S_S	0.184 g
	S_1	0.055 g

This structural analysis is based upon the tower being classified as a Risk Category II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	173.0	-	-	Low Profile Platform (Abandoned)	-	Nextel
1	165.0	3	Commscope VV-65A-R1 - Panel	SitePro1 RMQP-4096-HK (Platform w/ Handrails & Kickers)	(3) 1.9" Fiber	T-Mobile Sprint
2		3	RFS APXVAALL24_43-U-NA20 - Panel			
3		3	Ericsson AIR6449 B41 - Panel			
4		3	Ericsson 4460 B25 + B66 - RRU			
5		3	Ericsson 4480 B71 + B85 - RRU			
6		3	ALU TD-RRH8x20-25 - RRU			
-	153.0	2	Antel LPA-80080-6CF-EDIN - Panel	Low Profile Platform & (3) Commscope BSAMNT-SBS-2-2	(6) 1 5/8" (2) 1 5/8" Fiber	Verizon
-		4	Antel LPA-80063/6CF_5 - Panel			
-		6	Andrew JAHH-65B-R3B - Panel			
-		3	Samsung MT6407-77A			
-		3	Commscope CBC78T-DS-43-2X			
-		3	Samsung B2/B66A RRH-BR049 (RFV01U-D1A)			
-		3	Samsung B5/B13 RRH-BR04C (RFV01U-D2A)			
-		2	RFS DB-T1-6Z-8AB-0Z			

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
7	153.0	2	Antel LPA-80080-6CF-EDIN - Panel	(1) Platform w/ modifications (3) Commscope BSAMNT-SBS-2-2	(6) 1 5/8" (2) 1-1/4" Hybrid	Verizon
8		4	Antel LPA-80063/6CF_5- Panel			
9		6	Andrew JAHH-65B-R3B- Panel			
10		3	Samsung MT6413-77A- Panel			
11		3	Commscope CBC78T-DS-43-2X- Diplexer			
12		3	Samsung B2/B66A RRH ORAN (RF4439d-25A)- RH			
13		3	Samsung RF4461d-13A- RRH			
14		2	RFS DB-T1-6Z-8AB-0Z- OVP			

See the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

Tower Component	Utilization %	Pass / Fail
Pole Shaft	50.8%	Pass
Anchor Bolt	38.0%	Pass
Base Plate	67.1%	Pass
Structure Rating – *(Controlling Utilization of all Components)*	**67.1%**	

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	3811.5	31.4	54.1

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Service Load Condition (Rigidity)

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.0000 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a comprehensive structural analysis.

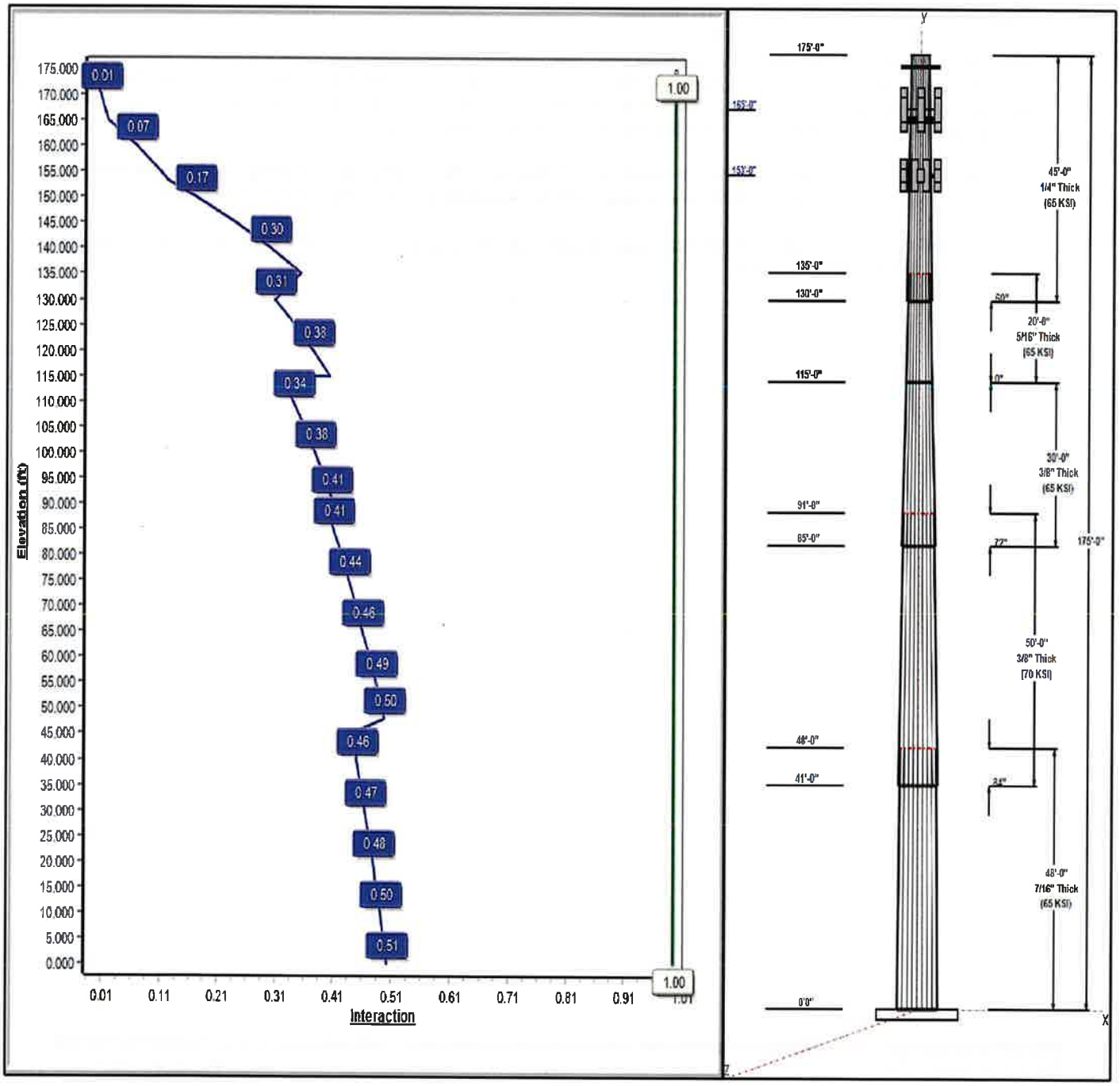
Usage Diagram - Max Ratio 50.75% at 0.0ft

Structure:	CT03113-S-SBA	**Code:**	EIA/TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Gh:**	1.1		
Base Elev:	0.000 (ft)			Page: 1	

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	26
Wind Load Factor:	1.00		

Load Case : 1.2D + 1.0W 125 mph Wind at 60°



Structure: CT03113-S-SBA

Type: Tapered
Site Name: North Chaplin
Height: 175.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.24286

3/29/2024

IES Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	52.84	64.50	0.438		0.24286	65
2	50.00	43.15	55.29	0.375	Slip	0.24286	70
3	30.00	38.07	45.36	0.375	Slip	0.24286	65
4	20.00	33.21	38.07	0.313	Butt	0.24286	65
5	45.00	24.00	34.93	0.250	Slip	0.24286	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
173.00	173.00	1	Low Profile Platform	
165.00	165.00	3	ALU TD-RRH8x20-25	T-Mobile Sprint
165.00	165.00	3	VV-65A-R1	T-Mobile Sprint
165.00	165.00	3	APXVAALL24_43-U-NA20	T-Mobile Sprint
165.00	165.00	3	AIR6449 B41	T-Mobile Sprint
165.00	165.00	3	4460 B25 + B66	T-Mobile Sprint
165.00	165.00	3	4480 B71 + B85	T-Mobile Sprint
165.00	165.00	1	RMQP-4096-HK	T-Mobile Sprint
153.00	153.00	1	Platform w/ handrail with	Verizon
153.00	153.00	4	Antel LPA-80063/6CF	Verizon
153.00	153.00	2	Antel LPA-80080/6CF	Verizon
153.00	153.00	6	JAHH-65B-R3B	Verizon
153.00	153.00	2	RFS DB-T1-6Z-8AB-0Z -	Verizon
153.00	153.00	3	MT6413-77A	Verizon
153.00	153.00	3	Bsamnt-sbs-2-2	Verizon
153.00	153.00	3	CBC78T-DS-43-2X	Verizon
153.00	153.00	3	B2/B66A RRH ORAN	Verizon
153.00	153.00	3	RF4461d-13A	Verizon

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	165.00	Inside	1.9" Fiber	T-Mobile Sprint
0.00	153.00	Inside	1 5/8" Coax	Verizon
0.00	153.00	Inside	1-1/4" Hybrid	Verizon

Anchor Bolts

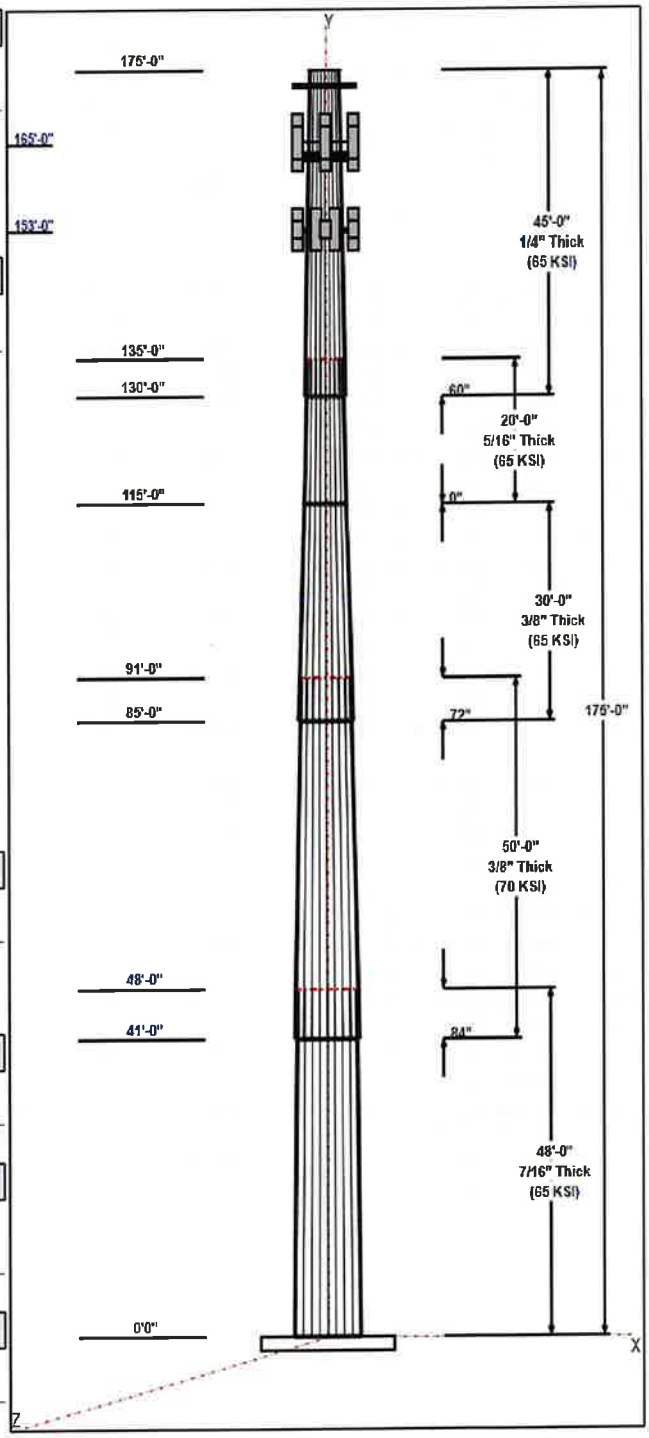
Qty	Specifications	Grade (ksi)	Arrangement
29	2.00" A687	105.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.5000	64.0	50.0	Polygon

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 125 mph Wind	3811.3	31.4	54.1
1.2D + 1.0W 125 mph Wind at 30°	3300.8	27.2	54.1
1.2D + 1.0W 125 mph Wind at 60°	1905.7	15.7	54.1
1.2D + 1.0W 125 mph Wind at 90°	0.0	0.0	54.1
1.2D + 1.0W 125 mph Wind at 120°	1905.7	15.7	54.1
1.2D + 1.0W 125 mph Wind at 150°	3300.8	27.2	54.1



1.2D + 1.0W 125 mph Wind at 180°	3811.3	31.4	54.1
1.2D + 1.0W 125 mph Wind at 210°	3300.8	27.2	54.1
1.2D + 1.0W 125 mph Wind at 240°	1905.7	15.7	54.1
1.2D + 1.0W 125 mph Wind at 270°	0.0	0.0	54.1
1.2D + 1.0W 125 mph Wind at 300°	1905.7	15.7	54.1
1.2D + 1.0W 125 mph Wind at 330°	3300.8	27.2	54.1
0.9D + 1.0W 125 mph Wind	3776.8	31.3	40.6
0.9D + 1.0W 125 mph Wind at 30°	3271.0	27.1	40.6
0.9D + 1.0W 125 mph Wind at 60°	1888.5	15.7	40.6
0.9D + 1.0W 125 mph Wind at 90°	0.0	0.0	40.6
0.9D + 1.0W 125 mph Wind at 120°	1888.5	15.7	40.6
0.9D + 1.0W 125 mph Wind at 150°	3271.0	27.1	40.6
0.9D + 1.0W 125 mph Wind at 180°	3776.8	31.3	40.6
0.9D + 1.0W 125 mph Wind at 210°	3271.0	27.1	40.6
0.9D + 1.0W 125 mph Wind at 240°	1888.5	15.7	40.6
0.9D + 1.0W 125 mph Wind at 270°	0.0	0.0	40.6
0.9D + 1.0W 125 mph Wind at 300°	1888.5	15.7	40.6
0.9D + 1.0W 125 mph Wind at 330°	3271.0	27.1	40.6
1.2D + 1.0Di + 1.0Wi 50 mph Wind	909.1	7.7	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	787.4	6.6	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	454.6	3.8	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	0.0	0.0	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	454.6	3.8	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	787.4	6.6	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	909.1	7.7	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	787.4	6.6	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	454.6	3.8	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	0.0	0.0	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	454.6	3.8	71.8
1.2D + 1.0Di + 1.0Wi 50 mph Wind at	787.4	6.6	71.8
1.0D + 1.0W 60 mph Wind	873.4	7.2	45.1
1.0D + 1.0W 60 mph Wind at 30°	756.4	6.3	45.1
1.0D + 1.0W 60 mph Wind at 60°	436.7	3.6	45.1
1.0D + 1.0W 60 mph Wind at 90°	0.0	0.0	45.1
1.0D + 1.0W 60 mph Wind at 120°	436.7	3.6	45.1
1.0D + 1.0W 60 mph Wind at 150°	756.4	6.3	45.1
1.0D + 1.0W 60 mph Wind at 180°	873.4	7.2	45.1
1.0D + 1.0W 60 mph Wind at 210°	756.4	6.3	45.1
1.0D + 1.0W 60 mph Wind at 240°	436.7	3.6	45.1
1.0D + 1.0W 60 mph Wind at 270°	0.0	0.0	45.1
1.0D + 1.0W 60 mph Wind at 300°	436.7	3.6	45.1
1.0D + 1.0W 60 mph Wind at 330°	756.4	6.3	45.1
1.2D + 1.0Ev + 1.0Eh	137.2	0.9	1.7
0.9D + 1.0Ev + 1.0Eh	137.2	0.9	1.7

Structure: CT03113-S-SBA - Coax Line Placement

Type: Monopole
Site Name: North Chaplin
Height: 175.00 (ft)

3/29/2024

Tower Engineering Solutions

Shaft Properties

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 5	

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.4375	65		0.00	13,207
2	18	50.000	0.3750	70	Slip	84.00	9,891
3	18	30.000	0.3750	65	Slip	72.00	5,023
4	18	20.000	0.3125	65	Flange	0.00	2,385
5	18	45.000	0.2500	65	Slip	60.00	3,550
					Total Shaft Weight:		**34,056**

	Bottom						Top						
Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	64.50	0.00	88.96	46124.76	24.59	147.43	52.84	48.00	72.77	25249.3	19.89	120.7	0.242857
2	55.29	41.00	65.36	24906.71	24.59	147.45	43.15	91.00	50.91	11769.1	18.88	115.0	0.242857
3	45.36	85.00	53.54	13686.62	19.92	120.95	38.07	115.00	44.87	8055.20	16.49	101.5	0.242857
4	38.07	115.0	37.45	6746.11	20.07	121.83	33.21	135.00	32.63	4463.27	17.33	106.2	0.242857
5	34.93	130.0	27.52	4180.88	23.22	139.71	24.00	175.00	18.84	1343.00	15.52	96.00	0.242857

Load Summary

Structure:	CT03113-S-SBA	**Code:**	EIA_H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	173.00	Low Profile Platform (Abandoned)	1	1200.00	25.00	1.00	1908.12	39.162	1.00	0.00	0.00
2	165.00	ALU TD-RRH8x20-25	3	70.00	4.05	0.67	139.37	4.583	0.67	0.00	0.00
3	165.00	VV-65A-R1	3	23.81	7.90	0.74	110.34	6.597	0.74	0.00	0.00
4	165.00	APXVAALL24_43-U-NA20	3	122.80	20.24	0.73	399.00	21.503	0.73	0.00	0.00
5	165.00	AIR6449 B41	3	103.00	5.65	0.71	195.29	6.290	0.71	0.00	0.00
6	165.00	4460 B25 + B66	3	104.00	2.85	0.67	150.18	3.304	0.67	0.00	0.00
7	165.00	4480 B71 + B85	3	93.00	2.85	0.67	141.41	3.304	0.67	0.00	0.00
8	165.00	RMQP-4096-HK	1	2449.00	46.00	1.00	4174.99	67.613	1.00	0.00	0.00
9	153.00	Platform w/ handrail with mods	1	2110.00	42.70	1.00	3869.70	70.602	1.00	0.00	0.00
10	153.00	Antel LPA-80063/6CF	4	27.00	9.59	0.94	210.24	10.484	0.94	0.00	0.00
11	153.00	Antel LPA-80080/6CF	2	21.00	8.62	1.70	142.82	9.477	1.70	0.00	0.00
12	153.00	JAHH-65B-R3B	6	64.40	9.11	0.83	209.61	9.992	0.83	0.00	0.00
13	153.00	RFS DB-T1-6Z-8AB-0Z - DC SS	2	44.00	4.80	1.00	206.91	5.427	1.00	0.00	0.00
14	153.00	MT6413-77A	3	57.30	3.85	0.70	120.19	4.389	0.70	0.00	0.00
15	153.00	Bsamnt-sbs-2-2	3	67.46	0.80	1.00	130.38	1.360	1.00	0.00	0.00
16	153.00	CBC78T-DS-43-2X	3	21.80	0.37	0.67	42.27	0.674	0.67	0.00	0.00
17	153.00	B2/B66A RRH ORAN	3	74.70	1.87	0.67	121.83	2.241	0.67	0.00	0.00
18	153.00	RF4461d-13A	3	79.10	1.87	0.67	126.81	2.241	0.67	0.00	0.00
		Totals:	**50**	**8,834.31**			**17,782.07**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	165.00	(3) 1.9" Fiber	0.00	Inside
0.00	153.00	(6) 1 5/8" Coax	0.00	Inside
0.00	153.00	(2) 1-1/4" Hybrid	0.00	Inside

Shaft Section Properties

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

TES Tower Engineering Solutions

Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.4375	64.500	88.956	46124.8	24.59	147.43	72.5	1408.	0.0
5.00		0.4375	63.286	87.269	43551.3	24.10	144.65	73.1	1355.	1499.1
10.00		0.4375	62.071	85.583	41075.4	23.61	141.88	73.6	1303.	1470.4
15.00		0.4375	60.857	83.897	38695.2	23.12	139.10	74.2	1252.	1441.8
20.00		0.4375	59.643	82.211	36408.7	22.63	136.33	74.8	1202.	1413.1
25.00		0.4375	58.429	80.525	34214.2	22.14	133.55	75.4	1153.	1384.4
30.00		0.4375	57.214	78.839	32109.6	21.65	130.78	75.9	1105.	1355.7
35.00		0.4375	56.000	77.153	30093.2	21.16	128.00	76.5	1058.	1327.0
40.00		0.4375	54.786	75.467	28163.0	20.67	125.22	77.1	1012.	1298.3
41.00	Bot - Section 2	0.4375	54.543	75.129	27787.1	20.57	124.67	77.2	1003.	256.2
45.00		0.4375	53.571	73.780	26317.1	20.18	122.45	77.7	967.6	1895.2
48.00	Top - Section 1	0.3750	53.593	63.340	22664.6	23.79	142.91	0.0	0.0	1399.0
50.00		0.3750	53.107	62.762	22049.7	23.56	141.62	78.2	817.8	429.1
55.00		0.3750	51.893	61.317	20561.2	22.99	138.38	79.0	780.4	1055.5
60.00		0.3750	50.679	59.872	19141.3	22.42	135.14	79.7	743.9	1030.9
65.00		0.3750	49.464	58.426	17788.4	21.85	131.90	80.5	708.3	1006.4
70.00		0.3750	48.250	56.981	16500.7	21.28	128.67	81.2	673.6	981.8
75.00		0.3750	47.036	55.536	15276.7	20.71	125.43	82.0	639.7	957.2
80.00		0.3750	45.821	54.091	14114.8	20.13	122.19	82.7	606.7	932.6
85.00	Bot - Section 3	0.3750	44.607	52.645	13013.4	19.56	118.95	83.5	574.6	908.0
90.00		0.3750	43.393	51.200	11970.8	18.99	115.71	84.2	543.4	1782.0
91.00	Top - Section 2	0.3750	43.900	51.804	12399.2	19.23	117.07	0.0	0.0	350.5
95.00		0.3750	42.929	50.648	11587.3	18.77	114.48	79.3	531.6	697.2
100.00		0.3750	41.714	49.202	10623.4	18.20	111.24	80.0	501.6	849.4
105.00		0.3750	40.500	47.757	9714.5	17.63	108.00	80.7	472.4	824.8
110.00		0.3750	39.286	46.312	8859.0	17.06	104.76	81.3	444.2	800.2
115.00	Top - Section 3	0.3750	38.071	44.867	8055.2	16.49	101.52	82.0	416.7	775.6
115.00	Bot - Section 4	0.3125	38.071	37.451	6746.1	19.79	121.83	77.8	349.0	
120.00		0.3125	36.857	36.246	6116.0	19.39	117.94	78.6	326.8	626.9
125.00		0.3125	35.643	35.042	5526.4	18.70	114.06	79.4	305.4	606.4
130.00	Bot - Section 5	0.3125	34.429	33.838	4975.9	18.02	110.17	80.2	284.7	586.0
135.00	Top - Section 4	0.2500	33.714	26.553	3756.9	22.37	134.86	0.0	0.0	1025.4
140.00		0.2500	32.500	25.589	3362.6	21.51	130.00	76.1	203.8	443.6
145.00		0.2500	31.286	24.626	2996.9	20.66	125.14	77.1	188.7	427.2
150.00		0.2500	30.071	23.662	2658.7	19.80	120.29	78.1	174.1	410.8
153.00		0.2500	29.343	23.084	2468.6	19.29	117.37	78.7	165.7	238.6
155.00		0.2500	28.857	22.699	2347.0	18.94	115.43	79.1	160.2	155.8
160.00		0.2500	27.643	21.735	2060.6	18.09	110.57	80.1	146.8	378.0
165.00		0.2500	26.429	20.772	1798.5	17.23	105.71	81.1	134.0	361.6
170.00		0.2500	25.214	19.808	1559.7	16.37	100.86	82.1	121.8	345.2
173.00		0.2500	24.486	19.230	1427.1	15.86	97.94	82.5	114.8	199.3
175.00		0.2500	24.000	18.845	1343.0	15.52	96.00	82.5	110.2	129.6
										34056.0

Wind Loading - Shaft

Structure: CT03113-S-SBA
Site Name: North Chaplin
Height: 175.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

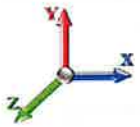
Code: TIA-222-H
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

3/29/2024

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 125 mph Wind at 60° - Controlling Direction

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	26.130	28.74	565.73	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	26.130	28.74	555.08	0.730	0.000	5.00	27.033	19.73	567.2	0.0	1799.0
10.00		1.00	0.70	26.130	28.74	544.43	0.730	0.000	5.00	26.519	19.36	556.4	0.0	1764.5
15.00		1.00	0.70	26.130	28.74	533.78	0.730	0.000	5.00	26.005	18.98	545.6	0.0	1730.1
20.00		1.00	0.70	26.130	28.74	523.13	0.730	0.000	5.00	25.491	18.61	534.9	0.0	1695.7
25.00		1.00	0.70	26.130	28.74	512.48	0.730	0.000	5.00	24.978	18.23	524.1	0.0	1661.3
30.00		1.00	0.70	26.152	28.77	502.04	0.730	0.000	5.00	24.464	17.86	513.7	0.0	1626.8
35.00		1.00	0.73	27.329	30.06	502.33	0.730	0.000	5.00	23.950	17.48	525.6	0.0	1592.4
40.00		1.00	0.76	28.392	31.23	500.90	0.730	0.000	5.00	23.436	17.11	534.3	0.0	1558.0
41.00	Bot - Section 2	1.00	0.77	28.593	31.45	500.44	0.730	0.000	1.00	4.626	3.38	106.2	0.0	307.5
45.00		1.00	0.79	29.364	32.30	498.11	0.730	0.000	4.00	18.551	13.54	437.4	0.0	2274.3
48.00	Top - Section 1	1.00	0.80	29.910	32.90	495.89	0.730	0.000	3.00	13.697	10.00	329.0	0.0	1678.8
50.00		1.00	0.81	30.261	33.29	501.28	0.730	0.000	2.00	9.029	6.59	219.4	0.0	514.9
55.00		1.00	0.83	31.096	34.21	496.53	0.730	0.000	5.00	22.212	16.22	554.7	0.0	1266.6
60.00		1.00	0.85	31.879	35.07	490.98	0.730	0.000	5.00	21.699	15.84	555.5	0.0	1237.1
65.00		1.00	0.87	32.617	35.88	484.73	0.730	0.000	5.00	21.185	15.47	554.9	0.0	1207.6
70.00		1.00	0.89	33.315	36.65	477.86	0.730	0.000	5.00	20.671	15.09	553.0	0.0	1178.1
75.00		1.00	0.91	33.978	37.38	470.45	0.730	0.000	5.00	20.157	14.71	550.0	0.0	1148.6
80.00		1.00	0.93	34.610	38.07	462.55	0.730	0.000	5.00	19.644	14.34	545.9	0.0	1119.1
85.00	Bot - Section 3	1.00	0.94	35.215	38.74	454.21	0.730	0.000	5.00	19.130	13.96	540.9	0.0	1089.6
90.00		1.00	0.96	35.795	39.37	445.46	0.730	0.000	5.00	18.933	13.82	544.2	0.0	2138.4
91.00	Top - Section 2	1.00	0.96	35.908	39.50	443.67	0.730	0.000	1.00	3.725	2.72	107.4	0.0	420.6
95.00		1.00	0.97	36.352	39.99	444.12	0.730	0.000	4.00	14.695	10.73	428.9	0.0	836.7
100.00		1.00	0.99	36.889	40.58	434.73	0.730	0.000	5.00	17.906	13.07	530.4	0.0	1019.3
105.00		1.00	1.00	37.406	41.15	425.02	0.730	0.000	5.00	17.392	12.70	522.4	0.0	989.8
110.00		1.00	1.02	37.907	41.70	415.03	0.730	0.000	5.00	16.878	12.32	513.8	0.0	960.3
115.00	Top - Section 3	1.00	1.03	38.391	42.23	404.76	0.730	0.000	5.00	16.365	11.95	504.5	0.0	930.8
120.00		1.00	1.04	38.861	42.75	394.24	0.730	0.000	5.00	15.851	11.57	494.6	0.0	752.3
125.00		1.00	1.05	39.317	43.25	383.49	0.730	0.000	5.00	15.337	11.20	484.2	0.0	727.7
130.00	Bot - Section 5	1.00	1.07	39.760	43.74	372.50	0.730	0.000	5.00	14.823	10.82	473.3	0.0	703.1
135.00	Top - Section 4	1.00	1.08	40.191	44.21	361.31	0.730	0.000	5.00	14.521	10.60	468.7	0.0	1230.5
140.00		1.00	1.09	40.611	44.67	355.38	0.730	0.000	5.00	14.007	10.23	456.8	0.0	532.3
145.00		1.00	1.10	41.020	45.12	343.82	0.730	0.000	5.00	13.494	9.85	444.5	0.0	512.6
150.00		1.00	1.11	41.419	45.56	332.08	0.730	0.000	5.00	12.980	9.48	431.7	0.0	492.9
153.00	Appurtenance(s)	1.00	1.12	41.654	45.82	324.95	0.730	0.000	3.00	7.541	5.51	252.2	0.0	286.3
155.00		1.00	1.12	41.809	45.99	320.17	0.730	0.000	2.00	4.925	3.60	165.3	0.0	186.9
160.00		1.00	1.13	42.190	46.41	308.09	0.730	0.000	5.00	11.952	8.73	404.9	0.0	453.6
165.00	Appurtenance(s)	1.00	1.14	42.563	46.82	295.85	0.730	0.000	5.00	11.439	8.35	391.0	0.0	433.9
170.00		1.00	1.15	42.927	47.22	283.47	0.730	0.000	5.00	10.925	7.98	376.6	0.0	414.3
173.00	Appurtenance(s)	1.00	1.16	43.143	47.46	275.96	0.730	0.000	3.00	6.308	4.61	218.5	0.0	239.1
175.00		1.00	1.16	43.284	47.61	270.93	0.730	0.000	2.00	4.103	3.00	142.6	0.0	155.5
								Totals:	**175.00**			**17,605.3**		**40,867.2**

Discrete Appurtenance Forces

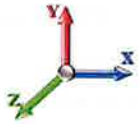
Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.0W 125 mph Wind at 60° - Controlling Direction

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	173.00	Low Profile Platform	1	43.143	47.457	1.00	1.00	25.00	1440.00	0.000	0.000	-593.21	0.00	0.00
2	165.00	ALU TD-RRH8x20-25	3	42.563	46.819	0.50	0.75	6.11	252.00	0.000	0.000	-142.92	0.00	0.00
3	165.00	RMQP-4096-HK	1	42.563	46.819	1.00	1.00	46.00	2938.80	0.000	0.000	-1076.84	0.00	0.00
4	165.00	4480 B71 + B85	3	42.563	46.819	0.50	0.75	4.30	334.80	0.000	0.000	-100.58	0.00	0.00
5	165.00	4460 B25 + B66	3	42.563	46.819	0.50	0.75	4.30	374.40	0.000	0.000	-100.58	0.00	0.00
6	165.00	AIR6449 B41	3	42.563	46.819	0.53	0.75	9.03	370.80	0.000	0.000	-211.29	0.00	0.00
7	165.00	APXVAALL24_43-U-NA20	3	42.563	46.819	0.55	0.75	33.24	442.08	0.000	0.000	-778.23	0.00	0.00
8	165.00	VV-65A-R1	3	42.563	46.819	0.55	0.75	13.15	85.72	0.000	0.000	-307.92	0.00	0.00
9	153.00	Platform w/ handrail with	1	41.654	45.820	1.00	1.00	42.70	2532.00	0.000	0.000	-978.25	0.00	0.00
10	153.00	Antel LPA-80080/6CF	2	41.654	45.820	1.36	0.80	23.45	50.40	0.000	0.000	-537.16	0.00	0.00
11	153.00	JAHH-65B-R3B	6	41.654	45.820	0.66	0.80	36.29	463.68	0.000	0.000	-831.50	0.00	0.00
12	153.00	Antel LPA-80063/6CF	4	41.654	45.820	0.75	0.80	28.85	129.60	0.000	0.000	-660.88	0.00	0.00
13	153.00	RF4461d-13A	3	41.654	45.820	0.54	0.80	3.01	284.76	0.000	0.000	-68.89	0.00	0.00
14	153.00	B2/B66A RRH ORAN	3	41.654	45.820	0.54	0.80	3.01	268.92	0.000	0.000	-68.89	0.00	0.00
15	153.00	CBC78T-DS-43-2X	3	41.654	45.820	0.54	0.80	0.59	78.48	0.000	0.000	-13.63	0.00	0.00
16	153.00	Bsamnt-sbs-2-2	3	41.654	45.820	1.00	1.00	2.40	242.86	0.000	0.000	-54.98	0.00	0.00
17	153.00	MT6413-77A	3	41.654	45.820	0.56	0.80	6.47	206.28	0.000	0.000	-148.18	0.00	0.00
18	153.00	RFS DB-T1-6Z-8AB-0Z -	2	41.654	45.820	0.80	0.80	7.68	105.60	0.000	0.000	-175.95	0.00	0.00
							Totals:		**10,601.17**			**-6,849.88**		

Total Applied Force Summary

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

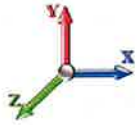
Tower Engineering Solutions

Load Case: 1.2D + 1.0W 125 mph Wind at 60° - Controlling Direction

Iterations 26

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		-283.60	-1883.69	0.00	0.00
10.00		-278.21	-1849.26	0.00	0.00
15.00		-272.82	-1814.84	0.00	0.00
20.00		-267.43	-1780.41	0.00	0.00
25.00		-262.04	-1745.99	0.00	0.00
30.00		-256.87	-1711.56	0.00	0.00
35.00		-262.80	-1677.14	0.00	0.00
40.00		-267.16	-1642.71	0.00	0.00
41.00		-53.10	-324.41	0.00	0.00
45.00		-218.71	-2342.04	0.00	0.00
48.00		-164.49	-1729.68	0.00	0.00
50.00		-109.70	-548.81	0.00	0.00
55.00		-277.33	-1351.37	0.00	0.00
60.00		-277.73	-1321.86	0.00	0.00
65.00		-277.43	-1292.35	0.00	0.00
70.00		-276.49	-1262.85	0.00	0.00
75.00		-274.99	-1233.34	0.00	0.00
80.00		-272.97	-1203.83	0.00	0.00
85.00		-270.47	-1174.32	0.00	0.00
90.00		-272.10	-2223.13	0.00	0.00
91.00		-53.70	-437.54	0.00	0.00
95.00		-214.47	-904.47	0.00	0.00
100.00		-265.20	-1104.03	0.00	0.00
105.00		-261.21	-1074.52	0.00	0.00
110.00		-256.88	-1045.01	0.00	0.00
115.00		-252.25	-1015.51	0.00	0.00
120.00		-247.32	-837.05	0.00	0.00
125.00		-242.11	-812.46	0.00	0.00
130.00		-236.64	-787.87	0.00	0.00
135.00		-234.33	-1315.24	0.00	0.00
140.00		-228.40	-617.01	0.00	0.00
145.00		-222.24	-597.34	0.00	0.00
150.00		-215.85	-577.67	0.00	0.00
153.00	(30) attachments	-3664.43	-4699.74	0.00	0.00
155.00		-82.67	-201.28	0.00	0.00
160.00		-202.47	-489.44	0.00	0.00
165.00	(19) attachments	-2913.83	-5268.36	0.00	0.00
170.00		-188.29	-414.26	0.00	0.00
173.00	(1) attachments	-702.48	-1679.11	0.00	0.00
175.00		-71.30	-155.47	0.00	0.00
	Totals:	**-15,652.52**	**-54,147.00**	**0.00**	**0.00**

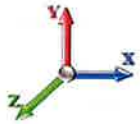
Calculated Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.0W 125 mph Wind at 60° - Controlling Direction

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 26

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-54.11	-15.68	-0.01	-1905.7	-3300.8	3811.46	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.507
5.00	-52.17	-15.45	-0.01	-1827.3	-3165.0	3654.65	5738.32	1531.58	7986.32	7427.08	0.06	0.115	0.000	0.502
10.00	-50.26	-15.22	-0.01	-1750.1	-3031.2	3500.17	5671.78	1501.99	7680.70	7198.15	0.25	0.232	0.000	0.496
15.00	-48.38	-14.99	-0.01	-1674.0	-2899.4	3347.98	5603.50	1472.40	7381.04	6970.40	0.55	0.351	0.000	0.489
20.00	-46.55	-14.77	-0.01	-1599.0	-2769.5	3198.06	5533.47	1442.80	7087.34	6743.96	0.98	0.471	0.000	0.483
25.00	-44.74	-14.55	-0.01	-1525.2	-2641.6	3050.38	5461.70	1413.21	6799.60	6518.96	1.54	0.593	0.000	0.477
30.00	-42.97	-14.33	-0.01	-1452.5	-2515.6	2904.92	5388.18	1383.62	6517.82	6295.53	2.23	0.717	0.000	0.470
35.00	-41.24	-14.10	-0.01	-1380.9	-2391.5	2761.67	5312.91	1354.03	6242.01	6073.81	3.05	0.842	0.000	0.463
40.00	-39.57	-13.84	-0.01	-1310.5	-2269.5	2620.70	5235.89	1324.44	5972.16	5853.93	4.00	0.969	0.000	0.456
41.00	-39.22	-13.81	-0.01	-1296.6	-2245.5	2593.01	5220.28	1318.52	5918.91	5810.18	4.21	0.996	0.000	0.454
45.00	-36.84	-13.60	-0.01	-1241.4	-2149.8	2482.53	5157.13	1294.85	5708.27	5636.01	5.09	1.100	0.000	0.448
48.00	-35.09	-13.44	-0.01	-1200.6	-2079.1	2400.94	4442.55	1197.13	5285.84	4868.48	5.80	1.179	0.000	0.502
50.00	-34.50	-13.36	-0.01	-1173.8	-2032.5	2347.19	4418.96	1186.21	5189.79	4798.12	6.31	1.232	0.000	0.498
55.00	-33.09	-13.11	-0.01	-1107.1	-1916.9	2213.66	4358.62	1158.89	4953.53	4622.85	7.68	1.380	0.000	0.487
60.00	-31.72	-12.85	-0.01	-1041.6	-1803.4	2082.63	4296.32	1131.57	4722.77	4448.60	9.20	1.528	0.000	0.476
65.00	-30.37	-12.60	-0.01	-977.42	-1692.1	1954.14	4232.08	1104.26	4497.51	4275.52	10.88	1.678	0.000	0.465
70.00	-29.06	-12.34	-0.01	-914.49	-1583.0	1828.20	4165.88	1076.94	4277.76	4103.74	12.72	1.829	0.000	0.453
75.00	-27.78	-12.08	-0.01	-852.83	-1476.1	1704.82	4097.73	1049.63	4063.51	3933.43	14.72	1.982	0.000	0.441
80.00	-26.54	-11.83	-0.01	-792.47	-1371.5	1584.04	4027.63	1022.31	3854.77	3764.73	16.88	2.135	0.000	0.428
85.00	-25.32	-11.57	-0.01	-733.40	-1269.1	1465.84	3955.57	995.00	3651.53	3597.77	19.20	2.289	0.000	0.414
90.00	-23.09	-11.27	-0.01	-675.59	-1169.0	1350.22	3881.56	967.68	3453.79	3432.73	21.68	2.442	0.000	0.400
91.00	-22.62	-11.22	-0.01	-664.35	-1149.5	1327.70	3673.04	909.16	3283.16	3286.94	22.19	2.474	0.000	0.411
95.00	-21.69	-11.01	-0.01	-619.51	-1071.8	1237.99	3615.55	888.86	3138.24	3162.67	24.32	2.598	0.000	0.398
100.00	-20.56	-10.75	-0.01	-564.48	-976.52	1127.93	3542.12	863.50	2961.69	3009.24	27.12	2.744	0.000	0.381
105.00	-19.46	-10.49	0.00	-510.78	-883.50	1020.52	3466.93	838.14	2790.26	2858.08	30.07	2.887	0.000	0.363
110.00	-18.39	-10.23	0.00	-458.38	-792.76	915.74	3390.01	812.77	2623.93	2709.30	33.17	3.029	0.000	0.344
115.00	-17.35	-9.97	0.00	-407.28	-704.29	813.57	3311.33	787.41	2462.72	2563.05	36.42	3.168	0.000	0.323
115.00	-17.35	-9.97	0.00	-407.28	-704.29	813.57	2622.08	657.26	2059.08	2036.29	36.42	-1.584	0.000	0.407
120.00	-16.50	-9.72	0.00	-357.47	-618.06	713.99	2564.05	636.12	1928.77	1926.66	39.81	3.303	0.000	0.378
125.00	-15.67	-9.48	0.00	-308.89	-533.99	616.90	2504.27	614.99	1802.72	1818.69	43.35	3.458	0.000	0.346
130.00	-14.86	-9.24	0.00	-261.54	-452.05	522.26	2442.74	593.85	1680.94	1712.49	47.05	3.604	0.000	0.312
135.00	-13.54	-8.98	0.00	-215.38	-372.22	430.04	1794.51	466.00	1293.86	1236.09	50.90	3.740	0.000	0.357
140.00	-12.92	-8.74	0.00	-170.52	-294.64	340.43	1752.60	449.09	1201.66	1163.08	54.88	3.863	0.000	0.302
145.00	-12.32	-8.51	0.00	-126.82	-219.10	253.16	1708.93	432.19	1112.88	1091.08	59.00	3.989	0.000	0.241
150.00	-11.75	-8.28	0.00	-84.26	-145.56	168.19	1663.52	415.28	1027.50	1020.20	63.23	4.089	0.000	0.174
153.00	-7.58	-4.46	0.00	-59.41	-102.63	118.58	1635.44	405.13	977.90	978.27	65.82	4.135	0.000	0.126
155.00	-7.39	-4.37	0.00	-50.50	-87.23	100.79	1616.36	398.37	945.52	950.58	67.55	4.160	0.000	0.111
160.00	-6.93	-4.15	0.00	-28.66	-49.50	57.19	1567.46	381.46	866.96	882.35	71.94	4.208	0.000	0.070
165.00	-2.10	-1.04	0.00	-7.90	-13.65	15.77	1516.81	364.55	791.80	815.65	76.36	4.233	0.000	0.021
170.00	-1.72	-0.84	0.00	-2.68	-4.63	5.34	1464.41	347.64	720.05	750.60	80.79	4.241	0.000	0.008
173.00	-0.14	-0.08	0.00	-0.15	-0.27	0.31	1428.72	337.49	678.63	710.72	83.46	4.243	0.000	0.001
175.00	0.00	-0.07	0.00	0.00	0.00	0.00	1400.09	330.73	651.70	682.38	85.23	4.243	0.000	0.000

Wind Loading - Shaft

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

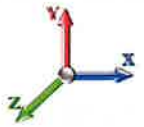
Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° - Controlling Direction

Iterations 23

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.181	4.60	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.181	4.60	0.00	1.200	0.828	5.00	27.723	33.27	153.0	332.6	2131.6
10.00		1.00	0.70	4.181	4.60	0.00	1.200	0.887	5.00	27.259	32.71	150.4	350.1	2114.6
15.00		1.00	0.70	4.181	4.60	0.00	1.200	0.924	5.00	26.775	32.13	147.8	357.7	2087.8
20.00		1.00	0.70	4.181	4.60	0.00	1.200	0.951	5.00	26.284	31.54	145.1	361.1	2056.8
25.00		1.00	0.70	4.181	4.60	0.00	1.200	0.973	5.00	25.788	30.95	142.3	362.0	2023.2
30.00		1.00	0.70	4.184	4.60	0.00	1.200	0.991	5.00	25.289	30.35	139.7	361.2	1988.0
35.00		1.00	0.73	4.373	4.81	0.00	1.200	1.006	5.00	24.788	29.75	143.1	359.2	1951.7
40.00		1.00	0.76	4.543	5.00	0.00	1.200	1.019	5.00	24.286	29.14	145.6	356.4	1914.4
41.00	Bot - Section 2	1.00	0.77	4.575	5.03	0.00	1.200	1.022	1.00	4.796	5.76	29.0	71.1	378.6
45.00		1.00	0.79	4.698	5.17	0.00	1.200	1.032	4.00	19.239	23.09	119.3	286.2	2560.4
48.00	Top - Section 1	1.00	0.80	4.786	5.26	0.00	1.200	1.038	3.00	14.216	17.06	89.8	213.2	1892.0
50.00		1.00	0.81	4.842	5.33	0.00	1.200	1.042	2.00	9.376	11.25	59.9	141.5	656.4
55.00		1.00	0.83	4.975	5.47	0.00	1.200	1.052	5.00	23.089	27.71	151.6	349.1	1615.7
60.00		1.00	0.85	5.101	5.61	0.00	1.200	1.062	5.00	22.583	27.10	152.1	344.1	1581.2
65.00		1.00	0.87	5.219	5.74	0.00	1.200	1.070	5.00	22.077	26.49	152.1	338.8	1546.4
70.00		1.00	0.89	5.330	5.86	0.00	1.200	1.078	5.00	21.570	25.88	151.8	333.2	1511.3
75.00		1.00	0.91	5.436	5.98	0.00	1.200	1.086	5.00	21.062	25.27	151.1	327.2	1475.9
80.00		1.00	0.93	5.538	6.09	0.00	1.200	1.093	5.00	20.554	24.66	150.2	321.1	1440.2
85.00	Bot - Section 3	1.00	0.94	5.634	6.20	0.00	1.200	1.099	5.00	20.046	24.06	149.1	314.7	1404.3
90.00		1.00	0.96	5.727	6.30	0.00	1.200	1.106	5.00	19.855	23.83	150.1	313.4	2451.8
91.00	Top - Section 2	1.00	0.96	5.745	6.32	0.00	1.200	1.107	1.00	3.910	4.69	29.6	62.4	483.0
95.00		1.00	0.97	5.816	6.40	0.00	1.200	1.112	4.00	15.436	18.52	118.5	245.3	1082.0
100.00		1.00	0.99	5.902	6.49	0.00	1.200	1.117	5.00	18.837	22.60	146.8	299.8	1319.1
105.00		1.00	1.00	5.985	6.58	0.00	1.200	1.123	5.00	18.328	21.99	144.8	292.7	1282.5
110.00		1.00	1.02	6.065	6.67	0.00	1.200	1.128	5.00	17.818	21.38	142.7	285.5	1245.8
115.00	Top - Section 3	1.00	1.03	6.143	6.76	0.00	1.200	1.133	5.00	17.309	20.77	140.3	278.2	1209.0
120.00		1.00	1.04	6.218	6.84	0.00	1.200	1.138	5.00	16.799	20.16	137.9	270.8	1023.1
125.00		1.00	1.05	6.291	6.92	0.00	1.200	1.142	5.00	16.289	19.55	135.3	263.2	991.0
130.00	Bot - Section 5	1.00	1.07	6.362	7.00	0.00	1.200	1.147	5.00	15.779	18.94	132.5	255.6	958.7
135.00	Top - Section 4	1.00	1.08	6.431	7.07	0.00	1.200	1.151	5.00	15.481	18.58	131.4	251.4	1481.9
140.00		1.00	1.09	6.498	7.15	0.00	1.200	1.155	5.00	14.970	17.96	128.4	243.6	775.9
145.00		1.00	1.10	6.563	7.22	0.00	1.200	1.160	5.00	14.460	17.35	125.3	235.6	748.2
150.00		1.00	1.11	6.627	7.29	0.00	1.200	1.163	5.00	13.949	16.74	122.0	227.6	720.6
153.00	Appurtenance(s)	1.00	1.12	6.665	7.33	0.00	1.200	1.166	3.00	8.124	9.75	71.5	133.7	420.0
155.00		1.00	1.12	6.689	7.36	0.00	1.200	1.167	2.00	5.314	6.38	46.9	87.8	274.7
160.00		1.00	1.13	6.750	7.43	0.00	1.200	1.171	5.00	12.928	15.51	115.2	211.3	664.9
165.00	Appurtenance(s)	1.00	1.14	6.810	7.49	0.00	1.200	1.175	5.00	12.418	14.90	111.6	203.1	637.0
170.00		1.00	1.15	6.868	7.56	0.00	1.200	1.178	5.00	11.907	14.29	107.9	194.7	609.0
173.00	Appurtenance(s)	1.00	1.16	6.903	7.59	0.00	1.200	1.180	3.00	6.898	8.28	62.9	113.8	352.9
175.00		1.00	1.16	6.926	7.62	0.00	1.200	1.182	2.00	4.497	5.40	41.1	74.5	230.0
								Totals:	**175.00**			**4,865.6**		**51,291.7**

Discrete Appurtenance Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

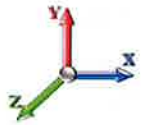
Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° - Controlling Direction

Iterations 23

Dead Load Factor 1.20

Wind Load Factor 1.00



No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	173.00	Low Profile Platform	1	6.903	7.593	1.00	1.00	39.16	1848.12	0.000	0.000	-148.68	0.00	0.00
2	165.00	ALU TD-RRH8x20-25	3	6.810	7.491	0.50	0.75	6.91	460.12	0.000	0.000	-25.88	0.00	0.00
3	165.00	RMQP-4096-HK	1	6.810	7.491	1.00	1.00	67.61	3874.79	0.000	0.000	-253.25	0.00	0.00
4	165.00	4480 B71 + B85	3	6.810	7.491	0.50	0.75	4.98	429.04	0.000	0.000	-18.66	0.00	0.00
5	165.00	4460 B25 + B66	3	6.810	7.491	0.50	0.75	4.98	446.93	0.000	0.000	-18.66	0.00	0.00
6	165.00	AIR6449 B41	3	6.810	7.491	0.53	0.75	10.05	552.56	0.000	0.000	-37.63	0.00	0.00
7	165.00	APXVAALL24_43-U-NA20	3	6.810	7.491	0.55	0.75	35.32	1270.69	0.000	0.000	-132.29	0.00	0.00
8	165.00	VV-65A-R1	3	6.810	7.491	0.55	0.75	10.98	345.32	0.000	0.000	-41.14	0.00	0.00
9	153.00	Platform w/ handrail with	1	6.665	7.331	1.00	1.00	70.60	4636.70	0.000	0.000	-258.80	0.00	0.00
10	153.00	Antel LPA-80080/6CF	2	6.665	7.331	1.36	0.80	25.78	294.04	0.000	0.000	-94.49	0.00	0.00
11	153.00	JAHH-65B-R3B	6	6.665	7.331	0.66	0.80	39.81	1334.93	0.000	0.000	-145.92	0.00	0.00
12	153.00	Antel LPA-80063/6CF	4	6.665	7.331	0.75	0.80	31.53	862.55	0.000	0.000	-115.59	0.00	0.00
13	153.00	RF4461d-13A	3	6.665	7.331	0.54	0.80	3.60	427.90	0.000	0.000	-13.21	0.00	0.00
14	153.00	B2/B66A RRH ORAN	3	6.665	7.331	0.54	0.80	3.60	410.30	0.000	0.000	-13.21	0.00	0.00
15	153.00	CBC78T-DS-43-2X	3	6.665	7.331	0.54	0.80	1.08	139.88	0.000	0.000	-3.98	0.00	0.00
16	153.00	Bsamnt-sbs-2-2	3	6.665	7.331	1.00	1.00	4.08	-317.02	0.000	0.000	-14.95	0.00	0.00
17	153.00	MT6413-77A	3	6.665	7.331	0.56	0.80	7.37	394.95	0.000	0.000	-27.03	0.00	0.00
18	153.00	RFS DB-T1-6Z-8AB-0Z -	2	6.665	7.331	0.80	0.80	8.68	417.22	0.000	0.000	-31.83	0.00	0.00
							Totals:		**17,829.01**			**-1,395.19**		

Total Applied Force Summary

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

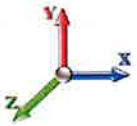
Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° - Controlling Direction

Iterations 23

Dead Load Factor 1.20

Wind Load Factor 1.00



Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		-76.49	-2216.31	0.00	0.00
10.00		-75.21	-2199.33	0.00	0.00
15.00		-73.88	-2172.57	0.00	0.00
20.00		-72.53	-2141.50	0.00	0.00
25.00		-71.16	-2107.95	0.00	0.00
30.00		-69.84	-2072.76	0.00	0.00
35.00		-71.54	-2036.39	0.00	0.00
40.00		-72.81	-1999.12	0.00	0.00
41.00		-14.48	-395.56	0.00	0.00
45.00		-59.65	-2628.20	0.00	0.00
48.00		-44.90	-1942.87	0.00	0.00
50.00		-29.96	-690.26	0.00	0.00
55.00		-75.82	-1700.44	0.00	0.00
60.00		-76.03	-1665.97	0.00	0.00
65.00		-76.04	-1631.14	0.00	0.00
70.00		-75.88	-1596.00	0.00	0.00
75.00		-75.57	-1560.59	0.00	0.00
80.00		-75.12	-1524.93	0.00	0.00
85.00		-74.54	-1489.06	0.00	0.00
90.00		-75.05	-2536.50	0.00	0.00
91.00		-14.82	-499.95	0.00	0.00
95.00		-59.25	-1149.78	0.00	0.00
100.00		-73.38	-1403.79	0.00	0.00
105.00		-72.40	-1367.24	0.00	0.00
110.00		-71.33	-1330.55	0.00	0.00
115.00		-70.17	-1293.73	0.00	0.00
120.00		-68.94	-1107.84	0.00	0.00
125.00		-67.63	-1075.70	0.00	0.00
130.00		-66.25	-1043.45	0.00	0.00
135.00		-65.70	-1566.66	0.00	0.00
140.00		-64.20	-860.58	0.00	0.00
145.00		-62.64	-832.97	0.00	0.00
150.00		-61.01	-805.28	0.00	0.00
153.00	(30) attachments	-754.75	-9072.26	0.00	0.00
155.00		-23.46	-289.08	0.00	0.00
160.00		-57.60	-700.75	0.00	0.00
165.00	(19) attachments	-583.31	-8052.27	0.00	0.00
170.00		-53.97	-608.98	0.00	0.00
173.00	(1) attachments	-180.11	-2201.04	0.00	0.00
175.00		-20.55	-230.00	0.00	0.00
	Totals:	**-3,828.00**	**-71,799.36**	**0.00**	**0.00**

Calculated Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

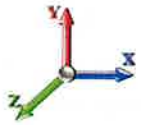
Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° - Controlling Direction

Iterations 23

Dead Load Factor 1.20

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-71.80	-3.84	0.00	-454.58	-787.36	909.17	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.131
5.00	-69.58	-3.78	0.00	-435.40	-754.14	870.80	5738.32	1531.58	7986.32	7427.08	0.01	0.027	0.000	0.129
10.00	-67.37	-3.72	0.00	-416.51	-721.43	833.03	5671.78	1501.99	7680.70	7198.15	0.06	0.055	0.000	0.128
15.00	-65.20	-3.66	0.00	-397.93	-689.24	795.86	5603.50	1472.40	7381.04	6970.40	0.13	0.083	0.000	0.126
20.00	-63.05	-3.60	0.00	-379.64	-657.56	759.28	5533.47	1442.80	7087.34	6743.96	0.23	0.112	0.000	0.124
25.00	-60.94	-3.54	0.00	-361.64	-626.39	723.29	5461.70	1413.21	6799.60	6518.96	0.37	0.141	0.000	0.122
30.00	-58.87	-3.48	0.00	-343.93	-595.71	687.87	5388.18	1383.62	6517.82	6295.53	0.53	0.170	0.000	0.120
35.00	-56.83	-3.42	0.00	-326.51	-565.54	653.03	5312.91	1354.03	6242.01	6073.81	0.73	0.200	0.000	0.118
40.00	-54.83	-3.36	0.00	-309.39	-535.89	618.79	5235.89	1324.44	5972.16	5853.93	0.95	0.230	0.000	0.116
41.00	-54.43	-3.35	0.00	-306.04	-530.07	612.08	5220.28	1318.52	5918.91	5810.18	1.00	0.236	0.000	0.116
45.00	-51.80	-3.29	0.00	-292.65	-506.88	585.29	5157.13	1294.85	5708.27	5636.01	1.21	0.261	0.000	0.114
48.00	-49.85	-3.25	0.00	-282.77	-489.77	565.54	4442.55	1197.13	5285.84	4868.48	1.38	0.280	0.000	0.127
50.00	-49.16	-3.23	0.00	-276.27	-478.51	552.54	4418.96	1186.21	5189.79	4798.12	1.50	0.292	0.000	0.126
55.00	-47.46	-3.16	0.00	-260.13	-450.55	520.25	4358.62	1158.89	4953.53	4622.85	1.82	0.327	0.000	0.123
60.00	-45.79	-3.10	0.00	-244.32	-423.16	488.63	4296.32	1131.57	4722.77	4448.60	2.18	0.362	0.000	0.121
65.00	-44.16	-3.03	0.00	-228.84	-396.36	457.68	4232.08	1104.26	4497.51	4275.52	2.58	0.397	0.000	0.118
70.00	-42.56	-2.96	0.00	-213.70	-370.14	427.40	4165.88	1076.94	4277.76	4103.74	3.02	0.432	0.000	0.114
75.00	-40.99	-2.89	0.00	-198.91	-344.51	397.81	4097.73	1049.63	4063.51	3933.43	3.49	0.468	0.000	0.111
80.00	-39.47	-2.82	0.00	-184.46	-319.48	368.91	4027.63	1022.31	3854.77	3764.73	4.00	0.503	0.000	0.108
85.00	-37.98	-2.75	0.00	-170.36	-295.06	340.70	3955.57	995.00	3651.53	3597.77	4.54	0.539	0.000	0.104
90.00	-35.44	-2.67	0.00	-156.60	-271.23	313.19	3881.56	967.68	3453.79	3432.73	5.13	0.575	0.000	0.100
91.00	-34.94	-2.66	0.00	-153.93	-266.60	307.85	3673.04	909.16	3283.16	3286.94	5.25	0.582	0.000	0.103
95.00	-33.79	-2.60	0.00	-143.30	-248.18	286.58	3615.55	888.86	3138.24	3162.67	5.75	0.611	0.000	0.100
100.00	-32.38	-2.53	0.00	-130.28	-225.64	260.55	3542.12	863.50	2961.69	3009.24	6.41	0.645	0.000	0.096
105.00	-31.01	-2.46	0.00	-117.63	-203.72	235.24	3466.93	838.14	2790.26	2858.08	7.10	0.678	0.000	0.091
110.00	-29.68	-2.39	0.00	-105.33	-182.42	210.64	3390.01	812.77	2623.93	2709.30	7.83	0.710	0.000	0.087
115.00	-28.39	-2.32	0.00	-93.38	-161.73	186.76	3311.33	787.41	2462.72	2563.05	8.59	0.742	0.000	0.081
115.00	-28.39	-2.32	0.00	-93.38	-161.73	186.76	2622.08	657.26	2059.08	2036.29	8.59	-0.371	0.000	0.103
120.00	-27.28	-2.25	0.00	-81.79	-141.66	163.58	2564.05	636.12	1928.77	1926.66	9.38	0.773	0.000	0.096
125.00	-26.20	-2.18	0.00	-70.54	-122.18	141.08	2504.27	614.99	1802.72	1818.69	10.21	0.809	0.000	0.088
130.00	-25.16	-2.12	0.00	-59.63	-103.27	119.25	2442.74	593.85	1680.94	1712.49	11.08	0.842	0.000	0.080
135.00	-23.59	-2.04	0.00	-49.05	-84.95	98.09	1794.51	466.00	1293.86	1236.09	11.98	0.873	0.000	0.093
140.00	-22.73	-1.98	0.00	-38.83	-67.24	77.65	1752.60	449.09	1201.66	1163.08	12.91	0.901	0.000	0.080
145.00	-21.90	-1.92	0.00	-28.93	-50.10	57.85	1708.93	432.19	1112.88	1091.08	13.87	0.930	0.000	0.066
150.00	-21.10	-1.85	0.00	-19.35	-33.52	38.70	1663.52	415.28	1027.50	1020.20	14.86	0.953	0.000	0.051
153.00	-12.05	-1.02	0.00	-13.80	-23.90	27.60	1635.44	405.13	977.90	978.27	15.46	0.964	0.000	0.036
155.00	-11.76	-1.00	0.00	-11.76	-20.36	23.52	1616.36	398.37	945.52	950.58	15.86	0.969	0.000	0.032
160.00	-11.06	-0.93	0.00	-6.78	-11.74	13.56	1567.46	381.46	866.96	882.35	16.89	0.981	0.000	0.022
165.00	-3.03	-0.28	0.00	-2.11	-3.66	4.23	1516.81	364.55	791.80	815.65	17.92	0.987	0.000	0.007
170.00	-2.42	-0.22	0.00	-0.71	-1.23	1.42	1464.41	347.64	720.05	750.60	18.95	0.989	0.000	0.004
173.00	-0.23	-0.02	0.00	-0.05	-0.08	0.09	1428.72	337.49	678.63	710.72	19.57	0.989	0.000	0.000
175.00	0.00	-0.02	0.00	0.00	0.00	0.00	1400.09	330.73	651.70	682.38	19.99	0.989	0.000	0.000

Wind Loading - Shaft

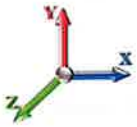
Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind - Controlling Direction

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.020	6.62	271.55	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.020	6.62	266.44	0.730	0.000	5.00	27.033	19.73	130.7	0.0	1499.1
10.00		1.00	0.70	6.020	6.62	261.33	0.730	0.000	5.00	26.519	19.36	128.2	0.0	1470.4
15.00		1.00	0.70	6.020	6.62	256.21	0.730	0.000	5.00	26.005	18.98	125.7	0.0	1441.8
20.00		1.00	0.70	6.020	6.62	251.10	0.730	0.000	5.00	25.491	18.61	123.2	0.0	1413.1
25.00		1.00	0.70	6.020	6.62	245.99	0.730	0.000	5.00	24.978	18.23	120.7	0.0	1384.4
30.00		1.00	0.70	6.025	6.63	240.98	0.730	0.000	5.00	24.464	17.86	118.4	0.0	1355.7
35.00		1.00	0.73	6.297	6.93	241.12	0.730	0.000	5.00	23.950	17.48	121.1	0.0	1327.0
40.00		1.00	0.76	6.542	7.20	240.43	0.730	0.000	5.00	23.436	17.11	123.1	0.0	1298.3
41.00	Bot - Section 2	1.00	0.77	6.588	7.25	240.21	0.730	0.000	1.00	4.626	3.38	24.5	0.0	256.2
45.00		1.00	0.79	6.765	7.44	239.09	0.730	0.000	4.00	18.551	13.54	100.8	0.0	1895.2
48.00	Top - Section 1	1.00	0.80	6.891	7.58	238.02	0.730	0.000	3.00	13.697	10.00	75.8	0.0	1399.0
50.00		1.00	0.81	6.972	7.67	240.61	0.730	0.000	2.00	9.029	6.59	50.5	0.0	429.1
55.00		1.00	0.83	7.165	7.88	238.34	0.730	0.000	5.00	22.212	16.22	127.8	0.0	1055.5
60.00		1.00	0.85	7.345	8.08	235.67	0.730	0.000	5.00	21.699	15.84	128.0	0.0	1030.9
65.00		1.00	0.87	7.515	8.27	232.67	0.730	0.000	5.00	21.185	15.47	127.8	0.0	1006.4
70.00		1.00	0.89	7.676	8.44	229.37	0.730	0.000	5.00	20.671	15.09	127.4	0.0	981.8
75.00		1.00	0.91	7.828	8.61	225.81	0.730	0.000	5.00	20.157	14.71	126.7	0.0	957.2
80.00		1.00	0.93	7.974	8.77	222.02	0.730	0.000	5.00	19.644	14.34	125.8	0.0	932.6
85.00	Bot - Section 3	1.00	0.94	8.114	8.92	218.02	0.730	0.000	5.00	19.130	13.96	124.6	0.0	908.0
90.00		1.00	0.96	8.247	9.07	213.82	0.730	0.000	5.00	18.933	13.82	125.4	0.0	1782.0
91.00	Top - Section 2	1.00	0.96	8.273	9.10	212.96	0.730	0.000	1.00	3.725	2.72	24.7	0.0	350.5
95.00		1.00	0.97	8.375	9.21	213.18	0.730	0.000	4.00	14.695	10.73	98.8	0.0	697.2
100.00		1.00	0.99	8.499	9.35	208.67	0.730	0.000	5.00	17.906	13.07	122.2	0.0	849.4
105.00		1.00	1.00	8.618	9.48	204.01	0.730	0.000	5.00	17.392	12.70	120.4	0.0	824.8
110.00		1.00	1.02	8.734	9.61	199.21	0.730	0.000	5.00	16.878	12.32	118.4	0.0	800.2
115.00	Top - Section 3	1.00	1.03	8.845	9.73	194.29	0.730	0.000	5.00	16.365	11.95	116.2	0.0	775.6
120.00		1.00	1.04	8.954	9.85	189.24	0.730	0.000	5.00	15.851	11.57	114.0	0.0	626.9
125.00		1.00	1.05	9.059	9.96	184.07	0.730	0.000	5.00	15.337	11.20	111.6	0.0	606.4
130.00	Bot - Section 5	1.00	1.07	9.161	10.08	178.80	0.730	0.000	5.00	14.823	10.82	109.0	0.0	586.0
135.00	Top - Section 4	1.00	1.08	9.260	10.19	173.43	0.730	0.000	5.00	14.521	10.60	108.0	0.0	1025.4
140.00		1.00	1.09	9.357	10.29	170.58	0.730	0.000	5.00	14.007	10.23	105.2	0.0	443.6
145.00		1.00	1.10	9.451	10.40	165.03	0.730	0.000	5.00	13.494	9.85	102.4	0.0	427.2
150.00		1.00	1.11	9.543	10.50	159.40	0.730	0.000	5.00	12.980	9.48	99.5	0.0	410.8
153.00	Appurtenance(s)	1.00	1.12	9.597	10.56	155.98	0.730	0.000	3.00	7.541	5.51	58.1	0.0	238.6
155.00		1.00	1.12	9.633	10.60	153.68	0.730	0.000	2.00	4.925	3.60	38.1	0.0	155.8
160.00		1.00	1.13	9.721	10.69	147.88	0.730	0.000	5.00	11.952	8.73	93.3	0.0	378.0
165.00	Appurtenance(s)	1.00	1.14	9.806	10.79	142.01	0.730	0.000	5.00	11.439	8.35	90.1	0.0	361.6
170.00		1.00	1.15	9.890	10.88	136.06	0.730	0.000	5.00	10.925	7.98	86.8	0.0	345.2
173.00	Appurtenance(s)	1.00	1.16	9.940	10.93	132.46	0.730	0.000	3.00	6.308	4.61	50.4	0.0	199.3
175.00		1.00	1.16	9.973	10.97	130.05	0.730	0.000	2.00	4.103	3.00	32.9	0.0	129.6
								Totals:	**175.00**			**4,056.3**		**34,056.0**

Discrete Appurtenance Forces

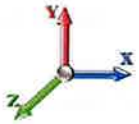
Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind - Controlling Direction

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	173.00	Low Profile Platform	1	9.940	10.934	1.00	1.00	25.00	1200.00	0.000	0.000	-273.35	0.00	0.00
2	165.00	ALU TD-RRH8x20-25	3	9.806	10.787	0.50	0.75	6.11	210.00	0.000	0.000	-65.86	0.00	0.00
3	165.00	RMQP-4096-HK	1	9.806	10.787	1.00	1.00	46.00	2449.00	0.000	0.000	-496.21	0.00	0.00
4	165.00	4480 B71 + B85	3	9.806	10.787	0.50	0.75	4.30	279.00	0.000	0.000	-46.35	0.00	0.00
5	165.00	4460 B25 + B66	3	9.806	10.787	0.50	0.75	4.30	312.00	0.000	0.000	-46.35	0.00	0.00
6	165.00	AIR6449 B41	3	9.806	10.787	0.53	0.75	9.03	309.00	0.000	0.000	-97.36	0.00	0.00
7	165.00	APXVAALL24_43-U-NA20	3	9.806	10.787	0.55	0.75	33.24	368.40	0.000	0.000	-358.61	0.00	0.00
8	165.00	VV-65A-R1	3	9.806	10.787	0.55	0.75	13.15	71.43	0.000	0.000	-141.89	0.00	0.00
9	153.00	Platform w/ handrail with	1	9.597	10.557	1.00	1.00	42.70	2110.00	0.000	0.000	-450.78	0.00	0.00
10	153.00	Antel LPA-80080/6CF	2	9.597	10.557	1.36	0.80	23.45	42.00	0.000	0.000	-247.52	0.00	0.00
11	153.00	JAHH-65B-R3B	6	9.597	10.557	0.66	0.80	36.29	386.40	0.000	0.000	-383.15	0.00	0.00
12	153.00	Antel LPA-80063/6CF	4	9.597	10.557	0.75	0.80	28.85	108.00	0.000	0.000	-304.53	0.00	0.00
13	153.00	RF4461d-13A	3	9.597	10.557	0.54	0.80	3.01	237.30	0.000	0.000	-31.74	0.00	0.00
14	153.00	B2/B66A RRH ORAN	3	9.597	10.557	0.54	0.80	3.01	224.10	0.000	0.000	-31.74	0.00	0.00
15	153.00	CBC78T-DS-43-2X	3	9.597	10.557	0.54	0.80	0.59	65.40	0.000	0.000	-6.28	0.00	0.00
16	153.00	Bsamnt-sbs-2-2	3	9.597	10.557	1.00	1.00	2.40	202.38	0.000	0.000	-25.34	0.00	0.00
17	153.00	MT6413-77A	3	9.597	10.557	0.56	0.80	6.47	171.90	0.000	0.000	-68.28	0.00	0.00
18	153.00	RFS DB-T1-6Z-8AB-0Z -	2	9.597	10.557	0.80	0.80	7.68	88.00	0.000	0.000	-81.08	0.00	0.00
							Totals:		**8,834.31**			**-3,156.42**		

Total Applied Force Summary

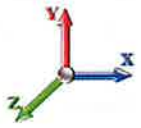
Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind - Controlling Direction

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		-130.68	-1569.74	0.00	0.00
10.00		-128.20	-1541.05	0.00	0.00
15.00		-125.72	-1512.37	0.00	0.00
20.00		-123.23	-1483.68	0.00	0.00
25.00		-120.75	-1454.99	0.00	0.00
30.00		-118.36	-1426.30	0.00	0.00
35.00		-121.10	-1397.62	0.00	0.00
40.00		-123.11	-1368.93	0.00	0.00
41.00		-24.47	-270.34	0.00	0.00
45.00		-100.78	-1951.70	0.00	0.00
48.00		-75.80	-1441.40	0.00	0.00
50.00		-50.55	-457.34	0.00	0.00
55.00		-127.79	-1126.14	0.00	0.00
60.00		-127.98	-1101.55	0.00	0.00
65.00		-127.84	-1076.96	0.00	0.00
70.00		-127.41	-1052.37	0.00	0.00
75.00		-126.72	-1027.78	0.00	0.00
80.00		-125.78	-1003.19	0.00	0.00
85.00		-124.63	-978.60	0.00	0.00
90.00		-125.39	-1852.61	0.00	0.00
91.00		-24.75	-364.62	0.00	0.00
95.00		-98.83	-753.72	0.00	0.00
100.00		-122.20	-920.02	0.00	0.00
105.00		-120.36	-895.43	0.00	0.00
110.00		-118.37	-870.84	0.00	0.00
115.00		-116.24	-846.25	0.00	0.00
120.00		-113.96	-697.54	0.00	0.00
125.00		-111.56	-677.05	0.00	0.00
130.00		-109.04	-656.56	0.00	0.00
135.00		-107.98	-1096.04	0.00	0.00
140.00		-105.24	-514.18	0.00	0.00
145.00		-102.41	-497.78	0.00	0.00
150.00		-99.47	-481.39	0.00	0.00
153.00	(30) attachments	-1688.57	-3916.45	0.00	0.00
155.00		-38.09	-167.74	0.00	0.00
160.00		-93.30	-407.87	0.00	0.00
165.00	(19) attachments	-1342.69	-4390.30	0.00	0.00
170.00		-86.77	-345.22	0.00	0.00
173.00	(1) attachments	-323.70	-1399.26	0.00	0.00
175.00		-32.86	-129.56	0.00	0.00
	Totals:	**-7,212.68**	**-45,122.50**	**0.00**	**0.00**

Calculated Forces

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind - Controlling Direction

Iterations 22

Dead Load Factor 1.00

Wind Load Factor 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.12	-7.22	0.00	-873.38	0.00	873.38	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.122
5.00	-43.55	-7.11	0.00	-837.27	0.00	837.27	5738.32	1531.58	7986.32	7427.08	0.01	0.026	0.000	0.120
10.00	-42.00	-7.00	0.00	-801.71	0.00	801.71	5671.78	1501.99	7680.70	7198.15	0.06	0.053	0.000	0.119
15.00	-40.49	-6.89	0.00	-766.70	0.00	766.70	5603.50	1472.40	7381.04	6970.40	0.13	0.080	0.000	0.117
20.00	-39.00	-6.79	0.00	-732.23	0.00	732.23	5533.47	1442.80	7087.34	6743.96	0.23	0.108	0.000	0.116
25.00	-37.54	-6.68	0.00	-698.30	0.00	698.30	5461.70	1413.21	6799.60	6518.96	0.35	0.136	0.000	0.114
30.00	-36.11	-6.58	0.00	-664.89	0.00	664.89	5388.18	1383.62	6517.82	6295.53	0.51	0.164	0.000	0.112
35.00	-34.71	-6.47	0.00	-632.00	0.00	632.00	5312.91	1354.03	6242.01	6073.81	0.70	0.193	0.000	0.111
40.00	-33.34	-6.35	0.00	-599.65	0.00	599.65	5235.89	1324.44	5972.16	5853.93	0.92	0.222	0.000	0.109
41.00	-33.07	-6.34	0.00	-593.30	0.00	593.30	5220.28	1318.52	5918.91	5810.18	0.96	0.228	0.000	0.108
45.00	-31.12	-6.24	0.00	-567.96	0.00	567.96	5157.13	1294.85	5708.27	5636.01	1.16	0.252	0.000	0.107
48.00	-29.67	-6.16	0.00	-549.25	0.00	549.25	4442.55	1197.13	5285.84	4868.48	1.33	0.270	0.000	0.120
50.00	-29.22	-6.12	0.00	-536.92	0.00	536.92	4418.96	1186.21	5189.79	4798.12	1.44	0.282	0.000	0.119
55.00	-28.09	-6.00	0.00	-506.31	0.00	506.31	4358.62	1158.89	4953.53	4622.85	1.76	0.316	0.000	0.116
60.00	-26.98	-5.89	0.00	-476.29	0.00	476.29	4296.32	1131.57	4722.77	4448.60	2.11	0.350	0.000	0.113
65.00	-25.90	-5.77	0.00	-446.86	0.00	446.86	4232.08	1104.26	4497.51	4275.52	2.49	0.384	0.000	0.111
70.00	-24.85	-5.65	0.00	-418.02	0.00	418.02	4165.88	1076.94	4277.76	4103.74	2.91	0.419	0.000	0.108
75.00	-23.82	-5.53	0.00	-389.78	0.00	389.78	4097.73	1049.63	4063.51	3933.43	3.37	0.453	0.000	0.105
80.00	-22.81	-5.41	0.00	-362.14	0.00	362.14	4027.63	1022.31	3854.77	3764.73	3.86	0.488	0.000	0.102
85.00	-21.83	-5.29	0.00	-335.11	0.00	335.11	3955.57	995.00	3651.53	3597.77	4.39	0.524	0.000	0.099
90.00	-19.98	-5.15	0.00	-308.67	0.00	308.67	3881.56	967.68	3453.79	3432.73	4.96	0.559	0.000	0.095
91.00	-19.61	-5.13	0.00	-303.52	0.00	303.52	3673.04	909.16	3283.16	3286.94	5.08	0.566	0.000	0.098
95.00	-18.86	-5.03	0.00	-283.00	0.00	283.00	3615.55	888.86	3138.24	3162.67	5.57	0.594	0.000	0.095
100.00	-17.94	-4.91	0.00	-257.83	0.00	257.83	3542.12	863.50	2961.69	3009.24	6.21	0.628	0.000	0.091
105.00	-17.04	-4.79	0.00	-233.27	0.00	233.27	3466.93	838.14	2790.26	2858.08	6.88	0.661	0.000	0.087
110.00	-16.17	-4.67	0.00	-209.31	0.00	209.31	3390.01	812.77	2623.93	2709.30	7.59	0.693	0.000	0.082
115.00	-15.32	-4.55	0.00	-185.95	0.00	185.95	3311.33	787.41	2462.72	2563.05	8.33	0.725	0.000	0.077
115.00	-15.32	-4.55	0.00	-185.95	0.00	185.95	2622.08	657.26	2059.08	2036.29	8.33	-0.725	0.000	0.097
120.00	-14.62	-4.44	0.00	-163.19	0.00	163.19	2564.05	636.12	1928.77	1926.66	9.11	0.755	0.000	0.090
125.00	-13.94	-4.33	0.00	-140.99	0.00	140.99	2504.27	614.99	1802.72	1818.69	9.92	0.791	0.000	0.083
130.00	-13.29	-4.22	0.00	-119.36	0.00	119.36	2442.74	593.85	1680.94	1712.49	10.77	0.824	0.000	0.075
135.00	-12.19	-4.10	0.00	-98.28	0.00	98.28	1794.51	466.00	1293.86	1236.09	11.65	0.855	0.000	0.086
140.00	-11.67	-3.99	0.00	-77.79	0.00	77.79	1752.60	449.09	1201.66	1163.08	12.56	0.884	0.000	0.074
145.00	-11.18	-3.89	0.00	-57.83	0.00	57.83	1708.93	432.19	1112.88	1091.08	13.50	0.912	0.000	0.060
150.00	-10.70	-3.78	0.00	-38.40	0.00	38.40	1663.52	415.28	1027.50	1020.20	14.47	0.935	0.000	0.044
153.00	-6.81	-2.03	0.00	-27.06	0.00	27.06	1635.44	405.13	977.90	978.27	15.06	0.946	0.000	0.032
155.00	-6.64	-1.99	0.00	-23.00	0.00	23.00	1616.36	398.37	945.52	950.58	15.46	0.951	0.000	0.028
160.00	-6.23	-1.89	0.00	-13.05	0.00	13.05	1567.46	381.46	866.96	882.35	16.46	0.962	0.000	0.019
165.00	-1.87	-0.47	0.00	-3.59	0.00	3.59	1516.81	364.55	791.80	815.65	17.47	0.968	0.000	0.006
170.00	-1.52	-0.38	0.00	-1.22	0.00	1.22	1464.41	347.64	720.05	750.60	18.49	0.970	0.000	0.003
173.00	-0.13	-0.03	0.00	-0.07	0.00	0.07	1428.72	337.49	678.63	710.72	19.10	0.970	0.000	0.000
175.00	0.00	-0.03	0.00	0.00	0.00	0.00	1400.09	330.73	651.70	682.38	19.50	0.970	0.000	0.000

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 125 mph Wind	31.4	0.00	54.11	0.00	0.00	3811.29
1.2D + 1.0W 125 mph Wind at 30°	27.2	15.68	54.11	1905.74	0.01	3300.81
1.2D + 1.0W 125 mph Wind at 60°	15.7	27.16	54.11	3300.81	0.01	1905.74
1.2D + 1.0W 125 mph Wind at 90°	0.0	31.36	54.11	3811.29	0.00	0.00
1.2D + 1.0W 125 mph Wind at 120°	15.7	27.16	54.11	3300.81	0.01	1905.74
1.2D + 1.0W 125 mph Wind at 150°	27.2	15.68	54.11	1905.74	0.01	3300.81
1.2D + 1.0W 125 mph Wind at 180°	31.4	0.00	54.11	0.00	0.00	3811.29
1.2D + 1.0W 125 mph Wind at 210°	27.2	15.68	54.11	1905.74	0.01	3300.81
1.2D + 1.0W 125 mph Wind at 240°	15.7	27.16	54.11	3300.81	0.01	1905.74
1.2D + 1.0W 125 mph Wind at 270°	0.0	31.36	54.11	3811.29	0.00	0.00
1.2D + 1.0W 125 mph Wind at 300°	15.7	27.16	54.11	3300.81	0.01	1905.74
1.2D + 1.0W 125 mph Wind at 330°	27.2	15.68	54.11	1905.74	0.01	3300.81
0.9D + 1.0W 125 mph Wind	31.3	0.00	40.58	0.00	0.00	3776.85
0.9D + 1.0W 125 mph Wind at 30°	27.1	15.67	40.58	1888.50	0.01	3270.97
0.9D + 1.0W 125 mph Wind at 60°	15.7	27.15	40.58	3270.97	0.01	1888.51
0.9D + 1.0W 125 mph Wind at 90°	0.0	31.35	40.58	3776.85	0.00	0.00
0.9D + 1.0W 125 mph Wind at 120°	15.7	27.15	40.58	3270.97	0.01	1888.51
0.9D + 1.0W 125 mph Wind at 150°	27.1	15.67	40.58	1888.50	0.01	3270.97
0.9D + 1.0W 125 mph Wind at 180°	31.3	0.00	40.58	0.00	0.00	3776.85
0.9D + 1.0W 125 mph Wind at 210°	27.1	15.67	40.58	1888.50	0.01	3270.97
0.9D + 1.0W 125 mph Wind at 240°	15.7	27.15	40.58	3270.97	0.01	1888.51
0.9D + 1.0W 125 mph Wind at 270°	0.0	31.35	40.58	3776.85	0.00	0.00
0.9D + 1.0W 125 mph Wind at 300°	15.7	27.15	40.58	3270.97	0.01	1888.51
0.9D + 1.0W 125 mph Wind at 330°	27.1	15.67	40.58	1888.50	0.01	3270.97
1.2D + 1.0Di + 1.0Wi 50 mph Wind	7.7	0.00	71.80	0.00	0.00	909.06
1.2D + 1.0Di + 1.0Wi 50 mph Wind	6.6	3.84	71.80	454.58	0.00	787.36
1.2D + 1.0Di + 1.0Wi 50 mph Wind	3.8	6.65	71.80	787.36	0.00	454.58
1.2D + 1.0Di + 1.0Wi 50 mph Wind	0.0	7.67	71.80	909.06	0.00	0.00
1.2D + 1.0Di + 1.0Wi 50 mph Wind	3.8	6.65	71.80	787.36	0.00	454.58
1.2D + 1.0Di + 1.0Wi 50 mph Wind	6.6	3.84	71.80	454.58	0.00	787.36
1.2D + 1.0Di + 1.0Wi 50 mph Wind	7.7	0.00	71.80	0.00	0.00	909.06
1.2D + 1.0Di + 1.0Wi 50 mph Wind	6.6	3.84	71.80	454.58	0.00	787.36
1.2D + 1.0Di + 1.0Wi 50 mph Wind	3.8	6.65	71.80	787.36	0.00	454.58
1.2D + 1.0Di + 1.0Wi 50 mph Wind	0.0	7.67	71.80	909.06	0.00	0.00
1.2D + 1.0Di + 1.0Wi 50 mph Wind	3.8	6.65	71.80	787.36	0.00	454.58
1.2D + 1.0Di + 1.0Wi 50 mph Wind	6.6	3.84	71.80	454.58	0.00	787.36
1.0D + 1.0W 60 mph Wind	7.2	0.00	45.12	0.00	0.00	873.38
1.0D + 1.0W 60 mph Wind at 30°	6.3	3.61	45.12	436.69	0.00	756.37
1.0D + 1.0W 60 mph Wind at 60°	3.6	6.25	45.12	756.37	0.00	436.69
1.0D + 1.0W 60 mph Wind at 90°	0.0	7.22	45.12	873.38	0.00	0.00
1.0D + 1.0W 60 mph Wind at 120°	3.6	6.25	45.12	756.37	0.00	436.69
1.0D + 1.0W 60 mph Wind at 150°	6.3	3.61	45.12	436.69	0.00	756.37
1.0D + 1.0W 60 mph Wind at 180°	7.2	0.00	45.12	0.00	0.00	873.38
1.0D + 1.0W 60 mph Wind at 210°	6.3	3.61	45.12	436.69	0.00	756.37
1.0D + 1.0W 60 mph Wind at 240°	3.6	6.25	45.12	756.37	0.00	436.69
1.0D + 1.0W 60 mph Wind at 270°	0.0	7.22	45.12	873.38	0.00	0.00
1.0D + 1.0W 60 mph Wind at 300°	3.6	6.25	45.12	756.37	0.00	436.69

Final Analysis Summary

Structure:	CT03113-S-SBA	**Code:**	TIA-222-H	3/29/2024	
Site Name:	North Chaplin	**Exposure:**	B		
Height:	175.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

TES Tower Engineering Solutions

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.0D + 1.0W 60 mph Wind at 330°	6.3	3.61	45.12	436.69	0.00	756.37
1.2D + 1.0Ev + 1.0Eh	0.9	0.00	1.68	0.00	0.00	137.21
0.9D + 1.0Ev + 1.0Eh	0.9	0.00	1.68	0.00	0.00	137.21

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.0W 125 mph Wind	-54.11	-31.36	0.00	-3811.2	0.00	3811.2	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 30°	-54.11	-27.16	0.01	-3300.8	-1905.7	3811.4	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 60°	-54.11	-15.68	-0.01	-1905.7	-3300.8	3811.4	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 90°	-54.11	0.00	0.00	0.00	-3811.2	3811.2	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 120	-54.11	15.68	0.01	1905.74	-3300.8	3811.4	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 150	-54.11	27.16	-0.01	3300.81	-1905.7	3811.4	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 180	-54.11	31.36	0.00	3811.29	0.00	3811.2	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 210	-54.11	27.16	0.01	3300.81	1905.7	3811.4	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 240	-54.11	15.68	-0.01	1905.74	3300.8	3811.4	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 270	-54.11	0.00	0.00	0.00	3811.2	3811.2	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 300	-54.11	-15.68	0.01	-1905.7	3300.8	3811.4	5803.10	1561.1	8297.91	7657.05	0.00	0.507
1.2D + 1.0W 125 mph Wind at 330	-54.11	-27.16	-0.01	-3300.8	1905.7	3811.4	5803.10	1561.1	8297.91	7657.05	0.00	0.507
0.9D + 1.0W 125 mph Wind	-40.58	-31.35	0.00	-3776.8	0.00	3776.8	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 30°	-40.58	-27.15	0.01	-3270.9	-1888.5	3777.0	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 60°	-40.58	-15.67	-0.01	-1888.5	-3270.9	3777.0	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 90°	-40.58	0.00	0.00	0.00	-3776.8	3776.8	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 120	-40.58	15.67	0.01	1888.51	-3270.9	3777.0	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 150	-40.58	27.15	-0.01	3270.97	-1888.5	3777.0	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 180	-40.58	31.35	0.00	3776.85	0.00	3776.8	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 210	-40.58	27.15	0.01	3270.97	1888.5	3777.0	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 240	-40.58	15.67	-0.01	1888.51	3270.9	3777.0	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 270	-40.58	0.00	0.00	0.00	3776.8	3776.8	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 300	-40.58	-15.67	0.01	-1888.5	3270.9	3777.0	5803.10	1561.1	8297.91	7657.05	0.00	0.501
0.9D + 1.0W 125 mph Wind at 330	-40.58	-27.15	-0.01	-3270.9	1888.5	3777.0	5803.10	1561.1	8297.91	7657.05	0.00	0.501
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	-7.67	0.00	-909.06	0.00	909.06	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	-6.65	0.00	-787.36	-454.58	909.17	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	-3.84	0.00	-454.58	-787.36	909.17	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	0.00	0.00	0.00	-909.06	909.06	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	3.84	0.00	454.58	-787.36	909.17	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	6.65	0.00	787.36	-454.58	909.17	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	7.67	0.00	909.06	0.00	909.06	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	6.65	0.00	787.36	454.58	909.17	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	3.84	0.00	454.58	787.36	909.17	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	0.00	0.00	0.00	909.06	909.06	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	-3.84	0.00	-454.58	787.36	909.17	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-71.80	-6.65	0.00	-787.36	454.58	909.17	5803.10	1561.1	8297.91	7657.05	0.00	0.131
1.0D + 1.0W 60 mph Wind	-45.12	-7.22	0.00	-873.38	0.00	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 30°	-45.12	-6.25	0.00	-756.37	-436.69	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)						
1.0D + 1.0W 60 mph Wind at 60°	-45.12	-3.61	0.00	-436.69	-756.37	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 90°	-45.12	0.00	0.00	0.00	-873.38	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 120°	-45.12	3.61	0.00	436.69	-756.37	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 150°	-45.12	6.25	0.00	756.37	-436.69	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 180°	-45.12	7.22	0.00	873.38	0.00	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 210°	-45.12	6.25	0.00	756.37	436.69	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 240°	-45.12	3.61	0.00	436.69	756.37	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 270°	-45.12	0.00	0.00	0.00	873.38	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 300°	-45.12	-3.61	0.00	-436.69	756.37	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.0D + 1.0W 60 mph Wind at 330°	-45.12	-6.25	0.00	-756.37	436.69	873.38	5803.10	1561.1	8297.91	7657.05	0.00	0.122
1.2D + 1.0Ev + 1.0Eh	-1.10	0.89	0.00	93.95	0.00	93.95	4442.55	1197.1	5285.84	4868.48	48.00	0.020
0.9D + 1.0Ev + 1.0Eh	-1.10	0.89	0.00	93.95	0.00	93.95	4442.55	1197.1	5285.84	4868.48	48.00	0.020

Monopole Mat Foundation Design

			Date: 3/29/2024
Customer Name:	Verizon	TIA Standard:	TIA-222-H
Site Name:		Structure Height (Ft.):	175
Site Number:	CT03113-S-SBA	Engineer Name:	S. Shrestha
Engr. Number:	146912	Engineer Login ID:	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

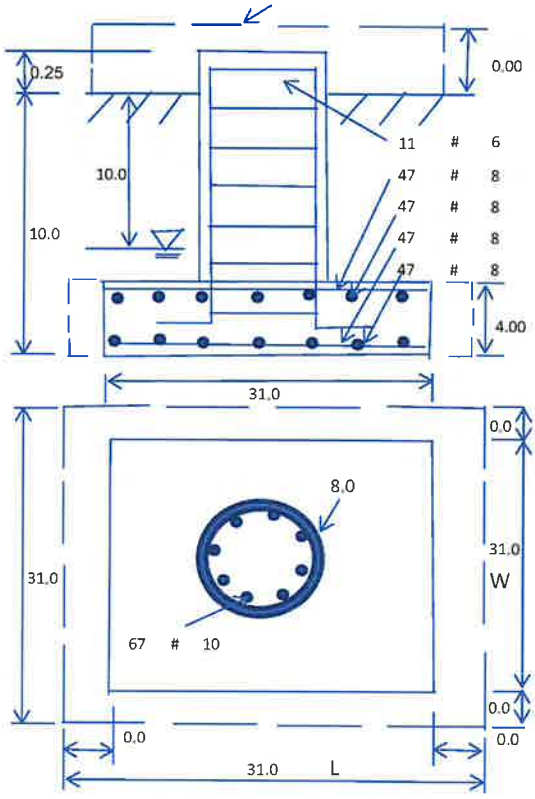
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	54.1	Shear Force (Kips):	31.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3811.5

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	10.0
Pier Height A. G. (ft.):	0.25	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	31	Width of Pad (ft.):	31
Final Length of pad (ft)	31.0	Final width of pad (ft):	31.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	10	Tie / Stirrup Size #:	6	
Qty. of Vertical Rebars:	67	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	47	Qty. of Rebar in Pad (W):	47	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	47	Qty. of Rebar in Pad (W):	47	

Soil Design Parameters:

Soil Unit Weight (pcf):	135.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	10.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	Yes		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM :	Yes	Reduction factor on the maximum soil bearing pressure:			1.00	

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	5464.41	Total Dry Soil Weight (Kips):	737.69
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	737.69	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4158.16	Total Dry Concrete Weight (Kips):	623.72
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	623.72	Total Vertical Load on Base (Kips):	1415.52

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	2443	<	Allowable Factored Soil Bearing (psf):	22500	0.11	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	19830.3	>	Design Factored Momont (kips-ft):	3388	0.17	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	5.85	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90		Strength reduction factor (Shear):	0.75			
Strength reduction factor (Axial compresion):	0.65		Wind Load Factor on Concrete Design:	1.00			
					Load/ Capacity Ratio		
(1) Concrete Pier:							
Vertical Steel Rebar Area (sq. in./each):	1.27		Tie / Stirrup Area (sq. in./each):	0.44			
Calculated Moment Capacity (Mn,Kips-Ft):	15037.0	>	Design Factored Moment (Mu, Kips-F	4007.8	0.27	OK!	
Calculated Shear Capacity (Kips):	932.6	>	Design Factored Shear (Kips):	31.4	0.03	OK!	
Calculated Tension Capacity (Tn, Kips):	4594.9	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!	
Calculated Compression Capacity (Pn, Kips):	9485.1	>	Design Factored Axial Load (Pu Kips):	54.1	0.01	OK!	
Moment & Axial Strength Combination:	0.27	OK!	Check Tie Spacing (Design/Required):		1	OK!	
Pier Reinforcement Ratio:	0.012		Reinforcement Ratio is satisfied per ACI				
(2).Concrete Pad:							
One-Way Design Shear Capacity (L-Direction, Kips):	1360.0	>	One-Way Factored Shear (L-D. Kips):	437.8	0.32	OK!	
One-Way Design Shear Capacity (W-Direction, Kips):	1360.0	>	One-Way Factored Shear (W-D., Kips)	437.8	0.32	OK!	
One-Way Design Shear Capacity (Corner-Corner. Kips):	1247.0	>	One-Way Factored Shear (C-C, Kips):	365.0	0.29	OK!	
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0022	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0022			
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	7239.1	>	Moment at Bottom (L-Dir. K-Ft):	3390.8	0.47	OK!	
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	7239.1	>	Moment at Bottom (W-Dir. K-Ft):	3390.8	0.47	OK!	
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	10175.7	>	Moment at Bottom (C-C Dir. K-Ft):	4795.3	0.47	OK!	
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0022	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0022			
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	7239.1	>	Moment at the top (L-Dir K-Ft):	592.6	0.08	OK!	
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	7239.1	>	Moment at the top (W-Dir K-Ft):	592.6	0.08	OK!	
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	10175.7	>	Moment at the top (C-C Dir. K-Ft):	554.6	0.05	OK!	
(3).Check Punching Shear Capacity due to Moment in the Pier:							
Moment transferred by punching shear:	1524.6	k-ft.	Max. factored shear stress v_{u_cD}:		2.1	Psi	
Max. factored shear stress v_{u_AB}:	6.3	Psi	Factored shear Strength ϕv_n:		164.3	Psi	
Max. factored shear stress v_u:	6.3	Psi	Check Usage of Punching Shear Capacity:		0.04	OK!	
(4).Check Bending Capacity of the Pad Within the Effective Slab Width:							
Overturning moment to be transferred by flexure:	1143.5	k-ft.	Effective Width for resisting OT moment:		20.0	ft.	
Calculated number of Rebar in Effective width:	31		Actual number of Rebar in Effective width:		13		
Steel Pad Moment Capacity (L-Direc. Kips-ft):	2033.3	k-ft.	Check Usage of the Flexure Capacity:		0.56	OK!	

Colliers Engineering & Design,
Architecture, Landscape Architecture, Surveying, CT P.C.
1055 Washington Boulevard
Stamford, CT 06901
peter.albano@collierseng.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10221772
Colliers Engineering & Design Project #: 20777651 (Rev. 1)

February 7, 2024

Site Information	*Site ID:*	*5000247838-VZW / NE MANSFIELD NE*
	Site Name:	*NE MANSFIELD NE*
	Carrier Name:	*Verizon Wireless*
	Address:	*203 Davis Rd* *Chaplin, Connecticut 06235* *Windham County*
	Latitude:	*41.793486°*
	Longitude:	*-72.160178°*
Structure Information	*Tower Type:*	*175-Ft Monopole*
	Mount Type:	*12.50-Ft Platform*

FUZE ID # 16272193

Analysis Results

Platform: **51.1% Pass w/ Modifications***

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

******Contractor PMI Requirements:***
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Madison Shell

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
02/07/2024

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS Site ID: 674961* *Dated October 6, 2023*
Mount Mapping Report	*High Tower Solutions, Inc. Site #: 467573* *Dated April 20, 2020*
Mount Analysis Report	*Maser Consulting Connecticut, Project #: 20777651A,* *dated January 24, 2024*
Mount Modification Drawings	*Maser Consulting Connecticut, Project #: 20777651A,* *dated February 5, 2024*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H Connecticut State Building Code (CSBS), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.982
Seismic Parameters:	S_S:	0.190 g
	S_1:	0.055 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V20)	

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
151.00	153.00	6	Commscope	JAHH-65B-R3B	Added
		3	Samsung	MT6413-77A	
		3	Commscope	CBC78T-DS-43-2X	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		2	Antel	LPA-80080-6CF	Retained
		4	Antel	LPA-80063/6CF	
		2	Raycap	RRFDC-3315-PF-48	

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

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

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

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

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

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

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

Analysis Results:

Component	Utilization %	Pass/Fail
Support Rail Corner	*42.7%*	*Pass*
Support Rail	*19.1%*	*Pass*
Mount Pipe	*29.1%*	*Pass*
Larger Mount Pipe	*27.7%*	*Pass*
Face Horizontal	*14.3%*	*Pass*
Grating Support	*26.9%*	*Pass*
Platform Crossmember	*20.4%*	*Pass*
Cross Arm Plate	*44.0%*	*Pass*
Standoff Horizontal	*33.0%*	*Pass*
Corner Plate	*40.7%*	*Pass*
Mount Connection	*51.1%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**51.1%**

BASELINE mount weight per SBA agreement: 2110 lbs

Increase in mount weight due to Verizon loading change per SBA agreement: 504 lbs

The weights listed above include 3 sector(s).

Mount Connection Envelope Reactions:

Connection Description	Elev. AGL (Ft)	Node Label	Envelope Wind Reactions				Envelope Wind + Ice Reactions			
			Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)	Axial (Lbs)	Lateral (Lbs)	Moment (K-Ft)	Torsion (K-Ft)
Sector C Standoff	151	N30	1860	3165	4.421	1.451	2580	929	5.052	0.338
Sector B Standoff	151	N32	1835	3076	4.357	1.882	2755	919	5.288	0.418
Sector A Standoff	151	N34	1862	3073	4.538	1.759	2667	921	5.180	0.401

Notes:
- Axial loads act along the axis of the tower
- Lateral reactions act perpendicular to the tower
- Moment loads introduce bending moment to the tower
- Torsion loads introduce twisting moment to the tower
- Batch solutions by individual load cases are included at the end of this document

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

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	25.7	25.7	42.8	42.7
0.5	33.4	33.4	56.8	56.8
1	40.5	40.5	70.3	70.3

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mount will be **SUFFICIENT** for the final loading configuration (attachment 2) after the modifications detailed in attachment 3 are successfully completed.

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Electronic pdf version of this can be downloaded at https://pmi.vzwsmart.com
For additional questions and support, please reach out to pmisupport@colliersengineering.com

MDG #: 5000247838 SMART Project #: 10221772 Fuze Project ID: 16272193

Purpose – to upload the proper documentation to the SMART Tool in order to allow the SMART Tool engineering vendor to complete the required Mount Desktop review of the Post Modification Inspection Report.

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

Base Requirements:

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

Photo Requirements:

- *Photos taken at ground level*
  - Photo of Gate Signs showing the tower owner, site name, and number.
  - Overall tower structure after installation of the modifications.
  - Photos of the mount after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- *Photos taken at Mount Elevation*
  - Photos showing the safety climb wire rope above and below the mount prior to modification.
  - Photos showing the climbing facility and safety climb if present.

- Photos showing each individual sector after installation of modifications. Each entire sector must be in one photo to show the interconnection of members.
  - These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.
- Photos of each installed modification per the modification drawings; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the distances (relative distance between collars) of the installed modifications from the appropriate reference locations shown in the modification drawings.
- Photos showing the installed modifications onto the tower (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, an elevation measurement shall be provided before the elevation change.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by the SMART Tool vendor.
  - If the materials are as specified on the drawings
    - The contractor shall provide the packing list, or the materials certifications for the materials utilized to perform the mount modification
    - Commscope, Metrosite, Perfect Vision, Sabre, and Site Pro have all agreed to support Verizon vendors with the necessary material certifications
  - If seeking permission to use an equivalent
    - It is required that the SMART Tool engineering vendor approval of such is included in the contractor submission package. There may be an additional charge for approval if the equivalent submission doesn't meet specifications as prescribed in the drawings.

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

☐ The material utilized was as specified on the SMART Tool engineering vendor Mount Modification Drawings and included in the material certification folder is a packing list or invoice for these materials.

OR

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

Antenna & Equipment Placement and Geometry Confirmation:

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

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

Comments:

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

☐ Yes ☐ No

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

Issue:

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is contacting the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

Response:

Special Instruction Confirmation:

☐ The contractor has read and acknowledges the above special instructions.

Comments:

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

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

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

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Comments:

Certifying Individual:

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

Structure: 5000247838-VZW - NE MANSFIELD NE

Sector: **A**

Structure Type: Monopole

Mount Elev: 151.00

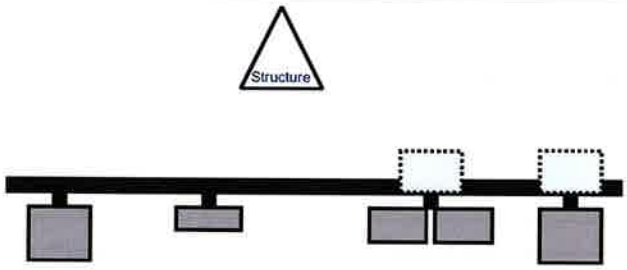
10221772

2/2/2024

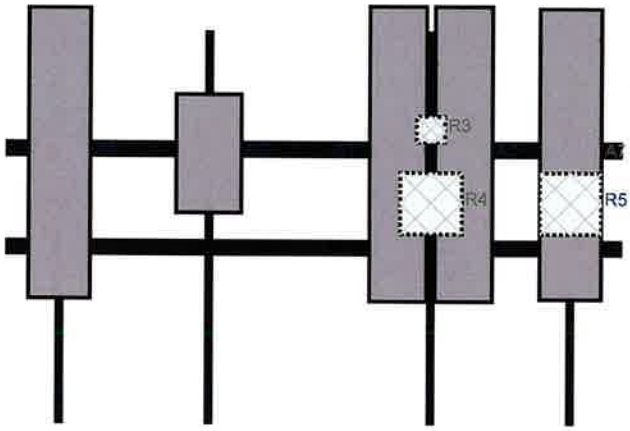
Page: 1

Colliers Engineering & Design

Plan View



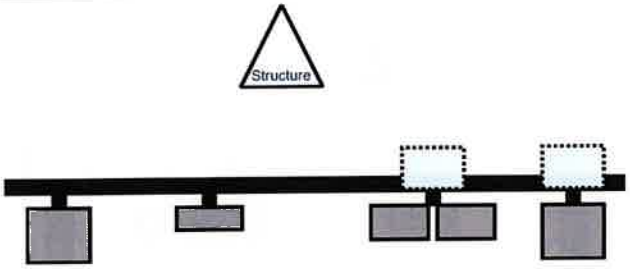
Front View - Looking at Structure



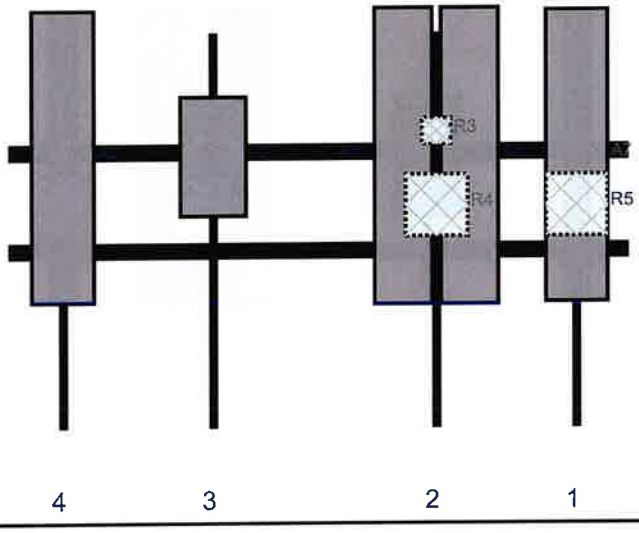
4 3 2 1

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
A7	LPA-80063/6CF	70.9	15	137.5	1	a	Front	30	0	Retained	04/20/2020
R5	RF4461d-13A	15	15	137.5	1	a	Behind	42	0	Added	
A1	JAHH-65B-R3B	72	13.8	103.5	2	a	Front	30	-8	Added	
A1	JAHH-65B-R3B	72	13.8	103.5	2	b	Front	30	8	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	103.5	2	a	Behind	24	0	Added	
R4	RF4439d-25A	15	15	103.5	2	a	Behind	42	0	Added	
A2	MT6413-77A	28.9	15.8	49.5	3	a	Front	30	0	Added	
A7	LPA-80063/6CF	70.9	15	13	4	a	Front	30	0	Retained	04/20/2020
M99	RRFDC-3315-PF-48	19.1	15.7		Member					Retained	04/20/2020
M98	RRFDC-3315-PF-48	19.1	15.7		Member					Retained	04/04/2020

Plan View

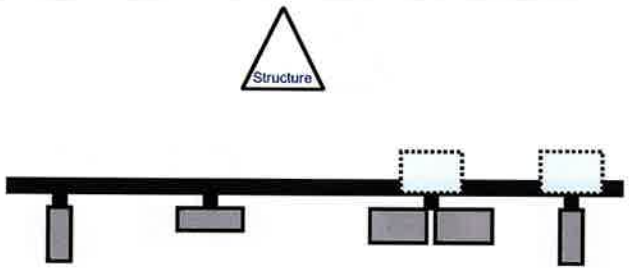


Front View - Looking at Structure

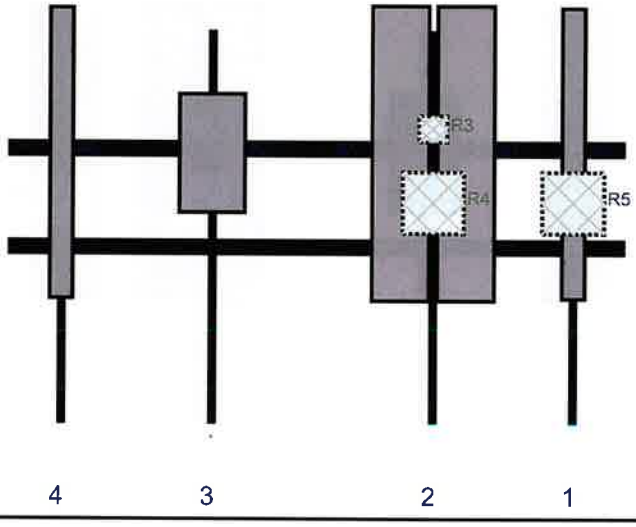


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A7	LPA-80063/6CF	70.9	15	137.5	1	a	Front	30	0	Retained	04/20/2020
R5	RF4461d-13A	15	15	137.5	1	a	Behind	42	0	Added	
A1	JAHH-65B-R3B	72	13.8	103.5	2	a	Front	30	-8	Added	
A1	JAHH-65B-R3B	72	13.8	103.5	2	b	Front	30	8	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	103.5	2	a	Behind	24	0	Added	
R4	RF4439d-25A	15	15	103.5	2	a	Behind	42	0	Added	
A2	MT6413-77A	28.9	15.8	49.5	3	a	Front	30	0	Added	
A7	LPA-80063/6CF	70.9	15	13	4	a	Front	30	0	Retained	04/20/2020

Plan View



Front View - Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A6	LPA-80080-6CF	70.9	5.5	137.5	1	a	Front	30	0	Retained	04/20/2020
R5	RF4461d-13A	15	15	137.5	1	a	Behind	42	0	Added	
A1	JAHH-65B-R3B	72	13.8	103.5	2	a	Front	30	-8	Added	
A1	JAHH-65B-R3B	72	13.8	103.5	2	b	Front	30	8	Added	
R3	CBC78T-DS-43-2X	6.4	6.9	103.5	2	a	Behind	24	0	Added	
R4	RF4439d-25A	15	15	103.5	2	a	Behind	42	0	Added	
A2	MT6413-77A	28.9	15.8	49.5	3	a	Front	30	0	Added	
A6	LPA-80080-6CF	70.9	5.5	13	4	a	Front	30	0	Retained	04/20/2020

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MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' PLATFORM

TOWER OWNER: SBA TOWERS, LLC
TOWER OWNER SITE NUMBER: CT03113

CARRIER SITE NAME: MANSFIELD NE
CARRIER SITE NUMBER: 5000247838
FUZE ID: 16272193

203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

LATITUDE: 41.793486° N
LONGITUDE: 72.160178° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 125 MPH
EXPOSURE CATEGORY B
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 491.3'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_s = .190
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: PETER ALBANO
PHONE: 856.797.0412
E-MAIL: PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10221772
VZW MOD #: 5000247838
ANALYSIS DATE: 2/7/2024

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

SHEET	DESCRIPTION
ST-1	TITLE SHEET
SBOM-1	BILL OF MATERIALS
SGN-1	GENERAL NOTES
SCF-1	CLIMBING FACILITY DETAIL
SS-1	MODIFICATION DETAILS
SS-2	MOUNT PHOTOS
	SPECIFICATION SHEETS

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SCALE: AS SHOWN

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1		CONSTRUCTION	BMS	DH
0	04/2024	ISSUED FOR CONSTRUCTION	BMS	MW

COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. P.C.0901111

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WINDHAM COUNTY

Colliers Engineering & Design
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERSENGINEERING.COM

TITLE SHEET

ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	VZWSMART	VZWSMART-PLK1	SUPPORT RAIL KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	504	504

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISON	H42-0501-06	STANDOFF CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CMX-CG-BO	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
					TOTAL:	504

*FOR ACTUAL INSTALL WEIGHT PLEASE CHECK THE MA REPORT

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM

SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

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BILL OF MATERIALS

SBOM-1

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

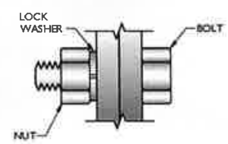
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND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

BOLT SCHEDULE (IN.)

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

WORKABLE GAGES (IN.)

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

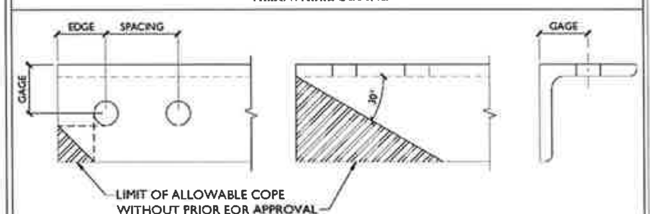


TYP. BOLT ASSEMBLY

NOTES:

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

ALLOWABLE COPING



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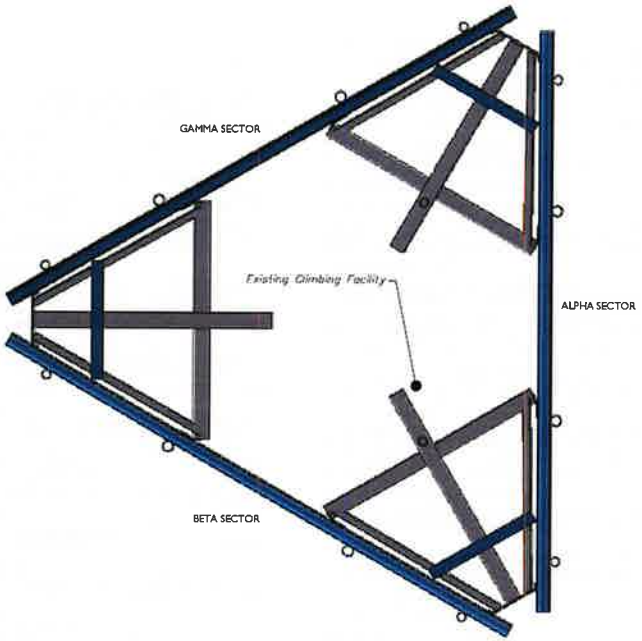
GENERAL NOTES

SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 CLIMBING FACILITY LOCATION
SCALE : N.T.S.

CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HIGH TOWER SOLUTION, INC. ON 4/20/2020, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (151'-0") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

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AS SHOWN	JV/TT/DG

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	10/01/24	CLIENT COMMENTS	BHS	EH
0	04/01/24	FOR CLIENT REVIEW	BHS	KDM

SITE NAME:

MANSFIELD NE
5000247838

203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

Colliers Engineering & Design
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203 324 0800

CLIMBING FACILITY DETAIL

SCF-1

LEGEND:

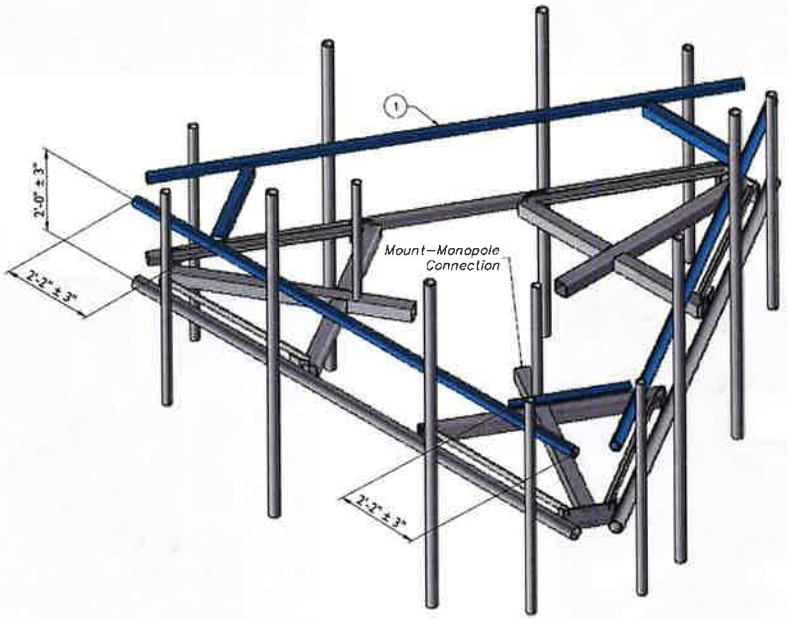
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	151'-0"	1	PROPOSED SUPPORT RAIL KIT (PART #: VZWSMART-PLK1)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1, RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN.

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH COLD GALVANIZATION. REPORT ANY SIGNIFICANT CORROSION TO EOR
B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINC KOTE, OR EOR APPROVED EQUAL).
C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.

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1	10/07/24	ISSUED FOR CONSTRUCTION	MAS	DK
0	04/01/24	ISSUED FOR CONSTRUCTION	MAS	MB

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CHAPLIN, CT 06235
WINDHAM COUNTY

Colliers Engineering & Design
Stamford, CT 06901
Phone: 203 324 0800

MODIFICATION DETAILS

SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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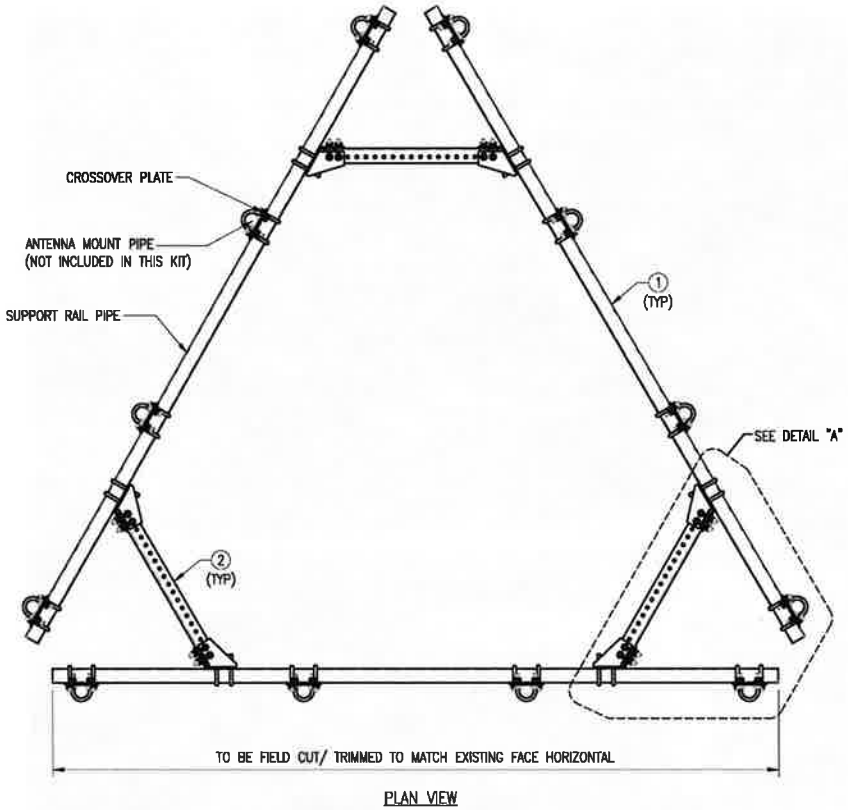
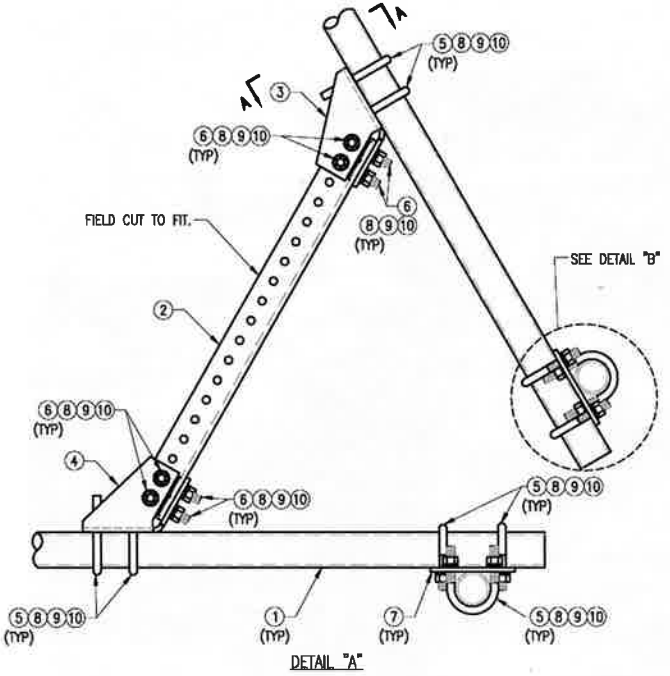
MOUNT PHOTOS

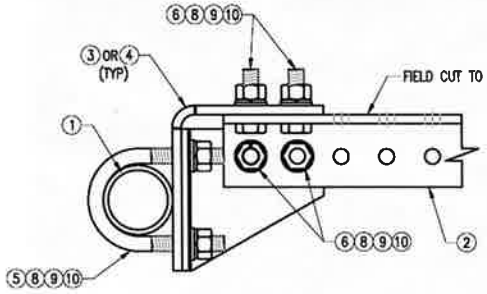
SS-2



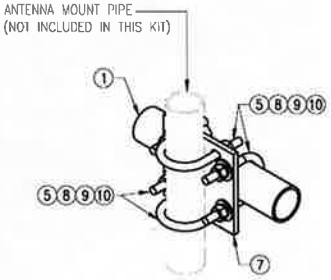
PLAN VIEW



DETAIL "A"



SECTION "A-A"



DETAIL "B"

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

VZW SMART-PLK1 (SUPPORT RAIL KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	PST2875-12.5	2.5" PST (2.875" O.D. X 0.203" THK.) X 12'-6" A53 GR-B	PLK1-F1	292
2	3	L33375-3	L 3" X 3" X 3/8" X 3'-0" A36	PLK1-F1	66
3	3	CBP-L	CORNER BENT PLATE BRACKET	PLK1-F2	28
4	3	CBP-R	CORNER BENT PLATE BRACKET	PLK1-F2	28
5	60	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	82
6	24	---	BOLT 5/8" X 2" A325	---	9
7	12	PL375-857	PL 3/8" X 8 1/2" X 7'-0" A36	PLK1-F3	77
8	144	FW-625	5/8" HDG USS FLAT WASHER	---	12
9	144	LW-625	5/8" HDG LOCK WASHER	---	3
10	144	NUT-625	5/8" HDG HEX NUT	---	17
				GALVANIZED WT	504

VzW SMART Tool© Vendor

verizon

FOR REFERENCE ONLY

DRAWN BY: H.R | CHECKED BY: HMA

REV	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/06/20

SHEET TITLE:
VZWSMART-PLK1
SUPPORT RAIL KIT

SHEET NUMBER: VZWSMART-PLK1

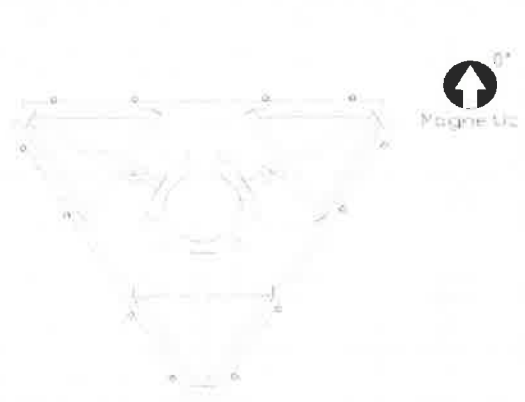
REV #: 0

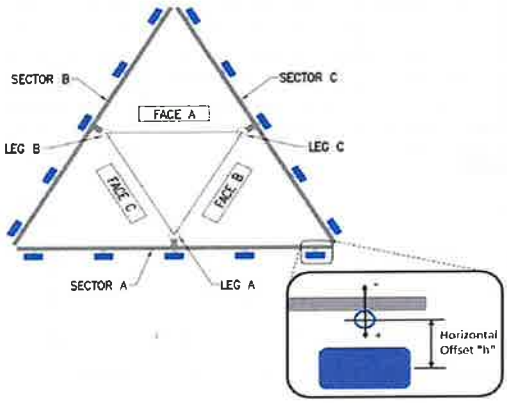
Updated on 3-03-2020

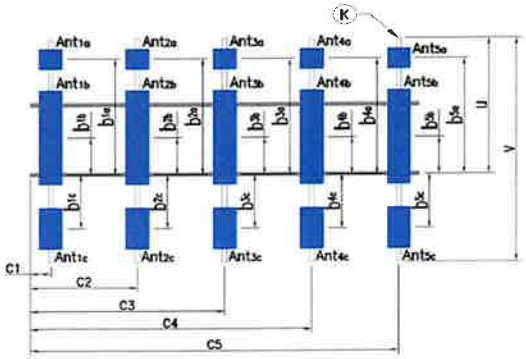
Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1219915

Tower Owner:	SBA Towers	**Mapping Date:**	4/20/2020
Site Name:	NE MANSFIELD NE	**Tower Type:**	Monopole
Site Number or ID:	467573	**Tower Height (Ft.):**	175
Mapping Contractor:	HighTower Solutions, Inc.	**Mount Elevation (Ft.):**	152.3







Antenna Layout

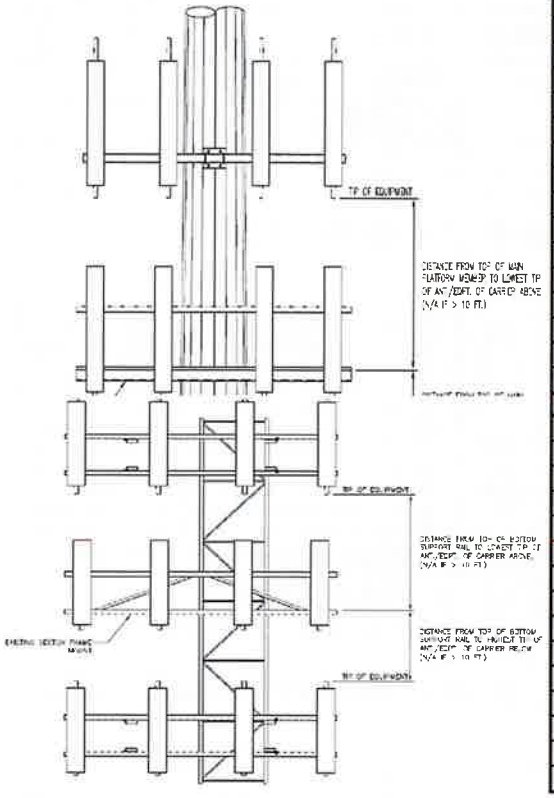
Mount Pipe Configuration and Geometries [Unit = inches]

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	5'3"Tx2.38"Dia.Pipe x.15"	35.00	13.00	C1	5'3"Tx2.38"Dia.Pipe x.15"	35.00	13.00
A2	8'Tx2.88"Dia.Pipe x.18"	53.00	49.50	C2	8'Tx2.88"Dia.Pipe x.18"	53.00	49.50
A3	8'Tx2.88"Dia.Pipe x.18"	53.00	103.50	C3	8'Tx2.88"Dia.Pipe x.18"	53.00	103.50
A4	5'3"Tx2.38"Dia.Pipe x.15"	35.00	137.50	C4	5'3"Tx2.38"Dia.Pipe x.15"	35.00	137.50
A5				C5			
A6				C6			
B1	5'3"Tx2.38"Dia.Pipe x.15"	35.00	13.00	D1			
B2	8'Tx2.88"Dia.Pipe x.18"	53.00	49.50	D2			
B3	8'Tx2.88"Dia.Pipe x.18"	53.00	103.50	D3			
B4	5'3"Tx2.38"Dia.Pipe x.15"	35.00	137.50	D4			
B5				D5			
B6				D6			
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.							
Squid(Raycap)(RRFDC-3315-PF-48)(19"Tx15"Wx10"D)(2-1.55")(Photo #9018) on Squid Pipe Mount on 60° & 300° Side Arms							
Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):				31.5	

Ants. Items	Enter antenna model. If not labled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (In.)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A									
Ant_{1a}									
Ant_{1b}	Amphenol(LPA-80063	15.00	13.00	71.00	(1)1 5/8"	5.25	14.00	345.00	9010
Ant_{1c}									
Ant_{2a}									
Ant_{2b}	Commscope(SBNHH-	12.00	7.50	73.00	(2)1.55"	5.25	9.00	345.00	9008
Ant_{2c}	Alcatel Lucent(B13 RF	12.00	7.25	20.50	(2)1.55"	30.25	-6.00		9016
Ant_{3a}									
Ant_{3b}	Commscope(SBNHH-	12.00	7.50	73.00	(2)1.55"	5.25	9.00	345.00	9008
Ant_{3c}	Alcatel Lucent(B66a R	11.75	7.25	25.50	(2)1.55"	29.25	-7.00		9014
Ant_{4a}									
Ant_{4b}	Amphenol(LPA-80063	15.00	13.00	71.00	(1)1 5/8"	5.25	14.00	345.00	9010
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									
Sector B									
Ant_{1a}									
Ant_{1b}	Antel(LPA80080/6CF	6.00	13.50	68.00	(1)1 5/8"	5.25	14.00	105.00	9005
Ant_{1c}									
Ant_{2a}									
Ant_{2b}	Commscope(SBNHH-	12.00	7.50	73.00	(2)1.55"	5.25	9.00	105.00	9008
Ant_{2c}	Alcatel Lucent(B13 RF	12.00	7.25	20.50	(2)1.55"	30.25	-6.00		9016
Ant_{3a}									
Ant_{3b}	Commscope(SBNHH-	12.00	7.50	73.00	(2)1.55"	5.25	9.00	105.00	9008
Ant_{3c}	Alcatel Lucent(B25 RF	11.75	7.25	25.50	(2)1.55"	29.25	-7.00		9014
Ant_{4a}									
Ant_{4b}	Antel(LPA80080/6CF	6.00	13.50	68.00	(1)1 5/8"	5.25	14.00	105.00	9005
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									

Mount Azimuth (Degree) for Each Sector and Climbing Information

Sector A:	0.00	Deg	
Sector B:	120.00	Deg	
Sector C:	240.00	Deg	
Sector D:		Deg	
Climbing	60.00	Deg	N/A
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was unobstructed.
	Condition:		Missing climbing members.



Sector C									
Ant_{1a}									
Ant_{1b}	Amphenol(LPA-80063	15.00	13.00	71.00	(1)1 5/8"	5.25	14.00	225.00	9010
Ant_{1c}									
Ant_{2a}									
Ant_{2b}	Commscope(SBNHH-	12.00	7.50	73.00	(2)1.55"	5.25	9.00	225.00	9008
Ant_{2c}	Alcatel Lucent(B13 RF	12.00	7.25	20.50	(2)1.55"	30.25	-6.00		9016
Ant_{3a}									
Ant_{3b}	Commscope(SBNHH-	12.00	7.50	73.00	(2)1.55"	5.25	9.00	225.00	9008
Ant_{3c}	Alcatel Lucent(B66a R	11.75	7.25	25.50	(2)1.55"	29.25	-7.00		9014
Ant_{4a}									
Ant_{4b}	Amphenol(LPA-80063	15.00	13.00	71.00	(1)1 5/8"	5.25	14.00	225.00	9010
Ant_{4c}									
Ant_{5a}									
Ant_{5b}									
Ant_{5c}									
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}									

Observed Safety and Structural Issues During the Mount Mapping

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

Mapping Notes

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

Standard Conditions

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

Updated on 3-03-2020

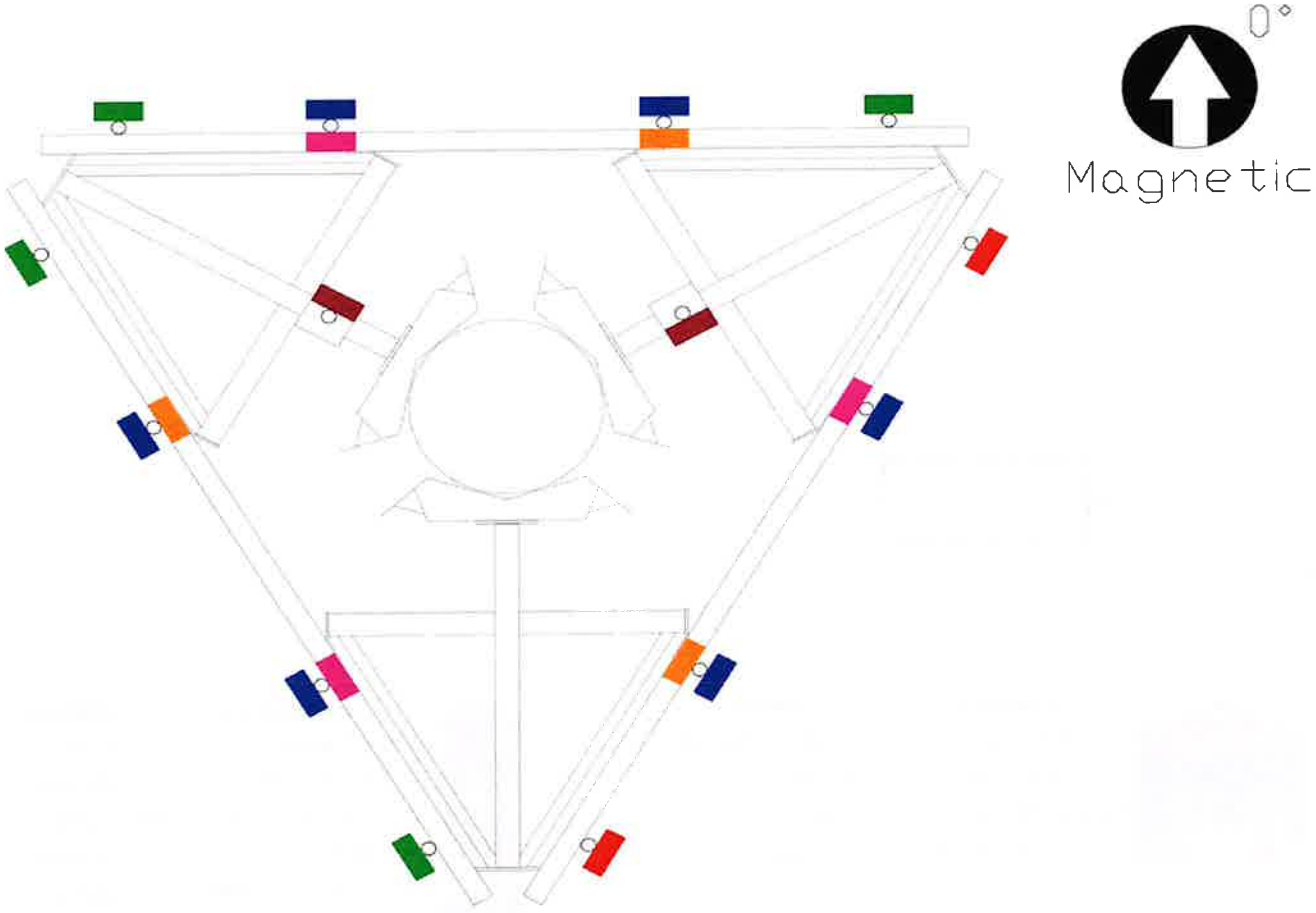
MASER CONSULTING P.A.

Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1219915

Tower Owner:	SBA Towers	**Mapping Date:**	4/20/2020
Site Name:	NE MANSFIELD NE	**Tower Type:**	Monopole
Site Number or ID:	467573	**Tower Height (Ft.):**	175
Mapping Contractor:	HighTower Solutions, Inc.	**Mount Elevation (Ft.):**	152.3

Please Insert Sketches of the Antenna Mount

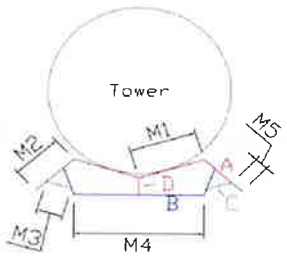


Legend

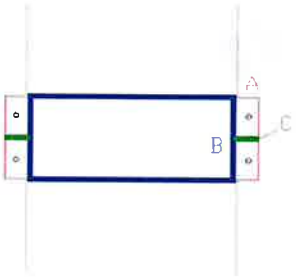
- Antenna #1
- Antenna #2
- Antenna #3
- Antenna #4
- Antenna #5
- Antenna #6

Please Insert Sketches of the Antenna Mount, cont'd

Plan View

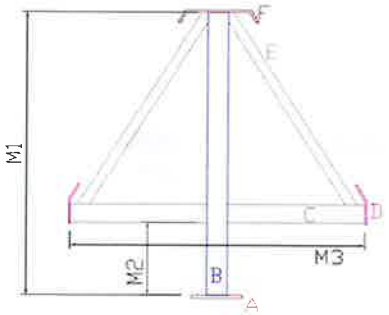


Side Elevation

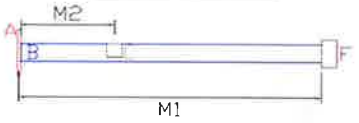


Label	Member Size	Bolt Size
A	10"Tx.50"Flat	3-.75"All-Threads
B	10"Tx15"5"x.38"Channel	Welded
C	6.5"Lx2.75"Wx.38"Flat	Welded
D	10"Tx4"Wx.38"Flat	Welded
M1	7"	
M2	8"	
M3	6.5"	
M4	2.5"	
M5	15"	
Measurement of Gap at All-Threads	17.5"	

Plan View

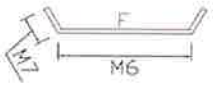


Side Elevation



Plan View of "D"

Plan View of "F"



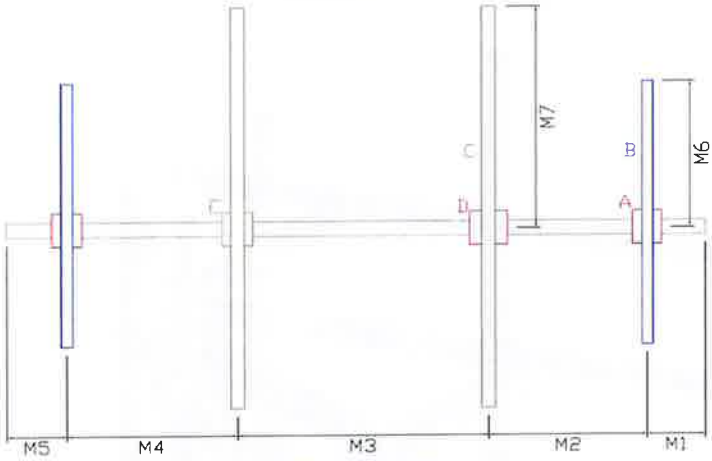
Label	Member Size	Bolt Size
A	10"Tx10"Wx.62"Flat	4-.62"
B	5'2"Lx4"x4"x.266"Sq.Tube	Welded
C	2'4.5"Lx4"x4"x.263"Sq.Tube	Welded
D	6"Tx.38"Flat	Welded
E	4'4"Lx2"x2"x.20"Angle	Welded
F	6"Tx.5"Flat	Welded
M1	5'2"	
M2	15.5"	
M3	5'1"	
M4	5"	
M5	3.5"	
M6	12"	
M7	3"	

Please Insert Sketches of the Antenna Mount, cont'd

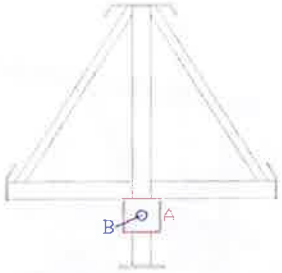
Front Elevation

Label	Member Size	Bolt Size
A	12'6"Lx3.5"Dia.Pipe x.20"	1-.50"U-Bolt

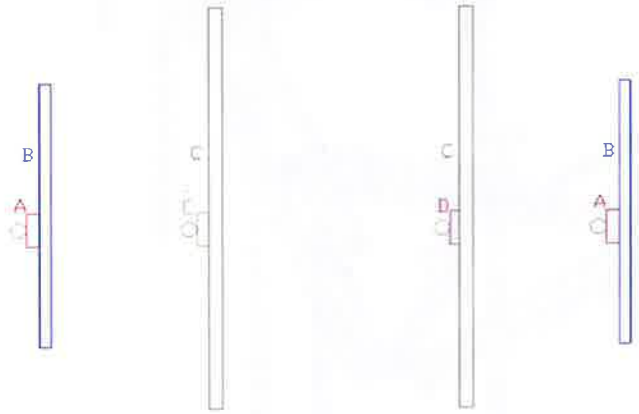
Front Elevation



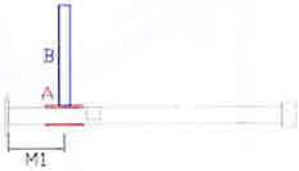
Plan View



Side Elevation

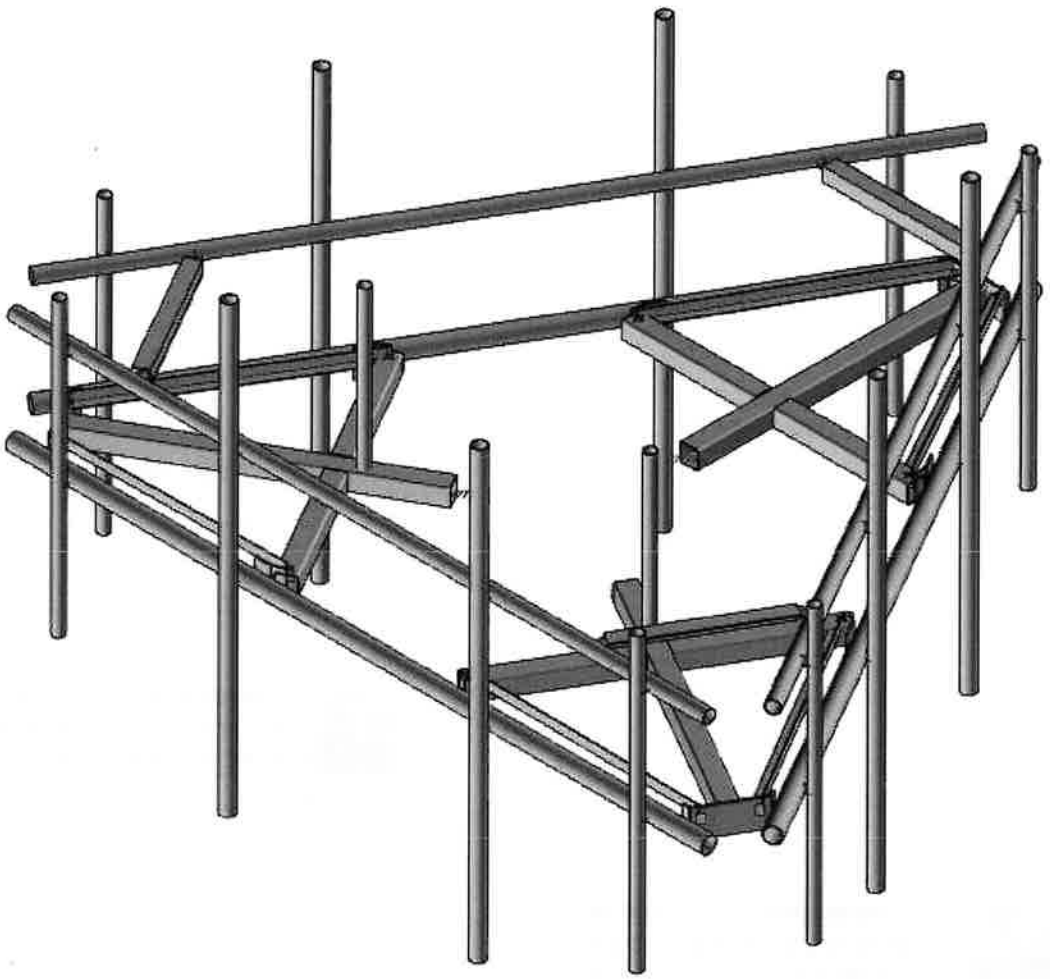


Side Elevation



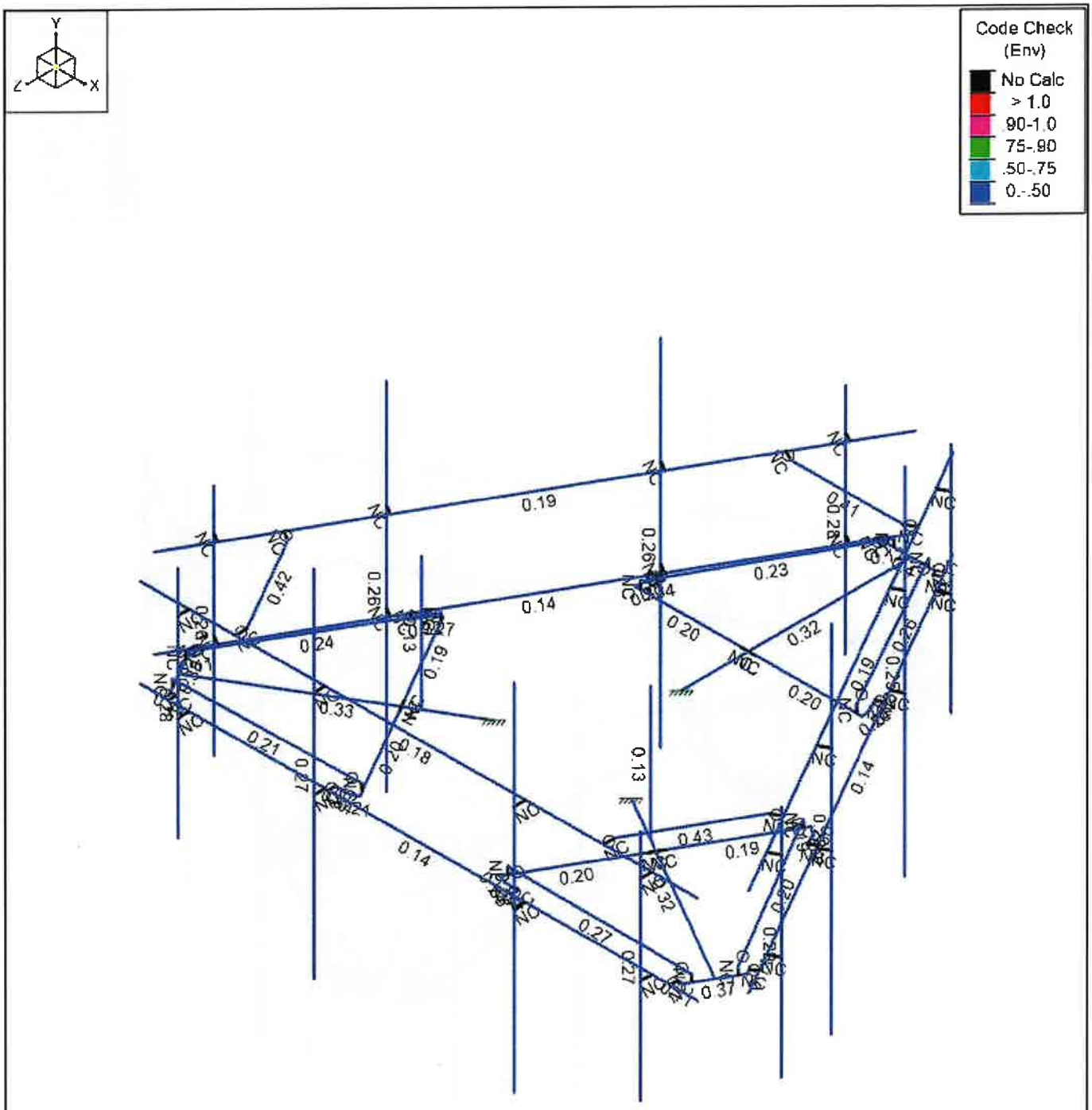
Label	Member Size	Bolt Size
A	8"x8"x.38"Flat	4-.50"All-Threads
B	2'Tx2.38"Dia.Pipe x.15"	Welded
M1	1'	

Label	Member Size	Bolt Size
A	8"Lx6.25"x2.75"x.35"Channel	2-.50"U-Bolt
B	5'3"Tx2.38"Dia.Pipe x.15"	2-.50"U-Bolt
C	8'Tx2.88"Dia.Pipe x.18"	2-.50"U-Bolt
D	8"Lx8"x2"x.38"Channel	2-.50"U-Bolt
E	8"Lx6.5"x2.5"x.32"Channel	2-.50"U-Bolt
M1	12.5"	
M2	2'10"	
M3	4'6"	
M4	3'.5"	
M5	13"	
M6	2'11"	
M7	4'5"	



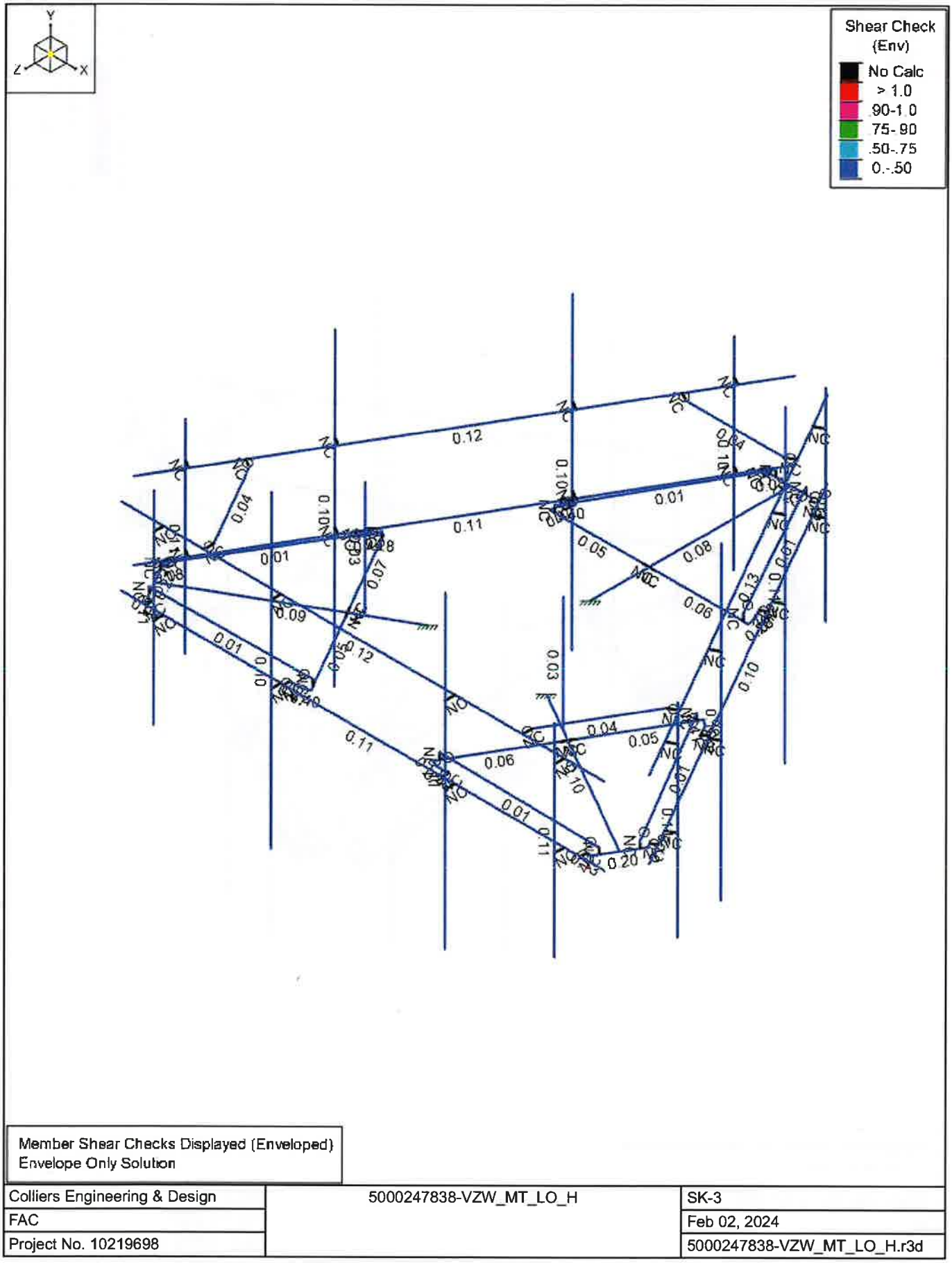
Envelope Only Solution

Colliers Engineering & Design	5000247838-VZW_MT_LO_H	SK-1
FAC		Feb 02, 2024
Project No. 10219698		5000247838-VZW_MT_LO_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & Design	5000247838-VZW_MT_LO_H	SK-2
FAC		Feb 02, 2024
Project No. 10219698		5000247838-VZW_MT_LO_H.r3d



Colliers Engineering & Design	5000247838-VZW_MT_LO_H	SK-3
FAC		Feb 02, 2024
Project No. 10219698		5000247838-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed	Area(Member)
1	Antenna D	None				123		
2	Antenna Di	None				123		
3	Antenna Wo (0 Deg)	None				123		
4	Antenna Wo (30 Deg)	None				123		
5	Antenna Wo (60 Deg)	None				123		
6	Antenna Wo (90 Deg)	None				123		
7	Antenna Wo (120 Deg)	None				123		
8	Antenna Wo (150 Deg)	None				123		
9	Antenna Wo (180 Deg)	None				123		
10	Antenna Wo (210 Deg)	None				123		
11	Antenna Wo (240 Deg)	None				123		
12	Antenna Wo (270 Deg)	None				123		
13	Antenna Wo (300 Deg)	None				123		
14	Antenna Wo (330 Deg)	None				123		
15	Antenna Wi (0 Deg)	None				123		
16	Antenna Wi (30 Deg)	None				123		
17	Antenna Wi (60 Deg)	None				123		
18	Antenna Wi (90 Deg)	None				123		
19	Antenna Wi (120 Deg)	None				123		
20	Antenna Wi (150 Deg)	None				123		
21	Antenna Wi (180 Deg)	None				123		
22	Antenna Wi (210 Deg)	None				123		
23	Antenna Wi (240 Deg)	None				123		
24	Antenna Wi (270 Deg)	None				123		
25	Antenna Wi (300 Deg)	None				123		
26	Antenna Wi (330 Deg)	None				123		
27	Antenna Wm (0 Deg)	None				123		
28	Antenna Wm (30 Deg)	None				123		
29	Antenna Wm (60 Deg)	None				123		
30	Antenna Wm (90 Deg)	None				123		
31	Antenna Wm (120 Deg)	None				123		
32	Antenna Wm (150 Deg)	None				123		
33	Antenna Wm (180 Deg)	None				123		
34	Antenna Wm (210 Deg)	None				123		
35	Antenna Wm (240 Deg)	None				123		
36	Antenna Wm (270 Deg)	None				123		
37	Antenna Wm (300 Deg)	None				123		
38	Antenna Wm (330 Deg)	None				123		
39	Structure D	None		-1				3
40	Structure Di	None					59	3
41	Structure Wo (0 Deg)	None					118	
42	Structure Wo (30 Deg)	None					118	
43	Structure Wo (60 Deg)	None					118	
44	Structure Wo (90 Deg)	None					118	
45	Structure Wo (120 Deg)	None					118	
46	Structure Wo (150 Deg)	None					118	
47	Structure Wo (180 Deg)	None					118	
48	Structure Wo (210 Deg)	None					118	
49	Structure Wo (240 Deg)	None					118	
50	Structure Wo (270 Deg)	None					118	
51	Structure Wo (300 Deg)	None					118	
52	Structure Wo (330 Deg)	None					118	
53	Structure Wi (0 Deg)	None					118	
54	Structure Wi (30 Deg)	None					118	
55	Structure Wi (60 Deg)	None					118	

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed	Area(Member)
56	Structure Wi (90 Deg)	None					118	
57	Structure Wi (120 Deg)	None					118	
58	Structure Wi (150 Deg)	None					118	
59	Structure Wi (180 Deg)	None					118	
60	Structure Wi (210 Deg)	None					118	
61	Structure Wi (240 Deg)	None					118	
62	Structure Wi (270 Deg)	None					118	
63	Structure Wi (300 Deg)	None					118	
64	Structure Wi (330 Deg)	None					118	
65	Structure Wm (0 Deg)	None					118	
66	Structure Wm (30 Deg)	None					118	
67	Structure Wm (60 Deg)	None					118	
68	Structure Wm (90 Deg)	None					118	
69	Structure Wm (120 Deg)	None					118	
70	Structure Wm (150 Deg)	None					118	
71	Structure Wm (180 Deg)	None					118	
72	Structure Wm (210 Deg)	None					118	
73	Structure Wm (240 Deg)	None					118	
74	Structure Wm (270 Deg)	None					118	
75	Structure Wm (300 Deg)	None					118	
76	Structure Wm (330 Deg)	None					118	
77	Lm1	None				1		
78	Lm2	None				1		
79	Lv1	None				1		
80	Lv2	None				1		
81	Antenna Ev	None				123		
82	Antenna Eh (0 Deg)	None				82		
83	Antenna Eh (90 Deg)	None				82		
84	Structure Ev	ELY		-0.041				3
85	Structure Eh (0 Deg)	ELZ			-0.101			3
86	Structure Eh (90 Deg)	ELX	0.101					3
87	BLC 39 Transient Area Loads	None					93	
88	BLC 40 Transient Area Loads	None					93	
89	BLC 84 Transient Area Loads	None					93	
90	BLC 85 Transient Area Loads	None					93	
91	BLC 86 Transient Area Loads	None					93	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.2D+1.0Wo (0 Deg)	Yes	Y	1	1.2	39	1.2	3	1	41	1						
2	1.2D+1.0Wo (30 Deg)	Yes	Y	1	1.2	39	1.2	4	1	42	1						
3	1.2D+1.0Wo (60 Deg)	Yes	Y	1	1.2	39	1.2	5	1	43	1						
4	1.2D+1.0Wo (90 Deg)	Yes	Y	1	1.2	39	1.2	6	1	44	1						
5	1.2D+1.0Wo (120 Deg)	Yes	Y	1	1.2	39	1.2	7	1	45	1						
6	1.2D+1.0Wo (150 Deg)	Yes	Y	1	1.2	39	1.2	8	1	46	1						
7	1.2D+1.0Wo (180 Deg)	Yes	Y	1	1.2	39	1.2	9	1	47	1						
8	1.2D+1.0Wo (210 Deg)	Yes	Y	1	1.2	39	1.2	10	1	48	1						
9	1.2D+1.0Wo (240 Deg)	Yes	Y	1	1.2	39	1.2	11	1	49	1						
10	1.2D+1.0Wo (270 Deg)	Yes	Y	1	1.2	39	1.2	12	1	50	1						
11	1.2D+1.0Wo (300 Deg)	Yes	Y	1	1.2	39	1.2	13	1	51	1						
12	1.2D+1.0Wo (330 Deg)	Yes	Y	1	1.2	39	1.2	14	1	52	1						
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	15	1	53	1		
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	16	1	54	1		
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	17	1	55	1		
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	18	1	56	1		

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	19	1	57	1				
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	20	1	58	1				
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	21	1	59	1				
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	22	1	60	1				
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	23	1	61	1				
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	24	1	62	1				
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	25	1	63	1				
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	26	1	64	1				
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	27	1	65	1						
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	28	1	66	1						
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	29	1	67	1						
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	30	1	68	1						
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1						
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1						
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1						
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1						
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1						
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1						
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1						
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	38	1	76	1						
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	27	1	65	1						
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	28	1	66	1						
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	29	1	67	1						
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	30	1	68	1						
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1						
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1						
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1						
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1						
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1						
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1						
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1						
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	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	1.2D + 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX	
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX	
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX	
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX	
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N1	0	0	0	
2	N2	-6.249996	0	4.095516	
3	N3	6.249996	0	4.095516	
4	N4	-5.749337	0	3.931981	
5	N5	-1.757481	0	3.93797	
6	N6	-2.049148	0	3.93797	
7	N7	-2.049148	0	4.095516	
8	N8	-5.624337	0	3.931981	
9	N9	-5.624337	0	4.095516	
10	N10	5.208337	0	4.095516	
11	N11	5.208337	0	4.345516	
12	N12	5.208337	2.916667	4.345516	
13	N13	5.208337	-2.333333	4.345516	
14	N14	5.749337	0	3.931981	
15	N15	5.624337	0	3.931981	
16	N16	5.624337	0	4.095516	
17	N17	6.279864	0	3.013081	
18	N18	6.217364	0	2.904828	
19	N19	6.358989	0	2.823061	
20	N20	0.530527	0	-6.945062	
21	N21	0.593027	0	-6.836809	
22	N22	0.734652	0	-6.918577	
23	N23	-0.530527	0	-6.945062	
24	N24	-0.593027	0	-6.836809	
25	N25	-0.734652	0	-6.918577	
26	N26	-6.279864	0	3.013081	
27	N27	-6.217364	0	2.904828	
28	N28	-6.358989	0	2.823061	
29	N29	0	0	-6.945062	
30	N30	0	0	-1.778396	
31	N31	-6.014601	0	3.472531	
32	N32	-1.540136	0	0.889198	
33	N33	6.014601	0	3.472531	
34	N34	1.540136	0	0.889198	
35	N35	1.757481	0	3.93797	
36	N36	2.049148	0	3.93797	
37	N37	2.049148	0	4.095516	
38	N42	0	0	-3.29384	
39	N43	-0.166687	0	-3.29384	
40	N44	0.166647	0	-3.29384	
41	N45	-2.852549	0	1.64692	
42	N46	-2.769206	0	1.791275	
43	N47	-2.935872	0	1.5026	
44	N48	2.852549	0	1.64692	
45	N49	2.935892	0	1.502565	
46	N50	2.769226	0	1.79124	
47	N59	-1.636768	0	3.752714	
48	N60	-5.82017	0	3.809294	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
49	N61	-1.636768	0.166667	3.752714	
50	N62	-5.82017	0.166667	3.809294	
51	N71	1.636768	0	3.752714	
52	N72	5.82017	0	3.809294	
53	N73	1.636768	0.166667	3.752714	
54	N74	5.82017	0.166667	3.809294	
55	N75	-1.574268	0	3.860967	
56	N76	1.574268	0	3.860967	
57	N57	4.289123	0	-0.446962	
58	N58	4.434956	0	-0.194371	
59	N59A	4.571395	0	-0.273144	
60	N60A	2.531642	0	-3.491009	
61	N61A	2.385808	0	-3.743599	
62	N62A	2.522247	0	-3.822372	
63	N67	4.06833	0	-0.458874	
64	N68	6.209031	0	3.135768	
65	N69	4.06833	0.166667	-0.458874	
66	N70	6.209031	0.166667	3.135768	
67	N71A	2.431562	0	-3.29384	
68	N72A	0.38886	0	-6.945062	
69	N73A	2.431562	0.166667	-3.29384	
70	N74A	0.38886	0.166667	-6.945062	
71	N75A	4.13083	0	-0.567127	
72	N76A	2.556562	0	-3.29384	
73	N77	-2.531642	0	-3.491009	
74	N78	-2.385808	0	-3.743599	
75	N79	-2.522247	0	-3.822372	
76	N80	-4.289123	0	-0.446962	
77	N81	-4.434956	0	-0.194371	
78	N82	-4.571395	0	-0.273144	
79	N87	-2.431562	0	-3.29384	
80	N88	-0.38886	0	-6.945062	
81	N89	-2.431562	0.166667	-3.29384	
82	N90	-0.38886	0.166667	-6.945062	
83	N91	-4.06833	0	-0.458874	
84	N92	-6.209031	0	3.135768	
85	N93	-4.06833	0.166667	-0.458874	
86	N94	-6.209031	0.166667	3.135768	
87	N95	-2.556562	0	-3.29384	
88	N96	-4.13083	0	-0.567127	
89	N89A	2.375004	0	4.095516	
90	N90A	2.375004	0	4.345516	
91	N91A	2.375004	4.416667	4.345516	
92	N92A	2.375004	-3.583333	4.345516	
93	N93A	-2.124996	0	4.095516	
94	N94A	-2.124996	0	4.345516	
95	N95A	-2.124996	4.416667	4.345516	
96	N96A	-2.124996	-3.583333	4.345516	
97	N97	-5.166663	0	4.095516	
98	N98	-5.166663	0	4.345516	
99	N99	-5.166663	2.916667	4.345516	
100	N100	-5.166663	-2.333333	4.345516	
101	N101	6.671819	0	3.364898	
102	N102	0.421823	0	-7.460413	
103	N103	0.942652	0	-6.55831	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
104	N104	1.159158	0	-6.68331	
105	N105	1.159158	2.916667	-6.68331	
106	N106	1.159158	-2.333333	-6.68331	
107	N107	2.359319	0	-4.104572	
108	N108	2.575825	0	-4.229572	
109	N109	2.575825	4.416667	-4.229572	
110	N110	2.575825	-3.583333	-4.229572	
111	N111	4.609319	0	-0.207457	
112	N112	4.825825	0	-0.332457	
113	N113	4.825825	4.416667	-0.332457	
114	N114	4.825825	-3.583333	-0.332457	
115	N115	6.130152	0	2.426703	
116	N116	6.346658	0	2.301703	
117	N117	6.346658	2.916667	2.301703	
118	N118	6.346658	-2.333333	2.301703	
119	N119	-0.421823	0	-7.460413	
120	N120	-6.671819	0	3.364898	
121	N121	-6.150989	0	2.462794	
122	N122	-6.367496	0	2.337794	
123	N123	-6.367496	2.916667	2.337794	
124	N124	-6.367496	-2.333333	2.337794	
125	N125	-4.734323	0	0.009056	
126	N126	-4.950829	0	-0.115944	
127	N127	-4.950829	4.416667	-0.115944	
128	N128	-4.950829	-3.583333	-0.115944	
129	N129	-2.484323	0	-3.888058	
130	N130	-2.700829	0	-4.013058	
131	N131	-2.700829	4.416667	-4.013058	
132	N132	-2.700829	-3.583333	-4.013058	
133	N133	-0.963489	0	-6.522219	
134	N134	-1.179996	0	-6.647219	
135	N135	-1.179996	2.916667	-6.647219	
136	N136	-1.179996	-2.333333	-6.647219	
137	N137	2.563874	0	1.480253	
138	N138	2.563874	3	1.480253	
139	N139	-2.563874	0	1.480253	
140	N140	-2.563874	3	1.480253	
141	N141	-6.249996	2	4.095516	
142	N142	6.249996	2	4.095516	
143	N143	5.208337	2	4.095516	
144	N144	5.208337	2	4.345516	
145	N145	2.375004	2	4.095516	
146	N146	2.375004	2	4.345516	
147	N147	-2.124996	2	4.095516	
148	N148	-2.124996	2	4.345516	
149	N149	-5.166663	2	4.095516	
150	N150	-5.166663	2	4.345516	
151	N151	-4.124998	2	4.095516	
152	N152	4.124998	2	4.095516	
153	N153	-4.124998	2	3.845516	
154	N154	4.124998	2	3.845516	
155	N155	6.671819	2	3.364898	
156	N156	0.421823	2	-7.460413	
157	N157	0.942652	2	-6.55831	
158	N158	1.159158	2	-6.68331	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
159	N159	2.359319	2	-4.104572	
160	N160	2.575825	2	-4.229572	
161	N161	4.609319	2	-0.207457	
162	N162	4.825825	2	-0.332457	
163	N163	6.130152	2	2.426703	
164	N164	6.346658	2	2.301703	
165	N165	5.60932	2	1.524595	
166	N166	1.484322	2	-5.620111	
167	N167	5.392813	2	1.649595	
168	N168	1.267815	2	-5.495111	
169	N169	-0.421823	2	-7.460413	
170	N170	-6.671819	2	3.364898	
171	N171	-6.150989	2	2.462794	
172	N172	-6.367496	2	2.337794	
173	N173	-4.734323	2	0.009056	
174	N174	-4.950829	2	-0.115944	
175	N175	-2.484323	2	-3.888058	
176	N176	-2.700829	2	-4.013058	
177	N177	-0.963489	2	-6.522219	
178	N178	-1.179996	2	-6.647219	
179	N179	-1.484322	2	-5.620111	
180	N180	-5.60932	2	1.524595	
181	N181	-1.267815	2	-5.495111	
182	N182	-5.392813	2	1.649595	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Face Horizontal	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Standoff Horizontal	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
3	Corner Plate	PL1/2X6	Beam	RECT	A36 Gr.36	Typical	3	0.062	9	0.237
4	Platform Crossmember	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
5	Grating Support	L2X2X3	Beam	Single Angle	A36 Gr.36	Typical	0.722	0.271	0.271	0.009
6	Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
7	Cross Arm Plate	PL3/8X6	Column	RECT	A36 Gr.36	Typical	2.25	0.026	6.75	0.101
8	Larger Mount Pipe	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
9	OVP Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
10	Support Rail	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
11	Support Rail Corner	L3X3X4	Column	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	0.031

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁻⁶F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3
8	Q235	29000	11154	0.3	0.65	0.49	35	1.5	58	1.2

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N3	N2		Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M2	N75	N5		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
3	M3	N5	N6		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
4	M4	N6	N7		RIGID	None	None	RIGID	Typical
5	M5	N4	N8		Corner Plate	Beam	RECT	A36 Gr.36	Typical
6	M6	N8	N9		RIGID	None	None	RIGID	Typical
7	M7	N10	N11		RIGID	None	None	RIGID	Typical
8	MP1A	N12	N13		Mount Pipe	Column	Pipe	A53 Gr.B	Typical
9	M9	N14	N15		Corner Plate	Beam	RECT	A36 Gr.36	Typical
10	M10	N15	N16		RIGID	None	None	RIGID	Typical
11	M11	N17	N18		Corner Plate	Beam	RECT	A36 Gr.36	Typical
12	M12	N18	N19		RIGID	None	None	RIGID	Typical
13	M13	N20	N21		Corner Plate	Beam	RECT	A36 Gr.36	Typical
14	M14	N21	N22		RIGID	None	None	RIGID	Typical
15	M15	N23	N24		Corner Plate	Beam	RECT	A36 Gr.36	Typical
16	M16	N24	N25		RIGID	None	None	RIGID	Typical
17	M17	N26	N27		Corner Plate	Beam	RECT	A36 Gr.36	Typical
18	M18	N27	N28		RIGID	None	None	RIGID	Typical
19	M19	N4	N26		Corner Plate	Beam	RECT	A36 Gr.36	Typical
20	M20	N23	N20		Corner Plate	Beam	RECT	A36 Gr.36	Typical
21	M21	N17	N14		Corner Plate	Beam	RECT	A36 Gr.36	Typical
22	M22	N29	N30		Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
23	M23	N31	N32		Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
24	M24	N33	N34		Standoff Horizontal	Beam	SquareTube	A500 Gr.B Rect	Typical
25	M25	N76	N35		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
26	M26	N35	N36		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
27	M27	N36	N37		RIGID	None	None	RIGID	Typical
28	M28	N43	N42		RIGID	None	None	RIGID	Typical
29	M29	N44	N42		RIGID	None	None	RIGID	Typical
30	M30	N75	N46	90	Platform Crossmember	Beam	SquareTube	A500 Gr.B Rect	Typical
31	M31	N46	N45		RIGID	None	None	RIGID	Typical
32	M32	N47	N45		RIGID	None	None	RIGID	Typical
33	M33	N76	N50	90	Platform Crossmember	Beam	SquareTube	A500 Gr.B Rect	Typical
34	M34	N49	N48		RIGID	None	None	RIGID	Typical
35	M35	N50	N48		RIGID	None	None	RIGID	Typical
36	M36	N61	N59		RIGID	None	None	RIGID	Typical
37	M37	N62	N60		RIGID	None	None	RIGID	Typical
38	M38	N61	N62		Grating Support	Beam	Single Angle	A36 Gr.36	Typical
39	M39	N73	N71		RIGID	None	None	RIGID	Typical
40	M40	N74	N72		RIGID	None	None	RIGID	Typical
41	M41	N73	N74	270	Grating Support	Beam	Single Angle	A36 Gr.36	Typical
42	M42	N75A	N57		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
43	M43	N57	N58		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
44	M44	N58	N59A		RIGID	None	None	RIGID	Typical
45	M45	N76A	N60A		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
46	M46	N60A	N61A		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
47	M47	N61A	N62A		RIGID	None	None	RIGID	Typical
48	M48	N75A	N49	90	Platform Crossmember	Beam	SquareTube	A500 Gr.B Rect	Typical
49	M49	N49	N48		RIGID	None	None	RIGID	Typical
50	M50	N76A	N44	90	Platform Crossmember	Beam	SquareTube	A500 Gr.B Rect	Typical
51	M51	N44	N42		RIGID	None	None	RIGID	Typical
52	M52	N69	N67		RIGID	None	None	RIGID	Typical
53	M53	N70	N68		RIGID	None	None	RIGID	Typical
54	M54	N69	N70		Grating Support	Beam	Single Angle	A36 Gr.36	Typical
55	M55	N73A	N71A		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
56	M56	N74A	N72A		RIGID	None	None	RIGID	Typical
57	M57	N73A	N74A	270	Grating Support	Beam	Single Angle	A36 Gr.36	Typical
58	M58	N95	N77		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
59	M59	N77	N78		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
60	M60	N78	N79		RIGID	None	None	RIGID	Typical
61	M61	N96	N80		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
62	M62	N80	N81		Cross Arm Plate	Column	RECT	A36 Gr.36	Typical
63	M63	N81	N82		RIGID	None	None	RIGID	Typical
64	M64	N95	N43	90	Platform Crossmember	Beam	SquareTube	A500 Gr.B Rect	Typical
65	M65	N43	N42		RIGID	None	None	RIGID	Typical
66	M66	N96	N47	90	Platform Crossmember	Beam	SquareTube	A500 Gr.B Rect	Typical
67	M67	N47	N45		RIGID	None	None	RIGID	Typical
68	M68	N89	N87		RIGID	None	None	RIGID	Typical
69	M69	N90	N88		RIGID	None	None	RIGID	Typical
70	M70	N89	N90		Grating Support	Beam	Single Angle	A36 Gr.36	Typical
71	M71	N93	N91		RIGID	None	None	RIGID	Typical
72	M72	N94	N92		RIGID	None	None	RIGID	Typical
73	M73	N93	N94	270	Grating Support	Beam	Single Angle	A36 Gr.36	Typical
74	M74	N89A	N90A		RIGID	None	None	RIGID	Typical
75	MP2A	N91A	N92A		Larger Mount Pipe	Column	Pipe	A53 Gr.B	Typical
76	M76	N93A	N94A		RIGID	None	None	RIGID	Typical
77	MP3A	N95A	N96A		Larger Mount Pipe	Column	Pipe	A53 Gr.B	Typical
78	M78	N97	N98		RIGID	None	None	RIGID	Typical
79	MP4A	N99	N100		Mount Pipe	Column	Pipe	A53 Gr.B	Typical
80	M80	N102	N101		Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
81	M81	N103	N104		RIGID	None	None	RIGID	Typical
82	MP1C	N105	N106		Mount Pipe	Column	Pipe	A53 Gr.B	Typical
83	M83	N107	N108		RIGID	None	None	RIGID	Typical
84	MP2C	N109	N110		Larger Mount Pipe	Column	Pipe	A53 Gr.B	Typical
85	M85	N111	N112		RIGID	None	None	RIGID	Typical
86	MP3C	N113	N114		Larger Mount Pipe	Column	Pipe	A53 Gr.B	Typical
87	M87	N115	N116		RIGID	None	None	RIGID	Typical
88	MP4C	N117	N118		Mount Pipe	Column	Pipe	A53 Gr.B	Typical
89	M89	N120	N119		Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
90	M90	N121	N122		RIGID	None	None	RIGID	Typical
91	MP1B	N123	N124		Mount Pipe	Column	Pipe	A53 Gr.B	Typical
92	M92	N125	N126		RIGID	None	None	RIGID	Typical
93	MP2B	N127	N128		Larger Mount Pipe	Column	Pipe	A53 Gr.B	Typical
94	M94	N129	N130		RIGID	None	None	RIGID	Typical
95	MP3B	N131	N132		Larger Mount Pipe	Column	Pipe	A53 Gr.B	Typical
96	M96	N133	N134		RIGID	None	None	RIGID	Typical
97	MP4B	N135	N136		Mount Pipe	Column	Pipe	A53 Gr.B	Typical
98	M98	N138	N137		OVP Mount Pipe	Column	Pipe	A53 Gr.B	Typical
99	M99	N140	N139		OVP Mount Pipe	Column	Pipe	A53 Gr.B	Typical
100	M100	N143	N144		RIGID	None	None	RIGID	Typical
101	M101	N145	N146		RIGID	None	None	RIGID	Typical
102	M102	N147	N148		RIGID	None	None	RIGID	Typical
103	M103	N149	N150		RIGID	None	None	RIGID	Typical
104	M104	N141	N142		Support Rail	Column	Pipe	A53 Gr.B	Typical
105	M105	N153	N151		RIGID	None	None	RIGID	Typical
106	M106	N154	N152		RIGID	None	None	RIGID	Typical
107	M107	N157	N158		RIGID	None	None	RIGID	Typical
108	M108	N159	N160		RIGID	None	None	RIGID	Typical
109	M109	N161	N162		RIGID	None	None	RIGID	Typical
110	M110	N163	N164		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
111	M111	N155	N156		Support Rail	Column	Pipe	A53 Gr.B	Typical
112	M112	N167	N165		RIGID	None	None	RIGID	Typical
113	M113	N168	N166		RIGID	None	None	RIGID	Typical
114	M114	N171	N172		RIGID	None	None	RIGID	Typical
115	M115	N173	N174		RIGID	None	None	RIGID	Typical
116	M116	N175	N176		RIGID	None	None	RIGID	Typical
117	M117	N177	N178		RIGID	None	None	RIGID	Typical
118	M118	N169	N170		Support Rail	Column	Pipe	A53 Gr.B	Typical
119	M119	N181	N179		RIGID	None	None	RIGID	Typical
120	M120	N182	N180		RIGID	None	None	RIGID	Typical
121	M121	N182	N153	90	Support Rail Corner	Column	Single Angle	A36 Gr.36	Typical
122	M122	N154	N167	90	Support Rail Corner	Column	Single Angle	A36 Gr.36	Typical
123	M123	N168	N181	90	Support Rail Corner	Column	Single Angle	A36 Gr.36	Typical

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
1	M1	Face Horizontal	12.5	Lbyy	N/A	N/A	Lateral
2	M2	Cross Arm Plate	0.199		N/A	N/A	Lateral
3	M3	Cross Arm Plate	0.292		N/A	N/A	Lateral
4	M5	Corner Plate	0.125	Lbyy	N/A	N/A	Lateral
5	MP1A	Mount Pipe	5.25		N/A	N/A	Lateral
6	M9	Corner Plate	0.125	Lbyy	N/A	N/A	Lateral
7	M11	Corner Plate	0.125	Lbyy	N/A	N/A	Lateral
8	M13	Corner Plate	0.125	Lbyy	N/A	N/A	Lateral
9	M15	Corner Plate	0.125	Lbyy	N/A	N/A	Lateral
10	M17	Corner Plate	0.125	Lbyy	N/A	N/A	Lateral
11	M19	Corner Plate	1.061	Lbyy	N/A	N/A	Lateral
12	M20	Corner Plate	1.061	Lbyy	N/A	N/A	Lateral
13	M21	Corner Plate	1.061	Lbyy	N/A	N/A	Lateral
14	M22	Standoff Horizontal	5.167	Lbyy	N/A	N/A	Lateral
15	M23	Standoff Horizontal	5.167	Lbyy	N/A	N/A	Lateral
16	M24	Standoff Horizontal	5.167	Lbyy	N/A	N/A	Lateral
17	M25	Cross Arm Plate	0.199		N/A	N/A	Lateral
18	M26	Cross Arm Plate	0.292		N/A	N/A	Lateral
19	M30	Platform Crossmember	2.39	Lbyy	N/A	N/A	Lateral
20	M33	Platform Crossmember	2.39	Lbyy	N/A	N/A	Lateral
21	M38	Grating Support	4.184	Lbyy	N/A	N/A	Lateral
22	M41	Grating Support	4.184	Lbyy	N/A	N/A	Lateral
23	M42	Cross Arm Plate	0.199		N/A	N/A	Lateral
24	M43	Cross Arm Plate	0.292		N/A	N/A	Lateral
25	M45	Cross Arm Plate	0.199		N/A	N/A	Lateral
26	M46	Cross Arm Plate	0.292		N/A	N/A	Lateral
27	M48	Platform Crossmember	2.39	Lbyy	N/A	N/A	Lateral
28	M50	Platform Crossmember	2.39	Lbyy	N/A	N/A	Lateral
29	M54	Grating Support	4.184	Lbyy	N/A	N/A	Lateral
30	M57	Grating Support	4.184	Lbyy	N/A	N/A	Lateral
31	M58	Cross Arm Plate	0.199		N/A	N/A	Lateral
32	M59	Cross Arm Plate	0.292		N/A	N/A	Lateral
33	M61	Cross Arm Plate	0.199		N/A	N/A	Lateral
34	M62	Cross Arm Plate	0.292		N/A	N/A	Lateral
35	M64	Platform Crossmember	2.39	Lbyy	N/A	N/A	Lateral
36	M66	Platform Crossmember	2.39	Lbyy	N/A	N/A	Lateral
37	M70	Grating Support	4.184	Lbyy	N/A	N/A	Lateral
38	M73	Grating Support	4.184	Lbyy	N/A	N/A	Lateral
39	MP2A	Larger Mount Pipe	8		N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
40	MP3A	Larger Mount Pipe	8		N/A	N/A	Lateral
41	MP4A	Mount Pipe	5.25		N/A	N/A	Lateral
42	M80	Face Horizontal	12.5	Lbyy	N/A	N/A	Lateral
43	MP1C	Mount Pipe	5.25		N/A	N/A	Lateral
44	MP2C	Larger Mount Pipe	8		N/A	N/A	Lateral
45	MP3C	Larger Mount Pipe	8		N/A	N/A	Lateral
46	MP4C	Mount Pipe	5.25		N/A	N/A	Lateral
47	M89	Face Horizontal	12.5	Lbyy	N/A	N/A	Lateral
48	MP1B	Mount Pipe	5.25		N/A	N/A	Lateral
49	MP2B	Larger Mount Pipe	8		N/A	N/A	Lateral
50	MP3B	Larger Mount Pipe	8		N/A	N/A	Lateral
51	MP4B	Mount Pipe	5.25		N/A	N/A	Lateral
52	M98	OVP Mount Pipe	3		N/A	N/A	Lateral
53	M99	OVP Mount Pipe	3		N/A	N/A	Lateral
54	M104	Support Rail	12.5		N/A	N/A	Lateral
55	M111	Support Rail	12.5		N/A	N/A	Lateral
56	M118	Support Rail	12.5		N/A	N/A	Lateral
57	M121	Support Rail Corner	2.536		N/A	N/A	Lateral
58	M122	Support Rail Corner	2.536		N/A	N/A	Lateral
59	M123	Support Rail Corner	2.536		N/A	N/A	Lateral

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	Y	-31.65	0.5
2	MP2A	My	-0.015	0.5
3	MP2A	Mz	-0.026	0.5
4	MP2A	Y	-31.65	4.5
5	MP2A	My	-0.015	4.5
6	MP2A	Mz	-0.026	4.5
7	MP2B	Y	-31.65	0.5
8	MP2B	My	0.029	0.5
9	MP2B	Mz	0.005	0.5
10	MP2B	Y	-31.65	4.5
11	MP2B	My	0.029	4.5
12	MP2B	Mz	0.005	4.5
13	MP2C	Y	-31.65	0.5
14	MP2C	My	-0.019	0.5
15	MP2C	Mz	0.023	0.5
16	MP2C	Y	-31.65	4.5
17	MP2C	My	-0.019	4.5
18	MP2C	Mz	0.023	4.5
19	MP2A	Y	-31.65	0.5
20	MP2A	My	-0.026	0.5
21	MP2A	Mz	0.015	0.5
22	MP2A	Y	-31.65	4.5
23	MP2A	My	-0.026	4.5
24	MP2A	Mz	0.015	4.5
25	MP2B	Y	-31.65	0.5
26	MP2B	My	0.005	0.5
27	MP2B	Mz	-0.029	0.5
28	MP2B	Y	-31.65	4.5
29	MP2B	My	0.005	4.5
30	MP2B	Mz	-0.029	4.5
31	MP2C	Y	-31.65	0.5
32	MP2C	My	0.023	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
33	MP2C	Mz	0.019	0.5
34	MP2C	Y	-31.65	4.5
35	MP2C	My	0.023	4.5
36	MP2C	Mz	0.019	4.5
37	MP3A	Y	-28.65	1.5
38	MP3A	My	-0.018	1.5
39	MP3A	Mz	-0.005	1.5
40	MP3A	Y	-28.65	3.5
41	MP3A	My	-0.018	3.5
42	MP3A	Mz	-0.005	3.5
43	MP3B	Y	-28.65	1.5
44	MP3B	My	0.016	1.5
45	MP3B	Mz	-0.011	1.5
46	MP3B	Y	-28.65	3.5
47	MP3B	My	0.016	3.5
48	MP3B	Mz	-0.011	3.5
49	MP3C	Y	-28.65	1.5
50	MP3C	My	0.002	1.5
51	MP3C	Mz	0.019	1.5
52	MP3C	Y	-28.65	3.5
53	MP3C	My	0.002	3.5
54	MP3C	Mz	0.019	3.5
55	MP2A	Y	-10.4	2
56	MP2A	My	0.007	2
57	MP2A	Mz	0.002	2
58	MP2B	Y	-10.4	2
59	MP2B	My	-0.006	2
60	MP2B	Mz	0.004	2
61	MP2C	Y	-10.4	2
62	MP2C	My	-0.000604	2
63	MP2C	Mz	-0.007	2
64	MP2A	Y	-74.7	3.5
65	MP2A	My	0.048	3.5
66	MP2A	Mz	0.013	3.5
67	MP2B	Y	-74.7	3.5
68	MP2B	My	-0.041	3.5
69	MP2B	Mz	0.029	3.5
70	MP2C	Y	-74.7	3.5
71	MP2C	My	-0.004	3.5
72	MP2C	Mz	-0.05	3.5
73	MP1A	Y	-79.1	3.5
74	MP1A	My	0.051	3.5
75	MP1A	Mz	0.014	3.5
76	MP1B	Y	-79.1	3.5
77	MP1B	My	0.051	3.5
78	MP1B	Mz	0.014	3.5
79	MP1C	Y	-79.1	3.5
80	MP1C	My	0.051	3.5
81	MP1C	Mz	0.014	3.5
82	MP1C	Y	-10.5	0.5
83	MP1C	My	0.00061	0.5
84	MP1C	Mz	0.007	0.5
85	MP1C	Y	-10.5	4.5
86	MP1C	My	0.00061	4.5
87	MP1C	Mz	0.007	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
88	MP4C	Y	-10.5	0.5
89	MP4C	My	0.00061	0.5
90	MP4C	Mz	0.007	0.5
91	MP4C	Y	-10.5	4.5
92	MP4C	My	0.00061	4.5
93	MP4C	Mz	0.007	4.5
94	MP1A	Y	-13.5	0.5
95	MP1A	My	-0.009	0.5
96	MP1A	Mz	-0.002	0.5
97	MP1A	Y	-13.5	4.5
98	MP1A	My	-0.009	4.5
99	MP1A	Mz	-0.002	4.5
100	MP1B	Y	-13.5	0.5
101	MP1B	My	0.007	0.5
102	MP1B	Mz	-0.005	0.5
103	MP1B	Y	-13.5	4.5
104	MP1B	My	0.007	4.5
105	MP1B	Mz	-0.005	4.5
106	MP4A	Y	-13.5	0.5
107	MP4A	My	-0.009	0.5
108	MP4A	Mz	-0.002	0.5
109	MP4A	Y	-13.5	4.5
110	MP4A	My	-0.009	4.5
111	MP4A	Mz	-0.002	4.5
112	MP4B	Y	-13.5	0.5
113	MP4B	My	0.007	0.5
114	MP4B	Mz	-0.005	0.5
115	MP4B	Y	-13.5	4.5
116	MP4B	My	0.007	4.5
117	MP4B	Mz	-0.005	4.5
118	M99	Y	-26.9	1
119	M99	My	-0.008	1
120	M99	Mz	0.016	1
121	M98	Y	-26.9	1
122	M98	My	-0.008	1
123	M98	Mz	0.016	1

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	Y	-70.628	0.5
2	MP2A	My	-0.033	0.5
3	MP2A	Mz	-0.058	0.5
4	MP2A	Y	-70.628	4.5
5	MP2A	My	-0.033	4.5
6	MP2A	Mz	-0.058	4.5
7	MP2B	Y	-70.628	0.5
8	MP2B	My	0.066	0.5
9	MP2B	Mz	0.012	0.5
10	MP2B	Y	-70.628	4.5
11	MP2B	My	0.066	4.5
12	MP2B	Mz	0.012	4.5
13	MP2C	Y	-70.628	0.5
14	MP2C	My	-0.043	0.5
15	MP2C	Mz	0.051	0.5
16	MP2C	Y	-70.628	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
17	MP2C	My	-0.043	4.5
18	MP2C	Mz	0.051	4.5
19	MP2A	Y	-70.628	0.5
20	MP2A	My	-0.058	0.5
21	MP2A	Mz	0.033	0.5
22	MP2A	Y	-70.628	4.5
23	MP2A	My	-0.058	4.5
24	MP2A	Mz	0.033	4.5
25	MP2B	Y	-70.628	0.5
26	MP2B	My	0.012	0.5
27	MP2B	Mz	-0.066	0.5
28	MP2B	Y	-70.628	4.5
29	MP2B	My	0.012	4.5
30	MP2B	Mz	-0.066	4.5
31	MP2C	Y	-70.628	0.5
32	MP2C	My	0.051	0.5
33	MP2C	Mz	0.043	0.5
34	MP2C	Y	-70.628	4.5
35	MP2C	My	0.051	4.5
36	MP2C	Mz	0.043	4.5
37	MP3A	Y	-30.075	1.5
38	MP3A	My	-0.019	1.5
39	MP3A	Mz	-0.005	1.5
40	MP3A	Y	-30.075	3.5
41	MP3A	My	-0.019	3.5
42	MP3A	Mz	-0.005	3.5
43	MP3B	Y	-30.075	1.5
44	MP3B	My	0.016	1.5
45	MP3B	Mz	-0.011	1.5
46	MP3B	Y	-30.075	3.5
47	MP3B	My	0.016	3.5
48	MP3B	Mz	-0.011	3.5
49	MP3C	Y	-30.075	1.5
50	MP3C	My	0.002	1.5
51	MP3C	Mz	0.02	1.5
52	MP3C	Y	-30.075	3.5
53	MP3C	My	0.002	3.5
54	MP3C	Mz	0.02	3.5
55	MP2A	Y	-10.862	2
56	MP2A	My	0.007	2
57	MP2A	Mz	0.002	2
58	MP2B	Y	-10.862	2
59	MP2B	My	-0.006	2
60	MP2B	Mz	0.004	2
61	MP2C	Y	-10.862	2
62	MP2C	My	-0.000631	2
63	MP2C	Mz	-0.007	2
64	MP2A	Y	-45.351	3.5
65	MP2A	My	0.029	3.5
66	MP2A	Mz	0.008	3.5
67	MP2B	Y	-45.351	3.5
68	MP2B	My	-0.025	3.5
69	MP2B	Mz	0.017	3.5
70	MP2C	Y	-45.351	3.5
71	MP2C	My	-0.003	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
72	MP2C	Mz	-0.03	3.5
73	MP1A	Y	-45.832	3.5
74	MP1A	My	0.03	3.5
75	MP1A	Mz	0.008	3.5
76	MP1B	Y	-45.832	3.5
77	MP1B	My	0.03	3.5
78	MP1B	Mz	0.008	3.5
79	MP1C	Y	-45.832	3.5
80	MP1C	My	0.03	3.5
81	MP1C	Mz	0.008	3.5
82	MP1C	Y	-59.053	0.5
83	MP1C	My	0.003	0.5
84	MP1C	Mz	0.039	0.5
85	MP1C	Y	-59.053	4.5
86	MP1C	My	0.003	4.5
87	MP1C	Mz	0.039	4.5
88	MP4C	Y	-59.053	0.5
89	MP4C	My	0.003	0.5
90	MP4C	Mz	0.039	0.5
91	MP4C	Y	-59.053	4.5
92	MP4C	My	0.003	4.5
93	MP4C	Mz	0.039	4.5
94	MP1A	Y	-89.522	0.5
95	MP1A	My	-0.058	0.5
96	MP1A	Mz	-0.015	0.5
97	MP1A	Y	-89.522	4.5
98	MP1A	My	-0.058	4.5
99	MP1A	Mz	-0.015	4.5
100	MP1B	Y	-89.522	0.5
101	MP1B	My	0.049	0.5
102	MP1B	Mz	-0.034	0.5
103	MP1B	Y	-89.522	4.5
104	MP1B	My	0.049	4.5
105	MP1B	Mz	-0.034	4.5
106	MP4A	Y	-89.522	0.5
107	MP4A	My	-0.058	0.5
108	MP4A	Mz	-0.015	0.5
109	MP4A	Y	-89.522	4.5
110	MP4A	My	-0.058	4.5
111	MP4A	Mz	-0.015	4.5
112	MP4B	Y	-89.522	0.5
113	MP4B	My	0.049	0.5
114	MP4B	Mz	-0.034	0.5
115	MP4B	Y	-89.522	4.5
116	MP4B	My	0.049	4.5
117	MP4B	Mz	-0.034	4.5
118	M99	Y	-55.838	1
119	M99	My	-0.016	1
120	M99	Mz	0.034	1
121	M98	Y	-55.838	1
122	M98	My	-0.016	1
123	M98	Mz	0.034	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	0.5
2	MP2A	Z	-166.22	0.5
3	MP2A	Mx	0.136	0.5
4	MP2A	X	0	4.5
5	MP2A	Z	-166.22	4.5
6	MP2A	Mx	0.136	4.5
7	MP2B	X	0	0.5
8	MP2B	Z	-150.921	0.5
9	MP2B	Mx	-0.025	0.5
10	MP2B	X	0	4.5
11	MP2B	Z	-150.921	4.5
12	MP2B	Mx	-0.025	4.5
13	MP2C	X	0	0.5
14	MP2C	Z	-112.184	0.5
15	MP2C	Mx	-0.081	0.5
16	MP2C	X	0	4.5
17	MP2C	Z	-112.184	4.5
18	MP2C	Mx	-0.081	4.5
19	MP2A	X	0	0.5
20	MP2A	Z	-166.22	0.5
21	MP2A	Mx	-0.078	0.5
22	MP2A	X	0	4.5
23	MP2A	Z	-166.22	4.5
24	MP2A	Mx	-0.078	4.5
25	MP2B	X	0	0.5
26	MP2B	Z	-150.921	0.5
27	MP2B	Mx	0.14	0.5
28	MP2B	X	0	4.5
29	MP2B	Z	-150.921	4.5
30	MP2B	Mx	0.14	4.5
31	MP2C	X	0	0.5
32	MP2C	Z	-112.184	0.5
33	MP2C	Mx	-0.068	0.5
34	MP2C	X	0	4.5
35	MP2C	Z	-112.184	4.5
36	MP2C	Mx	-0.068	4.5
37	MP3A	X	0	1.5
38	MP3A	Z	-56.449	1.5
39	MP3A	Mx	0.01	1.5
40	MP3A	X	0	3.5
41	MP3A	Z	-56.449	3.5
42	MP3A	Mx	0.01	3.5
43	MP3B	X	0	1.5
44	MP3B	Z	-46.419	1.5
45	MP3B	Mx	0.018	1.5
46	MP3B	X	0	3.5
47	MP3B	Z	-46.419	3.5
48	MP3B	Mx	0.018	3.5
49	MP3C	X	0	1.5
50	MP3C	Z	-21.02	1.5
51	MP3C	Mx	-0.014	1.5
52	MP3C	X	0	3.5
53	MP3C	Z	-21.02	3.5
54	MP3C	Mx	-0.014	3.5
55	MP2A	X	0	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP2A	Z	-13.456	2
57	MP2A	Mx	-0.003	2
58	MP2B	X	0	2
59	MP2B	Z	-12.419	2
60	MP2B	Mx	-0.005	2
61	MP2C	X	0	2
62	MP2C	Z	-9.594	2
63	MP2C	Mx	0.006	2
64	MP2A	X	0	3.5
65	MP2A	Z	-56.617	3.5
66	MP2A	Mx	-0.01	3.5
67	MP2B	X	0	3.5
68	MP2B	Z	-51.626	3.5
69	MP2B	Mx	-0.02	3.5
70	MP2C	X	0	3.5
71	MP2C	Z	-38.989	3.5
72	MP2C	Mx	0.026	3.5
73	MP1A	X	0	3.5
74	MP1A	Z	-68.357	3.5
75	MP1A	Mx	-0.012	3.5
76	MP1B	X	0	3.5
77	MP1B	Z	-68.357	3.5
78	MP1B	Mx	-0.012	3.5
79	MP1C	X	0	3.5
80	MP1C	Z	-68.357	3.5
81	MP1C	Mx	-0.012	3.5
82	MP1C	X	0	0.5
83	MP1C	Z	-160.527	0.5
84	MP1C	Mx	-0.107	0.5
85	MP1C	X	0	4.5
86	MP1C	Z	-160.527	4.5
87	MP1C	Mx	-0.107	4.5
88	MP4C	X	0	0.5
89	MP4C	Z	-160.527	0.5
90	MP4C	Mx	-0.107	0.5
91	MP4C	X	0	4.5
92	MP4C	Z	-160.527	4.5
93	MP4C	Mx	-0.107	4.5
94	MP1A	X	0	0.5
95	MP1A	Z	-178	0.5
96	MP1A	Mx	0.031	0.5
97	MP1A	X	0	4.5
98	MP1A	Z	-178	4.5
99	MP1A	Mx	0.031	4.5
100	MP1B	X	0	0.5
101	MP1B	Z	-172.983	0.5
102	MP1B	Mx	0.066	0.5
103	MP1B	X	0	4.5
104	MP1B	Z	-172.983	4.5
105	MP1B	Mx	0.066	4.5
106	MP4A	X	0	0.5
107	MP4A	Z	-178	0.5
108	MP4A	Mx	0.031	0.5
109	MP4A	X	0	4.5
110	MP4A	Z	-178	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
111	MP4A	Mx	0.031	4.5
112	MP4B	X	0	0.5
113	MP4B	Z	-172.983	0.5
114	MP4B	Mx	0.066	0.5
115	MP4B	X	0	4.5
116	MP4B	Z	-172.983	4.5
117	MP4B	Mx	0.066	4.5
118	M99	X	0	1
119	M99	Z	-66.486	1
120	M99	Mx	-0.04	1
121	M98	X	0	1
122	M98	Z	-66.486	1
123	M98	Mx	-0.04	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	83.11	0.5
2	MP2A	Z	-143.951	0.5
3	MP2A	Mx	0.078	0.5
4	MP2A	X	83.11	4.5
5	MP2A	Z	-143.951	4.5
6	MP2A	Mx	0.078	4.5
7	MP2B	X	61.085	0.5
8	MP2B	Z	-105.802	0.5
9	MP2B	Mx	0.039	0.5
10	MP2B	X	61.085	4.5
11	MP2B	Z	-105.802	4.5
12	MP2B	Mx	0.039	4.5
13	MP2C	X	65.475	0.5
14	MP2C	Z	-113.406	0.5
15	MP2C	Mx	-0.122	0.5
16	MP2C	X	65.475	4.5
17	MP2C	Z	-113.406	4.5
18	MP2C	Mx	-0.122	4.5
19	MP2A	X	83.11	0.5
20	MP2A	Z	-143.951	0.5
21	MP2A	Mx	-0.136	0.5
22	MP2A	X	83.11	4.5
23	MP2A	Z	-143.951	4.5
24	MP2A	Mx	-0.136	4.5
25	MP2B	X	61.085	0.5
26	MP2B	Z	-105.802	0.5
27	MP2B	Mx	0.108	0.5
28	MP2B	X	61.085	4.5
29	MP2B	Z	-105.802	4.5
30	MP2B	Mx	0.108	4.5
31	MP2C	X	65.475	0.5
32	MP2C	Z	-113.406	0.5
33	MP2C	Mx	-0.021	0.5
34	MP2C	X	65.475	4.5
35	MP2C	Z	-113.406	4.5
36	MP2C	Mx	-0.021	4.5
37	MP3A	X	28.225	1.5
38	MP3A	Z	-48.886	1.5
39	MP3A	Mx	-0.01	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
40	MP3A	X	28.225	3.5
41	MP3A	Z	-48.886	3.5
42	MP3A	Mx	-0.01	3.5
43	MP3B	X	13.784	1.5
44	MP3B	Z	-23.874	1.5
45	MP3B	Mx	0.017	1.5
46	MP3B	X	13.784	3.5
47	MP3B	Z	-23.874	3.5
48	MP3B	Mx	0.017	3.5
49	MP3C	X	16.662	1.5
50	MP3C	Z	-28.86	1.5
51	MP3C	Mx	-0.018	1.5
52	MP3C	X	16.662	3.5
53	MP3C	Z	-28.86	3.5
54	MP3C	Mx	-0.018	3.5
55	MP2A	X	6.802	2
56	MP2A	Z	-11.782	2
57	MP2A	Mx	0.002	2
58	MP2B	X	5.161	2
59	MP2B	Z	-8.939	2
60	MP2B	Mx	-0.006	2
61	MP2C	X	5.481	2
62	MP2C	Z	-9.494	2
63	MP2C	Mx	0.006	2
64	MP2A	X	28.309	3.5
65	MP2A	Z	-49.032	3.5
66	MP2A	Mx	0.01	3.5
67	MP2B	X	21.123	3.5
68	MP2B	Z	-36.587	3.5
69	MP2B	Mx	-0.026	3.5
70	MP2C	X	22.556	3.5
71	MP2C	Z	-39.068	3.5
72	MP2C	Mx	0.025	3.5
73	MP1A	X	34.178	3.5
74	MP1A	Z	-59.199	3.5
75	MP1A	Mx	0.012	3.5
76	MP1B	X	34.178	3.5
77	MP1B	Z	-59.199	3.5
78	MP1B	Mx	0.012	3.5
79	MP1C	X	34.178	3.5
80	MP1C	Z	-59.199	3.5
81	MP1C	Mx	0.012	3.5
82	MP1C	X	67.364	0.5
83	MP1C	Z	-116.678	0.5
84	MP1C	Mx	-0.074	0.5
85	MP1C	X	67.364	4.5
86	MP1C	Z	-116.678	4.5
87	MP1C	Mx	-0.074	4.5
88	MP4C	X	67.364	0.5
89	MP4C	Z	-116.678	0.5
90	MP4C	Mx	-0.074	0.5
91	MP4C	X	67.364	4.5
92	MP4C	Z	-116.678	4.5
93	MP4C	Mx	-0.074	4.5
94	MP1A	X	89	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
95	MP1A	Z	-154.152	0.5
96	MP1A	Mx	-0.031	0.5
97	MP1A	X	89	4.5
98	MP1A	Z	-154.152	4.5
99	MP1A	Mx	-0.031	4.5
100	MP1B	X	81.778	0.5
101	MP1B	Z	-141.643	0.5
102	MP1B	Mx	0.099	0.5
103	MP1B	X	81.778	4.5
104	MP1B	Z	-141.643	4.5
105	MP1B	Mx	0.099	4.5
106	MP4A	X	89	0.5
107	MP4A	Z	-154.152	0.5
108	MP4A	Mx	-0.031	0.5
109	MP4A	X	89	4.5
110	MP4A	Z	-154.152	4.5
111	MP4A	Mx	-0.031	4.5
112	MP4B	X	81.778	0.5
113	MP4B	Z	-141.643	0.5
114	MP4B	Mx	0.099	0.5
115	MP4B	X	81.778	4.5
116	MP4B	Z	-141.643	4.5
117	MP4B	Mx	0.099	4.5
118	M99	X	30.444	1
119	M99	Z	-52.73	1
120	M99	Mx	-0.04	1
121	M98	X	30.444	1
122	M98	Z	-52.73	1
123	M98	Mx	-0.04	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	122.054	0.5
2	MP2A	Z	-70.468	0.5
3	MP2A	Mx	0	0.5
4	MP2A	X	122.054	4.5
5	MP2A	Z	-70.468	4.5
6	MP2A	Mx	0	4.5
7	MP2B	X	97.154	0.5
8	MP2B	Z	-56.092	0.5
9	MP2B	Mx	0.081	0.5
10	MP2B	X	97.154	4.5
11	MP2B	Z	-56.092	4.5
12	MP2B	Mx	0.081	4.5
13	MP2C	X	138.306	0.5
14	MP2C	Z	-79.851	0.5
15	MP2C	Mx	-0.141	0.5
16	MP2C	X	138.306	4.5
17	MP2C	Z	-79.851	4.5
18	MP2C	Mx	-0.141	4.5
19	MP2A	X	122.054	0.5
20	MP2A	Z	-70.468	0.5
21	MP2A	Mx	-0.133	0.5
22	MP2A	X	122.054	4.5
23	MP2A	Z	-70.468	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
24	MP2A	Mx	-0.133	4.5
25	MP2B	X	97.154	0.5
26	MP2B	Z	-56.092	0.5
27	MP2B	Mx	0.068	0.5
28	MP2B	X	97.154	4.5
29	MP2B	Z	-56.092	4.5
30	MP2B	Mx	0.068	4.5
31	MP2C	X	138.306	0.5
32	MP2C	Z	-79.851	0.5
33	MP2C	Mx	0.051	0.5
34	MP2C	X	138.306	4.5
35	MP2C	Z	-79.851	4.5
36	MP2C	Mx	0.051	4.5
37	MP3A	X	34.53	1.5
38	MP3A	Z	-19.936	1.5
39	MP3A	Mx	-0.019	1.5
40	MP3A	X	34.53	3.5
41	MP3A	Z	-19.936	3.5
42	MP3A	Mx	-0.019	3.5
43	MP3B	X	18.204	1.5
44	MP3B	Z	-10.51	1.5
45	MP3B	Mx	0.014	1.5
46	MP3B	X	18.204	3.5
47	MP3B	Z	-10.51	3.5
48	MP3B	Mx	0.014	3.5
49	MP3C	X	45.186	1.5
50	MP3C	Z	-26.088	1.5
51	MP3C	Mx	-0.015	1.5
52	MP3C	X	45.186	3.5
53	MP3C	Z	-26.088	3.5
54	MP3C	Mx	-0.015	3.5
55	MP2A	X	10.253	2
56	MP2A	Z	-5.92	2
57	MP2A	Mx	0.005	2
58	MP2B	X	8.309	2
59	MP2B	Z	-4.797	2
60	MP2B	Mx	-0.006	2
61	MP2C	X	11.31	2
62	MP2C	Z	-6.53	2
63	MP2C	Mx	0.004	2
64	MP2A	X	41.889	3.5
65	MP2A	Z	-24.184	3.5
66	MP2A	Mx	0.023	3.5
67	MP2B	X	33.766	3.5
68	MP2B	Z	-19.495	3.5
69	MP2B	Mx	-0.026	3.5
70	MP2C	X	47.191	3.5
71	MP2C	Z	-27.246	3.5
72	MP2C	Mx	0.015	3.5
73	MP1A	X	50.865	3.5
74	MP1A	Z	-29.367	3.5
75	MP1A	Mx	0.028	3.5
76	MP1B	X	50.865	3.5
77	MP1B	Z	-29.367	3.5
78	MP1B	Mx	0.028	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
79	MP1C	X	50.865	3.5
80	MP1C	Z	-29.367	3.5
81	MP1C	Mx	0.028	3.5
82	MP1C	X	82.447	0.5
83	MP1C	Z	-47.601	0.5
84	MP1C	Mx	-0.027	0.5
85	MP1C	X	82.447	4.5
86	MP1C	Z	-47.601	4.5
87	MP1C	Mx	-0.027	4.5
88	MP4C	X	82.447	0.5
89	MP4C	Z	-47.601	0.5
90	MP4C	Mx	-0.027	0.5
91	MP4C	X	82.447	4.5
92	MP4C	Z	-47.601	4.5
93	MP4C	Mx	-0.027	4.5
94	MP1A	X	146.972	0.5
95	MP1A	Z	-84.854	0.5
96	MP1A	Mx	-0.08	0.5
97	MP1A	X	146.972	4.5
98	MP1A	Z	-84.854	4.5
99	MP1A	Mx	-0.08	4.5
100	MP1B	X	138.807	0.5
101	MP1B	Z	-80.14	0.5
102	MP1B	Mx	0.106	0.5
103	MP1B	X	138.807	4.5
104	MP1B	Z	-80.14	4.5
105	MP1B	Mx	0.106	4.5
106	MP4A	X	146.972	0.5
107	MP4A	Z	-84.854	0.5
108	MP4A	Mx	-0.08	0.5
109	MP4A	X	146.972	4.5
110	MP4A	Z	-84.854	4.5
111	MP4A	Mx	-0.08	4.5
112	MP4B	X	138.807	0.5
113	MP4B	Z	-80.14	0.5
114	MP4B	Mx	0.106	0.5
115	MP4B	X	138.807	4.5
116	MP4B	Z	-80.14	4.5
117	MP4B	Mx	0.106	4.5
118	M99	X	61.842	1
119	M99	Z	-35.704	1
120	M99	Mx	-0.039	1
121	M98	X	61.842	1
122	M98	Z	-35.704	1
123	M98	Mx	-0.039	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	115.652	0.5
2	MP2A	Z	0	0.5
3	MP2A	Mx	-0.055	0.5
4	MP2A	X	115.652	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	-0.055	4.5
7	MP2B	X	130.95	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
8	MP2B	Z	0	0.5
9	MP2B	Mx	0.122	0.5
10	MP2B	X	130.95	4.5
11	MP2B	Z	0	4.5
12	MP2B	Mx	0.122	4.5
13	MP2C	X	169.688	0.5
14	MP2C	Z	0	0.5
15	MP2C	Mx	-0.103	0.5
16	MP2C	X	169.688	4.5
17	MP2C	Z	0	4.5
18	MP2C	Mx	-0.103	4.5
19	MP2A	X	115.652	0.5
20	MP2A	Z	0	0.5
21	MP2A	Mx	-0.094	0.5
22	MP2A	X	115.652	4.5
23	MP2A	Z	0	4.5
24	MP2A	Mx	-0.094	4.5
25	MP2B	X	130.95	0.5
26	MP2B	Z	0	0.5
27	MP2B	Mx	0.021	0.5
28	MP2B	X	130.95	4.5
29	MP2B	Z	0	4.5
30	MP2B	Mx	0.021	4.5
31	MP2C	X	169.688	0.5
32	MP2C	Z	0	0.5
33	MP2C	Mx	0.123	0.5
34	MP2C	X	169.688	4.5
35	MP2C	Z	0	4.5
36	MP2C	Mx	0.123	4.5
37	MP3A	X	23.294	1.5
38	MP3A	Z	0	1.5
39	MP3A	Mx	-0.015	1.5
40	MP3A	X	23.294	3.5
41	MP3A	Z	0	3.5
42	MP3A	Mx	-0.015	3.5
43	MP3B	X	33.325	1.5
44	MP3B	Z	0	1.5
45	MP3B	Mx	0.018	1.5
46	MP3B	X	33.325	3.5
47	MP3B	Z	0	3.5
48	MP3B	Mx	0.018	3.5
49	MP3C	X	58.723	1.5
50	MP3C	Z	0	1.5
51	MP3C	Mx	0.003	1.5
52	MP3C	X	58.723	3.5
53	MP3C	Z	0	3.5
54	MP3C	Mx	0.003	3.5
55	MP2A	X	9.926	2
56	MP2A	Z	0	2
57	MP2A	Mx	0.006	2
58	MP2B	X	10.963	2
59	MP2B	Z	0	2
60	MP2B	Mx	-0.006	2
61	MP2C	X	13.787	2
62	MP2C	Z	0	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
63	MP2C	Mx	-0.000801	2
64	MP2A	X	40.121	3.5
65	MP2A	Z	0	3.5
66	MP2A	Mx	0.026	3.5
67	MP2B	X	45.111	3.5
68	MP2B	Z	0	3.5
69	MP2B	Mx	-0.025	3.5
70	MP2C	X	57.749	3.5
71	MP2C	Z	0	3.5
72	MP2C	Mx	-0.003	3.5
73	MP1A	X	49.111	3.5
74	MP1A	Z	0	3.5
75	MP1A	Mx	0.032	3.5
76	MP1B	X	49.111	3.5
77	MP1B	Z	0	3.5
78	MP1B	Mx	0.032	3.5
79	MP1C	X	49.111	3.5
80	MP1C	Z	0	3.5
81	MP1C	Mx	0.032	3.5
82	MP1C	X	81.474	0.5
83	MP1C	Z	0	0.5
84	MP1C	Mx	0.005	0.5
85	MP1C	X	81.474	4.5
86	MP1C	Z	0	4.5
87	MP1C	Mx	0.005	4.5
88	MP4C	X	81.474	0.5
89	MP4C	Z	0	0.5
90	MP4C	Mx	0.005	0.5
91	MP4C	X	81.474	4.5
92	MP4C	Z	0	4.5
93	MP4C	Mx	0.005	4.5
94	MP1A	X	161.418	0.5
95	MP1A	Z	0	0.5
96	MP1A	Mx	-0.104	0.5
97	MP1A	X	161.418	4.5
98	MP1A	Z	0	4.5
99	MP1A	Mx	-0.104	4.5
100	MP1B	X	166.435	0.5
101	MP1B	Z	0	0.5
102	MP1B	Mx	0.091	0.5
103	MP1B	X	166.435	4.5
104	MP1B	Z	0	4.5
105	MP1B	Mx	0.091	4.5
106	MP4A	X	161.418	0.5
107	MP4A	Z	0	0.5
108	MP4A	Mx	-0.104	0.5
109	MP4A	X	161.418	4.5
110	MP4A	Z	0	4.5
111	MP4A	Mx	-0.104	4.5
112	MP4B	X	166.435	0.5
113	MP4B	Z	0	0.5
114	MP4B	Mx	0.091	0.5
115	MP4B	X	166.435	4.5
116	MP4B	Z	0	4.5
117	MP4B	Mx	0.091	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
118	M99	X	87.529	1
119	M99	Z	0	1
120	M99	Mx	-0.025	1
121	M98	X	87.529	1
122	M98	Z	0	1
123	M98	Mx	-0.025	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	100.157	0.5
2	MP2A	Z	57.826	0.5
3	MP2A	Mx	-0.094	0.5
4	MP2A	X	100.157	4.5
5	MP2A	Z	57.826	4.5
6	MP2A	Mx	-0.094	4.5
7	MP2B	X	138.306	0.5
8	MP2B	Z	79.851	0.5
9	MP2B	Mx	0.141	0.5
10	MP2B	X	138.306	4.5
11	MP2B	Z	79.851	4.5
12	MP2B	Mx	0.141	4.5
13	MP2C	X	130.702	0.5
14	MP2C	Z	75.461	0.5
15	MP2C	Mx	-0.025	0.5
16	MP2C	X	130.702	4.5
17	MP2C	Z	75.461	4.5
18	MP2C	Mx	-0.025	4.5
19	MP2A	X	100.157	0.5
20	MP2A	Z	57.826	0.5
21	MP2A	Mx	-0.055	0.5
22	MP2A	X	100.157	4.5
23	MP2A	Z	57.826	4.5
24	MP2A	Mx	-0.055	4.5
25	MP2B	X	138.306	0.5
26	MP2B	Z	79.851	0.5
27	MP2B	Mx	-0.051	0.5
28	MP2B	X	138.306	4.5
29	MP2B	Z	79.851	4.5
30	MP2B	Mx	-0.051	4.5
31	MP2C	X	130.702	0.5
32	MP2C	Z	75.461	0.5
33	MP2C	Mx	0.14	0.5
34	MP2C	X	130.702	4.5
35	MP2C	Z	75.461	4.5
36	MP2C	Mx	0.14	4.5
37	MP3A	X	20.173	1.5
38	MP3A	Z	11.647	1.5
39	MP3A	Mx	-0.015	1.5
40	MP3A	X	20.173	3.5
41	MP3A	Z	11.647	3.5
42	MP3A	Mx	-0.015	3.5
43	MP3B	X	45.186	1.5
44	MP3B	Z	26.088	1.5
45	MP3B	Mx	0.015	1.5
46	MP3B	X	45.186	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
47	MP3B	Z	26.088	3.5
48	MP3B	Mx	0.015	3.5
49	MP3C	X	40.2	1.5
50	MP3C	Z	23.209	1.5
51	MP3C	Mx	0.018	1.5
52	MP3C	X	40.2	3.5
53	MP3C	Z	23.209	3.5
54	MP3C	Mx	0.018	3.5
55	MP2A	X	8.467	2
56	MP2A	Z	4.889	2
57	MP2A	Mx	0.006	2
58	MP2B	X	11.31	2
59	MP2B	Z	6.53	2
60	MP2B	Mx	-0.004	2
61	MP2C	X	10.755	2
62	MP2C	Z	6.209	2
63	MP2C	Mx	-0.005	2
64	MP2A	X	34.745	3.5
65	MP2A	Z	20.06	3.5
66	MP2A	Mx	0.026	3.5
67	MP2B	X	47.191	3.5
68	MP2B	Z	27.246	3.5
69	MP2B	Mx	-0.015	3.5
70	MP2C	X	44.71	3.5
71	MP2C	Z	25.813	3.5
72	MP2C	Mx	-0.02	3.5
73	MP1A	X	42.531	3.5
74	MP1A	Z	24.555	3.5
75	MP1A	Mx	0.032	3.5
76	MP1B	X	42.531	3.5
77	MP1B	Z	24.555	3.5
78	MP1B	Mx	0.032	3.5
79	MP1C	X	42.531	3.5
80	MP1C	Z	24.555	3.5
81	MP1C	Mx	0.032	3.5
82	MP1C	X	92.901	0.5
83	MP1C	Z	53.636	0.5
84	MP1C	Mx	0.041	0.5
85	MP1C	X	92.901	4.5
86	MP1C	Z	53.636	4.5
87	MP1C	Mx	0.041	4.5
88	MP4C	X	92.901	0.5
89	MP4C	Z	53.636	0.5
90	MP4C	Mx	0.041	0.5
91	MP4C	X	92.901	4.5
92	MP4C	Z	53.636	4.5
93	MP4C	Mx	0.041	4.5
94	MP1A	X	139.792	0.5
95	MP1A	Z	80.709	0.5
96	MP1A	Mx	-0.104	0.5
97	MP1A	X	139.792	4.5
98	MP1A	Z	80.709	4.5
99	MP1A	Mx	-0.104	4.5
100	MP1B	X	152.302	0.5
101	MP1B	Z	87.931	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
102	MP1B	Mx	0.05	0.5
103	MP1B	X	152.302	4.5
104	MP1B	Z	87.931	4.5
105	MP1B	Mx	0.05	4.5
106	MP4A	X	139.792	0.5
107	MP4A	Z	80.709	0.5
108	MP4A	Mx	-0.104	0.5
109	MP4A	X	139.792	4.5
110	MP4A	Z	80.709	4.5
111	MP4A	Mx	-0.104	4.5
112	MP4B	X	152.302	0.5
113	MP4B	Z	87.931	0.5
114	MP4B	Mx	0.05	0.5
115	MP4B	X	152.302	4.5
116	MP4B	Z	87.931	4.5
117	MP4B	Mx	0.05	4.5
118	M99	X	80.651	1
119	M99	Z	46.564	1
120	M99	Mx	0.005	1
121	M98	X	80.651	1
122	M98	Z	46.564	1
123	M98	Mx	0.005	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	70.468	0.5
2	MP2A	Z	122.054	0.5
3	MP2A	Mx	-0.133	0.5
4	MP2A	X	70.468	4.5
5	MP2A	Z	122.054	4.5
6	MP2A	Mx	-0.133	4.5
7	MP2B	X	84.844	0.5
8	MP2B	Z	146.954	0.5
9	MP2B	Mx	0.103	0.5
10	MP2B	X	84.844	4.5
11	MP2B	Z	146.954	4.5
12	MP2B	Mx	0.103	4.5
13	MP2C	X	61.085	0.5
14	MP2C	Z	105.802	0.5
15	MP2C	Mx	0.039	0.5
16	MP2C	X	61.085	4.5
17	MP2C	Z	105.802	4.5
18	MP2C	Mx	0.039	4.5
19	MP2A	X	70.468	0.5
20	MP2A	Z	122.054	0.5
21	MP2A	Mx	0	0.5
22	MP2A	X	70.468	4.5
23	MP2A	Z	122.054	4.5
24	MP2A	Mx	0	4.5
25	MP2B	X	84.844	0.5
26	MP2B	Z	146.954	0.5
27	MP2B	Mx	-0.123	0.5
28	MP2B	X	84.844	4.5
29	MP2B	Z	146.954	4.5
30	MP2B	Mx	-0.123	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
31	MP2C	X	61.085	0.5
32	MP2C	Z	105.802	0.5
33	MP2C	Mx	0.108	0.5
34	MP2C	X	61.085	4.5
35	MP2C	Z	105.802	4.5
36	MP2C	Mx	0.108	4.5
37	MP3A	X	19.936	1.5
38	MP3A	Z	34.53	1.5
39	MP3A	Mx	-0.019	1.5
40	MP3A	X	19.936	3.5
41	MP3A	Z	34.53	3.5
42	MP3A	Mx	-0.019	3.5
43	MP3B	X	29.361	1.5
44	MP3B	Z	50.856	1.5
45	MP3B	Mx	-0.003	1.5
46	MP3B	X	29.361	3.5
47	MP3B	Z	50.856	3.5
48	MP3B	Mx	-0.003	3.5
49	MP3C	X	13.784	1.5
50	MP3C	Z	23.874	1.5
51	MP3C	Mx	0.017	1.5
52	MP3C	X	13.784	3.5
53	MP3C	Z	23.874	3.5
54	MP3C	Mx	0.017	3.5
55	MP2A	X	5.771	2
56	MP2A	Z	9.996	2
57	MP2A	Mx	0.006	2
58	MP2B	X	6.894	2
59	MP2B	Z	11.94	2
60	MP2B	Mx	0.000801	2
61	MP2C	X	5.161	2
62	MP2C	Z	8.939	2
63	MP2C	Mx	-0.006	2
64	MP2A	X	24.184	3.5
65	MP2A	Z	41.889	3.5
66	MP2A	Mx	0.023	3.5
67	MP2B	X	28.874	3.5
68	MP2B	Z	50.012	3.5
69	MP2B	Mx	0.003	3.5
70	MP2C	X	21.123	3.5
71	MP2C	Z	36.587	3.5
72	MP2C	Mx	-0.026	3.5
73	MP1A	X	29.367	3.5
74	MP1A	Z	50.865	3.5
75	MP1A	Mx	0.028	3.5
76	MP1B	X	29.367	3.5
77	MP1B	Z	50.865	3.5
78	MP1B	Mx	0.028	3.5
79	MP1C	X	29.367	3.5
80	MP1C	Z	50.865	3.5
81	MP1C	Mx	0.028	3.5
82	MP1C	X	73.4	0.5
83	MP1C	Z	127.132	0.5
84	MP1C	Mx	0.089	0.5
85	MP1C	X	73.4	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
86	MP1C	Z	127.132	4.5
87	MP1C	Mx	0.089	4.5
88	MP4C	X	73.4	0.5
89	MP4C	Z	127.132	0.5
90	MP4C	Mx	0.089	0.5
91	MP4C	X	73.4	4.5
92	MP4C	Z	127.132	4.5
93	MP4C	Mx	0.089	4.5
94	MP1A	X	84.854	0.5
95	MP1A	Z	146.972	0.5
96	MP1A	Mx	-0.08	0.5
97	MP1A	X	84.854	4.5
98	MP1A	Z	146.972	4.5
99	MP1A	Mx	-0.08	4.5
100	MP1B	X	89.568	0.5
101	MP1B	Z	155.137	0.5
102	MP1B	Mx	-0.01	0.5
103	MP1B	X	89.568	4.5
104	MP1B	Z	155.137	4.5
105	MP1B	Mx	-0.01	4.5
106	MP4A	X	84.854	0.5
107	MP4A	Z	146.972	0.5
108	MP4A	Mx	-0.08	0.5
109	MP4A	X	84.854	4.5
110	MP4A	Z	146.972	4.5
111	MP4A	Mx	-0.08	4.5
112	MP4B	X	89.568	0.5
113	MP4B	Z	155.137	0.5
114	MP4B	Mx	-0.01	0.5
115	MP4B	X	89.568	4.5
116	MP4B	Z	155.137	4.5
117	MP4B	Mx	-0.01	4.5
118	M99	X	41.303	1
119	M99	Z	71.539	1
120	M99	Mx	0.032	1
121	M98	X	41.303	1
122	M98	Z	71.539	1
123	M98	Mx	0.032	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	0.5
2	MP2A	Z	166.22	0.5
3	MP2A	Mx	-0.136	0.5
4	MP2A	X	0	4.5
5	MP2A	Z	166.22	4.5
6	MP2A	Mx	-0.136	4.5
7	MP2B	X	0	0.5
8	MP2B	Z	150.921	0.5
9	MP2B	Mx	0.025	0.5
10	MP2B	X	0	4.5
11	MP2B	Z	150.921	4.5
12	MP2B	Mx	0.025	4.5
13	MP2C	X	0	0.5
14	MP2C	Z	112.184	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2C	Mx	0.081	0.5
16	MP2C	X	0	4.5
17	MP2C	Z	112.184	4.5
18	MP2C	Mx	0.081	4.5
19	MP2A	X	0	0.5
20	MP2A	Z	166.22	0.5
21	MP2A	Mx	0.078	0.5
22	MP2A	X	0	4.5
23	MP2A	Z	166.22	4.5
24	MP2A	Mx	0.078	4.5
25	MP2B	X	0	0.5
26	MP2B	Z	150.921	0.5
27	MP2B	Mx	-0.14	0.5
28	MP2B	X	0	4.5
29	MP2B	Z	150.921	4.5
30	MP2B	Mx	-0.14	4.5
31	MP2C	X	0	0.5
32	MP2C	Z	112.184	0.5
33	MP2C	Mx	0.068	0.5
34	MP2C	X	0	4.5
35	MP2C	Z	112.184	4.5
36	MP2C	Mx	0.068	4.5
37	MP3A	X	0	1.5
38	MP3A	Z	56.449	1.5
39	MP3A	Mx	-0.01	1.5
40	MP3A	X	0	3.5
41	MP3A	Z	56.449	3.5
42	MP3A	Mx	-0.01	3.5
43	MP3B	X	0	1.5
44	MP3B	Z	46.419	1.5
45	MP3B	Mx	-0.018	1.5
46	MP3B	X	0	3.5
47	MP3B	Z	46.419	3.5
48	MP3B	Mx	-0.018	3.5
49	MP3C	X	0	1.5
50	MP3C	Z	21.02	1.5
51	MP3C	Mx	0.014	1.5
52	MP3C	X	0	3.5
53	MP3C	Z	21.02	3.5
54	MP3C	Mx	0.014	3.5
55	MP2A	X	0	2
56	MP2A	Z	13.456	2
57	MP2A	Mx	0.003	2
58	MP2B	X	0	2
59	MP2B	Z	12.419	2
60	MP2B	Mx	0.005	2
61	MP2C	X	0	2
62	MP2C	Z	9.594	2
63	MP2C	Mx	-0.006	2
64	MP2A	X	0	3.5
65	MP2A	Z	56.617	3.5
66	MP2A	Mx	0.01	3.5
67	MP2B	X	0	3.5
68	MP2B	Z	51.626	3.5
69	MP2B	Mx	0.02	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	0	3.5
71	MP2C	Z	38.989	3.5
72	MP2C	Mx	-0.026	3.5
73	MP1A	X	0	3.5
74	MP1A	Z	68.357	3.5
75	MP1A	Mx	0.012	3.5
76	MP1B	X	0	3.5
77	MP1B	Z	68.357	3.5
78	MP1B	Mx	0.012	3.5
79	MP1C	X	0	3.5
80	MP1C	Z	68.357	3.5
81	MP1C	Mx	0.012	3.5
82	MP1C	X	0	0.5
83	MP1C	Z	160.527	0.5
84	MP1C	Mx	0.107	0.5
85	MP1C	X	0	4.5
86	MP1C	Z	160.527	4.5
87	MP1C	Mx	0.107	4.5
88	MP4C	X	0	0.5
89	MP4C	Z	160.527	0.5
90	MP4C	Mx	0.107	0.5
91	MP4C	X	0	4.5
92	MP4C	Z	160.527	4.5
93	MP4C	Mx	0.107	4.5
94	MP1A	X	0	0.5
95	MP1A	Z	178	0.5
96	MP1A	Mx	-0.031	0.5
97	MP1A	X	0	4.5
98	MP1A	Z	178	4.5
99	MP1A	Mx	-0.031	4.5
100	MP1B	X	0	0.5
101	MP1B	Z	172.983	0.5
102	MP1B	Mx	-0.066	0.5
103	MP1B	X	0	4.5
104	MP1B	Z	172.983	4.5
105	MP1B	Mx	-0.066	4.5
106	MP4A	X	0	0.5
107	MP4A	Z	178	0.5
108	MP4A	Mx	-0.031	0.5
109	MP4A	X	0	4.5
110	MP4A	Z	178	4.5
111	MP4A	Mx	-0.031	4.5
112	MP4B	X	0	0.5
113	MP4B	Z	172.983	0.5
114	MP4B	Mx	-0.066	0.5
115	MP4B	X	0	4.5
116	MP4B	Z	172.983	4.5
117	MP4B	Mx	-0.066	4.5
118	M99	X	0	1
119	M99	Z	66.486	1
120	M99	Mx	0.04	1
121	M98	X	0	1
122	M98	Z	66.486	1
123	M98	Mx	0.04	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-83.11	0.5
2	MP2A	Z	143.951	0.5
3	MP2A	Mx	-0.078	0.5
4	MP2A	X	-83.11	4.5
5	MP2A	Z	143.951	4.5
6	MP2A	Mx	-0.078	4.5
7	MP2B	X	-61.085	0.5
8	MP2B	Z	105.802	0.5
9	MP2B	Mx	-0.039	0.5
10	MP2B	X	-61.085	4.5
11	MP2B	Z	105.802	4.5
12	MP2B	Mx	-0.039	4.5
13	MP2C	X	-65.475	0.5
14	MP2C	Z	113.406	0.5
15	MP2C	Mx	0.122	0.5
16	MP2C	X	-65.475	4.5
17	MP2C	Z	113.406	4.5
18	MP2C	Mx	0.122	4.5
19	MP2A	X	-83.11	0.5
20	MP2A	Z	143.951	0.5
21	MP2A	Mx	0.136	0.5
22	MP2A	X	-83.11	4.5
23	MP2A	Z	143.951	4.5
24	MP2A	Mx	0.136	4.5
25	MP2B	X	-61.085	0.5
26	MP2B	Z	105.802	0.5
27	MP2B	Mx	-0.108	0.5
28	MP2B	X	-61.085	4.5
29	MP2B	Z	105.802	4.5
30	MP2B	Mx	-0.108	4.5
31	MP2C	X	-65.475	0.5
32	MP2C	Z	113.406	0.5
33	MP2C	Mx	0.021	0.5
34	MP2C	X	-65.475	4.5
35	MP2C	Z	113.406	4.5
36	MP2C	Mx	0.021	4.5
37	MP3A	X	-28.225	1.5
38	MP3A	Z	48.886	1.5
39	MP3A	Mx	0.01	1.5
40	MP3A	X	-28.225	3.5
41	MP3A	Z	48.886	3.5
42	MP3A	Mx	0.01	3.5
43	MP3B	X	-13.784	1.5
44	MP3B	Z	23.874	1.5
45	MP3B	Mx	-0.017	1.5
46	MP3B	X	-13.784	3.5
47	MP3B	Z	23.874	3.5
48	MP3B	Mx	-0.017	3.5
49	MP3C	X	-16.662	1.5
50	MP3C	Z	28.86	1.5
51	MP3C	Mx	0.018	1.5
52	MP3C	X	-16.662	3.5
53	MP3C	Z	28.86	3.5
54	MP3C	Mx	0.018	3.5
55	MP2A	X	-6.802	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP2A	Z	11.782	2
57	MP2A	Mx	-0.002	2
58	MP2B	X	-5.161	2
59	MP2B	Z	8.939	2
60	MP2B	Mx	0.006	2
61	MP2C	X	-5.481	2
62	MP2C	Z	9.494	2
63	MP2C	Mx	-0.006	2
64	MP2A	X	-28.309	3.5
65	MP2A	Z	49.032	3.5
66	MP2A	Mx	-0.01	3.5
67	MP2B	X	-21.123	3.5
68	MP2B	Z	36.587	3.5
69	MP2B	Mx	0.026	3.5
70	MP2C	X	-22.556	3.5
71	MP2C	Z	39.068	3.5
72	MP2C	Mx	-0.025	3.5
73	MP1A	X	-34.178	3.5
74	MP1A	Z	59.199	3.5
75	MP1A	Mx	-0.012	3.5
76	MP1B	X	-34.178	3.5
77	MP1B	Z	59.199	3.5
78	MP1B	Mx	-0.012	3.5
79	MP1C	X	-34.178	3.5
80	MP1C	Z	59.199	3.5
81	MP1C	Mx	-0.012	3.5
82	MP1C	X	-67.364	0.5
83	MP1C	Z	116.678	0.5
84	MP1C	Mx	0.074	0.5
85	MP1C	X	-67.364	4.5
86	MP1C	Z	116.678	4.5
87	MP1C	Mx	0.074	4.5
88	MP4C	X	-67.364	0.5
89	MP4C	Z	116.678	0.5
90	MP4C	Mx	0.074	0.5
91	MP4C	X	-67.364	4.5
92	MP4C	Z	116.678	4.5
93	MP4C	Mx	0.074	4.5
94	MP1A	X	-89	0.5
95	MP1A	Z	154.152	0.5
96	MP1A	Mx	0.031	0.5
97	MP1A	X	-89	4.5
98	MP1A	Z	154.152	4.5
99	MP1A	Mx	0.031	4.5
100	MP1B	X	-81.778	0.5
101	MP1B	Z	141.643	0.5
102	MP1B	Mx	-0.099	0.5
103	MP1B	X	-81.778	4.5
104	MP1B	Z	141.643	4.5
105	MP1B	Mx	-0.099	4.5
106	MP4A	X	-89	0.5
107	MP4A	Z	154.152	0.5
108	MP4A	Mx	0.031	0.5
109	MP4A	X	-89	4.5
110	MP4A	Z	154.152	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
111	MP4A	Mx	0.031	4.5
112	MP4B	X	-81.778	0.5
113	MP4B	Z	141.643	0.5
114	MP4B	Mx	-0.099	0.5
115	MP4B	X	-81.778	4.5
116	MP4B	Z	141.643	4.5
117	MP4B	Mx	-0.099	4.5
118	M99	X	-30.444	1
119	M99	Z	52.73	1
120	M99	Mx	0.04	1
121	M98	X	-30.444	1
122	M98	Z	52.73	1
123	M98	Mx	0.04	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-122.054	0.5
2	MP2A	Z	70.468	0.5
3	MP2A	Mx	0	0.5
4	MP2A	X	-122.054	4.5
5	MP2A	Z	70.468	4.5
6	MP2A	Mx	0	4.5
7	MP2B	X	-97.154	0.5
8	MP2B	Z	56.092	0.5
9	MP2B	Mx	-0.081	0.5
10	MP2B	X	-97.154	4.5
11	MP2B	Z	56.092	4.5
12	MP2B	Mx	-0.081	4.5
13	MP2C	X	-138.306	0.5
14	MP2C	Z	79.851	0.5
15	MP2C	Mx	0.141	0.5
16	MP2C	X	-138.306	4.5
17	MP2C	Z	79.851	4.5
18	MP2C	Mx	0.141	4.5
19	MP2A	X	-122.054	0.5
20	MP2A	Z	70.468	0.5
21	MP2A	Mx	0.133	0.5
22	MP2A	X	-122.054	4.5
23	MP2A	Z	70.468	4.5
24	MP2A	Mx	0.133	4.5
25	MP2B	X	-97.154	0.5
26	MP2B	Z	56.092	0.5
27	MP2B	Mx	-0.068	0.5
28	MP2B	X	-97.154	4.5
29	MP2B	Z	56.092	4.5
30	MP2B	Mx	-0.068	4.5
31	MP2C	X	-138.306	0.5
32	MP2C	Z	79.851	0.5
33	MP2C	Mx	-0.051	0.5
34	MP2C	X	-138.306	4.5
35	MP2C	Z	79.851	4.5
36	MP2C	Mx	-0.051	4.5
37	MP3A	X	-34.53	1.5
38	MP3A	Z	19.936	1.5
39	MP3A	Mx	0.019	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
40	MP3A	X	-34.53	3.5
41	MP3A	Z	19.936	3.5
42	MP3A	Mx	0.019	3.5
43	MP3B	X	-18.204	1.5
44	MP3B	Z	10.51	1.5
45	MP3B	Mx	-0.014	1.5
46	MP3B	X	-18.204	3.5
47	MP3B	Z	10.51	3.5
48	MP3B	Mx	-0.014	3.5
49	MP3C	X	-45.186	1.5
50	MP3C	Z	26.088	1.5
51	MP3C	Mx	0.015	1.5
52	MP3C	X	-45.186	3.5
53	MP3C	Z	26.088	3.5
54	MP3C	Mx	0.015	3.5
55	MP2A	X	-10.253	2
56	MP2A	Z	5.92	2
57	MP2A	Mx	-0.005	2
58	MP2B	X	-8.309	2
59	MP2B	Z	4.797	2
60	MP2B	Mx	0.006	2
61	MP2C	X	-11.31	2
62	MP2C	Z	6.53	2
63	MP2C	Mx	-0.004	2
64	MP2A	X	-41.889	3.5
65	MP2A	Z	24.184	3.5
66	MP2A	Mx	-0.023	3.5
67	MP2B	X	-33.766	3.5
68	MP2B	Z	19.495	3.5
69	MP2B	Mx	0.026	3.5
70	MP2C	X	-47.191	3.5
71	MP2C	Z	27.246	3.5
72	MP2C	Mx	-0.015	3.5
73	MP1A	X	-50.865	3.5
74	MP1A	Z	29.367	3.5
75	MP1A	Mx	-0.028	3.5
76	MP1B	X	-50.865	3.5
77	MP1B	Z	29.367	3.5
78	MP1B	Mx	-0.028	3.5
79	MP1C	X	-50.865	3.5
80	MP1C	Z	29.367	3.5
81	MP1C	Mx	-0.028	3.5
82	MP1C	X	-82.447	0.5
83	MP1C	Z	47.601	0.5
84	MP1C	Mx	0.027	0.5
85	MP1C	X	-82.447	4.5
86	MP1C	Z	47.601	4.5
87	MP1C	Mx	0.027	4.5
88	MP4C	X	-82.447	0.5
89	MP4C	Z	47.601	0.5
90	MP4C	Mx	0.027	0.5
91	MP4C	X	-82.447	4.5
92	MP4C	Z	47.601	4.5
93	MP4C	Mx	0.027	4.5
94	MP1A	X	-146.972	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
95	MP1A	Z	84.854	0.5
96	MP1A	Mx	0.08	0.5
97	MP1A	X	-146.972	4.5
98	MP1A	Z	84.854	4.5
99	MP1A	Mx	0.08	4.5
100	MP1B	X	-138.807	0.5
101	MP1B	Z	80.14	0.5
102	MP1B	Mx	-0.106	0.5
103	MP1B	X	-138.807	4.5
104	MP1B	Z	80.14	4.5
105	MP1B	Mx	-0.106	4.5
106	MP4A	X	-146.972	0.5
107	MP4A	Z	84.854	0.5
108	MP4A	Mx	0.08	0.5
109	MP4A	X	-146.972	4.5
110	MP4A	Z	84.854	4.5
111	MP4A	Mx	0.08	4.5
112	MP4B	X	-138.807	0.5
113	MP4B	Z	80.14	0.5
114	MP4B	Mx	-0.106	0.5
115	MP4B	X	-138.807	4.5
116	MP4B	Z	80.14	4.5
117	MP4B	Mx	-0.106	4.5
118	M99	X	-61.842	1
119	M99	Z	35.704	1
120	M99	Mx	0.039	1
121	M98	X	-61.842	1
122	M98	Z	35.704	1
123	M98	Mx	0.039	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-115.652	0.5
2	MP2A	Z	0	0.5
3	MP2A	Mx	0.055	0.5
4	MP2A	X	-115.652	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	0.055	4.5
7	MP2B	X	-130.95	0.5
8	MP2B	Z	0	0.5
9	MP2B	Mx	-0.122	0.5
10	MP2B	X	-130.95	4.5
11	MP2B	Z	0	4.5
12	MP2B	Mx	-0.122	4.5
13	MP2C	X	-169.688	0.5
14	MP2C	Z	0	0.5
15	MP2C	Mx	0.103	0.5
16	MP2C	X	-169.688	4.5
17	MP2C	Z	0	4.5
18	MP2C	Mx	0.103	4.5
19	MP2A	X	-115.652	0.5
20	MP2A	Z	0	0.5
21	MP2A	Mx	0.094	0.5
22	MP2A	X	-115.652	4.5
23	MP2A	Z	0	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
24	MP2A	Mx	0.094	4.5
25	MP2B	X	-130.95	0.5
26	MP2B	Z	0	0.5
27	MP2B	Mx	-0.021	0.5
28	MP2B	X	-130.95	4.5
29	MP2B	Z	0	4.5
30	MP2B	Mx	-0.021	4.5
31	MP2C	X	-169.688	0.5
32	MP2C	Z	0	0.5
33	MP2C	Mx	-0.123	0.5
34	MP2C	X	-169.688	4.5
35	MP2C	Z	0	4.5
36	MP2C	Mx	-0.123	4.5
37	MP3A	X	-23.294	1.5
38	MP3A	Z	0	1.5
39	MP3A	Mx	0.015	1.5
40	MP3A	X	-23.294	3.5
41	MP3A	Z	0	3.5
42	MP3A	Mx	0.015	3.5
43	MP3B	X	-33.325	1.5
44	MP3B	Z	0	1.5
45	MP3B	Mx	-0.018	1.5
46	MP3B	X	-33.325	3.5
47	MP3B	Z	0	3.5
48	MP3B	Mx	-0.018	3.5
49	MP3C	X	-58.723	1.5
50	MP3C	Z	0	1.5
51	MP3C	Mx	-0.003	1.5
52	MP3C	X	-58.723	3.5
53	MP3C	Z	0	3.5
54	MP3C	Mx	-0.003	3.5
55	MP2A	X	-9.926	2
56	MP2A	Z	0	2
57	MP2A	Mx	-0.006	2
58	MP2B	X	-10.963	2
59	MP2B	Z	0	2
60	MP2B	Mx	0.006	2
61	MP2C	X	-13.787	2
62	MP2C	Z	0	2
63	MP2C	Mx	0.000801	2
64	MP2A	X	-40.121	3.5
65	MP2A	Z	0	3.5
66	MP2A	Mx	-0.026	3.5
67	MP2B	X	-45.111	3.5
68	MP2B	Z	0	3.5
69	MP2B	Mx	0.025	3.5
70	MP2C	X	-57.749	3.5
71	MP2C	Z	0	3.5
72	MP2C	Mx	0.003	3.5
73	MP1A	X	-49.111	3.5
74	MP1A	Z	0	3.5
75	MP1A	Mx	-0.032	3.5
76	MP1B	X	-49.111	3.5
77	MP1B	Z	0	3.5
78	MP1B	Mx	-0.032	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
79	MP1C	X	-49.111	3.5
80	MP1C	Z	0	3.5
81	MP1C	Mx	-0.032	3.5
82	MP1C	X	-81.474	0.5
83	MP1C	Z	0	0.5
84	MP1C	Mx	-0.005	0.5
85	MP1C	X	-81.474	4.5
86	MP1C	Z	0	4.5
87	MP1C	Mx	-0.005	4.5
88	MP4C	X	-81.474	0.5
89	MP4C	Z	0	0.5
90	MP4C	Mx	-0.005	0.5
91	MP4C	X	-81.474	4.5
92	MP4C	Z	0	4.5
93	MP4C	Mx	-0.005	4.5
94	MP1A	X	-161.418	0.5
95	MP1A	Z	0	0.5
96	MP1A	Mx	0.104	0.5
97	MP1A	X	-161.418	4.5
98	MP1A	Z	0	4.5
99	MP1A	Mx	0.104	4.5
100	MP1B	X	-166.435	0.5
101	MP1B	Z	0	0.5
102	MP1B	Mx	-0.091	0.5
103	MP1B	X	-166.435	4.5
104	MP1B	Z	0	4.5
105	MP1B	Mx	-0.091	4.5
106	MP4A	X	-161.418	0.5
107	MP4A	Z	0	0.5
108	MP4A	Mx	0.104	0.5
109	MP4A	X	-161.418	4.5
110	MP4A	Z	0	4.5
111	MP4A	Mx	0.104	4.5
112	MP4B	X	-166.435	0.5
113	MP4B	Z	0	0.5
114	MP4B	Mx	-0.091	0.5
115	MP4B	X	-166.435	4.5
116	MP4B	Z	0	4.5
117	MP4B	Mx	-0.091	4.5
118	M99	X	-87.529	1
119	M99	Z	0	1
120	M99	Mx	0.025	1
121	M98	X	-87.529	1
122	M98	Z	0	1
123	M98	Mx	0.025	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-100.157	0.5
2	MP2A	Z	-57.826	0.5
3	MP2A	Mx	0.094	0.5
4	MP2A	X	-100.157	4.5
5	MP2A	Z	-57.826	4.5
6	MP2A	Mx	0.094	4.5
7	MP2B	X	-138.306	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
8	MP2B	Z	-79.851	0.5
9	MP2B	Mx	-0.141	0.5
10	MP2B	X	-138.306	4.5
11	MP2B	Z	-79.851	4.5
12	MP2B	Mx	-0.141	4.5
13	MP2C	X	-130.702	0.5
14	MP2C	Z	-75.461	0.5
15	MP2C	Mx	0.025	0.5
16	MP2C	X	-130.702	4.5
17	MP2C	Z	-75.461	4.5
18	MP2C	Mx	0.025	4.5
19	MP2A	X	-100.157	0.5
20	MP2A	Z	-57.826	0.5
21	MP2A	Mx	0.055	0.5
22	MP2A	X	-100.157	4.5
23	MP2A	Z	-57.826	4.5
24	MP2A	Mx	0.055	4.5
25	MP2B	X	-138.306	0.5
26	MP2B	Z	-79.851	0.5
27	MP2B	Mx	0.051	0.5
28	MP2B	X	-138.306	4.5
29	MP2B	Z	-79.851	4.5
30	MP2B	Mx	0.051	4.5
31	MP2C	X	-130.702	0.5
32	MP2C	Z	-75.461	0.5
33	MP2C	Mx	-0.14	0.5
34	MP2C	X	-130.702	4.5
35	MP2C	Z	-75.461	4.5
36	MP2C	Mx	-0.14	4.5
37	MP3A	X	-20.173	1.5
38	MP3A	Z	-11.647	1.5
39	MP3A	Mx	0.015	1.5
40	MP3A	X	-20.173	3.5
41	MP3A	Z	-11.647	3.5
42	MP3A	Mx	0.015	3.5
43	MP3B	X	-45.186	1.5
44	MP3B	Z	-26.088	1.5
45	MP3B	Mx	-0.015	1.5
46	MP3B	X	-45.186	3.5
47	MP3B	Z	-26.088	3.5
48	MP3B	Mx	-0.015	3.5
49	MP3C	X	-40.2	1.5
50	MP3C	Z	-23.209	1.5
51	MP3C	Mx	-0.018	1.5
52	MP3C	X	-40.2	3.5
53	MP3C	Z	-23.209	3.5
54	MP3C	Mx	-0.018	3.5
55	MP2A	X	-8.467	2
56	MP2A	Z	-4.889	2
57	MP2A	Mx	-0.006	2
58	MP2B	X	-11.31	2
59	MP2B	Z	-6.53	2
60	MP2B	Mx	0.004	2
61	MP2C	X	-10.755	2
62	MP2C	Z	-6.209	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
63	MP2C	Mx	0.005	2
64	MP2A	X	-34.745	3.5
65	MP2A	Z	-20.06	3.5
66	MP2A	Mx	-0.026	3.5
67	MP2B	X	-47.191	3.5
68	MP2B	Z	-27.246	3.5
69	MP2B	Mx	0.015	3.5
70	MP2C	X	-44.71	3.5
71	MP2C	Z	-25.813	3.5
72	MP2C	Mx	0.02	3.5
73	MP1A	X	-42.531	3.5
74	MP1A	Z	-24.555	3.5
75	MP1A	Mx	-0.032	3.5
76	MP1B	X	-42.531	3.5
77	MP1B	Z	-24.555	3.5
78	MP1B	Mx	-0.032	3.5
79	MP1C	X	-42.531	3.5
80	MP1C	Z	-24.555	3.5
81	MP1C	Mx	-0.032	3.5
82	MP1C	X	-92.901	0.5
83	MP1C	Z	-53.636	0.5
84	MP1C	Mx	-0.041	0.5
85	MP1C	X	-92.901	4.5
86	MP1C	Z	-53.636	4.5
87	MP1C	Mx	-0.041	4.5
88	MP4C	X	-92.901	0.5
89	MP4C	Z	-53.636	0.5
90	MP4C	Mx	-0.041	0.5
91	MP4C	X	-92.901	4.5
92	MP4C	Z	-53.636	4.5
93	MP4C	Mx	-0.041	4.5
94	MP1A	X	-139.792	0.5
95	MP1A	Z	-80.709	0.5
96	MP1A	Mx	0.104	0.5
97	MP1A	X	-139.792	4.5
98	MP1A	Z	-80.709	4.5
99	MP1A	Mx	0.104	4.5
100	MP1B	X	-152.302	0.5
101	MP1B	Z	-87.931	0.5
102	MP1B	Mx	-0.05	0.5
103	MP1B	X	-152.302	4.5
104	MP1B	Z	-87.931	4.5
105	MP1B	Mx	-0.05	4.5
106	MP4A	X	-139.792	0.5
107	MP4A	Z	-80.709	0.5
108	MP4A	Mx	0.104	0.5
109	MP4A	X	-139.792	4.5
110	MP4A	Z	-80.709	4.5
111	MP4A	Mx	0.104	4.5
112	MP4B	X	-152.302	0.5
113	MP4B	Z	-87.931	0.5
114	MP4B	Mx	-0.05	0.5
115	MP4B	X	-152.302	4.5
116	MP4B	Z	-87.931	4.5
117	MP4B	Mx	-0.05	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
118	M99	X	-80.651	1
119	M99	Z	-46.564	1
120	M99	Mx	-0.005	1
121	M98	X	-80.651	1
122	M98	Z	-46.564	1
123	M98	Mx	-0.005	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-70.468	0.5
2	MP2A	Z	-122.054	0.5
3	MP2A	Mx	0.133	0.5
4	MP2A	X	-70.468	4.5
5	MP2A	Z	-122.054	4.5
6	MP2A	Mx	0.133	4.5
7	MP2B	X	-84.844	0.5
8	MP2B	Z	-146.954	0.5
9	MP2B	Mx	-0.103	0.5
10	MP2B	X	-84.844	4.5
11	MP2B	Z	-146.954	4.5
12	MP2B	Mx	-0.103	4.5
13	MP2C	X	-61.085	0.5
14	MP2C	Z	-105.802	0.5
15	MP2C	Mx	-0.039	0.5
16	MP2C	X	-61.085	4.5
17	MP2C	Z	-105.802	4.5
18	MP2C	Mx	-0.039	4.5
19	MP2A	X	-70.468	0.5
20	MP2A	Z	-122.054	0.5
21	MP2A	Mx	0	0.5
22	MP2A	X	-70.468	4.5
23	MP2A	Z	-122.054	4.5
24	MP2A	Mx	0	4.5
25	MP2B	X	-84.844	0.5
26	MP2B	Z	-146.954	0.5
27	MP2B	Mx	0.123	0.5
28	MP2B	X	-84.844	4.5
29	MP2B	Z	-146.954	4.5
30	MP2B	Mx	0.123	4.5
31	MP2C	X	-61.085	0.5
32	MP2C	Z	-105.802	0.5
33	MP2C	Mx	-0.108	0.5
34	MP2C	X	-61.085	4.5
35	MP2C	Z	-105.802	4.5
36	MP2C	Mx	-0.108	4.5
37	MP3A	X	-19.936	1.5
38	MP3A	Z	-34.53	1.5
39	MP3A	Mx	0.019	1.5
40	MP3A	X	-19.936	3.5
41	MP3A	Z	-34.53	3.5
42	MP3A	Mx	0.019	3.5
43	MP3B	X	-29.361	1.5
44	MP3B	Z	-50.856	1.5
45	MP3B	Mx	0.003	1.5
46	MP3B	X	-29.361	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
47	MP3B	Z	-50.856	3.5
48	MP3B	Mx	0.003	3.5
49	MP3C	X	-13.784	1.5
50	MP3C	Z	-23.874	1.5
51	MP3C	Mx	-0.017	1.5
52	MP3C	X	-13.784	3.5
53	MP3C	Z	-23.874	3.5
54	MP3C	Mx	-0.017	3.5
55	MP2A	X	-5.771	2
56	MP2A	Z	-9.996	2
57	MP2A	Mx	-0.006	2
58	MP2B	X	-6.894	2
59	MP2B	Z	-11.94	2
60	MP2B	Mx	-0.000801	2
61	MP2C	X	-5.161	2
62	MP2C	Z	-8.939	2
63	MP2C	Mx	0.006	2
64	MP2A	X	-24.184	3.5
65	MP2A	Z	-41.889	3.5
66	MP2A	Mx	-0.023	3.5
67	MP2B	X	-28.874	3.5
68	MP2B	Z	-50.012	3.5
69	MP2B	Mx	-0.003	3.5
70	MP2C	X	-21.123	3.5
71	MP2C	Z	-36.587	3.5
72	MP2C	Mx	0.026	3.5
73	MP1A	X	-29.367	3.5
74	MP1A	Z	-50.865	3.5
75	MP1A	Mx	-0.028	3.5
76	MP1B	X	-29.367	3.5
77	MP1B	Z	-50.865	3.5
78	MP1B	Mx	-0.028	3.5
79	MP1C	X	-29.367	3.5
80	MP1C	Z	-50.865	3.5
81	MP1C	Mx	-0.028	3.5
82	MP1C	X	-73.4	0.5
83	MP1C	Z	-127.132	0.5
84	MP1C	Mx	-0.089	0.5
85	MP1C	X	-73.4	4.5
86	MP1C	Z	-127.132	4.5
87	MP1C	Mx	-0.089	4.5
88	MP4C	X	-73.4	0.5
89	MP4C	Z	-127.132	0.5
90	MP4C	Mx	-0.089	0.5
91	MP4C	X	-73.4	4.5
92	MP4C	Z	-127.132	4.5
93	MP4C	Mx	-0.089	4.5
94	MP1A	X	-84.854	0.5
95	MP1A	Z	-146.972	0.5
96	MP1A	Mx	0.08	0.5
97	MP1A	X	-84.854	4.5
98	MP1A	Z	-146.972	4.5
99	MP1A	Mx	0.08	4.5
100	MP1B	X	-89.568	0.5
101	MP1B	Z	-155.137	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
102	MP1B	Mx	0.01	0.5
103	MP1B	X	-89.568	4.5
104	MP1B	Z	-155.137	4.5
105	MP1B	Mx	0.01	4.5
106	MP4A	X	-84.854	0.5
107	MP4A	Z	-146.972	0.5
108	MP4A	Mx	0.08	0.5
109	MP4A	X	-84.854	4.5
110	MP4A	Z	-146.972	4.5
111	MP4A	Mx	0.08	4.5
112	MP4B	X	-89.568	0.5
113	MP4B	Z	-155.137	0.5
114	MP4B	Mx	0.01	0.5
115	MP4B	X	-89.568	4.5
116	MP4B	Z	-155.137	4.5
117	MP4B	Mx	0.01	4.5
118	M99	X	-41.303	1
119	M99	Z	-71.539	1
120	M99	Mx	-0.032	1
121	M98	X	-41.303	1
122	M98	Z	-71.539	1
123	M98	Mx	-0.032	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	0.5
2	MP2A	Z	-29.218	0.5
3	MP2A	Mx	0.024	0.5
4	MP2A	X	0	4.5
5	MP2A	Z	-29.218	4.5
6	MP2A	Mx	0.024	4.5
7	MP2B	X	0	0.5
8	MP2B	Z	-26.734	0.5
9	MP2B	Mx	-0.004	0.5
10	MP2B	X	0	4.5
11	MP2B	Z	-26.734	4.5
12	MP2B	Mx	-0.004	4.5
13	MP2C	X	0	0.5
14	MP2C	Z	-20.443	0.5
15	MP2C	Mx	-0.015	0.5
16	MP2C	X	0	4.5
17	MP2C	Z	-20.443	4.5
18	MP2C	Mx	-0.015	4.5
19	MP2A	X	0	0.5
20	MP2A	Z	-29.218	0.5
21	MP2A	Mx	-0.014	0.5
22	MP2A	X	0	4.5
23	MP2A	Z	-29.218	4.5
24	MP2A	Mx	-0.014	4.5
25	MP2B	X	0	0.5
26	MP2B	Z	-26.734	0.5
27	MP2B	Mx	0.025	0.5
28	MP2B	X	0	4.5
29	MP2B	Z	-26.734	4.5
30	MP2B	Mx	0.025	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
31	MP2C	X	0	0.5
32	MP2C	Z	-20.443	0.5
33	MP2C	Mx	-0.012	0.5
34	MP2C	X	0	4.5
35	MP2C	Z	-20.443	4.5
36	MP2C	Mx	-0.012	4.5
37	MP3A	X	0	1.5
38	MP3A	Z	-12.459	1.5
39	MP3A	Mx	0.002	1.5
40	MP3A	X	0	3.5
41	MP3A	Z	-12.459	3.5
42	MP3A	Mx	0.002	3.5
43	MP3B	X	0	1.5
44	MP3B	Z	-10.499	1.5
45	MP3B	Mx	0.004	1.5
46	MP3B	X	0	3.5
47	MP3B	Z	-10.499	3.5
48	MP3B	Mx	0.004	3.5
49	MP3C	X	0	1.5
50	MP3C	Z	-5.534	1.5
51	MP3C	Mx	-0.004	1.5
52	MP3C	X	0	3.5
53	MP3C	Z	-5.534	3.5
54	MP3C	Mx	-0.004	3.5
55	MP2A	X	0	2
56	MP2A	Z	-3.187	2
57	MP2A	Mx	-0.000621	2
58	MP2B	X	0	2
59	MP2B	Z	-2.989	2
60	MP2B	Mx	-0.001	2
61	MP2C	X	0	2
62	MP2C	Z	-2.451	2
63	MP2C	Mx	0.002	2
64	MP2A	X	0	3.5
65	MP2A	Z	-13.119	3.5
66	MP2A	Mx	-0.002	3.5
67	MP2B	X	0	3.5
68	MP2B	Z	-12.052	3.5
69	MP2B	Mx	-0.005	3.5
70	MP2C	X	0	3.5
71	MP2C	Z	-9.35	3.5
72	MP2C	Mx	0.006	3.5
73	MP1A	X	0	3.5
74	MP1A	Z	-13.13	3.5
75	MP1A	Mx	-0.002	3.5
76	MP1B	X	0	3.5
77	MP1B	Z	-13.13	3.5
78	MP1B	Mx	-0.002	3.5
79	MP1C	X	0	3.5
80	MP1C	Z	-13.13	3.5
81	MP1C	Mx	-0.002	3.5
82	MP1C	X	0	0.5
83	MP1C	Z	-28.245	0.5
84	MP1C	Mx	-0.019	0.5
85	MP1C	X	0	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
86	MP1C	Z	-28.245	4.5
87	MP1C	Mx	-0.019	4.5
88	MP4C	X	0	0.5
89	MP4C	Z	-28.245	0.5
90	MP4C	Mx	-0.019	0.5
91	MP4C	X	0	4.5
92	MP4C	Z	-28.245	4.5
93	MP4C	Mx	-0.019	4.5
94	MP1A	X	0	0.5
95	MP1A	Z	-31.111	0.5
96	MP1A	Mx	0.005	0.5
97	MP1A	X	0	4.5
98	MP1A	Z	-31.111	4.5
99	MP1A	Mx	0.005	4.5
100	MP1B	X	0	0.5
101	MP1B	Z	-30.288	0.5
102	MP1B	Mx	0.012	0.5
103	MP1B	X	0	4.5
104	MP1B	Z	-30.288	4.5
105	MP1B	Mx	0.012	4.5
106	MP4A	X	0	0.5
107	MP4A	Z	-31.111	0.5
108	MP4A	Mx	0.005	0.5
109	MP4A	X	0	4.5
110	MP4A	Z	-31.111	4.5
111	MP4A	Mx	0.005	4.5
112	MP4B	X	0	0.5
113	MP4B	Z	-30.288	0.5
114	MP4B	Mx	0.012	0.5
115	MP4B	X	0	4.5
116	MP4B	Z	-30.288	4.5
117	MP4B	Mx	0.012	4.5
118	M99	X	0	1
119	M99	Z	-12.842	1
120	M99	Mx	-0.008	1
121	M98	X	0	1
122	M98	Z	-12.842	1
123	M98	Mx	-0.008	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	14.609	0.5
2	MP2A	Z	-25.304	0.5
3	MP2A	Mx	0.014	0.5
4	MP2A	X	14.609	4.5
5	MP2A	Z	-25.304	4.5
6	MP2A	Mx	0.014	4.5
7	MP2B	X	11.032	0.5
8	MP2B	Z	-19.109	0.5
9	MP2B	Mx	0.007	0.5
10	MP2B	X	11.032	4.5
11	MP2B	Z	-19.109	4.5
12	MP2B	Mx	0.007	4.5
13	MP2C	X	11.745	0.5
14	MP2C	Z	-20.343	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2C	Mx	-0.022	0.5
16	MP2C	X	11.745	4.5
17	MP2C	Z	-20.343	4.5
18	MP2C	Mx	-0.022	4.5
19	MP2A	X	14.609	0.5
20	MP2A	Z	-25.304	0.5
21	MP2A	Mx	-0.024	0.5
22	MP2A	X	14.609	4.5
23	MP2A	Z	-25.304	4.5
24	MP2A	Mx	-0.024	4.5
25	MP2B	X	11.032	0.5
26	MP2B	Z	-19.109	0.5
27	MP2B	Mx	0.02	0.5
28	MP2B	X	11.032	4.5
29	MP2B	Z	-19.109	4.5
30	MP2B	Mx	0.02	4.5
31	MP2C	X	11.745	0.5
32	MP2C	Z	-20.343	0.5
33	MP2C	Mx	-0.004	0.5
34	MP2C	X	11.745	4.5
35	MP2C	Z	-20.343	4.5
36	MP2C	Mx	-0.004	4.5
37	MP3A	X	6.23	1.5
38	MP3A	Z	-10.79	1.5
39	MP3A	Mx	-0.002	1.5
40	MP3A	X	6.23	3.5
41	MP3A	Z	-10.79	3.5
42	MP3A	Mx	-0.002	3.5
43	MP3B	X	3.407	1.5
44	MP3B	Z	-5.901	1.5
45	MP3B	Mx	0.004	1.5
46	MP3B	X	3.407	3.5
47	MP3B	Z	-5.901	3.5
48	MP3B	Mx	0.004	3.5
49	MP3C	X	3.97	1.5
50	MP3C	Z	-6.875	1.5
51	MP3C	Mx	-0.004	1.5
52	MP3C	X	3.97	3.5
53	MP3C	Z	-6.875	3.5
54	MP3C	Mx	-0.004	3.5
55	MP2A	X	1.608	2
56	MP2A	Z	-2.785	2
57	MP2A	Mx	0.000482	2
58	MP2B	X	1.295	2
59	MP2B	Z	-2.243	2
60	MP2B	Mx	-0.002	2
61	MP2C	X	1.356	2
62	MP2C	Z	-2.349	2
63	MP2C	Mx	0.001	2
64	MP2A	X	6.56	3.5
65	MP2A	Z	-11.361	3.5
66	MP2A	Mx	0.002	3.5
67	MP2B	X	5.023	3.5
68	MP2B	Z	-8.7	3.5
69	MP2B	Mx	-0.006	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	5.329	3.5
71	MP2C	Z	-9.231	3.5
72	MP2C	Mx	0.006	3.5
73	MP1A	X	6.565	3.5
74	MP1A	Z	-11.371	3.5
75	MP1A	Mx	0.002	3.5
76	MP1B	X	6.565	3.5
77	MP1B	Z	-11.371	3.5
78	MP1B	Mx	0.002	3.5
79	MP1C	X	6.565	3.5
80	MP1C	Z	-11.371	3.5
81	MP1C	Mx	0.002	3.5
82	MP1C	X	12.011	0.5
83	MP1C	Z	-20.804	0.5
84	MP1C	Mx	-0.013	0.5
85	MP1C	X	12.011	4.5
86	MP1C	Z	-20.804	4.5
87	MP1C	Mx	-0.013	4.5
88	MP4C	X	12.011	0.5
89	MP4C	Z	-20.804	0.5
90	MP4C	Mx	-0.013	0.5
91	MP4C	X	12.011	4.5
92	MP4C	Z	-20.804	4.5
93	MP4C	Mx	-0.013	4.5
94	MP1A	X	15.556	0.5
95	MP1A	Z	-26.943	0.5
96	MP1A	Mx	-0.005	0.5
97	MP1A	X	15.556	4.5
98	MP1A	Z	-26.943	4.5
99	MP1A	Mx	-0.005	4.5
100	MP1B	X	14.37	0.5
101	MP1B	Z	-24.89	0.5
102	MP1B	Mx	0.017	0.5
103	MP1B	X	14.37	4.5
104	MP1B	Z	-24.89	4.5
105	MP1B	Mx	0.017	4.5
106	MP4A	X	15.556	0.5
107	MP4A	Z	-26.943	0.5
108	MP4A	Mx	-0.005	0.5
109	MP4A	X	15.556	4.5
110	MP4A	Z	-26.943	4.5
111	MP4A	Mx	-0.005	4.5
112	MP4B	X	14.37	0.5
113	MP4B	Z	-24.89	0.5
114	MP4B	Mx	0.017	0.5
115	MP4B	X	14.37	4.5
116	MP4B	Z	-24.89	4.5
117	MP4B	Mx	0.017	4.5
118	M99	X	5.942	1
119	M99	Z	-10.292	1
120	M99	Mx	-0.008	1
121	M98	X	5.942	1
122	M98	Z	-10.292	1
123	M98	Mx	-0.008	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	21.748	0.5
2	MP2A	Z	-12.556	0.5
3	MP2A	Mx	0	0.5
4	MP2A	X	21.748	4.5
5	MP2A	Z	-12.556	4.5
6	MP2A	Mx	0	4.5
7	MP2B	X	17.704	0.5
8	MP2B	Z	-10.222	0.5
9	MP2B	Mx	0.015	0.5
10	MP2B	X	17.704	4.5
11	MP2B	Z	-10.222	4.5
12	MP2B	Mx	0.015	4.5
13	MP2C	X	24.387	0.5
14	MP2C	Z	-14.08	0.5
15	MP2C	Mx	-0.025	0.5
16	MP2C	X	24.387	4.5
17	MP2C	Z	-14.08	4.5
18	MP2C	Mx	-0.025	4.5
19	MP2A	X	21.748	0.5
20	MP2A	Z	-12.556	0.5
21	MP2A	Mx	-0.024	0.5
22	MP2A	X	21.748	4.5
23	MP2A	Z	-12.556	4.5
24	MP2A	Mx	-0.024	4.5
25	MP2B	X	17.704	0.5
26	MP2B	Z	-10.222	0.5
27	MP2B	Mx	0.012	0.5
28	MP2B	X	17.704	4.5
29	MP2B	Z	-10.222	4.5
30	MP2B	Mx	0.012	4.5
31	MP2C	X	24.387	0.5
32	MP2C	Z	-14.08	0.5
33	MP2C	Mx	0.009	0.5
34	MP2C	X	24.387	4.5
35	MP2C	Z	-14.08	4.5
36	MP2C	Mx	0.009	4.5
37	MP3A	X	7.984	1.5
38	MP3A	Z	-4.609	1.5
39	MP3A	Mx	-0.004	1.5
40	MP3A	X	7.984	3.5
41	MP3A	Z	-4.609	3.5
42	MP3A	Mx	-0.004	3.5
43	MP3B	X	4.793	1.5
44	MP3B	Z	-2.767	1.5
45	MP3B	Mx	0.004	1.5
46	MP3B	X	4.793	3.5
47	MP3B	Z	-2.767	3.5
48	MP3B	Mx	0.004	3.5
49	MP3C	X	10.067	1.5
50	MP3C	Z	-5.812	1.5
51	MP3C	Mx	-0.003	1.5
52	MP3C	X	10.067	3.5
53	MP3C	Z	-5.812	3.5
54	MP3C	Mx	-0.003	3.5
55	MP2A	X	2.493	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP2A	Z	-1.439	2
57	MP2A	Mx	0.001	2
58	MP2B	X	2.123	2
59	MP2B	Z	-1.226	2
60	MP2B	Mx	-0.002	2
61	MP2C	X	2.695	2
62	MP2C	Z	-1.556	2
63	MP2C	Mx	0.000877	2
64	MP2A	X	9.834	3.5
65	MP2A	Z	-5.678	3.5
66	MP2A	Mx	0.005	3.5
67	MP2B	X	8.097	3.5
68	MP2B	Z	-4.675	3.5
69	MP2B	Mx	-0.006	3.5
70	MP2C	X	10.968	3.5
71	MP2C	Z	-6.332	3.5
72	MP2C	Mx	0.004	3.5
73	MP1A	X	9.905	3.5
74	MP1A	Z	-5.718	3.5
75	MP1A	Mx	0.005	3.5
76	MP1B	X	9.905	3.5
77	MP1B	Z	-5.718	3.5
78	MP1B	Mx	0.005	3.5
79	MP1C	X	9.905	3.5
80	MP1C	Z	-5.718	3.5
81	MP1C	Mx	0.005	3.5
82	MP1C	X	15.201	0.5
83	MP1C	Z	-8.776	0.5
84	MP1C	Mx	-0.005	0.5
85	MP1C	X	15.201	4.5
86	MP1C	Z	-8.776	4.5
87	MP1C	Mx	-0.005	4.5
88	MP4C	X	15.201	0.5
89	MP4C	Z	-8.776	0.5
90	MP4C	Mx	-0.005	0.5
91	MP4C	X	15.201	4.5
92	MP4C	Z	-8.776	4.5
93	MP4C	Mx	-0.005	4.5
94	MP1A	X	25.765	0.5
95	MP1A	Z	-14.875	0.5
96	MP1A	Mx	-0.014	0.5
97	MP1A	X	25.765	4.5
98	MP1A	Z	-14.875	4.5
99	MP1A	Mx	-0.014	4.5
100	MP1B	X	24.425	0.5
101	MP1B	Z	-14.102	0.5
102	MP1B	Mx	0.019	0.5
103	MP1B	X	24.425	4.5
104	MP1B	Z	-14.102	4.5
105	MP1B	Mx	0.019	4.5
106	MP4A	X	25.765	0.5
107	MP4A	Z	-14.875	0.5
108	MP4A	Mx	-0.014	0.5
109	MP4A	X	25.765	4.5
110	MP4A	Z	-14.875	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
111	MP4A	Mx	-0.014	4.5
112	MP4B	X	24.425	0.5
113	MP4B	Z	-14.102	0.5
114	MP4B	Mx	0.019	0.5
115	MP4B	X	24.425	4.5
116	MP4B	Z	-14.102	4.5
117	MP4B	Mx	0.019	4.5
118	M99	X	11.852	1
119	M99	Z	-6.843	1
120	M99	Mx	-0.007	1
121	M98	X	11.852	1
122	M98	Z	-6.843	1
123	M98	Mx	-0.007	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	21.006	0.5
2	MP2A	Z	0	0.5
3	MP2A	Mx	-0.01	0.5
4	MP2A	X	21.006	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	-0.01	4.5
7	MP2B	X	23.491	0.5
8	MP2B	Z	0	0.5
9	MP2B	Mx	0.022	0.5
10	MP2B	X	23.491	4.5
11	MP2B	Z	0	4.5
12	MP2B	Mx	0.022	4.5
13	MP2C	X	29.781	0.5
14	MP2C	Z	0	0.5
15	MP2C	Mx	-0.018	0.5
16	MP2C	X	29.781	4.5
17	MP2C	Z	0	4.5
18	MP2C	Mx	-0.018	4.5
19	MP2A	X	21.006	0.5
20	MP2A	Z	0	0.5
21	MP2A	Mx	-0.017	0.5
22	MP2A	X	21.006	4.5
23	MP2A	Z	0	4.5
24	MP2A	Mx	-0.017	4.5
25	MP2B	X	23.491	0.5
26	MP2B	Z	0	0.5
27	MP2B	Mx	0.004	0.5
28	MP2B	X	23.491	4.5
29	MP2B	Z	0	4.5
30	MP2B	Mx	0.004	4.5
31	MP2C	X	29.781	0.5
32	MP2C	Z	0	0.5
33	MP2C	Mx	0.022	0.5
34	MP2C	X	29.781	4.5
35	MP2C	Z	0	4.5
36	MP2C	Mx	0.022	4.5
37	MP3A	X	5.978	1.5
38	MP3A	Z	0	1.5
39	MP3A	Mx	-0.004	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
40	MP3A	X	5.978	3.5
41	MP3A	Z	0	3.5
42	MP3A	Mx	-0.004	3.5
43	MP3B	X	7.939	1.5
44	MP3B	Z	0	1.5
45	MP3B	Mx	0.004	1.5
46	MP3B	X	7.939	3.5
47	MP3B	Z	0	3.5
48	MP3B	Mx	0.004	3.5
49	MP3C	X	12.904	1.5
50	MP3C	Z	0	1.5
51	MP3C	Mx	0.00075	1.5
52	MP3C	X	12.904	3.5
53	MP3C	Z	0	3.5
54	MP3C	Mx	0.00075	3.5
55	MP2A	X	2.514	2
56	MP2A	Z	0	2
57	MP2A	Mx	0.002	2
58	MP2B	X	2.712	2
59	MP2B	Z	0	2
60	MP2B	Mx	-0.001	2
61	MP2C	X	3.25	2
62	MP2C	Z	0	2
63	MP2C	Mx	-0.000189	2
64	MP2A	X	9.592	3.5
65	MP2A	Z	0	3.5
66	MP2A	Mx	0.006	3.5
67	MP2B	X	10.659	3.5
68	MP2B	Z	0	3.5
69	MP2B	Mx	-0.006	3.5
70	MP2C	X	13.361	3.5
71	MP2C	Z	0	3.5
72	MP2C	Mx	-0.000776	3.5
73	MP1A	X	9.744	3.5
74	MP1A	Z	0	3.5
75	MP1A	Mx	0.006	3.5
76	MP1B	X	9.744	3.5
77	MP1B	Z	0	3.5
78	MP1B	Mx	0.006	3.5
79	MP1C	X	9.744	3.5
80	MP1C	Z	0	3.5
81	MP1C	Mx	0.006	3.5
82	MP1C	X	15.305	0.5
83	MP1C	Z	0	0.5
84	MP1C	Mx	0.000889	0.5
85	MP1C	X	15.305	4.5
86	MP1C	Z	0	4.5
87	MP1C	Mx	0.000889	4.5
88	MP4C	X	15.305	0.5
89	MP4C	Z	0	0.5
90	MP4C	Mx	0.000889	0.5
91	MP4C	X	15.305	4.5
92	MP4C	Z	0	4.5
93	MP4C	Mx	0.000889	4.5
94	MP1A	X	28.39	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
95	MP1A	Z	0	0.5
96	MP1A	Mx	-0.018	0.5
97	MP1A	X	28.39	4.5
98	MP1A	Z	0	4.5
99	MP1A	Mx	-0.018	4.5
100	MP1B	X	29.213	0.5
101	MP1B	Z	0	0.5
102	MP1B	Mx	0.016	0.5
103	MP1B	X	29.213	4.5
104	MP1B	Z	0	4.5
105	MP1B	Mx	0.016	4.5
106	MP4A	X	28.39	0.5
107	MP4A	Z	0	0.5
108	MP4A	Mx	-0.018	0.5
109	MP4A	X	28.39	4.5
110	MP4A	Z	0	4.5
111	MP4A	Mx	-0.018	4.5
112	MP4B	X	29.213	0.5
113	MP4B	Z	0	0.5
114	MP4B	Mx	0.016	0.5
115	MP4B	X	29.213	4.5
116	MP4B	Z	0	4.5
117	MP4B	Mx	0.016	4.5
118	M99	X	16.444	1
119	M99	Z	0	1
120	M99	Mx	-0.005	1
121	M98	X	16.444	1
122	M98	Z	0	1
123	M98	Mx	-0.005	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	18.192	0.5
2	MP2A	Z	10.503	0.5
3	MP2A	Mx	-0.017	0.5
4	MP2A	X	18.192	4.5
5	MP2A	Z	10.503	4.5
6	MP2A	Mx	-0.017	4.5
7	MP2B	X	24.387	0.5
8	MP2B	Z	14.08	0.5
9	MP2B	Mx	0.025	0.5
10	MP2B	X	24.387	4.5
11	MP2B	Z	14.08	4.5
12	MP2B	Mx	0.025	4.5
13	MP2C	X	23.152	0.5
14	MP2C	Z	13.367	0.5
15	MP2C	Mx	-0.004	0.5
16	MP2C	X	23.152	4.5
17	MP2C	Z	13.367	4.5
18	MP2C	Mx	-0.004	4.5
19	MP2A	X	18.192	0.5
20	MP2A	Z	10.503	0.5
21	MP2A	Mx	-0.01	0.5
22	MP2A	X	18.192	4.5
23	MP2A	Z	10.503	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
24	MP2A	Mx	-0.01	4.5
25	MP2B	X	24.387	0.5
26	MP2B	Z	14.08	0.5
27	MP2B	Mx	-0.009	0.5
28	MP2B	X	24.387	4.5
29	MP2B	Z	14.08	4.5
30	MP2B	Mx	-0.009	4.5
31	MP2C	X	23.152	0.5
32	MP2C	Z	13.367	0.5
33	MP2C	Mx	0.025	0.5
34	MP2C	X	23.152	4.5
35	MP2C	Z	13.367	4.5
36	MP2C	Mx	0.025	4.5
37	MP3A	X	5.177	1.5
38	MP3A	Z	2.989	1.5
39	MP3A	Mx	-0.004	1.5
40	MP3A	X	5.177	3.5
41	MP3A	Z	2.989	3.5
42	MP3A	Mx	-0.004	3.5
43	MP3B	X	10.067	1.5
44	MP3B	Z	5.812	1.5
45	MP3B	Mx	0.003	1.5
46	MP3B	X	10.067	3.5
47	MP3B	Z	5.812	3.5
48	MP3B	Mx	0.003	3.5
49	MP3C	X	9.092	1.5
50	MP3C	Z	5.249	1.5
51	MP3C	Mx	0.004	1.5
52	MP3C	X	9.092	3.5
53	MP3C	Z	5.249	3.5
54	MP3C	Mx	0.004	3.5
55	MP2A	X	2.153	2
56	MP2A	Z	1.243	2
57	MP2A	Mx	0.002	2
58	MP2B	X	2.695	2
59	MP2B	Z	1.556	2
60	MP2B	Mx	-0.000877	2
61	MP2C	X	2.589	2
62	MP2C	Z	1.495	2
63	MP2C	Mx	-0.001	2
64	MP2A	X	8.307	3.5
65	MP2A	Z	4.796	3.5
66	MP2A	Mx	0.006	3.5
67	MP2B	X	10.968	3.5
68	MP2B	Z	6.332	3.5
69	MP2B	Mx	-0.004	3.5
70	MP2C	X	10.437	3.5
71	MP2C	Z	6.026	3.5
72	MP2C	Mx	-0.005	3.5
73	MP1A	X	8.438	3.5
74	MP1A	Z	4.872	3.5
75	MP1A	Mx	0.006	3.5
76	MP1B	X	8.438	3.5
77	MP1B	Z	4.872	3.5
78	MP1B	Mx	0.006	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
79	MP1C	X	8.438	3.5
80	MP1C	Z	4.872	3.5
81	MP1C	Mx	0.006	3.5
82	MP1C	X	16.912	0.5
83	MP1C	Z	9.764	0.5
84	MP1C	Mx	0.007	0.5
85	MP1C	X	16.912	4.5
86	MP1C	Z	9.764	4.5
87	MP1C	Mx	0.007	4.5
88	MP4C	X	16.912	0.5
89	MP4C	Z	9.764	0.5
90	MP4C	Mx	0.007	0.5
91	MP4C	X	16.912	4.5
92	MP4C	Z	9.764	4.5
93	MP4C	Mx	0.007	4.5
94	MP1A	X	24.586	0.5
95	MP1A	Z	14.195	0.5
96	MP1A	Mx	-0.018	0.5
97	MP1A	X	24.586	4.5
98	MP1A	Z	14.195	4.5
99	MP1A	Mx	-0.018	4.5
100	MP1B	X	26.639	0.5
101	MP1B	Z	15.38	0.5
102	MP1B	Mx	0.009	0.5
103	MP1B	X	26.639	4.5
104	MP1B	Z	15.38	4.5
105	MP1B	Mx	0.009	4.5
106	MP4A	X	24.586	0.5
107	MP4A	Z	14.195	0.5
108	MP4A	Mx	-0.018	0.5
109	MP4A	X	24.586	4.5
110	MP4A	Z	14.195	4.5
111	MP4A	Mx	-0.018	4.5
112	MP4B	X	26.639	0.5
113	MP4B	Z	15.38	0.5
114	MP4B	Mx	0.009	0.5
115	MP4B	X	26.639	4.5
116	MP4B	Z	15.38	4.5
117	MP4B	Mx	0.009	4.5
118	M99	X	15.071	1
119	M99	Z	8.701	1
120	M99	Mx	0.001	1
121	M98	X	15.071	1
122	M98	Z	8.701	1
123	M98	Mx	0.001	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	12.556	0.5
2	MP2A	Z	21.748	0.5
3	MP2A	Mx	-0.024	0.5
4	MP2A	X	12.556	4.5
5	MP2A	Z	21.748	4.5
6	MP2A	Mx	-0.024	4.5
7	MP2B	X	14.891	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
8	MP2B	Z	25.791	0.5
9	MP2B	Mx	0.018	0.5
10	MP2B	X	14.891	4.5
11	MP2B	Z	25.791	4.5
12	MP2B	Mx	0.018	4.5
13	MP2C	X	11.032	0.5
14	MP2C	Z	19.109	0.5
15	MP2C	Mx	0.007	0.5
16	MP2C	X	11.032	4.5
17	MP2C	Z	19.109	4.5
18	MP2C	Mx	0.007	4.5
19	MP2A	X	12.556	0.5
20	MP2A	Z	21.748	0.5
21	MP2A	Mx	0	0.5
22	MP2A	X	12.556	4.5
23	MP2A	Z	21.748	4.5
24	MP2A	Mx	0	4.5
25	MP2B	X	14.891	0.5
26	MP2B	Z	25.791	0.5
27	MP2B	Mx	-0.022	0.5
28	MP2B	X	14.891	4.5
29	MP2B	Z	25.791	4.5
30	MP2B	Mx	-0.022	4.5
31	MP2C	X	11.032	0.5
32	MP2C	Z	19.109	0.5
33	MP2C	Mx	0.02	0.5
34	MP2C	X	11.032	4.5
35	MP2C	Z	19.109	4.5
36	MP2C	Mx	0.02	4.5
37	MP3A	X	4.609	1.5
38	MP3A	Z	7.984	1.5
39	MP3A	Mx	-0.004	1.5
40	MP3A	X	4.609	3.5
41	MP3A	Z	7.984	3.5
42	MP3A	Mx	-0.004	3.5
43	MP3B	X	6.452	1.5
44	MP3B	Z	11.175	1.5
45	MP3B	Mx	-0.00075	1.5
46	MP3B	X	6.452	3.5
47	MP3B	Z	11.175	3.5
48	MP3B	Mx	-0.00075	3.5
49	MP3C	X	3.407	1.5
50	MP3C	Z	5.901	1.5
51	MP3C	Mx	0.004	1.5
52	MP3C	X	3.407	3.5
53	MP3C	Z	5.901	3.5
54	MP3C	Mx	0.004	3.5
55	MP2A	X	1.411	2
56	MP2A	Z	2.444	2
57	MP2A	Mx	0.001	2
58	MP2B	X	1.625	2
59	MP2B	Z	2.815	2
60	MP2B	Mx	0.000189	2
61	MP2C	X	1.295	2
62	MP2C	Z	2.243	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
63	MP2C	Mx	-0.002	2
64	MP2A	X	5.678	3.5
65	MP2A	Z	9.834	3.5
66	MP2A	Mx	0.005	3.5
67	MP2B	X	6.681	3.5
68	MP2B	Z	11.571	3.5
69	MP2B	Mx	0.000776	3.5
70	MP2C	X	5.023	3.5
71	MP2C	Z	8.7	3.5
72	MP2C	Mx	-0.006	3.5
73	MP1A	X	5.718	3.5
74	MP1A	Z	9.905	3.5
75	MP1A	Mx	0.005	3.5
76	MP1B	X	5.718	3.5
77	MP1B	Z	9.905	3.5
78	MP1B	Mx	0.005	3.5
79	MP1C	X	5.718	3.5
80	MP1C	Z	9.905	3.5
81	MP1C	Mx	0.005	3.5
82	MP1C	X	12.999	0.5
83	MP1C	Z	22.515	0.5
84	MP1C	Mx	0.016	0.5
85	MP1C	X	12.999	4.5
86	MP1C	Z	22.515	4.5
87	MP1C	Mx	0.016	4.5
88	MP4C	X	12.999	0.5
89	MP4C	Z	22.515	0.5
90	MP4C	Mx	0.016	0.5
91	MP4C	X	12.999	4.5
92	MP4C	Z	22.515	4.5
93	MP4C	Mx	0.016	4.5
94	MP1A	X	14.875	0.5
95	MP1A	Z	25.765	0.5
96	MP1A	Mx	-0.014	0.5
97	MP1A	X	14.875	4.5
98	MP1A	Z	25.765	4.5
99	MP1A	Mx	-0.014	4.5
100	MP1B	X	15.649	0.5
101	MP1B	Z	27.105	0.5
102	MP1B	Mx	-0.002	0.5
103	MP1B	X	15.649	4.5
104	MP1B	Z	27.105	4.5
105	MP1B	Mx	-0.002	4.5
106	MP4A	X	14.875	0.5
107	MP4A	Z	25.765	0.5
108	MP4A	Mx	-0.014	0.5
109	MP4A	X	14.875	4.5
110	MP4A	Z	25.765	4.5
111	MP4A	Mx	-0.014	4.5
112	MP4B	X	15.649	0.5
113	MP4B	Z	27.105	0.5
114	MP4B	Mx	-0.002	0.5
115	MP4B	X	15.649	4.5
116	MP4B	Z	27.105	4.5
117	MP4B	Mx	-0.002	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
118	M99	X	7.801	1
119	M99	Z	13.511	1
120	M99	Mx	0.006	1
121	M98	X	7.801	1
122	M98	Z	13.511	1
123	M98	Mx	0.006	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	0.5
2	MP2A	Z	29.218	0.5
3	MP2A	Mx	-0.024	0.5
4	MP2A	X	0	4.5
5	MP2A	Z	29.218	4.5
6	MP2A	Mx	-0.024	4.5
7	MP2B	X	0	0.5
8	MP2B	Z	26.734	0.5
9	MP2B	Mx	0.004	0.5
10	MP2B	X	0	4.5
11	MP2B	Z	26.734	4.5
12	MP2B	Mx	0.004	4.5
13	MP2C	X	0	0.5
14	MP2C	Z	20.443	0.5
15	MP2C	Mx	0.015	0.5
16	MP2C	X	0	4.5
17	MP2C	Z	20.443	4.5
18	MP2C	Mx	0.015	4.5
19	MP2A	X	0	0.5
20	MP2A	Z	29.218	0.5
21	MP2A	Mx	0.014	0.5
22	MP2A	X	0	4.5
23	MP2A	Z	29.218	4.5
24	MP2A	Mx	0.014	4.5
25	MP2B	X	0	0.5
26	MP2B	Z	26.734	0.5
27	MP2B	Mx	-0.025	0.5
28	MP2B	X	0	4.5
29	MP2B	Z	26.734	4.5
30	MP2B	Mx	-0.025	4.5
31	MP2C	X	0	0.5
32	MP2C	Z	20.443	0.5
33	MP2C	Mx	0.012	0.5
34	MP2C	X	0	4.5
35	MP2C	Z	20.443	4.5
36	MP2C	Mx	0.012	4.5
37	MP3A	X	0	1.5
38	MP3A	Z	12.459	1.5
39	MP3A	Mx	-0.002	1.5
40	MP3A	X	0	3.5
41	MP3A	Z	12.459	3.5
42	MP3A	Mx	-0.002	3.5
43	MP3B	X	0	1.5
44	MP3B	Z	10.499	1.5
45	MP3B	Mx	-0.004	1.5
46	MP3B	X	0	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
47	MP3B	Z	10.499	3.5
48	MP3B	Mx	-0.004	3.5
49	MP3C	X	0	1.5
50	MP3C	Z	5.534	1.5
51	MP3C	Mx	0.004	1.5
52	MP3C	X	0	3.5
53	MP3C	Z	5.534	3.5
54	MP3C	Mx	0.004	3.5
55	MP2A	X	0	2
56	MP2A	Z	3.187	2
57	MP2A	Mx	0.000621	2
58	MP2B	X	0	2
59	MP2B	Z	2.989	2
60	MP2B	Mx	0.001	2
61	MP2C	X	0	2
62	MP2C	Z	2.451	2
63	MP2C	Mx	-0.002	2
64	MP2A	X	0	3.5
65	MP2A	Z	13.119	3.5
66	MP2A	Mx	0.002	3.5
67	MP2B	X	0	3.5
68	MP2B	Z	12.052	3.5
69	MP2B	Mx	0.005	3.5
70	MP2C	X	0	3.5
71	MP2C	Z	9.35	3.5
72	MP2C	Mx	-0.006	3.5
73	MP1A	X	0	3.5
74	MP1A	Z	13.13	3.5
75	MP1A	Mx	0.002	3.5
76	MP1B	X	0	3.5
77	MP1B	Z	13.13	3.5
78	MP1B	Mx	0.002	3.5
79	MP1C	X	0	3.5
80	MP1C	Z	13.13	3.5
81	MP1C	Mx	0.002	3.5
82	MP1C	X	0	0.5
83	MP1C	Z	28.245	0.5
84	MP1C	Mx	0.019	0.5
85	MP1C	X	0	4.5
86	MP1C	Z	28.245	4.5
87	MP1C	Mx	0.019	4.5
88	MP4C	X	0	0.5
89	MP4C	Z	28.245	0.5
90	MP4C	Mx	0.019	0.5
91	MP4C	X	0	4.5
92	MP4C	Z	28.245	4.5
93	MP4C	Mx	0.019	4.5
94	MP1A	X	0	0.5
95	MP1A	Z	31.111	0.5
96	MP1A	Mx	-0.005	0.5
97	MP1A	X	0	4.5
98	MP1A	Z	31.111	4.5
99	MP1A	Mx	-0.005	4.5
100	MP1B	X	0	0.5
101	MP1B	Z	30.288	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
102	MP1B	Mx	-0.012	0.5
103	MP1B	X	0	4.5
104	MP1B	Z	30.288	4.5
105	MP1B	Mx	-0.012	4.5
106	MP4A	X	0	0.5
107	MP4A	Z	31.111	0.5
108	MP4A	Mx	-0.005	0.5
109	MP4A	X	0	4.5
110	MP4A	Z	31.111	4.5
111	MP4A	Mx	-0.005	4.5
112	MP4B	X	0	0.5
113	MP4B	Z	30.288	0.5
114	MP4B	Mx	-0.012	0.5
115	MP4B	X	0	4.5
116	MP4B	Z	30.288	4.5
117	MP4B	Mx	-0.012	4.5
118	M99	X	0	1
119	M99	Z	12.842	1
120	M99	Mx	0.008	1
121	M98	X	0	1
122	M98	Z	12.842	1
123	M98	Mx	0.008	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-14.609	0.5
2	MP2A	Z	25.304	0.5
3	MP2A	Mx	-0.014	0.5
4	MP2A	X	-14.609	4.5
5	MP2A	Z	25.304	4.5
6	MP2A	Mx	-0.014	4.5
7	MP2B	X	-11.032	0.5
8	MP2B	Z	19.109	0.5
9	MP2B	Mx	-0.007	0.5
10	MP2B	X	-11.032	4.5
11	MP2B	Z	19.109	4.5
12	MP2B	Mx	-0.007	4.5
13	MP2C	X	-11.745	0.5
14	MP2C	Z	20.343	0.5
15	MP2C	Mx	0.022	0.5
16	MP2C	X	-11.745	4.5
17	MP2C	Z	20.343	4.5
18	MP2C	Mx	0.022	4.5
19	MP2A	X	-14.609	0.5
20	MP2A	Z	25.304	0.5
21	MP2A	Mx	0.024	0.5
22	MP2A	X	-14.609	4.5
23	MP2A	Z	25.304	4.5
24	MP2A	Mx	0.024	4.5
25	MP2B	X	-11.032	0.5
26	MP2B	Z	19.109	0.5
27	MP2B	Mx	-0.02	0.5
28	MP2B	X	-11.032	4.5
29	MP2B	Z	19.109	4.5
30	MP2B	Mx	-0.02	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
31	MP2C	X	-11.745	0.5
32	MP2C	Z	20.343	0.5
33	MP2C	Mx	0.004	0.5
34	MP2C	X	-11.745	4.5
35	MP2C	Z	20.343	4.5
36	MP2C	Mx	0.004	4.5
37	MP3A	X	-6.23	1.5
38	MP3A	Z	10.79	1.5
39	MP3A	Mx	0.002	1.5
40	MP3A	X	-6.23	3.5
41	MP3A	Z	10.79	3.5
42	MP3A	Mx	0.002	3.5
43	MP3B	X	-3.407	1.5
44	MP3B	Z	5.901	1.5
45	MP3B	Mx	-0.004	1.5
46	MP3B	X	-3.407	3.5
47	MP3B	Z	5.901	3.5
48	MP3B	Mx	-0.004	3.5
49	MP3C	X	-3.97	1.5
50	MP3C	Z	6.875	1.5
51	MP3C	Mx	0.004	1.5
52	MP3C	X	-3.97	3.5
53	MP3C	Z	6.875	3.5
54	MP3C	Mx	0.004	3.5
55	MP2A	X	-1.608	2
56	MP2A	Z	2.785	2
57	MP2A	Mx	-0.000482	2
58	MP2B	X	-1.295	2
59	MP2B	Z	2.243	2
60	MP2B	Mx	0.002	2
61	MP2C	X	-1.356	2
62	MP2C	Z	2.349	2
63	MP2C	Mx	-0.001	2
64	MP2A	X	-6.56	3.5
65	MP2A	Z	11.361	3.5
66	MP2A	Mx	-0.002	3.5
67	MP2B	X	-5.023	3.5
68	MP2B	Z	8.7	3.5
69	MP2B	Mx	0.006	3.5
70	MP2C	X	-5.329	3.5
71	MP2C	Z	9.231	3.5
72	MP2C	Mx	-0.006	3.5
73	MP1A	X	-6.565	3.5
74	MP1A	Z	11.371	3.5
75	MP1A	Mx	-0.002	3.5
76	MP1B	X	-6.565	3.5
77	MP1B	Z	11.371	3.5
78	MP1B	Mx	-0.002	3.5
79	MP1C	X	-6.565	3.5
80	MP1C	Z	11.371	3.5
81	MP1C	Mx	-0.002	3.5
82	MP1C	X	-12.011	0.5
83	MP1C	Z	20.804	0.5
84	MP1C	Mx	0.013	0.5
85	MP1C	X	-12.011	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
86	MP1C	Z	20.804	4.5
87	MP1C	Mx	0.013	4.5
88	MP4C	X	-12.011	0.5
89	MP4C	Z	20.804	0.5
90	MP4C	Mx	0.013	0.5
91	MP4C	X	-12.011	4.5
92	MP4C	Z	20.804	4.5
93	MP4C	Mx	0.013	4.5
94	MP1A	X	-15.556	0.5
95	MP1A	Z	26.943	0.5
96	MP1A	Mx	0.005	0.5
97	MP1A	X	-15.556	4.5
98	MP1A	Z	26.943	4.5
99	MP1A	Mx	0.005	4.5
100	MP1B	X	-14.37	0.5
101	MP1B	Z	24.89	0.5
102	MP1B	Mx	-0.017	0.5
103	MP1B	X	-14.37	4.5
104	MP1B	Z	24.89	4.5
105	MP1B	Mx	-0.017	4.5
106	MP4A	X	-15.556	0.5
107	MP4A	Z	26.943	0.5
108	MP4A	Mx	0.005	0.5
109	MP4A	X	-15.556	4.5
110	MP4A	Z	26.943	4.5
111	MP4A	Mx	0.005	4.5
112	MP4B	X	-14.37	0.5
113	MP4B	Z	24.89	0.5
114	MP4B	Mx	-0.017	0.5
115	MP4B	X	-14.37	4.5
116	MP4B	Z	24.89	4.5
117	MP4B	Mx	-0.017	4.5
118	M99	X	-5.942	1
119	M99	Z	10.292	1
120	M99	Mx	0.008	1
121	M98	X	-5.942	1
122	M98	Z	10.292	1
123	M98	Mx	0.008	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-21.748	0.5
2	MP2A	Z	12.556	0.5
3	MP2A	Mx	0	0.5
4	MP2A	X	-21.748	4.5
5	MP2A	Z	12.556	4.5
6	MP2A	Mx	0	4.5
7	MP2B	X	-17.704	0.5
8	MP2B	Z	10.222	0.5
9	MP2B	Mx	-0.015	0.5
10	MP2B	X	-17.704	4.5
11	MP2B	Z	10.222	4.5
12	MP2B	Mx	-0.015	4.5
13	MP2C	X	-24.387	0.5
14	MP2C	Z	14.08	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2C	Mx	0.025	0.5
16	MP2C	X	-24.387	4.5
17	MP2C	Z	14.08	4.5
18	MP2C	Mx	0.025	4.5
19	MP2A	X	-21.748	0.5
20	MP2A	Z	12.556	0.5
21	MP2A	Mx	0.024	0.5
22	MP2A	X	-21.748	4.5
23	MP2A	Z	12.556	4.5
24	MP2A	Mx	0.024	4.5
25	MP2B	X	-17.704	0.5
26	MP2B	Z	10.222	0.5
27	MP2B	Mx	-0.012	0.5
28	MP2B	X	-17.704	4.5
29	MP2B	Z	10.222	4.5
30	MP2B	Mx	-0.012	4.5
31	MP2C	X	-24.387	0.5
32	MP2C	Z	14.08	0.5
33	MP2C	Mx	-0.009	0.5
34	MP2C	X	-24.387	4.5
35	MP2C	Z	14.08	4.5
36	MP2C	Mx	-0.009	4.5
37	MP3A	X	-7.984	1.5
38	MP3A	Z	4.609	1.5
39	MP3A	Mx	0.004	1.5
40	MP3A	X	-7.984	3.5
41	MP3A	Z	4.609	3.5
42	MP3A	Mx	0.004	3.5
43	MP3B	X	-4.793	1.5
44	MP3B	Z	2.767	1.5
45	MP3B	Mx	-0.004	1.5
46	MP3B	X	-4.793	3.5
47	MP3B	Z	2.767	3.5
48	MP3B	Mx	-0.004	3.5
49	MP3C	X	-10.067	1.5
50	MP3C	Z	5.812	1.5
51	MP3C	Mx	0.003	1.5
52	MP3C	X	-10.067	3.5
53	MP3C	Z	5.812	3.5
54	MP3C	Mx	0.003	3.5
55	MP2A	X	-2.493	2
56	MP2A	Z	1.439	2
57	MP2A	Mx	-0.001	2
58	MP2B	X	-2.123	2
59	MP2B	Z	1.226	2
60	MP2B	Mx	0.002	2
61	MP2C	X	-2.695	2
62	MP2C	Z	1.556	2
63	MP2C	Mx	-0.000877	2
64	MP2A	X	-9.834	3.5
65	MP2A	Z	5.678	3.5
66	MP2A	Mx	-0.005	3.5
67	MP2B	X	-8.097	3.5
68	MP2B	Z	4.675	3.5
69	MP2B	Mx	0.006	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	-10.968	3.5
71	MP2C	Z	6.332	3.5
72	MP2C	Mx	-0.004	3.5
73	MP1A	X	-9.905	3.5
74	MP1A	Z	5.718	3.5
75	MP1A	Mx	-0.005	3.5
76	MP1B	X	-9.905	3.5
77	MP1B	Z	5.718	3.5
78	MP1B	Mx	-0.005	3.5
79	MP1C	X	-9.905	3.5
80	MP1C	Z	5.718	3.5
81	MP1C	Mx	-0.005	3.5
82	MP1C	X	-15.201	0.5
83	MP1C	Z	8.776	0.5
84	MP1C	Mx	0.005	0.5
85	MP1C	X	-15.201	4.5
86	MP1C	Z	8.776	4.5
87	MP1C	Mx	0.005	4.5
88	MP4C	X	-15.201	0.5
89	MP4C	Z	8.776	0.5
90	MP4C	Mx	0.005	0.5
91	MP4C	X	-15.201	4.5
92	MP4C	Z	8.776	4.5
93	MP4C	Mx	0.005	4.5
94	MP1A	X	-25.765	0.5
95	MP1A	Z	14.875	0.5
96	MP1A	Mx	0.014	0.5
97	MP1A	X	-25.765	4.5
98	MP1A	Z	14.875	4.5
99	MP1A	Mx	0.014	4.5
100	MP1B	X	-24.425	0.5
101	MP1B	Z	14.102	0.5
102	MP1B	Mx	-0.019	0.5
103	MP1B	X	-24.425	4.5
104	MP1B	Z	14.102	4.5
105	MP1B	Mx	-0.019	4.5
106	MP4A	X	-25.765	0.5
107	MP4A	Z	14.875	0.5
108	MP4A	Mx	0.014	0.5
109	MP4A	X	-25.765	4.5
110	MP4A	Z	14.875	4.5
111	MP4A	Mx	0.014	4.5
112	MP4B	X	-24.425	0.5
113	MP4B	Z	14.102	0.5
114	MP4B	Mx	-0.019	0.5
115	MP4B	X	-24.425	4.5
116	MP4B	Z	14.102	4.5
117	MP4B	Mx	-0.019	4.5
118	M99	X	-11.852	1
119	M99	Z	6.843	1
120	M99	Mx	0.007	1
121	M98	X	-11.852	1
122	M98	Z	6.843	1
123	M98	Mx	0.007	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-21.006	0.5
2	MP2A	Z	0	0.5
3	MP2A	Mx	0.01	0.5
4	MP2A	X	-21.006	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	0.01	4.5
7	MP2B	X	-23.491	0.5
8	MP2B	Z	0	0.5
9	MP2B	Mx	-0.022	0.5
10	MP2B	X	-23.491	4.5
11	MP2B	Z	0	4.5
12	MP2B	Mx	-0.022	4.5
13	MP2C	X	-29.781	0.5
14	MP2C	Z	0	0.5
15	MP2C	Mx	0.018	0.5
16	MP2C	X	-29.781	4.5
17	MP2C	Z	0	4.5
18	MP2C	Mx	0.018	4.5
19	MP2A	X	-21.006	0.5
20	MP2A	Z	0	0.5
21	MP2A	Mx	0.017	0.5
22	MP2A	X	-21.006	4.5
23	MP2A	Z	0	4.5
24	MP2A	Mx	0.017	4.5
25	MP2B	X	-23.491	0.5
26	MP2B	Z	0	0.5
27	MP2B	Mx	-0.004	0.5
28	MP2B	X	-23.491	4.5
29	MP2B	Z	0	4.5
30	MP2B	Mx	-0.004	4.5
31	MP2C	X	-29.781	0.5
32	MP2C	Z	0	0.5
33	MP2C	Mx	-0.022	0.5
34	MP2C	X	-29.781	4.5
35	MP2C	Z	0	4.5
36	MP2C	Mx	-0.022	4.5
37	MP3A	X	-5.978	1.5
38	MP3A	Z	0	1.5
39	MP3A	Mx	0.004	1.5
40	MP3A	X	-5.978	3.5
41	MP3A	Z	0	3.5
42	MP3A	Mx	0.004	3.5
43	MP3B	X	-7.939	1.5
44	MP3B	Z	0	1.5
45	MP3B	Mx	-0.004	1.5
46	MP3B	X	-7.939	3.5
47	MP3B	Z	0	3.5
48	MP3B	Mx	-0.004	3.5
49	MP3C	X	-12.904	1.5
50	MP3C	Z	0	1.5
51	MP3C	Mx	-0.00075	1.5
52	MP3C	X	-12.904	3.5
53	MP3C	Z	0	3.5
54	MP3C	Mx	-0.00075	3.5
55	MP2A	X	-2.514	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP2A	Z	0	2
57	MP2A	Mx	-0.002	2
58	MP2B	X	-2.712	2
59	MP2B	Z	0	2
60	MP2B	Mx	0.001	2
61	MP2C	X	-3.25	2
62	MP2C	Z	0	2
63	MP2C	Mx	0.000189	2
64	MP2A	X	-9.592	3.5
65	MP2A	Z	0	3.5
66	MP2A	Mx	-0.006	3.5
67	MP2B	X	-10.659	3.5
68	MP2B	Z	0	3.5
69	MP2B	Mx	0.006	3.5
70	MP2C	X	-13.361	3.5
71	MP2C	Z	0	3.5
72	MP2C	Mx	0.000776	3.5
73	MP1A	X	-9.744	3.5
74	MP1A	Z	0	3.5
75	MP1A	Mx	-0.006	3.5
76	MP1B	X	-9.744	3.5
77	MP1B	Z	0	3.5
78	MP1B	Mx	-0.006	3.5
79	MP1C	X	-9.744	3.5
80	MP1C	Z	0	3.5
81	MP1C	Mx	-0.006	3.5
82	MP1C	X	-15.305	0.5
83	MP1C	Z	0	0.5
84	MP1C	Mx	-0.000889	0.5
85	MP1C	X	-15.305	4.5
86	MP1C	Z	0	4.5
87	MP1C	Mx	-0.000889	4.5
88	MP4C	X	-15.305	0.5
89	MP4C	Z	0	0.5
90	MP4C	Mx	-0.000889	0.5
91	MP4C	X	-15.305	4.5
92	MP4C	Z	0	4.5
93	MP4C	Mx	-0.000889	4.5
94	MP1A	X	-28.39	0.5
95	MP1A	Z	0	0.5
96	MP1A	Mx	0.018	0.5
97	MP1A	X	-28.39	4.5
98	MP1A	Z	0	4.5
99	MP1A	Mx	0.018	4.5
100	MP1B	X	-29.213	0.5
101	MP1B	Z	0	0.5
102	MP1B	Mx	-0.016	0.5
103	MP1B	X	-29.213	4.5
104	MP1B	Z	0	4.5
105	MP1B	Mx	-0.016	4.5
106	MP4A	X	-28.39	0.5
107	MP4A	Z	0	0.5
108	MP4A	Mx	0.018	0.5
109	MP4A	X	-28.39	4.5
110	MP4A	Z	0	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
111	MP4A	Mx	0.018	4.5
112	MP4B	X	-29.213	0.5
113	MP4B	Z	0	0.5
114	MP4B	Mx	-0.016	0.5
115	MP4B	X	-29.213	4.5
116	MP4B	Z	0	4.5
117	MP4B	Mx	-0.016	4.5
118	M99	X	-16.444	1
119	M99	Z	0	1
120	M99	Mx	0.005	1
121	M98	X	-16.444	1
122	M98	Z	0	1
123	M98	Mx	0.005	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-18.192	0.5
2	MP2A	Z	-10.503	0.5
3	MP2A	Mx	0.017	0.5
4	MP2A	X	-18.192	4.5
5	MP2A	Z	-10.503	4.5
6	MP2A	Mx	0.017	4.5
7	MP2B	X	-24.387	0.5
8	MP2B	Z	-14.08	0.5
9	MP2B	Mx	-0.025	0.5
10	MP2B	X	-24.387	4.5
11	MP2B	Z	-14.08	4.5
12	MP2B	Mx	-0.025	4.5
13	MP2C	X	-23.152	0.5
14	MP2C	Z	-13.367	0.5
15	MP2C	Mx	0.004	0.5
16	MP2C	X	-23.152	4.5
17	MP2C	Z	-13.367	4.5
18	MP2C	Mx	0.004	4.5
19	MP2A	X	-18.192	0.5
20	MP2A	Z	-10.503	0.5
21	MP2A	Mx	0.01	0.5
22	MP2A	X	-18.192	4.5
23	MP2A	Z	-10.503	4.5
24	MP2A	Mx	0.01	4.5
25	MP2B	X	-24.387	0.5
26	MP2B	Z	-14.08	0.5
27	MP2B	Mx	0.009	0.5
28	MP2B	X	-24.387	4.5
29	MP2B	Z	-14.08	4.5
30	MP2B	Mx	0.009	4.5
31	MP2C	X	-23.152	0.5
32	MP2C	Z	-13.367	0.5
33	MP2C	Mx	-0.025	0.5
34	MP2C	X	-23.152	4.5
35	MP2C	Z	-13.367	4.5
36	MP2C	Mx	-0.025	4.5
37	MP3A	X	-5.177	1.5
38	MP3A	Z	-2.989	1.5
39	MP3A	Mx	0.004	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
40	MP3A	X	-5.177	3.5
41	MP3A	Z	-2.989	3.5
42	MP3A	Mx	0.004	3.5
43	MP3B	X	-10.067	1.5
44	MP3B	Z	-5.812	1.5
45	MP3B	Mx	-0.003	1.5
46	MP3B	X	-10.067	3.5
47	MP3B	Z	-5.812	3.5
48	MP3B	Mx	-0.003	3.5
49	MP3C	X	-9.092	1.5
50	MP3C	Z	-5.249	1.5
51	MP3C	Mx	-0.004	1.5
52	MP3C	X	-9.092	3.5
53	MP3C	Z	-5.249	3.5
54	MP3C	Mx	-0.004	3.5
55	MP2A	X	-2.153	2
56	MP2A	Z	-1.243	2
57	MP2A	Mx	-0.002	2
58	MP2B	X	-2.695	2
59	MP2B	Z	-1.556	2
60	MP2B	Mx	0.000877	2
61	MP2C	X	-2.589	2
62	MP2C	Z	-1.495	2
63	MP2C	Mx	0.001	2
64	MP2A	X	-8.307	3.5
65	MP2A	Z	-4.796	3.5
66	MP2A	Mx	-0.006	3.5
67	MP2B	X	-10.968	3.5
68	MP2B	Z	-6.332	3.5
69	MP2B	Mx	0.004	3.5
70	MP2C	X	-10.437	3.5
71	MP2C	Z	-6.026	3.5
72	MP2C	Mx	0.005	3.5
73	MP1A	X	-8.438	3.5
74	MP1A	Z	-4.872	3.5
75	MP1A	Mx	-0.006	3.5
76	MP1B	X	-8.438	3.5
77	MP1B	Z	-4.872	3.5
78	MP1B	Mx	-0.006	3.5
79	MP1C	X	-8.438	3.5
80	MP1C	Z	-4.872	3.5
81	MP1C	Mx	-0.006	3.5
82	MP1C	X	-16.912	0.5
83	MP1C	Z	-9.764	0.5
84	MP1C	Mx	-0.007	0.5
85	MP1C	X	-16.912	4.5
86	MP1C	Z	-9.764	4.5
87	MP1C	Mx	-0.007	4.5
88	MP4C	X	-16.912	0.5
89	MP4C	Z	-9.764	0.5
90	MP4C	Mx	-0.007	0.5
91	MP4C	X	-16.912	4.5
92	MP4C	Z	-9.764	4.5
93	MP4C	Mx	-0.007	4.5
94	MP1A	X	-24.586	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
95	MP1A	Z	-14.195	0.5
96	MP1A	Mx	0.018	0.5
97	MP1A	X	-24.586	4.5
98	MP1A	Z	-14.195	4.5
99	MP1A	Mx	0.018	4.5
100	MP1B	X	-26.639	0.5
101	MP1B	Z	-15.38	0.5
102	MP1B	Mx	-0.009	0.5
103	MP1B	X	-26.639	4.5
104	MP1B	Z	-15.38	4.5
105	MP1B	Mx	-0.009	4.5
106	MP4A	X	-24.586	0.5
107	MP4A	Z	-14.195	0.5
108	MP4A	Mx	0.018	0.5
109	MP4A	X	-24.586	4.5
110	MP4A	Z	-14.195	4.5
111	MP4A	Mx	0.018	4.5
112	MP4B	X	-26.639	0.5
113	MP4B	Z	-15.38	0.5
114	MP4B	Mx	-0.009	0.5
115	MP4B	X	-26.639	4.5
116	MP4B	Z	-15.38	4.5
117	MP4B	Mx	-0.009	4.5
118	M99	X	-15.071	1
119	M99	Z	-8.701	1
120	M99	Mx	-0.001	1
121	M98	X	-15.071	1
122	M98	Z	-8.701	1
123	M98	Mx	-0.001	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-12.556	0.5
2	MP2A	Z	-21.748	0.5
3	MP2A	Mx	0.024	0.5
4	MP2A	X	-12.556	4.5
5	MP2A	Z	-21.748	4.5
6	MP2A	Mx	0.024	4.5
7	MP2B	X	-14.891	0.5
8	MP2B	Z	-25.791	0.5
9	MP2B	Mx	-0.018	0.5
10	MP2B	X	-14.891	4.5
11	MP2B	Z	-25.791	4.5
12	MP2B	Mx	-0.018	4.5
13	MP2C	X	-11.032	0.5
14	MP2C	Z	-19.109	0.5
15	MP2C	Mx	-0.007	0.5
16	MP2C	X	-11.032	4.5
17	MP2C	Z	-19.109	4.5
18	MP2C	Mx	-0.007	4.5
19	MP2A	X	-12.556	0.5
20	MP2A	Z	-21.748	0.5
21	MP2A	Mx	0	0.5
22	MP2A	X	-12.556	4.5
23	MP2A	Z	-21.748	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
24	MP2A	Mx	0	4.5
25	MP2B	X	-14.891	0.5
26	MP2B	Z	-25.791	0.5
27	MP2B	Mx	0.022	0.5
28	MP2B	X	-14.891	4.5
29	MP2B	Z	-25.791	4.5
30	MP2B	Mx	0.022	4.5
31	MP2C	X	-11.032	0.5
32	MP2C	Z	-19.109	0.5
33	MP2C	Mx	-0.02	0.5
34	MP2C	X	-11.032	4.5
35	MP2C	Z	-19.109	4.5
36	MP2C	Mx	-0.02	4.5
37	MP3A	X	-4.609	1.5
38	MP3A	Z	-7.984	1.5
39	MP3A	Mx	0.004	1.5
40	MP3A	X	-4.609	3.5
41	MP3A	Z	-7.984	3.5
42	MP3A	Mx	0.004	3.5
43	MP3B	X	-6.452	1.5
44	MP3B	Z	-11.175	1.5
45	MP3B	Mx	0.00075	1.5
46	MP3B	X	-6.452	3.5
47	MP3B	Z	-11.175	3.5
48	MP3B	Mx	0.00075	3.5
49	MP3C	X	-3.407	1.5
50	MP3C	Z	-5.901	1.5
51	MP3C	Mx	-0.004	1.5
52	MP3C	X	-3.407	3.5
53	MP3C	Z	-5.901	3.5
54	MP3C	Mx	-0.004	3.5
55	MP2A	X	-1.411	2
56	MP2A	Z	-2.444	2
57	MP2A	Mx	-0.001	2
58	MP2B	X	-1.625	2
59	MP2B	Z	-2.815	2
60	MP2B	Mx	-0.000189	2
61	MP2C	X	-1.295	2
62	MP2C	Z	-2.243	2
63	MP2C	Mx	0.002	2
64	MP2A	X	-5.678	3.5
65	MP2A	Z	-9.834	3.5
66	MP2A	Mx	-0.005	3.5
67	MP2B	X	-6.681	3.5
68	MP2B	Z	-11.571	3.5
69	MP2B	Mx	-0.000776	3.5
70	MP2C	X	-5.023	3.5
71	MP2C	Z	-8.7	3.5
72	MP2C	Mx	0.006	3.5
73	MP1A	X	-5.718	3.5
74	MP1A	Z	-9.905	3.5
75	MP1A	Mx	-0.005	3.5
76	MP1B	X	-5.718	3.5
77	MP1B	Z	-9.905	3.5
78	MP1B	Mx	-0.005	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
79	MP1C	X	-5.718	3.5
80	MP1C	Z	-9.905	3.5
81	MP1C	Mx	-0.005	3.5
82	MP1C	X	-12.999	0.5
83	MP1C	Z	-22.515	0.5
84	MP1C	Mx	-0.016	0.5
85	MP1C	X	-12.999	4.5
86	MP1C	Z	-22.515	4.5
87	MP1C	Mx	-0.016	4.5
88	MP4C	X	-12.999	0.5
89	MP4C	Z	-22.515	0.5
90	MP4C	Mx	-0.016	0.5
91	MP4C	X	-12.999	4.5
92	MP4C	Z	-22.515	4.5
93	MP4C	Mx	-0.016	4.5
94	MP1A	X	-14.875	0.5
95	MP1A	Z	-25.765	0.5
96	MP1A	Mx	0.014	0.5
97	MP1A	X	-14.875	4.5
98	MP1A	Z	-25.765	4.5
99	MP1A	Mx	0.014	4.5
100	MP1B	X	-15.649	0.5
101	MP1B	Z	-27.105	0.5
102	MP1B	Mx	0.002	0.5
103	MP1B	X	-15.649	4.5
104	MP1B	Z	-27.105	4.5
105	MP1B	Mx	0.002	4.5
106	MP4A	X	-14.875	0.5
107	MP4A	Z	-25.765	0.5
108	MP4A	Mx	0.014	0.5
109	MP4A	X	-14.875	4.5
110	MP4A	Z	-25.765	4.5
111	MP4A	Mx	0.014	4.5
112	MP4B	X	-15.649	0.5
113	MP4B	Z	-27.105	0.5
114	MP4B	Mx	0.002	0.5
115	MP4B	X	-15.649	4.5
116	MP4B	Z	-27.105	4.5
117	MP4B	Mx	0.002	4.5
118	M99	X	-7.801	1
119	M99	Z	-13.511	1
120	M99	Mx	-0.006	1
121	M98	X	-7.801	1
122	M98	Z	-13.511	1
123	M98	Mx	-0.006	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	0.5
2	MP2A	Z	-9.574	0.5
3	MP2A	Mx	0.008	0.5
4	MP2A	X	0	4.5
5	MP2A	Z	-9.574	4.5
6	MP2A	Mx	0.008	4.5
7	MP2B	X	0	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
8	MP2B	Z	-8.693	0.5
9	MP2B	Mx	-0.001	0.5
10	MP2B	X	0	4.5
11	MP2B	Z	-8.693	4.5
12	MP2B	Mx	-0.001	4.5
13	MP2C	X	0	0.5
14	MP2C	Z	-6.462	0.5
15	MP2C	Mx	-0.005	0.5
16	MP2C	X	0	4.5
17	MP2C	Z	-6.462	4.5
18	MP2C	Mx	-0.005	4.5
19	MP2A	X	0	0.5
20	MP2A	Z	-9.574	0.5
21	MP2A	Mx	-0.005	0.5
22	MP2A	X	0	4.5
23	MP2A	Z	-9.574	4.5
24	MP2A	Mx	-0.005	4.5
25	MP2B	X	0	0.5
26	MP2B	Z	-8.693	0.5
27	MP2B	Mx	0.008	0.5
28	MP2B	X	0	4.5
29	MP2B	Z	-8.693	4.5
30	MP2B	Mx	0.008	4.5
31	MP2C	X	0	0.5
32	MP2C	Z	-6.462	0.5
33	MP2C	Mx	-0.004	0.5
34	MP2C	X	0	4.5
35	MP2C	Z	-6.462	4.5
36	MP2C	Mx	-0.004	4.5
37	MP3A	X	0	1.5
38	MP3A	Z	-3.251	1.5
39	MP3A	Mx	0.000561	1.5
40	MP3A	X	0	3.5
41	MP3A	Z	-3.251	3.5
42	MP3A	Mx	0.000561	3.5
43	MP3B	X	0	1.5
44	MP3B	Z	-2.674	1.5
45	MP3B	Mx	0.001	1.5
46	MP3B	X	0	3.5
47	MP3B	Z	-2.674	3.5
48	MP3B	Mx	0.001	3.5
49	MP3C	X	0	1.5
50	MP3C	Z	-1.211	1.5
51	MP3C	Mx	-0.000804	1.5
52	MP3C	X	0	3.5
53	MP3C	Z	-1.211	3.5
54	MP3C	Mx	-0.000804	3.5
55	MP2A	X	0	2
56	MP2A	Z	-0.775	2
57	MP2A	Mx	-0.000151	2
58	MP2B	X	0	2
59	MP2B	Z	-0.715	2
60	MP2B	Mx	-0.000273	2
61	MP2C	X	0	2
62	MP2C	Z	-0.553	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
63	MP2C	Mx	0.000367	2
64	MP2A	X	0	3.5
65	MP2A	Z	-3.261	3.5
66	MP2A	Mx	-0.000563	3.5
67	MP2B	X	0	3.5
68	MP2B	Z	-2.974	3.5
69	MP2B	Mx	-0.001	3.5
70	MP2C	X	0	3.5
71	MP2C	Z	-2.246	3.5
72	MP2C	Mx	0.001	3.5
73	MP1A	X	0	3.5
74	MP1A	Z	-3.937	3.5
75	MP1A	Mx	-0.000679	3.5
76	MP1B	X	0	3.5
77	MP1B	Z	-3.937	3.5
78	MP1B	Mx	-0.000679	3.5
79	MP1C	X	0	3.5
80	MP1C	Z	-3.937	3.5
81	MP1C	Mx	-0.000679	3.5
82	MP1C	X	0	0.5
83	MP1C	Z	-9.246	0.5
84	MP1C	Mx	-0.006	0.5
85	MP1C	X	0	4.5
86	MP1C	Z	-9.246	4.5
87	MP1C	Mx	-0.006	4.5
88	MP4C	X	0	0.5
89	MP4C	Z	-9.246	0.5
90	MP4C	Mx	-0.006	0.5
91	MP4C	X	0	4.5
92	MP4C	Z	-9.246	4.5
93	MP4C	Mx	-0.006	4.5
94	MP1A	X	0	0.5
95	MP1A	Z	-10.253	0.5
96	MP1A	Mx	0.002	0.5
97	MP1A	X	0	4.5
98	MP1A	Z	-10.253	4.5
99	MP1A	Mx	0.002	4.5
100	MP1B	X	0	0.5
101	MP1B	Z	-9.964	0.5
102	MP1B	Mx	0.004	0.5
103	MP1B	X	0	4.5
104	MP1B	Z	-9.964	4.5
105	MP1B	Mx	0.004	4.5
106	MP4A	X	0	0.5
107	MP4A	Z	-10.253	0.5
108	MP4A	Mx	0.002	0.5
109	MP4A	X	0	4.5
110	MP4A	Z	-10.253	4.5
111	MP4A	Mx	0.002	4.5
112	MP4B	X	0	0.5
113	MP4B	Z	-9.964	0.5
114	MP4B	Mx	0.004	0.5
115	MP4B	X	0	4.5
116	MP4B	Z	-9.964	4.5
117	MP4B	Mx	0.004	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
118	M99	X	0	1
119	M99	Z	-3.83	1
120	M99	Mx	-0.002	1
121	M98	X	0	1
122	M98	Z	-3.83	1
123	M98	Mx	-0.002	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	4.787	0.5
2	MP2A	Z	-8.292	0.5
3	MP2A	Mx	0.005	0.5
4	MP2A	X	4.787	4.5
5	MP2A	Z	-8.292	4.5
6	MP2A	Mx	0.005	4.5
7	MP2B	X	3.518	0.5
8	MP2B	Z	-6.094	0.5
9	MP2B	Mx	0.002	0.5
10	MP2B	X	3.518	4.5
11	MP2B	Z	-6.094	4.5
12	MP2B	Mx	0.002	4.5
13	MP2C	X	3.771	0.5
14	MP2C	Z	-6.532	0.5
15	MP2C	Mx	-0.007	0.5
16	MP2C	X	3.771	4.5
17	MP2C	Z	-6.532	4.5
18	MP2C	Mx	-0.007	4.5
19	MP2A	X	4.787	0.5
20	MP2A	Z	-8.292	0.5
21	MP2A	Mx	-0.008	0.5
22	MP2A	X	4.787	4.5
23	MP2A	Z	-8.292	4.5
24	MP2A	Mx	-0.008	4.5
25	MP2B	X	3.518	0.5
26	MP2B	Z	-6.094	0.5
27	MP2B	Mx	0.006	0.5
28	MP2B	X	3.518	4.5
29	MP2B	Z	-6.094	4.5
30	MP2B	Mx	0.006	4.5
31	MP2C	X	3.771	0.5
32	MP2C	Z	-6.532	0.5
33	MP2C	Mx	-0.001	0.5
34	MP2C	X	3.771	4.5
35	MP2C	Z	-6.532	4.5
36	MP2C	Mx	-0.001	4.5
37	MP3A	X	1.626	1.5
38	MP3A	Z	-2.816	1.5
39	MP3A	Mx	-0.000561	1.5
40	MP3A	X	1.626	3.5
41	MP3A	Z	-2.816	3.5
42	MP3A	Mx	-0.000561	3.5
43	MP3B	X	0.794	1.5
44	MP3B	Z	-1.375	1.5
45	MP3B	Mx	0.000959	1.5
46	MP3B	X	0.794	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
47	MP3B	Z	-1.375	3.5
48	MP3B	Mx	0.000959	3.5
49	MP3C	X	0.96	1.5
50	MP3C	Z	-1.662	1.5
51	MP3C	Mx	-0.001	1.5
52	MP3C	X	0.96	3.5
53	MP3C	Z	-1.662	3.5
54	MP3C	Mx	-0.001	3.5
55	MP2A	X	0.392	2
56	MP2A	Z	-0.679	2
57	MP2A	Mx	0.000118	2
58	MP2B	X	0.297	2
59	MP2B	Z	-0.515	2
60	MP2B	Mx	-0.000359	2
61	MP2C	X	0.316	2
62	MP2C	Z	-0.547	2
63	MP2C	Mx	0.000345	2
64	MP2A	X	1.631	3.5
65	MP2A	Z	-2.824	3.5
66	MP2A	Mx	0.000563	3.5
67	MP2B	X	1.217	3.5
68	MP2B	Z	-2.107	3.5
69	MP2B	Mx	-0.001	3.5
70	MP2C	X	1.299	3.5
71	MP2C	Z	-2.25	3.5
72	MP2C	Mx	0.001	3.5
73	MP1A	X	1.969	3.5
74	MP1A	Z	-3.41	3.5
75	MP1A	Mx	0.00068	3.5
76	MP1B	X	1.969	3.5
77	MP1B	Z	-3.41	3.5
78	MP1B	Mx	0.00068	3.5
79	MP1C	X	1.969	3.5
80	MP1C	Z	-3.41	3.5
81	MP1C	Mx	0.00068	3.5
82	MP1C	X	3.88	0.5
83	MP1C	Z	-6.721	0.5
84	MP1C	Mx	-0.004	0.5
85	MP1C	X	3.88	4.5
86	MP1C	Z	-6.721	4.5
87	MP1C	Mx	-0.004	4.5
88	MP4C	X	3.88	0.5
89	MP4C	Z	-6.721	0.5
90	MP4C	Mx	-0.004	0.5
91	MP4C	X	3.88	4.5
92	MP4C	Z	-6.721	4.5
93	MP4C	Mx	-0.004	4.5
94	MP1A	X	5.126	0.5
95	MP1A	Z	-8.879	0.5
96	MP1A	Mx	-0.002	0.5
97	MP1A	X	5.126	4.5
98	MP1A	Z	-8.879	4.5
99	MP1A	Mx	-0.002	4.5
100	MP1B	X	4.71	0.5
101	MP1B	Z	-8.159	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
102	MP1B	Mx	0.006	0.5
103	MP1B	X	4.71	4.5
104	MP1B	Z	-8.159	4.5
105	MP1B	Mx	0.006	4.5
106	MP4A	X	5.126	0.5
107	MP4A	Z	-8.879	0.5
108	MP4A	Mx	-0.002	0.5
109	MP4A	X	5.126	4.5
110	MP4A	Z	-8.879	4.5
111	MP4A	Mx	-0.002	4.5
112	MP4B	X	4.71	0.5
113	MP4B	Z	-8.159	0.5
114	MP4B	Mx	0.006	0.5
115	MP4B	X	4.71	4.5
116	MP4B	Z	-8.159	4.5
117	MP4B	Mx	0.006	4.5
118	M99	X	1.754	1
119	M99	Z	-3.037	1
120	M99	Mx	-0.002	1
121	M98	X	1.754	1
122	M98	Z	-3.037	1
123	M98	Mx	-0.002	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	7.03	0.5
2	MP2A	Z	-4.059	0.5
3	MP2A	Mx	0	0.5
4	MP2A	X	7.03	4.5
5	MP2A	Z	-4.059	4.5
6	MP2A	Mx	0	4.5
7	MP2B	X	5.596	0.5
8	MP2B	Z	-3.231	0.5
9	MP2B	Mx	0.005	0.5
10	MP2B	X	5.596	4.5
11	MP2B	Z	-3.231	4.5
12	MP2B	Mx	0.005	4.5
13	MP2C	X	7.966	0.5
14	MP2C	Z	-4.599	0.5
15	MP2C	Mx	-0.008	0.5
16	MP2C	X	7.966	4.5
17	MP2C	Z	-4.599	4.5
18	MP2C	Mx	-0.008	4.5
19	MP2A	X	7.03	0.5
20	MP2A	Z	-4.059	0.5
21	MP2A	Mx	-0.008	0.5
22	MP2A	X	7.03	4.5
23	MP2A	Z	-4.059	4.5
24	MP2A	Mx	-0.008	4.5
25	MP2B	X	5.596	0.5
26	MP2B	Z	-3.231	0.5
27	MP2B	Mx	0.004	0.5
28	MP2B	X	5.596	4.5
29	MP2B	Z	-3.231	4.5
30	MP2B	Mx	0.004	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
31	MP2C	X	7.966	0.5
32	MP2C	Z	-4.599	0.5
33	MP2C	Mx	0.003	0.5
34	MP2C	X	7.966	4.5
35	MP2C	Z	-4.599	4.5
36	MP2C	Mx	0.003	4.5
37	MP3A	X	1.989	1.5
38	MP3A	Z	-1.148	1.5
39	MP3A	Mx	-0.001	1.5
40	MP3A	X	1.989	3.5
41	MP3A	Z	-1.148	3.5
42	MP3A	Mx	-0.001	3.5
43	MP3B	X	1.049	1.5
44	MP3B	Z	-0.605	1.5
45	MP3B	Mx	0.000804	1.5
46	MP3B	X	1.049	3.5
47	MP3B	Z	-0.605	3.5
48	MP3B	Mx	0.000804	3.5
49	MP3C	X	2.603	1.5
50	MP3C	Z	-1.503	1.5
51	MP3C	Mx	-0.000847	1.5
52	MP3C	X	2.603	3.5
53	MP3C	Z	-1.503	3.5
54	MP3C	Mx	-0.000847	3.5
55	MP2A	X	0.591	2
56	MP2A	Z	-0.341	2
57	MP2A	Mx	0.00031	2
58	MP2B	X	0.479	2
59	MP2B	Z	-0.276	2
60	MP2B	Mx	-0.000367	2
61	MP2C	X	0.651	2
62	MP2C	Z	-0.376	2
63	MP2C	Mx	0.000212	2
64	MP2A	X	2.413	3.5
65	MP2A	Z	-1.393	3.5
66	MP2A	Mx	0.001	3.5
67	MP2B	X	1.945	3.5
68	MP2B	Z	-1.123	3.5
69	MP2B	Mx	-0.001	3.5
70	MP2C	X	2.718	3.5
71	MP2C	Z	-1.569	3.5
72	MP2C	Mx	0.000884	3.5
73	MP1A	X	2.93	3.5
74	MP1A	Z	-1.692	3.5
75	MP1A	Mx	0.002	3.5
76	MP1B	X	2.93	3.5
77	MP1B	Z	-1.692	3.5
78	MP1B	Mx	0.002	3.5
79	MP1C	X	2.93	3.5
80	MP1C	Z	-1.692	3.5
81	MP1C	Mx	0.002	3.5
82	MP1C	X	4.749	0.5
83	MP1C	Z	-2.742	0.5
84	MP1C	Mx	-0.002	0.5
85	MP1C	X	4.749	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
86	MP1C	Z	-2.742	4.5
87	MP1C	Mx	-0.002	4.5
88	MP4C	X	4.749	0.5
89	MP4C	Z	-2.742	0.5
90	MP4C	Mx	-0.002	0.5
91	MP4C	X	4.749	4.5
92	MP4C	Z	-2.742	4.5
93	MP4C	Mx	-0.002	4.5
94	MP1A	X	8.466	0.5
95	MP1A	Z	-4.888	0.5
96	MP1A	Mx	-0.005	0.5
97	MP1A	X	8.466	4.5
98	MP1A	Z	-4.888	4.5
99	MP1A	Mx	-0.005	4.5
100	MP1B	X	7.995	0.5
101	MP1B	Z	-4.616	0.5
102	MP1B	Mx	0.006	0.5
103	MP1B	X	7.995	4.5
104	MP1B	Z	-4.616	4.5
105	MP1B	Mx	0.006	4.5
106	MP4A	X	8.466	0.5
107	MP4A	Z	-4.888	0.5
108	MP4A	Mx	-0.005	0.5
109	MP4A	X	8.466	4.5
110	MP4A	Z	-4.888	4.5
111	MP4A	Mx	-0.005	4.5
112	MP4B	X	7.995	0.5
113	MP4B	Z	-4.616	0.5
114	MP4B	Mx	0.006	0.5
115	MP4B	X	7.995	4.5
116	MP4B	Z	-4.616	4.5
117	MP4B	Mx	0.006	4.5
118	M99	X	3.562	1
119	M99	Z	-2.057	1
120	M99	Mx	-0.002	1
121	M98	X	3.562	1
122	M98	Z	-2.057	1
123	M98	Mx	-0.002	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	6.662	0.5
2	MP2A	Z	0	0.5
3	MP2A	Mx	-0.003	0.5
4	MP2A	X	6.662	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	-0.003	4.5
7	MP2B	X	7.543	0.5
8	MP2B	Z	0	0.5
9	MP2B	Mx	0.007	0.5
10	MP2B	X	7.543	4.5
11	MP2B	Z	0	4.5
12	MP2B	Mx	0.007	4.5
13	MP2C	X	9.774	0.5
14	MP2C	Z	0	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2C	Mx	-0.006	0.5
16	MP2C	X	9.774	4.5
17	MP2C	Z	0	4.5
18	MP2C	Mx	-0.006	4.5
19	MP2A	X	6.662	0.5
20	MP2A	Z	0	0.5
21	MP2A	Mx	-0.005	0.5
22	MP2A	X	6.662	4.5
23	MP2A	Z	0	4.5
24	MP2A	Mx	-0.005	4.5
25	MP2B	X	7.543	0.5
26	MP2B	Z	0	0.5
27	MP2B	Mx	0.001	0.5
28	MP2B	X	7.543	4.5
29	MP2B	Z	0	4.5
30	MP2B	Mx	0.001	4.5
31	MP2C	X	9.774	0.5
32	MP2C	Z	0	0.5
33	MP2C	Mx	0.007	0.5
34	MP2C	X	9.774	4.5
35	MP2C	Z	0	4.5
36	MP2C	Mx	0.007	4.5
37	MP3A	X	1.342	1.5
38	MP3A	Z	0	1.5
39	MP3A	Mx	-0.000864	1.5
40	MP3A	X	1.342	3.5
41	MP3A	Z	0	3.5
42	MP3A	Mx	-0.000864	3.5
43	MP3B	X	1.92	1.5
44	MP3B	Z	0	1.5
45	MP3B	Mx	0.001	1.5
46	MP3B	X	1.92	3.5
47	MP3B	Z	0	3.5
48	MP3B	Mx	0.001	3.5
49	MP3C	X	3.382	1.5
50	MP3C	Z	0	1.5
51	MP3C	Mx	0.000197	1.5
52	MP3C	X	3.382	3.5
53	MP3C	Z	0	3.5
54	MP3C	Mx	0.000197	3.5
55	MP2A	X	0.572	2
56	MP2A	Z	0	2
57	MP2A	Mx	0.000365	2
58	MP2B	X	0.631	2
59	MP2B	Z	0	2
60	MP2B	Mx	-0.000345	2
61	MP2C	X	0.794	2
62	MP2C	Z	0	2
63	MP2C	Mx	-4.6e-5	2
64	MP2A	X	2.311	3.5
65	MP2A	Z	0	3.5
66	MP2A	Mx	0.001	3.5
67	MP2B	X	2.598	3.5
68	MP2B	Z	0	3.5
69	MP2B	Mx	-0.001	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	3.326	3.5
71	MP2C	Z	0	3.5
72	MP2C	Mx	-0.000193	3.5
73	MP1A	X	2.829	3.5
74	MP1A	Z	0	3.5
75	MP1A	Mx	0.002	3.5
76	MP1B	X	2.829	3.5
77	MP1B	Z	0	3.5
78	MP1B	Mx	0.002	3.5
79	MP1C	X	2.829	3.5
80	MP1C	Z	0	3.5
81	MP1C	Mx	0.002	3.5
82	MP1C	X	4.693	0.5
83	MP1C	Z	0	0.5
84	MP1C	Mx	0.000273	0.5
85	MP1C	X	4.693	4.5
86	MP1C	Z	0	4.5
87	MP1C	Mx	0.000273	4.5
88	MP4C	X	4.693	0.5
89	MP4C	Z	0	0.5
90	MP4C	Mx	0.000273	0.5
91	MP4C	X	4.693	4.5
92	MP4C	Z	0	4.5
93	MP4C	Mx	0.000273	4.5
94	MP1A	X	9.298	0.5
95	MP1A	Z	0	0.5
96	MP1A	Mx	-0.006	0.5
97	MP1A	X	9.298	4.5
98	MP1A	Z	0	4.5
99	MP1A	Mx	-0.006	4.5
100	MP1B	X	9.587	0.5
101	MP1B	Z	0	0.5
102	MP1B	Mx	0.005	0.5
103	MP1B	X	9.587	4.5
104	MP1B	Z	0	4.5
105	MP1B	Mx	0.005	4.5
106	MP4A	X	9.298	0.5
107	MP4A	Z	0	0.5
108	MP4A	Mx	-0.006	0.5
109	MP4A	X	9.298	4.5
110	MP4A	Z	0	4.5
111	MP4A	Mx	-0.006	4.5
112	MP4B	X	9.587	0.5
113	MP4B	Z	0	0.5
114	MP4B	Mx	0.005	0.5
115	MP4B	X	9.587	4.5
116	MP4B	Z	0	4.5
117	MP4B	Mx	0.005	4.5
118	M99	X	5.042	1
119	M99	Z	0	1
120	M99	Mx	-0.001	1
121	M98	X	5.042	1
122	M98	Z	0	1
123	M98	Mx	-0.001	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	5.769	0.5
2	MP2A	Z	3.331	0.5
3	MP2A	Mx	-0.005	0.5
4	MP2A	X	5.769	4.5
5	MP2A	Z	3.331	4.5
6	MP2A	Mx	-0.005	4.5
7	MP2B	X	7.966	0.5
8	MP2B	Z	4.599	0.5
9	MP2B	Mx	0.008	0.5
10	MP2B	X	7.966	4.5
11	MP2B	Z	4.599	4.5
12	MP2B	Mx	0.008	4.5
13	MP2C	X	7.528	0.5
14	MP2C	Z	4.347	0.5
15	MP2C	Mx	-0.001	0.5
16	MP2C	X	7.528	4.5
17	MP2C	Z	4.347	4.5
18	MP2C	Mx	-0.001	4.5
19	MP2A	X	5.769	0.5
20	MP2A	Z	3.331	0.5
21	MP2A	Mx	-0.003	0.5
22	MP2A	X	5.769	4.5
23	MP2A	Z	3.331	4.5
24	MP2A	Mx	-0.003	4.5
25	MP2B	X	7.966	0.5
26	MP2B	Z	4.599	0.5
27	MP2B	Mx	-0.003	0.5
28	MP2B	X	7.966	4.5
29	MP2B	Z	4.599	4.5
30	MP2B	Mx	-0.003	4.5
31	MP2C	X	7.528	0.5
32	MP2C	Z	4.347	0.5
33	MP2C	Mx	0.008	0.5
34	MP2C	X	7.528	4.5
35	MP2C	Z	4.347	4.5
36	MP2C	Mx	0.008	4.5
37	MP3A	X	1.162	1.5
38	MP3A	Z	0.671	1.5
39	MP3A	Mx	-0.000864	1.5
40	MP3A	X	1.162	3.5
41	MP3A	Z	0.671	3.5
42	MP3A	Mx	-0.000864	3.5
43	MP3B	X	2.603	1.5
44	MP3B	Z	1.503	1.5
45	MP3B	Mx	0.000847	1.5
46	MP3B	X	2.603	3.5
47	MP3B	Z	1.503	3.5
48	MP3B	Mx	0.000847	3.5
49	MP3C	X	2.316	1.5
50	MP3C	Z	1.337	1.5
51	MP3C	Mx	0.001	1.5
52	MP3C	X	2.316	3.5
53	MP3C	Z	1.337	3.5
54	MP3C	Mx	0.001	3.5
55	MP2A	X	0.488	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP2A	Z	0.282	2
57	MP2A	Mx	0.000366	2
58	MP2B	X	0.651	2
59	MP2B	Z	0.376	2
60	MP2B	Mx	-0.000212	2
61	MP2C	X	0.619	2
62	MP2C	Z	0.358	2
63	MP2C	Mx	-0.000274	2
64	MP2A	X	2.001	3.5
65	MP2A	Z	1.155	3.5
66	MP2A	Mx	0.001	3.5
67	MP2B	X	2.718	3.5
68	MP2B	Z	1.569	3.5
69	MP2B	Mx	-0.000884	3.5
70	MP2C	X	2.575	3.5
71	MP2C	Z	1.487	3.5
72	MP2C	Mx	-0.001	3.5
73	MP1A	X	2.45	3.5
74	MP1A	Z	1.414	3.5
75	MP1A	Mx	0.002	3.5
76	MP1B	X	2.45	3.5
77	MP1B	Z	1.414	3.5
78	MP1B	Mx	0.002	3.5
79	MP1C	X	2.45	3.5
80	MP1C	Z	1.414	3.5
81	MP1C	Mx	0.002	3.5
82	MP1C	X	5.351	0.5
83	MP1C	Z	3.089	0.5
84	MP1C	Mx	0.002	0.5
85	MP1C	X	5.351	4.5
86	MP1C	Z	3.089	4.5
87	MP1C	Mx	0.002	4.5
88	MP4C	X	5.351	0.5
89	MP4C	Z	3.089	0.5
90	MP4C	Mx	0.002	0.5
91	MP4C	X	5.351	4.5
92	MP4C	Z	3.089	4.5
93	MP4C	Mx	0.002	4.5
94	MP1A	X	8.052	0.5
95	MP1A	Z	4.649	0.5
96	MP1A	Mx	-0.006	0.5
97	MP1A	X	8.052	4.5
98	MP1A	Z	4.649	4.5
99	MP1A	Mx	-0.006	4.5
100	MP1B	X	8.773	0.5
101	MP1B	Z	5.065	0.5
102	MP1B	Mx	0.003	0.5
103	MP1B	X	8.773	4.5
104	MP1B	Z	5.065	4.5
105	MP1B	Mx	0.003	4.5
106	MP4A	X	8.052	0.5
107	MP4A	Z	4.649	0.5
108	MP4A	Mx	-0.006	0.5
109	MP4A	X	8.052	4.5
110	MP4A	Z	4.649	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
111	MP4A	Mx	-0.006	4.5
112	MP4B	X	8.773	0.5
113	MP4B	Z	5.065	0.5
114	MP4B	Mx	0.003	0.5
115	MP4B	X	8.773	4.5
116	MP4B	Z	5.065	4.5
117	MP4B	Mx	0.003	4.5
118	M99	X	4.645	1
119	M99	Z	2.682	1
120	M99	Mx	0.000312	1
121	M98	X	4.645	1
122	M98	Z	2.682	1
123	M98	Mx	0.000312	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	4.059	0.5
2	MP2A	Z	7.03	0.5
3	MP2A	Mx	-0.008	0.5
4	MP2A	X	4.059	4.5
5	MP2A	Z	7.03	4.5
6	MP2A	Mx	-0.008	4.5
7	MP2B	X	4.887	0.5
8	MP2B	Z	8.465	0.5
9	MP2B	Mx	0.006	0.5
10	MP2B	X	4.887	4.5
11	MP2B	Z	8.465	4.5
12	MP2B	Mx	0.006	4.5
13	MP2C	X	3.518	0.5
14	MP2C	Z	6.094	0.5
15	MP2C	Mx	0.002	0.5
16	MP2C	X	3.518	4.5
17	MP2C	Z	6.094	4.5
18	MP2C	Mx	0.002	4.5
19	MP2A	X	4.059	0.5
20	MP2A	Z	7.03	0.5
21	MP2A	Mx	0	0.5
22	MP2A	X	4.059	4.5
23	MP2A	Z	7.03	4.5
24	MP2A	Mx	0	4.5
25	MP2B	X	4.887	0.5
26	MP2B	Z	8.465	0.5
27	MP2B	Mx	-0.007	0.5
28	MP2B	X	4.887	4.5
29	MP2B	Z	8.465	4.5
30	MP2B	Mx	-0.007	4.5
31	MP2C	X	3.518	0.5
32	MP2C	Z	6.094	0.5
33	MP2C	Mx	0.006	0.5
34	MP2C	X	3.518	4.5
35	MP2C	Z	6.094	4.5
36	MP2C	Mx	0.006	4.5
37	MP3A	X	1.148	1.5
38	MP3A	Z	1.989	1.5
39	MP3A	Mx	-0.001	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
40	MP3A	X	1.148	3.5
41	MP3A	Z	1.989	3.5
42	MP3A	Mx	-0.001	3.5
43	MP3B	X	1.691	1.5
44	MP3B	Z	2.929	1.5
45	MP3B	Mx	-0.000197	1.5
46	MP3B	X	1.691	3.5
47	MP3B	Z	2.929	3.5
48	MP3B	Mx	-0.000197	3.5
49	MP3C	X	0.794	1.5
50	MP3C	Z	1.375	1.5
51	MP3C	Mx	0.000959	1.5
52	MP3C	X	0.794	3.5
53	MP3C	Z	1.375	3.5
54	MP3C	Mx	0.000959	3.5
55	MP2A	X	0.332	2
56	MP2A	Z	0.576	2
57	MP2A	Mx	0.000324	2
58	MP2B	X	0.397	2
59	MP2B	Z	0.688	2
60	MP2B	Mx	4.6e-5	2
61	MP2C	X	0.297	2
62	MP2C	Z	0.515	2
63	MP2C	Mx	-0.000359	2
64	MP2A	X	1.393	3.5
65	MP2A	Z	2.413	3.5
66	MP2A	Mx	0.001	3.5
67	MP2B	X	1.663	3.5
68	MP2B	Z	2.881	3.5
69	MP2B	Mx	0.000193	3.5
70	MP2C	X	1.217	3.5
71	MP2C	Z	2.107	3.5
72	MP2C	Mx	-0.001	3.5
73	MP1A	X	1.692	3.5
74	MP1A	Z	2.93	3.5
75	MP1A	Mx	0.002	3.5
76	MP1B	X	1.692	3.5
77	MP1B	Z	2.93	3.5
78	MP1B	Mx	0.002	3.5
79	MP1C	X	1.692	3.5
80	MP1C	Z	2.93	3.5
81	MP1C	Mx	0.002	3.5
82	MP1C	X	4.228	0.5
83	MP1C	Z	7.323	0.5
84	MP1C	Mx	0.005	0.5
85	MP1C	X	4.228	4.5
86	MP1C	Z	7.323	4.5
87	MP1C	Mx	0.005	4.5
88	MP4C	X	4.228	0.5
89	MP4C	Z	7.323	0.5
90	MP4C	Mx	0.005	0.5
91	MP4C	X	4.228	4.5
92	MP4C	Z	7.323	4.5
93	MP4C	Mx	0.005	4.5
94	MP1A	X	4.888	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
95	MP1A	Z	8.466	0.5
96	MP1A	Mx	-0.005	0.5
97	MP1A	X	4.888	4.5
98	MP1A	Z	8.466	4.5
99	MP1A	Mx	-0.005	4.5
100	MP1B	X	5.159	0.5
101	MP1B	Z	8.936	0.5
102	MP1B	Mx	-0.0006	0.5
103	MP1B	X	5.159	4.5
104	MP1B	Z	8.936	4.5
105	MP1B	Mx	-0.0006	4.5
106	MP4A	X	4.888	0.5
107	MP4A	Z	8.466	0.5
108	MP4A	Mx	-0.005	0.5
109	MP4A	X	4.888	4.5
110	MP4A	Z	8.466	4.5
111	MP4A	Mx	-0.005	4.5
112	MP4B	X	5.159	0.5
113	MP4B	Z	8.936	0.5
114	MP4B	Mx	-0.0006	0.5
115	MP4B	X	5.159	4.5
116	MP4B	Z	8.936	4.5
117	MP4B	Mx	-0.0006	4.5
118	M99	X	2.379	1
119	M99	Z	4.121	1
120	M99	Mx	0.002	1
121	M98	X	2.379	1
122	M98	Z	4.121	1
123	M98	Mx	0.002	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	0	0.5
2	MP2A	Z	9.574	0.5
3	MP2A	Mx	-0.008	0.5
4	MP2A	X	0	4.5
5	MP2A	Z	9.574	4.5
6	MP2A	Mx	-0.008	4.5
7	MP2B	X	0	0.5
8	MP2B	Z	8.693	0.5
9	MP2B	Mx	0.001	0.5
10	MP2B	X	0	4.5
11	MP2B	Z	8.693	4.5
12	MP2B	Mx	0.001	4.5
13	MP2C	X	0	0.5
14	MP2C	Z	6.462	0.5
15	MP2C	Mx	0.005	0.5
16	MP2C	X	0	4.5
17	MP2C	Z	6.462	4.5
18	MP2C	Mx	0.005	4.5
19	MP2A	X	0	0.5
20	MP2A	Z	9.574	0.5
21	MP2A	Mx	0.005	0.5
22	MP2A	X	0	4.5
23	MP2A	Z	9.574	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
24	MP2A	Mx	0.005	4.5
25	MP2B	X	0	0.5
26	MP2B	Z	8.693	0.5
27	MP2B	Mx	-0.008	0.5
28	MP2B	X	0	4.5
29	MP2B	Z	8.693	4.5
30	MP2B	Mx	-0.008	4.5
31	MP2C	X	0	0.5
32	MP2C	Z	6.462	0.5
33	MP2C	Mx	0.004	0.5
34	MP2C	X	0	4.5
35	MP2C	Z	6.462	4.5
36	MP2C	Mx	0.004	4.5
37	MP3A	X	0	1.5
38	MP3A	Z	3.251	1.5
39	MP3A	Mx	-0.000561	1.5
40	MP3A	X	0	3.5
41	MP3A	Z	3.251	3.5
42	MP3A	Mx	-0.000561	3.5
43	MP3B	X	0	1.5
44	MP3B	Z	2.674	1.5
45	MP3B	Mx	-0.001	1.5
46	MP3B	X	0	3.5
47	MP3B	Z	2.674	3.5
48	MP3B	Mx	-0.001	3.5
49	MP3C	X	0	1.5
50	MP3C	Z	1.211	1.5
51	MP3C	Mx	0.000804	1.5
52	MP3C	X	0	3.5
53	MP3C	Z	1.211	3.5
54	MP3C	Mx	0.000804	3.5
55	MP2A	X	0	2
56	MP2A	Z	0.775	2
57	MP2A	Mx	0.000151	2
58	MP2B	X	0	2
59	MP2B	Z	0.715	2
60	MP2B	Mx	0.000273	2
61	MP2C	X	0	2
62	MP2C	Z	0.553	2
63	MP2C	Mx	-0.000367	2
64	MP2A	X	0	3.5
65	MP2A	Z	3.261	3.5
66	MP2A	Mx	0.000563	3.5
67	MP2B	X	0	3.5
68	MP2B	Z	2.974	3.5
69	MP2B	Mx	0.001	3.5
70	MP2C	X	0	3.5
71	MP2C	Z	2.246	3.5
72	MP2C	Mx	-0.001	3.5
73	MP1A	X	0	3.5
74	MP1A	Z	3.937	3.5
75	MP1A	Mx	0.000679	3.5
76	MP1B	X	0	3.5
77	MP1B	Z	3.937	3.5
78	MP1B	Mx	0.000679	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
79	MP1C	X	0	3.5
80	MP1C	Z	3.937	3.5
81	MP1C	Mx	0.000679	3.5
82	MP1C	X	0	0.5
83	MP1C	Z	9.246	0.5
84	MP1C	Mx	0.006	0.5
85	MP1C	X	0	4.5
86	MP1C	Z	9.246	4.5
87	MP1C	Mx	0.006	4.5
88	MP4C	X	0	0.5
89	MP4C	Z	9.246	0.5
90	MP4C	Mx	0.006	0.5
91	MP4C	X	0	4.5
92	MP4C	Z	9.246	4.5
93	MP4C	Mx	0.006	4.5
94	MP1A	X	0	0.5
95	MP1A	Z	10.253	0.5
96	MP1A	Mx	-0.002	0.5
97	MP1A	X	0	4.5
98	MP1A	Z	10.253	4.5
99	MP1A	Mx	-0.002	4.5
100	MP1B	X	0	0.5
101	MP1B	Z	9.964	0.5
102	MP1B	Mx	-0.004	0.5
103	MP1B	X	0	4.5
104	MP1B	Z	9.964	4.5
105	MP1B	Mx	-0.004	4.5
106	MP4A	X	0	0.5
107	MP4A	Z	10.253	0.5
108	MP4A	Mx	-0.002	0.5
109	MP4A	X	0	4.5
110	MP4A	Z	10.253	4.5
111	MP4A	Mx	-0.002	4.5
112	MP4B	X	0	0.5
113	MP4B	Z	9.964	0.5
114	MP4B	Mx	-0.004	0.5
115	MP4B	X	0	4.5
116	MP4B	Z	9.964	4.5
117	MP4B	Mx	-0.004	4.5
118	M99	X	0	1
119	M99	Z	3.83	1
120	M99	Mx	0.002	1
121	M98	X	0	1
122	M98	Z	3.83	1
123	M98	Mx	0.002	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-4.787	0.5
2	MP2A	Z	8.292	0.5
3	MP2A	Mx	-0.005	0.5
4	MP2A	X	-4.787	4.5
5	MP2A	Z	8.292	4.5
6	MP2A	Mx	-0.005	4.5
7	MP2B	X	-3.518	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
8	MP2B	Z	6.094	0.5
9	MP2B	Mx	-0.002	0.5
10	MP2B	X	-3.518	4.5
11	MP2B	Z	6.094	4.5
12	MP2B	Mx	-0.002	4.5
13	MP2C	X	-3.771	0.5
14	MP2C	Z	6.532	0.5
15	MP2C	Mx	0.007	0.5
16	MP2C	X	-3.771	4.5
17	MP2C	Z	6.532	4.5
18	MP2C	Mx	0.007	4.5
19	MP2A	X	-4.787	0.5
20	MP2A	Z	8.292	0.5
21	MP2A	Mx	0.008	0.5
22	MP2A	X	-4.787	4.5
23	MP2A	Z	8.292	4.5
24	MP2A	Mx	0.008	4.5
25	MP2B	X	-3.518	0.5
26	MP2B	Z	6.094	0.5
27	MP2B	Mx	-0.006	0.5
28	MP2B	X	-3.518	4.5
29	MP2B	Z	6.094	4.5
30	MP2B	Mx	-0.006	4.5
31	MP2C	X	-3.771	0.5
32	MP2C	Z	6.532	0.5
33	MP2C	Mx	0.001	0.5
34	MP2C	X	-3.771	4.5
35	MP2C	Z	6.532	4.5
36	MP2C	Mx	0.001	4.5
37	MP3A	X	-1.626	1.5
38	MP3A	Z	2.816	1.5
39	MP3A	Mx	0.000561	1.5
40	MP3A	X	-1.626	3.5
41	MP3A	Z	2.816	3.5
42	MP3A	Mx	0.000561	3.5
43	MP3B	X	-0.794	1.5
44	MP3B	Z	1.375	1.5
45	MP3B	Mx	-0.000959	1.5
46	MP3B	X	-0.794	3.5
47	MP3B	Z	1.375	3.5
48	MP3B	Mx	-0.000959	3.5
49	MP3C	X	-0.96	1.5
50	MP3C	Z	1.662	1.5
51	MP3C	Mx	0.001	1.5
52	MP3C	X	-0.96	3.5
53	MP3C	Z	1.662	3.5
54	MP3C	Mx	0.001	3.5
55	MP2A	X	-0.392	2
56	MP2A	Z	0.679	2
57	MP2A	Mx	-0.000118	2
58	MP2B	X	-0.297	2
59	MP2B	Z	0.515	2
60	MP2B	Mx	0.000359	2
61	MP2C	X	-0.316	2
62	MP2C	Z	0.547	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
63	MP2C	Mx	-0.000345	2
64	MP2A	X	-1.631	3.5
65	MP2A	Z	2.824	3.5
66	MP2A	Mx	-0.000563	3.5
67	MP2B	X	-1.217	3.5
68	MP2B	Z	2.107	3.5
69	MP2B	Mx	0.001	3.5
70	MP2C	X	-1.299	3.5
71	MP2C	Z	2.25	3.5
72	MP2C	Mx	-0.001	3.5
73	MP1A	X	-1.969	3.5
74	MP1A	Z	3.41	3.5
75	MP1A	Mx	-0.00068	3.5
76	MP1B	X	-1.969	3.5
77	MP1B	Z	3.41	3.5
78	MP1B	Mx	-0.00068	3.5
79	MP1C	X	-1.969	3.5
80	MP1C	Z	3.41	3.5
81	MP1C	Mx	-0.00068	3.5
82	MP1C	X	-3.88	0.5
83	MP1C	Z	6.721	0.5
84	MP1C	Mx	0.004	0.5
85	MP1C	X	-3.88	4.5
86	MP1C	Z	6.721	4.5
87	MP1C	Mx	0.004	4.5
88	MP4C	X	-3.88	0.5
89	MP4C	Z	6.721	0.5
90	MP4C	Mx	0.004	0.5
91	MP4C	X	-3.88	4.5
92	MP4C	Z	6.721	4.5
93	MP4C	Mx	0.004	4.5
94	MP1A	X	-5.126	0.5
95	MP1A	Z	8.879	0.5
96	MP1A	Mx	0.002	0.5
97	MP1A	X	-5.126	4.5
98	MP1A	Z	8.879	4.5
99	MP1A	Mx	0.002	4.5
100	MP1B	X	-4.71	0.5
101	MP1B	Z	8.159	0.5
102	MP1B	Mx	-0.006	0.5
103	MP1B	X	-4.71	4.5
104	MP1B	Z	8.159	4.5
105	MP1B	Mx	-0.006	4.5
106	MP4A	X	-5.126	0.5
107	MP4A	Z	8.879	0.5
108	MP4A	Mx	0.002	0.5
109	MP4A	X	-5.126	4.5
110	MP4A	Z	8.879	4.5
111	MP4A	Mx	0.002	4.5
112	MP4B	X	-4.71	0.5
113	MP4B	Z	8.159	0.5
114	MP4B	Mx	-0.006	0.5
115	MP4B	X	-4.71	4.5
116	MP4B	Z	8.159	4.5
117	MP4B	Mx	-0.006	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
118	M99	X	-1.754	1
119	M99	Z	3.037	1
120	M99	Mx	0.002	1
121	M98	X	-1.754	1
122	M98	Z	3.037	1
123	M98	Mx	0.002	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-7.03	0.5
2	MP2A	Z	4.059	0.5
3	MP2A	Mx	0	0.5
4	MP2A	X	-7.03	4.5
5	MP2A	Z	4.059	4.5
6	MP2A	Mx	0	4.5
7	MP2B	X	-5.596	0.5
8	MP2B	Z	3.231	0.5
9	MP2B	Mx	-0.005	0.5
10	MP2B	X	-5.596	4.5
11	MP2B	Z	3.231	4.5
12	MP2B	Mx	-0.005	4.5
13	MP2C	X	-7.966	0.5
14	MP2C	Z	4.599	0.5
15	MP2C	Mx	0.008	0.5
16	MP2C	X	-7.966	4.5
17	MP2C	Z	4.599	4.5
18	MP2C	Mx	0.008	4.5
19	MP2A	X	-7.03	0.5
20	MP2A	Z	4.059	0.5
21	MP2A	Mx	0.008	0.5
22	MP2A	X	-7.03	4.5
23	MP2A	Z	4.059	4.5
24	MP2A	Mx	0.008	4.5
25	MP2B	X	-5.596	0.5
26	MP2B	Z	3.231	0.5
27	MP2B	Mx	-0.004	0.5
28	MP2B	X	-5.596	4.5
29	MP2B	Z	3.231	4.5
30	MP2B	Mx	-0.004	4.5
31	MP2C	X	-7.966	0.5
32	MP2C	Z	4.599	0.5
33	MP2C	Mx	-0.003	0.5
34	MP2C	X	-7.966	4.5
35	MP2C	Z	4.599	4.5
36	MP2C	Mx	-0.003	4.5
37	MP3A	X	-1.989	1.5
38	MP3A	Z	1.148	1.5
39	MP3A	Mx	0.001	1.5
40	MP3A	X	-1.989	3.5
41	MP3A	Z	1.148	3.5
42	MP3A	Mx	0.001	3.5
43	MP3B	X	-1.049	1.5
44	MP3B	Z	0.605	1.5
45	MP3B	Mx	-0.000804	1.5
46	MP3B	X	-1.049	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
47	MP3B	Z	0.605	3.5
48	MP3B	Mx	-0.000804	3.5
49	MP3C	X	-2.603	1.5
50	MP3C	Z	1.503	1.5
51	MP3C	Mx	0.000847	1.5
52	MP3C	X	-2.603	3.5
53	MP3C	Z	1.503	3.5
54	MP3C	Mx	0.000847	3.5
55	MP2A	X	-0.591	2
56	MP2A	Z	0.341	2
57	MP2A	Mx	-0.00031	2
58	MP2B	X	-0.479	2
59	MP2B	Z	0.276	2
60	MP2B	Mx	0.000367	2
61	MP2C	X	-0.651	2
62	MP2C	Z	0.376	2
63	MP2C	Mx	-0.000212	2
64	MP2A	X	-2.413	3.5
65	MP2A	Z	1.393	3.5
66	MP2A	Mx	-0.001	3.5
67	MP2B	X	-1.945	3.5
68	MP2B	Z	1.123	3.5
69	MP2B	Mx	0.001	3.5
70	MP2C	X	-2.718	3.5
71	MP2C	Z	1.569	3.5
72	MP2C	Mx	-0.000884	3.5
73	MP1A	X	-2.93	3.5
74	MP1A	Z	1.692	3.5
75	MP1A	Mx	-0.002	3.5
76	MP1B	X	-2.93	3.5
77	MP1B	Z	1.692	3.5
78	MP1B	Mx	-0.002	3.5
79	MP1C	X	-2.93	3.5
80	MP1C	Z	1.692	3.5
81	MP1C	Mx	-0.002	3.5
82	MP1C	X	-4.749	0.5
83	MP1C	Z	2.742	0.5
84	MP1C	Mx	0.002	0.5
85	MP1C	X	-4.749	4.5
86	MP1C	Z	2.742	4.5
87	MP1C	Mx	0.002	4.5
88	MP4C	X	-4.749	0.5
89	MP4C	Z	2.742	0.5
90	MP4C	Mx	0.002	0.5
91	MP4C	X	-4.749	4.5
92	MP4C	Z	2.742	4.5
93	MP4C	Mx	0.002	4.5
94	MP1A	X	-8.466	0.5
95	MP1A	Z	4.888	0.5
96	MP1A	Mx	0.005	0.5
97	MP1A	X	-8.466	4.5
98	MP1A	Z	4.888	4.5
99	MP1A	Mx	0.005	4.5
100	MP1B	X	-7.995	0.5
101	MP1B	Z	4.616	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
102	MP1B	Mx	-0.006	0.5
103	MP1B	X	-7.995	4.5
104	MP1B	Z	4.616	4.5
105	MP1B	Mx	-0.006	4.5
106	MP4A	X	-8.466	0.5
107	MP4A	Z	4.888	0.5
108	MP4A	Mx	0.005	0.5
109	MP4A	X	-8.466	4.5
110	MP4A	Z	4.888	4.5
111	MP4A	Mx	0.005	4.5
112	MP4B	X	-7.995	0.5
113	MP4B	Z	4.616	0.5
114	MP4B	Mx	-0.006	0.5
115	MP4B	X	-7.995	4.5
116	MP4B	Z	4.616	4.5
117	MP4B	Mx	-0.006	4.5
118	M99	X	-3.562	1
119	M99	Z	2.057	1
120	M99	Mx	0.002	1
121	M98	X	-3.562	1
122	M98	Z	2.057	1
123	M98	Mx	0.002	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-6.662	0.5
2	MP2A	Z	0	0.5
3	MP2A	Mx	0.003	0.5
4	MP2A	X	-6.662	4.5
5	MP2A	Z	0	4.5
6	MP2A	Mx	0.003	4.5
7	MP2B	X	-7.543	0.5
8	MP2B	Z	0	0.5
9	MP2B	Mx	-0.007	0.5
10	MP2B	X	-7.543	4.5
11	MP2B	Z	0	4.5
12	MP2B	Mx	-0.007	4.5
13	MP2C	X	-9.774	0.5
14	MP2C	Z	0	0.5
15	MP2C	Mx	0.006	0.5
16	MP2C	X	-9.774	4.5
17	MP2C	Z	0	4.5
18	MP2C	Mx	0.006	4.5
19	MP2A	X	-6.662	0.5
20	MP2A	Z	0	0.5
21	MP2A	Mx	0.005	0.5
22	MP2A	X	-6.662	4.5
23	MP2A	Z	0	4.5
24	MP2A	Mx	0.005	4.5
25	MP2B	X	-7.543	0.5
26	MP2B	Z	0	0.5
27	MP2B	Mx	-0.001	0.5
28	MP2B	X	-7.543	4.5
29	MP2B	Z	0	4.5
30	MP2B	Mx	-0.001	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
31	MP2C	X	-9.774	0.5
32	MP2C	Z	0	0.5
33	MP2C	Mx	-0.007	0.5
34	MP2C	X	-9.774	4.5
35	MP2C	Z	0	4.5
36	MP2C	Mx	-0.007	4.5
37	MP3A	X	-1.342	1.5
38	MP3A	Z	0	1.5
39	MP3A	Mx	0.000864	1.5
40	MP3A	X	-1.342	3.5
41	MP3A	Z	0	3.5
42	MP3A	Mx	0.000864	3.5
43	MP3B	X	-1.92	1.5
44	MP3B	Z	0	1.5
45	MP3B	Mx	-0.001	1.5
46	MP3B	X	-1.92	3.5
47	MP3B	Z	0	3.5
48	MP3B	Mx	-0.001	3.5
49	MP3C	X	-3.382	1.5
50	MP3C	Z	0	1.5
51	MP3C	Mx	-0.000197	1.5
52	MP3C	X	-3.382	3.5
53	MP3C	Z	0	3.5
54	MP3C	Mx	-0.000197	3.5
55	MP2A	X	-0.572	2
56	MP2A	Z	0	2
57	MP2A	Mx	-0.000365	2
58	MP2B	X	-0.631	2
59	MP2B	Z	0	2
60	MP2B	Mx	0.000345	2
61	MP2C	X	-0.794	2
62	MP2C	Z	0	2
63	MP2C	Mx	4.6e-5	2
64	MP2A	X	-2.311	3.5
65	MP2A	Z	0	3.5
66	MP2A	Mx	-0.001	3.5
67	MP2B	X	-2.598	3.5
68	MP2B	Z	0	3.5
69	MP2B	Mx	0.001	3.5
70	MP2C	X	-3.326	3.5
71	MP2C	Z	0	3.5
72	MP2C	Mx	0.000193	3.5
73	MP1A	X	-2.829	3.5
74	MP1A	Z	0	3.5
75	MP1A	Mx	-0.002	3.5
76	MP1B	X	-2.829	3.5
77	MP1B	Z	0	3.5
78	MP1B	Mx	-0.002	3.5
79	MP1C	X	-2.829	3.5
80	MP1C	Z	0	3.5
81	MP1C	Mx	-0.002	3.5
82	MP1C	X	-4.693	0.5
83	MP1C	Z	0	0.5
84	MP1C	Mx	-0.000273	0.5
85	MP1C	X	-4.693	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
86	MP1C	Z	0	4.5
87	MP1C	Mx	-0.000273	4.5
88	MP4C	X	-4.693	0.5
89	MP4C	Z	0	0.5
90	MP4C	Mx	-0.000273	0.5
91	MP4C	X	-4.693	4.5
92	MP4C	Z	0	4.5
93	MP4C	Mx	-0.000273	4.5
94	MP1A	X	-9.298	0.5
95	MP1A	Z	0	0.5
96	MP1A	Mx	0.006	0.5
97	MP1A	X	-9.298	4.5
98	MP1A	Z	0	4.5
99	MP1A	Mx	0.006	4.5
100	MP1B	X	-9.587	0.5
101	MP1B	Z	0	0.5
102	MP1B	Mx	-0.005	0.5
103	MP1B	X	-9.587	4.5
104	MP1B	Z	0	4.5
105	MP1B	Mx	-0.005	4.5
106	MP4A	X	-9.298	0.5
107	MP4A	Z	0	0.5
108	MP4A	Mx	0.006	0.5
109	MP4A	X	-9.298	4.5
110	MP4A	Z	0	4.5
111	MP4A	Mx	0.006	4.5
112	MP4B	X	-9.587	0.5
113	MP4B	Z	0	0.5
114	MP4B	Mx	-0.005	0.5
115	MP4B	X	-9.587	4.5
116	MP4B	Z	0	4.5
117	MP4B	Mx	-0.005	4.5
118	M99	X	-5.042	1
119	M99	Z	0	1
120	M99	Mx	0.001	1
121	M98	X	-5.042	1
122	M98	Z	0	1
123	M98	Mx	0.001	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-5.769	0.5
2	MP2A	Z	-3.331	0.5
3	MP2A	Mx	0.005	0.5
4	MP2A	X	-5.769	4.5
5	MP2A	Z	-3.331	4.5
6	MP2A	Mx	0.005	4.5
7	MP2B	X	-7.966	0.5
8	MP2B	Z	-4.599	0.5
9	MP2B	Mx	-0.008	0.5
10	MP2B	X	-7.966	4.5
11	MP2B	Z	-4.599	4.5
12	MP2B	Mx	-0.008	4.5
13	MP2C	X	-7.528	0.5
14	MP2C	Z	-4.347	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2C	Mx	0.001	0.5
16	MP2C	X	-7.528	4.5
17	MP2C	Z	-4.347	4.5
18	MP2C	Mx	0.001	4.5
19	MP2A	X	-5.769	0.5
20	MP2A	Z	-3.331	0.5
21	MP2A	Mx	0.003	0.5
22	MP2A	X	-5.769	4.5
23	MP2A	Z	-3.331	4.5
24	MP2A	Mx	0.003	4.5
25	MP2B	X	-7.966	0.5
26	MP2B	Z	-4.599	0.5
27	MP2B	Mx	0.003	0.5
28	MP2B	X	-7.966	4.5
29	MP2B	Z	-4.599	4.5
30	MP2B	Mx	0.003	4.5
31	MP2C	X	-7.528	0.5
32	MP2C	Z	-4.347	0.5
33	MP2C	Mx	-0.008	0.5
34	MP2C	X	-7.528	4.5
35	MP2C	Z	-4.347	4.5
36	MP2C	Mx	-0.008	4.5
37	MP3A	X	-1.162	1.5
38	MP3A	Z	-0.671	1.5
39	MP3A	Mx	0.000864	1.5
40	MP3A	X	-1.162	3.5
41	MP3A	Z	-0.671	3.5
42	MP3A	Mx	0.000864	3.5
43	MP3B	X	-2.603	1.5
44	MP3B	Z	-1.503	1.5
45	MP3B	Mx	-0.000847	1.5
46	MP3B	X	-2.603	3.5
47	MP3B	Z	-1.503	3.5
48	MP3B	Mx	-0.000847	3.5
49	MP3C	X	-2.316	1.5
50	MP3C	Z	-1.337	1.5
51	MP3C	Mx	-0.001	1.5
52	MP3C	X	-2.316	3.5
53	MP3C	Z	-1.337	3.5
54	MP3C	Mx	-0.001	3.5
55	MP2A	X	-0.488	2
56	MP2A	Z	-0.282	2
57	MP2A	Mx	-0.000366	2
58	MP2B	X	-0.651	2
59	MP2B	Z	-0.376	2
60	MP2B	Mx	0.000212	2
61	MP2C	X	-0.619	2
62	MP2C	Z	-0.358	2
63	MP2C	Mx	0.000274	2
64	MP2A	X	-2.001	3.5
65	MP2A	Z	-1.155	3.5
66	MP2A	Mx	-0.001	3.5
67	MP2B	X	-2.718	3.5
68	MP2B	Z	-1.569	3.5
69	MP2B	Mx	0.000884	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	-2.575	3.5
71	MP2C	Z	-1.487	3.5
72	MP2C	Mx	0.001	3.5
73	MP1A	X	-2.45	3.5
74	MP1A	Z	-1.414	3.5
75	MP1A	Mx	-0.002	3.5
76	MP1B	X	-2.45	3.5
77	MP1B	Z	-1.414	3.5
78	MP1B	Mx	-0.002	3.5
79	MP1C	X	-2.45	3.5
80	MP1C	Z	-1.414	3.5
81	MP1C	Mx	-0.002	3.5
82	MP1C	X	-5.351	0.5
83	MP1C	Z	-3.089	0.5
84	MP1C	Mx	-0.002	0.5
85	MP1C	X	-5.351	4.5
86	MP1C	Z	-3.089	4.5
87	MP1C	Mx	-0.002	4.5
88	MP4C	X	-5.351	0.5
89	MP4C	Z	-3.089	0.5
90	MP4C	Mx	-0.002	0.5
91	MP4C	X	-5.351	4.5
92	MP4C	Z	-3.089	4.5
93	MP4C	Mx	-0.002	4.5
94	MP1A	X	-8.052	0.5
95	MP1A	Z	-4.649	0.5
96	MP1A	Mx	0.006	0.5
97	MP1A	X	-8.052	4.5
98	MP1A	Z	-4.649	4.5
99	MP1A	Mx	0.006	4.5
100	MP1B	X	-8.773	0.5
101	MP1B	Z	-5.065	0.5
102	MP1B	Mx	-0.003	0.5
103	MP1B	X	-8.773	4.5
104	MP1B	Z	-5.065	4.5
105	MP1B	Mx	-0.003	4.5
106	MP4A	X	-8.052	0.5
107	MP4A	Z	-4.649	0.5
108	MP4A	Mx	0.006	0.5
109	MP4A	X	-8.052	4.5
110	MP4A	Z	-4.649	4.5
111	MP4A	Mx	0.006	4.5
112	MP4B	X	-8.773	0.5
113	MP4B	Z	-5.065	0.5
114	MP4B	Mx	-0.003	0.5
115	MP4B	X	-8.773	4.5
116	MP4B	Z	-5.065	4.5
117	MP4B	Mx	-0.003	4.5
118	M99	X	-4.645	1
119	M99	Z	-2.682	1
120	M99	Mx	-0.000312	1
121	M98	X	-4.645	1
122	M98	Z	-2.682	1
123	M98	Mx	-0.000312	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	-4.059	0.5
2	MP2A	Z	-7.03	0.5
3	MP2A	Mx	0.008	0.5
4	MP2A	X	-4.059	4.5
5	MP2A	Z	-7.03	4.5
6	MP2A	Mx	0.008	4.5
7	MP2B	X	-4.887	0.5
8	MP2B	Z	-8.465	0.5
9	MP2B	Mx	-0.006	0.5
10	MP2B	X	-4.887	4.5
11	MP2B	Z	-8.465	4.5
12	MP2B	Mx	-0.006	4.5
13	MP2C	X	-3.518	0.5
14	MP2C	Z	-6.094	0.5
15	MP2C	Mx	-0.002	0.5
16	MP2C	X	-3.518	4.5
17	MP2C	Z	-6.094	4.5
18	MP2C	Mx	-0.002	4.5
19	MP2A	X	-4.059	0.5
20	MP2A	Z	-7.03	0.5
21	MP2A	Mx	0	0.5
22	MP2A	X	-4.059	4.5
23	MP2A	Z	-7.03	4.5
24	MP2A	Mx	0	4.5
25	MP2B	X	-4.887	0.5
26	MP2B	Z	-8.465	0.5
27	MP2B	Mx	0.007	0.5
28	MP2B	X	-4.887	4.5
29	MP2B	Z	-8.465	4.5
30	MP2B	Mx	0.007	4.5
31	MP2C	X	-3.518	0.5
32	MP2C	Z	-6.094	0.5
33	MP2C	Mx	-0.006	0.5
34	MP2C	X	-3.518	4.5
35	MP2C	Z	-6.094	4.5
36	MP2C	Mx	-0.006	4.5
37	MP3A	X	-1.148	1.5
38	MP3A	Z	-1.989	1.5
39	MP3A	Mx	0.001	1.5
40	MP3A	X	-1.148	3.5
41	MP3A	Z	-1.989	3.5
42	MP3A	Mx	0.001	3.5
43	MP3B	X	-1.691	1.5
44	MP3B	Z	-2.929	1.5
45	MP3B	Mx	0.000197	1.5
46	MP3B	X	-1.691	3.5
47	MP3B	Z	-2.929	3.5
48	MP3B	Mx	0.000197	3.5
49	MP3C	X	-0.794	1.5
50	MP3C	Z	-1.375	1.5
51	MP3C	Mx	-0.000959	1.5
52	MP3C	X	-0.794	3.5
53	MP3C	Z	-1.375	3.5
54	MP3C	Mx	-0.000959	3.5
55	MP2A	X	-0.332	2

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP2A	Z	-0.576	2
57	MP2A	Mx	-0.000324	2
58	MP2B	X	-0.397	2
59	MP2B	Z	-0.688	2
60	MP2B	Mx	-4.6e-5	2
61	MP2C	X	-0.297	2
62	MP2C	Z	-0.515	2
63	MP2C	Mx	0.000359	2
64	MP2A	X	-1.393	3.5
65	MP2A	Z	-2.413	3.5
66	MP2A	Mx	-0.001	3.5
67	MP2B	X	-1.663	3.5
68	MP2B	Z	-2.881	3.5
69	MP2B	Mx	-0.000193	3.5
70	MP2C	X	-1.217	3.5
71	MP2C	Z	-2.107	3.5
72	MP2C	Mx	0.001	3.5
73	MP1A	X	-1.692	3.5
74	MP1A	Z	-2.93	3.5
75	MP1A	Mx	-0.002	3.5
76	MP1B	X	-1.692	3.5
77	MP1B	Z	-2.93	3.5
78	MP1B	Mx	-0.002	3.5
79	MP1C	X	-1.692	3.5
80	MP1C	Z	-2.93	3.5
81	MP1C	Mx	-0.002	3.5
82	MP1C	X	-4.228	0.5
83	MP1C	Z	-7.323	0.5
84	MP1C	Mx	-0.005	0.5
85	MP1C	X	-4.228	4.5
86	MP1C	Z	-7.323	4.5
87	MP1C	Mx	-0.005	4.5
88	MP4C	X	-4.228	0.5
89	MP4C	Z	-7.323	0.5
90	MP4C	Mx	-0.005	0.5
91	MP4C	X	-4.228	4.5
92	MP4C	Z	-7.323	4.5
93	MP4C	Mx	-0.005	4.5
94	MP1A	X	-4.888	0.5
95	MP1A	Z	-8.466	0.5
96	MP1A	Mx	0.005	0.5
97	MP1A	X	-4.888	4.5
98	MP1A	Z	-8.466	4.5
99	MP1A	Mx	0.005	4.5
100	MP1B	X	-5.159	0.5
101	MP1B	Z	-8.936	0.5
102	MP1B	Mx	0.0006	0.5
103	MP1B	X	-5.159	4.5
104	MP1B	Z	-8.936	4.5
105	MP1B	Mx	0.0006	4.5
106	MP4A	X	-4.888	0.5
107	MP4A	Z	-8.466	0.5
108	MP4A	Mx	0.005	0.5
109	MP4A	X	-4.888	4.5
110	MP4A	Z	-8.466	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
111	MP4A	Mx	0.005	4.5
112	MP4B	X	-5.159	0.5
113	MP4B	Z	-8.936	0.5
114	MP4B	Mx	0.0006	0.5
115	MP4B	X	-5.159	4.5
116	MP4B	Z	-8.936	4.5
117	MP4B	Mx	0.0006	4.5
118	M99	X	-2.379	1
119	M99	Z	-4.121	1
120	M99	Mx	-0.002	1
121	M98	X	-2.379	1
122	M98	Z	-4.121	1
123	M98	Mx	-0.002	1

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M1	Y	-500	%31

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M1	Y	-500	%8

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M1	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M1	Y	-250	%100

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	Y	-1.283	0.5
2	MP2A	My	-0.000605	0.5
3	MP2A	Mz	-0.001	0.5
4	MP2A	Y	-1.283	4.5
5	MP2A	My	-0.000605	4.5
6	MP2A	Mz	-0.001	4.5
7	MP2B	Y	-1.283	0.5
8	MP2B	My	0.001	0.5
9	MP2B	Mz	0.00021	0.5
10	MP2B	Y	-1.283	4.5
11	MP2B	My	0.001	4.5
12	MP2B	Mz	0.00021	4.5
13	MP2C	Y	-1.283	0.5
14	MP2C	My	-0.000777	0.5
15	MP2C	Mz	0.000927	0.5
16	MP2C	Y	-1.283	4.5
17	MP2C	My	-0.000777	4.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
18	MP2C	Mz	0.000927	4.5
19	MP2A	Y	-1.283	0.5
20	MP2A	My	-0.001	0.5
21	MP2A	Mz	0.000605	0.5
22	MP2A	Y	-1.283	4.5
23	MP2A	My	-0.001	4.5
24	MP2A	Mz	0.000605	4.5
25	MP2B	Y	-1.283	0.5
26	MP2B	My	0.00021	0.5
27	MP2B	Mz	-0.001	0.5
28	MP2B	Y	-1.283	4.5
29	MP2B	My	0.00021	4.5
30	MP2B	Mz	-0.001	4.5
31	MP2C	Y	-1.283	0.5
32	MP2C	My	0.000927	0.5
33	MP2C	Mz	0.000777	0.5
34	MP2C	Y	-1.283	4.5
35	MP2C	My	0.000927	4.5
36	MP2C	Mz	0.000777	4.5
37	MP3A	Y	-1.161	1.5
38	MP3A	My	-0.000748	1.5
39	MP3A	Mz	-0.0002	1.5
40	MP3A	Y	-1.161	3.5
41	MP3A	My	-0.000748	3.5
42	MP3A	Mz	-0.0002	3.5
43	MP3B	Y	-1.161	1.5
44	MP3B	My	0.000634	1.5
45	MP3B	Mz	-0.000444	1.5
46	MP3B	Y	-1.161	3.5
47	MP3B	My	0.000634	3.5
48	MP3B	Mz	-0.000444	3.5
49	MP3C	Y	-1.161	1.5
50	MP3C	My	6.7e-5	1.5
51	MP3C	Mz	0.000771	1.5
52	MP3C	Y	-1.161	3.5
53	MP3C	My	6.7e-5	3.5
54	MP3C	Mz	0.000771	3.5
55	MP2A	Y	-0.422	2
56	MP2A	My	0.000269	2
57	MP2A	Mz	8.2e-5	2
58	MP2B	Y	-0.422	2
59	MP2B	My	-0.00023	2
60	MP2B	Mz	0.000161	2
61	MP2C	Y	-0.422	2
62	MP2C	My	-2.4e-5	2
63	MP2C	Mz	-0.00028	2
64	MP2A	Y	-3.028	3.5
65	MP2A	My	0.002	3.5
66	MP2A	Mz	0.000522	3.5
67	MP2B	Y	-3.028	3.5
68	MP2B	My	-0.002	3.5
69	MP2B	Mz	0.001	3.5
70	MP2C	Y	-3.028	3.5
71	MP2C	My	-0.000176	3.5
72	MP2C	Mz	-0.002	3.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
73	MP1A	Y	-3.206	3.5
74	MP1A	My	0.002	3.5
75	MP1A	Mz	0.000553	3.5
76	MP1B	Y	-3.206	3.5
77	MP1B	My	0.002	3.5
78	MP1B	Mz	0.000553	3.5
79	MP1C	Y	-3.206	3.5
80	MP1C	My	0.002	3.5
81	MP1C	Mz	0.000553	3.5
82	MP1C	Y	-0.426	0.5
83	MP1C	My	2.5e-5	0.5
84	MP1C	Mz	0.000283	0.5
85	MP1C	Y	-0.426	4.5
86	MP1C	My	2.5e-5	4.5
87	MP1C	Mz	0.000283	4.5
88	MP4C	Y	-0.426	0.5
89	MP4C	My	2.5e-5	0.5
90	MP4C	Mz	0.000283	0.5
91	MP4C	Y	-0.426	4.5
92	MP4C	My	2.5e-5	4.5
93	MP4C	Mz	0.000283	4.5
94	MP1A	Y	-0.547	0.5
95	MP1A	My	-0.000352	0.5
96	MP1A	Mz	-9.4e-5	0.5
97	MP1A	Y	-0.547	4.5
98	MP1A	My	-0.000352	4.5
99	MP1A	Mz	-9.4e-5	4.5
100	MP1B	Y	-0.547	0.5
101	MP1B	My	0.000299	0.5
102	MP1B	Mz	-0.000209	0.5
103	MP1B	Y	-0.547	4.5
104	MP1B	My	0.000299	4.5
105	MP1B	Mz	-0.000209	4.5
106	MP4A	Y	-0.547	0.5
107	MP4A	My	-0.000352	0.5
108	MP4A	Mz	-9.4e-5	0.5
109	MP4A	Y	-0.547	4.5
110	MP4A	My	-0.000352	4.5
111	MP4A	Mz	-9.4e-5	4.5
112	MP4B	Y	-0.547	0.5
113	MP4B	My	0.000299	0.5
114	MP4B	Mz	-0.000209	0.5
115	MP4B	Y	-0.547	4.5
116	MP4B	My	0.000299	4.5
117	MP4B	Mz	-0.000209	4.5
118	M99	Y	-1.09	1
119	M99	My	-0.000307	1
120	M99	Mz	0.000659	1
121	M98	Y	-1.09	1
122	M98	My	-0.000307	1
123	M98	Mz	0.000659	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	Z	-3.207	0.5
2	MP2A	Mx	0.003	0.5
3	MP2A	Z	-3.207	4.5
4	MP2A	Mx	0.003	4.5
5	MP2B	Z	-3.207	0.5
6	MP2B	Mx	-0.000525	0.5
7	MP2B	Z	-3.207	4.5
8	MP2B	Mx	-0.000525	4.5
9	MP2C	Z	-3.207	0.5
10	MP2C	Mx	-0.002	0.5
11	MP2C	Z	-3.207	4.5
12	MP2C	Mx	-0.002	4.5
13	MP2A	Z	-3.207	0.5
14	MP2A	Mx	-0.002	0.5
15	MP2A	Z	-3.207	4.5
16	MP2A	Mx	-0.002	4.5
17	MP2B	Z	-3.207	0.5
18	MP2B	Mx	0.003	0.5
19	MP2B	Z	-3.207	4.5
20	MP2B	Mx	0.003	4.5
21	MP2C	Z	-3.207	0.5
22	MP2C	Mx	-0.002	0.5
23	MP2C	Z	-3.207	4.5
24	MP2C	Mx	-0.002	4.5
25	MP3A	Z	-2.903	1.5
26	MP3A	Mx	0.000501	1.5
27	MP3A	Z	-2.903	3.5
28	MP3A	Mx	0.000501	3.5
29	MP3B	Z	-2.903	1.5
30	MP3B	Mx	0.001	1.5
31	MP3B	Z	-2.903	3.5
32	MP3B	Mx	0.001	3.5
33	MP3C	Z	-2.903	1.5
34	MP3C	Mx	-0.002	1.5
35	MP3C	Z	-2.903	3.5
36	MP3C	Mx	-0.002	3.5
37	MP2A	Z	-1.054	2
38	MP2A	Mx	-0.000205	2
39	MP2B	Z	-1.054	2
40	MP2B	Mx	-0.000403	2
41	MP2C	Z	-1.054	2
42	MP2C	Mx	0.0007	2
43	MP2A	Z	-7.57	3.5
44	MP2A	Mx	-0.001	3.5
45	MP2B	Z	-7.57	3.5
46	MP2B	Mx	-0.003	3.5
47	MP2C	Z	-7.57	3.5
48	MP2C	Mx	0.005	3.5
49	MP1A	Z	-8.015	3.5
50	MP1A	Mx	-0.001	3.5
51	MP1B	Z	-8.015	3.5
52	MP1B	Mx	-0.001	3.5
53	MP1C	Z	-8.015	3.5
54	MP1C	Mx	-0.001	3.5
55	MP1C	Z	-1.064	0.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP1C	Mx	-0.000707	0.5
57	MP1C	Z	-1.064	4.5
58	MP1C	Mx	-0.000707	4.5
59	MP4C	Z	-1.064	0.5
60	MP4C	Mx	-0.000707	0.5
61	MP4C	Z	-1.064	4.5
62	MP4C	Mx	-0.000707	4.5
63	MP1A	Z	-1.368	0.5
64	MP1A	Mx	0.000236	0.5
65	MP1A	Z	-1.368	4.5
66	MP1A	Mx	0.000236	4.5
67	MP1B	Z	-1.368	0.5
68	MP1B	Mx	0.000523	0.5
69	MP1B	Z	-1.368	4.5
70	MP1B	Mx	0.000523	4.5
71	MP4A	Z	-1.368	0.5
72	MP4A	Mx	0.000236	0.5
73	MP4A	Z	-1.368	4.5
74	MP4A	Mx	0.000236	4.5
75	MP4B	Z	-1.368	0.5
76	MP4B	Mx	0.000523	0.5
77	MP4B	Z	-1.368	4.5
78	MP4B	Mx	0.000523	4.5
79	M99	Z	-2.726	1
80	M99	Mx	-0.002	1
81	M98	Z	-2.726	1
82	M98	Mx	-0.002	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP2A	X	3.207	0.5
2	MP2A	Mx	-0.002	0.5
3	MP2A	X	3.207	4.5
4	MP2A	Mx	-0.002	4.5
5	MP2B	X	3.207	0.5
6	MP2B	Mx	0.003	0.5
7	MP2B	X	3.207	4.5
8	MP2B	Mx	0.003	4.5
9	MP2C	X	3.207	0.5
10	MP2C	Mx	-0.002	0.5
11	MP2C	X	3.207	4.5
12	MP2C	Mx	-0.002	4.5
13	MP2A	X	3.207	0.5
14	MP2A	Mx	-0.003	0.5
15	MP2A	X	3.207	4.5
16	MP2A	Mx	-0.003	4.5
17	MP2B	X	3.207	0.5
18	MP2B	Mx	0.000525	0.5
19	MP2B	X	3.207	4.5
20	MP2B	Mx	0.000525	4.5
21	MP2C	X	3.207	0.5
22	MP2C	Mx	0.002	0.5
23	MP2C	X	3.207	4.5
24	MP2C	Mx	0.002	4.5
25	MP3A	X	2.903	1.5

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
26	MP3A	Mx	-0.002	1.5
27	MP3A	X	2.903	3.5
28	MP3A	Mx	-0.002	3.5
29	MP3B	X	2.903	1.5
30	MP3B	Mx	0.002	1.5
31	MP3B	X	2.903	3.5
32	MP3B	Mx	0.002	3.5
33	MP3C	X	2.903	1.5
34	MP3C	Mx	0.000169	1.5
35	MP3C	X	2.903	3.5
36	MP3C	Mx	0.000169	3.5
37	MP2A	X	1.054	2
38	MP2A	Mx	0.000672	2
39	MP2B	X	1.054	2
40	MP2B	Mx	-0.000576	2
41	MP2C	X	1.054	2
42	MP2C	Mx	-6.1e-5	2
43	MP2A	X	7.57	3.5
44	MP2A	Mx	0.005	3.5
45	MP2B	X	7.57	3.5
46	MP2B	Mx	-0.004	3.5
47	MP2C	X	7.57	3.5
48	MP2C	Mx	-0.00044	3.5
49	MP1A	X	8.015	3.5
50	MP1A	Mx	0.005	3.5
51	MP1B	X	8.015	3.5
52	MP1B	Mx	0.005	3.5
53	MP1C	X	8.015	3.5
54	MP1C	Mx	0.005	3.5
55	MP1C	X	1.064	0.5
56	MP1C	Mx	6.2e-5	0.5
57	MP1C	X	1.064	4.5
58	MP1C	Mx	6.2e-5	4.5
59	MP4C	X	1.064	0.5
60	MP4C	Mx	6.2e-5	0.5
61	MP4C	X	1.064	4.5
62	MP4C	Mx	6.2e-5	4.5
63	MP1A	X	1.368	0.5
64	MP1A	Mx	-0.000881	0.5
65	MP1A	X	1.368	4.5
66	MP1A	Mx	-0.000881	4.5
67	MP1B	X	1.368	0.5
68	MP1B	Mx	0.000747	0.5
69	MP1B	X	1.368	4.5
70	MP1B	Mx	0.000747	4.5
71	MP4A	X	1.368	0.5
72	MP4A	Mx	-0.000881	0.5
73	MP4A	X	1.368	4.5
74	MP4A	Mx	-0.000881	4.5
75	MP4B	X	1.368	0.5
76	MP4B	Mx	0.000747	0.5
77	MP4B	X	1.368	4.5
78	MP4B	Mx	0.000747	4.5
79	M99	X	2.726	1
80	M99	Mx	-0.000768	1

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

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
81	M98	X	2.726	1
82	M98	Mx	-0.000768	1

Member Area Loads (BLC 39 : Structure D)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N72A	N71A	N87	N88	Y	Two Way	-0.005
2	N67	N68	N72	N71	Y	Two Way	-0.005
3	N59	N60	N92	N91	Y	Two Way	-0.005

Member Area Loads (BLC 40 : Structure Di)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N72A	N71A	N87	N88	Y	Two Way	-0.01
2	N91	N59	N60	N92	Y	Two Way	-0.01
3	N67	N68	N72	N71	Y	Two Way	-0.01

Member Area Loads (BLC 84 : Structure Ev)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N72A	N71A	N87	N88	Y	Two Way	-0.000211
2	N67	N68	N72	N71	Y	Two Way	-0.000211
3	N59	N60	N92	N91	Y	Two Way	-0.000211

Member Area Loads (BLC 85 : Structure Eh (0 Deg))

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N72A	N71A	N87	N88	Z	Two Way	-0.000527
2	N67	N68	N72	N71	Z	Two Way	-0.000527
3	N59	N60	N92	N91	Z	Two Way	-0.000527

Member Area Loads (BLC 86 : Structure Eh (90 Deg))

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	N72A	N71A	N87	N88	X	Two Way	0.000527
2	N67	N68	N72	N71	X	Two Way	0.000527
3	N59	N60	N92	N91	X	Two Way	0.000527

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N30	max	970.407	10	2580.322	13	2972.499	1	5.048	13	1.442	4	0.225	40
2		min	-957.59	4	356.009	7	-3162.882	7	-0.309	7	-1.451	10	0.012	10
3	N32	max	2527.752	9	2755.012	21	1660.101	2	0.294	3	1.882	12	0.25	3
4		min	-2720.772	3	421.213	3	-1553.722	8	-2.438	21	-1.872	6	-4.693	21
5	N34	max	2618.259	11	2667.206	17	1797.182	12	0.113	11	1.759	8	4.328	17
6		min	-2438.495	5	398.332	11	-1705.381	6	-2.846	17	-1.73	2	-0.428	11
7	Totals:	max	5788.751	10	7561.192	14	6287.369	1						
8		min	-5788.753	4	2407.457	71	-6287.368	7						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	M1	PIPE 3.0	0.136	3.906	10	0.108	3.776		6	28250.583	65205	5.749	5.749	1	H1-1b
2	M2	PL3/8X6	0.207	0	11	0.405	0	y	17	71035.355	72900	0.57	9.113	1.189	H1-1b
3	M3	PL3/8X6	0.335	0.292	2	0.405	0	y	21	68943.028	72900	0.57	9.113	1.163	H1-1b
4	M5	PL1/2X6	0.112	0.125	9	0.084	0.125	y	5	96648.928	97200	1.012	12.15	1.017	H1-1b
5	MP1A	PIPE 2.0	0.265	2.898	9	0.108	0.93		7	23088.171	32130	1.872	1.872	1	H1-1b
6	M9	PL1/2X6	0.11	0.125	10	0.125	0	y	39	96648.928	97200	1.012	12.15	1.105	H1-1b
7	M11	PL1/2X6	0.114	0.125	5	0.089	0.125	y	1	96648.928	97200	1.012	12.15	1.012	H1-1b
8	M13	PL1/2X6	0.11	0.125	12	0.084	0	y	11	96648.928	97200	1.012	12.15	1.886	H1-1b
9	M15	PL1/2X6	0.123	0.125	1	0.084	0.125	y	9	96648.928	97200	1.012	12.15	1.02	H1-1b
10	M17	PL1/2X6	0.113	0.125	1	0.078	0	y	7	96648.928	97200	1.012	12.15	1.103	H1-1b
11	M19	PL1/2X6	0.385	0.531	8	0.223	0	y	8	64528.275	97200	1.012	12.15	1.435	H1-1b
12	M20	PL1/2X6	0.407	0.531	1	0.227	0	y	12	64528.275	97200	1.012	12.15	1.377	H1-1b
13	M21	PL1/2X6	0.37	0.531	11	0.201	0	y	4	64528.275	97200	1.012	12.15	1.467	H1-1b
14	M22	HSS4X4X4	0.315	5.167	13	0.082	5.167	y	14	124770.34	139518	16.181	16.181	3	H1-1b
15	M23	HSS4X4X4	0.33	5.167	21	0.09	5.167	y	22	124770.34	139518	16.181	16.181	3	H1-1b
16	M24	HSS4X4X4	0.322	5.167	17	0.103	5.167	y	30	124770.34	139518	16.181	16.181	3	H1-1b
17	M25	PL3/8X6	0.243	0	2	0.268	0	y	21	71035.355	72900	0.57	9.113	1.185	H1-1b
18	M26	PL3/8X6	0.333	0.292	12	0.423	0	y	17	68943.028	72900	0.57	9.113	1.197	H1-1b
19	M30	HSS4X4X4	0.196	2.39	8	0.051	2.39	z	22	136222.616	139518	16.181	16.181	1.626	H1-1b
20	M33	HSS4X4X4	0.198	2.39	6	0.063	2.39	z	16	136222.508	139518	16.181	16.181	1.696	H1-1b
21	M38	L2X2X3	0.212	4.184	9	0.01	0	z	7	9732.975	23392.8	0.558	1.072	1.136	H2-1
22	M41	L2X2X3	0.269	4.184	6	0.014	0	y	6	9732.975	23392.8	0.558	1.139	1.5	H2-1
23	M42	PL3/8X6	0.192	0	7	0.405	0	y	13	71035.355	72900	0.57	9.113	1.191	H1-1b
24	M43	PL3/8X6	0.301	0.292	11	0.393	0	y	17	68943.028	72900	0.57	9.113	1.114	H1-1b
25	M45	PL3/8X6	0.241	0	10	0.278	0	y	18	71035.355	72900	0.57	9.113	1.19	H1-1b
26	M46	PL3/8X6	0.327	0.292	8	0.422	0	y	13	68943.028	72900	0.57	9.113	1.207	H1-1b
27	M48	HSS4X4X4	0.191	2.39	5	0.049	2.39	z	18	136222.616	139518	16.181	16.181	1.61	H1-1b
28	M50	HSS4X4X4	0.196	2.39	1	0.062	2.39	z	24	136222.508	139518	16.181	16.181	1.679	H1-1b
29	M54	L2X2X3	0.2	4.184	5	0.011	4.184	y	24	9732.975	23392.8	0.558	1.072	1.136	H2-1
30	M57	L2X2X3	0.259	4.184	1	0.014	0	y	2	9732.975	23392.8	0.558	1.139	1.5	H2-1
31	M58	PL3/8X6	0.205	0	1	0.398	0	y	21	71035.355	72900	0.57	9.113	1.199	H1-1b
32	M59	PL3/8X6	0.338	0.292	6	0.399	0	y	13	68943.028	72900	0.57	9.113	1.162	H1-1b
33	M61	PL3/8X6	0.265	0	6	0.277	0	y	13	71035.355	72900	0.57	9.113	1.19	H1-1b
34	M62	PL3/8X6	0.323	0.292	4	0.44	0	y	21	68943.028	72900	0.57	9.113	1.237	H1-1b
35	M64	HSS4X4X4	0.204	2.39	1	0.051	2.39	z	13	136222.616	139518	16.181	16.181	1.609	H1-1b
36	M66	HSS4X4X4	0.193	2.39	16	0.065	2.39	z	19	136222.508	139518	16.181	16.181	1.764	H1-1b
37	M70	L2X2X3	0.229	4.184	1	0.01	0	z	11	9732.975	23392.8	0.558	1.072	1.136	H2-1
38	M73	L2X2X3	0.242	4.184	10	0.013	0	y	10	9732.975	23392.8	0.558	1.139	1.5	H2-1
39	MP2A	PIPE 2.5	0.251	4.417	9	0.108	2.417		6	30038.461	50715	3.596	3.596	1	H1-1b
40	MP3A	PIPE 2.5	0.269	4.417	5	0.101	4.417		3	30038.461	50715	3.596	3.596	1	H1-1b
41	MP4A	PIPE 2.0	0.284	2.898	5	0.107	0.93		7	23088.171	32130	1.872	1.872	1	H1-1b
42	M80	PIPE 3.0	0.143	3.906	6	0.095	1.042		2	28250.583	65205	5.749	5.749	1	H1-1b
43	MP1C	PIPE 2.0	0.256	2.898	5	0.116	0.93		3	23088.171	32130	1.872	1.872	1	H1-1b
44	MP2C	PIPE 2.5	0.253	4.417	5	0.105	2.417		2	30038.461	50715	3.596	3.596	1	H1-1b
45	MP3C	PIPE 2.5	0.277	4.417	1	0.102	4.417		11	30038.461	50715	3.596	3.596	1	H1-1b
46	MP4C	PIPE 2.0	0.291	2.898	1	0.114	0.93		3	23088.171	32130	1.872	1.872	1	H1-1b
47	M89	PIPE 3.0	0.142	3.906	2	0.105	8.464		12	28250.583	65205	5.749	5.749	1	H1-1b
48	MP1B	PIPE 2.0	0.263	2.898	1	0.106	2.953		9	23088.171	32130	1.872	1.872	1	H1-1b
49	MP2B	PIPE 2.5	0.265	4.417	1	0.103	2.417		10	30038.461	50715	3.596	3.596	1	H1-1b
50	MP3B	PIPE 2.5	0.258	4.417	8	0.104	4.417		1	30038.461	50715	3.596	3.596	1	H1-1b
51	MP4B	PIPE 2.0	0.282	2.898	9	0.104	0.93		11	23088.171	32130	1.872	1.872	1	H1-1b
52	M98	PIPE 2.0	0.129	3	5	0.033	3		7	28843.414	32130	1.872	1.872	1	H1-1b
53	M99	PIPE 2.0	0.129	3	5	0.033	3		7	28843.414	32130	1.872	1.872	1	H1-1b
54	M104	PIPE 2.5	0.181	8.724	8	0.122	10.417		6	14558.81	50715	3.596	3.596	1	H1-1b
55	M111	PIPE 2.5	0.191	8.724	5	0.125	10.417		3	14558.81	50715	3.596	3.596	1	H1-1b

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
56	M118	PIPE 2.5	0.191	8.724	1	0.118	10.417		11	14558.81	50715	3.596	3.596	1	H1-1b
57	M121	L3X3X4	0.424	2.536	12	0.045	2.536	y	12	40462.684	46656	1.688	3.756	1.5	H2-1
58	M122	L3X3X4	0.427	2.536	7	0.045	2.536	y	2	40462.684	46656	1.688	3.756	1.5	H2-1
59	M123	L3X3X4	0.413	2.536	4	0.042	2.536	y	4	40462.684	46656	1.688	3.756	1.5	H2-1

Node Reactions

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N30	-105.344	1860.136	2972.499	4.42	0.119	0.094
2	1	N32	-1039.548	755.087	1637.954	-0.138	1.336	-0.775
3	1	N34	1144.887	746.127	1676.917	-0.38	-0.997	0.741
4	1	Totals:	-0.005	3361.35	6287.369			
5	1	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
6	2	N30	-350.43	1741.479	2553.135	4.034	0.13	0.144
7	2	N32	-2271.102	501.959	1660.101	0.228	0.243	-0.027
8	2	N34	-417.681	1117.916	1050.805	-0.994	-1.73	1.825
9	2	Totals:	-3039.213	3361.354	5264.041			
10	2	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
11	3	N30	-714.458	1467.898	1487.792	3.163	0.792	0.182
12	3	N32	-2720.772	421.213	1434.295	0.294	-0.132	0.25
13	3	N34	-1612.915	1472.241	-7.564	-1.593	-1.208	2.842
14	3	Totals:	-5048.145	3361.353	2914.522			
15	3	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
16	4	N30	-957.59	1113.114	17.922	2.038	1.442	0.202
17	4	N32	-2612.471	509.783	966.24	0.054	-0.282	0.054
18	4	N34	-2218.692	1738.451	-984.17	-2.082	-0.255	3.588
19	4	Totals:	-5788.753	3361.348	-0.008			
20	4	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
21	5	N30	-730.456	741.6	-1546.455	0.872	1.018	0.198
22	5	N32	-2025.227	757.463	68.069	-0.445	-1.137	-0.636
23	5	N34	-2438.495	1862.278	-1520.458	-2.364	-0.018	3.874
24	5	Totals:	-5194.179	3361.34	-2998.844			
25	5	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
26	6	N30	-233.834	453.67	-2741.743	-0.02	0.119	0.167
27	6	N32	-774.59	1122.923	-962.953	-1.079	-1.872	-1.709
28	6	N34	-2115.092	1784.739	-1705.381	-2.301	0.123	3.555
29	6	Totals:	-3123.516	3361.332	-5410.077			
30	6	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
31	7	N30	118.006	356.009	-3162.882	-0.309	-0.13	0.119
32	7	N32	853.551	1496.06	-1535.198	-1.661	-1.322	-2.801
33	7	N34	-971.554	1509.256	-1589.288	-1.873	1.023	2.707
34	7	Totals:	0.003	3361.324	-6287.368			
35	7	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
36	8	N30	368.331	472.913	-2742.066	0.08	-0.145	0.069
37	8	N32	2080.823	1752.454	-1553.722	-2.026	-0.231	-3.546
38	8	N34	590.057	1135.954	-968.251	-1.26	1.759	1.625
39	8	Totals:	3039.211	3361.321	-5264.04			
40	8	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
41	9	N30	730.635	743.226	-1673.733	0.954	-0.805	0.031
42	9	N32	2527.752	1834.943	-1331.038	-2.092	0.141	-3.822
43	9	N34	1789.755	783.154	90.251	-0.661	1.24	0.607
44	9	Totals:	5048.143	3361.322	-2914.521			
45	9	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
46	10	N30	970.407	1096.252	-201.617	2.08	-1.451	0.012
47	10	N32	2418.113	1744.968	-867.098	-1.853	0.29	-3.628
48	10	N34	2400.231	520.107	1068.725	-0.171	0.286	-0.141

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
49	10	Totals:	5788.751	3361.327	0.009			
50	10	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
51	11	N30	740.354	1468.643	1360.177	3.243	-1.026	0.016
52	11	N32	1835.564	1494.359	29.978	-1.356	1.144	-2.941
53	11	N34	2618.259	398.332	1608.69	0.113	0.046	-0.428
54	11	Totals:	5194.176	3361.334	2998.845			
55	11	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
56	12	N30	241.876	1760.066	2551.052	4.131	-0.127	0.046
57	12	N32	590.134	1127.048	1061.844	-0.722	1.882	-1.87
58	12	N34	2291.504	474.229	1797.182	0.05	-0.097	-0.109
59	12	Totals:	3123.514	3361.343	5410.078			
60	12	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
61	13	N30	-10.437	2580.322	343.36	5.048	0.031	0.194
62	13	N32	-456.847	2537.58	477.051	-2.043	0.292	-4.08
63	13	N34	467.283	2443.29	501.325	-2.445	-0.2	3.7
64	13	Totals:	-0.001	7561.192	1321.735			
65	13	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
66	14	N30	-66.44	2557.282	260.413	4.973	0.032	0.204
67	14	N32	-714.677	2486.006	478.103	-1.969	0.058	-3.927
68	14	N34	137.672	2517.905	375.962	-2.567	-0.362	3.917
69	14	Totals:	-643.445	7561.192	1114.478			
70	14	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
71	15	N30	-152.673	2502.645	38.965	4.799	0.191	0.211
72	15	N32	-811.164	2469.052	432.223	-1.956	-0.007	-3.869
73	15	N34	-114.814	2589.495	151.565	-2.689	-0.24	4.123
74	15	Totals:	-1078.651	7561.192	622.752			
75	15	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
76	16	N30	-208.615	2430.907	-274.82	4.572	0.338	0.215
77	16	N32	-789.829	2487.213	333.163	-2.005	-0.032	-3.909
78	16	N34	-240.532	2643.071	-58.344	-2.789	-0.029	4.273
79	16	Totals:	-1238.976	7561.191	-0.001			
80	16	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
81	17	N30	-156.131	2356.098	-603.005	4.339	0.234	0.214
82	17	N32	-666.527	2537.886	137.373	-2.106	-0.223	-4.049
83	17	N34	-280.505	2667.206	-171.277	-2.846	0.015	4.328
84	17	Totals:	-1103.163	7561.19	-636.908			
85	17	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
86	18	N30	-46.577	2298.45	-844.466	4.161	0.034	0.207
87	18	N32	-405.047	2611.559	-84.078	-2.234	-0.384	-4.264
88	18	N34	-205.979	2651.178	-210.458	-2.833	0.04	4.263
89	18	Totals:	-657.602	7561.188	-1139.002			
90	18	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
91	19	N30	27.677	2278.567	-928.323	4.103	-0.009	0.197
92	19	N32	-65.335	2686.276	-201.644	-2.351	-0.258	-4.483
93	19	N34	37.658	2596.343	-191.766	-2.748	0.24	4.093
94	19	Totals:	0	7561.187	-1321.733			
95	19	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
96	20	N30	83.908	2301.534	-845.327	4.178	-0.011	0.187
97	20	N32	192.319	2737.984	-202.529	-2.425	-0.024	-4.635
98	20	N34	367.217	2521.668	-66.62	-2.626	0.401	3.876
99	20	Totals:	643.444	7561.186	-1114.475			
100	20	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
101	21	N30	170.056	2356.036	-623.735	4.352	-0.17	0.179
102	21	N32	288.693	2755.012	-156.797	-2.438	0.041	-4.693
103	21	N34	619.901	2450.138	157.783	-2.504	0.28	3.67

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
104	21	Totals:	1078.649	7561.186	-622.75			
105	21	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
106	22	N30	225.856	2427.705	-309.836	4.579	-0.316	0.176
107	22	N32	267.287	2736.79	-57.921	-2.389	0.065	-4.654
108	22	N34	745.831	2396.693	367.761	-2.404	0.068	3.52
109	22	Totals:	1238.974	7561.187	0.003			
110	22	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
111	23	N30	173.25	2502.553	18.223	4.812	-0.212	0.177
112	23	N32	144.196	2685.993	137.83	-2.287	0.257	-4.514
113	23	N34	785.716	2372.642	480.858	-2.347	0.024	3.465
114	23	Totals:	1103.161	7561.189	636.911			
115	23	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
116	24	N30	63.61	2560.342	259.487	4.989	-0.012	0.183
117	24	N32	-117.061	2612.248	359.314	-2.16	0.418	-4.299
118	24	N34	711.051	2388.6	520.204	-2.36	-0.001	3.53
119	24	Totals:	657.6	7561.19	1139.004			
120	24	COG (ft):	X: -0.068	Y: 0.785	Z: 0.085			
121	25	N30	2.212	1005.489	82.089	1.835	0	0.116
122	25	N32	-153.666	1291.67	143.993	-1.229	0.077	-1.752
123	25	N34	151.449	1814.186	136.07	-2.374	-0.044	2.658
124	25	Totals:	-0.005	4111.345	362.152			
125	25	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
126	26	N30	-12.039	998.699	57.891	1.813	0	0.119
127	26	N32	-224.49	1276.997	145.168	-1.208	0.014	-1.709
128	26	N34	61.47	1835.649	100.151	-2.409	-0.086	2.721
129	26	Totals:	-175.059	4111.345	303.21			
130	26	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
131	27	N30	-32.952	983.043	-3.55	1.763	0.038	0.121
132	27	N32	-250.319	1272.269	132.243	-1.204	-0.008	-1.693
133	27	N34	-7.507	1856.033	39.185	-2.444	-0.056	2.779
134	27	Totals:	-290.777	4111.345	167.878			
135	27	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
136	28	N30	-46.86	962.671	-88.267	1.698	0.076	0.123
137	28	N32	-244.042	1277.374	105.39	-1.218	-0.016	-1.704
138	28	N34	-42.541	1871.301	-17.124	-2.472	-0.002	2.822
139	28	Totals:	-333.443	4111.345	-0.001			
140	28	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
141	29	N30	-33.695	941.262	-178.295	1.631	0.051	0.122
142	29	N32	-210.328	1291.695	53.68	-1.246	-0.066	-1.744
143	29	N34	-55.164	1878.388	-48.119	-2.488	0.012	2.839
144	29	Totals:	-299.186	4111.345	-172.735			
145	29	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
146	30	N30	-5.037	924.604	-247.013	1.579	-0.001	0.121
147	30	N32	-138.423	1312.773	-5.737	-1.283	-0.108	-1.806
148	30	N34	-36.459	1873.966	-58.876	-2.484	0.02	2.82
149	30	Totals:	-179.919	4111.344	-311.625			
150	30	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
151	31	N30	15.098	918.935	-271.268	1.563	-0.015	0.118
152	31	N32	-44.59	1334.217	-38.8	-1.316	-0.076	-1.869
153	31	N34	29.488	1858.192	-52.084	-2.46	0.072	2.771
154	31	Totals:	-0.004	4111.344	-362.153			
155	31	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
156	32	N30	29.367	925.719	-247.065	1.585	-0.015	0.115
157	32	N32	26.219	1348.901	-39.963	-1.337	-0.014	-1.912
158	32	N34	119.464	1836.723	-16.183	-2.424	0.115	2.709

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
159	32	Totals:	175.05	4111.344	-303.211			
160	32	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
161	33	N30	50.274	941.364	-185.614	1.635	-0.054	0.113
162	33	N32	52.039	1353.635	-27.048	-1.341	0.008	-1.928
163	33	N34	188.456	1816.345	44.784	-2.39	0.085	2.651
164	33	Totals:	290.769	4111.344	-167.879			
165	33	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
166	34	N30	64.171	961.731	-100.89	1.7	-0.091	0.112
167	34	N32	45.758	1348.526	-0.209	-1.328	0.017	-1.916
168	34	N34	223.506	1801.088	101.099	-2.362	0.03	2.608
169	34	Totals:	333.434	4111.344	0			
170	34	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
171	35	N30	50.996	983.143	-10.871	1.767	-0.066	0.112
172	35	N32	12.059	1334.194	51.498	-1.299	0.066	-1.877
173	35	N34	236.123	1794.007	132.106	-2.346	0.016	2.591
174	35	Totals:	299.178	4111.344	172.733			
175	35	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
176	36	N30	22.332	999.812	57.832	1.818	-0.015	0.114
177	36	N32	-59.829	1313.11	110.917	-1.262	0.108	-1.815
178	36	N34	217.407	1798.423	142.875	-2.349	0.008	2.61
179	36	Totals:	179.91	4111.345	311.624			
180	36	COG (ft):	X: 0.42	Y: 0.595	Z: 0.787			
181	37	N30	-1.005	1016.697	69.922	1.757	0.012	0.218
182	37	N32	-168.463	1073.146	144.847	-0.891	0.064	-1.311
183	37	N34	169.457	2021.507	147.382	-2.664	-0.036	3.617
184	37	Totals:	-0.01	4111.349	362.15			
185	37	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
186	38	N30	-15.262	1009.889	45.699	1.734	0.013	0.221
187	38	N32	-239.303	1058.479	146.037	-0.87	0.001	-1.268
188	38	N34	79.5	2042.982	111.472	-2.7	-0.078	3.679
189	38	Totals:	-175.064	4111.35	303.208			
190	38	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
191	39	N30	-36.178	994.223	-15.777	1.684	0.051	0.223
192	39	N32	-265.145	1053.75	133.124	-0.866	-0.02	-1.252
193	39	N34	10.54	2063.377	50.529	-2.734	-0.048	3.738
194	39	Totals:	-290.783	4111.35	167.876			
195	39	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
196	40	N30	-50.088	973.848	-100.524	1.619	0.088	0.225
197	40	N32	-258.876	1058.846	106.276	-0.879	-0.029	-1.263
198	40	N34	-24.484	2078.656	-5.755	-2.762	0.006	3.781
199	40	Totals:	-333.449	4111.349	-0.002			
200	40	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
201	41	N30	-36.925	952.44	-190.576	1.552	0.064	0.224
202	41	N32	-225.163	1073.156	54.565	-0.908	-0.078	-1.303
203	41	N34	-37.103	2085.754	-36.725	-2.778	0.02	3.797
204	41	Totals:	-299.192	4111.349	-172.736			
205	41	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
206	42	N30	-8.268	935.792	-259.307	1.501	0.012	0.223
207	42	N32	-153.252	1094.223	-4.857	-0.945	-0.121	-1.365
208	42	N34	-18.404	2081.334	-47.462	-2.775	0.028	3.779
209	42	Totals:	-179.924	4111.348	-311.626			
210	42	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
211	43	N30	11.871	930.14	-283.559	1.484	-0.002	0.22
212	43	N32	-59.407	1115.656	-37.933	-0.978	-0.089	-1.428
213	43	N34	47.527	2065.552	-40.663	-2.75	0.08	3.73

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
214	43	Totals:	-0.009	4111.348	-362.154			
215	43	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
216	44	N30	26.145	936.942	-259.331	1.507	-0.003	0.217
217	44	N32	11.419	1130.334	-39.111	-0.999	-0.026	-1.471
218	44	N34	137.481	2044.072	-4.77	-2.715	0.122	3.668
219	44	Totals:	175.045	4111.348	-303.212			
220	44	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
221	45	N30	47.055	952.598	-197.846	1.557	-0.041	0.215
222	45	N32	37.252	1135.068	-26.209	-1.003	-0.005	-1.487
223	45	N34	206.455	2023.682	56.174	-2.68	0.093	3.61
224	45	Totals:	290.763	4111.348	-167.88			
225	45	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
226	46	N30	60.955	972.967	-113.091	1.622	-0.079	0.214
227	46	N32	30.979	1129.968	0.626	-0.989	0.004	-1.475
228	46	N34	241.495	2008.413	112.464	-2.652	0.038	3.567
229	46	Totals:	333.429	4111.348	-0.001			
230	46	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
231	47	N30	47.782	994.378	-23.047	1.689	-0.054	0.214
232	47	N32	-2.718	1115.648	52.333	-0.961	0.053	-1.436
233	47	N34	254.109	2001.322	143.446	-2.636	0.024	3.55
234	47	Totals:	299.172	4111.349	172.732			
235	47	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
236	48	N30	19.118	1011.038	45.669	1.74	-0.002	0.216
237	48	N32	-74.612	1094.575	111.758	-0.924	0.096	-1.374
238	48	N34	235.398	2005.736	154.195	-2.64	0.016	3.569
239	48	Totals:	179.904	4111.349	311.622			
240	48	COG (ft):	X: 0.945	Y: 0.595	Z: 0.787			
241	49	N30	7.396	1030.877	-92.332	1.888	-0.006	0.107
242	49	N32	-94.704	1352.354	49.198	-1.316	0.005	-1.997
243	49	N34	87.307	1353.106	43.134	-1.542	0.012	1.934
244	49	Totals:	-0.001	3736.337	0			
245	49	COG (ft):	X: -0.014	Y: 0.655	Z: 0.455			
246	50	N30	11.389	1040.053	-99.664	1.819	-0.02	0.029
247	50	N32	-106.38	1617.371	58.424	-1.721	0.004	-2.946
248	50	N34	94.995	1078.906	41.241	-1.094	0.02	1.446
249	50	Totals:	0.004	3736.33	0.001			
250	50	COG (ft):	X: -0.642	Y: 0.655	Z: 0.455			
251	51	N30	8.597	1290.534	-108.492	2.406	-0.008	0.124
252	51	N32	-110.824	1314.431	57.913	-1.053	0.004	-2.091
253	51	N34	102.226	1316.595	50.58	-1.317	0.015	2.016
254	51	Totals:	-0.001	3921.56	0.001			
255	51	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
256	52	N30	3.563	1169.535	41.04	2.213	-0.006	0.111
257	52	N32	-134.464	1151.867	120.973	-0.905	0.054	-1.818
258	52	N34	130.9	1153.48	121.835	-1.139	-0.041	1.752
259	52	Totals:	-0.001	3474.883	283.847			
260	52	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
261	53	N30	-19.844	1166.146	24.115	2.203	0.023	0.112
262	53	N32	-191.27	1142.446	130.502	-0.892	0.032	-1.789
263	53	N34	69.189	1166.291	91.195	-1.16	-0.047	1.79
264	53	Totals:	-141.925	3474.883	245.812			
265	53	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
266	54	N30	-35.894	1156.699	-25.021	2.173	0.045	0.114
267	54	N32	-223.132	1138.991	118.812	-0.889	0.003	-1.777
268	54	N34	13.213	1179.193	48.133	-1.183	-0.037	1.827

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
269	54	Totals:	-245.814	3474.883	141.924			
270	54	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
271	55	N30	-40.29	1143.726	-93.214	2.132	0.053	0.114
272	55	N32	-221.517	1142.427	89.035	-0.899	-0.026	-1.786
273	55	N34	-22.042	1188.73	4.179	-1.202	-0.013	1.853
274	55	Totals:	-283.849	3474.883	0			
275	55	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
276	56	N30	-31.848	1130.704	-162.188	2.091	0.044	0.113
277	56	N32	-186.847	1151.835	49.148	-0.917	-0.047	-1.812
278	56	N34	-27.119	1192.343	-28.884	-1.211	0.018	1.861
279	56	Totals:	-245.814	3474.883	-141.923			
280	56	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
281	57	N30	-12.832	1121.123	-213.457	2.061	0.022	0.112
282	57	N32	-128.427	1164.694	9.847	-0.939	-0.055	-1.849
283	57	N34	-0.666	1189.065	-42.201	-1.208	0.047	1.849
284	57	Totals:	-141.925	3474.882	-245.811			
285	57	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
286	58	N30	11.665	1117.546	-233.291	2.05	-0.008	0.11
287	58	N32	-61.9	1177.562	-18.349	-0.96	-0.047	-1.887
288	58	N34	50.234	1179.774	-32.206	-1.195	0.068	1.82
289	58	Totals:	-0.001	3474.882	-283.846			
290	58	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
291	59	N30	35.076	1120.934	-216.363	2.06	-0.038	0.108
292	59	N32	-5.099	1186.987	-27.876	-0.973	-0.025	-1.916
293	59	N34	111.946	1166.961	-1.572	-1.173	0.074	1.782
294	59	Totals:	141.923	3474.882	-245.81			
295	59	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
296	60	N30	51.126	1130.376	-167.221	2.09	-0.059	0.107
297	60	N32	26.759	1190.444	-16.19	-0.976	0.004	-1.928
298	60	N34	167.927	1154.061	41.489	-1.151	0.064	1.745
299	60	Totals:	245.811	3474.882	-141.922			
300	60	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
301	61	N30	55.517	1143.347	-99.028	2.131	-0.067	0.106
302	61	N32	25.145	1187.007	13.583	-0.967	0.033	-1.92
303	61	N34	203.185	1144.528	85.446	-1.132	0.04	1.719
304	61	Totals:	283.847	3474.882	0.001			
305	61	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
306	62	N30	47.07	1156.37	-30.057	2.172	-0.058	0.107
307	62	N32	-9.52	1177.594	53.467	-0.949	0.055	-1.894
308	62	N34	208.261	1140.918	118.514	-1.123	0.01	1.711
309	62	Totals:	245.811	3474.882	141.924			
310	62	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
311	63	N30	28.055	1165.956	21.207	2.202	-0.036	0.109
312	63	N32	-67.936	1164.733	92.773	-0.926	0.062	-1.857
313	63	N34	181.804	1144.194	131.833	-1.126	-0.02	1.723
314	63	Totals:	141.923	3474.883	245.812			
315	63	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
316	64	N30	1.215	818.246	70.564	1.559	-0.004	0.077
317	64	N32	-104.253	794.096	105.207	-0.619	0.053	-1.249
318	64	N34	103.038	795.117	108.076	-0.781	-0.045	1.203
319	64	Totals:	-0.001	2407.458	283.847			
320	64	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
321	65	N30	-22.203	814.856	53.643	1.548	0.026	0.079
322	65	N32	-161.058	784.68	114.724	-0.605	0.031	-1.22
323	65	N34	41.336	807.923	77.444	-0.802	-0.051	1.241

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
324	65	Totals:	-141.925	2407.459	245.812			
325	65	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
326	66	N30	-38.262	805.413	4.517	1.518	0.047	0.08
327	66	N32	-192.924	781.228	103.023	-0.603	0.002	-1.208
328	66	N34	-14.627	820.817	34.384	-0.825	-0.041	1.278
329	66	Totals:	-245.813	2407.459	141.924			
330	66	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
331	67	N30	-42.66	792.445	-63.665	1.477	0.055	0.08
332	67	N32	-191.319	784.664	73.239	-0.612	-0.027	-1.216
333	67	N34	-49.87	830.349	-9.574	-0.843	-0.017	1.304
334	67	Totals:	-283.849	2407.458	0			
335	67	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
336	68	N30	-34.213	779.43	-132.628	1.436	0.046	0.08
337	68	N32	-156.661	794.07	33.351	-0.63	-0.048	-1.242
338	68	N34	-54.939	833.958	-42.646	-0.852	0.014	1.312
339	68	Totals:	-245.813	2407.458	-141.923			
340	68	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
341	69	N30	-15.187	769.855	-183.891	1.406	0.024	0.078
342	69	N32	-98.253	806.923	-5.945	-0.653	-0.056	-1.28
343	69	N34	-28.485	830.68	-55.975	-0.85	0.043	1.3
344	69	Totals:	-141.925	2407.458	-245.811			
345	69	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
346	70	N30	9.322	766.281	-203.724	1.395	-0.006	0.076
347	70	N32	-31.734	819.784	-34.13	-0.673	-0.048	-1.318
348	70	N34	22.411	821.392	-45.992	-0.836	0.064	1.272
349	70	Totals:	-0.001	2407.458	-283.846			
350	70	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
351	71	N30	32.745	769.669	-186.8	1.406	-0.035	0.074
352	71	N32	25.065	829.204	-43.646	-0.687	-0.026	-1.347
353	71	N34	84.113	808.584	-15.365	-0.815	0.07	1.234
354	71	Totals:	141.923	2407.457	-245.811			
355	71	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
356	72	N30	48.802	779.108	-137.668	1.436	-0.057	0.073
357	72	N32	56.928	832.658	-31.948	-0.689	0.003	-1.359
358	72	N34	140.082	795.691	27.694	-0.792	0.06	1.197
359	72	Totals:	245.812	2407.457	-141.923			
360	72	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
361	73	N30	53.195	792.073	-69.486	1.477	-0.065	0.072
362	73	N32	55.323	829.221	-2.169	-0.68	0.032	-1.351
363	73	N34	175.329	786.164	71.655	-0.774	0.036	1.17
364	73	Totals:	283.847	2407.458	0.001			
365	73	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
366	74	N30	44.744	805.09	-0.526	1.518	-0.056	0.073
367	74	N32	20.671	819.811	37.717	-0.662	0.053	-1.325
368	74	N34	180.396	782.557	104.732	-0.764	0.005	1.162
369	74	Totals:	245.812	2407.458	141.924			
370	74	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			
371	75	N30	25.72	814.67	50.732	1.548	-0.034	0.075
372	75	N32	-37.734	806.955	77.017	-0.64	0.061	-1.287
373	75	N34	153.937	785.834	118.063	-0.767	-0.024	1.174
374	75	Totals:	141.923	2407.458	245.812			
375	75	COG (ft):	X: -0.016	Y: 0.728	Z: 0.049			

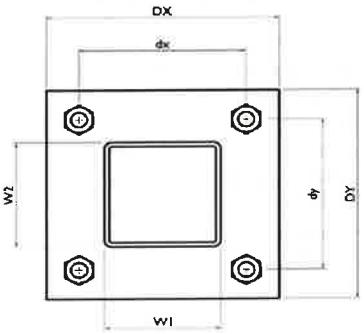
VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	2/2/2024
Site Name:	NE MASFIELD NE		
MDG #:	5000247838		
Fuze ID #:	16272193	Page:	1

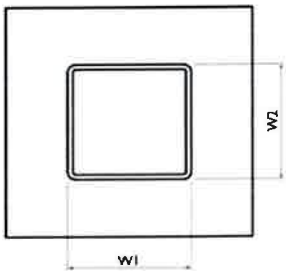
Version 2.00

I. Mount-to-Tower Connection Check

Custom Orientation Required	No
Tower Connection Bolt Checks	Yes
Bolt Orientation	Parallel
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	8
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	8
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	4.1
Required Shear Strength / bolt (kips):	0.8
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	20.0%



Tower Connection Baseplate Checks	Yes
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, D_x (in):	10
Plate Height, D_y (in):	10
W1(in):	4
W2 (in):	4
Member Thickness (in):	0.25
Stiffener location a_1 (in):	
Stiffener location b_1 (in):	
Stiffener location a_2 (in):	
Stiffener location b_2 (in):	
F_y (ksi, plate):	36
Plate Thickness (in):	0.625
Length of Yield Line, L_y (in):	7.85
Bolt Eccentricity, e (in):	3.06
M_u (kip-in):	12.70
Phi*M_n (kip-in):	24.84
Plate Bending Utilization:	51.1%



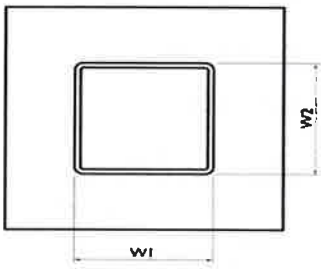
VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	2/2/2024
Site Name:	NE MASFIELD NE		
MDG #:	5000247838		
Fuze ID #:	16272193	Page:	2

Version 2.00

Tower Connection Weld Checks

	Yes
Weld Shape:	Rectangle
Weld Stiffener Configuration:	None
Weld Size (1/16 in):	4
W1 (in):	4
W2 (in):	4
Weld Total Length (in):	16.00
Z_x (in^3/in):	21.33
Z_y (in^3/in):	21.33
J_p (in^4/in):	85.33
c_x (in)	2.25
c_y (in)	2.25
Required combined strength (kip/in):	2.03
Weld Capacity (kip/in):	5.57
Weld Utilization:	**36.4%**



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MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' PLATFORM

TOWER OWNER: SBA TOWERS, LLC
TOWER OWNER SITE NUMBER: CT03113

CARRIER SITE NAME: MANSFIELD NE
CARRIER SITE NUMBER: 5000247838
FUZE ID: 16272193

203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

LATITUDE: 41.793486° N
LONGITUDE: 72.160178° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 125 MPH
EXPOSURE CATEGORY B
TOPOGRAPHIC CATEGORY: 1
TOPOGRAPHIC CONSIDERED: N/A
TOPOGRAPHIC METHOD: N/A
MEAN BASE ELEVATION (AMSL) = 491.3'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .190
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: COLLIERS ENGINEERING & DESIGN
CONTACT: PETER ALBANO
PHONE: 856 797 0412
E-MAIL: PETER.ALBANO@COLLIERSENG.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10221772
VZW MDG #:	5000247838
ANALYSIS DATE	7/7/2024

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

Colliers Engineering & Design
www.colliersengineering.com
Doing Business as MASER

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REV	DATE	DESCRIPTION
1	09/2024	ISSUED FOR CONSTRUCTION
0	04/2024	PRELIMINARY

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
02/07/2024

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

SITE NAME:
MANSFIELD NE
5000247838
203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

Colliers Engineering & Design
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.1800
COLLIERS ENGINEERING & DESIGN (CT), P.C.
DOING BUSINESS AS MASER CONSULTING

TITLE SHEET

ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	VZWSMART	VZWSMART-PLK1	SUPPORT RAIL KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	504	504

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISON	H42-0501-06	STANDOFF CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CMX-CG-BO	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
					TOTAL:	504

*FOR ACTUAL INSTALL WEIGHT PLEASE CHECK THE MA REPORT

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM

METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 980-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM

PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6721
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM

SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-5937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM

SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9841
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

Colliers Engineering & Design
www.collieraengineering.com

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SCALE	AS SHOWN	JOB NUMBER	25273051

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	02/07/24	POWERVIEW CONSTRUCTION	MM	EH
0	04/01/21	ISSUED FOR CONSTRUCTION	MM	EH

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
02/07/2024

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

SITE NAME:
MANSFIELD NE
5000247838
203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

Colliers Engineering & Design
Stamford, CT 06901
Phone: 203.324.9600
COLLIERS ENGINEERING & DESIGN (CT), P.C.
DOING BUSINESS AS MASER CONSULTING

BILL OF MATERIALS

SBOM-1

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

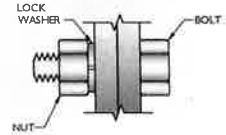
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND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

BOLT SCHEDULE (IN.)

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

WORKABLE GAGES (IN.)

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

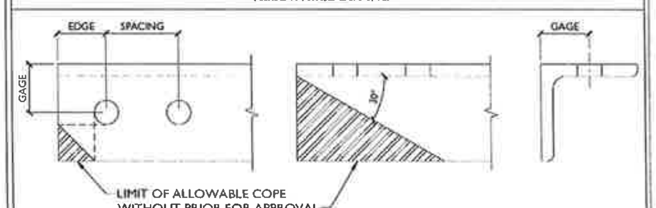


TYP. BOLT ASSEMBLY

NOTES:

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

ALLOWABLE COPING



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STATE OF CONNECTICUT · DEJIAN XU · No. 33733 · LICENSED PROFESSIONAL ENGINEER · 02/07/2024

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

SITE NAME:

MANSFIELD NE
5000247838

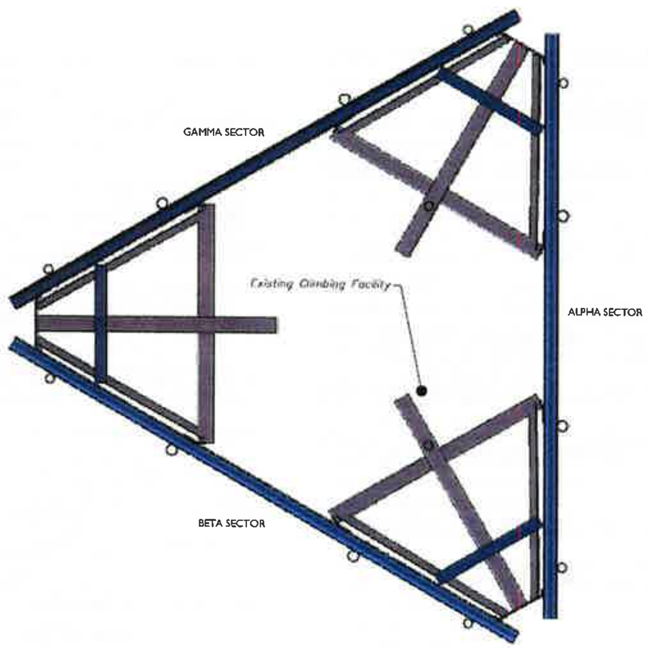
203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

Colliers Engineering & Design — STAMFORD

GENERAL NOTES

SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



(1) CLIMBING FACILITY LOCATION
SCALE: N.T.S.

CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HIGH TOWER SOLUTION, INC. ON 4/20/2020, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (151'-0") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

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STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
02/07/2024

SITE NAME:
MANSFIELD NE
5000247838
203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

CLIMBING FACILITY DETAIL

SCF-1

LEGEND:

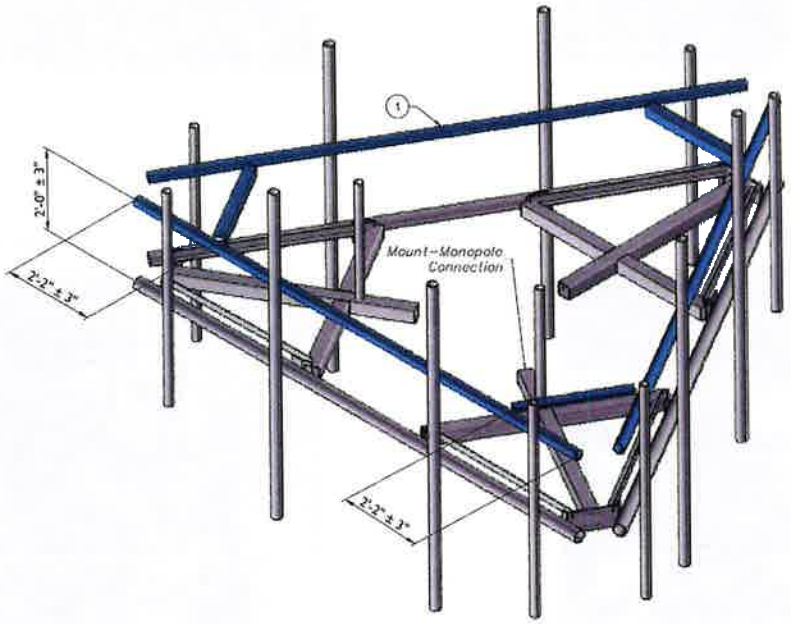
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	151'-0"	1	PROPOSED SUPPORT RAIL KIT (PART #: VZWSMART-PLK1)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN.

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THAT NEW & EXISTING STEEL IS FREE OF CORROSION. VISIBLE MINOR CORROSION SHALL BE WIRE BRUSHED CLEAN AND TREATED WITH COLD GALVANIZATION. REPORT ANY SIGNIFICANT CORROSION TO EOR
B. THREADED ROD FROM PROPOSED KITS SHALL BE TRIMMED TO EXTEND NO MORE THAN 3" BEYOND THE LOCK NUT. TREAT ALL CUT ENDS WITH (2) COATS OF COLD GALVANIZATION (ZINC KOTE, OR EOR APPROVED EQUAL).
C. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE: N.T.S.

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811 PROTECT YOURSELF

FOR STATE FACILITY DIRECT PHONE NUMBERS VISIT WWW.CALL811.COM

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	02/07/24	[illegible]	BMS	RM
0	04/21/23	[illegible]	BMS	RM

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
02/07/2024

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SITE NAME:

MANSFIELD NE
5000247838

203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

STAMFORD
Colliers Engineering & Design
Stamford, CT 06901
Phone: 203.324.6611
COLLIERS ENGINEERING & DESIGN CT, P.C. COMMONWEALTH OF MASSACHUSETTS MASER CONSULTING

MODIFICATION DETAILS

SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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AS SHOWN

STATE OF CONNECTICUT DEJIAN XU No. 33733 LICENSED PROFESSIONAL ENGINEER 02/07/2024

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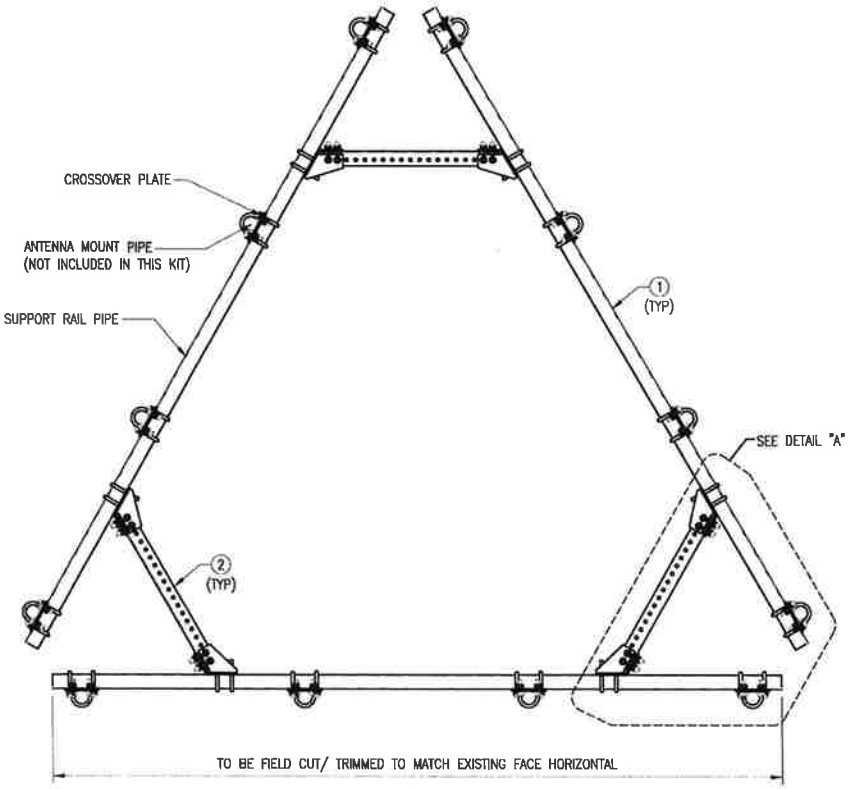
SITE NAME:

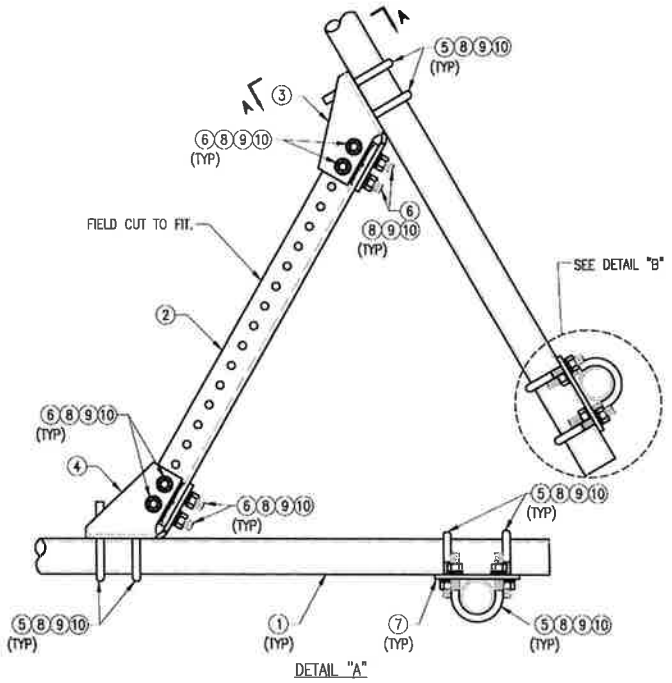
MANSFIELD NE
5000247838
203 DAVIS RD
CHAPLIN, CT 06235
WINDHAM COUNTY

MOUNT PHOTOS

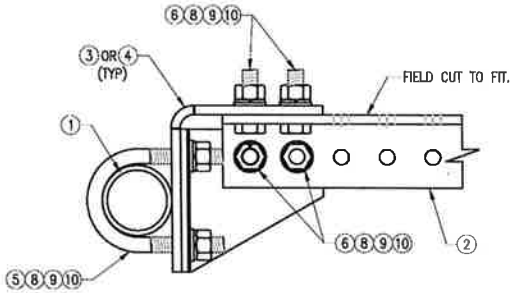
SS-2



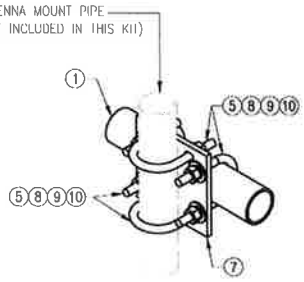
PLAN VIEW



DETAIL "A"



SECTION "A-A"



DETAIL "B"

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

VZW SMART-PLK1 (SUPPORT RAIL KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	PST2875-12.5	2.5" PST (2.875" O.D. X 0.203" THK.) X 12'-6" A53 GR-B	PLK1-F1	292
2	3	L33375-3	L 3" X 3" X 3/8" X 3'-0" A36	PLK1-F1	66
3	3	CBP-L	CORNER BENT PLATE BRACKET	PLK1-F2	28
4	3	CBP-R	CORNER BENT PLATE BRACKET	PLK1-F2	28
5	60	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	82
6	24	---	BOLT 5/8" X 2" A325	---	9
7	12	PL375-857	PL 3/8" X 8 1/2" X 7'-0" A36	PLK1-F3	77
8	144	FW-625	5/8" HDG USS FLAT WASHER	---	12
9	144	LW-625	5/8" HDG LOCK WASHER	---	3
10	144	NUT-625	5/8" HDG HEX NUT	---	17
				GALVANIZED WT	504

VzW SMART Tool© Vendor

verizon

FOR REFERENCE ONLY

DRAWN BY: H.R | CHECKED BY: HMA

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

SHEET TITLE:
VZWSMART-PLK1
SUPPORT RAIL KIT

SHEET NUMBER: VZWSMART-PLK1

REV #: 0

ATTACHMENT 5

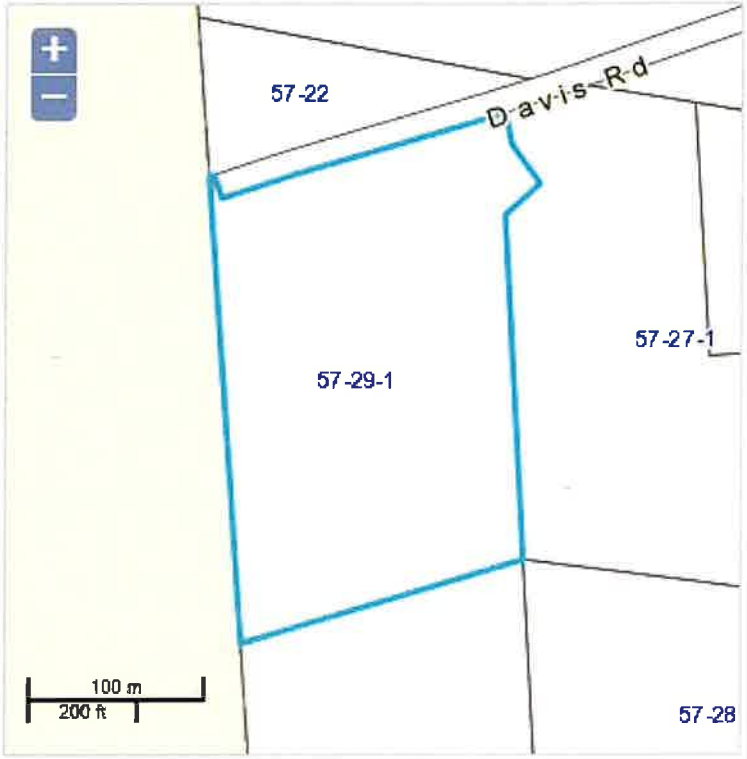
Town of Chaplin, Connecticut

Property Record Card

Card 1 of 1

203 DAVIS RD

ID: **57-29-1** Account #: **P000791**



Owner: PEARL TRUMAN J
Co-Owner:
Address: 203 DAVIS RD
CHAPLIN CT 06235

Assessment: Total: $146,300
Building: $90,400 Land: $35,900 Yard: $20,000

Sales History

Grantee	Book / Page	Sale Date	Sale Price
PEARL TRUMAN J	51/ 677		$0

MainStreetGIS

MainStreetGIS, LLC
www.mainstreetgis.com

Land Information
Land Area: 6.28 AC Zoning:
Land Use: 101 - Single Family
Neighborhood:

Building Information
Style: Cape Cod
Year Built: 1987
Rooms: 6 Bedrooms: 03
Baths: 2 Half Baths: 1
Living Area: 1517
Gross Area: 3076

Stories: 1.7
Heat Fuel: Oil
Heat Type: Hot Water
AC Type: None
Roof Structure: Gable
Roof Covering: Asphalt Shingl

Extra Features

Description	Area / Units	Assessment
Canopy	420	3700
Garage	360	5300
Garage	420	6200
Shed	540	4800

Sub Areas

Description	Living Area	Gross Area
First Floor	946	946
Framed Open Porch	0	210
Wood Deck	0	288
Three Quarter Story	571	816
Basement	0	816

ATTACHMENT 6

VW/Mansfield NE

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	quadient CORRECTION IMI $003.34 06/13/2024 ZIP 06101 043M32206619 US POSTAGE
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Juan Roman III, First Selectman Town of Chaplin 495 Phoenixville Road Chaplin, CT 06235				
2.	James Gigliotti, Zoning Official Town of Chaplin 495 Phoenixville Road Chaplin, CT 06235				
3.	Pearl Truman 203 Davis Road Chaplin, CT 06235				
4.					
5.					
6.					

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JUN 13 2024
HARTFORD, CT 06103

See Reverse for Instructions