

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

October 27, 2023

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

**RE: Notice of Exempt Modification // Site: KILLINGLY CT (ATC: 88011)
1375 North Road, Killingly CT 06241
N 41.87155083 // W -71.82156976**

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains fifteen (15) antenna at the 266-ft level on the existing 287ft Tower, located at 1375 North Road, Killingly, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the installation of two (2) interference mitigation filters on Verizon Wireless existing antenna platform and mounting assembly.

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 Bethany'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 September 27, 2023, by A.T Engineering Services, LLC, a structural analysis dated September 12, 2023, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated July 21, 2023, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated October 10, 2023, 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

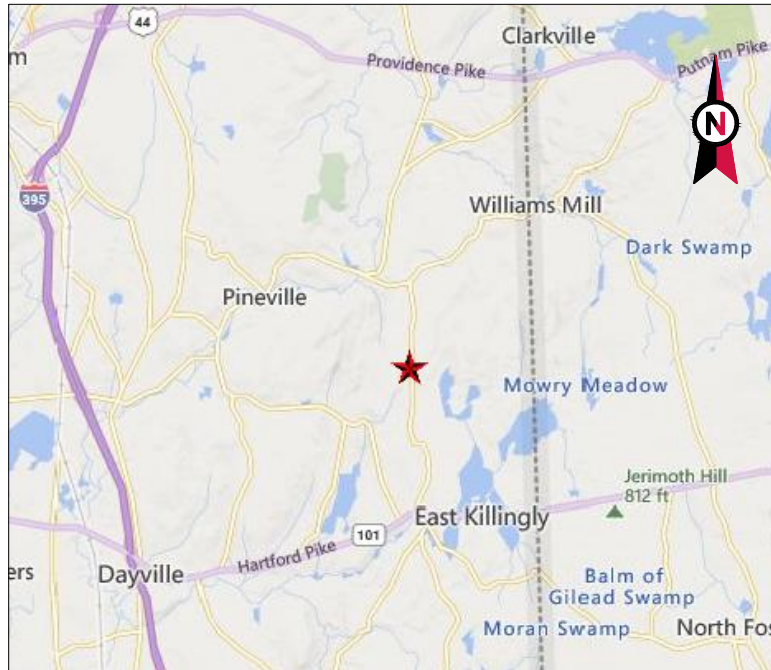
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Attachments: Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Available Original Tower Approval Records
Exhibit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

cc: Mary Calorio – Town Manager – Chief Elected Official
Ann-Marie Aubrey – Director of Planning & Development - as P&Z official
American Tower Corporation - as tower owner and ground owner

EXHIBIT 1





VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: EAST KILLINGLY NORTH
 ATC SITE NUMBER: 88011
 VERIZON SITE NAME: KILLINGLY CT
 VERIZON SITE NUMBER: 5000243499
 VERIZON FUZE PID: 17123850
 SITE ADDRESS: 1375 NORTH ROAD
 KILLINGLY, CT 06241



LOCATION MAP

BIRD WATCH SITE:
 PLEASE CONTACT BIRD.WATCH@AMERICANTOWER.COM OR
 AMERICAN TOWER NOC AT 877-518-6937 FOR ASSISTANCE

VERIZON AMENDMENT DRAWINGS

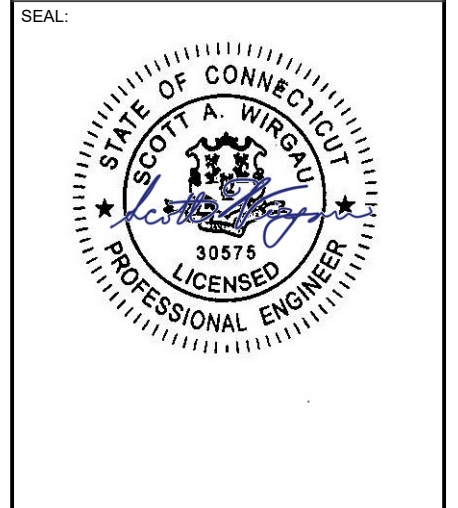
COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. 2020 NFPA 70, NATIONAL ELECTRIC CODE (NEC) 2. 2022 CONNECTICUT STATE BUILDING CODE 3. 2021 INTERNATIONAL BUILDING CODE (IBC) DESIGN CRITERIA FROM TOWER STRUCTURAL ANALYSIS: BASIC WIND SPEED: 122 MPH (3-SECOND GUST) BASIC WIND SPEED W/ ICE: 50 MPH (3-SECOND GUST) W/ 1.00" RADIAL ICE CONCURRENT CODE(S): ANSI/TIA-222-H / 2021 IBC / 2022 CONNECTICUT STATE BUILDING CODE EXPOSURE CATEGORY: B RISK CATEGORY: II TOPO FACTOR PROCEDURE: METHOD 3 TOPOGRAPHIC CATEGORY: 1 FEATURE: FLAT SPECTRAL RESPONSE: S _s =0.19, S _w =0.06 SITE CLASS: D - STIFF SOIL - DEFAULT INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY AMERICAN TOWER CORP., DATED 09/12/2023.	<u>SITE ADDRESS:</u> 1375 NORTH ROAD KILLINGLY, CT 06241 COUNTY: WINDHAM <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.87155083 LONGITUDE: -71.82156976 GROUND ELEVATION: 745' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: INSTALL (1) SWIVEL MOUNT, AND (2) FILTER(S) EXISTING (15) ANTENNA(S), (6) RRR(S), (3) DIPLEXER(S), (2) OVP(S), (12) 1-5/8" COAX, AND (1) 1-1/4" HYBRIFLEX CABLE(S) TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518 <u>PROPERTY OWNER:</u> 1375 NORTH ROAD KILLINGLY, CT 06241	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).	G-001 TITLE SHEET G-002 GENERAL NOTES C-101 DETAILED SITE PLAN C-201 TOWER ELEVATION C-401 ANTENNA INFORMATION & SCHEDULE C-501 CONSTRUCTION DETAILS E-501 GROUNDING DETAILS R-601 SUPPLEMENTAL R-602 SUPPLEMENTAL				
<u>UTILITY COMPANIES</u> POWER COMPANY: CT LIGHT & POWER PHONE: (800) 286-2000 TELEPHONE COMPANY: FRONTIER COMMUNICATIONS PHONE: (800) 921-8102		<u>PROJECT LOCATION DIRECTIONS</u> TAKE ROUTE 395 TO EXIT 97. AT END OF THE RAMP, TAKE A LEFT ONTO 44 EAST. AFTER YOU CROSS FIVE MILE RIVER, GO ABOUT ANOTHER .5 MILES AND TAKE A RIGHT ONTO EAST PUTNUM ROAD. AT THE 3RD STOP SIGN, TAKE A LEFT. LOOK FOR NORTH ROAD ON YOUR RIGHT. TAKE NORTH ROAD. TOWER IS ON THE RIGHT.	CONTRACTOR PMI REQUIREMENTS PMI ACCESSED AT: HTTPS://PMI.VZWSMART.COM SMART TOOL VENDOR PROJECT NUMBER: 10207603 VZW LOCATION CODE (PSLC): 5000243499 ***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
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 PEC.0001553

THE USE AND PUBLICATION OF THESE DRAWINGS SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OR THE SPECIFIED CARRIER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	KPF	09/27/23

ATC SITE NUMBER:
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 ATC SITE NAME:
 EAST KILLINGLY NORTH
 VERIZON SITE NAME:
 KILLINGLY CT
 SITE ADDRESS:
 1375 NORTH ROAD
 KILLINGLY, CT 06241



ATC JOB NO: 14519444_GO
 CUSTOMER ID: KILLINGLY CT
 CUSTOMER #: 5000243499

TITLE SHEET
 SHEET NUMBER:
G-001
 REVISION:
0

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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 ANSIEIA/NTIA-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 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 NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE 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.

B. ALL COAXIAL/HYBRID CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL/HYBRID CABLE (NOT WITHIN BENDS)

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.

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.



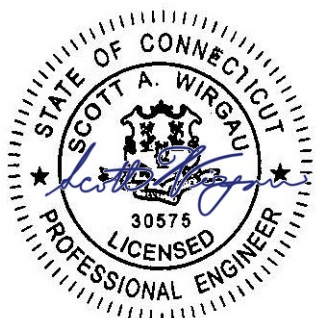
AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
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 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 PEC.0001553

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 VERIZON SITE NAME:
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 SITE ADDRESS:
 1375 NORTH ROAD
 KILLINGLY, CT 06241

SEAL:



Digitally Signed: 2023-09-28



ATC JOB NO:	14519444_G0
CUSTOMER ID:	KILLINGLY CT
CUSTOMER #:	5000243499

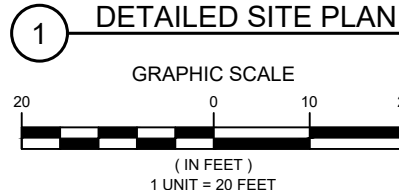
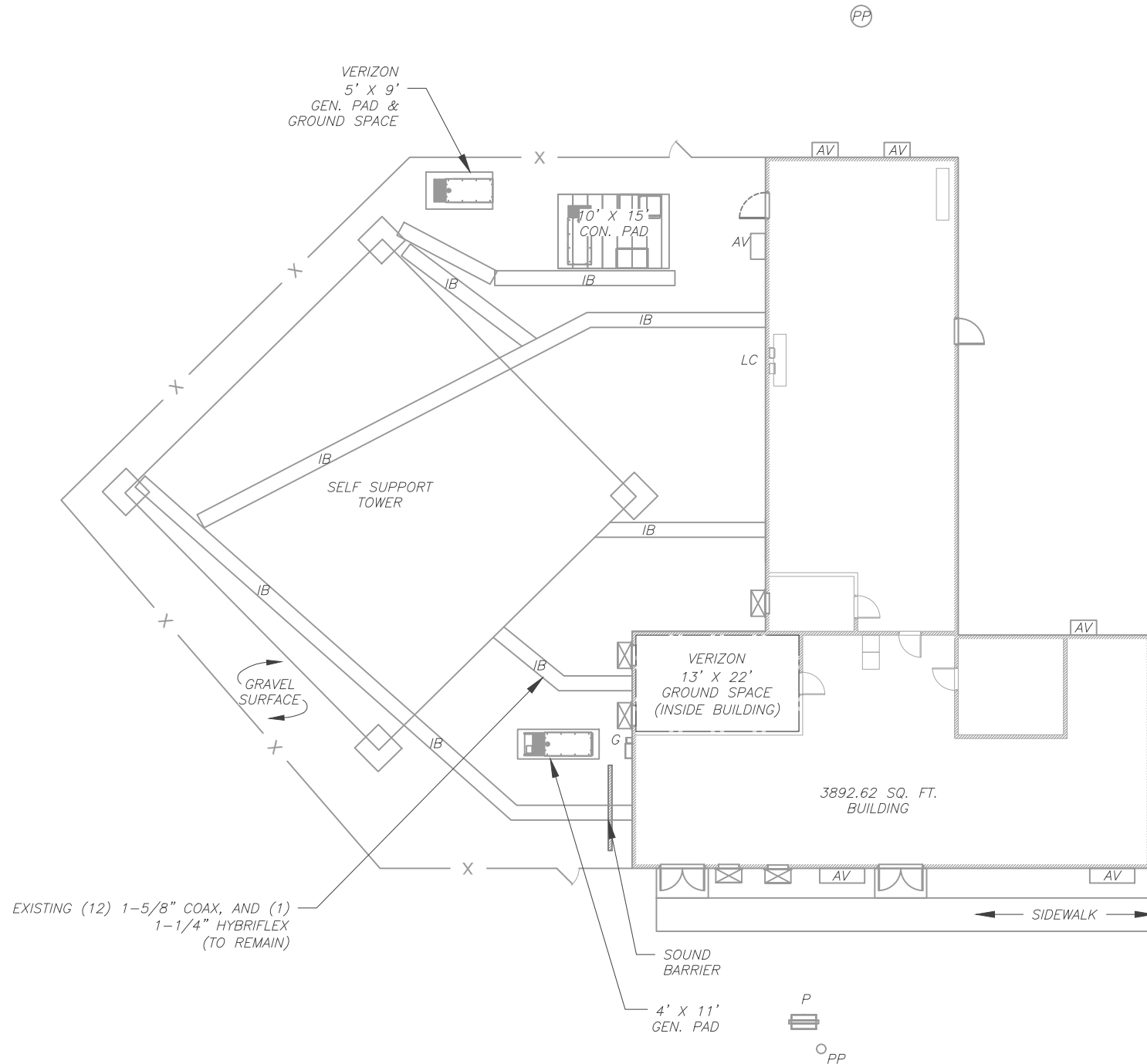
GENERAL NOTES

SHEET NUMBER: G-002	REVISION: 0
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SITE PLAN NOTES:

- 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.
- 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.
- 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



AMERICAN TOWER®
A.T. ENGINEERING SERVICES LLC
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ATC SITE NAME:
EAST KILLINGLY NORTH

VERIZON SITE NAME:
KILLINGLY CT

SITE ADDRESS:
 1375 NORTH ROAD
 KILLINGLY, CT 06241



Digitally Signed: 2023-09-28

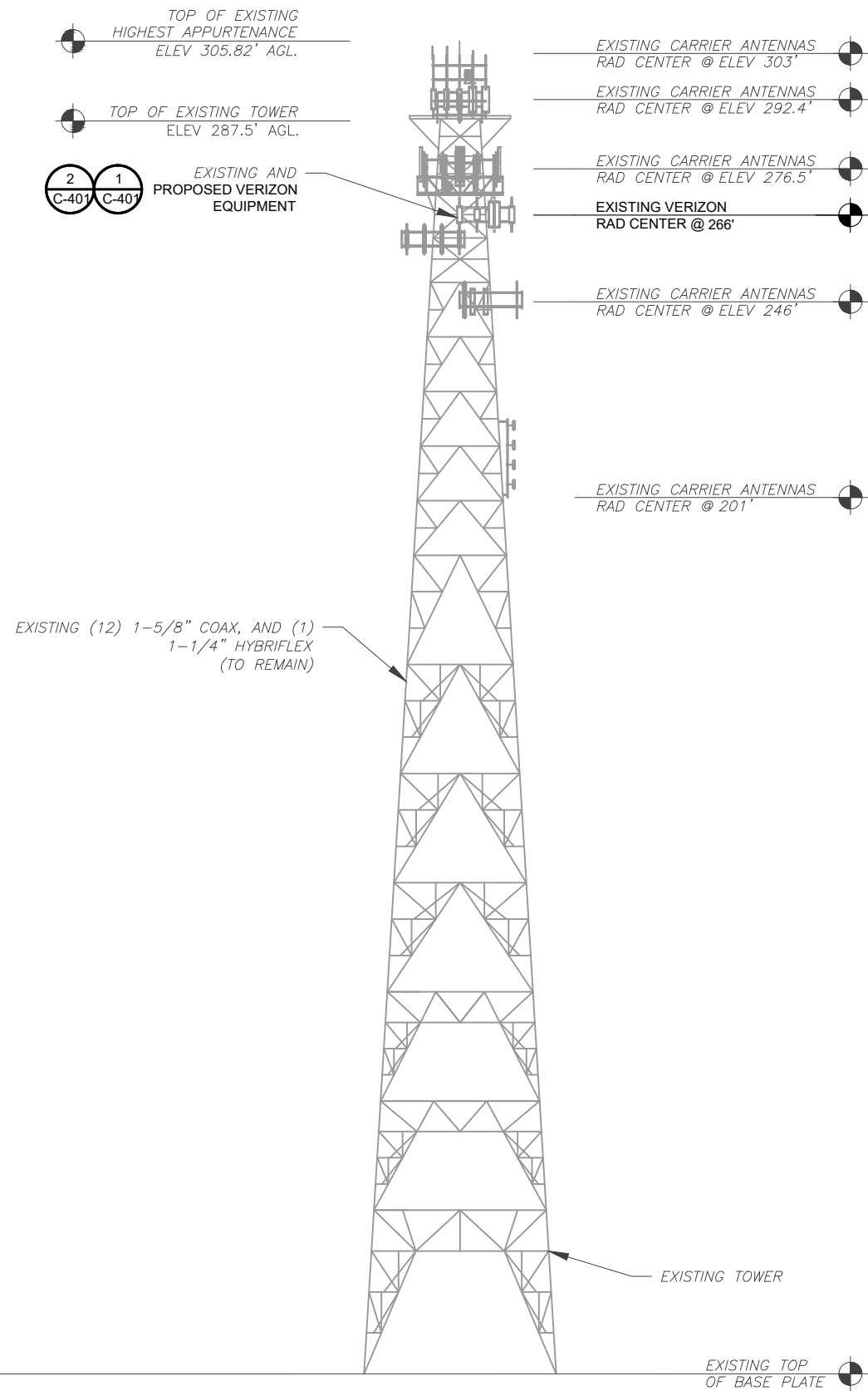


ATC JOB NO:	14519444_G0
CUSTOMER ID:	KILLINGLY CT
CUSTOMER #:	5000243499

DETAILED SITE PLAN	
SHEET NUMBER: C-101	REVISION: 0

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PER MOUNT ANALYSIS COMPLETED BY COLLIERS, DATED 07/22/2023, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



1 TOWER ELEVATION
SCALE: N.T.S.

TOWER NOTE:

- 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.
- 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.
- TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
- 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
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	KPF	09/27/23

ATC SITE NUMBER:
88011

ATC SITE NAME:
EAST KILLINGLY NORTH

VERIZON SITE NAME:
KILLINGLY CT

SITE ADDRESS:
1375 NORTH ROAD
KILLINGLY, CT 06241



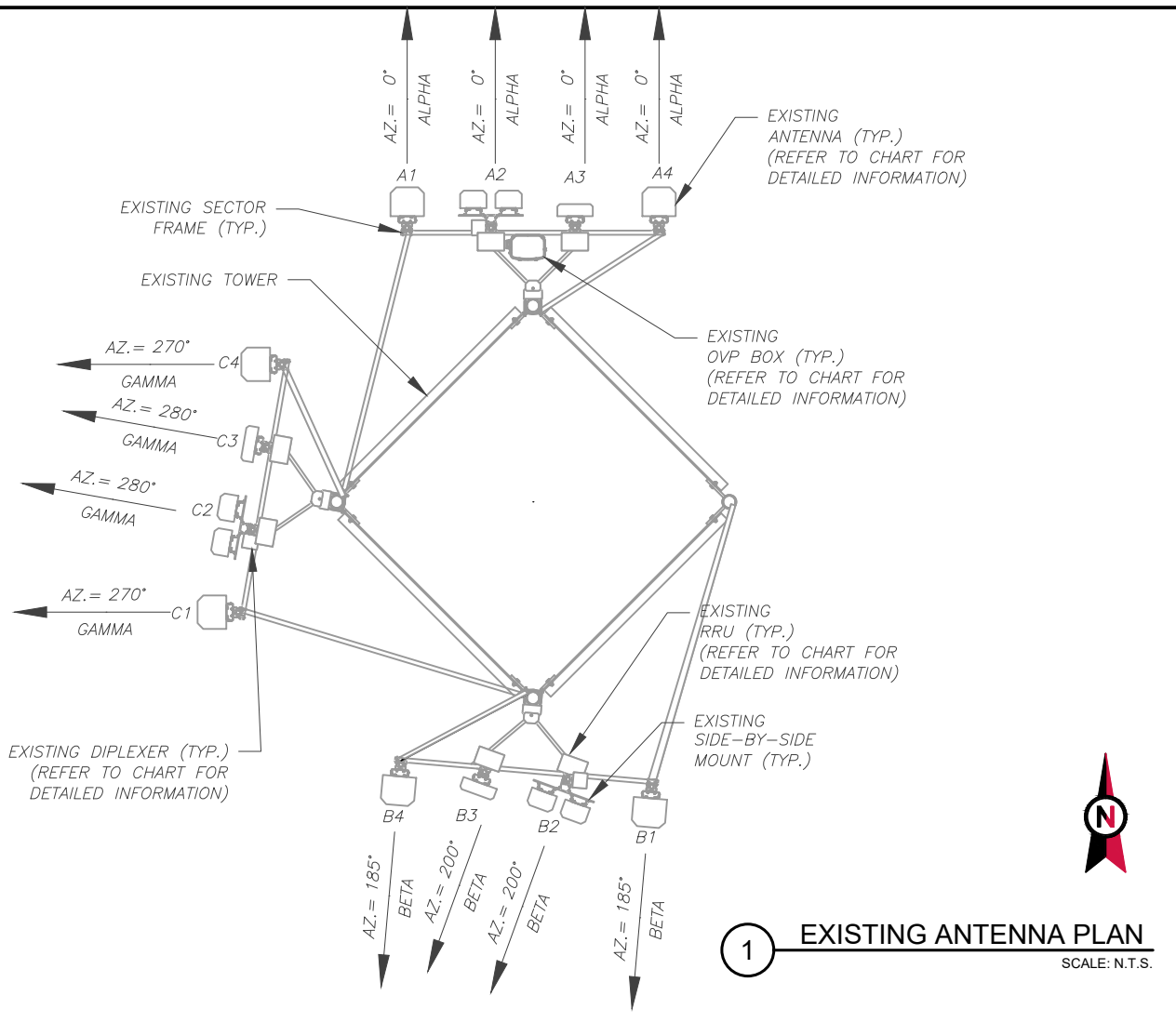
Digitally Signed: 2023-09-28

verizon	
ATC JOB NO:	14519444_GO
CUSTOMER ID:	KILLINGLY CT
CUSTOMER #:	5000243499

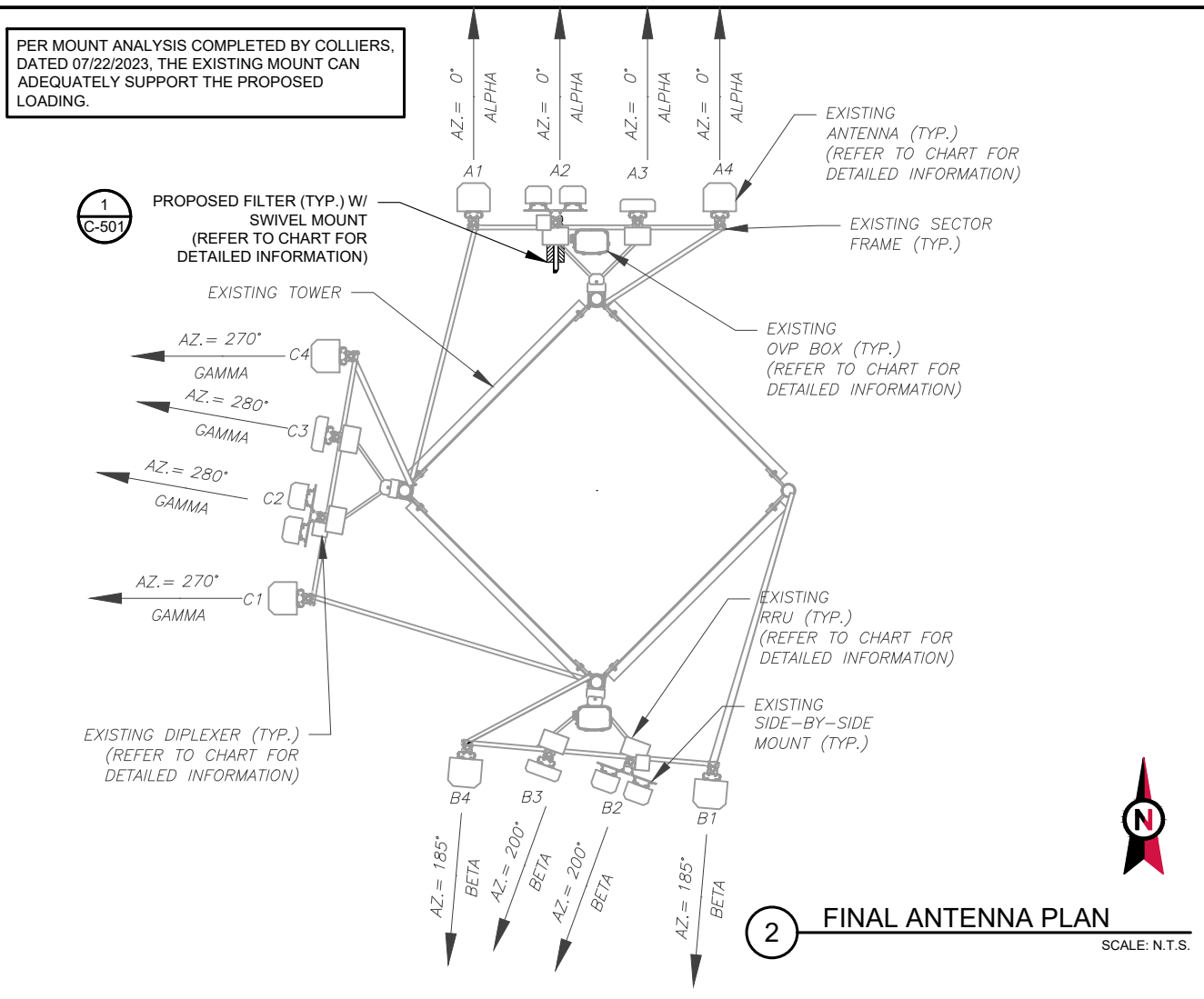
TOWER ELEVATION

SHEET NUMBER: C-201	REVISION: 0
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1 EXISTING ANTENNA PLAN
SCALE: N.T.S.



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE									
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELE C D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	266'	0°	A1	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
			A2	(2) JAHH-45BR3B	700/850/1900 /2100 LTE	-	RMN	CBC78T-DS-43-2X B2/B66A RRHBR049	RMN
			A3	MT6407-77A	L-SUB6 5G	-	RMN	B5/B13 RRHBR04C	RMN
			A4	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
BETA	266'	200°	B1	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
			B2	(2) JAHH-45BR3B	700/850/1900 /2100 LTE	-	RMN	CBC78T-DS-43-2X B2/B66A RRHBR049	RMN
			B3	MT6407-77A	L-SUB6 5G	-	RMN	B5/B13 RRHBR04C	RMN
			B4	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
GAMMA	266'	280°	C1	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
			C2	(2) JAHH-65BR3B	700/850/1900 /2100 LTE	-	RMN	CBC78T-DS-43-2X B2/B66A RRHBR049	RMN
			C3	MT6407-77A	L-SUB6 5G	-	RMN	B5/B13 RRHBR04C	RMN
			C4	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-

NOTES

- CONFIRM WITH VERIZON REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- 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	MECH/ELE C D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	266'	0°	A1	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
			A2	(2) JAHH-45BR3B	700/850/1900 /2100 LTE	-	RMN	CBC78T-DS-43-2X B2/B66A RRHBR049 (2) KA-6030	RMN RMN ADD
			A3	MT6407-77A	L-SUB6 5G	-	RMN	B5/B13 RRHBR04C	RMN
			A4	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
BETA	266'	200°	B1	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
			B2	(2) JAHH-45BR3B	700/850/1900 /2100 LTE	-	RMN	CBC78T-DS-43-2X B2/B66A RRHBR049	RMN
			B3	MT6407-77A	L-SUB6 5G	-	RMN	B5/B13 RRHBR04C	RMN
			B4	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
GAMMA	266'	280°	C1	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-
			C2	(2) JAHH-65BR3B	700/850/1900 /2100 LTE	-	RMN	CBC78T-DS-43-2X B2/B66A RRHBR049	RMN
			C3	MT6407-77A	L-SUB6 5G	-	RMN	B5/B13 RRHBR04C	RMN
			C4	LPA-80063-4CF-EDIN-X	850 CDMA	-	RMN	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RRFDC-3315-PF-48	RMN	(12) 1-5/8"	(1) 1-1/4"	RMN
-	-	-	-	-

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RRFDC-3315-PF-48	RMN	(12) 1-5/8"	(1) 1-1/4"	RMN
-	-	-	-	-

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	KPF	09/27/23

ATC SITE NUMBER:
88011

ATC SITE NAME:
EAST KILLINGLY NORTH

VERIZON SITE NAME:
KILLINGLY CT

SITE ADDRESS:
1375 NORTH ROAD
KILLINGLY, CT 06241

SEAL:

Digitally Signed: 2023-09-28

ATC JOB NO: 14519444_GO
CUSTOMER ID: KILLINGLY CT
CUSTOMER #: 5000243499

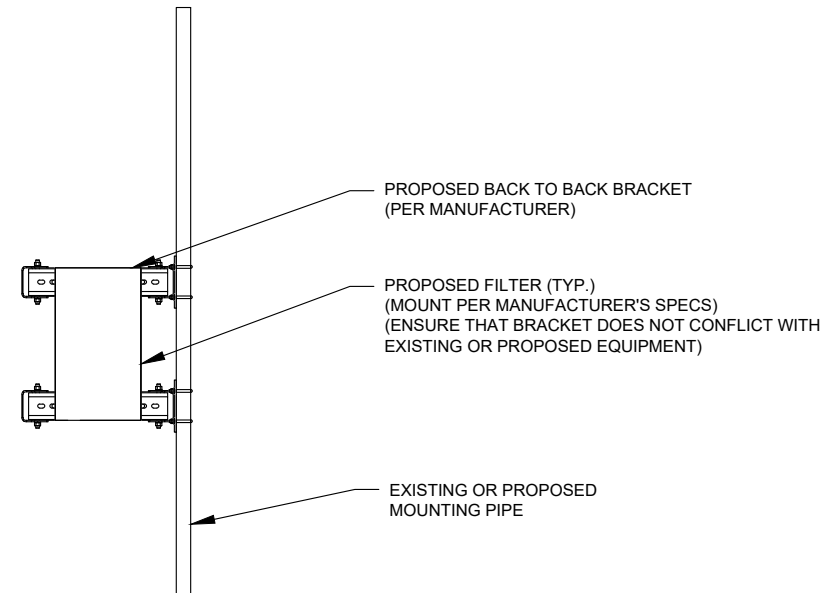
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:
C-401

REVISION:
0

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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.



1 PROPOSED FILTER MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	KPF	09/27/23

ATC SITE NUMBER:

88011

ATC SITE NAME:

EAST KILLINGLY NORTH

VERIZON SITE NAME:

KILLINGLY CT

SITE ADDRESS:

1375 NORTH ROAD
 KILLINGLY, CT 06241

SEAL:



Digitally Signed: 2023-09-28



ATC JOB NO: 14519444_G0

CUSTOMER ID: KILLINGLY CT

CUSTOMER #: 5000243499

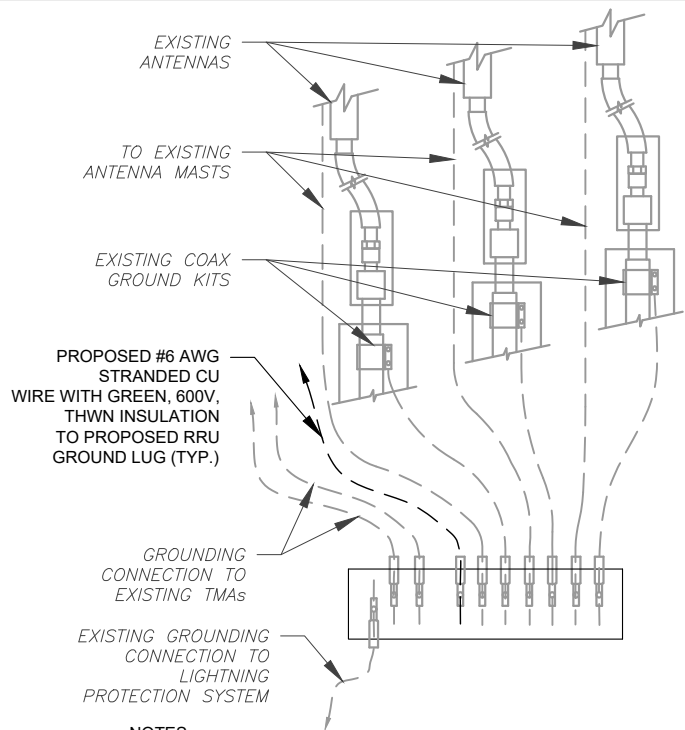
**CONSTRUCTION
 DETAILS**

SHEET NUMBER:

C-501

REVISION:

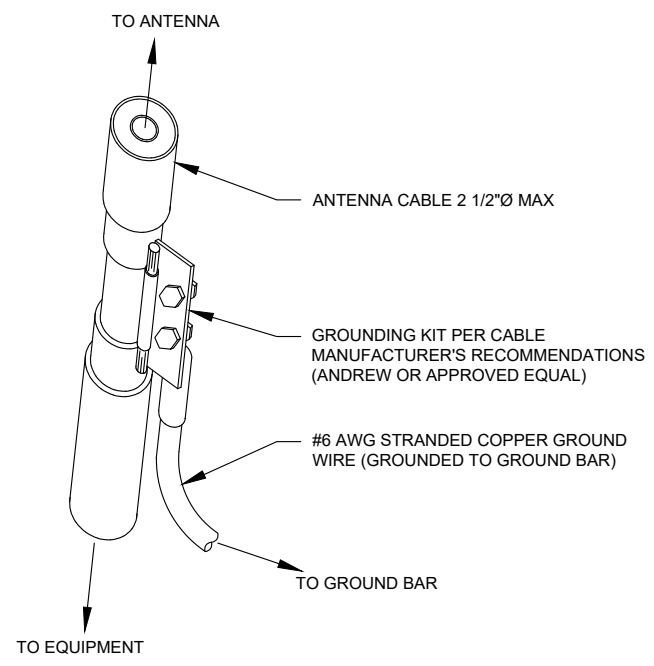
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NOTES:

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.

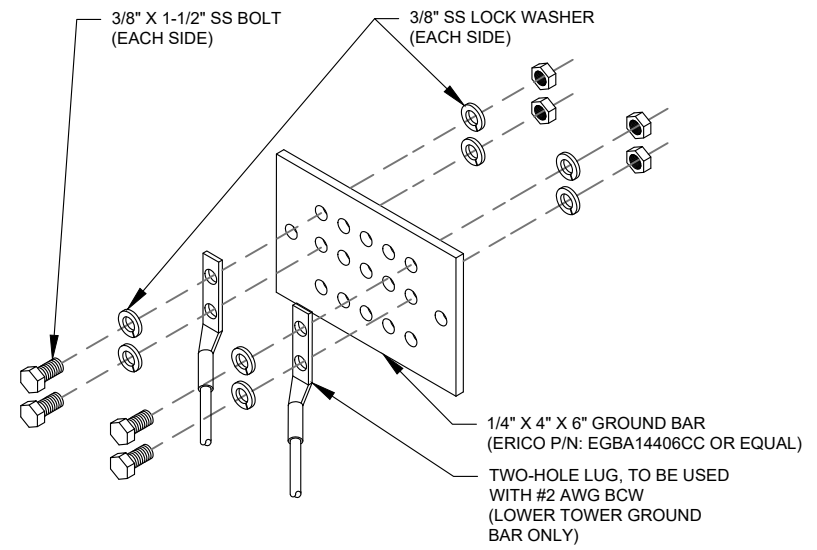
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



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.



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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	KPF	09/27/23

ATC SITE NUMBER:

88011

ATC SITE NAME:

EAST KILLINGLY NORTH

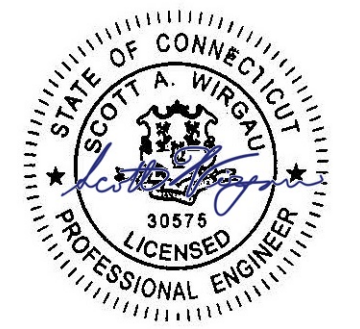
VERIZON SITE NAME:

KILLINGLY CT

SITE ADDRESS:

1375 NORTH ROAD
 KILLINGLY, CT 06241

SEAL:



Digitally Signed: 2023-09-28



ATC JOB NO:	14519444_G0
CUSTOMER ID:	KILLINGLY CT
CUSTOMER #:	5000243499

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

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

Mount Structural Analysis Report
 (3) 12.46-Ft T-Frame

July 21, 2023
 Site ID: 5000243499-VZW / KILLINGLY CT
 Page | 5

Requirements:

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

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

Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis
 SMART Tool Project #: 10207603
 Colliers Engineering & Design CT, P.C. Project #: 23777177
 July 21, 2023

Site Information

Site ID: 5000243499-VZW / KILLINGLY CT
 Site Name: KILLINGLY CT
 Carrier Name: Verizon Wireless
 Address: 1375 North Rd
 Killingly, Connecticut 06239
 Windham County
 Latitude: 41.871500°
 Longitude: -71.821528°

Structure Information

Tower Type: 288-Ft Self Support
 Mount Type: 12.46-Ft T-Frame

FUZE ID # 17123850

Analysis Results

T-Frame: 94.5% 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.vzsmart.com>

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

Report Prepared By: Prasanna Dhakal



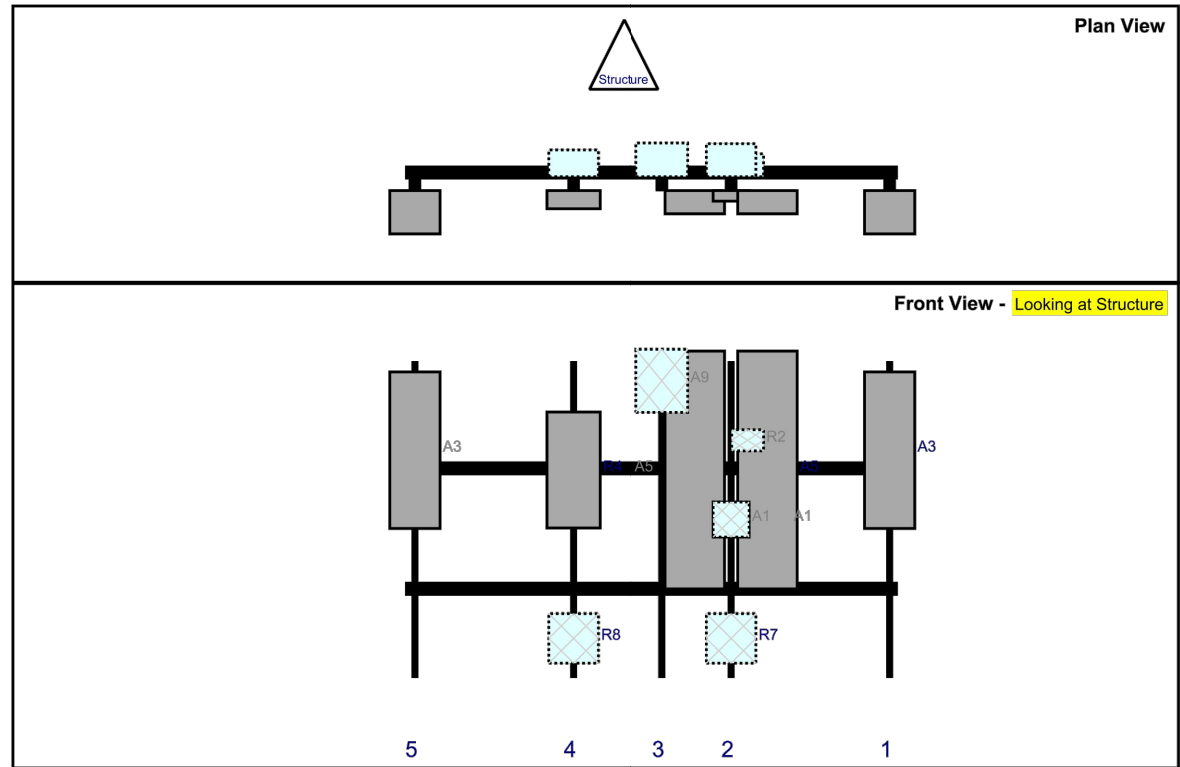
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY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

SUPPLEMENTAL

SHEET NUMBER: R-601	REVISION: 0
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Structure: 5000243499-VZW - KILLINGLY CT

Sector: **A** 7/21/2023
 Structure Type: Self Support 10207603
 Mount Elev: 264.50 Page: 1



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A3	LPA-80063-4CF-EDIN-6	47.4	15.2	147	1	a	Front	27	0	Retained	04/14/2023
A5	JAHH-45B-R3B	72	18	99	2	a	Front	33	11	Retained	04/14/2023
A5	JAHH-45B-R3B	72	18	99	2	b	Front	33	-11	Retained	04/14/2023
A1	KA-6030	10.6	10.9	99	2	a	Front	48	0	Added	
A1	KA-6030	10.6	10.9	99	2	b	Behind	48	0	Added	
R2	CBC78T-DS-43-2X	6.4	9.65	99	2	a	Behind	24	5	Retained	04/14/2023
R7	B2/B66A RRH-BR049	15	15	99	2	a	Behind	84	0	Retained	04/14/2023
A9	RRFDC-3315-PF-48	19.1	15.7	78	3	a	Behind	6	0	Retained	04/14/2023
R4	MT6407-77A	35.1	16.1	51	4	a	Front	33	0	Retained	04/14/2023
R8	B5/B13 RRH-BR04C	15	15	51	4	a	Behind	84	0	Retained	04/14/2023
A3	LPA-80063-4CF-EDIN-6	47.4	15.2	3	5	a	Front	27	0	Retained	04/14/2023

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 VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: **R-602** REVISION: **0**

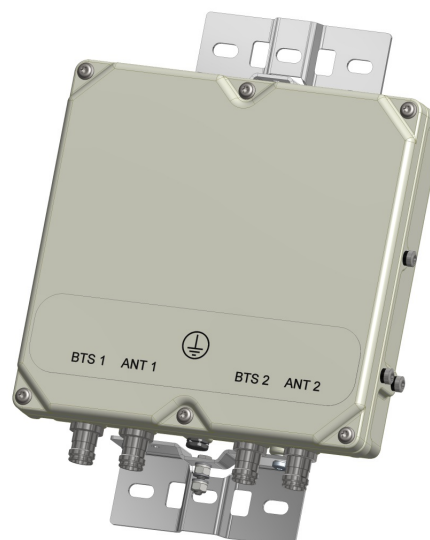
KA-6030

TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

The KA-6030 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the KA-6030 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the KA-6030 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.

FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available



TECHNICAL SPECIFICATIONS

BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	

ELECTRICAL

Impedance	50Ohms
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm

DC / AISG

Passband	0 - 13MHz
Insertion loss	0.3dB maximum
Return loss	15dB minimum
Input voltage range	± 33V
DC current rating	2A continuous, 4A peak
Compliance	3GPP TS 25.461

ENVIRONMENTAL

For further details of environmental compliance, please contact Kaelus.

Temperature range	-20°C to +60°C -4°F to +140°F
Ingress protection	IP67
Altitude	2600m 8530ft
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.
MTBF	>1,000,000 hours
Compliance	ETSI EN 300 019 class 4.1H, RoHS, NEBS GR-487-CORE

MECHANICAL

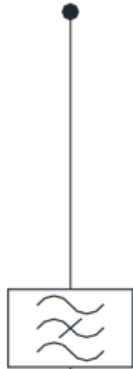
Dimensions H x D x W	269 x 277 x 80mm 10.60 x 10.90 x 3.15in (Excluding brackets and connectors)
Weight	8.0 kg 17.6 lbs (no bracket)
Finish	Powder coated, light grey (RAL7035)
Connectors	RF: 4.3-10 (F) x 4
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
KA-6030-2032	TWIN, 2 in / 2 out	DC/AISG PASS	4.3-10 (F)

ELECTRICAL BLOCK DIAGRAM

ANT1



BTS1

ANT2



BTS2

MECHANICAL BLOCK DIAGRAM

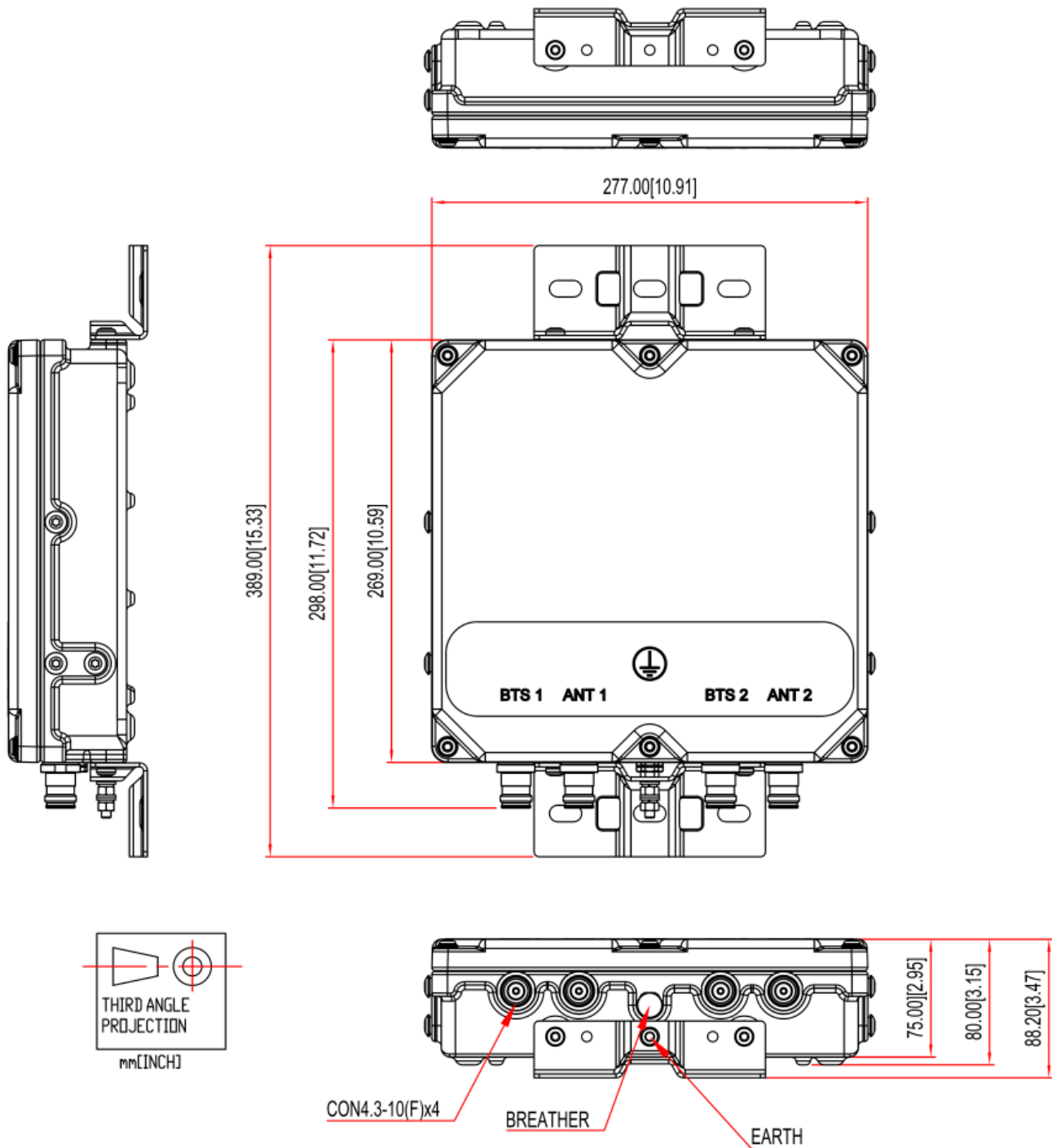


EXHIBIT 2



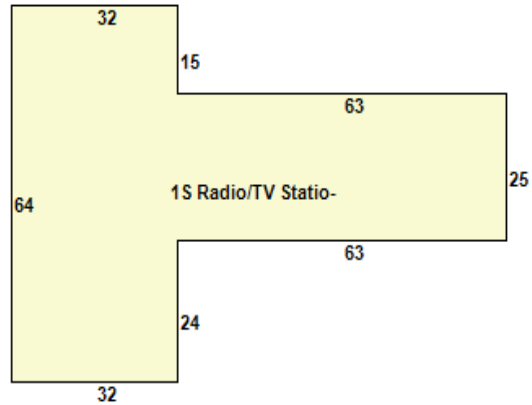
Location:	1375 NORTH RD			Map Id:	50-3	Zone:	RD	Date Printed:	10/12/2023		
				Neighborhood:	117-NORTH RD			Last Update:	10/12/2023		
Owner Of Record				Volume/Page	Date	Sales Type		Valid	Sale Price		
AMERICAN TOWERS INC				0772/0005	2/16/2000			No	186,528		
PO BOX 723597, ATLANTA, GA 31139						Exempt					
Prior Owner History											
Permit Number	Date	Permit Description									
22-227	6/20/2022	ADD 3 ANTENNAES TO EXISTING VERIZON WIRELESS									
21-1169	11/19/2021										
27869	11/5/2020	UPGRADES TO TOWER - REMV & REPL 4 ANTENNA. ADDN 4 REMOTE RADIO UNITS. DIPLEXERS & CABLES									
27112	9/18/2019	INSTALL 6 REPL ANTENNAS. RRUS & OTHER ANCILLARY EQUIP & CABLING ON EXISTING TOWE									
26263	8/21/2018	REPLACE EXISTING ANTENNAS WITH NEW ON EXISTING COMM TOWER ON EXISTING SPRINT RAD HEIGHT									
26159	7/9/2018	INSTALL TMOBILE CABINETS ON CONCRETE PAD W/ GENERATOR FOR EMERGENCY BACKUP POWER ANTENNA, EQUIPMENT									
Supplemental Data						Appraised Value					
Census/Tract	9041-2006	TvlerPARID		000072		Total Land Value		67,870			
Dev Map ID		Historic Dist				Total Building Value		275,900			
GIS ID		Drive/Access				Total Outbdg Value		0			
Route						Total Market Value		343,770			
District											
Utilities	Well, Septic										
Acres				State Item Codes							
Land Type	Acres	490	Total Value	Code	Quantity	Value					
Primary Site	2.07	0.00	67,870	32-Industrial Building	1.00	193,130					
				21-Commercial Land	2.07	47,530					
				33-Industrial Improvement	3.00	0					
Total	2.0700	0.00	67,870								
Assessment History (Prior Years as of Oct 1)					490 Appraised Totals						
	2023	2022	2021	2020	2019	Type	Acres	Value	Type	Acres	Value
Land	47,530	47,530	47,530	47,530	47,530						
Building	193,130	193,130	193,130	94,580	94,580						
Outbuilding	0	0	0	98,550	98,550						
Total	240,660	240,660	240,660	240,660	240,660			Totals		0.00	0
						Application Date:	Expiration Date:				
Comments											

Unique ID: 72

Killinlv

Location:	1375 NORTH RD	Unit	
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Commercial Building Description		Description	Area/Qty
Building Use	Industrial	Base Value	3623
Class	Wood Frame		
Overall Condition	Good		
Construction Quality	B-		
Stories	1.00		
Year Built	1960		
Remodel			
Percent Complete	100		
GLA	3623		
Basement			
Basement Area	0		
HVAC			
Heating Type	None	Attached Component Computations	
Fuel Type	None	Type	Yr Bit Area/Qty
Cooling Type	None		
Interior			
Floors			
Walls			
Wall Height			
Exterior			
Exterior Walls	Concr/Cinder		
Roof Type			
Roof Cover			
Special Features			



Detached Component Computations							
Type	Year	Condition	Area/Qty	Type	Year	Condition	Area/Qty
Cell Tower	1960	Average	300				
Chain Fence	1960	Average	1440				
Paving	1960	Average	3700				

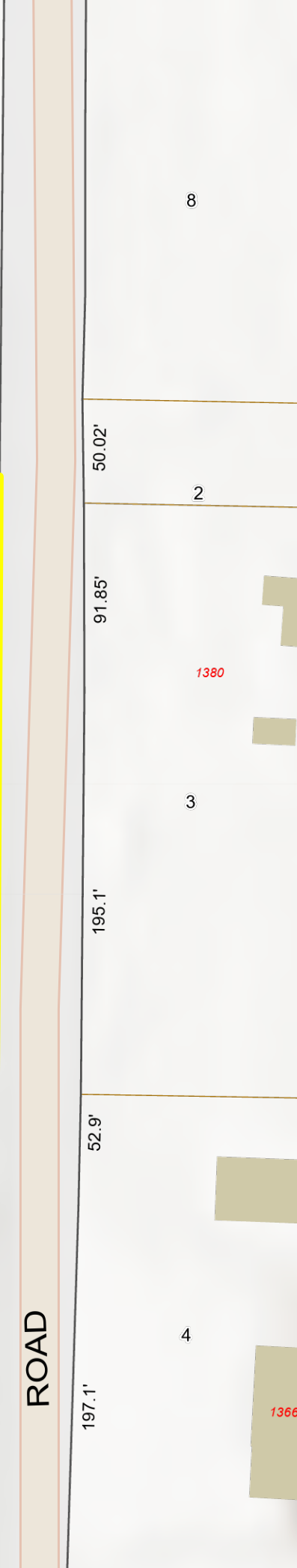
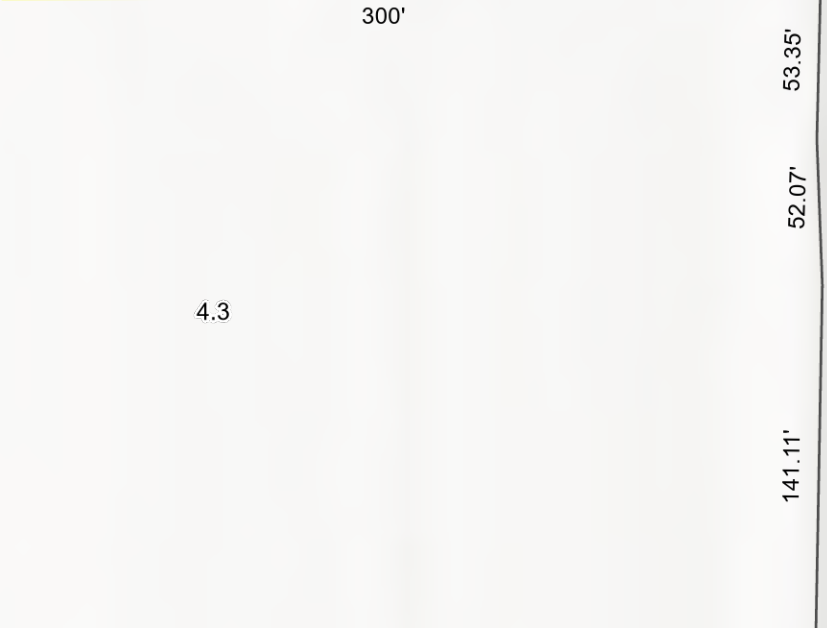
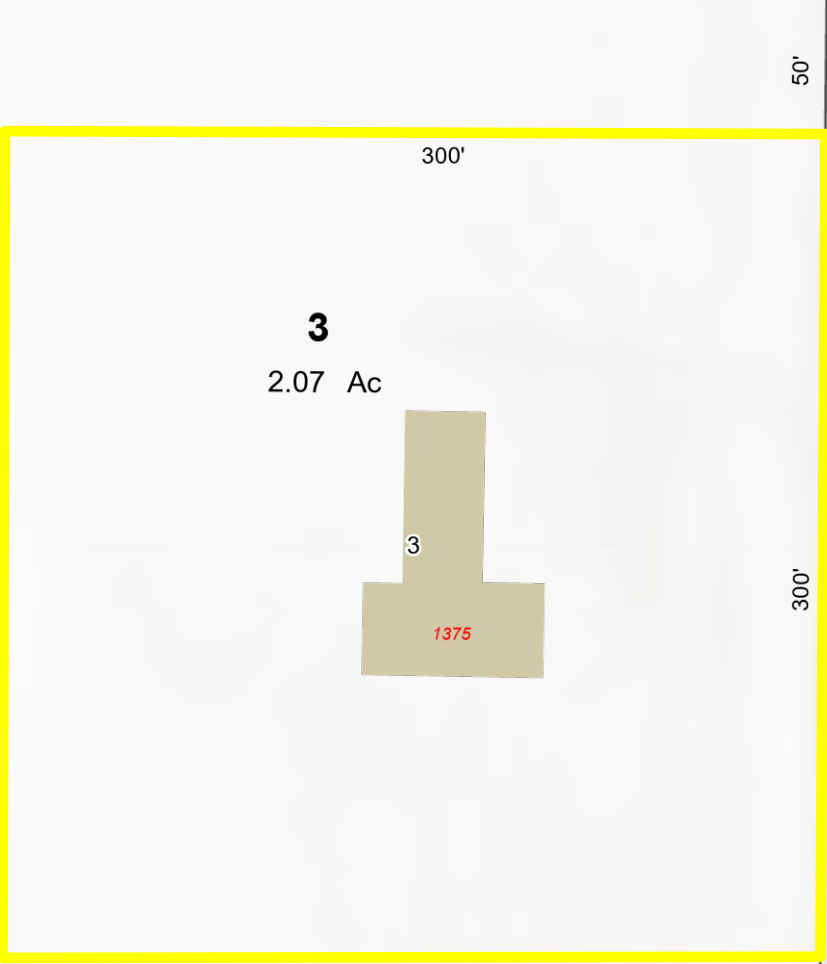


EXHIBIT 3





AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 288 ft Self Support Tower
ATC Asset Name : EAST KILLINGLY NORTH
ATC Asset Number : 88011
Engineering Number : 14519444_C3_03
Proposed Carrier : VERIZON WIRELESS
Carrier Site Name : KILLINGLY CT
Carrier Site Number : 5000243499
Site Location : 1375 North Road
Killingly, CT 06241-1404
41.8716° N, 71.8216° W
County : Windham
Date : September 12, 2023
Max Usage : 100%
Analysis Result : Pass

Created By:

Daniel K. Sheek
Structural Engineer I



COA: PEC.0001553



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Standard Conditions Attached

Calculations..... Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 288 ft Self Support tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	CSEI Analysis, ATC Eng. #26726321, dated September 13, 2006
Foundation:	CSEI Analysis, ATC Eng. #26726321, dated September 13, 2006
Geotechnical:	FDH Velocitel Project #17PXNW1600, dated February 27, 2017
Modification:	ATC Project #45432633, dated July 9, 2010 ATC Project #OAA686695_C6_04, dated November 28, 2016

Analysis

The tower was analyzed using Power Line Systems, Inc. tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	122 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" 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 3
Topographic Category:	1
Feature:	Flat
Crest Height (H):	0 ft
Spectral Response:	$S_s = 0.19$, $S_i = 0.06$
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	Result
Legs	73%	Pass
Diagonals	99%	Pass
Truss Diagonals	72%	Pass
Horizontals	63%	Pass
Truss Horizontals	73%	Pass
Anchor Bolts	16%	Pass
Foundation	100%	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Base (Local)	-	443.8	324.2	60.0

**Reactions shown are maximum overall and not limited by Load Case*

VERIZON WIRELESS Final Loading

Elev (ft)	Qty	Equipment	Lines
266.0	2	Commscope JAHH-65B-R3B	(1) 1 1/4" Hybriflex Cable (12) 1 5/8" Coax
	2	Kaelus KA-6030	
	2	Raycap RRFDC-3315-PF-48	
	3	Commscope CBC78T-DS-43-2X	
	3	Light Sector Frame	
	3	Samsung B2/B66A RRH-BR049	
	3	Samsung B5/B13 RRH-BR04C	
	3	Samsung MT6407-77A	
	4	Commscope JAHH-45B-R3B	
	6	Amphenol Antel LPA-80063-4CF-EDIN-X	

Install proposed lines alongside existing VERIZON WIRELESS lines.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
298.6	1	Procom CXL 900-3LW	-	SIGFOX S.A.
297.0	1	5" x 3" x 2" Cavity Filter	-	SIGFOX S.A.
	1	Low Noise Amplifier		
	3	Side Arm		
292.8	3	Commscope NNVV-65B-R4	-	SPRINT NEXTEL
292.7	3	Alcatel-Lucent 1900 MHz 4X45 RRH	-	SPRINT NEXTEL
292.6	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield	-	SPRINT NEXTEL
292.4	3	RFS APXVTM14-ALU-I20	-	SPRINT NEXTEL
292.0	3	Side Arm	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
290.5	6	Alcatel-Lucent RRH2x50-08	-	SPRINT NEXTEL
277.0	2	Light Sector Frame	(4) 1 1/4" Hybriflex Cable (4) 1 5/8" Hybriflex	T-MOBILE
	4	Commscope CBC1923Q-43		
	4	Commscope CBC6AE7LQ-DS-43		
	4	Ericsson AIR32 B66Aa/B2a		
	4	Ericsson Air6449 B41		
	4	Ericsson RRUS 11 B12		
	4	Ericsson RRUS 11 B4		
	4	Ericsson RRUS 4415 B25		
	4	Ericsson Radio 4478 B71		
	4	RFS APXVAARR24_43-U-NA20		
246.0	2	Light Sector Frame	(2) 0.39" (10mm) Fiber Trunk (4) 0.82" (20.8mm) 8 AWG 6 (12) 2 1/4" Coax	AT&T MOBILITY
	2	Raycap DC6-48-60-18-8F		
	3	CCI DMP65R-BU8D		
	3	CCI OPA65R-BU8D		
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Ericsson RRUS 8843 B2, B66A		
	3	Powerwave Allgon P65-16-XLH-RR		
	3	Powerwave Allgon TT19-08BP111-001		
	6	Powerwave Allgon LGP21901		
230.0	1	Raycap RDIDC-9181-PF-48	(1) 1.75" (44.5mm) Hybrid	DISH WIRELESS L.L.C.
	2	Light Sector Frame		
	3	Commscope FFVV-65B-R2		
	3	Fujitsu TA08025-B604		



Elev (ft)	Qty	Equipment	Lines	Carrier
	3	Fujitsu TA08025-B605		
210.0	1	Andrew DB264	(1) 7/8" Coax	US DEPT OF JUSTICE

(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:

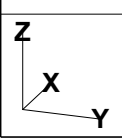
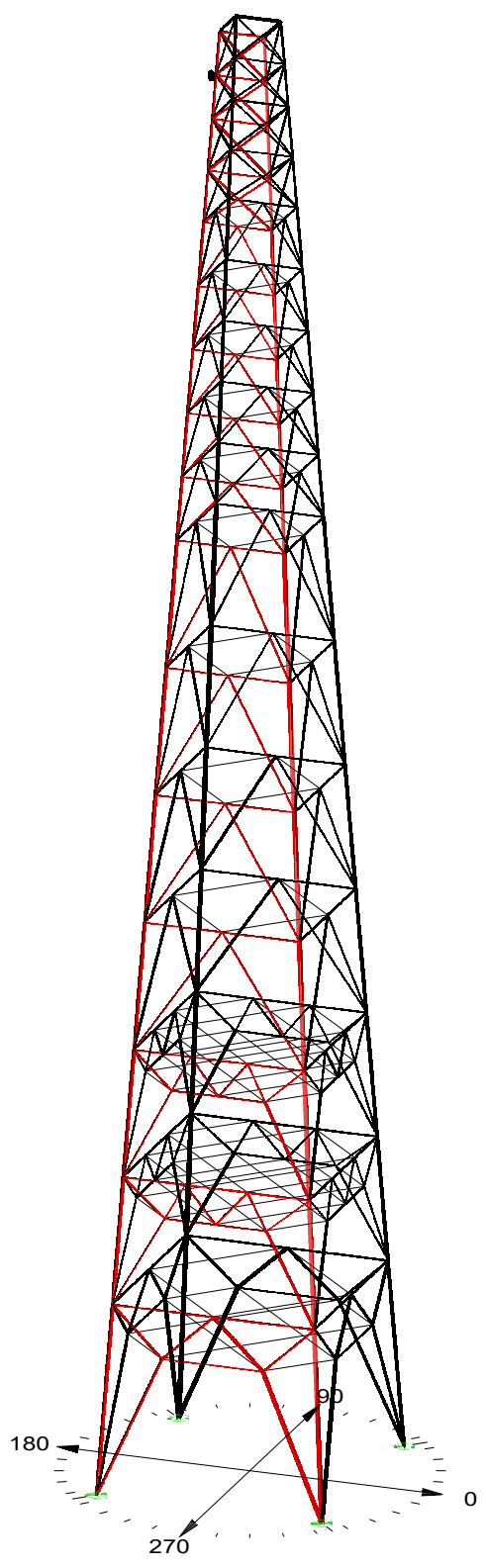
- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Services LLC

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.



Project Name : 88011 - East Killingly North, CT
 Project Notes : 0AA727044_C3_02 T-Mobile
 Project File : X:\VC-E\East Killingly North, CT (88011)\14519444 VERIZON WIRELESS\14519444_03_CUST_STR\88011 - EAST KILLINGLY NORTH.ctb
 Date run : 10:31:32 AM Tuesday, September 12, 2023
 by : Tower Version 16.73
 licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

Member check option: ANSI/TIA 222-W-1
 Connection rupture check: Not Checked
 Crossing diagonal check: Fixed
 Included angle check: None
 Climbing load check: None
 Redundant members checked with: Actual Force
 Loads from file: X:\VC-E\East Killingly North, CT (88011)\14519444 VERIZON WIRELESS\14519444_03_CUST_STR\88011 - EAST KILLINGLY NORTH.eia

*** Analysis Results:

Maximum element usage is 99.39% for Angle "D 13X" in load case "M -90"

Foundation Design Forces For All Load Cases:

Note: loads are factored.

Load Case	Foundation Description	Axial Force (kips)	Shear Force (kips)	Bending Moment (ft-k)	Foundation Usage %
W 0	OP 320.22	45.14	3.61	0.00	
W 0	OX 315.37	44.42	3.37	0.00	
W 0	OXY -199.89	33.90	3.84	0.00	
W 0	OP 199.88	34.29	3.03	0.00	
W 180	OP -195.74	34.18	4.11	0.00	
W 180	OX -196.69	33.77	3.92	0.00	
W 180	OXY 312.87	44.38	3.44	0.00	
W 180	OP 146.87	45.00	3.67	0.00	
W 45	OP 443.83	60.01	2.40	0.00	
W 45	OX 58.88	18.25	4.33	0.00	
W 45	OXY -324.17	51.26	4.06	0.00	
W 45	OY 58.79	18.21	4.32	0.00	
W -45	OP 62.81	19.18	4.57	0.00	
W -45	OX 439.53	59.66	2.46	0.00	
W -45	OXY 57.27	17.68	4.18	0.00	
W -45	OY -322.30	51.27	4.12	0.00	
W 90	OP 320.24	45.15	3.62	0.00	
W 90	OX -196.31	34.29	4.03	0.00	
W 90	OXY -199.88	33.90	3.83	0.00	
W 90	OY 315.27	44.41	3.36	0.00	
W -90	OP -195.75	34.19	4.12	0.00	
W -90	OX 316.97	45.01	3.68	0.00	
W -90	OXY 312.86	44.37	3.43	0.00	
W -90	OY -196.77	33.77	3.91	0.00	
W 0 Ice	OP 149.93	18.62	1.31	0.00	
W 0 Ice	OX 146.97	18.32	1.18	0.00	
W 0 Ice	OXY 23.31	2.66	2.04	0.00	
W 0 Ice	OY 26.42	2.74	2.12	0.00	
W 180 Ice	OP 29.97	3.03	2.21	0.00	
W 180 Ice	OX 26.88	2.93	2.13	0.00	
W 180 Ice	OXY 142.55	18.22	1.15	0.00	
W 180 Ice	OY 146.24	18.46	1.28	0.00	
W 45 Ice	OP 179.70	22.53	0.82	0.00	
W 45 Ice	OX 86.20	10.34	1.81	0.00	
W 45 Ice	OXY -6.38	3.59	2.18	0.00	
W 45 Ice	OY 86.11	10.24	1.81	0.00	
W -45 Ice	OP 89.96	10.76	1.93	0.00	
W -45 Ice	OX 175.87	22.30	0.75	0.00	
W -45 Ice	OXY 82.99	10.26	1.75	0.00	
W -45 Ice	OY -3.18	3.44	2.25	0.00	
W 90 Ice	OP 149.93	18.63	1.31	0.00	
W 90 Ice	OX 26.51	2.75	2.12	0.00	
W 90 Ice	OXY 23.31	2.66	2.04	0.00	
W 90 Ice	OY 145.88	18.32	1.18	0.00	
W -90 Ice	OP 29.97	3.03	2.21	0.00	
W -90 Ice	OX 146.33	18.46	1.29	0.00	
W -90 Ice	OXY 142.55	18.22	1.15	0.00	
W -90 Ice	OY 26.79	2.92	2.13	0.00	

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Tran. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Tran. Moment (ft-k)	Long. Moment (ft-k)	Bending Moment (ft-k)	Vert. Moment (ft-k)	Found. Usage %
W 0	OP	-40.03	-20.88	-320.22	45.14	-1.35	-3.35	3.61	-1.91	0.00
W 0	OX	-38.95	21.34	-315.37	44.42	1.10	-3.18	3.37	1.92	0.00
W 0	OXY	-39.89	-15.79	-199.89	33.90	0.29	-3.83	3.84	1.74	0.00
W 0	OY	-30.71	15.26	-198.38	34.29	-0.21	-4.02	4.03	-1.71	0.00
W 180	OP	30.71	15.01	195.74	34.18	-0.21	4.11	4.11	1.72	0.00
W 180	OX	29.99	-15.52	-196.69	33.77	0.29	-3.91	3.92	-1.75	0.00
W 180	OXY	38.99	21.21	-312.87	44.38	1.09	-3.26	3.44	-1.93	0.00
W 180	OY	39.98	-20.65	-316.87	45.00	-1.34	3.42	3.67	1.92	0.00
W 45	OP	-42.42	-42.45	-443.83	60.01	1.70	-1.69	2.40	-0.00	0.00
W 45	OX	-15.94	-8.89	-58.88	18.25	2.86	-2.87	4.33	2.66	0.00
W 45	OXY	-36.26	-36.23	-324.17	51.26	2.86	-2.87	4.06	-0.00	0.00
W 45	OY	-8.86	-15.91	-58.79	18.21	2.42	-3.58	4.32	-2.66	0.00
W -45	OP	-16.80	9.24	-62.81	19.18	-3.79	-2.55	4.57	-2.66	0.00
W -45	OX	-41.89	15.77	-439.53	59.66	-1.89	-1.87	2.46	0.00	0.00
W -45	OXY	-8.38	15.57	-57.27	17.68	-2.39	-3.43	4.18	2.68	0.00
W -45	OY	-36.64	35.86	-322.30	51.27	-2.83	-3.00	4.12	0.03	0.00
W 90	OP	-20.83	-15.54	-320.24	45.15	1.16	-1.36	3.62	-1.91	0.00
W 90	OX	-15.23	-30.72	-198.31	34.29	4.03	0.21	4.03	1.71	0.00
W 90	OXY	-15.81	-29.98	-199.88	33.90	3.82	-0.29	3.83	-1.74	0.00
W 90	OY	21.36	-38.93	-315.27	44.41	3.18	-1.09	3.36	-1.92	0.00
W -90	OP	14.90	15.72	195.75	34.19	-4.11	0.21	4.12	-1.72	0.00
W -90	OX	-20.63	40.00	-316.97	45.01	-3.43	1.34	3.68	-1.92	0.00
W -90	OXY	21.23	38.96	-312.86	44.37	-3.26	-1.08	3.43	1.93	0.00
W -90	OY	-15.55	15.99	-195.75	33.77	-3.90	-0.30	3.91	-1.75	0.00
W 0 Ice	OP	-15.25	-10.69	-149.93	18.62	-1.29	0.20	1.31	-0.44	0.00
W 0 Ice	OX	-14.81	10.78	-145.97	18.32	1.16	0.23	1.18	0.43	0.00
W 0 Ice	OXY	-1.35	2.29	-23.31	2.66	0.91	-1.82	2.04	0.43	0.00
W 0 Ice	OY	-1.35	2.39	-26.42	2.74	-0.98	-1.98	2.12	-0.41	0.00
W 180 Ice	OP	1.33	-2.73	-29.97	3.03	-0.98	1.98	2.21	0.43	0.00
W 180 Ice	OX	1.37	2.59	-26.88	2.93	0.92	1.92	2.13	-0.44	0.00
W 180 Ice	OXY	14.83	15.52	-146.24	18.46	-0.12	0.13	1.15	-0.45	0.00
W 180 Ice	OY	15.22	-10.44	-146.24	18.46	-1.28	-0.11	1.28	0.45	0.00
W 45 Ice	OP	-15.92	-15.93	-179.70	22.53	-0.58	0.58	0.82	0.00	0.00
W 45 Ice	OX	-9.69	3.63	-86.20	10.34	1.78	0.35	1.81	0.64	0.00
W 45 Ice	OXY	-2.54	-2.54	-6.38	3.59	1.54	-1.54	2.18	-0.00	0.00
W 45 Ice	OY	3.64	-9.67	-86.11	10.34	-0.35	-1.77	1.81	-0.64	0.00
W -45 Ice	OP	-10.15	-3.57	-89.96	10.76	-1.90	0.32	1.93	-0.65	0.00
W -45 Ice	OX	-15.55	15.99	-175.87	22.30	0.46	0.60	0.75	-0.01	0.00
W -45 Ice	OXY	3.58	9.61	-82.99	10.26	0.28	-1.73	1.75	0.65	0.00
W -45 Ice	OY	-2.39	2.48	3.18	3.44	-1.61	-1.57	2.25	0.02	0.00
W 90 Ice	OP	-10.69	-15.25	-149.93	18.63	-0.20	1.29	1.31	0.44	0.00
W 90 Ice	OX	-2.40	-1.35	-26.51	2.75	1.88	0.98	2.12	0.41	0.00
W 90 Ice	OXY	2.29	-1.35	-23.31	2.66	1.82	-0.91	2.04	-0.43	0.00
W 90 Ice	OY	10.79	-14.80	-145.88	18.32	-0.23	-1.16	1.18	-0.43	0.00
W -90 Ice	OP	-2.73	1.33	-29.97	3.03	-1.98	0.97	2.21	-0.43	0.00
W -90 Ice	OX	-10.44	15.23	-146.43	18.46	0.11	1.28	1.29	0.45	0.00
W -90 Ice	OXY	10.59	14.83	-142.55	18.22	0.13	-1.14	1.15	0.45	0.00
W -90 Ice	OY	2.59	1.36	-26.79	2.92	-1.92	-0.92	2.13	0.44	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case	Support Joint	Origin Joint	Leg Member	Residual Force (kips)	Residual Shear Force (kips)	Residual Shear Force (kips)	Residual Shear Force (kips)	Residual Shear Force (kips)	Total Force (kips)	Total Force (kips)	Total Force (kips)
W 0	OP	IP	L 1P	322.771	18.995	20.037	20.018	0.869	-40.03	-20.88	-320.22
W 0	OX	LX	L 1X	317.894	19.274	19.318	19.248	-1.640	-38.95	21.34	-315.37
W 0	OXY	1XY	L 1XY	-201.964	17.774	17.821	17.513	3.301	-30.00	-15.79	199.89
W 0	OY	L 1Y	L 1Y	-200.473	18.487	18.534	18.311	-2.864	-30.71	15.26	198.38
W 180	OP	IP	L 1P	-197.822	18.639	18.685	-18.478	-2.778	30.71	15.01	195.74
W 180	OX	LX	L 1X	-198.762	17.950	17.997	-17.705	3.228	29.99	-15.52	196.69
W 180	OXY	1XY	L 1XY	315.407	19.463	19.508	-19.437	-1.658	38.99	21.21	-312.87
W 180	OY	L 1Y	L 1Y	314.119	18.199	18.246	-18.199	-2.018	39.98	-20.65	-316.87
W 45	OP	IP	L 1P	447.385	20.711	20.792	14.686	14.719	-42.42	-42.45	-443.83
W 45	OX	LX	L 1X	59.087	17.558	17.558	12.264	12.565	-15.94	-8.89	-58.88
W 45	OXY	1XY	L 1XY	-327.429	22.530	22.618	16.007	15.980	-36.26	-36.23	-324.17
W 45	OY	L 1Y	L 1Y	59.000	17.513	17.513	12.880	12.235	-8.86	-15.91	-58.79
W -45	OP	IP	L 1P	63.040	18.417	18.417	12.880	-13.164	-16.80	9.24	-62.81
W -45	OX	LX	L 1X	443.079	20.753	20.833	14.133	-15.307	-41.59	42.77	-439.53
W -45	OXY	1XY	L 1XY	496.466	16.936	16.936	11.963	11.963	-8.38	15.57	-57.27
W -45	OY	L 1Y	L 1Y	-325.562	22.703	22.791	16.498	-15.724	-36.64	35.86	-322.30
W 90	OP	IP	L 1P	322.783	20.015	20.057	0.842	20.040	-20.85	-40.05	-320.24
W 90	OX	LX	L 1X	-200.397	18.506	18.552	-2.841	18.334	15.23	-30.72	-198.31

W 90	OXY	1XY	L 1XY	-201.952	17.761	17.809	3.322	17.496	-15.81	-29.98	199.88
W 90	OXY	1Y	L 1Y	317.385	19.260	19.304	-1.867	19.232	21.36	-9.93	-315.27
W 90	OP	1P	L 1P	-197.832	-18.652	-18.699	-2.757	-18.494	14.99	30.72	195.75
W 90	OXY	1X	L 1X	319.514	20.172	20.214	0.822	-20.198	-20.63	40.00	-316.97
W 90	OXY	1XY	L 1XY	315.395	19.444	19.488	-1.685	-19.415	21.23	38.96	-312.86
W 90	OXY	1Y	L 1Y	198.830	17.932	17.980	3.251	-17.683	-15.55	29.98	196.77
W 0 Ice	OP	1P	L 1P	150.961	6.011	6.028	5.880	1.326	-15.25	-10.69	-149.93
W 0 Ice	OP	1X	L 1X	146.999	5.911	5.929	5.691	-1.662	-14.81	10.78	-145.97
W 0 Ice	OXY	1XY	L 1XY	23.278	2.926	2.928	2.807	-0.833	-1.35	2.29	-23.31
W 0 Ice	OXY	1Y	L 1Y	177.147	3.084	3.087	3.740	0.740	-1.35	-2.39	-26.42
W 180 Ice	OP	1P	L 1P	29.940	3.310	3.314	-3.202	0.853	1.33	-2.73	-29.97
W 180 Ice	OXY	1X	L 1X	26.848	3.177	3.180	-3.045	-0.915	1.37	2.59	-26.88
W 180 Ice	OXY	1XY	L 1XY	158.040	14.142	14.160	-5.217	-1.679	14.83	10.59	-142.55
W 180 Ice	OXY	1Y	L 1Y	147.268	6.206	6.208	-6.084	1.308	15.22	-10.44	-146.24
W 45 Ice	OP	1P	L 1P	180.982	6.624	6.650	4.697	4.707	-15.92	-15.93	-179.70
W 45 Ice	OP	1X	L 1X	86.697	4.640	4.643	4.299	1.753	-9.69	3.63	-86.20
W 45 Ice	OXY	1XY	L 1XY	2.141	3.017	3.029	2.141	2.141	-2.54	-2.54	6.38
W 45 Ice	OXY	1Y	L 1Y	86.609	4.632	4.634	1.744	4.294	3.64	-9.67	-86.11
W 45 Ice	OP	1P	L 1P	90.464	4.970	4.972	4.530	-2.050	-10.15	-3.57	-89.96
W 45 Ice	OP	1X	L 1X	177.147	3.091	3.094	0.744	3.004	-2.40	-1.35	-26.53
W 45 Ice	OXY	1XY	L 1XY	83.487	4.704	4.708	1.605	-4.426	3.58	9.61	-82.99
W 45 Ice	OXY	1Y	L 1Y	-3.469	3.146	3.158	2.188	-2.277	-2.39	2.48	3.18
W 90 Ice	OP	1P	L 1P	150.963	6.016	6.033	1.318	5.887	-10.69	-15.25	-149.93
W 90 Ice	OP	1X	L 1X	146.973	5.991	6.004	0.744	2.806	2.29	-1.35	-23.31
W 90 Ice	OXY	1XY	L 1XY	23.278	2.924	2.927	-0.820	0.853	1.33	-2.73	-29.97
W 90 Ice	OXY	1Y	L 1Y	146.908	5.912	5.929	-1.670	5.889	10.79	-14.80	-145.88
W 90 Ice	OP	1P	L 1P	29.937	3.312	3.316	-3.094	-3.203	-2.73	1.33	-29.97
W 90 Ice	OP	1X	L 1X	147.359	6.206	6.223	1.300	-0.086	-10.44	15.23	-146.33
W 90 Ice	OXY	1XY	L 1XY	143.578	6.138	6.156	-1.687	-5.920	10.59	14.83	-142.55
W 90 Ice	OXY	1Y	L 1Y	26.762	3.170	3.172	-0.912	-3.039	2.59	1.36	-26.79

Overturning Moment Summary For All Load Cases:

Load Case	Transverse Moment (ft-k)	Longitudinal Moment (ft-k)	Torsional Moment (ft-k)	Resultant Moment (ft-k)	Transverse Force (kips)	Longitudinal Force (kips)	Vertical Force (kips)
W 0	142.972	-22961.110	-62.351	22961.380	-0.049	-139.667	237.317
W 180	17249.637	-17253.580	-2.758	24397.459	103.477	103.477	237.317
W 45	-16988.622	-17237.587	90.784	24202.225	-103.436	-103.436	237.317
W 90	23219.701	-146.926	-66.276	23220.166	139.666	0.065	237.317
W 90	-22965.059	-115.218	66.260	22965.348	-139.667	-0.049	237.317
W 0 Ice	158.814	-5529.625	13.980	5531.905	0.013	32.756	345.635
W 180 Ice	152.312	5210.164	-13.977	5212.390	0.010	-32.751	345.635
W 45 Ice	4177.842	-4181.804	-0.402	5911.463	24.515	24.515	345.635
W 90 Ice	-3865.314	-4178.487	20.339	5692.135	-24.507	-24.503	345.635
W 90 Ice	5525.664	-162.780	-14.831	5528.061	32.756	0.013	345.635
W 90 Ice	-5214.132	-156.278	14.828	5216.474	-32.751	-0.010	345.635

EIA Sections Information:

Section Label	Top Z (ft)	Bottom Z (ft)	Joint Count	Member Count	Top Width (ft)	Bottom Width (ft)	Gross Area (ft^2)	Face A Factor	Face B Factor	Dead Load
278.9-287.5	287.500	278.917	8	20	9.00	10.07	81.85	1.1220	1.1220	1.346
270.3-278.9	278.917	270.334	8	16	10.07	11.15	91.06	1.2150	1.2150	1.458
260.2-270.3	270.334	260.167	8	16	11.15	12.42	119.77	1.1970	1.1970	1.436
250.0-260.2	260.167	250.000	12	26	12.42	14.00	133.30	1.2030	1.2030	2.044
237.5-250.0	250.000	237.500	16	24	13.69	15.25	180.84	1.2010	1.2010	1.441
225.0-237.5	237.500	225.000	16	24	15.25	16.81	200.36	1.2070	1.2070	1.449
212.5-225.0	225.000	212.500	16	24	16.81	18.37	219.89	1.2130	1.2130	1.456
200.0-212.5	212.500	200.000	16	24	18.37	19.93	239.41	1.2200	1.2200	1.463
187.5-200.0	200.000	187.500	16	24	19.93	21.50	258.94	1.2250	1.2250	1.471
162.5-187.5	187.500	162.500	16	24	21.50	24.62	316.45	1.2550	1.2550	1.506
137.5-162.5	162.500	137.500	16	24	24.62	27.74	354.55	1.2700	1.2700	1.524
112.5-137.5	137.500	112.500	16	24	27.74	30.87	408.65	1.2790	1.2790	1.535
87.5-112.5	112.500	87.500	20	32	30.87	33.99	480.75	1.2930	1.2930	1.552
62.5-87.5	87.500	62.500	36	76	33.99	37.12	588.85	1.2930	1.2930	1.476
37.5-62.5	62.500	37.500	40	80	37.12	40.24	723.30	1.2930	1.2930	1.480
0.00-37.50	37.500	0.000	20	40	40.24	44.93	896.86	1.2600	1.2600	1.512

Printed capacities do not include the rated strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

Group Label	Group Angle	Group Desc.	Group Type	Angle Size	Steel Strength	Max Usage	Max Use Control	Comp. In Member	Comp. Force	Control Case	L/r	Comp. Connect.	Comp. Connect.	RLX	RLY	RLZ	L/r	RL/r	Length	Curve	No. Comp. Member	No. Bolts	Of Comp.
				(ksi)	%	(kips)			(kips)		(kips)	Capacity	Capacity	Capacity	Capacity	Capacity		(ft)					
Leg S1	L 8" x 8"	x 1.125"	SAB	8X8X1.13	36.0	72.62	Comp	72.62	L 1P	-365.737	W 45	503.652	0.000	0.000	0.250	0.250	0.250	72.40	72.40	37.646	1	0	
Leg S2	L 8" x 8"	x 1.125"	SAB	8X8X1.13	36.0	58.26	Comp	58.26	L 1P	-318.626	W 45	480.400	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.097	1	0	
Leg S3	L 8" x 8"	x 1"	SAB	8X8X1	36.0	56.37	Comp	56.37	L 3P	-276.437	W 45	490.440	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.097	1	0	
Leg S4	L 8" x 8"	x 0.875"	SAB	8X8X0.88	36.0	64.40	Comp	64.40	L 4P	-267.477	W 45	415.366	0.000	0.000	0.333	0.333	0.333	63.94	63.94	25.097	1	0	
Leg S5	L 8" x 8"	x 0.875"	SAB	8X8X0.88	36.0	55.25	Comp	55.25	L 5P	-229.473	W 45	415.366	0.000	0.000	0.333	0.333	0.333	63.94	63.94	25.097	1	0	
Leg S6	L 8" x 8"	x 0.75"	SAB	8X8X0.75	36.0	60.10	Comp	60.10	L 6P	-190.808	W 45	359.362	0.000	0.000	0.333	0.333	0.333	63.53	63.53	25.097	1	0	
Leg S7	L 8" x 8"	x 0.625"	SAB	8X8X0.63	36.0	50.59	Comp	50.59	L 7P	-152.933	W 45	302.310	0.000	0.000	0.333	0.333	0.333	63.53	63.53	25.097	1	0	
Leg S8	L 6" x 6"	x 0.75"	SAB	6X6X0.75	36.0	50.21	Comp	50.21	L 8P	-132.849	W 45	264.577	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.549	1	0	
Leg S9	L 6" x 6"	x 0.625"	SAB	6X6X0.75	36.0	42.47	Comp	42.47	L 9P	-112.366	W 45	264.577	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.549	1	0	
Leg S10	L 6" x 6"	x 0.5625"	SAB	6X6X0.56	36.0	50.29	Comp	50.29	L 10P	-93.568	W 45	202.141	0.000	0.000	0.500	0.500	0.500	63.81	63.81	12.549	1	0	
Leg S11	L 6" x 6"	x 0.5625"	SAB	6X6X0.56	36.0	36.71	Comp	36.71	L 11P	-74.202	W 45	202.141	0.000	0.000	0.500	0.500	0.500	63.81	63.81	12.549	1	0	
Leg S12	L 6" x 6"	x 0.4375"	SAB	6X6X0.44	36.0	33.75	Comp	33.75	L 12P	-53.737	W 45	159.217	0.000	0.000	0.500	0.500	0.500	63.27	63.27	12.549	1	0	
Leg S13	L 5" x 5"	x 0.4375"	SAB	5X5X0.44	36.0	32.04	Comp	32.04	L 13P	-42.420	W 45	132.416	0.000	0.000	0.500	0.500	0.500	62.11	62.11	10.209	1	0	
Leg S14	L 5" x 5"	x 0.4375"	SAB	5X5X0.44	36.0	21.92	Comp	21.92	L 14P	-29.029	W 45	132.416	0.000	0.000	0.500	0.500	0.500	62.11	62.11	10.209	1	0	
Leg S15	L 5" x 5"	x 0.3125"	SAB	5X5X0.31	36.0	14.71	Comp	14.71	L 15P	-14.226	W 45	96.704	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1	0	
Leg S16	L 5" x 5"	x 0.3125"	SAB	5X5X0.31	36.0	6.01	Comp	6.01	L 16P	-5.816	W 45	96.704	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1	0	
Diag S1	B/B	L2.5"x3.5"	DAS	3.5X2.5X0.25	36.0	82.85	Comp	82.85	D 2X	-57.547	W 90	175.176	0.000	0.0									

Leg 54	L 8" x 8" x 0.875"	SAB	8X8X0.88	36.0	64.40	Comp	46.62	L 4XY	199.836	W 45	428.651	0.000	0.000	0.000	25.097	0.0000	0
Leg 55	L 8" x 8" x 0.875"	SAB	8X8X0.88	36.0	55.25	Comp	39.48	L 3XY	169.234	W 45	428.651	0.000	0.000	0.000	25.097	0.0000	0
Leg 56	L 8" x 8" x 0.75"	SAB	8X8X0.75	36.0	53.10	Comp	37.25	L 5XY	138.071	W 45	370.655	0.000	0.000	0.000	25.097	0.0000	0
Leg 57	L 8" x 8" x 0.625"	SAB	8X8X0.63	36.0	50.59	Comp	34.02	L 7XY	105.933	W 45	311.364	0.000	0.000	0.000	25.097	0.0000	0
Leg 58	L 6" x 6" x 0.75"	SAB	6X6X0.75	36.0	50.21	Comp	33.00	L 8XY	90.236	W 45	273.456	0.000	0.000	0.000	12.549	0.0000	0
Leg 59	L 6" x 6" x 0.75"	SAB	6X6X0.75	36.0	42.47	Comp	27.16	L 9XY	74.269	W 45	273.456	0.000	0.000	0.000	12.549	0.0000	0
Leg S10	L 6" x 6" x 0.5625"	SAB	6X6X0.56	36.0	46.29	Comp	27.89	L 10XY	58.108	W 45	208.332	0.000	0.000	0.000	12.549	0.0000	0
Leg S11	L 6" x 6" x 0.5625"	SAB	6X6X0.56	36.0	36.71	Comp	20.11	L 11XY	41.904	W 45	208.332	0.000	0.000	0.000	12.549	0.0000	0
Leg S12	L 6" x 6" x 0.4375"	SAB	6X6X0.44	36.0	33.75	Comp	16.00	L 12XY	26.230	W 45	163.944	0.000	0.000	0.000	12.549	0.0000	0
Leg S13	L 5" x 5" x 0.4375"	SAB	5X5X0.44	36.0	32.04	Comp	14.97	L 13XY	20.669	W 45	135.432	0.000	0.000	0.000	10.207	0.0000	0
Leg S14	L 5" x 5" x 0.4375"	SAB	5X5X0.44	36.0	21.92	Comp	7.49	L 14XY	10.140	W 45	135.432	0.000	0.000	0.000	10.207	0.0000	0
Leg S15	L 5" x 5" x 0.3125"	SAB	5X5X0.31	36.0	14.71	Comp	3.93	L 15XY	3.858	W 45	98.172	0.000	0.000	0.000	8.616	0.0000	0
Leg S16	L 5" x 5" x 0.3125"	SAB	5X5X0.31	36.0	6.01	Comp	0.00	L 16Y	0.000	W 45	98.172	0.000	0.000	0.000	8.616	0.0000	0
Diag 1	B/B L5"x5"x0.3125"	DAE	5X5X0.31	36.0	32.85	Comp	25.55	D 2P	50.074	W -90	196.020	0.000	0.000	0.000	30.789	0.0000	0
Diag 2	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	67.20	Comp	40.15	D 4P	37.460	W -90	93.312	0.000	0.000	0.000	20.603	0.0000	0
Diag 3	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	68.66	Comp	39.83	D 6P	37.162	W -90	93.312	0.000	0.000	0.000	20.250	0.0000	0
Diag 4	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	74.88	Comp	31.64	D 7P	26.962	W -90	85.212	0.000	0.000	0.000	30.271	0.0000	0
Diag 5	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	72.25	Comp	31.93	D 9P	27.207	W -90	85.212	0.000	0.000	0.000	29.422	0.0000	0
Diag 6	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	74.94	Comp	31.50	D 11P	26.844	W -90	85.212	0.000	0.000	0.000	28.633	0.0000	0
Diag 7	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	99.39	Comp	31.84	D 13P	27.133	W -90	85.212	0.000	0.000	0.000	27.910	0.0000	0
Diag 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	67.29	Comp	20.78	D 15P	16.023	W -90	77.112	0.000	0.000	0.000	16.504	0.0000	0
Diag 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	60.29	Comp	19.68	D 17P	15.172	W -90	77.112	0.000	0.000	0.000	16.006	0.0000	0
Diag 10	B/B L2.5"x2.5"x0.25"	DAL	2.5X2X0.25	36.0	93.98	Comp	22.09	D 19P	15.246	W -90	69.012	0.000	0.000	0.000	15.532	0.0000	0
Diag 11	B/B L2.5"x2.5"x0.25"	DAL	2.5X2X0.25	36.0	90.32	Comp	22.46	D 21P	15.500	W -90	69.012	0.000	0.000	0.000	15.083	0.0000	0
Diag 12	B/B L2.5"x2.5"x0.25"	DAL	2.5X2X0.25	36.0	80.92	Comp	21.12	D 23P	14.578	W -90	69.012	0.000	0.000	0.000	14.662	0.0000	0
Diag 13	L 3.5" x 3.5" x 0.25"	SAB	3.5X3.5X0.25	36.0	34.92	Comp	11.89	D 25X	6.510	W 90	54.756	0.000	0.000	0.000	16.556	0.0000	0
Diag 14	L 3.5" x 3.5" x 0.25"	SAB	3.5X3.5X0.25	36.0	32.15	Comp	11.87	D 28X	6.500	W 90	54.756	0.000	0.000	0.000	15.574	0.0000	0
Diag 15	L 3" x 3" x 0.25"	SAB	3X3X0.25	36.0	24.84	Comp	8.57	D 29Y	3.999	W 0	46.656	0.000	0.000	0.000	13.657	0.0000	0
Diag 16	L 3" x 3" x 0.25"	SAB	3X3X0.25	36.0	12.74	Comp	4.29	D 31Y	2.004	W 0	46.656	0.000	0.000	0.000	12.841	0.0000	0
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	60.08	Comp	39.38	H 1X	36.742	W -90	93.312	0.000	0.000	0.000	20.120	0.0000	0
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	59.57	Comp	37.20	H 3K	34.709	W -90	93.312	0.000	0.000	0.000	12.372	0.0000	0
Horiz 3	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	63.35	Comp	36.91	H 5X	31.448	W -90	85.212	0.000	0.000	0.000	11.331	0.0000	0
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	53.15	Comp	17.64	H 7X	15.029	W -90	85.212	0.000	0.000	0.000	15.434	0.0000	0
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	43.43	Comp	16.35	H 9P	13.929	W 90	85.212	0.000	0.000	0.000	13.872	0.0000	0
Horiz 6	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	48.41	Comp	16.03	H 11X	12.364	W -90	77.112	0.000	0.000	0.000	12.310	0.0000	0
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	37.45	Comp	15.17	H 13P	11.698	W 90	77.112	0.000	0.000	0.000	10.748	0.0000	0
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	30.08	Comp	13.38	H 15X	10.320	W -90	77.112	0.000	0.000	0.000	9.967	0.0000	0
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	24.08	Comp	12.18	H 17X	9.390	W -90	77.112	0.000	0.000	0.000	9.186	0.0000	0
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	20.48	Comp	11.56	H 19X	8.910	W -90	77.112	0.000	0.000	0.000	8.405	0.0000	0
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	18.45	Comp	11.34	H 21P	8.745	W 90	77.112	0.000	0.000	0.000	7.624	0.0000	0
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	12.65	Comp	10.42	H 23P	8.038	W 90	77.112	0.000	0.000	0.000	6.843	0.0000	0
Horiz 13	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	8.71	Tens	8.71	H 25P	3.696	W 0	42.444	0.000	0.000	0.000	12.456	0.0000	0
Horiz 14	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	2.70	Tens	2.70	H 27P	2.303	W 0	85.212	0.000	0.000	0.000	11.145	0.0000	0
Horiz 15	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	3.18	Tens	3.18	H 29P	1.352	W 0	42.444	0.000	0.000	0.000	10.073	0.0000	0
LD 1	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	93.93	Comp	24.67	LD 2Y	27.012	W -45	109.512	0.000	0.000	0.000	13.764	0.0000	0
LD 2	B/B L4"x4"x0.3125"	DAE	4X4X0.31	36.0	56.15	Comp	30.94	LD 3P	48.111	W -90	155.520	0.000	0.000	0.000	13.764	0.0000	0
LD 3	B/B L2.5"x2.5"x0.25"	DAL	2.5X2X0.25	36.0	71.68	Comp	27.02	LD 8Y	18.645	W -45	69.012	0.000	0.000	0.000	11.004	0.0000	0
LD 4	B/B L2.5"x2.5"x0.25"	DAL	2.5X2X0.25	36.0	63.04	Comp	26.15	LD 9P	24.948	W -90	69.012	0.000	0.000	0.000	8.060	0.0000	0
LD 5	B/B L3"x2.5"x0.25"	DAL	3X2X0.25	36.0	65.94	Comp	40.98	LD 11X	31.600	W -90	77.112	0.000	0.000	0.000	9.374	0.0000	0
LD 6	B/B L3"x2.5"x0.25"	DAL	3X2X0.25	36.0	68.48	Comp	28.18	LD 14Y	19.446	W -45	69.012	0.000	0.000	0.000	10.440	0.0000	0
LD 7	B/B L2.5"x2.5"x0.25"	DAL	2.5X2X0.25	36.0	61.47	Comp	35.98	LD 15P	24.758	W -90	69.012	0.000	0.000	0.000	7.922	0.0000	0
LD 8	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	45.42	Comp	33.01	LD 17X	30.806	W -90	93.312	0.000	0.000	0.000	9.039	0.0000	0
LD 9	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	21.21	Tens	21.21	LH 1Y	16.359	W 0	77.112	0.000	0.000	0.000	20.120	0.0000	0
LH 1	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	73.12	Comp	23.57	LH 4Y	20.087	W -45	85.212	0.000	0.000	0.000	10.104	0.0000	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	65.46	Comp	23.80	LH 6Y	20.279	W -45	85.212	0.000	0.000	0.000	9.291	0.0000	0
LH 3	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	0.00	0.00	0.00	BR 9X	0.839	W -45	0.324	0.000	0.000	0.000	19.618	0.0000	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00	0.00	0.00					0.000	0.000	0.000	0.000	0.0000	0

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

Load Case	Maximum Usage %	Element Label	Element Type
W 0	97.91	D 14P	Angle
W 180	99.17	D 14Y	Angle
W 45	72.62	L 1P	Angle
W -45	77.72	D 13X	Angle
W 90	98.22	D 13P	Angle
W -90	99.39	D 13X	Angle
W 0 Ice	25.80	D 14P	Angle
W 180 Ice	27.34	D 14Y	Angle
W 45 Ice	30.25	L 1P	Angle
W -45 Ice	29.45	L 1X	Angle
W 90 Ice	25.91	D 13P	Angle
W -90 Ice	27.35	D 13X	Angle

*** Weight of structure (lbs):
 Weight of Angles/Section DLF: 131305.8
 Weight of Equipment: 140.0
 Total: 131445.8

*** End of Report

Site #: 88011
Name: East Killingly North, CT

Engineer: Daniel Sheek
Date: 12/22/20

Windspeed: No Ice: 122 mph Ice: 50 mph
Carrier: Verizon

Taper: -0.124974
FW @ Base: 44.93 ft

Taper Change: 287.5 ft
FW @ Top: 9 ft

Joint Label	Symmetry Code	X Coord. (ft)	Y Coord. (ft)	Z Coord. (ft)	X Disp. Rest.	Y Disp. Rest.	Z Disp. Rest.	X Rot. Rest.	Y Rot. Rest.	Z Rot. Rest.	Drop (Y or Blank)	Spreadsheet Version Last Updated: 11/12/2014							
												# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	FW (ft)	# Sub-Brace
0	XY-Symmetry	22.465	22.465	0	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed		3	9.375	37.5	1	1	0	44.93	3
1	XY-Symmetry	20.12173913	20.12173913	37.5	Free	Free	Free	Free	Free	Free			7.030	25	2	2	37.5	40.24347826	3
2	XY-Symmetry	18.55956522	18.55956522	62.5	Free	Free	Free	Free	Free	Free			7.030	25	2	3	62.5	37.11913043	3
3	XY-Symmetry	16.9973913	16.9973913	87.5	Free	Free	Free	Free	Free	Free				25	A	4	87.5	33.99478261	2
4	XY-Symmetry	15.43521739	15.43521739	112.5	Free	Free	Free	Free	Free	Free				25	A	5	112.5	30.87043478	2
5	XY-Symmetry	13.87304348	13.87304348	137.5	Free	Free	Free	Free	Free	Free				25	A	6	137.5	27.74608696	2
6	XY-Symmetry	12.31086957	12.31086957	162.5	Free	Free	Free	Free	Free	Free				25	A	7	162.5	24.62173913	2
7	XY-Symmetry	10.74869565	10.74869565	187.5	Free	Free	Free	Free	Free	Free				12.5	A	8	187.5	21.4973913	1
8	XY-Symmetry	9.967608696	9.967608696	200	Free	Free	Free	Free	Free	Free				12.5	A	9	200	19.93521739	1
9	XY-Symmetry	9.186521739	9.186521739	212.5	Free	Free	Free	Free	Free	Free				12.5	A	10	212.5	18.37304348	1
10	XY-Symmetry	8.405434783	8.405434783	225	Free	Free	Free	Free	Free	Free				12.5	A	11	225	16.81086957	1
11	XY-Symmetry	7.624347826	7.624347826	237.5	Free	Free	Free	Free	Free	Free				12.5	A	12	237.5	15.24869565	1
12	XY-Symmetry	6.84326087	6.84326087	250	Free	Free	Free	Free	Free	Free				10.167	X	13	250	13.68652174	1
13	XY-Symmetry	6.207955983	6.207955983	260.167	Free	Free	Free	Free	Free	Free				10.167	X	14	260.167	12.41591197	1
14	XY-Symmetry	5.572651096	5.572651096	270.334	Free	Free	Free	Free	Free	Free				8.583	X	15	270.334	11.14530219	1
15	XY-Symmetry	5.036325548	5.036325548	278.917	Free	Free	Free	Free	Free	Free				8.583	X	16	278.917	10.0726511	1
16	XY-Symmetry	4.5	4.5	287.5	Free	Free	Free	Free	Free	Free						17	287.5		9
A1	Y-Symmetry	20.12173913	0	37.5	Free	Free	Free	Free	Free	Free									
A2	X-Symmetry	0	20.12173913	37.5	Free	Free	Free	Free	Free	Free									
A3	XY-Symmetry	18.55956522	6.186521739	62.5	Free	Free	Free	Free	Free	Free									
A4	XY-Symmetry	6.186521739	18.55956522	62.5	Free	Free	Free	Free	Free	Free									
A5	XY-Symmetry	16.9973913	5.665797101	87.5	Free	Free	Free	Free	Free	Free									
A6	XY-Symmetry	5.665797101	16.9973913	87.5	Free	Free	Free	Free	Free	Free									
A7	Y-Symmetry	15.43521739	0	112.5	Free	Free	Free	Free	Free	Free									
A8	X-Symmetry	0	15.43521739	112.5	Free	Free	Free	Free	Free	Free									
A9	Y-Symmetry	13.87304348	0	137.5	Free	Free	Free	Free	Free	Free									
A10	X-Symmetry	0	13.87304348	137.5	Free	Free	Free	Free	Free	Free									
A11	Y-Symmetry	12.31086957	0	162.5	Free	Free	Free	Free	Free	Free									
A12	X-Symmetry	0	12.31086957	162.5	Free	Free	Free	Free	Free	Free									
A13	Y-Symmetry	10.74869565	0	187.5	Free	Free	Free	Free	Free	Free									
A14	X-Symmetry	0	10.74869565	187.5	Free	Free	Free	Free	Free	Free									
A15	Y-Symmetry	9.967608696	0	200	Free	Free	Free	Free	Free	Free									
A16	X-Symmetry	0	9.967608696	200	Free	Free	Free	Free	Free	Free									
A17	Y-Symmetry	9.186521739	0	212.5	Free	Free	Free	Free	Free	Free									
A18	X-Symmetry	0	9.186521739	212.5	Free	Free	Free	Free	Free	Free									
A19	Y-Symmetry	8.405434783	0	225	Free	Free	Free	Free	Free	Free									
A20	X-Symmetry	0	8.405434783	225	Free	Free	Free	Free	Free	Free									
A21	Y-Symmetry	7.624347826	0	237.5	Free	Free	Free	Free	Free	Free									
A22	X-Symmetry	0	7.624347826	237.5	Free	Free	Free	Free	Free	Free									
A23	Y-Symmetry	6.84326087	0	250	Free	Free	Free	Free	Free	Free									
A24	X-Symmetry	0	6.84326087	250	Free	Free	Free	Free	Free	Free									
H1	XY-Symmetry	20.70755435	10.06086957	28.125	Free	Free	Free	Free	Free	Free									
H2	XY-Symmetry	10.06086957	20.70755435	28.125	Free	Free	Free	Free	Free	Free									
H5	XY-Symmetry	18.99884852	10.10510487	55.47	Free	Free	Free	Free	Free	Free									
H6	XY-Symmetry	10.10510487	18.99884852	55.47	Free	Free	Free	Free	Free	Free									
H7	Y-Symmetry	18.99884852	0	55.47	Free	Free	Free	Free	Free	Free									
H8	X-Symmetry	0	18.99884852	55.47	Free	Free	Free	Free	Free	Free									
H9	XY-Symmetry	17.43667461	9.291524696	80.47	Free	Free	Free	Free	Free	Free									
H10	XY-Symmetry	9.291524696	17.43667461	80.47	Free	Free	Free	Free	Free	Free									
H11	Y-Symmetry	17.43667461	0	80.47	Free	Free	Free	Free	Free	Free									
H12	X-Symmetry	0	17.43667461	80.47	Free	Free	Free	Free	Free	Free									

NOTES
Types:
1: Built up Horiz. w/ A
2: Built up Horiz. w/ M
A: Typical A brace
X: Typical X brace
Drop: Use only for types 1 & 2
Sections: 16

Legs

Site No.:	88011
Engineer:	Daniel.Sheek
Date:	12/22/2020
Carrier:	Verizon

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter or Length (in)	Thickness ^[2] (in)	F _y (ksi)
1	0.000-37.50	L	8	1.125	36
2	37.50-62.50	L	8	1.125	36
3	62.50-87.50	L	8	1	36
4	87.50-112.5	L	8	0.875	36
5	112.5-137.5	L	8	0.875	36
6	137.5-162.5	L	8	0.75	36
7	162.5-187.5	L	8	0.625	36
8	187.5-200.0	L	6	0.75	36
9	200.0-212.5	L	6	0.75	36
10	212.5-225.0	L	6	0.5625	36
11	225.0-237.5	L	6	0.5625	36
12	237.5-250.0	L	6	0.4375	36
13	250.0-260.2	L	5	0.4375	36
14	260.2-270.3	L	5	0.4375	36
15	270.3-278.9	L	5	0.3125	36
16	278.9-287.5	L	5	0.3125	36

Notes:

^[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifferlized Angle. **L** = Even Leg

^[2] For Solid Round Leg Shapes Thickness Equals Zero.

^[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88011
Engineer:	Daniel.Sheek
Date:	12/22/2020
Carrier:	Verizon

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-37.50	2L		5	5	0.3125	36	
2	37.50-62.50	2L		2.5	3.5	0.25	36	
3	62.50-87.50	2L		2.5	3.5	0.25	36	
4	87.50-112.5	2L		2.5	3	0.25	36	
5	112.5-137.5	2L		2.5	3	0.25	36	
6	137.5-162.5	2L		2.5	3	0.25	36	
7	162.5-187.5	2L		2.5	3	0.25	36	
8	187.5-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2	0.25	36	
11	225.0-237.5	2L		2.5	2	0.25	36	
12	237.5-250.0	2L		2.5	2	0.25	36	
13	250.0-260.2	L		3.5	3.5	0.25	36	
14	260.2-270.3	L		3.5	3.5	0.25	36	
15	270.3-278.9	L		3	3	0.25	36	
16	278.9-287.5	L		3	3	0.25	36	

Notes:

- ^[1] Type of Diagonal Shape: R = Round, L = Single-Angle or 2L = Double-Angle.
- ^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.
- ^[3] Applies to Single-Angle and Double-Angle Shapes only.
- ^[4] Applies to Double-Angle Shapes only.
- ^[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88011
Engineer:	Daniel.Sheek
Date:	12/22/2020
Carrier:	Verizon

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	B/B Spacing (in.)
1	0.000-37.50	2L		3.5	2.5	0.25	36	0.375
2	37.50-62.50	2L		3.5	2.5	0.25	36	0.375
3	62.50-87.50	2L		3	2.5	0.25	36	0.375
4	87.50-112.5	2L		3	2.5	0.25	36	0.375
5	112.5-137.5	2L		3	2.5	0.25	36	0.375
6	137.5-162.5	2L		2.5	2.5	0.25	36	0.375
7	162.5-187.5	2L		2.5	2.5	0.25	36	0.375
8	187.5-200.0	2L		2.5	2.5	0.25	36	0.375
9	200.0-212.5	2L		2.5	2.5	0.25	36	0.375
10	212.5-225.0	2L		2.5	2.5	0.25	36	0.375
11	225.0-237.5	2L		2.5	2.5	0.25	36	0.375
12	237.5-250.0	2L		2.5	2.5	0.25	36	0.375
13	250.0-260.2	L		3	2.5	0.25	36	
14	260.2-270.3	2L		3	2.5	0.25	36	0.375
15	270.3-278.9	L		3	2.5	0.25	36	
16	278.9-287.5	C		8	11.5		36	

Notes:

^[1] Type of Horizontal Shape: R = Round, L = Single-Angle, 2L = Double-Angle, C = Channel, W = W Shape

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88011
Engineer:	Daniel.Sheek
Date:	12/22/2020
Carrier:	Verizon

When inputting thickness values, include all decimal places.
Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)
1	0.000-37.50	2L		3.5	3.5	0.25	36
2	0.000-37.50	2L		4	4	0.3125	36
3	37.50-62.50	2L		2.5	2	0.25	36
4	37.50-62.50	2L		2.5	2	0.25	36
5	37.50-62.50	2L		3	2	0.25	36
6	62.50-87.50	2L		2.5	2	0.25	36
7	62.50-87.50	2L		2.5	2	0.25	36
8	62.50-87.50	2L		3	3	0.25	36

Notes:

- ^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.
- ^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.
- ^[3] Applies to Single-Angle and Double-Angle Shapes only.
- ^[4] Applies to Double-Angle Shapes only.
- ^[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

Site No.:	88011
Engineer:	Daniel.Sheek
Date:	12/22/2020
Carrier:	Verizon

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Horiz. Tension Only? (Y/N)
1	0.000-37.50	2L		2.5	2.5	0.25	36	Y
2	37.50-62.50	2L		2.5	3	0.25	36	
3	62.50-87.50	2L		2.5	3	0.25	36	

Notes:

- ^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.
- ^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.
- ^[3] Applies to Single-Angle and Double-Angle Shapes only.
- ^[4] Applies to Double-Angle Shapes only.
- ^[5] Applies to Single-Angle Shapes only.

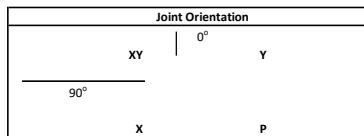
Dishes

Dish Types	
S	Standard
R	Standard w/ Radome
H	High Performance
G	Grid

Site No.:	88011
Engineer:	Daniel Sheek
Date:	12/22/20
Carrier:	Verizon

Dish Number	Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation	Equipment Status
1	277	2	45	H	XY	Proposed
2						
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Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle (deg)
2' HP 1 @ 277'	15XY	2 ft HP Dish	45



Site Number	East Killingly North, CT
Site Name	88011
TIA Revision	ANSI/TIA-222-H
Date	9/12/2023

SST Anchor Rod Interaction Check

Reactions & Layout			
Uplift	Tu	324.2	k
Axial	Pu	443.8	k
Shear	Vu	60.0	k
Rod Quantity	n	6	
Rod Diameter	d	2 1/4	in
Rod Grade		A36	
Rod F _y	F _y	36	ksi
Rod F _u	F _u	58	ksi
Clear Distance		3	in
Grouted? (Type c)		Yes	

Rod Properties			
Threads per Inch	n ^b	4.5	
Net Area	A _n	3.25	in ²
Gross Area	A _g	3.98	in ²

Tension			
Tension Reduction Factor	Φ _t	0.75	
Nominal Tensile Strength	R _{nt}	188.37	k

[ANSI/TIA-222-H, 4.9.6.5]

Shear			
Shear Reduction Factor	Φ _v	0.75	
Nominal Shear Strength	R _{nv}	115.31	k
Compression Reduction Factor	Φ _c	0.90	
Nominal Shear Yielding Strength	R _{nvc}	64.41	k

[ANSI/TIA-222-H, 4.9.6.3]

Flexure			
Flexure Reduction Factor	Φ _f	0.90	
Plastic Section Modulus	Z	1.90	in ³
Nominal Flexural Strength	M _n	68.34	k-in

[ANSI/TIA-222-H, 4.7.1]

Compression			
Radius of Gyration	r	0.56	ksi
Effective Yield Strss	F _y '	36.00	ksi
λ _c		0.01	k-in
Critical Compression Stress	F _{cr}	36.00	k
Nominal Compression Yielding Strength	R _{nc}	143.14	k
Nominal Buckling Strength	R _{nb}	143.13	k
Anchor Rod Projection to Nut	lar	0.85	in

[ANSI/TIA-222-H, 4.5.4.2]

Tensile Interaction Result		16.0%	Pass
Compressive Interaction Result		3.0%	Pass

Site Name: EAST KILLINGLY NORTH
Site Number: 88011
Tower Type: SST
Design Loads (Factored) - Analysis per TIA-222-H Standards

Mat & Pier Foundation Analysis

Foundation Analysis Parameters		
Design / Analysis / Mapping:	Mapping	-
Compression/Leg:	443.8	k
Uplift/Leg:	324.2	k
Shear/Leg:	60.0	k
Global Moment:		k-ft
Global Axial:		k
Depth to Base of Foundation (l + t - h):	11.25	ft
Diameter of Pier (d):	3.5	ft
Length of Pier (l):	8.5	ft
Height of Pier above Ground (h):	0.5	ft
Pier Shape:	Square	
If Square: Pier Taper:	Pyramidal	
Pier Width at Base:	7.5	ft
Width of Pad (W):	14.75	ft
Length of Pad (L):	14.75	ft
Thickness of Pad (t):	3.25	ft
Tower Leg Center to Center:	44	ft
Number of Connection to Tower:	1	-
Tower Center from Mat Center:	0	ft
Depth Below Ground Surface to Water Table:	99	ft
Unit Weight of Soil Above Water Table:	120	pcf
Angle of Uplift:	15	°
Coefficient of Shear Friction:	0.3	-
Ultimate Compressive Bearing Pressure:	30,000	psf
Bearing Pressure Type:	Gross	-
Ultimate Passive Pressure on Pad Face:	1,155	psf
Ultimate Skin Friction:	1,007	psf
Soil Type:	Sand	-
$\Phi_{\text{Soil and Concrete Weight}}$:	1.2	-
Φ_{Soil} :	0.75	-

Overturning Moment Usage		
Design OTM:	705.1	k-ft
OTM Resistance:	2382.3	k-ft
$M_u / \Phi_s M_n$:	29.6%	Pass

Soil Bearing Pressure Usage		
Applied Bearing Pressure:	1792.1	psf
Factored Nominal Bearing Pressure:	22500.0	psf
$P_u / \Phi_s P_n$:	8.0%	Pass
Load Direction Controlling Design Bearing Pressure:	<i>Diagonal to Pad Edge</i>	

Sliding Factor of Safety		
Ultimate Friction Resistance:	88.6	k
Ultimate Passive Pressure Resistance:	55.4	k
Total Factored Sliding Resistance:	108.0	k
$V_u / \Phi_s V_n$:	55.6%	Pass

Uplift and Pullout Usage		
Applied Uplift Force:	324.2	k
Ultimate Skin Friction Resistance:	193.1	k
Factored Uplift Capacity per Leg ($\Phi_s T_n$):	323.8	k
$T_u / \Phi_s T_n$:	100%	Pass

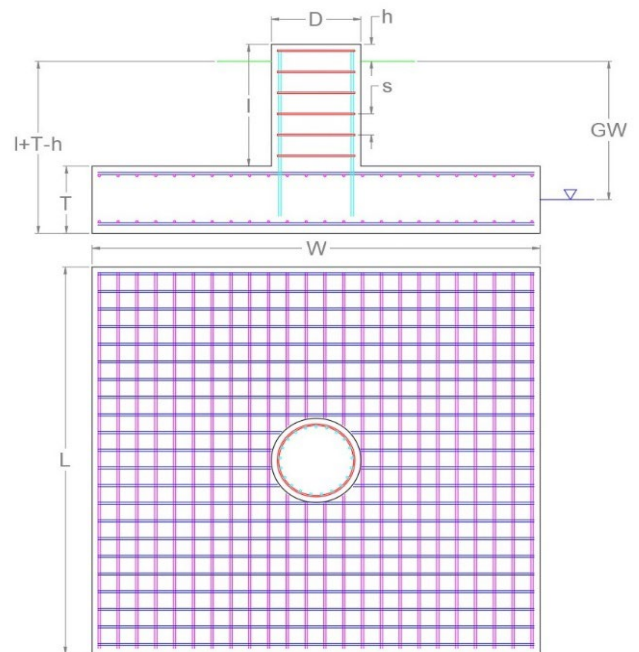


EXHIBIT 4



Colliers Engineering & Design 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

SMART Tool Project #: 10207603
Colliers Engineering & Design CT, P.C. Project #: 23777177

July 21, 2023

Site Information

Site ID: 5000243499-VZW / KILLINGLY CT
Site Name: KILLINGLY CT
Carrier Name: Verizon Wireless
Address: 1375 North Rd
Killingly, Connecticut 06239
Windham County
Latitude: 41.871500°
Longitude: -71.821528°

Structure Information

Tower Type: 288-Ft Self Support
Mount Type: 12.46-Ft T-Frame

FUZE ID # 17123850

Analysis Results

T-Frame: 94.5% Pass*

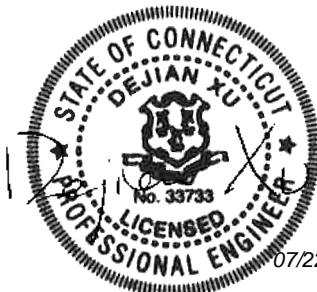
***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

***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



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: 324175, dated March 23, 2021
Mount Mapping Report	Hudson Design Group LLC., Site ID: 467465, dated March 30, 2021
Previous Mount Analysis	Maser Consulting Connecticut, Project #: 21777487 (Rev. 1), dated June 30, 2021
Antenna Mount Post-Modification Inspection Report	Colliers Engineering & Design, Project #: 21777487, dated April 28, 2023
Final Loading Configuration	Filter Add Scope Provided by Verizon Wireless

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} : 125 mph
 Ice Wind Speed (3-sec. Gust): 50 mph
 Design Ice Thickness: 1.00 in
 Risk Category: II
 Exposure Category: C
 Topographic Category: 1
 Topographic Feature Considered: N/A
 Topographic Method: N/A
 Ground Elevation Factor, K_e : 0.974

Seismic Parameters: S_s : 0.186 g
 S_1 : 0.055 g

Maintenance Parameters: Wind Speed (3-sec. Gust): 30 mph
 Maintenance Load, L_v : 250 lbs.
 Maintenance Load, L_m : 500 lbs.

Analysis Software: RISA-3D (V17)

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
264.50	266.00	2	KAelus	KA-6030	Added
		3	Samsung	MT6407-77A	Retained
		4	Andrew	JAHH-45B-R3B	
		2	Andrew	JAHH-65B-R3B	
		6	Antel	LPA-80063-4CF-EDIN-6	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RRFDC-3315-PF-48	
		3	Commscope	CBC78T-DS-43-2X	

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 CT, P.C. 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 CT, P.C. 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 CT, P.C. 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 CT, P.C.

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	76.1%	Pass
Mast Pipe	52.4%	Pass
Standoff Horizontal	61.5%	Pass
Standoff Vertical	80.8%	Pass
Face Vertical	40.8%	Pass
Mount Pipe	60.9%	Pass
Tieback	26.5%	Pass
Mount Connection	94.5%	Pass

Structure Rating – (Controlling Utilization of all Components)	94.5%
---	--------------

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	22.9	10.7	32.6	20.4
0.5	29.3	15.6	43.1	29.4
1	35.1	19.6	52.9	37.5

Notes:

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 1 sector.
- Ka factors included in (EPA)a calculations

Requirements:

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

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 #: 5000243499

SMART Project #: 10207603

Fuze Project ID: 17123850

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:

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

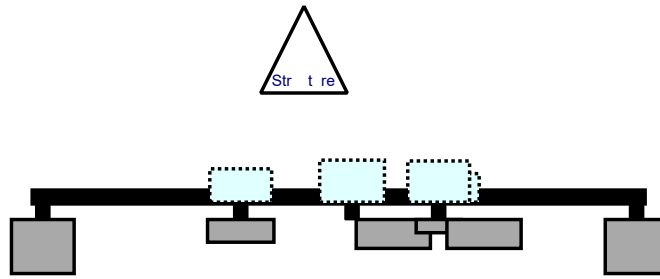
Contractor to certify the condition of the safety climb and verify no damage when leaving the site:

Safety Climb in Good Condition Safety Climb Damaged

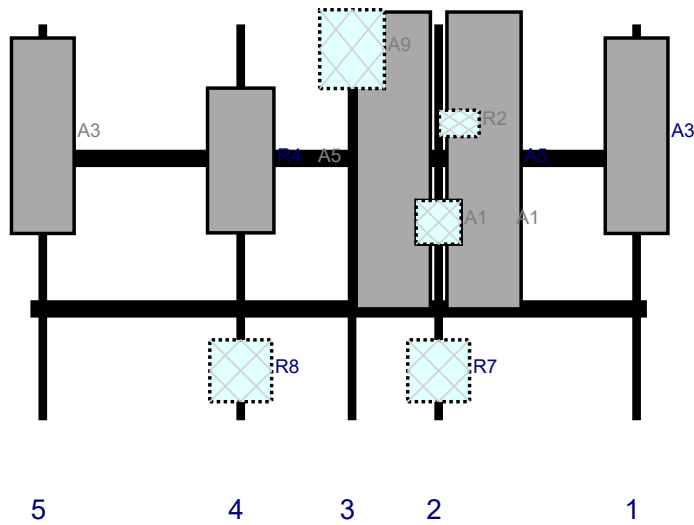
Certifying Individual:

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

Plan View

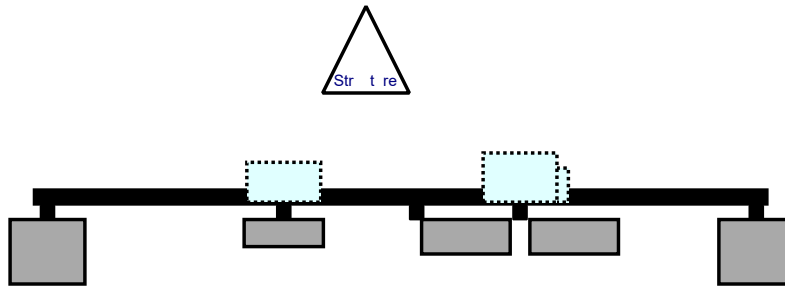


Front View - Looking at Structure

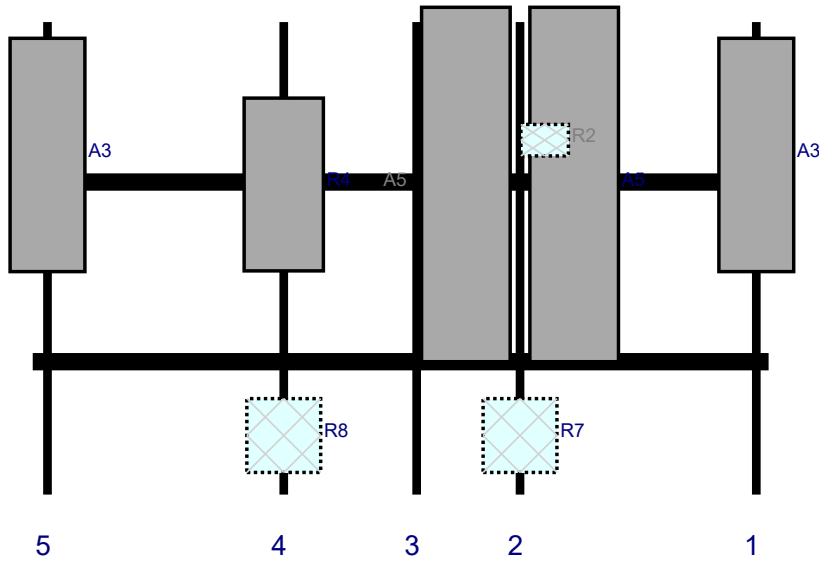


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A3	LPA-80063-4CF-EDIN-6	47.4	15.2	147	1		Fro t	27	0	Ret i ed	04/14/2023
A5	JAHH-45B-R3B	72	18	99	2		Fro t	33	11	Ret i ed	04/14/2023
A5	JAHH-45B-R3B	72	18	99	2		Fro t	33	-11	Ret i ed	04/14/2023
A1	KA-6030	10.6	10.9	99	2		Fro t	48	0	Added	
A1	KA-6030	10.6	10.9	99	2		Behi d	48	0	Added	
R2	CBC78T-DS-43-2	6.4	9.65	99	2		Behi d	24	5	Ret i ed	04/14/2023
R7	B2/B66A RRRH-BR049	15	15	99	2		Behi d	84	0	Ret i ed	04/14/2023
A9	RRFDC-3315-PF-48	19.1	15.7	78	3		Behi d	6	0	Ret i ed	04/14/2023
R4	MT6407-77A	35.1	16.1	51	4		Fro t	33	0	Ret i ed	04/14/2023
R8	B5/B13 RRRH-BR04C	15	15	51	4		Behi d	84	0	Ret i ed	04/14/2023
A3	LPA-80063-4CF-EDIN-6	47.4	15.2	3	5		Fro t	27	0	Ret i ed	04/14/2023

Plan View

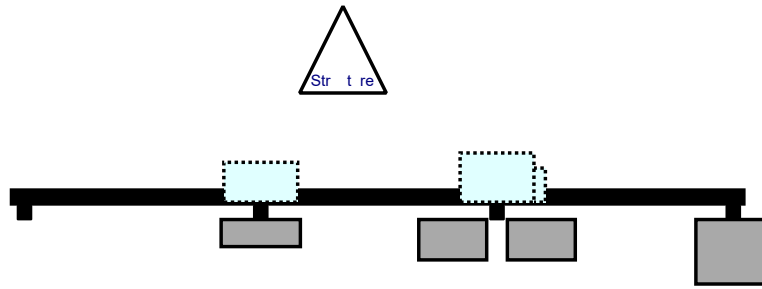


Front View - Looking at Str t re

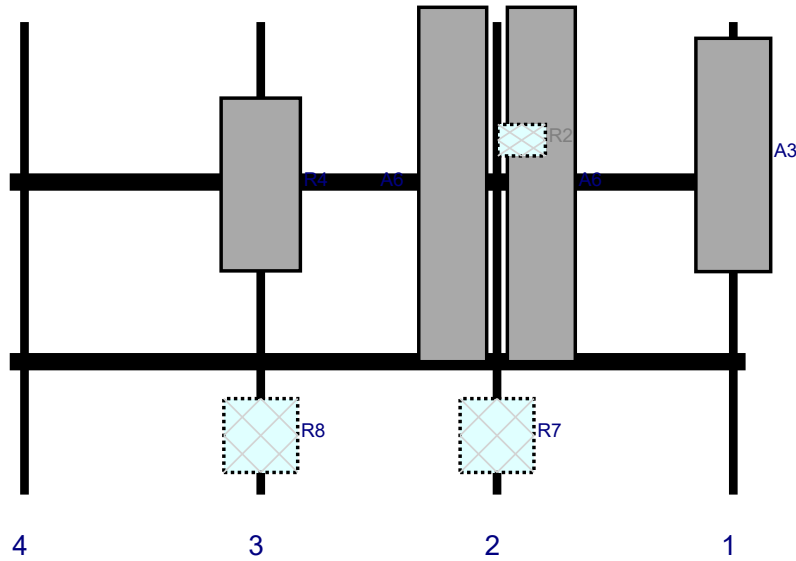


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A3	LPA-80063-4CF-EDIN-6	47.4	15.2	147	1		Fro t	27	0	Ret i ed	04/14/2023
A5	JAHH-45B-R3B	72	18	99	2		Fro t	33	11	Ret i ed	04/14/2023
A5	JAHH-45B-R3B	72	18	99	2		Fro t	33	-11	Ret i ed	04/14/2023
R2	CBC78T-DS-43-2	6.4	9.65	99	2		Behi d	24	5	Ret i ed	04/14/2023
R7	B2/B66A RRRH-BR049	15	15	99	2		Behi d	84	0	Ret i ed	04/14/2023
R4	MT6407-77A	35.1	16.1	51	4		Fro t	33	0	Ret i ed	04/14/2023
R8	B5/B13 RRRH-BR04C	15	15	51	4		Behi d	84	0	Ret i ed	04/14/2023
A3	LPA-80063-4CF-EDIN-6	47.4	15.2	3	5		Fro t	27	0	Ret i ed	04/14/2023

Plan View



Front View - Looking at Structure




Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A3	LPA-80063-4CF-EDIN-6	47.4	15.2	147	1		Fro t	27	0	Ret i ed	04/14/2023
A6	JAHH-65B-R3B	72	13.8	99	2		Fro t	33	9	Ret i ed	04/14/2023
A6	JAHH-65B-R3B	72	13.8	99	2		Fro t	33	-9	Ret i ed	04/14/2023
R2	CBC78T-DS-43-2	6.4	9.65	99	2		Behi d	24	5	Ret i ed	04/14/2023
R7	B2/B66A RRH-BR049	15	15	99	2		Behi d	84	0	Ret i ed	04/14/2023
R4	MT6407-77A	35.1	16.1	51	3		Fro t	33	0	Ret i ed	04/14/2023
R8	B5/B13 RRH-BR04C	15	15	51	3		Behi d	84	0	Ret i ed	04/14/2023



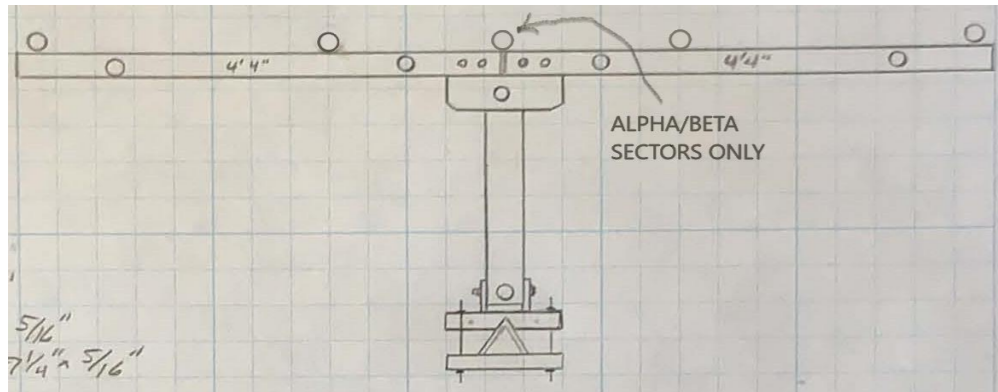
Apr 14, 2023 5:48:11 PM
1375 North Road
Killingly
Windham County
Connecticut



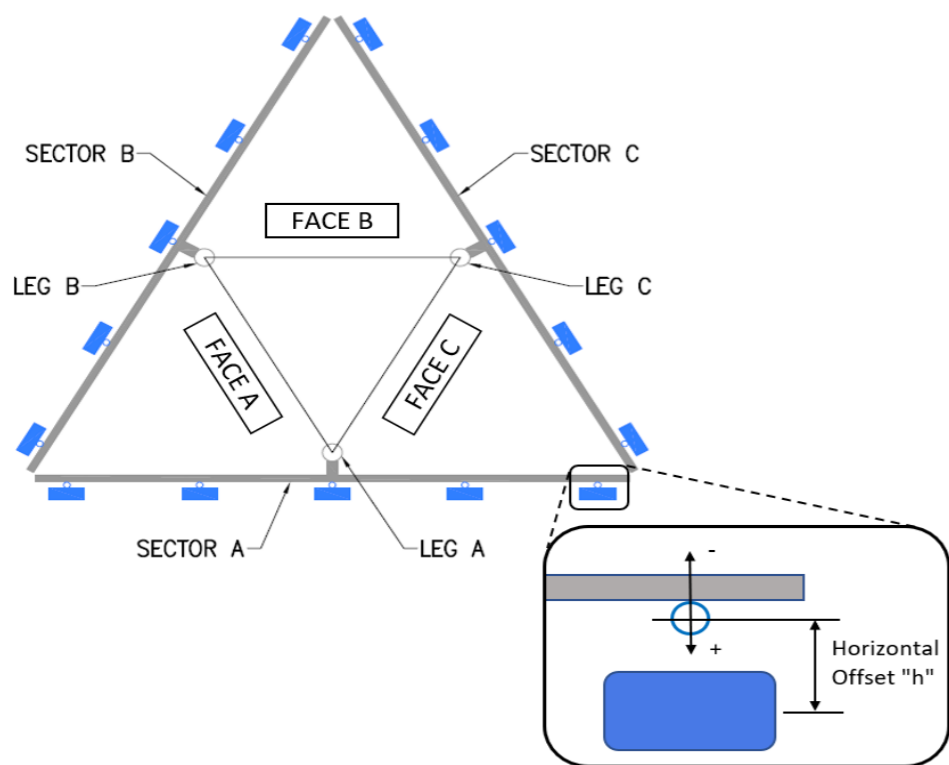
Apr 14, 2023 at 4:45:04 PM
1359-1391 North Rd
Dayville CT 06241
United States

	Antenna Mount Mapping Form (PATENT PENDING)			FCC #
				1056419
Tower Owner:	AMERICAN TOWER	Mapping Date:	3/30/2021	
Site Name:	KILLINGLY CT	Tower Type:	Self Support	
Site Number or ID:	467465	Tower Height (Ft.):	300	
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (Ft.):	266	

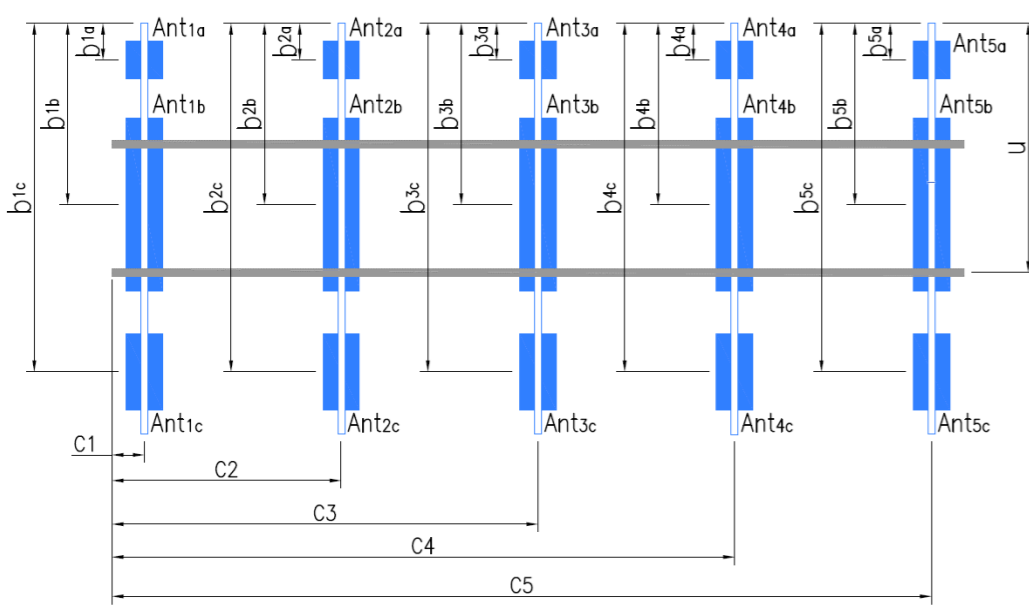
This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.



Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2" STD. PIPE X 72" LONG	66.00	3.00	C1	2" STD. PIPE X 72" LONG	66.00	3.00
A2	2" STD. PIPE X 84" LONG	78.00	51.00	C2	2" STD. PIPE X 84" LONG	78.00	51.00
A3	2" STD. PIPE X 72" LONG		72.00	C3	(EMPTY)		
A4	2" STD. PIPE X 84" LONG	78.00	99.00	C4	2" STD. PIPE X 84" LONG	78.00	99.00
A5	2" STD. PIPE X 72" LONG	66.00	147.00	C5	2" STD. PIPE X 72" LONG	66.00	147.00
A6				C6			
B1	2" STD. PIPE X 72" LONG	66.00	3.00	D1			
B2	2" STD. PIPE X 84" LONG	78.00	51.00	D2			
B3	2" STD. PIPE X 72" LONG		72.00	D3			
B4	2" STD. PIPE X 84" LONG	78.00	99.00	D4			
B5	2" STD. PIPE X 72" LONG	66.00	147.00	D5			
B6				D6			
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							18.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.):							7.5
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.):							
Please enter additional information or comments below.							
TOWER LEG: ANGLE 5"X5"X1/2" THK.							
Tower Face Width at Mount Elev. (ft.):		11	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):		5		



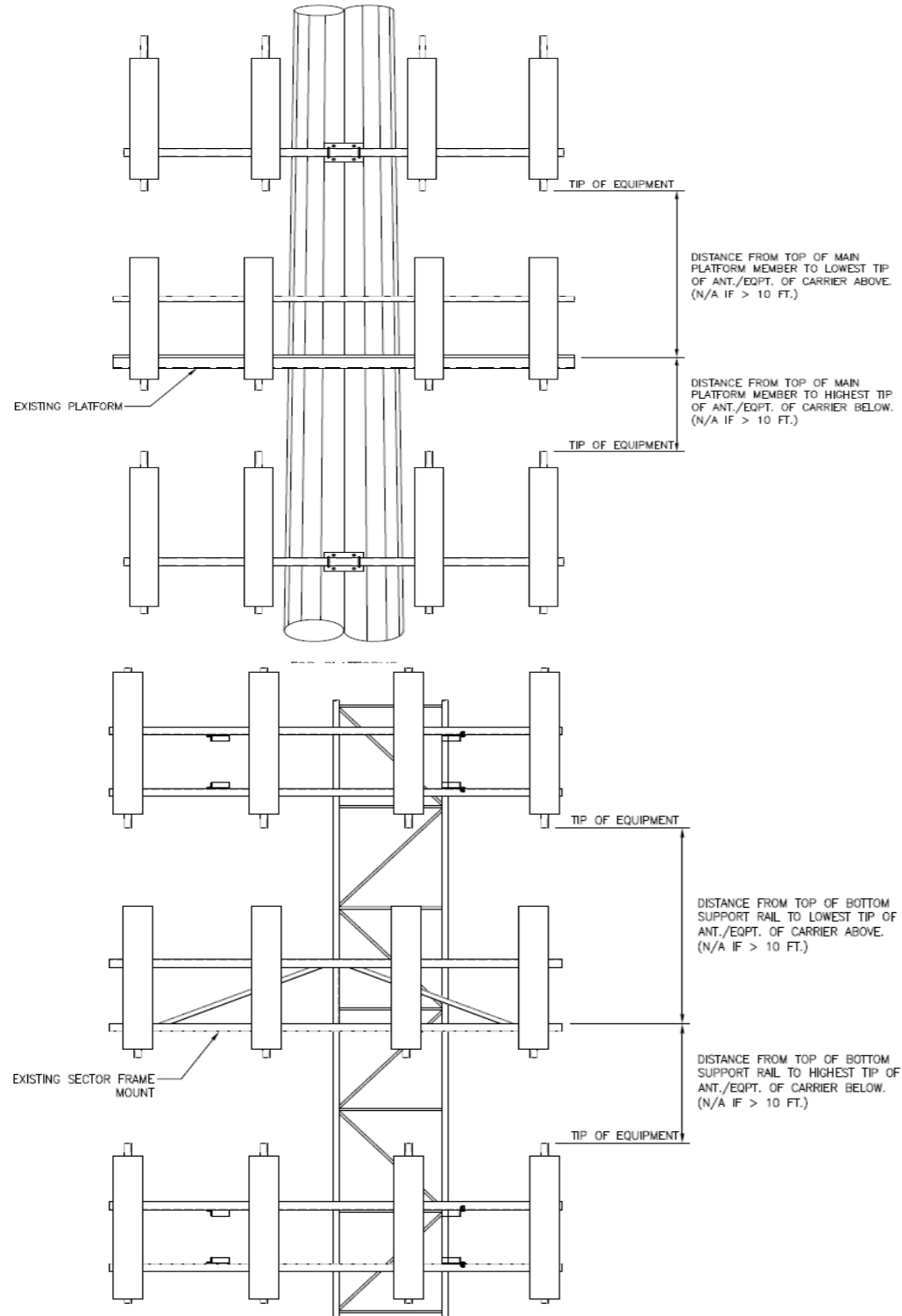
Ants. Items	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b _{1a} , b _{2a} , b _{3a} , b _{1b} ..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	
Sector A										
Ant _{1a}										
Ant _{1b}	LPA-80063-4CF	15.00	13.00	47.50		268.25	21.00	15.00	10.00	1, 14
Ant _{1c}										
Ant _{2a}	B13 RRH 4X30	12.00	7.50	20.50		270.167	10.00	-7.00		2,16
Ant _{2b}	SBNHH-1D65B	12.00	7.00	73.00		268	36.00	10.00	10.00	2, 15
Ant _{2c}										
Ant _{3a}	RRFDC-3315-PF-48	15.00	10.00	28.00		264.5		-9.00		2, 17
Ant _{3b}										
Ant _{3c}										
Ant _{4a}	B66a RHH 4X45	12.00	7.00	25.50		269.917	13.00	-7.00		4, 19
Ant _{4b}	SBNHH-1D65B	12.00	7.00	73.00		268	36.00	10.00	10.00	4,15
Ant _{4c}										
Ant _{5a}										
Ant _{5b}	LPA-80063-4CF	15.00	13.00	47.50		268.25	21.00	15.00	10.00	5,14
Ant _{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										



Antenna Layout (Looking Out From Tower)

Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector			Sector B														
Sector A:	10.00	Deg	Leg A:	10.00	Deg	Ant _{1a}														
Sector B:	190.00	Deg	Leg B:	100.00	Deg	Ant _{1b}	LPA-80063-4CF	15.00	13.00	47.50		268.25	21.00	15.00	100.00	7, 14				
Sector C:	280.00	Deg	Leg C:	190.00	Deg	Ant _{1c}														
Sector D:		Deg	Leg D:	280.00	Deg	Ant _{2a}	B13 RRH 4X30	12.00	7.50	20.50		270.167	10.00	-7.00		7,16				

Climbing Facility Information		
Location:	10.00 Deg	Inside Corner Leg A
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.



Ant _{2b}	SBNHH-1D65B	12.00	7.00	73.00		268	36.00	10.00	100.00	7, 15
Ant _{2c}										
Ant _{3a}	RRFDC-3315-PF-48	15.00	10.00	28.00		264.5		-9.00		8, 17
Ant _{3b}										
Ant _{3c}										
Ant _{4a}	B66a RHH 4X45	12.00	7.00	25.50		269.917	13.00	-7.00		9, 19
Ant _{4b}	SBNHH-1D65B	12.00	7.00	73.00		268	36.00	10.00	100.00	9,15
Ant _{4c}										
Ant _{5a}										
Ant _{5b}	LPA-80063-4CF	15.00	13.00	47.50		268.25	21.00	15.00	100.00	9,14
Ant _{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Sector C										
Ant _{1a}										
Ant _{1b}	LPA-80063-4CF	15.00	13.00	47.50		268.25	21.00	15.00	280.00	11, 14
Ant _{1c}										
Ant _{2a}	B13 RRH 4X30	12.00	7.50	20.50		270.167	10.00	-7.00		12,16
Ant _{2b}	SBNHH-1D65B	12.00	7.00	73.00		268	36.00	10.00	280.00	12, 15
Ant _{2c}										
Ant _{3a}										
Ant _{3b}										
Ant _{3c}										
Ant _{4a}	B66a RHH 4X45	12.00	7.00	25.50		269.917	13.00	-7.00		13, 19
Ant _{4b}	SBNHH-1D65B	12.00	7.00	73.00		268	36.00	10.00	280.00	13,15
Ant _{4c}										
Ant _{5a}										
Ant _{5b}	LPA-80063-4CF	15.00	13.00	47.50		268.25	21.00	15.00	280.00	13,14
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		
2	(10) 1-5/8"Ø COAX, (2) 1-1/4"Ø HYBRID, (1) 5/8"Ø COAX	110-112
3		
4		
5		
6		
7		
8		

Mapping Notes

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

Standard Conditions

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



Antenna Mount Mapping Form (PATENT PENDING)

FCC #

1056419

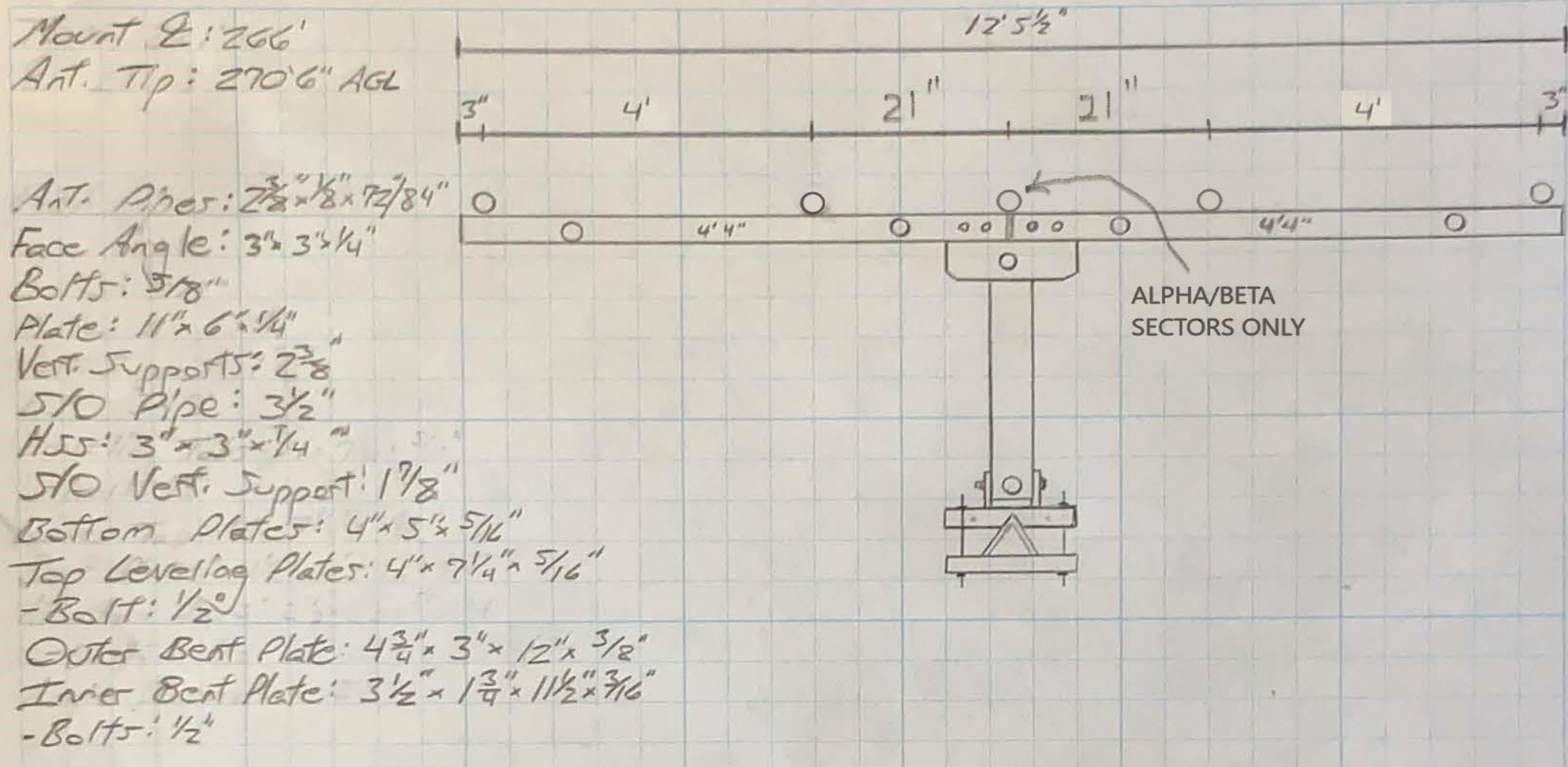
Tower Owner:	AMERICAN TOWER	Mapping Date:	3/30/2021
Site Name:	KILLINGLY CT	Tower Type:	Self Support
Site Number or ID:	467465	Tower Height (Ft.):	300
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (Ft.):	266

This antenna mapping form is the property of TES and under PATENT PENDING. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.

Please Insert Sketches of the Antenna Mount

DATE: 3-30-21
 Project Name: _____
 Project No.: Killingly CT
 Design By: Josh Chk'd By: _____ Page ____ of ____

45 BEECHWOOD DRIVE
 NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553
 FAX: (978) 336-5586

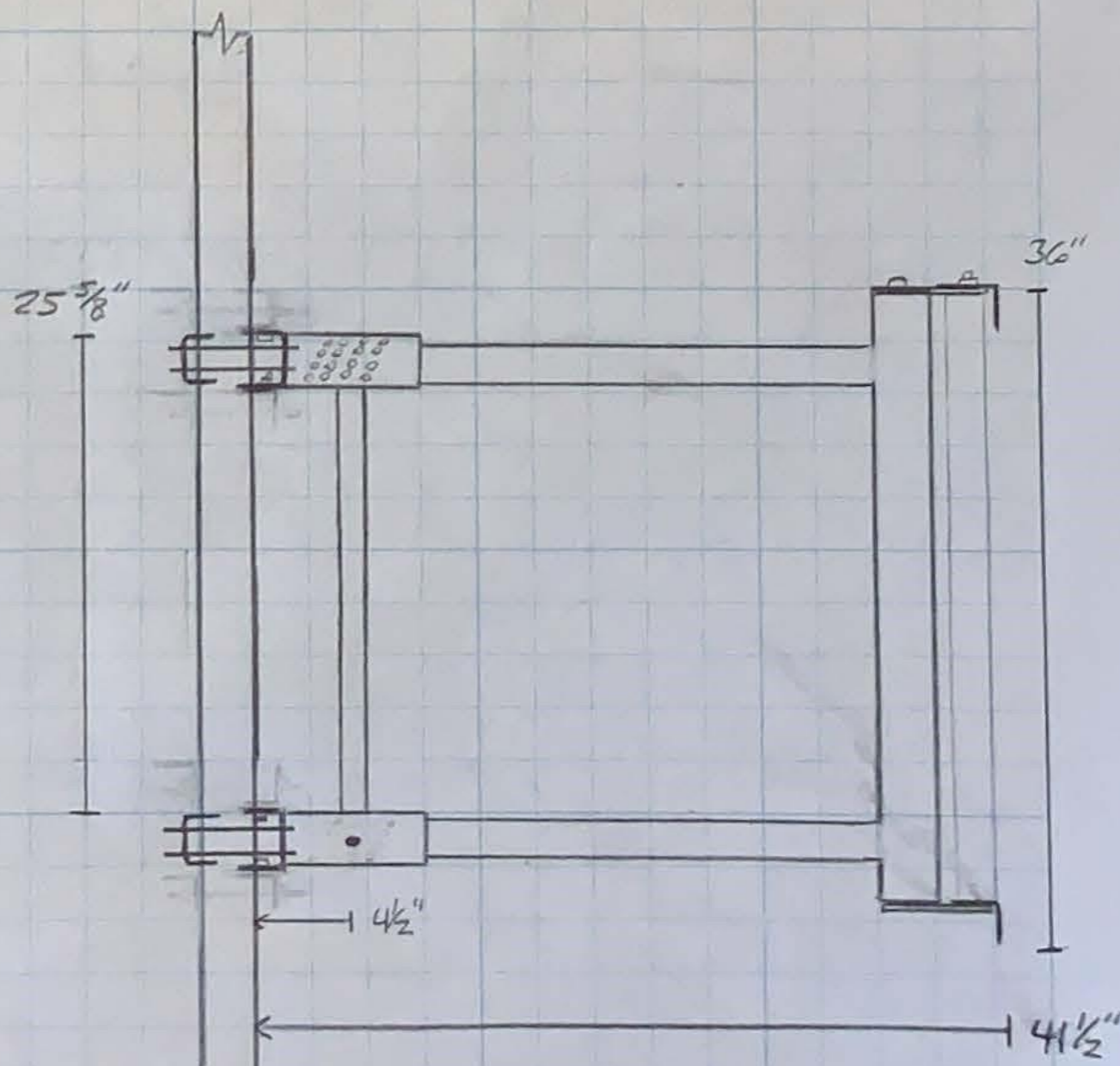


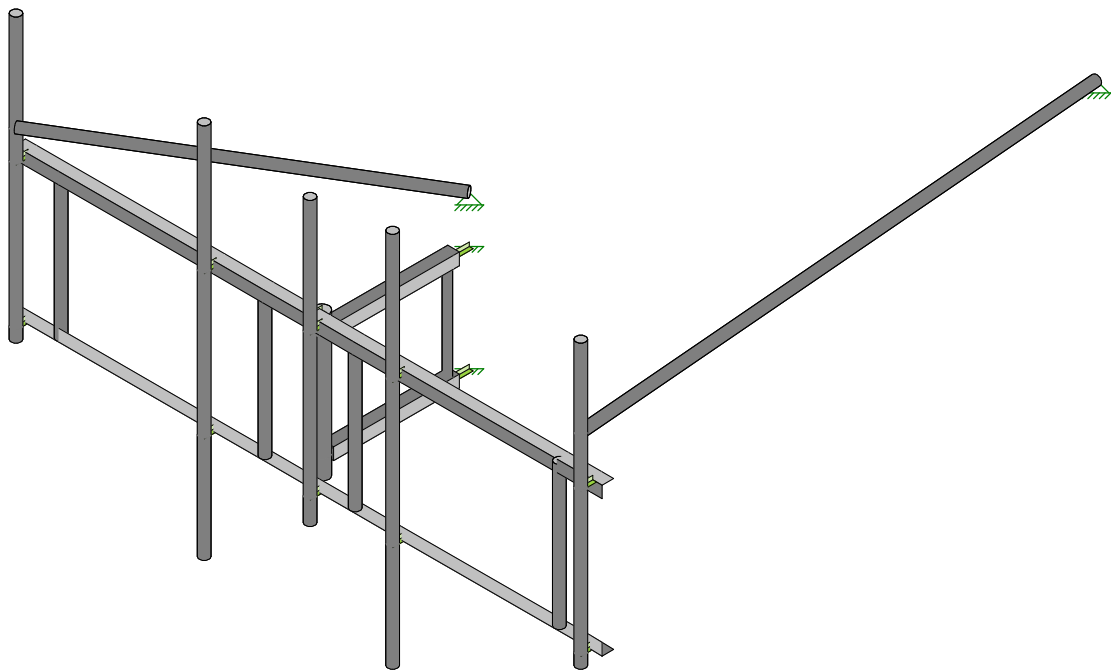
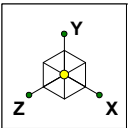
Tower Face: 11"
 Tower Leg: 5" x 5" x 1/2"
 Tower to face: 4 1/2"
 Stiff arm: 2 3/8"

Inventory
 #1 + #4
 LPA-80063-4CF

#2 + #3
 JBNHH-1DG5B

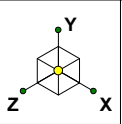
(3) B13 RRH 4x30
 (3) UHIE, B600 RRH 4x15
 (2) OVP



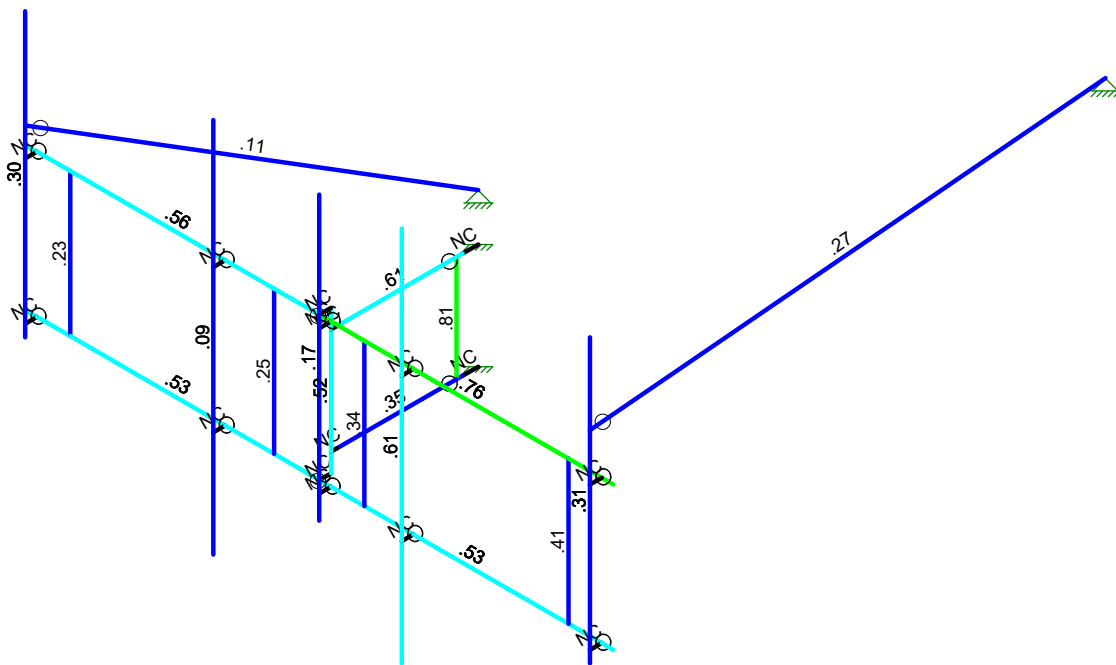


Envelope Only Solution

Colliers Engineering & De...		SK - 1
	Antenna Mount Analysis	July 21, 2023 at 7:17 PM
Project # 23777177		5000243499-VZW_MT_LOT_A_H....

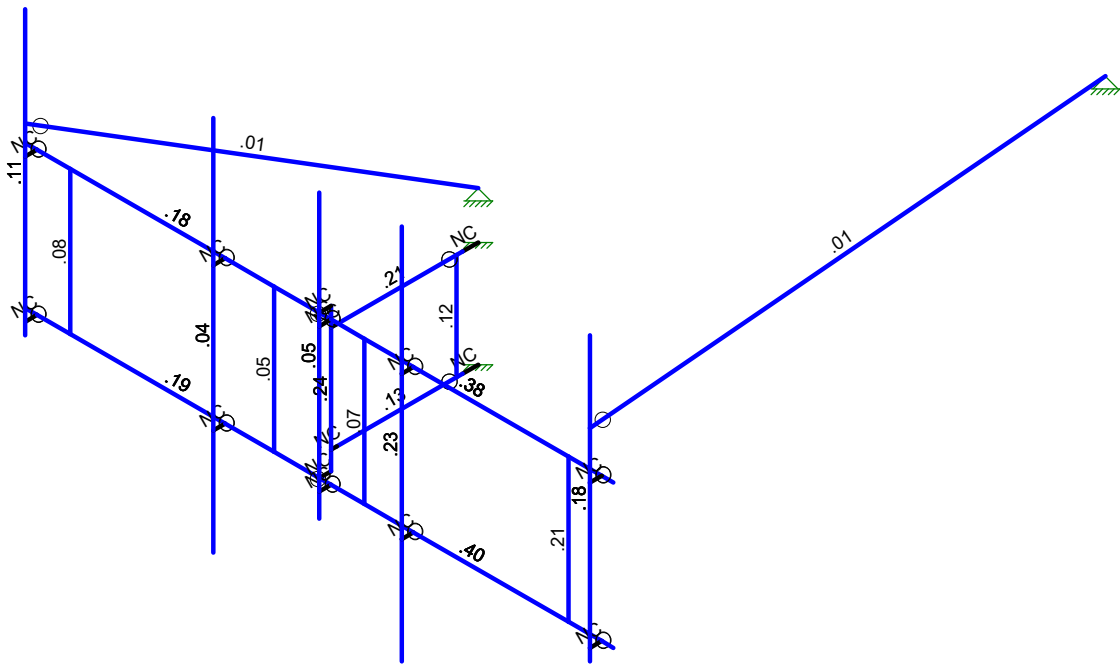
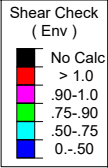
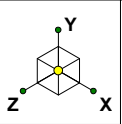


Code Check (Env)	
Black	No Calc
Red	> 1.0
Pink	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0.-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 2
		July 21, 2023 at 7:17 PM
Project # 23777177		5000243499-VZW_MT_LOT_A_H....



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...

Antenna Mount Analysis

SK - 3

July 21, 2023 at 7:18 PM

Project # 23777177

5000243499-VZW_MT_LOT_A_H....



Basic Load Cases

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



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						38		
58 Structure Wi (150 Deg)	None						38		
59 Structure Wi (180 Deg)	None						38		
60 Structure Wi (210 Deg)	None						38		
61 Structure Wi (240 Deg)	None						38		
62 Structure Wi (270 Deg)	None						38		
63 Structure Wi (300 Deg)	None						38		
64 Structure Wi (330 Deg)	None						38		
65 Structure Wm (0 Deg)	None						38		
66 Structure Wm (30 Deg)	None						38		
67 Structure Wm (60 Deg)	None						38		
68 Structure Wm (90 Deg)	None						38		
69 Structure Wm (120 Deg)	None						38		
70 Structure Wm (150 Deg)	None						38		
71 Structure Wm (180 Deg)	None						38		
72 Structure Wm (210 Deg)	None						38		
73 Structure Wm (240 Deg)	None						38		
74 Structure Wm (270 Deg)	None						38		
75 Structure Wm (300 Deg)	None						38		
76 Structure Wm (330 Deg)	None						38		
77 Lm1	None					1			
78 Lm2	None					1			
79 Lv1	None					1			
80 Lv2	None					1			
81 Antenna Ev	None					48			
82 Antenna Eh (0 Deg)	None					32			
83 Antenna Eh (90 Deg)	None					32			
84 Structure Ev	ELY		-0.0397						
85 Structure Eh (0 Deg)	ELZ			-0.0992					
86 Structure Eh (90 Deg)	ELX	.0992							

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
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



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...
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...				
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				



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

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Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	ALPHA	-1.291667	-0.395833	2.487235	0	
2	N2	-7.541667	-0.395833	2.487235	0	
3	N3	4.958333	-0.395833	2.487235	0	
4	N4	-1.291667	2.645833	2.487235	0	
5	N5	-7.541667	2.645833	2.487235	0	
6	N6	4.958333	2.645833	2.487235	0	
7	N7	-2.25	-0.395833	2.487235	0	
8	N8	-2.25	2.645833	2.487235	0	
9	N9	-0.333333	-0.395833	2.487235	0	
10	N10	-0.333333	2.645833	2.487235	0	
11	N11	-6.583333	-0.395833	2.487235	0	
12	N12	-6.583333	2.645833	2.487235	0	
13	N13	4	-0.395833	2.487235	0	
14	N14	4	2.645833	2.487235	0	
15	N15	4.708333	-0.395833	2.487235	0	
16	N16	4.708333	2.645833	2.487235	0	
17	N19	-1.291667	-0.395833	2.237235	0	
18	N20	-1.291667	2.645833	2.237235	0	
19	N22	-1.291667	2.25	2.112235	0	
20	N23	-1.291667	0	2.112235	0	
21	N24	-1.291666	2.25	-0.554435	0	
22	N25	-1.291666	0	-0.554435	0	
23	N26	-1.291666	2.25	-0.429432	0	
24	N27	-1.291666	0	-0.429432	0	
25	N30	4.708333	-0.395833	2.737235	0	
26	N31	4.708333	2.645833	2.737235	0	
27	N35	4.708333	5.354167	2.737235	0	
28	N37	4.708333	-0.645833	2.737235	0	
29	N42	-1.291667	2.25	2.237235	0	
30	N43	-1.291667	0	2.237235	0	
31	N36	0.708333	-0.395833	2.487235	0	
32	N37A	0.708333	2.645833	2.487235	0	
33	N48	-7.291667	-0.395833	2.487235	0	
34	N49	-7.291667	2.645833	2.487235	0	
35	N50	-7.291667	-0.395833	2.737235	0	
36	N51	-7.291667	2.645833	2.737235	0	
37	N64	4.708333	2.625	2.737235	0	
38	N70	-1.291666	0.104167	-0.554435	0	
39	N72	-1.041667	-0.395833	2.487235	0	
40	N73	-1.041667	2.645833	2.487235	0	
41	N74	-1.041667	-0.395833	2.737235	0	
42	N75	-1.041667	2.645833	2.737235	0	
43	N76	-1.041667	5.104167	2.737235	0	
44	N77	-1.041667	-0.895833	2.737235	0	
45	N82	-7.291667	5.354167	2.737235	0	
46	N83	-7.291667	-0.645833	2.737235	0	
47	N62A	0.708333	-0.395833	2.737235	0	
48	N63A	0.708333	2.645833	2.737235	0	
49	N64A	0.708333	5.354167	2.737235	0	
50	N65A	0.708333	-2.645833	2.737235	0	
51	N64B	-3.291667	-0.395833	2.487235	0	
52	N65B	-3.291667	2.645833	2.487235	0	
53	N66	-3.291667	-0.395833	2.737235	0	
54	N67	-3.291667	2.645833	2.737235	0	
55	N68	-3.291667	5.354167	2.737235	0	
56	N69	-3.291667	-2.645833	2.737235	0	



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

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Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
57	N65C	-7.291667	3.25	2.737235	0	
58	N67B	4.708333	3.645833	2.737235	0	
59	N72A	3.708334	3.645833	-9.214689	0	
60	N80	-1.291666	2.25	-0.887769	0	
61	N81	-1.291666	0	-0.887769	0	
62	N82A	-1.291666	3.25	-0.887769	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Desig... A [in2]	Iyy [i...	Izz [i...	J [in4]	
1	Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.0313
3	Face Vertical	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
4	Standoff Horizontal	HSS3X3X4	Beam	SquareTube	A500 Gr. B 46	Typical	2.44	3.02	3.02	5.08
5	Standoff Vertical	PIPE 1.5	Column	Pipe	A53 Gr. B	Typical	.749	.293	.293	.586
6	Mast Pipe	PIPE 3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
7	Tieback	PIPE 2.0	Beam	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	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	.3	.65	.49	42	1.4	58	1.3
6	A500 Gr. B 46	29000	11154	.3	.65	.49	46	1.4	58	1.3

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
1	M1	N6	N4		90	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
2	M2	N4	N5		90	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
3	M3	N3	ALPHA			Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
4	M4	ALPHA	N2			Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
5	M5	N20	N4			RIGID	None	None	RIGID	Typical
6	M6	N19	ALPHA			RIGID	None	None	RIGID	Typical
7	M7	N19	N20			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
8	M8	N24	N22			Standoff Horizontal	Beam	SquareTube	A500 Gr...	Typical
9	M9	N25	N23			Standoff Horizontal	Beam	SquareTube	A500 Gr...	Typical
10	M10	N27	N26			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
11	M11	N12	N11			Face Vertical	Column	Pipe	A53 Gr. B	Typical
12	M12	N8	N7			Face Vertical	Column	Pipe	A53 Gr. B	Typical
13	M13	N10	N9			Face Vertical	Column	Pipe	A53 Gr. B	Typical
14	M14	N14	N13			Face Vertical	Column	Pipe	A53 Gr. B	Typical
15	M15	N16	N31			RIGID	None	None	RIGID	Typical
16	M16	N15	N30			RIGID	None	None	RIGID	Typical
17	MP1A	N35	N37			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
18	M25	N65C	N82A			Tieback	Beam	Pipe	A53 Gr. B	Typical
19	M26	N67B	N72A			Tieback	Beam	Pipe	A53 Gr. B	Typical
20	M24	N22	N42			RIGID	None	None	RIGID	Typical
21	M25A	N23	N43			RIGID	None	None	RIGID	Typical
22	M28	N49	N51			RIGID	None	None	RIGID	Typical
23	M29	N48	N50			RIGID	None	None	RIGID	Typical
24	M34	N73	N75			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...
25	M35	N72	N74			RIGID	None	None	RIGID	Typical
26	MP3A	N76	N77			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
27	MP5A	N82	N83			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
28	M30	N37A	N63A			RIGID	None	None	RIGID	Typical
29	M31A	N36	N62A			RIGID	None	None	RIGID	Typical
30	MP2A	N64A	N65A			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
31	M33A	N65B	N67			RIGID	None	None	RIGID	Typical
32	M34A	N64B	N66			RIGID	None	None	RIGID	Typical
33	MP4A	N68	N69			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
34	M34B	N80	N24			RIGID	None	None	RIGID	Typical
35	M35A	N81	N25			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				None
2	M2						Yes	Default			None
3	M3						Yes				None
4	M4						Yes				None
5	M5	0000X0					Yes	** NA **			None
6	M6	0000X0					Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M8	00000X					Yes	Default			None
9	M9	00000X					Yes	Default			None
10	M10						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	M15		000X00				Yes	** NA **			None
16	M16		000X00				Yes	** NA **			None
17	MP1A						Yes	** NA **			None
18	M25	0000X0					Yes				None
19	M26	0000X0					Yes				None
20	M24						Yes	** NA **			None
21	M25A						Yes	** NA **			None
22	M28		000X00				Yes	** NA **			None
23	M29		000X00				Yes	** NA **			None
24	M34		000X00				Yes	** NA **			None
25	M35		000X00				Yes	** NA **			None
26	MP3A						Yes	** NA **			None
27	MP5A						Yes	** NA **			None
28	M30		000X00				Yes	** NA **			None
29	M31A		000X00				Yes	** NA **			None
30	MP2A						Yes	** NA **			None
31	M33A		000X00				Yes	** NA **			None
32	M34A		000X00				Yes	** NA **			None
33	MP4A						Yes	** NA **			None
34	M34B						Yes	** NA **			None
35	M35A						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	Y	-17.6	4
2	MP2A	My	-.0073	4



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
3	MP2A	Mz	0	4
4	MP2A	Y	-17.6	4
5	MP2A	My	.0073	4
6	MP2A	Mz	0	4
7	MP2A	Y	-20.7	2
8	MP2A	My	.0086	2
9	MP2A	Mz	.0086	2
10	MP1A	Y	-10	.25
11	MP1A	My	-.005	.25
12	MP1A	Mz	0	.25
13	MP1A	Y	-10	4.25
14	MP1A	My	-.005	4.25
15	MP1A	Mz	0	4.25
16	MP5A	Y	-10	.25
17	MP5A	My	-.005	.25
18	MP5A	Mz	0	.25
19	MP5A	Y	-10	4.25
20	MP5A	My	-.005	4.25
21	MP5A	Mz	0	4.25
22	MP4A	Y	-43.55	1.75
23	MP4A	My	-.0218	1.75
24	MP4A	Mz	0	1.75
25	MP4A	Y	-43.55	3.75
26	MP4A	My	-.0218	3.75
27	MP4A	Mz	0	3.75
28	MP2A	Y	-45.75	1
29	MP2A	My	-.0381	1
30	MP2A	Mz	.0419	1
31	MP2A	Y	-45.75	4.5
32	MP2A	My	-.0381	4.5
33	MP2A	Mz	.0419	4.5
34	MP2A	Y	-45.75	1
35	MP2A	My	-.0381	1
36	MP2A	Mz	-.0419	1
37	MP2A	Y	-45.75	4.5
38	MP2A	My	-.0381	4.5
39	MP2A	Mz	-.0419	4.5
40	MP2A	Y	-84.4	7
41	MP2A	My	.0422	7
42	MP2A	Mz	0	7
43	MP4A	Y	-70.3	7
44	MP4A	My	.0352	7
45	MP4A	Mz	0	7
46	MP3A	Y	-26.9	.5
47	MP3A	My	.0202	.5
48	MP3A	Mz	0	.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	Y	6.6	4
2	MP2A	My	.0027	4
3	MP2A	Mz	0	4
4	MP2A	Y	6.6	4
5	MP2A	My	-.0027	4
6	MP2A	Mz	0	4
7	MP2A	Y	-17.6073	2



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
8	MP2A	My	.0073	2
9	MP2A	Mz	.0073	2
10	MP1A	Y	-67.4462	.25
11	MP1A	My	-.0337	.25
12	MP1A	Mz	0	.25
13	MP1A	Y	-67.4462	4.25
14	MP1A	My	-.0337	4.25
15	MP1A	Mz	0	4.25
16	MP5A	Y	-67.4462	.25
17	MP5A	My	-.0337	.25
18	MP5A	Mz	0	.25
19	MP5A	Y	-67.4462	4.25
20	MP5A	My	-.0337	4.25
21	MP5A	Mz	0	4.25
22	MP4A	Y	-38.3161	1.75
23	MP4A	My	-.0192	1.75
24	MP4A	Mz	0	1.75
25	MP4A	Y	-38.3161	3.75
26	MP4A	My	-.0192	3.75
27	MP4A	Mz	0	3.75
28	MP2A	Y	-84.5245	1
29	MP2A	My	-.0704	1
30	MP2A	Mz	.0775	1
31	MP2A	Y	-84.5245	4.5
32	MP2A	My	-.0704	4.5
33	MP2A	Mz	.0775	4.5
34	MP2A	Y	-84.5245	1
35	MP2A	My	-.0704	1
36	MP2A	Mz	-.0775	1
37	MP2A	Y	-84.5245	4.5
38	MP2A	My	-.0704	4.5
39	MP2A	Mz	-.0775	4.5
40	MP2A	Y	-48.3295	7
41	MP2A	My	.0242	7
42	MP2A	Mz	0	7
43	MP4A	Y	-43.4869	7
44	MP4A	My	.0217	7
45	MP4A	Mz	0	7
46	MP3A	Y	-59.4633	.5
47	MP3A	My	.0446	.5
48	MP3A	Mz	0	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	0	4
2	MP2A	Z	-49.652	4
3	MP2A	Mx	0	4
4	MP2A	X	0	4
5	MP2A	Z	-49.652	4
6	MP2A	Mx	0	4
7	MP2A	X	0	2
8	MP2A	Z	-26.895	2
9	MP2A	Mx	-.0112	2
10	MP1A	X	0	.25
11	MP1A	Z	-159.041	.25
12	MP1A	Mx	0	.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
13	MP1A	X	0	4.25
14	MP1A	Z	-159.041	4.25
15	MP1A	Mx	0	4.25
16	MP5A	X	0	.25
17	MP5A	Z	-159.041	.25
18	MP5A	Mx	0	.25
19	MP5A	X	0	4.25
20	MP5A	Z	-159.041	4.25
21	MP5A	Mx	0	4.25
22	MP4A	X	0	1.75
23	MP4A	Z	-101.493	1.75
24	MP4A	Mx	0	1.75
25	MP4A	X	0	3.75
26	MP4A	Z	-101.493	3.75
27	MP4A	Mx	0	3.75
28	MP2A	X	0	1
29	MP2A	Z	-295.158	1
30	MP2A	Mx	-.2706	1
31	MP2A	X	0	4.5
32	MP2A	Z	-295.158	4.5
33	MP2A	Mx	-.2706	4.5
34	MP2A	X	0	1
35	MP2A	Z	-295.158	1
36	MP2A	Mx	.2706	1
37	MP2A	X	0	4.5
38	MP2A	Z	-295.158	4.5
39	MP2A	Mx	.2706	4.5
40	MP2A	X	0	7
41	MP2A	Z	-80.167	7
42	MP2A	Mx	0	7
43	MP4A	X	0	7
44	MP4A	Z	-80.167	7
45	MP4A	Mx	0	7
46	MP3A	X	0	.5
47	MP3A	Z	-129.301	.5
48	MP3A	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	20.502	4
2	MP2A	Z	-35.51	4
3	MP2A	Mx	-.0085	4
4	MP2A	X	20.502	4
5	MP2A	Z	-35.51	4
6	MP2A	Mx	.0085	4
7	MP2A	X	12.475	2
8	MP2A	Z	-21.607	2
9	MP2A	Mx	-.0038	2
10	MP1A	X	77.06	.25
11	MP1A	Z	-133.471	.25
12	MP1A	Mx	-.0385	.25
13	MP1A	X	77.06	4.25
14	MP1A	Z	-133.471	4.25
15	MP1A	Mx	-.0385	4.25
16	MP5A	X	77.06	.25
17	MP5A	Z	-133.471	.25



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
18	MP5A	Mx	-.0385	.25
19	MP5A	X	77.06	4.25
20	MP5A	Z	-133.471	4.25
21	MP5A	Mx	-.0385	4.25
22	MP4A	X	42.429	1.75
23	MP4A	Z	-73.489	1.75
24	MP4A	Mx	-.0212	1.75
25	MP4A	X	42.429	3.75
26	MP4A	Z	-73.489	3.75
27	MP4A	Mx	-.0212	3.75
28	MP2A	X	127.783	1
29	MP2A	Z	-221.327	1
30	MP2A	Mx	-.3094	1
31	MP2A	X	127.783	4.5
32	MP2A	Z	-221.327	4.5
33	MP2A	Mx	-.3094	4.5
34	MP2A	X	127.783	1
35	MP2A	Z	-221.327	1
36	MP2A	Mx	.0964	1
37	MP2A	X	127.783	4.5
38	MP2A	Z	-221.327	4.5
39	MP2A	Mx	.0964	4.5
40	MP2A	X	36.786	7
41	MP2A	Z	-63.716	7
42	MP2A	Mx	.0184	7
43	MP4A	X	35.558	7
44	MP4A	Z	-61.588	7
45	MP4A	Mx	.0178	7
46	MP3A	X	58.984	.5
47	MP3A	Z	-102.163	.5
48	MP3A	Mx	.0442	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	20.531	4
2	MP2A	Z	-11.854	4
3	MP2A	Mx	-.0086	4
4	MP2A	X	20.531	4
5	MP2A	Z	-11.854	4
6	MP2A	Mx	.0086	4
7	MP2A	X	18.239	2
8	MP2A	Z	-10.53	2
9	MP2A	Mx	.0032	2
10	MP1A	X	124.948	.25
11	MP1A	Z	-72.139	.25
12	MP1A	Mx	-.0625	.25
13	MP1A	X	124.948	4.25
14	MP1A	Z	-72.139	4.25
15	MP1A	Mx	-.0625	4.25
16	MP5A	X	124.948	.25
17	MP5A	Z	-72.139	.25
18	MP5A	Mx	-.0625	.25
19	MP5A	X	124.948	4.25
20	MP5A	Z	-72.139	4.25
21	MP5A	Mx	-.0625	4.25
22	MP4A	X	44.676	1.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
23	MP4A	Z	-25.794	1.75
24	MP4A	Mx	-.0223	1.75
25	MP4A	X	44.676	3.75
26	MP4A	Z	-25.794	3.75
27	MP4A	Mx	-.0223	3.75
28	MP2A	X	152.752	1
29	MP2A	Z	-88.191	1
30	MP2A	Mx	-.2081	1
31	MP2A	X	152.752	4.5
32	MP2A	Z	-88.191	4.5
33	MP2A	Mx	-.2081	4.5
34	MP2A	X	152.752	1
35	MP2A	Z	-88.191	1
36	MP2A	Mx	-.0465	1
37	MP2A	X	152.752	4.5
38	MP2A	Z	-88.191	4.5
39	MP2A	Mx	-.0465	4.5
40	MP2A	X	52.294	7
41	MP2A	Z	-30.192	7
42	MP2A	Mx	.0261	7
43	MP4A	X	45.911	7
44	MP4A	Z	-26.507	7
45	MP4A	Mx	.023	7
46	MP3A	X	82.534	.5
47	MP3A	Z	-47.651	.5
48	MP3A	Mx	.0619	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	15.06	4
2	MP2A	Z	0	4
3	MP2A	Mx	-.0063	4
4	MP2A	X	15.06	4
5	MP2A	Z	0	4
6	MP2A	Mx	.0063	4
7	MP2A	X	19.116	2
8	MP2A	Z	0	2
9	MP2A	Mx	.008	2
10	MP1A	X	139.356	.25
11	MP1A	Z	0	.25
12	MP1A	Mx	-.0697	.25
13	MP1A	X	139.356	4.25
14	MP1A	Z	0	4.25
15	MP1A	Mx	-.0697	4.25
16	MP5A	X	139.356	.25
17	MP5A	Z	0	.25
18	MP5A	Mx	-.0697	.25
19	MP5A	X	139.356	4.25
20	MP5A	Z	0	4.25
21	MP5A	Mx	-.0697	4.25
22	MP4A	X	34.953	1.75
23	MP4A	Z	0	1.75
24	MP4A	Mx	-.0175	1.75
25	MP4A	X	34.953	3.75
26	MP4A	Z	0	3.75
27	MP4A	Mx	-.0175	3.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
28	MP2A	X	136.791	1
29	MP2A	Z	0	1
30	MP2A	Mx	-.114	1
31	MP2A	X	136.791	4.5
32	MP2A	Z	0	4.5
33	MP2A	Mx	-.114	4.5
34	MP2A	X	136.791	1
35	MP2A	Z	0	1
36	MP2A	Mx	-.114	1
37	MP2A	X	136.791	4.5
38	MP2A	Z	0	4.5
39	MP2A	Mx	-.114	4.5
40	MP2A	X	53.789	7
41	MP2A	Z	0	7
42	MP2A	Mx	.0269	7
43	MP4A	X	43.962	7
44	MP4A	Z	0	7
45	MP4A	Mx	.022	7
46	MP3A	X	83.968	.5
47	MP3A	Z	0	.5
48	MP3A	Mx	.063	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	20.531	4
2	MP2A	Z	11.854	4
3	MP2A	Mx	-.0086	4
4	MP2A	X	20.531	4
5	MP2A	Z	11.854	4
6	MP2A	Mx	.0086	4
7	MP2A	X	18.239	2
8	MP2A	Z	10.53	2
9	MP2A	Mx	.012	2
10	MP1A	X	124.948	.25
11	MP1A	Z	72.139	.25
12	MP1A	Mx	-.0625	.25
13	MP1A	X	124.948	4.25
14	MP1A	Z	72.139	4.25
15	MP1A	Mx	-.0625	4.25
16	MP5A	X	124.948	.25
17	MP5A	Z	72.139	.25
18	MP5A	Mx	-.0625	.25
19	MP5A	X	124.948	4.25
20	MP5A	Z	72.139	4.25
21	MP5A	Mx	-.0625	4.25
22	MP4A	X	44.676	1.75
23	MP4A	Z	25.794	1.75
24	MP4A	Mx	-.0223	1.75
25	MP4A	X	44.676	3.75
26	MP4A	Z	25.794	3.75
27	MP4A	Mx	-.0223	3.75
28	MP2A	X	152.752	1
29	MP2A	Z	88.191	1
30	MP2A	Mx	-.0465	1
31	MP2A	X	152.752	4.5
32	MP2A	Z	88.191	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
33	MP2A	Mx	-.0465	4.5
34	MP2A	X	152.752	1
35	MP2A	Z	88.191	1
36	MP2A	Mx	-.2081	1
37	MP2A	X	152.752	4.5
38	MP2A	Z	88.191	4.5
39	MP2A	Mx	-.2081	4.5
40	MP2A	X	52.294	7
41	MP2A	Z	30.192	7
42	MP2A	Mx	.0261	7
43	MP4A	X	45.911	7
44	MP4A	Z	26.507	7
45	MP4A	Mx	.023	7
46	MP3A	X	82.534	.5
47	MP3A	Z	47.651	.5
48	MP3A	Mx	.0619	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	20.502	4
2	MP2A	Z	35.51	4
3	MP2A	Mx	-.0085	4
4	MP2A	X	20.502	4
5	MP2A	Z	35.51	4
6	MP2A	Mx	.0085	4
7	MP2A	X	12.475	2
8	MP2A	Z	21.607	2
9	MP2A	Mx	.0142	2
10	MP1A	X	77.06	.25
11	MP1A	Z	133.471	.25
12	MP1A	Mx	-.0385	.25
13	MP1A	X	77.06	4.25
14	MP1A	Z	133.471	4.25
15	MP1A	Mx	-.0385	4.25
16	MP5A	X	77.06	.25
17	MP5A	Z	133.471	.25
18	MP5A	Mx	-.0385	.25
19	MP5A	X	77.06	4.25
20	MP5A	Z	133.471	4.25
21	MP5A	Mx	-.0385	4.25
22	MP4A	X	42.429	1.75
23	MP4A	Z	73.489	1.75
24	MP4A	Mx	-.0212	1.75
25	MP4A	X	42.429	3.75
26	MP4A	Z	73.489	3.75
27	MP4A	Mx	-.0212	3.75
28	MP2A	X	127.783	1
29	MP2A	Z	221.327	1
30	MP2A	Mx	.0964	1
31	MP2A	X	127.783	4.5
32	MP2A	Z	221.327	4.5
33	MP2A	Mx	.0964	4.5
34	MP2A	X	127.783	1
35	MP2A	Z	221.327	1
36	MP2A	Mx	-.3094	1
37	MP2A	X	127.783	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
38	MP2A	Z	221.327	4.5
39	MP2A	Mx	-3094	4.5
40	MP2A	X	36.786	7
41	MP2A	Z	63.716	7
42	MP2A	Mx	.0184	7
43	MP4A	X	35.558	7
44	MP4A	Z	61.588	7
45	MP4A	Mx	.0178	7
46	MP3A	X	58.984	.5
47	MP3A	Z	102.163	.5
48	MP3A	Mx	.0442	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	0	4
2	MP2A	Z	49.652	4
3	MP2A	Mx	0	4
4	MP2A	X	0	4
5	MP2A	Z	49.652	4
6	MP2A	Mx	0	4
7	MP2A	X	0	2
8	MP2A	Z	26.895	2
9	MP2A	Mx	.0112	2
10	MP1A	X	0	.25
11	MP1A	Z	159.041	.25
12	MP1A	Mx	0	.25
13	MP1A	X	0	4.25
14	MP1A	Z	159.041	4.25
15	MP1A	Mx	0	4.25
16	MP5A	X	0	.25
17	MP5A	Z	159.041	.25
18	MP5A	Mx	0	.25
19	MP5A	X	0	4.25
20	MP5A	Z	159.041	4.25
21	MP5A	Mx	0	4.25
22	MP4A	X	0	1.75
23	MP4A	Z	101.493	1.75
24	MP4A	Mx	0	1.75
25	MP4A	X	0	3.75
26	MP4A	Z	101.493	3.75
27	MP4A	Mx	0	3.75
28	MP2A	X	0	1
29	MP2A	Z	295.158	1
30	MP2A	Mx	.2706	1
31	MP2A	X	0	4.5
32	MP2A	Z	295.158	4.5
33	MP2A	Mx	.2706	4.5
34	MP2A	X	0	1
35	MP2A	Z	295.158	1
36	MP2A	Mx	-.2706	1
37	MP2A	X	0	4.5
38	MP2A	Z	295.158	4.5
39	MP2A	Mx	-.2706	4.5
40	MP2A	X	0	7
41	MP2A	Z	80.167	7
42	MP2A	Mx	0	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
43	MP4A	X	0	7
44	MP4A	Z	80.167	7
45	MP4A	Mx	0	7
46	MP3A	X	0	.5
47	MP3A	Z	129.301	.5
48	MP3A	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-20.502	4
2	MP2A	Z	35.51	4
3	MP2A	Mx	.0085	4
4	MP2A	X	-20.502	4
5	MP2A	Z	35.51	4
6	MP2A	Mx	-.0085	4
7	MP2A	X	-12.475	2
8	MP2A	Z	21.607	2
9	MP2A	Mx	.0038	2
10	MP1A	X	-77.06	.25
11	MP1A	Z	133.471	.25
12	MP1A	Mx	.0385	.25
13	MP1A	X	-77.06	4.25
14	MP1A	Z	133.471	4.25
15	MP1A	Mx	.0385	4.25
16	MP5A	X	-77.06	.25
17	MP5A	Z	133.471	.25
18	MP5A	Mx	.0385	.25
19	MP5A	X	-77.06	4.25
20	MP5A	Z	133.471	4.25
21	MP5A	Mx	.0385	4.25
22	MP4A	X	-42.429	1.75
23	MP4A	Z	73.489	1.75
24	MP4A	Mx	.0212	1.75
25	MP4A	X	-42.429	3.75
26	MP4A	Z	73.489	3.75
27	MP4A	Mx	.0212	3.75
28	MP2A	X	-127.783	1
29	MP2A	Z	221.327	1
30	MP2A	Mx	.3094	1
31	MP2A	X	-127.783	4.5
32	MP2A	Z	221.327	4.5
33	MP2A	Mx	.3094	4.5
34	MP2A	X	-127.783	1
35	MP2A	Z	221.327	1
36	MP2A	Mx	-.0964	1
37	MP2A	X	-127.783	4.5
38	MP2A	Z	221.327	4.5
39	MP2A	Mx	-.0964	4.5
40	MP2A	X	-36.786	7
41	MP2A	Z	63.716	7
42	MP2A	Mx	-.0184	7
43	MP4A	X	-35.558	7
44	MP4A	Z	61.588	7
45	MP4A	Mx	-.0178	7
46	MP3A	X	-58.984	.5
47	MP3A	Z	102.163	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
48	MP3A	Mx	-.0442	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-20.531	4
2	MP2A	Z	11.854	4
3	MP2A	Mx	.0086	4
4	MP2A	X	-20.531	4
5	MP2A	Z	11.854	4
6	MP2A	Mx	-.0086	4
7	MP2A	X	-18.239	2
8	MP2A	Z	10.53	2
9	MP2A	Mx	-.0032	2
10	MP1A	X	-124.948	.25
11	MP1A	Z	72.139	.25
12	MP1A	Mx	.0625	.25
13	MP1A	X	-124.948	4.25
14	MP1A	Z	72.139	4.25
15	MP1A	Mx	.0625	4.25
16	MP5A	X	-124.948	.25
17	MP5A	Z	72.139	.25
18	MP5A	Mx	.0625	.25
19	MP5A	X	-124.948	4.25
20	MP5A	Z	72.139	4.25
21	MP5A	Mx	.0625	4.25
22	MP4A	X	-44.676	1.75
23	MP4A	Z	25.794	1.75
24	MP4A	Mx	.0223	1.75
25	MP4A	X	-44.676	3.75
26	MP4A	Z	25.794	3.75
27	MP4A	Mx	.0223	3.75
28	MP2A	X	-152.752	1
29	MP2A	Z	88.191	1
30	MP2A	Mx	.2081	1
31	MP2A	X	-152.752	4.5
32	MP2A	Z	88.191	4.5
33	MP2A	Mx	.2081	4.5
34	MP2A	X	-152.752	1
35	MP2A	Z	88.191	1
36	MP2A	Mx	.0465	1
37	MP2A	X	-152.752	4.5
38	MP2A	Z	88.191	4.5
39	MP2A	Mx	.0465	4.5
40	MP2A	X	-52.294	7
41	MP2A	Z	30.192	7
42	MP2A	Mx	-.0261	7
43	MP4A	X	-45.911	7
44	MP4A	Z	26.507	7
45	MP4A	Mx	-.023	7
46	MP3A	X	-82.534	.5
47	MP3A	Z	47.651	.5
48	MP3A	Mx	-.0619	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-15.06	4



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
2	MP2A	Z	0	4
3	MP2A	Mx	.0063	4
4	MP2A	X	-15.06	4
5	MP2A	Z	0	4
6	MP2A	Mx	-.0063	4
7	MP2A	X	-19.116	2
8	MP2A	Z	0	2
9	MP2A	Mx	-.008	2
10	MP1A	X	-139.356	.25
11	MP1A	Z	0	.25
12	MP1A	Mx	.0697	.25
13	MP1A	X	-139.356	4.25
14	MP1A	Z	0	4.25
15	MP1A	Mx	.0697	4.25
16	MP5A	X	-139.356	.25
17	MP5A	Z	0	.25
18	MP5A	Mx	.0697	.25
19	MP5A	X	-139.356	4.25
20	MP5A	Z	0	4.25
21	MP5A	Mx	.0697	4.25
22	MP4A	X	-34.953	1.75
23	MP4A	Z	0	1.75
24	MP4A	Mx	.0175	1.75
25	MP4A	X	-34.953	3.75
26	MP4A	Z	0	3.75
27	MP4A	Mx	.0175	3.75
28	MP2A	X	-136.791	1
29	MP2A	Z	0	1
30	MP2A	Mx	.114	1
31	MP2A	X	-136.791	4.5
32	MP2A	Z	0	4.5
33	MP2A	Mx	.114	4.5
34	MP2A	X	-136.791	1
35	MP2A	Z	0	1
36	MP2A	Mx	.114	1
37	MP2A	X	-136.791	4.5
38	MP2A	Z	0	4.5
39	MP2A	Mx	.114	4.5
40	MP2A	X	-53.789	7
41	MP2A	Z	0	7
42	MP2A	Mx	-.0269	7
43	MP4A	X	-43.962	7
44	MP4A	Z	0	7
45	MP4A	Mx	-.022	7
46	MP3A	X	-83.968	.5
47	MP3A	Z	0	.5
48	MP3A	Mx	-.063	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-20.531	4
2	MP2A	Z	-11.854	4
3	MP2A	Mx	.0086	4
4	MP2A	X	-20.531	4
5	MP2A	Z	-11.854	4
6	MP2A	Mx	-.0086	4



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
7	MP2A	X	-18.239	2
8	MP2A	Z	-10.53	2
9	MP2A	Mx	-.012	2
10	MP1A	X	-124.948	.25
11	MP1A	Z	-72.139	.25
12	MP1A	Mx	.0625	.25
13	MP1A	X	-124.948	4.25
14	MP1A	Z	-72.139	4.25
15	MP1A	Mx	.0625	4.25
16	MP5A	X	-124.948	.25
17	MP5A	Z	-72.139	.25
18	MP5A	Mx	.0625	.25
19	MP5A	X	-124.948	4.25
20	MP5A	Z	-72.139	4.25
21	MP5A	Mx	.0625	4.25
22	MP4A	X	-44.676	1.75
23	MP4A	Z	-25.794	1.75
24	MP4A	Mx	.0223	1.75
25	MP4A	X	-44.676	3.75
26	MP4A	Z	-25.794	3.75
27	MP4A	Mx	.0223	3.75
28	MP2A	X	-152.752	1
29	MP2A	Z	-88.191	1
30	MP2A	Mx	.0465	1
31	MP2A	X	-152.752	4.5
32	MP2A	Z	-88.191	4.5
33	MP2A	Mx	.0465	4.5
34	MP2A	X	-152.752	1
35	MP2A	Z	-88.191	1
36	MP2A	Mx	.2081	1
37	MP2A	X	-152.752	4.5
38	MP2A	Z	-88.191	4.5
39	MP2A	Mx	.2081	4.5
40	MP2A	X	-52.294	7
41	MP2A	Z	-30.192	7
42	MP2A	Mx	-.0261	7
43	MP4A	X	-45.911	7
44	MP4A	Z	-26.507	7
45	MP4A	Mx	-.023	7
46	MP3A	X	-82.534	.5
47	MP3A	Z	-47.651	.5
48	MP3A	Mx	-.0619	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-20.502	4
2	MP2A	Z	-35.51	4
3	MP2A	Mx	.0085	4
4	MP2A	X	-20.502	4
5	MP2A	Z	-35.51	4
6	MP2A	Mx	-.0085	4
7	MP2A	X	-12.475	2
8	MP2A	Z	-21.607	2
9	MP2A	Mx	-.0142	2
10	MP1A	X	-77.06	.25
11	MP1A	Z	-133.471	.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
12	MP1A	Mx	.0385	.25
13	MP1A	X	-77.06	4.25
14	MP1A	Z	-133.471	4.25
15	MP1A	Mx	.0385	4.25
16	MP5A	X	-77.06	.25
17	MP5A	Z	-133.471	.25
18	MP5A	Mx	.0385	.25
19	MP5A	X	-77.06	4.25
20	MP5A	Z	-133.471	4.25
21	MP5A	Mx	.0385	4.25
22	MP4A	X	-42.429	1.75
23	MP4A	Z	-73.489	1.75
24	MP4A	Mx	.0212	1.75
25	MP4A	X	-42.429	3.75
26	MP4A	Z	-73.489	3.75
27	MP4A	Mx	.0212	3.75
28	MP2A	X	-127.783	1
29	MP2A	Z	-221.327	1
30	MP2A	Mx	-.0964	1
31	MP2A	X	-127.783	4.5
32	MP2A	Z	-221.327	4.5
33	MP2A	Mx	-.0964	4.5
34	MP2A	X	-127.783	1
35	MP2A	Z	-221.327	1
36	MP2A	Mx	.3094	1
37	MP2A	X	-127.783	4.5
38	MP2A	Z	-221.327	4.5
39	MP2A	Mx	.3094	4.5
40	MP2A	X	-36.786	7
41	MP2A	Z	-63.716	7
42	MP2A	Mx	-.0184	7
43	MP4A	X	-35.558	7
44	MP4A	Z	-61.588	7
45	MP4A	Mx	-.0178	7
46	MP3A	X	-58.984	.5
47	MP3A	Z	-102.163	.5
48	MP3A	Mx	-.0442	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	0	4
2	MP2A	Z	-10.342	4
3	MP2A	Mx	0	4
4	MP2A	X	0	4
5	MP2A	Z	-10.342	4
6	MP2A	Mx	0	4
7	MP2A	X	0	2
8	MP2A	Z	-6.093	2
9	MP2A	Mx	-.0025	2
10	MP1A	X	0	.25
11	MP1A	Z	-28.396	.25
12	MP1A	Mx	0	.25
13	MP1A	X	0	4.25
14	MP1A	Z	-28.396	4.25
15	MP1A	Mx	0	4.25
16	MP5A	X	0	.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
17	MP5A	Z	-28.396	.25
18	MP5A	Mx	0	.25
19	MP5A	X	0	4.25
20	MP5A	Z	-28.396	4.25
21	MP5A	Mx	0	4.25
22	MP4A	X	0	1.75
23	MP4A	Z	-22.171	1.75
24	MP4A	Mx	0	1.75
25	MP4A	X	0	3.75
26	MP4A	Z	-22.171	3.75
27	MP4A	Mx	0	3.75
28	MP2A	X	0	1
29	MP2A	Z	-51.381	1
30	MP2A	Mx	-.0471	1
31	MP2A	X	0	4.5
32	MP2A	Z	-51.381	4.5
33	MP2A	Mx	-.0471	4.5
34	MP2A	X	0	1
35	MP2A	Z	-51.381	1
36	MP2A	Mx	.0471	1
37	MP2A	X	0	4.5
38	MP2A	Z	-51.381	4.5
39	MP2A	Mx	.0471	4.5
40	MP2A	X	0	7
41	MP2A	Z	-18.732	7
42	MP2A	Mx	0	7
43	MP4A	X	0	7
44	MP4A	Z	-18.732	7
45	MP4A	Mx	0	7
46	MP3A	X	0	.5
47	MP3A	Z	-24.371	.5
48	MP3A	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	4.372	4
2	MP2A	Z	-7.572	4
3	MP2A	Mx	-.0018	4
4	MP2A	X	4.372	4
5	MP2A	Z	-7.572	4
6	MP2A	Mx	.0018	4
7	MP2A	X	2.863	2
8	MP2A	Z	-4.958	2
9	MP2A	Mx	-.000873	2
10	MP1A	X	13.793	.25
11	MP1A	Z	-23.89	.25
12	MP1A	Mx	-.0069	.25
13	MP1A	X	13.793	4.25
14	MP1A	Z	-23.89	4.25
15	MP1A	Mx	-.0069	4.25
16	MP5A	X	13.793	.25
17	MP5A	Z	-23.89	.25
18	MP5A	Mx	-.0069	.25
19	MP5A	X	13.793	4.25
20	MP5A	Z	-23.89	4.25
21	MP5A	Mx	-.0069	4.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
22	MP4A	X	9.502	1.75
23	MP4A	Z	-16.457	1.75
24	MP4A	Mx	-.0048	1.75
25	MP4A	X	9.502	3.75
26	MP4A	Z	-16.457	3.75
27	MP4A	Mx	-.0048	3.75
28	MP2A	X	22.449	1
29	MP2A	Z	-38.883	1
30	MP2A	Mx	-.0544	1
31	MP2A	X	22.449	4.5
32	MP2A	Z	-38.883	4.5
33	MP2A	Mx	-.0544	4.5
34	MP2A	X	22.449	1
35	MP2A	Z	-38.883	1
36	MP2A	Mx	.0169	1
37	MP2A	X	22.449	4.5
38	MP2A	Z	-38.883	4.5
39	MP2A	Mx	.0169	4.5
40	MP2A	X	8.658	7
41	MP2A	Z	-14.996	7
42	MP2A	Mx	.0043	7
43	MP4A	X	8.388	7
44	MP4A	Z	-14.529	7
45	MP4A	Mx	.0042	7
46	MP3A	X	11.212	.5
47	MP3A	Z	-19.419	.5
48	MP3A	Mx	.0084	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	4.805	4
2	MP2A	Z	-2.774	4
3	MP2A	Mx	-.002	4
4	MP2A	X	4.805	4
5	MP2A	Z	-2.774	4
6	MP2A	Mx	.002	4
7	MP2A	X	4.322	2
8	MP2A	Z	-2.495	2
9	MP2A	Mx	.000761	2
10	MP1A	X	22.488	.25
11	MP1A	Z	-12.983	.25
12	MP1A	Mx	-.0112	.25
13	MP1A	X	22.488	4.25
14	MP1A	Z	-12.983	4.25
15	MP1A	Mx	-.0112	4.25
16	MP5A	X	22.488	.25
17	MP5A	Z	-12.983	.25
18	MP5A	Mx	-.0112	.25
19	MP5A	X	22.488	4.25
20	MP5A	Z	-12.983	4.25
21	MP5A	Mx	-.0112	4.25
22	MP4A	X	10.97	1.75
23	MP4A	Z	-6.333	1.75
24	MP4A	Mx	-.0055	1.75
25	MP4A	X	10.97	3.75
26	MP4A	Z	-6.333	3.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
27	MP4A	Mx	-0.055	3.75
28	MP2A	X	27.654	1
29	MP2A	Z	-15.966	1
30	MP2A	Mx	-0.377	1
31	MP2A	X	27.654	4.5
32	MP2A	Z	-15.966	4.5
33	MP2A	Mx	-0.377	4.5
34	MP2A	X	27.654	1
35	MP2A	Z	-15.966	1
36	MP2A	Mx	-0.084	1
37	MP2A	X	27.654	4.5
38	MP2A	Z	-15.966	4.5
39	MP2A	Mx	-0.084	4.5
40	MP2A	X	12.541	7
41	MP2A	Z	-7.241	7
42	MP2A	Mx	.0063	7
43	MP4A	X	11.143	7
44	MP4A	Z	-6.433	7
45	MP4A	Mx	.0056	7
46	MP3A	X	16.047	.5
47	MP3A	Z	-9.264	.5
48	MP3A	Mx	.012	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	3.95	4
2	MP2A	Z	0	4
3	MP2A	Mx	-0.016	4
4	MP2A	X	3.95	4
5	MP2A	Z	0	4
6	MP2A	Mx	.0016	4
7	MP2A	X	4.623	2
8	MP2A	Z	0	2
9	MP2A	Mx	.0019	2
10	MP1A	X	25.157	.25
11	MP1A	Z	0	.25
12	MP1A	Mx	-0.126	.25
13	MP1A	X	25.157	4.25
14	MP1A	Z	0	4.25
15	MP1A	Mx	-0.126	4.25
16	MP5A	X	25.157	.25
17	MP5A	Z	0	.25
18	MP5A	Mx	-0.126	.25
19	MP5A	X	25.157	4.25
20	MP5A	Z	0	4.25
21	MP5A	Mx	-0.126	4.25
22	MP4A	X	9.499	1.75
23	MP4A	Z	0	1.75
24	MP4A	Mx	-0.047	1.75
25	MP4A	X	9.499	3.75
26	MP4A	Z	0	3.75
27	MP4A	Mx	-0.047	3.75
28	MP2A	X	25.449	1
29	MP2A	Z	0	1
30	MP2A	Mx	-0.212	1
31	MP2A	X	25.449	4.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
32	MP2A	Z	0	4.5
33	MP2A	Mx	-.0212	4.5
34	MP2A	X	25.449	1
35	MP2A	Z	0	1
36	MP2A	Mx	-.0212	1
37	MP2A	X	25.449	4.5
38	MP2A	Z	0	4.5
39	MP2A	Mx	-.0212	4.5
40	MP2A	X	13.065	7
41	MP2A	Z	0	7
42	MP2A	Mx	.0065	7
43	MP4A	X	10.911	7
44	MP4A	Z	0	7
45	MP4A	Mx	.0055	7
46	MP3A	X	16.582	.5
47	MP3A	Z	0	.5
48	MP3A	Mx	.0124	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	4.805	4
2	MP2A	Z	2.774	4
3	MP2A	Mx	-.002	4
4	MP2A	X	4.805	4
5	MP2A	Z	2.774	4
6	MP2A	Mx	.002	4
7	MP2A	X	4.322	2
8	MP2A	Z	2.495	2
9	MP2A	Mx	.0028	2
10	MP1A	X	22.488	.25
11	MP1A	Z	12.983	.25
12	MP1A	Mx	-.0112	.25
13	MP1A	X	22.488	4.25
14	MP1A	Z	12.983	4.25
15	MP1A	Mx	-.0112	4.25
16	MP5A	X	22.488	.25
17	MP5A	Z	12.983	.25
18	MP5A	Mx	-.0112	.25
19	MP5A	X	22.488	4.25
20	MP5A	Z	12.983	4.25
21	MP5A	Mx	-.0112	4.25
22	MP4A	X	10.97	1.75
23	MP4A	Z	6.333	1.75
24	MP4A	Mx	-.0055	1.75
25	MP4A	X	10.97	3.75
26	MP4A	Z	6.333	3.75
27	MP4A	Mx	-.0055	3.75
28	MP2A	X	27.654	1
29	MP2A	Z	15.966	1
30	MP2A	Mx	-.0084	1
31	MP2A	X	27.654	4.5
32	MP2A	Z	15.966	4.5
33	MP2A	Mx	-.0084	4.5
34	MP2A	X	27.654	1
35	MP2A	Z	15.966	1
36	MP2A	Mx	-.0377	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
37	MP2A	X	27.654	4.5
38	MP2A	Z	15.966	4.5
39	MP2A	Mx	-.0377	4.5
40	MP2A	X	12.541	7
41	MP2A	Z	7.241	7
42	MP2A	Mx	.0063	7
43	MP4A	X	11.143	7
44	MP4A	Z	6.433	7
45	MP4A	Mx	.0056	7
46	MP3A	X	16.047	.5
47	MP3A	Z	9.264	.5
48	MP3A	Mx	.012	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	4.372	4
2	MP2A	Z	7.572	4
3	MP2A	Mx	-.0018	4
4	MP2A	X	4.372	4
5	MP2A	Z	7.572	4
6	MP2A	Mx	.0018	4
7	MP2A	X	2.863	2
8	MP2A	Z	4.958	2
9	MP2A	Mx	.0033	2
10	MP1A	X	13.793	.25
11	MP1A	Z	23.89	.25
12	MP1A	Mx	-.0069	.25
13	MP1A	X	13.793	4.25
14	MP1A	Z	23.89	4.25
15	MP1A	Mx	-.0069	4.25
16	MP5A	X	13.793	.25
17	MP5A	Z	23.89	.25
18	MP5A	Mx	-.0069	.25
19	MP5A	X	13.793	4.25
20	MP5A	Z	23.89	4.25
21	MP5A	Mx	-.0069	4.25
22	MP4A	X	9.502	1.75
23	MP4A	Z	16.457	1.75
24	MP4A	Mx	-.0048	1.75
25	MP4A	X	9.502	3.75
26	MP4A	Z	16.457	3.75
27	MP4A	Mx	-.0048	3.75
28	MP2A	X	22.449	1
29	MP2A	Z	38.883	1
30	MP2A	Mx	.0169	1
31	MP2A	X	22.449	4.5
32	MP2A	Z	38.883	4.5
33	MP2A	Mx	.0169	4.5
34	MP2A	X	22.449	1
35	MP2A	Z	38.883	1
36	MP2A	Mx	-.0544	1
37	MP2A	X	22.449	4.5
38	MP2A	Z	38.883	4.5
39	MP2A	Mx	-.0544	4.5
40	MP2A	X	8.658	7
41	MP2A	Z	14.996	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
42	MP2A	Mx	.0043	7
43	MP4A	X	8.388	7
44	MP4A	Z	14.529	7
45	MP4A	Mx	.0042	7
46	MP3A	X	11.212	.5
47	MP3A	Z	19.419	.5
48	MP3A	Mx	.0084	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	0	4
2	MP2A	Z	10.342	4
3	MP2A	Mx	0	4
4	MP2A	X	0	4
5	MP2A	Z	10.342	4
6	MP2A	Mx	0	4
7	MP2A	X	0	2
8	MP2A	Z	6.093	2
9	MP2A	Mx	.0025	2
10	MP1A	X	0	.25
11	MP1A	Z	28.396	.25
12	MP1A	Mx	0	.25
13	MP1A	X	0	4.25
14	MP1A	Z	28.396	4.25
15	MP1A	Mx	0	4.25
16	MP5A	X	0	.25
17	MP5A	Z	28.396	.25
18	MP5A	Mx	0	.25
19	MP5A	X	0	4.25
20	MP5A	Z	28.396	4.25
21	MP5A	Mx	0	4.25
22	MP4A	X	0	1.75
23	MP4A	Z	22.171	1.75
24	MP4A	Mx	0	1.75
25	MP4A	X	0	3.75
26	MP4A	Z	22.171	3.75
27	MP4A	Mx	0	3.75
28	MP2A	X	0	1
29	MP2A	Z	51.381	1
30	MP2A	Mx	.0471	1
31	MP2A	X	0	4.5
32	MP2A	Z	51.381	4.5
33	MP2A	Mx	.0471	4.5
34	MP2A	X	0	1
35	MP2A	Z	51.381	1
36	MP2A	Mx	-.0471	1
37	MP2A	X	0	4.5
38	MP2A	Z	51.381	4.5
39	MP2A	Mx	-.0471	4.5
40	MP2A	X	0	7
41	MP2A	Z	18.732	7
42	MP2A	Mx	0	7
43	MP4A	X	0	7
44	MP4A	Z	18.732	7
45	MP4A	Mx	0	7
46	MP3A	X	0	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
47	MP3A	Z	24.371	.5
48	MP3A	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-4.372	4
2	MP2A	Z	7.572	4
3	MP2A	Mx	.0018	4
4	MP2A	X	-4.372	4
5	MP2A	Z	7.572	4
6	MP2A	Mx	-.0018	4
7	MP2A	X	-2.863	2
8	MP2A	Z	4.958	2
9	MP2A	Mx	.000873	2
10	MP1A	X	-13.793	.25
11	MP1A	Z	23.89	.25
12	MP1A	Mx	.0069	.25
13	MP1A	X	-13.793	4.25
14	MP1A	Z	23.89	4.25
15	MP1A	Mx	.0069	4.25
16	MP5A	X	-13.793	.25
17	MP5A	Z	23.89	.25
18	MP5A	Mx	.0069	.25
19	MP5A	X	-13.793	4.25
20	MP5A	Z	23.89	4.25
21	MP5A	Mx	.0069	4.25
22	MP4A	X	-9.502	1.75
23	MP4A	Z	16.457	1.75
24	MP4A	Mx	.0048	1.75
25	MP4A	X	-9.502	3.75
26	MP4A	Z	16.457	3.75
27	MP4A	Mx	.0048	3.75
28	MP2A	X	-22.449	1
29	MP2A	Z	38.883	1
30	MP2A	Mx	.0544	1
31	MP2A	X	-22.449	4.5
32	MP2A	Z	38.883	4.5
33	MP2A	Mx	.0544	4.5
34	MP2A	X	-22.449	1
35	MP2A	Z	38.883	1
36	MP2A	Mx	-.0169	1
37	MP2A	X	-22.449	4.5
38	MP2A	Z	38.883	4.5
39	MP2A	Mx	-.0169	4.5
40	MP2A	X	-8.658	7
41	MP2A	Z	14.996	7
42	MP2A	Mx	-.0043	7
43	MP4A	X	-8.388	7
44	MP4A	Z	14.529	7
45	MP4A	Mx	-.0042	7
46	MP3A	X	-11.212	.5
47	MP3A	Z	19.419	.5
48	MP3A	Mx	-.0084	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
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Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-4.805	4
2	MP2A	Z	2.774	4
3	MP2A	Mx	.002	4
4	MP2A	X	-4.805	4
5	MP2A	Z	2.774	4
6	MP2A	Mx	-.002	4
7	MP2A	X	-4.322	2
8	MP2A	Z	2.495	2
9	MP2A	Mx	-.000761	2
10	MP1A	X	-22.488	.25
11	MP1A	Z	12.983	.25
12	MP1A	Mx	.0112	.25
13	MP1A	X	-22.488	4.25
14	MP1A	Z	12.983	4.25
15	MP1A	Mx	.0112	4.25
16	MP5A	X	-22.488	.25
17	MP5A	Z	12.983	.25
18	MP5A	Mx	.0112	.25
19	MP5A	X	-22.488	4.25
20	MP5A	Z	12.983	4.25
21	MP5A	Mx	.0112	4.25
22	MP4A	X	-10.97	1.75
23	MP4A	Z	6.333	1.75
24	MP4A	Mx	.0055	1.75
25	MP4A	X	-10.97	3.75
26	MP4A	Z	6.333	3.75
27	MP4A	Mx	.0055	3.75
28	MP2A	X	-27.654	1
29	MP2A	Z	15.966	1
30	MP2A	Mx	.0377	1
31	MP2A	X	-27.654	4.5
32	MP2A	Z	15.966	4.5
33	MP2A	Mx	.0377	4.5
34	MP2A	X	-27.654	1
35	MP2A	Z	15.966	1
36	MP2A	Mx	.0084	1
37	MP2A	X	-27.654	4.5
38	MP2A	Z	15.966	4.5
39	MP2A	Mx	.0084	4.5
40	MP2A	X	-12.541	7
41	MP2A	Z	7.241	7
42	MP2A	Mx	-.0063	7
43	MP4A	X	-11.143	7
44	MP4A	Z	6.433	7
45	MP4A	Mx	-.0056	7
46	MP3A	X	-16.047	.5
47	MP3A	Z	9.264	.5
48	MP3A	Mx	-.012	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-3.95	4
2	MP2A	Z	0	4
3	MP2A	Mx	.0016	4
4	MP2A	X	-3.95	4
5	MP2A	Z	0	4



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
6	MP2A	Mx	-0.016	4
7	MP2A	X	-4.623	2
8	MP2A	Z	0	2
9	MP2A	Mx	-0.019	2
10	MP1A	X	-25.157	.25
11	MP1A	Z	0	.25
12	MP1A	Mx	.0126	.25
13	MP1A	X	-25.157	4.25
14	MP1A	Z	0	4.25
15	MP1A	Mx	.0126	4.25
16	MP5A	X	-25.157	.25
17	MP5A	Z	0	.25
18	MP5A	Mx	.0126	.25
19	MP5A	X	-25.157	4.25
20	MP5A	Z	0	4.25
21	MP5A	Mx	.0126	4.25
22	MP4A	X	-9.499	1.75
23	MP4A	Z	0	1.75
24	MP4A	Mx	.0047	1.75
25	MP4A	X	-9.499	3.75
26	MP4A	Z	0	3.75
27	MP4A	Mx	.0047	3.75
28	MP2A	X	-25.449	1
29	MP2A	Z	0	1
30	MP2A	Mx	.0212	1
31	MP2A	X	-25.449	4.5
32	MP2A	Z	0	4.5
33	MP2A	Mx	.0212	4.5
34	MP2A	X	-25.449	1
35	MP2A	Z	0	1
36	MP2A	Mx	.0212	1
37	MP2A	X	-25.449	4.5
38	MP2A	Z	0	4.5
39	MP2A	Mx	.0212	4.5
40	MP2A	X	-13.065	7
41	MP2A	Z	0	7
42	MP2A	Mx	-0.0065	7
43	MP4A	X	-10.911	7
44	MP4A	Z	0	7
45	MP4A	Mx	-0.0055	7
46	MP3A	X	-16.582	.5
47	MP3A	Z	0	.5
48	MP3A	Mx	-0.0124	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-4.805	4
2	MP2A	Z	-2.774	4
3	MP2A	Mx	.002	4
4	MP2A	X	-4.805	4
5	MP2A	Z	-2.774	4
6	MP2A	Mx	-.002	4
7	MP2A	X	-4.322	2
8	MP2A	Z	-2.495	2
9	MP2A	Mx	-.0028	2
10	MP1A	X	-22.488	.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
11	MP1A	Z	-12.983	.25
12	MP1A	Mx	.0112	.25
13	MP1A	X	-22.488	4.25
14	MP1A	Z	-12.983	4.25
15	MP1A	Mx	.0112	4.25
16	MP5A	X	-22.488	.25
17	MP5A	Z	-12.983	.25
18	MP5A	Mx	.0112	.25
19	MP5A	X	-22.488	4.25
20	MP5A	Z	-12.983	4.25
21	MP5A	Mx	.0112	4.25
22	MP4A	X	-10.97	1.75
23	MP4A	Z	-6.333	1.75
24	MP4A	Mx	.0055	1.75
25	MP4A	X	-10.97	3.75
26	MP4A	Z	-6.333	3.75
27	MP4A	Mx	.0055	3.75
28	MP2A	X	-27.654	1
29	MP2A	Z	-15.966	1
30	MP2A	Mx	.0084	1
31	MP2A	X	-27.654	4.5
32	MP2A	Z	-15.966	4.5
33	MP2A	Mx	.0084	4.5
34	MP2A	X	-27.654	1
35	MP2A	Z	-15.966	1
36	MP2A	Mx	.0377	1
37	MP2A	X	-27.654	4.5
38	MP2A	Z	-15.966	4.5
39	MP2A	Mx	.0377	4.5
40	MP2A	X	-12.541	7
41	MP2A	Z	-7.241	7
42	MP2A	Mx	-.0063	7
43	MP4A	X	-11.143	7
44	MP4A	Z	-6.433	7
45	MP4A	Mx	-.0056	7
46	MP3A	X	-16.047	.5
47	MP3A	Z	-9.264	.5
48	MP3A	Mx	-.012	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-4.372	4
2	MP2A	Z	-7.572	4
3	MP2A	Mx	.0018	4
4	MP2A	X	-4.372	4
5	MP2A	Z	-7.572	4
6	MP2A	Mx	-.0018	4
7	MP2A	X	-2.863	2
8	MP2A	Z	-4.958	2
9	MP2A	Mx	-.0033	2
10	MP1A	X	-13.793	.25
11	MP1A	Z	-23.89	.25
12	MP1A	Mx	.0069	.25
13	MP1A	X	-13.793	4.25
14	MP1A	Z	-23.89	4.25
15	MP1A	Mx	.0069	4.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
16	MP5A	X	-13.793	.25
17	MP5A	Z	-23.89	.25
18	MP5A	Mx	.0069	.25
19	MP5A	X	-13.793	4.25
20	MP5A	Z	-23.89	4.25
21	MP5A	Mx	.0069	4.25
22	MP4A	X	-9.502	1.75
23	MP4A	Z	-16.457	1.75
24	MP4A	Mx	.0048	1.75
25	MP4A	X	-9.502	3.75
26	MP4A	Z	-16.457	3.75
27	MP4A	Mx	.0048	3.75
28	MP2A	X	-22.449	1
29	MP2A	Z	-38.883	1
30	MP2A	Mx	-.0169	1
31	MP2A	X	-22.449	4.5
32	MP2A	Z	-38.883	4.5
33	MP2A	Mx	-.0169	4.5
34	MP2A	X	-22.449	1
35	MP2A	Z	-38.883	1
36	MP2A	Mx	.0544	1
37	MP2A	X	-22.449	4.5
38	MP2A	Z	-38.883	4.5
39	MP2A	Mx	.0544	4.5
40	MP2A	X	-8.658	7
41	MP2A	Z	-14.996	7
42	MP2A	Mx	-.0043	7
43	MP4A	X	-8.388	7
44	MP4A	Z	-14.529	7
45	MP4A	Mx	-.0042	7
46	MP3A	X	-11.212	.5
47	MP3A	Z	-19.419	.5
48	MP3A	Mx	-.0084	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	0	4
2	MP2A	Z	-2.86	4
3	MP2A	Mx	0	4
4	MP2A	X	0	4
5	MP2A	Z	-2.86	4
6	MP2A	Mx	0	4
7	MP2A	X	0	2
8	MP2A	Z	-1.549	2
9	MP2A	Mx	-.000645	2
10	MP1A	X	0	.25
11	MP1A	Z	-9.161	.25
12	MP1A	Mx	0	.25
13	MP1A	X	0	4.25
14	MP1A	Z	-9.161	4.25
15	MP1A	Mx	0	4.25
16	MP5A	X	0	.25
17	MP5A	Z	-9.161	.25
18	MP5A	Mx	0	.25
19	MP5A	X	0	4.25
20	MP5A	Z	-9.161	4.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
21	MP5A	Mx	0	4.25
22	MP4A	X	0	1.75
23	MP4A	Z	-5.846	1.75
24	MP4A	Mx	0	1.75
25	MP4A	X	0	3.75
26	MP4A	Z	-5.846	3.75
27	MP4A	Mx	0	3.75
28	MP2A	X	0	1
29	MP2A	Z	-17.001	1
30	MP2A	Mx	-.0156	1
31	MP2A	X	0	4.5
32	MP2A	Z	-17.001	4.5
33	MP2A	Mx	-.0156	4.5
34	MP2A	X	0	1
35	MP2A	Z	-17.001	1
36	MP2A	Mx	.0156	1
37	MP2A	X	0	4.5
38	MP2A	Z	-17.001	4.5
39	MP2A	Mx	.0156	4.5
40	MP2A	X	0	7
41	MP2A	Z	-4.618	7
42	MP2A	Mx	0	7
43	MP4A	X	0	7
44	MP4A	Z	-4.618	7
45	MP4A	Mx	0	7
46	MP3A	X	0	.5
47	MP3A	Z	-7.448	.5
48	MP3A	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	1.181	4
2	MP2A	Z	-2.045	4
3	MP2A	Mx	-.000492	4
4	MP2A	X	1.181	4
5	MP2A	Z	-2.045	4
6	MP2A	Mx	.000492	4
7	MP2A	X	.719	2
8	MP2A	Z	-1.245	2
9	MP2A	Mx	-.000219	2
10	MP1A	X	4.439	.25
11	MP1A	Z	-7.688	.25
12	MP1A	Mx	-.0022	.25
13	MP1A	X	4.439	4.25
14	MP1A	Z	-7.688	4.25
15	MP1A	Mx	-.0022	4.25
16	MP5A	X	4.439	.25
17	MP5A	Z	-7.688	.25
18	MP5A	Mx	-.0022	.25
19	MP5A	X	4.439	4.25
20	MP5A	Z	-7.688	4.25
21	MP5A	Mx	-.0022	4.25
22	MP4A	X	2.444	1.75
23	MP4A	Z	-4.233	1.75
24	MP4A	Mx	-.0012	1.75
25	MP4A	X	2.444	3.75



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
26	MP4A	Z	-4.233	3.75
27	MP4A	Mx	-0.012	3.75
28	MP2A	X	7.36	1
29	MP2A	Z	-12.748	1
30	MP2A	Mx	-0.178	1
31	MP2A	X	7.36	4.5
32	MP2A	Z	-12.748	4.5
33	MP2A	Mx	-0.178	4.5
34	MP2A	X	7.36	1
35	MP2A	Z	-12.748	1
36	MP2A	Mx	.0056	1
37	MP2A	X	7.36	4.5
38	MP2A	Z	-12.748	4.5
39	MP2A	Mx	.0056	4.5
40	MP2A	X	2.119	7
41	MP2A	Z	-3.67	7
42	MP2A	Mx	.0011	7
43	MP4A	X	2.048	7
44	MP4A	Z	-3.547	7
45	MP4A	Mx	.001	7
46	MP3A	X	3.397	.5
47	MP3A	Z	-5.885	.5
48	MP3A	Mx	.0025	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	1.183	4
2	MP2A	Z	-.683	4
3	MP2A	Mx	-.000493	4
4	MP2A	X	1.183	4
5	MP2A	Z	-.683	4
6	MP2A	Mx	.000493	4
7	MP2A	X	1.051	2
8	MP2A	Z	-.607	2
9	MP2A	Mx	.000185	2
10	MP1A	X	7.197	.25
11	MP1A	Z	-4.155	.25
12	MP1A	Mx	-.0036	.25
13	MP1A	X	7.197	4.25
14	MP1A	Z	-4.155	4.25
15	MP1A	Mx	-.0036	4.25
16	MP5A	X	7.197	.25
17	MP5A	Z	-4.155	.25
18	MP5A	Mx	-.0036	.25
19	MP5A	X	7.197	4.25
20	MP5A	Z	-4.155	4.25
21	MP5A	Mx	-.0036	4.25
22	MP4A	X	2.573	1.75
23	MP4A	Z	-1.486	1.75
24	MP4A	Mx	-.0013	1.75
25	MP4A	X	2.573	3.75
26	MP4A	Z	-1.486	3.75
27	MP4A	Mx	-.0013	3.75
28	MP2A	X	8.799	1
29	MP2A	Z	-5.08	1
30	MP2A	Mx	-.012	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
31	MP2A	X	8.799	4.5
32	MP2A	Z	-5.08	4.5
33	MP2A	Mx	-.012	4.5
34	MP2A	X	8.799	1
35	MP2A	Z	-5.08	1
36	MP2A	Mx	-.0027	1
37	MP2A	X	8.799	4.5
38	MP2A	Z	-5.08	4.5
39	MP2A	Mx	-.0027	4.5
40	MP2A	X	3.012	7
41	MP2A	Z	-1.739	7
42	MP2A	Mx	.0015	7
43	MP4A	X	2.644	7
44	MP4A	Z	-1.527	7
45	MP4A	Mx	.0013	7
46	MP3A	X	4.754	.5
47	MP3A	Z	-2.745	.5
48	MP3A	Mx	.0036	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	.867	4
2	MP2A	Z	0	4
3	MP2A	Mx	-.000361	4
4	MP2A	X	.867	4
5	MP2A	Z	0	4
6	MP2A	Mx	.000361	4
7	MP2A	X	1.101	2
8	MP2A	Z	0	2
9	MP2A	Mx	.000459	2
10	MP1A	X	8.027	.25
11	MP1A	Z	0	.25
12	MP1A	Mx	-.004	.25
13	MP1A	X	8.027	4.25
14	MP1A	Z	0	4.25
15	MP1A	Mx	-.004	4.25
16	MP5A	X	8.027	.25
17	MP5A	Z	0	.25
18	MP5A	Mx	-.004	.25
19	MP5A	X	8.027	4.25
20	MP5A	Z	0	4.25
21	MP5A	Mx	-.004	4.25
22	MP4A	X	2.013	1.75
23	MP4A	Z	0	1.75
24	MP4A	Mx	-.001	1.75
25	MP4A	X	2.013	3.75
26	MP4A	Z	0	3.75
27	MP4A	Mx	-.001	3.75
28	MP2A	X	7.879	1
29	MP2A	Z	0	1
30	MP2A	Mx	-.0066	1
31	MP2A	X	7.879	4.5
32	MP2A	Z	0	4.5
33	MP2A	Mx	-.0066	4.5
34	MP2A	X	7.879	1
35	MP2A	Z	0	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
36	MP2A	Mx	-.0066	1
37	MP2A	X	7.879	4.5
38	MP2A	Z	0	4.5
39	MP2A	Mx	-.0066	4.5
40	MP2A	X	3.098	7
41	MP2A	Z	0	7
42	MP2A	Mx	.0015	7
43	MP4A	X	2.532	7
44	MP4A	Z	0	7
45	MP4A	Mx	.0013	7
46	MP3A	X	4.837	.5
47	MP3A	Z	0	.5
48	MP3A	Mx	.0036	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	1.183	4
2	MP2A	Z	.683	4
3	MP2A	Mx	-.000493	4
4	MP2A	X	1.183	4
5	MP2A	Z	.683	4
6	MP2A	Mx	.000493	4
7	MP2A	X	1.051	2
8	MP2A	Z	.607	2
9	MP2A	Mx	.000691	2
10	MP1A	X	7.197	.25
11	MP1A	Z	4.155	.25
12	MP1A	Mx	-.0036	.25
13	MP1A	X	7.197	4.25
14	MP1A	Z	4.155	4.25
15	MP1A	Mx	-.0036	4.25
16	MP5A	X	7.197	.25
17	MP5A	Z	4.155	.25
18	MP5A	Mx	-.0036	.25
19	MP5A	X	7.197	4.25
20	MP5A	Z	4.155	4.25
21	MP5A	Mx	-.0036	4.25
22	MP4A	X	2.573	1.75
23	MP4A	Z	1.486	1.75
24	MP4A	Mx	-.0013	1.75
25	MP4A	X	2.573	3.75
26	MP4A	Z	1.486	3.75
27	MP4A	Mx	-.0013	3.75
28	MP2A	X	8.799	1
29	MP2A	Z	5.08	1
30	MP2A	Mx	-.0027	1
31	MP2A	X	8.799	4.5
32	MP2A	Z	5.08	4.5
33	MP2A	Mx	-.0027	4.5
34	MP2A	X	8.799	1
35	MP2A	Z	5.08	1
36	MP2A	Mx	-.012	1
37	MP2A	X	8.799	4.5
38	MP2A	Z	5.08	4.5
39	MP2A	Mx	-.012	4.5
40	MP2A	X	3.012	7



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
41	MP2A	Z	1.739	7
42	MP2A	Mx	.0015	7
43	MP4A	X	2.644	7
44	MP4A	Z	1.527	7
45	MP4A	Mx	.0013	7
46	MP3A	X	4.754	.5
47	MP3A	Z	2.745	.5
48	MP3A	Mx	.0036	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	1.181	4
2	MP2A	Z	2.045	4
3	MP2A	Mx	-.000492	4
4	MP2A	X	1.181	4
5	MP2A	Z	2.045	4
6	MP2A	Mx	.000492	4
7	MP2A	X	.719	2
8	MP2A	Z	1.245	2
9	MP2A	Mx	.000818	2
10	MP1A	X	4.439	.25
11	MP1A	Z	7.688	.25
12	MP1A	Mx	-.0022	.25
13	MP1A	X	4.439	4.25
14	MP1A	Z	7.688	4.25
15	MP1A	Mx	-.0022	4.25
16	MP5A	X	4.439	.25
17	MP5A	Z	7.688	.25
18	MP5A	Mx	-.0022	.25
19	MP5A	X	4.439	4.25
20	MP5A	Z	7.688	4.25
21	MP5A	Mx	-.0022	4.25
22	MP4A	X	2.444	1.75
23	MP4A	Z	4.233	1.75
24	MP4A	Mx	-.0012	1.75
25	MP4A	X	2.444	3.75
26	MP4A	Z	4.233	3.75
27	MP4A	Mx	-.0012	3.75
28	MP2A	X	7.36	1
29	MP2A	Z	12.748	1
30	MP2A	Mx	.0056	1
31	MP2A	X	7.36	4.5
32	MP2A	Z	12.748	4.5
33	MP2A	Mx	.0056	4.5
34	MP2A	X	7.36	1
35	MP2A	Z	12.748	1
36	MP2A	Mx	-.0178	1
37	MP2A	X	7.36	4.5
38	MP2A	Z	12.748	4.5
39	MP2A	Mx	-.0178	4.5
40	MP2A	X	2.119	7
41	MP2A	Z	3.67	7
42	MP2A	Mx	.0011	7
43	MP4A	X	2.048	7
44	MP4A	Z	3.547	7
45	MP4A	Mx	.001	7



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

July 21, 2023
 7:18 PM
 Checked By: _____

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
46	MP3A	X	3.397	.5
47	MP3A	Z	5.885	.5
48	MP3A	Mx	.0025	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	0	4
2	MP2A	Z	2.86	4
3	MP2A	Mx	0	4
4	MP2A	X	0	4
5	MP2A	Z	2.86	4
6	MP2A	Mx	0	4
7	MP2A	X	0	2
8	MP2A	Z	1.549	2
9	MP2A	Mx	.000645	2
10	MP1A	X	0	.25
11	MP1A	Z	9.161	.25
12	MP1A	Mx	0	.25
13	MP1A	X	0	4.25
14	MP1A	Z	9.161	4.25
15	MP1A	Mx	0	4.25
16	MP5A	X	0	.25
17	MP5A	Z	9.161	.25
18	MP5A	Mx	0	.25
19	MP5A	X	0	4.25
20	MP5A	Z	9.161	4.25
21	MP5A	Mx	0	4.25
22	MP4A	X	0	1.75
23	MP4A	Z	5.846	1.75
24	MP4A	Mx	0	1.75
25	MP4A	X	0	3.75
26	MP4A	Z	5.846	3.75
27	MP4A	Mx	0	3.75
28	MP2A	X	0	1
29	MP2A	Z	17.001	1
30	MP2A	Mx	.0156	1
31	MP2A	X	0	4.5
32	MP2A	Z	17.001	4.5
33	MP2A	Mx	.0156	4.5
34	MP2A	X	0	1
35	MP2A	Z	17.001	1
36	MP2A	Mx	-.0156	1
37	MP2A	X	0	4.5
38	MP2A	Z	17.001	4.5
39	MP2A	Mx	-.0156	4.5
40	MP2A	X	0	7
41	MP2A	Z	4.618	7
42	MP2A	Mx	0	7
43	MP4A	X	0	7
44	MP4A	Z	4.618	7
45	MP4A	Mx	0	7
46	MP3A	X	0	.5
47	MP3A	Z	7.448	.5
48	MP3A	Mx	0	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-1.181	4
2	MP2A	Z	2.045	4
3	MP2A	Mx	.000492	4
4	MP2A	X	-1.181	4
5	MP2A	Z	2.045	4
6	MP2A	Mx	-.000492	4
7	MP2A	X	-.719	2
8	MP2A	Z	1.245	2
9	MP2A	Mx	.000219	2
10	MP1A	X	-4.439	.25
11	MP1A	Z	7.688	.25
12	MP1A	Mx	.0022	.25
13	MP1A	X	-4.439	4.25
14	MP1A	Z	7.688	4.25
15	MP1A	Mx	.0022	4.25
16	MP5A	X	-4.439	.25
17	MP5A	Z	7.688	.25
18	MP5A	Mx	.0022	.25
19	MP5A	X	-4.439	4.25
20	MP5A	Z	7.688	4.25
21	MP5A	Mx	.0022	4.25
22	MP4A	X	-2.444	1.75
23	MP4A	Z	4.233	1.75
24	MP4A	Mx	.0012	1.75
25	MP4A	X	-2.444	3.75
26	MP4A	Z	4.233	3.75
27	MP4A	Mx	.0012	3.75
28	MP2A	X	-7.36	1
29	MP2A	Z	12.748	1
30	MP2A	Mx	.0178	1
31	MP2A	X	-7.36	4.5
32	MP2A	Z	12.748	4.5
33	MP2A	Mx	.0178	4.5
34	MP2A	X	-7.36	1
35	MP2A	Z	12.748	1
36	MP2A	Mx	-.0056	1
37	MP2A	X	-7.36	4.5
38	MP2A	Z	12.748	4.5
39	MP2A	Mx	-.0056	4.5
40	MP2A	X	-2.119	7
41	MP2A	Z	3.67	7
42	MP2A	Mx	-.0011	7
43	MP4A	X	-2.048	7
44	MP4A	Z	3.547	7
45	MP4A	Mx	-.001	7
46	MP3A	X	-3.397	.5
47	MP3A	Z	5.885	.5
48	MP3A	Mx	-.0025	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-1.183	4
2	MP2A	Z	.683	4
3	MP2A	Mx	.000493	4
4	MP2A	X	-1.183	4
5	MP2A	Z	.683	4



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
6	MP2A	Mx	-0.00493	4
7	MP2A	X	-1.051	2
8	MP2A	Z	.607	2
9	MP2A	Mx	-0.00185	2
10	MP1A	X	-7.197	.25
11	MP1A	Z	4.155	.25
12	MP1A	Mx	.0036	.25
13	MP1A	X	-7.197	4.25
14	MP1A	Z	4.155	4.25
15	MP1A	Mx	.0036	4.25
16	MP5A	X	-7.197	.25
17	MP5A	Z	4.155	.25
18	MP5A	Mx	.0036	.25
19	MP5A	X	-7.197	4.25
20	MP5A	Z	4.155	4.25
21	MP5A	Mx	.0036	4.25
22	MP4A	X	-2.573	1.75
23	MP4A	Z	1.486	1.75
24	MP4A	Mx	.0013	1.75
25	MP4A	X	-2.573	3.75
26	MP4A	Z	1.486	3.75
27	MP4A	Mx	.0013	3.75
28	MP2A	X	-8.799	1
29	MP2A	Z	5.08	1
30	MP2A	Mx	.012	1
31	MP2A	X	-8.799	4.5
32	MP2A	Z	5.08	4.5
33	MP2A	Mx	.012	4.5
34	MP2A	X	-8.799	1
35	MP2A	Z	5.08	1
36	MP2A	Mx	.0027	1
37	MP2A	X	-8.799	4.5
38	MP2A	Z	5.08	4.5
39	MP2A	Mx	.0027	4.5
40	MP2A	X	-3.012	7
41	MP2A	Z	1.739	7
42	MP2A	Mx	-.0015	7
43	MP4A	X	-2.644	7
44	MP4A	Z	1.527	7
45	MP4A	Mx	-.0013	7
46	MP3A	X	-4.754	.5
47	MP3A	Z	2.745	.5
48	MP3A	Mx	-.0036	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-.867	4
2	MP2A	Z	0	4
3	MP2A	Mx	.000361	4
4	MP2A	X	-.867	4
5	MP2A	Z	0	4
6	MP2A	Mx	-.000361	4
7	MP2A	X	-1.101	2
8	MP2A	Z	0	2
9	MP2A	Mx	-.000459	2
10	MP1A	X	-8.027	.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
11	MP1A	Z	0	.25
12	MP1A	Mx	.004	.25
13	MP1A	X	-8.027	4.25
14	MP1A	Z	0	4.25
15	MP1A	Mx	.004	4.25
16	MP5A	X	-8.027	.25
17	MP5A	Z	0	.25
18	MP5A	Mx	.004	.25
19	MP5A	X	-8.027	4.25
20	MP5A	Z	0	4.25
21	MP5A	Mx	.004	4.25
22	MP4A	X	-2.013	1.75
23	MP4A	Z	0	1.75
24	MP4A	Mx	.001	1.75
25	MP4A	X	-2.013	3.75
26	MP4A	Z	0	3.75
27	MP4A	Mx	.001	3.75
28	MP2A	X	-7.879	1
29	MP2A	Z	0	1
30	MP2A	Mx	.0066	1
31	MP2A	X	-7.879	4.5
32	MP2A	Z	0	4.5
33	MP2A	Mx	.0066	4.5
34	MP2A	X	-7.879	1
35	MP2A	Z	0	1
36	MP2A	Mx	.0066	1
37	MP2A	X	-7.879	4.5
38	MP2A	Z	0	4.5
39	MP2A	Mx	.0066	4.5
40	MP2A	X	-3.098	7
41	MP2A	Z	0	7
42	MP2A	Mx	-.0015	7
43	MP4A	X	-2.532	7
44	MP4A	Z	0	7
45	MP4A	Mx	-.0013	7
46	MP3A	X	-4.837	.5
47	MP3A	Z	0	.5
48	MP3A	Mx	-.0036	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	-1.183	4
2	MP2A	Z	-.683	4
3	MP2A	Mx	.000493	4
4	MP2A	X	-1.183	4
5	MP2A	Z	-.683	4
6	MP2A	Mx	-.000493	4
7	MP2A	X	-1.051	2
8	MP2A	Z	-.607	2
9	MP2A	Mx	-.000691	2
10	MP1A	X	-7.197	.25
11	MP1A	Z	-4.155	.25
12	MP1A	Mx	.0036	.25
13	MP1A	X	-7.197	4.25
14	MP1A	Z	-4.155	4.25
15	MP1A	Mx	.0036	4.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
16	MP5A	X	-7.197	.25
17	MP5A	Z	-4.155	.25
18	MP5A	Mx	.0036	.25
19	MP5A	X	-7.197	4.25
20	MP5A	Z	-4.155	4.25
21	MP5A	Mx	.0036	4.25
22	MP4A	X	-2.573	1.75
23	MP4A	Z	-1.486	1.75
24	MP4A	Mx	.0013	1.75
25	MP4A	X	-2.573	3.75
26	MP4A	Z	-1.486	3.75
27	MP4A	Mx	.0013	3.75
28	MP2A	X	-8.799	1
29	MP2A	Z	-5.08	1
30	MP2A	Mx	.0027	1
31	MP2A	X	-8.799	4.5
32	MP2A	Z	-5.08	4.5
33	MP2A	Mx	.0027	4.5
34	MP2A	X	-8.799	1
35	MP2A	Z	-5.08	1
36	MP2A	Mx	.012	1
37	MP2A	X	-8.799	4.5
38	MP2A	Z	-5.08	4.5
39	MP2A	Mx	.012	4.5
40	MP2A	X	-3.012	7
41	MP2A	Z	-1.739	7
42	MP2A	Mx	-.0015	7
43	MP4A	X	-2.644	7
44	MP4A	Z	-1.527	7
45	MP4A	Mx	-.0013	7
46	MP3A	X	-4.754	.5
47	MP3A	Z	-2.745	.5
48	MP3A	Mx	-.0036	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-1.181	4
2	MP2A	Z	-2.045	4
3	MP2A	Mx	.000492	4
4	MP2A	X	-1.181	4
5	MP2A	Z	-2.045	4
6	MP2A	Mx	-.000492	4
7	MP2A	X	-.719	2
8	MP2A	Z	-1.245	2
9	MP2A	Mx	-.000818	2
10	MP1A	X	-4.439	.25
11	MP1A	Z	-7.688	.25
12	MP1A	Mx	.0022	.25
13	MP1A	X	-4.439	4.25
14	MP1A	Z	-7.688	4.25
15	MP1A	Mx	.0022	4.25
16	MP5A	X	-4.439	.25
17	MP5A	Z	-7.688	.25
18	MP5A	Mx	.0022	.25
19	MP5A	X	-4.439	4.25
20	MP5A	Z	-7.688	4.25



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
21	MP5A	Mx	.0022	4.25
22	MP4A	X	-2.444	1.75
23	MP4A	Z	-4.233	1.75
24	MP4A	Mx	.0012	1.75
25	MP4A	X	-2.444	3.75
26	MP4A	Z	-4.233	3.75
27	MP4A	Mx	.0012	3.75
28	MP2A	X	-7.36	1
29	MP2A	Z	-12.748	1
30	MP2A	Mx	-0.0056	1
31	MP2A	X	-7.36	4.5
32	MP2A	Z	-12.748	4.5
33	MP2A	Mx	-0.0056	4.5
34	MP2A	X	-7.36	1
35	MP2A	Z	-12.748	1
36	MP2A	Mx	.0178	1
37	MP2A	X	-7.36	4.5
38	MP2A	Z	-12.748	4.5
39	MP2A	Mx	.0178	4.5
40	MP2A	X	-2.119	7
41	MP2A	Z	-3.67	7
42	MP2A	Mx	-0.0011	7
43	MP4A	X	-2.048	7
44	MP4A	Z	-3.547	7
45	MP4A	Mx	-.001	7
46	MP3A	X	-3.397	.5
47	MP3A	Z	-5.885	.5
48	MP3A	Mx	-.0025	.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M31A	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M34A	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M3	Y	-250	%100

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	M3	Y	-250	0

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	Y	-6984	4
2	MP2A	My	-.000291	4
3	MP2A	Mz	0	4
4	MP2A	Y	-6984	4
5	MP2A	My	.000291	4
6	MP2A	Mz	0	4
7	MP2A	Y	-8214	2



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
8	MP2A	My	.000342	2
9	MP2A	Mz	.000342	2
10	MP1A	Y	-.3968	.25
11	MP1A	My	-.000198	.25
12	MP1A	Mz	0	.25
13	MP1A	Y	-.3968	4.25
14	MP1A	My	-.000198	4.25
15	MP1A	Mz	0	4.25
16	MP5A	Y	-.3968	.25
17	MP5A	My	-.000198	.25
18	MP5A	Mz	0	.25
19	MP5A	Y	-.3968	4.25
20	MP5A	My	-.000198	4.25
21	MP5A	Mz	0	4.25
22	MP4A	Y	-1.7281	1.75
23	MP4A	My	-.000864	1.75
24	MP4A	Mz	0	1.75
25	MP4A	Y	-1.7281	3.75
26	MP4A	My	-.000864	3.75
27	MP4A	Mz	0	3.75
28	MP2A	Y	-1.8154	1
29	MP2A	My	-.0015	1
30	MP2A	Mz	.0017	1
31	MP2A	Y	-1.8154	4.5
32	MP2A	My	-.0015	4.5
33	MP2A	Mz	.0017	4.5
34	MP2A	Y	-1.8154	1
35	MP2A	My	-.0015	1
36	MP2A	Mz	-.0017	1
37	MP2A	Y	-1.8154	4.5
38	MP2A	My	-.0015	4.5
39	MP2A	Mz	-.0017	4.5
40	MP2A	Y	-3.349	7
41	MP2A	My	.0017	7
42	MP2A	Mz	0	7
43	MP4A	Y	-2.7895	7
44	MP4A	My	.0014	7
45	MP4A	Mz	0	7
46	MP3A	Y	-1.0674	.5
47	MP3A	My	.000801	.5
48	MP3A	Mz	0	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	Z	-1.7459	4
2	MP2A	Mx	0	4
3	MP2A	Z	-1.7459	4
4	MP2A	Mx	0	4
5	MP2A	Z	-2.0534	2
6	MP2A	Mx	-.000856	2
7	MP1A	Z	-.992	.25
8	MP1A	Mx	0	.25
9	MP1A	Z	-.992	4.25
10	MP1A	Mx	0	4.25
11	MP5A	Z	-.992	.25
12	MP5A	Mx	0	.25

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
13	MP5A	Z	-.992	4.25
14	MP5A	Mx	0	4.25
15	MP4A	Z	-4.3202	1.75
16	MP4A	Mx	0	1.75
17	MP4A	Z	-4.3202	3.75
18	MP4A	Mx	0	3.75
19	MP2A	Z	-4.5384	1
20	MP2A	Mx	-.0042	1
21	MP2A	Z	-4.5384	4.5
22	MP2A	Mx	-.0042	4.5
23	MP2A	Z	-4.5384	1
24	MP2A	Mx	.0042	1
25	MP2A	Z	-4.5384	4.5
26	MP2A	Mx	.0042	4.5
27	MP2A	Z	-8.3725	7
28	MP2A	Mx	0	7
29	MP4A	Z	-6.9738	7
30	MP4A	Mx	0	7
31	MP3A	Z	-2.6685	.5
32	MP3A	Mx	0	.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	1.7459	4
2	MP2A	Mx	-.000727	4
3	MP2A	X	1.7459	4
4	MP2A	Mx	.000727	4
5	MP2A	X	2.0534	2
6	MP2A	Mx	.000856	2
7	MP1A	X	.992	.25
8	MP1A	Mx	-.000496	.25
9	MP1A	X	.992	4.25
10	MP1A	Mx	-.000496	4.25
11	MP5A	X	.992	.25
12	MP5A	Mx	-.000496	.25
13	MP5A	X	.992	4.25
14	MP5A	Mx	-.000496	4.25
15	MP4A	X	4.3202	1.75
16	MP4A	Mx	-.0022	1.75
17	MP4A	X	4.3202	3.75
18	MP4A	Mx	-.0022	3.75
19	MP2A	X	4.5384	1
20	MP2A	Mx	-.0038	1
21	MP2A	X	4.5384	4.5
22	MP2A	Mx	-.0038	4.5
23	MP2A	X	4.5384	1
24	MP2A	Mx	-.0038	1
25	MP2A	X	4.5384	4.5
26	MP2A	Mx	-.0038	4.5
27	MP2A	X	8.3725	7
28	MP2A	Mx	.0042	7
29	MP4A	X	6.9738	7
30	MP4A	Mx	.0035	7
31	MP3A	X	2.6685	.5
32	MP3A	Mx	.002	.5



Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude...	End Magnitude ...	Start Location[ft...	End Location[ft...
1	M1	Y	-8.2352	-8.2352	0	%100
2	M2	Y	-8.2352	-8.2352	0	%100
3	M3	Y	-8.2352	-8.2352	0	%100
4	M4	Y	-8.2352	-8.2352	0	%100
5	M7	Y	-7.1179	-7.1179	0	%100
6	M8	Y	-8.2352	-8.2352	0	%100
7	M9	Y	-8.2352	-8.2352	0	%100
8	M10	Y	-4.7109	-4.7109	0	%100
9	M11	Y	-5.4255	-5.4255	0	%100
10	M12	Y	-5.4255	-5.4255	0	%100
11	M13	Y	-5.4255	-5.4255	0	%100
12	M14	Y	-5.4255	-5.4255	0	%100
13	MP1A	Y	-5.4255	-5.4255	0	%100
14	M25	Y	-5.4255	-5.4255	0	%100
15	M26	Y	-5.4255	-5.4255	0	%100
16	MP3A	Y	-5.4255	-5.4255	0	%100
17	MP5A	Y	-5.4255	-5.4255	0	%100
18	MP2A	Y	-5.4255	-5.4255	0	%100
19	MP4A	Y	-5.4255	-5.4255	0	%100

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

	Member Label	Direction	Start Magnitude...	End Magnitude ...	Start Location[ft...	End Location[ft...
1	M1	X	0	0	0	%100
2	M1	Z	-25.8603	-25.8603	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-25.8603	-25.8603	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	-25.8603	-25.8603	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	-25.8603	-25.8603	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	-12.2216	-12.2216	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	-7.8634	-7.8634	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	-10.0927	-10.0927	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	-10.0927	-10.0927	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	-10.0927	-10.0927	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	-10.0927	-10.0927	0	%100
25	MP1A	X	0	0	0	%100
26	MP1A	Z	-12.2836	-12.2836	0	%100
27	M25	X	0	0	0	%100
28	M25	Z	-8.9989	-8.9989	0	%100
29	M26	X	0	0	0	%100
30	M26	Z	-.0854	-.0854	0	%100
31	MP3A	X	0	0	0	%100
32	MP3A	Z	-12.2836	-12.2836	0	%100
33	MP5A	X	0	0	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
34	MP5A	Z	-12.2836	-12.2836	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-12.2836	-12.2836	0	%100
37	MP4A	X	0	0	0	%100
38	MP4A	Z	-12.2836	-12.2836	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	9.6976	9.6976	0	%100
2	M1	Z	-16.7967	-16.7967	0	%100
3	M2	X	9.6976	9.6976	0	%100
4	M2	Z	-16.7967	-16.7967	0	%100
5	M3	X	9.6976	9.6976	0	%100
6	M3	Z	-16.7967	-16.7967	0	%100
7	M4	X	9.6976	9.6976	0	%100
8	M4	Z	-16.7967	-16.7967	0	%100
9	M7	X	6.1108	6.1108	0	%100
10	M7	Z	-10.5842	-10.5842	0	%100
11	M8	X	1.5699	1.5699	0	%100
12	M8	Z	-2.7191	-2.7191	0	%100
13	M9	X	1.5699	1.5699	0	%100
14	M9	Z	-2.7191	-2.7191	0	%100
15	M10	X	3.9317	3.9317	0	%100
16	M10	Z	-6.8099	-6.8099	0	%100
17	M11	X	5.0463	5.0463	0	%100
18	M11	Z	-8.7405	-8.7405	0	%100
19	M12	X	5.0463	5.0463	0	%100
20	M12	Z	-8.7405	-8.7405	0	%100
21	M13	X	5.0463	5.0463	0	%100
22	M13	Z	-8.7405	-8.7405	0	%100
23	M14	X	5.0463	5.0463	0	%100
24	M14	Z	-8.7405	-8.7405	0	%100
25	MP1A	X	6.1418	6.1418	0	%100
26	MP1A	Z	-10.6379	-10.6379	0	%100
27	M25	X	1.431	1.431	0	%100
28	M25	Z	-2.4785	-2.4785	0	%100
29	M26	X	1.9987	1.9987	0	%100
30	M26	Z	-3.4619	-3.4619	0	%100
31	MP3A	X	6.1418	6.1418	0	%100
32	MP3A	Z	-10.6379	-10.6379	0	%100
33	MP5A	X	6.1418	6.1418	0	%100
34	MP5A	Z	-10.6379	-10.6379	0	%100
35	MP2A	X	6.1418	6.1418	0	%100
36	MP2A	Z	-10.6379	-10.6379	0	%100
37	MP4A	X	6.1418	6.1418	0	%100
38	MP4A	Z	-10.6379	-10.6379	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	5.5989	5.5989	0	%100
2	M1	Z	-3.2325	-3.2325	0	%100
3	M2	X	5.5989	5.5989	0	%100
4	M2	Z	-3.2325	-3.2325	0	%100
5	M3	X	5.5989	5.5989	0	%100
6	M3	Z	-3.2325	-3.2325	0	%100
7	M4	X	5.5989	5.5989	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
8	M4	Z	-3.2325	-3.2325	0	%100
9	M7	X	10.5842	10.5842	0	%100
10	M7	Z	-6.1108	-6.1108	0	%100
11	M8	X	8.1573	8.1573	0	%100
12	M8	Z	-4.7096	-4.7096	0	%100
13	M9	X	8.1573	8.1573	0	%100
14	M9	Z	-4.7096	-4.7096	0	%100
15	M10	X	6.8099	6.8099	0	%100
16	M10	Z	-3.9317	-3.9317	0	%100
17	M11	X	8.7405	8.7405	0	%100
18	M11	Z	-5.0463	-5.0463	0	%100
19	M12	X	8.7405	8.7405	0	%100
20	M12	Z	-5.0463	-5.0463	0	%100
21	M13	X	8.7405	8.7405	0	%100
22	M13	Z	-5.0463	-5.0463	0	%100
23	M14	X	8.7405	8.7405	0	%100
24	M14	Z	-5.0463	-5.0463	0	%100
25	MP1A	X	10.6379	10.6379	0	%100
26	MP1A	Z	-6.1418	-6.1418	0	%100
27	M25	X	.0042	.0042	0	%100
28	M25	Z	-.0024	-.0024	0	%100
29	M26	X	8.7069	8.7069	0	%100
30	M26	Z	-5.0269	-5.0269	0	%100
31	MP3A	X	10.6379	10.6379	0	%100
32	MP3A	Z	-6.1418	-6.1418	0	%100
33	MP5A	X	10.6379	10.6379	0	%100
34	MP5A	Z	-6.1418	-6.1418	0	%100
35	MP2A	X	10.6379	10.6379	0	%100
36	MP2A	Z	-6.1418	-6.1418	0	%100
37	MP4A	X	10.6379	10.6379	0	%100
38	MP4A	Z	-6.1418	-6.1418	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	M7	X	12.2216	12.2216	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	12.559	12.559	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	12.559	12.559	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	7.8634	7.8634	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	10.0927	10.0927	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	10.0927	10.0927	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	10.0927	10.0927	0	%100
22	M13	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
23	M14	X	10.0927	10.0927	0	%100
24	M14	Z	0	0	0	%100
25	MP1A	X	12.2836	12.2836	0	%100
26	MP1A	Z	0	0	0	%100
27	M25	X	3.2848	3.2848	0	%100
28	M25	Z	0	0	0	%100
29	M26	X	12.1982	12.1982	0	%100
30	M26	Z	0	0	0	%100
31	MP3A	X	12.2836	12.2836	0	%100
32	MP3A	Z	0	0	0	%100
33	MP5A	X	12.2836	12.2836	0	%100
34	MP5A	Z	0	0	0	%100
35	MP2A	X	12.2836	12.2836	0	%100
36	MP2A	Z	0	0	0	%100
37	MP4A	X	12.2836	12.2836	0	%100
38	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	5.5989	5.5989	0	%100
2	M1	Z	3.2325	3.2325	0	%100
3	M2	X	5.5989	5.5989	0	%100
4	M2	Z	3.2325	3.2325	0	%100
5	M3	X	5.5989	5.5989	0	%100
6	M3	Z	3.2325	3.2325	0	%100
7	M4	X	5.5989	5.5989	0	%100
8	M4	Z	3.2325	3.2325	0	%100
9	M7	X	10.5842	10.5842	0	%100
10	M7	Z	6.1108	6.1108	0	%100
11	M8	X	8.1573	8.1573	0	%100
12	M8	Z	4.7096	4.7096	0	%100
13	M9	X	8.1573	8.1573	0	%100
14	M9	Z	4.7096	4.7096	0	%100
15	M10	X	6.8099	6.8099	0	%100
16	M10	Z	3.9317	3.9317	0	%100
17	M11	X	8.7405	8.7405	0	%100
18	M11	Z	5.0463	5.0463	0	%100
19	M12	X	8.7405	8.7405	0	%100
20	M12	Z	5.0463	5.0463	0	%100
21	M13	X	8.7405	8.7405	0	%100
22	M13	Z	5.0463	5.0463	0	%100
23	M14	X	8.7405	8.7405	0	%100
24	M14	Z	5.0463	5.0463	0	%100
25	MP1A	X	10.6379	10.6379	0	%100
26	MP1A	Z	6.1418	6.1418	0	%100
27	M25	X	8.1594	8.1594	0	%100
28	M25	Z	4.7109	4.7109	0	%100
29	M26	X	7.176	7.176	0	%100
30	M26	Z	4.1431	4.1431	0	%100
31	MP3A	X	10.6379	10.6379	0	%100
32	MP3A	Z	6.1418	6.1418	0	%100
33	MP5A	X	10.6379	10.6379	0	%100
34	MP5A	Z	6.1418	6.1418	0	%100
35	MP2A	X	10.6379	10.6379	0	%100
36	MP2A	Z	6.1418	6.1418	0	%100
37	MP4A	X	10.6379	10.6379	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
38	MP4A	Z	6.1418	6.1418	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	9.6976	9.6976	0	%100
2	M1	Z	16.7967	16.7967	0	%100
3	M2	X	9.6976	9.6976	0	%100
4	M2	Z	16.7967	16.7967	0	%100
5	M3	X	9.6976	9.6976	0	%100
6	M3	Z	16.7967	16.7967	0	%100
7	M4	X	9.6976	9.6976	0	%100
8	M4	Z	16.7967	16.7967	0	%100
9	M7	X	6.1108	6.1108	0	%100
10	M7	Z	10.5842	10.5842	0	%100
11	M8	X	1.5699	1.5699	0	%100
12	M8	Z	2.7191	2.7191	0	%100
13	M9	X	1.5699	1.5699	0	%100
14	M9	Z	2.7191	2.7191	0	%100
15	M10	X	3.9317	3.9317	0	%100
16	M10	Z	6.8099	6.8099	0	%100
17	M11	X	5.0463	5.0463	0	%100
18	M11	Z	8.7405	8.7405	0	%100
19	M12	X	5.0463	5.0463	0	%100
20	M12	Z	8.7405	8.7405	0	%100
21	M13	X	5.0463	5.0463	0	%100
22	M13	Z	8.7405	8.7405	0	%100
23	M14	X	5.0463	5.0463	0	%100
24	M14	Z	8.7405	8.7405	0	%100
25	MP1A	X	6.1418	6.1418	0	%100
26	MP1A	Z	10.6379	10.6379	0	%100
27	M25	X	6.1394	6.1394	0	%100
28	M25	Z	10.6337	10.6337	0	%100
29	M26	X	1.1149	1.1149	0	%100
30	M26	Z	1.931	1.931	0	%100
31	MP3A	X	6.1418	6.1418	0	%100
32	MP3A	Z	10.6379	10.6379	0	%100
33	MP5A	X	6.1418	6.1418	0	%100
34	MP5A	Z	10.6379	10.6379	0	%100
35	MP2A	X	6.1418	6.1418	0	%100
36	MP2A	Z	10.6379	10.6379	0	%100
37	MP4A	X	6.1418	6.1418	0	%100
38	MP4A	Z	10.6379	10.6379	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	25.8603	25.8603	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	25.8603	25.8603	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	25.8603	25.8603	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	25.8603	25.8603	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	12.2216	12.2216	0	%100
11	M8	X	0	0	0	%100



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

July 21, 2023
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 Checked By: _____

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
12	M8	Z	0	0	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	7.8634	7.8634	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	10.0927	10.0927	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	10.0927	10.0927	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	10.0927	10.0927	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	10.0927	10.0927	0	%100
25	MP1A	X	0	0	0	%100
26	MP1A	Z	12.2836	12.2836	0	%100
27	M25	X	0	0	0	%100
28	M25	Z	8.9989	8.9989	0	%100
29	M26	X	0	0	0	%100
30	M26	Z	.0854	.0854	0	%100
31	MP3A	X	0	0	0	%100
32	MP3A	Z	12.2836	12.2836	0	%100
33	MP5A	X	0	0	0	%100
34	MP5A	Z	12.2836	12.2836	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	12.2836	12.2836	0	%100
37	MP4A	X	0	0	0	%100
38	MP4A	Z	12.2836	12.2836	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-9.6976	-9.6976	0	%100
2	M1	Z	16.7967	16.7967	0	%100
3	M2	X	-9.6976	-9.6976	0	%100
4	M2	Z	16.7967	16.7967	0	%100
5	M3	X	-9.6976	-9.6976	0	%100
6	M3	Z	16.7967	16.7967	0	%100
7	M4	X	-9.6976	-9.6976	0	%100
8	M4	Z	16.7967	16.7967	0	%100
9	M7	X	-6.1108	-6.1108	0	%100
10	M7	Z	10.5842	10.5842	0	%100
11	M8	X	-1.5699	-1.5699	0	%100
12	M8	Z	2.7191	2.7191	0	%100
13	M9	X	-1.5699	-1.5699	0	%100
14	M9	Z	2.7191	2.7191	0	%100
15	M10	X	-3.9317	-3.9317	0	%100
16	M10	Z	6.8099	6.8099	0	%100
17	M11	X	-5.0463	-5.0463	0	%100
18	M11	Z	8.7405	8.7405	0	%100
19	M12	X	-5.0463	-5.0463	0	%100
20	M12	Z	8.7405	8.7405	0	%100
21	M13	X	-5.0463	-5.0463	0	%100
22	M13	Z	8.7405	8.7405	0	%100
23	M14	X	-5.0463	-5.0463	0	%100
24	M14	Z	8.7405	8.7405	0	%100
25	MP1A	X	-6.1418	-6.1418	0	%100
26	MP1A	Z	10.6379	10.6379	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
27	M25	X	-1.431	-1.431	0	%100
28	M25	Z	2.4785	2.4785	0	%100
29	M26	X	-1.9987	-1.9987	0	%100
30	M26	Z	3.4619	3.4619	0	%100
31	MP3A	X	-6.1418	-6.1418	0	%100
32	MP3A	Z	10.6379	10.6379	0	%100
33	MP5A	X	-6.1418	-6.1418	0	%100
34	MP5A	Z	10.6379	10.6379	0	%100
35	MP2A	X	-6.1418	-6.1418	0	%100
36	MP2A	Z	10.6379	10.6379	0	%100
37	MP4A	X	-6.1418	-6.1418	0	%100
38	MP4A	Z	10.6379	10.6379	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-5.5989	-5.5989	0	%100
2	M1	Z	3.2325	3.2325	0	%100
3	M2	X	-5.5989	-5.5989	0	%100
4	M2	Z	3.2325	3.2325	0	%100
5	M3	X	-5.5989	-5.5989	0	%100
6	M3	Z	3.2325	3.2325	0	%100
7	M4	X	-5.5989	-5.5989	0	%100
8	M4	Z	3.2325	3.2325	0	%100
9	M7	X	-10.5842	-10.5842	0	%100
10	M7	Z	6.1108	6.1108	0	%100
11	M8	X	-8.1573	-8.1573	0	%100
12	M8	Z	4.7096	4.7096	0	%100
13	M9	X	-8.1573	-8.1573	0	%100
14	M9	Z	4.7096	4.7096	0	%100
15	M10	X	-6.8099	-6.8099	0	%100
16	M10	Z	3.9317	3.9317	0	%100
17	M11	X	-8.7405	-8.7405	0	%100
18	M11	Z	5.0463	5.0463	0	%100
19	M12	X	-8.7405	-8.7405	0	%100
20	M12	Z	5.0463	5.0463	0	%100
21	M13	X	-8.7405	-8.7405	0	%100
22	M13	Z	5.0463	5.0463	0	%100
23	M14	X	-8.7405	-8.7405	0	%100
24	M14	Z	5.0463	5.0463	0	%100
25	MP1A	X	-10.6379	-10.6379	0	%100
26	MP1A	Z	6.1418	6.1418	0	%100
27	M25	X	-.0042	-.0042	0	%100
28	M25	Z	.0024	.0024	0	%100
29	M26	X	-8.7069	-8.7069	0	%100
30	M26	Z	5.0269	5.0269	0	%100
31	MP3A	X	-10.6379	-10.6379	0	%100
32	MP3A	Z	6.1418	6.1418	0	%100
33	MP5A	X	-10.6379	-10.6379	0	%100
34	MP5A	Z	6.1418	6.1418	0	%100
35	MP2A	X	-10.6379	-10.6379	0	%100
36	MP2A	Z	6.1418	6.1418	0	%100
37	MP4A	X	-10.6379	-10.6379	0	%100
38	MP4A	Z	6.1418	6.1418	0	%100

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

Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
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Member Distributed Loads (BLC 50 : Structure Wo (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	M7	X	-12.2216	-12.2216	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	-12.559	-12.559	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	-12.559	-12.559	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	-7.8634	-7.8634	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	-10.0927	-10.0927	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	-10.0927	-10.0927	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	-10.0927	-10.0927	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	-10.0927	-10.0927	0	%100
24	M14	Z	0	0	0	%100
25	MP1A	X	-12.2836	-12.2836	0	%100
26	MP1A	Z	0	0	0	%100
27	M25	X	-3.2848	-3.2848	0	%100
28	M25	Z	0	0	0	%100
29	M26	X	-12.1982	-12.1982	0	%100
30	M26	Z	0	0	0	%100
31	MP3A	X	-12.2836	-12.2836	0	%100
32	MP3A	Z	0	0	0	%100
33	MP5A	X	-12.2836	-12.2836	0	%100
34	MP5A	Z	0	0	0	%100
35	MP2A	X	-12.2836	-12.2836	0	%100
36	MP2A	Z	0	0	0	%100
37	MP4A	X	-12.2836	-12.2836	0	%100
38	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-5.5989	-5.5989	0	%100
2	M1	Z	-3.2325	-3.2325	0	%100
3	M2	X	-5.5989	-5.5989	0	%100
4	M2	Z	-3.2325	-3.2325	0	%100
5	M3	X	-5.5989	-5.5989	0	%100
6	M3	Z	-3.2325	-3.2325	0	%100
7	M4	X	-5.5989	-5.5989	0	%100
8	M4	Z	-3.2325	-3.2325	0	%100
9	M7	X	-10.5842	-10.5842	0	%100
10	M7	Z	-6.1108	-6.1108	0	%100
11	M8	X	-8.1573	-8.1573	0	%100
12	M8	Z	-4.7096	-4.7096	0	%100
13	M9	X	-8.1573	-8.1573	0	%100
14	M9	Z	-4.7096	-4.7096	0	%100
15	M10	X	-6.8099	-6.8099	0	%100



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 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
16	M10	Z	-3.9317	-3.9317	0	%100
17	M11	X	-8.7405	-8.7405	0	%100
18	M11	Z	-5.0463	-5.0463	0	%100
19	M12	X	-8.7405	-8.7405	0	%100
20	M12	Z	-5.0463	-5.0463	0	%100
21	M13	X	-8.7405	-8.7405	0	%100
22	M13	Z	-5.0463	-5.0463	0	%100
23	M14	X	-8.7405	-8.7405	0	%100
24	M14	Z	-5.0463	-5.0463	0	%100
25	MP1A	X	-10.6379	-10.6379	0	%100
26	MP1A	Z	-6.1418	-6.1418	0	%100
27	M25	X	-8.1594	-8.1594	0	%100
28	M25	Z	-4.7109	-4.7109	0	%100
29	M26	X	-7.176	-7.176	0	%100
30	M26	Z	-4.1431	-4.1431	0	%100
31	MP3A	X	-10.6379	-10.6379	0	%100
32	MP3A	Z	-6.1418	-6.1418	0	%100
33	MP5A	X	-10.6379	-10.6379	0	%100
34	MP5A	Z	-6.1418	-6.1418	0	%100
35	MP2A	X	-10.6379	-10.6379	0	%100
36	MP2A	Z	-6.1418	-6.1418	0	%100
37	MP4A	X	-10.6379	-10.6379	0	%100
38	MP4A	Z	-6.1418	-6.1418	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-9.6976	-9.6976	0	%100
2	M1	Z	-16.7967	-16.7967	0	%100
3	M2	X	-9.6976	-9.6976	0	%100
4	M2	Z	-16.7967	-16.7967	0	%100
5	M3	X	-9.6976	-9.6976	0	%100
6	M3	Z	-16.7967	-16.7967	0	%100
7	M4	X	-9.6976	-9.6976	0	%100
8	M4	Z	-16.7967	-16.7967	0	%100
9	M7	X	-6.1108	-6.1108	0	%100
10	M7	Z	-10.5842	-10.5842	0	%100
11	M8	X	-1.5699	-1.5699	0	%100
12	M8	Z	-2.7191	-2.7191	0	%100
13	M9	X	-1.5699	-1.5699	0	%100
14	M9	Z	-2.7191	-2.7191	0	%100
15	M10	X	-3.9317	-3.9317	0	%100
16	M10	Z	-6.8099	-6.8099	0	%100
17	M11	X	-5.0463	-5.0463	0	%100
18	M11	Z	-8.7405	-8.7405	0	%100
19	M12	X	-5.0463	-5.0463	0	%100
20	M12	Z	-8.7405	-8.7405	0	%100
21	M13	X	-5.0463	-5.0463	0	%100
22	M13	Z	-8.7405	-8.7405	0	%100
23	M14	X	-5.0463	-5.0463	0	%100
24	M14	Z	-8.7405	-8.7405	0	%100
25	MP1A	X	-6.1418	-6.1418	0	%100
26	MP1A	Z	-10.6379	-10.6379	0	%100
27	M25	X	-6.1394	-6.1394	0	%100
28	M25	Z	-10.6337	-10.6337	0	%100
29	M26	X	-1.1149	-1.1149	0	%100
30	M26	Z	-1.931	-1.931	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
31	MP3A	X	-6.1418	-6.1418	0	%100
32	MP3A	Z	-10.6379	-10.6379	0	%100
33	MP5A	X	-6.1418	-6.1418	0	%100
34	MP5A	Z	-10.6379	-10.6379	0	%100
35	MP2A	X	-6.1418	-6.1418	0	%100
36	MP2A	Z	-10.6379	-10.6379	0	%100
37	MP4A	X	-6.1418	-6.1418	0	%100
38	MP4A	Z	-10.6379	-10.6379	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	-6.1756	-6.1756	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-6.1756	-6.1756	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	-6.1756	-6.1756	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	-6.1756	-6.1756	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	-3.7686	-3.7686	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	-2.7664	-2.7664	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	-3.2687	-3.2687	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	-3.2687	-3.2687	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	-3.2687	-3.2687	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	-3.2687	-3.2687	0	%100
25	MP1A	X	0	0	0	%100
26	MP1A	Z	-4.0034	-4.0034	0	%100
27	M25	X	0	0	0	%100
28	M25	Z	-2.9328	-2.9328	0	%100
29	M26	X	0	0	0	%100
30	M26	Z	-.0278	-.0278	0	%100
31	MP3A	X	0	0	0	%100
32	MP3A	Z	-4.0034	-4.0034	0	%100
33	MP5A	X	0	0	0	%100
34	MP5A	Z	-4.0034	-4.0034	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-4.0034	-4.0034	0	%100
37	MP4A	X	0	0	0	%100
38	MP4A	Z	-4.0034	-4.0034	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	2.3159	2.3159	0	%100
2	M1	Z	-4.0112	-4.0112	0	%100
3	M2	X	2.3159	2.3159	0	%100
4	M2	Z	-4.0112	-4.0112	0	%100



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 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
5	M3	X	2.3159	2.3159	0	%100
6	M3	Z	-4.0112	-4.0112	0	%100
7	M4	X	2.3159	2.3159	0	%100
8	M4	Z	-4.0112	-4.0112	0	%100
9	M7	X	1.8843	1.8843	0	%100
10	M7	Z	-3.2637	-3.2637	0	%100
11	M8	X	.4493	.4493	0	%100
12	M8	Z	-.7782	-.7782	0	%100
13	M9	X	.4493	.4493	0	%100
14	M9	Z	-.7782	-.7782	0	%100
15	M10	X	1.3832	1.3832	0	%100
16	M10	Z	-2.3958	-2.3958	0	%100
17	M11	X	1.6343	1.6343	0	%100
18	M11	Z	-2.8307	-2.8307	0	%100
19	M12	X	1.6343	1.6343	0	%100
20	M12	Z	-2.8307	-2.8307	0	%100
21	M13	X	1.6343	1.6343	0	%100
22	M13	Z	-2.8307	-2.8307	0	%100
23	M14	X	1.6343	1.6343	0	%100
24	M14	Z	-2.8307	-2.8307	0	%100
25	MP1A	X	2.0017	2.0017	0	%100
26	MP1A	Z	-3.467	-3.467	0	%100
27	M25	X	.4664	.4664	0	%100
28	M25	Z	-.8078	-.8078	0	%100
29	M26	X	.6514	.6514	0	%100
30	M26	Z	-1.1283	-1.1283	0	%100
31	MP3A	X	2.0017	2.0017	0	%100
32	MP3A	Z	-3.467	-3.467	0	%100
33	MP5A	X	2.0017	2.0017	0	%100
34	MP5A	Z	-3.467	-3.467	0	%100
35	MP2A	X	2.0017	2.0017	0	%100
36	MP2A	Z	-3.467	-3.467	0	%100
37	MP4A	X	2.0017	2.0017	0	%100
38	MP4A	Z	-3.467	-3.467	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	1.3371	1.3371	0	%100
2	M1	Z	-.772	-.772	0	%100
3	M2	X	1.3371	1.3371	0	%100
4	M2	Z	-.772	-.772	0	%100
5	M3	X	1.3371	1.3371	0	%100
6	M3	Z	-.772	-.772	0	%100
7	M4	X	1.3371	1.3371	0	%100
8	M4	Z	-.772	-.772	0	%100
9	M7	X	3.2637	3.2637	0	%100
10	M7	Z	-1.8843	-1.8843	0	%100
11	M8	X	2.3346	2.3346	0	%100
12	M8	Z	-1.3479	-1.3479	0	%100
13	M9	X	2.3346	2.3346	0	%100
14	M9	Z	-1.3479	-1.3479	0	%100
15	M10	X	2.3958	2.3958	0	%100
16	M10	Z	-1.3832	-1.3832	0	%100
17	M11	X	2.8307	2.8307	0	%100
18	M11	Z	-1.6343	-1.6343	0	%100
19	M12	X	2.8307	2.8307	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
20	M12	Z	-1.6343	-1.6343	0	%100
21	M13	X	2.8307	2.8307	0	%100
22	M13	Z	-1.6343	-1.6343	0	%100
23	M14	X	2.8307	2.8307	0	%100
24	M14	Z	-1.6343	-1.6343	0	%100
25	MP1A	X	3.467	3.467	0	%100
26	MP1A	Z	-2.0017	-2.0017	0	%100
27	M25	X	.0014	.0014	0	%100
28	M25	Z	-.000791	-.000791	0	%100
29	M26	X	2.8377	2.8377	0	%100
30	M26	Z	-1.6383	-1.6383	0	%100
31	MP3A	X	3.467	3.467	0	%100
32	MP3A	Z	-2.0017	-2.0017	0	%100
33	MP5A	X	3.467	3.467	0	%100
34	MP5A	Z	-2.0017	-2.0017	0	%100
35	MP2A	X	3.467	3.467	0	%100
36	MP2A	Z	-2.0017	-2.0017	0	%100
37	MP4A	X	3.467	3.467	0	%100
38	MP4A	Z	-2.0017	-2.0017	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	M7	X	3.7686	3.7686	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	3.5943	3.5943	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	3.5943	3.5943	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	2.7664	2.7664	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	3.2687	3.2687	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	3.2687	3.2687	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	3.2687	3.2687	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	3.2687	3.2687	0	%100
24	M14	Z	0	0	0	%100
25	MP1A	X	4.0034	4.0034	0	%100
26	MP1A	Z	0	0	0	%100
27	M25	X	1.0705	1.0705	0	%100
28	M25	Z	0	0	0	%100
29	M26	X	3.9756	3.9756	0	%100
30	M26	Z	0	0	0	%100
31	MP3A	X	4.0034	4.0034	0	%100
32	MP3A	Z	0	0	0	%100
33	MP5A	X	4.0034	4.0034	0	%100
34	MP5A	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
35	MP2A	X	4.0034	4.0034	0	%100
36	MP2A	Z	0	0	0	%100
37	MP4A	X	4.0034	4.0034	0	%100
38	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	1.3371	1.3371	0	%100
2	M1	Z	.772	.772	0	%100
3	M2	X	1.3371	1.3371	0	%100
4	M2	Z	.772	.772	0	%100
5	M3	X	1.3371	1.3371	0	%100
6	M3	Z	.772	.772	0	%100
7	M4	X	1.3371	1.3371	0	%100
8	M4	Z	.772	.772	0	%100
9	M7	X	3.2637	3.2637	0	%100
10	M7	Z	1.8843	1.8843	0	%100
11	M8	X	2.3346	2.3346	0	%100
12	M8	Z	1.3479	1.3479	0	%100
13	M9	X	2.3346	2.3346	0	%100
14	M9	Z	1.3479	1.3479	0	%100
15	M10	X	2.3958	2.3958	0	%100
16	M10	Z	1.3832	1.3832	0	%100
17	M11	X	2.8307	2.8307	0	%100
18	M11	Z	1.6343	1.6343	0	%100
19	M12	X	2.8307	2.8307	0	%100
20	M12	Z	1.6343	1.6343	0	%100
21	M13	X	2.8307	2.8307	0	%100
22	M13	Z	1.6343	1.6343	0	%100
23	M14	X	2.8307	2.8307	0	%100
24	M14	Z	1.6343	1.6343	0	%100
25	MP1A	X	3.467	3.467	0	%100
26	MP1A	Z	2.0017	2.0017	0	%100
27	M25	X	2.6593	2.6593	0	%100
28	M25	Z	1.5353	1.5353	0	%100
29	M26	X	2.3388	2.3388	0	%100
30	M26	Z	1.3503	1.3503	0	%100
31	MP3A	X	3.467	3.467	0	%100
32	MP3A	Z	2.0017	2.0017	0	%100
33	MP5A	X	3.467	3.467	0	%100
34	MP5A	Z	2.0017	2.0017	0	%100
35	MP2A	X	3.467	3.467	0	%100
36	MP2A	Z	2.0017	2.0017	0	%100
37	MP4A	X	3.467	3.467	0	%100
38	MP4A	Z	2.0017	2.0017	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	2.3159	2.3159	0	%100
2	M1	Z	4.0112	4.0112	0	%100
3	M2	X	2.3159	2.3159	0	%100
4	M2	Z	4.0112	4.0112	0	%100
5	M3	X	2.3159	2.3159	0	%100
6	M3	Z	4.0112	4.0112	0	%100
7	M4	X	2.3159	2.3159	0	%100
8	M4	Z	4.0112	4.0112	0	%100



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
9	M7	X	1.8843	1.8843	0	%100
10	M7	Z	3.2637	3.2637	0	%100
11	M8	X	.4493	.4493	0	%100
12	M8	Z	.7782	.7782	0	%100
13	M9	X	.4493	.4493	0	%100
14	M9	Z	.7782	.7782	0	%100
15	M10	X	1.3832	1.3832	0	%100
16	M10	Z	2.3958	2.3958	0	%100
17	M11	X	1.6343	1.6343	0	%100
18	M11	Z	2.8307	2.8307	0	%100
19	M12	X	1.6343	1.6343	0	%100
20	M12	Z	2.8307	2.8307	0	%100
21	M13	X	1.6343	1.6343	0	%100
22	M13	Z	2.8307	2.8307	0	%100
23	M14	X	1.6343	1.6343	0	%100
24	M14	Z	2.8307	2.8307	0	%100
25	MP1A	X	2.0017	2.0017	0	%100
26	MP1A	Z	3.467	3.467	0	%100
27	M25	X	2.0009	2.0009	0	%100
28	M25	Z	3.4657	3.4657	0	%100
29	M26	X	.3633	.3633	0	%100
30	M26	Z	.6293	.6293	0	%100
31	MP3A	X	2.0017	2.0017	0	%100
32	MP3A	Z	3.467	3.467	0	%100
33	MP5A	X	2.0017	2.0017	0	%100
34	MP5A	Z	3.467	3.467	0	%100
35	MP2A	X	2.0017	2.0017	0	%100
36	MP2A	Z	3.467	3.467	0	%100
37	MP4A	X	2.0017	2.0017	0	%100
38	MP4A	Z	3.467	3.467	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	6.1756	6.1756	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	6.1756	6.1756	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	6.1756	6.1756	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	6.1756	6.1756	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	3.7686	3.7686	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	2.7664	2.7664	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	3.2687	3.2687	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	3.2687	3.2687	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	3.2687	3.2687	0	%100
23	M14	X	0	0	0	%100



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
24	M14	Z	3.2687	3.2687	0	%100
25	MP1A	X	0	0	0	%100
26	MP1A	Z	4.0034	4.0034	0	%100
27	M25	X	0	0	0	%100
28	M25	Z	2.9328	2.9328	0	%100
29	M26	X	0	0	0	%100
30	M26	Z	.0278	.0278	0	%100
31	MP3A	X	0	0	0	%100
32	MP3A	Z	4.0034	4.0034	0	%100
33	MP5A	X	0	0	0	%100
34	MP5A	Z	4.0034	4.0034	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	4.0034	4.0034	0	%100
37	MP4A	X	0	0	0	%100
38	MP4A	Z	4.0034	4.0034	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-2.3159	-2.3159	0	%100
2	M1	Z	4.0112	4.0112	0	%100
3	M2	X	-2.3159	-2.3159	0	%100
4	M2	Z	4.0112	4.0112	0	%100
5	M3	X	-2.3159	-2.3159	0	%100
6	M3	Z	4.0112	4.0112	0	%100
7	M4	X	-2.3159	-2.3159	0	%100
8	M4	Z	4.0112	4.0112	0	%100
9	M7	X	-1.8843	-1.8843	0	%100
10	M7	Z	3.2637	3.2637	0	%100
11	M8	X	-.4493	-.4493	0	%100
12	M8	Z	.7782	.7782	0	%100
13	M9	X	-.4493	-.4493	0	%100
14	M9	Z	.7782	.7782	0	%100
15	M10	X	-1.3832	-1.3832	0	%100
16	M10	Z	2.3958	2.3958	0	%100
17	M11	X	-1.6343	-1.6343	0	%100
18	M11	Z	2.8307	2.8307	0	%100
19	M12	X	-1.6343	-1.6343	0	%100
20	M12	Z	2.8307	2.8307	0	%100
21	M13	X	-1.6343	-1.6343	0	%100
22	M13	Z	2.8307	2.8307	0	%100
23	M14	X	-1.6343	-1.6343	0	%100
24	M14	Z	2.8307	2.8307	0	%100
25	MP1A	X	-2.0017	-2.0017	0	%100
26	MP1A	Z	3.467	3.467	0	%100
27	M25	X	-.4664	-.4664	0	%100
28	M25	Z	.8078	.8078	0	%100
29	M26	X	-.6514	-.6514	0	%100
30	M26	Z	1.1283	1.1283	0	%100
31	MP3A	X	-2.0017	-2.0017	0	%100
32	MP3A	Z	3.467	3.467	0	%100
33	MP5A	X	-2.0017	-2.0017	0	%100
34	MP5A	Z	3.467	3.467	0	%100
35	MP2A	X	-2.0017	-2.0017	0	%100
36	MP2A	Z	3.467	3.467	0	%100
37	MP4A	X	-2.0017	-2.0017	0	%100
38	MP4A	Z	3.467	3.467	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-1.3371	-1.3371	0	%100
2	M1	Z	.772	.772	0	%100
3	M2	X	-1.3371	-1.3371	0	%100
4	M2	Z	.772	.772	0	%100
5	M3	X	-1.3371	-1.3371	0	%100
6	M3	Z	.772	.772	0	%100
7	M4	X	-1.3371	-1.3371	0	%100
8	M4	Z	.772	.772	0	%100
9	M7	X	-3.2637	-3.2637	0	%100
10	M7	Z	1.8843	1.8843	0	%100
11	M8	X	-2.3346	-2.3346	0	%100
12	M8	Z	1.3479	1.3479	0	%100
13	M9	X	-2.3346	-2.3346	0	%100
14	M9	Z	1.3479	1.3479	0	%100
15	M10	X	-2.3958	-2.3958	0	%100
16	M10	Z	1.3832	1.3832	0	%100
17	M11	X	-2.8307	-2.8307	0	%100
18	M11	Z	1.6343	1.6343	0	%100
19	M12	X	-2.8307	-2.8307	0	%100
20	M12	Z	1.6343	1.6343	0	%100
21	M13	X	-2.8307	-2.8307	0	%100
22	M13	Z	1.6343	1.6343	0	%100
23	M14	X	-2.8307	-2.8307	0	%100
24	M14	Z	1.6343	1.6343	0	%100
25	MP1A	X	-3.467	-3.467	0	%100
26	MP1A	Z	2.0017	2.0017	0	%100
27	M25	X	-.0014	-.0014	0	%100
28	M25	Z	.000791	.000791	0	%100
29	M26	X	-2.8377	-2.8377	0	%100
30	M26	Z	1.6383	1.6383	0	%100
31	MP3A	X	-3.467	-3.467	0	%100
32	MP3A	Z	2.0017	2.0017	0	%100
33	MP5A	X	-3.467	-3.467	0	%100
34	MP5A	Z	2.0017	2.0017	0	%100
35	MP2A	X	-3.467	-3.467	0	%100
36	MP2A	Z	2.0017	2.0017	0	%100
37	MP4A	X	-3.467	-3.467	0	%100
38	MP4A	Z	2.0017	2.0017	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	M7	X	-3.7686	-3.7686	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	-3.5943	-3.5943	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	-3.5943	-3.5943	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	-2.7664	-2.7664	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
16	M10	Z	0	0	0	%100
17	M11	X	-3.2687	-3.2687	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	-3.2687	-3.2687	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	-3.2687	-3.2687	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	-3.2687	-3.2687	0	%100
24	M14	Z	0	0	0	%100
25	MP1A	X	-4.0034	-4.0034	0	%100
26	MP1A	Z	0	0	0	%100
27	M25	X	-1.0705	-1.0705	0	%100
28	M25	Z	0	0	0	%100
29	M26	X	-3.9756	-3.9756	0	%100
30	M26	Z	0	0	0	%100
31	MP3A	X	-4.0034	-4.0034	0	%100
32	MP3A	Z	0	0	0	%100
33	MP5A	X	-4.0034	-4.0034	0	%100
34	MP5A	Z	0	0	0	%100
35	MP2A	X	-4.0034	-4.0034	0	%100
36	MP2A	Z	0	0	0	%100
37	MP4A	X	-4.0034	-4.0034	0	%100
38	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-1.3371	-1.3371	0	%100
2	M1	Z	-.772	-.772	0	%100
3	M2	X	-1.3371	-1.3371	0	%100
4	M2	Z	-.772	-.772	0	%100
5	M3	X	-1.3371	-1.3371	0	%100
6	M3	Z	-.772	-.772	0	%100
7	M4	X	-1.3371	-1.3371	0	%100
8	M4	Z	-.772	-.772	0	%100
9	M7	X	-3.2637	-3.2637	0	%100
10	M7	Z	-1.8843	-1.8843	0	%100
11	M8	X	-2.3346	-2.3346	0	%100
12	M8	Z	-1.3479	-1.3479	0	%100
13	M9	X	-2.3346	-2.3346	0	%100
14	M9	Z	-1.3479	-1.3479	0	%100
15	M10	X	-2.3958	-2.3958	0	%100
16	M10	Z	-1.3832	-1.3832	0	%100
17	M11	X	-2.8307	-2.8307	0	%100
18	M11	Z	-1.6343	-1.6343	0	%100
19	M12	X	-2.8307	-2.8307	0	%100
20	M12	Z	-1.6343	-1.6343	0	%100
21	M13	X	-2.8307	-2.8307	0	%100
22	M13	Z	-1.6343	-1.6343	0	%100
23	M14	X	-2.8307	-2.8307	0	%100
24	M14	Z	-1.6343	-1.6343	0	%100
25	MP1A	X	-3.467	-3.467	0	%100
26	MP1A	Z	-2.0017	-2.0017	0	%100
27	M25	X	-2.6593	-2.6593	0	%100
28	M25	Z	-1.5353	-1.5353	0	%100
29	M26	X	-2.3388	-2.3388	0	%100
30	M26	Z	-1.3503	-1.3503	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
31	MP3A	X	-3.467	-3.467	0	%100
32	MP3A	Z	-2.0017	-2.0017	0	%100
33	MP5A	X	-3.467	-3.467	0	%100
34	MP5A	Z	-2.0017	-2.0017	0	%100
35	MP2A	X	-3.467	-3.467	0	%100
36	MP2A	Z	-2.0017	-2.0017	0	%100
37	MP4A	X	-3.467	-3.467	0	%100
38	MP4A	Z	-2.0017	-2.0017	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-2.3159	-2.3159	0	%100
2	M1	Z	-4.0112	-4.0112	0	%100
3	M2	X	-2.3159	-2.3159	0	%100
4	M2	Z	-4.0112	-4.0112	0	%100
5	M3	X	-2.3159	-2.3159	0	%100
6	M3	Z	-4.0112	-4.0112	0	%100
7	M4	X	-2.3159	-2.3159	0	%100
8	M4	Z	-4.0112	-4.0112	0	%100
9	M7	X	-1.8843	-1.8843	0	%100
10	M7	Z	-3.2637	-3.2637	0	%100
11	M8	X	-.4493	-.4493	0	%100
12	M8	Z	-.7782	-.7782	0	%100
13	M9	X	-.4493	-.4493	0	%100
14	M9	Z	-.7782	-.7782	0	%100
15	M10	X	-1.3832	-1.3832	0	%100
16	M10	Z	-2.3958	-2.3958	0	%100
17	M11	X	-1.6343	-1.6343	0	%100
18	M11	Z	-2.8307	-2.8307	0	%100
19	M12	X	-1.6343	-1.6343	0	%100
20	M12	Z	-2.8307	-2.8307	0	%100
21	M13	X	-1.6343	-1.6343	0	%100
22	M13	Z	-2.8307	-2.8307	0	%100
23	M14	X	-1.6343	-1.6343	0	%100
24	M14	Z	-2.8307	-2.8307	0	%100
25	MP1A	X	-2.0017	-2.0017	0	%100
26	MP1A	Z	-3.467	-3.467	0	%100
27	M25	X	-2.0009	-2.0009	0	%100
28	M25	Z	-3.4657	-3.4657	0	%100
29	M26	X	-.3633	-.3633	0	%100
30	M26	Z	-.6293	-.6293	0	%100
31	MP3A	X	-2.0017	-2.0017	0	%100
32	MP3A	Z	-3.467	-3.467	0	%100
33	MP5A	X	-2.0017	-2.0017	0	%100
34	MP5A	Z	-3.467	-3.467	0	%100
35	MP2A	X	-2.0017	-2.0017	0	%100
36	MP2A	Z	-3.467	-3.467	0	%100
37	MP4A	X	-2.0017	-2.0017	0	%100
38	MP4A	Z	-3.467	-3.467	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	-1.4896	-1.4896	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-1.4896	-1.4896	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
5	M3	X	0	0	0	%100
6	M3	Z	-1.4896	-1.4896	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	-1.4896	-1.4896	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	-.704	-.704	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	-.4529	-.4529	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	-.5813	-.5813	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	-.5813	-.5813	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	-.5813	-.5813	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	-.5813	-.5813	0	%100
25	MP1A	X	0	0	0	%100
26	MP1A	Z	-.7075	-.7075	0	%100
27	M25	X	0	0	0	%100
28	M25	Z	-.5183	-.5183	0	%100
29	M26	X	0	0	0	%100
30	M26	Z	-.0049	-.0049	0	%100
31	MP3A	X	0	0	0	%100
32	MP3A	Z	-.7075	-.7075	0	%100
33	MP5A	X	0	0	0	%100
34	MP5A	Z	-.7075	-.7075	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-.7075	-.7075	0	%100
37	MP4A	X	0	0	0	%100
38	MP4A	Z	-.7075	-.7075	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	.5586	.5586	0	%100
2	M1	Z	-.9675	-.9675	0	%100
3	M2	X	.5586	.5586	0	%100
4	M2	Z	-.9675	-.9675	0	%100
5	M3	X	.5586	.5586	0	%100
6	M3	Z	-.9675	-.9675	0	%100
7	M4	X	.5586	.5586	0	%100
8	M4	Z	-.9675	-.9675	0	%100
9	M7	X	.352	.352	0	%100
10	M7	Z	-.6097	-.6097	0	%100
11	M8	X	.0904	.0904	0	%100
12	M8	Z	-.1566	-.1566	0	%100
13	M9	X	.0904	.0904	0	%100
14	M9	Z	-.1566	-.1566	0	%100
15	M10	X	.2265	.2265	0	%100
16	M10	Z	-.3923	-.3923	0	%100
17	M11	X	.2907	.2907	0	%100
18	M11	Z	-.5035	-.5035	0	%100
19	M12	X	.2907	.2907	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
20	M12	Z	-.5035	-.5035	0	%100
21	M13	X	.2907	.2907	0	%100
22	M13	Z	-.5035	-.5035	0	%100
23	M14	X	.2907	.2907	0	%100
24	M14	Z	-.5035	-.5035	0	%100
25	MP1A	X	.3538	.3538	0	%100
26	MP1A	Z	-.6127	-.6127	0	%100
27	M25	X	.0824	.0824	0	%100
28	M25	Z	-.1428	-.1428	0	%100
29	M26	X	.1151	.1151	0	%100
30	M26	Z	-.1994	-.1994	0	%100
31	MP3A	X	.3538	.3538	0	%100
32	MP3A	Z	-.6127	-.6127	0	%100
33	MP5A	X	.3538	.3538	0	%100
34	MP5A	Z	-.6127	-.6127	0	%100
35	MP2A	X	.3538	.3538	0	%100
36	MP2A	Z	-.6127	-.6127	0	%100
37	MP4A	X	.3538	.3538	0	%100
38	MP4A	Z	-.6127	-.6127	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	.3225	.3225	0	%100
2	M1	Z	-.1862	-.1862	0	%100
3	M2	X	.3225	.3225	0	%100
4	M2	Z	-.1862	-.1862	0	%100
5	M3	X	.3225	.3225	0	%100
6	M3	Z	-.1862	-.1862	0	%100
7	M4	X	.3225	.3225	0	%100
8	M4	Z	-.1862	-.1862	0	%100
9	M7	X	.6097	.6097	0	%100
10	M7	Z	-.352	-.352	0	%100
11	M8	X	.4699	.4699	0	%100
12	M8	Z	-.2713	-.2713	0	%100
13	M9	X	.4699	.4699	0	%100
14	M9	Z	-.2713	-.2713	0	%100
15	M10	X	.3923	.3923	0	%100
16	M10	Z	-.2265	-.2265	0	%100
17	M11	X	.5035	.5035	0	%100
18	M11	Z	-.2907	-.2907	0	%100
19	M12	X	.5035	.5035	0	%100
20	M12	Z	-.2907	-.2907	0	%100
21	M13	X	.5035	.5035	0	%100
22	M13	Z	-.2907	-.2907	0	%100
23	M14	X	.5035	.5035	0	%100
24	M14	Z	-.2907	-.2907	0	%100
25	MP1A	X	.6127	.6127	0	%100
26	MP1A	Z	-.3538	-.3538	0	%100
27	M25	X	.000242	.000242	0	%100
28	M25	Z	-.00014	-.00014	0	%100
29	M26	X	.5015	.5015	0	%100
30	M26	Z	-.2896	-.2896	0	%100
31	MP3A	X	.6127	.6127	0	%100
32	MP3A	Z	-.3538	-.3538	0	%100
33	MP5A	X	.6127	.6127	0	%100
34	MP5A	Z	-.3538	-.3538	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
35	MP2A	X	.6127	.6127	0	%100
36	MP2A	Z	-.3538	-.3538	0	%100
37	MP4A	X	.6127	.6127	0	%100
38	MP4A	Z	-.3538	-.3538	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	M7	X	.704	.704	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	.7234	.7234	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	.7234	.7234	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	.4529	.4529	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	.5813	.5813	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	.5813	.5813	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	.5813	.5813	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	.5813	.5813	0	%100
24	M14	Z	0	0	0	%100
25	MP1A	X	.7075	.7075	0	%100
26	MP1A	Z	0	0	0	%100
27	M25	X	.1892	.1892	0	%100
28	M25	Z	0	0	0	%100
29	M26	X	.7026	.7026	0	%100
30	M26	Z	0	0	0	%100
31	MP3A	X	.7075	.7075	0	%100
32	MP3A	Z	0	0	0	%100
33	MP5A	X	.7075	.7075	0	%100
34	MP5A	Z	0	0	0	%100
35	MP2A	X	.7075	.7075	0	%100
36	MP2A	Z	0	0	0	%100
37	MP4A	X	.7075	.7075	0	%100
38	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	.3225	.3225	0	%100
2	M1	Z	.1862	.1862	0	%100
3	M2	X	.3225	.3225	0	%100
4	M2	Z	.1862	.1862	0	%100
5	M3	X	.3225	.3225	0	%100
6	M3	Z	.1862	.1862	0	%100
7	M4	X	.3225	.3225	0	%100
8	M4	Z	.1862	.1862	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
9	M7	X	.6097	.6097	0	%100
10	M7	Z	.352	.352	0	%100
11	M8	X	.4699	.4699	0	%100
12	M8	Z	.2713	.2713	0	%100
13	M9	X	.4699	.4699	0	%100
14	M9	Z	.2713	.2713	0	%100
15	M10	X	.3923	.3923	0	%100
16	M10	Z	.2265	.2265	0	%100
17	M11	X	.5035	.5035	0	%100
18	M11	Z	.2907	.2907	0	%100
19	M12	X	.5035	.5035	0	%100
20	M12	Z	.2907	.2907	0	%100
21	M13	X	.5035	.5035	0	%100
22	M13	Z	.2907	.2907	0	%100
23	M14	X	.5035	.5035	0	%100
24	M14	Z	.2907	.2907	0	%100
25	MP1A	X	.6127	.6127	0	%100
26	MP1A	Z	.3538	.3538	0	%100
27	M25	X	.47	.47	0	%100
28	M25	Z	.2713	.2713	0	%100
29	M26	X	.4133	.4133	0	%100
30	M26	Z	.2386	.2386	0	%100
31	MP3A	X	.6127	.6127	0	%100
32	MP3A	Z	.3538	.3538	0	%100
33	MP5A	X	.6127	.6127	0	%100
34	MP5A	Z	.3538	.3538	0	%100
35	MP2A	X	.6127	.6127	0	%100
36	MP2A	Z	.3538	.3538	0	%100
37	MP4A	X	.6127	.6127	0	%100
38	MP4A	Z	.3538	.3538	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	.5586	.5586	0	%100
2	M1	Z	.9675	.9675	0	%100
3	M2	X	.5586	.5586	0	%100
4	M2	Z	.9675	.9675	0	%100
5	M3	X	.5586	.5586	0	%100
6	M3	Z	.9675	.9675	0	%100
7	M4	X	.5586	.5586	0	%100
8	M4	Z	.9675	.9675	0	%100
9	M7	X	.352	.352	0	%100
10	M7	Z	.6097	.6097	0	%100
11	M8	X	.0904	.0904	0	%100
12	M8	Z	.1566	.1566	0	%100
13	M9	X	.0904	.0904	0	%100
14	M9	Z	.1566	.1566	0	%100
15	M10	X	.2265	.2265	0	%100
16	M10	Z	.3923	.3923	0	%100
17	M11	X	.2907	.2907	0	%100
18	M11	Z	.5035	.5035	0	%100
19	M12	X	.2907	.2907	0	%100
20	M12	Z	.5035	.5035	0	%100
21	M13	X	.2907	.2907	0	%100
22	M13	Z	.5035	.5035	0	%100
23	M14	X	.2907	.2907	0	%100



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

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 Checked By: _____

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location	End Location
24	M14	Z	.5035	.5035	0	%100
25	MP1A	X	.3538	.3538	0	%100
26	MP1A	Z	.6127	.6127	0	%100
27	M25	X	.3536	.3536	0	%100
28	M25	Z	.6125	.6125	0	%100
29	M26	X	.0642	.0642	0	%100
30	M26	Z	.1112	.1112	0	%100
31	MP3A	X	.3538	.3538	0	%100
32	MP3A	Z	.6127	.6127	0	%100
33	MP5A	X	.3538	.3538	0	%100
34	MP5A	Z	.6127	.6127	0	%100
35	MP2A	X	.3538	.3538	0	%100
36	MP2A	Z	.6127	.6127	0	%100
37	MP4A	X	.3538	.3538	0	%100
38	MP4A	Z	.6127	.6127	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location	End Location
1	M1	X	0	0	0	%100
2	M1	Z	1.4896	1.4896	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	1.4896	1.4896	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	1.4896	1.4896	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	1.4896	1.4896	0	%100
9	M7	X	0	0	0	%100
10	M7	Z	.704	.704	0	%100
11	M8	X	0	0	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	0	0	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	0	0	0	%100
16	M10	Z	.4529	.4529	0	%100
17	M11	X	0	0	0	%100
18	M11	Z	.5813	.5813	0	%100
19	M12	X	0	0	0	%100
20	M12	Z	.5813	.5813	0	%100
21	M13	X	0	0	0	%100
22	M13	Z	.5813	.5813	0	%100
23	M14	X	0	0	0	%100
24	M14	Z	.5813	.5813	0	%100
25	MP1A	X	0	0	0	%100
26	MP1A	Z	.7075	.7075	0	%100
27	M25	X	0	0	0	%100
28	M25	Z	.5183	.5183	0	%100
29	M26	X	0	0	0	%100
30	M26	Z	.0049	.0049	0	%100
31	MP3A	X	0	0	0	%100
32	MP3A	Z	.7075	.7075	0	%100
33	MP5A	X	0	0	0	%100
34	MP5A	Z	.7075	.7075	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	.7075	.7075	0	%100
37	MP4A	X	0	0	0	%100
38	MP4A	Z	.7075	.7075	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-.5586	-.5586	0	%100
2	M1	Z	.9675	.9675	0	%100
3	M2	X	-.5586	-.5586	0	%100
4	M2	Z	.9675	.9675	0	%100
5	M3	X	-.5586	-.5586	0	%100
6	M3	Z	.9675	.9675	0	%100
7	M4	X	-.5586	-.5586	0	%100
8	M4	Z	.9675	.9675	0	%100
9	M7	X	-.352	-.352	0	%100
10	M7	Z	.6097	.6097	0	%100
11	M8	X	-.0904	-.0904	0	%100
12	M8	Z	.1566	.1566	0	%100
13	M9	X	-.0904	-.0904	0	%100
14	M9	Z	.1566	.1566	0	%100
15	M10	X	-.2265	-.2265	0	%100
16	M10	Z	.3923	.3923	0	%100
17	M11	X	-.2907	-.2907	0	%100
18	M11	Z	.5035	.5035	0	%100
19	M12	X	-.2907	-.2907	0	%100
20	M12	Z	.5035	.5035	0	%100
21	M13	X	-.2907	-.2907	0	%100
22	M13	Z	.5035	.5035	0	%100
23	M14	X	-.2907	-.2907	0	%100
24	M14	Z	.5035	.5035	0	%100
25	MP1A	X	-.3538	-.3538	0	%100
26	MP1A	Z	.6127	.6127	0	%100
27	M25	X	-.0824	-.0824	0	%100
28	M25	Z	.1428	.1428	0	%100
29	M26	X	-.1151	-.1151	0	%100
30	M26	Z	.1994	.1994	0	%100
31	MP3A	X	-.3538	-.3538	0	%100
32	MP3A	Z	.6127	.6127	0	%100
33	MP5A	X	-.3538	-.3538	0	%100
34	MP5A	Z	.6127	.6127	0	%100
35	MP2A	X	-.3538	-.3538	0	%100
36	MP2A	Z	.6127	.6127	0	%100
37	MP4A	X	-.3538	-.3538	0	%100
38	MP4A	Z	.6127	.6127	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-.3225	-.3225	0	%100
2	M1	Z	.1862	.1862	0	%100
3	M2	X	-.3225	-.3225	0	%100
4	M2	Z	.1862	.1862	0	%100
5	M3	X	-.3225	-.3225	0	%100
6	M3	Z	.1862	.1862	0	%100
7	M4	X	-.3225	-.3225	0	%100
8	M4	Z	.1862	.1862	0	%100
9	M7	X	-.6097	-.6097	0	%100
10	M7	Z	.352	.352	0	%100
11	M8	X	-.4699	-.4699	0	%100
12	M8	Z	.2713	.2713	0	%100
13	M9	X	-.4699	-.4699	0	%100
14	M9	Z	.2713	.2713	0	%100
15	M10	X	-.3923	-.3923	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
16	M10	Z	.2265	.2265	0	%100
17	M11	X	-.5035	-.5035	0	%100
18	M11	Z	.2907	.2907	0	%100
19	M12	X	-.5035	-.5035	0	%100
20	M12	Z	.2907	.2907	0	%100
21	M13	X	-.5035	-.5035	0	%100
22	M13	Z	.2907	.2907	0	%100
23	M14	X	-.5035	-.5035	0	%100
24	M14	Z	.2907	.2907	0	%100
25	MP1A	X	-.6127	-.6127	0	%100
26	MP1A	Z	.3538	.3538	0	%100
27	M25	X	-.000242	-.000242	0	%100
28	M25	Z	.00014	.00014	0	%100
29	M26	X	-.5015	-.5015	0	%100
30	M26	Z	.2896	.2896	0	%100
31	MP3A	X	-.6127	-.6127	0	%100
32	MP3A	Z	.3538	.3538	0	%100
33	MP5A	X	-.6127	-.6127	0	%100
34	MP5A	Z	.3538	.3538	0	%100
35	MP2A	X	-.6127	-.6127	0	%100
36	MP2A	Z	.3538	.3538	0	%100
37	MP4A	X	-.6127	-.6127	0	%100
38	MP4A	Z	.3538	.3538	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	M3	X	0	0	0	%100
6	M3	Z	0	0	0	%100
7	M4	X	0	0	0	%100
8	M4	Z	0	0	0	%100
9	M7	X	-.704	-.704	0	%100
10	M7	Z	0	0	0	%100
11	M8	X	-.7234	-.7234	0	%100
12	M8	Z	0	0	0	%100
13	M9	X	-.7234	-.7234	0	%100
14	M9	Z	0	0	0	%100
15	M10	X	-.4529	-.4529	0	%100
16	M10	Z	0	0	0	%100
17	M11	X	-.5813	-.5813	0	%100
18	M11	Z	0	0	0	%100
19	M12	X	-.5813	-.5813	0	%100
20	M12	Z	0	0	0	%100
21	M13	X	-.5813	-.5813	0	%100
22	M13	Z	0	0	0	%100
23	M14	X	-.5813	-.5813	0	%100
24	M14	Z	0	0	0	%100
25	MP1A	X	-.7075	-.7075	0	%100
26	MP1A	Z	0	0	0	%100
27	M25	X	-.1892	-.1892	0	%100
28	M25	Z	0	0	0	%100
29	M26	X	-.7026	-.7026	0	%100
30	M26	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
31	MP3A	X	-0.7075	-0.7075	0	%100
32	MP3A	Z	0	0	0	%100
33	MP5A	X	-0.7075	-0.7075	0	%100
34	MP5A	Z	0	0	0	%100
35	MP2A	X	-0.7075	-0.7075	0	%100
36	MP2A	Z	0	0	0	%100
37	MP4A	X	-0.7075	-0.7075	0	%100
38	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-0.3225	-0.3225	0	%100
2	M1	Z	-0.1862	-0.1862	0	%100
3	M2	X	-0.3225	-0.3225	0	%100
4	M2	Z	-0.1862	-0.1862	0	%100
5	M3	X	-0.3225	-0.3225	0	%100
6	M3	Z	-0.1862	-0.1862	0	%100
7	M4	X	-0.3225	-0.3225	0	%100
8	M4	Z	-0.1862	-0.1862	0	%100
9	M7	X	-0.6097	-0.6097	0	%100
10	M7	Z	-0.352	-0.352	0	%100
11	M8	X	-0.4699	-0.4699	0	%100
12	M8	Z	-0.2713	-0.2713	0	%100
13	M9	X	-0.4699	-0.4699	0	%100
14	M9	Z	-0.2713	-0.2713	0	%100
15	M10	X	-0.3923	-0.3923	0	%100
16	M10	Z	-0.2265	-0.2265	0	%100
17	M11	X	-0.5035	-0.5035	0	%100
18	M11	Z	-0.2907	-0.2907	0	%100
19	M12	X	-0.5035	-0.5035	0	%100
20	M12	Z	-0.2907	-0.2907	0	%100
21	M13	X	-0.5035	-0.5035	0	%100
22	M13	Z	-0.2907	-0.2907	0	%100
23	M14	X	-0.5035	-0.5035	0	%100
24	M14	Z	-0.2907	-0.2907	0	%100
25	MP1A	X	-0.6127	-0.6127	0	%100
26	MP1A	Z	-0.3538	-0.3538	0	%100
27	M25	X	-0.47	-0.47	0	%100
28	M25	Z	-0.2713	-0.2713	0	%100
29	M26	X	-0.4133	-0.4133	0	%100
30	M26	Z	-0.2386	-0.2386	0	%100
31	MP3A	X	-0.6127	-0.6127	0	%100
32	MP3A	Z	-0.3538	-0.3538	0	%100
33	MP5A	X	-0.6127	-0.6127	0	%100
34	MP5A	Z	-0.3538	-0.3538	0	%100
35	MP2A	X	-0.6127	-0.6127	0	%100
36	MP2A	Z	-0.3538	-0.3538	0	%100
37	MP4A	X	-0.6127	-0.6127	0	%100
38	MP4A	Z	-0.3538	-0.3538	0	%100

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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
1	M1	X	-0.5586	-0.5586	0	%100
2	M1	Z	-0.9675	-0.9675	0	%100
3	M2	X	-0.5586	-0.5586	0	%100
4	M2	Z	-0.9675	-0.9675	0	%100



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

	Member Label	Direction	Start Magnitude	End Magnitude	Start Location[ft]	End Location[ft]
5	M3	X	-5586	-5586	0	%100
6	M3	Z	-9675	-9675	0	%100
7	M4	X	-5586	-5586	0	%100
8	M4	Z	-9675	-9675	0	%100
9	M7	X	-352	-352	0	%100
10	M7	Z	-6097	-6097	0	%100
11	M8	X	-0904	-0904	0	%100
12	M8	Z	-1566	-1566	0	%100
13	M9	X	-0904	-0904	0	%100
14	M9	Z	-1566	-1566	0	%100
15	M10	X	-2265	-2265	0	%100
16	M10	Z	-3923	-3923	0	%100
17	M11	X	-2907	-2907	0	%100
18	M11	Z	-5035	-5035	0	%100
19	M12	X	-2907	-2907	0	%100
20	M12	Z	-5035	-5035	0	%100
21	M13	X	-2907	-2907	0	%100
22	M13	Z	-5035	-5035	0	%100
23	M14	X	-2907	-2907	0	%100
24	M14	Z	-5035	-5035	0	%100
25	MP1A	X	-3538	-3538	0	%100
26	MP1A	Z	-6127	-6127	0	%100
27	M25	X	-3536	-3536	0	%100
28	M25	Z	-6125	-6125	0	%100
29	M26	X	-0642	-0642	0	%100
30	M26	Z	-1112	-1112	0	%100
31	MP3A	X	-3538	-3538	0	%100
32	MP3A	Z	-6127	-6127	0	%100
33	MP5A	X	-3538	-3538	0	%100
34	MP5A	Z	-6127	-6127	0	%100
35	MP2A	X	-3538	-3538	0	%100
36	MP2A	Z	-6127	-6127	0	%100
37	MP4A	X	-3538	-3538	0	%100
38	MP4A	Z	-6127	-6127	0	%100

Member Area Loads

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

Envelope Joint Reactions

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N72A	...	60.874	1	59.87	20	814.715	2	0	75	0	75
2		...	-61.432	7	-9.65	2	-809.225	8	0	1	0	1
3	N80	...	2004.702	11	1345.01	19	177.499	1	-1.07	1	5.448	11
4		...	-2244.096	5	320.962	1	-4111.603	19	-4.48	19	-5.903	5
5	N81	...	697.046	50	1308.791	13	3968.302	13	-0.9	7	2.478	11
6		...	-317.762	5	269.17	7	866.806	7	-4.36	13	-1.958	5
7	N82A	...	715.055	7	53.495	18	469.858	1	0	75	0	75
8		...	-730.855	1	-5.195	12	-467.421	7	0	1	0	1
9	Totals:	...	2282.428	11	2637.125	23	3741.519	1				
10		...	-2282.426	5	832.566	68	-3741.521	7				



Company : Colliers Engineering & Design
 Designer :
 Job Number : Project # 23777177
 Model Name : Antenna Mount Analysis

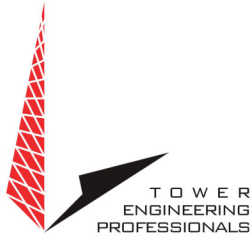
July 21, 2023
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 Checked By: _____

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	L3X3X4	.761	6.25	6	.380	5.... z	16	19638.8...	46656	1.688	3.756	3.795	H2-1
2	M2	L3X3X4	.557	0	7	.181	.977 z	19	19638.8...	46656	1.688	3.688	2.494	H2-1
3	M3	L3X3X4	.528	6.25	14	.398	5.... y	13	19638.8...	46656	1.688	3.701	2.554	H2-1
4	M4	L3X3X4	.530	0	1	.185	.977 y	13	19638.8...	46656	1.688	3.707	2.585	H2-1
5	M7	PIPE_3.0	.524	2.63	19	.244	2.63	5	62054.35	65205	5.749	5.749	4.283	H1-...
6	M8	HSS3X3X4	.615	0	5	.206	.139 z	5	95547.6...	101016	8.556	8.556	2.142	H1-...
7	M9	HSS3X3X4	.350	2....	18	.127	.139 y	5	95547.6...	101016	8.556	8.556	2.139	H1-...
8	M10	PIPE_1.5	.808	2.25	13	.120	2.25	17	22661.6...	23593.5	1.105	1.105	2.269	H1-...
9	M11	PIPE_2.0	.234	0	23	.075	3....	13	28756.4...	32130	1.872	1.872	2.28	H1-...
10	M12	PIPE_2.0	.255	3....	44	.051	0	43	28756.4...	32130	1.872	1.872	2.246	H1-...
11	M13	PIPE_2.0	.338	0	13	.070	0	15	28756.4...	32130	1.872	1.872	2.265	H1-...
12	M14	PIPE_2.0	.408	3....	50	.209	0	2	28756.4...	32130	1.872	1.872	2.242	H1-...
13	MP1A	PIPE_2.0	.309	1.75	2	.180	2.75	2	20866.7...	32130	1.872	1.872	1.61	H1-...
14	M25	PIPE_2.0	.111	0	6	.006	7.01	6	17824.9...	32130	1.872	1.872	1.441	H1-...
15	M26	PIPE_2.0	.265	0	2	.009	0	4	6838.165	32130	1.872	1.872	2.13	H1-...
16	MP3A	PIPE_2.0	.167	2....	1	.050	2....	5	20866.7...	32130	1.872	1.872	1.439	H1-...
17	MP5A	PIPE_2.0	.298	2.75	12	.105	2....	12	20866.7...	32130	1.872	1.872	1.643	H1-...
18	MP2A	PIPE_2.0	.609	2....	7	.226	2.75	8	14916.0...	32130	1.872	1.872	1.644	H1-...
19	MP4A	PIPE_2.0	.094	5.75	7	.038	2.75	43	14916.0...	32130	1.872	1.872	1.183	H1-...

EXHIBIT 5





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Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:

88011

Site Name:

East Killingly North

Location:

Killingly, Connecticut

Tenants:

Department of Justice, AT&T Mobility, Dish Wireless,
T-Mobile, & Verizon Wireless

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

October 17th, 2023

236983 P408687

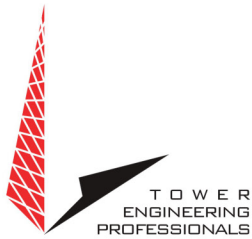
Prepared By:

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

Approved By:



10/18/23



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APPENDIX 4 INFORMATION PERTAINING TO MPE STUDIES.....	11
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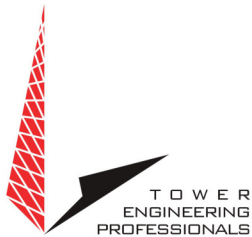
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Non-Ionizing Electromagnetic Radiation (NIER) Study

88011 East Killingly North
Killingly, 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.

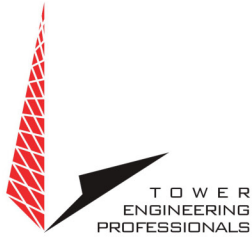
SITE AND FACILITY CONSIDERATIONS

Site 88011 East Killingly North 6 is located at 1375 North Rd., in Killingly, Connecticut at coordinates 41.871551, -71.821570. The support structure is a 288' self-support. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are The Department of Justice (DOJ), AT&T Mobility (AT&T), Dish Wireless (Dish), T-Mobile (T-Mobile), & Verizon Wireless (VZW). 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 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' 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.



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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 88008 EAST KILLINGLY NORTH.RF NIER Study 8/15/23.
- 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.

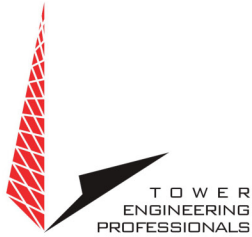
COMPLIANCE DETERMINATION

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

APPENDIX 1 Site Photos

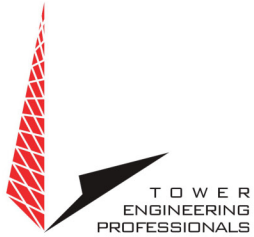


Aerial View of Site



Appendix 2.1 Antenna Inventory

88011 East Killingly North							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azimuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	T-Mobile	Ericsson	Air 6419	2500/2600	45	24400	277
2	T-Mobile	Ericsson	Air 6419	2500/2600	135	24400	277
3	T-Mobile	Ericsson	Air 6419	2500/2600	235	24400	277
4	T-Mobile	Ericsson	Air 6419	2500/2600	315	24400	277
5	T-Mobile	RFS	APXVAALL24	600/1900/2100	45	23200	277
6	T-Mobile	RFS	APXVAALL24	600/1900/2100	135	23200	277
7	T-Mobile	RFS	APXVAALL24	600/1900/2100	235	23200	277
8	T-Mobile	RFS	APXVAALL24	600/1900/2100	315	23200	277
9	T-Mobile	Ericsson	Air 32	2500/2600	45	20300	277
10	T-Mobile	Ericsson	Air 32	2500/2600	135	20300	277
11	T-Mobile	Ericsson	Air 32	2500/2600	235	20300	277
12	T-Mobile	Ericsson	Air 32	2500/2600	315	20300	277
13	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	030	32167	266
14	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	150	32167	266
15	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	270	32167	266
16	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	030	32167	266
17	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100	280	32167	266
18	Verizon	Commscope	JAHH-65B-R3B	700/800/1900/2100	280	32167	266
19	Verizon	Amphenol	LPA-80063-4CF	800	000	15310	266
20	Verizon	Amphenol	LPA-80063-4CF	800	185	15310	266
21	Verizon	Amphenol	LPA-80063-4CF	800	270	15310	266
22	Verizon	Amphenol	LPA-80063-4CF	800	000	15310	266
23	Verizon	Amphenol	LPA-80063-4CF	800	185	15310	266
24	Verizon	Amphenol	LPA-80063-4CF	800	270	15310	266
25	Verizon	Samsung	MT6407	3700/3800/3900	000	18286	266
26	Verizon	Samsung	MT6407	3700/3800/3900	185	18286	266
27	Verizon	Samsung	MT6407	3700/3800/3900	270	18286	266

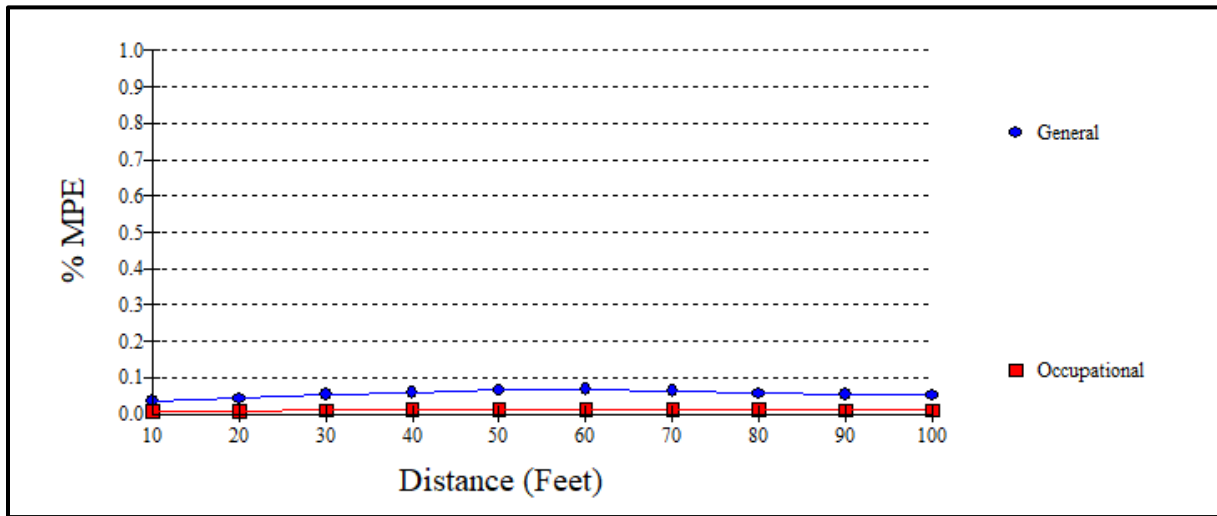


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Appendix 2.2 Antenna Inventory

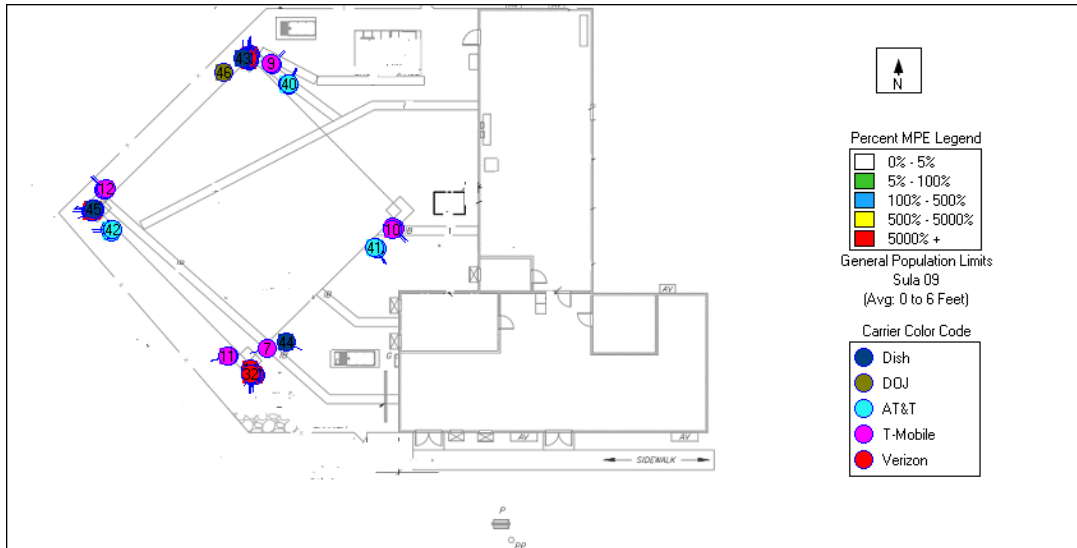
88011 East Killingly North							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azimuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
28	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	000	32167	266
29	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	185	32167	266
30	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	270	32167	266
31	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	000	32167	266
32	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	185	32167	266
33	Verizon	Commscope	JAHH-45B-R3B	700/800/1900/2100	270	32167	266
34	AT&T	Powerwave	P65-16-XLH-RR	800	030	39435	246
35	AT&T	Powerwave	P65-16-XLH-RR	800	150	39435	246
36	AT&T	Powerwave	P65-16-XLH-RR	800	270	39435	246
37	AT&T	CCI	OPA65R-BU8D	700/1900	030	37788	246
38	AT&T	CCI	OPA65R-BU8D	700/1900	150	37788	246
39	AT&T	CCI	OPA65R-BU8D	700/1900	270	18373	246
40	AT&T	CCI	DMP65R-BU8D	700/800/2100	150	18373	246
41	AT&T	CCI	DMP65R-BU8D	700/800/2100	030	18373	246
42	AT&T	CCI	DMP65R-BU8D	700/800/2100	150	18373	246
43	Dish	Commscope	FFVV-65B-R2	600/1900/2000/2100	000	48332	230
44	Dish	Commscope	FFVV-65B-R2	600/1900/2000/2100	120	48332	230
45	Dish	Commscope	FFVV-65B-R2	600/1900/2000/2100	240	48332	230
46	DOJ	Andrew	DB264	100	000	639	210

Appendix 3.1 MPE Limit Study



Maximum Power Density (@60'):	0.0004 mW/cm ²
General Population MPE (@60'):	0.0657%
Occupational MPE (@60'):	0.0131%

Appendix 3.2 MPE Limit Study





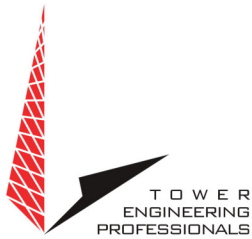
Appendix 4 Information Pertaining to MPE Studies

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.



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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.

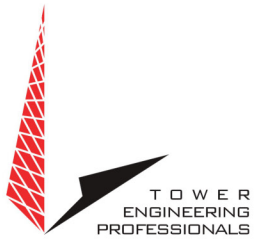
General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore,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



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.

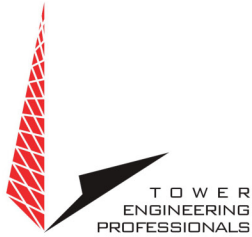


The FCC's limits for exposure at different frequencies are shown in the following Tables.

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:

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

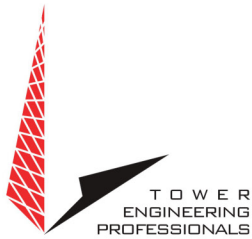
Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length



326 TRYON ROAD
RALEIGH, NC 27607
919.661.6351
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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

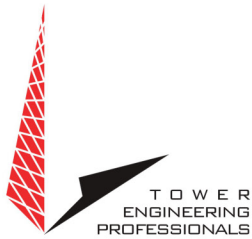
θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)

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



From: [Ann-Marie Aubrey](#)
To: [John Andrews](#)
Subject: RE: [Town of Killingly CT] CSC Antenna Collocation at 1375 North Road (Sent by Jack Andrews, jmandrews@clinellc.com)
Date: Thursday, September 8, 2022 3:11:43 PM

Dear Mr. Andrews;

The Tower dates back beyond the late 2005 / early 2006. The file for that Tower is quite extensive, and even though I could not verify the exact date the Tower was approved, there have been numerous applications by mobile communication companies to change out and update their antenna's on the Tower, and all of those applications had to go before the Connecticut Siting Council. So this is a well-known Tower at a well-known location. I believe the Tower was actually constructed in the early to late 1990's.

If there is anything further I can assist you with, please let me know.

Sincerely,

Ann-Marie L. Aubrey
Director, Planning and Development
Killingly Town Hall
172 Main Street
Killingly, CT 06239
(t) 860-779-5311
(f) 860-779-5381
(email) aaubrey@killinglyct.gov

-----Original Message-----

From: John Andrews <jmandrews@clinellc.com>
Sent: Thursday, September 8, 2022 2:02 PM
To: Ann-Marie Aubrey <aaubrey@killinglyct.gov>
Subject: RE: [Town of Killingly CT] CSC Antenna Collocation at 1375 North Road (Sent by Jack Andrews, jmandrews@clinellc.com)

Ms. Aubrey - Have you had any success in locating any prior approval for the tower 1375 North Road?

Based on the illegible dates on the Permit I sent, it was likely in late 2005 or the first half of '06.

Thank you for your assistance.

John Andrews Jr. | Project Manager
10130 Donleigh Drive, Columbia, MD 21046 Centerline Communications
750 W Center St, Suite 301 | West Bridgewater, MA 02379
Mobile: 443.677.0144
jmandrews@clinellc.com | https://link.edgepilot.com/s/f2b0836e/BSZ-PIx57E_DFJmX_cDp5g?u=http://www.centerlinecommunications.com/

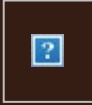
-----Original Message-----

From: Ann-Marie Aubrey <aaubrey@killinglyct.gov>
Sent: Thursday, September 1, 2022 6:32 PM
To: John Andrews <jmandrews@clinellc.com>
Subject: RE: [Town of Killingly CT] CSC Antenna Collocation at 1375 North Road (Sent by Jack Andrews,

EXHIBIT 7



From: [UPS](#)
To: [Barbara Kassabian](#)
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030332529160
Date: Tuesday, October 24, 2023 1:29:34 PM



Hello, your package has been delivered.

Delivery Date: Tuesday, 10/24/2023

Delivery Time: 1:28 PM

Signed by: ANCRI

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030332529160
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:	14519444

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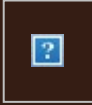
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To: [Barbara Kassabian](#)
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030339594550
Date: Tuesday, October 24, 2023 11:04:14 AM



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Delivery Date: Tuesday, 10/24/2023

Delivery Time: 11:02 AM

Signed by: PLANNING

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030339594550
Ship To:	KILLINGLY TOWN HALL 172 MAIN STREET 1ST FLOOR DANIELSON, CT 062392822 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14519444

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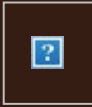
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From: [UPS](#)
To: [Barbara Kassabian](#)
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030316624720
Date: Tuesday, October 24, 2023 11:05:18 AM



Hello, your package has been delivered.

Delivery Date: Tuesday, 10/24/2023

Delivery Time: 11:03 AM

Signed by: FELL



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CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030316624720
Ship To:	KILLINGLY TOWN HALL 172 MAIN STREET 2ND FLOOR DANIELSON, CT 062392822 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14519444

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