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

January 26, 2024

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

RE: Notice of Exempt Modification // Site: EAST HARTFORD CT (ATC: 370626)
148 Roberts Street, East Hartford, CT 06108
N 41.773333 // W -72.613442

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antenna at the 118-ft level on the existing 130 ft Tower, located at 148 Roberts Street, East Hartford, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the removal of the existing antenna mount and associated equipment as well as the installation of new antenna mounts and equipment on Verizon Wireless existing antenna platform and mounting assembly as described on the project documents.

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

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated January 10, 2024, by A.T Engineering Services, LLC, a structural analysis dated December 29, 2023, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated December 12, 2023, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated January 18, 2024, by Tower Engineering Professionals.

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.

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

4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

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

6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis and a structural mount analysis, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings.

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

Sincerely,

Derek Maheux

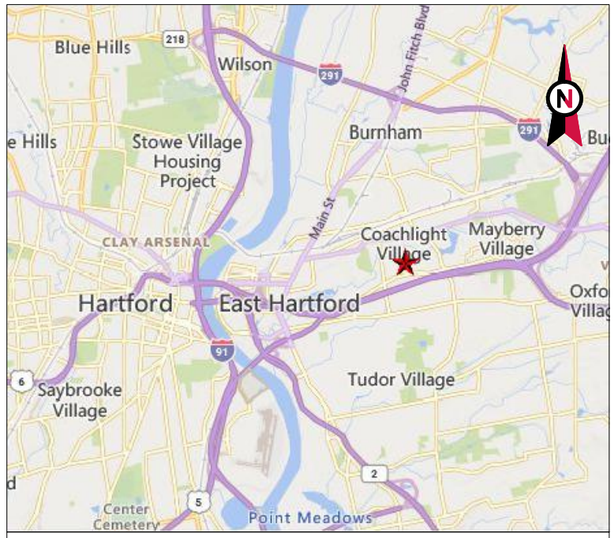
_____

Derek Maheux, Program Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
Mobile: (508) 649 2307
Dmaheux@clinellc.com

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

cc: Connor Martin – Mayor – Chief Elected Official
Eileen Buckheit – Development Director - as P&Z official
Greater Hartford Transit District – as ground owner
American Tower Corporation - as tower owner

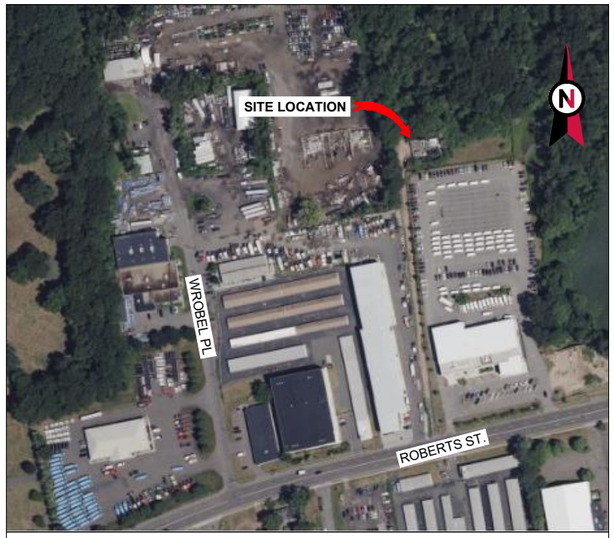
EXHIBIT 1



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: EAST HARTFORD
ATC SITE NUMBER: 370626
VERIZON SITE NAME: EAST HARTFORD CT
VERIZON SITE NUMBER: 5000384062
VERIZON FUZE PID: 16053192
SITE ADDRESS: 148 ROBERTS ST.
EAST HARTFORD, CT 06108



LOCATION MAP

VERIZON AMENDMENT DRAWINGS

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

2021 IBC
NATIONAL ELECTRICAL CODE (NFPA 70, NEC 2020 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE, IMC PORTION (IMC 2021 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE, IPC PORTION (IPC 2021 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE, IECC PORTION (IECC 2021 W/ AMND)
PART III OF THE 2022 CT STATE FIRE SAFETY CODE (IFC 2021 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE, IEBC PORTION (IEBC 2021 W/ AMND)
2022 CONNECTICUT STATE BUILDING CODE
2022 CONNECTICUT STATE BUILDING CODE, IRC PORTION (IRC 2021 W/ AMND)
CONNECTICUT STATE FUEL GAS CODE (IFGC 2021 W/ AMND)

UTILITY COMPANIES

POWER COMPANY: EVER SOURCE
PHONE: (877) 659-6326

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 376-6843

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

PROJECT SUMMARY

SITE ADDRESS:

148 ROBERTS ST.
EAST HARTFORD, CT 06108
COUNTY: HARTFORD

GEOGRAPHIC COORDINATES:

LATITUDE: 41° 46' 23.978" N

LONGITUDE: 72° 36' 48.401" W

GROUND ELEVATION: 49' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS

ENGINEER:

A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN, STE 300
CARY, NC 27511

PROPERTY OWNER:

DOUBLE E PROPERTIES OF EAST HARTFORD, LLC
148 ROBERTS ST.
EAST HARTFORD, CT 06108

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

REMOVE (3) SIDE BY SIDE ANTENNA MOUNT(S),(12) ANTENNA(s), AND (12) RRH(s)

INSTALL (3) SIDE BY SIDE ANTENNA MOUNT(S), (12) ANTENNA(s), AND (9) RRH(s)

EXISTING (2) OVP(s), (6) 1-5/8" COAX, AND (2) 1-5/8" HYBRIFLEX CABLE(s) TO REMAIN

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

FROM HARTFORD CT NORTH ON MAIN STREET TURN RIGHT ON MORGAN STREET SOUTH / US 44 EAST. MERGE ONTO I-84 EAST / US 6 EAST. TAKE EXIT 58 ROBERTS STREET TOWARD SILVER LANE / BURNSIDE AVENUE. TURN LEFT ONTO ROBERTS STREET. SITE IS ON THE LEFT

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	1/10/2024	JM
G-002	GENERAL NOTES	0	1/10/2024	JM
C-101	DETAILED SITE PLAN	0	1/10/2024	JM
C-201	TOWER ELEVATION	0	1/10/2024	JM
C-401	ANTENNA INFORMATION & SCHEDULE	0	1/10/2024	JM
C-501	CONSTRUCTION DETAILS	0	1/10/2024	JM
E-501	GROUNDING DETAILS	0	1/10/2024	JM
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT NUMBER:	10208301
VZW LOCATION CODE (PSLC):	5000384062

***PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT

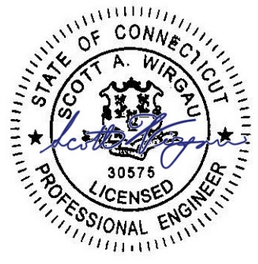
MOUNT MODIFICATION REQUIRED:	NO
VZW APPROVED SMART KIT VENDORS:	REFER TO MOUNT MODIFICATION DRAWINGS PAGES FOR VZW SMART KIT APPROVED VENDORS

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	1/10/2024

ATC SITE NUMBER:
370626
ATC SITE NAME:
EAST HARTFORD
VERIZON SITE NAME:
EAST HARTFORD CT
SITE ADDRESS:
148 ROBERTS ST.
EAST HARTFORD, CT 06108

SEAL:



verizon

ATC JOB NO:	14530661_G0
CUSTOMER ID:	EAST HARTFORD CT
CUSTOMER #:	5000384062

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. WHEN THE PROJECT SCOPE REQUIRES THE USE OF THE SAFETY CLIMB, THE GENERAL CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS FREE OF OBSTRUCTIONS, NOT RUBBING ON OR TRAPPED BY ANY INSTALLED CUSTOMER EQUIPMENT, IS VISUALLY TAUT, MEETS MANUFACTURER INSTALLATION SPECIFICATIONS, AND IS FIRMLY SECURED AT ALL CABLE GUIDE LOCATIONS UPON PROJECT COMPLETION.
29. COMPLETION OF PROJECT SHALL NOT OBSTRUCT, TRAP, LOOSEN, OR OTHERWISE CAUSE FAILURE TO MEET MANUFACTURER INSTALLATION REQUIREMENTS FOR THE SAFETY CLIMB.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
31. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
32. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
33. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
34. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
35. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL/HYBRID CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
   - B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND VERIZON SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
   - E. INSTALL COAXIAL/HYBRID CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL/HYBRID CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
2. ANTENNA AND COAXIAL/HYBRID CABLE GROUNDING:
   - A. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
   - B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

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

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	1/10/2024

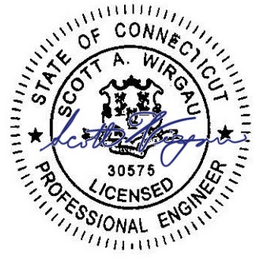
ATC SITE NUMBER:
370626

ATC SITE NAME:
EAST HARTFORD

VERIZON SITE NAME:
EAST HARTFORD CT

SITE ADDRESS:
148 ROBERTS ST.
EAST HARTFORD, CT 06108

SEAL:



Digitally Signed: 2024-01-11

verizon

ATC JOB NO:	14530661_G0
CUSTOMER ID:	EAST HARTFORD CT
CUSTOMER #:	5000384062

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

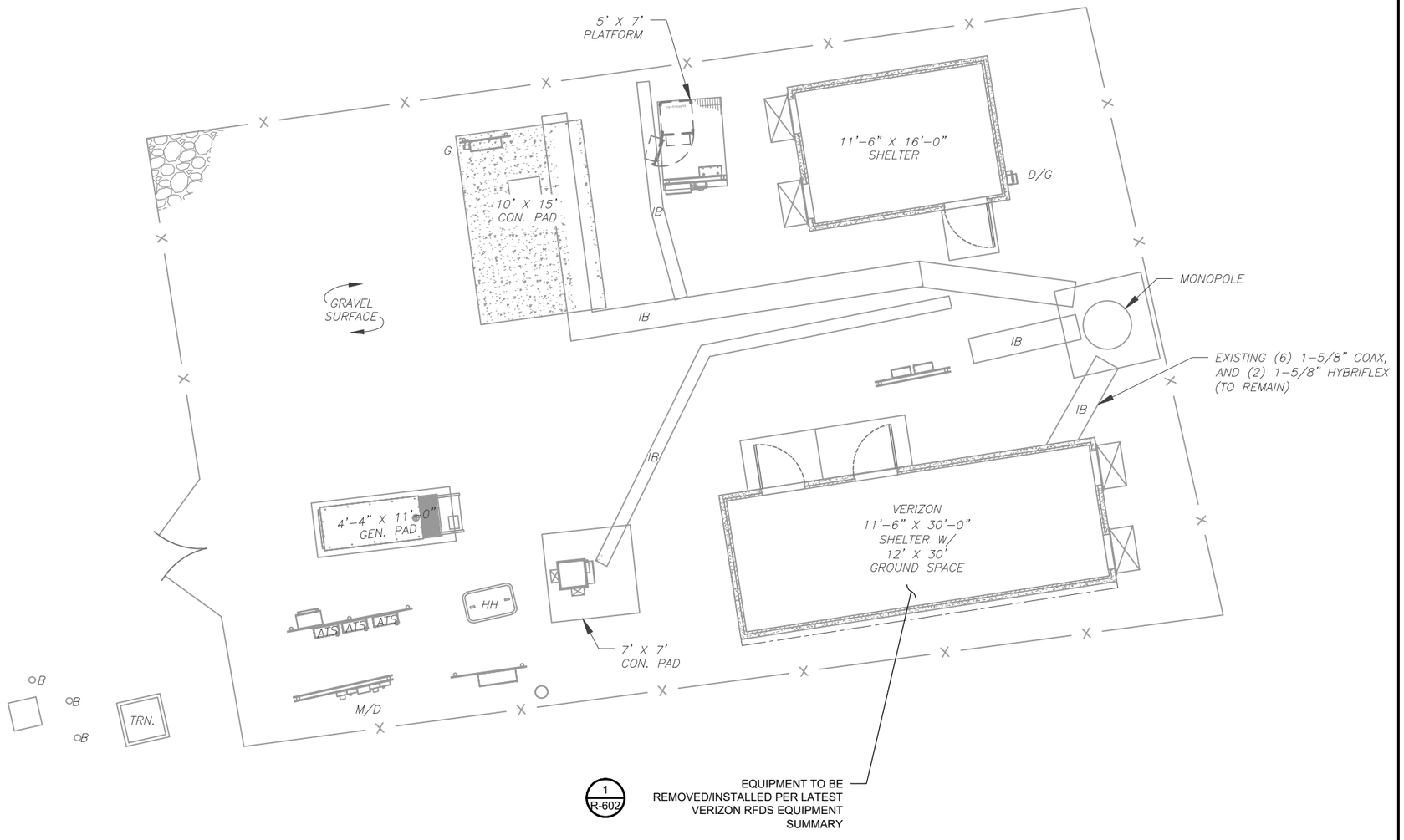
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
———	CHAINLINK FENCE



1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

AMERICAN TOWER®

A.T. ENGINEERING SERVICES LLC

1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	1/10/2024

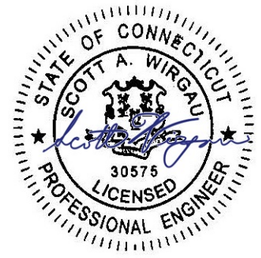
ATC SITE NUMBER:
370626

ATC SITE NAME:
EAST HARTFORD

VERIZON SITE NAME:
EAST HARTFORD CT

SITE ADDRESS:
148 ROBERTS ST.
EAST HARTFORD, CT 06108

SEAL:



Digitally Signed: 2024-01-11

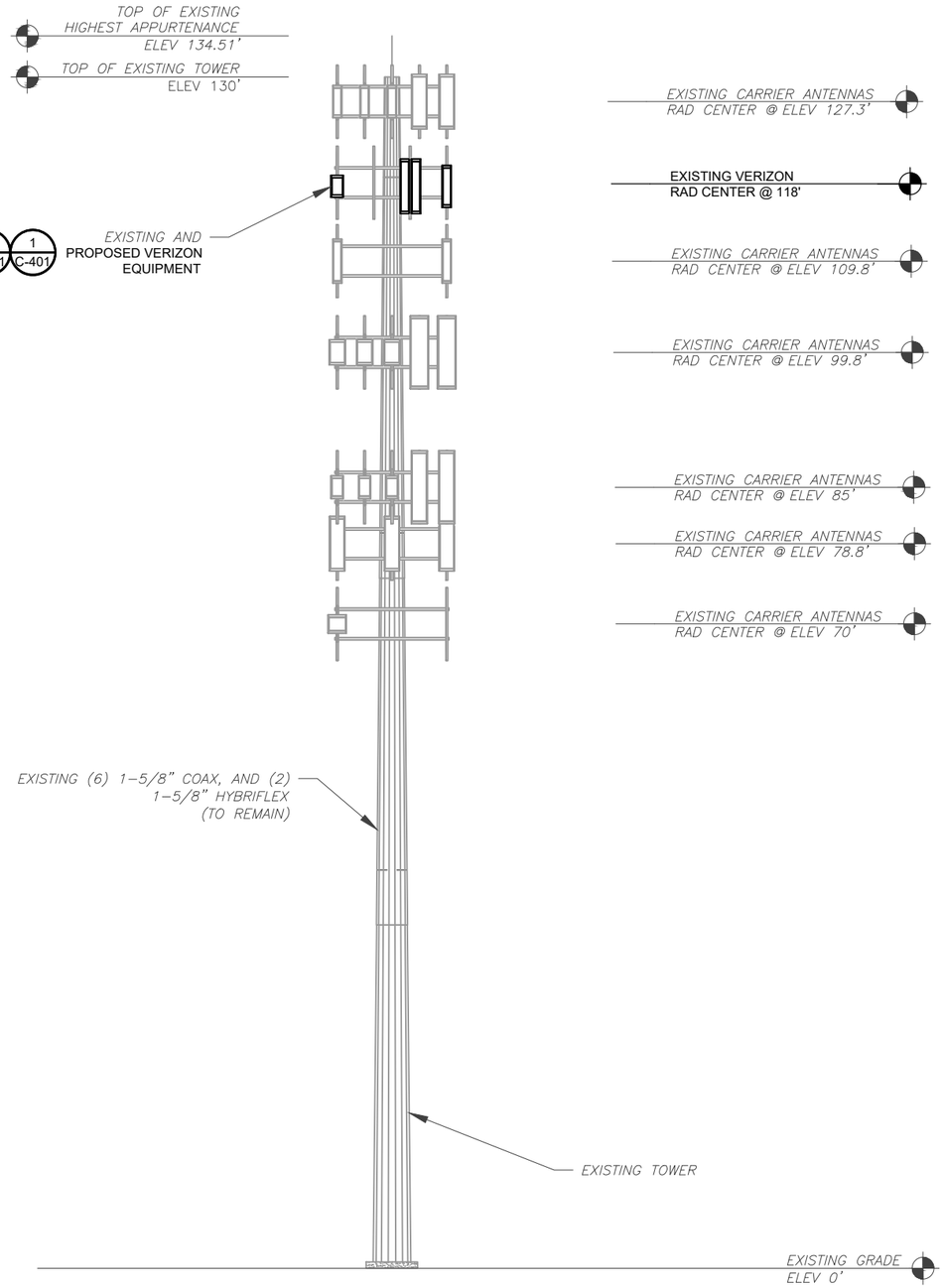
verizon

ATC JOB NO:	14530661_G0
CUSTOMER ID:	EAST HARTFORD CT
CUSTOMER #:	5000384062

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

PER MOUNT ANALYSIS COMPLETED BY COLLIERS , DATED 12/14/23, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 TOWER ELEVATION
SCALE: N.T.S.

ALL ELEVATIONS REFLECT ABOVE GROUND LEVEL (A.G.L.)

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	1/10/2024

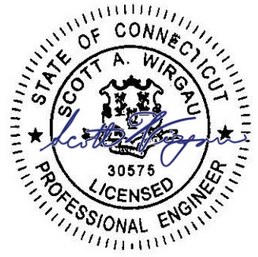
ATC SITE NUMBER:
370626

ATC SITE NAME:
EAST HARTFORD

VERIZON SITE NAME:
EAST HARTFORD CT

SITE ADDRESS:
148 ROBERTS ST.
EAST HARTFORD, CT 06108

SEAL:



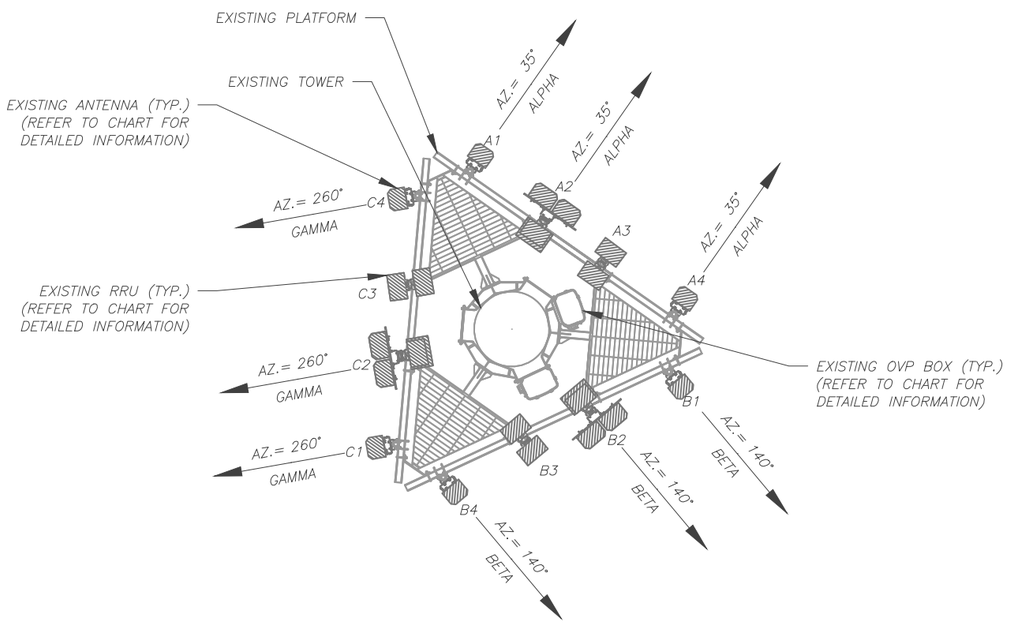
Digitally Signed: 2024-01-11

verizon

ATC JOB NO:	14530661_G0
CUSTOMER ID:	EAST HARTFORD CT
CUSTOMER #:	5000384062

TOWER ELEVATION

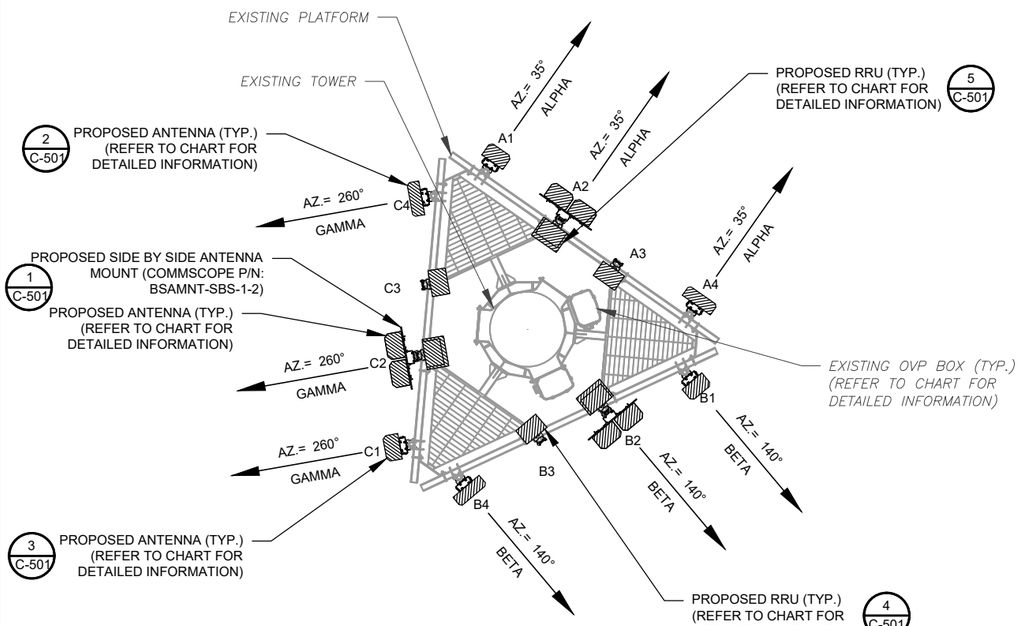
SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY COLLIERS , DATED 12/14/23, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	118'	35°	A1	DB844G65ZAXY	700 LTE	RMV	–	–
			A2	(2) JAHH-65B-R3B	700/ 850/ 1900/ AWS LTE	RMV	(1) AHCA (1) UHBA	RMV RMV
			A3	–	–	–	(1) UHFA (1) UHIE	RMV RMV
			A4	DB844G65ZAXY	700 LTE	RMV	–	–
BETA	118'	140°	B1	DB844G65ZAXY	700 LTE	RMV	–	–
			B2	(2) JAHH-65B-R3B	700/ 850/ 1900/ AWS LTE	RMV	(1) AHCA (1) UHBA	RMV RMV
			B3	–	–	–	(1) UHFA (1) UHIE	RMV RMV
			B4	DB844G65ZAXY	700 LTE	RMV	–	–
GAMMA	118'	260°	C1	DB844G65ZAXY	700 LTE	RMV	–	–
			C2	(2) JAHH-65B-R3B	700/ 850/ 1900/ AWS LTE	RMV	(1) AHCA (1) UHBA	RMV RMV
			C3	–	–	–	(1) UHFA (1) UHIE	RMV RMV
			C4	DB844G65ZAXY	700 LTE	RMV	–	–

NOTES

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

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	118'	35°	A1	LNX-6513DS-A1M	-	ADD	-	-
			A2	NHH-65B-R2B	700 / 850 /1900 LTE/ 850 5G	ADD	RF 4439D-25A	ADD
				NHHSS-65B-R2BT4	AWS LTE/ CBRS LTE	ADD	RT4423-48A	ADD
			A3	-	-	-	RF4461D-13A	ADD
			A4	MT6413-77A	L-SUB6 5G	ADD	-	-
BETA	118'	140°	B1	LNX-6513DS-A1M	-	ADD	-	-
			B2	NHH-65B-R2B	700 / 850 /1900 LTE/ 850 5G	ADD	RT4423-48A	ADD
				NHHSS-65B-R2BT4	AWS LTE/ CBRS LTE	ADD	RT4423-48A	ADD
			B3	-	-	-	RF4461D-13A	ADD
			B4	MT6413-77A	L-SUB6 5G	ADD	-	-
GAMMA	118'	260°	C1	LNX-6513DS-A1M	-	ADD	-	-
			C2	NHH-65B-R2B	700 / 850 /1900 LTE/ 850 5G	ADD	RT4423-48A	ADD
				NHHSS-65B-R2BT4	AWS LTE/ CBRS LTE	ADD	RT4423-48AV	ADD
			C3	-	-	-	RF4461D-13A	ADD
			C4	MT6413-77A	L-SUB6 5G	ADD	-	-

EXISTING FIBER DISTRIBUTION / OVP BOX

MODEL NUMBER	STATUS
(2) DB-T1-6Z-8AB-0Z	RMN
–	RMV

EXISTING CABLING SUMMARY

CABLE QTY, SIZE, TYPE	STATUS
(6) 1-5/8" COAX, AND (2) 1-5/8" HYBRIFLEX	RMN
----	RMV

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX

MODEL NUMBER	STATUS
(2) DB-T1-6Z-8AB-0Z	RMN
–	RMV

FINAL CABLING SUMMARY

CABLE QTY, SIZE, TYPE	STATUS
(6) 1-5/8" COAX, AND (2) 1-5/8" HYBRIFLEX	RMN
----	ADD

AMERICAN TOWER®

A.T. ENGINEERING SERVICES LLC

1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	1/10/2024

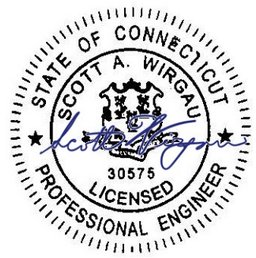
ATC SITE NUMBER:
370626

ATC SITE NAME:
EAST HARTFORD

VERIZON SITE NAME:
EAST HARTFORD CT

SITE ADDRESS:
148 ROBERTS ST.
EAST HARTFORD, CT 06108

SEAL:



Digitally Signed: 2024-01-11

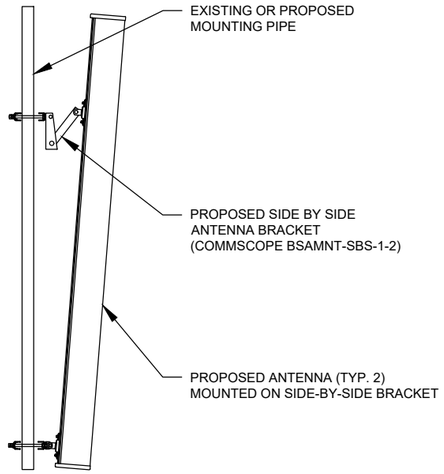
verizon

ATC JOB NO:	14530661_G0
CUSTOMER ID:	EAST HARTFORD CT
CUSTOMER #:	5000384062

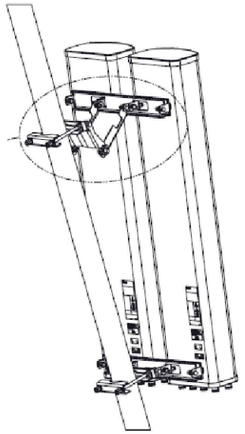
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0

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



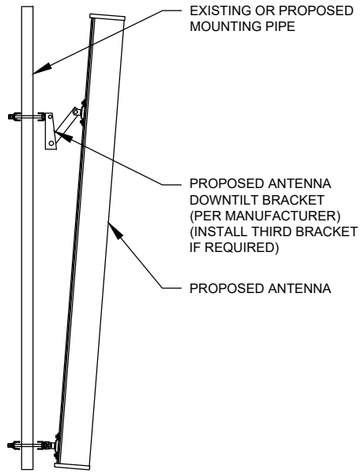
PROFILE VIEW



ISOMETRIC VIEW (BY MANUFACTURER)

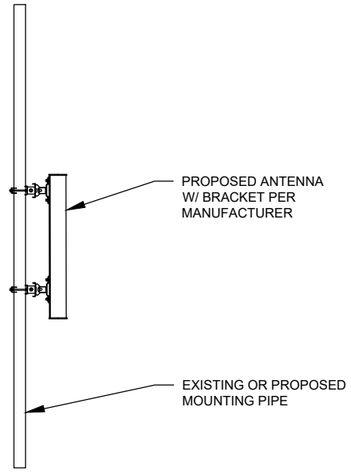
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



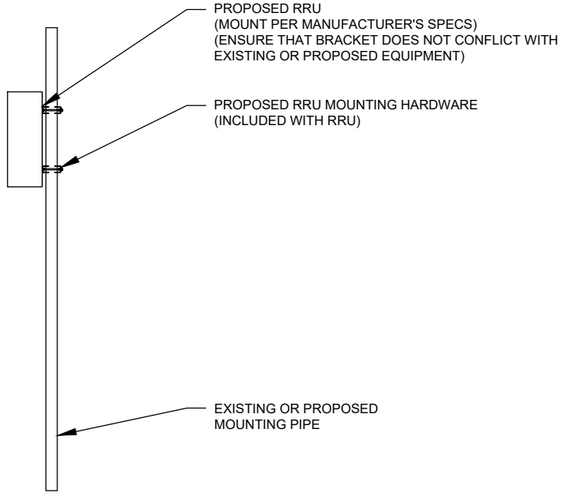
2 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



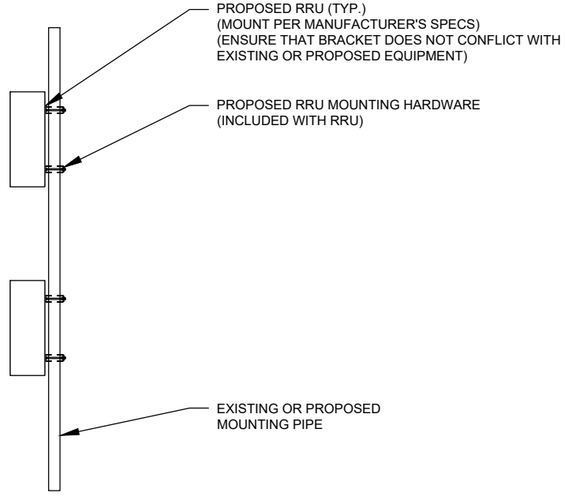
3 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



4 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



5 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	1/10/2024

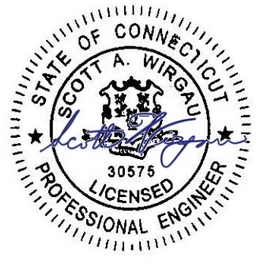
ATC SITE NUMBER:
370626

ATC SITE NAME:
EAST HARTFORD

VERIZON SITE NAME:
EAST HARTFORD CT

SITE ADDRESS:
148 ROBERTS ST.
EAST HARTFORD, CT 06108

SEAL:



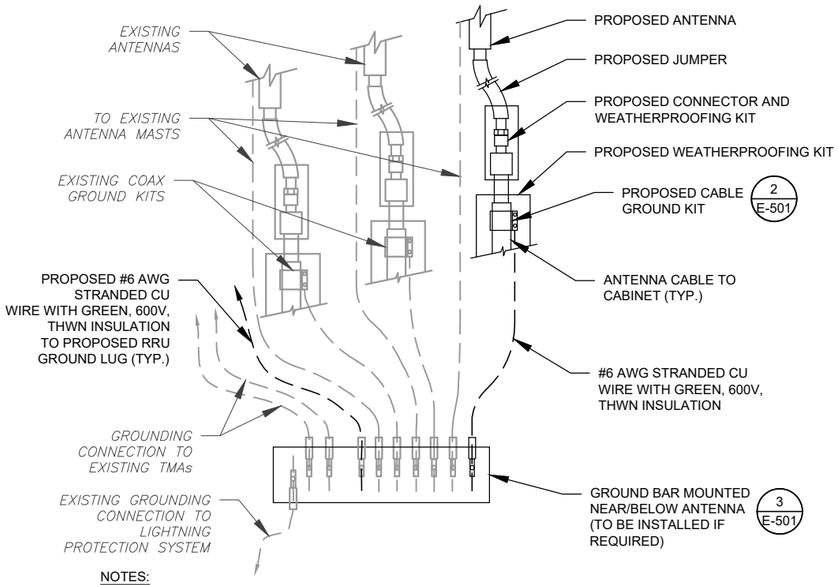
Digitally Signed: 2024-01-11

verizon

ATC JOB NO:	14530661_G0
CUSTOMER ID:	EAST HARTFORD CT
CUSTOMER #:	5000384062

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

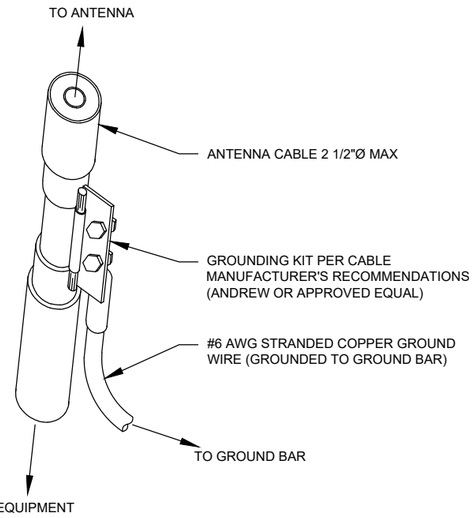


NOTES:

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

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

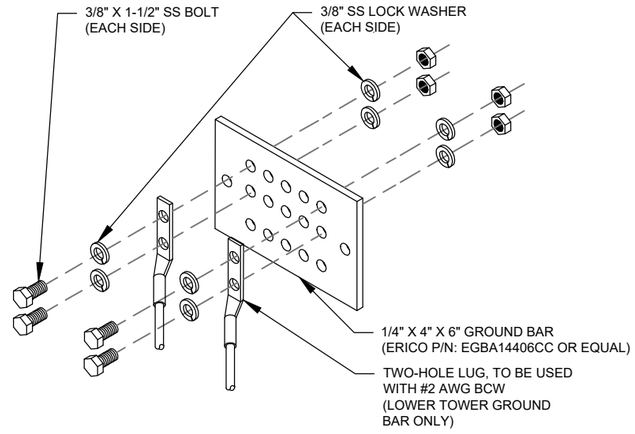


GROUND KIT NOTES:

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

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



GROUND BAR NOTES:

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

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
1 FENTON MAIN
SUITE 300
CARY, NC 27511
PHONE: (919) 468-0112
PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	JM	1/10/2024

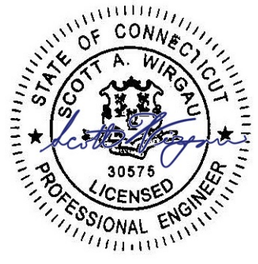
ATC SITE NUMBER:
370626

ATC SITE NAME:
EAST HARTFORD

VERIZON SITE NAME:
EAST HARTFORD CT

SITE ADDRESS:
148 ROBERTS ST.
EAST HARTFORD, CT 06108

SEAL:



Digitally Signed: 2024-01-11

verizon

ATC JOB NO:	14530661_G0
CUSTOMER ID:	EAST HARTFORD CT
CUSTOMER #:	5000384062

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

verizon fuze | RFDS

NORTHEAST > North East > New England > New England West > **E HARTFORD 3 CT**

RF Submit by: Brauer, Mark - mark.brauer2@verizonwireless.com - 9/18/2023, 10:32:29 AM

EE Submit by: , --

Project Details	
FUZE Project ID:	16053192
Project Name:	UPGRADE-RRH
Project Alt Name:	E HARTFORD 3 CT - MKT 68 - MODIFICATION
Project Type:	Modification
Modification Type:	RF
Designed Sector Carrier 4G:	18
Designed Sector Carrier 5G:	3
Additional Sector Carrier 4G:	N/A
Additional Sector Carrier 5G:	N/A
FP Solution Type & Tech Type:	MODIFICATION;4G_CBRS,4G_Radio Swap,5G_850,5G_L-Sub6,5G_vDU add - Sub3
Carrier Aggregation:	false
MPT Id:	
eCIP-O:	false
Suffix:	

Location Information	
Site ID:	674879
E-NodeB ID:	068156,0689552
MDG Location ID:	5000384062
PSLC:	467627
Switch Name:	Windsor 1
Tower Owner:	
Tower Type:	Monopole
Site Type:	MACRO
Site Sub Type:	SPOKE
Street Address:	148 Roberts Street
City:	East Hartford
State:	CT
Zip Code:	06108
County:	Hartford
Latitude:	41.773333 / 41° 46' 23.9988" N
Longitude:	-72.613442 / 72° 36' 48.3912" W

RFDS Project Scope: Samsung RRH upgrade
CBRS add
L-Sub6 add
Antenna swaps
Update 04/02/2021 - per Stan Gvinter:
Added: (2) LI 6x12 Hybrids
Removed: (2)6x12 Hybrids (Non LI)
Retained: (2) OVP
Update 02/06/2023 - no change, refreshing so proper regulatory license information populates.
Update 07/28/2023 - Per RE update to latest RRHs

Antenna Summary

Added

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
			LTE	LTE		COMMSCOPE	NHHSS-65B-R2BT4	118	121	140(C) 260(B) 35(A)		true	PHYSICAL	3	00000000190005945
					5G	Samsung	MT6413-77A	118	119.2	140(B) 260(C) 35(A)		false	PHYSICAL	3	
LTE	LTE 5G	LTE				COMMSCOPE	NHH-65B-R2B	118	121	140(B) 260(C) 35(A)		true	PHYSICAL	3	00000000190005282
						ANDREW	LNX-6513DS-A1M	118	120.3	35(D)140(D2)2		false	PHYSICAL	3	00000000190005014

Removed

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID
LTE	LTE	LTE	LTE			ANDREW	JAHH-65B-R3B	118	121	35(01) 140(02) 260(03)		false	PHYSICAL	6	
LTE						COMMSCOPEDECIE PRODUCTS	DB844G65ZAXY H (109884)	118	121	35(01) 140(02)		false	PHYSICAL	6	

Retained

700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity	Item ID

No data available.

Added: 12 | Removed: 12 | Retained: 0

1 RFDS

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

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: 0

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
RRU	Tower			LTE	LTE			Samsung	B2/B66A RRH ORAN (RF4439d-25A)			PHYSICAL	3	
RRU	Tower						5G	Samsung	MT6413-77A			PHYSICAL	0	
RRU	Tower	LTE	LTE 5G					Samsung	RF4461d-13A			PHYSICAL	3	
RRU	Tower					LTE		Samsung	RT4423-48A			PHYSICAL	3	
Upconverter	Ground (Outdoor)							COMMSCOPE	PS-1600-73-VZ			PHYSICAL	5	0000000019004
Upconverter	Ground (Outdoor)							COMMSCOPE	PS-R-1600-VZ			PHYSICAL	1	0000000019004
Upconverter	Ground (Outdoor)							COMMSCOPE	PULSAR-EDGE-CNTRL			PHYSICAL	1	0000000019000
Kit	Shelter							Samsung	NW-FSGPSCH30VZ			PHYSICAL	1	0000000019000
Kit	Shelter							Samsung	SFG-AFE000DAVZ			PHYSICAL	12	0000000019000
Kit	Shelter							Samsung	SFG-AFE000DBVZ			PHYSICAL	2	0000000019000
Kit	Shelter							Samsung	SFG-AFS00Z01VZ			PHYSICAL	1	0000000019000
Kit	Shelter							Samsung	SLS-BB1150EGEX			PHYSICAL	1	0000000019000
LCC4	Shelter							SAMSUNGELE-001	SLS-BB1150EDEX			PHYSICAL	1	0000000019001
Mount	Tower							COMMSCOPET-001	BSAMNT-SBS-1-2			PHYSICAL	3	0000000019000
OVP Box	Shelter							RAYCAPINC-001	RVZDC-4520-RM-48			PHYSICAL	1	0000000019004
Hybrid Cable	Tower							HUBERSUHNE-001	SD-06x6GA-12SM-160	160'		PHYSICAL	2	
Kit	Shelter							Samsung	NW-FSBRACH02VZ			PHYSICAL	1	
Kit	Shelter							Nokia	3HE00027CA			PHYSICAL	1	0000000019001
Kit	Shelter							Nokia	3HE04824AA			PHYSICAL	4	0000000019001
Kit	Shelter							Nokia	3HE11904AA			PHYSICAL	2	0000000019001
Kit	Shelter							AMERICANCA-006	55325-KIT			PHYSICAL	1	0000000019004
Kit	Shelter							Samsung	NW-FSCPCBH15VZ			PHYSICAL	1	0000000019000
Other	Tower							RAYCAPINC-001	3315-ALM-RS485			PHYSICAL	2	0000000019000
Other	Shelter							HEWLETTPAC-003	EB041921			PHYSICAL	1	0000000019004
Other	Shelter							RAYCAPINC-001	RM-4520-MOD-12			PHYSICAL	3	0000000019000
Upconverter	Ground (Outdoor)							COMMSCOPE	RS485-CARD			PHYSICAL	1	0000000019000

Removed

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
Hybrid Cable	Tower								6x12 non LI			PHYSICAL	2	
RRU	Tower		LTE					Nokia	AHCA AirScale RRH 4T4R B5 160W			PHYSICAL	3	
RRU	Tower	LTE						Nokia	UHBA B13 RRH 4x30			PHYSICAL	3	
RRU	Tower			LTE				Nokia	UHFA B25 RRH 4x30			PHYSICAL	3	
RRU	Tower				LTE			Nokia	UHIE B66A RRH 4x45			PHYSICAL	3	

Retained

Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity	Item ID
OVP Box	Tower								OVP-6			PHYSICAL	2	
Coaxial Cables	Tower											PHYSICAL	6	

1 RFDS

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

SUPPLEMENTAL

SHEET NUMBER: R-602

REVISION: 0

Colliers Engineering & Design,
Architecture, Landscaping Architecture, Surveying, CT, P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10208301
Colliers Engineering & Design Project #: 21777429 (Rev. 1)

December 12, 2023

Site Information

Site ID:	*5000384062-VZW / E HARTFORD 3 CT*
Site Name:	*E HARTFORD 3 CT*
Carrier Name:	*Verizon Wireless*
Address:	*148 Roberts Street* *East Hartford, Connecticut 06108* *Hartford County*
Latitude:	*41.773333°*
Longitude:	*-72.613442°*

Structure Information

Tower Type:	*Monopole*
Mount Type:	*12.50-Ft Platform*

FUZE ID # 16053192

Analysis Results

Platform: **80.1% Pass***

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

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com

For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Prasanna Dhakal

STATE OF CONNECTICUT · DEJIAN XU · No. 33733 · LICENSED PROFESSIONAL ENGINEER

12/14/2023

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	22.3	22.3	41.9	41.9
0.5	29.3	29.3	57.1	57.1
1	35.7	35.7	71.8	71.8

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 sectors.
- Ka factors included in (EPA)a calculations

Requirements:

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

1. 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 rubbing against 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.

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

Attachments:

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

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER: R-603

REVISION: 0

EXHIBIT 2

Property Location 148 ROBERTS ST | Map ID 35/ / 18/ / | Bldg Name | State Use 902
Vision ID 12045 | Account # 12045 | Bldg # 1 | Sec # 1 of 1 | Card # 1 of 2 | Print Date 7/6/2023 1:27:13 PM

CURRENT OWNER

GREATER HARTFORD TRANSIT DIS

1 UNION PL

HARTFORD CT 06103

TOPO	UTILITIES	STRT / ROAD	LOCATION
A Good	1 All	1 Paved	

SUPPLEMENTAL DATA

Alt Prcl ID	4270-0148	Locn Suffix	
Homeown		Zoning	I-2
Census	5105	Res Area	18254
VCS	4403	Non Res A	0
# Units	2	Lot Size	6.44
Class	Com		
GIS ID		Assoc Pid#	

CURRENT ASSESSMENT

Description	Code	Appraised	Assessed
EX COM LN	21	366,750	256,730
EX COM BL	22	4,022,910	2,816,040
EX CM OTB	25	482,940	338,050
EX VC R L	51	31,960	22,370
	Total	4,904,560	3,433,190

6043

EAST HARTFORD, CT

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE		SALE DATE	Q/U	V/I	SALE PRIC	VC
GREATER HARTFORD TRANSIT DISTRICT	4021	335	08-11-2021	U	I		B24
GREATER HARTFORD TRANSIT DISTRICT	3394	0102	06-05-2013	U	I	1,000,000	B06
DOUBLE E PROPERTIES OF EAST HARTFO	3205	0125	10-07-2010	U	I	0	B03
THE MASTERS CLUB L L C	2969	0212	12-04-2007	U	I	1,200,000	B25
ELKS BENEVOLENT	0365	0358	01-01-1900	Q	I	0	NC

PREVIOUS ASSESSMENTS (HISTORY)

Year	Code	Assessed	Year	Code	Assessed	Year	Code	Assessed
2022	21	256,730	2021	11	22,370	2020	21	237,710
	22	2,816,040		13	52,950		22	2,618,920
	25	338,050		21	256,730		25	338,000
	51	22,370		22	2,816,040			
	Total	3,433,190		Total	3,486,140		Total	3,194,630

EXEMPTIONS

Year	Code	Description	Amount
		Total	0.00

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm Int

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD

Nbhd	Nbhd Name	B	Tracing	Batch
0001				

NOTES

SPLIT OUT 27.41 AC TO BE CONVEYED TO THE TOWN.DBA ELKS CLUB.ADD SHEDS & C/L FENCE FOR TELE-COM SITE, 2004. ADD I&E PENALTY 2006-2007.REMOVE I/E PENALTY 2008.2011 BAA N/C.SOLD 5.37 AC PARCEL.KEPT 1.07 AC ,NEW PID#17166, 148 ROBERTS ST REAR.EXEM PT 2014. DEMO ALL BLDGS & O/BLDGS,PVMNT REMAINS,2015.NEW CONSTR, 30% COMPL,2016. CONST COMPLETE,2017.

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	3,907,480
Appraised Xf (B) Value (Bldg)	115,430
Appraised Ob (B) Value (Bldg)	482,940
Appraised Land Value (Bldg)	398,710
Special Land Value	0
Total Appraised Parcel Value	4,904,560
Valuation Method	C
Total Appraised Parcel Value	4,904,560

BUILDING PERMIT RECORD

Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments
B-22-1125	12-16-2022	TE	Telecom	18,000		0		REPLACE BP B-21-1081 NO
B-22-378	05-26-2022	TE	Telecom	35,000		0		AT&T Wireless to replace all 1
B-22-86	02-15-2022	TE	Telecom	25,000		0		relocate 3 antennas on the exi
E-22-23	01-20-2022	CM	Commercial	30,000		0		Convert fuel station from deise
B-21-1081	10-28-2021	TE	Telecom	18,000		0		Replace (6) antennas and (12)
B-21-962	10-25-2021	DM	Demolish	5,000	05-17-2022	0		DEMOLITION OF A SINGLE F
E-21-719	10-12-2021	EL	Electric	10,000		0		Installation of 1 new equipmen

VISIT / CHANGE HISTORY

Date	Id	Type	Is	Cd	Purpost/Result
10-05-2021	MAF	2	1	24	Permit Review
09-23-2021	AK	2		21	Sales Review
04-18-2016	JM			99	Vacant Land - Inspected
10-13-2015	RB			20	Field Review
01-24-2012	CK	0	6	41	Hearing - No Change
03-29-2005	TM			63	Verified

LAND LINE VALUATION SECTION

B	Use Code	Description	Zone	Land Type	Land Units		Unit Price	I. Factor	Site Index	Cond.	Nbhd.	Nhbd Adj	Notes	Location Adjustment		Adj Unit Pric	Land Value
1	902	Exempt Commer	I2		5.370	AC	135,000.00	0.50586	C	1.00	2000	1.000			0		366,750
				Total Card Land Units	5.3700	AC	Parcel Total Land Area:	6.1300								Total Land Value	398,710

Property Location 148 ROBERTS ST | Map ID 35/ / 18/ / | Bldg Name | State Use 902
Vision ID 12045 | Account # 12045 | Bldg # 1 | Sec # 1 of 1 | Card # 1 of 2 | Print Date 7/6/2023 1:27:14 PM

CONSTRUCTION DETAIL

Element	Cd	Description
Style:	21	Office
Model	94	Comm/Ind
Grade	87	1.80
Stories:	2	
Occupancy	1.00	
Exterior Wall 1	15	Concr/Cinder
Exterior Wall 2		
Roof Structure	01	Flat
Roof Cover	01	Metal
Interior Wall 1	00	Typical
Interior Wall 2		
Interior Floor 1	08	Mixed
Interior Floor 2		
Heating Fuel	10	Other
Heating Type	11	Other
AC Type	06	Partial
Finished %	30	
Bldg Use	902	Exempt Commercial
Total Bedrooms		
Total Baths		
Num Fixtures		
Total Rooms		
Basement %		
Heat/AC		
Frame Type	3	Steel
Baths/Plumbing	02	Average
Common Wall		
Wall Height	33.00	
Perimeter	744.00	
1st Floor Use:		

CONSTRUCTION DETAIL (CONTINUED)

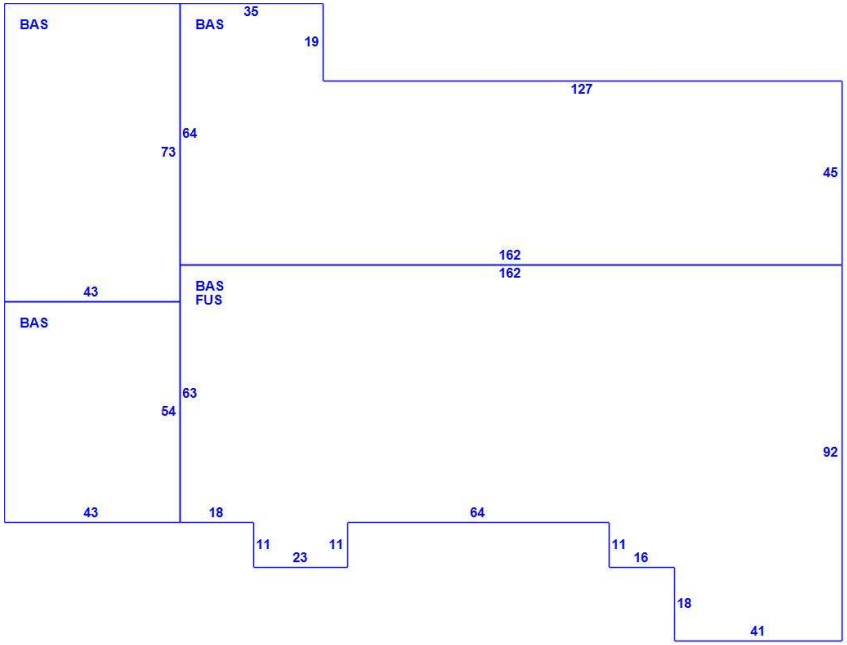
Element	Cd	Description

MIXED USE

Code	Description	Percentage
902	Exempt Commercial	100
		0
		0

COST / MARKET VALUATION

RCN	4,070,294
Year Built	2017
Effective Year Built	2017
Depreciation Code	A
Remodel Rating	
Year Remodeled	
Depreciation %	4
Functional Obsol	0
External Obsol	0
Trend Factor	1
Condition	
Condition %	
Percent Good	96
RCNLD	3,907,480
Dep % Ovr	
Dep Ovr Comment	
Misc Imp Ovr	
Misc Imp Ovr Comment	
Cost to Cure Ovr	
Cost to Cure Ovr Comment	



OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)

Code	Description	L/B	Units	Unit Price	Yr Blt	Cond. Cd	% Good	Grade	Grade Adj	Appr. Value
PAV1	Paving	L	154,00	3.10	2016		100	C	1.00	477,400
ELV1	Elevator Pass	B	1	35000.00	2016		96		0.00	33,600
SPR1	Sprinklers-Wet	B	23,648	2.30	2016		96		0.00	52,210
SPR3	Sprinklers-Dry	B	13,416	2.30	2016		96		0.00	29,620
PAV3	Concrete Slab-	L	84	11.00	2016		100	C	1.00	920
PAV3	Concrete Slab-	L	420	11.00	2016		100	C	1.00	4,620

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Floor Area	Eff Area	Unit Cost	Undeprec Value
BAS	First Floor	25,240	25,240	25,240	109.82	2,771,806
FUS	Finished Upper Story	11,824	11,824	11,824	109.82	1,298,488
	Ttl Gross Liv / Lease Area	37,064	37,064	37,064		4,070,294

Property Location 148 ROBERTS ST | Map ID 35/ / 18/ / | Bldg Name | State Use 902
Vision ID 12045 | Account # 12045 | Bldg # 2 | Sec # 1 of 1 | Card # 2 of 2 | Print Date 7/6/2023 1:27:15 PM

CURRENT OWNER

GREATER HARTFORD TRANSIT DIS

1 UNION PL

HARTFORD CT 06103

TOPO	UTILITIES	STRT / ROAD	LOCATION
A Good	1 All	1 Paved	

SUPPLEMENTAL DATA

Alt Prcl ID	4270-0148	Locn Suffix	
Homeown		Zoning	I-2
Census	5105	Res Area	18254
VCS	4403	Non Res A	0
# Units	2	Lot Size	6.44
Class	Com		
GIS ID		Assoc Pid#	

CURRENT ASSESSMENT

Description	Code	Appraised	Assessed
EX COM LN	21	366,750	256,730
EX COM BL	22	4,022,910	2,816,040
EX CM OTB	25	482,940	338,050
EX VC R L	51	31,960	22,370
Total		4,904,560	3,433,190

6043

EAST HARTFORD, CT

VISION

RECORD OF OWNERSHIP

RECORD OF OWNERSHIP	BK-VOL/PAGE		SALE DATE	Q/U	V/I	SALE PRIC	VC
GREATER HARTFORD TRANSIT DISTRICT	4021	335	08-11-2021	U	I		B24
GREATER HARTFORD TRANSIT DISTRICT	3394	0102	06-05-2013	U	I	1,000,000	B06
DOUBLE E PROPERTIES OF EAST HARTFO	3205	0125	10-07-2010	U	I	0	B03
THE MASTERS CLUB L L C	2969	0212	12-04-2007	U	I	1,200,000	B25
ELKS BENEVOLENT	0365	0358	01-01-1900	Q	I	0	NC

PREVIOUS ASSESSMENTS (HISTORY)

Year	Code	Assessed	Year	Code	Assessed V	Year	Code	Assessed
2022	21	256,730	2021	11	22,370	2020	21	237,710
	22	2,816,040		13	52,950		22	2,618,920
	25	338,050		21	256,730		25	338,000
	51	22,370		22	2,816,040			
	Total	3,433,190		Total	3,486,140		Total	3,194,630

EXEMPTIONS

Year	Code	Description	Amount
		Total	0.00

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm Int

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD

Nbhd	Nbhd Name	B	Tracing	Batch
0001				

NOTES

HRNG N/C, YEAR BUILT: CIRCA 1880. LOC 2021 REVAL. SF HOME DEMO, 2022GL.
ADJ COMM. PROPERTIES PER 2001 REVIEW.
CORR LAND, DEL ENP, 2016 REVAL. DEL MTL/
SHED & PTC, ADD FOP & WDK PER 2016 FIELD
REVIEW. PARCEL 12044 (144 ROBERTS ST)
COMBINED W/PARCEL 12045 (148 ROBERTS ST)

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	3,907,480
Appraised Xf (B) Value (Bldg)	115,430
Appraised Ob (B) Value (Bldg)	482,940
Appraised Land Value (Bldg)	398,710
Special Land Value	0
Total Appraised Parcel Value	4,904,560
Valuation Method	C
Total Appraised Parcel Value	4,904,560

BUILDING PERMIT RECORD

Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments

VISIT / CHANGE HISTORY

Date	Id	Type	Is	Cd	Purpost/Result
05-17-2022	AK	1	1	63	Verified

LAND LINE VALUATION SECTION

B	Use Code	Description	Zone	Land Type	Land Units		Unit Price	Size Adj	Site Index	Cond.	Nbhd.	Nbhd. Adj	Notes	Location Adjustment		Adj Unit P	Land Value
2	900	Exempt Vac	R3		0.760	AC	80,258.00	1.23286	5	0.50	44	0.850	LOWER REAR ADJ		1.0000		31,960
				Total Card Land Units	0.7600	AC	Parcel Total Land Area	6.1300							Total Land Value		31,960

Property Location	148 ROBERTS ST		Map ID	35/ / 18/ /		Bldg Name	State Use 902
Vision ID	12045	Account # 12045		Bldg # 2	Sec # 1 of 1	Card # 2 of 2	Print Date

CONSTRUCTION DETAIL

Element	Cd	Description
Style		
Model	00	Vacant
Grade:		
Stories		
Occupancy		
Exterior Wall 1		
Exterior Wall 2		
Roof Structure		
Roof Cover		
Interior Wall 1		
Interior Wall 2		
Interior Flr 1		
Interior Flr 2		
Heat Fuel		
Heat Type:		
AC Type:		
Total Bedrooms		
Full Bthrms:		
Half Baths:		
Extra Fixtures		
Total Rooms:		
Bath Style:		
Kitchen Style:		
Num Kitchens		
Fireplaces		
Extra Openings		
Prefab Fpl(s)		
% Basement		
Bsmt Garage(s)		
% Fin Bsmt		
% Rec Room		
% Semi FBM		
% Attic Fin		

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd	Description
% Semi FBM		
% Attic Fin		
Unfin %		

CONDO DATA

Parcel Id		C		Owne	
		B		S	

Adjust Type	Code	Description	Factor%
Condo Flr			
Condo Unit			

COST / MARKET VALUATION

Building Value New	
Year Built	
Effective Year Built	
Depreciation Code	
Remodel Rating	
Year Remodeled	
Depreciation %	
Functional Obsol	
External Obsol	
Trend Factor	1
Condition	
Condition %	
Percent Good	
RCNLD	
Dep % Ovr	
Dep Ovr Comment	
Misc Imp Ovr	
Misc Imp Ovr Comment	
Cost to Cure Ovr	
Cost to Cure Ovr Comment	

No Sketch

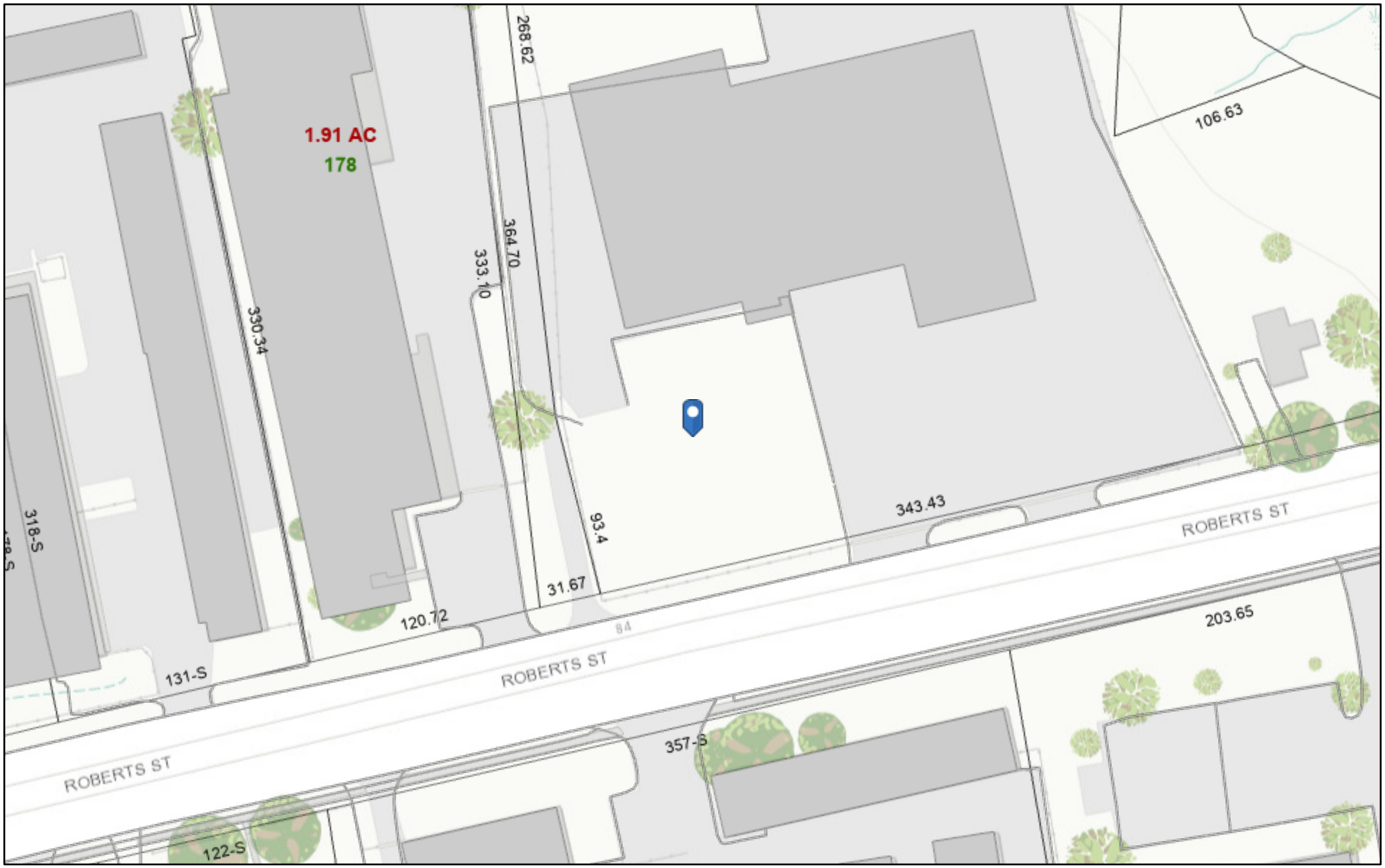
OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)

Code	Description	L/B	Units	Unit Price	Yr Blt	Cond. Cd	% Gd	Grade	Grade Adj.	Appr. Value

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Floor Area	Eff Area	Unit Cost	Undeprec Value
	Ttl Gross Liv / Lease Area	0	0	0		0

East Hartford, CT Web Map



1/24/2024, 3:08:25 PM

1:1,128

0 0.01 0.01 0.02 mi

0 0.01 0.02 0.04 km

Paved Feature
Sidewalk
Municipal Boundary
Address Points
Building Footprints
TaxParcel
Mailing address Parcels
Mailing Address Points

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

EXHIBIT 3

AMERICAN TOWER®
CORPORATION

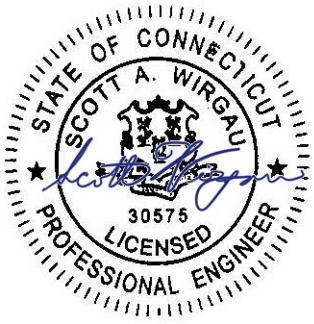
Structural Analysis Report

Structure	:	130 ft Monopole
ATC Asset Name	:	East Hartford
ATC Asset Number	:	370626
Engineering Number	:	14530661_C3_03
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	East Hartford CT
Carrier Site Number	:	5000384062
Site Location	:	148 Roberts St. East Hartford, CT 06108-0000 41.7733° N, 72.6134° W
County	:	Hartford
Date	:	December 29, 2023
Max Usage	:	59%
Analysis Result	:	Pass

Created By:

Sarah Kramer
Structural Engineer I

Sarah D. Kramer



COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 130 ft Monopole tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	Glen Martin Engineering Drawing #MP1400800-0001, dated August 20, 2003
Foundation:	Glen Martin Engineering Drawing #GME-03309, dated August 26, 2003
Geotechnical:	Geotechnical Engineering Project Name: The Marcus Group, dated April 25, 2003

Analysis

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

Basic Wind Speed:	118 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.50" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	Ss = 0.19, S_1 = 0.06
Site Class:	D - Stiff Soil - Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Result
Pole Shaft	58.9%	1.2D + 1.0W	Pass
Serviceability Usage	31.9%	1.0D + 1.0W	Pass
Upper Flange Plate @ 119.0 ft	11.7%	Bolts	Pass
Base Plate @ 0.0 ft	42.3%	Rods	Pass
Mat & Pier	55.8%	Moment [Soil]	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	2,274.2	49.7	24.7

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

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

VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
118.0	1	Platform with Handrails	(6) 1 5/8" Coax (2) 1 5/8" Hybriflex
	2	RFS DB-T1-6Z-8AB-0Z	
	3	Andrew LNX-6513DS-A1M	
	3	Commscope NHH-65B-R2B	
	3	Commscope NHHSS-65B-R2BT4	
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung MT6413-77A	
	3	Samsung RF4461d-13A	
	3	Samsung RT4423-48A	

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
130.1	6	Alcatel-Lucent RRH2x50-08	-	CLEARWIRE CORPORATION
129.9	1	DragonWave Horizon Compact (11.5 lbs)	-	CLEARWIRE CORPORATION
129.1	1	DragonWave A-ANT-18G-2-C	-	CLEARWIRE CORPORATION
128.0	3	T-Arm	(2) 2" conduit	CLEARWIRE CORPORATION
127.6	3	Alcatel-Lucent 1900 MHz 4X45 RRH	-	CLEARWIRE CORPORATION
127.3	3	Argus LLPX310R	-	CLEARWIRE CORPORATION
	3	Commscope NNVV-65B-R4		
124.6	3	RRH	-	CLEARWIRE CORPORATION
110.0	1	Low Profile Platform	(5) 1 5/8" Coax	SPRINT NEXTEL
109.8	2	58" x 12" Panel	-	SPRINT NEXTEL
105.5	3	Ericsson RRUS 4415 B66	-	T-MOBILE
105.4	3	Ericsson RRUS 4415 B25	-	T-MOBILE
100.0	1	Platform with Handrails	(4) 1 5/8" Hybriflex (6) 7/8" Coax	T-MOBILE
	3	Commscope SDX1926Q-43		
	3	Ericsson AIR32 B66Aa/B2a		
	3	Ericsson Air6449 B41		
	3	Ericsson Radio 4449 B71 B85A		
	3	RFS APXVAALL24 43-U-NA20		
90.0	1	Platform with Handrails	(3) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (1) 0.96" (24.3mm) Cable (5) 2" conduit	AT&T MOBILITY
	1	Raycap DC6-48-60-0-8F		
	3	CCI DMP65R-BU8D		
	3	CCI TPA65R-BU8A		
	3	Ericsson RRUS 32 B30 (53 lbs)		
	3	Ericsson RRUS 32 B66A		
	3	Ericsson RRUS 4415 B25		
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Raycap DC6-48-60-18-8F		
88.0	3	Ericsson AIR 6419 B77G	-	AT&T MOBILITY
85.0	3	Ericsson Air 6449 B77D	-	AT&T MOBILITY
79.0	1	Commscope RDIDC-9181-PF-48	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	1	Platform with Handrails		
	3	Fujitsu TA08025-B604		
	3	Fujitsu TA08025-B605		
	3	JMA Wireless MX08FRO665-21		
70.0	1	24" x 24" Panel	(1) 1 5/8" Coax	SPRINT NEXTEL
50.0	1	Side Arm	-	SPRINT NEXTEL

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

Standard Conditions

All engineering services performed by A.T. Engineering Services LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services LLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Services LLC and used in the performance of our engineering services is correct and complete.

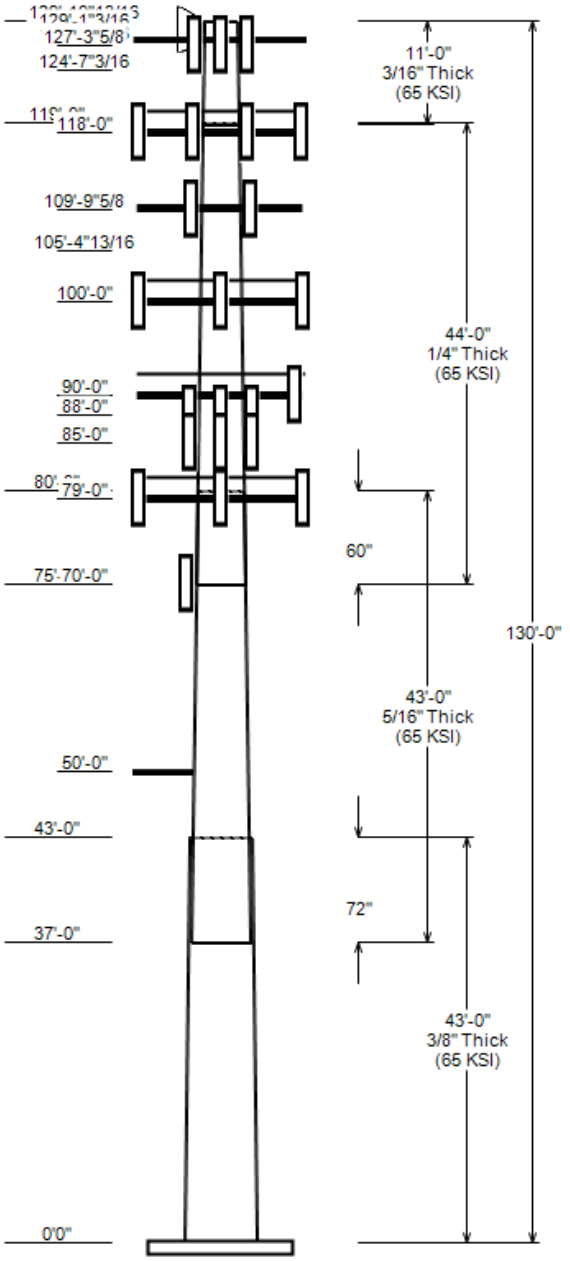
All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Services LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ANALYSIS PARAMETERS

Nominal Wind:	118 mph	**Ice Wind:**	50 mph w/ 1.5" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	B	**S_s:** 0.189	**S_1:** 0.055
Topo Category:	1	**Topo Factor:**	Method 1	**Topo Feature:**	
Structure Height:	130 ft	**Base Elevation:**	0.00 ft	**Structure Type:**	Taper
Base Diameter:	49.19 in	**Base Rotation:**	0°	**Taper:**	0.2330 (in/ft)



POLE SECTION PROPERTIES

Section	Length (ft)	Flat Diameter (in) Top	Flat Diameter (in) Bottom	Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
1	43.000	39.16	49.19	0.375		0.000	16 Sides	65
2	43.000	31.16	41.19	0.312	Slip Joint	72.000	16 Sides	65
3	44.000	22.56	32.83	0.250	Slip Joint	60.000	16 Sides	65
4	11.000	20.00	22.56	0.188	Butt Joint	0.000	16 Sides	65

DISCRETE APPURTENANCE

Elev (ft)	Description
130.1	(6) Alcatel-Lucent RRH2x50-08
129.9	(1) DragonWave Horizon Compact (11
129.1	(1) DragonWave A-ANT-18G-2-C
128.0	(3) Generic Round T-Arm
127.6	(3) Alcatel-Lucent 1900 MHz 4X45 R
127.3	(3) Argus LLPX310R
127.3	(3) Commscope NNVV-65B-R4
124.6	(3) Generic RRH
118.0	(3) Samsung RT4423-48A
118.0	(3) Samsung B2/B66A RRH ORAN (RF 4
118.0	(3) Samsung RF4461d-13A
118.0	(3) Samsung MT6413-77A
118.0	(2) RFS DB-T1-6Z-8AB-0Z
118.0	(3) Andrew LNX-6513DS-A1M
118.0	(3) Commscope NHHSS-65B-R2BT4
118.0	(3) Commscope NHH-65B-R2B
118.0	(1) Generic Round Platform with Ha
110.0	(1) Generic Round Low Profile Plat
109.8	(2) Generic 58" x 12" Panel
105.5	(3) Ericsson RRUS 4415 B66
105.4	(3) Ericsson RRUS 4415 B25
100.0	(3) Commscope SDX1926Q-43
100.0	(3) Ericsson Radio 4449 B71 B85A
100.0	(3) Ericsson Air6449 B41
100.0	(3) Ericsson AIR32 B66Aa/B2a
100.0	(3) RFS APXVAALL24 43-U-NA20
100.0	(1) Generic Round Platform with Ha
90.0	(3) Raycap DC6-48-60-18-8F
90.0	(1) Raycap DC6-48-60-0-8F
90.0	(3) Ericsson RRUS 4415 B25
90.0	(3) Ericsson RRUS 4449 B5, B12
90.0	(3) Ericsson RRUS 4478 B14
90.0	(3) Ericsson RRUS 32 B66A
90.0	(3) Ericsson RRUS 32 B30 (53 lbs)
90.0	(3) CCI DMP65R-BU8D
90.0	(3) CCI TPA65R-BU8A
90.0	(1) Generic Round Platform with Ha
88.0	(3) Ericsson AIR 6419 B77G
85.0	(3) Ericsson Air 6449 B77D
79.0	(1) Commscope RDIDC-9181-PF-48
79.0	(3) Fujitsu TA08025-B605
79.0	(3) Fujitsu TA08025-B604
79.0	(3) JMA Wireless MX08FRO665-21
79.0	(1) Generic Flat Platform with Han
70.0	(1) Generic 24" x 24" Panel
50.0	(1) Generic Round Side Arm

LINEAR APPURTENANCE

Elev To (ft)	Description
130.0	(3) 1/2" Coax
128.0	(2) 2" conduit
118.0	(2) 1 5/8" Hybriflex
118.0	(6) 1 5/8" Coax
110.0	(5) 1 5/8" Coax
100.0	(6) 7/8" Coax
100.0	(4) 1 5/8" Hybriflex
90.0	(5) 2" conduit
90.0	(1) 0.96" (24.3mm) Cable
90.0	(6) 0.78" (19.7mm) 8 AWG 6
90.0	(3) 0.39" (10mm) Fiber Trunk
79.0	(1) 1.60" (40.6mm) Hybrid
70.0	(1) 1 5/8" Coax

GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	2274.21	49.72	24.66
0.9D + 1.0W	2243.96	37.28	24.64
1.2D + 1.0Di + 1.0Wi	658.31	77.24	6.95
1.2D + 1.0Ev + 1.0Eh	129.87	49.89	1.25
0.9D - 1.0Ev + 1.0Eh	127.68	34.58	1.25
1.0D + 1.0W	521.69	41.46	5.70

DISH SERVICEABILITY

Load Case	Elevation (ft)	Deflection (in)	Rotation (°)
1.0D + 1.0W	129.10	14.746	0.930

ANALYSIS PARAMETERS

Location:	Hartford County,CT	**Height:**	130 ft
Type and Shape:	Taper, 16 Sides	**Base Diameter:**	49.19 in
Manufacturer:	Undetermined	**Top Diameter:**	20.00 in
K_d (non-service):	0.95	**Taper:**	0.2330 in/ft
K_e:	1.00	**Rotation:**	0.000°

ICE & WIND PARAMETERS

Risk Category:	II	**Design Wind Speed:**	118 mph
Exposure Category:	B	**Design Wind Speed w/ Ice:**	50 mph
Topo Factor Procedure:	Method 1	**Design Ice Thickness:**	1.50 in
Topographic Category:	1	**Service Wind Speed:**	60 mph
Crest Height:	0 ft	**HMSL:**	49.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil		**Period Based on Rayleigh Method (sec):**		2.30
T_L (sec):	6	**P:**	1	**C_s:**	0.030
S_s:	0.189	**S_1:**	0.055	**C_s Max:**	0.030
F_a:	1.600	**F_v:**	2.400	**C_s Min:**	0.030
S_{ds}:	0.202	**S_{d1}:**	0.088		

LOAD CASES

1.2D + 1.0W	118 mph Wind with No Ice
0.9D + 1.0W	118 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph Wind with 1.5" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in^2)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in^2)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-16	43.00	0.3750	65		0.00	7,667	49.19	0.000	58.39	17,579.1	24.10	131.17	39.16	43.00	46.40	8,819.0	18.78	104.43	0.2332
2-16	43.00	0.3125	65	Slip	72.00	5,231	41.19	37.000	40.75	8,600.2	24.23	131.80	31.16	80.00	30.75	3,696.6	17.84	99.71	0.2332
3-16	44.00	0.2500	65	Slip	60.00	3,277	32.83	75.000	25.98	3,482.7	24.13	131.30	22.56	119.00	17.80	1,119.5	15.96	90.26	0.2332
4-16	11.00	0.1875	65	Butt	0.00	472	22.56	119.000	13.38	846.7	21.95	120.35	20.00	130.00	11.85	587.7	19.23	106.67	0.2332
			Total Shaft Weight			**16,647**													

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
130.10	Alcatel-Lucent RRH2x50-08	6	0.80	0.000	52.90	1.701	0.50	111.44	2.553	0.50
129.90	DragonWave Horizon Compact (11	1	0.80	0.000	11.50	0.721	0.50	33.71	1.283	0.50
129.10	DragonWave A-ANT-18G-2-C	1	1.00	0.000	27.10	4.688	1.00	123.39	5.945	1.00
128.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	570.12	17.830	0.67
127.60	Alcatel-Lucent 1900 MHz 4X45 R	3	0.80	0.000	60.00	2.322	0.67	139.45	3.387	0.67
127.30	Commscope NNVV-65B-R4	3	0.80	0.000	77.40	12.271	0.64	324.87	15.032	0.64
127.30	Argus LLPX310R	3	0.80	0.000	28.60	4.292	0.63	117.35	5.920	0.63
124.60	Generic RRH	3	0.80	0.000	45.00	2.400	1.00	130.23	3.454	1.00
118.00	Samsung RT4423-48A	3	0.75	0.000	18.70	0.855	0.50	40.90	1.464	0.50
118.00	Commscope NHH-65B-R2B	3	0.75	0.000	43.70	8.079	0.69	214.05	10.801	0.69
118.00	Commscope NHHSS-65B-R2BT4	3	0.75	0.000	51.00	8.079	0.69	220.82	10.812	0.69
118.00	Andrew LNX-6513DS-A1M	3	0.75	0.000	31.10	5.846	0.69	163.28	7.911	0.69
118.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	4082.54	51.083	1.00
118.00	Samsung MT6413-77A	3	0.75	0.000	57.30	3.805	0.61	140.26	5.103	0.61
118.00	Samsung RF4461d-13A	3	0.75	0.000	79.10	1.875	0.50	142.09	2.757	0.50
118.00	Samsung B2/B66A RRH ORAN (RF 4	3	0.75	0.000	74.70	1.875	0.50	137.14	2.754	0.50
118.00	RFS DB-T1-6Z-8AB-0Z	2	0.75	2.000	44.00	4.800	0.72	166.97	6.189	0.72
110.00	Generic Round Low Profile Plat	1	1.00	0.000	1875.00	21.700	1.00	2661.67	40.349	1.00
109.80	Generic 58" x 12" Panel	2	0.80	0.000	40.00	6.301	0.75	170.55	8.471	0.75
105.50	Ericsson RRUS 4415 B66	3	0.75	0.000	46.00	1.650	0.50	87.88	2.472	0.50
105.40	Ericsson RRUS 4415 B25	3	0.75	0.000	46.00	1.842	0.50	93.42	2.709	0.50
100.00	RFS APXVAALL24 43-U-NA20	3	0.75	0.000	122.80	20.243	0.63	496.65	23.803	0.63
100.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	4054.62	50.662	1.00
100.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	234.80	7.206	0.63
100.00	Ericsson AIR32 B66Aa/B2a	3	0.75	0.000	132.20	6.510	0.71	285.39	8.612	0.71
100.00	Ericsson Radio 4449 B71 B85A	3	0.75	0.000	75.00	1.650	0.50	132.72	2.465	0.50
100.00	Commscope SDX1926Q-43	3	0.75	0.000	6.20	0.242	0.50	14.45	0.580	0.50
90.00	Ericsson RRUS 4415 B25	3	0.75	0.000	46.00	1.842	0.50	92.63	2.695	0.50
90.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	132.30	2.856	0.50
90.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.40	2.021	0.67	117.77	2.918	0.67
90.00	Ericsson RRUS 32 B66A	3	0.75	0.000	50.70	2.720	0.67	120.41	3.827	0.67
90.00	Ericsson RRUS 32 B30 (53 lbs)	3	0.75	0.000	53.00	2.743	0.67	122.95	3.855	0.67
90.00	CCI DMP65R-BU8D	3	0.75	0.000	95.70	17.871	0.63	418.96	21.376	0.63
90.00	Raycap DC6-48-60-18-8F	3	0.75	0.000	20.00	1.260	0.50	70.08	1.886	0.50
90.00	CCI TPA65R-BU8A	3	0.75	0.000	108.00	21.356	0.61	483.90	24.894	0.61
90.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	4040.50	50.449	1.00
90.00	Raycap DC6-48-60-0-8F	1	0.75	0.000	32.80	1.360	0.50	88.09	1.991	0.50
88.00	Ericsson AIR 6419 B77G	3	0.75	0.000	66.10	3.797	0.65	158.12	5.046	0.65
85.00	Ericsson Air 6449 B77D	3	0.75	0.000	81.60	4.028	0.65	178.67	5.326	0.65
79.00	Generic Flat Platform with Han	1	1.00	0.000	2500.00	42.400	1.00	4165.29	62.060	1.00
79.00	JMA Wireless MX08FRO665-21	3	0.75	0.000	64.50	12.489	0.64	305.44	15.123	0.64
79.00	Fujitsu TA08025-B604	3	0.75	0.000	63.90	1.962	0.50	118.57	2.824	0.50
79.00	Commscope RDIDC-9181-PF-48	1	0.75	0.000	21.90	1.867	1.00	75.25	2.711	1.00
79.00	Fujitsu TA08025-B605	3	0.75	0.000	75.00	1.962	0.50	133.73	2.824	0.50
70.00	Generic 24" x 24" Panel	1	1.00	0.000	30.00	4.800	1.00	125.98	6.115	1.00
50.00	Generic Round Side Arm	1	1.00	0.000	187.50	5.200	1.00	269.17	7.627	1.00
Totals	**Row Count: 46**	**117**			**19,469.80**			**39,482.09**		

LINEAR APPURTENANCE PROPERTIES

Load Case Azimuth (deg): 0.00

Elev From (ft)	Elev To (ft)	Qty	Description	Diameter (in)	Weight (lb/ft)	Flat	Max/ Row	Distance Between Rows(in)	Distance Between Cols(in)	Azimuth (deg)	Distance From Face (in)	Exposed To Wind	Carrier
0.00	130.00	3	1/2" Coax	0.63	0.15	N	0	0	0	0	0	N	CLEARWIRE CORPORATI
0.00	128.00	2	2" conduit	2.38	3.65	N	0	0	0	0	0	N	CLEARWIRE CORPORATI
0.00	118.00	6	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	118.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	110.00	5	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	SPRINT NEXTEL
0.00	100.00	6	7/8" Coax	1.09	0.33	N	6	1	1	330	1	Y	T-MOBILE
0.00	100.00	4	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	T-MOBILE
0.00	90.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	90.00	5	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	90.00	3	0.39" (10mm) Fiber Tr	0.39	0.06	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	90.00	1	0.96" (24.3mm) Cable	0.96	0.88	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	79.00	1	1.60" (40.6mm) Hybrid	1.6	2.34	N	0	0	0	0	0	N	DISH WIRELESS L.L.C.
0.00	70.00	1	1 5/8" Coax	1.98	0.82	N	1	1	1	0	1	Y	SPRINT NEXTEL

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description *(Max Length: 5 ft)*	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.3750	49.190	58.395	17,579.10	24.10	131.17	75.3	701.0	0.0	0.0
5.00		0.3750	48.024	57.000	16,349.30	23.48	128.06	76	667.8	0.0	981.7
10.00		0.3750	46.858	55.605	15,178.20	22.87	124.95	76.7	635.4	0.0	957.9
15.00		0.3750	45.692	54.211	14,064.50	22.25	121.85	77.4	603.8	0.0	934.2
20.00		0.3750	44.526	52.816	13,006.60	21.63	118.74	78.1	573.0	0.0	910.5
25.00		0.3750	43.360	51.421	12,003.10	21.01	115.63	78.8	543.0	0.0	886.7
30.00		0.3750	42.194	50.026	11,052.60	20.39	112.52	79.5	513.8	0.0	863.0
35.00		0.3750	41.028	48.631	10,153.70	19.77	109.41	80.2	485.4	0.0	839.3
37.00	Bot - Section 2	0.3750	40.562	48.074	9,808.20	19.53	108.17	80.5	474.3	0.0	329.1
40.00		0.3750	39.862	47.237	9,304.80	19.16	106.30	80.9	457.9	0.0	898.9
43.00	Top - Section 1	0.3125	39.788	39.352	7,746.90	23.34	127.32	76.2	381.9	0.0	883.2
45.00		0.3125	39.321	38.887	7,475.60	23.04	125.83	76.5	372.9	0.0	266.2
50.00		0.3125	38.155	37.725	6,825.10	22.30	122.10	77.3	350.9	0.0	651.7
55.00		0.3125	36.989	36.562	6,213.50	21.56	118.37	78.2	329.5	0.0	632.0
60.00		0.3125	35.823	35.400	5,639.50	20.81	114.64	79	308.8	0.0	612.2
65.00		0.3125	34.658	34.238	5,102.10	20.07	110.90	79.9	288.8	0.0	592.4
70.00		0.3125	33.492	33.075	4,599.90	19.33	107.17	80.7	269.4	0.0	572.6
75.00	Bot - Section 3	0.3125	32.326	31.913	4,131.80	18.59	103.44	81.5	250.7	0.0	552.9
79.00		0.3125	31.393	30.983	3,781.00	17.99	100.46	82.2	236.3	0.0	776.6
80.00	Top - Section 2	0.2500	31.660	25.049	3,122.00	23.20	126.64	76.3	193.4	0.0	190.6
85.00		0.2500	30.494	24.119	2,787.10	22.27	121.97	77.4	179.3	0.0	418.3
88.00		0.2500	29.794	23.561	2,598.10	21.72	119.18	78	171.1	0.0	243.4
90.00		0.2500	29.328	23.189	2,477.00	21.35	117.31	78.4	165.7	0.0	159.1
95.00		0.2500	28.162	22.260	2,190.80	20.42	112.65	79.5	152.6	0.0	386.6
100.00		0.2500	26.996	21.330	1,927.60	19.49	107.98	80.5	140.1	0.0	370.8
105.00		0.2500	25.830	20.400	1,686.30	18.56	103.32	81.6	128.1	0.0	355.0
105.40		0.2500	25.737	20.326	1,667.90	18.49	102.95	81.7	127.1	0.0	27.7
105.50		0.2500	25.713	20.307	1,663.40	18.47	102.85	81.7	126.9	0.0	6.9
109.80		0.2500	24.710	19.507	1,474.50	17.67	98.84	82.6	117.0	0.0	291.3
110.00		0.2500	24.664	19.470	1,466.10	17.63	98.66	82.6	116.6	0.0	13.3
115.00		0.2500	23.498	18.540	1,265.90	16.71	93.99	82.6	105.7	0.0	323.4
118.00		0.2500	22.798	17.982	1,155.00	16.15	91.19	82.6	99.4	0.0	186.4
119.00	Top - Section 3	0.2500	22.565	17.796	1,119.50	15.96	90.26	82.6	97.3	0.0	60.9
119.00	Bot - Section 4	0.1875	22.565	13.385	846.70	21.95	120.35	77.7	73.6	0.0	
120.00		0.1875	22.332	13.245	820.50	21.70	119.10	78	72.1	0.0	45.3
124.60		0.1875	21.259	12.604	707.00	20.56	113.38	79.3	65.2	0.0	202.3
125.00		0.1875	21.166	12.548	697.60	20.47	112.89	79.4	64.7	0.0	17.1
127.30		0.1875	20.630	12.227	645.50	19.90	110.02	80.1	61.4	0.0	96.9
127.60		0.1875	20.560	12.185	638.90	19.82	109.65	80.1	61.0	0.0	12.5
128.00		0.1875	20.466	12.129	630.10	19.72	109.15	80.3	60.4	0.0	16.5
129.10		0.1875	20.210	11.976	606.50	19.45	107.79	80.6	58.9	0.0	45.1

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	(Max Length: 5 ft)	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
129.90			0.1875	20.023	11.864	589.70	19.25	106.79	80.8	57.8	0.0	32.4
130.00			0.1875	20.000	11.850	587.70	19.23	106.67	80.8	57.6	0.0	4.0
											Total:	**16,646.9**

CALCULATED FORCES

Load Case: 1.2D + 1.0W — 118 mph Wind with No Ice — 26 Iterations

Gust Response Factor: 1.10
Dead load Factor: 1.20
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-49.72	-24.66	0.00	-2,274.2	0.00	2,274.21	3,957.37	1,024.83	4,561.65	3,958.89	0	0	0.588
5.00	-48.15	-24.41	0.00	-2,150.9	0.00	2,150.91	3,898.74	1,000.35	4,346.37	3,806.37	0.1	-0.18	0.578
10.00	-46.61	-24.17	0.00	-2,028.9	0.00	2,028.86	3,838.36	975.87	4,136.30	3,655.01	0.38	-0.36	0.568
15.00	-45.10	-23.92	0.00	-1,908.0	0.00	1,908.03	3,776.22	951.40	3,931.43	3,504.92	0.86	-0.55	0.557
20.00	-43.62	-23.68	0.00	-1,788.4	0.00	1,788.43	3,712.33	926.92	3,731.76	3,356.23	1.53	-0.73	0.545
25.00	-42.17	-23.44	0.00	-1,670.0	0.00	1,670.03	3,646.67	902.44	3,537.29	3,209.08	2.4	-0.92	0.533
30.00	-40.74	-23.20	0.00	-1,552.8	0.00	1,552.84	3,579.26	877.96	3,348.03	3,063.58	3.47	-1.11	0.519
35.00	-39.37	-23.02	0.00	-1,436.8	0.00	1,436.85	3,510.10	853.48	3,163.97	2,919.87	4.74	-1.3	0.504
37.00	-38.82	-22.89	0.00	-1,390.8	0.00	1,390.82	3,481.94	843.69	3,091.80	2,862.92	5.3	-1.38	0.498
40.00	-37.51	-22.72	0.00	-1,322.2	0.00	1,322.15	3,439.17	829.00	2,985.11	2,778.07	6.21	-1.5	0.488
43.00	-36.22	-22.56	0.00	-1,254.0	0.00	1,254.00	2,697.55	690.63	2,485.92	2,181.76	7.19	-1.62	0.589
45.00	-35.73	-22.39	0.00	-1,208.9	0.00	1,208.88	2,677.43	682.47	2,427.54	2,139.70	7.89	-1.7	0.579
50.00	-34.34	-21.95	0.00	-1,097.0	0.00	1,096.95	2,625.91	662.07	2,284.61	2,035.31	9.79	-1.92	0.553
55.00	-33.20	-21.68	0.00	-987.2	0.00	987.18	2,572.64	641.67	2,146.02	1,932.08	11.91	-2.14	0.525
60.00	-32.08	-21.39	0.00	-878.8	0.00	878.81	2,517.61	621.27	2,011.77	1,830.13	14.27	-2.35	0.494
65.00	-31.00	-21.10	0.00	-771.9	0.00	771.86	2,460.82	600.87	1,881.85	1,729.60	16.84	-2.56	0.460
70.00	-29.92	-20.64	0.00	-666.4	0.00	666.37	2,402.27	580.47	1,756.27	1,630.62	19.63	-2.76	0.422
75.00	-28.90	-20.36	0.00	-563.2	0.00	563.17	2,341.97	560.07	1,635.02	1,533.30	22.62	-2.95	0.381
79.00	-24.07	-17.69	0.00	-481.7	0.00	481.73	2,292.47	543.75	1,541.15	1,456.74	25.15	-3.09	0.342
80.00	-23.76	-17.51	0.00	-464.0	0.00	464.04	1,720.57	439.61	1,259.08	1,107.21	25.8	-3.13	0.435
85.00	-22.66	-17.02	0.00	-376.5	0.00	376.49	1,679.48	423.29	1,167.35	1,040.33	29.17	-3.29	0.377
88.00	-21.95	-16.65	0.00	-325.4	0.00	325.43	1,653.99	413.50	1,113.98	1,000.65	31.27	-3.4	0.340
90.00	-17.00	-12.61	0.00	-292.1	0.00	292.13	1,636.64	406.98	1,079.09	974.39	32.71	-3.46	0.311
95.00	-16.37	-12.28	0.00	-229.1	0.00	229.11	1,592.04	390.66	994.30	909.51	36.42	-3.61	0.263
100.00	-11.37	-8.85	0.00	-167.7	0.00	167.69	1,545.69	374.34	912.98	845.81	40.27	-3.74	0.206
105.00	-10.83	-8.66	0.00	-123.4	0.00	123.43	1,497.58	358.02	835.13	783.43	44.25	-3.85	0.165
105.40	-10.63	-8.55	0.00	-120.0	0.00	119.97	1,493.65	356.71	829.05	778.50	44.57	-3.86	0.162
105.50	-10.46	-8.35	0.00	-119.1	0.00	119.11	1,492.67	356.39	827.54	777.27	44.65	-3.86	0.161
109.80	-9.94	-7.90	0.00	-83.2	0.00	83.21	1,449.74	342.35	763.65	724.89	48.17	-3.94	0.122
110.00	-7.74	-6.78	0.00	-81.6	0.00	81.64	1,446.53	341.70	760.75	721.90	48.33	-3.94	0.119
115.00	-7.27	-6.52	0.00	-47.8	0.00	47.75	1,377.44	325.38	689.83	654.26	52.49	-4	0.079
118.00	-2.83	-3.12	0.00	-27.8	0.00	27.79	1,335.99	315.59	648.95	615.27	55.01	-4.03	0.047
119.00	-2.75	-3.06	0.00	-24.7	0.00	24.66	1,322.18	312.33	635.60	602.54	55.85	-4.03	0.043
119.00	-2.75	-3.06	0.00	-24.7	0.00	24.66	936.41	234.90	479.32	429.14	55.85	-4.03	0.061
120.00	-2.70	-2.91	0.00	-21.6	0.00	21.60	929.99	232.45	469.38	421.71	56.7	-4.04	0.054
124.60	-2.28	-2.52	0.00	-8.2	0.00	8.23	899.55	221.19	425.02	387.98	60.6	-4.06	0.024
125.00	-2.26	-2.44	0.00	-7.2	0.00	7.22	896.83	220.21	421.26	385.08	60.94	-4.06	0.021
127.30	-1.82	-1.34	0.00	-1.6	0.00	1.60	880.98	214.58	400.00	368.52	62.9	-4.07	0.006
127.60	-1.60	-1.16	0.00	-1.2	0.00	1.20	878.89	213.85	397.27	366.38	63.16	-4.07	0.005
128.00	-0.49	-0.47	0.00	-0.7	0.00	0.73	876.09	212.87	393.64	363.52	63.5	-4.07	0.003
129.10	-0.42	-0.23	0.00	-0.2	0.00	0.22	868.33	210.18	383.75	355.70	64.43	-4.07	0.001
129.90	-0.37	-0.19	0.00	-0.0	0.00	0.04	862.63	208.22	376.63	350.05	65.11	-4.07	0.001
130.00	0.00	-0.16	0.00	-0.0	0.00	0.02	861.91	207.97	375.75	349.34	65.2	-4.07	0.000

CALCULATED FORCES

Load Case: 0.9D + 1.0W — 118 mph Wind with No Ice (Reduced DL) — 25 Iterations

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-37.28	-24.64	0.00	-2,244.0	0.00	2,243.96	3,957.37	1,024.83	4,561.65	3,958.89	0	0	0.577
5.00	-36.08	-24.35	0.00	-2,120.8	0.00	2,120.77	3,898.74	1,000.35	4,346.37	3,806.37	0.1	-0.18	0.567
10.00	-34.91	-24.07	0.00	-1,999.0	0.00	1,999.02	3,838.36	975.87	4,136.30	3,655.01	0.38	-0.36	0.557
15.00	-33.76	-23.79	0.00	-1,878.7	0.00	1,878.68	3,776.22	951.40	3,931.43	3,504.92	0.85	-0.54	0.546
20.00	-32.63	-23.51	0.00	-1,759.8	0.00	1,759.75	3,712.33	926.92	3,731.76	3,356.23	1.51	-0.72	0.534
25.00	-31.53	-23.24	0.00	-1,642.2	0.00	1,642.19	3,646.67	902.44	3,537.29	3,209.08	2.37	-0.91	0.521
30.00	-30.45	-22.97	0.00	-1,526.0	0.00	1,525.98	3,579.26	877.96	3,348.03	3,063.58	3.42	-1.1	0.507
35.00	-29.41	-22.77	0.00	-1,411.1	0.00	1,411.13	3,510.10	853.48	3,163.97	2,919.87	4.67	-1.28	0.492
37.00	-28.98	-22.63	0.00	-1,365.6	0.00	1,365.60	3,481.94	843.69	3,091.80	2,862.92	5.22	-1.36	0.486
40.00	-27.99	-22.44	0.00	-1,297.7	0.00	1,297.71	3,439.17	829.00	2,985.11	2,778.07	6.11	-1.48	0.476
43.00	-27.02	-22.28	0.00	-1,230.4	0.00	1,230.38	2,697.55	690.63	2,485.92	2,181.76	7.08	-1.59	0.575
45.00	-26.64	-22.08	0.00	-1,185.8	0.00	1,185.82	2,677.43	682.47	2,427.54	2,139.70	7.77	-1.67	0.565
50.00	-25.58	-21.63	0.00	-1,075.4	0.00	1,075.41	2,625.91	662.07	2,284.61	2,035.31	9.63	-1.89	0.539
55.00	-24.71	-21.32	0.00	-967.3	0.00	967.28	2,572.64	641.67	2,146.02	1,932.08	11.72	-2.1	0.511
60.00	-23.86	-21.02	0.00	-860.7	0.00	860.66	2,517.61	621.27	2,011.77	1,830.13	14.04	-2.31	0.481
65.00	-23.04	-20.71	0.00	-755.6	0.00	755.57	2,460.82	600.87	1,881.85	1,729.60	16.57	-2.51	0.447
70.00	-22.22	-20.23	0.00	-652.0	0.00	652.03	2,402.27	580.47	1,756.27	1,630.62	19.3	-2.71	0.410
75.00	-21.45	-19.94	0.00	-550.9	0.00	550.86	2,341.97	560.07	1,635.02	1,533.30	22.24	-2.9	0.370
79.00	-17.85	-17.33	0.00	-471.1	0.00	471.09	2,292.47	543.75	1,541.15	1,456.74	24.73	-3.04	0.332
80.00	-17.61	-17.14	0.00	-453.8	0.00	453.76	1,720.57	439.61	1,259.08	1,107.21	25.37	-3.07	0.422
85.00	-16.78	-16.66	0.00	-368.0	0.00	368.04	1,679.48	423.29	1,167.35	1,040.33	28.67	-3.23	0.365
88.00	-16.25	-16.29	0.00	-318.1	0.00	318.07	1,653.99	413.50	1,113.98	1,000.65	30.73	-3.33	0.329
90.00	-12.58	-12.32	0.00	-285.5	0.00	285.49	1,636.64	406.98	1,079.09	974.39	32.15	-3.4	0.302
95.00	-12.11	-11.99	0.00	-223.9	0.00	223.91	1,592.04	390.66	994.30	909.51	35.79	-3.55	0.255
100.00	-8.40	-8.64	0.00	-164.0	0.00	163.95	1,545.69	374.34	912.98	845.81	39.57	-3.67	0.200
105.00	-8.00	-8.46	0.00	-120.7	0.00	120.74	1,497.58	358.02	835.13	783.43	43.47	-3.78	0.160
105.40	-7.85	-8.36	0.00	-117.4	0.00	117.35	1,493.65	356.71	829.05	778.50	43.79	-3.79	0.157
105.50	-7.73	-8.15	0.00	-116.5	0.00	116.52	1,492.67	356.39	827.54	777.27	43.87	-3.79	0.156
109.80	-7.34	-7.71	0.00	-81.5	0.00	81.47	1,449.74	342.35	763.65	724.89	47.31	-3.86	0.118
110.00	-5.70	-6.63	0.00	-79.9	0.00	79.93	1,446.53	341.70	760.75	721.90	47.47	-3.86	0.115
115.00	-5.36	-6.38	0.00	-46.8	0.00	46.79	1,377.44	325.38	689.83	654.26	51.55	-3.92	0.076
118.00	-2.08	-3.07	0.00	-27.3	0.00	27.26	1,335.99	315.59	648.95	615.27	54.02	-3.95	0.046
119.00	-2.02	-3.01	0.00	-24.2	0.00	24.19	1,322.18	312.33	635.60	602.54	54.85	-3.96	0.042
119.00	-2.02	-3.01	0.00	-24.2	0.00	24.19	936.41	234.90	479.32	429.14	54.85	-3.96	0.059
120.00	-1.98	-2.85	0.00	-21.2	0.00	21.19	929.99	232.45	469.38	421.71	55.68	-3.96	0.053
124.60	-1.67	-2.47	0.00	-8.1	0.00	8.07	899.55	221.19	425.02	387.98	59.51	-3.99	0.023
125.00	-1.66	-2.40	0.00	-7.1	0.00	7.08	896.83	220.21	421.26	385.08	59.84	-3.99	0.020
127.30	-1.34	-1.31	0.00	-1.6	0.00	1.56	880.98	214.58	400.00	368.52	61.76	-3.99	0.006
127.60	-1.18	-1.13	0.00	-1.2	0.00	1.17	878.89	213.85	397.27	366.38	62.01	-3.99	0.005
128.00	-0.36	-0.46	0.00	-0.7	0.00	0.72	876.09	212.87	393.64	363.52	62.35	-3.99	0.002
129.10	-0.31	-0.22	0.00	-0.2	0.00	0.21	868.33	210.18	383.75	355.70	63.27	-3.99	0.001
129.90	-0.28	-0.18	0.00	-0.0	0.00	0.03	862.63	208.22	376.63	350.05	63.93	-3.99	0.000
130.00	0.00	-0.16	0.00	-0.0	0.00	0.02	861.91	207.97	375.75	349.34	64.02	-3.99	0.000

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph Wind with 1.5" Radial Ice — 25 Iterations

Gust Response Factor: 1.10 — Ice Dead Load Factor 1.00
Dead load Factor: 1.20 — Ice Importance Factor 1.00
Wind Load Factor: 1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-77.24	-6.95	0.00	-658.3	0.00	658.31	3,957.37	1,024.83	4,561.65	3,958.89	0	0	0.186
5.00	-75.32	-6.90	0.00	-623.6	0.00	623.55	3,898.74	1,000.35	4,346.37	3,806.37	0.03	-0.05	0.183
10.00	-73.39	-6.85	0.00	-589.0	0.00	589.04	3,838.36	975.87	4,136.30	3,655.01	0.11	-0.1	0.180
15.00	-71.48	-6.80	0.00	-554.8	0.00	554.80	3,776.22	951.40	3,931.43	3,504.92	0.25	-0.16	0.177
20.00	-69.58	-6.74	0.00	-520.8	0.00	520.81	3,712.33	926.92	3,731.76	3,356.23	0.44	-0.21	0.174
25.00	-67.72	-6.69	0.00	-487.1	0.00	487.09	3,646.67	902.44	3,537.29	3,209.08	0.7	-0.27	0.170
30.00	-65.88	-6.64	0.00	-453.6	0.00	453.63	3,579.26	877.96	3,348.03	3,063.58	1.01	-0.32	0.167
35.00	-64.08	-6.60	0.00	-420.4	0.00	420.44	3,510.10	853.48	3,163.97	2,919.87	1.38	-0.38	0.162
37.00	-63.36	-6.57	0.00	-407.2	0.00	407.25	3,481.94	843.69	3,091.80	2,862.92	1.54	-0.4	0.161
40.00	-61.80	-6.53	0.00	-387.6	0.00	387.55	3,439.17	829.00	2,985.11	2,778.07	1.8	-0.44	0.158
43.00	-60.27	-6.49	0.00	-368.0	0.00	367.98	2,697.55	690.63	2,485.92	2,181.76	2.09	-0.47	0.191
45.00	-59.62	-6.45	0.00	-355.0	0.00	355.01	2,677.43	682.47	2,427.54	2,139.70	2.29	-0.5	0.188
50.00	-57.76	-6.34	0.00	-322.8	0.00	322.77	2,625.91	662.07	2,284.61	2,035.31	2.85	-0.56	0.181
55.00	-56.22	-6.27	0.00	-291.1	0.00	291.07	2,572.64	641.67	2,146.02	1,932.08	3.47	-0.62	0.173
60.00	-54.71	-6.20	0.00	-259.7	0.00	259.70	2,517.61	621.27	2,011.77	1,830.13	4.16	-0.69	0.164
65.00	-53.23	-6.13	0.00	-228.7	0.00	228.69	2,460.82	600.87	1,881.85	1,729.60	4.91	-0.75	0.154
70.00	-51.67	-6.01	0.00	-198.0	0.00	198.05	2,402.27	580.47	1,756.27	1,630.62	5.73	-0.81	0.143
75.00	-50.28	-5.94	0.00	-168.0	0.00	167.99	2,341.97	560.07	1,635.02	1,533.30	6.6	-0.86	0.131
79.00	-42.66	-5.21	0.00	-144.2	0.00	144.25	2,292.47	543.75	1,541.15	1,456.74	7.35	-0.91	0.118
80.00	-42.29	-5.16	0.00	-139.0	0.00	139.04	1,720.57	439.61	1,259.08	1,107.21	7.54	-0.92	0.150
85.00	-40.55	-5.03	0.00	-113.2	0.00	113.22	1,679.48	423.29	1,167.35	1,040.33	8.53	-0.97	0.133
88.00	-39.37	-4.92	0.00	-98.1	0.00	98.14	1,653.99	413.50	1,113.98	1,000.65	9.14	-1	0.122
90.00	-30.02	-3.81	0.00	-88.3	0.00	88.29	1,636.64	406.98	1,079.09	974.39	9.57	-1.02	0.109
95.00	-29.02	-3.71	0.00	-69.3	0.00	69.26	1,592.04	390.66	994.30	909.51	10.66	-1.06	0.094
100.00	-20.30	-2.71	0.00	-50.7	0.00	50.73	1,545.69	374.34	912.98	845.81	11.8	-1.1	0.073
105.00	-19.47	-2.65	0.00	-37.2	0.00	37.17	1,497.58	358.02	835.13	783.43	12.97	-1.14	0.060
105.40	-19.12	-2.62	0.00	-36.1	0.00	36.11	1,493.65	356.71	829.05	778.50	13.07	-1.14	0.059
105.50	-18.83	-2.55	0.00	-35.8	0.00	35.84	1,492.67	356.39	827.54	777.27	13.09	-1.14	0.059
109.80	-17.82	-2.42	0.00	-24.9	0.00	24.87	1,449.74	342.35	763.65	724.89	14.13	-1.16	0.047
110.00	-14.88	-2.04	0.00	-24.4	0.00	24.38	1,446.53	341.70	760.75	721.90	14.18	-1.16	0.044
115.00	-14.13	-1.96	0.00	-14.2	0.00	14.17	1,377.44	325.38	689.83	654.26	15.41	-1.18	0.032
118.00	-5.96	-0.93	0.00	-8.2	0.00	8.21	1,335.99	315.59	648.95	615.27	16.15	-1.19	0.018
119.00	-5.83	-0.91	0.00	-7.3	0.00	7.28	1,322.18	312.33	635.60	602.54	16.4	-1.19	0.016
119.00	-5.83	-0.91	0.00	-7.3	0.00	7.28	936.41	234.90	479.32	429.14	16.4	-1.19	0.023
120.00	-5.72	-0.86	0.00	-6.4	0.00	6.37	929.99	232.45	469.38	421.71	16.65	-1.19	0.021
124.60	-4.82	-0.74	0.00	-2.4	0.00	2.43	899.55	221.19	425.02	387.98	17.8	-1.2	0.012
125.00	-4.78	-0.71	0.00	-2.1	0.00	2.13	896.83	220.21	421.26	385.08	17.9	-1.2	0.011
127.30	-3.29	-0.43	0.00	-0.5	0.00	0.50	880.98	214.58	400.00	368.52	18.48	-1.2	0.005
127.60	-2.84	-0.38	0.00	-0.4	0.00	0.37	878.89	213.85	397.27	366.38	18.56	-1.2	0.004
128.00	-1.02	-0.14	0.00	-0.2	0.00	0.22	876.09	212.87	393.64	363.52	18.66	-1.2	0.002
129.10	-0.80	-0.07	0.00	-0.1	0.00	0.07	868.33	210.18	383.75	355.70	18.93	-1.2	0.001
129.90	-0.69	-0.06	0.00	-0.0	0.00	0.01	862.63	208.22	376.63	350.05	19.14	-1.2	0.001
130.00	0.00	-0.04	0.00	0.0	0.00	0.00	861.91	207.97	375.75	349.34	19.16	-1.2	0.000

CALCULATED FORCES

Load Case: 1.0D + 1.0W — 60 mph Wind with No Ice — 24 Iterations

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

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-41.46	-5.70	0.00	-521.7	0.00	521.69	3,957.37	1,024.83	4,561.65	3,958.89	0	0	0.142
5.00	-40.21	-5.64	0.00	-493.2	0.00	493.19	3,898.74	1,000.35	4,346.37	3,806.37	0.02	-0.04	0.140
10.00	-38.99	-5.57	0.00	-465.0	0.00	465.01	3,838.36	975.87	4,136.30	3,655.01	0.09	-0.08	0.137
15.00	-37.79	-5.51	0.00	-437.1	0.00	437.13	3,776.22	951.40	3,931.43	3,504.92	0.2	-0.13	0.135
20.00	-36.61	-5.45	0.00	-409.6	0.00	409.57	3,712.33	926.92	3,731.76	3,356.23	0.35	-0.17	0.132
25.00	-35.46	-5.39	0.00	-382.3	0.00	382.31	3,646.67	902.44	3,537.29	3,209.08	0.55	-0.21	0.129
30.00	-34.33	-5.33	0.00	-355.4	0.00	355.36	3,579.26	877.96	3,348.03	3,063.58	0.79	-0.25	0.126
35.00	-33.22	-5.29	0.00	-328.7	0.00	328.70	3,510.10	853.48	3,163.97	2,919.87	1.09	-0.3	0.122
37.00	-32.79	-5.26	0.00	-318.1	0.00	318.13	3,481.94	843.69	3,091.80	2,862.92	1.21	-0.32	0.121
40.00	-31.73	-5.21	0.00	-302.4	0.00	302.36	3,439.17	829.00	2,985.11	2,778.07	1.42	-0.34	0.118
43.00	-30.69	-5.18	0.00	-286.7	0.00	286.72	2,697.55	690.63	2,485.92	2,181.76	1.65	-0.37	0.143
45.00	-30.31	-5.13	0.00	-276.4	0.00	276.36	2,677.43	682.47	2,427.54	2,139.70	1.81	-0.39	0.141
50.00	-29.21	-5.03	0.00	-250.7	0.00	250.70	2,625.91	662.07	2,284.61	2,035.31	2.24	-0.44	0.134
55.00	-28.31	-4.96	0.00	-225.6	0.00	225.55	2,572.64	641.67	2,146.02	1,932.08	2.73	-0.49	0.128
60.00	-27.43	-4.89	0.00	-200.7	0.00	200.74	2,517.61	621.27	2,011.77	1,830.13	3.27	-0.54	0.121
65.00	-26.57	-4.82	0.00	-176.3	0.00	176.27	2,460.82	600.87	1,881.85	1,729.60	3.86	-0.59	0.113
70.00	-25.70	-4.72	0.00	-152.1	0.00	152.14	2,402.27	580.47	1,756.27	1,630.62	4.49	-0.63	0.104
75.00	-24.89	-4.65	0.00	-128.6	0.00	128.56	2,341.97	560.07	1,635.02	1,533.30	5.18	-0.67	0.095
79.00	-20.78	-4.04	0.00	-110.0	0.00	109.96	2,292.47	543.75	1,541.15	1,456.74	5.76	-0.71	0.085
80.00	-20.54	-4.00	0.00	-105.9	0.00	105.92	1,720.57	439.61	1,259.08	1,107.21	5.91	-0.72	0.108
85.00	-19.63	-3.89	0.00	-85.9	0.00	85.93	1,679.48	423.29	1,167.35	1,040.33	6.68	-0.75	0.094
88.00	-19.04	-3.80	0.00	-74.3	0.00	74.27	1,653.99	413.50	1,113.98	1,000.65	7.16	-0.78	0.086
90.00	-14.75	-2.88	0.00	-66.7	0.00	66.66	1,636.64	406.98	1,079.09	974.39	7.49	-0.79	0.077
95.00	-14.23	-2.80	0.00	-52.3	0.00	52.29	1,592.04	390.66	994.30	909.51	8.34	-0.83	0.066
100.00	-9.91	-2.02	0.00	-38.3	0.00	38.28	1,545.69	374.34	912.98	845.81	9.22	-0.86	0.052
105.00	-9.46	-1.98	0.00	-28.2	0.00	28.19	1,497.58	358.02	835.13	783.43	10.13	-0.88	0.042
105.40	-9.29	-1.95	0.00	-27.4	0.00	27.40	1,493.65	356.71	829.05	778.50	10.2	-0.88	0.041
105.50	-9.14	-1.90	0.00	-27.2	0.00	27.20	1,492.67	356.39	827.54	777.27	10.22	-0.88	0.041
109.80	-8.69	-1.80	0.00	-19.0	0.00	19.02	1,449.74	342.35	763.65	724.89	11.02	-0.9	0.032
110.00	-6.80	-1.55	0.00	-18.6	0.00	18.65	1,446.53	341.70	760.75	721.90	11.06	-0.9	0.031
115.00	-6.40	-1.49	0.00	-10.9	0.00	10.92	1,377.44	325.38	689.83	654.26	12.01	-0.91	0.021
118.00	-2.53	-0.71	0.00	-6.4	0.00	6.36	1,335.99	315.59	648.95	615.27	12.59	-0.92	0.012
119.00	-2.46	-0.70	0.00	-5.6	0.00	5.64	1,322.18	312.33	635.60	602.54	12.78	-0.92	0.011
119.00	-2.46	-0.70	0.00	-5.6	0.00	5.64	936.41	234.90	479.32	429.14	12.78	-0.92	0.016
120.00	-2.41	-0.67	0.00	-4.9	0.00	4.94	929.99	232.45	469.38	421.71	12.98	-0.92	0.014
124.60	-2.03	-0.58	0.00	-1.9	0.00	1.88	899.55	221.19	425.02	387.98	13.87	-0.93	0.007
125.00	-2.01	-0.56	0.00	-1.6	0.00	1.65	896.83	220.21	421.26	385.08	13.95	-0.93	0.007
127.30	-1.59	-0.31	0.00	-0.4	0.00	0.36	880.98	214.58	400.00	368.52	14.4	-0.93	0.003
127.60	-1.39	-0.26	0.00	-0.3	0.00	0.27	878.89	213.85	397.27	366.38	14.45	-0.93	0.002
128.00	-0.44	-0.11	0.00	-0.2	0.00	0.17	876.09	212.87	393.64	363.52	14.53	-0.93	0.001
129.10	-0.36	-0.05	0.00	-0.0	0.00	0.05	868.33	210.18	383.75	355.70	14.75	-0.93	0.001
129.90	-0.32	-0.04	0.00	-0.0	0.00	0.01	862.63	208.22	376.63	350.05	14.9	-0.93	0.000
130.00	0.00	-0.04	0.00	0.0	0.00	0.00	861.91	207.97	375.75	349.34	14.92	-0.93	0.000

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.189
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.055
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a:	1.600
Site Coefficient F_v:	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.202
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.088
Seismic Response Coefficient (C_s):	0.030
Upper Limit C_S:	0.030
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	2.300
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.900
Total Unfactored Dead Load:	41.460 k
Seismic Base Shear (E):	1.240 k

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
41	129.95	4	43	0.000	0	5
40	129.5	33	340	0.002	2	41
39	128.55	46	466	0.003	3	57
38	127.8	20	199	0.001	1	24
37	127.45	15	149	0.001	1	18
36	126.15	115	1,131	0.006	8	142
35	124.8	20	195	0.001	1	25
34	122.3	238	2,212	0.012	15	295
33	119.5	53	472	0.003	3	66
32	118.5	69	601	0.003	4	85
31	116.5	232	1,968	0.011	14	288
30	112.5	400	3,170	0.018	22	496
29	109.9	17	130	0.001	1	21
28	107.65	375	2,732	0.015	19	465
27	105.45	9	62	0.000	0	11
26	105.2	35	248	0.001	2	44
25	102.5	452	3,002	0.017	21	560
24	97.5	504	3,042	0.017	21	625
23	92.5	519	2,839	0.016	20	644
22	89	258	1,310	0.007	9	320
21	86.5	392	1,884	0.010	13	486
20	82.5	665	2,925	0.016	20	825
19	79.5	240	984	0.006	7	298
18	77	984	3,793	0.021	26	1,220
17	72.5	812	2,791	0.016	19	1,007
16	67.5	835	2,509	0.014	17	1,036
15	62.5	855	2,218	0.012	15	1,061
14	57.5	875	1,937	0.011	13	1,085
13	52.5	895	1,666	0.009	11	1,110
12	47.5	915	1,408	0.008	10	1,134
11	44	371	494	0.003	3	461
10	41.5	1,041	1,240	0.007	9	1,291
9	38.5	1,057	1,091	0.006	8	1,310
8	36	434	395	0.002	3	539
7	32.5	1,102	825	0.005	6	1,367
6	27.5	1,126	613	0.003	4	1,396
5	22.5	1,150	428	0.002	3	1,426
4	17.5	1,173	271	0.002	2	1,455

SEISMIC FORCES

1.2D + 1.0Ev + 1.0Eh **Seismic**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
3	12.5	1,197	146	0.001	1	1,485
2	7.5	1,221	56	0.000	0	1,514
1	2.5	1,244	7	0.000	0	1,544
Alcatel-Lucent RRH2x50-08	130	317	3,313	0.018	23	394
DragonWave Horizon Compact (11.5 lbs)	129.9	12	120	0.001	1	14
DragonWave A-ANT-18G-2-C	129.1	27	279	0.002	2	34
Generic Round T-Arm	128	938	9,502	0.053	65	1,163
Alcatel-Lucent 1900 MHz 4X45 RRH	127.6	180	1,813	0.010	13	223
Argus LLPX310R	127.3	86	861	0.005	6	106
Commscope NNVV-65B-R4	127.3	232	2,329	0.013	16	288
Generic RRH	124.6	135	1,300	0.007	9	167
Samsung RT4423-48A	118	56	487	0.003	3	70
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	118	224	1,946	0.011	13	278
Samsung RF4461d-13A	118	237	2,060	0.011	14	294
Samsung MT6413-77A	118	172	1,493	0.008	10	213
RFS DB-T1-6Z-8AB-0Z	118	88	764	0.004	5	109
Andrew LNX-6513DS-A1M	118	93	810	0.004	6	116
Commscope NHHSS-65B-R2BT4	118	153	1,328	0.007	9	190
Commscope NHH-65B-R2B	118	131	1,138	0.006	8	163
Generic Round Platform with Handrails	118	2,500	21,707	0.120	150	3,101
Generic Round Platform with Handrails	100	2,500	15,847	0.088	109	3,101
Generic Round Platform with Handrails	90	2,500	12,971	0.072	89	3,101
Generic Round Low Profile Platform	110	1,875	14,246	0.079	98	2,326
Generic 58" x 12" Panel	109.8	80	606	0.003	4	99
Ericsson RRUS 4415 B66	105.5	138	968	0.005	7	171
Ericsson RRUS 4415 B25	105.4	138	967	0.005	7	171
Ericsson RRUS 4415 B25	90	138	716	0.004	5	171
Commscope SDX1926Q-43	100	19	118	0.001	1	23
Ericsson Radio 4449 B71 B85A	100	225	1,426	0.008	10	279
Ericsson Air6449 B41	100	312	1,978	0.011	14	387
Ericsson AIR32 B66Aa/B2a	100	397	2,514	0.014	17	492
RFS APXVAALL24 43-U-NA20	100	368	2,335	0.013	16	457
Raycap DC6-48-60-18-8F	90	60	311	0.002	2	74
Raycap DC6-48-60-0-8F	90	33	170	0.001	1	41
Ericsson RRUS 4449 B5, B12	90	213	1,105	0.006	8	264
Ericsson RRUS 4478 B14	90	178	925	0.005	6	221
Ericsson RRUS 32 B66A	90	152	789	0.004	5	189
Ericsson RRUS 32 B30 (53 lbs)	90	159	825	0.005	6	197
CCI DMP65R-BU8D	90	287	1,490	0.008	10	356
CCI TPA65R-BU8A	90	324	1,681	0.009	12	402
Ericsson AIR 6419 B77G	88	198	986	0.006	7	246
Ericsson Air 6449 B77D	85	245	1,139	0.006	8	304
Commscope RDIDC-9181-PF-48	79	22	89	0.000	1	27
Fujitsu TA08025-B605	79	225	911	0.005	6	279
Fujitsu TA08025-B604	79	192	776	0.004	5	238
JMA Wireless MX08FRO665-21	79	194	784	0.004	5	240
Generic Flat Platform with Handrails	79	2,500	10,124	0.056	70	3,101
Generic 24" x 24" Panel	70	30	97	0.000	1	37
Generic Round Side Arm	50	188	318	0.002	2	233
	Totals:	**41,465**	**180,452**	**1.000**	**1,244**	**51,429**

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
41	129.95	4	43	0.000	0	4
40	129.5	33	340	0.002	2	28
39	128.55	46	466	0.003	3	39
38	127.8	20	199	0.001	1	17
37	127.45	15	149	0.001	1	13
36	126.15	115	1,131	0.006	8	99

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
35	124.8	20	195	0.001	1	17
34	122.3	238	2,212	0.012	15	205
33	119.5	53	472	0.003	3	46
32	118.5	69	601	0.003	4	59
31	116.5	232	1,968	0.011	14	200
30	112.5	400	3,170	0.018	22	344
29	109.9	17	130	0.001	1	15
28	107.65	375	2,732	0.015	19	322
27	105.45	9	62	0.000	0	8
26	105.2	35	248	0.001	2	30
25	102.5	452	3,002	0.017	21	388
24	97.5	504	3,042	0.017	21	433
23	92.5	519	2,839	0.016	20	447
22	89	258	1,310	0.007	9	222
21	86.5	392	1,884	0.010	13	337
20	82.5	665	2,925	0.016	20	572
19	79.5	240	984	0.006	7	206
18	77	984	3,793	0.021	26	846
17	72.5	812	2,791	0.016	19	698
16	67.5	835	2,509	0.014	17	718
15	62.5	855	2,218	0.012	15	735
14	57.5	875	1,937	0.011	13	752
13	52.5	895	1,666	0.009	11	769
12	47.5	915	1,408	0.008	10	786
11	44	371	494	0.003	3	319
10	41.5	1,041	1,240	0.007	9	895
9	38.5	1,057	1,091	0.006	8	908
8	36	434	395	0.002	3	373
7	32.5	1,102	825	0.005	6	947
6	27.5	1,126	613	0.003	4	968
5	22.5	1,150	428	0.002	3	988
4	17.5	1,173	271	0.002	2	1,009
3	12.5	1,197	146	0.001	1	1,029
2	7.5	1,221	56	0.000	0	1,049
1	2.5	1,244	7	0.000	0	1,070
Alcatel-Lucent RRH2x50-08	130	317	3,313	0.018	23	273
DragonWave Horizon Compact (11.5 lbs)	129.9	12	120	0.001	1	10
DragonWave A-ANT-18G-2-C	129.1	27	279	0.002	2	23
Generic Round T-Arm	128	938	9,502	0.053	65	806
Alcatel-Lucent 1900 MHz 4X45 RRH	127.6	180	1,813	0.010	13	155
Argus LLPX310R	127.3	86	861	0.005	6	74
Commscope NNVV-65B-R4	127.3	232	2,329	0.013	16	200
Generic RRH	124.6	135	1,300	0.007	9	116
Samsung RT4423-48A	118	56	487	0.003	3	48
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	118	224	1,946	0.011	13	193
Samsung RF4461d-13A	118	237	2,060	0.011	14	204
Samsung MT6413-77A	118	172	1,493	0.008	10	148
RFS DB-T1-6Z-8AB-0Z	118	88	764	0.004	5	76
Andrew LNX-6513DS-A1M	118	93	810	0.004	6	80
Commscope NHHSS-65B-R2BT4	118	153	1,328	0.007	9	132
Commscope NHH-65B-R2B	118	131	1,138	0.006	8	113
Generic Round Platform with Handrails	118	2,500	21,707	0.120	150	2,149
Generic Round Platform with Handrails	100	2,500	15,847	0.088	109	2,149
Generic Round Platform with Handrails	90	2,500	12,971	0.072	89	2,149
Generic Round Low Profile Platform	110	1,875	14,246	0.079	98	1,612
Generic 58" x 12" Panel	109.8	80	606	0.003	4	69
Ericsson RRUS 4415 B66	105.5	138	968	0.005	7	119
Ericsson RRUS 4415 B25	105.4	138	967	0.005	7	119
Ericsson RRUS 4415 B25	90	138	716	0.004	5	119
Commscope SDX1926Q-43	100	19	118	0.001	1	16
Ericsson Radio 4449 B71 B85A	100	225	1,426	0.008	10	193

SEISMIC FORCES

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
Ericsson Air6449 B41	100	312	1,978	0.011	14	268
Ericsson AIR32 B66Aa/B2a	100	397	2,514	0.014	17	341
RFS APXVAALL24 43-U-NA20	100	368	2,335	0.013	16	317
Raycap DC6-48-60-18-8F	90	60	311	0.002	2	52
Raycap DC6-48-60-0-8F	90	33	170	0.001	1	28
Ericsson RRUS 4449 B5, B12	90	213	1,105	0.006	8	183
Ericsson RRUS 4478 B14	90	178	925	0.005	6	153
Ericsson RRUS 32 B66A	90	152	789	0.004	5	131
Ericsson RRUS 32 B30 (53 lbs)	90	159	825	0.005	6	137
CCI DMP65R-BU8D	90	287	1,490	0.008	10	247
CCI TPA65R-BU8A	90	324	1,681	0.009	12	279
Ericsson AIR 6419 B77G	88	198	986	0.006	7	170
Ericsson Air 6449 B77D	85	245	1,139	0.006	8	210
Commscope RDIDC-9181-PF-48	79	22	89	0.000	1	19
Fujitsu TA08025-B605	79	225	911	0.005	6	193
Fujitsu TA08025-B604	79	192	776	0.004	5	165
JMA Wireless MX08FRO665-21	79	194	784	0.004	5	166
Generic Flat Platform with Handrails	79	2,500	10,124	0.056	70	2,149
Generic 24" x 24" Panel	70	30	97	0.000	1	26
Generic Round Side Arm	50	188	318	0.002	2	161
	Totals:	**41,465**	**180,452**	**1.000**	**1,244**	**35,646**

1.2D + 1.0Ev + 1.0Eh **Seismic**

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-49.89	-1.25	0.00	-129.87	0.00	129.87	3,957.37	1,024.83	4,562	3,958.89	0.00	0.00	0.05
5.00	-48.37	-1.26	0.00	-123.64	0.00	123.64	3,898.74	1,000.35	4,346	3,806.37	0.01	-0.01	0.05
10.00	-46.89	-1.26	0.00	-117.36	0.00	117.36	3,838.36	975.87	4,136	3,655.01	0.02	-0.02	0.04
15.00	-45.43	-1.27	0.00	-111.04	0.00	111.04	3,776.22	951.40	3,931	3,504.92	0.05	-0.03	0.04
20.00	-44.01	-1.27	0.00	-104.70	0.00	104.70	3,712.33	926.92	3,732	3,356.23	0.09	-0.04	0.04
25.00	-42.61	-1.28	0.00	-98.33	0.00	98.33	3,646.67	902.44	3,537	3,209.08	0.14	-0.05	0.04
30.00	-41.24	-1.28	0.00	-91.94	0.00	91.94	3,579.26	877.96	3,348	3,063.58	0.20	-0.06	0.04
35.00	-40.70	-1.28	0.00	-85.56	0.00	85.56	3,510.10	853.48	3,164	2,919.87	0.27	-0.08	0.04
37.00	-39.39	-1.27	0.00	-83.00	0.00	83.00	3,481.94	843.69	3,092	2,862.92	0.31	-0.08	0.04
40.00	-38.10	-1.27	0.00	-79.17	0.00	79.17	3,439.17	829.00	2,985	2,778.07	0.36	-0.09	0.04
43.00	-37.64	-1.27	0.00	-75.36	0.00	75.36	2,697.55	690.63	2,486	2,181.76	0.42	-0.10	0.05
45.00	-36.51	-1.26	0.00	-72.83	0.00	72.83	2,677.43	682.47	2,428	2,139.70	0.46	-0.10	0.05
50.00	-35.16	-1.25	0.00	-66.51	0.00	66.51	2,625.91	662.07	2,285	2,035.31	0.57	-0.11	0.05
55.00	-34.08	-1.25	0.00	-60.24	0.00	60.24	2,572.64	641.67	2,146	1,932.08	0.70	-0.13	0.04
60.00	-33.02	-1.24	0.00	-54.00	0.00	54.00	2,517.61	621.27	2,012	1,830.13	0.84	-0.14	0.04
65.00	-31.98	-1.22	0.00	-47.82	0.00	47.82	2,460.82	600.87	1,882	1,729.60	0.99	-0.15	0.04
70.00	-30.94	-1.21	0.00	-41.70	0.00	41.70	2,402.27	580.47	1,756	1,630.62	1.15	-0.16	0.04
75.00	-29.72	-1.18	0.00	-35.66	0.00	35.66	2,341.97	560.07	1,635	1,533.30	1.33	-0.18	0.04
79.00	-25.53	-1.08	0.00	-30.92	0.00	30.92	2,292.47	543.75	1,541	1,456.74	1.49	-0.19	0.03
80.00	-24.71	-1.06	0.00	-29.85	0.00	29.85	1,720.57	439.61	1,259	1,107.21	1.52	-0.19	0.04
85.00	-23.92	-1.04	0.00	-24.55	0.00	24.55	1,679.48	423.29	1,167	1,040.33	1.73	-0.20	0.04
88.00	-23.35	-1.02	0.00	-21.44	0.00	21.44	1,653.99	413.50	1,114	1,000.65	1.85	-0.21	0.04
90.00	-17.69	-0.84	0.00	-19.39	0.00	19.39	1,636.64	406.98	1,079	974.39	1.94	-0.21	0.03
95.00	-17.07	-0.82	0.00	-15.19	0.00	15.19	1,592.04	390.66	994	909.51	2.17	-0.22	0.03
100.00	-11.77	-0.61	0.00	-11.09	0.00	11.09	1,545.69	374.34	913	845.81	2.40	-0.23	0.02
105.00	-11.73	-0.61	0.00	-8.02	0.00	8.02	1,497.58	358.02	835	783.43	2.65	-0.24	0.02
105.40	-11.54	-0.60	0.00	-7.77	0.00	7.77	1,493.65	356.71	829	778.50	2.67	-0.24	0.02
105.50	-10.91	-0.58	0.00	-7.71	0.00	7.71	1,492.67	356.39	828	777.27	2.67	-0.24	0.02
109.80	-10.79	-0.57	0.00	-5.23	0.00	5.23	1,449.74	342.35	764	724.89	2.89	-0.24	0.02
110.00	-7.97	-0.44	0.00	-5.12	0.00	5.12	1,446.53	341.70	761	721.90	2.90	-0.24	0.01
115.00	-7.68	-0.43	0.00	-2.92	0.00	2.92	1,377.44	325.38	690	654.26	3.15	-0.25	0.01
118.00	-3.06	-0.18	0.00	-1.64	0.00	1.64	1,335.99	315.59	649	615.27	3.31	-0.25	0.01
119.00	-3.00	-0.18	0.00	-1.46	0.00	1.46	1,322.18	312.33	636	602.54	3.36	-0.25	0.01

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
119.00	-3.00	-0.18	0.00	-1.46	0.00	1.46	936.41	234.90	479	429.14	3.36	-0.25	0.01
120.00	-2.70	-0.16	0.00	-1.28	0.00	1.28	929.99	232.45	469	421.71	3.41	-0.25	0.01
124.60	-2.51	-0.15	0.00	-0.53	0.00	0.53	899.55	221.19	425	387.98	3.65	-0.25	0.00
125.00	-2.37	-0.14	0.00	-0.46	0.00	0.46	896.83	220.21	421	385.08	3.67	-0.25	0.00
127.30	-1.95	-0.12	0.00	-0.13	0.00	0.13	880.98	214.58	400	368.52	3.79	-0.25	0.00
127.60	-1.71	-0.10	0.00	-0.10	0.00	0.10	878.89	213.85	397	366.38	3.80	-0.25	0.00
128.00	-0.49	-0.03	0.00	-0.06	0.00	0.06	876.09	212.87	394	363.52	3.83	-0.25	0.00
129.10	-0.41	-0.03	0.00	-0.02	0.00	0.02	868.33	210.18	384	355.70	3.88	-0.25	0.00
129.90	-0.39	-0.02	0.00	0.00	0.00	0.00	862.63	208.22	377	350.05	3.92	-0.25	0.00
130.00	0.00	-0.02	0.00	0.00	0.00	0.00	861.91	207.97	376	349.34	3.93	-0.25	0.00

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

CALCULATED FORCES

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (fr-kips)	Mu Mx (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (kips)	Phi Mn (kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-34.58	-1.25	0.00	-127.68	0.00	127.68	3,957.37	1,024.83	4,562	3,958.89	0.00	0.00	0.04
5.00	-33.53	-1.25	0.00	-121.45	0.00	121.45	3,898.74	1,000.35	4,346	3,806.37	0.01	-0.01	0.04
10.00	-32.50	-1.26	0.00	-115.19	0.00	115.19	3,838.36	975.87	4,136	3,655.01	0.02	-0.02	0.04
15.00	-31.49	-1.26	0.00	-108.91	0.00	108.91	3,776.22	951.40	3,931	3,504.92	0.05	-0.03	0.04
20.00	-30.50	-1.26	0.00	-102.61	0.00	102.61	3,712.33	926.92	3,732	3,356.23	0.09	-0.04	0.04
25.00	-29.53	-1.26	0.00	-96.30	0.00	96.30	3,646.67	902.44	3,537	3,209.08	0.14	-0.05	0.04
30.00	-28.58	-1.26	0.00	-89.99	0.00	89.99	3,579.26	877.96	3,348	3,063.58	0.20	-0.06	0.04
35.00	-28.21	-1.26	0.00	-83.68	0.00	83.68	3,510.10	853.48	3,164	2,919.87	0.27	-0.07	0.04
37.00	-27.30	-1.26	0.00	-81.16	0.00	81.16	3,481.94	843.69	3,092	2,862.92	0.30	-0.08	0.04
40.00	-26.41	-1.25	0.00	-77.39	0.00	77.39	3,439.17	829.00	2,985	2,778.07	0.35	-0.09	0.04
43.00	-26.09	-1.25	0.00	-73.64	0.00	73.64	2,697.55	690.63	2,486	2,181.76	0.41	-0.09	0.04
45.00	-25.30	-1.24	0.00	-71.14	0.00	71.14	2,677.43	682.47	2,428	2,139.70	0.45	-0.10	0.04
50.00	-24.37	-1.23	0.00	-64.94	0.00	64.94	2,625.91	662.07	2,285	2,035.31	0.56	-0.11	0.04
55.00	-23.62	-1.22	0.00	-58.78	0.00	58.78	2,572.64	641.67	2,146	1,932.08	0.68	-0.12	0.04
60.00	-22.88	-1.21	0.00	-52.67	0.00	52.67	2,517.61	621.27	2,012	1,830.13	0.82	-0.14	0.04
65.00	-22.16	-1.20	0.00	-46.62	0.00	46.62	2,460.82	600.87	1,882	1,729.60	0.97	-0.15	0.04
70.00	-21.44	-1.18	0.00	-40.64	0.00	40.64	2,402.27	580.47	1,756	1,630.62	1.13	-0.16	0.03
75.00	-20.60	-1.15	0.00	-34.75	0.00	34.75	2,341.97	560.07	1,635	1,533.30	1.31	-0.17	0.03
79.00	-17.70	-1.05	0.00	-30.14	0.00	30.14	2,292.47	543.75	1,541	1,456.74	1.45	-0.18	0.03
80.00	-17.12	-1.03	0.00	-29.09	0.00	29.09	1,720.57	439.61	1,259	1,107.21	1.49	-0.18	0.04
85.00	-16.58	-1.01	0.00	-23.93	0.00	23.93	1,679.48	423.29	1,167	1,040.33	1.69	-0.19	0.03
88.00	-16.19	-1.00	0.00	-20.89	0.00	20.89	1,653.99	413.50	1,114	1,000.65	1.82	-0.20	0.03
90.00	-12.26	-0.82	0.00	-18.90	0.00	18.90	1,636.64	406.98	1,079	974.39	1.90	-0.21	0.03
95.00	-11.83	-0.80	0.00	-14.81	0.00	14.81	1,592.04	390.66	994	909.51	2.12	-0.21	0.02
100.00	-8.16	-0.60	0.00	-10.81	0.00	10.81	1,545.69	374.34	913	845.81	2.35	-0.22	0.02
105.00	-8.13	-0.60	0.00	-7.82	0.00	7.82	1,497.58	358.02	835	783.43	2.59	-0.23	0.02
105.40	-8.00	-0.59	0.00	-7.58	0.00	7.58	1,493.65	356.71	829	778.50	2.61	-0.23	0.02
105.50	-7.56	-0.56	0.00	-7.52	0.00	7.52	1,492.67	356.39	828	777.27	2.61	-0.23	0.02
109.80	-7.48	-0.56	0.00	-5.11	0.00	5.11	1,449.74	342.35	764	724.89	2.82	-0.24	0.01
110.00	-5.52	-0.43	0.00	-4.99	0.00	4.99	1,446.53	341.70	761	721.90	2.83	-0.24	0.01
115.00	-5.32	-0.42	0.00	-2.85	0.00	2.85	1,377.44	325.38	690	654.26	3.08	-0.24	0.01
118.00	-2.12	-0.18	0.00	-1.60	0.00	1.60	1,335.99	315.59	649	615.27	3.23	-0.24	0.00
119.00	-2.08	-0.18	0.00	-1.42	0.00	1.42	1,322.18	312.33	636	602.54	3.28	-0.24	0.00
119.00	-2.08	-0.18	0.00	-1.42	0.00	1.42	936.41	234.90	479	429.14	3.28	-0.24	0.01
120.00	-1.87	-0.16	0.00	-1.25	0.00	1.25	929.99	232.45	469	421.71	3.33	-0.24	0.01
124.60	-1.74	-0.15	0.00	-0.51	0.00	0.51	899.55	221.19	425	387.98	3.57	-0.24	0.00
125.00	-1.64	-0.14	0.00	-0.45	0.00	0.45	896.83	220.21	421	385.08	3.59	-0.24	0.00
127.30	-1.35	-0.12	0.00	-0.13	0.00	0.13	880.98	214.58	400	368.52	3.71	-0.24	0.00
127.60	-1.18	-0.10	0.00	-0.10	0.00	0.10	878.89	213.85	397	366.38	3.72	-0.24	0.00
128.00	-0.34	-0.03	0.00	-0.05	0.00	0.05	876.09	212.87	394	363.52	3.74	-0.24	0.00
129.10	-0.29	-0.03	0.00	-0.02	0.00	0.02	868.33	210.18	384	355.70	3.80	-0.24	0.00
129.90	-0.27	-0.02	0.00	0.00	0.00	0.00	862.63	208.22	377	350.05	3.84	-0.24	0.00
130.00	0.00	-0.02	0.00	0.00	0.00	0.00	861.91	207.97	376	349.34	3.84	-0.24	0.00

ANALYSIS SUMMARY

Load Case	Base Reactions Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Max Usage Elev (ft)	Interaction Ratio
1.2D + 1.0W	24.66	0.00	49.72	0.00	0.00	2274.21	43.00	0.59
0.9D + 1.0W	24.64	0.00	37.28	0.00	0.00	2243.96	0.00	0.58
1.2D + 1.0Di + 1.0Wi	6.95	0.00	77.24	0.00	0.00	658.31	43.00	0.19
1.2D + 1.0Ev + 1.0Eh	1.28	0.00	49.89	0.00	0.00	129.87	43.00	0.05
0.9D - 1.0Ev + 1.0Eh	1.26	0.00	34.58	0.00	0.00	127.68	43.00	0.04
1.0D + 1.0W	5.70	0.00	41.46	0.00	0.00	521.69	43.00	0.14

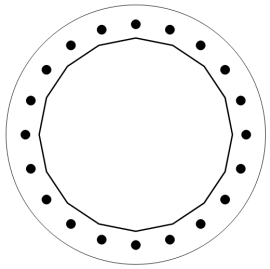
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
2274.21	49.72	24.66

PLATE PARAMETERS (ID# 27680)

Width:	67	in
Shape:	Round	
Thickness:	2.5	in
Grade:	A572-55	
Yield Strength:	55	ksi
Tensile Strength:	70	ksi
Rod Detail Type:	d	
Clear Distance	4	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	252	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#28401]	Radial	20	2.5	57	A572-55	55	70	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	49.19"ø x 0.375" (16 Sides)	57.1400	-	-	17022.58	-
Bolt Group	Original (20) 2.5"ø	4.9087	3.9988	1.2725	29312.02	4.0

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	49.19"ø x 0.375" (16 Sides)	2274.2	49.72	24.66	1.000
Bolt Group	Original (20) 2.5"ø	2274.2	-	24.66	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	49.32	in	Flat Width:	9.809	in	Neutral Axis:	252	°
Point-to-Point Diameter:	50.28	in	Flat Radians:	0.393	rad	Bend Line Limits:	5.501 to 0.154	rad
Orientation Offset:	-	°						

PLATE PROPERTIES

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$	
Flats	35.477	0.00	55.432	460.7	2743.9	16.8%	✓
Corners	34.094	0.00	53.271	315.9	2636.9	12.0%	✓
Circumferential	39.739	0.00	62.092	576.3	3073.6	18.8%	✓

PLASTIC ANCHOR ROD ANALYSIS

Class	Group Quantity	Rod Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result	
Original	20	2.5	84.8	2.0	209.9	42.3%	✓

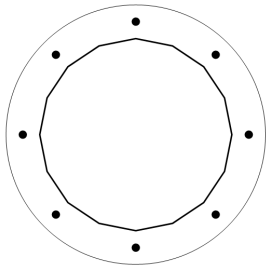
UPPER FLANGE PLATE ANALYSIS @ 119 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
24.66	2.75	3.06

PLATE PARAMETERS (ID# 27681)

Width:	31	in
Shape:	Round	
Thickness:	1	in
Grade:	A36	
Yield Strength:	36	ksi
Tensile Strength:	58	ksi
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	270	°



FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#28402]	Radial	8	1	27	A325	92	120	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	22.5651"ø x 0.1875" (16 Sides)	13.0970	-	-	819.95	-
Bolt Group	Original (8) 1"ø	0.7854	0.6057	0.0292	401.88	8.0

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	22.5651"ø x 0.1875" (16 Sides)	24.7	2.75	3.06	1.000
Bolt Group	Original (8) 1"ø	24.7	-	3.06	1.000

UPPER FLANGE PLATE BEND LINE ANALYSIS @ 119 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	22.69	in	Flat Width:	4.513	in	Neutral Axis:	270	°
Point-to-Point Diameter:	23.14	in	Flat Radians:	0.393	rad	Bend Line Limits:	5.697 to 0.586	rad
Orientation Offset:	-	°						

PLATE PROPERTIES

Bend Line	Chord Length (in)	Additional Length (in)	Section Modulus (in^3)	Applied Moment M_u (k-in)	Moment Capacity ΦM_n (k-in)	Flexure Result $M_u/\Phi M_n$
Flats	17.369	0.00	4.342	9.3	140.7	6.6%
Corners	16.773	0.00	4.193	8.0	135.9	5.9%
Circumferential	21.976	0.00	5.494	8.0	178.0	4.5%

PLASTIC FLANGE BOLT ANALYSIS

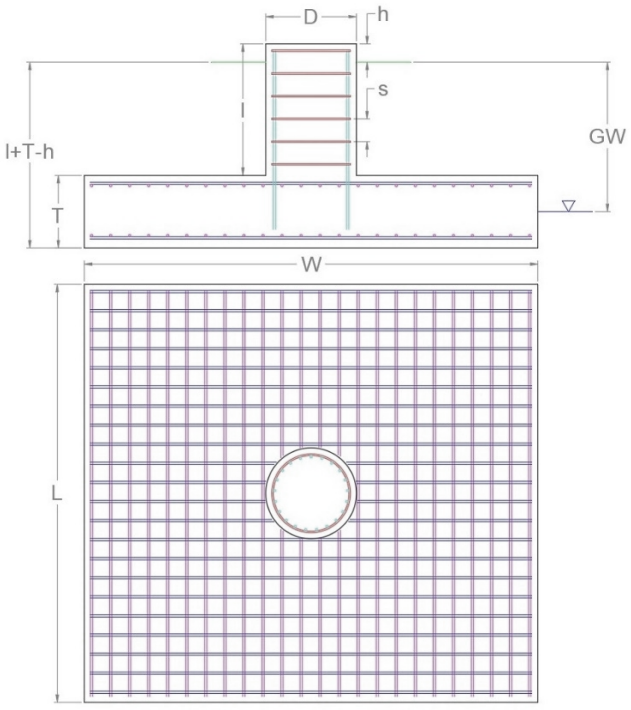
Class	Group Quantity	Bolt Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result
Original	8	1	5.4	0.6	54.5	11.7%

APPLIED GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
2,274.21	49.72	24.66

FOUNDATION PARAMETERS

Mat Length:	L	23	ft
Mat Width:	W	23	ft
Mat Thickness:	T	2	ft
Base Depth:	L+T-h	6	ft
Pier Shape:		Square	
Pier Width:	D	7	ft
Pier Height above Grade:	h	1	ft
Concrete Compressive Strength:		5,000	psi
Mat Top Rebar:		(34) #9 bars [60 ksi]	
Mat Bottom Rebar:		(34) #9 bars [60 ksi]	
Pier Vertical Rebar:		(24) #11 bars [60 ksi]	
Pier Rebar Ties:	s	#4 bars @ 6.0" c/c [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	3	ft
Soil Unit Weight:		115	pcf
Ultimate Skin Friction:		250	psf
Ultimate Bearing Pressure:		4,000	psf
Bearing Pressure Type:		Gross	
Coefficient of Shear Friction:		0.5	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
2,446.83	4,386.35	**55.8%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
1,651.00	3,000.00	Diagonal to Pad Edge	**55.0%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
24.66	46.00	450.2	20.71	165.75	**15.0%**	✓

MAT REINFORCING STEEL STRENGTH ANALYSIS

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
29,000	0.9	0.75	0.65

MAT REINFORCING ONE WAY SHEAR ANALYSIS

One Way Design Shear, V_u (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$	
141.63	561.95	Diagonal to Pad Edge	**25.2%**	✓

MAT REINFORCING PUNCHING SHEAR ANALYSIS

Punching Shear Design Stress, v_u (psi)	Nominal Punching Shear Capacity, $\Phi_c v_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c v_n$	
49.8	212.1	**23.5%**	✓

MAT REINFORCING MOMENT TRANSFER ANALYSIS

Moment Transfer Effective Flexural Width, w_f (in)	Neutral Axis Depth (in)	Pier Moment at Joint, M_{ut} (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6\ M_{ut} / \Phi M_{sc,f}$	
13.00	1.82	0.00	20,739.6	**0.0%**	✓

MAT REINFORCING FLEXURE ANALYSIS – UPPER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$	
421.58	2,927.79	Parallel to Pad Edge	**14.4%**	✓

MAT REINFORCING FLEXURE ANALYSIS – LOWER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$	
1,106.20	2,927.79	Parallel to Pad Edge	**37.8%**	✓

PIER REINFORCING STEEL STRENGTH ANALYSIS

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
75.62	29,000	0.9	0.75	0.65

PIER REINFORCING MOMENT ANALYSIS

Design Moment, M_u (k-ft)	Nominal Moment Capacity, $\Phi_b M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u/\Phi_b M_n$	
2,397.51	6,238.91	0.005	**38.4%**	✓

PIER REINFORCING COMPRESSION ANALYSIS

Design Compression, P_u (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$	
49.72	15,559.69	**0.3%**	✓

PIER REINFORCING SHEAR ANALYSIS

Design Shear, V_u (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$	
24.66	952.64	**2.6%**	✓

EXHIBIT 4

Colliers Engineering & Design,
Architecture, Landscaping Architecture, Surveying, CT, P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis-VZW

SMART Tool Project #: 10208301
Colliers Engineering & Design Project #: 21777429 (Rev. 1)

December 12, 2023

Site Information	*Site ID:*	*5000384062-VZW / E HARTFORD 3 CT*
	Site Name:	*E HARTFORD 3 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*148 Roberts Street* *East Hartford, Connecticut 06108* *Hartford County*
	Latitude:	*41.773333°*
	Longitude:	*-72.613442°*
Structure Information	*Tower Type:*	*Monopole*
	Mount Type:	*12.50-Ft Platform*

FUZE ID # 16053192

Analysis Results

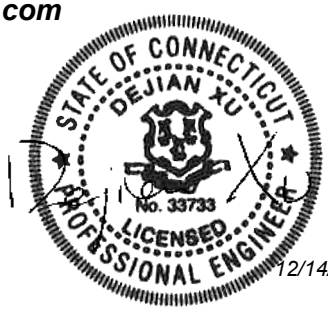
Platform: **80.1% Pass***

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

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com

For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Prasanna Dhakal



12/14/2023

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 674879, dated September 18, 2023*
Mount Mapping Report	*RKS Design & Engineering LLC, Site ID: 467627, dated March 18, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	120 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.50 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.998
Seismic Parameters:	S_S:	0.191 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 (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
115.00	118.00	3	Commscope	NHHSS-65B-R2BT4	Added
		3	Samsung	MT6413-77A	
		3	Commscope	NHH-65B-R2B	
		3	Andrew	LNX-6513DS-A1M	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		3	Samsung	RT4423-48A	
		1	Raycap	RHSDC-3315-PF-48*	Retained
		1	Raycap	RRFDC-3315-PF-48*	

* Equipment is flush mounted directly to the Monopole. They are not mounted on platform mounts and are not included in this mount analysis.

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

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

Standard Conditions:

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

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
Face Horizontal	*25.3%*	*Pass*
Standoff Horizontal	*53.4%*	*Pass*
Corner Plate	*22.8%*	*Pass*
Crossmember	*21.9%*	*Pass*
Grating Support	*15.7%*	*Pass*
Cross Arm Plate	*43.4%*	*Pass*
Support Rail	*52.4%*	*Pass*
Support Rail Corner	*61.9%*	*Pass*
Mount Pipe	*80.1%*	*Pass*
Mount Connection	*56.4%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**80.1%**

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	115	N2	2654	2637	8.227	1.140	3280	998	7.796	0.353
Sector B Standoff	115	N3	2665	2671	8.259	1.094	3298	1002	7.855	0.347
Sector A Standoff	115	N4	2582	2535	7.953	1.179	3262	979	7.720	0.354

Notes:
- Axial loads act along the axis of the tower leg
- Lateral reactions act perpendicular to the tower leg
- Moment loads introduce bending moment to the tower leg
- Torsion loads introduce twisting moment to the tower leg
- 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	22.3	22.3	41.9	41.9
0.5	29.3	29.3	57.1	57.1
1	35.7	35.7	71.8	71.8

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 sectors.
- Ka factors included in (EPA)a calculations

Requirements:

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

1. 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 rubbing against 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.

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

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

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

For additional questions and support, please reach out to pmisupport@colliersengineering.com

---

MDG #: 5000384062 SMART Project #: 10208301 Fuze Project ID: 16053192

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

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

Base Requirements:

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

Photo Requirements:

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

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

Antenna & equipment placement and Geometry Confirmation:

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.

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

OR

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

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

Issue:

1. 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 rubbing against 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.

☐ All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

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

Comments:

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

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

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

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Certifying Individual:

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

Structure: 5000384062-VZW - E HARTFORD 3 CT

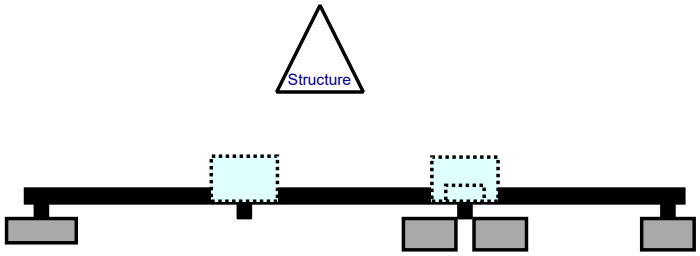
Sector: **A** 12/12/2023

Structure Type: Monopole 10208301

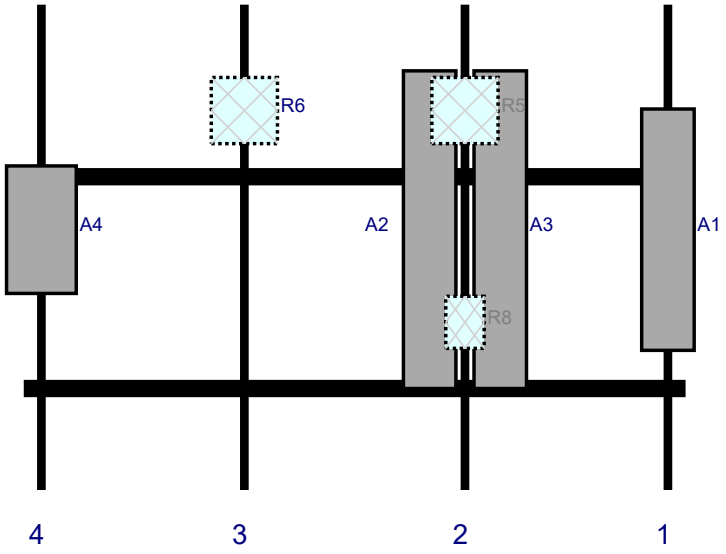
Mount Elev: 115.00 Page: 1

Colliers Engineering & Design

Plan View

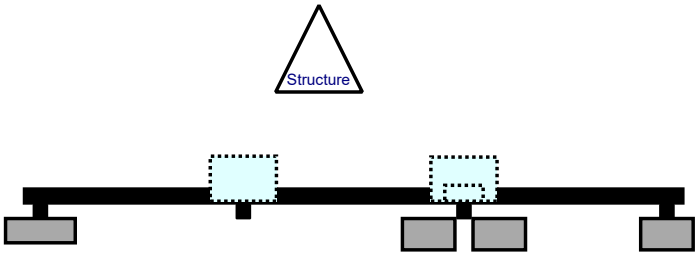


Front View - Looking at Structure

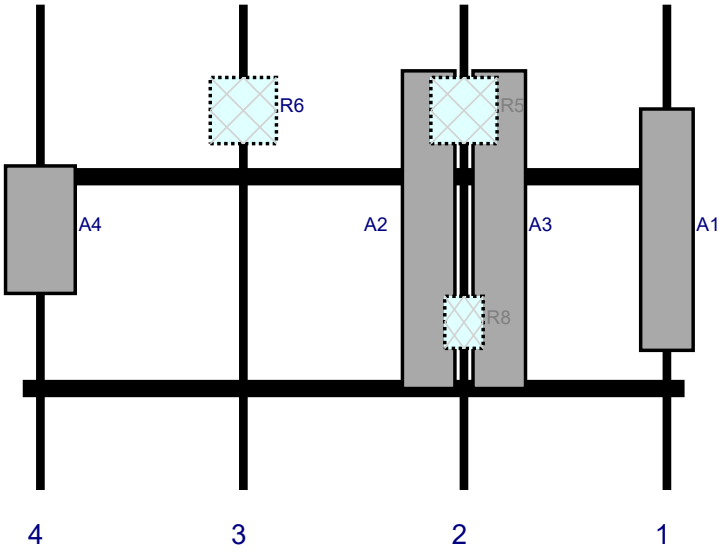


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	LNX-6513DS-A1M	54.7	11.9	146	1	a	Front	51	0	Added	
A2	NHH-65B-R2B	72	11.9	100	2	a	Front	51	-8	Added	
A3	NHHSS-65B-R2BT4	72	11.9	100	2	a	Front	51	8	Added	
R5	RF4439d-25A	15	15	100	2	a	Behind	24	0	Added	
R8	RT4423-48A	11.8	8.7	100	2	a	Behind	72	0	Added	
R6	RF4461d-13A	15	15	50	3	a	Behind	24	0	Added	
A4	MT6413-77A	28.9	15.8	4	4	a	Front	51	0	Added	

Plan View

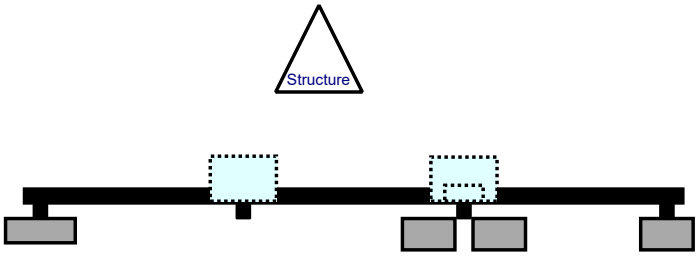


Front View - Looking at Structure

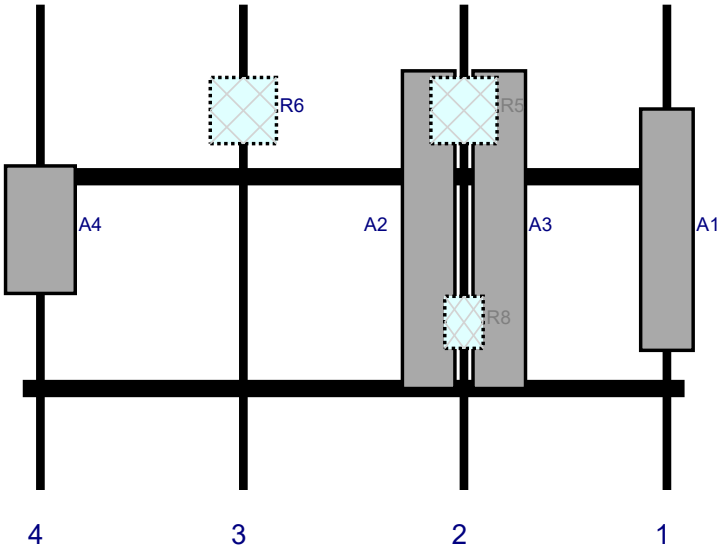


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	LNX-6513DS-A1M	54.7	11.9	146	1	a	Front	51	0	Added	
A2	NHH-65B-R2B	72	11.9	100	2	a	Front	51	-8	Added	
A3	NHHSS-65B-R2BT4	72	11.9	100	2	a	Front	51	8	Added	
R5	RF4439d-25A	15	15	100	2	a	Behind	24	0	Added	
R8	RT4423-48A	11.8	8.7	100	2	a	Behind	72	0	Added	
R6	RF4461d-13A	15	15	50	3	a	Behind	24	0	Added	
A4	MT6413-77A	28.9	15.8	4	4	a	Front	51	0	Added	

Plan View



Front View - Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	LNX-6513DS-A1M	54.7	11.9	146	1	a	Front	51	0	Added	
A2	NHH-65B-R2B	72	11.9	100	2	a	Front	51	-8	Added	
A3	NHHSS-65B-R2BT4	72	11.9	100	2	a	Front	51	8	Added	
R5	RF4439d-25A	15	15	100	2	a	Behind	24	0	Added	
R8	RT4423-48A	11.8	8.7	100	2	a	Behind	72	0	Added	
R6	RF4461d-13A	15	15	50	3	a	Behind	24	0	Added	
A4	MT6413-77A	28.9	15.8	4	4	a	Front	51	0	Added	


03/18/2021


2021. 3.18

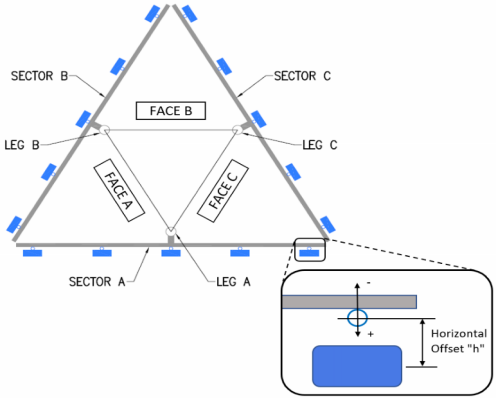
V3.0 Updated on 8-31-2020

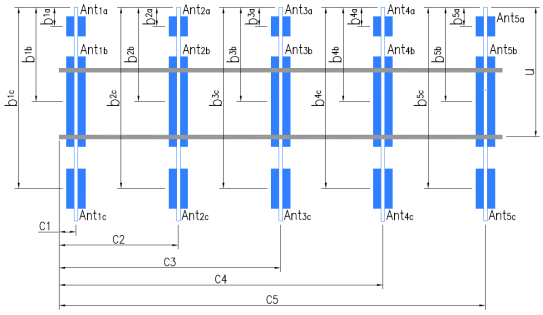
Antenna Mount Mapping Form (PATENT PENDING)

FCC # UNKNOWN

Tower Owner:	ATC	**Mapping Date:**	3/18/2021
Site Name:	VZW:E HARTFORD 3 CT	**Tower Type:**	Monopole
Site Number or ID:	VZW:467627	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering LLC	**Mount Elevation (Ft.):**	115.5

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





Antenna Layout (Looking Out From Tower)

Mount Pipe Configuration and Geometries [Unit = Inches]

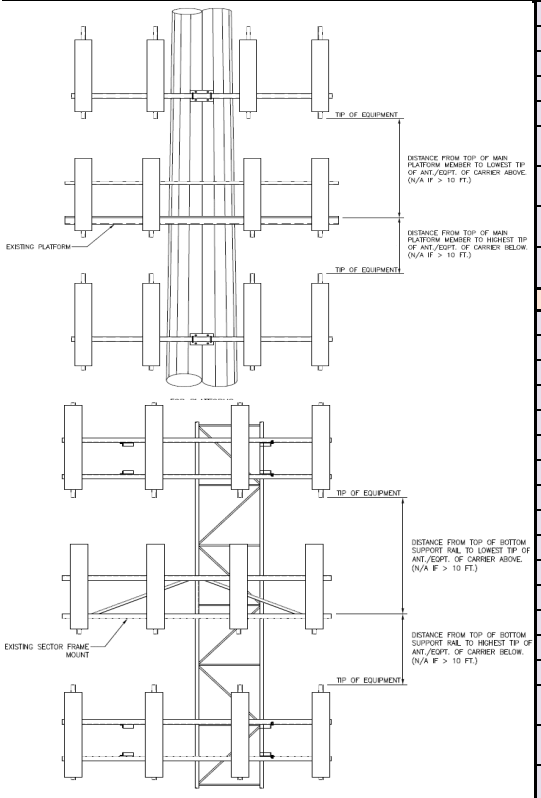
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	Pipe 2.375"Ø X 0.16" X 110" Long	87.75	4.50	C1	Pipe 2.375"Ø X 0.16" X 110" Long	87.75	4.50
A2	Pipe 2.375"Ø X 0.16" X 110" Long	87.00	50.50	C2	Pipe 2.375"Ø X 0.16" X 110" Long	87.00	50.50
A3	Pipe 2.375"Ø X 0.16" X 110" Long	88.50	100.00	C3	Pipe 2.375"Ø X 0.16" X 110" Long	88.50	100.00
A4	Pipe 2.375"Ø X 0.16" X 110" Long	86.50	146.25	C4	Pipe 2.375"Ø X 0.16" X 110" Long	86.50	146.25
A5				C5			
A6				C6			
B1	Pipe 2.375"Ø X 0.16" X 110" Long	87.75	4.50	D1			
B2	Pipe 2.375"Ø X 0.16" X 110" Long	87.00	50.50	D2			
B3	Pipe 2.375"Ø X 0.16" X 110" Long	88.50	100.00	D3			
B4	Pipe 2.375"Ø X 0.16" X 110" Long	86.50	146.25	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	7
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	3.2
Please enter additional infomation or comments below.	
Tower Face Width at Mount Elev. (ft.):	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.): 22.61

	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	DB844G65ZAXY	9.75	8.25	48.00		118.313	54.00	7.50	40.00	8,136
Ant_{1c}										
Ant_{2a}	UNKNOWN RRH	26.00	12.00	26.00		120.833	23.00	-9.00		8,136
Ant_{2b}	(2)JAHH-65B-R3B	13.80	8.20	72.00		118.5	51.00	16.50	40.00	8,136
Ant_{2c}	B66a RRH 4x45	11.80	7.20	25.80		117.917	58.00	-10.50		8,136
Ant_{3a}	B13 RRH4x30	12.00	9.00	21.60		117.875	60.00	-13.00		8,137
Ant_{3b}										8,137
Ant_{3c}	B25 RRH 4x30	12.00	7.20	21.20		120.667	26.50	10.50		
Ant_{4a}										
Ant_{4b}	DB844G65ZAXY	9.75	8.25	48.00		118.208	54.00	7.50	40.00	8,137
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RHSDC-3315-PF-48	15.70	10.20	25.60			33.00			338
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	40.00	Deg	Leg A:		Deg
Sector B:	160.00	Deg	Leg B:		Deg
Sector C:	280.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	280.00 Deg	N/A
Climbing Facility	Corrosion Type:	N/A
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.



Sector B										
Ant_{1a}										
Ant_{1b}	DB844G65ZAXY	9.75	8.25	48.00		118.313	54.00	7.50	160.00	14,138
Ant_{1c}										
Ant_{2a}	UNKNOWN RRH	26.00	12.00	26.00		120.833	23.00	-9.00		14,138
Ant_{2b}	(2)JAHH-65B-R3B	13.80	8.20	72.00		118.5	51.00	16.50	150.00	14,138
Ant_{2c}	B66a RRH 4x45	11.80	7.20	25.80		117.917	58.00	-10.50		14,138
Ant_{3a}	B13 RRH4x30	12.00	9.00	21.60		117.875	60.00	-13.00		14,139
Ant_{3b}										14,139
Ant_{3c}	B25 RRH 4x30	12.00	7.20	21.20		120.667	26.50	10.50		
Ant_{4a}										
Ant_{4b}	DB844G65ZAXY	9.75	8.25	48.00		118.208	54.00	7.50	160.00	14,139
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RRFDC-3315-PF-48	15.70	10.20	25.60			33.00			342
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	DB844G65ZAXY	9.75	8.25	48.00		118.313	54.00	7.50	280.00	22,141
Ant_{1c}										
Ant_{2a}	UNKNOWN RRH	26.00	12.00	26.00		120.833	23.00	-9.00		22,141
Ant_{2b}	(2)JAHH-65B-R3B	13.80	8.20	72.00		118.5	51.00	16.50	270.00	22,141
Ant_{2c}	B66a RRH 4x45	11.80	7.20	25.80		117.917	58.00	-10.50		22,141
Ant_{3a}	B13 RRH4x30	12.00	9.00	21.60		117.875	60.00	-13.00		22,143
Ant_{3b}										22,142
Ant_{3c}	B25 RRH 4x30	12.00	7.20	21.20		120.667	26.50	10.50		
Ant_{4a}										
Ant_{4b}	DB844G65ZAXY	9.75	8.25	48.00		118.208	54.00	7.50	280.00	22,142
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

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

1	COAX TOTAL (8): (2) 1.49"Ø HYBRID, (6) FH 1-5/8	
2		
3		
4		
5		
6		
7		
8		

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

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

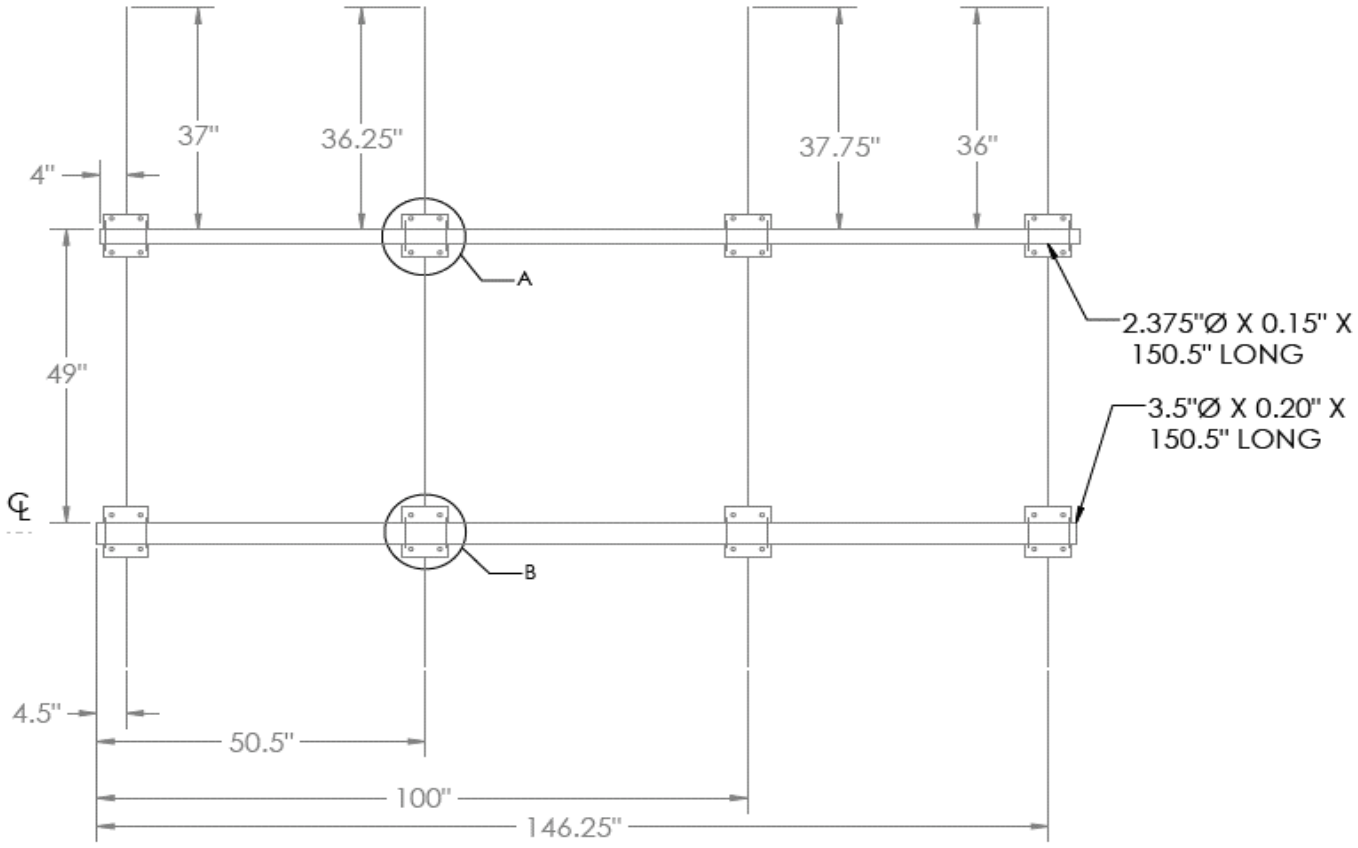
V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

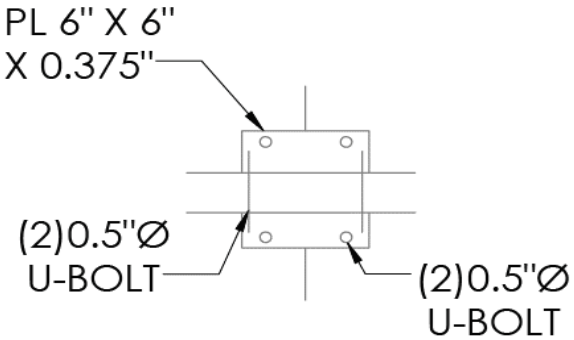
FCC #
UNKNOWN

Tower Owner:	ATC	**Mapping Date:**	3/18/2021
Site Name:	VZW:E HARTFORD 3 CT	**Tower Type:**	Monopole
Site Number or ID:	VZW:467627	**Tower Height (Ft.):**	UNKNOWN
Mapping Contractor:	RKS Design & Engineering LLC	**Mount Elevation (Ft.):**	115.5

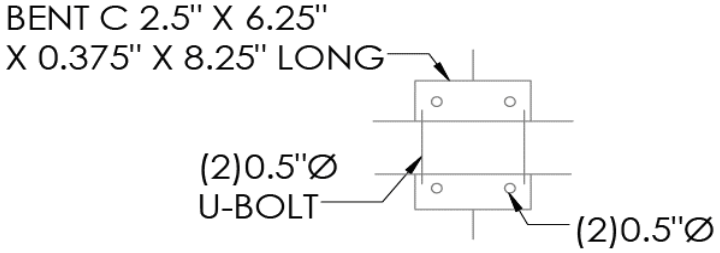
Please Insert Sketches of the Antenna Mount



SECTOR A,B & C

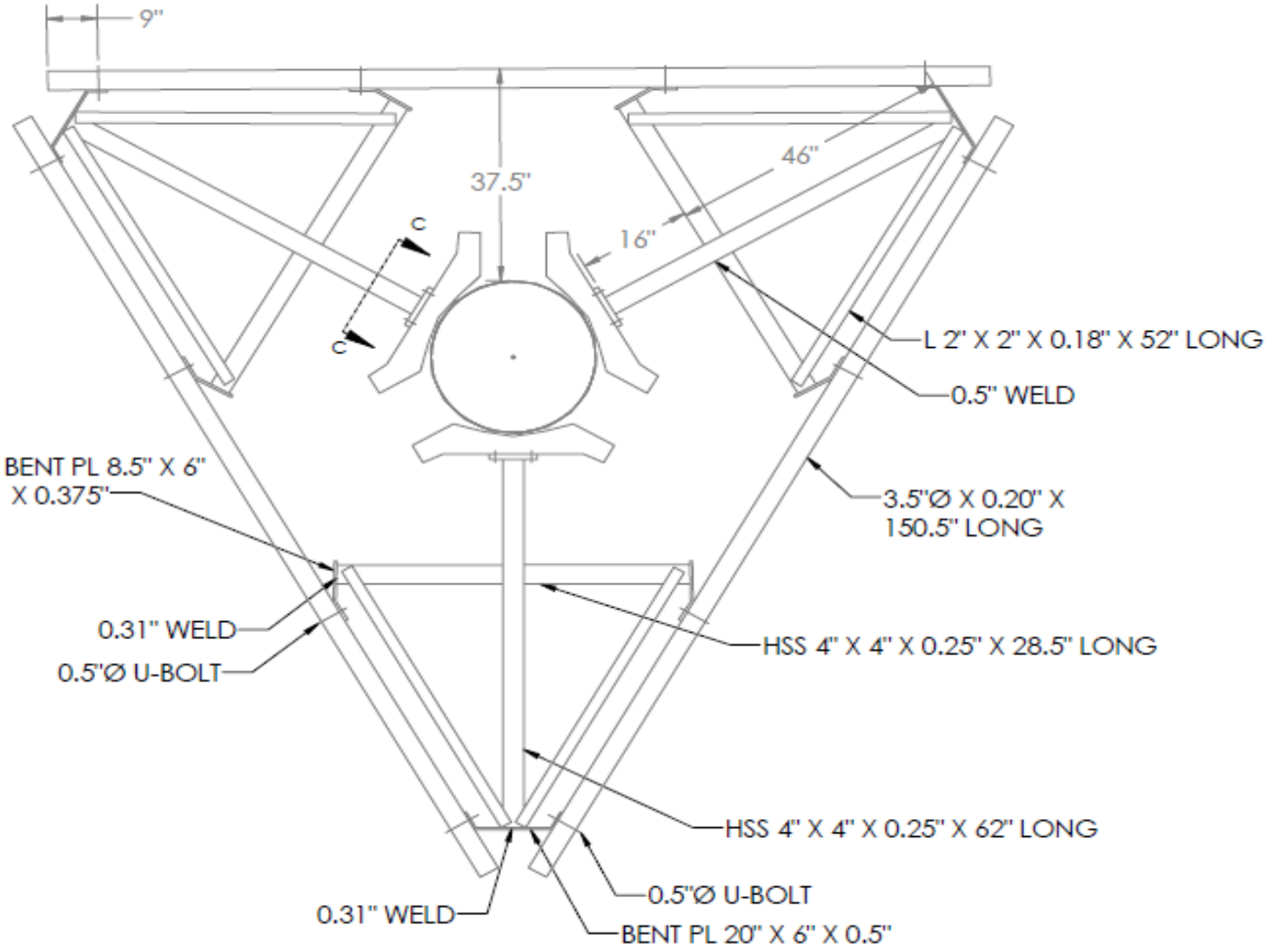


DETAIL A

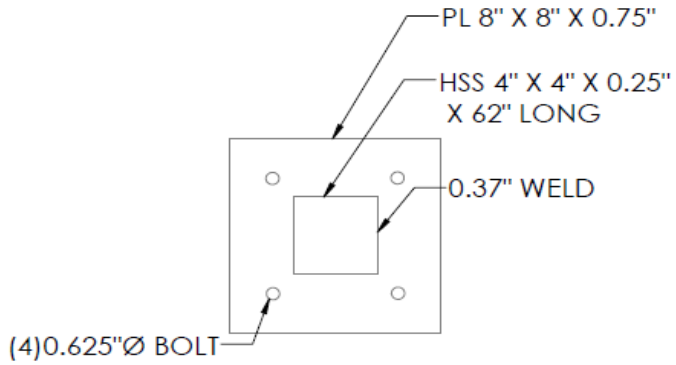


DETAIL B

Please Insert Sketches of the Antenna Mount, cont'd

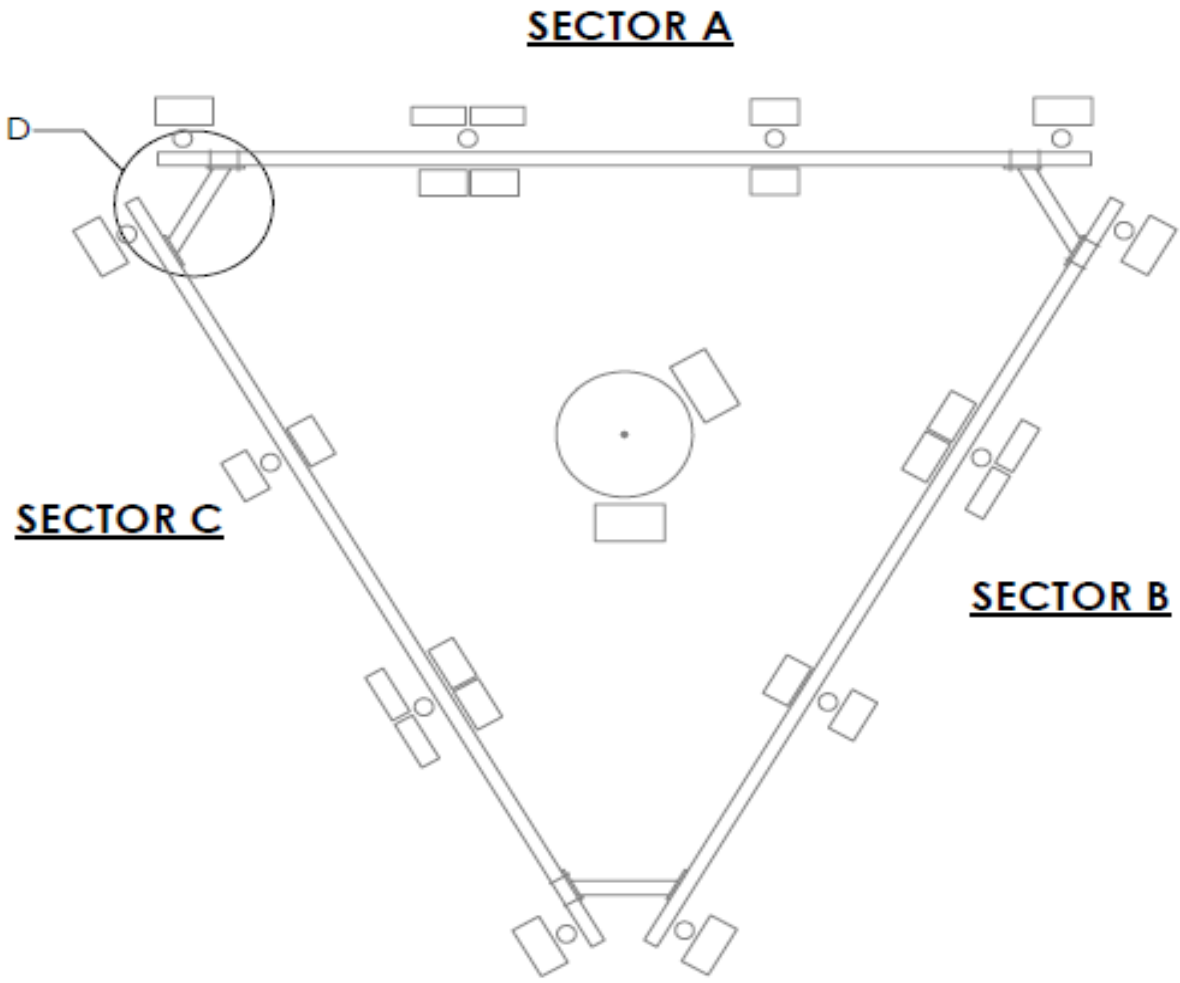


MOUNT VIEW



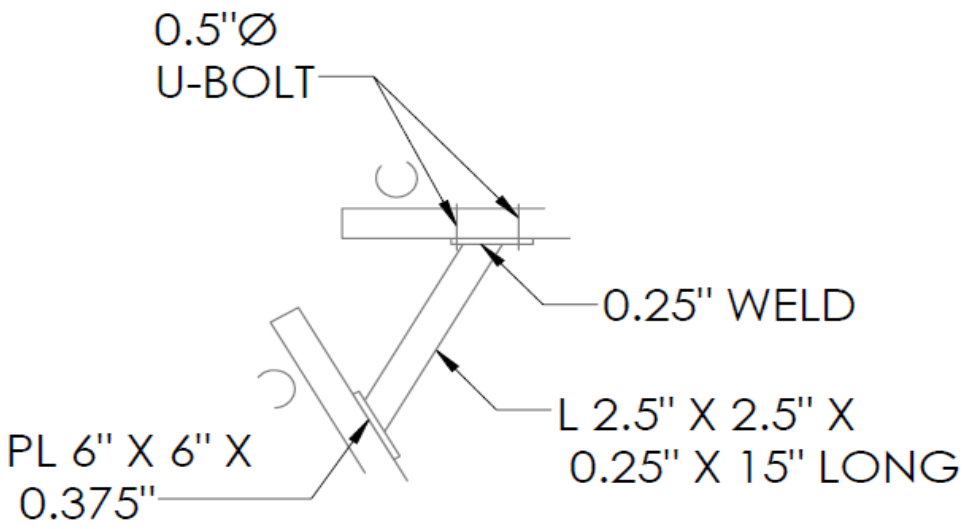
SECTION C-C

Please Insert Sketches of the Antenna Mount, cont'd

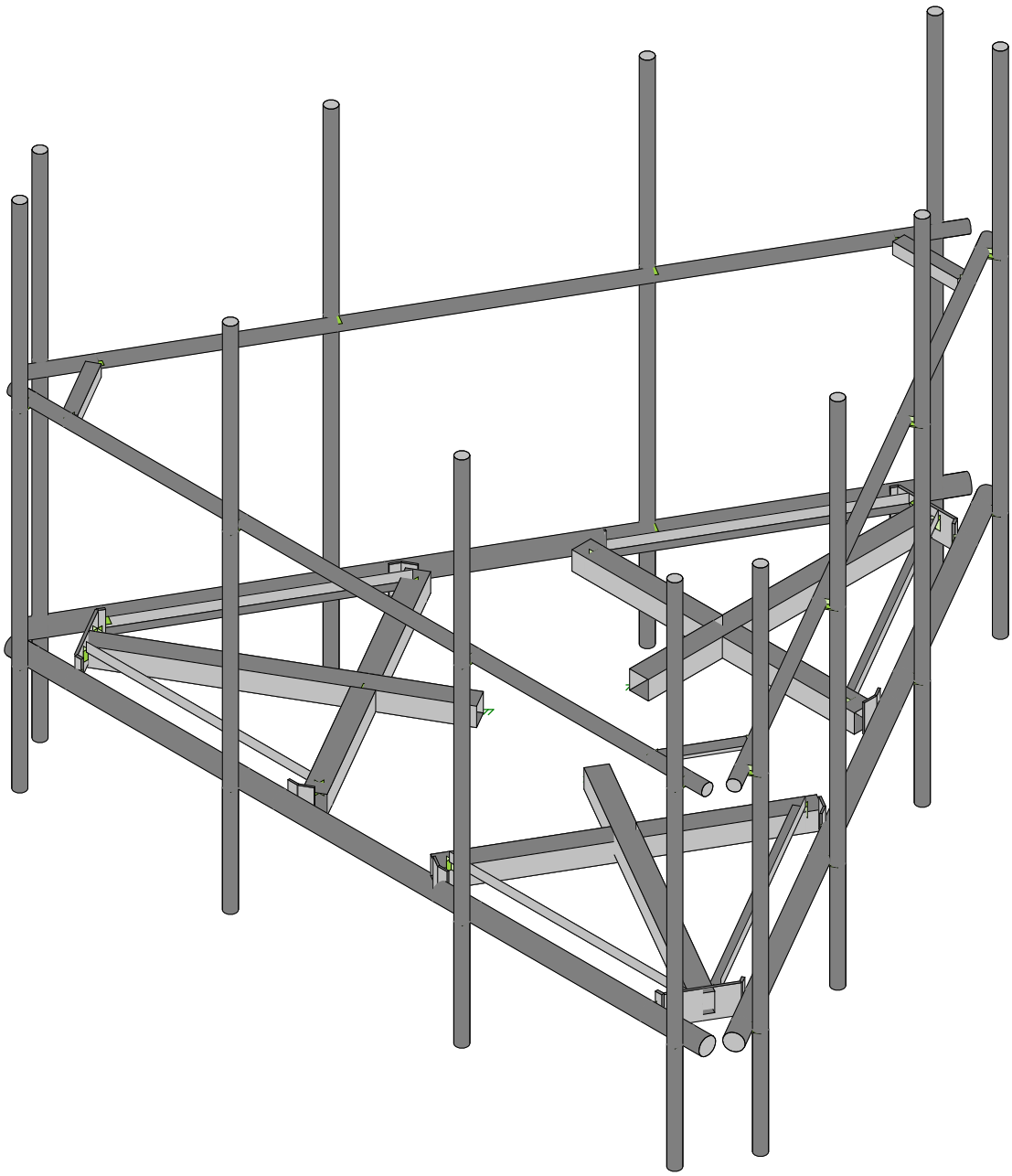


ANTENNA PLAN VIEW

Please Insert Sketches of the Antenna Mount, cont'd

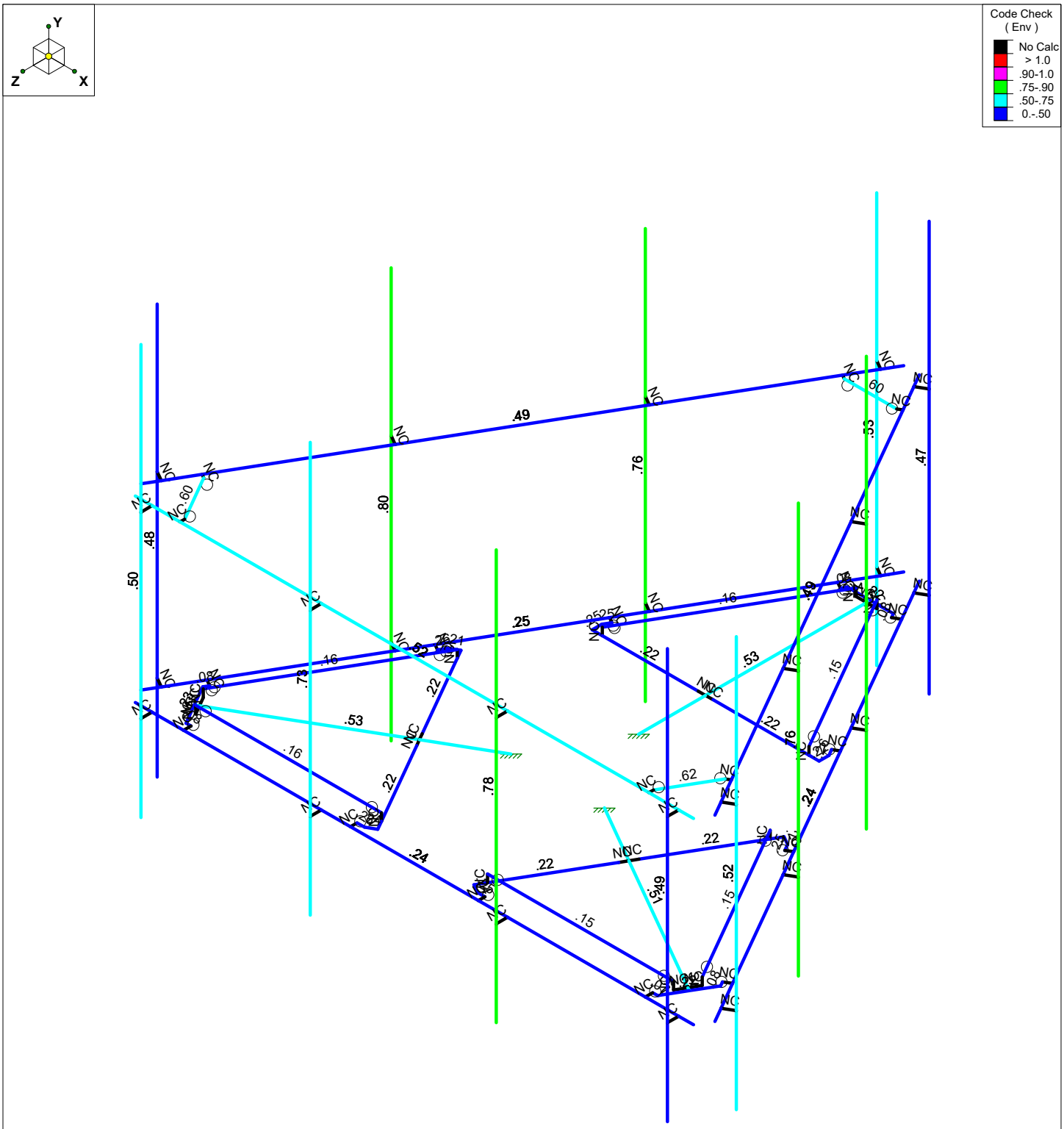


DETAIL D



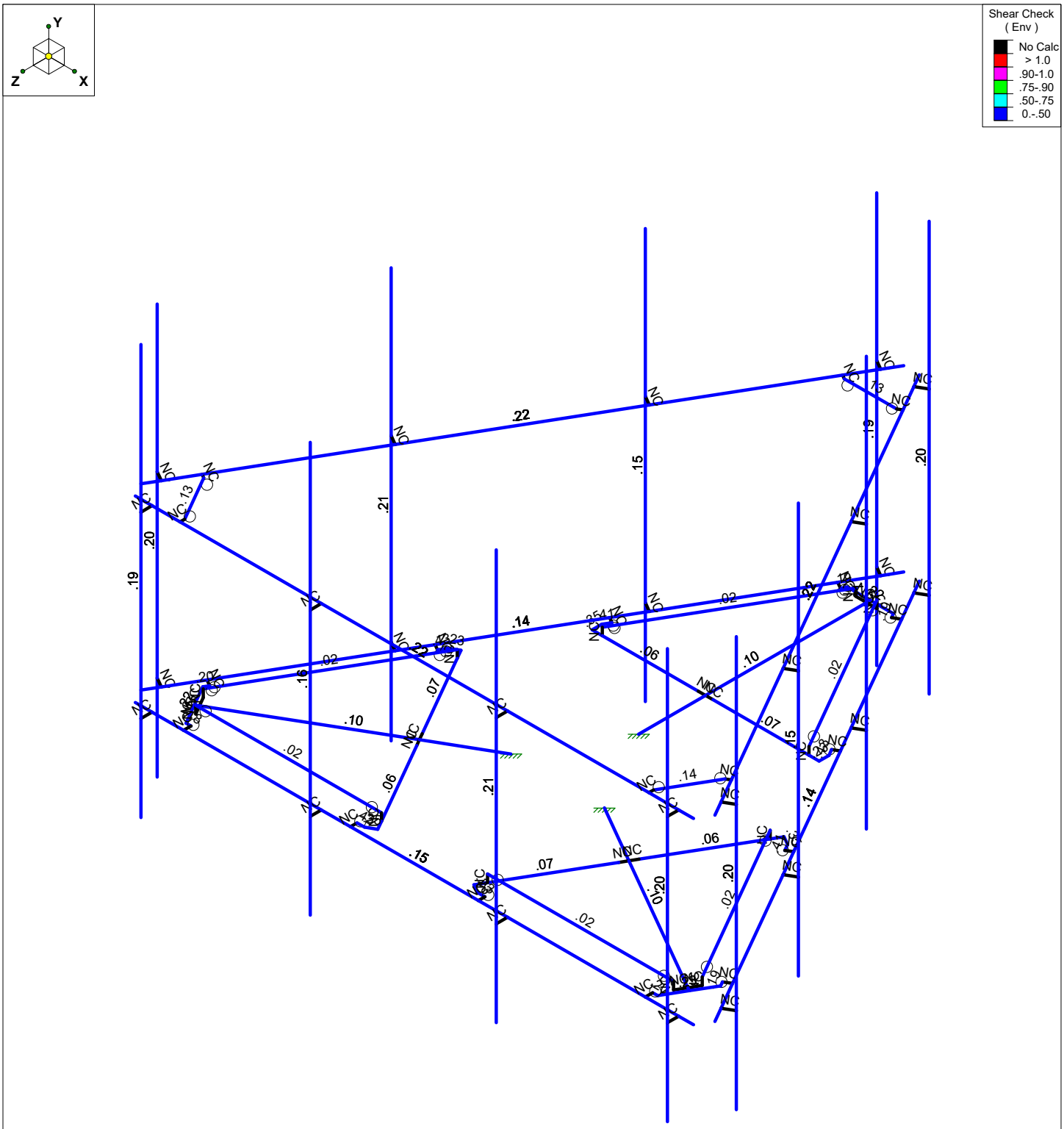
Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 1
		Dec 12, 2023 at 11:18 AM
Project # 21777429		5000384062-VZW_MT_LO_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 2
		Dec 12, 2023 at 11:18 AM
Project # 21777429		5000384062-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 3
		Dec 12, 2023 at 11:18 AM
Project # 21777429		5000384062-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gr...	Y Gr...	Z Gr...	Joint	Point	Distributed	Area(Member)	Surfa...
1	Antenna D	None					99			
2	Antenna Di	None					99			
3	Antenna Wo (0 Deg)	None					99			
4	Antenna Wo (30 Deg)	None					99			
5	Antenna Wo (60 Deg)	None					99			
6	Antenna Wo (90 Deg)	None					99			
7	Antenna Wo (120 Deg)	None					99			
8	Antenna Wo (150 Deg)	None					99			
9	Antenna Wo (180 Deg)	None					99			
10	Antenna Wo (210 Deg)	None					99			
11	Antenna Wo (240 Deg)	None					99			
12	Antenna Wo (270 Deg)	None					99			
13	Antenna Wo (300 Deg)	None					99			
14	Antenna Wo (330 Deg)	None					99			
15	Antenna Wi (0 Deg)	None					99			
16	Antenna Wi (30 Deg)	None					99			
17	Antenna Wi (60 Deg)	None					99			
18	Antenna Wi (90 Deg)	None					99			
19	Antenna Wi (120 Deg)	None					99			
20	Antenna Wi (150 Deg)	None					99			
21	Antenna Wi (180 Deg)	None					99			
22	Antenna Wi (210 Deg)	None					99			
23	Antenna Wi (240 Deg)	None					99			
24	Antenna Wi (270 Deg)	None					99			
25	Antenna Wi (300 Deg)	None					99			
26	Antenna Wi (330 Deg)	None					99			
27	Antenna Wm (0 Deg)	None					99			
28	Antenna Wm (30 Deg)	None					99			
29	Antenna Wm (60 Deg)	None					99			
30	Antenna Wm (90 Deg)	None					99			
31	Antenna Wm (120 Deg)	None					99			
32	Antenna Wm (150 Deg)	None					99			
33	Antenna Wm (180 Deg)	None					99			
34	Antenna Wm (210 Deg)	None					99			
35	Antenna Wm (240 Deg)	None					99			
36	Antenna Wm (270 Deg)	None					99			
37	Antenna Wm (300 Deg)	None					99			
38	Antenna Wm (330 Deg)	None					99			
39	Structure D	None		-1					3	
40	Structure Di	None						57	3	
41	Structure Wo (0 Deg)	None						114		
42	Structure Wo (30 Deg)	None						114		
43	Structure Wo (60 Deg)	None						114		
44	Structure Wo (90 Deg)	None						114		
45	Structure Wo (120 Deg)	None						114		
46	Structure Wo (150 Deg)	None						114		
47	Structure Wo (180 Deg)	None						114		
48	Structure Wo (210 Deg)	None						114		
49	Structure Wo (240 Deg)	None						114		
50	Structure Wo (270 Deg)	None						114		
51	Structure Wo (300 Deg)	None						114		
52	Structure Wo (330 Deg)	None						114		
53	Structure Wi (0 Deg)	None						114		
54	Structure Wi (30 Deg)	None						114		
55	Structure Wi (60 Deg)	None						114		
56	Structure Wi (90 Deg)	None						114		

Basic Load Cases (Continued)

	BLC Description	Category	X Gr...	Y Gr...	Z Gr...	Joint	Point	Distributed	Area(Member)	Surfa...
57	Structure Wi (120 Deg)	None						114		
58	Structure Wi (150 Deg)	None						114		
59	Structure Wi (180 Deg)	None						114		
60	Structure Wi (210 Deg)	None						114		
61	Structure Wi (240 Deg)	None						114		
62	Structure Wi (270 Deg)	None						114		
63	Structure Wi (300 Deg)	None						114		
64	Structure Wi (330 Deg)	None						114		
65	Structure Wm (0 Deg)	None						114		
66	Structure Wm (30 Deg)	None						114		
67	Structure Wm (60 Deg)	None						114		
68	Structure Wm (90 Deg)	None						114		
69	Structure Wm (120 Deg)	None						114		
70	Structure Wm (150 Deg)	None						114		
71	Structure Wm (180 Deg)	None						114		
72	Structure Wm (210 Deg)	None						114		
73	Structure Wm (240 Deg)	None						114		
74	Structure Wm (270 Deg)	None						114		
75	Structure Wm (300 Deg)	None						114		
76	Structure Wm (330 Deg)	None						114		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					99			
82	Antenna Eh (0 Deg)	None					66			
83	Antenna Eh (90 Deg)	None					66			
84	Structure Ev	ELY		-.0407					3	
85	Structure Eh (0 Deg)	ELZ			-.1019				3	
86	Structure Eh (90 Deg)	ELX	.1019						3	
87	BLC 39 Transient Area Loads	None						30		
88	BLC 40 Transient Area Loads	None						30		
89	BLC 84 Transient Area Loads	None						30		
90	BLC 85 Transient Area Loads	None						30		
91	BLC 86 Transient Area Loads	None						30		

Load Combinations

	Description	S...	PDel...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
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 De...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 De...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 De...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 De...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 De...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 De...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 De...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 De...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								

Load Combinations (Continued)

	Description	S...	PDel...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
18	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0...	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 + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83		ELZ	1	E...					
53	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	ELZ	.866	E...	.5				
54	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	ELZ	.5	E...	.866				
55	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	ELZ		E...	1				
56	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	ELZ	-.5	E...	.866				
57	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	.5	ELZ	-.8...	E...	.5				
58	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		ELZ	-1	E...					
59	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	-.5	ELZ	-.8...	E...	-.5				
60	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.8...	ELZ	-.5	E...	-.8...				
61	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	ELZ		E...	-1				
62	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.8...	ELZ	.5	E...	-.8...				
63	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	ELZ	.866	E...	-.5				
64	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		ELZ	1	E...					
65	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	ELZ	.866	E...	.5				
66	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	ELZ	.5	E...	.866				
67	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	ELZ		E...	1				
68	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	ELZ	-.5	E...	.866				
69	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	.5	ELZ	-.8...	E...	.5				
70	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		ELZ	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	-.5	ELZ	-.8...	E...	-.5				
72	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.8...	ELZ	-.5	E...	-.8...				
73	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	ELZ		E...	-1				
74	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.8...	ELZ	.5	E...	-.8...				

Load Combinations (Continued)

	Description	S...	PDel...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
75	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	ELZ	.866	E...	-.5				

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Desig...	A [in2]	Iyy [i...	Izz [i...	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	.0625	9	.2369
4	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	.722	.271	.271	.0092
6	Cross Arm Plate	PL3/8x6	Beam	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101
7	Support Rail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
8	Support Rail Corner	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.0261
9	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
1	M1	N5	N6			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M2	N88	N89			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
3	M3	N90	N91			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
4	M4	N2	N11			Standoff Horizontal	Beam	SquareTube	A500 Gr...	Typical
5	M5	N3	N38			Standoff Horizontal	Beam	SquareTube	A500 Gr...	Typical
6	M6	N4	N65			Standoff Horizontal	Beam	SquareTube	A500 Gr...	Typical
7	M7	N25	N26			Corner Plate	Beam	RECT	A36 Gr.36	Typical
8	M8	N26	N20			Corner Plate	Beam	RECT	A36 Gr.36	Typical
9	M9	N25	N22			Corner Plate	Beam	RECT	A36 Gr.36	Typical
10	M10	N52	N53			Corner Plate	Beam	RECT	A36 Gr.36	Typical
11	M11	N53	N47			Corner Plate	Beam	RECT	A36 Gr.36	Typical
12	M12	N52	N49			Corner Plate	Beam	RECT	A36 Gr.36	Typical
13	M13	N79	N80			Corner Plate	Beam	RECT	A36 Gr.36	Typical
14	M14	N80	N74			Corner Plate	Beam	RECT	A36 Gr.36	Typical
15	M15	N79	N76			Corner Plate	Beam	RECT	A36 Gr.36	Typical
16	M16	N14	N16			Crossmember	Beam	SquareTube	A500 Gr...	Typical
17	M17	N15	N7			Crossmember	Beam	SquareTube	A500 Gr...	Typical
18	M18	N41	N43			Crossmember	Beam	SquareTube	A500 Gr...	Typical
19	M19	N42	N34			Crossmember	Beam	SquareTube	A500 Gr...	Typical
20	M20	N68	N70			Crossmember	Beam	SquareTube	A500 Gr...	Typical
21	M21	N69	N61			Crossmember	Beam	SquareTube	A500 Gr...	Typical
22	M22	N30	N8			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
23	M23	N9	N32			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
24	M24	N57	N35			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
25	M25	N36	N59			Grating Support	Beam	Single Angle	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
26	M26	N84	N62			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
27	M27	N63	N86			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
28	M28	N14	N18			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
29	M29	N18	N19			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
30	M30	N7	N17			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
31	M31	N17	N21			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
32	M32	N41	N45			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
33	M33	N45	N46			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
34	M34	N34	N44			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
35	M35	N44	N48			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
36	M36	N68	N72			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
37	M37	N72	N73			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
38	M38	N61	N71			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
39	M39	N71	N75			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
40	M40	N96	N97			Support Rail	Beam	Pipe	A53 Gr.B	Typical
41	M41	N126	N127			Support Rail	Beam	Pipe	A53 Gr.B	Typical
42	M42	N156	N157			Support Rail	Beam	Pipe	A53 Gr.B	Typical
43	M43	N121	N176		180	Support Rail Corner	Beam	Single Angle	A36 Gr.36	Typical
44	M44	N181	N146		180	Support Rail Corner	Beam	Single Angle	A36 Gr.36	Typical
45	M45	N151	N116		180	Support Rail Corner	Beam	Single Angle	A36 Gr.36	Typical
46	MP1A	N112	N115			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
47	MP2A	N111	N114			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
48	MP3A	N110	N113			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
49	MP4A	N118	N119			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
50	MP1B	N172	N175			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
51	MP2B	N171	N174			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
52	MP3B	N170	N173			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
53	MP4B	N178	N179			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
54	MP1C	N142	N145			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
55	MP2C	N141	N144			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
56	MP3C	N140	N143			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
57	MP4C	N148	N149			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
58	M58	N9	N13			RIGID	None	None	RIGID	Typical
59	M59	N8	N12			RIGID	None	None	RIGID	Typical
60	M60	N32	N33			RIGID	None	None	RIGID	Typical
61	M61	N15	N10			RIGID	None	None	RIGID	Typical
62	M62	N10	N16			RIGID	None	None	RIGID	Typical
63	M63	N19	N23			RIGID	None	None	RIGID	Typical
64	M64	N20	N27			RIGID	None	None	RIGID	Typical
65	M65	N21	N24			RIGID	None	None	RIGID	Typical
66	M66	N22	N28			RIGID	None	None	RIGID	Typical
67	M67	N33	N29			RIGID	None	None	RIGID	Typical
68	M68	N29	N31			RIGID	None	None	RIGID	Typical
69	M69	N30	N31			RIGID	None	None	RIGID	Typical
70	M70	N36	N40			RIGID	None	None	RIGID	Typical
71	M71	N35	N39			RIGID	None	None	RIGID	Typical
72	M72	N59	N60			RIGID	None	None	RIGID	Typical
73	M73	N42	N37			RIGID	None	None	RIGID	Typical
74	M74	N37	N43			RIGID	None	None	RIGID	Typical
75	M75	N46	N50			RIGID	None	None	RIGID	Typical
76	M76	N47	N54			RIGID	None	None	RIGID	Typical
77	M77	N48	N51			RIGID	None	None	RIGID	Typical
78	M78	N49	N55			RIGID	None	None	RIGID	Typical
79	M79	N60	N56			RIGID	None	None	RIGID	Typical
80	M80	N56	N58			RIGID	None	None	RIGID	Typical
81	M81	N57	N58			RIGID	None	None	RIGID	Typical
82	M82	N63	N67			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
83	M83	N62	N66			RIGID	None	None	RIGID	Typical
84	M84	N86	N87			RIGID	None	None	RIGID	Typical
85	M85	N69	N64			RIGID	None	None	RIGID	Typical
86	M86	N64	N70			RIGID	None	None	RIGID	Typical
87	M87	N73	N77			RIGID	None	None	RIGID	Typical
88	M88	N74	N81			RIGID	None	None	RIGID	Typical
89	M89	N75	N78			RIGID	None	None	RIGID	Typical
90	M90	N76	N82			RIGID	None	None	RIGID	Typical
91	M91	N87	N83			RIGID	None	None	RIGID	Typical
92	M92	N83	N85			RIGID	None	None	RIGID	Typical
93	M93	N84	N85			RIGID	None	None	RIGID	Typical
94	M94	N95	N106			RIGID	None	None	RIGID	Typical
95	M95	N101	N109			RIGID	None	None	RIGID	Typical
96	M96	N94	N105			RIGID	None	None	RIGID	Typical
97	M97	N100	N108			RIGID	None	None	RIGID	Typical
98	M98	N93	N104			RIGID	None	None	RIGID	Typical
99	M99	N99	N107			RIGID	None	None	RIGID	Typical
100	M100	N92	N103			RIGID	None	None	RIGID	Typical
101	M101	N98	N117			RIGID	None	None	RIGID	Typical
102	M102	N102	N116			RIGID	None	None	RIGID	Typical
103	M103	N120	N121			RIGID	None	None	RIGID	Typical
104	M104	N125	N136			RIGID	None	None	RIGID	Typical
105	M105	N131	N139			RIGID	None	None	RIGID	Typical
106	M106	N124	N135			RIGID	None	None	RIGID	Typical
107	M107	N130	N138			RIGID	None	None	RIGID	Typical
108	M108	N123	N134			RIGID	None	None	RIGID	Typical
109	M109	N129	N137			RIGID	None	None	RIGID	Typical
110	M110	N122	N133			RIGID	None	None	RIGID	Typical
111	M111	N132	N146			RIGID	None	None	RIGID	Typical
112	M112	N128	N147			RIGID	None	None	RIGID	Typical
113	M113	N150	N151			RIGID	None	None	RIGID	Typical
114	M114	N155	N166			RIGID	None	None	RIGID	Typical
115	M115	N161	N169			RIGID	None	None	RIGID	Typical
116	M116	N154	N165			RIGID	None	None	RIGID	Typical
117	M117	N160	N168			RIGID	None	None	RIGID	Typical
118	M118	N153	N164			RIGID	None	None	RIGID	Typical
119	M119	N159	N167			RIGID	None	None	RIGID	Typical
120	M120	N152	N163			RIGID	None	None	RIGID	Typical
121	M121	N162	N176			RIGID	None	None	RIGID	Typical
122	M122	N158	N177			RIGID	None	None	RIGID	Typical
123	M123	N180	N181			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis ...	Inactive	Seismi...
1	M1						Yes	Default			None
2	M2						Yes	Default			None
3	M3						Yes	Default			None
4	M4						Yes				None
5	M5						Yes				None
6	M6						Yes				None
7	M7						Yes	Default			None
8	M8						Yes				None
9	M9						Yes				None
10	M10						Yes	Default			None
11	M11						Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis ...	Inactive	Seismi...
12	M12						Yes				None
13	M13						Yes	Default			None
14	M14						Yes				None
15	M15						Yes				None
16	M16						Yes	Default			None
17	M17						Yes	Default			None
18	M18						Yes	Default			None
19	M19						Yes	Default			None
20	M20						Yes	Default			None
21	M21						Yes	Default			None
22	M22	OOOOOX	OOOOOX				Yes	Default			None
23	M23	OOOOOX	OOOOOX				Yes	Default			None
24	M24	OOOOOX	OOOOOX				Yes	Default			None
25	M25	OOOOOX	OOOOOX				Yes	Default			None
26	M26	OOOOOX	OOOOOX				Yes	Default			None
27	M27	OOOOOX	OOOOOX				Yes	Default			None
28	M28						Yes				None
29	M29						Yes				None
30	M30						Yes				None
31	M31						Yes				None
32	M32						Yes				None
33	M33						Yes				None
34	M34						Yes				None
35	M35						Yes				None
36	M36						Yes				None
37	M37						Yes				None
38	M38						Yes				None
39	M39						Yes				None
40	M40						Yes	Default			None
41	M41						Yes	Default			None
42	M42						Yes	Default			None
43	M43						Yes				None
44	M44						Yes				None
45	M45						Yes				None
46	MP1A						Yes	** NA **			None
47	MP2A						Yes	** NA **			None
48	MP3A						Yes	** NA **			None
49	MP4A						Yes	** NA **			None
50	MP1B						Yes	** NA **			None
51	MP2B						Yes	** NA **			None
52	MP3B						Yes	** NA **			None
53	MP4B						Yes	** NA **			None
54	MP1C						Yes	** NA **			None
55	MP2C						Yes	** NA **			None
56	MP3C						Yes	** NA **			None
57	MP4C						Yes	** NA **			None
58	M58						Yes	** NA **			None
59	M59						Yes	** NA **			None
60	M60						Yes	** NA **			None
61	M61						Yes	** NA **			None
62	M62						Yes	** NA **			None
63	M63		BenPIN				Yes	** NA **			None
64	M64		BenPIN				Yes	** NA **			None
65	M65		BenPIN				Yes	** NA **			None
66	M66		BenPIN				Yes	** NA **			None
67	M67						Yes	** NA **			None
68	M68						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis ...	Inactive	Seismi...
69	M69						Yes	** NA **			None
70	M70						Yes	** NA **			None
71	M71						Yes	** NA **			None
72	M72						Yes	** NA **			None
73	M73						Yes	** NA **			None
74	M74						Yes	** NA **			None
75	M75		BenPIN				Yes	** NA **			None
76	M76		BenPIN				Yes	** NA **			None
77	M77		BenPIN				Yes	** NA **			None
78	M78		BenPIN				Yes	** NA **			None
79	M79						Yes	** NA **			None
80	M80						Yes	** NA **			None
81	M81						Yes	** NA **			None
82	M82						Yes	** NA **			None
83	M83						Yes	** NA **			None
84	M84						Yes	** NA **			None
85	M85						Yes	** NA **			None
86	M86						Yes	** NA **			None
87	M87		BenPIN				Yes	** NA **			None
88	M88		BenPIN				Yes	** NA **			None
89	M89		BenPIN				Yes	** NA **			None
90	M90		BenPIN				Yes	** NA **			None
91	M91						Yes	** NA **			None
92	M92						Yes	** NA **			None
93	M93						Yes	** NA **			None
94	M94						Yes	** NA **			None
95	M95						Yes	** NA **			None
96	M96						Yes	** NA **			None
97	M97						Yes	** NA **			None
98	M98						Yes	** NA **			None
99	M99						Yes	** NA **			None
100	M100						Yes	** NA **			None
101	M101						Yes	** NA **			None
102	M102	OOOOOX					Yes	** NA **			None
103	M103	OOOOOX					Yes	** NA **			None
104	M104						Yes	** NA **			None
105	M105						Yes	** NA **			None
106	M106						Yes	** NA **			None
107	M107						Yes	** NA **			None
108	M108						Yes	** NA **			None
109	M109						Yes	** NA **			None
110	M110						Yes	** NA **			None
111	M111	OOOOOX					Yes	** NA **			None
112	M112						Yes	** NA **			None
113	M113	OOOOOX					Yes	** NA **			None
114	M114						Yes	** NA **			None
115	M115						Yes	** NA **			None
116	M116						Yes	** NA **			None
117	M117						Yes	** NA **			None
118	M118						Yes	** NA **			None
119	M119						Yes	** NA **			None
120	M120						Yes	** NA **			None
121	M121	OOOOOX					Yes	** NA **			None
122	M122						Yes	** NA **			None
123	M123	OOOOOX					Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-22.35	2.25
2	MP1A	My	-.0111	2.25
3	MP1A	Mz	.000974	2.25
4	MP1A	Y	-22.35	6.25
5	MP1A	My	-.0111	6.25
6	MP1A	Mz	.000974	6.25
7	MP1B	Y	-22.35	2.25
8	MP1B	My	.0019	2.25
9	MP1B	Mz	-.011	2.25
10	MP1B	Y	-22.35	6.25
11	MP1B	My	.0019	6.25
12	MP1B	Mz	-.011	6.25
13	MP1C	Y	-22.35	2.25
14	MP1C	My	.0086	2.25
15	MP1C	Mz	.0072	2.25
16	MP1C	Y	-22.35	6.25
17	MP1C	My	.0086	6.25
18	MP1C	Mz	.0072	6.25
19	MP2A	Y	-21.85	2.25
20	MP2A	My	-.0176	2.25
21	MP2A	Mz	-.0131	2.25
22	MP2A	Y	-21.85	6.25
23	MP2A	My	-.0176	6.25
24	MP2A	Mz	-.0131	6.25
25	MP2B	Y	-21.85	2.25
26	MP2B	My	.0172	2.25
27	MP2B	Mz	-.0136	2.25
28	MP2B	Y	-21.85	6.25
29	MP2B	My	.0172	6.25
30	MP2B	Mz	-.0136	6.25
31	MP2C	Y	-21.85	2.25
32	MP2C	My	.0032	2.25
33	MP2C	Mz	.0217	2.25
34	MP2C	Y	-21.85	6.25
35	MP2C	My	.0032	6.25
36	MP2C	Mz	.0217	6.25
37	MP2A	Y	-32.3	2.25
38	MP2A	My	-.0223	2.25
39	MP2A	Mz	.0236	2.25
40	MP2A	Y	-32.3	6.25
41	MP2A	My	-.0223	6.25
42	MP2A	Mz	.0236	6.25
43	MP2B	Y	-32.3	2.25
44	MP2B	My	-.017	2.25
45	MP2B	Mz	-.0276	2.25
46	MP2B	Y	-32.3	6.25
47	MP2B	My	-.017	6.25
48	MP2B	Mz	-.0276	6.25
49	MP2C	Y	-32.3	2.25
50	MP2C	My	.0324	2.25
51	MP2C	Mz	-.000924	2.25
52	MP2C	Y	-32.3	6.25
53	MP2C	My	.0324	6.25
54	MP2C	Mz	-.000924	6.25
55	MP4A	Y	-28.65	3.25
56	MP4A	My	-.0143	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
57	MP4A	Mz	.0012	3.25
58	MP4A	Y	-28.65	5.25
59	MP4A	My	-.0143	5.25
60	MP4A	Mz	.0012	5.25
61	MP4B	Y	-28.65	3.25
62	MP4B	My	.0025	3.25
63	MP4B	Mz	-.0141	3.25
64	MP4B	Y	-28.65	5.25
65	MP4B	My	.0025	5.25
66	MP4B	Mz	-.0141	5.25
67	MP4C	Y	-28.65	3.25
68	MP4C	My	.011	3.25
69	MP4C	Mz	.0092	3.25
70	MP4C	Y	-28.65	5.25
71	MP4C	My	.011	5.25
72	MP4C	Mz	.0092	5.25
73	MP2A	Y	-74.7	2
74	MP2A	My	.0372	2
75	MP2A	Mz	-.0033	2
76	MP2B	Y	-74.7	2
77	MP2B	My	-.0065	2
78	MP2B	Mz	.0368	2
79	MP2C	Y	-74.7	2
80	MP2C	My	-.0286	2
81	MP2C	Mz	-.024	2
82	MP3A	Y	-79.1	2
83	MP3A	My	.0394	2
84	MP3A	Mz	-.0034	2
85	MP3B	Y	-79.1	2
86	MP3B	My	-.0069	2
87	MP3B	Mz	.0389	2
88	MP3C	Y	-79.1	2
89	MP3C	My	-.0303	2
90	MP3C	Mz	-.0254	2
91	MP2A	Y	-21	6
92	MP2A	My	.0105	6
93	MP2A	Mz	-.000915	6
94	MP2B	Y	-21	6
95	MP2B	My	-.0018	6
96	MP2B	Mz	.0103	6
97	MP2C	Y	-21	6
98	MP2C	My	-.008	6
99	MP2C	Mz	-.0067	6

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-73.0613	2.25
2	MP1A	My	-.0364	2.25
3	MP1A	Mz	.0032	2.25
4	MP1A	Y	-73.0613	6.25
5	MP1A	My	-.0364	6.25
6	MP1A	Mz	.0032	6.25
7	MP1B	Y	-73.0613	2.25
8	MP1B	My	.0063	2.25
9	MP1B	Mz	-.036	2.25
10	MP1B	Y	-73.0613	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP1B	My	.0063	6.25
12	MP1B	Mz	-.036	6.25
13	MP1C	Y	-73.0613	2.25
14	MP1C	My	.028	2.25
15	MP1C	Mz	.0235	2.25
16	MP1C	Y	-73.0613	6.25
17	MP1C	My	.028	6.25
18	MP1C	Mz	.0235	6.25
19	MP2A	Y	-93.708	2.25
20	MP2A	My	-.0755	2.25
21	MP2A	Mz	-.0561	2.25
22	MP2A	Y	-93.708	6.25
23	MP2A	My	-.0755	6.25
24	MP2A	Mz	-.0561	6.25
25	MP2B	Y	-93.708	2.25
26	MP2B	My	.0737	2.25
27	MP2B	Mz	-.0584	2.25
28	MP2B	Y	-93.708	6.25
29	MP2B	My	.0737	6.25
30	MP2B	Mz	-.0584	6.25
31	MP2C	Y	-93.708	2.25
32	MP2C	My	.0137	2.25
33	MP2C	Mz	.093	2.25
34	MP2C	Y	-93.708	6.25
35	MP2C	My	.0137	6.25
36	MP2C	Mz	.093	6.25
37	MP2A	Y	-93.708	2.25
38	MP2A	My	-.0646	2.25
39	MP2A	Mz	.0684	2.25
40	MP2A	Y	-93.708	6.25
41	MP2A	My	-.0646	6.25
42	MP2A	Mz	.0684	6.25
43	MP2B	Y	-93.708	2.25
44	MP2B	My	-.0493	2.25
45	MP2B	Mz	-.0801	2.25
46	MP2B	Y	-93.708	6.25
47	MP2B	My	-.0493	6.25
48	MP2B	Mz	-.0801	6.25
49	MP2C	Y	-93.708	2.25
50	MP2C	My	.094	2.25
51	MP2C	Mz	-.0027	2.25
52	MP2C	Y	-93.708	6.25
53	MP2C	My	.094	6.25
54	MP2C	Mz	-.0027	6.25
55	MP4A	Y	-46.4022	3.25
56	MP4A	My	-.0231	3.25
57	MP4A	Mz	.002	3.25
58	MP4A	Y	-46.4022	5.25
59	MP4A	My	-.0231	5.25
60	MP4A	Mz	.002	5.25
61	MP4B	Y	-46.4022	3.25
62	MP4B	My	.004	3.25
63	MP4B	Mz	-.0228	3.25
64	MP4B	Y	-46.4022	5.25
65	MP4B	My	.004	5.25
66	MP4B	Mz	-.0228	5.25
67	MP4C	Y	-46.4022	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
68	MP4C	My	.0178	3.25
69	MP4C	Mz	.0149	3.25
70	MP4C	Y	-46.4022	5.25
71	MP4C	My	.0178	5.25
72	MP4C	Mz	.0149	5.25
73	MP2A	Y	-70.2568	2
74	MP2A	My	.035	2
75	MP2A	Mz	-.0031	2
76	MP2B	Y	-70.2568	2
77	MP2B	My	-.0061	2
78	MP2B	Mz	.0346	2
79	MP2C	Y	-70.2568	2
80	MP2C	My	-.0269	2
81	MP2C	Mz	-.0226	2
82	MP3A	Y	-70.9765	2
83	MP3A	My	.0354	2
84	MP3A	Mz	-.0031	2
85	MP3B	Y	-70.9765	2
86	MP3B	My	-.0062	2
87	MP3B	Mz	.0349	2
88	MP3C	Y	-70.9765	2
89	MP3C	My	-.0272	2
90	MP3C	Mz	-.0228	2
91	MP2A	Y	-27.1898	6
92	MP2A	My	.0135	6
93	MP2A	Mz	-.0012	6
94	MP2B	Y	-27.1898	6
95	MP2B	My	-.0024	6
96	MP2B	Mz	.0134	6
97	MP2C	Y	-27.1898	6
98	MP2C	My	-.0104	6
99	MP2C	Mz	-.0087	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.25
2	MP1A	Z	-119.226	2.25
3	MP1A	Mx	-.0052	2.25
4	MP1A	X	0	6.25
5	MP1A	Z	-119.226	6.25
6	MP1A	Mx	-.0052	6.25
7	MP1B	X	0	2.25
8	MP1B	Z	-79.947	2.25
9	MP1B	Mx	.0394	2.25
10	MP1B	X	0	6.25
11	MP1B	Z	-79.947	6.25
12	MP1B	Mx	.0394	6.25
13	MP1C	X	0	2.25
14	MP1C	Z	-102.67	2.25
15	MP1C	Mx	-.033	2.25
16	MP1C	X	0	6.25
17	MP1C	Z	-102.67	6.25
18	MP1C	Mx	-.033	6.25
19	MP2A	X	0	2.25
20	MP2A	Z	-110.852	2.25
21	MP2A	Mx	.0664	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP2A	X	0	6.25
23	MP2A	Z	-110.852	6.25
24	MP2A	Mx	.0664	6.25
25	MP2B	X	0	2.25
26	MP2B	Z	-49.69	2.25
27	MP2B	Mx	.0309	2.25
28	MP2B	X	0	6.25
29	MP2B	Z	-49.69	6.25
30	MP2B	Mx	.0309	6.25
31	MP2C	X	0	2.25
32	MP2C	Z	-85.073	2.25
33	MP2C	Mx	-.0845	2.25
34	MP2C	X	0	6.25
35	MP2C	Z	-85.073	6.25
36	MP2C	Mx	-.0845	6.25
37	MP2A	X	0	2.25
38	MP2A	Z	-164.632	2.25
39	MP2A	Mx	-.1201	2.25
40	MP2A	X	0	6.25
41	MP2A	Z	-164.632	6.25
42	MP2A	Mx	-.1201	6.25
43	MP2B	X	0	2.25
44	MP2B	Z	-111.198	2.25
45	MP2B	Mx	.095	2.25
46	MP2B	X	0	6.25
47	MP2B	Z	-111.198	6.25
48	MP2B	Mx	.095	6.25
49	MP2C	X	0	2.25
50	MP2C	Z	-142.11	2.25
51	MP2C	Mx	.0041	2.25
52	MP2C	X	0	6.25
53	MP2C	Z	-142.11	6.25
54	MP2C	Mx	.0041	6.25
55	MP4A	X	0	3.25
56	MP4A	Z	-77.346	3.25
57	MP4A	Mx	-.0034	3.25
58	MP4A	X	0	5.25
59	MP4A	Z	-77.346	5.25
60	MP4A	Mx	-.0034	5.25
61	MP4B	X	0	3.25
62	MP4B	Z	-31.37	3.25
63	MP4B	Mx	.0154	3.25
64	MP4B	X	0	5.25
65	MP4B	Z	-31.37	5.25
66	MP4B	Mx	.0154	5.25
67	MP4C	X	0	3.25
68	MP4C	Z	-57.967	3.25
69	MP4C	Mx	-.0186	3.25
70	MP4C	X	0	5.25
71	MP4C	Z	-57.967	5.25
72	MP4C	Mx	-.0186	5.25
73	MP2A	X	0	2
74	MP2A	Z	-63.402	2
75	MP2A	Mx	.0028	2
76	MP2B	X	0	2
77	MP2B	Z	-43.278	2
78	MP2B	Mx	-.0213	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
79	MP2C	X	0	2
80	MP2C	Z	-54.92	2
81	MP2C	Mx	.0177	2
82	MP3A	X	0	2
83	MP3A	Z	-76.498	2
84	MP3A	Mx	.0033	2
85	MP3B	X	0	2
86	MP3B	Z	-53.02	2
87	MP3B	Mx	-.0261	2
88	MP3C	X	0	2
89	MP3C	Z	-66.602	2
90	MP3C	Mx	.0214	2
91	MP2A	X	0	6
92	MP2A	Z	-35.112	6
93	MP2A	Mx	.0015	6
94	MP2B	X	0	6
95	MP2B	Z	-15.548	6
96	MP2B	Mx	-.0077	6
97	MP2C	X	0	6
98	MP2C	Z	-26.866	6
99	MP2C	Mx	.0086	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	53.053	2.25
2	MP1A	Z	-91.891	2.25
3	MP1A	Mx	-.0304	2.25
4	MP1A	X	53.053	6.25
5	MP1A	Z	-91.891	6.25
6	MP1A	Mx	-.0304	6.25
7	MP1B	X	41.745	2.25
8	MP1B	Z	-72.305	2.25
9	MP1B	Mx	.0392	2.25
10	MP1B	X	41.745	6.25
11	MP1B	Z	-72.305	6.25
12	MP1B	Mx	.0392	6.25
13	MP1C	X	59.153	2.25
14	MP1C	Z	-102.455	2.25
15	MP1C	Mx	-.0103	2.25
16	MP1C	X	59.153	6.25
17	MP1C	Z	-102.455	6.25
18	MP1C	Mx	-.0103	6.25
19	MP2A	X	45.212	2.25
20	MP2A	Z	-78.309	2.25
21	MP2A	Mx	.0105	2.25
22	MP2A	X	45.212	6.25
23	MP2A	Z	-78.309	6.25
24	MP2A	Mx	.0105	6.25
25	MP2B	X	27.604	2.25
26	MP2B	Z	-47.812	2.25
27	MP2B	Mx	.0515	2.25
28	MP2B	X	27.604	6.25
29	MP2B	Z	-47.812	6.25
30	MP2B	Mx	.0515	6.25
31	MP2C	X	54.709	2.25
32	MP2C	Z	-94.759	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP2C	Mx	-.0861	2.25
34	MP2C	X	54.709	6.25
35	MP2C	Z	-94.759	6.25
36	MP2C	Mx	-.0861	6.25
37	MP2A	X	73.392	2.25
38	MP2A	Z	-127.119	2.25
39	MP2A	Mx	-.1433	2.25
40	MP2A	X	73.392	6.25
41	MP2A	Z	-127.119	6.25
42	MP2A	Mx	-.1433	6.25
43	MP2B	X	58.01	2.25
44	MP2B	Z	-100.476	2.25
45	MP2B	Mx	.0553	2.25
46	MP2B	X	58.01	6.25
47	MP2B	Z	-100.476	6.25
48	MP2B	Mx	.0553	6.25
49	MP2C	X	81.69	2.25
50	MP2C	Z	-141.491	2.25
51	MP2C	Mx	.086	2.25
52	MP2C	X	81.69	6.25
53	MP2C	Z	-141.491	6.25
54	MP2C	Mx	.086	6.25
55	MP4A	X	30.995	3.25
56	MP4A	Z	-53.685	3.25
57	MP4A	Mx	-.0178	3.25
58	MP4A	X	30.995	5.25
59	MP4A	Z	-53.685	5.25
60	MP4A	Mx	-.0178	5.25
61	MP4B	X	17.759	3.25
62	MP4B	Z	-30.76	3.25
63	MP4B	Mx	.0167	3.25
64	MP4B	X	17.759	5.25
65	MP4B	Z	-30.76	5.25
66	MP4B	Mx	.0167	5.25
67	MP4C	X	38.134	3.25
68	MP4C	Z	-66.05	3.25
69	MP4C	Mx	-.0066	3.25
70	MP4C	X	38.134	5.25
71	MP4C	Z	-66.05	5.25
72	MP4C	Mx	-.0066	5.25
73	MP2A	X	28.34	2
74	MP2A	Z	-49.087	2
75	MP2A	Mx	.0163	2
76	MP2B	X	22.547	2
77	MP2B	Z	-39.052	2
78	MP2B	Mx	-.0212	2
79	MP2C	X	31.465	2
80	MP2C	Z	-54.499	2
81	MP2C	Mx	.0055	2
82	MP3A	X	34.328	2
83	MP3A	Z	-59.458	2
84	MP3A	Mx	.0197	2
85	MP3B	X	27.569	2
86	MP3B	Z	-47.751	2
87	MP3B	Mx	-.0259	2
88	MP3C	X	37.974	2
89	MP3C	Z	-65.773	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
90	MP3C	Mx	.0066	2
91	MP2A	X	14.289	6
92	MP2A	Z	-24.749	6
93	MP2A	Mx	.0082	6
94	MP2B	X	8.657	6
95	MP2B	Z	-14.994	6
96	MP2B	Mx	-.0081	6
97	MP2C	X	17.327	6
98	MP2C	Z	-30.01	6
99	MP2C	Mx	.003	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	74.484	2.25
2	MP1A	Z	-43.003	2.25
3	MP1A	Mx	-.039	2.25
4	MP1A	X	74.484	6.25
5	MP1A	Z	-43.003	6.25
6	MP1A	Mx	-.039	6.25
7	MP1B	X	88.915	2.25
8	MP1B	Z	-51.335	2.25
9	MP1B	Mx	.033	2.25
10	MP1B	X	88.915	6.25
11	MP1B	Z	-51.335	6.25
12	MP1B	Mx	.033	6.25
13	MP1C	X	99.386	2.25
14	MP1C	Z	-57.38	2.25
15	MP1C	Mx	.0196	2.25
16	MP1C	X	99.386	6.25
17	MP1C	Z	-57.38	6.25
18	MP1C	Mx	.0196	6.25
19	MP2A	X	51.204	2.25
20	MP2A	Z	-29.563	2.25
21	MP2A	Mx	-.0235	2.25
22	MP2A	X	51.204	6.25
23	MP2A	Z	-29.563	6.25
24	MP2A	Mx	-.0235	6.25
25	MP2B	X	73.675	2.25
26	MP2B	Z	-42.536	2.25
27	MP2B	Mx	.0845	2.25
28	MP2B	X	73.675	6.25
29	MP2B	Z	-42.536	6.25
30	MP2B	Mx	.0845	6.25
31	MP2C	X	89.979	2.25
32	MP2C	Z	-51.95	2.25
33	MP2C	Mx	-.0384	2.25
34	MP2C	X	89.979	6.25
35	MP2C	Z	-51.95	6.25
36	MP2C	Mx	-.0384	6.25
37	MP2A	X	103.439	2.25
38	MP2A	Z	-59.721	2.25
39	MP2A	Mx	-.1148	2.25
40	MP2A	X	103.439	6.25
41	MP2A	Z	-59.721	6.25
42	MP2A	Mx	-.1148	6.25
43	MP2B	X	123.071	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
44	MP2B	Z	-71.055	2.25
45	MP2B	Mx	-.0041	2.25
46	MP2B	X	123.071	6.25
47	MP2B	Z	-71.055	6.25
48	MP2B	Mx	-.0041	6.25
49	MP2C	X	137.315	2.25
50	MP2C	Z	-79.279	2.25
51	MP2C	Mx	.14	2.25
52	MP2C	X	137.315	6.25
53	MP2C	Z	-79.279	6.25
54	MP2C	Mx	.14	6.25
55	MP4A	X	33.31	3.25
56	MP4A	Z	-19.232	3.25
57	MP4A	Mx	-.0174	3.25
58	MP4A	X	33.31	5.25
59	MP4A	Z	-19.232	5.25
60	MP4A	Mx	-.0174	5.25
61	MP4B	X	50.201	3.25
62	MP4B	Z	-28.984	3.25
63	MP4B	Mx	.0186	3.25
64	MP4B	X	50.201	5.25
65	MP4B	Z	-28.984	5.25
66	MP4B	Mx	.0186	5.25
67	MP4C	X	62.457	3.25
68	MP4C	Z	-36.06	3.25
69	MP4C	Mx	.0123	3.25
70	MP4C	X	62.457	5.25
71	MP4C	Z	-36.06	5.25
72	MP4C	Mx	.0123	5.25
73	MP2A	X	40.169	2
74	MP2A	Z	-23.191	2
75	MP2A	Mx	.021	2
76	MP2B	X	47.562	2
77	MP2B	Z	-27.46	2
78	MP2B	Mx	-.0177	2
79	MP2C	X	52.927	2
80	MP2C	Z	-30.557	2
81	MP2C	Mx	-.0105	2
82	MP3A	X	49.053	2
83	MP3A	Z	-28.321	2
84	MP3A	Mx	.0257	2
85	MP3B	X	57.679	2
86	MP3B	Z	-33.301	2
87	MP3B	Mx	-.0214	2
88	MP3C	X	63.938	2
89	MP3C	Z	-36.915	2
90	MP3C	Mx	-.0126	2
91	MP2A	X	16.079	6
92	MP2A	Z	-9.283	6
93	MP2A	Mx	.0084	6
94	MP2B	X	23.266	6
95	MP2B	Z	-13.433	6
96	MP2B	Mx	-.0086	6
97	MP2C	X	28.482	6
98	MP2C	Z	-16.444	6
99	MP2C	Mx	-.0056	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	79.026	2.25
2	MP1A	Z	0	2.25
3	MP1A	Mx	-.0394	2.25
4	MP1A	X	79.026	6.25
5	MP1A	Z	0	6.25
6	MP1A	Mx	-.0394	6.25
7	MP1B	X	118.305	2.25
8	MP1B	Z	0	2.25
9	MP1B	Mx	.0103	2.25
10	MP1B	X	118.305	6.25
11	MP1B	Z	0	6.25
12	MP1B	Mx	.0103	6.25
13	MP1C	X	95.582	2.25
14	MP1C	Z	0	2.25
15	MP1C	Mx	.0366	2.25
16	MP1C	X	95.582	6.25
17	MP1C	Z	0	6.25
18	MP1C	Mx	.0366	6.25
19	MP2A	X	48.256	2.25
20	MP2A	Z	0	2.25
21	MP2A	Mx	-.0389	2.25
22	MP2A	X	48.256	6.25
23	MP2A	Z	0	6.25
24	MP2A	Mx	-.0389	6.25
25	MP2B	X	109.418	2.25
26	MP2B	Z	0	2.25
27	MP2B	Mx	.0861	2.25
28	MP2B	X	109.418	6.25
29	MP2B	Z	0	6.25
30	MP2B	Mx	.0861	6.25
31	MP2C	X	74.035	2.25
32	MP2C	Z	0	2.25
33	MP2C	Mx	.0108	2.25
34	MP2C	X	74.035	6.25
35	MP2C	Z	0	6.25
36	MP2C	Mx	.0108	6.25
37	MP2A	X	109.945	2.25
38	MP2A	Z	0	2.25
39	MP2A	Mx	-.0758	2.25
40	MP2A	X	109.945	6.25
41	MP2A	Z	0	6.25
42	MP2A	Mx	-.0758	6.25
43	MP2B	X	163.379	2.25
44	MP2B	Z	0	2.25
45	MP2B	Mx	-.086	2.25
46	MP2B	X	163.379	6.25
47	MP2B	Z	0	6.25
48	MP2B	Mx	-.086	6.25
49	MP2C	X	132.467	2.25
50	MP2C	Z	0	2.25
51	MP2C	Mx	.1329	2.25
52	MP2C	X	132.467	6.25
53	MP2C	Z	0	6.25
54	MP2C	Mx	.1329	6.25
55	MP4A	X	30.292	3.25
56	MP4A	Z	0	3.25
57	MP4A	Mx	-.0151	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP4A	X	30.292	5.25
59	MP4A	Z	0	5.25
60	MP4A	Mx	-.0151	5.25
61	MP4B	X	76.268	3.25
62	MP4B	Z	0	3.25
63	MP4B	Mx	.0066	3.25
64	MP4B	X	76.268	5.25
65	MP4B	Z	0	5.25
66	MP4B	Mx	.0066	5.25
67	MP4C	X	49.671	3.25
68	MP4C	Z	0	3.25
69	MP4C	Mx	.019	3.25
70	MP4C	X	49.671	5.25
71	MP4C	Z	0	5.25
72	MP4C	Mx	.019	5.25
73	MP2A	X	42.806	2
74	MP2A	Z	0	2
75	MP2A	Mx	.0213	2
76	MP2B	X	62.931	2
77	MP2B	Z	0	2
78	MP2B	Mx	-.0055	2
79	MP2C	X	51.288	2
80	MP2C	Z	0	2
81	MP2C	Mx	-.0196	2
82	MP3A	X	52.47	2
83	MP3A	Z	0	2
84	MP3A	Mx	.0261	2
85	MP3B	X	75.948	2
86	MP3B	Z	0	2
87	MP3B	Mx	-.0066	2
88	MP3C	X	62.365	2
89	MP3C	Z	0	2
90	MP3C	Mx	-.0239	2
91	MP2A	X	15.089	6
92	MP2A	Z	0	6
93	MP2A	Mx	.0075	6
94	MP2B	X	34.653	6
95	MP2B	Z	0	6
96	MP2B	Mx	-.003	6
97	MP2C	X	23.335	6
98	MP2C	Z	0	6
99	MP2C	Mx	-.0089	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	79.8	2.25
2	MP1A	Z	46.073	2.25
3	MP1A	Mx	-.0377	2.25
4	MP1A	X	79.8	6.25
5	MP1A	Z	46.073	6.25
6	MP1A	Mx	-.0377	6.25
7	MP1B	X	99.386	2.25
8	MP1B	Z	57.38	2.25
9	MP1B	Mx	-.0196	2.25
10	MP1B	X	99.386	6.25
11	MP1B	Z	57.38	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP1B	Mx	-.0196	6.25
13	MP1C	X	69.236	2.25
14	MP1C	Z	39.973	2.25
15	MP1C	Mx	.0394	2.25
16	MP1C	X	69.236	6.25
17	MP1C	Z	39.973	6.25
18	MP1C	Mx	.0394	6.25
19	MP2A	X	59.482	2.25
20	MP2A	Z	34.342	2.25
21	MP2A	Mx	-.0685	2.25
22	MP2A	X	59.482	6.25
23	MP2A	Z	34.342	6.25
24	MP2A	Mx	-.0685	6.25
25	MP2B	X	89.979	2.25
26	MP2B	Z	51.95	2.25
27	MP2B	Mx	.0384	2.25
28	MP2B	X	89.979	6.25
29	MP2B	Z	51.95	6.25
30	MP2B	Mx	.0384	6.25
31	MP2C	X	43.033	2.25
32	MP2C	Z	24.845	2.25
33	MP2C	Mx	.0309	2.25
34	MP2C	X	43.033	6.25
35	MP2C	Z	24.845	6.25
36	MP2C	Mx	.0309	6.25
37	MP2A	X	110.671	2.25
38	MP2A	Z	63.896	2.25
39	MP2A	Mx	-.0296	2.25
40	MP2A	X	110.671	6.25
41	MP2A	Z	63.896	6.25
42	MP2A	Mx	-.0296	6.25
43	MP2B	X	137.315	2.25
44	MP2B	Z	79.279	2.25
45	MP2B	Mx	-.14	2.25
46	MP2B	X	137.315	6.25
47	MP2B	Z	79.279	6.25
48	MP2B	Mx	-.14	6.25
49	MP2C	X	96.3	2.25
50	MP2C	Z	55.599	2.25
51	MP2C	Mx	.095	2.25
52	MP2C	X	96.3	6.25
53	MP2C	Z	55.599	6.25
54	MP2C	Mx	.095	6.25
55	MP4A	X	39.533	3.25
56	MP4A	Z	22.824	3.25
57	MP4A	Mx	-.0187	3.25
58	MP4A	X	39.533	5.25
59	MP4A	Z	22.824	5.25
60	MP4A	Mx	-.0187	5.25
61	MP4B	X	62.457	3.25
62	MP4B	Z	36.06	3.25
63	MP4B	Mx	-.0123	3.25
64	MP4B	X	62.457	5.25
65	MP4B	Z	36.06	5.25
66	MP4B	Mx	-.0123	5.25
67	MP4C	X	27.167	3.25
68	MP4C	Z	15.685	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP4C	Mx	.0154	3.25
70	MP4C	X	27.167	5.25
71	MP4C	Z	15.685	5.25
72	MP4C	Mx	.0154	5.25
73	MP2A	X	42.892	2
74	MP2A	Z	24.764	2
75	MP2A	Mx	.0203	2
76	MP2B	X	52.927	2
77	MP2B	Z	30.557	2
78	MP2B	Mx	.0105	2
79	MP2C	X	37.48	2
80	MP2C	Z	21.639	2
81	MP2C	Mx	-.0213	2
82	MP3A	X	52.231	2
83	MP3A	Z	30.156	2
84	MP3A	Mx	.0247	2
85	MP3B	X	63.938	2
86	MP3B	Z	36.915	2
87	MP3B	Mx	.0126	2
88	MP3C	X	45.917	2
89	MP3C	Z	26.51	2
90	MP3C	Mx	-.0261	2
91	MP2A	X	18.727	6
92	MP2A	Z	10.812	6
93	MP2A	Mx	.0089	6
94	MP2B	X	28.482	6
95	MP2B	Z	16.444	6
96	MP2B	Mx	.0056	6
97	MP2C	X	13.465	6
98	MP2C	Z	7.774	6
99	MP2C	Mx	-.0077	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	56.123	2.25
2	MP1A	Z	97.207	2.25
3	MP1A	Mx	-.0237	2.25
4	MP1A	X	56.123	6.25
5	MP1A	Z	97.207	6.25
6	MP1A	Mx	-.0237	6.25
7	MP1B	X	47.791	2.25
8	MP1B	Z	82.776	2.25
9	MP1B	Mx	-.0366	2.25
10	MP1B	X	47.791	6.25
11	MP1B	Z	82.776	6.25
12	MP1B	Mx	-.0366	6.25
13	MP1C	X	41.745	2.25
14	MP1C	Z	72.305	2.25
15	MP1C	Mx	.0392	2.25
16	MP1C	X	41.745	6.25
17	MP1C	Z	72.305	6.25
18	MP1C	Mx	.0392	6.25
19	MP2A	X	49.991	2.25
20	MP2A	Z	86.587	2.25
21	MP2A	Mx	-.0921	2.25
22	MP2A	X	49.991	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	86.587	6.25
24	MP2A	Mx	-.0921	6.25
25	MP2B	X	37.018	2.25
26	MP2B	Z	64.116	2.25
27	MP2B	Mx	-.0108	2.25
28	MP2B	X	37.018	6.25
29	MP2B	Z	64.116	6.25
30	MP2B	Mx	-.0108	6.25
31	MP2C	X	27.604	2.25
32	MP2C	Z	47.812	2.25
33	MP2C	Mx	.0515	2.25
34	MP2C	X	27.604	6.25
35	MP2C	Z	47.812	6.25
36	MP2C	Mx	.0515	6.25
37	MP2A	X	77.568	2.25
38	MP2A	Z	134.352	2.25
39	MP2A	Mx	.0446	2.25
40	MP2A	X	77.568	6.25
41	MP2A	Z	134.352	6.25
42	MP2A	Mx	.0446	6.25
43	MP2B	X	66.234	2.25
44	MP2B	Z	114.72	2.25
45	MP2B	Mx	-.1329	2.25
46	MP2B	X	66.234	6.25
47	MP2B	Z	114.72	6.25
48	MP2B	Mx	-.1329	6.25
49	MP2C	X	58.01	2.25
50	MP2C	Z	100.476	2.25
51	MP2C	Mx	.0553	2.25
52	MP2C	X	58.01	6.25
53	MP2C	Z	100.476	6.25
54	MP2C	Mx	.0553	6.25
55	MP4A	X	34.587	3.25
56	MP4A	Z	59.907	3.25
57	MP4A	Mx	-.0146	3.25
58	MP4A	X	34.587	5.25
59	MP4A	Z	59.907	5.25
60	MP4A	Mx	-.0146	5.25
61	MP4B	X	24.835	3.25
62	MP4B	Z	43.016	3.25
63	MP4B	Mx	-.019	3.25
64	MP4B	X	24.835	5.25
65	MP4B	Z	43.016	5.25
66	MP4B	Mx	-.019	5.25
67	MP4C	X	17.759	3.25
68	MP4C	Z	30.76	3.25
69	MP4C	Mx	.0167	3.25
70	MP4C	X	17.759	5.25
71	MP4C	Z	30.76	5.25
72	MP4C	Mx	.0167	5.25
73	MP2A	X	29.913	2
74	MP2A	Z	51.811	2
75	MP2A	Mx	.0126	2
76	MP2B	X	25.644	2
77	MP2B	Z	44.417	2
78	MP2B	Mx	.0196	2
79	MP2C	X	22.547	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP2C	Z	39.052	2
81	MP2C	Mx	-.0212	2
82	MP3A	X	36.163	2
83	MP3A	Z	62.636	2
84	MP3A	Mx	.0153	2
85	MP3B	X	31.183	2
86	MP3B	Z	54.01	2
87	MP3B	Mx	.0239	2
88	MP3C	X	27.569	2
89	MP3C	Z	47.751	2
90	MP3C	Mx	-.0259	2
91	MP2A	X	15.817	6
92	MP2A	Z	27.397	6
93	MP2A	Mx	.0067	6
94	MP2B	X	11.668	6
95	MP2B	Z	20.209	6
96	MP2B	Mx	.0089	6
97	MP2C	X	8.657	6
98	MP2C	Z	14.994	6
99	MP2C	Mx	-.0081	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.25
2	MP1A	Z	119.226	2.25
3	MP1A	Mx	.0052	2.25
4	MP1A	X	0	6.25
5	MP1A	Z	119.226	6.25
6	MP1A	Mx	.0052	6.25
7	MP1B	X	0	2.25
8	MP1B	Z	79.947	2.25
9	MP1B	Mx	-.0394	2.25
10	MP1B	X	0	6.25
11	MP1B	Z	79.947	6.25
12	MP1B	Mx	-.0394	6.25
13	MP1C	X	0	2.25
14	MP1C	Z	102.67	2.25
15	MP1C	Mx	.033	2.25
16	MP1C	X	0	6.25
17	MP1C	Z	102.67	6.25
18	MP1C	Mx	.033	6.25
19	MP2A	X	0	2.25
20	MP2A	Z	110.852	2.25
21	MP2A	Mx	-.0664	2.25
22	MP2A	X	0	6.25
23	MP2A	Z	110.852	6.25
24	MP2A	Mx	-.0664	6.25
25	MP2B	X	0	2.25
26	MP2B	Z	49.69	2.25
27	MP2B	Mx	-.0309	2.25
28	MP2B	X	0	6.25
29	MP2B	Z	49.69	6.25
30	MP2B	Mx	-.0309	6.25
31	MP2C	X	0	2.25
32	MP2C	Z	85.073	2.25
33	MP2C	Mx	.0845	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP2C	X	0	6.25
35	MP2C	Z	85.073	6.25
36	MP2C	Mx	.0845	6.25
37	MP2A	X	0	2.25
38	MP2A	Z	164.632	2.25
39	MP2A	Mx	.1201	2.25
40	MP2A	X	0	6.25
41	MP2A	Z	164.632	6.25
42	MP2A	Mx	.1201	6.25
43	MP2B	X	0	2.25
44	MP2B	Z	111.198	2.25
45	MP2B	Mx	-.095	2.25
46	MP2B	X	0	6.25
47	MP2B	Z	111.198	6.25
48	MP2B	Mx	-.095	6.25
49	MP2C	X	0	2.25
50	MP2C	Z	142.11	2.25
51	MP2C	Mx	-.0041	2.25
52	MP2C	X	0	6.25
53	MP2C	Z	142.11	6.25
54	MP2C	Mx	-.0041	6.25
55	MP4A	X	0	3.25
56	MP4A	Z	77.346	3.25
57	MP4A	Mx	.0034	3.25
58	MP4A	X	0	5.25
59	MP4A	Z	77.346	5.25
60	MP4A	Mx	.0034	5.25
61	MP4B	X	0	3.25
62	MP4B	Z	31.37	3.25
63	MP4B	Mx	-.0154	3.25
64	MP4B	X	0	5.25
65	MP4B	Z	31.37	5.25
66	MP4B	Mx	-.0154	5.25
67	MP4C	X	0	3.25
68	MP4C	Z	57.967	3.25
69	MP4C	Mx	.0186	3.25
70	MP4C	X	0	5.25
71	MP4C	Z	57.967	5.25
72	MP4C	Mx	.0186	5.25
73	MP2A	X	0	2
74	MP2A	Z	63.402	2
75	MP2A	Mx	-.0028	2
76	MP2B	X	0	2
77	MP2B	Z	43.278	2
78	MP2B	Mx	.0213	2
79	MP2C	X	0	2
80	MP2C	Z	54.92	2
81	MP2C	Mx	-.0177	2
82	MP3A	X	0	2
83	MP3A	Z	76.498	2
84	MP3A	Mx	-.0033	2
85	MP3B	X	0	2
86	MP3B	Z	53.02	2
87	MP3B	Mx	.0261	2
88	MP3C	X	0	2
89	MP3C	Z	66.602	2
90	MP3C	Mx	-.0214	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP2A	X	0	6
92	MP2A	Z	35.112	6
93	MP2A	Mx	-.0015	6
94	MP2B	X	0	6
95	MP2B	Z	15.548	6
96	MP2B	Mx	.0077	6
97	MP2C	X	0	6
98	MP2C	Z	26.866	6
99	MP2C	Mx	-.0086	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-53.053	2.25
2	MP1A	Z	91.891	2.25
3	MP1A	Mx	.0304	2.25
4	MP1A	X	-53.053	6.25
5	MP1A	Z	91.891	6.25
6	MP1A	Mx	.0304	6.25
7	MP1B	X	-41.745	2.25
8	MP1B	Z	72.305	2.25
9	MP1B	Mx	-.0392	2.25
10	MP1B	X	-41.745	6.25
11	MP1B	Z	72.305	6.25
12	MP1B	Mx	-.0392	6.25
13	MP1C	X	-59.153	2.25
14	MP1C	Z	102.455	2.25
15	MP1C	Mx	.0103	2.25
16	MP1C	X	-59.153	6.25
17	MP1C	Z	102.455	6.25
18	MP1C	Mx	.0103	6.25
19	MP2A	X	-45.212	2.25
20	MP2A	Z	78.309	2.25
21	MP2A	Mx	-.0105	2.25
22	MP2A	X	-45.212	6.25
23	MP2A	Z	78.309	6.25
24	MP2A	Mx	-.0105	6.25
25	MP2B	X	-27.604	2.25
26	MP2B	Z	47.812	2.25
27	MP2B	Mx	-.0515	2.25
28	MP2B	X	-27.604	6.25
29	MP2B	Z	47.812	6.25
30	MP2B	Mx	-.0515	6.25
31	MP2C	X	-54.709	2.25
32	MP2C	Z	94.759	2.25
33	MP2C	Mx	.0861	2.25
34	MP2C	X	-54.709	6.25
35	MP2C	Z	94.759	6.25
36	MP2C	Mx	.0861	6.25
37	MP2A	X	-73.392	2.25
38	MP2A	Z	127.119	2.25
39	MP2A	Mx	.1433	2.25
40	MP2A	X	-73.392	6.25
41	MP2A	Z	127.119	6.25
42	MP2A	Mx	.1433	6.25
43	MP2B	X	-58.01	2.25
44	MP2B	Z	100.476	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2B	Mx	-.0553	2.25
46	MP2B	X	-58.01	6.25
47	MP2B	Z	100.476	6.25
48	MP2B	Mx	-.0553	6.25
49	MP2C	X	-81.69	2.25
50	MP2C	Z	141.491	2.25
51	MP2C	Mx	-.086	2.25
52	MP2C	X	-81.69	6.25
53	MP2C	Z	141.491	6.25
54	MP2C	Mx	-.086	6.25
55	MP4A	X	-30.995	3.25
56	MP4A	Z	53.685	3.25
57	MP4A	Mx	.0178	3.25
58	MP4A	X	-30.995	5.25
59	MP4A	Z	53.685	5.25
60	MP4A	Mx	.0178	5.25
61	MP4B	X	-17.759	3.25
62	MP4B	Z	30.76	3.25
63	MP4B	Mx	-.0167	3.25
64	MP4B	X	-17.759	5.25
65	MP4B	Z	30.76	5.25
66	MP4B	Mx	-.0167	5.25
67	MP4C	X	-38.134	3.25
68	MP4C	Z	66.05	3.25
69	MP4C	Mx	.0066	3.25
70	MP4C	X	-38.134	5.25
71	MP4C	Z	66.05	5.25
72	MP4C	Mx	.0066	5.25
73	MP2A	X	-28.34	2
74	MP2A	Z	49.087	2
75	MP2A	Mx	-.0163	2
76	MP2B	X	-22.547	2
77	MP2B	Z	39.052	2
78	MP2B	Mx	.0212	2
79	MP2C	X	-31.465	2
80	MP2C	Z	54.499	2
81	MP2C	Mx	-.0055	2
82	MP3A	X	-34.328	2
83	MP3A	Z	59.458	2
84	MP3A	Mx	-.0197	2
85	MP3B	X	-27.569	2
86	MP3B	Z	47.751	2
87	MP3B	Mx	.0259	2
88	MP3C	X	-37.974	2
89	MP3C	Z	65.773	2
90	MP3C	Mx	-.0066	2
91	MP2A	X	-14.289	6
92	MP2A	Z	24.749	6
93	MP2A	Mx	-.0082	6
94	MP2B	X	-8.657	6
95	MP2B	Z	14.994	6
96	MP2B	Mx	.0081	6
97	MP2C	X	-17.327	6
98	MP2C	Z	30.01	6
99	MP2C	Mx	-.003	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-74.484	2.25
2	MP1A	Z	43.003	2.25
3	MP1A	Mx	.039	2.25
4	MP1A	X	-74.484	6.25
5	MP1A	Z	43.003	6.25
6	MP1A	Mx	.039	6.25
7	MP1B	X	-88.915	2.25
8	MP1B	Z	51.335	2.25
9	MP1B	Mx	-.033	2.25
10	MP1B	X	-88.915	6.25
11	MP1B	Z	51.335	6.25
12	MP1B	Mx	-.033	6.25
13	MP1C	X	-99.386	2.25
14	MP1C	Z	57.38	2.25
15	MP1C	Mx	-.0196	2.25
16	MP1C	X	-99.386	6.25
17	MP1C	Z	57.38	6.25
18	MP1C	Mx	-.0196	6.25
19	MP2A	X	-51.204	2.25
20	MP2A	Z	29.563	2.25
21	MP2A	Mx	.0235	2.25
22	MP2A	X	-51.204	6.25
23	MP2A	Z	29.563	6.25
24	MP2A	Mx	.0235	6.25
25	MP2B	X	-73.675	2.25
26	MP2B	Z	42.536	2.25
27	MP2B	Mx	-.0845	2.25
28	MP2B	X	-73.675	6.25
29	MP2B	Z	42.536	6.25
30	MP2B	Mx	-.0845	6.25
31	MP2C	X	-89.979	2.25
32	MP2C	Z	51.95	2.25
33	MP2C	Mx	.0384	2.25
34	MP2C	X	-89.979	6.25
35	MP2C	Z	51.95	6.25
36	MP2C	Mx	.0384	6.25
37	MP2A	X	-103.439	2.25
38	MP2A	Z	59.721	2.25
39	MP2A	Mx	.1148	2.25
40	MP2A	X	-103.439	6.25
41	MP2A	Z	59.721	6.25
42	MP2A	Mx	.1148	6.25
43	MP2B	X	-123.071	2.25
44	MP2B	Z	71.055	2.25
45	MP2B	Mx	.0041	2.25
46	MP2B	X	-123.071	6.25
47	MP2B	Z	71.055	6.25
48	MP2B	Mx	.0041	6.25
49	MP2C	X	-137.315	2.25
50	MP2C	Z	79.279	2.25
51	MP2C	Mx	-.14	2.25
52	MP2C	X	-137.315	6.25
53	MP2C	Z	79.279	6.25
54	MP2C	Mx	-.14	6.25
55	MP4A	X	-33.31	3.25
56	MP4A	Z	19.232	3.25
57	MP4A	Mx	.0174	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP4A	X	-33.31	5.25
59	MP4A	Z	19.232	5.25
60	MP4A	Mx	.0174	5.25
61	MP4B	X	-50.201	3.25
62	MP4B	Z	28.984	3.25
63	MP4B	Mx	-.0186	3.25
64	MP4B	X	-50.201	5.25
65	MP4B	Z	28.984	5.25
66	MP4B	Mx	-.0186	5.25
67	MP4C	X	-62.457	3.25
68	MP4C	Z	36.06	3.25
69	MP4C	Mx	-.0123	3.25
70	MP4C	X	-62.457	5.25
71	MP4C	Z	36.06	5.25
72	MP4C	Mx	-.0123	5.25
73	MP2A	X	-40.169	2
74	MP2A	Z	23.191	2
75	MP2A	Mx	-.021	2
76	MP2B	X	-47.562	2
77	MP2B	Z	27.46	2
78	MP2B	Mx	.0177	2
79	MP2C	X	-52.927	2
80	MP2C	Z	30.557	2
81	MP2C	Mx	.0105	2
82	MP3A	X	-49.053	2
83	MP3A	Z	28.321	2
84	MP3A	Mx	-.0257	2
85	MP3B	X	-57.679	2
86	MP3B	Z	33.301	2
87	MP3B	Mx	.0214	2
88	MP3C	X	-63.938	2
89	MP3C	Z	36.915	2
90	MP3C	Mx	.0126	2
91	MP2A	X	-16.079	6
92	MP2A	Z	9.283	6
93	MP2A	Mx	-.0084	6
94	MP2B	X	-23.266	6
95	MP2B	Z	13.433	6
96	MP2B	Mx	.0086	6
97	MP2C	X	-28.482	6
98	MP2C	Z	16.444	6
99	MP2C	Mx	.0056	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-79.026	2.25
2	MP1A	Z	0	2.25
3	MP1A	Mx	.0394	2.25
4	MP1A	X	-79.026	6.25
5	MP1A	Z	0	6.25
6	MP1A	Mx	.0394	6.25
7	MP1B	X	-118.305	2.25
8	MP1B	Z	0	2.25
9	MP1B	Mx	-.0103	2.25
10	MP1B	X	-118.305	6.25
11	MP1B	Z	0	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP1B	Mx	-.0103	6.25
13	MP1C	X	-95.582	2.25
14	MP1C	Z	0	2.25
15	MP1C	Mx	-.0366	2.25
16	MP1C	X	-95.582	6.25
17	MP1C	Z	0	6.25
18	MP1C	Mx	-.0366	6.25
19	MP2A	X	-48.256	2.25
20	MP2A	Z	0	2.25
21	MP2A	Mx	.0389	2.25
22	MP2A	X	-48.256	6.25
23	MP2A	Z	0	6.25
24	MP2A	Mx	.0389	6.25
25	MP2B	X	-109.418	2.25
26	MP2B	Z	0	2.25
27	MP2B	Mx	-.0861	2.25
28	MP2B	X	-109.418	6.25
29	MP2B	Z	0	6.25
30	MP2B	Mx	-.0861	6.25
31	MP2C	X	-74.035	2.25
32	MP2C	Z	0	2.25
33	MP2C	Mx	-.0108	2.25
34	MP2C	X	-74.035	6.25
35	MP2C	Z	0	6.25
36	MP2C	Mx	-.0108	6.25
37	MP2A	X	-109.945	2.25
38	MP2A	Z	0	2.25
39	MP2A	Mx	.0758	2.25
40	MP2A	X	-109.945	6.25
41	MP2A	Z	0	6.25
42	MP2A	Mx	.0758	6.25
43	MP2B	X	-163.379	2.25
44	MP2B	Z	0	2.25
45	MP2B	Mx	.086	2.25
46	MP2B	X	-163.379	6.25
47	MP2B	Z	0	6.25
48	MP2B	Mx	.086	6.25
49	MP2C	X	-132.467	2.25
50	MP2C	Z	0	2.25
51	MP2C	Mx	-.1329	2.25
52	MP2C	X	-132.467	6.25
53	MP2C	Z	0	6.25
54	MP2C	Mx	-.1329	6.25
55	MP4A	X	-30.292	3.25
56	MP4A	Z	0	3.25
57	MP4A	Mx	.0151	3.25
58	MP4A	X	-30.292	5.25
59	MP4A	Z	0	5.25
60	MP4A	Mx	.0151	5.25
61	MP4B	X	-76.268	3.25
62	MP4B	Z	0	3.25
63	MP4B	Mx	-.0066	3.25
64	MP4B	X	-76.268	5.25
65	MP4B	Z	0	5.25
66	MP4B	Mx	-.0066	5.25
67	MP4C	X	-49.671	3.25
68	MP4C	Z	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP4C	Mx	-.019	3.25
70	MP4C	X	-49.671	5.25
71	MP4C	Z	0	5.25
72	MP4C	Mx	-.019	5.25
73	MP2A	X	-42.806	2
74	MP2A	Z	0	2
75	MP2A	Mx	-.0213	2
76	MP2B	X	-62.931	2
77	MP2B	Z	0	2
78	MP2B	Mx	.0055	2
79	MP2C	X	-51.288	2
80	MP2C	Z	0	2
81	MP2C	Mx	.0196	2
82	MP3A	X	-52.47	2
83	MP3A	Z	0	2
84	MP3A	Mx	-.0261	2
85	MP3B	X	-75.948	2
86	MP3B	Z	0	2
87	MP3B	Mx	.0066	2
88	MP3C	X	-62.365	2
89	MP3C	Z	0	2
90	MP3C	Mx	.0239	2
91	MP2A	X	-15.089	6
92	MP2A	Z	0	6
93	MP2A	Mx	-.0075	6
94	MP2B	X	-34.653	6
95	MP2B	Z	0	6
96	MP2B	Mx	.003	6
97	MP2C	X	-23.335	6
98	MP2C	Z	0	6
99	MP2C	Mx	.0089	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-79.8	2.25
2	MP1A	Z	-46.073	2.25
3	MP1A	Mx	.0377	2.25
4	MP1A	X	-79.8	6.25
5	MP1A	Z	-46.073	6.25
6	MP1A	Mx	.0377	6.25
7	MP1B	X	-99.386	2.25
8	MP1B	Z	-57.38	2.25
9	MP1B	Mx	.0196	2.25
10	MP1B	X	-99.386	6.25
11	MP1B	Z	-57.38	6.25
12	MP1B	Mx	.0196	6.25
13	MP1C	X	-69.236	2.25
14	MP1C	Z	-39.973	2.25
15	MP1C	Mx	-.0394	2.25
16	MP1C	X	-69.236	6.25
17	MP1C	Z	-39.973	6.25
18	MP1C	Mx	-.0394	6.25
19	MP2A	X	-59.482	2.25
20	MP2A	Z	-34.342	2.25
21	MP2A	Mx	.0685	2.25
22	MP2A	X	-59.482	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	-34.342	6.25
24	MP2A	Mx	.0685	6.25
25	MP2B	X	-89.979	2.25
26	MP2B	Z	-51.95	2.25
27	MP2B	Mx	-.0384	2.25
28	MP2B	X	-89.979	6.25
29	MP2B	Z	-51.95	6.25
30	MP2B	Mx	-.0384	6.25
31	MP2C	X	-43.033	2.25
32	MP2C	Z	-24.845	2.25
33	MP2C	Mx	-.0309	2.25
34	MP2C	X	-43.033	6.25
35	MP2C	Z	-24.845	6.25
36	MP2C	Mx	-.0309	6.25
37	MP2A	X	-110.671	2.25
38	MP2A	Z	-63.896	2.25
39	MP2A	Mx	.0296	2.25
40	MP2A	X	-110.671	6.25
41	MP2A	Z	-63.896	6.25
42	MP2A	Mx	.0296	6.25
43	MP2B	X	-137.315	2.25
44	MP2B	Z	-79.279	2.25
45	MP2B	Mx	.14	2.25
46	MP2B	X	-137.315	6.25
47	MP2B	Z	-79.279	6.25
48	MP2B	Mx	.14	6.25
49	MP2C	X	-96.3	2.25
50	MP2C	Z	-55.599	2.25
51	MP2C	Mx	-.095	2.25
52	MP2C	X	-96.3	6.25
53	MP2C	Z	-55.599	6.25
54	MP2C	Mx	-.095	6.25
55	MP4A	X	-39.533	3.25
56	MP4A	Z	-22.824	3.25
57	MP4A	Mx	.0187	3.25
58	MP4A	X	-39.533	5.25
59	MP4A	Z	-22.824	5.25
60	MP4A	Mx	.0187	5.25
61	MP4B	X	-62.457	3.25
62	MP4B	Z	-36.06	3.25
63	MP4B	Mx	.0123	3.25
64	MP4B	X	-62.457	5.25
65	MP4B	Z	-36.06	5.25
66	MP4B	Mx	.0123	5.25
67	MP4C	X	-27.167	3.25
68	MP4C	Z	-15.685	3.25
69	MP4C	Mx	-.0154	3.25
70	MP4C	X	-27.167	5.25
71	MP4C	Z	-15.685	5.25
72	MP4C	Mx	-.0154	5.25
73	MP2A	X	-42.892	2
74	MP2A	Z	-24.764	2
75	MP2A	Mx	-.0203	2
76	MP2B	X	-52.927	2
77	MP2B	Z	-30.557	2
78	MP2B	Mx	-.0105	2
79	MP2C	X	-37.48	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP2C	Z	-21.639	2
81	MP2C	Mx	.0213	2
82	MP3A	X	-52.231	2
83	MP3A	Z	-30.156	2
84	MP3A	Mx	-.0247	2
85	MP3B	X	-63.938	2
86	MP3B	Z	-36.915	2
87	MP3B	Mx	-.0126	2
88	MP3C	X	-45.917	2
89	MP3C	Z	-26.51	2
90	MP3C	Mx	.0261	2
91	MP2A	X	-18.727	6
92	MP2A	Z	-10.812	6
93	MP2A	Mx	-.0089	6
94	MP2B	X	-28.482	6
95	MP2B	Z	-16.444	6
96	MP2B	Mx	-.0056	6
97	MP2C	X	-13.465	6
98	MP2C	Z	-7.774	6
99	MP2C	Mx	.0077	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-56.123	2.25
2	MP1A	Z	-97.207	2.25
3	MP1A	Mx	.0237	2.25
4	MP1A	X	-56.123	6.25
5	MP1A	Z	-97.207	6.25
6	MP1A	Mx	.0237	6.25
7	MP1B	X	-47.791	2.25
8	MP1B	Z	-82.776	2.25
9	MP1B	Mx	.0366	2.25
10	MP1B	X	-47.791	6.25
11	MP1B	Z	-82.776	6.25
12	MP1B	Mx	.0366	6.25
13	MP1C	X	-41.745	2.25
14	MP1C	Z	-72.305	2.25
15	MP1C	Mx	-.0392	2.25
16	MP1C	X	-41.745	6.25
17	MP1C	Z	-72.305	6.25
18	MP1C	Mx	-.0392	6.25
19	MP2A	X	-49.991	2.25
20	MP2A	Z	-86.587	2.25
21	MP2A	Mx	.0921	2.25
22	MP2A	X	-49.991	6.25
23	MP2A	Z	-86.587	6.25
24	MP2A	Mx	.0921	6.25
25	MP2B	X	-37.018	2.25
26	MP2B	Z	-64.116	2.25
27	MP2B	Mx	.0108	2.25
28	MP2B	X	-37.018	6.25
29	MP2B	Z	-64.116	6.25
30	MP2B	Mx	.0108	6.25
31	MP2C	X	-27.604	2.25
32	MP2C	Z	-47.812	2.25
33	MP2C	Mx	-.0515	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP2C	X	-27.604	6.25
35	MP2C	Z	-47.812	6.25
36	MP2C	Mx	-.0515	6.25
37	MP2A	X	-77.568	2.25
38	MP2A	Z	-134.352	2.25
39	MP2A	Mx	-.0446	2.25
40	MP2A	X	-77.568	6.25
41	MP2A	Z	-134.352	6.25
42	MP2A	Mx	-.0446	6.25
43	MP2B	X	-66.234	2.25
44	MP2B	Z	-114.72	2.25
45	MP2B	Mx	.1329	2.25
46	MP2B	X	-66.234	6.25
47	MP2B	Z	-114.72	6.25
48	MP2B	Mx	.1329	6.25
49	MP2C	X	-58.01	2.25
50	MP2C	Z	-100.476	2.25
51	MP2C	Mx	-.0553	2.25
52	MP2C	X	-58.01	6.25
53	MP2C	Z	-100.476	6.25
54	MP2C	Mx	-.0553	6.25
55	MP4A	X	-34.587	3.25
56	MP4A	Z	-59.907	3.25
57	MP4A	Mx	.0146	3.25
58	MP4A	X	-34.587	5.25
59	MP4A	Z	-59.907	5.25
60	MP4A	Mx	.0146	5.25
61	MP4B	X	-24.835	3.25
62	MP4B	Z	-43.016	3.25
63	MP4B	Mx	.019	3.25
64	MP4B	X	-24.835	5.25
65	MP4B	Z	-43.016	5.25
66	MP4B	Mx	.019	5.25
67	MP4C	X	-17.759	3.25
68	MP4C	Z	-30.76	3.25
69	MP4C	Mx	-.0167	3.25
70	MP4C	X	-17.759	5.25
71	MP4C	Z	-30.76	5.25
72	MP4C	Mx	-.0167	5.25
73	MP2A	X	-29.913	2
74	MP2A	Z	-51.811	2
75	MP2A	Mx	-.0126	2
76	MP2B	X	-25.644	2
77	MP2B	Z	-44.417	2
78	MP2B	Mx	-.0196	2
79	MP2C	X	-22.547	2
80	MP2C	Z	-39.052	2
81	MP2C	Mx	.0212	2
82	MP3A	X	-36.163	2
83	MP3A	Z	-62.636	2
84	MP3A	Mx	-.0153	2
85	MP3B	X	-31.183	2
86	MP3B	Z	-54.01	2
87	MP3B	Mx	-.0239	2
88	MP3C	X	-27.569	2
89	MP3C	Z	-47.751	2
90	MP3C	Mx	.0259	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP2A	X	-15.817	6
92	MP2A	Z	-27.397	6
93	MP2A	Mx	-.0067	6
94	MP2B	X	-11.668	6
95	MP2B	Z	-20.209	6
96	MP2B	Mx	-.0089	6
97	MP2C	X	-8.657	6
98	MP2C	Z	-14.994	6
99	MP2C	Mx	.0081	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.25
2	MP1A	Z	-24.467	2.25
3	MP1A	Mx	-.0011	2.25
4	MP1A	X	0	6.25
5	MP1A	Z	-24.467	6.25
6	MP1A	Mx	-.0011	6.25
7	MP1B	X	0	2.25
8	MP1B	Z	-17.245	2.25
9	MP1B	Mx	.0085	2.25
10	MP1B	X	0	6.25
11	MP1B	Z	-17.245	6.25
12	MP1B	Mx	.0085	6.25
13	MP1C	X	0	2.25
14	MP1C	Z	-21.423	2.25
15	MP1C	Mx	-.0069	2.25
16	MP1C	X	0	6.25
17	MP1C	Z	-21.423	6.25
18	MP1C	Mx	-.0069	6.25
19	MP2A	X	0	2.25
20	MP2A	Z	-33.157	2.25
21	MP2A	Mx	.0199	2.25
22	MP2A	X	0	6.25
23	MP2A	Z	-33.157	6.25
24	MP2A	Mx	.0199	6.25
25	MP2B	X	0	2.25
26	MP2B	Z	-23.639	2.25
27	MP2B	Mx	.0147	2.25
28	MP2B	X	0	6.25
29	MP2B	Z	-23.639	6.25
30	MP2B	Mx	.0147	6.25
31	MP2C	X	0	2.25
32	MP2C	Z	-29.145	2.25
33	MP2C	Mx	-.0289	2.25
34	MP2C	X	0	6.25
35	MP2C	Z	-29.145	6.25
36	MP2C	Mx	-.0289	6.25
37	MP2A	X	0	2.25
38	MP2A	Z	-33.157	2.25
39	MP2A	Mx	-.0242	2.25
40	MP2A	X	0	6.25
41	MP2A	Z	-33.157	6.25
42	MP2A	Mx	-.0242	6.25
43	MP2B	X	0	2.25
44	MP2B	Z	-23.639	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2B	Mx	.0202	2.25
46	MP2B	X	0	6.25
47	MP2B	Z	-23.639	6.25
48	MP2B	Mx	.0202	6.25
49	MP2C	X	0	2.25
50	MP2C	Z	-29.145	2.25
51	MP2C	Mx	.000834	2.25
52	MP2C	X	0	6.25
53	MP2C	Z	-29.145	6.25
54	MP2C	Mx	.000834	6.25
55	MP4A	X	0	3.25
56	MP4A	Z	-16.304	3.25
57	MP4A	Mx	-.00071	3.25
58	MP4A	X	0	5.25
59	MP4A	Z	-16.304	5.25
60	MP4A	Mx	-.00071	5.25
61	MP4B	X	0	3.25
62	MP4B	Z	-7.491	3.25
63	MP4B	Mx	.0037	3.25
64	MP4B	X	0	5.25
65	MP4B	Z	-7.491	5.25
66	MP4B	Mx	.0037	5.25
67	MP4C	X	0	3.25
68	MP4C	Z	-12.59	3.25
69	MP4C	Mx	-.004	3.25
70	MP4C	X	0	5.25
71	MP4C	Z	-12.59	5.25
72	MP4C	Mx	-.004	5.25
73	MP2A	X	0	2
74	MP2A	Z	-17.239	2
75	MP2A	Mx	.000751	2
76	MP2B	X	0	2
77	MP2B	Z	-12.392	2
78	MP2B	Mx	-.0061	2
79	MP2C	X	0	2
80	MP2C	Z	-15.196	2
81	MP2C	Mx	.0049	2
82	MP3A	X	0	2
83	MP3A	Z	-17.241	2
84	MP3A	Mx	.000751	2
85	MP3B	X	0	2
86	MP3B	Z	-12.587	2
87	MP3B	Mx	-.0062	2
88	MP3C	X	0	2
89	MP3C	Z	-15.279	2
90	MP3C	Mx	.0049	2
91	MP2A	X	0	6
92	MP2A	Z	-8.87	6
93	MP2A	Mx	.000387	6
94	MP2B	X	0	6
95	MP2B	Z	-4.857	6
96	MP2B	Mx	-.0024	6
97	MP2C	X	0	6
98	MP2C	Z	-7.179	6
99	MP2C	Mx	.0023	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	11.027	2.25
2	MP1A	Z	-19.1	2.25
3	MP1A	Mx	-.0063	2.25
4	MP1A	X	11.027	6.25
5	MP1A	Z	-19.1	6.25
6	MP1A	Mx	-.0063	6.25
7	MP1B	X	8.948	2.25
8	MP1B	Z	-15.499	2.25
9	MP1B	Mx	.0084	2.25
10	MP1B	X	8.948	6.25
11	MP1B	Z	-15.499	6.25
12	MP1B	Mx	.0084	6.25
13	MP1C	X	12.149	2.25
14	MP1C	Z	-21.042	2.25
15	MP1C	Mx	-.0021	2.25
16	MP1C	X	12.149	6.25
17	MP1C	Z	-21.042	6.25
18	MP1C	Mx	-.0021	6.25
19	MP2A	X	14.989	2.25
20	MP2A	Z	-25.962	2.25
21	MP2A	Mx	.0035	2.25
22	MP2A	X	14.989	6.25
23	MP2A	Z	-25.962	6.25
24	MP2A	Mx	.0035	6.25
25	MP2B	X	12.249	2.25
26	MP2B	Z	-21.216	2.25
27	MP2B	Mx	.0229	2.25
28	MP2B	X	12.249	6.25
29	MP2B	Z	-21.216	6.25
30	MP2B	Mx	.0229	6.25
31	MP2C	X	16.467	2.25
32	MP2C	Z	-28.522	2.25
33	MP2C	Mx	-.0259	2.25
34	MP2C	X	16.467	6.25
35	MP2C	Z	-28.522	6.25
36	MP2C	Mx	-.0259	6.25
37	MP2A	X	14.989	2.25
38	MP2A	Z	-25.962	2.25
39	MP2A	Mx	-.0293	2.25
40	MP2A	X	14.989	6.25
41	MP2A	Z	-25.962	6.25
42	MP2A	Mx	-.0293	6.25
43	MP2B	X	12.249	2.25
44	MP2B	Z	-21.216	2.25
45	MP2B	Mx	.0117	2.25
46	MP2B	X	12.249	6.25
47	MP2B	Z	-21.216	6.25
48	MP2B	Mx	.0117	6.25
49	MP2C	X	16.467	2.25
50	MP2C	Z	-28.522	2.25
51	MP2C	Mx	.0173	2.25
52	MP2C	X	16.467	6.25
53	MP2C	Z	-28.522	6.25
54	MP2C	Mx	.0173	6.25
55	MP4A	X	6.68	3.25
56	MP4A	Z	-11.571	3.25
57	MP4A	Mx	-.0038	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP4A	X	6.68	5.25
59	MP4A	Z	-11.571	5.25
60	MP4A	Mx	-.0038	5.25
61	MP4B	X	4.143	3.25
62	MP4B	Z	-7.176	3.25
63	MP4B	Mx	.0039	3.25
64	MP4B	X	4.143	5.25
65	MP4B	Z	-7.176	5.25
66	MP4B	Mx	.0039	5.25
67	MP4C	X	8.049	3.25
68	MP4C	Z	-13.941	3.25
69	MP4C	Mx	-.0014	3.25
70	MP4C	X	8.049	5.25
71	MP4C	Z	-13.941	5.25
72	MP4C	Mx	-.0014	5.25
73	MP2A	X	7.81	2
74	MP2A	Z	-13.527	2
75	MP2A	Mx	.0045	2
76	MP2B	X	6.414	2
77	MP2B	Z	-11.11	2
78	MP2B	Mx	-.006	2
79	MP2C	X	8.563	2
80	MP2C	Z	-14.831	2
81	MP2C	Mx	.0015	2
82	MP3A	X	7.843	2
83	MP3A	Z	-13.585	2
84	MP3A	Mx	.0045	2
85	MP3B	X	6.503	2
86	MP3B	Z	-11.264	2
87	MP3B	Mx	-.0061	2
88	MP3C	X	8.566	2
89	MP3C	Z	-14.836	2
90	MP3C	Mx	.0015	2
91	MP2A	X	3.765	6
92	MP2A	Z	-6.521	6
93	MP2A	Mx	.0022	6
94	MP2B	X	2.61	6
95	MP2B	Z	-4.52	6
96	MP2B	Mx	-.0025	6
97	MP2C	X	4.388	6
98	MP2C	Z	-7.6	6
99	MP2C	Mx	.000762	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	15.9	2.25
2	MP1A	Z	-9.18	2.25
3	MP1A	Mx	-.0083	2.25
4	MP1A	X	15.9	6.25
5	MP1A	Z	-9.18	6.25
6	MP1A	Mx	-.0083	6.25
7	MP1B	X	18.553	2.25
8	MP1B	Z	-10.711	2.25
9	MP1B	Mx	.0069	2.25
10	MP1B	X	18.553	6.25
11	MP1B	Z	-10.711	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP1B	Mx	.0069	6.25
13	MP1C	X	20.478	2.25
14	MP1C	Z	-11.823	2.25
15	MP1C	Mx	.004	2.25
16	MP1C	X	20.478	6.25
17	MP1C	Z	-11.823	6.25
18	MP1C	Mx	.004	6.25
19	MP2A	X	21.744	2.25
20	MP2A	Z	-12.554	2.25
21	MP2A	Mx	-.01	2.25
22	MP2A	X	21.744	6.25
23	MP2A	Z	-12.554	6.25
24	MP2A	Mx	-.01	6.25
25	MP2B	X	25.241	2.25
26	MP2B	Z	-14.573	2.25
27	MP2B	Mx	.0289	2.25
28	MP2B	X	25.241	6.25
29	MP2B	Z	-14.573	6.25
30	MP2B	Mx	.0289	6.25
31	MP2C	X	27.778	2.25
32	MP2C	Z	-16.038	2.25
33	MP2C	Mx	-.0119	2.25
34	MP2C	X	27.778	6.25
35	MP2C	Z	-16.038	6.25
36	MP2C	Mx	-.0119	6.25
37	MP2A	X	21.744	2.25
38	MP2A	Z	-12.554	2.25
39	MP2A	Mx	-.0241	2.25
40	MP2A	X	21.744	6.25
41	MP2A	Z	-12.554	6.25
42	MP2A	Mx	-.0241	6.25
43	MP2B	X	25.241	2.25
44	MP2B	Z	-14.573	2.25
45	MP2B	Mx	-.000834	2.25
46	MP2B	X	25.241	6.25
47	MP2B	Z	-14.573	6.25
48	MP2B	Mx	-.000834	6.25
49	MP2C	X	27.778	2.25
50	MP2C	Z	-16.038	2.25
51	MP2C	Mx	.0283	2.25
52	MP2C	X	27.778	6.25
53	MP2C	Z	-16.038	6.25
54	MP2C	Mx	.0283	6.25
55	MP4A	X	7.665	3.25
56	MP4A	Z	-4.425	3.25
57	MP4A	Mx	-.004	3.25
58	MP4A	X	7.665	5.25
59	MP4A	Z	-4.425	5.25
60	MP4A	Mx	-.004	5.25
61	MP4B	X	10.903	3.25
62	MP4B	Z	-6.295	3.25
63	MP4B	Mx	.004	3.25
64	MP4B	X	10.903	5.25
65	MP4B	Z	-6.295	5.25
66	MP4B	Mx	.004	5.25
67	MP4C	X	13.252	3.25
68	MP4C	Z	-7.651	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP4C	Mx	.0026	3.25
70	MP4C	X	13.252	5.25
71	MP4C	Z	-7.651	5.25
72	MP4C	Mx	.0026	5.25
73	MP2A	X	11.379	2
74	MP2A	Z	-6.57	2
75	MP2A	Mx	.006	2
76	MP2B	X	13.16	2
77	MP2B	Z	-7.598	2
78	MP2B	Mx	-.0049	2
79	MP2C	X	14.452	2
80	MP2C	Z	-8.344	2
81	MP2C	Mx	-.0029	2
82	MP3A	X	11.522	2
83	MP3A	Z	-6.652	2
84	MP3A	Mx	.006	2
85	MP3B	X	13.232	2
86	MP3B	Z	-7.64	2
87	MP3B	Mx	-.0049	2
88	MP3C	X	14.473	2
89	MP3C	Z	-8.356	2
90	MP3C	Mx	-.0029	2
91	MP2A	X	4.743	6
92	MP2A	Z	-2.738	6
93	MP2A	Mx	.0025	6
94	MP2B	X	6.217	6
95	MP2B	Z	-3.589	6
96	MP2B	Mx	-.0023	6
97	MP2C	X	7.287	6
98	MP2C	Z	-4.207	6
99	MP2C	Mx	-.0014	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	17.076	2.25
2	MP1A	Z	0	2.25
3	MP1A	Mx	-.0085	2.25
4	MP1A	X	17.076	6.25
5	MP1A	Z	0	6.25
6	MP1A	Mx	-.0085	6.25
7	MP1B	X	24.297	2.25
8	MP1B	Z	0	2.25
9	MP1B	Mx	.0021	2.25
10	MP1B	X	24.297	6.25
11	MP1B	Z	0	6.25
12	MP1B	Mx	.0021	6.25
13	MP1C	X	20.12	2.25
14	MP1C	Z	0	2.25
15	MP1C	Mx	.0077	2.25
16	MP1C	X	20.12	6.25
17	MP1C	Z	0	6.25
18	MP1C	Mx	.0077	6.25
19	MP2A	X	23.416	2.25
20	MP2A	Z	0	2.25
21	MP2A	Mx	-.0189	2.25
22	MP2A	X	23.416	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	0	6.25
24	MP2A	Mx	-.0189	6.25
25	MP2B	X	32.934	2.25
26	MP2B	Z	0	2.25
27	MP2B	Mx	.0259	2.25
28	MP2B	X	32.934	6.25
29	MP2B	Z	0	6.25
30	MP2B	Mx	.0259	6.25
31	MP2C	X	27.428	2.25
32	MP2C	Z	0	2.25
33	MP2C	Mx	.004	2.25
34	MP2C	X	27.428	6.25
35	MP2C	Z	0	6.25
36	MP2C	Mx	.004	6.25
37	MP2A	X	23.416	2.25
38	MP2A	Z	0	2.25
39	MP2A	Mx	-.0161	2.25
40	MP2A	X	23.416	6.25
41	MP2A	Z	0	6.25
42	MP2A	Mx	-.0161	6.25
43	MP2B	X	32.934	2.25
44	MP2B	Z	0	2.25
45	MP2B	Mx	-.0173	2.25
46	MP2B	X	32.934	6.25
47	MP2B	Z	0	6.25
48	MP2B	Mx	-.0173	6.25
49	MP2C	X	27.428	2.25
50	MP2C	Z	0	2.25
51	MP2C	Mx	.0275	2.25
52	MP2C	X	27.428	6.25
53	MP2C	Z	0	6.25
54	MP2C	Mx	.0275	6.25
55	MP4A	X	7.285	3.25
56	MP4A	Z	0	3.25
57	MP4A	Mx	-.0036	3.25
58	MP4A	X	7.285	5.25
59	MP4A	Z	0	5.25
60	MP4A	Mx	-.0036	5.25
61	MP4B	X	16.098	3.25
62	MP4B	Z	0	3.25
63	MP4B	Mx	.0014	3.25
64	MP4B	X	16.098	5.25
65	MP4B	Z	0	5.25
66	MP4B	Mx	.0014	5.25
67	MP4C	X	10.999	3.25
68	MP4C	Z	0	3.25
69	MP4C	Mx	.0042	3.25
70	MP4C	X	10.999	5.25
71	MP4C	Z	0	5.25
72	MP4C	Mx	.0042	5.25
73	MP2A	X	12.278	2
74	MP2A	Z	0	2
75	MP2A	Mx	.0061	2
76	MP2B	X	17.125	2
77	MP2B	Z	0	2
78	MP2B	Mx	-.0015	2
79	MP2C	X	14.321	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP2C	Z	0	2
81	MP2C	Mx	-.0055	2
82	MP3A	X	12.478	2
83	MP3A	Z	0	2
84	MP3A	Mx	.0062	2
85	MP3B	X	17.132	2
86	MP3B	Z	0	2
87	MP3B	Mx	-.0015	2
88	MP3C	X	14.439	2
89	MP3C	Z	0	2
90	MP3C	Mx	-.0055	2
91	MP2A	X	4.763	6
92	MP2A	Z	0	6
93	MP2A	Mx	.0024	6
94	MP2B	X	8.776	6
95	MP2B	Z	0	6
96	MP2B	Mx	-.000762	6
97	MP2C	X	6.455	6
98	MP2C	Z	0	6
99	MP2C	Mx	-.0025	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	16.877	2.25
2	MP1A	Z	9.744	2.25
3	MP1A	Mx	-.008	2.25
4	MP1A	X	16.877	6.25
5	MP1A	Z	9.744	6.25
6	MP1A	Mx	-.008	6.25
7	MP1B	X	20.478	2.25
8	MP1B	Z	11.823	2.25
9	MP1B	Mx	-.004	2.25
10	MP1B	X	20.478	6.25
11	MP1B	Z	11.823	6.25
12	MP1B	Mx	-.004	6.25
13	MP1C	X	14.935	2.25
14	MP1C	Z	8.623	2.25
15	MP1C	Mx	.0085	2.25
16	MP1C	X	14.935	6.25
17	MP1C	Z	8.623	6.25
18	MP1C	Mx	.0085	6.25
19	MP2A	X	23.032	2.25
20	MP2A	Z	13.298	2.25
21	MP2A	Mx	-.0265	2.25
22	MP2A	X	23.032	6.25
23	MP2A	Z	13.298	6.25
24	MP2A	Mx	-.0265	6.25
25	MP2B	X	27.778	2.25
26	MP2B	Z	16.038	2.25
27	MP2B	Mx	.0119	2.25
28	MP2B	X	27.778	6.25
29	MP2B	Z	16.038	6.25
30	MP2B	Mx	.0119	6.25
31	MP2C	X	20.472	2.25
32	MP2C	Z	11.82	2.25
33	MP2C	Mx	.0147	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP2C	X	20.472	6.25
35	MP2C	Z	11.82	6.25
36	MP2C	Mx	.0147	6.25
37	MP2A	X	23.032	2.25
38	MP2A	Z	13.298	2.25
39	MP2A	Mx	-.0062	2.25
40	MP2A	X	23.032	6.25
41	MP2A	Z	13.298	6.25
42	MP2A	Mx	-.0062	6.25
43	MP2B	X	27.778	2.25
44	MP2B	Z	16.038	2.25
45	MP2B	Mx	-.0283	2.25
46	MP2B	X	27.778	6.25
47	MP2B	Z	16.038	6.25
48	MP2B	Mx	-.0283	6.25
49	MP2C	X	20.472	2.25
50	MP2C	Z	11.82	2.25
51	MP2C	Mx	.0202	2.25
52	MP2C	X	20.472	6.25
53	MP2C	Z	11.82	6.25
54	MP2C	Mx	.0202	6.25
55	MP4A	X	8.858	3.25
56	MP4A	Z	5.114	3.25
57	MP4A	Mx	-.0042	3.25
58	MP4A	X	8.858	5.25
59	MP4A	Z	5.114	5.25
60	MP4A	Mx	-.0042	5.25
61	MP4B	X	13.252	3.25
62	MP4B	Z	7.651	3.25
63	MP4B	Mx	-.0026	3.25
64	MP4B	X	13.252	5.25
65	MP4B	Z	7.651	5.25
66	MP4B	Mx	-.0026	5.25
67	MP4C	X	6.488	3.25
68	MP4C	Z	3.746	3.25
69	MP4C	Mx	.0037	3.25
70	MP4C	X	6.488	5.25
71	MP4C	Z	3.746	5.25
72	MP4C	Mx	.0037	5.25
73	MP2A	X	12.035	2
74	MP2A	Z	6.949	2
75	MP2A	Mx	.0057	2
76	MP2B	X	14.452	2
77	MP2B	Z	8.344	2
78	MP2B	Mx	.0029	2
79	MP2C	X	10.731	2
80	MP2C	Z	6.196	2
81	MP2C	Mx	-.0061	2
82	MP3A	X	12.152	2
83	MP3A	Z	7.016	2
84	MP3A	Mx	.0057	2
85	MP3B	X	14.473	2
86	MP3B	Z	8.356	2
87	MP3B	Mx	.0029	2
88	MP3C	X	10.901	2
89	MP3C	Z	6.293	2
90	MP3C	Mx	-.0062	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP2A	X	5.286	6
92	MP2A	Z	3.052	6
93	MP2A	Mx	.0025	6
94	MP2B	X	7.287	6
95	MP2B	Z	4.207	6
96	MP2B	Mx	.0014	6
97	MP2C	X	4.207	6
98	MP2C	Z	2.429	6
99	MP2C	Mx	-.0024	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	11.592	2.25
2	MP1A	Z	20.077	2.25
3	MP1A	Mx	-.0049	2.25
4	MP1A	X	11.592	6.25
5	MP1A	Z	20.077	6.25
6	MP1A	Mx	-.0049	6.25
7	MP1B	X	10.06	2.25
8	MP1B	Z	17.424	2.25
9	MP1B	Mx	-.0077	2.25
10	MP1B	X	10.06	6.25
11	MP1B	Z	17.424	6.25
12	MP1B	Mx	-.0077	6.25
13	MP1C	X	8.948	2.25
14	MP1C	Z	15.499	2.25
15	MP1C	Mx	.0084	2.25
16	MP1C	X	8.948	6.25
17	MP1C	Z	15.499	6.25
18	MP1C	Mx	.0084	6.25
19	MP2A	X	15.733	2.25
20	MP2A	Z	27.25	2.25
21	MP2A	Mx	-.029	2.25
22	MP2A	X	15.733	6.25
23	MP2A	Z	27.25	6.25
24	MP2A	Mx	-.029	6.25
25	MP2B	X	13.714	2.25
26	MP2B	Z	23.753	2.25
27	MP2B	Mx	-.004	2.25
28	MP2B	X	13.714	6.25
29	MP2B	Z	23.753	6.25
30	MP2B	Mx	-.004	6.25
31	MP2C	X	12.249	2.25
32	MP2C	Z	21.216	2.25
33	MP2C	Mx	.0229	2.25
34	MP2C	X	12.249	6.25
35	MP2C	Z	21.216	6.25
36	MP2C	Mx	.0229	6.25
37	MP2A	X	15.733	2.25
38	MP2A	Z	27.25	2.25
39	MP2A	Mx	.009	2.25
40	MP2A	X	15.733	6.25
41	MP2A	Z	27.25	6.25
42	MP2A	Mx	.009	6.25
43	MP2B	X	13.714	2.25
44	MP2B	Z	23.753	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2B	Mx	-.0275	2.25
46	MP2B	X	13.714	6.25
47	MP2B	Z	23.753	6.25
48	MP2B	Mx	-.0275	6.25
49	MP2C	X	12.249	2.25
50	MP2C	Z	21.216	2.25
51	MP2C	Mx	.0117	2.25
52	MP2C	X	12.249	6.25
53	MP2C	Z	21.216	6.25
54	MP2C	Mx	.0117	6.25
55	MP4A	X	7.369	3.25
56	MP4A	Z	12.764	3.25
57	MP4A	Mx	-.0031	3.25
58	MP4A	X	7.369	5.25
59	MP4A	Z	12.764	5.25
60	MP4A	Mx	-.0031	5.25
61	MP4B	X	5.5	3.25
62	MP4B	Z	9.526	3.25
63	MP4B	Mx	-.0042	3.25
64	MP4B	X	5.5	5.25
65	MP4B	Z	9.526	5.25
66	MP4B	Mx	-.0042	5.25
67	MP4C	X	4.143	3.25
68	MP4C	Z	7.176	3.25
69	MP4C	Mx	.0039	3.25
70	MP4C	X	4.143	5.25
71	MP4C	Z	7.176	5.25
72	MP4C	Mx	.0039	5.25
73	MP2A	X	8.189	2
74	MP2A	Z	14.183	2
75	MP2A	Mx	.0035	2
76	MP2B	X	7.161	2
77	MP2B	Z	12.402	2
78	MP2B	Mx	.0055	2
79	MP2C	X	6.414	2
80	MP2C	Z	11.11	2
81	MP2C	Mx	-.006	2
82	MP3A	X	8.207	2
83	MP3A	Z	14.215	2
84	MP3A	Mx	.0035	2
85	MP3B	X	7.22	2
86	MP3B	Z	12.505	2
87	MP3B	Mx	.0055	2
88	MP3C	X	6.503	2
89	MP3C	Z	11.264	2
90	MP3C	Mx	-.0061	2
91	MP2A	X	4.078	6
92	MP2A	Z	7.064	6
93	MP2A	Mx	.0017	6
94	MP2B	X	3.227	6
95	MP2B	Z	5.59	6
96	MP2B	Mx	.0025	6
97	MP2C	X	2.61	6
98	MP2C	Z	4.52	6
99	MP2C	Mx	-.0025	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.25
2	MP1A	Z	24.467	2.25
3	MP1A	Mx	.0011	2.25
4	MP1A	X	0	6.25
5	MP1A	Z	24.467	6.25
6	MP1A	Mx	.0011	6.25
7	MP1B	X	0	2.25
8	MP1B	Z	17.245	2.25
9	MP1B	Mx	-.0085	2.25
10	MP1B	X	0	6.25
11	MP1B	Z	17.245	6.25
12	MP1B	Mx	-.0085	6.25
13	MP1C	X	0	2.25
14	MP1C	Z	21.423	2.25
15	MP1C	Mx	.0069	2.25
16	MP1C	X	0	6.25
17	MP1C	Z	21.423	6.25
18	MP1C	Mx	.0069	6.25
19	MP2A	X	0	2.25
20	MP2A	Z	33.157	2.25
21	MP2A	Mx	-.0199	2.25
22	MP2A	X	0	6.25
23	MP2A	Z	33.157	6.25
24	MP2A	Mx	-.0199	6.25
25	MP2B	X	0	2.25
26	MP2B	Z	23.639	2.25
27	MP2B	Mx	-.0147	2.25
28	MP2B	X	0	6.25
29	MP2B	Z	23.639	6.25
30	MP2B	Mx	-.0147	6.25
31	MP2C	X	0	2.25
32	MP2C	Z	29.145	2.25
33	MP2C	Mx	.0289	2.25
34	MP2C	X	0	6.25
35	MP2C	Z	29.145	6.25
36	MP2C	Mx	.0289	6.25
37	MP2A	X	0	2.25
38	MP2A	Z	33.157	2.25
39	MP2A	Mx	.0242	2.25
40	MP2A	X	0	6.25
41	MP2A	Z	33.157	6.25
42	MP2A	Mx	.0242	6.25
43	MP2B	X	0	2.25
44	MP2B	Z	23.639	2.25
45	MP2B	Mx	-.0202	2.25
46	MP2B	X	0	6.25
47	MP2B	Z	23.639	6.25
48	MP2B	Mx	-.0202	6.25
49	MP2C	X	0	2.25
50	MP2C	Z	29.145	2.25
51	MP2C	Mx	-.000834	2.25
52	MP2C	X	0	6.25
53	MP2C	Z	29.145	6.25
54	MP2C	Mx	-.000834	6.25
55	MP4A	X	0	3.25
56	MP4A	Z	16.304	3.25
57	MP4A	Mx	.00071	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP4A	X	0	5.25
59	MP4A	Z	16.304	5.25
60	MP4A	Mx	.00071	5.25
61	MP4B	X	0	3.25
62	MP4B	Z	7.491	3.25
63	MP4B	Mx	-.0037	3.25
64	MP4B	X	0	5.25
65	MP4B	Z	7.491	5.25
66	MP4B	Mx	-.0037	5.25
67	MP4C	X	0	3.25
68	MP4C	Z	12.59	3.25
69	MP4C	Mx	.004	3.25
70	MP4C	X	0	5.25
71	MP4C	Z	12.59	5.25
72	MP4C	Mx	.004	5.25
73	MP2A	X	0	2
74	MP2A	Z	17.239	2
75	MP2A	Mx	-.000751	2
76	MP2B	X	0	2
77	MP2B	Z	12.392	2
78	MP2B	Mx	.0061	2
79	MP2C	X	0	2
80	MP2C	Z	15.196	2
81	MP2C	Mx	-.0049	2
82	MP3A	X	0	2
83	MP3A	Z	17.241	2
84	MP3A	Mx	-.000751	2
85	MP3B	X	0	2
86	MP3B	Z	12.587	2
87	MP3B	Mx	.0062	2
88	MP3C	X	0	2
89	MP3C	Z	15.279	2
90	MP3C	Mx	-.0049	2
91	MP2A	X	0	6
92	MP2A	Z	8.87	6
93	MP2A	Mx	-.000387	6
94	MP2B	X	0	6
95	MP2B	Z	4.857	6
96	MP2B	Mx	.0024	6
97	MP2C	X	0	6
98	MP2C	Z	7.179	6
99	MP2C	Mx	-.0023	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-11.027	2.25
2	MP1A	Z	19.1	2.25
3	MP1A	Mx	.0063	2.25
4	MP1A	X	-11.027	6.25
5	MP1A	Z	19.1	6.25
6	MP1A	Mx	.0063	6.25
7	MP1B	X	-8.948	2.25
8	MP1B	Z	15.499	2.25
9	MP1B	Mx	-.0084	2.25
10	MP1B	X	-8.948	6.25
11	MP1B	Z	15.499	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP1B	Mx	-.0084	6.25
13	MP1C	X	-12.149	2.25
14	MP1C	Z	21.042	2.25
15	MP1C	Mx	.0021	2.25
16	MP1C	X	-12.149	6.25
17	MP1C	Z	21.042	6.25
18	MP1C	Mx	.0021	6.25
19	MP2A	X	-14.989	2.25
20	MP2A	Z	25.962	2.25
21	MP2A	Mx	-.0035	2.25
22	MP2A	X	-14.989	6.25
23	MP2A	Z	25.962	6.25
24	MP2A	Mx	-.0035	6.25
25	MP2B	X	-12.249	2.25
26	MP2B	Z	21.216	2.25
27	MP2B	Mx	-.0229	2.25
28	MP2B	X	-12.249	6.25
29	MP2B	Z	21.216	6.25
30	MP2B	Mx	-.0229	6.25
31	MP2C	X	-16.467	2.25
32	MP2C	Z	28.522	2.25
33	MP2C	Mx	.0259	2.25
34	MP2C	X	-16.467	6.25
35	MP2C	Z	28.522	6.25
36	MP2C	Mx	.0259	6.25
37	MP2A	X	-14.989	2.25
38	MP2A	Z	25.962	2.25
39	MP2A	Mx	.0293	2.25
40	MP2A	X	-14.989	6.25
41	MP2A	Z	25.962	6.25
42	MP2A	Mx	.0293	6.25
43	MP2B	X	-12.249	2.25
44	MP2B	Z	21.216	2.25
45	MP2B	Mx	-.0117	2.25
46	MP2B	X	-12.249	6.25
47	MP2B	Z	21.216	6.25
48	MP2B	Mx	-.0117	6.25
49	MP2C	X	-16.467	2.25
50	MP2C	Z	28.522	2.25
51	MP2C	Mx	-.0173	2.25
52	MP2C	X	-16.467	6.25
53	MP2C	Z	28.522	6.25
54	MP2C	Mx	-.0173	6.25
55	MP4A	X	-6.68	3.25
56	MP4A	Z	11.571	3.25
57	MP4A	Mx	.0038	3.25
58	MP4A	X	-6.68	5.25
59	MP4A	Z	11.571	5.25
60	MP4A	Mx	.0038	5.25
61	MP4B	X	-4.143	3.25
62	MP4B	Z	7.176	3.25
63	MP4B	Mx	-.0039	3.25
64	MP4B	X	-4.143	5.25
65	MP4B	Z	7.176	5.25
66	MP4B	Mx	-.0039	5.25
67	MP4C	X	-8.049	3.25
68	MP4C	Z	13.941	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP4C	Mx	.0014	3.25
70	MP4C	X	-8.049	5.25
71	MP4C	Z	13.941	5.25
72	MP4C	Mx	.0014	5.25
73	MP2A	X	-7.81	2
74	MP2A	Z	13.527	2
75	MP2A	Mx	-.0045	2
76	MP2B	X	-6.414	2
77	MP2B	Z	11.11	2
78	MP2B	Mx	.006	2
79	MP2C	X	-8.563	2
80	MP2C	Z	14.831	2
81	MP2C	Mx	-.0015	2
82	MP3A	X	-7.843	2
83	MP3A	Z	13.585	2
84	MP3A	Mx	-.0045	2
85	MP3B	X	-6.503	2
86	MP3B	Z	11.264	2
87	MP3B	Mx	.0061	2
88	MP3C	X	-8.566	2
89	MP3C	Z	14.836	2
90	MP3C	Mx	-.0015	2
91	MP2A	X	-3.765	6
92	MP2A	Z	6.521	6
93	MP2A	Mx	-.0022	6
94	MP2B	X	-2.61	6
95	MP2B	Z	4.52	6
96	MP2B	Mx	.0025	6
97	MP2C	X	-4.388	6
98	MP2C	Z	7.6	6
99	MP2C	Mx	-.000762	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-15.9	2.25
2	MP1A	Z	9.18	2.25
3	MP1A	Mx	.0083	2.25
4	MP1A	X	-15.9	6.25
5	MP1A	Z	9.18	6.25
6	MP1A	Mx	.0083	6.25
7	MP1B	X	-18.553	2.25
8	MP1B	Z	10.711	2.25
9	MP1B	Mx	-.0069	2.25
10	MP1B	X	-18.553	6.25
11	MP1B	Z	10.711	6.25
12	MP1B	Mx	-.0069	6.25
13	MP1C	X	-20.478	2.25
14	MP1C	Z	11.823	2.25
15	MP1C	Mx	-.004	2.25
16	MP1C	X	-20.478	6.25
17	MP1C	Z	11.823	6.25
18	MP1C	Mx	-.004	6.25
19	MP2A	X	-21.744	2.25
20	MP2A	Z	12.554	2.25
21	MP2A	Mx	.01	2.25
22	MP2A	X	-21.744	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	12.554	6.25
24	MP2A	Mx	.01	6.25
25	MP2B	X	-25.241	2.25
26	MP2B	Z	14.573	2.25
27	MP2B	Mx	-.0289	2.25
28	MP2B	X	-25.241	6.25
29	MP2B	Z	14.573	6.25
30	MP2B	Mx	-.0289	6.25
31	MP2C	X	-27.778	2.25
32	MP2C	Z	16.038	2.25
33	MP2C	Mx	.0119	2.25
34	MP2C	X	-27.778	6.25
35	MP2C	Z	16.038	6.25
36	MP2C	Mx	.0119	6.25
37	MP2A	X	-21.744	2.25
38	MP2A	Z	12.554	2.25
39	MP2A	Mx	.0241	2.25
40	MP2A	X	-21.744	6.25
41	MP2A	Z	12.554	6.25
42	MP2A	Mx	.0241	6.25
43	MP2B	X	-25.241	2.25
44	MP2B	Z	14.573	2.25
45	MP2B	Mx	.000834	2.25
46	MP2B	X	-25.241	6.25
47	MP2B	Z	14.573	6.25
48	MP2B	Mx	.000834	6.25
49	MP2C	X	-27.778	2.25
50	MP2C	Z	16.038	2.25
51	MP2C	Mx	-.0283	2.25
52	MP2C	X	-27.778	6.25
53	MP2C	Z	16.038	6.25
54	MP2C	Mx	-.0283	6.25
55	MP4A	X	-7.665	3.25
56	MP4A	Z	4.425	3.25
57	MP4A	Mx	.004	3.25
58	MP4A	X	-7.665	5.25
59	MP4A	Z	4.425	5.25
60	MP4A	Mx	.004	5.25
61	MP4B	X	-10.903	3.25
62	MP4B	Z	6.295	3.25
63	MP4B	Mx	-.004	3.25
64	MP4B	X	-10.903	5.25
65	MP4B	Z	6.295	5.25
66	MP4B	Mx	-.004	5.25
67	MP4C	X	-13.252	3.25
68	MP4C	Z	7.651	3.25
69	MP4C	Mx	-.0026	3.25
70	MP4C	X	-13.252	5.25
71	MP4C	Z	7.651	5.25
72	MP4C	Mx	-.0026	5.25
73	MP2A	X	-11.379	2
74	MP2A	Z	6.57	2
75	MP2A	Mx	-.006	2
76	MP2B	X	-13.16	2
77	MP2B	Z	7.598	2
78	MP2B	Mx	.0049	2
79	MP2C	X	-14.452	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP2C	Z	8.344	2
81	MP2C	Mx	.0029	2
82	MP3A	X	-11.522	2
83	MP3A	Z	6.652	2
84	MP3A	Mx	-.006	2
85	MP3B	X	-13.232	2
86	MP3B	Z	7.64	2
87	MP3B	Mx	.0049	2
88	MP3C	X	-14.473	2
89	MP3C	Z	8.356	2
90	MP3C	Mx	.0029	2
91	MP2A	X	-4.743	6
92	MP2A	Z	2.738	6
93	MP2A	Mx	-.0025	6
94	MP2B	X	-6.217	6
95	MP2B	Z	3.589	6
96	MP2B	Mx	.0023	6
97	MP2C	X	-7.287	6
98	MP2C	Z	4.207	6
99	MP2C	Mx	.0014	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-17.076	2.25
2	MP1A	Z	0	2.25
3	MP1A	Mx	.0085	2.25
4	MP1A	X	-17.076	6.25
5	MP1A	Z	0	6.25
6	MP1A	Mx	.0085	6.25
7	MP1B	X	-24.297	2.25
8	MP1B	Z	0	2.25
9	MP1B	Mx	-.0021	2.25
10	MP1B	X	-24.297	6.25
11	MP1B	Z	0	6.25
12	MP1B	Mx	-.0021	6.25
13	MP1C	X	-20.12	2.25
14	MP1C	Z	0	2.25
15	MP1C	Mx	-.0077	2.25
16	MP1C	X	-20.12	6.25
17	MP1C	Z	0	6.25
18	MP1C	Mx	-.0077	6.25
19	MP2A	X	-23.416	2.25
20	MP2A	Z	0	2.25
21	MP2A	Mx	.0189	2.25
22	MP2A	X	-23.416	6.25
23	MP2A	Z	0	6.25
24	MP2A	Mx	.0189	6.25
25	MP2B	X	-32.934	2.25
26	MP2B	Z	0	2.25
27	MP2B	Mx	-.0259	2.25
28	MP2B	X	-32.934	6.25
29	MP2B	Z	0	6.25
30	MP2B	Mx	-.0259	6.25
31	MP2C	X	-27.428	2.25
32	MP2C	Z	0	2.25
33	MP2C	Mx	-.004	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP2C	X	-27.428	6.25
35	MP2C	Z	0	6.25
36	MP2C	Mx	-.004	6.25
37	MP2A	X	-23.416	2.25
38	MP2A	Z	0	2.25
39	MP2A	Mx	.0161	2.25
40	MP2A	X	-23.416	6.25
41	MP2A	Z	0	6.25
42	MP2A	Mx	.0161	6.25
43	MP2B	X	-32.934	2.25
44	MP2B	Z	0	2.25
45	MP2B	Mx	.0173	2.25
46	MP2B	X	-32.934	6.25
47	MP2B	Z	0	6.25
48	MP2B	Mx	.0173	6.25
49	MP2C	X	-27.428	2.25
50	MP2C	Z	0	2.25
51	MP2C	Mx	-.0275	2.25
52	MP2C	X	-27.428	6.25
53	MP2C	Z	0	6.25
54	MP2C	Mx	-.0275	6.25
55	MP4A	X	-7.285	3.25
56	MP4A	Z	0	3.25
57	MP4A	Mx	.0036	3.25
58	MP4A	X	-7.285	5.25
59	MP4A	Z	0	5.25
60	MP4A	Mx	.0036	5.25
61	MP4B	X	-16.098	3.25
62	MP4B	Z	0	3.25
63	MP4B	Mx	-.0014	3.25
64	MP4B	X	-16.098	5.25
65	MP4B	Z	0	5.25
66	MP4B	Mx	-.0014	5.25
67	MP4C	X	-10.999	3.25
68	MP4C	Z	0	3.25
69	MP4C	Mx	-.0042	3.25
70	MP4C	X	-10.999	5.25
71	MP4C	Z	0	5.25
72	MP4C	Mx	-.0042	5.25
73	MP2A	X	-12.278	2
74	MP2A	Z	0	2
75	MP2A	Mx	-.0061	2
76	MP2B	X	-17.125	2
77	MP2B	Z	0	2
78	MP2B	Mx	.0015	2
79	MP2C	X	-14.321	2
80	MP2C	Z	0	2
81	MP2C	Mx	.0055	2
82	MP3A	X	-12.478	2
83	MP3A	Z	0	2
84	MP3A	Mx	-.0062	2
85	MP3B	X	-17.132	2
86	MP3B	Z	0	2
87	MP3B	Mx	.0015	2
88	MP3C	X	-14.439	2
89	MP3C	Z	0	2
90	MP3C	Mx	.0055	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP2A	X	-4.763	6
92	MP2A	Z	0	6
93	MP2A	Mx	-.0024	6
94	MP2B	X	-8.776	6
95	MP2B	Z	0	6
96	MP2B	Mx	.000762	6
97	MP2C	X	-6.455	6
98	MP2C	Z	0	6
99	MP2C	Mx	.0025	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-16.877	2.25
2	MP1A	Z	-9.744	2.25
3	MP1A	Mx	.008	2.25
4	MP1A	X	-16.877	6.25
5	MP1A	Z	-9.744	6.25
6	MP1A	Mx	.008	6.25
7	MP1B	X	-20.478	2.25
8	MP1B	Z	-11.823	2.25
9	MP1B	Mx	.004	2.25
10	MP1B	X	-20.478	6.25
11	MP1B	Z	-11.823	6.25
12	MP1B	Mx	.004	6.25
13	MP1C	X	-14.935	2.25
14	MP1C	Z	-8.623	2.25
15	MP1C	Mx	-.0085	2.25
16	MP1C	X	-14.935	6.25
17	MP1C	Z	-8.623	6.25
18	MP1C	Mx	-.0085	6.25
19	MP2A	X	-23.032	2.25
20	MP2A	Z	-13.298	2.25
21	MP2A	Mx	.0265	2.25
22	MP2A	X	-23.032	6.25
23	MP2A	Z	-13.298	6.25
24	MP2A	Mx	.0265	6.25
25	MP2B	X	-27.778	2.25
26	MP2B	Z	-16.038	2.25
27	MP2B	Mx	-.0119	2.25
28	MP2B	X	-27.778	6.25
29	MP2B	Z	-16.038	6.25
30	MP2B	Mx	-.0119	6.25
31	MP2C	X	-20.472	2.25
32	MP2C	Z	-11.82	2.25
33	MP2C	Mx	-.0147	2.25
34	MP2C	X	-20.472	6.25
35	MP2C	Z	-11.82	6.25
36	MP2C	Mx	-.0147	6.25
37	MP2A	X	-23.032	2.25
38	MP2A	Z	-13.298	2.25
39	MP2A	Mx	.0062	2.25
40	MP2A	X	-23.032	6.25
41	MP2A	Z	-13.298	6.25
42	MP2A	Mx	.0062	6.25
43	MP2B	X	-27.778	2.25
44	MP2B	Z	-16.038	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2B	Mx	.0283	2.25
46	MP2B	X	-27.778	6.25
47	MP2B	Z	-16.038	6.25
48	MP2B	Mx	.0283	6.25
49	MP2C	X	-20.472	2.25
50	MP2C	Z	-11.82	2.25
51	MP2C	Mx	-.0202	2.25
52	MP2C	X	-20.472	6.25
53	MP2C	Z	-11.82	6.25
54	MP2C	Mx	-.0202	6.25
55	MP4A	X	-8.858	3.25
56	MP4A	Z	-5.114	3.25
57	MP4A	Mx	.0042	3.25
58	MP4A	X	-8.858	5.25
59	MP4A	Z	-5.114	5.25
60	MP4A	Mx	.0042	5.25
61	MP4B	X	-13.252	3.25
62	MP4B	Z	-7.651	3.25
63	MP4B	Mx	.0026	3.25
64	MP4B	X	-13.252	5.25
65	MP4B	Z	-7.651	5.25
66	MP4B	Mx	.0026	5.25
67	MP4C	X	-6.488	3.25
68	MP4C	Z	-3.746	3.25
69	MP4C	Mx	-.0037	3.25
70	MP4C	X	-6.488	5.25
71	MP4C	Z	-3.746	5.25
72	MP4C	Mx	-.0037	5.25
73	MP2A	X	-12.035	2
74	MP2A	Z	-6.949	2
75	MP2A	Mx	-.0057	2
76	MP2B	X	-14.452	2
77	MP2B	Z	-8.344	2
78	MP2B	Mx	-.0029	2
79	MP2C	X	-10.731	2
80	MP2C	Z	-6.196	2
81	MP2C	Mx	.0061	2
82	MP3A	X	-12.152	2
83	MP3A	Z	-7.016	2
84	MP3A	Mx	-.0057	2
85	MP3B	X	-14.473	2
86	MP3B	Z	-8.356	2
87	MP3B	Mx	-.0029	2
88	MP3C	X	-10.901	2
89	MP3C	Z	-6.293	2
90	MP3C	Mx	.0062	2
91	MP2A	X	-5.286	6
92	MP2A	Z	-3.052	6
93	MP2A	Mx	-.0025	6
94	MP2B	X	-7.287	6
95	MP2B	Z	-4.207	6
96	MP2B	Mx	-.0014	6
97	MP2C	X	-4.207	6
98	MP2C	Z	-2.429	6
99	MP2C	Mx	.0024	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-11.592	2.25
2	MP1A	Z	-20.077	2.25
3	MP1A	Mx	.0049	2.25
4	MP1A	X	-11.592	6.25
5	MP1A	Z	-20.077	6.25
6	MP1A	Mx	.0049	6.25
7	MP1B	X	-10.06	2.25
8	MP1B	Z	-17.424	2.25
9	MP1B	Mx	.0077	2.25
10	MP1B	X	-10.06	6.25
11	MP1B	Z	-17.424	6.25
12	MP1B	Mx	.0077	6.25
13	MP1C	X	-8.948	2.25
14	MP1C	Z	-15.499	2.25
15	MP1C	Mx	-.0084	2.25
16	MP1C	X	-8.948	6.25
17	MP1C	Z	-15.499	6.25
18	MP1C	Mx	-.0084	6.25
19	MP2A	X	-15.733	2.25
20	MP2A	Z	-27.25	2.25
21	MP2A	Mx	.029	2.25
22	MP2A	X	-15.733	6.25
23	MP2A	Z	-27.25	6.25
24	MP2A	Mx	.029	6.25
25	MP2B	X	-13.714	2.25
26	MP2B	Z	-23.753	2.25
27	MP2B	Mx	.004	2.25
28	MP2B	X	-13.714	6.25
29	MP2B	Z	-23.753	6.25
30	MP2B	Mx	.004	6.25
31	MP2C	X	-12.249	2.25
32	MP2C	Z	-21.216	2.25
33	MP2C	Mx	-.0229	2.25
34	MP2C	X	-12.249	6.25
35	MP2C	Z	-21.216	6.25
36	MP2C	Mx	-.0229	6.25
37	MP2A	X	-15.733	2.25
38	MP2A	Z	-27.25	2.25
39	MP2A	Mx	-.009	2.25
40	MP2A	X	-15.733	6.25
41	MP2A	Z	-27.25	6.25
42	MP2A	Mx	-.009	6.25
43	MP2B	X	-13.714	2.25
44	MP2B	Z	-23.753	2.25
45	MP2B	Mx	.0275	2.25
46	MP2B	X	-13.714	6.25
47	MP2B	Z	-23.753	6.25
48	MP2B	Mx	.0275	6.25
49	MP2C	X	-12.249	2.25
50	MP2C	Z	-21.216	2.25
51	MP2C	Mx	-.0117	2.25
52	MP2C	X	-12.249	6.25
53	MP2C	Z	-21.216	6.25
54	MP2C	Mx	-.0117	6.25
55	MP4A	X	-7.369	3.25
56	MP4A	Z	-12.764	3.25
57	MP4A	Mx	.0031	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP4A	X	-7.369	5.25
59	MP4A	Z	-12.764	5.25
60	MP4A	Mx	.0031	5.25
61	MP4B	X	-5.5	3.25
62	MP4B	Z	-9.526	3.25
63	MP4B	Mx	.0042	3.25
64	MP4B	X	-5.5	5.25
65	MP4B	Z	-9.526	5.25
66	MP4B	Mx	.0042	5.25
67	MP4C	X	-4.143	3.25
68	MP4C	Z	-7.176	3.25
69	MP4C	Mx	-.0039	3.25
70	MP4C	X	-4.143	5.25
71	MP4C	Z	-7.176	5.25
72	MP4C	Mx	-.0039	5.25
73	MP2A	X	-8.189	2
74	MP2A	Z	-14.183	2
75	MP2A	Mx	-.0035	2
76	MP2B	X	-7.161	2
77	MP2B	Z	-12.402	2
78	MP2B	Mx	-.0055	2
79	MP2C	X	-6.414	2
80	MP2C	Z	-11.11	2
81	MP2C	Mx	.006	2
82	MP3A	X	-8.207	2
83	MP3A	Z	-14.215	2
84	MP3A	Mx	-.0035	2
85	MP3B	X	-7.22	2
86	MP3B	Z	-12.505	2
87	MP3B	Mx	-.0055	2
88	MP3C	X	-6.503	2
89	MP3C	Z	-11.264	2
90	MP3C	Mx	.0061	2
91	MP2A	X	-4.078	6
92	MP2A	Z	-7.064	6
93	MP2A	Mx	-.0017	6
94	MP2B	X	-3.227	6
95	MP2B	Z	-5.59	6
96	MP2B	Mx	-.0025	6
97	MP2C	X	-2.61	6
98	MP2C	Z	-4.52	6
99	MP2C	Mx	.0025	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.25
2	MP1A	Z	-7.452	2.25
3	MP1A	Mx	-.000325	2.25
4	MP1A	X	0	6.25
5	MP1A	Z	-7.452	6.25
6	MP1A	Mx	-.000325	6.25
7	MP1B	X	0	2.25
8	MP1B	Z	-4.997	2.25
9	MP1B	Mx	.0025	2.25
10	MP1B	X	0	6.25
11	MP1B	Z	-4.997	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP1B	Mx	.0025	6.25
13	MP1C	X	0	2.25
14	MP1C	Z	-6.417	2.25
15	MP1C	Mx	-.0021	2.25
16	MP1C	X	0	6.25
17	MP1C	Z	-6.417	6.25
18	MP1C	Mx	-.0021	6.25
19	MP2A	X	0	2.25
20	MP2A	Z	-6.928	2.25
21	MP2A	Mx	.0041	2.25
22	MP2A	X	0	6.25
23	MP2A	Z	-6.928	6.25
24	MP2A	Mx	.0041	6.25
25	MP2B	X	0	2.25
26	MP2B	Z	-3.106	2.25
27	MP2B	Mx	.0019	2.25
28	MP2B	X	0	6.25
29	MP2B	Z	-3.106	6.25
30	MP2B	Mx	.0019	6.25
31	MP2C	X	0	2.25
32	MP2C	Z	-5.317	2.25
33	MP2C	Mx	-.0053	2.25
34	MP2C	X	0	6.25
35	MP2C	Z	-5.317	6.25
36	MP2C	Mx	-.0053	6.25
37	MP2A	X	0	2.25
38	MP2A	Z	-10.29	2.25
39	MP2A	Mx	-.0075	2.25
40	MP2A	X	0	6.25
41	MP2A	Z	-10.29	6.25
42	MP2A	Mx	-.0075	6.25
43	MP2B	X	0	2.25
44	MP2B	Z	-6.95	2.25
45	MP2B	Mx	.0059	2.25
46	MP2B	X	0	6.25
47	MP2B	Z	-6.95	6.25
48	MP2B	Mx	.0059	6.25
49	MP2C	X	0	2.25
50	MP2C	Z	-8.882	2.25
51	MP2C	Mx	.000254	2.25
52	MP2C	X	0	6.25
53	MP2C	Z	-8.882	6.25
54	MP2C	Mx	.000254	6.25
55	MP4A	X	0	3.25
56	MP4A	Z	-4.834	3.25
57	MP4A	Mx	-.000211	3.25
58	MP4A	X	0	5.25
59	MP4A	Z	-4.834	5.25
60	MP4A	Mx	-.000211	5.25
61	MP4B	X	0	3.25
62	MP4B	Z	-1.961	3.25
63	MP4B	Mx	.000966	3.25
64	MP4B	X	0	5.25
65	MP4B	Z	-1.961	5.25
66	MP4B	Mx	.000966	5.25
67	MP4C	X	0	3.25
68	MP4C	Z	-3.623	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP4C	Mx	-.0012	3.25
70	MP4C	X	0	5.25
71	MP4C	Z	-3.623	5.25
72	MP4C	Mx	-.0012	5.25
73	MP2A	X	0	2
74	MP2A	Z	-3.963	2
75	MP2A	Mx	.000173	2
76	MP2B	X	0	2
77	MP2B	Z	-2.705	2
78	MP2B	Mx	-.0013	2
79	MP2C	X	0	2
80	MP2C	Z	-3.433	2
81	MP2C	Mx	.0011	2
82	MP3A	X	0	2
83	MP3A	Z	-4.781	2
84	MP3A	Mx	.000208	2
85	MP3B	X	0	2
86	MP3B	Z	-3.314	2
87	MP3B	Mx	-.0016	2
88	MP3C	X	0	2
89	MP3C	Z	-4.163	2
90	MP3C	Mx	.0013	2
91	MP2A	X	0	6
92	MP2A	Z	-2.194	6
93	MP2A	Mx	9.6e-5	6
94	MP2B	X	0	6
95	MP2B	Z	-.972	6
96	MP2B	Mx	-.000479	6
97	MP2C	X	0	6
98	MP2C	Z	-1.679	6
99	MP2C	Mx	.00054	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	3.316	2.25
2	MP1A	Z	-5.743	2.25
3	MP1A	Mx	-.0019	2.25
4	MP1A	X	3.316	6.25
5	MP1A	Z	-5.743	6.25
6	MP1A	Mx	-.0019	6.25
7	MP1B	X	2.609	2.25
8	MP1B	Z	-4.519	2.25
9	MP1B	Mx	.0025	2.25
10	MP1B	X	2.609	6.25
11	MP1B	Z	-4.519	6.25
12	MP1B	Mx	.0025	6.25
13	MP1C	X	3.697	2.25
14	MP1C	Z	-6.403	2.25
15	MP1C	Mx	-.000642	2.25
16	MP1C	X	3.697	6.25
17	MP1C	Z	-6.403	6.25
18	MP1C	Mx	-.000642	6.25
19	MP2A	X	2.826	2.25
20	MP2A	Z	-4.894	2.25
21	MP2A	Mx	.000655	2.25
22	MP2A	X	2.826	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	-4.894	6.25
24	MP2A	Mx	.000655	6.25
25	MP2B	X	1.725	2.25
26	MP2B	Z	-2.988	2.25
27	MP2B	Mx	.0032	2.25
28	MP2B	X	1.725	6.25
29	MP2B	Z	-2.988	6.25
30	MP2B	Mx	.0032	6.25
31	MP2C	X	3.419	2.25
32	MP2C	Z	-5.922	2.25
33	MP2C	Mx	-.0054	2.25
34	MP2C	X	3.419	6.25
35	MP2C	Z	-5.922	6.25
36	MP2C	Mx	-.0054	6.25
37	MP2A	X	4.587	2.25
38	MP2A	Z	-7.945	2.25
39	MP2A	Mx	-.009	2.25
40	MP2A	X	4.587	6.25
41	MP2A	Z	-7.945	6.25
42	MP2A	Mx	-.009	6.25
43	MP2B	X	3.626	2.25
44	MP2B	Z	-6.28	2.25
45	MP2B	Mx	.0035	2.25
46	MP2B	X	3.626	6.25
47	MP2B	Z	-6.28	6.25
48	MP2B	Mx	.0035	6.25
49	MP2C	X	5.106	2.25
50	MP2C	Z	-8.843	2.25
51	MP2C	Mx	.0054	2.25
52	MP2C	X	5.106	6.25
53	MP2C	Z	-8.843	6.25
54	MP2C	Mx	.0054	6.25
55	MP4A	X	1.937	3.25
56	MP4A	Z	-3.355	3.25
57	MP4A	Mx	-.0011	3.25
58	MP4A	X	1.937	5.25
59	MP4A	Z	-3.355	5.25
60	MP4A	Mx	-.0011	5.25
61	MP4B	X	1.11	3.25
62	MP4B	Z	-1.922	3.25
63	MP4B	Mx	.001	3.25
64	MP4B	X	1.11	5.25
65	MP4B	Z	-1.922	5.25
66	MP4B	Mx	.001	5.25
67	MP4C	X	2.383	3.25
68	MP4C	Z	-4.128	3.25
69	MP4C	Mx	-.000414	3.25
70	MP4C	X	2.383	5.25
71	MP4C	Z	-4.128	5.25
72	MP4C	Mx	-.000414	5.25
73	MP2A	X	1.771	2
74	MP2A	Z	-3.068	2
75	MP2A	Mx	.001	2
76	MP2B	X	1.409	2
77	MP2B	Z	-2.441	2
78	MP2B	Mx	-.0013	2
79	MP2C	X	1.967	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP2C	Z	-3.406	2
81	MP2C	Mx	.000341	2
82	MP3A	X	2.146	2
83	MP3A	Z	-3.716	2
84	MP3A	Mx	.0012	2
85	MP3B	X	1.723	2
86	MP3B	Z	-2.984	2
87	MP3B	Mx	-.0016	2
88	MP3C	X	2.373	2
89	MP3C	Z	-4.111	2
90	MP3C	Mx	.000412	2
91	MP2A	X	.893	6
92	MP2A	Z	-1.547	6
93	MP2A	Mx	.000512	6
94	MP2B	X	.541	6
95	MP2B	Z	-.937	6
96	MP2B	Mx	-.000508	6
97	MP2C	X	1.083	6
98	MP2C	Z	-1.876	6
99	MP2C	Mx	.000188	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	4.655	2.25
2	MP1A	Z	-2.688	2.25
3	MP1A	Mx	-.0024	2.25
4	MP1A	X	4.655	6.25
5	MP1A	Z	-2.688	6.25
6	MP1A	Mx	-.0024	6.25
7	MP1B	X	5.557	2.25
8	MP1B	Z	-3.208	2.25
9	MP1B	Mx	.0021	2.25
10	MP1B	X	5.557	6.25
11	MP1B	Z	-3.208	6.25
12	MP1B	Mx	.0021	6.25
13	MP1C	X	6.212	2.25
14	MP1C	Z	-3.586	2.25
15	MP1C	Mx	.0012	2.25
16	MP1C	X	6.212	6.25
17	MP1C	Z	-3.586	6.25
18	MP1C	Mx	.0012	6.25
19	MP2A	X	3.2	2.25
20	MP2A	Z	-1.848	2.25
21	MP2A	Mx	-.0015	2.25
22	MP2A	X	3.2	6.25
23	MP2A	Z	-1.848	6.25
24	MP2A	Mx	-.0015	6.25
25	MP2B	X	4.605	2.25
26	MP2B	Z	-2.659	2.25
27	MP2B	Mx	.0053	2.25
28	MP2B	X	4.605	6.25
29	MP2B	Z	-2.659	6.25
30	MP2B	Mx	.0053	6.25
31	MP2C	X	5.624	2.25
32	MP2C	Z	-3.247	2.25
33	MP2C	Mx	-.0024	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP2C	X	5.624	6.25
35	MP2C	Z	-3.247	6.25
36	MP2C	Mx	-.0024	6.25
37	MP2A	X	6.465	2.25
38	MP2A	Z	-3.733	2.25
39	MP2A	Mx	-.0072	2.25
40	MP2A	X	6.465	6.25
41	MP2A	Z	-3.733	6.25
42	MP2A	Mx	-.0072	6.25
43	MP2B	X	7.692	2.25
44	MP2B	Z	-4.441	2.25
45	MP2B	Mx	-.000254	2.25
46	MP2B	X	7.692	6.25
47	MP2B	Z	-4.441	6.25
48	MP2B	Mx	-.000254	6.25
49	MP2C	X	8.582	2.25
50	MP2C	Z	-4.955	2.25
51	MP2C	Mx	.0088	2.25
52	MP2C	X	8.582	6.25
53	MP2C	Z	-4.955	6.25
54	MP2C	Mx	.0088	6.25
55	MP4A	X	2.082	3.25
56	MP4A	Z	-1.202	3.25
57	MP4A	Mx	-.0011	3.25
58	MP4A	X	2.082	5.25
59	MP4A	Z	-1.202	5.25
60	MP4A	Mx	-.0011	5.25
61	MP4B	X	3.138	3.25
62	MP4B	Z	-1.811	3.25
63	MP4B	Mx	.0012	3.25
64	MP4B	X	3.138	5.25
65	MP4B	Z	-1.811	5.25
66	MP4B	Mx	.0012	5.25
67	MP4C	X	3.904	3.25
68	MP4C	Z	-2.254	3.25
69	MP4C	Mx	.000771	3.25
70	MP4C	X	3.904	5.25
71	MP4C	Z	-2.254	5.25
72	MP4C	Mx	.000771	5.25
73	MP2A	X	2.511	2
74	MP2A	Z	-1.449	2
75	MP2A	Mx	.0013	2
76	MP2B	X	2.973	2
77	MP2B	Z	-1.716	2
78	MP2B	Mx	-.0011	2
79	MP2C	X	3.308	2
80	MP2C	Z	-1.91	2
81	MP2C	Mx	-.000653	2
82	MP3A	X	3.066	2
83	MP3A	Z	-1.77	2
84	MP3A	Mx	.0016	2
85	MP3B	X	3.605	2
86	MP3B	Z	-2.081	2
87	MP3B	Mx	-.0013	2
88	MP3C	X	3.996	2
89	MP3C	Z	-2.307	2
90	MP3C	Mx	-.000789	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP2A	X	1.005	6
92	MP2A	Z	-.58	6
93	MP2A	Mx	.000526	6
94	MP2B	X	1.454	6
95	MP2B	Z	-.84	6
96	MP2B	Mx	-.00054	6
97	MP2C	X	1.78	6
98	MP2C	Z	-1.028	6
99	MP2C	Mx	-.000351	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	4.939	2.25
2	MP1A	Z	0	2.25
3	MP1A	Mx	-.0025	2.25
4	MP1A	X	4.939	6.25
5	MP1A	Z	0	6.25
6	MP1A	Mx	-.0025	6.25
7	MP1B	X	7.394	2.25
8	MP1B	Z	0	2.25
9	MP1B	Mx	.000642	2.25
10	MP1B	X	7.394	6.25
11	MP1B	Z	0	6.25
12	MP1B	Mx	.000642	6.25
13	MP1C	X	5.974	2.25
14	MP1C	Z	0	2.25
15	MP1C	Mx	.0023	2.25
16	MP1C	X	5.974	6.25
17	MP1C	Z	0	6.25
18	MP1C	Mx	.0023	6.25
19	MP2A	X	3.016	2.25
20	MP2A	Z	0	2.25
21	MP2A	Mx	-.0024	2.25
22	MP2A	X	3.016	6.25
23	MP2A	Z	0	6.25
24	MP2A	Mx	-.0024	6.25
25	MP2B	X	6.839	2.25
26	MP2B	Z	0	2.25
27	MP2B	Mx	.0054	2.25
28	MP2B	X	6.839	6.25
29	MP2B	Z	0	6.25
30	MP2B	Mx	.0054	6.25
31	MP2C	X	4.627	2.25
32	MP2C	Z	0	2.25
33	MP2C	Mx	.000676	2.25
34	MP2C	X	4.627	6.25
35	MP2C	Z	0	6.25
36	MP2C	Mx	.000676	6.25
37	MP2A	X	6.872	2.25
38	MP2A	Z	0	2.25
39	MP2A	Mx	-.0047	2.25
40	MP2A	X	6.872	6.25
41	MP2A	Z	0	6.25
42	MP2A	Mx	-.0047	6.25
43	MP2B	X	10.211	2.25
44	MP2B	Z	0	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2B	Mx	-.0054	2.25
46	MP2B	X	10.211	6.25
47	MP2B	Z	0	6.25
48	MP2B	Mx	-.0054	6.25
49	MP2C	X	8.279	2.25
50	MP2C	Z	0	2.25
51	MP2C	Mx	.0083	2.25
52	MP2C	X	8.279	6.25
53	MP2C	Z	0	6.25
54	MP2C	Mx	.0083	6.25
55	MP4A	X	1.893	3.25
56	MP4A	Z	0	3.25
57	MP4A	Mx	-.000943	3.25
58	MP4A	X	1.893	5.25
59	MP4A	Z	0	5.25
60	MP4A	Mx	-.000943	5.25
61	MP4B	X	4.767	3.25
62	MP4B	Z	0	3.25
63	MP4B	Mx	.000414	3.25
64	MP4B	X	4.767	5.25
65	MP4B	Z	0	5.25
66	MP4B	Mx	.000414	5.25
67	MP4C	X	3.104	3.25
68	MP4C	Z	0	3.25
69	MP4C	Mx	.0012	3.25
70	MP4C	X	3.104	5.25
71	MP4C	Z	0	5.25
72	MP4C	Mx	.0012	5.25
73	MP2A	X	2.675	2
74	MP2A	Z	0	2
75	MP2A	Mx	.0013	2
76	MP2B	X	3.933	2
77	MP2B	Z	0	2
78	MP2B	Mx	-.000341	2
79	MP2C	X	3.206	2
80	MP2C	Z	0	2
81	MP2C	Mx	-.0012	2
82	MP3A	X	3.279	2
83	MP3A	Z	0	2
84	MP3A	Mx	.0016	2
85	MP3B	X	4.747	2
86	MP3B	Z	0	2
87	MP3B	Mx	-.000412	2
88	MP3C	X	3.898	2
89	MP3C	Z	0	2
90	MP3C	Mx	-.0015	2
91	MP2A	X	.943	6
92	MP2A	Z	0	6
93	MP2A	Mx	.00047	6
94	MP2B	X	2.166	6
95	MP2B	Z	0	6
96	MP2B	Mx	-.000188	6
97	MP2C	X	1.458	6
98	MP2C	Z	0	6
99	MP2C	Mx	-.000558	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	4.988	2.25
2	MP1A	Z	2.88	2.25
3	MP1A	Mx	-.0024	2.25
4	MP1A	X	4.988	6.25
5	MP1A	Z	2.88	6.25
6	MP1A	Mx	-.0024	6.25
7	MP1B	X	6.212	2.25
8	MP1B	Z	3.586	2.25
9	MP1B	Mx	-.0012	2.25
10	MP1B	X	6.212	6.25
11	MP1B	Z	3.586	6.25
12	MP1B	Mx	-.0012	6.25
13	MP1C	X	4.327	2.25
14	MP1C	Z	2.498	2.25
15	MP1C	Mx	.0025	2.25
16	MP1C	X	4.327	6.25
17	MP1C	Z	2.498	6.25
18	MP1C	Mx	.0025	6.25
19	MP2A	X	3.718	2.25
20	MP2A	Z	2.146	2.25
21	MP2A	Mx	-.0043	2.25
22	MP2A	X	3.718	6.25
23	MP2A	Z	2.146	6.25
24	MP2A	Mx	-.0043	6.25
25	MP2B	X	5.624	2.25
26	MP2B	Z	3.247	2.25
27	MP2B	Mx	.0024	2.25
28	MP2B	X	5.624	6.25
29	MP2B	Z	3.247	6.25
30	MP2B	Mx	.0024	6.25
31	MP2C	X	2.69	2.25
32	MP2C	Z	1.553	2.25
33	MP2C	Mx	.0019	2.25
34	MP2C	X	2.69	6.25
35	MP2C	Z	1.553	6.25
36	MP2C	Mx	.0019	6.25
37	MP2A	X	6.917	2.25
38	MP2A	Z	3.994	2.25
39	MP2A	Mx	-.0019	2.25
40	MP2A	X	6.917	6.25
41	MP2A	Z	3.994	6.25
42	MP2A	Mx	-.0019	6.25
43	MP2B	X	8.582	2.25
44	MP2B	Z	4.955	2.25
45	MP2B	Mx	-.0088	2.25
46	MP2B	X	8.582	6.25
47	MP2B	Z	4.955	6.25
48	MP2B	Mx	-.0088	6.25
49	MP2C	X	6.019	2.25
50	MP2C	Z	3.475	2.25
51	MP2C	Mx	.0059	2.25
52	MP2C	X	6.019	6.25
53	MP2C	Z	3.475	6.25
54	MP2C	Mx	.0059	6.25
55	MP4A	X	2.471	3.25
56	MP4A	Z	1.427	3.25
57	MP4A	Mx	-.0012	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP4A	X	2.471	5.25
59	MP4A	Z	1.427	5.25
60	MP4A	Mx	-.0012	5.25
61	MP4B	X	3.904	3.25
62	MP4B	Z	2.254	3.25
63	MP4B	Mx	-.000771	3.25
64	MP4B	X	3.904	5.25
65	MP4B	Z	2.254	5.25
66	MP4B	Mx	-.000771	5.25
67	MP4C	X	1.698	3.25
68	MP4C	Z	.98	3.25
69	MP4C	Mx	.000965	3.25
70	MP4C	X	1.698	5.25
71	MP4C	Z	.98	5.25
72	MP4C	Mx	.000965	5.25
73	MP2A	X	2.681	2
74	MP2A	Z	1.548	2
75	MP2A	Mx	.0013	2
76	MP2B	X	3.308	2
77	MP2B	Z	1.91	2
78	MP2B	Mx	.000653	2
79	MP2C	X	2.342	2
80	MP2C	Z	1.352	2
81	MP2C	Mx	-.0013	2
82	MP3A	X	3.264	2
83	MP3A	Z	1.885	2
84	MP3A	Mx	.0015	2
85	MP3B	X	3.996	2
86	MP3B	Z	2.307	2
87	MP3B	Mx	.000789	2
88	MP3C	X	2.87	2
89	MP3C	Z	1.657	2
90	MP3C	Mx	-.0016	2
91	MP2A	X	1.17	6
92	MP2A	Z	.676	6
93	MP2A	Mx	.000553	6
94	MP2B	X	1.78	6
95	MP2B	Z	1.028	6
96	MP2B	Mx	.000352	6
97	MP2C	X	.842	6
98	MP2C	Z	.486	6
99	MP2C	Mx	-.000479	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	3.508	2.25
2	MP1A	Z	6.075	2.25
3	MP1A	Mx	-.0015	2.25
4	MP1A	X	3.508	6.25
5	MP1A	Z	6.075	6.25
6	MP1A	Mx	-.0015	6.25
7	MP1B	X	2.987	2.25
8	MP1B	Z	5.174	2.25
9	MP1B	Mx	-.0023	2.25
10	MP1B	X	2.987	6.25
11	MP1B	Z	5.174	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP1B	Mx	-.0023	6.25
13	MP1C	X	2.609	2.25
14	MP1C	Z	4.519	2.25
15	MP1C	Mx	.0025	2.25
16	MP1C	X	2.609	6.25
17	MP1C	Z	4.519	6.25
18	MP1C	Mx	.0025	6.25
19	MP2A	X	3.124	2.25
20	MP2A	Z	5.412	2.25
21	MP2A	Mx	-.0058	2.25
22	MP2A	X	3.124	6.25
23	MP2A	Z	5.412	6.25
24	MP2A	Mx	-.0058	6.25
25	MP2B	X	2.314	2.25
26	MP2B	Z	4.007	2.25
27	MP2B	Mx	-.000675	2.25
28	MP2B	X	2.314	6.25
29	MP2B	Z	4.007	6.25
30	MP2B	Mx	-.000675	6.25
31	MP2C	X	1.725	2.25
32	MP2C	Z	2.988	2.25
33	MP2C	Mx	.0032	2.25
34	MP2C	X	1.725	6.25
35	MP2C	Z	2.988	6.25
36	MP2C	Mx	.0032	6.25
37	MP2A	X	4.848	2.25
38	MP2A	Z	8.397	2.25
39	MP2A	Mx	.0028	2.25
40	MP2A	X	4.848	6.25
41	MP2A	Z	8.397	6.25
42	MP2A	Mx	.0028	6.25
43	MP2B	X	4.14	2.25
44	MP2B	Z	7.17	2.25
45	MP2B	Mx	-.0083	2.25
46	MP2B	X	4.14	6.25
47	MP2B	Z	7.17	6.25
48	MP2B	Mx	-.0083	6.25
49	MP2C	X	3.626	2.25
50	MP2C	Z	6.28	2.25
51	MP2C	Mx	.0035	2.25
52	MP2C	X	3.626	6.25
53	MP2C	Z	6.28	6.25
54	MP2C	Mx	.0035	6.25
55	MP4A	X	2.162	3.25
56	MP4A	Z	3.744	3.25
57	MP4A	Mx	-.000914	3.25
58	MP4A	X	2.162	5.25
59	MP4A	Z	3.744	5.25
60	MP4A	Mx	-.000914	5.25
61	MP4B	X	1.552	3.25
62	MP4B	Z	2.689	3.25
63	MP4B	Mx	-.0012	3.25
64	MP4B	X	1.552	5.25
65	MP4B	Z	2.689	5.25
66	MP4B	Mx	-.0012	5.25
67	MP4C	X	1.11	3.25
68	MP4C	Z	1.922	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP4C	Mx	.001	3.25
70	MP4C	X	1.11	5.25
71	MP4C	Z	1.922	5.25
72	MP4C	Mx	.001	5.25
73	MP2A	X	1.87	2
74	MP2A	Z	3.238	2
75	MP2A	Mx	.00079	2
76	MP2B	X	1.603	2
77	MP2B	Z	2.776	2
78	MP2B	Mx	.0012	2
79	MP2C	X	1.409	2
80	MP2C	Z	2.441	2
81	MP2C	Mx	-.0013	2
82	MP3A	X	2.26	2
83	MP3A	Z	3.915	2
84	MP3A	Mx	.000955	2
85	MP3B	X	1.949	2
86	MP3B	Z	3.376	2
87	MP3B	Mx	.0015	2
88	MP3C	X	1.723	2
89	MP3C	Z	2.984	2
90	MP3C	Mx	-.0016	2
91	MP2A	X	.989	6
92	MP2A	Z	1.712	6
93	MP2A	Mx	.000418	6
94	MP2B	X	.729	6
95	MP2B	Z	1.263	6
96	MP2B	Mx	.000559	6
97	MP2C	X	.541	6
98	MP2C	Z	.937	6
99	MP2C	Mx	-.000508	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.25
2	MP1A	Z	7.452	2.25
3	MP1A	Mx	.000325	2.25
4	MP1A	X	0	6.25
5	MP1A	Z	7.452	6.25
6	MP1A	Mx	.000325	6.25
7	MP1B	X	0	2.25
8	MP1B	Z	4.997	2.25
9	MP1B	Mx	-.0025	2.25
10	MP1B	X	0	6.25
11	MP1B	Z	4.997	6.25
12	MP1B	Mx	-.0025	6.25
13	MP1C	X	0	2.25
14	MP1C	Z	6.417	2.25
15	MP1C	Mx	.0021	2.25
16	MP1C	X	0	6.25
17	MP1C	Z	6.417	6.25
18	MP1C	Mx	.0021	6.25
19	MP2A	X	0	2.25
20	MP2A	Z	6.928	2.25
21	MP2A	Mx	-.0041	2.25
22	MP2A	X	0	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	6.928	6.25
24	MP2A	Mx	-.0041	6.25
25	MP2B	X	0	2.25
26	MP2B	Z	3.106	2.25
27	MP2B	Mx	-.0019	2.25
28	MP2B	X	0	6.25
29	MP2B	Z	3.106	6.25
30	MP2B	Mx	-.0019	6.25
31	MP2C	X	0	2.25
32	MP2C	Z	5.317	2.25
33	MP2C	Mx	.0053	2.25
34	MP2C	X	0	6.25
35	MP2C	Z	5.317	6.25
36	MP2C	Mx	.0053	6.25
37	MP2A	X	0	2.25
38	MP2A	Z	10.29	2.25
39	MP2A	Mx	.0075	2.25
40	MP2A	X	0	6.25
41	MP2A	Z	10.29	6.25
42	MP2A	Mx	.0075	6.25
43	MP2B	X	0	2.25
44	MP2B	Z	6.95	2.25
45	MP2B	Mx	-.0059	2.25
46	MP2B	X	0	6.25
47	MP2B	Z	6.95	6.25
48	MP2B	Mx	-.0059	6.25
49	MP2C	X	0	2.25
50	MP2C	Z	8.882	2.25
51	MP2C	Mx	-.000254	2.25
52	MP2C	X	0	6.25
53	MP2C	Z	8.882	6.25
54	MP2C	Mx	-.000254	6.25
55	MP4A	X	0	3.25
56	MP4A	Z	4.834	3.25
57	MP4A	Mx	.000211	3.25
58	MP4A	X	0	5.25
59	MP4A	Z	4.834	5.25
60	MP4A	Mx	.000211	5.25
61	MP4B	X	0	3.25
62	MP4B	Z	1.961	3.25
63	MP4B	Mx	-.000966	3.25
64	MP4B	X	0	5.25
65	MP4B	Z	1.961	5.25
66	MP4B	Mx	-.000966	5.25
67	MP4C	X	0	3.25
68	MP4C	Z	3.623	3.25
69	MP4C	Mx	.0012	3.25
70	MP4C	X	0	5.25
71	MP4C	Z	3.623	5.25
72	MP4C	Mx	.0012	5.25
73	MP2A	X	0	2
74	MP2A	Z	3.963	2
75	MP2A	Mx	-.000173	2
76	MP2B	X	0	2
77	MP2B	Z	2.705	2
78	MP2B	Mx	.0013	2
79	MP2C	X	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP2C	Z	3.433	2
81	MP2C	Mx	-.0011	2
82	MP3A	X	0	2
83	MP3A	Z	4.781	2
84	MP3A	Mx	-.000208	2
85	MP3B	X	0	2
86	MP3B	Z	3.314	2
87	MP3B	Mx	.0016	2
88	MP3C	X	0	2
89	MP3C	Z	4.163	2
90	MP3C	Mx	-.0013	2
91	MP2A	X	0	6
92	MP2A	Z	2.194	6
93	MP2A	Mx	-9.6e-5	6
94	MP2B	X	0	6
95	MP2B	Z	.972	6
96	MP2B	Mx	.000479	6
97	MP2C	X	0	6
98	MP2C	Z	1.679	6
99	MP2C	Mx	-.00054	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-3.316	2.25
2	MP1A	Z	5.743	2.25
3	MP1A	Mx	.0019	2.25
4	MP1A	X	-3.316	6.25
5	MP1A	Z	5.743	6.25
6	MP1A	Mx	.0019	6.25
7	MP1B	X	-2.609	2.25
8	MP1B	Z	4.519	2.25
9	MP1B	Mx	-.0025	2.25
10	MP1B	X	-2.609	6.25
11	MP1B	Z	4.519	6.25
12	MP1B	Mx	-.0025	6.25
13	MP1C	X	-3.697	2.25
14	MP1C	Z	6.403	2.25
15	MP1C	Mx	.000642	2.25
16	MP1C	X	-3.697	6.25
17	MP1C	Z	6.403	6.25
18	MP1C	Mx	.000642	6.25
19	MP2A	X	-2.826	2.25
20	MP2A	Z	4.894	2.25
21	MP2A	Mx	-.000655	2.25
22	MP2A	X	-2.826	6.25
23	MP2A	Z	4.894	6.25
24	MP2A	Mx	-.000655	6.25
25	MP2B	X	-1.725	2.25
26	MP2B	Z	2.988	2.25
27	MP2B	Mx	-.0032	2.25
28	MP2B	X	-1.725	6.25
29	MP2B	Z	2.988	6.25
30	MP2B	Mx	-.0032	6.25
31	MP2C	X	-3.419	2.25
32	MP2C	Z	5.922	2.25
33	MP2C	Mx	.0054	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP2C	X	-3.419	6.25
35	MP2C	Z	5.922	6.25
36	MP2C	Mx	.0054	6.25
37	MP2A	X	-4.587	2.25
38	MP2A	Z	7.945	2.25
39	MP2A	Mx	.009	2.25
40	MP2A	X	-4.587	6.25
41	MP2A	Z	7.945	6.25
42	MP2A	Mx	.009	6.25
43	MP2B	X	-3.626	2.25
44	MP2B	Z	6.28	2.25
45	MP2B	Mx	-.0035	2.25
46	MP2B	X	-3.626	6.25
47	MP2B	Z	6.28	6.25
48	MP2B	Mx	-.0035	6.25
49	MP2C	X	-5.106	2.25
50	MP2C	Z	8.843	2.25
51	MP2C	Mx	-.0054	2.25
52	MP2C	X	-5.106	6.25
53	MP2C	Z	8.843	6.25
54	MP2C	Mx	-.0054	6.25
55	MP4A	X	-1.937	3.25
56	MP4A	Z	3.355	3.25
57	MP4A	Mx	.0011	3.25
58	MP4A	X	-1.937	5.25
59	MP4A	Z	3.355	5.25
60	MP4A	Mx	.0011	5.25
61	MP4B	X	-1.11	3.25
62	MP4B	Z	1.922	3.25
63	MP4B	Mx	-.001	3.25
64	MP4B	X	-1.11	5.25
65	MP4B	Z	1.922	5.25
66	MP4B	Mx	-.001	5.25
67	MP4C	X	-2.383	3.25
68	MP4C	Z	4.128	3.25
69	MP4C	Mx	.000414	3.25
70	MP4C	X	-2.383	5.25
71	MP4C	Z	4.128	5.25
72	MP4C	Mx	.000414	5.25
73	MP2A	X	-1.771	2
74	MP2A	Z	3.068	2
75	MP2A	Mx	-.001	2
76	MP2B	X	-1.409	2
77	MP2B	Z	2.441	2
78	MP2B	Mx	.0013	2
79	MP2C	X	-1.967	2
80	MP2C	Z	3.406	2
81	MP2C	Mx	-.000341	2
82	MP3A	X	-2.146	2
83	MP3A	Z	3.716	2
84	MP3A	Mx	-.0012	2
85	MP3B	X	-1.723	2
86	MP3B	Z	2.984	2
87	MP3B	Mx	.0016	2
88	MP3C	X	-2.373	2
89	MP3C	Z	4.111	2
90	MP3C	Mx	-.000412	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP2A	X	-.893	6
92	MP2A	Z	1.547	6
93	MP2A	Mx	-.000512	6
94	MP2B	X	-.541	6
95	MP2B	Z	.937	6
96	MP2B	Mx	.000508	6
97	MP2C	X	-1.083	6
98	MP2C	Z	1.876	6
99	MP2C	Mx	-.000188	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-4.655	2.25
2	MP1A	Z	2.688	2.25
3	MP1A	Mx	.0024	2.25
4	MP1A	X	-4.655	6.25
5	MP1A	Z	2.688	6.25
6	MP1A	Mx	.0024	6.25
7	MP1B	X	-5.557	2.25
8	MP1B	Z	3.208	2.25
9	MP1B	Mx	-.0021	2.25
10	MP1B	X	-5.557	6.25
11	MP1B	Z	3.208	6.25
12	MP1B	Mx	-.0021	6.25
13	MP1C	X	-6.212	2.25
14	MP1C	Z	3.586	2.25
15	MP1C	Mx	-.0012	2.25
16	MP1C	X	-6.212	6.25
17	MP1C	Z	3.586	6.25
18	MP1C	Mx	-.0012	6.25
19	MP2A	X	-3.2	2.25
20	MP2A	Z	1.848	2.25
21	MP2A	Mx	.0015	2.25
22	MP2A	X	-3.2	6.25
23	MP2A	Z	1.848	6.25
24	MP2A	Mx	.0015	6.25
25	MP2B	X	-4.605	2.25
26	MP2B	Z	2.659	2.25
27	MP2B	Mx	-.0053	2.25
28	MP2B	X	-4.605	6.25
29	MP2B	Z	2.659	6.25
30	MP2B	Mx	-.0053	6.25
31	MP2C	X	-5.624	2.25
32	MP2C	Z	3.247	2.25
33	MP2C	Mx	.0024	2.25
34	MP2C	X	-5.624	6.25
35	MP2C	Z	3.247	6.25
36	MP2C	Mx	.0024	6.25
37	MP2A	X	-6.465	2.25
38	MP2A	Z	3.733	2.25
39	MP2A	Mx	.0072	2.25
40	MP2A	X	-6.465	6.25
41	MP2A	Z	3.733	6.25
42	MP2A	Mx	.0072	6.25
43	MP2B	X	-7.692	2.25
44	MP2B	Z	4.441	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP2B	Mx	.000254	2.25
46	MP2B	X	-7.692	6.25
47	MP2B	Z	4.441	6.25
48	MP2B	Mx	.000254	6.25
49	MP2C	X	-8.582	2.25
50	MP2C	Z	4.955	2.25
51	MP2C	Mx	-.0088	2.25
52	MP2C	X	-8.582	6.25
53	MP2C	Z	4.955	6.25
54	MP2C	Mx	-.0088	6.25
55	MP4A	X	-2.082	3.25
56	MP4A	Z	1.202	3.25
57	MP4A	Mx	.0011	3.25
58	MP4A	X	-2.082	5.25
59	MP4A	Z	1.202	5.25
60	MP4A	Mx	.0011	5.25
61	MP4B	X	-3.138	3.25
62	MP4B	Z	1.811	3.25
63	MP4B	Mx	-.0012	3.25
64	MP4B	X	-3.138	5.25
65	MP4B	Z	1.811	5.25
66	MP4B	Mx	-.0012	5.25
67	MP4C	X	-3.904	3.25
68	MP4C	Z	2.254	3.25
69	MP4C	Mx	-.000771	3.25
70	MP4C	X	-3.904	5.25
71	MP4C	Z	2.254	5.25
72	MP4C	Mx	-.000771	5.25
73	MP2A	X	-2.511	2
74	MP2A	Z	1.449	2
75	MP2A	Mx	-.0013	2
76	MP2B	X	-2.973	2
77	MP2B	Z	1.716	2
78	MP2B	Mx	.0011	2
79	MP2C	X	-3.308	2
80	MP2C	Z	1.91	2
81	MP2C	Mx	.000653	2
82	MP3A	X	-3.066	2
83	MP3A	Z	1.77	2
84	MP3A	Mx	-.0016	2
85	MP3B	X	-3.605	2
86	MP3B	Z	2.081	2
87	MP3B	Mx	.0013	2
88	MP3C	X	-3.996	2
89	MP3C	Z	2.307	2
90	MP3C	Mx	.000789	2
91	MP2A	X	-1.005	6
92	MP2A	Z	.58	6
93	MP2A	Mx	-.000526	6
94	MP2B	X	-1.454	6
95	MP2B	Z	.84	6
96	MP2B	Mx	.00054	6
97	MP2C	X	-1.78	6
98	MP2C	Z	1.028	6
99	MP2C	Mx	.000351	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-4.939	2.25
2	MP1A	Z	0	2.25
3	MP1A	Mx	.0025	2.25
4	MP1A	X	-4.939	6.25
5	MP1A	Z	0	6.25
6	MP1A	Mx	.0025	6.25
7	MP1B	X	-7.394	2.25
8	MP1B	Z	0	2.25
9	MP1B	Mx	-.000642	2.25
10	MP1B	X	-7.394	6.25
11	MP1B	Z	0	6.25
12	MP1B	Mx	-.000642	6.25
13	MP1C	X	-5.974	2.25
14	MP1C	Z	0	2.25
15	MP1C	Mx	-.0023	2.25
16	MP1C	X	-5.974	6.25
17	MP1C	Z	0	6.25
18	MP1C	Mx	-.0023	6.25
19	MP2A	X	-3.016	2.25
20	MP2A	Z	0	2.25
21	MP2A	Mx	.0024	2.25
22	MP2A	X	-3.016	6.25
23	MP2A	Z	0	6.25
24	MP2A	Mx	.0024	6.25
25	MP2B	X	-6.839	2.25
26	MP2B	Z	0	2.25
27	MP2B	Mx	-.0054	2.25
28	MP2B	X	-6.839	6.25
29	MP2B	Z	0	6.25
30	MP2B	Mx	-.0054	6.25
31	MP2C	X	-4.627	2.25
32	MP2C	Z	0	2.25
33	MP2C	Mx	-.000676	2.25
34	MP2C	X	-4.627	6.25
35	MP2C	Z	0	6.25
36	MP2C	Mx	-.000676	6.25
37	MP2A	X	-6.872	2.25
38	MP2A	Z	0	2.25
39	MP2A	Mx	.0047	2.25
40	MP2A	X	-6.872	6.25
41	MP2A	Z	0	6.25
42	MP2A	Mx	.0047	6.25
43	MP2B	X	-10.211	2.25
44	MP2B	Z	0	2.25
45	MP2B	Mx	.0054	2.25
46	MP2B	X	-10.211	6.25
47	MP2B	Z	0	6.25
48	MP2B	Mx	.0054	6.25
49	MP2C	X	-8.279	2.25
50	MP2C	Z	0	2.25
51	MP2C	Mx	-.0083	2.25
52	MP2C	X	-8.279	6.25
53	MP2C	Z	0	6.25
54	MP2C	Mx	-.0083	6.25
55	MP4A	X	-1.893	3.25
56	MP4A	Z	0	3.25
57	MP4A	Mx	.000943	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP4A	X	-1.893	5.25
59	MP4A	Z	0	5.25
60	MP4A	Mx	.000943	5.25
61	MP4B	X	-4.767	3.25
62	MP4B	Z	0	3.25
63	MP4B	Mx	-.000414	3.25
64	MP4B	X	-4.767	5.25
65	MP4B	Z	0	5.25
66	MP4B	Mx	-.000414	5.25
67	MP4C	X	-3.104	3.25
68	MP4C	Z	0	3.25
69	MP4C	Mx	-.0012	3.25
70	MP4C	X	-3.104	5.25
71	MP4C	Z	0	5.25
72	MP4C	Mx	-.0012	5.25
73	MP2A	X	-2.675	2
74	MP2A	Z	0	2
75	MP2A	Mx	-.0013	2
76	MP2B	X	-3.933	2
77	MP2B	Z	0	2
78	MP2B	Mx	.000341	2
79	MP2C	X	-3.206	2
80	MP2C	Z	0	2
81	MP2C	Mx	.0012	2
82	MP3A	X	-3.279	2
83	MP3A	Z	0	2
84	MP3A	Mx	-.0016	2
85	MP3B	X	-4.747	2
86	MP3B	Z	0	2
87	MP3B	Mx	.000412	2
88	MP3C	X	-3.898	2
89	MP3C	Z	0	2
90	MP3C	Mx	.0015	2
91	MP2A	X	-.943	6
92	MP2A	Z	0	6
93	MP2A	Mx	-.00047	6
94	MP2B	X	-2.166	6
95	MP2B	Z	0	6
96	MP2B	Mx	.000188	6
97	MP2C	X	-1.458	6
98	MP2C	Z	0	6
99	MP2C	Mx	.000558	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-4.988	2.25
2	MP1A	Z	-2.88	2.25
3	MP1A	Mx	.0024	2.25
4	MP1A	X	-4.988	6.25
5	MP1A	Z	-2.88	6.25
6	MP1A	Mx	.0024	6.25
7	MP1B	X	-6.212	2.25
8	MP1B	Z	-3.586	2.25
9	MP1B	Mx	.0012	2.25
10	MP1B	X	-6.212	6.25
11	MP1B	Z	-3.586	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP1B	Mx	.0012	6.25
13	MP1C	X	-4.327	2.25
14	MP1C	Z	-2.498	2.25
15	MP1C	Mx	-.0025	2.25
16	MP1C	X	-4.327	6.25
17	MP1C	Z	-2.498	6.25
18	MP1C	Mx	-.0025	6.25
19	MP2A	X	-3.718	2.25
20	MP2A	Z	-2.146	2.25
21	MP2A	Mx	.0043	2.25
22	MP2A	X	-3.718	6.25
23	MP2A	Z	-2.146	6.25
24	MP2A	Mx	.0043	6.25
25	MP2B	X	-5.624	2.25
26	MP2B	Z	-3.247	2.25
27	MP2B	Mx	-.0024	2.25
28	MP2B	X	-5.624	6.25
29	MP2B	Z	-3.247	6.25
30	MP2B	Mx	-.0024	6.25
31	MP2C	X	-2.69	2.25
32	MP2C	Z	-1.553	2.25
33	MP2C	Mx	-.0019	2.25
34	MP2C	X	-2.69	6.25
35	MP2C	Z	-1.553	6.25
36	MP2C	Mx	-.0019	6.25
37	MP2A	X	-6.917	2.25
38	MP2A	Z	-3.994	2.25
39	MP2A	Mx	.0019	2.25
40	MP2A	X	-6.917	6.25
41	MP2A	Z	-3.994	6.25
42	MP2A	Mx	.0019	6.25
43	MP2B	X	-8.582	2.25
44	MP2B	Z	-4.955	2.25
45	MP2B	Mx	.0088	2.25
46	MP2B	X	-8.582	6.25
47	MP2B	Z	-4.955	6.25
48	MP2B	Mx	.0088	6.25
49	MP2C	X	-6.019	2.25
50	MP2C	Z	-3.475	2.25
51	MP2C	Mx	-.0059	2.25
52	MP2C	X	-6.019	6.25
53	MP2C	Z	-3.475	6.25
54	MP2C	Mx	-.0059	6.25
55	MP4A	X	-2.471	3.25
56	MP4A	Z	-1.427	3.25
57	MP4A	Mx	.0012	3.25
58	MP4A	X	-2.471	5.25
59	MP4A	Z	-1.427	5.25
60	MP4A	Mx	.0012	5.25
61	MP4B	X	-3.904	3.25
62	MP4B	Z	-2.254	3.25
63	MP4B	Mx	.000771	3.25
64	MP4B	X	-3.904	5.25
65	MP4B	Z	-2.254	5.25
66	MP4B	Mx	.000771	5.25
67	MP4C	X	-1.698	3.25
68	MP4C	Z	-.98	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
69	MP4C	Mx	-.000965	3.25
70	MP4C	X	-1.698	5.25
71	MP4C	Z	-.98	5.25
72	MP4C	Mx	-.000965	5.25
73	MP2A	X	-2.681	2
74	MP2A	Z	-1.548	2
75	MP2A	Mx	-.0013	2
76	MP2B	X	-3.308	2
77	MP2B	Z	-1.91	2
78	MP2B	Mx	-.000653	2
79	MP2C	X	-2.342	2
80	MP2C	Z	-1.352	2
81	MP2C	Mx	.0013	2
82	MP3A	X	-3.264	2
83	MP3A	Z	-1.885	2
84	MP3A	Mx	-.0015	2
85	MP3B	X	-3.996	2
86	MP3B	Z	-2.307	2
87	MP3B	Mx	-.000789	2
88	MP3C	X	-2.87	2
89	MP3C	Z	-1.657	2
90	MP3C	Mx	.0016	2
91	MP2A	X	-1.17	6
92	MP2A	Z	-.676	6
93	MP2A	Mx	-.000553	6
94	MP2B	X	-1.78	6
95	MP2B	Z	-1.028	6
96	MP2B	Mx	-.000352	6
97	MP2C	X	-.842	6
98	MP2C	Z	-.486	6
99	MP2C	Mx	.000479	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-3.508	2.25
2	MP1A	Z	-6.075	2.25
3	MP1A	Mx	.0015	2.25
4	MP1A	X	-3.508	6.25
5	MP1A	Z	-6.075	6.25
6	MP1A	Mx	.0015	6.25
7	MP1B	X	-2.987	2.25
8	MP1B	Z	-5.174	2.25
9	MP1B	Mx	.0023	2.25
10	MP1B	X	-2.987	6.25
11	MP1B	Z	-5.174	6.25
12	MP1B	Mx	.0023	6.25
13	MP1C	X	-2.609	2.25
14	MP1C	Z	-4.519	2.25
15	MP1C	Mx	-.0025	2.25
16	MP1C	X	-2.609	6.25
17	MP1C	Z	-4.519	6.25
18	MP1C	Mx	-.0025	6.25
19	MP2A	X	-3.124	2.25
20	MP2A	Z	-5.412	2.25
21	MP2A	Mx	.0058	2.25
22	MP2A	X	-3.124	6.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	-5.412	6.25
24	MP2A	Mx	.0058	6.25
25	MP2B	X	-2.314	2.25
26	MP2B	Z	-4.007	2.25
27	MP2B	Mx	.000675	2.25
28	MP2B	X	-2.314	6.25
29	MP2B	Z	-4.007	6.25
30	MP2B	Mx	.000675	6.25
31	MP2C	X	-1.725	2.25
32	MP2C	Z	-2.988	2.25
33	MP2C	Mx	-.0032	2.25
34	MP2C	X	-1.725	6.25
35	MP2C	Z	-2.988	6.25
36	MP2C	Mx	-.0032	6.25
37	MP2A	X	-4.848	2.25
38	MP2A	Z	-8.397	2.25
39	MP2A	Mx	-.0028	2.25
40	MP2A	X	-4.848	6.25
41	MP2A	Z	-8.397	6.25
42	MP2A	Mx	-.0028	6.25
43	MP2B	X	-4.14	2.25
44	MP2B	Z	-7.17	2.25
45	MP2B	Mx	.0083	2.25
46	MP2B	X	-4.14	6.25
47	MP2B	Z	-7.17	6.25
48	MP2B	Mx	.0083	6.25
49	MP2C	X	-3.626	2.25
50	MP2C	Z	-6.28	2.25
51	MP2C	Mx	-.0035	2.25
52	MP2C	X	-3.626	6.25
53	MP2C	Z	-6.28	6.25
54	MP2C	Mx	-.0035	6.25
55	MP4A	X	-2.162	3.25
56	MP4A	Z	-3.744	3.25
57	MP4A	Mx	.000914	3.25
58	MP4A	X	-2.162	5.25
59	MP4A	Z	-3.744	5.25
60	MP4A	Mx	.000914	5.25
61	MP4B	X	-1.552	3.25
62	MP4B	Z	-2.689	3.25
63	MP4B	Mx	.0012	3.25
64	MP4B	X	-1.552	5.25
65	MP4B	Z	-2.689	5.25
66	MP4B	Mx	.0012	5.25
67	MP4C	X	-1.11	3.25
68	MP4C	Z	-1.922	3.25
69	MP4C	Mx	-.001	3.25
70	MP4C	X	-1.11	5.25
71	MP4C	Z	-1.922	5.25
72	MP4C	Mx	-.001	5.25
73	MP2A	X	-1.87	2
74	MP2A	Z	-3.238	2
75	MP2A	Mx	-.00079	2
76	MP2B	X	-1.603	2
77	MP2B	Z	-2.776	2
78	MP2B	Mx	-.0012	2
79	MP2C	X	-1.409	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
80	MP2C	Z	-2.441	2
81	MP2C	Mx	.0013	2
82	MP3A	X	-2.26	2
83	MP3A	Z	-3.915	2
84	MP3A	Mx	-.000955	2
85	MP3B	X	-1.949	2
86	MP3B	Z	-3.376	2
87	MP3B	Mx	-.0015	2
88	MP3C	X	-1.723	2
89	MP3C	Z	-2.984	2
90	MP3C	Mx	.0016	2
91	MP2A	X	-.989	6
92	MP2A	Z	-1.712	6
93	MP2A	Mx	-.000418	6
94	MP2B	X	-.729	6
95	MP2B	Z	-1.263	6
96	MP2B	Mx	-.000559	6
97	MP2C	X	-.541	6
98	MP2C	Z	-.937	6
99	MP2C	Mx	.000508	6

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M96	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M100	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-.9107	2.25
2	MP1A	My	-.000454	2.25
3	MP1A	Mz	4e-5	2.25
4	MP1A	Y	-.9107	6.25
5	MP1A	My	-.000454	6.25
6	MP1A	Mz	4e-5	6.25
7	MP1B	Y	-.9107	2.25
8	MP1B	My	7.9e-5	2.25
9	MP1B	Mz	-.000448	2.25
10	MP1B	Y	-.9107	6.25
11	MP1B	My	7.9e-5	6.25
12	MP1B	Mz	-.000448	6.25
13	MP1C	Y	-.9107	2.25
14	MP1C	My	.000349	2.25
15	MP1C	Mz	.000293	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP1C	Y	-.9107	6.25
17	MP1C	My	.000349	6.25
18	MP1C	Mz	.000293	6.25
19	MP2A	Y	-.8903	2.25
20	MP2A	My	-.000717	2.25
21	MP2A	Mz	-.000533	2.25
22	MP2A	Y	-.8903	6.25
23	MP2A	My	-.000717	6.25
24	MP2A	Mz	-.000533	6.25
25	MP2B	Y	-.8903	2.25
26	MP2B	My	.0007	2.25
27	MP2B	Mz	-.000555	2.25
28	MP2B	Y	-.8903	6.25
29	MP2B	My	.0007	6.25
30	MP2B	Mz	-.000555	6.25
31	MP2C	Y	-.8903	2.25
32	MP2C	My	.00013	2.25
33	MP2C	Mz	.000884	2.25
34	MP2C	Y	-.8903	6.25
35	MP2C	My	.00013	6.25
36	MP2C	Mz	.000884	6.25
37	MP2A	Y	-1.3161	2.25
38	MP2A	My	-.000907	2.25
39	MP2A	Mz	.00096	2.25
40	MP2A	Y	-1.3161	6.25
41	MP2A	My	-.000907	6.25
42	MP2A	Mz	.00096	6.25
43	MP2B	Y	-1.3161	2.25
44	MP2B	My	-.000693	2.25
45	MP2B	Mz	-.0011	2.25
46	MP2B	Y	-1.3161	6.25
47	MP2B	My	-.000693	6.25
48	MP2B	Mz	-.0011	6.25
49	MP2C	Y	-1.3161	2.25
50	MP2C	My	.0013	2.25
51	MP2C	Mz	-3.8e-5	2.25
52	MP2C	Y	-1.3161	6.25
53	MP2C	My	.0013	6.25
54	MP2C	Mz	-3.8e-5	6.25
55	MP4A	Y	-1.1674	3.25
56	MP4A	My	-.000581	3.25
57	MP4A	Mz	5.1e-5	3.25
58	MP4A	Y	-1.1674	5.25
59	MP4A	My	-.000581	5.25
60	MP4A	Mz	5.1e-5	5.25
61	MP4B	Y	-1.1674	3.25
62	MP4B	My	.000101	3.25
63	MP4B	Mz	-.000575	3.25
64	MP4B	Y	-1.1674	5.25
65	MP4B	My	.000101	5.25
66	MP4B	Mz	-.000575	5.25
67	MP4C	Y	-1.1674	3.25
68	MP4C	My	.000447	3.25
69	MP4C	Mz	.000375	3.25
70	MP4C	Y	-1.1674	5.25
71	MP4C	My	.000447	5.25
72	MP4C	Mz	.000375	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP2A	Y	-3.0438	2
74	MP2A	My	.0015	2
75	MP2A	Mz	-.000133	2
76	MP2B	Y	-3.0438	2
77	MP2B	My	-.000264	2
78	MP2B	Mz	.0015	2
79	MP2C	Y	-3.0438	2
80	MP2C	My	-.0012	2
81	MP2C	Mz	-.000978	2
82	MP3A	Y	-3.2231	2
83	MP3A	My	.0016	2
84	MP3A	Mz	-.00014	2
85	MP3B	Y	-3.2231	2
86	MP3B	My	-.00028	2
87	MP3B	Mz	.0016	2
88	MP3C	Y	-3.2231	2
89	MP3C	My	-.0012	2
90	MP3C	Mz	-.001	2
91	MP2A	Y	-.8557	6
92	MP2A	My	.000426	6
93	MP2A	Mz	-3.7e-5	6
94	MP2B	Y	-.8557	6
95	MP2B	My	-7.4e-5	6
96	MP2B	Mz	.000421	6
97	MP2C	Y	-.8557	6
98	MP2C	My	-.000328	6
99	MP2C	Mz	-.000275	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Z	-2.2767	2.25
2	MP1A	Mx	-9.9e-5	2.25
3	MP1A	Z	-2.2767	6.25
4	MP1A	Mx	-9.9e-5	6.25
5	MP1B	Z	-2.2767	2.25
6	MP1B	Mx	.0011	2.25
7	MP1B	Z	-2.2767	6.25
8	MP1B	Mx	.0011	6.25
9	MP1C	Z	-2.2767	2.25
10	MP1C	Mx	-.000732	2.25
11	MP1C	Z	-2.2767	6.25
12	MP1C	Mx	-.000732	6.25
13	MP2A	Z	-2.2258	2.25
14	MP2A	Mx	.0013	2.25
15	MP2A	Z	-2.2258	6.25
16	MP2A	Mx	.0013	6.25
17	MP2B	Z	-2.2258	2.25
18	MP2B	Mx	.0014	2.25
19	MP2B	Z	-2.2258	6.25
20	MP2B	Mx	.0014	6.25
21	MP2C	Z	-2.2258	2.25
22	MP2C	Mx	-.0022	2.25
23	MP2C	Z	-2.2258	6.25
24	MP2C	Mx	-.0022	6.25
25	MP2A	Z	-3.2903	2.25
26	MP2A	Mx	-.0024	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP2A	Z	-3.2903	6.25
28	MP2A	Mx	-.0024	6.25
29	MP2B	Z	-3.2903	2.25
30	MP2B	Mx	.0028	2.25
31	MP2B	Z	-3.2903	6.25
32	MP2B	Mx	.0028	6.25
33	MP2C	Z	-3.2903	2.25
34	MP2C	Mx	9.4e-5	2.25
35	MP2C	Z	-3.2903	6.25
36	MP2C	Mx	9.4e-5	6.25
37	MP4A	Z	-2.9185	3.25
38	MP4A	Mx	-.000127	3.25
39	MP4A	Z	-2.9185	5.25
40	MP4A	Mx	-.000127	5.25
41	MP4B	Z	-2.9185	3.25
42	MP4B	Mx	.0014	3.25
43	MP4B	Z	-2.9185	5.25
44	MP4B	Mx	.0014	5.25
45	MP4C	Z	-2.9185	3.25
46	MP4C	Mx	-.000938	3.25
47	MP4C	Z	-2.9185	5.25
48	MP4C	Mx	-.000938	5.25
49	MP2A	Z	-7.6094	2
50	MP2A	Mx	.000332	2
51	MP2B	Z	-7.6094	2
52	MP2B	Mx	-.0037	2
53	MP2C	Z	-7.6094	2
54	MP2C	Mx	.0024	2
55	MP3A	Z	-8.0577	2
56	MP3A	Mx	.000351	2
57	MP3B	Z	-8.0577	2
58	MP3B	Mx	-.004	2
59	MP3C	Z	-8.0577	2
60	MP3C	Mx	.0026	2
61	MP2A	Z	-2.1392	6
62	MP2A	Mx	9.3e-5	6
63	MP2B	Z	-2.1392	6
64	MP2B	Mx	-.0011	6
65	MP2C	Z	-2.1392	6
66	MP2C	Mx	.000688	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.2767	2.25
2	MP1A	Mx	-.0011	2.25
3	MP1A	X	2.2767	6.25
4	MP1A	Mx	-.0011	6.25
5	MP1B	X	2.2767	2.25
6	MP1B	Mx	.000198	2.25
7	MP1B	X	2.2767	6.25
8	MP1B	Mx	.000198	6.25
9	MP1C	X	2.2767	2.25
10	MP1C	Mx	.000872	2.25
11	MP1C	X	2.2767	6.25
12	MP1C	Mx	.000872	6.25
13	MP2A	X	2.2258	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
14	MP2A	Mx	-.0018	2.25
15	MP2A	X	2.2258	6.25
16	MP2A	Mx	-.0018	6.25
17	MP2B	X	2.2258	2.25
18	MP2B	Mx	.0018	2.25
19	MP2B	X	2.2258	6.25
20	MP2B	Mx	.0018	6.25
21	MP2C	X	2.2258	2.25
22	MP2C	Mx	.000325	2.25
23	MP2C	X	2.2258	6.25
24	MP2C	Mx	.000325	6.25
25	MP2A	X	3.2903	2.25
26	MP2A	Mx	-.0023	2.25
27	MP2A	X	3.2903	6.25
28	MP2A	Mx	-.0023	6.25
29	MP2B	X	3.2903	2.25
30	MP2B	Mx	-.0017	2.25
31	MP2B	X	3.2903	6.25
32	MP2B	Mx	-.0017	6.25
33	MP2C	X	3.2903	2.25
34	MP2C	Mx	.0033	2.25
35	MP2C	X	3.2903	6.25
36	MP2C	Mx	.0033	6.25
37	MP4A	X	2.9185	3.25
38	MP4A	Mx	-.0015	3.25
39	MP4A	X	2.9185	5.25
40	MP4A	Mx	-.0015	5.25
41	MP4B	X	2.9185	3.25
42	MP4B	Mx	.000253	3.25
43	MP4B	X	2.9185	5.25
44	MP4B	Mx	.000253	5.25
45	MP4C	X	2.9185	3.25
46	MP4C	Mx	.0011	3.25
47	MP4C	X	2.9185	5.25
48	MP4C	Mx	.0011	5.25
49	MP2A	X	7.6094	2
50	MP2A	Mx	.0038	2
51	MP2B	X	7.6094	2
52	MP2B	Mx	-.000661	2
53	MP2C	X	7.6094	2
54	MP2C	Mx	-.0029	2
55	MP3A	X	8.0577	2
56	MP3A	Mx	.004	2
57	MP3B	X	8.0577	2
58	MP3B	Mx	-.0007	2
59	MP3C	X	8.0577	2
60	MP3C	Mx	-.0031	2
61	MP2A	X	2.1392	6
62	MP2A	Mx	.0011	6
63	MP2B	X	2.1392	6
64	MP2B	Mx	-.000186	6
65	MP2C	X	2.1392	6
66	MP2C	Mx	-.000819	6

Member Area Loads (BLC 39 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N9	N32	N30	Y	Two Way	-.0052
2	N63	N62	N84	N86	Y	Two Way	-.0052
3	N36	N35	N57	N59	Y	Two Way	-.0052

Member Area Loads (BLC 40 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N9	N32	N30	Y	Two Way	-.017
2	N63	N62	N84	N86	Y	Two Way	-.017
3	N36	N35	N57	N59	Y	Two Way	-.017

Member Area Loads (BLC 84 : Structure Ev)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N9	N32	N30	Y	Two Way	-.000212
2	N63	N62	N84	N86	Y	Two Way	-.000212
3	N36	N35	N57	N59	Y	Two Way	-.000212

Member Area Loads (BLC 85 : Structure Eh (0 Deg))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N9	N32	N30	Z	Two Way	-.00053
2	N63	N62	N84	N86	Z	Two Way	-.00053
3	N36	N35	N57	N59	Z	Two Way	-.00053

Member Area Loads (BLC 86 : Structure Eh (90 Deg))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N9	N32	N30	X	Two Way	.00053
2	N63	N62	N84	N86	X	Two Way	.00053
3	N36	N35	N57	N59	X	Two Way	.00053

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	L...	MZ [k-ft]	LC
1	N2	...	632.321	10	3279.746	13	2506.876	1	8.227	1	1.14	4	.419	4
2		...	-625.646	4	-587.814	7	-2636.962	7	-3.941	7	-1.12	10	-.313	10
3	N3	...	2220.143	9	3297.814	21	1296.197	3	2.055	3	1.094	12	3.381	3
4		...	-2334.932	3	-592.737	3	-1238.64	9	-4.117	9	-1.073	6	-7.16	9
5	N4	...	2176.934	11	3261.858	17	1351.8	12	1.756	11	1.179	8	6.877	5
6		...	-2069.74	5	-515.314	11	-1275.895	6	-4.046	17	-1.161	2	-3.217	11
7	Totals:	...	4578.343	10	8382.058	18	4684.138	1						
8		...	-4578.345	4	2211.73	75	-4684.139	7						

Joint Reactions

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N2	-21.773	2654.232	2506.876	8.227	-.275	.016
2	1	N3	-1067.354	224.498	873.044	.809	.213	.592
3	1	N4	1089.019	210.029	1304.218	.637	-.789	-.599
4	1	Totals:	-.108	3088.759	4684.138			
5	1	COG (ft):	X: 0	Y: 2.34	Z: 0			
6	2	N2	-151.939	2463.682	2355.643	7.482	-.269	.215
7	2	N3	-2043.027	-391.868	1104.531	1.856	-.291	2.646
8	2	N4	-182.628	1016.967	658.325	-.822	-1.161	2.082
9	2	Totals:	-2377.594	3088.782	4118.499			
10	2	COG (ft):	X: 0	Y: 2.34	Z: 0			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
11	3	N2	-543.026	1846.974	1464.456	5.153	.76	.36
12	3	N3	-2334.932	-592.737	1296.197	2.055	.236	3.381
13	3	N4	-1194.466	1834.582	-409.048	-2.365	-.255	4.692
14	3	Totals:	-4072.424	3088.819	2351.605			
15	3	COG (ft):	X: 0	Y: 2.34	Z: 0			
16	4	N2	-625.646	1030.935	45.844	2.098	1.14	.419
17	4	N3	-2173.632	-336.466	1053.058	1.384	.27	2.608
18	4	N4	-1779.067	2394.388	-1098.749	-3.501	.289	6.395
19	4	Totals:	-4578.345	3088.857	.152			
20	4	COG (ft):	X: 0	Y: 2.34	Z: 0			
21	5	N2	-239.951	257.222	-1311.182	-.789	.269	.389
22	5	N3	-1593.388	249.319	284.307	.137	-.716	.724
23	5	N4	-2069.74	2582.343	-1226.757	-3.994	-.211	6.877
24	5	Totals:	-3903.078	3088.884	-2253.632			
25	5	COG (ft):	X: 0	Y: 2.34	Z: 0			
26	6	N2	49.253	-326.119	-2216.228	-2.971	-.223	.273
27	6	N3	-443.254	1020.407	-456.987	-1.383	-1.073	-1.77
28	6	N4	-1885.697	2394.61	-1275.895	-3.791	-.219	6.15
29	6	Totals:	-2279.698	3088.898	-3949.11			
30	6	COG (ft):	X: 0	Y: 2.34	Z: 0			
31	7	N2	29.659	-587.814	-2636.962	-3.941	.291	.087
32	7	N3	959.788	1833.421	-813.879	-2.879	-.189	-4.391
33	7	N4	-989.339	1843.289	-1233.298	-2.881	.801	4.27
34	7	Totals:	.108	3088.896	-4684.139			
35	7	COG (ft):	X: 0	Y: 2.34	Z: 0			
36	8	N2	164.682	-402.006	-2484.597	-3.195	.282	-.114
37	8	N3	1932.251	2459.611	-1041.361	-3.92	.315	-6.433
38	8	N4	280.662	1031.269	-592.54	-1.428	1.179	1.595
39	8	Totals:	2377.595	3088.874	-4118.498			
40	8	COG (ft):	X: 0	Y: 2.34	Z: 0			
41	9	N2	553.32	205.433	-1587.201	-.85	-.745	-.258
42	9	N3	2220.143	2665.073	-1238.64	-4.117	-.218	-7.16
43	9	N4	1298.961	218.331	474.237	.116	.276	-1.021
44	9	Totals:	4072.424	3088.836	-2351.603			
45	9	COG (ft):	X: 0	Y: 2.34	Z: 0			
46	10	N2	632.321	1017.133	-165.443	2.215	-1.12	-.313
47	10	N3	2057.356	2403.332	-1000.167	-3.45	-.257	-6.391
48	10	N4	1888.666	-331.667	1165.46	1.258	-.269	-2.731
49	10	Totals:	4578.343	3088.798	-.15			
50	10	COG (ft):	X: 0	Y: 2.34	Z: 0			
51	11	N2	243.168	1794.918	1186.453	5.095	-.247	-.283
52	11	N3	1482.974	1809.167	-232.181	-2.209	.731	-4.52
53	11	N4	2176.934	-515.314	1299.36	1.756	.225	-3.217
54	11	Totals:	3903.076	3088.771	2253.633			
55	11	COG (ft):	X: 0	Y: 2.34	Z: 0			
56	12	N2	-47.575	2387.307	2087.02	7.265	.245	-.168
57	12	N3	337.574	1033.751	510.289	-.691	1.094	-2.036
58	12	N4	1989.697	-332.3	1351.8	1.554	.23	-2.489
59	12	Totals:	2279.696	3088.757	3949.11			
60	12	COG (ft):	X: 0	Y: 2.34	Z: 0			
61	13	N2	12.057	3279.746	559.6	7.793	-.02	.205
62	13	N3	-501.563	2563.132	363.773	-2.267	.131	-4.568
63	13	N4	489.47	2539.138	492.741	-2.631	-.172	4.294
64	13	Totals:	-.036	8382.016	1416.115			
65	13	COG (ft):	X: 0	Y: 2.278	Z: 0			
66	14	N2	-21.496	3219.641	500.764	7.559	-.036	.264
67	14	N3	-794.973	2379.076	426.479	-1.958	-.036	-3.958

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
68	14	N4	102.012	2783.307	310.351	-3.072	-.301	5.099
69	14	Totals:	-714.456	8382.023	1237.593			
70	14	COG (ft):	X: 0	Y: 2.278	Z: 0			
71	15	N2	-126.465	3036.728	232.843	6.866	.224	.308
72	15	N3	-885.848	2316.158	468.462	-1.894	.074	-3.732
73	15	N4	-216.895	3029.148	8.497	-3.538	-.081	5.886
74	15	Totals:	-1229.207	8382.034	709.802			
75	15	COG (ft):	X: 0	Y: 2.278	Z: 0			
76	16	N2	-163.044	2791.254	-192.855	5.947	.353	.325
77	16	N3	-834.205	2389.071	399.802	-2.086	.097	-3.949
78	16	N4	-399.679	3201.721	-206.897	-3.89	.092	6.416
79	16	Totals:	-1396.928	8382.046	.05			
80	16	COG (ft):	X: 0	Y: 2.278	Z: 0			
81	17	N2	-66.068	2553.196	-609.323	5.06	.138	.315
82	17	N3	-654.764	2567.001	177.058	-2.461	-.156	-4.513
83	17	N4	-477.753	3261.858	-259.797	-4.046	-.014	6.575
84	17	Totals:	-1198.585	8382.054	-692.062			
85	17	COG (ft):	X: 0	Y: 2.278	Z: 0			
86	18	N2	27.048	2375.31	-884.453	4.4	-.028	.279
87	18	N3	-311.433	2804.509	-61.142	-2.924	-.284	-5.277
88	18	N4	-412.358	3202.239	-261.36	-3.979	-.034	6.346
89	18	Totals:	-696.742	8382.058	-1206.955			
90	18	COG (ft):	X: 0	Y: 2.278	Z: 0			
91	19	N2	36.255	2300.881	-997.546	4.128	.08	.223
92	19	N3	104.665	3049.579	-188.922	-3.374	-.068	-6.07
93	19	N4	-140.888	3031.597	-229.641	-3.695	.224	5.764
94	19	Totals:	.031	8382.057	-1416.109			
95	19	COG (ft):	X: 0	Y: 2.278	Z: 0			
96	20	N2	70.278	2360.594	-938.598	4.363	.095	.164
97	20	N3	397.745	3234.469	-251.26	-3.683	.099	-6.679
98	20	N4	246.429	2786.988	-47.729	-3.255	.354	4.959
99	20	Totals:	714.452	8382.051	-1237.587			
100	20	COG (ft):	X: 0	Y: 2.278	Z: 0			
101	21	N2	175.076	2542.702	-670.137	5.057	-.164	.121
102	21	N3	488.253	3297.814	-293.683	-3.747	-.011	-6.904
103	21	N4	565.874	2541.524	254.024	-2.788	.134	4.172
104	21	Totals:	1229.203	8382.04	-709.796			
105	21	COG (ft):	X: 0	Y: 2.278	Z: 0			
106	22	N2	211.309	2787.776	-244.125	5.977	-.293	.104
107	22	N3	436.472	3224.468	-225.477	-3.555	-.035	-6.688
108	22	N4	749.143	2369.784	469.557	-2.436	-.039	3.64
109	22	Totals:	1396.924	8382.028	-.044			
110	22	COG (ft):	X: 0	Y: 2.278	Z: 0			
111	23	N2	113.991	3026.178	171.937	6.863	-.078	.114
112	23	N3	257.547	3045.782	-2.838	-3.181	.219	-6.125
113	23	N4	827.043	2310.059	522.969	-2.28	.067	3.481
114	23	Totals:	1198.58	8382.019	692.068			
115	23	COG (ft):	X: 0	Y: 2.278	Z: 0			
116	24	N2	20.736	3204.856	446.613	7.522	.088	.15
117	24	N3	-85.33	2807.873	235.482	-2.718	.347	-5.362
118	24	N4	761.332	2369.285	524.865	-2.346	.086	3.711
119	24	Totals:	696.738	8382.015	1206.961			
120	24	COG (ft):	X: 0	Y: 2.278	Z: 0			
121	25	N2	.88	962.417	93.814	2.177	-.008	.039
122	25	N3	-124.02	1192.421	79.914	-1.316	.014	-1.742
123	25	N4	123.14	1683.978	119.031	-2.367	-.044	2.744
124	25	Totals:	0	3838.817	292.758			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
125	25	COG (ft):	X: .407	Y: 1.883	Z: .745			
126	26	N2	-7.39	950.641	84.305	2.13	-.007	.051
127	26	N3	-184.927	1153.603	94.275	-1.251	-.018	-1.614
128	26	N4	43.725	1734.574	78.817	-2.458	-.067	2.911
129	26	Totals:	-148.593	3838.818	257.396			
130	26	COG (ft):	X: .407	Y: 1.883	Z: .745			
131	27	N2	-31.754	912.384	28.419	1.984	.057	.06
132	27	N3	-203.063	1140.874	106.431	-1.239	.015	-1.568
133	27	N4	-19.706	1785.562	12.121	-2.554	-.01	3.074
134	27	Totals:	-254.523	3838.82	146.971			
135	27	COG (ft):	X: .407	Y: 1.883	Z: .745			
136	28	N2	-36.807	861.522	-60.325	1.793	.08	.064
137	28	N3	-192.917	1157.018	91.372	-1.28	.018	-1.616
138	28	N4	-56.415	1820.283	-31.043	-2.625	.024	3.181
139	28	Totals:	-286.139	3838.823	.004			
140	28	COG (ft):	X: .407	Y: 1.883	Z: .745			
141	29	N2	-12.596	813.062	-144.975	1.613	.026	.062
142	29	N3	-156.802	1193.853	43.347	-1.358	-.044	-1.734
143	29	N4	-74.542	1831.909	-39.232	-2.656	-.007	3.211
144	29	Totals:	-243.94	3838.825	-140.86			
145	29	COG (ft):	X: .407	Y: 1.883	Z: .745			
146	30	N2	5.528	776.369	-201.397	1.477	-.005	.055
147	30	N3	-85.041	1242.153	-3.018	-1.453	-.066	-1.889
148	30	N4	-62.964	1820.303	-42.409	-2.643	-.008	3.165
149	30	Totals:	-142.476	3838.825	-246.824			
150	30	COG (ft):	X: .407	Y: 1.883	Z: .745			
151	31	N2	4.118	759.882	-227.659	1.416	.028	.043
152	31	N3	2.728	1292.841	-25.498	-1.547	-.011	-2.053
153	31	N4	-6.833	1786.102	-39.612	-2.586	.056	3.048
154	31	Totals:	.014	3838.825	-292.769			
155	31	COG (ft):	X: .407	Y: 1.883	Z: .745			
156	32	N2	12.408	771.639	-218.146	1.463	.027	.031
157	32	N3	63.623	1331.698	-39.843	-1.612	.02	-2.181
158	32	N4	72.576	1735.486	.582	-2.495	.079	2.88
159	32	Totals:	148.607	3838.824	-257.407			
160	32	COG (ft):	X: .407	Y: 1.883	Z: .745			
161	33	N2	36.762	809.861	-162.236	1.609	-.037	.022
162	33	N3	81.743	1344.444	-52.021	-1.624	-.013	-2.227
163	33	N4	136.032	1684.517	67.275	-2.399	.023	2.717
164	33	Totals:	254.537	3838.822	-146.982			
165	33	COG (ft):	X: .407	Y: 1.883	Z: .745			
166	34	N2	41.8	860.706	-73.479	1.8	-.061	.018
167	34	N3	71.591	1328.28	-36.981	-1.582	-.015	-2.179
168	34	N4	172.761	1649.834	110.445	-2.328	-.011	2.611
169	34	Totals:	286.153	3838.819	-.015			
170	34	COG (ft):	X: .407	Y: 1.883	Z: .745			
171	35	N2	17.576	909.181	11.15	1.98	-.006	.02
172	35	N3	35.499	1291.411	11.041	-1.505	.047	-2.062
173	35	N4	190.879	1638.225	118.658	-2.297	.02	2.58
174	35	Totals:	243.954	3838.817	140.849			
175	35	COG (ft):	X: .407	Y: 1.883	Z: .745			
176	36	N2	-.555	945.91	67.555	2.116	.025	.027
177	36	N3	-36.244	1243.094	57.411	-1.41	.069	-1.906
178	36	N4	179.289	1649.812	121.848	-2.31	.02	2.626
179	36	Totals:	142.49	3838.817	246.813			
180	36	COG (ft):	X: .407	Y: 1.883	Z: .745			
181	37	N2	15.096	1005.513	60.719	2.053	-.042	-.074

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
182	37	N3	-169.377	1941.663	111.458	-2.726	.016	-4.402
183	37	N4	154.265	891.601	120.552	-.917	-.017	1.136
184	37	Totals:	-.016	3838.778	292.729			
185	37	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
186	38	N2	6.829	993.778	51.222	2.007	-.042	-.062
187	38	N3	-230.209	1902.827	125.83	-2.66	-.016	-4.274
188	38	N4	74.772	942.174	80.315	-1.008	-.04	1.304
189	38	Totals:	-148.609	3838.779	257.366			
190	38	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
191	39	N2	-17.516	955.538	-4.706	1.861	.023	-.053
192	39	N3	-248.313	1890.141	138.022	-2.648	.017	-4.228
193	39	N4	11.29	993.102	13.626	-1.105	.016	1.467
194	39	Totals:	-254.539	3838.781	146.942			
195	39	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
196	40	N2	-22.55	904.689	-93.527	1.669	.046	-.049
197	40	N3	-238.178	1906.354	123.022	-2.69	.019	-4.277
198	40	N4	-25.426	1027.741	-29.52	-1.176	.05	1.574
199	40	Totals:	-286.155	3838.784	-.025			
200	40	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
201	41	N2	1.671	856.237	-178.272	1.489	-.008	-.051
202	41	N3	-202.109	1943.246	75.059	-2.768	-.042	-4.394
203	41	N4	-43.517	1039.302	-37.676	-1.207	.019	1.604
204	41	Totals:	-243.956	3838.785	-140.89			
205	41	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
206	42	N2	19.804	819.522	-234.793	1.353	-.039	-.058
207	42	N3	-130.425	1991.596	28.738	-2.862	-.065	-4.549
208	42	N4	-31.871	1027.668	-40.798	-1.194	.019	1.558
209	42	Totals:	-142.492	3838.786	-246.854			
210	42	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
211	43	N2	18.403	802.986	-261.124	1.292	-.007	-.07
212	43	N3	-42.749	2042.336	6.274	-2.956	-.01	-4.713
213	43	N4	24.344	993.465	-37.949	-1.137	.083	1.441
214	43	Totals:	-.002	3838.786	-292.799			
215	43	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
216	44	N2	26.689	814.702	-251.623	1.339	-.007	-.082
217	44	N3	18.071	2081.21	-8.081	-3.021	.022	-4.84
218	44	N4	103.831	942.873	2.268	-1.046	.106	1.273
219	44	Totals:	148.591	3838.785	-257.436			
220	44	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
221	45	N2	51.025	852.906	-195.671	1.485	-.072	-.091
222	45	N3	36.159	2093.913	-20.295	-3.033	-.011	-4.886
223	45	N4	167.337	891.963	68.955	-.95	.05	1.11
224	45	Totals:	254.521	3838.782	-147.011			
225	45	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
226	46	N2	56.045	903.738	-106.837	1.677	-.095	-.095
227	46	N3	26.018	2077.679	-5.314	-2.991	-.014	-4.838
228	46	N4	204.074	857.363	112.107	-.878	.015	1.003
229	46	Totals:	286.137	3838.78	-.044			
230	46	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
231	47	N2	31.809	952.205	-22.112	1.857	-.041	-.093
232	47	N3	-10.027	2040.756	42.646	-2.914	.048	-4.721
233	47	N4	222.155	845.817	120.286	-.847	.047	.973
234	47	Totals:	243.938	3838.778	140.82			
235	47	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
236	48	N2	13.67	988.956	34.391	1.993	-.01	-.086
237	48	N3	-81.693	1992.389	88.972	-2.819	.071	-4.565
238	48	N4	210.497	857.433	123.421	-.86	.047	1.018

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
239	48	Totals:	142.474	3838.777	246.784			
240	48	COG (ft):	X: -1.148	Y: 1.883	Z: .745			
241	49	N2	-1.737	967.713	-84.387	1.912	.023	.121
242	49	N3	-77.559	974.166	30.235	-.966	-.008	-1.596
243	49	N4	79.308	1521.936	54.148	-2.049	.007	3.242
244	49	Totals:	.012	3463.815	-.004			
245	49	COG (ft):	X: .676	Y: 2.087	Z: .413			
246	50	N2	4.703	937.971	-65.161	1.99	.006	.052
247	50	N3	-58.777	1264.127	28.085	-1.474	.006	-2.099
248	50	N4	54.075	1261.727	37.073	-1.562	.006	2.035
249	50	Totals:	0	3463.824	-.003			
250	50	COG (ft):	X: 0	Y: 2.087	Z: .413			
251	51	N2	5.495	1199.878	-75.929	2.523	.007	.061
252	51	N3	-67.542	1203.301	32.718	-1.214	.008	-2.226
253	51	N4	62.046	1200.452	43.212	-1.316	.006	2.152
254	51	Totals:	0	3603.631	0			
255	51	COG (ft):	X: 0	Y: 2.34	Z: 0			
256	52	N2	2.292	1143.43	78.316	2.535	.007	.053
257	52	N3	-109.124	1026.546	85.226	-.986	.037	-1.85
258	52	N4	106.826	1023.734	98.7	-1.079	-.025	1.787
259	52	Totals:	-.006	3193.71	262.242			
260	52	COG (ft):	X: 0	Y: 2.34	Z: 0			
261	53	N2	-11.871	1132.79	60.078	2.494	.025	.063
262	53	N3	-161.886	997.205	102.29	-.937	.024	-1.753
263	53	N4	42.644	1063.716	64.736	-1.151	-.03	1.918
264	53	Totals:	-131.113	3193.711	227.105			
265	53	COG (ft):	X: 0	Y: 2.34	Z: 0			
266	54	N2	-21.552	1103.556	7.722	2.384	.037	.07
267	54	N3	-187.307	986.406	99.713	-.925	.006	-1.714
268	54	N4	-18.223	1103.751	23.692	-1.227	-.025	2.046
269	54	Totals:	-227.081	3193.713	131.127			
270	54	COG (ft):	X: 0	Y: 2.34	Z: 0			
271	55	N2	-24.16	1063.56	-64.738	2.235	.041	.073
272	55	N3	-178.577	997.039	78.187	-.954	-.012	-1.744
273	55	N4	-59.479	1133.115	-13.442	-1.288	-.012	2.137
274	55	Totals:	-262.215	3193.715	.008			
275	55	COG (ft):	X: 0	Y: 2.34	Z: 0			
276	56	N2	-18.989	1023.526	-137.885	2.085	.036	.071
277	56	N3	-138.024	1026.262	43.481	-1.015	-.024	-1.836
278	56	N4	-70.062	1143.927	-36.71	-1.315	.005	2.166
279	56	Totals:	-227.075	3193.716	-131.114			
280	56	COG (ft):	X: 0	Y: 2.34	Z: 0			
281	57	N2	-7.425	994.18	-192.113	1.976	.023	.064
282	57	N3	-76.532	1066.245	4.902	-1.093	-.029	-1.964
283	57	N4	-47.146	1133.291	-39.886	-1.303	.023	2.126
284	57	Totals:	-131.103	3193.717	-227.098			
285	57	COG (ft):	X: 0	Y: 2.34	Z: 0			
286	58	N2	7.437	983.372	-212.899	1.937	.006	.055
287	58	N3	-10.568	1106.286	-27.222	-1.165	-.024	-2.094
288	58	N4	3.137	1104.059	-22.121	-1.255	.036	2.028
289	58	Totals:	.005	3193.717	-262.242			
290	58	COG (ft):	X: 0	Y: 2.34	Z: 0			
291	59	N2	21.61	994.003	-194.655	1.978	-.012	.045
292	59	N3	42.183	1135.646	-44.28	-1.214	-.011	-2.192
293	59	N4	67.319	1064.067	11.831	-1.183	.04	1.897
294	59	Totals:	131.112	3193.715	-227.105			
295	59	COG (ft):	X: 0	Y: 2.34	Z: 0			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
296	60	N2	31.291	1023.218	-142.288	2.087	-.024	.038
297	60	N3	67.594	1146.455	-41.709	-1.226	.007	-2.231
298	60	N4	128.195	1024.041	52.87	-1.106	.035	1.769
299	60	Totals:	227.08	3193.714	-131.127			
300	60	COG (ft):	X: 0	Y: 2.34	Z: 0			
301	61	N2	33.889	1063.204	-69.822	2.237	-.029	.035
302	61	N3	58.864	1135.813	-20.195	-1.197	.025	-2.2
303	61	N4	169.461	994.695	90.009	-1.046	.023	1.677
304	61	Totals:	262.214	3193.712	-.007			
305	61	COG (ft):	X: 0	Y: 2.34	Z: 0			
306	62	N2	28.708	1103.247	3.32	2.386	-.024	.037
307	62	N3	18.322	1106.57	14.506	-1.136	.038	-2.109
308	62	N4	180.045	983.893	113.289	-1.018	.005	1.648
309	62	Totals:	227.075	3193.71	131.114			
310	62	COG (ft):	X: 0	Y: 2.34	Z: 0			
311	63	N2	17.143	1132.612	57.537	2.495	-.01	.044
312	63	N3	-43.161	1066.577	53.09	-1.059	.042	-1.981
313	63	N4	157.119	994.52	116.471	-1.03	-.012	1.688
314	63	Totals:	131.102	3193.71	227.098			
315	63	COG (ft):	X: 0	Y: 2.34	Z: 0			
316	64	N2	.773	816.117	98.864	1.846	.005	.036
317	64	N3	-90.583	698.821	76.375	-.655	.035	-1.244
318	64	N4	89.804	696.793	87.002	-.72	-.027	1.201
319	64	Totals:	-.006	2211.73	262.242			
320	64	COG (ft):	X: 0	Y: 2.34	Z: 0			
321	65	N2	-13.459	805.524	80.654	1.806	.023	.046
322	65	N3	-143.333	669.609	93.365	-.607	.022	-1.147
323	65	N4	25.68	736.598	53.086	-.792	-.032	1.331
324	65	Totals:	-131.113	2211.731	227.105			
325	65	COG (ft):	X: 0	Y: 2.34	Z: 0			
326	66	N2	-23.188	776.418	28.357	1.696	.035	.053
327	66	N3	-168.781	658.859	90.718	-.595	.004	-1.109
328	66	N4	-35.112	776.456	12.052	-.868	-.027	1.459
329	66	Totals:	-227.081	2211.733	131.127			
330	66	COG (ft):	X: 0	Y: 2.34	Z: 0			
331	67	N2	-25.807	736.599	-44.028	1.547	.04	.056
332	67	N3	-160.11	669.445	69.145	-.624	-.014	-1.139
333	67	N4	-76.298	805.691	-25.109	-.928	-.014	1.55
334	67	Totals:	-262.215	2211.735	.007			
335	67	COG (ft):	X: 0	Y: 2.34	Z: 0			
336	68	N2	-20.609	696.742	-117.105	1.399	.035	.054
337	68	N3	-119.632	698.539	34.427	-.685	-.027	-1.23
338	68	N4	-86.834	816.455	-48.436	-.956	.004	1.579
339	68	Totals:	-227.075	2211.736	-131.114			
340	68	COG (ft):	X: 0	Y: 2.34	Z: 0			
341	69	N2	-8.986	667.526	-171.286	1.29	.021	.048
342	69	N3	-58.21	738.345	-4.124	-.762	-.031	-1.357
343	69	N4	-63.906	805.866	-51.687	-.944	.021	1.539
344	69	Totals:	-131.103	2211.737	-227.098			
345	69	COG (ft):	X: 0	Y: 2.34	Z: 0			
346	70	N2	5.95	656.766	-192.06	1.251	.004	.038
347	70	N3	7.706	778.209	-36.19	-.834	-.026	-1.487
348	70	N4	-13.651	776.762	-33.992	-.896	.034	1.441
349	70	Totals:	.006	2211.737	-262.242			
350	70	COG (ft):	X: 0	Y: 2.34	Z: 0			
351	71	N2	20.193	667.35	-173.844	1.291	-.014	.029
352	71	N3	60.447	807.44	-53.174	-.883	-.013	-1.584

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
353	71	N4	50.473	736.946	-.087	-.824	.039	1.31
354	71	Totals:	131.112	2211.736	-227.105			
355	71	COG (ft):	X: 0	Y: 2.34	Z: 0			
356	72	N2	29.921	696.437	-121.535	1.4	-.027	.022
357	72	N3	85.885	818.2	-50.533	-.894	.005	-1.623
358	72	N4	111.274	697.097	40.94	-.748	.034	1.183
359	72	Totals:	227.081	2211.734	-131.127			
360	72	COG (ft):	X: 0	Y: 2.34	Z: 0			
361	73	N2	32.531	736.246	-49.144	1.549	-.031	.019
362	73	N3	77.213	807.605	-28.971	-.866	.023	-1.593
363	73	N4	152.471	667.881	78.107	-.688	.021	1.092
364	73	Totals:	262.214	2211.732	-.007			
365	73	COG (ft):	X: 0	Y: 2.34	Z: 0			
366	74	N2	27.323	776.112	23.927	1.698	-.026	.021
367	74	N3	36.745	778.492	5.741	-.805	.036	-1.502
368	74	N4	163.007	657.127	101.446	-.66	.003	1.062
369	74	Totals:	227.075	2211.731	131.114			
370	74	COG (ft):	X: 0	Y: 2.34	Z: 0			
371	75	N2	15.699	805.347	78.097	1.807	-.012	.027
372	75	N3	-24.667	738.675	44.298	-.728	.04	-1.374
373	75	N4	140.069	667.708	104.703	-.672	-.014	1.102
374	75	Totals:	131.102	2211.73	227.098			
375	75	COG (ft):	X: 0	Y: 2.34	Z: 0			

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

	Member	Shape	Code Check	Lo...	LC	Shear Check	Lo.....		LC	phi*Pnc...	phi*Pnt [...	phi*Mn y...	phi*Mn...	Cb	Eqn
1	M1	PIPE_3.0	.243	7....	9	.145	4....		7	28250.5...	65205	5.749	5.749	2.562	H1-...
2	M2	PIPE_3.0	.242	4....	6	.142	4....		3	28250.5...	65205	5.749	5.749	2.904	H1-...
3	M3	PIPE_3.0	.253	4....	2	.140	4....		11	28250.5...	65205	5.749	5.749	2.926	H1-...
4	M4	HSS4X4X4	.534	0	1	.104	0	y	14	124657....	139518	16.181	16.181	2.079	H1-...
5	M5	HSS4X4X4	.533	0	9	.104	0	y	22	124657....	139518	16.181	16.181	2.078	H1-...
6	M6	HSS4X4X4	.513	0	5	.104	0	y	18	124657....	139518	16.181	16.181	2.087	H1-...
7	M7	PL1/2x6	.224	.516	1	.218	.516	y	4	66009.2...	97200	1.012	12.15	1.251	H1-...
8	M8	PL1/2x6	.078	.112	7	.188	0	y	11	96757.5...	97200	1.012	12.15	1.538	H1-...
9	M9	PL1/2x6	.079	.112	12	.191	.112	y	9	96757.5...	97200	1.012	12.15	1.022	H1-...
10	M10	PL1/2x6	.228	.516	9	.216	.516	y	12	66009.2...	97200	1.012	12.15	1.248	H1-...
11	M11	PL1/2x6	.078	.112	3	.195	0	y	7	96757.5...	97200	1.012	12.15	1.548	H1-...
12	M12	PL1/2x6	.083	.112	8	.182	.112	y	5	96757.5...	97200	1.012	12.15	1.025	H1-...
13	M13	PL1/2x6	.216	.516	5	.227	.516	y	8	66009.2...	97200	1.012	12.15	1.246	H1-...
14	M14	PL1/2x6	.075	.112	11	.197	0	y	3	96757.5...	97200	1.012	12.15	1.522	H1-...
15	M15	PL1/2x6	.079	.112	4	.191	.112	y	1	96757.5...	97200	1.012	12.15	1.025	H1-...
16	M16	HSS4X4X4	.219	2....	14	.073	2....	y	13	136263....	139518	16.181	16.181	1.67	H1-...
17	M17	HSS4X4X4	.217	0	24	.062	0	y	13	136263....	139518	16.181	16.181	1.647	H1-...
18	M18	HSS4X4X4	.219	2....	22	.074	2....	y	21	136263....	139518	16.181	16.181	1.67	H1-...
19	M19	HSS4X4X4	.219	0	20	.062	0	y	20	136263....	139518	16.181	16.181	1.647	H1-...
20	M20	HSS4X4X4	.218	2....	18	.073	2....	y	17	136263....	139518	16.181	16.181	1.67	H1-...
21	M21	HSS4X4X4	.217	0	16	.061	0	y	16	136263....	139518	16.181	16.181	1.646	H1-...
22	M22	L2x2x3	.153	4....	1	.016	4....	y	17	9823.122	23392.8	.558	1.078	1.154	H2-1
23	M23	L2x2x3	.157	0	2	.017	4....	y	21	9823.122	23392.8	.558	1.077	1.15	H2-1
24	M24	L2x2x3	.155	4....	9	.016	4....	y	13	9823.122	23392.8	.558	1.078	1.154	H2-1
25	M25	L2x2x3	.157	0	9	.017	4....	y	17	9823.122	23392.8	.558	1.078	1.153	H2-1
26	M26	L2x2x3	.147	4....	5	.016	4....	y	21	9823.122	23392.8	.558	1.078	1.153	H2-1
27	M27	L2x2x3	.152	0	6	.017	4....	y	13	9823.122	23392.8	.558	1.077	1.151	H2-1
28	M28	PL3/8x6	.216	0	4	.226	0	y	5	70647.0...	72900	.57	9.113	1.449	H1-...
29	M29	PL3/8x6	.257	.167	7	.433	0	y	14	71583.5...	72900	.57	9.058	1	H1-...

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

	Member	Shape	Code Check	Lo...	LC	Shear Check	Lo.....		LC	phi*Pnc...	phi*Pnt [...	phi*Mn y...	phi*Mn...	Cb	Eqn
30	M30	PL3/8x6	.252	0	3	.354	0	y	21	70647.0...	72900	.57	9.113	1.156	H1-...
31	M31	PL3/8x6	.255	.167	7	.413	0	y	24	71583.5...	72900	.57	9.113	1.017	H1-...
32	M32	PL3/8x6	.211	0	12	.233	0	y	1	70647.0...	72900	.57	9.113	1.448	H1-...
33	M33	PL3/8x6	.260	.167	3	.434	0	y	22	71583.5...	72900	.57	9.066	1.001	H1-...
34	M34	PL3/8x6	.242	0	11	.352	0	y	17	70647.0...	72900	.57	9.113	1.16	H1-...
35	M35	PL3/8x6	.259	.167	3	.415	0	y	20	71583.5...	72900	.57	9.113	1.017	H1-...
36	M36	PL3/8x6	.237	0	8	.234	0	y	9	70647.0...	72900	.57	9.113	1.456	H1-...
37	M37	PL3/8x6	.245	.167	11	.433	0	y	18	71583.5...	72900	.57	9.113	1.008	H1-...
38	M38	PL3/8x6	.262	0	7	.354	0	y	13	70647.0...	72900	.57	9.113	1.155	H1-...
39	M39	PL3/8x6	.246	.167	11	.412	0	y	16	71583.5...	72900	.57	9.113	1.01	H1-...
40	M40	PIPE_2.0	.524	4....	8	.219	.911		7	6295.422	32130	1.872	1.872	2.791	H1-...
41	M41	PIPE_2.0	.493	4....	4	.220	.911		8	6295.422	32130	1.872	1.872	2.786	H1-...
42	M42	PIPE_2.0	.490	4....	12	.216	.911		4	6295.422	32130	1.872	1.872	2.778	H1-...
43	M43	L2.5x2.5x4	.595	0	11	.131	0	z	6	36872.8...	38556	1.114	2.537	2.161	H2-1
44	M44	L2.5x2.5x4	.602	0	3	.133	.061	z	10	36872.8...	38556	1.114	2.537	2.164	H2-1
45	M45	L2.5x2.5x4	.619	0	7	.139	0	z	2	36872.8...	38556	1.114	2.537	2.16	H2-1
46	MP1A	PIPE_2.0	.488	7....	9	.203	3....		7	11706.3...	32130	1.872	1.872	2.085	H1-...
47	MP2A	PIPE_2.0	.783	7....	9	.210	7....		11	11706.3...	32130	1.872	1.872	2.086	H1-...
48	MP3A	PIPE_2.0	.728	7....	4	.158	7....		7	11706.3...	32130	1.872	1.872	2.027	H1-...
49	MP4A	PIPE_2.0	.501	7....	5	.194	3....		6	11706.3...	32130	1.872	1.872	2.047	H1-...
50	MP1B	PIPE_2.0	.484	7....	1	.195	3....		11	11706.3...	32130	1.872	1.872	1.941	H1-...
51	MP2B	PIPE_2.0	.801	7....	2	.210	7....		3	11706.3...	32130	1.872	1.872	2.113	H1-...
52	MP3B	PIPE_2.0	.760	7....	9	.149	7....		11	11706.3...	32130	1.872	1.872	2.108	H1-...
53	MP4B	PIPE_2.0	.525	7....	9	.195	3....		10	11706.3...	32130	1.872	1.872	2.09	H1-...
54	MP1C	PIPE_2.0	.467	7....	5	.199	3....		3	11706.3...	32130	1.872	1.872	2.261	H1-...
55	MP2C	PIPE_2.0	.770	7....	6	.213	7....		7	11706.3...	32130	1.872	1.872	2.058	H1-...
56	MP3C	PIPE_2.0	.761	7....	1	.151	7....		3	11706.3...	32130	1.872	1.872	1.882	H1-...
57	MP4C	PIPE_2.0	.525	7....	1	.203	3....		2	11706.3...	32130	1.872	1.872	2.02	H1-...

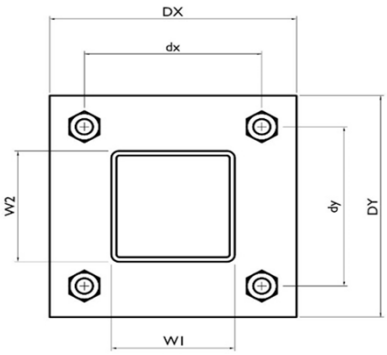
VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	12/12/2023
Site Name:	E HARTFORD 3 CT		
MDG #:	5000384062		
Fuze ID #:	16053192	Page:	1

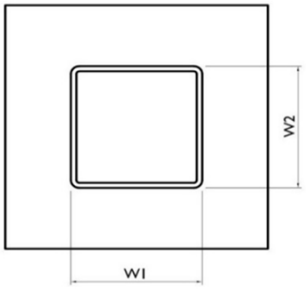
Version 2.00

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)* :	6
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	6
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	9.1
Required Shear Strength / bolt (kips):	0.7
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	**44.1%**



Tower Connection Baseplate Checks	Yes
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, D_x (in):	8
Plate Height, D_y (in):	8
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):	0.75
Length of Yield Line, L_y (in):	5.85
Bolt Eccentricity, e (in):	1.65
M_u (kip-in):	15.04
Phi*M_n (kip-in):	26.65
Plate Bending Utilization:	**56.4%**



VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	12/12/2023
Site Name:	E HARTFORD 3 CT		
MDG #:	5000384062		
Fuze ID #:	16053192	Page:	2

Version 2.00

Tower Connection Weld Checks	Yes

Weld Shape:	Rectangle
Weld Stiffener Configuration:	None
Weld Size (1/16 in):	6
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):	3.30
Weld Capacity (kip/in):	8.35
Weld Utilization:	**39.5%**

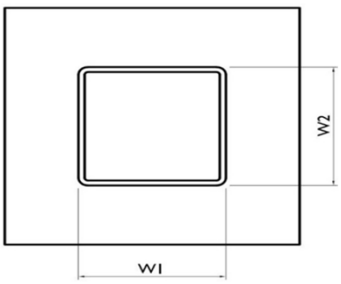


EXHIBIT 5

Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:

370626

Site Name:

East Hartford

Location:

East Hartford, Connecticut

Tenants:

AT&T Mobility, Verizon Wireless, T-Mobile, Dish Wireless

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

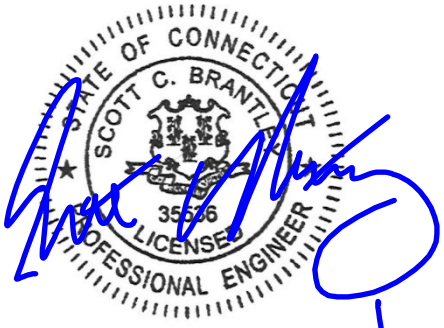
January 18th, 2024

25867 P-417750

Prepared By:

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

Approved By:



01/19/2024

TOWER ENGINEERING PROFESSIONALS

Contents

Disclaimer Notice

This work is based upon our best interpretation of available information. However, these data and their interpretation are constantly changing. Therefore, we do not warrant that any undertaking based on this report will be successful, or that others will not require further research or actions in support of this proposal or future undertaking. In the event of errors, our liability is strictly limited to the replacement of this document with a corrected one. Liability for consequential damages is specifically denied. Any use of this document constitutes an agreement to hold Tower Engineering Professionals and its employees harmless and indemnify it for all liability, claims, demands, and litigation expenses and attorney's fees arising out of such use.

Work product documents released prior to account settlement remain the sole property of Tower Engineering Professionals and must be returned on demand. Underlying work notes and data relating to this document remain the property of Tower Engineering Professionals. This document shall not be reproduced in whole or part without the permission of Tower Engineering Professionals. Any dispute hereunder shall be adjudicated in North Carolina. Any use or retention of this document constitutes acceptance of these terms, the entire work product, and all charges associated therewith.

TOWER ENGINEERING PROFESSIONALS

Non-Ionizing Electromagnetic Radiation (NIER) Study

370626 East Hartford
East Hartford, Connecticut

INTRODUCTION

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

SITE AND FACILITY CONSIDERATIONS

Site 370626 East Hartford is located at 289 Mountain St., in East Hartford, Connecticut at coordinates 370626 East Hartford. The support structure is a 128' monopole. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are AT&T Mobility (AT&T), Verizon Wireless (VZW), T-Mobile (T-Mobile), & Dish Wireless (Dish). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

POWER DENSITY CALCULATIONS

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

For the purpose of this study, a radius of 90' from the base of the tower with a height of 6' above ground level was used, beyond 90' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.

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

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 370626 East Hartford.RF NIER Study 12/29/23.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

SITE MITIGATION & CONTROL

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

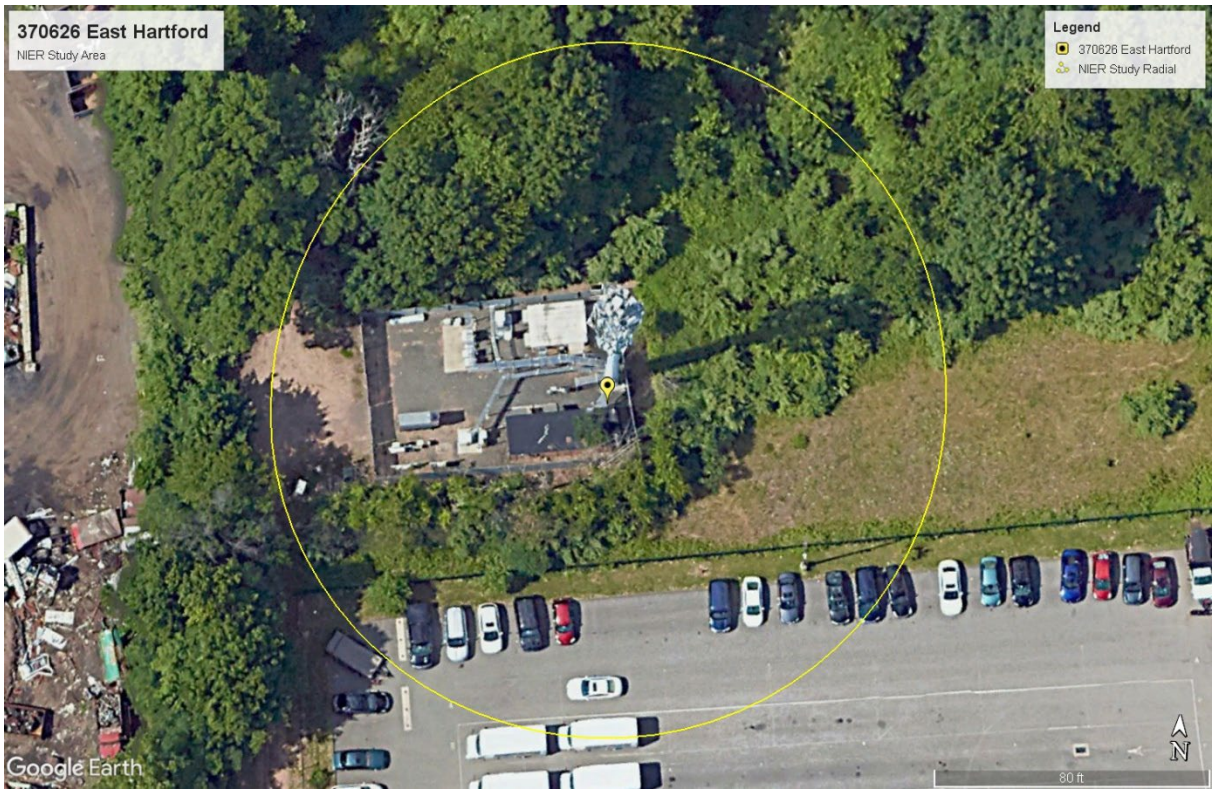
TEP recommends that all personnel working on this tower be trained in RF safety procedures and carry a personal RF monitor at all times.

COMPLIANCE DETERMINATION

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

TOWER ENGINEERING PROFESSIONALS

APPENDIX 1 Site Photos



Aerial View of Site

TOWER ENGINEERING PROFESSIONALS

Appendix 2.1 Antenna Inventory

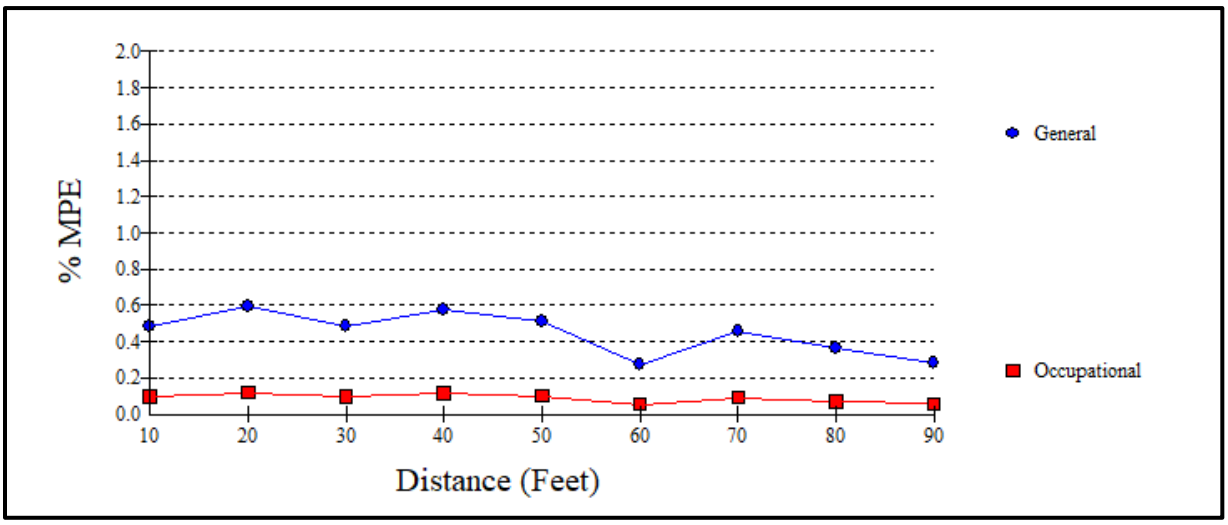
370626 East Hartford							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	Verizon	Commscope	NHHSS-65B-R2BT4	800	035	11565.00	118.0
2	Verizon	Commscope	NHHSS-65B-R2BT4	800	140	11565.00	118.0
3	Verizon	Commscope	NHHSS-65B-R2BT4	800	260	11565.00	118.0
4	Verizon	Samsung	MT6407-77A	3700-3900	035	18286.00	118.0
5	Verizon	Samsung	MT6407-77A	3700-3900	140	18286.00	118.0
6	Verizon	Samsung	MT6407-77A	3700-3900	260	18286.00	118.0
7	Verizon	Andrew	LNX-6513DS-A1M	700/800/1900/2100	035	47000.00	118.0
8	Verizon	Andrew	LNX-6513DS-A1M	700/800/1900/2100	140	47000.00	118.0
9	Verizon	Andrew	LNX-6513DS-A1M	700/800/1900/2100	260	47000.00	118.0
10	Verizon	Commscope	NHH-65B-R2B	1900/2100	035	21085.00	118.0
11	Verizon	Commscope	NHH-65B-R2B	1900/2100	140	21085.00	118.0
12	Verizon	Commscope	NHH-65B-R2B	1900/2100	260	21086.00	118.0
13	T-Mobile	Ericsson	Air 32	1900/2100	030	1222.00	100.00
14	T-Mobile	Ericsson	Air 32	1900/2100	150	1222.00	100.00
15	T-Mobile	Ericsson	Air 32	1900/2100	270	1222.00	100.00
16	T-Mobile	RFS	APXVAALL24	600/1900/2100	030	1222.00	100.0
17	T-Mobile	RFS	APXVAALL24	600/1900/2100	150	1222.00	100.0
18	T-Mobile	RFS	APXVAALL24	600/1900/2100	270	1222.00	100.0
19	T-Mobile	Ericsson	Air 6449 B41	2500-2699	030	1222.00	100.00
20	T-Mobile	Ericsson	Air 6449 B41	2500-2699	150	1222.00	100.0
21	T-Mobile	Ericsson	Air 6449 B41	2500-2699	270	1222.00	100.0

TOWER ENGINEERING PROFESSIONALS

Appendix 2.2 Antenna Inventory

370626 East Hartford							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
22	AT&T	Ericsson	Air 6449	3700-3900	110	70300.00	91.0
23	AT&T	Ericsson	Air 6449	3700-3900	220	70300.00	91.0
24	AT&T	Ericsson	Air 6449	3700-3900	340	70300.00	91.0
25	AT&T	CCI	TPA65R-BU8D	700/800/2100	110	81640.00	90.0
26	AT&T	CCI	TPA65R-BU8D	700/800/2100	220	81640.00	90.0
27	AT&T	CCI	TPA65R-BU8D	700/800/2100	340	81640.00	90.0
28	AT&T	CCI	DMP65R-BU8D	700/800/2100	110	81640.00	90.0
29	AT&T	CCI	DMP65R-BU8D	700/800/2100	220	81640.00	90.0
30	AT&T	CCI	DMP65R-BU8D	700/800/2100	340	81640.00	90.0
31	AT&T	Ericsson	Air 6449	3700-3900	110	70300.00	88.0
32	AT&T	Ericsson	Air 6449	3700-3900	220	70300.00	88.0
33	AT&T	Ericsson	Air 6449	3700-3900	340	70300.00	88.0
34	AT&T	CCI	DMP65R-BU8D	700/800/2100	110	81640.00	87.3
35	AT&T	CCI	DMP65R-BU8D	700/800/2100	220	81640.00	87.3
36	AT&T	CCI	DMP65R-BU8D	700/800/2100	340	81640.00	87.3
37	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	000	40000.00	79.0
38	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	120	40000.00	79.0
39	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	240	40000.00	79.0

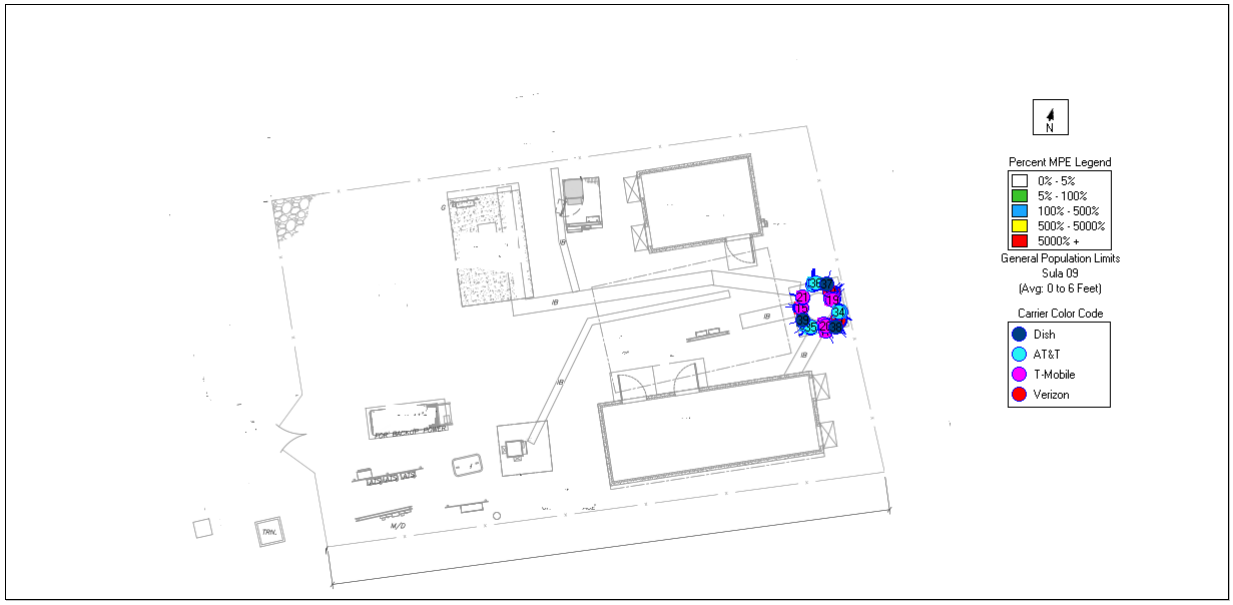
Appendix 3.1 MPE Limit Study



Maximum Power Density (@20'):	0.0037 mW/cm²
General Population MPE (@20'):	0.5931%
Occupational MPE (@20'):	0.1136%

TOWER ENGINEERING PROFESSIONALS

Appendix 3.2 MPE Limit Study



Appendix 4 Information Pertaining to MPE Studies

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

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

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

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

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

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

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

TOWER ENGINEERING PROFESSIONALS

Appendix 5 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure, and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

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

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^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

f = frequency

* = Plane-wave equivalent power density

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

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^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

* = Plane-wave equivalent power density

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

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

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

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

Cylindrical Model (Near Field Predictions)

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

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

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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

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

Where:

S = Power Density

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

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

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

Spherical Model (Far Field Predictions)

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

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

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

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

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

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

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

EXHIBIT 6

Connecticut Siting Council (/CSC)

Decisions (/CSC/Decisions/Decisions) >

Meetings and Minutes (/CSC/Common-Elements/v4-template/Council-Activity) >

Pending Matters (/CSC/1_Applications-and-Other-Pending-Matters/Pending-Matters) >

About Us (/CSC/Common-Elements/Common-Elements/Connecticut-Siting-Council---Description) >

Contact Us (/CSC/Common-Elements/Common-Elements/Contact-Us) >

Search Connecticut Siting Council

DOCKET NO. 228 – The Marcus Group, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a cellular telecommunications facility at 148 Roberts Street, East Hartford, Connecticut.

} Connecticut

} Siting

} Council

} November 7, 2002

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to The Marcus Group (Marcus) for the construction, maintenance and operation of a wireless telecommunications facility at the proposed prime site located at 148 Roberts Street, East Hartford, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of AT&T Wireless LLC, Cellco Partnership b/b/a Verizon Wireless, Nextel Communications of the Mid-Atlantic, and other entities, both public and private, but such tower shall not exceed a height of 120 feet above ground level. The access road to the facility shall be finished with gravel. The north edge of the facility compound shall be a minimum distance of 52 feet to the nearest wetland area.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include: a final site plan(s) for site development to include the location and specifications for the tower, tower foundation, antennas, equipment buildings, security fence, access road, utility line, and landscaping plan. The D&M Plan shall also include construction plans to be submitted prior to construction for site clearing, water drainage, and erosion and sedimentation control consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall provide a recalculated report of electromagnetic radio frequency power density if and

when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

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

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

6. If the facility does not initially provide, or permanently ceases to provide wireless services following completion of construction, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

7. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and ceases to function.

8. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved.

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

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

The parties and intervenors to this proceeding are:

EXHIBIT 7

Hello, your package has been delivered.

Delivery Date: Wednesday, 01/31/2024
Delivery Time: 11:53 AM
Signed by: DONNA

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030323606325
Ship To:	AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 018011053 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14530661

Discover more about UPS:

Visit www.ups.com

Sign Up For Additional E-Mail From UPS

Read Compass Online

Hello, your package has been delivered.

Delivery Date: Wednesday, 01/31/2024
Delivery Time: 1:08 PM
Signed by: MAiLRM

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030310473752
Ship To:	EILEEN BUCKHEIT, DEVELOPMENT DIR 50 CHAPMAN PLACE EAST HARTFORD, CT 061082174 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14530661

Discover more about UPS:

Visit www.ups.com

Sign Up For Additional E-Mail From UPS

Read Compass Online

Review the UPS Privacy Notice

For Questions, Visit Our Help and Support Center

Hello, your package has been delivered.

Delivery Date: Wednesday, 01/31/2024
Delivery Time: 2:27 PM
Signed by: CARMEN

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030305226761
Ship To:	GREATER HARTFORD TRUST DISTRICT 1 UNION PLACE HARTFORD, CT 061031490 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14530661

Discover more about UPS:

Visit www.ups.com

Sign Up For Additional E-Mail From UPS

Read Compass Online

Hello, your package has been delivered.

Delivery Date: Wednesday, 01/31/2024
Delivery Time: 1:08 PM
Signed by: MAYOR

CENTERLINE SITE ACQUISITION

Tracking Number:	**1Z9Y45030305922740**
Ship To:	CONNOR MARTIN, MAYOR 50 CHAPMAN PLACE EAST HARTFORD, CT 061082174 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14530661

Discover more about UPS:

Visit www.ups.com

Sign Up For Additional E-Mail From UPS

Read Compass Online
