Robinson+Cole

KENNETH C. BALDWIN

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

Also admitted in Massachusetts
and New York

March 23, 2022

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
165 Huntington Road, Scotland, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and associated equipment on the ground near the base of the tower. The tower was approved by the Town of Scotland ("Town") in September of 1998. Cellco's shared use of the tower was approved by the Siting Council ("Council") in December of 2006 (EM-VER-123-007-010-099-060308). A copy of the Town approval and the Council's EM-VER-123-007-010-099-060308 approval are included in Attachment 1.

Cellco now intends to modify its facility by removing twelve (12) existing antennas and installing three (3) new Samsung MT6407-77A antennas and six (6) new MX06FRO660-03 antennas on its existing antenna mounts. Cellco also intends to install six (6) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and the specifications for Cellco's new antennas and RRHs are included in Attachment 2.

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

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's new antennas will be installed on its existing antenna mounts.

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

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

4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

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

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

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Gary Greenberg, Scotland First Selectman
Melissa Gil, Zoning Enforcement Officer
Pauline and Guy Passarello, Property Owners
Karla Hanna, Verizon Wireless

ATTACHMENT 1

360

BUILDING PERMIT

AMOUNT PAID 4286

VALIDATION

LICANT Pauline Passarello DATE 9/9/ 1998 PERMIT NO. 360

ADDRESS 165 Huntington Rd (NO.) (STREET) (CONTR'S LICENSE)

MIT TO telecommunications tower (TYPE OF IMPROVEMENT) NO. STORY tower (PROPOSED USE) NUMBER OF DWELLING UNITS

T (LOCATION) 165 Huntington Rd (NO.) (STREET) ZONING DISTRICT

ETWEEN (CROSS STREET) AND (CROSS STREET)

IDIVISION LOT BLOCK LOT SIZE

LDING IS TO BE FT. WIDE BY FT. LONG BY FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TYPE USE GROUP BASEMENT WALLS OR FOUNDATION (TYPE)

MARKS:

EA OR UME 200 sq. feet (CUBIC/SQUARE FEET) ESTIMATED COST $170,000.00 PERMIT FEE $ 895.00

NER Pauline Passarello

DRESS 165 Huntington Rd

BUILDING DEPT. BY George Guay

George Guay

IMUM OF THREE CALLED SPECTIONS REQUIRED FOR CONSTRUCTION WORK:
OUNDATIONS OR FOOTINGS.
RIOR TO COVERING STRUCTURAL EMBERS (READY FOR LATH OR INISH COVERING).
INAL INSPECTION BEFORE CCUPANCY.

APPROVED PLANS MUST BE RETAINED ON JOB AND THIS CARD KEPT POSTED UNTIL FINAL INSPECTION HAS BEEN MADE. WHERE A CERTIFICATE OF OCCUPANCY IS REQUIRED, SUCH BUILDING SHALL NOT BE OCCUPIED UNTIL FINAL INSPECTION HAS BEEN MADE.

WHERE APPLICABLE SEPARATE PERMITS ARE REQUIRED FOR ELECTRICAL, PLUMBING AND MECHANICAL INSTALLATIONS.

POST THIS CARD SO IT IS VISIBLE FROM STREET

BUILDING INSPECTION APPROVALS	PLUMBING INSPECTION APPROVALS	ELECTRICAL INSPECTION APPROVALS
	1	1
	2	2
	HEATING INSPECTING APPROVALS	REFRIGERATION INSPECTION APPROVALS
	1	1
HER	2	2

APPLICATION FOR SCOTLAND PLANNING & ZONING APPROVAL

JOB LOCATION: 165 Huntington Rd						MAP # 21	BLOCK # 19
OWNERS NAME: SBA, INC						LOT # 5	ZONE RA
ADDRESS: 80 Eastern Blvd, Glastonbury CT 06033							
BUILDERS NAME: DICW Electric CO., INC							
ADDRESS: 156 Cross Road Waterford, CT 06385						TELEPHONE (860) 338 0256	
TYPE OF BUILDING OR IMPROVEMENT: Complete installation of top 60' of Telecommunications tower 240' Lattice tower			BASEMENT: N/A	USE		CONFORMING / NON-CONFORMING	
FLOOR AREA	SIZE	FRONT	DEPTH	WING	STORIES: 240'	# BDRMS	#BATHS
1ST: N/A							
2ND: N/A							
GARAGE / SHED / POOL / SIGN	SPECIFY TYPE	SIZE	SQ FEET	ATTACHED / DETACHED	CONFORMING / NON-CONFORMING		
DISTANCE FROM PROPERTY LINES			FRONT	RIGHT SIDE	LEFT SIDE	REAR	

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

March 24, 2006

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

RE: **EM-VER-123-007-010-099-060308** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify existing telecommunications facilities located at 165 Huntington Road, Scotland; 1657 Wilbur Cross Parkway, Berlin; 310 Watertown Road, Bethlehem; and 88 Parsonage Hill Road, Northford (North Branford), Connecticut.

Dear Attorney Baldwin:

At a public meeting held on March 22, 2006, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated March 8, 2006, including the placement of all necessary equipment and shelters within the tower compounds. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to existing facility sites that would not increase tower heights, extend the boundaries of the tower sites, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power densities measured at the tower site boundaries to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on these towers.

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

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz, P.E.
Chairman

PBK/laf

See Attached List.

I:\siting\forms\exmod\emdcltr.doc

CSC
CONNECTICUT SITING COUNCIL

List Attachment.

c: The Honorable Adam P. Salina, Mayor, Town of Berlin
Hellyn Riggins, Town Planner, Town of Berlin
The Honorable Leo S. Bulvanoski, First Selectman, Town of Bethlehem
Jeffrey Hamel, Chairman, Planning and Zoning, Town of Bethlehem
The Honorable Andrew Esposito III, Mayor, Town of North Branford
Carol Zeeb, Town Planner, Town of North Branford
The Honorable Elizabeth A. Wilson, First Selectman, Town of Scotland
Carl S. Fontneau, Town Planner, Town of Scotland
Berlin Fire Department
Jean Szwabowski, Ochenknowski Towers LLC
Sheila R. Becker, Regional Director of Compliance, SBA, Inc.
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Michele G. Briggs, New Cingular Wireless PCS, LLC
Christine Farrell, T-Mobile, Inc.
Thomas F. Flynn III, Nextel Communications, Inc.

ATTACHMENT 2

verizon

SITE NAME: SCOTLAND_CT

165 HUNTINGTON ROAD
SCOTLAND, CT 06247
TOWN OF SCOTLAND
WINDHAM COUNTY

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

SITE INFORMATION

SITE ADDRESS:	165 HUNTINGTON ROAD SCOTLAND, CT 06247
LATITUDE (NAD 83): LONGITUDE (NAD 83):	41°-41'-45.2796"N (41.695911°) 72°-05'-49.4484"W (-72.097069°)
JURISDICTION:	TOWN OF SCOTLAND WINDHAM COUNTY
PARCEL NUMBER:	21-19-05
PROPERTY OWNER:	PAULINE M. & GUY T. PASSARELLO PO BOX 153 SCOTLAND, CT 06264
TOWER OWNER:	SBA COMMUNICATIONS CORPORATION 8051 CONGRESS AVENUE BOCA RATON, FL 33487-1307
VZW SITE ID:	324822
STRUCTURE TYPE:	SELF SUPPORT TOWER
CONSTRUCTION TYPE:	II B
USE GROUP:	U

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT PROJECT NUMBER:	100765
VERIZON LOCATION CODE (PSLC):	467618

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

MOUNT MODIFICATION REQUIRED

YES

VERIZON APPROVED VENDORS

* REFER TO MOUNT MODIFICATION DRAWINGS.

VICINITY MAP

SCOPE OF WORK

PROJECT CONSISTS OF INSTALLING: (3) PROPOSED DUAL ANTENNA MOUNTS, (9) PROPOSED ANTENNAS, (9) PROPOSED RRUS, (1) PROPOSED OVP, AND (1) PROPOSED 12X24 HYBRID CABLE TO AN EXISTING WIRELESS TELECOMMUNICATIONS FACILITY.

PROJECT CONSISTS OF REMOVING: (12) EXISTING ANTENNAS, (3) EXISTING RRUS, AND (1) 1-5/8" COAXIAL CABLE FROM AN EXISTING TELECOMMUNICATIONS FACILITY.

CODE COMPLIANCE

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

- 2018 CT STATE BUILDING CODE / (2015 IBC W/ CT AMENDMENTS)
- 2018 CT STATE BUILDING CODE / (2015 IMC W/ CT AMENDMENTS)
- 2018 CT STATE BUILDING CODE / (2020 NEC W/ CT AMENDMENTS)
- NFPA 1-2015 EDITION
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- ANSI/TIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSI/T 311

DRAWING INDEX

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 22"X34". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

APPROVAL BLOCK

		APPROVED	APPROVED AS NOTED	DISAPPROVED/ REVISE
CONSTRUCTION MANAGER	DATE	☐	☐	☐
SITE ACQUISITION	DATE	☐	☐	☐
RF ENGINEER	DATE	☐	☐	☐
LESSOR/LESSOR REP	DATE	☐	☐	☐

ENGINEER

NB+C TOTALLY COMMITTED.
NB+C ENGINEERING SERVICES, LLC.
100 APOLLO DRIVE
SUITE 303
CHELMSFORD, MA 01824
(978) 856-8308

APPLICANT

verizon
118 FLANDERS ROAD
FLOOR 3
WESTBOROUGH, MA 01581

SITE INFORMATION

SCOTLAND_CT
165 HUNTINGTON ROAD
SCOTLAND, CT 06247
TOWN OF SCOTLAND
WINDHAM COUNTY

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
1	03/18/22	UPDATED MA	CSG
0	03/04/22	FINAL CDs	CSG

PROFESSIONAL STAMP

STATE OF CONNECTICUT
DANIEL J. CORNING
34055
LICENSED PROFESSIONAL ENGINEER

ENGINEER

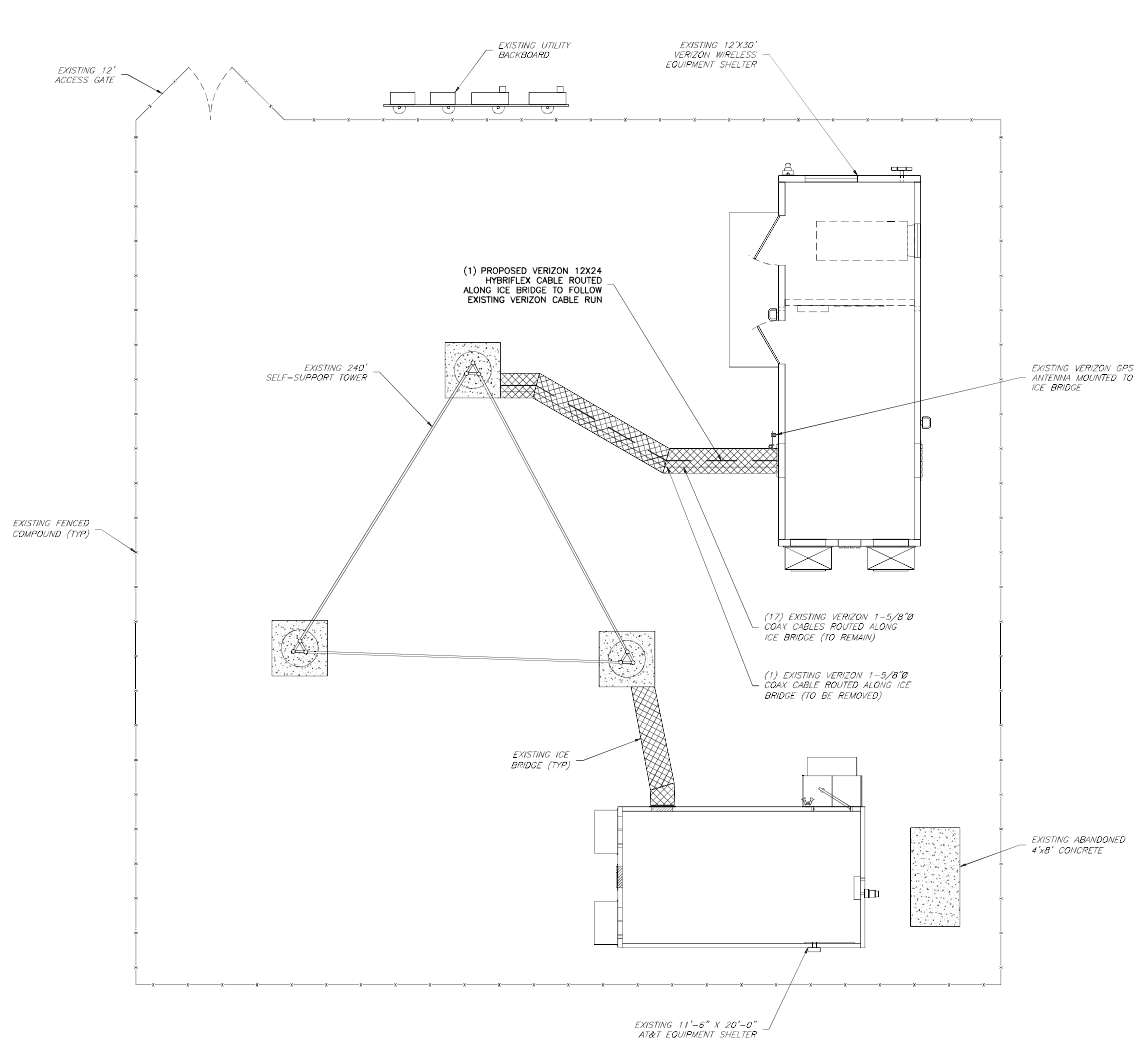
DANIEL J. CORNING, P.E.
CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



1 / C-1 COMPOUND PLAN
SCALE: 1" = 5' (22X34)
SCALE: 1" = 10' (11X17)

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
8. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
9. IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
10. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER MONTH.
11. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
12. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
13. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
14. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.

GRAPHIC SCALE
5 0 2.5 5 10 20
1 INCH = 5 FEET (22X34)
1 INCH = 10 FEET (11X17)

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LYNELLENFORD, MA 01824
(978) 856-8388

APPLICANT

verizon
118 FLANDERS ROAD
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SITE INFORMATION

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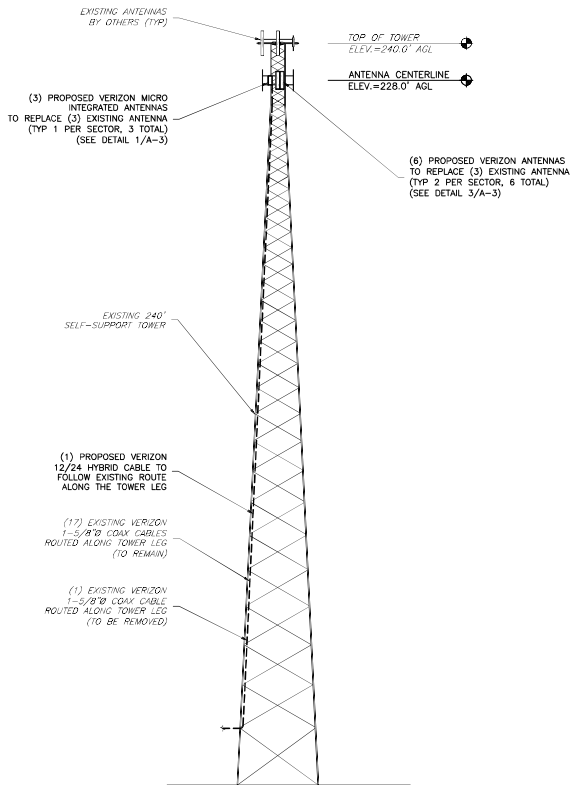
SHEET TITLE

COMPOUND PLAN

SHEET NUMBER

C-1



1 / C-2 ELEVATION
SCALE: 1" = 10' (22X34)
SCALE: 1" = 20' (11X17)

NOTE:
POST-MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO THE MOUNT ANALYSIS PREPARED BY MASER CONSULTING DATED 02/17/2022 FOR ADDITIONAL DETAILS.

NOTE:
MOUNT MODIFICATIONS ARE REQUIRED BEFORE ANY INSTALL CAN OCCUR, PLEASE REFER TO THE MOUNT MODIFICATION DRAWINGS PROVIDED BY MASER CONSULTING DATED, 02/17/2022.

GRAPHIC SCALE
10 0 5 10 20 40
1 INCH = 10 FEET (22X34)
1 INCH = 20 FEET (11X17)

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LYNNFIELD, MA 01940
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APPLICANT

verizon
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SITE INFORMATION

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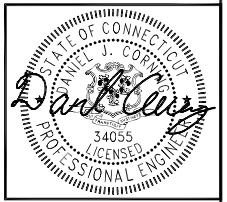


ENGINEER

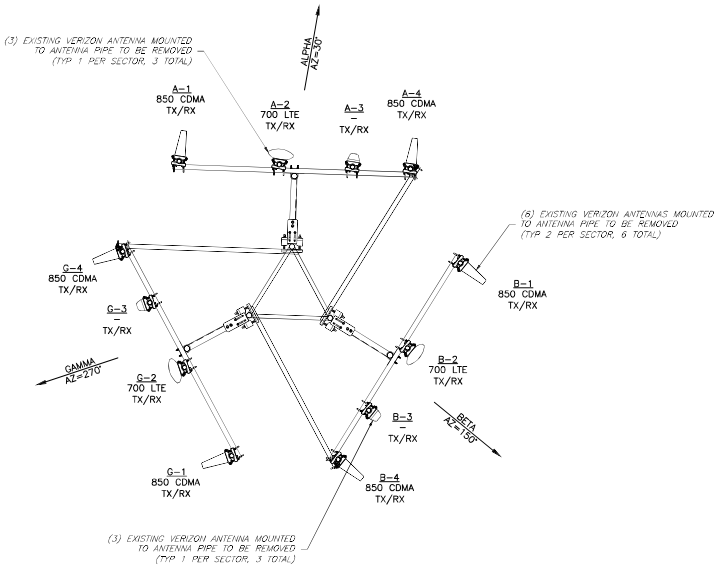
DANIEL J. CORNING, P.E.
CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

ELEVATION

SHEET NUMBER

C-2



1 / A-1 EXISTING ANTENNA ORIENTATION PLAN
NTS

APPROX TRUE NORTH

EXISTING ANTENNA & RRH SCHEDULE

ANTENNA POSITION	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER	AZIMUTH	DOWN TILT		RRH QUANTITY & MODEL	TECHNOLOGY	CABLE SIZE, LENGTH & QUANTITY
					MECH	ELEC			
A-1	ANTEL	LPA-80080/6CF	230.00'	30°	0°	0°	–	–	(6) 1-5/8" Ø COAX CABLES (280'±)
A-2	ANTEL	BXA-70063-6CF	230.00	30°	0°	2°	(1) UHBA B13 RRH 4x30	700 LTE	
A-3	ANTEL	BXA-171085-12BF-EDIN	230.00	30°	–	–	–	–	
A-4	ANTEL	LPA-80080/6CF	230.00	30°	0°	0°	–	–	
B-1	ANTEL	LPA-80080/6CF	230.00'	150°	0°	0°	–	–	(6) 1-5/8" Ø COAX CABLES (280'±)
B-2	ANTEL	BXA-70063-6CF	230.00	150°	0°	2°	(1) UHBA B13 RRH 4x30	700 LTE	
B-3	ANTEL	BXA-171085-12BF-EDIN	230.00	150°	–	–	–	–	
B-4	ANTEL	LPA-80080/6CF	230.00	150°	0°	0°	–	–	
G-1	ANTEL	LPA-80080/6CF	230.00'	270°	4°	0°	–	–	(6) 1-5/8" Ø COAX CABLES (280'±)
G-2	ANTEL	BXA-70063-6CF	230.00	270°	0°	6°	(1) UHBA B13 RRH 4x30	700 LTE	
G-3	ANTEL	BXA-171085-12BF-EDIN	230.00	270°	–	–	–	–	
G-4	ANTEL	LPA-80080/6CF	230.00	270°	4°	0°	–	–	

NOTES:
1. PLANS PREPARED PER RF SHEET DATED 08/12/2021. CONTRACTOR TO VERIFY PROPOSED ANTENNA INFORMATION IS THE MOST CURRENT DATA AT TIME OF CONSTRUCTION.
2. CONTRACTOR TO CONFIRM CABLE LENGTHS PRIOR TO CONSTRUCTION.

ENGINEER

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WINDHAM COUNTY

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DANIEL J. CORNING, P.E.
CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

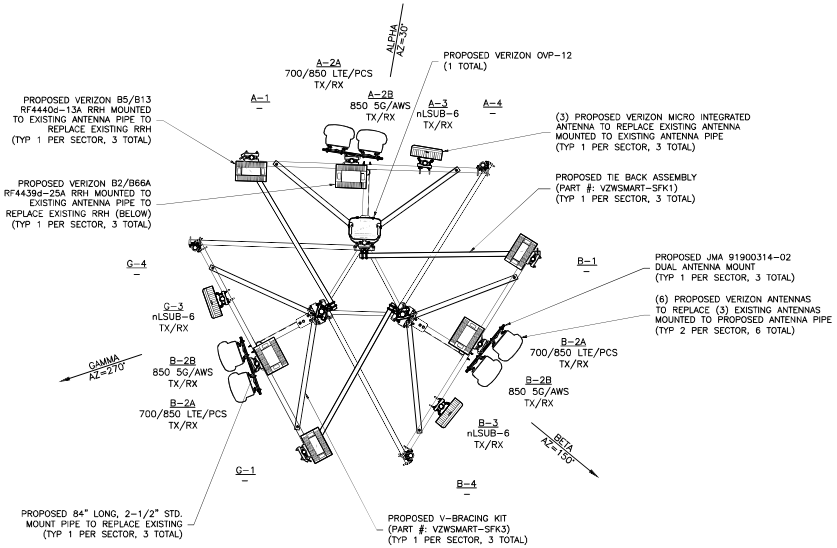
EXISTING ANTENNA PLAN & SCHEDULE

SHEET NUMBER

A-1

GENERAL ANTENNA NOTES

1. ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT FOR EACH ANTENNA WITH RF ENGINEER.
2. ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO ELEVATION 0.0'.
3. CHECK WITH RF ENGINEER FOR LATEST ANTENNA TYPE & AZIMUTH.
4. CONTRACTOR SHALL VERIFY ANTENNA TYPE AND AZIMUTH WITH CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
5. ALL CABLE LENGTHS ARE ESTIMATED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
6. COLOR TAPE MARKINGS MUST BE 3/4" WIDE AND UV RESISTANT, SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE.
7. CONTRACTOR SHALL COORDINATE COLOR CODINGS IN THE FIELD WITH VERIZON REPRESENTATIVE.
8. A STRUCTURAL ANALYSIS REPORT HAS BEEN ISSUED BY TOWER ENGINEERING SOLUTIONS DATED 01/11/2022 TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES.



1 / A-2 PROPOSED ANTENNA ORIENTATION PLAN
NTS

APPROX TRUE NORTH

NOTE:
POST-MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO THE MOUNT ANALYSIS PREPARED BY MASER CONSULTING DATED 02/17/2022 FOR ADDITIONAL DETAILS.

NOTE:
MOUNT MODIFICATIONS ARE REQUIRED BEFORE ANY INSTALL CAN OCCUR, PLEASE REFER TO THE MOUNT MODIFICATION DRAWINGS PROVIDED BY MASER CONSULTING DATED, 02/17/2022.

PROPOSED ANTENNA & RRH SCHEDULE

ANTENNA POSITION	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER	AZIMUTH	DOWN TILT		RRH QUANTITY & MODEL	TECHNOLOGY	CABLE SIZE, LENGTH & QUANTITY
					MECH	ELEC			
A-1	*EMPTY*	–	–	–	–	–	–	–	(1) 12x24 HYBRIFLEX CABLE (280'±) (5) 1-5/8" Ø COAX CABLES (280'±)
A-2a	JMA WIRELESS	MX06FRO660-03	228.00'	30°	0°/0°/0°	2°/2°/2°	(1) B5/B13 RF4440d-13A	700/850 5G	
A-2b	JMA WIRELESS	MX06FRO660-03	228.00'	30°	0°/0°	2°/2°	(1) B2/B66A RF4439d-25A	PCS/AWS	
A-3	SAMSUNG	MT6407-77A	228.00'	30°	0°	6°	INTEGRATED IN ANTENNA	nL-Sub6	
A-4	*EMPTY*	–	–	–	–	–	–	–	
B-1	*EMPTY*	–	–	–	–	–	–	–	SHARED THROUGH HYBRIFLEX CABLE (6) 1-5/8" Ø COAX CABLES (280'±)
B-2a	JMA WIRELESS	MX06FRO660-03	228.00'	150°	0°/0°/0°	2°/2°/2°	(1) B5/B13 RF4440d-13A	700/850 5G	
B-2b	JMA WIRELESS	MX06FRO660-03	228.00'	150°	0°/0°	2°/2°	(1) B2/B66A RF4439d-25A	PCS/AWS	
B-3	SAMSUNG	MT6407-77A	228.00'	150°	0°	6°	INTEGRATED IN ANTENNA	nL-Sub6	
B-4	*EMPTY*	–	–	–	–	–	–	–	
G-1	*EMPTY*	–	–	–	–	–	–	–	SHARED THROUGH HYBRIFLEX CABLE (6) 1-5/8" Ø COAX CABLES (280'±)
G-2a	JMA WIRELESS	MX06FRO660-03	228.00'	270°	0°/0°/0°	6°/6°/2°	(1) B5/B13 RF4440d-13A	700/850 5G	
G-2b	JMA WIRELESS	MX06FRO660-03	228.00'	270°	0°/0°	6°/2°	(1) B2/B66A RF4439d-25A	PCS/AWS	
G-3	SAMSUNG	MT6407-77A	228.00'	270°	0°	6°	INTEGRATED IN ANTENNA	nL-Sub6	
G-4	*EMPTY*	–	–	–	–	–	–	–	

NOTES:
1. CONTRACTOR TO VERIFY PROPOSED ANTENNA INFORMATION IS THE MOST CURRENT DATA AT TIME OF CONSTRUCTION.
2. CONTRACTOR TO CONFIRM CABLE LENGTHS PRIOR TO CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE TO BUILD FROM THE LATEST RF SHEET.

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APPLICANT

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SITE INFORMATION

SCOTLAND_CT
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WINDHAM COUNTY

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
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0	03/04/22	FINAL CDs	CSG

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STATE OF CONNECTICUT · DANIEL J. CORNING · 34055 · LICENSED PROFESSIONAL ENGINEER

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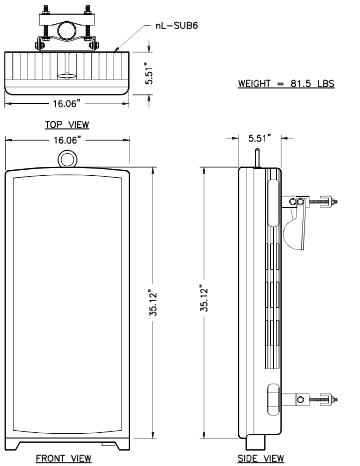
DANIEL J. CORNING, P.E.
CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

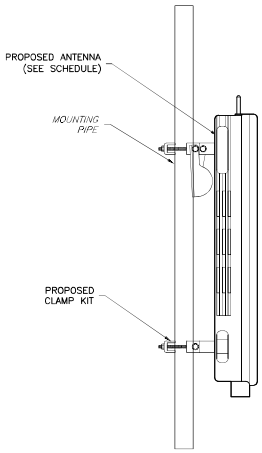
PROPOSED ANTENNA PLAN & SCHEDULE

SHEET NUMBER

A-2



1 A-3 MT6407-77A INTEGRATED ANTENNA
NTS



2 A-3 ANTENNA MOUNTING DETAILS
NTS

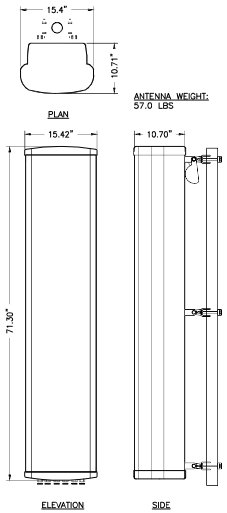
PROPOSED ANTENNA SPECIFICATIONS

ANTENNA MANUFACTURER	ANTENNA MODEL	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
SAMSUNG	MT6407-77A	3	35.12"	16.06"	5.51"	81.5 LBS
JMA WIRELESS	MX06FRO660-03	6	71.30"	15.42"	10.70"	57.0 LBS

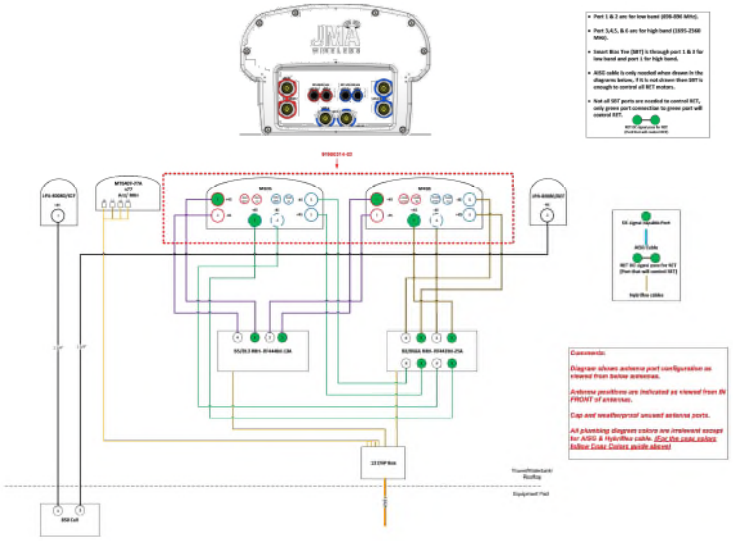
EXISTING ANTENNA SPECIFICATIONS

ANTENNA MANUFACTURER	ANTENNA MODEL	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
ANTEL	*LPA-80080/6CF	6	70.9"	5.5"	13.2"	21.0 LBS
ANTEL	*BXA-70063-6CF	3	71.0"	11.2"	5.2"	17.0 LBS
ANTEL	*BXA-171085-12BF-EDIN	3	72.5"	6.1"	4.1"	12.8 LBS

* TO BE REMOVED



3 A-3 MX06FRO660-03 ANTENNA DETAILS
NTS



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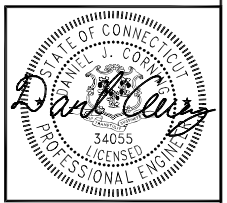

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CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

ANTENNA DETAILS & PLUMBING DIAGRAM

SHEET NUMBER

A-3

PROPOSED RRH EQUIPMENT SPECIFICATIONS

MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
SAMSUNG	RF4439D-25A	TOWER	3	15.50"	15.90"	12.00"	90.0 LBS
SAMSUNG	RF4440D-13A	TOWER	3	15.50"	15.90"	10.20"	74.5 LBS

EXISTING RRH EQUIPMENT SPECIFICATIONS

MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
NOKIA	** UHBA B13 RRH 4X30*	*SHELTER*	*3*	*21.50"*	*12.00"*	*9.00"*	*56.70 LBS*

* TO BE REMOVED

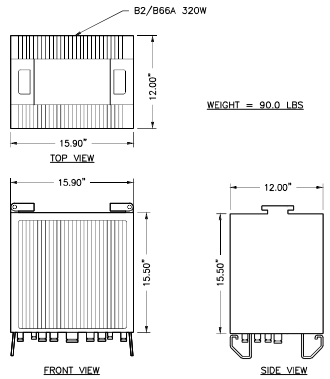
PROPOSED DISTRIBUTION EQUIPMENT SPECIFICATIONS

MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
RAYCAP	RVZDC-6627-PF-48	TOWER	1	29.50"	16.50"	12.60"	32.0 LBS

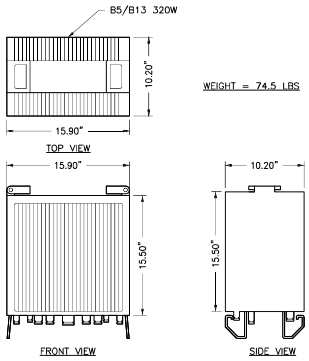
EXISTING DISTRIBUTION EQUIPMENT SPECIFICATIONS

MANUFACTURER	MODEL #	LOCATION	QUANTITY	HEIGHT	WIDTH	DEPTH	WEIGHT
–	*NONE*	–	–	–	–	–	–

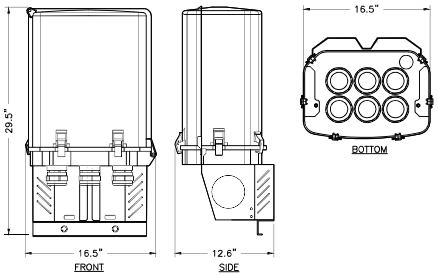
* TO BE REMOVED



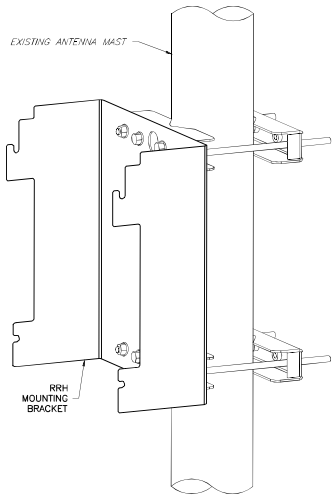
1 / A-4 B2/B66A RF4439D-25A (REMOTE RADIO HEAD)
NTS



2 / A-4 B5/B13 RF4440D-13A (REMOTE RADIO HEAD)
NTS



3 / A-4 OVP12 DISTRIBUTION BOX DETAIL
NTS



4 / A-4 RRH MOUNTING DETAIL
NTS

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LICENSED PROFESSIONAL ENGINEER

ENGINEER

DANIEL J. CORNING, P.E.
CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

EQUIPMENT SPECIFICATIONS & DETAILS

SHEET NUMBER

A-4

VERIZON WIRELESS CONTRACTOR SCOPE OF WORK

- VERIZON WIRELESS CONTRACTOR IS TO SUPPLY AND INSTALL THE PROPOSED CABLE JUMPER (WITH LC TO LC CONNECTORS) FROM THE PROPOSED FIBER TRAYS TO THE PROPOSED MAIN DISTRIBUTION BOX (BOTTOM).
- VERIZON WIRELESS CONTRACTOR IS TO SUPPLY AND INSTALL ALL MOUNTING HARDWARE AND 1/2" ANTENNA JUMPER CABLES AS REQUIRED DURING CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL THE PROPOSED MAIN DISTRIBUTION BOXES (BOTTOM) INSIDE OF THE EXISTING EQUIPMENT SHELTER. THE CONTRACTOR IS TO VERIFY THE LOCATION IN THE EQUIPMENT SHELTER PRIOR TO CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL THE PROPOSED MAIN DISTRIBUTION BOXES (TOP) IN THE ALPHA SECTOR, MOUNTED ON THE BACK SIDE OF ANTENNA PIPE.
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL (1) RUNS OF 12/24 HYBRIFLEX CABLE FROM THE PROPOSED MAIN DISTRIBUTION BOX (BOTTOM) TO THE MAIN DISTRIBUTION BOX (TOP) FOLLOWING THE PATH OF THE EXISTING CABLES.
- VERIZON WIRELESS CONTRACTOR IS TO MAKE ALL ALARM CONNECTIONS TO THE DISTRIBUTION BOXES AND LEAVE A 40' COIL FOR OTHERS TO PUNCH INTO ALARM BLOCK.
- VERIZON WIRELESS CONTRACTOR IS TO SEAL ALL DISTRIBUTION BOXES AS REQUIRED DURING CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL (9) RUNS OF HELIAX 1/1 HYBRID CABLE FROM THE PROPOSED MAIN DISTRIBUTION BOXES TO THE REMOTE RADIO HEAD UNITS.
- VERIZON WIRELESS CONTRACTOR IS TO SUPPLY AND INSTALL 1/2" ANTENNA JUMPERS FROM EACH PROPOSED REMOTE RADIO HEAD UNIT (RRH) TO THE PROPOSED ANTENNAS IN ALL SECTORS (36 TOTAL 1/2" ANTENNA JUMPERS).
- VERIZON WIRELESS CONTRACTOR IS TO INSTALL THE PROPOSED REMOTE RADIO HEAD UNITS IN ALL SECTORS ON THE ANTENNA PIPE.
- VERIZON WIRELESS CONTRACTOR IS TO GROUND ALL REMOTE RADIO HEAD UNITS (RRH) AND DISTRIBUTION BOXES TO THE EXISTING GROUND BARS AS REQUIRED DURING CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO GROUND ALL PROPOSED ANTENNAS TO THE EXISTING GROUND BARS AS REQUIRED DURING CONSTRUCTION.
- VERIZON WIRELESS CONTRACTOR IS TO COMPLETE THE INSTALLATION OF THE PROPOSED ANTENNAS AND HYBRIFLEX CABLE SYSTEM.
- VERIZON WIRELESS CONTRACTOR IS TO PERFORM THE FOLLOWING OPTICAL SWEEP TESTS; OTDR AND OPTICAL LOSS. RECOMMENDED UNITS – ANRITSU MT9090, JDSU, EXFO FTB-1/FTB-720 OTDR.
- VERIZON WIRELESS CONTRACTOR IS TO PERFORM THE FOLLOWING ANTENNA SYSTEM SWEEP TESTS: SYSTEM VZWR / dB RL.
- VERIZON WIRELESS CONTRACTOR IS TO PROVIDE ALL CLOSE OUT DOCUMENTS AS REQUIRED BY VERIZON WIRELESS.

SAMSUNG RRH

- DUAL RRH B2/B66A RF4439D-25A HELIAX 1/1 HYBRID CABLE CABLE MUST BE CONNECTED TO THE L0 PRIMARY PORT AND (1) EXTRA PAIR OF FIBER CONNECTED TO L1 SECONDARY PORT.
- DUAL RRH B5/B13 RF4440D-13A HELIAX 1/1 HYBRID CABLE MUST BE CONNECTED TO THE L0 PRIMARY PORT.

INTEGRATED ANTENNA

- MT6407-77A 1/1 HYBRID CABLE MUST BE CONNECTED TO OPT1 PORT AND (3) EXTRA FIBER CABLE TO THE SECONDARY OPT2 PORT.

MOP FOR RET INSTALLS

ANTENNA CREW

1. REVIEW ANTENNA SCHEDULE WITH CELL TECH
2. FOR EACH SECTOR, LAY ANTENNAS OUT ON THE GROUND AS THEY WILL BE INSTALLED ACCORDING TO THE ANTENNA SCHEDULE
3. LABELED EACH ANTENNA WITH FACE AND POSITION WITH A SHARPIE (EX:"ALPHA-4")
4. LABEL ALL MOTORS WITH SHARPIE WITH BAND AND TECHNOLOGY (EX:"700LTE", "AWSLTE","PCSLTE","850VOICE", ETC)
5. CONNECT ALL AISG CABLES (INCLUDING JUMPERS THAT WILL BE USED IN FINAL ASSEMBLY) PER THE ANTENNA SCHEDULE
   A. WHEN DAISY CHAINING IS INEVITABLE, AS A GENERAL RULE...
      I. KEEP LOW AND HIGH BANDS ON SEPARATE AISG CHAINS AS MUCH AS POSSIBLE
      II. MINIMIZE AMOUNT OF MOTORS PER CHAIN AS MUCH AS POSSIBLE (MAX IS 6)
   B. WHEN COMPLETED ALL RET MOTOR PORTS NEED TO BE CONNECTED, INCLUDING THE MOTORS NOT BEING USED YET. THE ONLY UNUSED PORT WILL BE THE LAST IN THE DAISY CHAIN, WHICH NEEDS TO BE CAPPED AND WEATHERPROOFED.
6. ON LAPTOP, FILL OUT THE SOFTCOPY OF THE RET DEPLOYMENT FORM AND SAVE IT, REPLACING THE "######" WITH THE 6-DIGIT ENB NUMBER IN THE FILENAME (EX: RET DEPLOYMENT FORM_0981234.XLSX")
7. GIVE A SOFTCOPY OF THE RET DEPLOYMENT FORM TO VZW CELL TECH AND GC/CONSULTANT (EITHER BY EMAIL OR USB STICK)
8. USING THE SAME LAPTOP WHICH HAS THE RET DEPLOYMENT FORM OPENED, CONNECT THE CONTROL MODULE AND PROVISION EACH MOTOR RESPECTIVELY
   NOTE: CREWS MUST USE SOFTWARE THAT IS SPECIFIC TO THE MOTOR TYPE BEING PROVISIONED (IE- JMA SOFTWARE SHOULD ONLY BE SUED FOR JMA MOTORS)
   A. COPY AND PASTE "RET FRIENDLY NAME" FROM SPREADSHEET (COLUMN A) TO THE "SECTOR ID" FIELD OF EACH MOTOR
   B. POPULATE "SET RET TILT"
   C. POPULATE "MECHANICAL TILT"
9. CALIBRATE ALL MOTORS
10. DISCONNECT NECESSARY AISG JUMPERS TO TRANSPORT ANTENNAS SAFELY TO ASSEMBLY
11. INSTALL ANTENNAS ACCORDING TO THE ANTENNA SCHEDULE, USING THE SHARPIE LABELS AS REFERENCE
12. RECONNECT ALL AISG JUMPERS
13. BEFORE PLUGGING INTO EACH RRH, CONNECT MAIN AISG CABLE INTO CONTROLLER TO ENSURE ALL MOTORS ARE STILL SEEN IN THE DAISY CHAIN
14. PLUG AISG INTO RRH AND NOTIFY VZW TECH OF COMPLETION

VZW TECH (USER HELP GUIDE: \\WIN-VZWNET\NORTHEAST\PAPM_IMPLEMENTATION\SYSTEM PERFORMANCE\USERS\MOSERGA\RET\)

15. POWER ON RADIO EQUIPMENT AND RUN ANY NECESSARY WOS
16. "DISCOVER" THE RETS
    A. LOG INTO SAM
       I. VERIFY RET LICENSE ALLOCATION IN SAM
          • ENBEQUIPMENT>ENB>ACTIVATIONSERVICE>ISAISGALLOWED=CHECKED
    B. LOG INTO NEM LOCAL
       I. GO TO TREE VIEW AND HIGHLIGHT RET SUBUNIT
       II. ENABLE BUS SCAN
          • CONFIGURATION> ENABLE AISG BUS SCAN
       III. ALLOCATE CONFIG RIGHTS
          • CONFIGURATION>ALLOCATION CONFIGURATION RIGHTS
       IV. VERIFY CORRECT NUMBER OF RETS ARE DISCOVERED
17. "COMMISSION" THE RETS
    A. LOG INTO NEM LOCAL
       I. STILL IN TREE VIEW, RIGHT CLICK ON "HW MODULES"
       II. SELECT "CREATE RET MO"
       II. RELEASE CONFIG RIGHTS
          • CONFIGURATION>RELEASE CONFIGURATION RIGHTS
       IV. VERIFY RETSUBUNIT:SECTORNAME, ELECTRICAL TILT, AND MECHANICAL TILT ARE POPULATED
18. "PROVISION" THE RETS
    A. LOG INTO SAM
       I. OPEN UP THE ENB PROPERTIES AND COMPLETE A FULL RESYNC
       II. IN THE SEARCH TEXTBOX, SEARCH FOR "RETSUBUNIT"
       III. VERIFY ALL RETS ARE ACCOUNTED FOR AND "RETSUBUNIT:SECTORNAME", "ANTENNAELECTICALTILT", AND "RETSUBUNIT:MECHANICALTILT " ARE ACCURATE

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CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

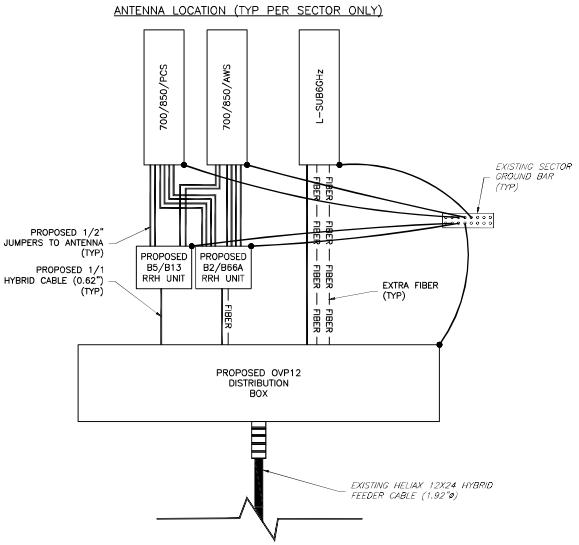
SCOPE OF WORK

SHEET NUMBER

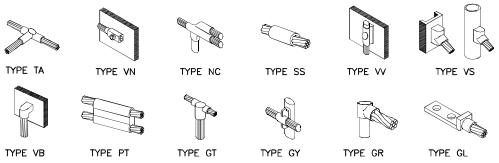
A-5

GROUNDING NOTES

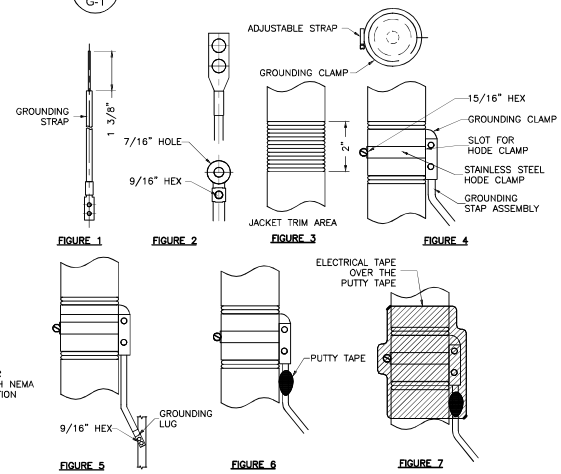
1. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
2. ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
3. ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
4. GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
5. GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.
6. GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
7. ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
8. INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
9. REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
10. ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
11. PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
12. PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.

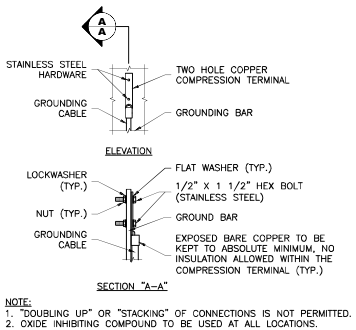


1 G-1 GROUNDING RISER DIAGRAM NTS



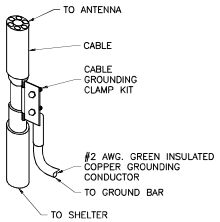
2 G-1 CADWELD GROUNDING CONNECTION DETAILS NTS



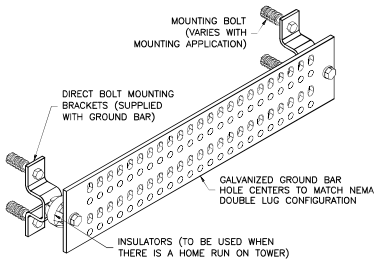


NOTE:
1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

3 G-1 GROUND BAR CONNECTION DETAIL NTS



4 G-1 CABLE GROUNDING DETAIL NTS



5 G-1 GROUND BAR DETAIL NTS

6 G-1 GROUNDING STRAP WEATHERPROOFING DETAIL NTS

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100 APOLLO DRIVE
SUITE 303
LAKELAND, MA 01824
(978) 856-8388

APPLICANT

verizon
118 FLANDERS ROAD
FLOOR 3
WESTBOROUGH, MA 01581

SITE INFORMATION

SCOTLAND_CT
165 HUNTINGTON ROAD
SCOTLAND, CT 06247
TOWN OF SCOTLAND
WINDHAM COUNTY

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
1	03/18/22	UPDATED MA	CSG
0	03/04/22	FINAL CDs	CSG

PROFESSIONAL STAMP

STATE OF CONNECTICUT
DANIEL J. CORNING
34055
LICENSED PROFESSIONAL ENGINEER

ENGINEER

DANIEL J. CORNING, P.E.
CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

GROUNDING DETAILS & NOTES

SHEET NUMBER

G-1

POST-MODIFICATION INSPECTION (PMI) REQUIREMENT

1. PMI REQUIRED FOR ALL SITES, REFER TO VERIZON NSTD-446 SECTIONS 1.5 AND 2.3 FOR MORE INFORMATION.

2. REFER TO THE MOUNT ANALYSIS BY MASER CONSULTING DATED 12/23/2021 FOR ADDITIONAL DETAILS.

3. GENERAL CONTRACTOR SHALL PROVIDE THE BELOW DOCUMENTATION TO THE ENGINEER OF RECORD VIA EMAIL TO VZWMOUNTS@NBCLLC.COM, DROPBOX, OR OTHER FILESHARE METHOD. PROVIDE HIGH RESOLUTION PHOTOS (DO NOT COMPRESS).

4. ENGINEER OF RECORD WILL CONDUCT A REVIEW OF THE PROVIDED DOCUMENTS TO PREPARE A PMI REPORT. ENGINEER OF RECORD WILL NOTIFY GENERAL CONTRACTOR IF ANY ADDITIONAL DOCUMENTATION IS REQUIRED TO COMPLETE THE PMI.

5. PMI DOCUMENTATION SHALL BE SUFFICIENT TO CONFIRM THE UPGRADE WAS BUILT AS DESIGNED, INCLUDING EQUIPMENT CHANGES AND STRUCTURAL MODIFICATIONS, AND IS IN ADDITION TO ANY OTHER REQUIRED CLOSEOUT PACKAGE DOCUMENTATION.

6. REQUIRED DOCUMENTATION FOR PMI INCLUDES THE FOLLOWING AT A MINIMUM. REFER TO THE MOUNT ANALYSIS FOR POSSIBLE ADDITIONAL INFORMATION. IF STRUCTURAL MODIFICATIONS ARE REQUIRED, REFER TO THE MODIFICATION DRAWINGS FOR POSSIBLE ADDITIONAL REQUIREMENTS.

6A. PROVIDE PRE-AND-POST CONSTRUCTION PHOTOS OF EACH SECTOR FROM THE MOUNT ELEVATION AND THE GROUND. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE PHOTOS PROVIDED PROVIDE POSITIVE CONFIRMATION THAT THE MODIFICATION/UPGRADE WAS COMPLETED IN ACCORDANCE WITH THESE CONSTRUCTION DRAWINGS AND ANY STRUCTURAL/MOUNT MODIFICATION DRAWINGS. CONTRACTOR SHALL RELAY ANY DATA THAT CAN IMPACT THE PERFORMANCE OF THE MOUNT OR MOUNT MODIFICATION, INCLUDING SAFETY ISSUES. PHOTOS SHALL HAVE A DATE/TIME STAMP IN THE PHOTO. REFER TO THE MOUNT ANALYSIS FOR FILE STRUCTURE SCHEDULE OF PHOTOS. PROVIDE PHOTOS OF THE GATE SIGNS AND CARRIER SHELTER TO IDENTIFY THE TOWER OWNER, SITE NAME, SITE NUMBER, ETC.

6B. VERIFICATION OF THE MEMBER CONNECTIONS, BRACING, AND RELEVANT DIMENSIONS.

6C. VERIFICATION OF THE ANTENNA AND OTHER EQUIPMENT CONFIGURATION (PHOTOS OF MODEL NUMBERS/TAGS FOR ALL EQUIPMENT, AS WELL AS THE FEEDLINE CONFIGURATION). TAKE PHOTOS OF THE BACK SIDE OF EACH SECTOR AS WELL AS CLOSE-UPS OF ALL EQUIPMENT. PHOTOS SHOULD CONFIRM THE HORIZONTAL AND VERTICAL POSITIONING OF THE ANTENNAS AND EQUIPMENT AND SHALL HAVE TAPE MEASURES IN THE PHOTOS TO CONFIRM.

6D. FOR TIE-BACKS, STRUTS, MOUNT PIPES, PHOTOS TO CONFIRM THE ANGLES AND LOCATION OF ATTACHMENT POINT AT BOTH ENDS OF MEMBER, AS WELL AS DIMENSIONS, THICKNESS, AND LENGTHS OF THE MEMBERS. REFER TO THE CHECKLIST IN THE MOUNT ANALYSIS FOR ADDITIONAL INFORMATION.

6E. MOUNT ATTACHMENT TO THE SUPPORTING STRUCTURE, INCLUDING ANY KICKERS OR SUPPORTS, OR TIEBACKS.

6F. MATERIALS USED (TYPE, STRENGTH, DIMENSIONS, ETC). PROVIDE BILL OF MATERIALS AND MATERIAL SPEC TO CONFIRM MATERIAL GRADES AND SIZES. PROVIDE DOCUMENTATION FOR GALVANIZATION OF MEMBERS WHETHER HOT-DIPPED OR COLD-GALVANIZED. IF MATERIALS DIFFER FROM THOSE SPECIFIED ON THESE DRAWINGS, PROVIDE DOCUMENTATION THAT THE "EQUIVALENT" MATERIAL HAS THE SAME SPECIFICATIONS.

6G. MOUNT ORIENTATION/AZIMUTH AND ELEVATION. PROVIDE TAPE DROP PHOTOS OF ANTENNA CENTERLINE(S) AND MOUNT ATTACHMENT POINTS TO THE SUPPORTING STRUCTURE. IF THERE ARE MULTIPLE RAD CENTERS, PROVIDE PHOTOS OF ALL ELEVATIONS.

POST-MODIFICATION INSPECTION (PMI) REQUIREMENT CONT.

6H. VERIFICATION THAT THE INSTALL HAS NOT CAUSED DAMAGE TO OR UNPLANNED OBSTRUCTION OF THE FOLLOWING:

--- CLIMBING FACILITIES
--- SAFETY CLIMB IF PRESENT, INCLUDING PHOTOS ABOVE AND BELOW THE MOUNT.
--- LIGHTING SYSTEM
--- OTHER INSTALLED SYSTEMS ON THE STRUCTURE.
--- CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS SUPPORTED AND NOT ADVERSELY AFFECTED BY THE INSTALLATION OF NEW COMPONENTS. THIS MAY INVOLVE THE INSTALLATION OF WIRE ROPE GUIDES OR OTHER ITEMS TO PROTECT THE WIRE ROPE.

6I. OTHER ITEMS DETERMINED BY THE STRUCTURAL ENGINEER TO ENSURE THE MOUNT WILL PERFORM AS DESIGNED. PHOTOS OF RELEVANT MEASUREMENTS, WITH SUFFICIENT DETAILS TO CONFIRM CONNECTION DETAILS, PLACEMENT OF EQUIPMENT, WALL ANCHOR DETAILS, BALLAST QUANTITIES, STRUCTURAL MODIFICATIONS ETC. DIAMETERS AND THICKNESSES OF BOLTS/THREADED RODS/ANGLES/TUBES ETC SHALL HAVE PHOTOS CONFIRMING CALIPER MEASUREMENTS.

--- CONFIRMATION THAT ALL HARDWARE WAS PROPERLY INSTALLED, AND EXISTING HARDWARE WAS INSPECTED FOR ANY ISSUES.
--- FOR BALLAST SLEDS, DOCUMENTATION OF THE WEIGHT OF BALLAST IN EACH SECTOR.
--- FOR WALL ANCHORS, PHOTOS AND MEASUREMENTS OF OUTSIDE AND INSIDE OF CONNECTIONS. DOCUMENTATION OF ADHESIVE USED, SIZE AND LENGTH OF ANCHORS, EFFECTIVE EMBEDMENT DEPTH OF THE ANCHORS, GROUTING OF HOLLOW WALLS, SPACING AND EDGE DISTANCE MEASUREMENTS, AND ANY THROUGH-BOLTS OR BACKING PLATES.
--- FOR STUD WELD CONNECTIONS, DOCUMENTATION TO CONFIRM SURFACE PREPARATION, STUD WELD SIZE, GRADE, LENGTH, AND SPACING.
--- FOR FABRICATED PARTS, SHOP DRAWINGS TO BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
--- FOR WELDED PARTS, CERTIFIED WELD INSPECTION.
--- FOR BOLTED PARTS, BOLT INSTALLATION AND TORQUE.

7. CONTRACTOR SHALL PROVIDE, IN ADDITION TO THE ABOVE, AS-BUILT CDS WITH REDLINES IDENTIFYING ANY CHANGES. THE AS-BUILTS SHALL THE CONTRACTOR'S NAME, PREPARER'S SIGNATURE, AND DATE.

8. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PMI ("FAILED PMI"), THE CONTRACTOR SHALL WORK WITH THE ENGINEER OF RECORD TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

8A. CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENTAL PMI.

8B. OR, WITH THE EOR'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT/UPGRADE USING THE AS-BUILT CONDITION.

9. NOTE: IF LOADING IS DIFFERENT THAN THAT SHOWN IN THESE CONSTRUCTION DRAWINGS OR STRUCTURAL/MOUNT MODIFICATION DRAWINGS, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY FOR RESOLUTION.

10. THE ENGINEERING FIRM PERFORMING AN ANALYSIS SHALL PROVIDE A CONTRACTOR'S PHOTO LOG AND CHECKLIST TO BE COMPLETED BY THE INSTALLING CONTRACTOR. THE CONTRACTOR SHALL THEN PROVIDE POST-INSTALLATION INFORMATION TO THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL REVIEW THE DOCUMENTS FOR ANY DEFICIENCIES THAT CAN BE DETERMINED FROM THE DESKTOP REVIEW OF THE DATA. THE ENGINEERING FIRM SHALL THEN PROVIDE DOCUMENTATION TO VZW THAT THE SITE IS COMPLETED, AND THE PMI REPORT IS APPROVED.

ENGINEER

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100 APOLLO DRIVE
SUITE 303
LOWELL, MA 01854
(978) 856-8308

APPLICANT

verizon
118 FLANDERS ROAD
FLOOR 3
WESTBOROUGH, MA 01581

SITE INFORMATION

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165 HUNTINGTON ROAD
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TOWN OF SCOTLAND
WINDHAM COUNTY

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REVISIONS

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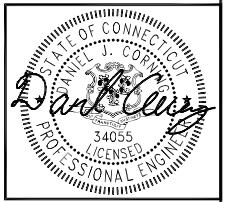
PROFESSIONAL STAMP



ENGINEER

DANIEL J. CORNING, P.E.
CT PROFESSIONAL ENGINEER LIC. #34055

SHEET TITLE

PMI REQUIREMENTS

SHEET NUMBER

GN-1

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' T-FRAME

TOWER OWNER: SBA TOWERS
TOWER OWNER SITE NUMBER: CT00990

CARRIER SITE NAME: SCOTLAND CT
CARRIER SITE NUMBER: 467618
FUZE ID: 16078712

165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT 06247
WINDHAM COUNTY

LATITUDE: 41.695911° N
LONGITUDE: 72.097069° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 122 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 367.1'

ICE LOADS

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

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .189
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS
ADDRESS: 118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP: WESTBOROUGH, MA 01581
CONTACT: ANDREW CANDIELLO
EMAIL: ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY: MASER CONSULTING
CONTACT: PETER ALBANO
PHONE: 856-797-0412
E-MAIL: PETER.ALBANO@COLLIERSENGINEERING.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10123269
VZW LOCATION CODE (PSLC): 467618
ANALYSIS DATE: 12/21/2021

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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

SCALE:	JOB NUMBER:
AS SHOWN	21777796A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
3	2/17/2022	ISSUED FOR CONSTRUCTION	CDH	DRH
2	12/23/2021	ISSUED FOR CONSTRUCTION	DC	DRH
1	11/24/2021	ISSUED FOR CONSTRUCTION	DC	DRH
0	08/27/2021	ISSUED FOR CONSTRUCTION	DC	DRH

STATE OF CONNECTICUT
PETER MICHAEL ALBANO
No. 35449
LICENSED PROFESSIONAL ENGINEER
02/21/22

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:

SCOTLAND CT
467618
165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT
06247
WINDHAM COUNTY

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

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	VZWSMART	VZWSMART-SFK1	TIE BACK ASSEMBLY	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PRCTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.	72	216
3		VZWSMART-SFK3-SL	V-BRACING KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1	117	351
6		VZWSMART-MSK1	CROSSOVER PLATE		14	84

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	-	-	84" LONG, P2 1/2 STD	GALVANIZED.CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).	35	105
					TOTAL:	756

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTES:

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

MASER CONSULTING CONNECTICUT
VOLTE READY AT A BUSINESS ENGINEERING & LICENSED IN 2004
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467618

165 HUNTINGTON ROAD
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06247
WINDHAM COUNTY

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

SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: SBOM-1

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO
      PETER.ALBANO@COLLIERSENGINEERING.COM
   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC COTE).
9. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
10. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
11. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
12. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
13. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

WELDING NOTES

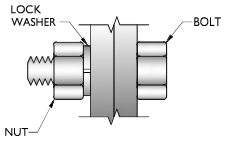
1. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTION (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE, DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A THIRD PARTY CERTIFIED WELD INSPECTOR (CWI) THROUGHOUT THE ENTIRETY OF THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
3. THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CWI REPORT, THAT ALL WELDING OPERATIONS PRE, DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF ALL WELDING. ALL CWI WELD INSPECTION DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.
4. IN CASES WHERE A WELD IS SPECIFIED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT-UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.
5. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
6. CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.

BOLT SCHEDULE (IN.)

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

WORKABLE GAGES (IN.)

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

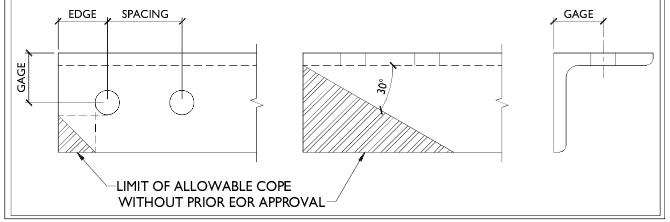


TYP. BOLT ASSEMBLY

NOTES:

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

ALLOWABLE COPING



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SCALE:	JOB NUMBER:
AS SHOWN	21777796A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
3	2/17/2022	ISSUED FOR CONSTRUCTION	CDH	DRH
2	12/23/2021	ISSUED FOR CONSTRUCTION	DC	DRH
1	11/24/2021	ISSUED FOR CONSTRUCTION	DC	DRH
0	08/27/2021	ISSUED FOR CONSTRUCTION	DC	DRH

STATE OF CONNECTICUT
PETER MICHAEL ALBANO
No. 35449
LICENSED PROFESSIONAL ENGINEER
02/21/22

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SITE NAME:

SCOTLAND CT
467618

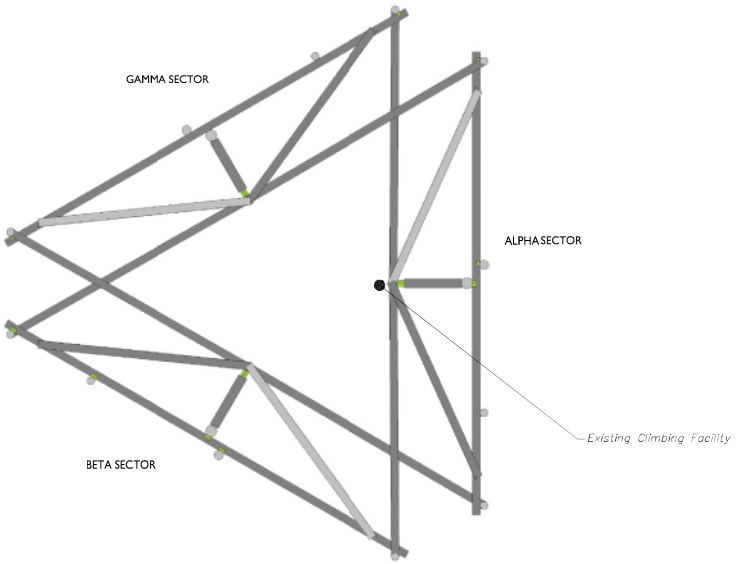
165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT
06247
WINDHAM COUNTY

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

SHEET TITLE:
MODIFICATION NOTES

SHEET NUMBER:
SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



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

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HUDSON DESIGN GROUP, LLC ON 6/4/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (228'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

CLIMBING FACILITY PHOTO

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02/21/22

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2000 Midlantic Drive
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Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
CLIMBING FACILITY DETAIL

SHEET NUMBER:
SCF-1

LEGEND:

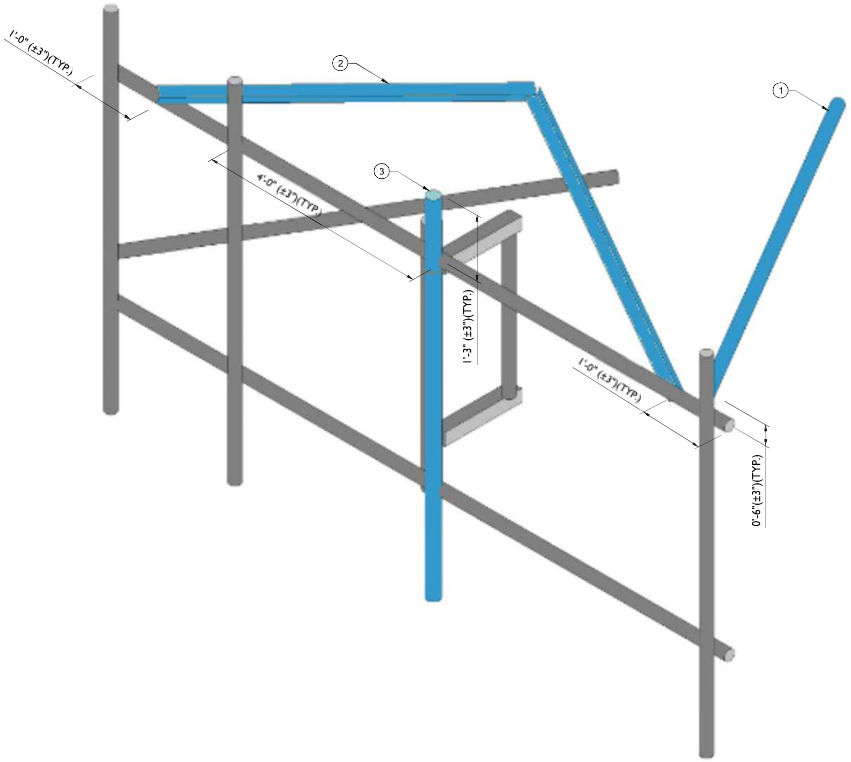
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	228'-0"	3	PROPOSED TIE BACK ASSEMBLY (PART #: VZWSMART-SFK1)	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.
2		3	PROPOSED V-BRACING KIT (PART #: VZWSMART-SFK3-SL)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1
3		3	84" LONG, P2 1/2 STD MOUNT PIPE	GALVANIZED.CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTALS WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).

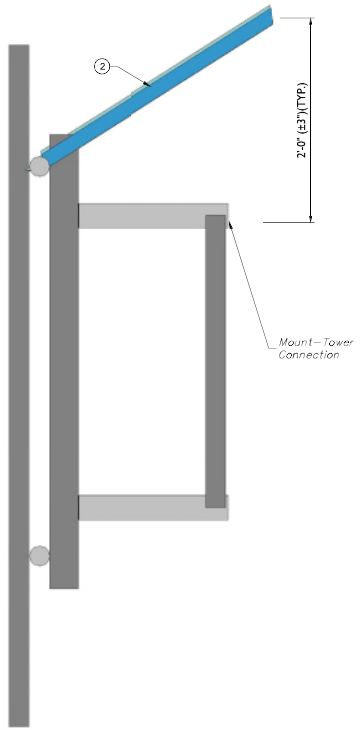
NOTES.

MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

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WINDHAM COUNTY

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Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :

MODIFICATION DETAILS

SHEET NUMBER :

SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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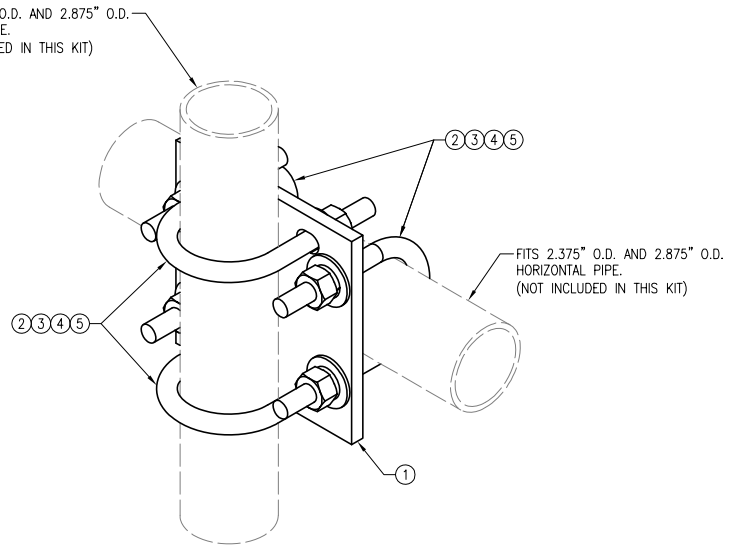
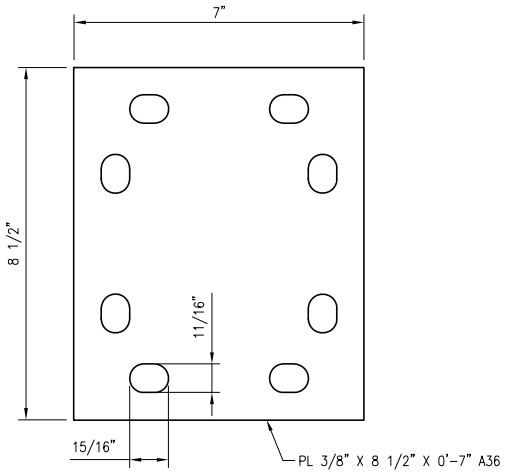
SHEET TITLE:
MOUNT PHOTOS

SHEET NUMBER:
SS-2





PL375-857

VZWSMART-MSK1 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	14

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

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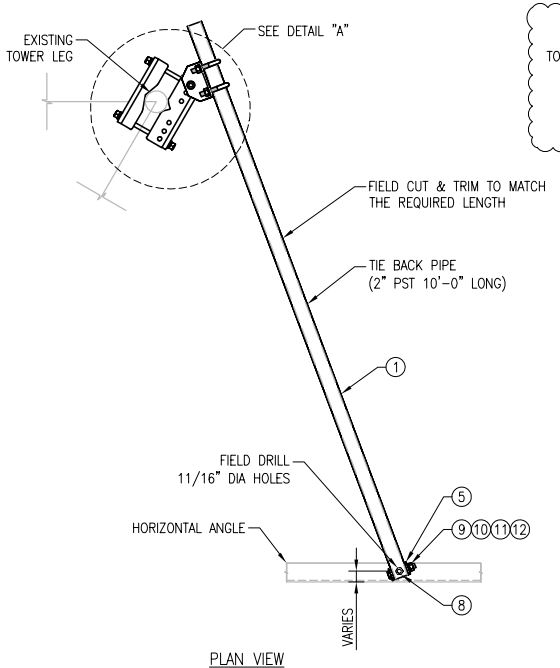
DRAWN BY: H.R	CHECKED BY: HMA

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

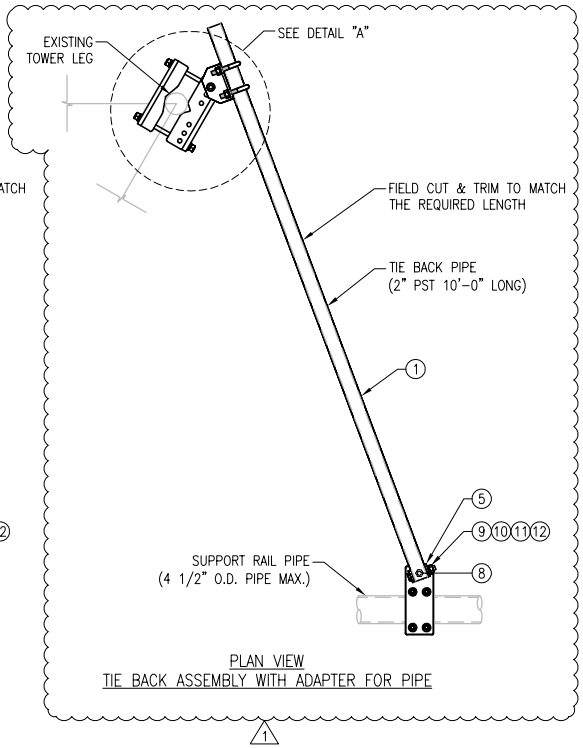
SHEET TITLE:
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0

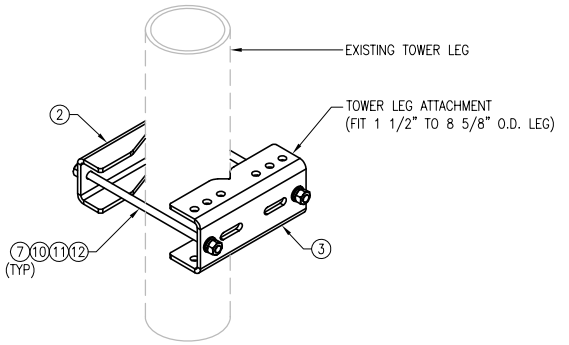


PLAN VIEW
TIE BACK ASSEMBLY

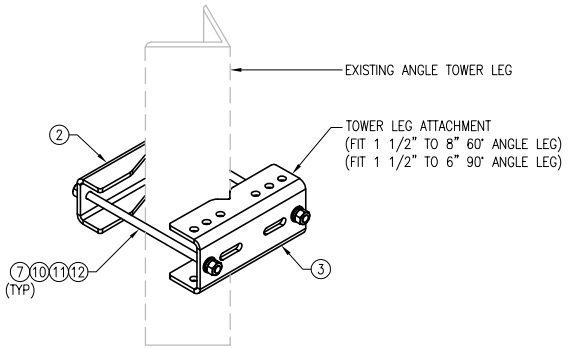


PLAN VIEW
TIE BACK ASSEMBLY WITH ADAPTER FOR PIPE

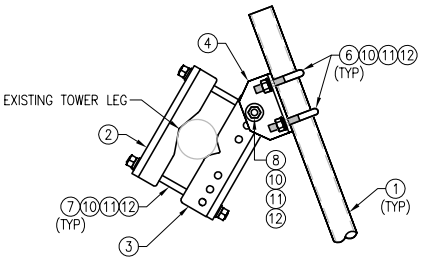
1



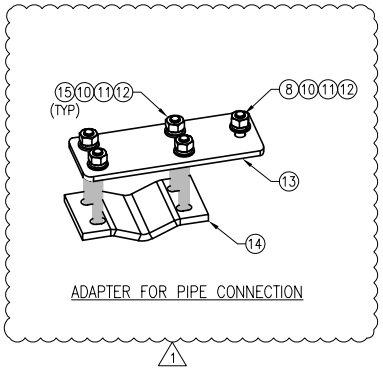
ROUND TOWER LEG ATTACHMENT DETAIL



ANGLE TOWER LEG ATTACHMENT DETAIL



DETAIL "A"



ADAPTER FOR PIPE CONNECTION

1

VZWSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-B 35KSI	SFK1-F1	38
2	1	BP825-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BP6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	15	LW-625	5/8" HDG LOCK WASHER	---	0
12	15	NUT-625	5/8" HDG HEX NUT	---	2
13	1	PL375-4511	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	---	BOLT 5/8" X 6" FULL THREAD SAE GR 5	---	0
			GALVANIZED WT		84

1

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

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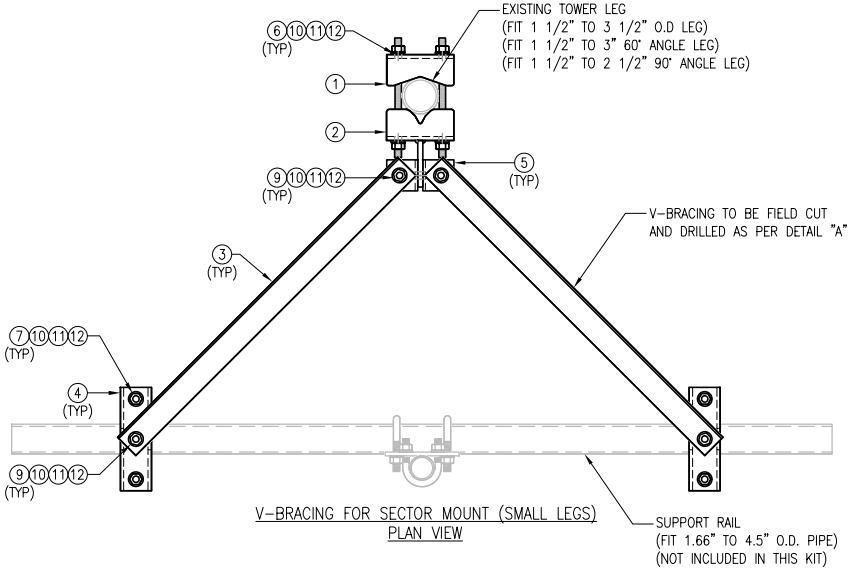
DRAWN BY: BT	CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

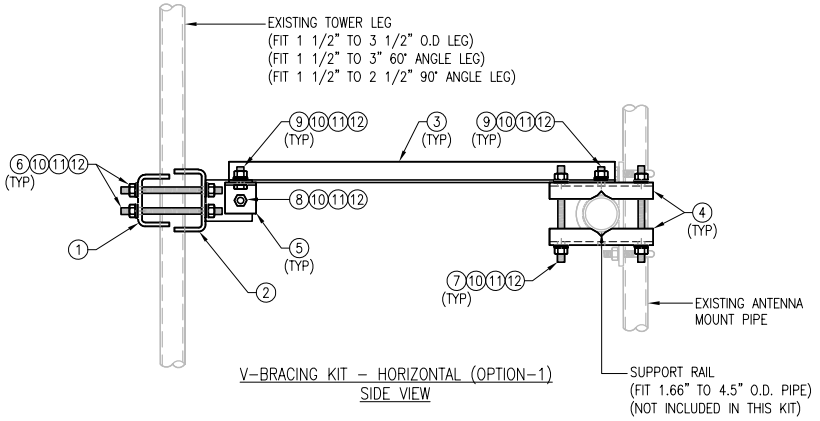
SHEET TITLE:
VZWSMART-SFK1
TIE BACK ASSEMBLY

SHEET NUMBER: VZWSMART-SFK1

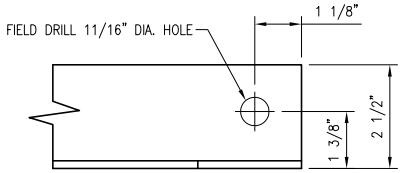
REV #: 1



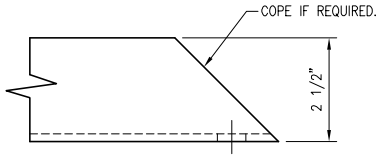
V-BRACING FOR SECTOR MOUNT (SMALL LEGS)
PLAN VIEW



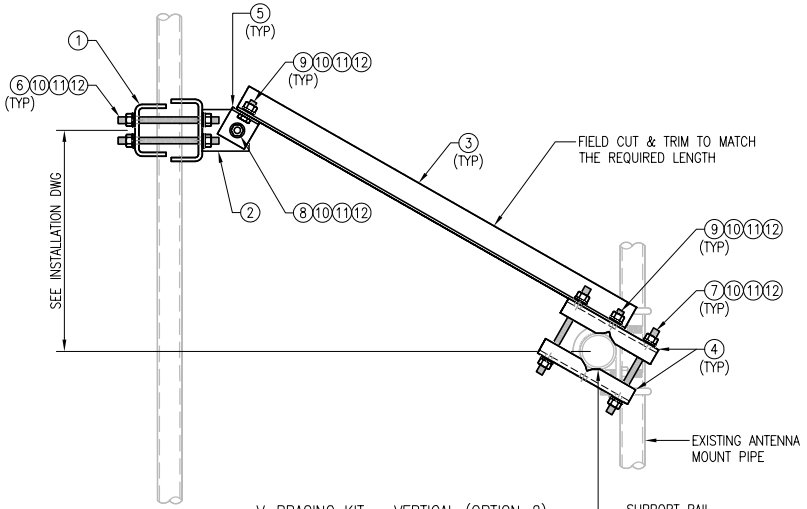
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT - VERTICAL (OPTION-2)
SIDE VIEW

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

VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE	VBSM-SL-F1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-F3	11
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	4	---	BOLT 5/8" X 1 3/4" A325	---	--
10	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
11	21	LW-625	5/8" HDG LOCK WASHER	---	0
12	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	117

VzW SMART Tool© Vendor

verizon

DRAWN BY: BT | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:
VZWSMART-SFK3-SL
V-BRACING KIT
FOR SMALL LEGS

SHEET NUMBER: VZWSMART-SFK3-SL
REV #: 0

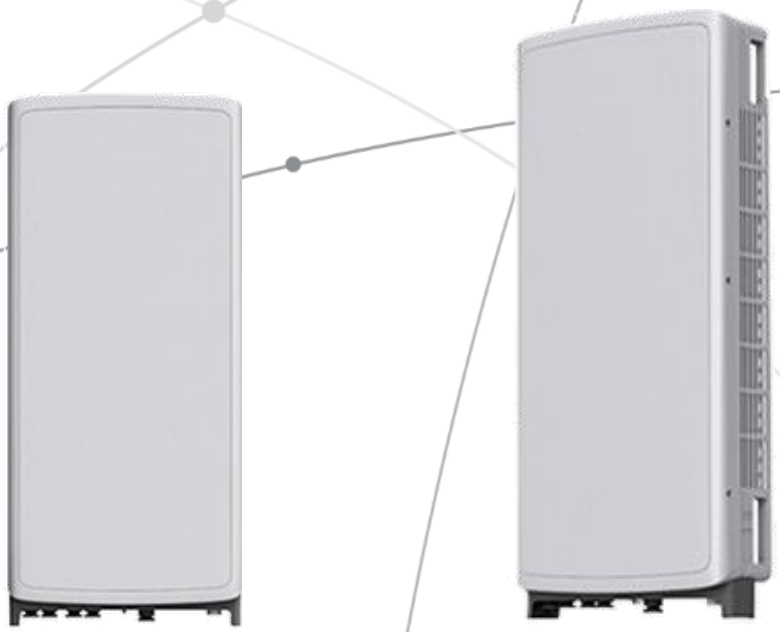
SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

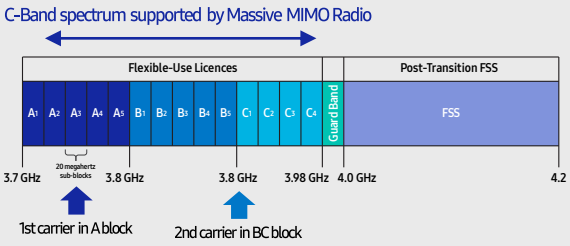


Points of Differentiation

Wide Bandwidth

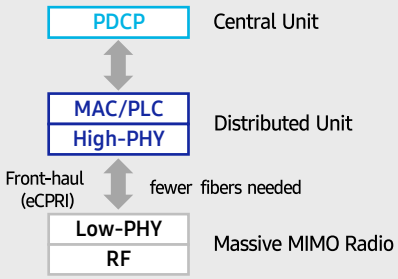
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

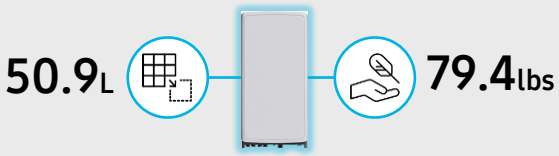
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO(Multi-user MIMO) , it enables to increase user throughput by minimizing interference.

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

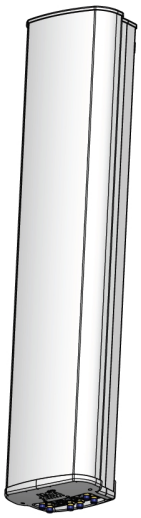
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

X-Pol Hex-Port 6 ft 60° Fast Roll Off antenna with independent tilt on 700 & 850 MHz:

2 ports 698-798, 824-894 MHz and 4 ports 1695-2180 MHz

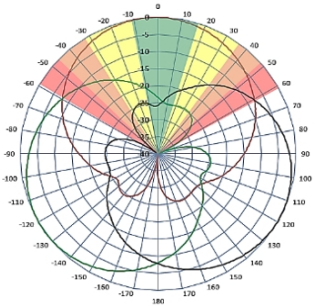
- Fast Roll Off (FRO™) azimuth beam pattern improves Intra- and Inter-cell SINR
- Compatible with dual band 700/850 MHz radios with independent low band EDT without external diplexers
- Fully integrated (iRETs) with independent RET control for low and high bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities
- Suitable for LTE/CDMA/PCS/UMTS/GSM air interface technologies
- Integrated Smart Bias-Ts reduce leasing costs



Fast Roll-Off antennas increase data throughput without compromising coverage

The horizontal beam produced by Fast Roll-Off (FRO) technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors .

Non-FRO antenna



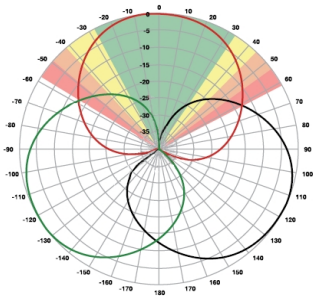
Large traditional antenna pattern overlap creates harmful interference.

JMA's FRO antenna pattern minimizes overlap, thereby minimizing interference.

LTE throughput	SINR	Speed (bps/Hz)	Speed increase	CQI
Excellent	>18	>4.5	333+%	8-10
Good	15-18	3.3-4.5	277%	6-7
Fair	10-15	2-3.3	160%	4-6
Poor	<10	<2	0%	1-3

The LTE radio automatically selects the best throughput based on measured SINR.

JMA FRO antenna



Electrical specification (minimum/maximum)	Ports 1, 2		Ports 3, 4, 5, 6		
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180
Polarization	± 45°		± 45°		
Average gain over all tilts, dBi	14.4	14.0	17.6	18.0	18.2
Horizontal beamwidth (HBW), degrees	60.5	53.0	55.0	55.0	55.5
Front-to-back ratio, co-polar power @180°± 30°, dB	>24	>24.0	>25.0	>25.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>15.0	>14.2	>18	>18	>15
Sector power ratio, percent	<3.5	<3.0	<3.7	<3.8	<3.6
Vertical beamwidth (VBW), degrees[1]	13.1	11.8	6.0	5.5	5.5
Electrical downtilt (EDT) range, degrees	2-14	2-14	0-9		
First upper side lobe (USLS) suppression, dB[1]	≤-15.0	≤-16.5	≤-16.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB[1]	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

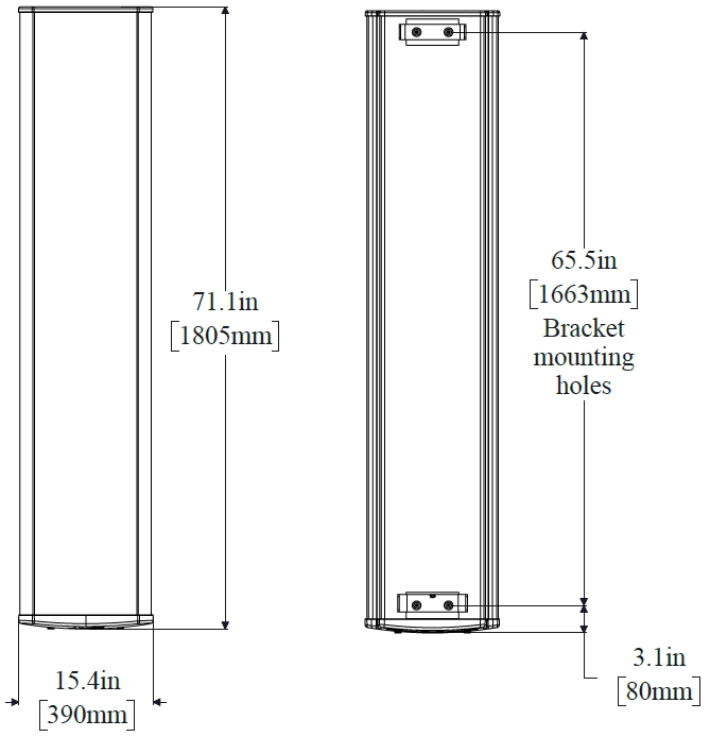
[1] Typical value over frequency and tilt

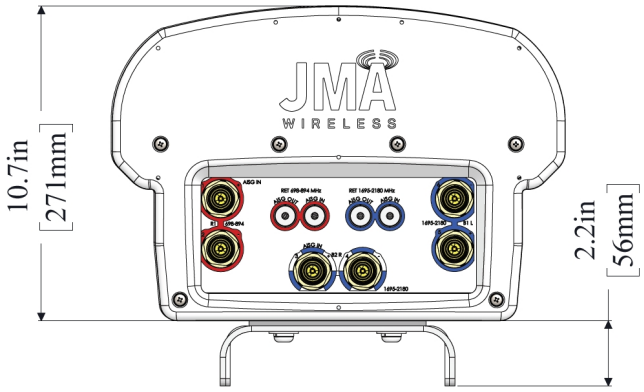
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	71.3/ 15.4/ 10.7 (1811/ 392/ 273)
Shipping dimensions length/width/height, inches (mm)	82/ 20/ 15 (2083/ 508/ 381)
No. of RF input ports, connector type, and location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	60 (27.0)
Shipping weight, lb (kg)	90 (41.0)
Antenna mounting and downtilt kit included with antenna	91900318
Net weight of the mounting and downtilt kit, lb (kg)	18 (8.18)
Range of mechanical up/down tilt	-2° to 14°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal, lateral, and rear wind loading @ 150 km/h, lbf (N)	154 (685), 73 (325), 158 (703)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	2.6

Front view | **Back view** | **Bottom view**





Ordering information	
Antenna model	**Description**
MX06FRO660-03	6F X-Pol HEX FRO 60° independent tilt 700/850 RET, 4.3-10 & SBT
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations

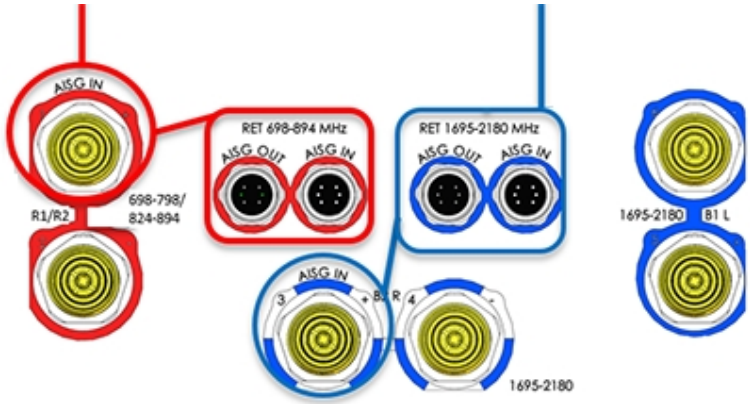
Remote electrical tilt (RET 1000) information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors
RET interface connector location	Bottom of the antenna
Total no. of internal RETs (low bands)	2
Total no. of internal RETs (high bands)	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below:

RET device	Band	RF port
R1	698-798	1-2
R2	824-894	1-2

RET device	Band	RF port
B1/B2	1695-2180	3-6

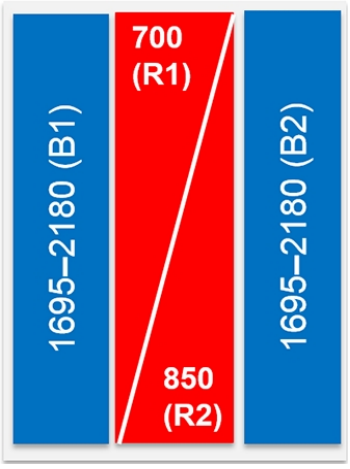


Array topology

3 sets of radiating arrays

R1/R2: 698-894 MHz
B1: 1695-2180 MHz
B2: 1695-2180 MHz

Band	RF port
1695-2180	3-4
698-894	1-2
1695-2180	5-6



SAMSUNG

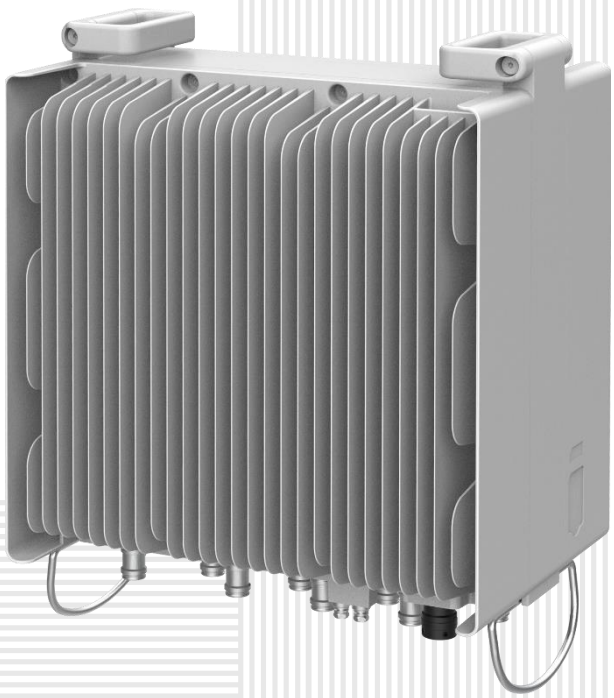
AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

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

57196

Model Code	RF4439d-25A



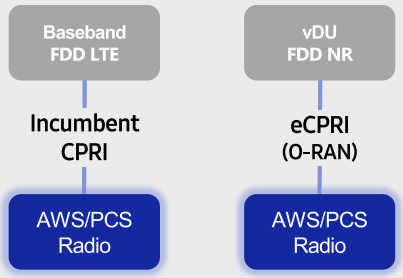
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

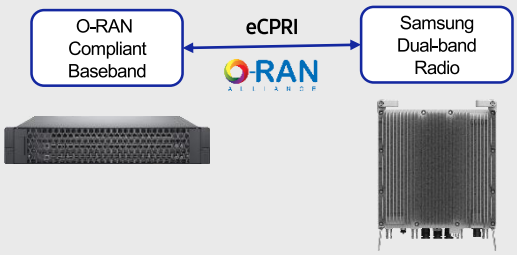
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

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

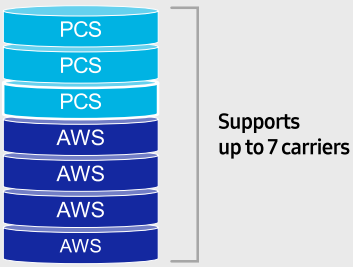
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

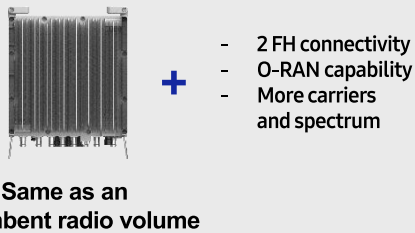
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

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



Brand New Features in a Compact Size

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



Technical Specifications

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

SAMSUNG

700/850MHZ MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This 700/850MHz 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code	RF4440d-13A

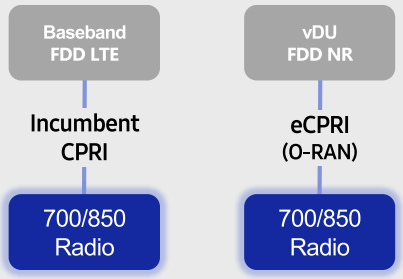
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

Samsung's 700/850MHz macro radio can support each incumbent CPRI interface as well as an advanced eCPRI interface. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

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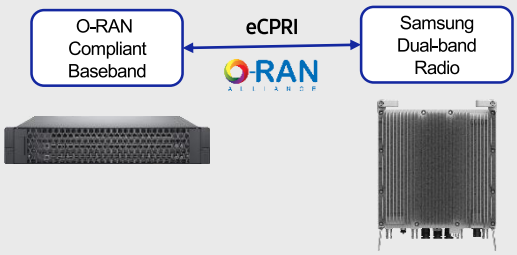
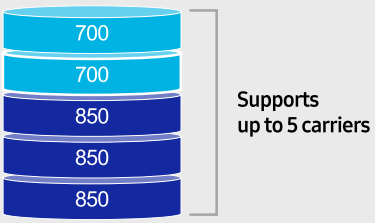


Optimum Spectrum Utilization

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

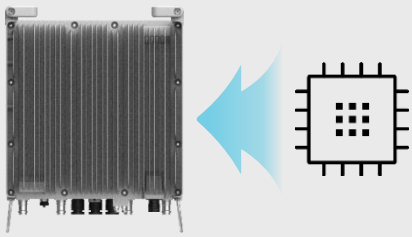
The new 700/850MHz dual-band radio can support up to 2 carriers in the B13 (700MHz) band and 3 carriers in the B5 (850MHz) band, respectively.



Secured Integrity

Access to sensitive data is allowed only to authorized software.

The Samsung radio's CPU can protect root of trust, which is credential information to verify SW integrity, and secure storage provides access control to sensitive data by using dedicated hardware (TPM).



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B13(700MHz), B5(850MHz)
Frequency Band	DL: 746 – 756MHz, UL: 777 – 787MHz DL: 869 – 894MHz, UL: 824 – 849MHz
RF Power	(B13) 4 × 40W or 2 × 60W (B5) 4 × 40W or 2 × 60W
IBW/OBW	(B13) 10MHz / 10MHz (B5) 25MHz / 25MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 9.05inch (33.2L) / 70.33 lb

ATTACHMENT 3

	General	Power	Density					
Site Name: Scotland								
Tower Height: Verizon @ 230ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS.EXP.**	**FRACTION MPE**	**Total**
*AT&T	1	1115	238	850	0.007449771	0.566666667	0.001314665	
*AT&T	1	2951	238	700	0.019716838	0.466666667	0.42%	
*AT&T	1	2951	238	700	0.019716838	0.466666667	0.42%	
*AT&T	1	3837	238	2100	0.025636566	1	0.26%	
*AT&T	1	1476	238	700	0.00986176	0.466666667	0.21%	
*AT&T	1	3664	238	1900	0.024480682	1	0.24%	
*AT&T	1	1000	238	850	0.006681409	0.566666667	0.12%	
*AT&T	1	1000	238	850	0.006681409	0.566666667	0.12%	
VZW 700	**4**	**623**	**230**	**751**	**0.0017**	**0.5007**	**0.34%**	
VZW Cellular	**4**	**623**	**230**	**874**	**0.0017**	**0.5827**	**0.29%**	
VZW PCS	**4**	**1462**	**230**	**1975**	**0.0040**	**1.0000**	**0.40%**	
VZW AWS	**4**	**1640**	**230**	**2120**	**0.0045**	**1.0000**	**0.45%**	
VZW CBAND	**2**	**22131**	**230**	**3730.08**	**0.0301**	**1.0000**	**3.01%**	
								6.41%
* Source: Siting Council								

ATTACHMENT 4

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

Structural Analysis Report

Existing 240 ft PIROD Self Supporting Tower
Customer Name: SBA Communications Corp
Customer Site Number: CT00990-S
Customer Site Name: Scotland
Carrier Name: Verizon (App#: 171043, V3)
Carrier Site ID / Name: 467618 / Scotland CT
Site Location: 165 Huntington Road
Scotland, Connecticut
Windham County
Latitude: 41.695911
Longitude: -72.097069

Analysis Result:

Max Structural Usage: 89.3% [Pass]
Max Foundation Usage: 65.0% [Pass]
Additional Usage Caused by Mount Modification: +2.0%

Report Prepared By: Younus Alkarawi

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

Structural Analysis Report

Existing 240 ft PIROD Self Supporting Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT00990-S

Customer Site Name: Scotland

Carrier Name: Verizon (App#: 171043, V3)

Carrier Site ID / Name: 467618 / Scotland CT

Site Location: 165 Huntington Road

Scotland, Connecticut

Windham County

Latitude: 41.695911

Longitude: -72.097069

Analysis Result:

Max Structural Usage: 89.3% [Pass]

Max Foundation Usage: 65.0% [Pass]

Additional Usage Caused by Mount Modification: +2.0%

Report Prepared By: Younus Alkarawi

Introduction

The purpose of this report is to summarize the analysis results on the 240 ft PIROD Self Supporting Tower to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Pirod, Eng File # A-115649 Dated 05/05/1999
Foundation Drawing	Pirod, Eng File # A-115649 Dated 05/05/1999
Geotechnical Report	Jaworski Geotech, inc., Project # 99222G Dated 04/28/1999
Modification Drawings	N/A
Mount Analysis	Verizon MA by Maser Consulting # 21777796A (REV2), dated 02/17/2022 Verizon MMD by Maser Consulting # 21777796A, dated 02/17/2022

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2**.** In accordance with this standard, the structure was analyzed using **TESTowers,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 130 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 101.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.172, S_1 = 0.062

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	238.0	3	Powerwave 7770 Panel	Platform w/ Handrail (Site Pro 1 XAHCP, SCX1-K, SCX4-K, SCX2-K)	(2) 1/2" Fiber (6) 3/4" DC (12) 1 5/8"	AT&T
2		6	CCI DMP65R-BU8DA Panel			
3		6	Powerwave LGP21401 TMA			
4		3	Ericsson RRUS 4478 B14 RRU			
5		3	Ericsson RRUS 8843 B2 B66A RRU			
6		3	Ericsson RRUS 4449 B5/B12 RRU			
7		3	Raycap DC6-48-60-18-8F OVP			
-	228.0	6	Antel LPA-80080/6CF Panel	(3) T-Frames JMA 91900314-02	(18) 1 5/8"	Verizon
-		3	Antel BXA-171085-12BF Panel			
-		3	Antel BXA-70063/6CF Panel			
14	218.0	3	RFS APX16DWV-16DWVS-E-A20 Panel	(3) Sector Frames (Site Pro 1 VFA12-HD)	(3) 1.99" 6x24 Hybrid	T-Mobile Sprint
15		3	RFS APXVAALL24-43-U-NA20 Panel			
16		3	Ericsson AIR6449 B41 Panel			
17		3	Ericsson 4460 B25 + B66 RRU			
18		3	Ericsson 4480 B71 + B85 RRU			

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
8	228.0	6	JMA Wireless MX06FRO660-03 - Panel	(3) Modified JMA 91900314-02 T-Frames W/ (3) VZWSMART-SFK1 (Tie back assembly), (3) VZWSMART-SFK3-SL (V-Bracing kit), (6) VZWSMART-MSK1 (Crossover plate) & (3) 84" Long P2 1/2 STD	(17) 1 5/8" (1) 1 5/8" Hybrid	Verizon
9		3	Samsung MT6407-77A - Panel			
10		3	Samsung RF4439d-25A RRU			
11		3	Samsung RF4440d-13A RRU			
12		1	Raycap RVZDC-6627-PF-48-OVP			
13		1	GPS			

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

Analysis Results

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

Tower Component	Legs	Diagonals	Horizontals
Max. Usage:	**73.6%**	**89.3%**	**54.5%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Compression (Kips)	Uplift (Kips)	Shear (Kips)
Analysis Reactions	520.1	448.4	51.9

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.4551 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

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

Standard Conditions

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

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

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

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

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

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

Structure: CT00990-S-SBA

Site Name:	Scotland			**Code:**	EIA/TIA-222-G	1/11/2022
Type:	Self Support	**Base Shape:**	Triangle	**Basic WS:**	101.00	
Height:	240.00 (ft)	**Base Width:**	26.00	**Basic Ice WS:**	50.00	
Base Elev:	0.00 (ft)	**Top Width:**	4.50	**Operational WS:**	60.00	Page: 1

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Section Properties

Sect	Leg Members	Diagonal Members	Horizontal Members
1-2	18B 18"BD 2.75"	DAE 3.5X3.5X0.3125	
3-4	18B 18"BD 2.5"	DAE 3.5X3.5X0.3125	
5-6	12B 12"BD 2.25"	SAE 3.5X3.5X0.3125	
7-8	12B 12"BD 2"	SAE 3X3X0.3125	
9	12B 12"BD 1.75"	SAE 3X3X0.1875	
10	12B 12"BD 1.5"	SAE 3X3X0.1875	
11	12B 12"BD 1.25"	SAE 3X3X0.1875	
12	SOL 2" SOLID	SOL 1" SOLID	SOL 1" SOLID
13	SOL 1 3/4" SOLID	SOL 3/4" SOLID	SOL 3/4" SOLID

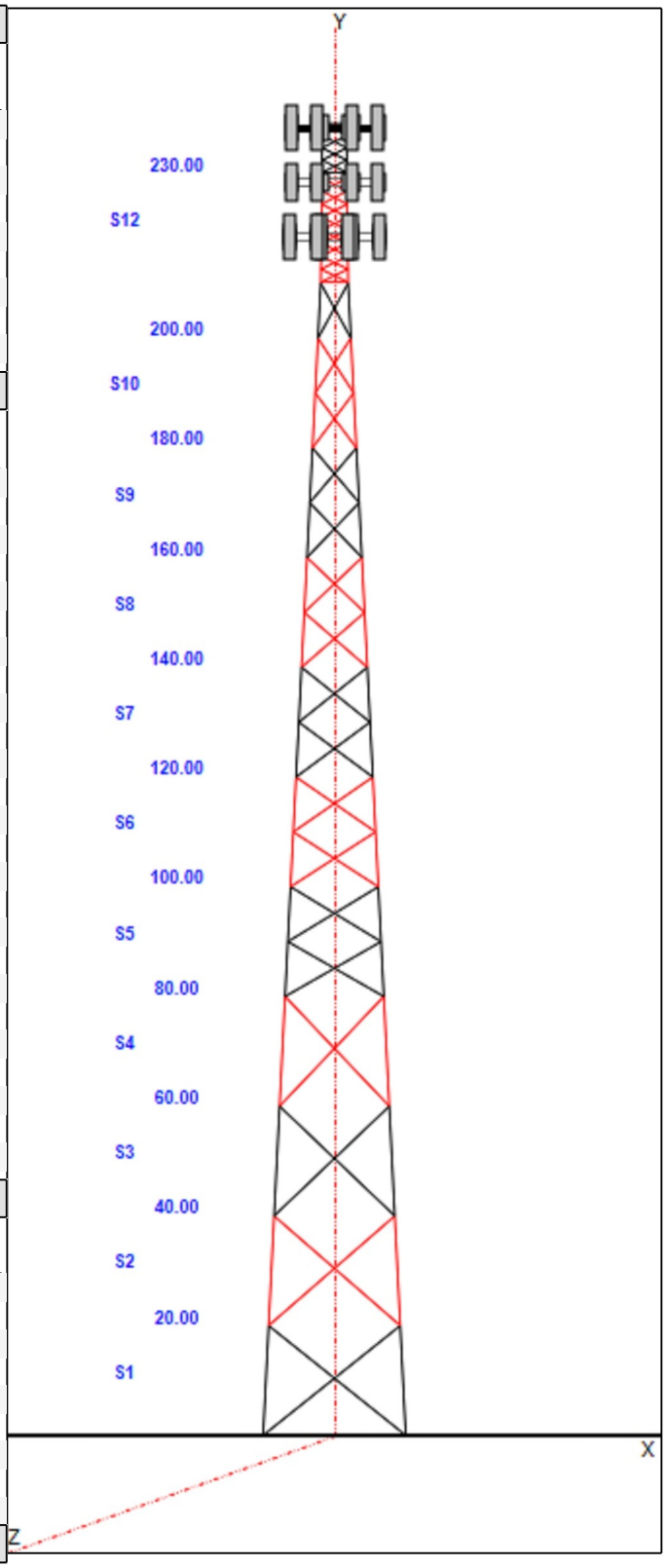
Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description
240.00	240.00	1	6' Lightning rod
240.00	240.00	1	Beacon
238.00	238.00	3	7770.00
238.00	238.00	6	LGP21401
238.00	238.00	3	DC6-48-60-18-8F
238.00	238.00	6	DMP65R-BU8DA
238.00	238.00	3	RRUS 4478 B14
238.00	238.00	3	B2 B66A 8843
238.00	238.00	3	4449 B5/B12
238.00	238.00	1	Platform w/ Hand Rail (round)
228.00	228.00	6	JMA Wireless MX06FRO660-03
228.00	228.00	3	Samsung MT6407-77A
228.00	228.00	3	Samsung RF4439d-25A RRU
228.00	228.00	3	Samsung RF4440d-13A RRU
228.00	228.00	1	Raycap RVZDC-6627-PF-48-OVP
228.00	228.00	1	VZWSMART-SFK3
228.00	228.00	1	(3) VZWSMART-SFK1
228.00	228.00	1	GPS
228.00	228.00	3	T-Frames
218.00	218.00	3	AIR6449 B41
218.00	218.00	3	4460 B25 + B66
218.00	218.00	3	4480 B71 + B85
218.00	218.00	1	(3) VFA12-HD
218.00	218.00	3	APX16DWV-16DWVS-E-A20
218.00	218.00	3	APXVAALL24-43-U-NA20

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Qty	Description
0.00	238.00	2	1/2" Fiber
0.00	238.00	6	3/4" DC
0.00	238.00	1	W/G Ladder
228.00	238.00	12	1 5/8" Coax
0.00	228.00	17	1 5/8" Coax
0.00	228.00	12	1 5/8" Coax
0.00	228.00	1	1 5/8" Hybrid
0.00	228.00	1	W/G Ladder
0.00	218.00	3	6x24 Hybrid

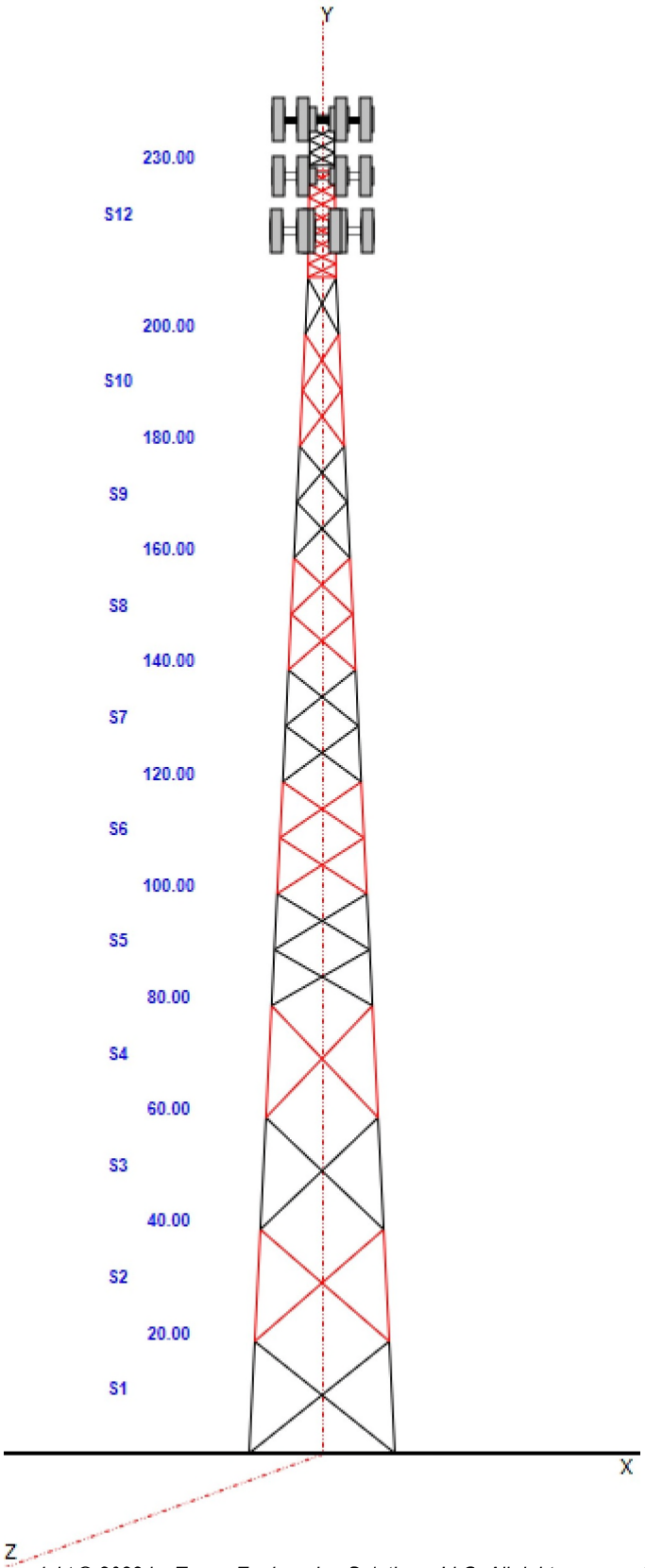
Base Reactions



Structure: CT00990-S-SBA

Site Name:	Scotland			**Code:**	EIA/TIA-222-G	1/11/2022
Type:	Self Support	**Base Shape:**	Triangle	**Basic WS:**	101.00	
Height:	240.00 (ft)	**Base Width:**	26.00	**Basic Ice WS:**	50.00	
Base Elev:	0.00 (ft)	**Top Width:**	4.50	**Operational WS:**	60.00	Page: 2

Leg			Overturning		
Max Uplift:	-448.41	(kips	Moment:	11026.83	(ft-kips)
Max Down:	520.87	(kips	Total Down:	93.46	(kips)
Max Shear:	51.94	(kips	Total Shear:	75.64	(kips)



Structure: CT00990-S-SBA - Coax Line Placement

Type: Self Support
Site Name: Scotland
Height: 240.00 (ft)

1/11/2022

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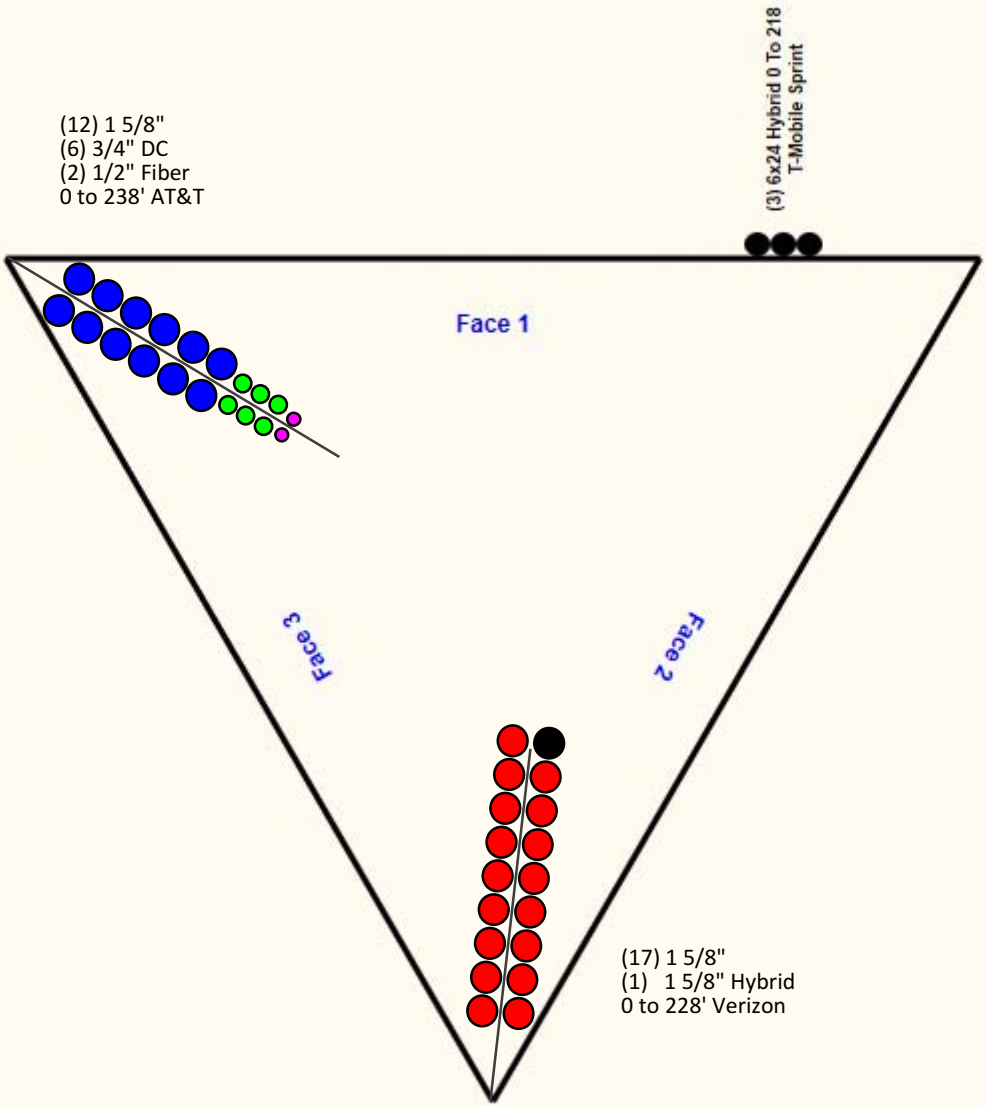

Loading Summary

Structure:	CT00990-S-SBA		**Code:**	EIA/TIA-222-G	1/11/2022
Site Name:	Scotland		**Exposure:**	C	
Height:	240.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	0.85	**Topography:** 1	**Struct Class:**	II	Page: 5

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Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	Ice Weight (lb)	Ice CaAa (sf)	Len (in)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
240.00	6' Lightning rod	1	6.50	0.380	44.47	1.518	72.000	0.600	0.600	1.00	1.00	0.000
240.00	Beacon	1	36.00	2.720	175.31	3.713	28.000	17.500	17.500	1.00	1.00	0.000
238.00	7770.00	3	35.00	5.500	177.86	6.617	55.000	11.000	5.000	0.80	0.73	0.000
238.00	LGP21401	6	14.10	1.290	40.25	2.164	14.400	9.200	2.600	0.80	0.75	0.000
238.00	DC6-48-60-18-8F	3	31.80	0.920	96.46	1.378	24.000	11.000	11.000	0.80	1.00	0.000
238.00	DMP65R-BU8DA	6	95.70	17.870	511.10	19.749	96.000	20.700	7.700	0.80	0.73	0.000
238.00	RRUS 4478 B14	3	59.40	1.650	102.77	2.192	15.000	13.200	7.300	0.80	0.67	0.000
238.00	B2 B66A 8843	3	70.00	1.640	118.09	2.180	15.000	13.200	9.300	0.80	0.67	0.000
238.00	4449 B5/B12	3	71.00	1.970	126.83	2.542	17.900	13.200	9.400	0.80	0.67	0.000
238.00	Platform w/ Hand Rail (round)	1	1600.0	32.000	3796.26	61.206	0.000	0.000	0.000	1.00	1.00	0.000
228.00	JMA Wireless MX06FRO660-03	6	60.00	14.480	483.99	16.164	82.000	20.000	15.000	0.80	0.89	0.000
228.00	Samsung MT6407-77A	3	79.40	4.690	204.63	5.676	35.100	16.100	5.500	0.80	0.70	0.000
228.00	Samsung RF4439d-25A RRU	3	74.70	1.880	132.24	2.453	15.000	15.000	10.000	0.80	0.67	0.000
228.00	Samsung RF4440d-13A RRU	3	70.30	1.870	146.65	2.468	15.000	15.000	9.000	0.80	0.67	0.000
228.00	Raycap RVZDC-6627-PF-48-OVP	1	32.00	4.060	150.38	4.914	29.500	16.500	12.600	1.00	1.00	0.000
228.00	VZWSMART-SFK3	1	329.00	10.000	806.27	20.880	0.000	0.000	0.000	0.75	1.00	0.000
228.00	(3) VZWSMART-SFK1	1	180.00	6.100	415.01	12.737	0.000	0.000	0.000	0.75	1.00	0.000
228.00	GPS	1	1.00	0.140	10.80	0.543	4.000	5.000	0.000	1.00	1.00	0.000
228.00	T-Frames	3	500.00	15.000	1044.01	35.310	0.000	0.000	0.000	0.75	0.75	0.000
218.00	AIR6449 B41	3	103.00	5.650	245.47	6.638	33.100	20.500	8.300	0.80	0.71	0.000
218.00	4460 B25 + B66	3	88.00	2.050	178.57	2.671	17.100	14.400	11.300	0.80	0.67	0.000
218.00	4480 B71 + B85	3	93.00	2.850	167.74	3.551	21.800	15.700	7.500	0.80	0.67	0.000
218.00	(3) VFA12-HD	1	2322.0	50.700	4679.94	116.89	0.000	0.000	0.000	0.75	1.00	0.000
218.00	APX16DWV-16DWVS-E-A20	3	40.70	6.610	162.33	8.873	55.900	13.300	3.100	0.80	0.62	0.000
218.00	APXVAALL24-43-U-NA20	3	143.30	20.240	615.30	22.193	95.900	24.000	8.500	0.80	0.72	0.000
	Totals:	**68**	**9,904.10**		**26,847.39**						**Number of Appurtenances :**	**25**

Linear Appurtenances Properties

Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	238.00	1/2" Fiber	2	0.65	0.16	100.00	3	Individual NR		N	1.00	1.00	
0.00	238.00	3/4" DC	6	0.75	0.40	50.00	3	Block		N	0.50	1.00	
0.00	238.00	W/G Ladder	1	2.00	6.00	100.00	3	Individual NR		N	1.00	1.00	
228.00	238.00	1 5/8" Coax	12	1.98	1.04	50.00	3	Block		N	0.50	1.00	
0.00	228.00	1 5/8" Coax	17	1.98	1.04	50.00	2	Block		N	0.50	1.00	
0.00	228.00	1 5/8" Coax	12	1.98	1.04	50.00	3	Block		N	0.50	0.58	
0.00	228.00	1 5/8" Hybrid	1	2.00	1.10	100.00	2	Individual NR		N	0.50	1.00	
0.00	228.00	W/G Ladder	1	2.00	6.00	100.00	2	Individual NR		N	1.00	1.00	
0.00	218.00	6x24 Hybrid	3	2.00	1.10	100.00	1	Individual NR		N	1.00	0.60	

Section Forces

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 7	

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Load Case: 1.2D + 1.6W Normal Wind — 1.2D + 1.6W 101 mph Wind at Normal To Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	18.87	18.274	27.83	0.00	0.09	3.01	1.00	1.00	0.00	29.14	87.92	0.00	11,101.	0.0	2247.86	1777.62	4,025.49
2	30.0	21.80	17.378	27.83	0.00	0.10	2.98	1.00	1.00	0.00	28.32	87.92	0.00	10,942.	0.0	2504.31	2054.21	4,558.51
3	50.0	24.28	16.527	26.21	0.00	0.10	2.97	1.00	1.00	0.00	26.87	87.92	0.00	10,046.	0.0	2634.12	2287.44	4,921.56
4	70.0	26.06	15.714	26.21	0.00	0.11	2.94	1.00	1.00	0.00	26.15	87.92	0.00	9,899.6	0.0	2722.03	2455.35	5,177.38
5	90.0	27.48	22.308	23.64	0.00	0.13	2.84	1.00	1.00	0.00	31.98	87.92	0.00	7,194.6	0.0	3398.76	2588.75	5,987.51
6	110.0	28.66	20.349	23.64	0.00	0.14	2.80	1.00	1.00	0.00	30.14	87.92	0.00	7,018.9	0.0	3295.24	2700.46	5,995.70
7	130.0	29.69	15.847	22.04	0.00	0.14	2.81	1.00	1.00	0.00	24.96	87.92	0.00	5,941.4	0.0	2831.41	2797.12	5,628.53
8	150.0	30.60	14.323	22.04	0.00	0.16	2.74	1.00	1.00	0.00	23.63	87.92	0.00	5,806.7	0.0	2698.94	2882.67	5,581.61
9	170.0	31.41	12.972	18.83	0.00	0.17	2.71	1.00	1.00	0.00	21.66	87.92	0.00	4,447.7	0.0	2504.60	2959.64	5,464.25
10	190.0	32.16	11.777	17.23	0.00	0.20	2.61	1.00	1.00	0.00	20.23	87.92	0.00	3,926.9	0.0	2311.59	3029.76	5,341.36
11	205.0	32.68	5.503	7.81	0.00	0.23	2.51	1.00	1.00	0.00	9.57	43.96	0.00	1,725.7	0.0	1068.48	1539.31	2,607.79
12	220.0	33.17	0.000	14.30	0.00	0.15	2.79	1.00	1.00	0.00	8.25	77.61	0.00	2,755.5	0.0	1037.66	2794.24	3,831.90
13	235.0	33.63	0.000	5.90	0.00	0.13	2.86	1.00	1.00	0.00	3.39	13.95	0.00	764.5	0.0	443.01	585.52	1,028.53
														81,571.6	**0.0**			**60,150.11**

Load Case: 1.2D + 1.6W 60° Wind — 1.2D + 1.6W 101 mph Wind at 60° From Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	18.87	18.274	27.83	0.00	0.09	3.01	0.80	1.00	0.00	25.49	87.92	0.00	11,101.	0.0	1965.98	1777.62	3,743.61
2	30.0	21.80	17.378	27.83	0.00	0.10	2.98	0.80	1.00	0.00	24.84	87.92	0.00	10,942.	0.0	2196.92	2054.21	4,251.13
3	50.0	24.28	16.527	26.21	0.00	0.10	2.97	0.80	1.00	0.00	23.56	87.92	0.00	10,046.	0.0	2310.05	2287.44	4,597.49
4	70.0	26.06	15.714	26.21	0.00	0.11	2.94	0.80	1.00	0.00	23.00	87.92	0.00	9,899.6	0.0	2394.84	2455.35	4,850.18
5	90.0	27.48	22.308	23.64	0.00	0.13	2.84	0.80	1.00	0.00	27.52	87.92	0.00	7,194.6	0.0	2924.57	2588.75	5,513.33
6	110.0	28.66	20.349	23.64	0.00	0.14	2.80	0.80	1.00	0.00	26.07	87.92	0.00	7,018.9	0.0	2850.29	2700.46	5,550.76
7	130.0	29.69	15.847	22.04	0.00	0.14	2.81	0.80	1.00	0.00	21.79	87.92	0.00	5,941.4	0.0	2471.89	2797.12	5,269.02
8	150.0	30.60	14.323	22.04	0.00	0.16	2.74	0.80	1.00	0.00	20.77	87.92	0.00	5,806.7	0.0	2371.80	2882.67	5,254.48
9	170.0	31.41	12.972	18.83	0.00	0.17	2.71	0.80	1.00	0.00	19.07	87.92	0.00	4,447.7	0.0	2204.60	2959.64	5,164.24
10	190.0	32.16	11.777	17.23	0.00	0.20	2.61	0.80	1.00	0.00	17.88	87.92	0.00	3,926.9	0.0	2042.51	3029.76	5,072.27
11	205.0	32.68	5.503	7.81	0.00	0.23	2.51	0.80	1.00	0.00	8.47	43.96	0.00	1,725.7	0.0	945.65	1539.31	2,484.96
12	220.0	33.17	0.000	14.30	0.00	0.15	2.79	0.80	1.00	0.00	8.25	77.61	0.00	2,755.5	0.0	1037.66	2794.24	3,831.90
13	235.0	33.63	0.000	5.90	0.00	0.13	2.86	0.80	1.00	0.00	3.39	13.95	0.00	764.5	0.0	443.01	585.52	1,028.53
														81,571.6	**0.0**			**56,611.89**

Section Forces

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 8	

TES Tower Engineering Solutions

Load Case: 1.2D + 1.6W 90° Wind — 1.2D + 1.6W 101 mph Wind at 90° From Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.20

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	18.87	18.274	27.83	0.00	0.09	3.01	0.85	1.00	0.00	26.40	87.92	0.00	11,101.	0.0	2036.45	1777.62	3,814.08
2	30.0	21.80	17.378	27.83	0.00	0.10	2.98	0.85	1.00	0.00	25.71	87.92	0.00	10,942.	0.0	2273.77	2054.21	4,327.97
3	50.0	24.28	16.527	26.21	0.00	0.10	2.97	0.85	1.00	0.00	24.39	87.92	0.00	10,046.	0.0	2391.07	2287.44	4,678.50
4	70.0	26.06	15.714	26.21	0.00	0.11	2.94	0.85	1.00	0.00	23.79	87.92	0.00	9,899.6	0.0	2476.64	2455.35	4,931.98
5	90.0	27.48	22.308	23.64	0.00	0.13	2.84	0.85	1.00	0.00	28.63	87.92	0.00	7,194.6	0.0	3043.12	2588.75	5,631.87
6	110.0	28.66	20.349	23.64	0.00	0.14	2.80	0.85	1.00	0.00	27.09	87.92	0.00	7,018.9	0.0	2961.53	2700.46	5,661.99
7	130.0	29.69	15.847	22.04	0.00	0.14	2.81	0.85	1.00	0.00	22.58	87.92	0.00	5,941.4	0.0	2561.77	2797.12	5,358.90
8	150.0	30.60	14.323	22.04	0.00	0.16	2.74	0.85	1.00	0.00	21.48	87.92	0.00	5,806.7	0.0	2453.59	2882.67	5,336.26
9	170.0	31.41	12.972	18.83	0.00	0.17	2.71	0.85	1.00	0.00	19.71	87.92	0.00	4,447.7	0.0	2279.60	2959.64	5,239.25
10	190.0	32.16	11.777	17.23	0.00	0.20	2.61	0.85	1.00	0.00	18.47	87.92	0.00	3,926.9	0.0	2109.78	3029.76	5,139.55
11	205.0	32.68	5.503	7.81	0.00	0.23	2.51	0.85	1.00	0.00	8.75	43.96	0.00	1,725.7	0.0	976.36	1539.31	2,515.67
12	220.0	33.17	0.000	14.30	0.00	0.15	2.79	0.85	1.00	0.00	8.25	77.61	0.00	2,755.5	0.0	1037.66	2794.24	3,831.90
13	235.0	33.63	0.000	5.90	0.00	0.13	2.86	0.85	1.00	0.00	3.39	13.95	0.00	764.5	0.0	443.01	585.52	1,028.53
														81,571.6	**0.0**			**57,496.45**

Load Case: 0.9D + 1.6W Normal Wind — 0.9D + 1.6W 101 mph Wind at Normal To Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 0.90

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	18.87	18.274	27.83	0.00	0.09	3.01	1.00	1.00	0.00	29.14	87.92	0.00	8,326.2	0.0	2247.86	1777.62	4,025.49
2	30.0	21.80	17.378	27.83	0.00	0.10	2.98	1.00	1.00	0.00	28.32	87.92	0.00	8,206.8	0.0	2504.31	2054.21	4,558.51
3	50.0	24.28	16.527	26.21	0.00	0.10	2.97	1.00	1.00	0.00	26.87	87.92	0.00	7,534.6	0.0	2634.12	2287.44	4,921.56
4	70.0	26.06	15.714	26.21	0.00	0.11	2.94	1.00	1.00	0.00	26.15	87.92	0.00	7,424.7	0.0	2722.03	2455.35	5,177.38
5	90.0	27.48	22.308	23.64	0.00	0.13	2.84	1.00	1.00	0.00	31.98	87.92	0.00	5,395.9	0.0	3398.76	2588.75	5,987.51
6	110.0	28.66	20.349	23.64	0.00	0.14	2.80	1.00	1.00	0.00	30.14	87.92	0.00	5,264.2	0.0	3295.24	2700.46	5,995.70
7	130.0	29.69	15.847	22.04	0.00	0.14	2.81	1.00	1.00	0.00	24.96	87.92	0.00	4,456.0	0.0	2831.41	2797.12	5,628.53
8	150.0	30.60	14.323	22.04	0.00	0.16	2.74	1.00	1.00	0.00	23.63	87.92	0.00	4,355.0	0.0	2698.94	2882.67	5,581.61
9	170.0	31.41	12.972	18.83	0.00	0.17	2.71	1.00	1.00	0.00	21.66	87.92	0.00	3,335.8	0.0	2504.60	2959.64	5,464.25
10	190.0	32.16	11.777	17.23	0.00	0.20	2.61	1.00	1.00	0.00	20.23	87.92	0.00	2,945.2	0.0	2311.59	3029.76	5,341.36
11	205.0	32.68	5.503	7.81	0.00	0.23	2.51	1.00	1.00	0.00	9.57	43.96	0.00	1,294.3	0.0	1068.48	1539.31	2,607.79
12	220.0	33.17	0.000	14.30	0.00	0.15	2.79	1.00	1.00	0.00	8.25	77.61	0.00	2,066.6	0.0	1037.66	2794.24	3,831.90
13	235.0	33.63	0.000	5.90	0.00	0.13	2.86	1.00	1.00	0.00	3.39	13.95	0.00	573.3	0.0	443.01	585.52	1,028.53
														61,178.7	**0.0**			**60,150.11**

Section Forces

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 60° Wind — 0.9D + 1.6W 101 mph Wind at 60° From Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 0.90

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	18.87	18.274	27.83	0.00	0.09	3.01	0.80	1.00	0.00	25.49	87.92	0.00	8,326.2	0.0	1965.98	1777.62	3,743.61
2	30.0	21.80	17.378	27.83	0.00	0.10	2.98	0.80	1.00	0.00	24.84	87.92	0.00	8,206.8	0.0	2196.92	2054.21	4,251.13
3	50.0	24.28	16.527	26.21	0.00	0.10	2.97	0.80	1.00	0.00	23.56	87.92	0.00	7,534.6	0.0	2310.05	2287.44	4,597.49
4	70.0	26.06	15.714	26.21	0.00	0.11	2.94	0.80	1.00	0.00	23.00	87.92	0.00	7,424.7	0.0	2394.84	2455.35	4,850.18
5	90.0	27.48	22.308	23.64	0.00	0.13	2.84	0.80	1.00	0.00	27.52	87.92	0.00	5,395.9	0.0	2924.57	2588.75	5,513.33
6	110.0	28.66	20.349	23.64	0.00	0.14	2.80	0.80	1.00	0.00	26.07	87.92	0.00	5,264.2	0.0	2850.29	2700.46	5,550.76
7	130.0	29.69	15.847	22.04	0.00	0.14	2.81	0.80	1.00	0.00	21.79	87.92	0.00	4,456.0	0.0	2471.89	2797.12	5,269.02
8	150.0	30.60	14.323	22.04	0.00	0.16	2.74	0.80	1.00	0.00	20.77	87.92	0.00	4,355.0	0.0	2371.80	2882.67	5,254.48
9	170.0	31.41	12.972	18.83	0.00	0.17	2.71	0.80	1.00	0.00	19.07	87.92	0.00	3,335.8	0.0	2204.60	2959.64	5,164.24
10	190.0	32.16	11.777	17.23	0.00	0.20	2.61	0.80	1.00	0.00	17.88	87.92	0.00	2,945.2	0.0	2042.51	3029.76	5,072.27
11	205.0	32.68	5.503	7.81	0.00	0.23	2.51	0.80	1.00	0.00	8.47	43.96	0.00	1,294.3	0.0	945.65	1539.31	2,484.96
12	220.0	33.17	0.000	14.30	0.00	0.15	2.79	0.80	1.00	0.00	8.25	77.61	0.00	2,066.6	0.0	1037.66	2794.24	3,831.90
13	235.0	33.63	0.000	5.90	0.00	0.13	2.86	0.80	1.00	0.00	3.39	13.95	0.00	573.3	0.0	443.01	585.52	1,028.53
														61,178.7	**0.0**			**56,611.89**

Load Case: 0.9D + 1.6W 90° Wind — 0.9D + 1.6W 101 mph Wind at 90° From Face

Wind Load Factor: 1.60 — **Wind Importance Factor:** 1.00

Dead Load Factor: 0.90

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	18.87	18.274	27.83	0.00	0.09	3.01	0.85	1.00	0.00	26.40	87.92	0.00	8,326.2	0.0	2036.45	1777.62	3,814.08
2	30.0	21.80	17.378	27.83	0.00	0.10	2.98	0.85	1.00	0.00	25.71	87.92	0.00	8,206.8	0.0	2273.77	2054.21	4,327.97
3	50.0	24.28	16.527	26.21	0.00	0.10	2.97	0.85	1.00	0.00	24.39	87.92	0.00	7,534.6	0.0	2391.07	2287.44	4,678.50
4	70.0	26.06	15.714	26.21	0.00	0.11	2.94	0.85	1.00	0.00	23.79	87.92	0.00	7,424.7	0.0	2476.64	2455.35	4,931.98
5	90.0	27.48	22.308	23.64	0.00	0.13	2.84	0.85	1.00	0.00	28.63	87.92	0.00	5,395.9	0.0	3043.12	2588.75	5,631.87
6	110.0	28.66	20.349	23.64	0.00	0.14	2.80	0.85	1.00	0.00	27.09	87.92	0.00	5,264.2	0.0	2961.53	2700.46	5,661.99
7	130.0	29.69	15.847	22.04	0.00	0.14	2.81	0.85	1.00	0.00	22.58	87.92	0.00	4,456.0	0.0	2561.77	2797.12	5,358.90
8	150.0	30.60	14.323	22.04	0.00	0.16	2.74	0.85	1.00	0.00	21.48	87.92	0.00	4,355.0	0.0	2453.59	2882.67	5,336.26
9	170.0	31.41	12.972	18.83	0.00	0.17	2.71	0.85	1.00	0.00	19.71	87.92	0.00	3,335.8	0.0	2279.60	2959.64	5,239.25
10	190.0	32.16	11.777	17.23	0.00	0.20	2.61	0.85	1.00	0.00	18.47	87.92	0.00	2,945.2	0.0	2109.78	3029.76	5,139.55
11	205.0	32.68	5.503	7.81	0.00	0.23	2.51	0.85	1.00	0.00	8.75	43.96	0.00	1,294.3	0.0	976.36	1539.31	2,515.67
12	220.0	33.17	0.000	14.30	0.00	0.15	2.79	0.85	1.00	0.00	8.25	77.61	0.00	2,066.6	0.0	1037.66	2794.24	3,831.90
13	235.0	33.63	0.000	5.90	0.00	0.13	2.86	0.85	1.00	0.00	3.39	13.95	0.00	573.3	0.0	443.01	585.52	1,028.53
														61,178.7	**0.0**			**57,496.45**

Section Forces

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi Normal Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	4.62	18.274	50.92	23.10	0.13	2.83	1.00	1.00	1.33	47.10	110.10	26.62	16,681.	5580.1	524.48	482.92	1,007.40
2	30.0	5.34	17.378	52.85	25.02	0.15	2.78	1.00	1.00	1.49	47.35	112.68	29.72	17,167.	6224.6	598.73	580.47	1,179.20
3	50.0	5.95	16.527	51.77	25.56	0.16	2.75	1.00	1.00	1.56	45.94	113.98	31.27	16,467.	6421.6	639.00	658.04	1,297.04
4	70.0	6.39	15.714	51.88	25.67	0.17	2.70	1.00	1.00	1.62	45.28	114.87	32.34	16,445.	6546.1	663.82	712.50	1,376.31
5	90.0	6.73	22.308	56.52	32.88	0.22	2.53	1.00	1.00	1.66	55.00	115.56	33.17	13,546.	6352.0	796.03	742.57	1,538.60
6	110.0	7.02	20.349	55.28	31.64	0.24	2.47	1.00	1.00	1.69	52.53	116.12	33.84	13,296.	6277.2	775.76	775.30	1,551.06
7	130.0	7.28	15.847	52.34	30.31	0.25	2.45	1.00	1.00	1.72	46.42	116.59	34.41	11,796.	5855.5	702.90	806.02	1,508.92
8	150.0	7.50	14.323	50.99	28.96	0.28	2.36	1.00	1.00	1.75	44.50	117.00	34.90	11,573.	5767.2	670.03	824.68	1,494.71
9	170.0	7.70	12.972	46.49	27.66	0.30	2.28	1.00	1.00	1.77	40.88	117.37	35.34	10,000.	5552.7	611.07	840.02	1,451.09
10	190.0	7.88	11.777	43.72	26.49	0.36	2.15	1.00	1.00	1.79	38.86	117.70	35.74	9,333.1	5406.3	559.87	841.74	1,401.61
11	205.0	8.01	5.503	20.68	12.86	0.42	2.02	1.00	1.00	1.80	18.87	58.96	18.01	4,370.7	2645.0	259.51	404.41	663.92
12	220.0	8.13	0.000	54.97	40.67	0.53	1.87	1.00	1.00	1.81	38.64	106.63	24.78	7,585.9	4830.4	498.61	584.83	1,083.43
13	235.0	8.24	0.000	26.96	21.06	0.54	1.85	1.00	1.00	1.83	19.21	21.25	4.87	2,422.5	1658.0	248.75	125.53	374.28
														150,688.2	**69116.7**			**15,927.59**

Load Case: 1.2D + 1.0Di + 1.0Wi 60° Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	4.62	18.274	50.92	23.10	0.13	2.83	0.80	1.00	1.33	43.45	110.10	26.62	16,681.	5580.1	483.78	482.92	966.70
2	30.0	5.34	17.378	52.85	25.02	0.15	2.78	0.80	1.00	1.49	43.88	112.68	29.72	17,167.	6224.6	554.78	580.47	1,135.25
3	50.0	5.95	16.527	51.77	25.56	0.16	2.75	0.80	1.00	1.56	42.63	113.98	31.27	16,467.	6421.6	593.03	658.04	1,251.07
4	70.0	6.39	15.714	51.88	25.67	0.17	2.70	0.80	1.00	1.62	42.14	114.87	32.34	16,445.	6546.1	617.74	712.50	1,330.24
5	90.0	6.73	22.308	56.52	32.88	0.22	2.53	0.80	1.00	1.66	50.54	115.56	33.17	13,546.	6352.0	731.45	742.57	1,474.03
6	110.0	7.02	20.349	55.28	31.64	0.24	2.47	0.80	1.00	1.69	48.46	116.12	33.84	13,296.	6277.2	715.66	775.30	1,490.96
7	130.0	7.28	15.847	52.34	30.31	0.25	2.45	0.80	1.00	1.72	43.25	116.59	34.41	11,796.	5855.5	654.92	806.02	1,460.93
8	150.0	7.50	14.323	50.99	28.96	0.28	2.36	0.80	1.00	1.75	41.64	117.00	34.90	11,573.	5767.2	626.90	824.68	1,451.58
9	170.0	7.70	12.972	46.49	27.66	0.30	2.28	0.80	1.00	1.77	38.29	117.37	35.34	10,000.	5552.7	572.30	840.02	1,412.31
10	190.0	7.88	11.777	43.72	26.49	0.36	2.15	0.80	1.00	1.79	36.50	117.70	35.74	9,333.1	5406.3	525.93	841.74	1,367.68
11	205.0	8.01	5.503	20.68	12.86	0.42	2.02	0.80	1.00	1.80	17.77	58.96	18.01	4,370.7	2645.0	244.38	404.41	648.79
12	220.0	8.13	0.000	54.97	40.67	0.53	1.87	0.80	1.00	1.81	38.64	106.63	24.78	7,585.9	4830.4	498.61	584.83	1,083.43
13	235.0	8.24	0.000	26.96	21.06	0.54	1.85	0.80	1.00	1.83	19.21	21.25	4.87	2,422.5	1658.0	248.75	125.53	374.28
														150,688.2	**69116.7**			**15,447.25**

Section Forces

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 90° Wind — 1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face

Wind Load Factor: 1.00
Dead Load Factor: 1.20
Ice Dead Load Factor: 1.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	4.62	18.274	50.92	23.10	0.13	2.83	0.85	1.00	1.33	44.36	110.10	26.62	16,681.	5580.1	493.95	482.92	976.88
2	30.0	5.34	17.378	52.85	25.02	0.15	2.78	0.85	1.00	1.49	44.75	112.68	29.72	17,167.	6224.6	565.77	580.47	1,146.24
3	50.0	5.95	16.527	51.77	25.56	0.16	2.75	0.85	1.00	1.56	43.46	113.98	31.27	16,467.	6421.6	604.52	658.04	1,262.56
4	70.0	6.39	15.714	51.88	25.67	0.17	2.70	0.85	1.00	1.62	42.92	114.87	32.34	16,445.	6546.1	629.26	712.50	1,341.76
5	90.0	6.73	22.308	56.52	32.88	0.22	2.53	0.85	1.00	1.66	51.65	115.56	33.17	13,546.	6352.0	747.60	742.57	1,490.17
6	110.0	7.02	20.349	55.28	31.64	0.24	2.47	0.85	1.00	1.69	49.48	116.12	33.84	13,296.	6277.2	730.69	775.30	1,505.98
7	130.0	7.28	15.847	52.34	30.31	0.25	2.45	0.85	1.00	1.72	44.04	116.59	34.41	11,796.	5855.5	666.91	806.02	1,472.93
8	150.0	7.50	14.323	50.99	28.96	0.28	2.36	0.85	1.00	1.75	42.35	117.00	34.90	11,573.	5767.2	637.68	824.68	1,462.36
9	170.0	7.70	12.972	46.49	27.66	0.30	2.28	0.85	1.00	1.77	38.94	117.37	35.34	10,000.	5552.7	581.99	840.02	1,422.00
10	190.0	7.88	11.777	43.72	26.49	0.36	2.15	0.85	1.00	1.79	37.09	117.70	35.74	9,333.1	5406.3	534.42	841.74	1,376.16
11	205.0	8.01	5.503	20.68	12.86	0.42	2.02	0.85	1.00	1.80	18.04	58.96	18.01	4,370.7	2645.0	248.16	404.41	652.57
12	220.0	8.13	0.000	54.97	40.67	0.53	1.87	0.85	1.00	1.81	38.64	106.63	24.78	7,585.9	4830.4	498.61	584.83	1,083.43
13	235.0	8.24	0.000	26.96	21.06	0.54	1.85	0.85	1.00	1.83	19.21	21.25	4.87	2,422.5	1658.0	248.75	125.53	374.28
														150,688.2	**69116.7**			**15,567.33**

Load Case: 1.0D + 1.0W Normal Wind — 1.0D + 1.0W 60 mph Wind at Normal To Face

Wind Load Factor: 1.00
Dead Load Factor: 1.00
Ice Dead Load Factor: 0.00
Wind Importance Factor: 1.00
Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	6.66	18.274	27.83	0.00	0.09	3.01	1.00	1.00	0.00	33.00	87.92	0.00	9,251.3	0.0	561.47	392.08	953.55
2	30.0	7.69	17.378	27.83	0.00	0.10	2.98	1.00	1.00	0.00	31.69	87.92	0.00	9,118.6	0.0	618.29	453.09	1,071.38
3	50.0	8.57	16.527	26.21	0.00	0.10	2.97	1.00	1.00	0.00	30.06	87.92	0.00	8,371.8	0.0	650.04	504.53	1,154.57
4	70.0	9.20	15.714	26.21	0.00	0.11	2.94	1.00	1.00	0.00	29.07	87.92	0.00	8,249.7	0.0	667.65	541.57	1,209.22
5	90.0	9.70	22.308	23.64	0.00	0.13	2.84	1.00	1.00	0.00	34.83	87.92	0.00	5,995.5	0.0	816.47	570.99	1,387.46
6	110.0	10.12	20.349	23.64	0.00	0.14	2.80	1.00	1.00	0.00	32.82	87.92	0.00	5,849.1	0.0	791.39	595.63	1,387.02
7	130.0	10.48	15.847	22.04	0.00	0.14	2.81	1.00	1.00	0.00	27.68	87.92	0.00	4,951.2	0.0	692.62	616.95	1,309.57
8	150.0	10.80	14.323	22.04	0.00	0.16	2.74	1.00	1.00	0.00	26.17	87.92	0.00	4,838.9	0.0	659.19	635.82	1,295.01
9	170.0	11.09	12.972	18.83	0.00	0.17	2.71	1.00	1.00	0.00	23.57	87.92	0.00	3,706.4	0.0	601.15	652.80	1,253.94
10	190.0	11.35	11.777	17.23	0.00	0.20	2.61	1.00	1.00	0.00	21.66	87.92	0.00	3,272.4	0.0	545.79	668.26	1,214.05
11	205.0	11.53	5.503	7.81	0.00	0.23	2.51	1.00	1.00	0.00	10.03	43.96	0.00	1,438.1	0.0	246.91	339.52	586.43
12	220.0	11.70	0.000	14.30	0.00	0.15	2.79	1.00	1.00	0.00	8.25	77.61	0.00	2,296.2	0.0	228.87	616.32	845.19
13	235.0	11.87	0.000	5.90	0.00	0.13	2.86	1.00	1.00	0.00	3.39	13.95	0.00	637.0	0.0	97.71	129.15	226.86
														67,976.3	**0.0**			**13,894.27**

Section Forces

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 12	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60° Wind — 1.0D + 1.0W 60 mph Wind at 60° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	6.66	18.274	27.83	0.00	0.09	3.01	0.80	1.00	0.00	29.35	87.92	0.00	9,251.3	0.0	499.29	392.08	891.38
2	30.0	7.69	17.378	27.83	0.00	0.10	2.98	0.80	1.00	0.00	28.22	87.92	0.00	9,118.6	0.0	550.49	453.09	1,003.58
3	50.0	8.57	16.527	26.21	0.00	0.10	2.97	0.80	1.00	0.00	26.75	87.92	0.00	8,371.8	0.0	578.56	504.53	1,083.09
4	70.0	9.20	15.714	26.21	0.00	0.11	2.94	0.80	1.00	0.00	25.93	87.92	0.00	8,249.7	0.0	595.48	541.57	1,137.05
5	90.0	9.70	22.308	23.64	0.00	0.13	2.84	0.80	1.00	0.00	30.37	87.92	0.00	5,995.5	0.0	711.88	570.99	1,282.87
6	110.0	10.12	20.349	23.64	0.00	0.14	2.80	0.80	1.00	0.00	28.75	87.92	0.00	5,849.1	0.0	693.25	595.63	1,288.88
7	130.0	10.48	15.847	22.04	0.00	0.14	2.81	0.80	1.00	0.00	24.51	87.92	0.00	4,951.2	0.0	613.32	616.95	1,230.28
8	150.0	10.80	14.323	22.04	0.00	0.16	2.74	0.80	1.00	0.00	23.31	87.92	0.00	4,838.9	0.0	587.03	635.82	1,222.85
9	170.0	11.09	12.972	18.83	0.00	0.17	2.71	0.80	1.00	0.00	20.97	87.92	0.00	3,706.4	0.0	534.98	652.80	1,187.77
10	190.0	11.35	11.777	17.23	0.00	0.20	2.61	0.80	1.00	0.00	19.30	87.92	0.00	3,272.4	0.0	486.44	668.26	1,154.70
11	205.0	11.53	5.503	7.81	0.00	0.23	2.51	0.80	1.00	0.00	8.93	43.96	0.00	1,438.1	0.0	219.82	339.52	559.34
12	220.0	11.70	0.000	14.30	0.00	0.15	2.79	0.80	1.00	0.00	8.25	77.61	0.00	2,296.2	0.0	228.87	616.32	845.19
13	235.0	11.87	0.000	5.90	0.00	0.13	2.86	0.80	1.00	0.00	3.39	13.95	0.00	637.0	0.0	97.71	129.15	226.86
														67,976.3	**0.0**			**13,113.85**

Load Case: 1.0D + 1.0W 90° Wind — 1.0D + 1.0W 60 mph Wind at 90° From Face

Wind Load Factor: 1.00 — **Wind Importance Factor:** 1.00

Dead Load Factor: 1.00

Ice Dead Load Factor: 0.00 — **Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	10.0	6.66	18.274	27.83	0.00	0.09	3.01	0.85	1.00	0.00	30.26	87.92	0.00	9,251.3	0.0	514.84	392.08	906.92
2	30.0	7.69	17.378	27.83	0.00	0.10	2.98	0.85	1.00	0.00	29.09	87.92	0.00	9,118.6	0.0	567.44	453.09	1,020.53
3	50.0	8.57	16.527	26.21	0.00	0.10	2.97	0.85	1.00	0.00	27.58	87.92	0.00	8,371.8	0.0	596.43	504.53	1,100.96
4	70.0	9.20	15.714	26.21	0.00	0.11	2.94	0.85	1.00	0.00	26.72	87.92	0.00	8,249.7	0.0	613.53	541.57	1,155.09
5	90.0	9.70	22.308	23.64	0.00	0.13	2.84	0.85	1.00	0.00	31.48	87.92	0.00	5,995.5	0.0	738.03	570.99	1,309.02
6	110.0	10.12	20.349	23.64	0.00	0.14	2.80	0.85	1.00	0.00	29.77	87.92	0.00	5,849.1	0.0	717.79	595.63	1,313.42
7	130.0	10.48	15.847	22.04	0.00	0.14	2.81	0.85	1.00	0.00	25.31	87.92	0.00	4,951.2	0.0	633.15	616.95	1,250.10
8	150.0	10.80	14.323	22.04	0.00	0.16	2.74	0.85	1.00	0.00	24.02	87.92	0.00	4,838.9	0.0	605.07	635.82	1,240.89
9	170.0	11.09	12.972	18.83	0.00	0.17	2.71	0.85	1.00	0.00	21.62	87.92	0.00	3,706.4	0.0	551.52	652.80	1,204.32
10	190.0	11.35	11.777	17.23	0.00	0.20	2.61	0.85	1.00	0.00	19.89	87.92	0.00	3,272.4	0.0	501.28	668.26	1,169.54
11	205.0	11.53	5.503	7.81	0.00	0.23	2.51	0.85	1.00	0.00	9.21	43.96	0.00	1,438.1	0.0	226.59	339.52	566.11
12	220.0	11.70	0.000	14.30	0.00	0.15	2.79	0.85	1.00	0.00	8.25	77.61	0.00	2,296.2	0.0	228.87	616.32	845.19
13	235.0	11.87	0.000	5.90	0.00	0.13	2.86	0.85	1.00	0.00	3.39	13.95	0.00	637.0	0.0	97.71	129.15	226.86
														67,976.3	**0.0**			**13,308.96**

Force/Stress Compression Summary

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 13	

TES Tower Engineering Solutions

LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	20	18B - 18"BD 2.75"	-500.01	1.2D + 1.6W Normal Wind	20.03	100	100	100	32.57	50.00	742.04	67.4	Member X
2	40	18B - 18"BD 2.75"	-471.93	1.2D + 1.6W Normal Wind	20.03	100	100	100	32.57	50.00	742.04	63.6	Member X
3	60	18B - 18"BD 2.5"	-431.81	1.2D + 1.6W Normal Wind	20.03	100	100	100	32.60	50.00	612.89	70.5	Member X
4	80	18B - 18"BD 2.5"	-390.24	1.2D + 1.6W Normal Wind	20.03	100	100	100	32.60	50.00	612.89	63.7	Member X
5	100	12B - 12"BD 2.25"	-364.54	1.2D + 1.6W Normal Wind	10.02	100	100	100	24.38	50.00	514.03	70.9	Member X
6	120	12B - 12"BD 2.25"	-324.99	1.2D + 1.6W Normal Wind	10.02	100	100	100	24.38	50.00	514.03	63.2	Member X
7	140	12B - 12"BD 2"	-285.44	1.2D + 1.6W Normal Wind	10.02	100	100	100	24.41	50.00	405.83	70.3	Member X
8	160	12B - 12"BD 2"	-245.58	1.2D + 1.6W Normal Wind	10.02	100	100	100	24.41	50.00	405.83	60.5	Member X
9	180	12B - 12"BD 1.75"	-202.89	1.2D + 1.6W Normal Wind	10.02	100	100	100	25.99	50.00	308.82	65.7	Member X
10	200	12B - 12"BD 1.5"	-156.60	1.2D + 1.6W Normal Wind	10.02	100	100	100	30.32	50.00	222.99	70.2	Member X
11	210	12B - 12"BD 1.25"	-98.10	1.2D + 1.6W Normal Wind	10.02	100	100	100	36.38	50.00	150.33	65.3	Member X
12	230	SOL - 2" SOLID	-82.13	1.2D + 1.6W Normal Wind	2.37	100	100	100	56.88	50.00	111.59	73.6	Member X
13	240	SOL - 1 3/4" SOLID	-11.09	1.2D + 1.6W Normal Wind	2.24	100	100	100	61.43	50.00	82.14	13.5	Member X

Splices

		Top Splice					Bottom Splice				
Sect	Top Elev	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts
1	20	1.2D + 1.6W Normal Wind	488.27	0.00	0.0			1.2D + 1.6W Normal Wind	521.10	0.00			
2	40	1.2D + 1.6W Normal Wind	453.49	0.00	0.0			1.2D + 1.6W Normal Wind	488.27	0.00		1/4 A325	12
3	60	1.2D + 1.6W Normal Wind	413.60	0.00	0.0			1.2D + 1.6W Normal Wind	453.49	0.00		1/4 A325	12
4	80	1.2D + 1.6W Normal Wind	374.80	0.00	0.0			1.2D + 1.6W Normal Wind	413.60	0.00		1/4 A325	12
5	100	1.2D + 1.6W Normal Wind	334.86	0.00	0.0			1.2D + 1.6W Normal Wind	374.80	0.00		1/4 A325	6
6	120	1.2D + 1.6W Normal Wind	295.89	0.00	0.0			1.2D + 1.6W Normal Wind	334.86	0.00		1/4 A325	6
7	140	1.2D + 1.6W Normal Wind	256.28	0.00	0.0			1.2D + 1.6W Normal Wind	295.89	0.00		1/4 A325	6
8	160	1.2D + 1.6W Normal Wind	214.57	0.00	0.0			1.2D + 1.6W Normal Wind	256.28	0.00		1/4 A325	6
9	180	1.2D + 1.6W Normal Wind	170.42	0.00	0.0			1.2D + 1.6W Normal Wind	214.57	0.00		1 A325	6
10	200	1.2D + 1.6W Normal Wind	118.31	0.00	0.0			1.2D + 1.6W Normal Wind	170.42	0.00		1 A325	6
11	210	1.2D + 1.6W Normal Wind	88.11	0.00	0.0			1.2D + 1.6W Normal Wind	118.31	0.00		1 A325	6
12	230	1.2D + 1.6W Normal Wind	13.72	0.00	0.0			1.2D + 1.6W Normal Wind	88.11	0.00		1 A325	6
13	240	1.2D + 1.0E	0.25	0.00	0.0			1.2D + 1.6W Normal Wind	13.72	0.00			

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
1	20										0.00	0	0				
2	40										0.00	0	0				
3	60										0.00	0	0				
4	80										0.00	0	0				
5	100										0.00	0	0				
6	120										0.00	0	0				
7	140										0.00	0	0				
8	160										0.00	0	0				
9	180										0.00	0	0				
10	200										0.00	0	0				
11	210										0.00	0	0				
12	230	SOL - 1" SOLID	-2.35	1.2D + 1.6W 60° Wind	4.52	100	100	100	151.90	50.00	7.69	0	0			31	Member X
13	240	SOL - 3/4" SOLID	-1.34	1.2D + 1.6W Normal Wind	4.50	100	100	100	201.60	50.00	2.46	0	0			55	Member X

Force/Stress Compression Summary

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
1	20	DAE - 3.5X3.5X0.3125	-15.9	1.2D + 1.6W Normal Wind	32.02	49	49	25	176.80	36.00	30.21	2	2	63.62	118.	53	Member Y
2	40	DAE - 3.5X3.5X0.3125	-13.8	0.9D + 1.6W 90° Wind	30.48	48	48	24	163.66	36.00	35.25	2	2	63.62	118.	39	Member Y
3	60	DAE - 3.5X3.5X0.3125	-14.9	1.2D + 1.6W 90° Wind	29.01	48	48	24	156.31	36.00	38.65	2	2	63.62	118.	39	Member Y
4	80	DAE - 3.5X3.5X0.3125	-14.3	1.2D + 1.6W Normal Wind	27.59	48	48	24	149.29	36.00	42.37	2	2	63.62	118.	34	Member Y
5	100	SAE - 3.5X3.5X0.3125	-9.43	0.9D + 1.6W 90° Wind	20.16	48	48	48	168.27	36.00	16.67	1	1	43.49	33.1	57	Member Z
6	120	SAE - 3.5X3.5X0.3125	-9.38	1.2D + 1.6W 90° Wind	18.45	48	48	48	154.00	36.00	19.91	1	1	43.49	33.1	47	Member Z
7	140	SAE - 3X3X0.3125	-8.90	1.2D + 1.6W 90° Wind	16.80	47	47	47	160.90	36.00	15.53	1	1	43.49	33.1	57	Member Z
8	160	SAE - 3X3X0.3125	-8.47	1.2D + 1.6W 90° Wind	15.24	47	47	47	145.96	36.00	18.88	1	1	43.49	33.1	45	Member Z
9	180	SAE - 3X3X0.1875	-8.24	1.2D + 1.6W 90° Wind	13.80	46	46	46	127.78	36.00	14.95	1	1	31.81	17.9	55	Member Z
10	200	SAE - 3X3X0.1875	-9.28	0.9D + 1.6W 90° Wind	11.93	46	46	46	112.87	36.00	18.06	1	1	31.81	17.9	52	Bolt Bear
11	210	SAE - 3X3X0.1875	-11.3	1.2D + 1.6W Normal Wind	11.42	46	46	46	109.30	36.00	18.83	1	1	31.81	17.9	63	Bolt Bear
12	230	SOL - 1" SOLID	-7.02	1.2D + 1.6W 90° Wind	5.50	46	46	46	85.04	50.00	20.83	0	0			34	Member X
13	240	SOL - 3/4" SOLID	-3.05	1.2D + 1.6W 90° Wind	5.03	46	46	46	103.59	50.00	9.07	0	0			34	Member X

Force/Stress Tension Summary

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 15	

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LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	20	18B - 18"BD 2.75"	433.27	0.9D + 1.6W 60° Wind	50	801.90	54.0	Member
2	40	18B - 18"BD 2.75"	409.22	0.9D + 1.6W 60° Wind	50	801.90	51.0	Member
3	60	18B - 18"BD 2.5"	378.30	0.9D + 1.6W 60° Wind	50	662.40	57.1	Member
4	80	18B - 18"BD 2.5"	345.04	0.9D + 1.6W 60° Wind	50	662.40	52.1	Member
5	100	12B - 12"BD 2.25"	325.36	0.9D + 1.6W 60° Wind	50	536.85	60.6	Member
6	120	12B - 12"BD 2.25"	292.10	0.9D + 1.6W 60° Wind	50	536.85	54.4	Member
7	140	12B - 12"BD 2"	258.66	0.9D + 1.6W 60° Wind	50	423.90	61.0	Member
8	160	12B - 12"BD 2"	223.89	0.9D + 1.6W 60° Wind	50	423.90	52.8	Member
9	180	12B - 12"BD 1.75"	186.27	0.9D + 1.6W 60° Wind	50	324.45	57.4	Member
10	200	12B - 12"BD 1.5"	144.21	0.9D + 1.6W 60° Wind	50	238.50	60.5	Member
11	210	12B - 12"BD 1.25"	89.64	0.9D + 1.6W 60° Wind	50	165.60	54.1	Member
12	230	SOL - 2" SOLID	78.72	0.9D + 1.6W 60° Wind	50	141.37	55.7	Member
13	240	SOL - 1 3/4" SOLID	11.09	0.9D + 1.6W 60° Wind	50	108.24	10.2	Member

Splices

		Top Splice					Bottom Splice					
Sect	Top Elev	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts	Load Case	Force (kips)	Cap (kips)	Use %	Bolt Type	Num Bolts
1	20	0.9D + 1.6W 60° Wind	420.98	0.00	0.0			0.9D + 1.6W 60° Wind	451.6	0.00			
2	40	0.9D + 1.6W 60° Wind	391.49	0.00	0.0			0.9D + 1.6W 60° Wind	420.9	915.84	46.0	1 1/4 A325	12
3	60	0.9D + 1.6W 60° Wind	360.21	0.00	0.0			0.9D + 1.6W 60° Wind	391.4	915.84	42.7	1 1/4 A325	12
4	80	0.9D + 1.6W 60° Wind	329.22	0.00	0.0			0.9D + 1.6W 60° Wind	360.2	915.84	39.3	1 1/4 A325	12
5	100	0.9D + 1.6W 60° Wind	299.15	0.00	0.0			0.9D + 1.6W 60° Wind	329.2	457.92	71.9	1 1/4 A325	6
6	120	0.9D + 1.6W 60° Wind	266.22	0.00	0.0			0.9D + 1.6W 60° Wind	299.1	457.92	65.3	1 1/4 A325	6
7	140	0.9D + 1.6W 60° Wind	232.08	0.00	0.0			0.9D + 1.6W 60° Wind	266.2	457.92	58.1	1 1/4 A325	6
8	160	0.9D + 1.6W 60° Wind	195.33	0.00	0.0			0.9D + 1.6W 60° Wind	232.0	457.92	50.7	1 1/4 A325	6
9	180	0.9D + 1.6W 60° Wind	155.53	0.00	0.0			0.9D + 1.6W 60° Wind	195.3	318.06	61.4	1 A325	6
10	200	0.9D + 1.6W 60° Wind	107.02	0.00	0.0			0.9D + 1.6W 60° Wind	155.5	318.06	48.9	1 A325	6
11	210	0.9D + 1.6W 60° Wind	78.02	0.00	0.0			0.9D + 1.6W 60° Wind	107.0	318.06	33.6	1 A325	6
12	230	0.9D + 1.6W 60° Wind	11.07	0.00	0.0			0.9D + 1.6W 60° Wind	78.02	318.06	24.5	1 A325	6
13	240		0.00	0.00	0.0			0.9D + 1.6W 60° Wind	11.07	0.00			

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	20	-			36	0.00	0	0					
2	40	-			36	0.00	0	0					
3	60	-			36	0.00	0	0					
4	80	-			36	0.00	0	0					
5	100	-			36	0.00	0	0					
6	120	-			36	0.00	0	0					
7	140	-			36	0.00	0	0					
8	160	-			36	0.00	0	0					
9	180	-			36	0.00	0	0					
10	200	-			36	0.00	0	0					
11	210	-			36	0.00	0	0					
12	230	SOL - 1" SOLID	2.37	1.2D + 1.6W Normal Wi	50	35.34	0	0				6.7	Member
13	240	SOL - 3/4" SOLID	1.34	1.2D + 1.6W 60° Wind	50	19.88	0	0				6.7	Member

Force/Stress Tension Summary

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	20	DAE - 3.5X3.5X0.3125	13.87	0.9D + 1.6W 60° Wind	36	135.43	2	2	63.62	118.54	71.05	21.8	Bolt Shear
2	40	DAE - 3.5X3.5X0.3125	13.43	1.2D + 1.6W 90° Wind	36	135.43	2	2	63.62	118.54	71.05	21.1	Bolt Shear
3	60	DAE - 3.5X3.5X0.3125	14.08	0.9D + 1.6W 90° Wind	36	135.43	2	2	63.62	118.54	71.05	22.1	Bolt Shear
4	80	DAE - 3.5X3.5X0.3125	13.04	0.9D + 1.6W 90° Wind	36	135.43	2	2	63.62	118.54	71.05	20.5	Bolt Shear
5	100	SAE - 3.5X3.5X0.3125	9.75	0.9D + 1.6W 90° Wind	36	67.72	1	1	43.49	33.17	22.44	43.5	Blck Shear
6	120	SAE - 3.5X3.5X0.3125	9.09	1.2D + 1.6W 90° Wind	36	54.17	1	1	43.49	33.17	22.44	40.5	Blck Shear
7	140	SAE - 3X3X0.3125	8.48	0.9D + 1.6W 90° Wind	36	44.05	1	1	43.49	33.17	19.04	44.5	Blck Shear
8	160	SAE - 3X3X0.3125	8.10	1.2D + 1.6W 90° Wind	36	44.05	1	1	43.49	33.17	19.04	42.6	Blck Shear
9	180	SAE - 3X3X0.1875	7.96	1.2D + 1.6W 90° Wind	36	28.68	1	1	31.81	17.94	11.68	68.1	Blck Shear
10	200	SAE - 3X3X0.1875	9.08	1.2D + 1.6W 90° Wind	36	28.68	1	1	31.81	17.94	11.68	77.7	Blck Shear
11	210	SAE - 3X3X0.1875	10.43	0.9D + 1.6W 60° Wind	36	28.68	1	1	31.81	17.94	11.68	89.3	Blck Shear
12	230	SOL - 1" SOLID	6.93	1.2D + 1.6W 90° Wind	50	35.34	0	0				19.6	Member
13	240	SOL - 3/4" SOLID	3.06	1.2D + 1.6W 90° Wind	50	19.88	0	0				15.4	Member

Seismic Section Forces

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 17	

Tower Engineering Solutions

Load Case: 1.2D + 1.0E

Dead Load Factor	1.20	**Sds**	0.183	**Ss**	0.1720	**Fa**	1.6000	**Ke**	0.0000
Seismic Load Factor	1.00	**Sd1**	0.099	**S1**	0.0620	**Fv**	2.4000	**Kg**	0.0000
Seismic Importance Factor	1.00	**SA**	0.101	**R**	3.0000	**Vs**	3.1479	**f1**	1.0181

Sect #	Elev (ft)	Wz (lb)	a	b	c	Lateral Fsz (lb)
1	10.00	9251.3	0.00	0.04	0.02	39.27
2	30.00	9118.6	0.03	0.07	0.04	73.24
3	50.00	8371.8	0.08	0.07	0.04	84.39
4	70.00	8249.6	0.16	0.07	0.03	101.41
5	90.00	5995.4	0.27	0.05	0.02	86.43
6	110.00	5849.0	0.40	0.02	0.01	89.62
7	130.00	4951.1	0.55	-0.04	0.01	71.35
8	150.00	4838.8	0.74	-0.10	0.04	63.83
9	170.00	3706.4	0.95	-0.12	0.11	59.57
10	190.00	3272.3	1.18	-0.01	0.24	94.70
11	205.00	1438.0	1.38	0.25	0.41	69.08
12	220.00	9097.4	1.59	0.74	0.65	696.13
13	235.00	3739.9	1.81	1.59	1.00	429.91

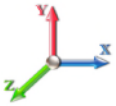
Load Case: 0.9D + 1.0E

Dead Load Factor	0.90	**Sds**	0.183	**Ss**	0.1720	**Fa**	1.6000	**Ke**	0.0000
Seismic Load Factor	1.00	**Sd1**	0.099	**S1**	0.0620	**Fv**	2.4000	**Kg**	0.0000
Seismic Importance Factor	1.00	**SA**	0.101	**R**	3.0000	**Vs**	3.1479	**f1**	1.0181

Sect #	Elev (ft)	Wz (lb)	a	b	c	Lateral Fsz (lb)
1	10.00	9251.3	0.00	0.04	0.02	39.27
2	30.00	9118.6	0.03	0.07	0.04	73.24
3	50.00	8371.8	0.08	0.07	0.04	84.39
4	70.00	8249.6	0.16	0.07	0.03	101.41
5	90.00	5995.4	0.27	0.05	0.02	86.43
6	110.00	5849.0	0.40	0.02	0.01	89.62
7	130.00	4951.1	0.55	-0.04	0.01	71.35
8	150.00	4838.8	0.74	-0.10	0.04	63.83
9	170.00	3706.4	0.95	-0.12	0.11	59.57
10	190.00	3272.3	1.18	-0.01	0.24	94.70
11	205.00	1438.0	1.38	0.25	0.41	69.08
12	220.00	9097.4	1.59	0.74	0.65	696.13
13	235.00	3739.9	1.81	1.59	1.00	429.91

Support Forces Summary

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 18	



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Load Case	Node	FX (kips)	FY (kips)	FZ (kips)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal Wind	1	0.00	520.87	-51.94	
	1a	19.17	-213.71	-11.85	
	1b	-19.17	-213.71	-11.85	
1.2D + 1.6W 60° Wind	1	-0.50	267.44	-26.05	
	1a	-22.81	267.44	12.59	
	1b	-39.13	-441.43	-22.59	
1.2D + 1.6W 90° Wind	1	-0.63	31.18	-2.31	
	1a	-38.17	444.11	21.68	
	1b	-34.18	-381.83	-19.37	
0.9D + 1.6W Normal Wind	1	0.00	512.25	-51.31	
	1a	19.68	-221.08	-12.16	
	1b	-19.68	-221.08	-12.16	
0.9D + 1.6W 60° Wind	1	-0.51	259.25	-25.43	
	1a	-22.28	259.25	12.27	
	1b	-39.64	-448.41	-22.89	
0.9D + 1.6W 90° Wind	1	-0.65	23.39	-1.70	
	1a	-37.63	435.62	21.36	
	1b	-34.71	-388.91	-19.66	
1.2D + 1.0Di + 1.0Wi Normal Wind	1	0.00	185.44	-13.43	
	1a	4.89	-3.61	-3.01	
	1b	-4.89	-3.61	-3.01	
1.2D + 1.0Di + 1.0Wi 60° Wind	1	-0.14	121.28	-6.89	
	1a	-6.04	121.28	3.32	
	1b	-10.26	-64.34	-5.92	
1.2D + 1.0Di + 1.0Wi 90° Wind	1	-0.17	59.41	-0.65	
	1a	-10.02	167.07	5.69	
	1b	-8.90	-48.26	-5.04	
1.2D + 1.0E	1	0.00	46.53	4.93	
	1a	6.04	23.47	-3.41	
	1b	-6.04	23.47	-3.41	
0.9D + 1.0E	1	0.00	38.71	5.55	
	1a	6.57	15.69	-3.72	
	1b	-6.57	15.69	-3.72	
1.0D + 1.0W Normal Wind	1	0.00	136.68	-13.36	
	1a	3.05	-29.40	-1.97	
	1b	-3.05	-29.40	-1.97	
1.0D + 1.0W 60° Wind	1	-0.15	79.43	-7.46	
	1a	-6.54	79.43	3.60	
	1b	-7.63	-80.98	-4.41	
1.0D + 1.0W 90° Wind	1	-0.18	25.96	-2.04	
	1a	-10.03	119.39	5.69	
	1b	-6.51	-67.47	-3.65	

Max Reactions

Leg			Overturning		
Max Uplift:	-448.41	(kips)	Moment:	11026.83	(ft-kips)
Max Down:	520.87	(kips)	Total Down:	93.46	(kips)
Max Shear:	51.94	(kips)	Total Shear:	75.64	(kips)

Analysis Summary

Structure:	CT00990-S-SBA	**Code:**	EIA/TIA-222-G	1/11/2022	
Site Name:	Scotland	**Exposure:**	C		
Height:	240.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	0.85 **Topography:** 1	**Struct Class:**	II	Page: 20	

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Max Reactions

Leg			Overturning		
Max Uplift:	-448.41	(kips)	Moment:	11026.83	(ft-kips)
Max Down:	520.87	(kips)	Total Down:	93.46	(kips)
Max Shear:	51.94	(kips)	Total Shear:	75.64	(kips)

Anchor Bolts

Bolt Size (in.):	2.00	Number Bolts:	6
Yield Strength (Ksi):	105.00	Tensile Strength (Ksi):	150.00
Detail Type:	C		

Interaction Ratio: 0.30

Max Usages

Max Leg: 73.6% (1.2D + 1.6W Normal Wind - Sect 12)
Max Diag: 89.3% (0.9D + 1.6W 60° Wind - Sect 11)
Max Horiz: 54.5% (1.2D + 1.6W Normal Wind - Sect 13)

Max Deflection, Twist and Sway

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
0.9D + 1.0E - Normal To Face	217.32	0.0855	0.0028	0.0682
	229.17	0.1000	0.0037	0.0972
	236.93	0.1104	0.0031	0.0697
	240.00	0.1144	0.0029	0.0850
0.9D + 1.6W 101 mph Wind at 60° From Face	217.32	2.1824	-0.0852	1.5510
	229.17	2.5125	-0.1221	2.0141
	236.93	2.7430	-0.1245	1.6248
	240.00	2.8310	-0.1256	1.6881
0.9D + 1.6W 101 mph Wind at 90° From Face	217.32	2.1927	-0.0982	1.5550
	229.17	2.5235	-0.1394	2.0100
	236.93	2.7546	-0.1439	1.6350
	240.00	2.8422	-0.1439	1.6761
0.9D + 1.6W 101 mph Wind at Normal To Face	217.32	2.2282	0.0855	1.5684
	229.17	2.5621	0.1202	2.0332
	236.93	2.7955	0.1255	1.6423
	240.00	2.8827	0.1245	1.7053
1.0D + 1.0W 60 mph Wind at 60° From Face	217.32	0.4892	-0.0189	0.3453
	229.17	0.5627	-0.0269	0.4486
	236.93	0.6141	-0.0276	0.3617
	240.00	0.6336	-0.0277	0.3760
1.0D + 1.0W 60 mph Wind at 90° From Face	217.32	0.4919	-0.0219	0.3467
	229.17	0.5657	-0.0310	0.4478
	236.93	0.6173	-0.0319	0.3644
	240.00	0.6367	-0.0319	0.3737

1.0D + 1.0W 60 mph Wind at Normal To Face	217.32	0.5003	0.0192	0.3501
	229.17	0.5748	0.0271	0.4521
	236.93	0.6268	0.0279	0.3664
	240.00	0.6464	0.0278	0.3800
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face	217.32	0.5656	-0.0218	0.3962
	229.17	0.6499	-0.0309	0.5134
	236.93	0.7085	-0.0317	0.4130
	240.00	0.7310	-0.0318	0.4353
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face	217.32	0.5671	-0.0252	0.3971
	229.17	0.6515	-0.0357	0.5117
	236.93	0.7103	-0.0368	0.4153
	240.00	0.7327	-0.0367	0.4324
1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face	217.32	0.5719	0.0219	0.3991
	229.17	0.6567	0.0310	0.5122
	236.93	0.7158	0.0320	0.4158
	240.00	0.7381	0.0319	0.4360
1.2D + 1.0E - Normal To Face	217.32	0.0857	0.0028	0.0684
	229.17	0.1003	-0.0037	0.0973
	236.93	0.1107	-0.0031	0.0699
	240.00	0.1148	-0.0029	0.0853
1.2D + 1.6W 101 mph Wind at 60° From Face	217.32	2.1887	-0.0856	1.5567
	229.17	2.5200	-0.1227	2.0228
	236.93	2.7514	-0.1252	1.6308
	240.00	2.8396	-0.1262	1.6945
1.2D + 1.6W 101 mph Wind at 90° From Face	217.32	2.1989	-0.0986	1.5608
	229.17	2.5310	-0.1401	2.0182
	236.93	2.7630	-0.1446	1.6411
	240.00	2.8509	-0.1446	1.6824
1.2D + 1.6W 101 mph Wind at Normal To Face	217.32	2.2346	0.0858	1.5742
	229.17	2.5697	0.1207	2.0416
	236.93	2.8039	0.1261	1.6484
	240.00	2.8915	0.1251	1.7116

Mat Foundation Design for Self Supporting Tower

			Date: 1/11/2022
Customer Name:	SBA Communications Corp	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	240
Site Nmber:	CT00990-S-SBA	Engineer Name:	T. Alajaj
Engr. Number:	121691	Engineer Login ID:	

Foundation Info Obtained from: Drawings/Calculations

Analysis or Design? Analysis

Number of Tower Legs: 3 Legs

Base Reactions (Factored):

(1). Individual Leg:

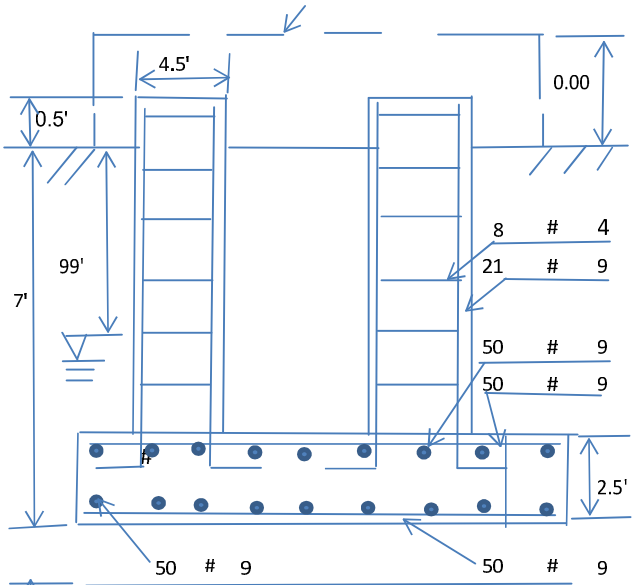
Axial Load (Kips):	520.9	Uplift Force (Kips):	448.4
Shear Force (Kips):	51.9		

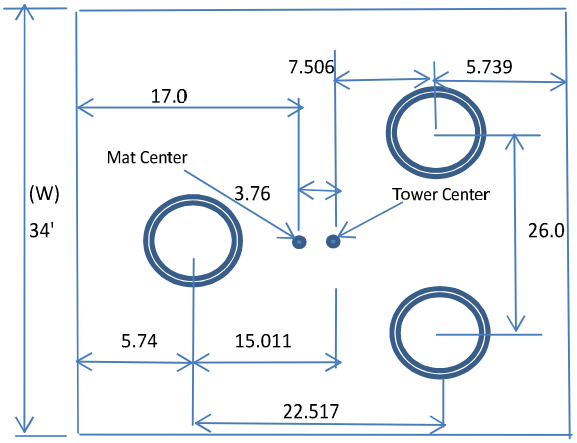
(2). Tower Base:

Total Vertical Load (Kips):	93.5	Total Shear Force (Kips):	75.6
Moment (Kips-ft):	11026.8		

Foundation Geometries:

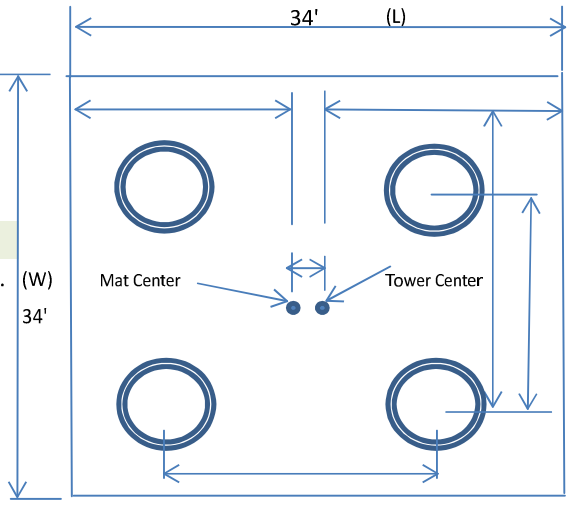
Leg distance (Center-to-Center ft.):		26.0	Mods required -Yes/No ?:	No	
Diameter of Pier (ft.):	Round	4.5	Pier Height A. G. (ft.):	0.50	
Tower center to mat center (ft):		3.75521	Depth of Base BG (ft.):	7.0	
Length of Pad (ft.):		34	Width of Pad (ft.):	34	
Thickness of Pad (ft):		2.50			





Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi	
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60		
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4		
Qty. of Vertical Rebars:	21	Tie Spacing (in):	12.0		
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9		
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf	
Rebar at the bottom of the concrete pad:					
Qty. of Rebar in Pad (L):	50	Qty. of Rebar in Pad (W):	50		
Rebar at the top of the concrete pad:					
Qty. of Rebar in Pad (L):	50	Qty. of Rebar in Pad (W):	50		



Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	62.6	Pcf	
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	
Ultimate Bearing Pressure (psf):	16000	Consider ties in concrete shear strength:		Yes	
Consider Soil Lateral Resistance ?	Yes	Enter soil C (psf) or Phi (deg.):	30.0	Deg.	
		Depth to ignor lateral resistance	1.0	Ft.	

Apply 1.35 for e/w per G/H: 1.35

Foundation Analysis and Design:	Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75			
Total Dry Soil Volume (cu. Ft.):		4987.29	Total Dry Soil Weight (Kips):	623.41			
Total Buoyant Soil Volume (cu. Ft.):		0.00	Total Buoyant Soil Weight (Kips):	0.00			
Total Effective Soil Weight (Kips):		623.41	Weight from the Concrete Block at Top (K):	0.00			
Total Dry Concrete Volume (cu. Ft.):		3128.56	Total Dry Concrete Weight (Kips):	469.28			
Total Buoyant Concrete Volume (cu. Ft.):		0.00	Total Buoyant Concrete Weight (Kips):	0.00			
Total Effective Concrete Weight (Kips):		469.28	Total Vertical Load on Base (Kips):	1186.15			
Check Soil Capacities:						Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):		3239.08	<	Allowable Factored Soil Bearing (psf):	12000	0.27	OK!
Allowable Foundation Overturning Resistance (kips-ft.):		18307.0	>	Design Factored Momont (kips-ft):	11860	0.65	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):		1.54	OK!				
Check the capacities of Reinforceing Concrete:							
Strength reduction factor (Flexure and axial tension):		0.90	Strength reduction factor (Shear):		0.75		
Strength reduction factor (Axial compresion):		0.65	Wind Load Factor on Concrete Design:		1.00		
(1) Concrete Pier:						Load/ Capacity Ratio	
	Vertical Steel Rebar Area (sq. in./each):	1.00		Tie / Stirrup Area (sq. in./each):	0.20		
	Calculated Moment Capacity (Mn,Kips-Ft):	1264.7	>	Design Factored Moment (Mu, Kips-Ft)	250.6	0.20	OK!
	Calculated Shear Capacity (Kips):	188.8	>	Design Factored Shear (Kips):	51.9	0.28	OK!
	Calculated Tension Capacity (Tn, Kips):	1134.0	>	Design Factored Tension (Tu Kips):	448.4	0.40	OK!
	Calculated Compression Capacity (Pn, Kips):	4012.0	>	Design Factored Axial Load (Pu Kips):	520.9	0.13	OK!
	Moment & Tension Strength Combination:	0.20	OK!	Check Tie Spacing (Design/Req'd):	1.00		
	Pier Reinforcement Ratio:	0.009	Reinforcement Ratio is satisfied per ACI				
(2).Concrete Pad:							
	One-Way Design Shear Capacity (L or W Direction, Kips):	1023.3	>	One-Way Factored Shear (L/W-Dir Kips	250.3	0.24	OK!
	One-Way Design Shear Capacity (Diagonal Dir., Kips):	913.4	>	One-Way Factored Shear (Dia. Dir, Kips	455.8	0.50	OK!
	Lower Steel Pad Reinforcement Ratio (L or W-Direct.):	0.0046		Lower Steel Reinf. Ratio (Dia. Dir.):	0.0042		
	Lower Steel Pad Moment Capacity (L or W-Dir. Kips-ft):	5705.1	>	Moment at Bottom (L-Direct. K-Ft):	788.1	0.14	OK!
	Lower Steel Pad Moment Capacity (Dia. Direction,K-ft):	5447.5	>	Moment at Bottom (Dia. Dir. K-Ft):	3385.8	0.62	OK!
	Upper Steel Pad Reinforcement Ratio (L or W -Direction):	0.0046		Upper Steel Reinf. Ratio (Dia. Dir.):	0.0042		
	Upper Steel Pad Moment Capacity (L or W-Dir., Kips-ft):	5705.1	>	Moment at the top (L-Dir Kips-Ft):	290.7	0.05	OK!
	Upper Steel Pad Moment Capacity (Dia. Direction, K-ft):	5447.5	>	Moment at the top (Dia. Dir., K-Ft):	1020.5	0.19	OK!
	Punching Failure Capacity (Kips):	1266.1	>	Punch. Failure Factored Shear (K):	520.9	0.41	OK!

Maser Consulting Connecticut
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Stamford, CT 06901
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Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10123269
Maser Consulting Connecticut Project #: 21777796A (Rev 2)

February 17, 2022

Site Information	*Site ID:*	*467618-VZW / SCOTLAND CT*
	Site Name:	*SCOTLAND CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*165 Huntington Road* *Scotland, Connecticut 06247* *Windham County*
	Latitude:	*41.695911°*
	Longitude:	*-72.097069°*
Structure Information	*Tower Type:*	*240-Ft Self Support*
	Mount Type:	*12.50-Ft T-Frame*

FUZE ID # 16078712

Analysis Results

T-Frame: **54.8% Pass w/ Modifications ***

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

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

Report Prepared By: Grant Walters

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 324822, dated December 10, 2021*
Mount Mapping Report	*Hudson Design Group, LLC., Site ID: 467618 dated June 4, 2021*
Previous Mount Analysis	*Maser Consulting, Project #: 21777796A (Rev 2) dated December 17, 2021*
Mount Modification Drawings	*Maser Consulting, Project #: 21777796A (Rev 2) dated December 23, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	122 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:	0.987
Seismic Parameters:	S_S:	0.189 g
	S_1:	0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
228.00	228.00	6	JMA Wireless	MX06FRO660-03	Added
		3	Samsung	MT6407-77A	
		1	Raycap	RVZDC-6627-PF-48	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4440d-13A	

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mounts.

The recent mount mapping did not report existing OVP units. However, 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.

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

Standard Conditions:

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

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

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

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

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped 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. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

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

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

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontal	54.8 %	Pass
Mount Pipe	34.2 %	Pass
Mast Pipe	29.2 %	Pass
Standoff Horizontal	28.9 %	Pass
Standoff Vertical	28.6 %	Pass
P2.5 Mount Pipe	17.1 %	Pass
Tieback	27.1 %	Pass
V Bracing	15.9 %	Pass
Mount Connection	42.1 %	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**54.8%**

BASELINE mount weight per SBA agreement: 539.48 lbs

Increase in mount weight due to Verizon loading change per SBA agreement: 261.30 lbs

The weights listed above includes 1 sector.

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	17.1	8.3	25.5	16.7
0.5	23.5	11.7	35.3	23.5
1	29.6	14.7	44.7	29.8

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

Requirements:

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

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

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

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PSLC #: 467618 SMART Project #: 10123269 Fuze Project ID: 16078712

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

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

Base Requirements:

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

Photo Requirements:

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

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

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

Material Certification:

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

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

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

OR

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

Antenna & Equipment Placement and Geometry Confirmation:

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

OR

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

Comments:

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

☐ Yes ☐ No

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

Issue:

Response:

Special Instruction Confirmation:

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

Comments:

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

☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

☐ Yes ☐ No

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

☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Comments:

Certifying Individual:

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

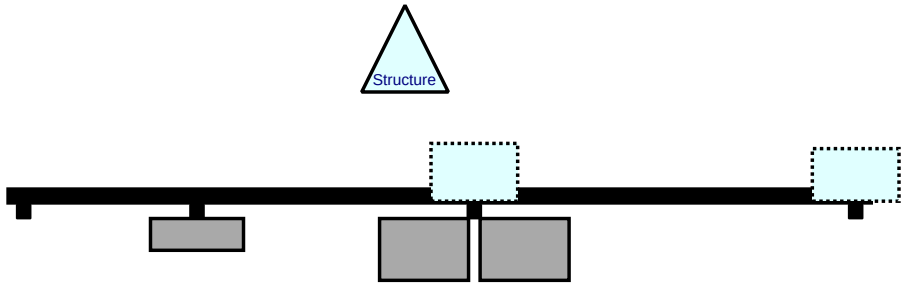
Structure: 467618-VZW - SCOTLAND CT

Sector: **A** 12/21/2021

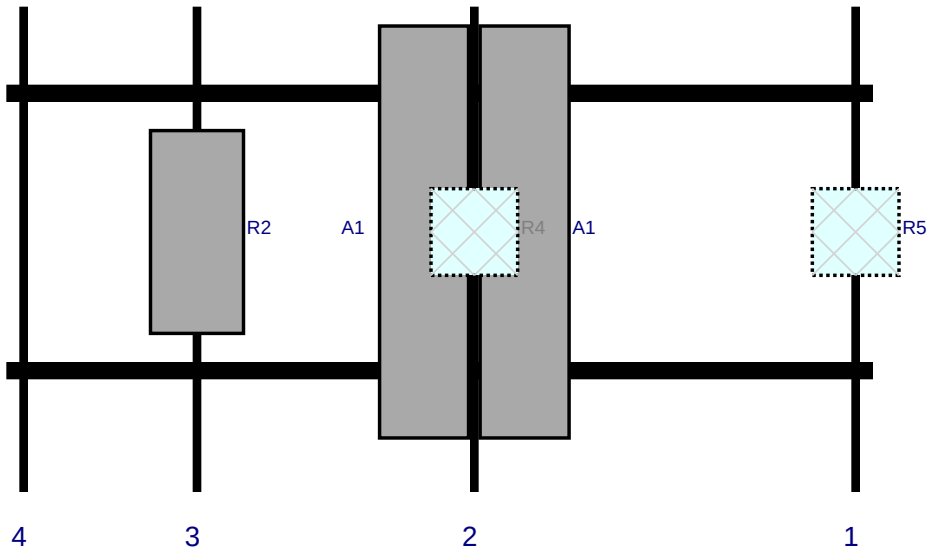
Structure Type: Self Support 10123269

Mount Elev: 228.00 Page: 1

Plan View

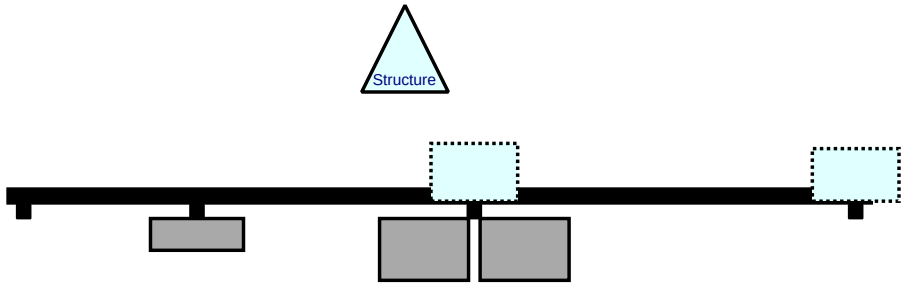


Front View - Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R5	RF4440d-13A	15	15	147	1	a	Behind	39	0	Added	
A1	MX06FRO660-03	71.3	15.4	81	2	a	Front	39	8.7	Added	
A1	MX06FRO660-03	71.3	15.4	81	2	b	Front	39	-8.7	Added	
R4	RF4439d-25A	15	15	81	2	a	Behind	39	0	Added	
R2	MT6407-77A	35.1	16.1	33	3	a	Front	39	0	Added	

Plan View



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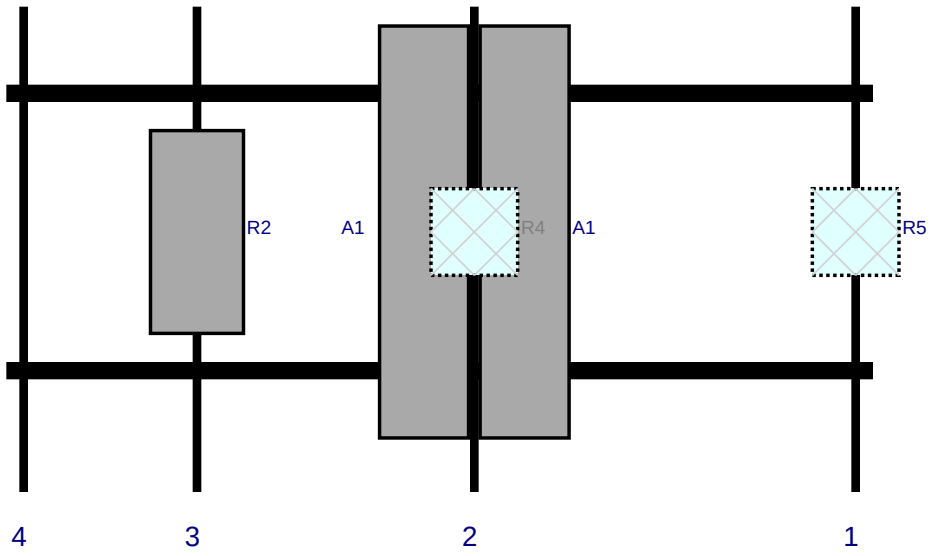

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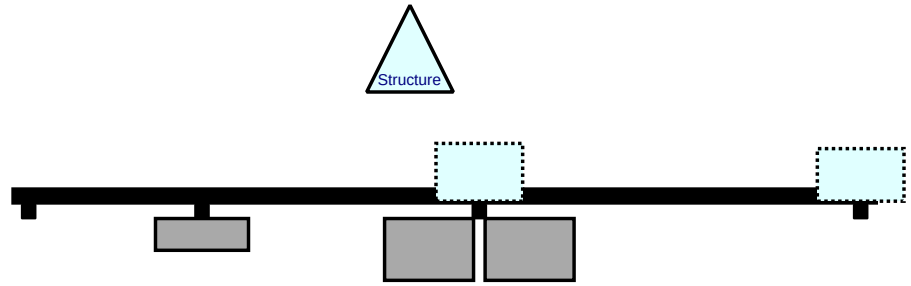
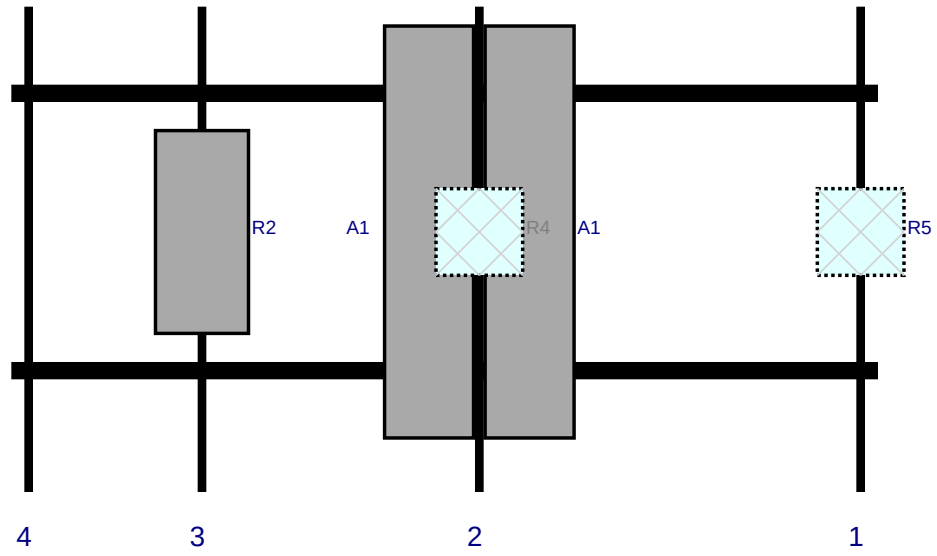
Plan View



Front View - Looking at Structure



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verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' T-FRAME

TOWER OWNER: SBA TOWERS
TOWER OWNER SITE NUMBER: CT00990

CARRIER SITE NAME: SCOTLAND CT
CARRIER SITE NUMBER: 467618
FUZE ID: 16078712

165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT 06247
WINDHAM COUNTY

LATITUDE: 41.695911° N
LONGITUDE: 72.097069° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 122 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 367.1'

ICE LOADS

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

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .189
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS
ADDRESS: 118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP: WESTBOROUGH, MA 01581
CONTACT: ANDREW CANDIELLO
EMAIL: ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY: MASER CONSULTING
CONTACT: PETER ALBANO
PHONE: 856-797-0412
E-MAIL: PETER.ALBANO@COLLIERSENGINEERING.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10123269
VZW LOCATION CODE (PSLC): 467618
ANALYSIS DATE: 12/21/2021

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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

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SCALE: AS SHOWN
JOB NUMBER: 21777796A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
3	2/17/2022	ISSUED FOR CONSTRUCTION	CDH	DRH
2	12/23/2021	ISSUED FOR CONSTRUCTION	DC	DRH
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0	08/27/2021	ISSUED FOR CONSTRUCTION	DC	DRH

SITE NAME:

SCOTLAND CT
467618

165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT
06247
WINDHAM COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: TITLE SHEET

SHEET NUMBER: ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	VZWSMART	VZWSMART-SFK1	TIE BACK ASSEMBLY	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.	72	216
3		VZWSMART-SFK3-SL	V-BRACING KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1	117	351
6		VZWSMART-MSK1	CROSSOVER PLATE		14	84

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	-	-	84" LONG, P2 1/2 STD	GALVANIZED.CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).	35	105
					TOTAL:	756

NOTES:

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

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

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2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: SBOM-1

PROJECT NOTES

1. SEE MODIFICATION NOTES

2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.

4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.

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

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

10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.

11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

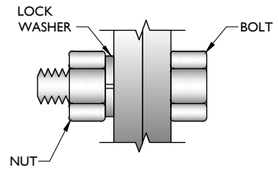
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO
      PETER.ALBANO@COLLIERSENGINEERING.COM
   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC COTE).
9. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
10. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
11. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
12. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
13. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

WELDING NOTES

1. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTION (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE, DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A THIRD PARTY CERTIFIED WELD INSPECTOR (CWI) THROUGHOUT THE ENTIRETY OF THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
3. THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CWI REPORT, THAT ALL WELDING OPERATIONS PRE, DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF ALL WELDING. ALL CWI WELD INSPECTION DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.
4. IN CASES WHERE A WELD IS SPECIFIED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT-UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.
5. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
6. CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.

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

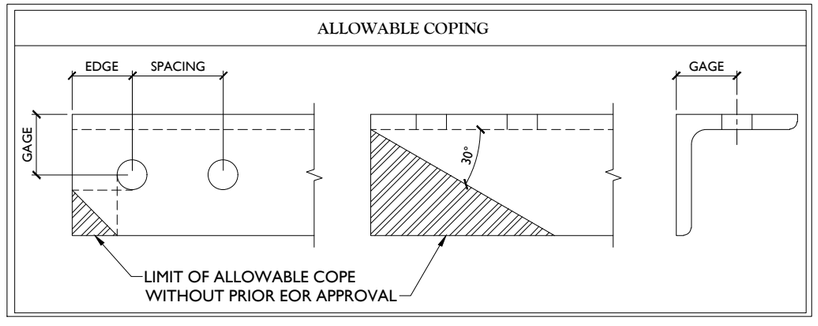
WORKABLE GAGES (IN.)	
LEG	**GAGE**
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

NOTES:

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



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WINDHAM COUNTY

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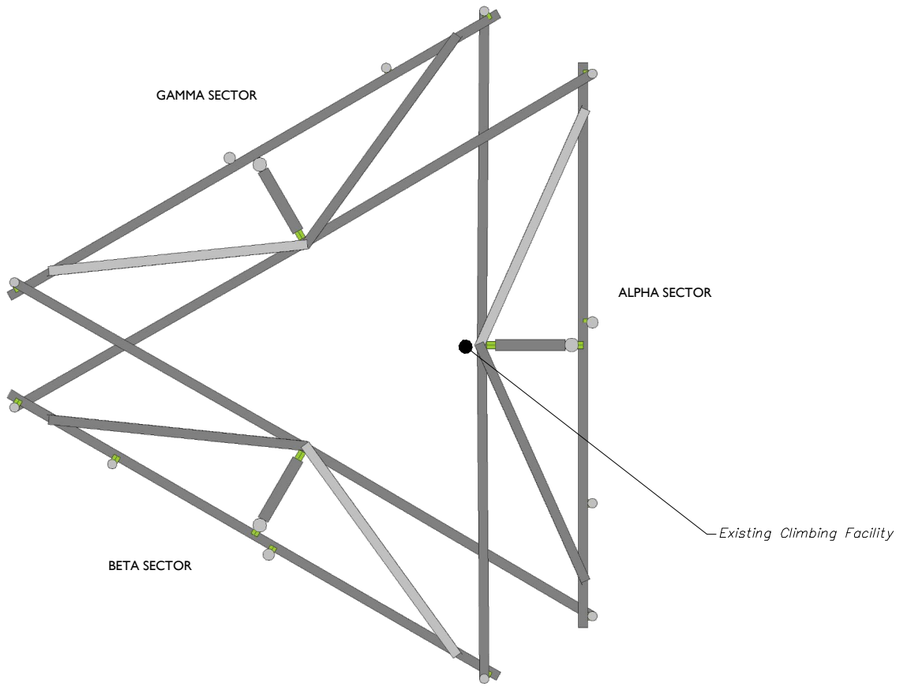
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: MODIFICATION NOTES

SHEET NUMBER: SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



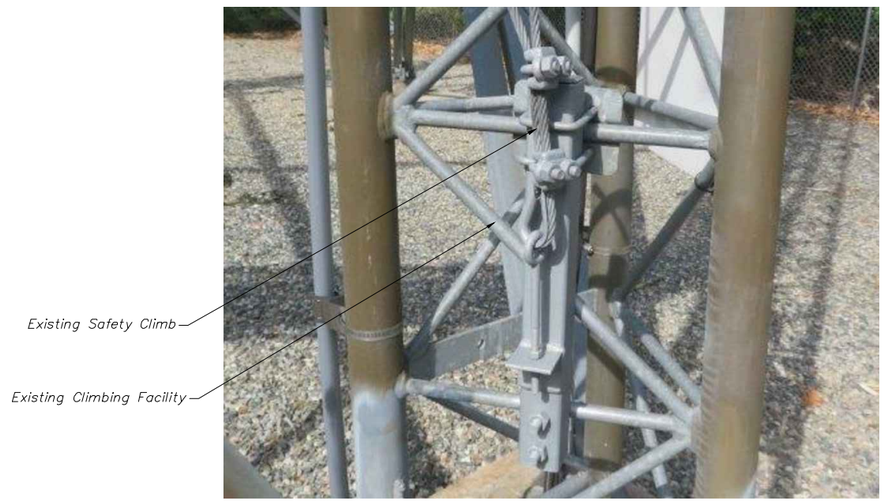
1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HUDSON DESIGN GROUP, LLC ON 6/4/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (230'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.



CLIMBING FACILITY PHOTO

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SCALE : AS SHOWN

JOB NUMBER : 21777796A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
3	2/17/2022	ISSUED FOR CONSTRUCTION	CDH	DRH
2	12/23/2021	ISSUED FOR CONSTRUCTION	DC	DRH
1	11/24/2021	ISSUED FOR CONSTRUCTION	DC	DRH
0	08/27/2021	ISSUED FOR CONSTRUCTION	DC	DRH

SITE NAME:

SCOTLAND CT
467618

165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT
06247
WINDHAM COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :

CLIMBING FACILITY DETAIL

SHEET NUMBER :

SCF-1

LEGEND:

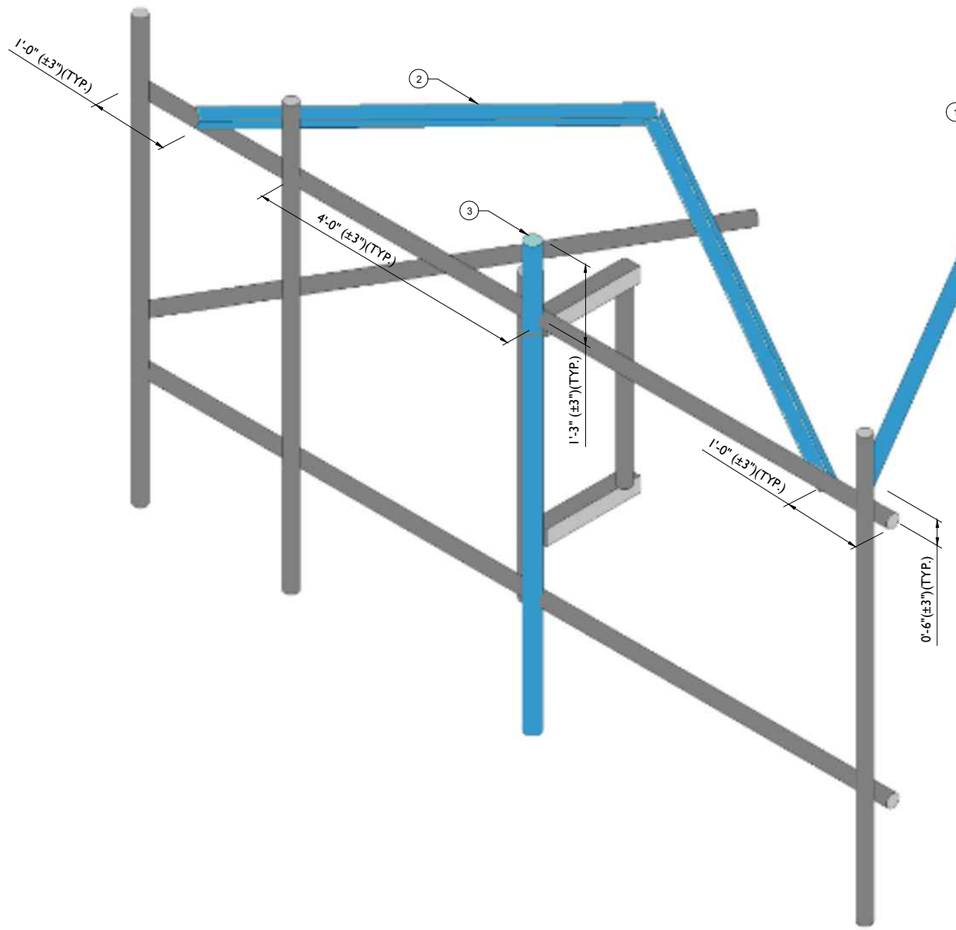
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	228'-0"	3	PROPOSED TIE BACK ASSEMBLY (PART #: VZWSMART-SFK1)	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.
2		3	PROPOSED V-BRACING KIT (PART #: VZWSMART-SFK3-SL)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1
3		3	84" LONG, P2 1/2 STD MOUNT PIPE	GALVANIZED.CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTALS WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).

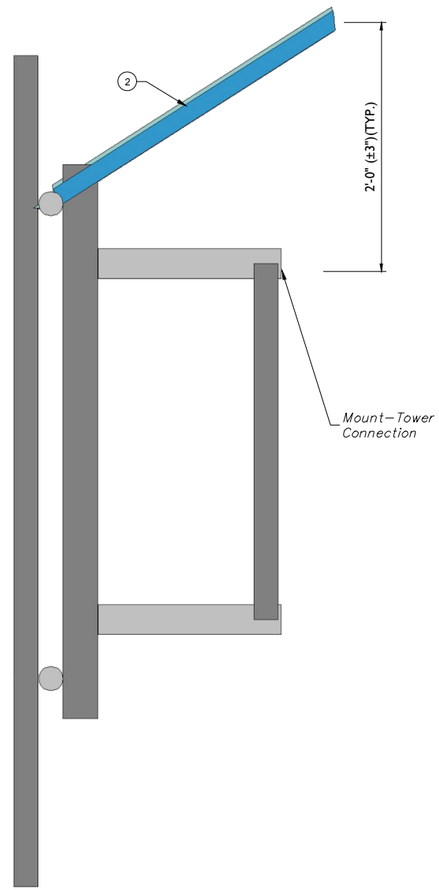
NOTES.

MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



PROPOSED ISOMETRIC VIEW

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

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AS SHOWN	21777796A

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2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

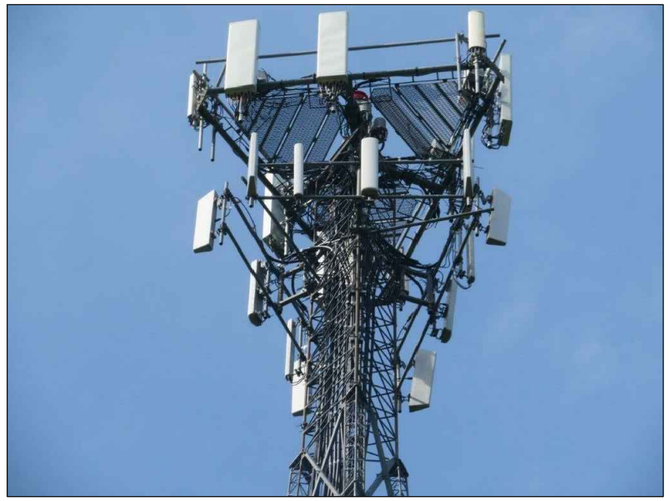
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :

MODIFICATION DETAILS

SHEET NUMBER :

SS-1



MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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JOB NUMBER : 21777796A

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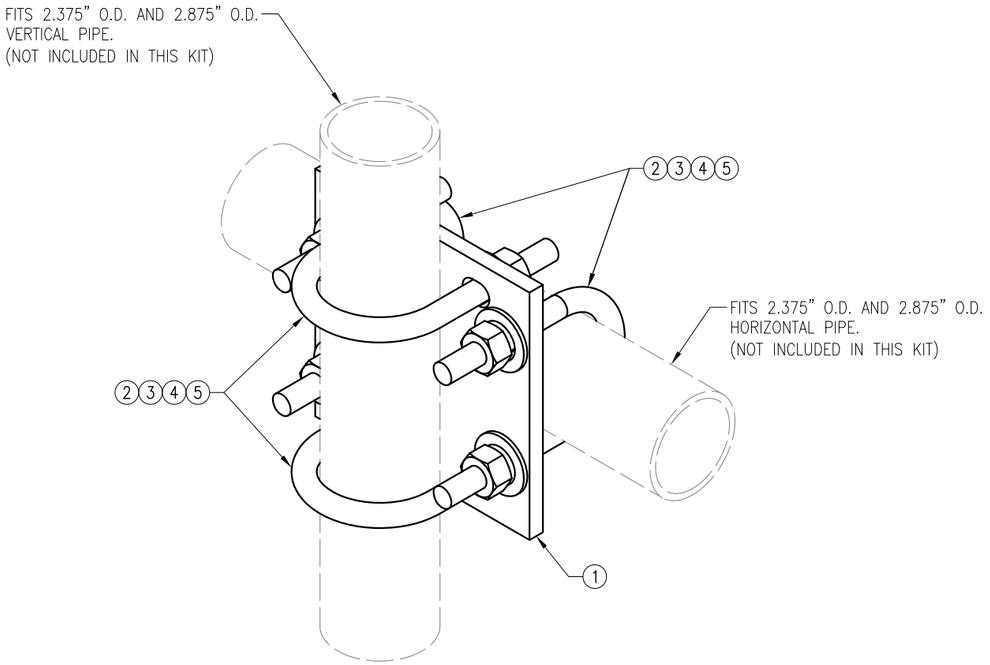
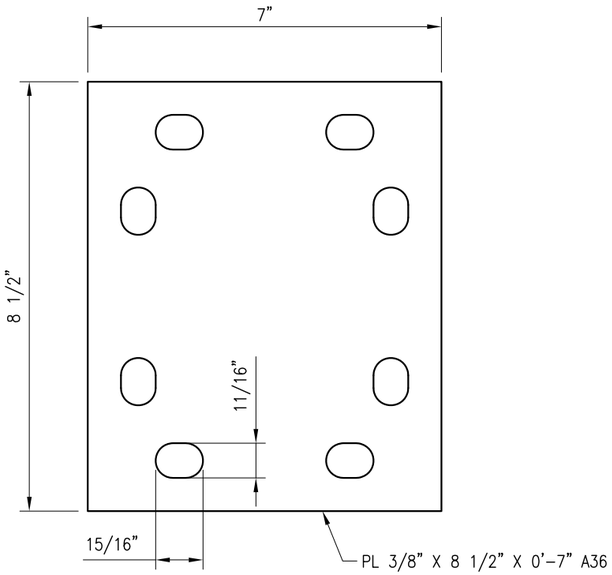
Fax: 856.722.1120

SHEET TITLE :
MOUNT PHOTOS

SHEET NUMBER :
SS-2





PL375-857

VZWSMART-MSK1 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	14

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

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DRAWN BY: H.R | CHECKED BY: HMA

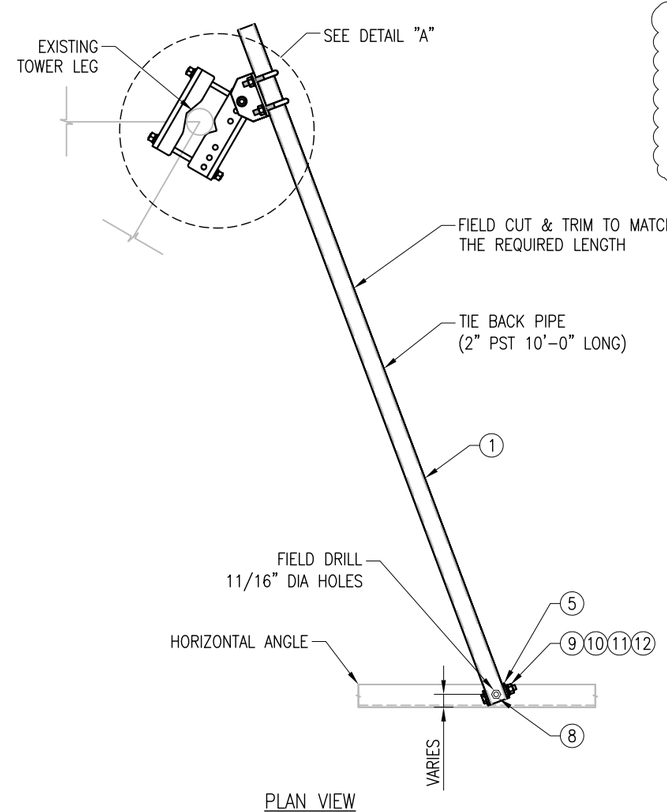
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

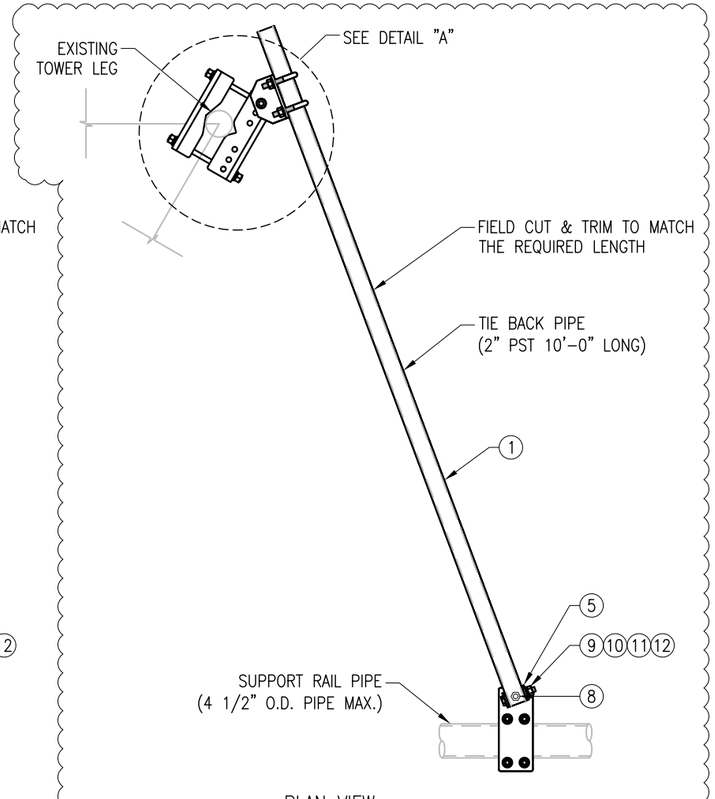
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0

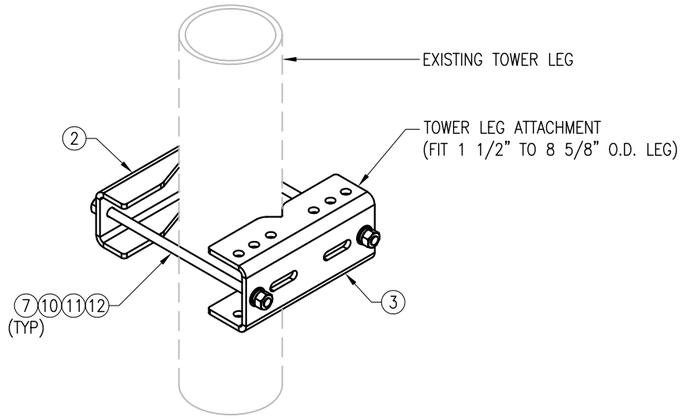


PLAN VIEW
TIE BACK ASSEMBLY

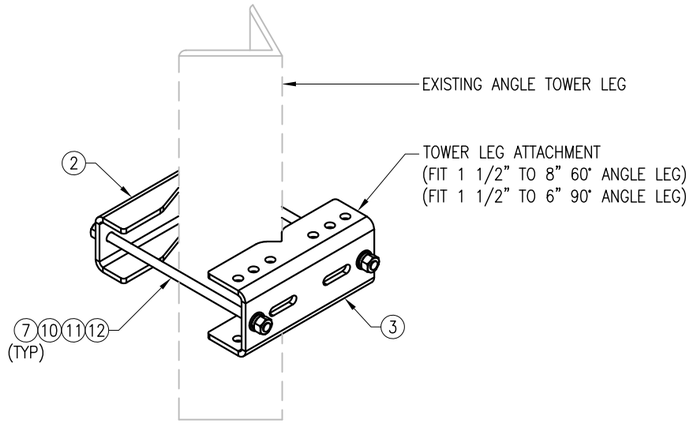


PLAN VIEW
TIE BACK ASSEMBLY WITH ADAPTER FOR PIPE

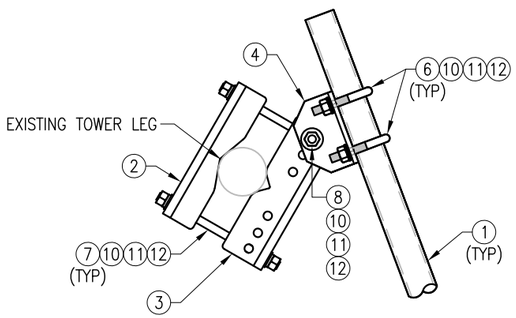
1



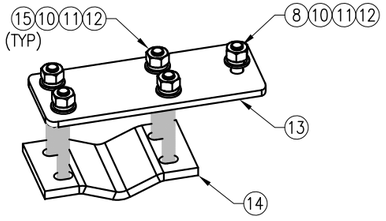
ROUND TOWER LEG ATTACHMENT DETAIL



ANGLE TOWER LEG ATTACHMENT DETAIL



DETAIL "A"



ADAPTER FOR PIPE CONNECTION

1

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

VZWSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-B 35KSI	SFK1-F1	38
2	1	BP825-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BP6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	15	LW-625	5/8" HDG LOCK WASHER	---	0
12	15	NUT-625	5/8" HDG HEX NUT	---	2
13	1	PL375-4511	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	---	BOLT 5/8" X 6" FULL THREAD SAE GR 5	---	0
			GALVANIZED WT		84

1

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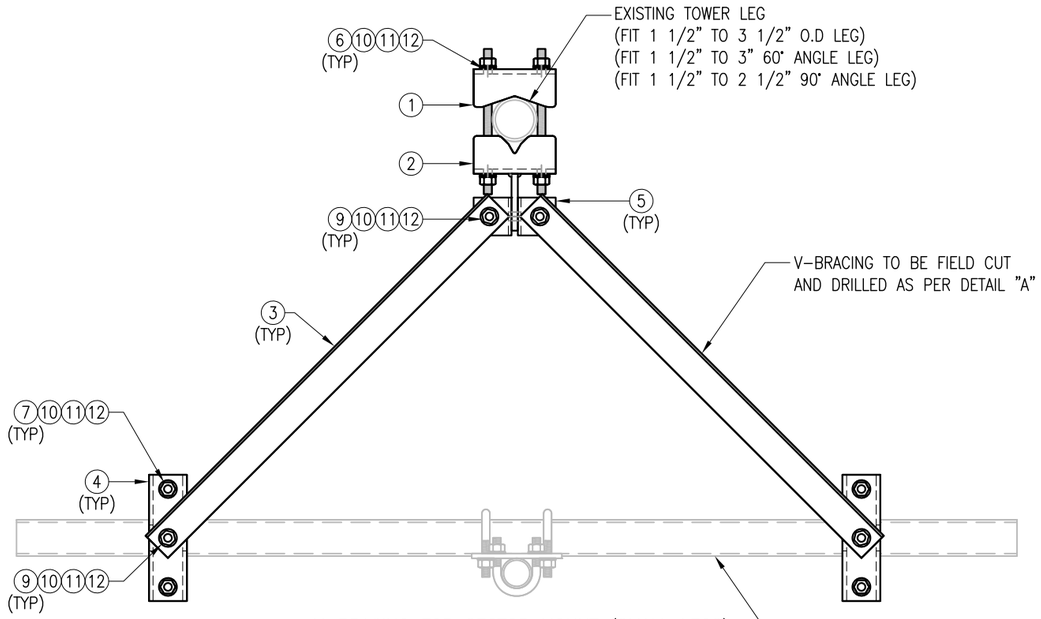
DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

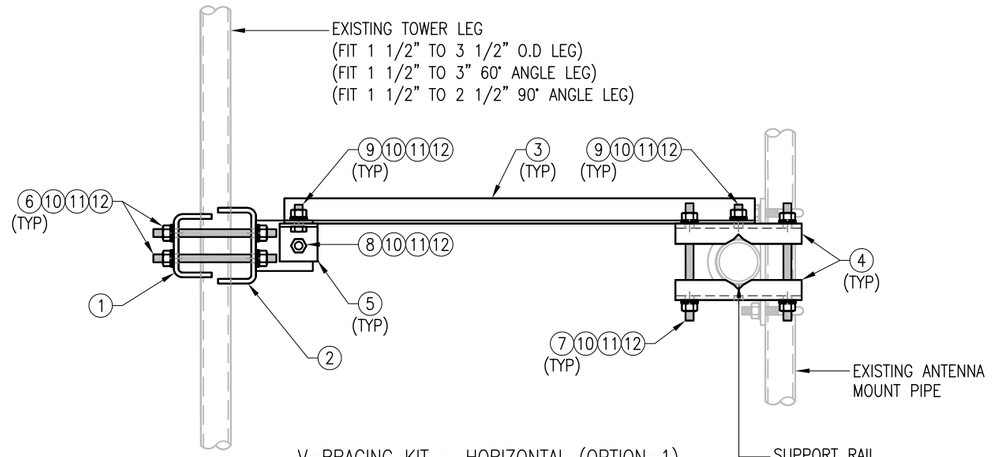
SHEET TITLE:
VZWSMART-SFK1
TIE BACK ASSEMBLY

SHEET NUMBER: VZWSMART-SFK1

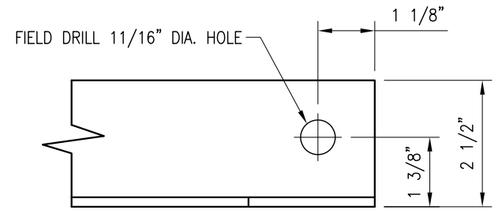
REV #: 1



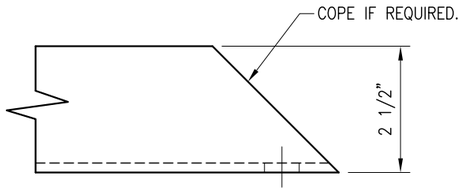
V-BRACING FOR SECTOR MOUNT (SMALL LEGS)
PLAN VIEW



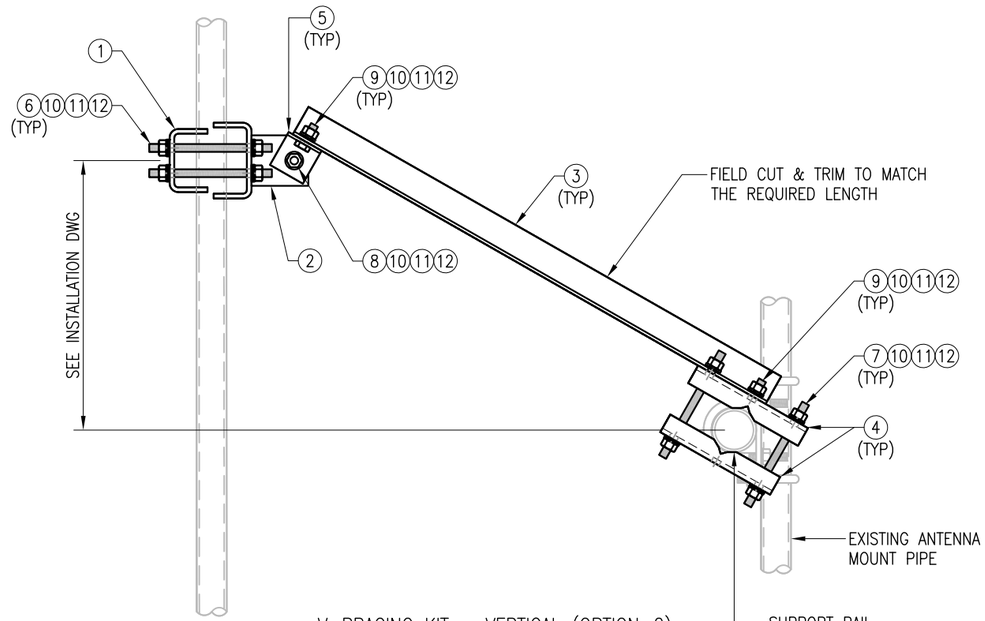
V-BRACING KIT – HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT – VERTICAL (OPTION-2)
SIDE VIEW

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

VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE	VBSM-SL-F1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-F3	11
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	4	---	BOLT 5/8" X 1 3/4" A325	---	--
10	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
11	21	LW-625	5/8" HDG LOCK WASHER	---	0
12	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	117

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DRAWN BY: BT | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:
VZWSMART-SFK3-SL
V-BRACING KIT
FOR SMALL LEGS

SHEET NUMBER: VZWSMART-SFK3-SL

REV #: 0

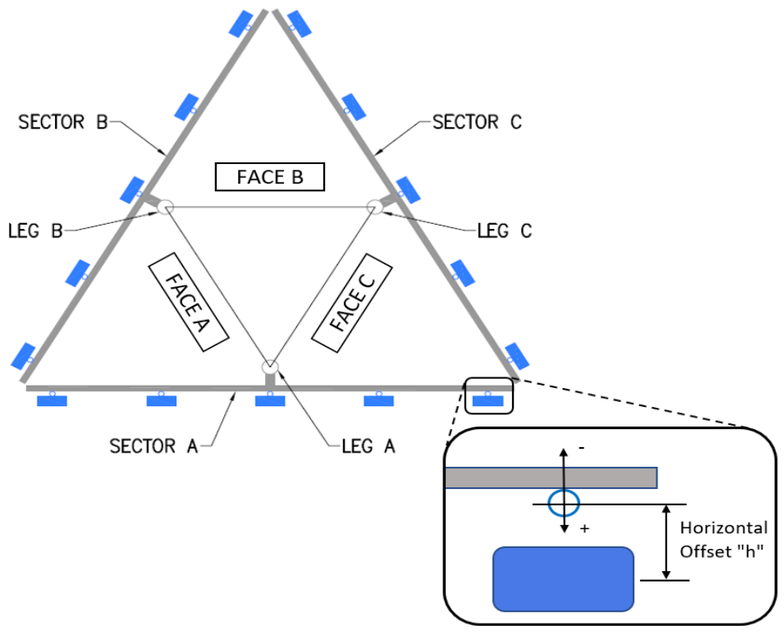
V4.0 Updated on 3-31-2021

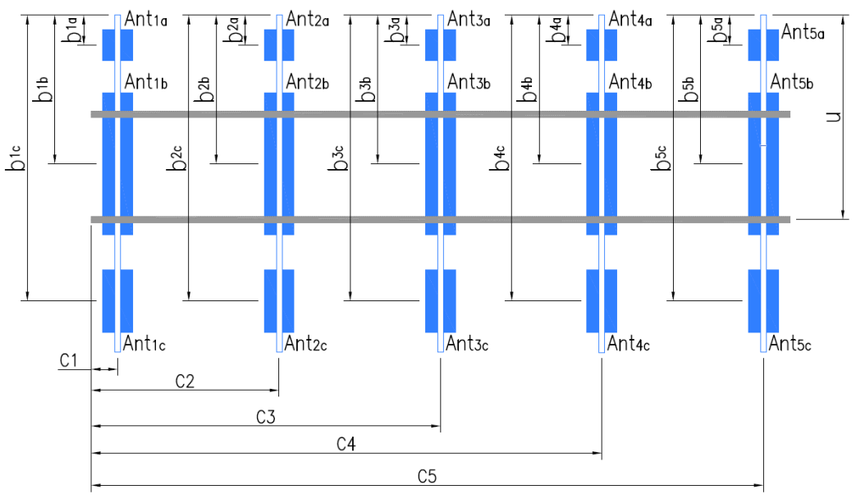
Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1205146

Tower Owner:	OTHER	**Mapping Date:**	6/4/2021
Site Name:	SCOTLAND CT	**Tower Type:**	Self Support
Site Number or ID:	467618	**Tower Height (Ft.):**	240
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	**Mount Elevation (Ft.):**	230.25

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





Antenna Layout (Looking Out From Tower)

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	30.00	Deg	Leg A:	20.00	Deg
Sector B:	155.00	Deg	Leg B:	140.00	Deg
Sector C:	270.00	Deg	Leg C:	260.00	Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	20.00	Deg
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.

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 84" LONG	63.00	3.00	C1	2" STD. PIPE X 84" LONG	63.00	3.00
A2	2" STD. PIPE X 84" LONG	63.00	69.00	C2	2" STD. PIPE X 84" LONG	63.00	69.00
A3	2" STD. PIPE X 84" LONG	63.00	117.00	C3	2" STD. PIPE X 84" LONG	63.00	117.00
A4	2" STD. PIPE X 84" LONG	63.00	147.00	C4	2" STD. PIPE X 84" LONG	63.00	147.00
A5				C5			
A6				C6			
B1	2" STD. PIPE X 84" LONG	63.00	3.00	D1			
B2	2" STD. PIPE X 84" LONG	63.00	69.00	D2			
B3	2" STD. PIPE X 84" LONG	63.00	117.00	D3			
B4	2" STD. PIPE X 84" LONG	63.00	147.00	D4			
B5				D5			
B6				D6			

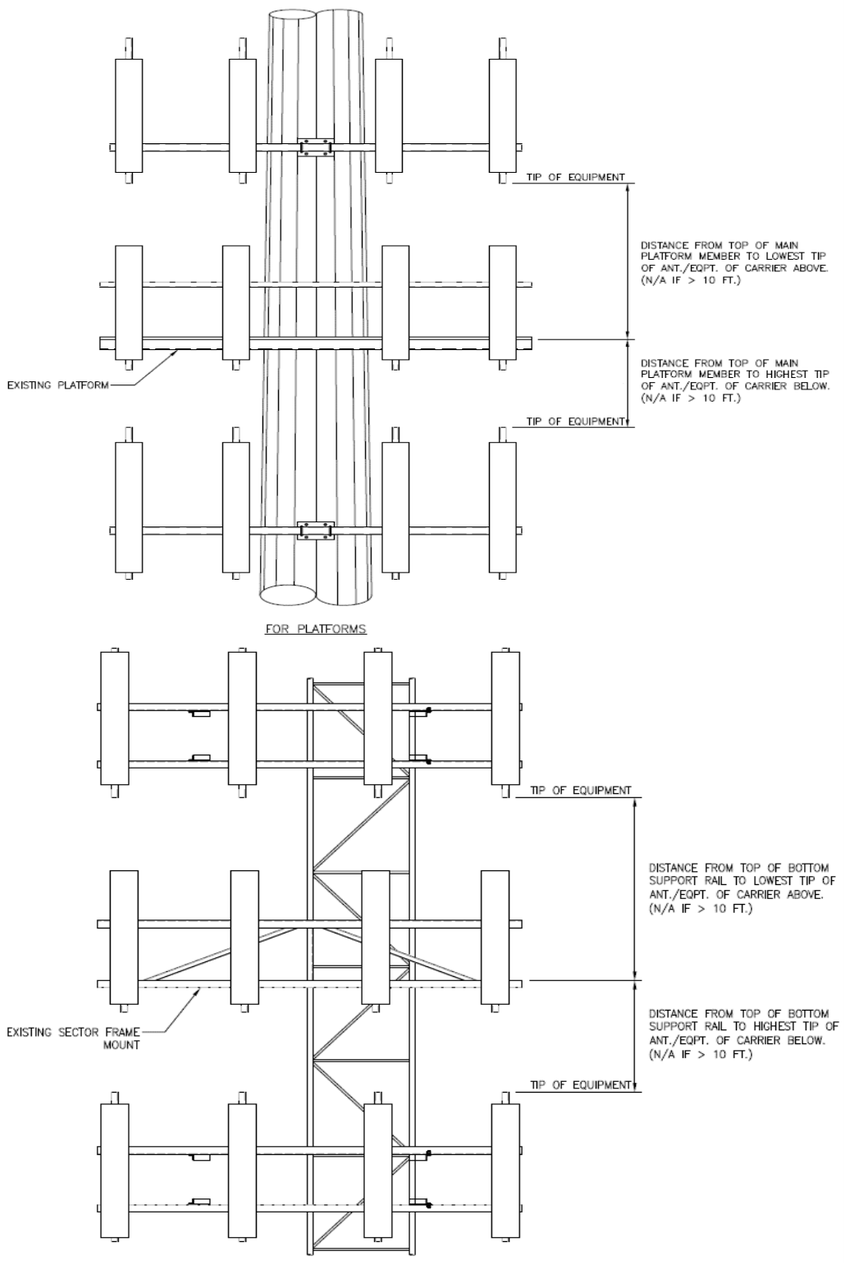
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	18.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	5
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

Please enter additional infomation or comments below.

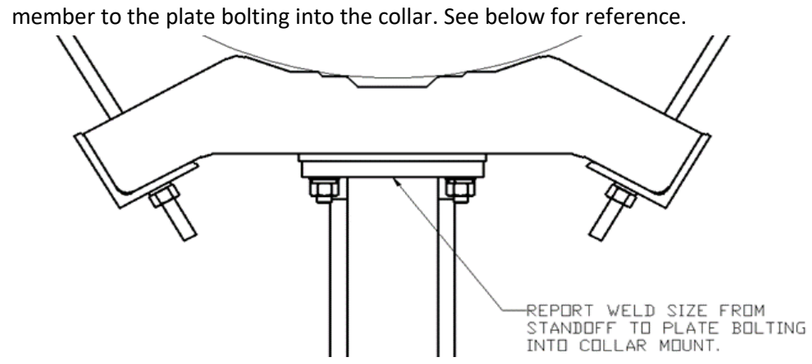
Tower Face Width at Mount Elev. (ft.):	4.46	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	2
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	LPA-80080/6CF	6.00	13.00	70.00		230.333	44.00	14.00	30.00	23, 128
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA-70063-6CF-EDIN-	11.50	5.00	71.00		230.583	41.00	9.00	30.00	23, 129
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	BXA-171085-12BE-ED	6.00	4.00	72.00		230.25	45.00	8.00	30.00	24, 130
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LPA-80080/6CF	6.00	13.00	70.00		230.333	44.00	14.00	30.00	26, 131
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector B										
Ant_{1a}										
Ant_{1b}	LPA-80080/6CF	6.00	13.00	70.00		230.333	44.00	14.00	155.00	31, 132
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA-70063-6CF-EDIN-	11.50	5.00	71.00		230.583	41.00	9.00	155.00	32, 133
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	BXA-171085-12BE-ED	6.00	4.00	72.00		230.25	45.00	8.00	155.00	33, 135
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LPA-80080/6CF	6.00	13.00	70.00		230.333	44.00	14.00	155.00	34, 136
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										

Please insert a photo of the mount centerline measurement here.



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



Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	LPA-80080/6CF	6.00	13.00	70.00		230.333	44.00	14.00	280.00	147, 137
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA-70063-6CF-EDIN-	11.50	5.00	71.00		230.583	41.00	9.00	270.00	147, 138
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	BXA-171085-12BE-ED	6.00	4.00	72.00		230.25	45.00	8.00	270.00	148, 139
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	LPA-80080/6CF	6.00	13.00	70.00		230.333	44.00	14.00	270.00	148, 139
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1		
2		
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System					
If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.					Photo #
Description of Obstruction:					
Type of Light:		Photo #		Additional Comments:	

Lighting Technology:		Photo #		
Elevation (AGL) at base of light (Ft.):		Photo #		
Is a service loop available?		Photo #		
Is beacon installed on an extension?		Photo #		

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

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

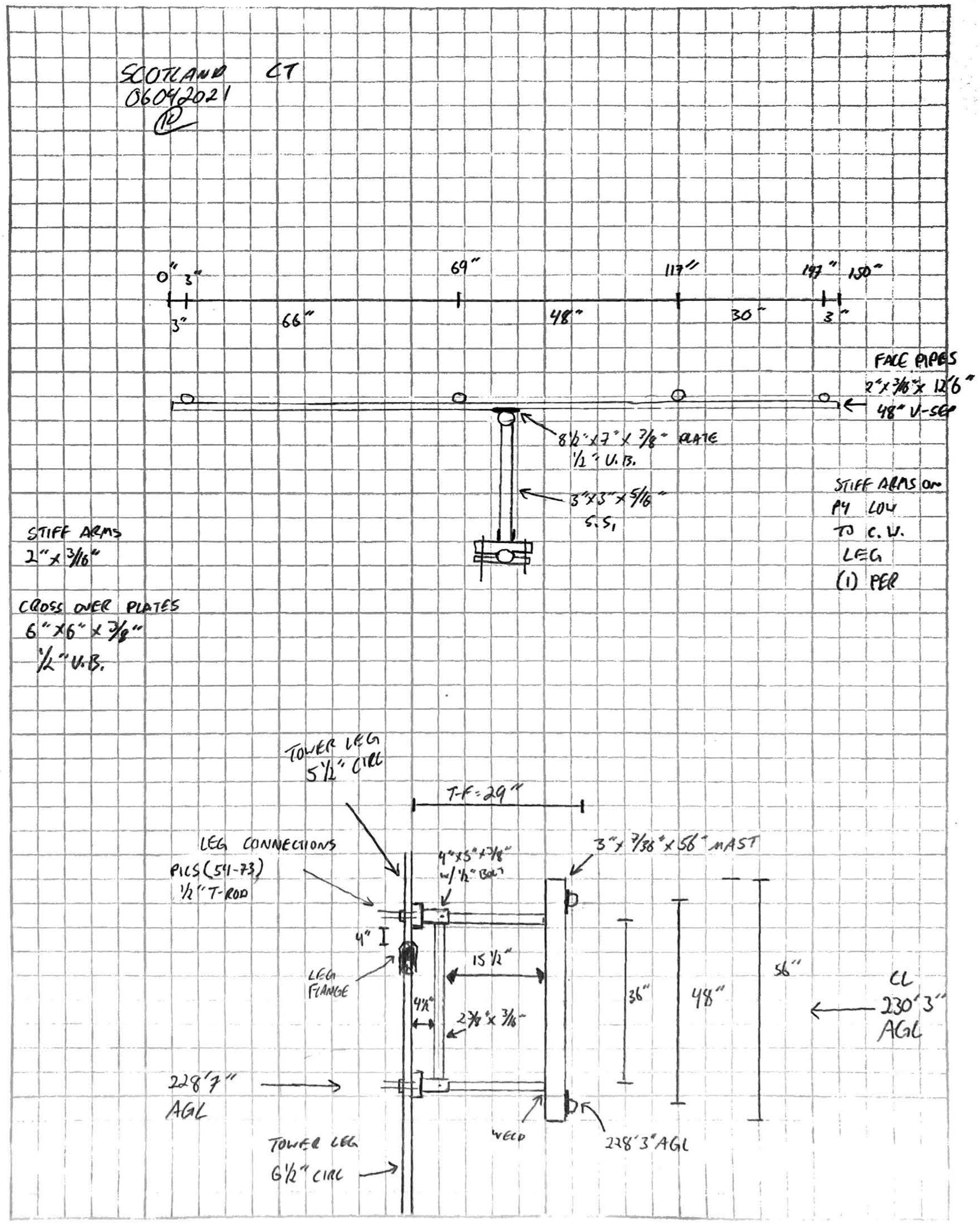
V4.0 Updated on 3-31-2021

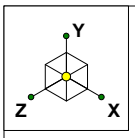
Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1205146

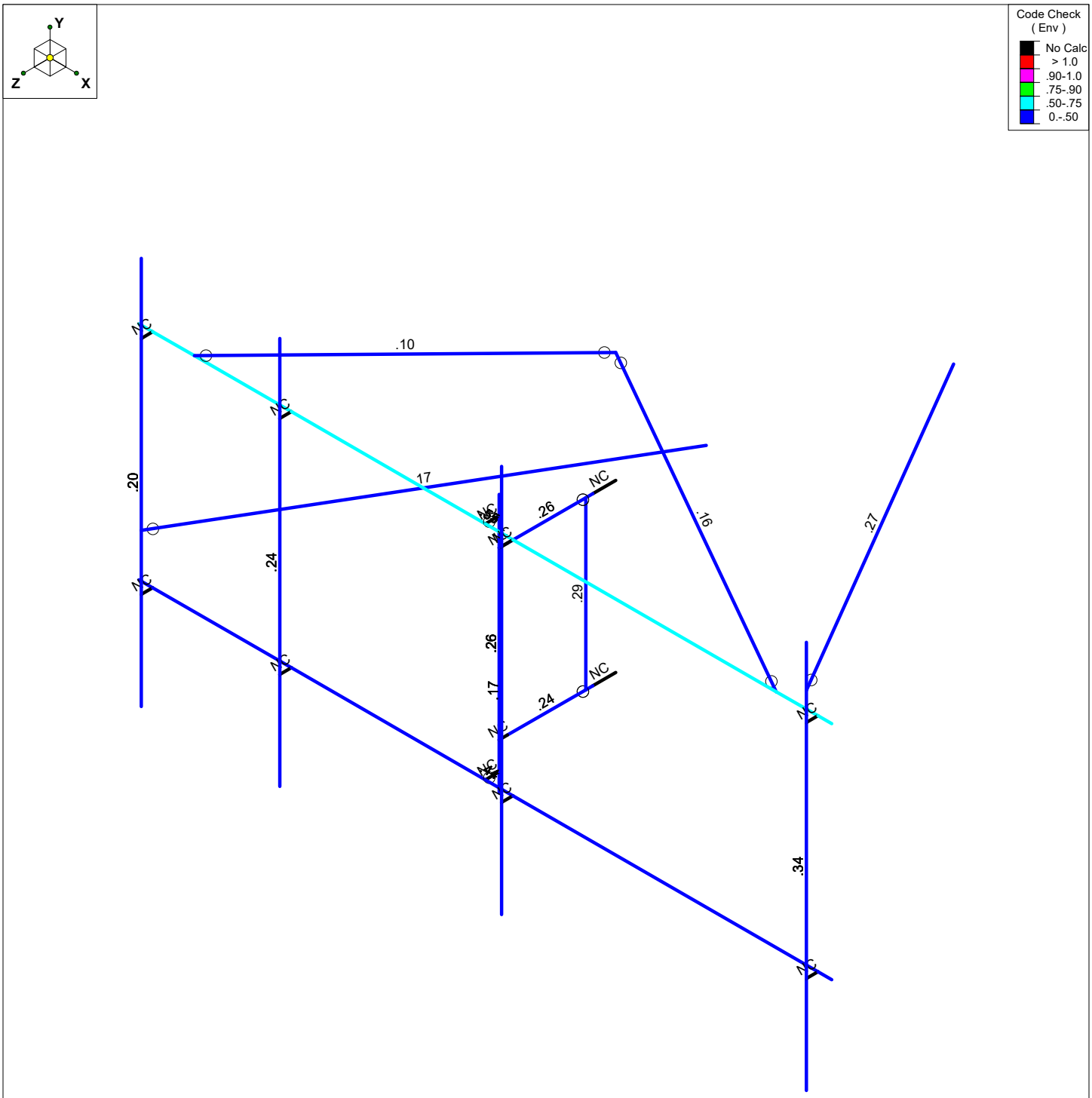
Tower Owner:	OTHER	**Mapping Date:**	6/4/2021
Site Name:	SCOTLAND CT	**Tower Type:**	Self Support
Site Number or ID:	467618	**Tower Height (Ft.):**	240
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	**Mount Elevation (Ft.):**	230.25

Please Insert Sketches of the Antenna Mount



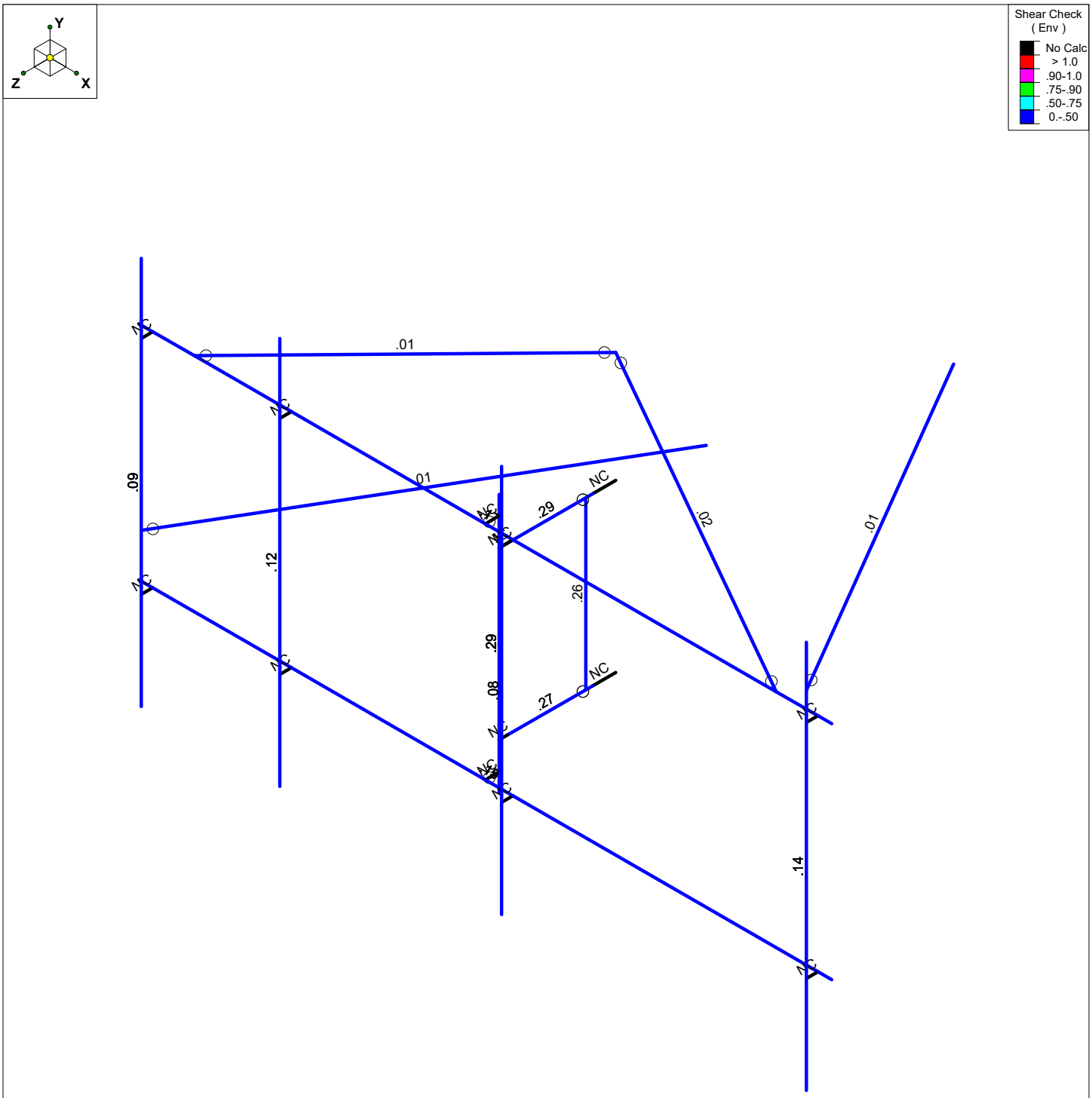


		SK - 1
		Dec 21, 2021 at 9:53 AM
		467618-VZW_MT_LOT_A_H - Mo...



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

		SK - 2
		Dec 21, 2021 at 9:53 AM
		467618-VZW_MT_LOT_A_H - Mo...



Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

		SK - 3
		Dec 21, 2021 at 9:53 AM
		467618-VZW_MT_LOT_A_H - Mo...

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
57	Structure Wi (120 De...	None						28		
58	Structure Wi (150 De...	None						28		
59	Structure Wi (180 De...	None						28		
60	Structure Wi (210 De...	None						28		
61	Structure Wi (240 De...	None						28		
62	Structure Wi (270 De...	None						28		
63	Structure Wi (300 De...	None						28		
64	Structure Wi (330 De...	None						28		
65	Structure Wm (0 Deg)	None						28		
66	Structure Wm (30 De...	None						28		
67	Structure Wm (60 De...	None						28		
68	Structure Wm (90 De...	None						28		
69	Structure Wm (120 D...	None						28		
70	Structure Wm (150 D...	None						28		
71	Structure Wm (180 D...	None						28		
72	Structure Wm (210 D...	None						28		
73	Structure Wm (240 D...	None						28		
74	Structure Wm (270 D...	None						28		
75	Structure Wm (300 D...	None						28		
76	Structure Wm (330 D...	None						28		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					27			
82	Antenna Eh (0 Deg)	None					18			
83	Antenna Eh (90 Deg)	None					18			
84	Structure Ev	ELY		-.04						
85	Structure Eh (0 Deg)	ELZ	-.101							
86	Structure Eh (90 Deg)	ELX			.101					

Load Combinations

	Description	Solve	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	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 D...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 D...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 D...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 ...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 ...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 ...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 ...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 ...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 ...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 ...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 ...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								

Load Combinations (Continued)

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N5	7.333333	2.416667	0	0	
2	N6	-5.166667	2.416667	0	0	
3	N8	7.083333	2.416667	0	0	
4	N23	7.083333	3.666667	0.208333	0	
5	N27	7.083333	-3.333333	0.208333	0	
6	N22A	1.083333	2.75	-.25	0	
7	N23A	1.083333	-1.916667	-.25	0	
8	N24A	7.333333	-1.583333	0	0	
9	N25A	-5.166667	-1.583333	0	0	
10	N26	7.083333	-1.583333	0	0	
11	N29A	7.083333	-1.583333	0.208333	0	
12	N35	1.083333	-1.083333	-.25	0	
13	N37	1.083333	-1.083333	-1.9375	0	
14	N41	1.083333	1.916667	-.25	0	
15	N39	1.083333	1.916667	-1.9375	0	
16	N39A	1.083333	-1.083333	-1.8125	0	
17	N40	1.083333	1.916667	-1.8125	0	
18	N41A	1.083333	-1.083333	-2.354167	0	
19	N42	1.083333	1.916667	-2.354167	0	
20	N25	1.583333	2.416667	0	0	
21	N26A	1.583333	2.416667	0.208333	0	
22	N27A	1.583333	3.666667	0.208333	0	
23	N28	1.583333	-3.333333	0.208333	0	
24	N29	1.583333	-1.583333	0	0	
25	N30	1.583333	-1.583333	0.208333	0	
26	N37B	-2.416667	2.416667	0	0	
27	N38	-2.416667	2.416667	0.208333	0	
28	N39B	-2.416667	3.666667	0.208333	0	
29	N40B	-2.416667	-3.333333	0.208333	0	
30	N41B	-2.416667	-1.583333	0	0	
31	N42A	-2.416667	-1.583333	0.208333	0	
32	N43A	-4.916667	2.416667	0	0	
33	N44	-4.916667	2.416667	0.208333	0	
34	N45	-4.916667	3.666667	0.208333	0	
35	N46	-4.916667	-3.333333	0.208333	0	
36	N47	-4.916667	-1.583333	0	0	
37	N48	-4.916667	-1.583333	0.208333	0	
38	N48A	1.083333	2.416667	0	0	
39	N49A	1.083333	2.416667	-.25	0	
40	N49B	1.083333	-1.583333	0	0	
41	N50	1.083333	-1.583333	-.25	0	
42	N44A	1.083333	-1.083333	-0.395833	0	
43	N45A	1.083333	1.916667	-0.395833	0	
44	N45B	7.083333	2.416667	0.208333	0	
45	N45C	-4.916667	-0.583333	0.208333	0	
46	N46A	-1.146667	-0.583333	-6.21664	0	
47	N47A	-4.166667	2.416667	0	0	
48	N48B	6.333333	2.416667	0	0	
49	N49	1.083333	3.916667	-2.354167	0	
50	N50A	7.083333	2.916667	0.208333	0	
51	N52	3.313333	2.916667	-6.21664	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Standoff Horizontal	HSS3X3X5	Beam	Tube	A500 Gr. B 46	Typical	2.94	3.45	3.45	5.94
4	Mast Pipe	PIPE_3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
5	Tieback	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
6	Standoff Vertical	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
7	P2.5 Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
8	V Bracing	L2.5x2.5x4	Column	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	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(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M2	N6	N5			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
2	MP1A	N23	N27			Mount Pipe	Beam	Pipe	A53 Gr. B	Typical
3	M12	N22A	N23A			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
4	M13	N25A	N24A			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
5	M14	N29A	N26			RIGID	None	None	RIGID	Typical
6	M19	N44A	N37			Standoff Horizontal	Beam	Tube	A500 Gr. ...	Typical
7	M20	N45A	N39			Standoff Horizontal	Beam	Tube	A500 Gr. ...	Typical
8	M21	N39A	N40			Standoff Vertical	Column	Pipe	A53 Gr. B	Typical
9	M22	N39	N42			RIGID	None	None	RIGID	Typical
10	M23	N37	N41A			RIGID	None	None	RIGID	Typical
11	M15	N26A	N25			RIGID	None	None	RIGID	Typical
12	MP2A	N27A	N28			P2.5 Mount Pipe	Column	Pipe	A53 Gr. B	Typical
13	M17	N30	N29			RIGID	None	None	RIGID	Typical
14	M21B	N38	N37B			RIGID	None	None	RIGID	Typical
15	MP3A	N39B	N40B			Mount Pipe	Beam	Pipe	A53 Gr. B	Typical
16	M23A	N42A	N41B			RIGID	None	None	RIGID	Typical
17	M24	N44	N43A			RIGID	None	None	RIGID	Typical
18	MP4A	N45	N46			Mount Pipe	Beam	Pipe	A53 Gr. B	Typical
19	M26	N48	N47			RIGID	None	None	RIGID	Typical
20	M27	N48A	N49A			RIGID	None	None	RIGID	Typical
21	M27A	N49B	N50			RIGID	None	None	RIGID	Typical
22	M24A	N41	N45A			RIGID	None	None	RIGID	Typical
23	M25	N35	N44A			RIGID	None	None	RIGID	Typical
24	M24B	N45B	N8			RIGID	None	None	RIGID	Typical
25	M25A	N45C	N46A			Tieback	Beam	Pipe	A53 Gr. B	Typical
26	M26A	N47A	N49			V Bracing	Column	Single Angle	A36 Gr.36	Typical
27	M27B	N48B	N49		270	V Bracing	Column	Single Angle	A36 Gr.36	Typical
28	M28	N50A	N52			Tieback	Beam	Pipe	A53 Gr. B	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rati...A...		Inactive	Seismic ...
1	M2						Yes	Default			None
2	MP1A						Yes				None
3	M12						Yes	** NA **			None
4	M13						Yes				None
5	M14						Yes	** NA **			None
6	M19		OOOOOO				Yes	Default			None
7	M20		OOOOOO				Yes	Default			None
8	M21						Yes	** NA **			None
9	M22						Yes	** NA **			None
10	M23						Yes	** NA **			None
11	M15						Yes	** NA **			None
12	MP2A						Yes	** NA **			None
13	M17						Yes	** NA **			None
14	M21B						Yes	** NA **			None
15	MP3A						Yes				None
16	M23A						Yes	** NA **			None
17	M24						Yes	** NA **			None
18	MP4A						Yes				None
19	M26						Yes	** NA **			None
20	M27		OOOOOO				Yes	** NA **			None
21	M27A		OOOOOO				Yes	** NA **			None
22	M24A						Yes	** NA **			None
23	M25						Yes	** NA **			None
24	M24B						Yes	** NA **			None
25	M25A	OOOOXO					Yes	Default			None
26	M26A	BenPIN	BenPIN				Yes	** NA **			None
27	M27B	BenPIN	BenPIN				Yes	** NA **			None
28	M28	OOOOXO					Yes	Default			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-23	.75
2	MP2A	My	-.011	.75
3	MP2A	Mz	.017	.75
4	MP2A	Y	-23	5.75
5	MP2A	My	-.011	5.75
6	MP2A	Mz	.017	5.75
7	MP2A	Y	-23	.75
8	MP2A	My	-.011	.75
9	MP2A	Mz	-.017	.75
10	MP2A	Y	-23	5.75
11	MP2A	My	-.011	5.75
12	MP2A	Mz	-.017	5.75
13	MP3A	Y	-43.55	2.25
14	MP3A	My	-.022	2.25
15	MP3A	Mz	0	2.25
16	MP3A	Y	-43.55	4.25
17	MP3A	My	-.022	4.25
18	MP3A	Mz	0	4.25
19	M21	Y	-32	1.5
20	M21	My	0	1.5
21	M21	Mz	0	1.5
22	MP2A	Y	-74.7	3.25
23	MP2A	My	.037	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
24	MP2A	Mz	0	3.25
25	MP1A	Y	-70.3	3.25
26	MP1A	My	.035	3.25
27	MP1A	Mz	0	3.25

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-87.148	.75
2	MP2A	My	-.044	.75
3	MP2A	Mz	.063	.75
4	MP2A	Y	-87.148	5.75
5	MP2A	My	-.044	5.75
6	MP2A	Mz	.063	5.75
7	MP2A	Y	-87.148	.75
8	MP2A	My	-.044	.75
9	MP2A	Mz	-.063	.75
10	MP2A	Y	-87.148	5.75
11	MP2A	My	-.044	5.75
12	MP2A	Mz	-.063	5.75
13	MP3A	Y	-37.697	2.25
14	MP3A	My	-.019	2.25
15	MP3A	Mz	0	2.25
16	MP3A	Y	-37.697	4.25
17	MP3A	My	-.019	4.25
18	MP3A	Mz	0	4.25
19	M21	Y	-92.966	1.5
20	M21	My	0	1.5
21	M21	Mz	0	1.5
22	MP2A	Y	-47.567	3.25
23	MP2A	My	.024	3.25
24	MP2A	Mz	0	3.25
25	MP1A	Y	-45.307	3.25
26	MP1A	My	.023	3.25
27	MP1A	Mz	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-239.275	.75
3	MP2A	Mx	-.173	.75
4	MP2A	X	0	5.75
5	MP2A	Z	-239.275	5.75
6	MP2A	Mx	-.173	5.75
7	MP2A	X	0	.75
8	MP2A	Z	-239.275	.75
9	MP2A	Mx	.173	.75
10	MP2A	X	0	5.75
11	MP2A	Z	-239.275	5.75
12	MP2A	Mx	.173	5.75
13	MP3A	X	0	2.25
14	MP3A	Z	-113.941	2.25
15	MP3A	Mx	0	2.25
16	MP3A	X	0	4.25
17	MP3A	Z	-113.941	4.25
18	MP3A	Mx	0	4.25
19	M21	X	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	M21	Z	-185.184	1.5
21	M21	Mx	0	1.5
22	MP2A	X	0	3.25
23	MP2A	Z	-90.668	3.25
24	MP2A	Mx	0	3.25
25	MP1A	X	0	3.25
26	MP1A	Z	-90.668	3.25
27	MP1A	Mx	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	111.965	.75
2	MP2A	Z	-193.928	.75
3	MP2A	Mx	-.197	.75
4	MP2A	X	111.965	5.75
5	MP2A	Z	-193.928	5.75
6	MP2A	Mx	-.197	5.75
7	MP2A	X	111.965	.75
8	MP2A	Z	-193.928	.75
9	MP2A	Mx	.085	.75
10	MP2A	X	111.965	5.75
11	MP2A	Z	-193.928	5.75
12	MP2A	Mx	.085	5.75
13	MP3A	X	48.304	2.25
14	MP3A	Z	-83.664	2.25
15	MP3A	Mx	-.024	2.25
16	MP3A	X	48.304	4.25
17	MP3A	Z	-83.664	4.25
18	MP3A	Mx	-.024	4.25
19	M21	X	80.925	1.5
20	M21	Z	-140.166	1.5
21	M21	Mx	0	1.5
22	MP2A	X	41.576	3.25
23	MP2A	Z	-72.012	3.25
24	MP2A	Mx	.021	3.25
25	MP1A	X	40.894	3.25
26	MP1A	Z	-70.831	3.25
27	MP1A	Mx	.02	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	167.349	.75
2	MP2A	Z	-96.619	.75
3	MP2A	Mx	-.154	.75
4	MP2A	X	167.349	5.75
5	MP2A	Z	-96.619	5.75
6	MP2A	Mx	-.154	5.75
7	MP2A	X	167.349	.75
8	MP2A	Z	-96.619	.75
9	MP2A	Mx	-.014	.75
10	MP2A	X	167.349	5.75
11	MP2A	Z	-96.619	5.75
12	MP2A	Mx	-.014	5.75
13	MP3A	X	53.642	2.25
14	MP3A	Z	-30.97	2.25
15	MP3A	Mx	-.027	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP3A	X	53.642	4.25
17	MP3A	Z	-30.97	4.25
18	MP3A	Mx	-.027	4.25
19	M21	X	130.063	1.5
20	M21	Z	-75.092	1.5
21	M21	Mx	0	1.5
22	MP2A	X	58.995	3.25
23	MP2A	Z	-34.061	3.25
24	MP2A	Mx	.029	3.25
25	MP1A	X	55.452	3.25
26	MP1A	Z	-32.015	3.25
27	MP1A	Mx	.028	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	177.892	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.089	.75
4	MP2A	X	177.892	5.75
5	MP2A	Z	0	5.75
6	MP2A	Mx	-.089	5.75
7	MP2A	X	177.892	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.089	.75
10	MP2A	X	177.892	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	-.089	5.75
13	MP3A	X	44.608	2.25
14	MP3A	Z	0	2.25
15	MP3A	Mx	-.022	2.25
16	MP3A	X	44.608	4.25
17	MP3A	Z	0	4.25
18	MP3A	Mx	-.022	4.25
19	M21	X	161.85	1.5
20	M21	Z	0	1.5
21	M21	Mx	0	1.5
22	MP2A	X	60.607	3.25
23	MP2A	Z	0	3.25
24	MP2A	Mx	.03	3.25
25	MP1A	X	55.152	3.25
26	MP1A	Z	0	3.25
27	MP1A	Mx	.028	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	167.349	.75
2	MP2A	Z	96.619	.75
3	MP2A	Mx	-.014	.75
4	MP2A	X	167.349	5.75
5	MP2A	Z	96.619	5.75
6	MP2A	Mx	-.014	5.75
7	MP2A	X	167.349	.75
8	MP2A	Z	96.619	.75
9	MP2A	Mx	-.154	.75
10	MP2A	X	167.349	5.75
11	MP2A	Z	96.619	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
12	MP2A	Mx	-.154	5.75
13	MP3A	X	53.642	2.25
14	MP3A	Z	30.97	2.25
15	MP3A	Mx	-.027	2.25
16	MP3A	X	53.642	4.25
17	MP3A	Z	30.97	4.25
18	MP3A	Mx	-.027	4.25
19	M21	X	160.374	1.5
20	M21	Z	92.592	1.5
21	M21	Mx	0	1.5
22	MP2A	X	58.995	3.25
23	MP2A	Z	34.061	3.25
24	MP2A	Mx	.029	3.25
25	MP1A	X	55.452	3.25
26	MP1A	Z	32.015	3.25
27	MP1A	Mx	.028	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	111.965	.75
2	MP2A	Z	193.928	.75
3	MP2A	Mx	.085	.75
4	MP2A	X	111.965	5.75
5	MP2A	Z	193.928	5.75
6	MP2A	Mx	.085	5.75
7	MP2A	X	111.965	.75
8	MP2A	Z	193.928	.75
9	MP2A	Mx	-.197	.75
10	MP2A	X	111.965	5.75
11	MP2A	Z	193.928	5.75
12	MP2A	Mx	-.197	5.75
13	MP3A	X	48.304	2.25
14	MP3A	Z	83.664	2.25
15	MP3A	Mx	-.024	2.25
16	MP3A	X	48.304	4.25
17	MP3A	Z	83.664	4.25
18	MP3A	Mx	-.024	4.25
19	M21	X	98.425	1.5
20	M21	Z	170.478	1.5
21	M21	Mx	0	1.5
22	MP2A	X	41.576	3.25
23	MP2A	Z	72.012	3.25
24	MP2A	Mx	.021	3.25
25	MP1A	X	40.894	3.25
26	MP1A	Z	70.831	3.25
27	MP1A	Mx	.02	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	239.275	.75
3	MP2A	Mx	.173	.75
4	MP2A	X	0	5.75
5	MP2A	Z	239.275	5.75
6	MP2A	Mx	.173	5.75
7	MP2A	X	0	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
8	MP2A	Z	239.275	.75
9	MP2A	Mx	-.173	.75
10	MP2A	X	0	5.75
11	MP2A	Z	239.275	5.75
12	MP2A	Mx	-.173	5.75
13	MP3A	X	0	2.25
14	MP3A	Z	113.941	2.25
15	MP3A	Mx	0	2.25
16	MP3A	X	0	4.25
17	MP3A	Z	113.941	4.25
18	MP3A	Mx	0	4.25
19	M21	X	0	1.5
20	M21	Z	185.184	1.5
21	M21	Mx	0	1.5
22	MP2A	X	0	3.25
23	MP2A	Z	90.668	3.25
24	MP2A	Mx	0	3.25
25	MP1A	X	0	3.25
26	MP1A	Z	90.668	3.25
27	MP1A	Mx	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-111.965	.75
2	MP2A	Z	193.928	.75
3	MP2A	Mx	.197	.75
4	MP2A	X	-111.965	5.75
5	MP2A	Z	193.928	5.75
6	MP2A	Mx	.197	5.75
7	MP2A	X	-111.965	.75
8	MP2A	Z	193.928	.75
9	MP2A	Mx	-.085	.75
10	MP2A	X	-111.965	5.75
11	MP2A	Z	193.928	5.75
12	MP2A	Mx	-.085	5.75
13	MP3A	X	-48.304	2.25
14	MP3A	Z	83.664	2.25
15	MP3A	Mx	.024	2.25
16	MP3A	X	-48.304	4.25
17	MP3A	Z	83.664	4.25
18	MP3A	Mx	.024	4.25
19	M21	X	-80.925	1.5
20	M21	Z	140.166	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-41.576	3.25
23	MP2A	Z	72.012	3.25
24	MP2A	Mx	-.021	3.25
25	MP1A	X	-40.894	3.25
26	MP1A	Z	70.831	3.25
27	MP1A	Mx	-.02	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-167.349	.75
2	MP2A	Z	96.619	.75
3	MP2A	Mx	.154	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP2A	X	-167.349	5.75
5	MP2A	Z	96.619	5.75
6	MP2A	Mx	.154	5.75
7	MP2A	X	-167.349	.75
8	MP2A	Z	96.619	.75
9	MP2A	Mx	.014	.75
10	MP2A	X	-167.349	5.75
11	MP2A	Z	96.619	5.75
12	MP2A	Mx	.014	5.75
13	MP3A	X	-53.642	2.25
14	MP3A	Z	30.97	2.25
15	MP3A	Mx	.027	2.25
16	MP3A	X	-53.642	4.25
17	MP3A	Z	30.97	4.25
18	MP3A	Mx	.027	4.25
19	M21	X	-130.063	1.5
20	M21	Z	75.092	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-58.995	3.25
23	MP2A	Z	34.061	3.25
24	MP2A	Mx	-.029	3.25
25	MP1A	X	-55.452	3.25
26	MP1A	Z	32.015	3.25
27	MP1A	Mx	-.028	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-177.892	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.089	.75
4	MP2A	X	-177.892	5.75
5	MP2A	Z	0	5.75
6	MP2A	Mx	.089	5.75
7	MP2A	X	-177.892	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.089	.75
10	MP2A	X	-177.892	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	.089	5.75
13	MP3A	X	-44.608	2.25
14	MP3A	Z	0	2.25
15	MP3A	Mx	.022	2.25
16	MP3A	X	-44.608	4.25
17	MP3A	Z	0	4.25
18	MP3A	Mx	.022	4.25
19	M21	X	-161.85	1.5
20	M21	Z	0	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-60.607	3.25
23	MP2A	Z	0	3.25
24	MP2A	Mx	-.03	3.25
25	MP1A	X	-55.152	3.25
26	MP1A	Z	0	3.25
27	MP1A	Mx	-.028	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-167.349	.75
2	MP2A	Z	-96.619	.75
3	MP2A	Mx	.014	.75
4	MP2A	X	-167.349	5.75
5	MP2A	Z	-96.619	5.75
6	MP2A	Mx	.014	5.75
7	MP2A	X	-167.349	.75
8	MP2A	Z	-96.619	.75
9	MP2A	Mx	.154	.75
10	MP2A	X	-167.349	5.75
11	MP2A	Z	-96.619	5.75
12	MP2A	Mx	.154	5.75
13	MP3A	X	-53.642	2.25
14	MP3A	Z	-30.97	2.25
15	MP3A	Mx	.027	2.25
16	MP3A	X	-53.642	4.25
17	MP3A	Z	-30.97	4.25
18	MP3A	Mx	.027	4.25
19	M21	X	-160.374	1.5
20	M21	Z	-92.592	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-58.995	3.25
23	MP2A	Z	-34.061	3.25
24	MP2A	Mx	-.029	3.25
25	MP1A	X	-55.452	3.25
26	MP1A	Z	-32.015	3.25
27	MP1A	Mx	-.028	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-111.965	.75
2	MP2A	Z	-193.928	.75
3	MP2A	Mx	-.085	.75
4	MP2A	X	-111.965	5.75
5	MP2A	Z	-193.928	5.75
6	MP2A	Mx	-.085	5.75
7	MP2A	X	-111.965	.75
8	MP2A	Z	-193.928	.75
9	MP2A	Mx	.197	.75
10	MP2A	X	-111.965	5.75
11	MP2A	Z	-193.928	5.75
12	MP2A	Mx	.197	5.75
13	MP3A	X	-48.304	2.25
14	MP3A	Z	-83.664	2.25
15	MP3A	Mx	.024	2.25
16	MP3A	X	-48.304	4.25
17	MP3A	Z	-83.664	4.25
18	MP3A	Mx	.024	4.25
19	M21	X	-98.425	1.5
20	M21	Z	-170.478	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-41.576	3.25
23	MP2A	Z	-72.012	3.25
24	MP2A	Mx	-.021	3.25
25	MP1A	X	-40.894	3.25
26	MP1A	Z	-70.831	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP1A	Mx	-.02	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-44.023	.75
3	MP2A	Mx	-.032	.75
4	MP2A	X	0	5.75
5	MP2A	Z	-44.023	5.75
6	MP2A	Mx	-.032	5.75
7	MP2A	X	0	.75
8	MP2A	Z	-44.023	.75
9	MP2A	Mx	.032	.75
10	MP2A	X	0	5.75
11	MP2A	Z	-44.023	5.75
12	MP2A	Mx	.032	5.75
13	MP3A	X	0	2.25
14	MP3A	Z	-21.754	2.25
15	MP3A	Mx	0	2.25
16	MP3A	X	0	4.25
17	MP3A	Z	-21.754	4.25
18	MP3A	Mx	0	4.25
19	M21	X	0	1.5
20	M21	Z	-35.644	1.5
21	M21	Mx	0	1.5
22	MP2A	X	0	3.25
23	MP2A	Z	-18.388	3.25
24	MP2A	Mx	0	3.25
25	MP1A	X	0	3.25
26	MP1A	Z	-18.388	3.25
27	MP1A	Mx	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	20.675	.75
2	MP2A	Z	-35.811	.75
3	MP2A	Mx	-.036	.75
4	MP2A	X	20.675	5.75
5	MP2A	Z	-35.811	5.75
6	MP2A	Mx	-.036	5.75
7	MP2A	X	20.675	.75
8	MP2A	Z	-35.811	.75
9	MP2A	Mx	.016	.75
10	MP2A	X	20.675	5.75
11	MP2A	Z	-35.811	5.75
12	MP2A	Mx	.016	5.75
13	MP3A	X	9.321	2.25
14	MP3A	Z	-16.145	2.25
15	MP3A	Mx	-.005	2.25
16	MP3A	X	9.321	4.25
17	MP3A	Z	-16.145	4.25
18	MP3A	Mx	-.005	4.25
19	M21	X	15.776	1.5
20	M21	Z	-27.325	1.5
21	M21	Mx	0	1.5
22	MP2A	X	8.497	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	-14.718	3.25
24	MP2A	Mx	.004	3.25
25	MP1A	X	8.372	3.25
26	MP1A	Z	-14.501	3.25
27	MP1A	Mx	.004	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	31.183	.75
2	MP2A	Z	-18.004	.75
3	MP2A	Mx	-.029	.75
4	MP2A	X	31.183	5.75
5	MP2A	Z	-18.004	5.75
6	MP2A	Mx	-.029	5.75
7	MP2A	X	31.183	.75
8	MP2A	Z	-18.004	.75
9	MP2A	Mx	-.003	.75
10	MP2A	X	31.183	5.75
11	MP2A	Z	-18.004	5.75
12	MP2A	Mx	-.003	5.75
13	MP3A	X	10.755	2.25
14	MP3A	Z	-6.21	2.25
15	MP3A	Mx	-.005	2.25
16	MP3A	X	10.755	4.25
17	MP3A	Z	-6.21	4.25
18	MP3A	Mx	-.005	4.25
19	M21	X	25.554	1.5
20	M21	Z	-14.753	1.5
21	M21	Mx	0	1.5
22	MP2A	X	12.306	3.25
23	MP2A	Z	-7.105	3.25
24	MP2A	Mx	.006	3.25
25	MP1A	X	11.655	3.25
26	MP1A	Z	-6.729	3.25
27	MP1A	Mx	.006	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	33.335	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.017	.75
4	MP2A	X	33.335	5.75
5	MP2A	Z	0	5.75
6	MP2A	Mx	-.017	5.75
7	MP2A	X	33.335	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.017	.75
10	MP2A	X	33.335	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	-.017	5.75
13	MP3A	X	9.308	2.25
14	MP3A	Z	0	2.25
15	MP3A	Mx	-.005	2.25
16	MP3A	X	9.308	4.25
17	MP3A	Z	0	4.25
18	MP3A	Mx	-.005	4.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	M21	X	31.552	1.5
20	M21	Z	0	1.5
21	M21	Mx	0	1.5
22	MP2A	X	12.817	3.25
23	MP2A	Z	0	3.25
24	MP2A	Mx	.006	3.25
25	MP1A	X	11.814	3.25
26	MP1A	Z	0	3.25
27	MP1A	Mx	.006	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	31.183	.75
2	MP2A	Z	18.004	.75
3	MP2A	Mx	-.003	.75
4	MP2A	X	31.183	5.75
5	MP2A	Z	18.004	5.75
6	MP2A	Mx	-.003	5.75
7	MP2A	X	31.183	.75
8	MP2A	Z	18.004	.75
9	MP2A	Mx	-.029	.75
10	MP2A	X	31.183	5.75
11	MP2A	Z	18.004	5.75
12	MP2A	Mx	-.029	5.75
13	MP3A	X	10.755	2.25
14	MP3A	Z	6.21	2.25
15	MP3A	Mx	-.005	2.25
16	MP3A	X	10.755	4.25
17	MP3A	Z	6.21	4.25
18	MP3A	Mx	-.005	4.25
19	M21	X	30.869	1.5
20	M21	Z	17.822	1.5
21	M21	Mx	0	1.5
22	MP2A	X	12.306	3.25
23	MP2A	Z	7.105	3.25
24	MP2A	Mx	.006	3.25
25	MP1A	X	11.655	3.25
26	MP1A	Z	6.729	3.25
27	MP1A	Mx	.006	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	20.675	.75
2	MP2A	Z	35.811	.75
3	MP2A	Mx	.016	.75
4	MP2A	X	20.675	5.75
5	MP2A	Z	35.811	5.75
6	MP2A	Mx	.016	5.75
7	MP2A	X	20.675	.75
8	MP2A	Z	35.811	.75
9	MP2A	Mx	-.036	.75
10	MP2A	X	20.675	5.75
11	MP2A	Z	35.811	5.75
12	MP2A	Mx	-.036	5.75
13	MP3A	X	9.321	2.25
14	MP3A	Z	16.145	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	-.005	2.25
16	MP3A	X	9.321	4.25
17	MP3A	Z	16.145	4.25
18	MP3A	Mx	-.005	4.25
19	M21	X	18.845	1.5
20	M21	Z	32.64	1.5
21	M21	Mx	0	1.5
22	MP2A	X	8.497	3.25
23	MP2A	Z	14.718	3.25
24	MP2A	Mx	.004	3.25
25	MP1A	X	8.372	3.25
26	MP1A	Z	14.501	3.25
27	MP1A	Mx	.004	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	44.023	.75
3	MP2A	Mx	.032	.75
4	MP2A	X	0	5.75
5	MP2A	Z	44.023	5.75
6	MP2A	Mx	.032	5.75
7	MP2A	X	0	.75
8	MP2A	Z	44.023	.75
9	MP2A	Mx	-.032	.75
10	MP2A	X	0	5.75
11	MP2A	Z	44.023	5.75
12	MP2A	Mx	-.032	5.75
13	MP3A	X	0	2.25
14	MP3A	Z	21.754	2.25
15	MP3A	Mx	0	2.25
16	MP3A	X	0	4.25
17	MP3A	Z	21.754	4.25
18	MP3A	Mx	0	4.25
19	M21	X	0	1.5
20	M21	Z	35.644	1.5
21	M21	Mx	0	1.5
22	MP2A	X	0	3.25
23	MP2A	Z	18.388	3.25
24	MP2A	Mx	0	3.25
25	MP1A	X	0	3.25
26	MP1A	Z	18.388	3.25
27	MP1A	Mx	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-20.675	.75
2	MP2A	Z	35.811	.75
3	MP2A	Mx	.036	.75
4	MP2A	X	-20.675	5.75
5	MP2A	Z	35.811	5.75
6	MP2A	Mx	.036	5.75
7	MP2A	X	-20.675	.75
8	MP2A	Z	35.811	.75
9	MP2A	Mx	-.016	.75
10	MP2A	X	-20.675	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2A	Z	35.811	5.75
12	MP2A	Mx	-.016	5.75
13	MP3A	X	-9.321	2.25
14	MP3A	Z	16.145	2.25
15	MP3A	Mx	.005	2.25
16	MP3A	X	-9.321	4.25
17	MP3A	Z	16.145	4.25
18	MP3A	Mx	.005	4.25
19	M21	X	-15.776	1.5
20	M21	Z	27.325	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-8.497	3.25
23	MP2A	Z	14.718	3.25
24	MP2A	Mx	-.004	3.25
25	MP1A	X	-8.372	3.25
26	MP1A	Z	14.501	3.25
27	MP1A	Mx	-.004	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-31.183	.75
2	MP2A	Z	18.004	.75
3	MP2A	Mx	.029	.75
4	MP2A	X	-31.183	5.75
5	MP2A	Z	18.004	5.75
6	MP2A	Mx	.029	5.75
7	MP2A	X	-31.183	.75
8	MP2A	Z	18.004	.75
9	MP2A	Mx	.003	.75
10	MP2A	X	-31.183	5.75
11	MP2A	Z	18.004	5.75
12	MP2A	Mx	.003	5.75
13	MP3A	X	-10.755	2.25
14	MP3A	Z	6.21	2.25
15	MP3A	Mx	.005	2.25
16	MP3A	X	-10.755	4.25
17	MP3A	Z	6.21	4.25
18	MP3A	Mx	.005	4.25
19	M21	X	-25.554	1.5
20	M21	Z	14.753	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-12.306	3.25
23	MP2A	Z	7.105	3.25
24	MP2A	Mx	-.006	3.25
25	MP1A	X	-11.655	3.25
26	MP1A	Z	6.729	3.25
27	MP1A	Mx	-.006	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-33.335	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.017	.75
4	MP2A	X	-33.335	5.75
5	MP2A	Z	0	5.75
6	MP2A	Mx	.017	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP2A	X	-33.335	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.017	.75
10	MP2A	X	-33.335	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	.017	5.75
13	MP3A	X	-9.308	2.25
14	MP3A	Z	0	2.25
15	MP3A	Mx	.005	2.25
16	MP3A	X	-9.308	4.25
17	MP3A	Z	0	4.25
18	MP3A	Mx	.005	4.25
19	M21	X	-31.552	1.5
20	M21	Z	0	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-12.817	3.25
23	MP2A	Z	0	3.25
24	MP2A	Mx	-.006	3.25
25	MP1A	X	-11.814	3.25
26	MP1A	Z	0	3.25
27	MP1A	Mx	-.006	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-31.183	.75
2	MP2A	Z	-18.004	.75
3	MP2A	Mx	.003	.75
4	MP2A	X	-31.183	5.75
5	MP2A	Z	-18.004	5.75
6	MP2A	Mx	.003	5.75
7	MP2A	X	-31.183	.75
8	MP2A	Z	-18.004	.75
9	MP2A	Mx	.029	.75
10	MP2A	X	-31.183	5.75
11	MP2A	Z	-18.004	5.75
12	MP2A	Mx	.029	5.75
13	MP3A	X	-10.755	2.25
14	MP3A	Z	-6.21	2.25
15	MP3A	Mx	.005	2.25
16	MP3A	X	-10.755	4.25
17	MP3A	Z	-6.21	4.25
18	MP3A	Mx	.005	4.25
19	M21	X	-30.869	1.5
20	M21	Z	-17.822	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-12.306	3.25
23	MP2A	Z	-7.105	3.25
24	MP2A	Mx	-.006	3.25
25	MP1A	X	-11.655	3.25
26	MP1A	Z	-6.729	3.25
27	MP1A	Mx	-.006	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-20.675	.75
2	MP2A	Z	-35.811	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP2A	Mx	-.016	.75
4	MP2A	X	-20.675	5.75
5	MP2A	Z	-35.811	5.75
6	MP2A	Mx	-.016	5.75
7	MP2A	X	-20.675	.75
8	MP2A	Z	-35.811	.75
9	MP2A	Mx	.036	.75
10	MP2A	X	-20.675	5.75
11	MP2A	Z	-35.811	5.75
12	MP2A	Mx	.036	5.75
13	MP3A	X	-9.321	2.25
14	MP3A	Z	-16.145	2.25
15	MP3A	Mx	.005	2.25
16	MP3A	X	-9.321	4.25
17	MP3A	Z	-16.145	4.25
18	MP3A	Mx	.005	4.25
19	M21	X	-18.845	1.5
20	M21	Z	-32.64	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-8.497	3.25
23	MP2A	Z	-14.718	3.25
24	MP2A	Mx	-.004	3.25
25	MP1A	X	-8.372	3.25
26	MP1A	Z	-14.501	3.25
27	MP1A	Mx	-.004	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-14.468	.75
3	MP2A	Mx	-.01	.75
4	MP2A	X	0	5.75
5	MP2A	Z	-14.468	5.75
6	MP2A	Mx	-.01	5.75
7	MP2A	X	0	.75
8	MP2A	Z	-14.468	.75
9	MP2A	Mx	.01	.75
10	MP2A	X	0	5.75
11	MP2A	Z	-14.468	5.75
12	MP2A	Mx	.01	5.75
13	MP3A	X	0	2.25
14	MP3A	Z	-6.89	2.25
15	MP3A	Mx	0	2.25
16	MP3A	X	0	4.25
17	MP3A	Z	-6.89	4.25
18	MP3A	Mx	0	4.25
19	M21	X	0	1.5
20	M21	Z	-11.198	1.5
21	M21	Mx	0	1.5
22	MP2A	X	0	3.25
23	MP2A	Z	-5.482	3.25
24	MP2A	Mx	0	3.25
25	MP1A	X	0	3.25
26	MP1A	Z	-5.482	3.25
27	MP1A	Mx	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.77	.75
2	MP2A	Z	-11.726	.75
3	MP2A	Mx	-.012	.75
4	MP2A	X	6.77	5.75
5	MP2A	Z	-11.726	5.75
6	MP2A	Mx	-.012	5.75
7	MP2A	X	6.77	.75
8	MP2A	Z	-11.726	.75
9	MP2A	Mx	.005	.75
10	MP2A	X	6.77	5.75
11	MP2A	Z	-11.726	5.75
12	MP2A	Mx	.005	5.75
13	MP3A	X	2.921	2.25
14	MP3A	Z	-5.059	2.25
15	MP3A	Mx	-.001	2.25
16	MP3A	X	2.921	4.25
17	MP3A	Z	-5.059	4.25
18	MP3A	Mx	-.001	4.25
19	M21	X	4.893	1.5
20	M21	Z	-8.476	1.5
21	M21	Mx	0	1.5
22	MP2A	X	2.514	3.25
23	MP2A	Z	-4.354	3.25
24	MP2A	Mx	.001	3.25
25	MP1A	X	2.473	3.25
26	MP1A	Z	-4.283	3.25
27	MP1A	Mx	.001	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	10.119	.75
2	MP2A	Z	-5.842	.75
3	MP2A	Mx	-.009	.75
4	MP2A	X	10.119	5.75
5	MP2A	Z	-5.842	5.75
6	MP2A	Mx	-.009	5.75
7	MP2A	X	10.119	.75
8	MP2A	Z	-5.842	.75
9	MP2A	Mx	-.000824	.75
10	MP2A	X	10.119	5.75
11	MP2A	Z	-5.842	5.75
12	MP2A	Mx	-.000824	5.75
13	MP3A	X	3.244	2.25
14	MP3A	Z	-1.873	2.25
15	MP3A	Mx	-.002	2.25
16	MP3A	X	3.244	4.25
17	MP3A	Z	-1.873	4.25
18	MP3A	Mx	-.002	4.25
19	M21	X	7.865	1.5
20	M21	Z	-4.541	1.5
21	M21	Mx	0	1.5
22	MP2A	X	3.567	3.25
23	MP2A	Z	-2.06	3.25
24	MP2A	Mx	.002	3.25
25	MP1A	X	3.353	3.25
26	MP1A	Z	-1.936	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP1A	Mx	.002	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	10.757	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.005	.75
4	MP2A	X	10.757	5.75
5	MP2A	Z	0	5.75
6	MP2A	Mx	-.005	5.75
7	MP2A	X	10.757	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	-.005	.75
10	MP2A	X	10.757	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	-.005	5.75
13	MP3A	X	2.697	2.25
14	MP3A	Z	0	2.25
15	MP3A	Mx	-.001	2.25
16	MP3A	X	2.697	4.25
17	MP3A	Z	0	4.25
18	MP3A	Mx	-.001	4.25
19	M21	X	9.787	1.5
20	M21	Z	0	1.5
21	M21	Mx	0	1.5
22	MP2A	X	3.665	3.25
23	MP2A	Z	0	3.25
24	MP2A	Mx	.002	3.25
25	MP1A	X	3.335	3.25
26	MP1A	Z	0	3.25
27	MP1A	Mx	.002	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	10.119	.75
2	MP2A	Z	5.842	.75
3	MP2A	Mx	-.000824	.75
4	MP2A	X	10.119	5.75
5	MP2A	Z	5.842	5.75
6	MP2A	Mx	-.000824	5.75
7	MP2A	X	10.119	.75
8	MP2A	Z	5.842	.75
9	MP2A	Mx	-.009	.75
10	MP2A	X	10.119	5.75
11	MP2A	Z	5.842	5.75
12	MP2A	Mx	-.009	5.75
13	MP3A	X	3.244	2.25
14	MP3A	Z	1.873	2.25
15	MP3A	Mx	-.002	2.25
16	MP3A	X	3.244	4.25
17	MP3A	Z	1.873	4.25
18	MP3A	Mx	-.002	4.25
19	M21	X	9.697	1.5
20	M21	Z	5.599	1.5
21	M21	Mx	0	1.5
22	MP2A	X	3.567	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	2.06	3.25
24	MP2A	Mx	.002	3.25
25	MP1A	X	3.353	3.25
26	MP1A	Z	1.936	3.25
27	MP1A	Mx	.002	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.77	.75
2	MP2A	Z	11.726	.75
3	MP2A	Mx	.005	.75
4	MP2A	X	6.77	5.75
5	MP2A	Z	11.726	5.75
6	MP2A	Mx	.005	5.75
7	MP2A	X	6.77	.75
8	MP2A	Z	11.726	.75
9	MP2A	Mx	-.012	.75
10	MP2A	X	6.77	5.75
11	MP2A	Z	11.726	5.75
12	MP2A	Mx	-.012	5.75
13	MP3A	X	2.921	2.25
14	MP3A	Z	5.059	2.25
15	MP3A	Mx	-.001	2.25
16	MP3A	X	2.921	4.25
17	MP3A	Z	5.059	4.25
18	MP3A	Mx	-.001	4.25
19	M21	X	5.952	1.5
20	M21	Z	10.308	1.5
21	M21	Mx	0	1.5
22	MP2A	X	2.514	3.25
23	MP2A	Z	4.354	3.25
24	MP2A	Mx	.001	3.25
25	MP1A	X	2.473	3.25
26	MP1A	Z	4.283	3.25
27	MP1A	Mx	.001	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	14.468	.75
3	MP2A	Mx	.01	.75
4	MP2A	X	0	5.75
5	MP2A	Z	14.468	5.75
6	MP2A	Mx	.01	5.75
7	MP2A	X	0	.75
8	MP2A	Z	14.468	.75
9	MP2A	Mx	-.01	.75
10	MP2A	X	0	5.75
11	MP2A	Z	14.468	5.75
12	MP2A	Mx	-.01	5.75
13	MP3A	X	0	2.25
14	MP3A	Z	6.89	2.25
15	MP3A	Mx	0	2.25
16	MP3A	X	0	4.25
17	MP3A	Z	6.89	4.25
18	MP3A	Mx	0	4.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	M21	X	0	1.5
20	M21	Z	11.198	1.5
21	M21	Mx	0	1.5
22	MP2A	X	0	3.25
23	MP2A	Z	5.482	3.25
24	MP2A	Mx	0	3.25
25	MP1A	X	0	3.25
26	MP1A	Z	5.482	3.25
27	MP1A	Mx	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.77	.75
2	MP2A	Z	11.726	.75
3	MP2A	Mx	.012	.75
4	MP2A	X	-6.77	5.75
5	MP2A	Z	11.726	5.75
6	MP2A	Mx	.012	5.75
7	MP2A	X	-6.77	.75
8	MP2A	Z	11.726	.75
9	MP2A	Mx	-.005	.75
10	MP2A	X	-6.77	5.75
11	MP2A	Z	11.726	5.75
12	MP2A	Mx	-.005	5.75
13	MP3A	X	-2.921	2.25
14	MP3A	Z	5.059	2.25
15	MP3A	Mx	.001	2.25
16	MP3A	X	-2.921	4.25
17	MP3A	Z	5.059	4.25
18	MP3A	Mx	.001	4.25
19	M21	X	-4.893	1.5
20	M21	Z	8.476	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-2.514	3.25
23	MP2A	Z	4.354	3.25
24	MP2A	Mx	-.001	3.25
25	MP1A	X	-2.473	3.25
26	MP1A	Z	4.283	3.25
27	MP1A	Mx	-.001	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-10.119	.75
2	MP2A	Z	5.842	.75
3	MP2A	Mx	.009	.75
4	MP2A	X	-10.119	5.75
5	MP2A	Z	5.842	5.75
6	MP2A	Mx	.009	5.75
7	MP2A	X	-10.119	.75
8	MP2A	Z	5.842	.75
9	MP2A	Mx	.000824	.75
10	MP2A	X	-10.119	5.75
11	MP2A	Z	5.842	5.75
12	MP2A	Mx	.000824	5.75
13	MP3A	X	-3.244	2.25
14	MP3A	Z	1.873	2.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	.002	2.25
16	MP3A	X	-3.244	4.25
17	MP3A	Z	1.873	4.25
18	MP3A	Mx	.002	4.25
19	M21	X	-7.865	1.5
20	M21	Z	4.541	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-3.567	3.25
23	MP2A	Z	2.06	3.25
24	MP2A	Mx	-.002	3.25
25	MP1A	X	-3.353	3.25
26	MP1A	Z	1.936	3.25
27	MP1A	Mx	-.002	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-10.757	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.005	.75
4	MP2A	X	-10.757	5.75
5	MP2A	Z	0	5.75
6	MP2A	Mx	.005	5.75
7	MP2A	X	-10.757	.75
8	MP2A	Z	0	.75
9	MP2A	Mx	.005	.75
10	MP2A	X	-10.757	5.75
11	MP2A	Z	0	5.75
12	MP2A	Mx	.005	5.75
13	MP3A	X	-2.697	2.25
14	MP3A	Z	0	2.25
15	MP3A	Mx	.001	2.25
16	MP3A	X	-2.697	4.25
17	MP3A	Z	0	4.25
18	MP3A	Mx	.001	4.25
19	M21	X	-9.787	1.5
20	M21	Z	0	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-3.665	3.25
23	MP2A	Z	0	3.25
24	MP2A	Mx	-.002	3.25
25	MP1A	X	-3.335	3.25
26	MP1A	Z	0	3.25
27	MP1A	Mx	-.002	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-10.119	.75
2	MP2A	Z	-5.842	.75
3	MP2A	Mx	.000824	.75
4	MP2A	X	-10.119	5.75
5	MP2A	Z	-5.842	5.75
6	MP2A	Mx	.000824	5.75
7	MP2A	X	-10.119	.75
8	MP2A	Z	-5.842	.75
9	MP2A	Mx	.009	.75
10	MP2A	X	-10.119	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP2A	Z	-5.842	5.75
12	MP2A	Mx	.009	5.75
13	MP3A	X	-3.244	2.25
14	MP3A	Z	-1.873	2.25
15	MP3A	Mx	.002	2.25
16	MP3A	X	-3.244	4.25
17	MP3A	Z	-1.873	4.25
18	MP3A	Mx	.002	4.25
19	M21	X	-9.697	1.5
20	M21	Z	-5.599	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-3.567	3.25
23	MP2A	Z	-2.06	3.25
24	MP2A	Mx	-.002	3.25
25	MP1A	X	-3.353	3.25
26	MP1A	Z	-1.936	3.25
27	MP1A	Mx	-.002	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.77	.75
2	MP2A	Z	-11.726	.75
3	MP2A	Mx	-.005	.75
4	MP2A	X	-6.77	5.75
5	MP2A	Z	-11.726	5.75
6	MP2A	Mx	-.005	5.75
7	MP2A	X	-6.77	.75
8	MP2A	Z	-11.726	.75
9	MP2A	Mx	.012	.75
10	MP2A	X	-6.77	5.75
11	MP2A	Z	-11.726	5.75
12	MP2A	Mx	.012	5.75
13	MP3A	X	-2.921	2.25
14	MP3A	Z	-5.059	2.25
15	MP3A	Mx	.001	2.25
16	MP3A	X	-2.921	4.25
17	MP3A	Z	-5.059	4.25
18	MP3A	Mx	.001	4.25
19	M21	X	-5.952	1.5
20	M21	Z	-10.308	1.5
21	M21	Mx	0	1.5
22	MP2A	X	-2.514	3.25
23	MP2A	Z	-4.354	3.25
24	MP2A	Mx	-.001	3.25
25	MP1A	X	-2.473	3.25
26	MP1A	Z	-4.283	3.25
27	MP1A	Mx	-.001	3.25

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M17	Y	-500	%100

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M23A	Y	-500	%100

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M13	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M13	Y	-250	%100

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-.927	.75
2	MP2A	My	-.000464	.75
3	MP2A	Mz	.000672	.75
4	MP2A	Y	-.927	5.75
5	MP2A	My	-.000464	5.75
6	MP2A	Mz	.000672	5.75
7	MP2A	Y	-.927	.75
8	MP2A	My	-.000464	.75
9	MP2A	Mz	-.000672	.75
10	MP2A	Y	-.927	5.75
11	MP2A	My	-.000464	5.75
12	MP2A	Mz	-.000672	5.75
13	MP3A	Y	-1.756	2.25
14	MP3A	My	-.000878	2.25
15	MP3A	Mz	0	2.25
16	MP3A	Y	-1.756	4.25
17	MP3A	My	-.000878	4.25
18	MP3A	Mz	0	4.25
19	M21	Y	-1.29	1.5
20	M21	My	0	1.5
21	M21	Mz	0	1.5
22	MP2A	Y	-3.012	3.25
23	MP2A	My	.002	3.25
24	MP2A	Mz	0	3.25
25	MP1A	Y	-2.834	3.25
26	MP1A	My	.001	3.25
27	MP1A	Mz	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Z	-2.318	.75
2	MP2A	Mx	-.002	.75
3	MP2A	Z	-2.318	5.75
4	MP2A	Mx	-.002	5.75
5	MP2A	Z	-2.318	.75
6	MP2A	Mx	.002	.75
7	MP2A	Z	-2.318	5.75
8	MP2A	Mx	.002	5.75
9	MP3A	Z	-4.39	2.25
10	MP3A	Mx	0	2.25
11	MP3A	Z	-4.39	4.25
12	MP3A	Mx	0	4.25
13	M21	Z	-3.226	1.5
14	M21	Mx	0	1.5
15	MP2A	Z	-7.53	3.25
16	MP2A	Mx	0	3.25
17	MP1A	Z	-7.086	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP1A	Mx	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.318	.75
2	MP2A	Mx	-.001	.75
3	MP2A	X	2.318	5.75
4	MP2A	Mx	-.001	5.75
5	MP2A	X	2.318	.75
6	MP2A	Mx	-.001	.75
7	MP2A	X	2.318	5.75
8	MP2A	Mx	-.001	5.75
9	MP3A	X	4.39	2.25
10	MP3A	Mx	-.002	2.25
11	MP3A	X	4.39	4.25
12	MP3A	Mx	-.002	4.25
13	M21	X	3.226	1.5
14	M21	Mx	0	1.5
15	MP2A	X	7.53	3.25
16	MP2A	Mx	.004	3.25
17	MP1A	X	7.086	3.25
18	MP1A	Mx	.004	3.25

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	Y	-5.325	-5.325	0	%100
2	MP1A	Y	-5.325	-5.325	0	%100
3	M12	Y	-6.994	-6.994	0	%100
4	M13	Y	-5.325	-5.325	0	%100
5	M19	Y	-8.096	-8.096	0	%100
6	M20	Y	-8.096	-8.096	0	%100
7	M21	Y	-5.325	-5.325	0	%100
8	MP2A	Y	-6.067	-6.067	0	%100
9	MP3A	Y	-5.325	-5.325	0	%100
10	MP4A	Y	-5.325	-5.325	0	%100
11	M25A	Y	-5.325	-5.325	0	%100
12	M26A	Y	-7.047	-7.047	0	%100
13	M27B	Y	-7.047	-7.047	0	%100
14	M28	Y	-5.325	-5.325	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-11.515	-11.515	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-11.515	-11.515	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	-13.035	-13.035	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	-11.515	-11.515	0	%100
9	M19	X	0	0	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	0	0	0	%100
12	M20	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
13	M21	X	0	0	0	%100
14	M21	Z	-9.416	-9.416	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-13.94	-13.94	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	-11.515	-11.515	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	-11.515	-11.515	0	%100
21	M25A	X	0	0	0	%100
22	M25A	Z	-2.949	-2.949	0	%100
23	M26A	X	0	0	0	%100
24	M26A	Z	-17.035	-17.035	0	%100
25	M27B	X	0	0	0	%100
26	M27B	Z	-17.035	-17.035	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-2.949	-2.949	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	4.318	4.318	0	%100
2	M2	Z	-7.479	-7.479	0	%100
3	MP1A	X	5.758	5.758	0	%100
4	MP1A	Z	-9.973	-9.973	0	%100
5	M12	X	6.517	6.517	0	%100
6	M12	Z	-11.289	-11.289	0	%100
7	M13	X	4.318	4.318	0	%100
8	M13	Z	-7.479	-7.479	0	%100
9	M19	X	1.35	1.35	0	%100
10	M19	Z	-2.338	-2.338	0	%100
11	M20	X	1.35	1.35	0	%100
12	M20	Z	-2.338	-2.338	0	%100
13	M21	X	4.708	4.708	0	%100
14	M21	Z	-8.155	-8.155	0	%100
15	MP2A	X	6.97	6.97	0	%100
16	MP2A	Z	-12.072	-12.072	0	%100
17	MP3A	X	5.758	5.758	0	%100
18	MP3A	Z	-9.973	-9.973	0	%100
19	MP4A	X	5.758	5.758	0	%100
20	MP4A	Z	-9.973	-9.973	0	%100
21	M25A	X	.000285	.000285	0	%100
22	M25A	Z	-.000494	-.000494	0	%100
23	M26A	X	3.887	3.887	0	%100
24	M26A	Z	-6.732	-6.732	0	%100
25	M27B	X	10.003	10.003	0	%100
26	M27B	Z	-17.326	-17.326	0	%100
27	M28	X	4.353	4.353	0	%100
28	M28	Z	-7.54	-7.54	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	2.493	2.493	0	%100
2	M2	Z	-1.439	-1.439	0	%100
3	MP1A	X	9.973	9.973	0	%100
4	MP1A	Z	-5.758	-5.758	0	%100
5	M12	X	11.289	11.289	0	%100
6	M12	Z	-6.517	-6.517	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	M13	X	2.493	2.493	0	%100
8	M13	Z	-1.439	-1.439	0	%100
9	M19	X	7.013	7.013	0	%100
10	M19	Z	-4.049	-4.049	0	%100
11	M20	X	7.013	7.013	0	%100
12	M20	Z	-4.049	-4.049	0	%100
13	M21	X	8.155	8.155	0	%100
14	M21	Z	-4.708	-4.708	0	%100
15	MP2A	X	12.072	12.072	0	%100
16	MP2A	Z	-6.97	-6.97	0	%100
17	MP3A	X	9.973	9.973	0	%100
18	MP3A	Z	-5.758	-5.758	0	%100
19	MP4A	X	9.973	9.973	0	%100
20	MP4A	Z	-5.758	-5.758	0	%100
21	M25A	X	2.433	2.433	0	%100
22	M25A	Z	-1.404	-1.404	0	%100
23	M26A	X	1.284	1.284	0	%100
24	M26A	Z	-.741	-.741	0	%100
25	M27B	X	11.877	11.877	0	%100
26	M27B	Z	-6.857	-6.857	0	%100
27	M28	X	9.972	9.972	0	%100
28	M28	Z	-5.757	-5.757	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	11.515	11.515	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	13.035	13.035	0	%100
6	M12	Z	0	0	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	0	0	0	%100
9	M19	X	10.797	10.797	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	10.797	10.797	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	9.416	9.416	0	%100
14	M21	Z	0	0	0	%100
15	MP2A	X	13.94	13.94	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	11.515	11.515	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	11.515	11.515	0	%100
20	MP4A	Z	0	0	0	%100
21	M25A	X	8.566	8.566	0	%100
22	M25A	Z	0	0	0	%100
23	M26A	X	4.453	4.453	0	%100
24	M26A	Z	0	0	0	%100
25	M27B	X	4.453	4.453	0	%100
26	M27B	Z	0	0	0	%100
27	M28	X	8.566	8.566	0	%100
28	M28	Z	0	0	0	%100

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	2.493	2.493	0	%100
2	M2	Z	1.439	1.439	0	%100
3	MP1A	X	9.973	9.973	0	%100
4	MP1A	Z	5.758	5.758	0	%100
5	M12	X	11.289	11.289	0	%100
6	M12	Z	6.517	6.517	0	%100
7	M13	X	2.493	2.493	0	%100
8	M13	Z	1.439	1.439	0	%100
9	M19	X	7.013	7.013	0	%100
10	M19	Z	4.049	4.049	0	%100
11	M20	X	7.013	7.013	0	%100
12	M20	Z	4.049	4.049	0	%100
13	M21	X	8.155	8.155	0	%100
14	M21	Z	4.708	4.708	0	%100
15	MP2A	X	12.072	12.072	0	%100
16	MP2A	Z	6.97	6.97	0	%100
17	MP3A	X	9.973	9.973	0	%100
18	MP3A	Z	5.758	5.758	0	%100
19	MP4A	X	9.973	9.973	0	%100
20	MP4A	Z	5.758	5.758	0	%100
21	M25A	X	9.972	9.972	0	%100
22	M25A	Z	5.757	5.757	0	%100
23	M26A	X	11.877	11.877	0	%100
24	M26A	Z	6.857	6.857	0	%100
25	M27B	X	1.284	1.284	0	%100
26	M27B	Z	.741	.741	0	%100
27	M28	X	2.433	2.433	0	%100
28	M28	Z	1.404	1.404	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	4.318	4.318	0	%100
2	M2	Z	7.479	7.479	0	%100
3	MP1A	X	5.758	5.758	0	%100
4	MP1A	Z	9.973	9.973	0	%100
5	M12	X	6.517	6.517	0	%100
6	M12	Z	11.289	11.289	0	%100
7	M13	X	4.318	4.318	0	%100
8	M13	Z	7.479	7.479	0	%100
9	M19	X	1.35	1.35	0	%100
10	M19	Z	2.338	2.338	0	%100
11	M20	X	1.35	1.35	0	%100
12	M20	Z	2.338	2.338	0	%100
13	M21	X	4.708	4.708	0	%100
14	M21	Z	8.155	8.155	0	%100
15	MP2A	X	6.97	6.97	0	%100
16	MP2A	Z	12.072	12.072	0	%100
17	MP3A	X	5.758	5.758	0	%100
18	MP3A	Z	9.973	9.973	0	%100
19	MP4A	X	5.758	5.758	0	%100
20	MP4A	Z	9.973	9.973	0	%100
21	M25A	X	4.353	4.353	0	%100
22	M25A	Z	7.54	7.54	0	%100
23	M26A	X	10.003	10.003	0	%100
24	M26A	Z	17.326	17.326	0	%100
25	M27B	X	3.887	3.887	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
26	M27B	Z	6.732	6.732	0	%100
27	M28	X	.000285	.000285	0	%100
28	M28	Z	.000494	.000494	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	11.515	11.515	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	11.515	11.515	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	13.035	13.035	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	11.515	11.515	0	%100
9	M19	X	0	0	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	0	0	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	0	0	0	%100
14	M21	Z	9.416	9.416	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	13.94	13.94	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	11.515	11.515	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	11.515	11.515	0	%100
21	M25A	X	0	0	0	%100
22	M25A	Z	2.949	2.949	0	%100
23	M26A	X	0	0	0	%100
24	M26A	Z	17.035	17.035	0	%100
25	M27B	X	0	0	0	%100
26	M27B	Z	17.035	17.035	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	2.949	2.949	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-4.318	-4.318	0	%100
2	M2	Z	7.479	7.479	0	%100
3	MP1A	X	-5.758	-5.758	0	%100
4	MP1A	Z	9.973	9.973	0	%100
5	M12	X	-6.517	-6.517	0	%100
6	M12	Z	11.289	11.289	0	%100
7	M13	X	-4.318	-4.318	0	%100
8	M13	Z	7.479	7.479	0	%100
9	M19	X	-1.35	-1.35	0	%100
10	M19	Z	2.338	2.338	0	%100
11	M20	X	-1.35	-1.35	0	%100
12	M20	Z	2.338	2.338	0	%100
13	M21	X	-4.708	-4.708	0	%100
14	M21	Z	8.155	8.155	0	%100
15	MP2A	X	-6.97	-6.97	0	%100
16	MP2A	Z	12.072	12.072	0	%100
17	MP3A	X	-5.758	-5.758	0	%100
18	MP3A	Z	9.973	9.973	0	%100
19	MP4A	X	-5.758	-5.758	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
20	MP4A	Z	9.973	9.973	0	%100
21	M25A	X	-.000285	-.000285	0	%100
22	M25A	Z	.000494	.000494	0	%100
23	M26A	X	-3.887	-3.887	0	%100
24	M26A	Z	6.732	6.732	0	%100
25	M27B	X	-10.003	-10.003	0	%100
26	M27B	Z	17.326	17.326	0	%100
27	M28	X	-4.353	-4.353	0	%100
28	M28	Z	7.54	7.54	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-2.493	-2.493	0	%100
2	M2	Z	1.439	1.439	0	%100
3	MP1A	X	-9.973	-9.973	0	%100
4	MP1A	Z	5.758	5.758	0	%100
5	M12	X	-11.289	-11.289	0	%100
6	M12	Z	6.517	6.517	0	%100
7	M13	X	-2.493	-2.493	0	%100
8	M13	Z	1.439	1.439	0	%100
9	M19	X	-7.013	-7.013	0	%100
10	M19	Z	4.049	4.049	0	%100
11	M20	X	-7.013	-7.013	0	%100
12	M20	Z	4.049	4.049	0	%100
13	M21	X	-8.155	-8.155	0	%100
14	M21	Z	4.708	4.708	0	%100
15	MP2A	X	-12.072	-12.072	0	%100
16	MP2A	Z	6.97	6.97	0	%100
17	MP3A	X	-9.973	-9.973	0	%100
18	MP3A	Z	5.758	5.758	0	%100
19	MP4A	X	-9.973	-9.973	0	%100
20	MP4A	Z	5.758	5.758	0	%100
21	M25A	X	-2.433	-2.433	0	%100
22	M25A	Z	1.404	1.404	0	%100
23	M26A	X	-1.284	-1.284	0	%100
24	M26A	Z	.741	.741	0	%100
25	M27B	X	-11.877	-11.877	0	%100
26	M27B	Z	6.857	6.857	0	%100
27	M28	X	-9.972	-9.972	0	%100
28	M28	Z	5.757	5.757	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	-11.515	-11.515	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	-13.035	-13.035	0	%100
6	M12	Z	0	0	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	0	0	0	%100
9	M19	X	-10.797	-10.797	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	-10.797	-10.797	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	-9.416	-9.416	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	M21	Z	0	0	0	%100
15	MP2A	X	-13.94	-13.94	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	-11.515	-11.515	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	-11.515	-11.515	0	%100
20	MP4A	Z	0	0	0	%100
21	M25A	X	-8.566	-8.566	0	%100
22	M25A	Z	0	0	0	%100
23	M26A	X	-4.453	-4.453	0	%100
24	M26A	Z	0	0	0	%100
25	M27B	X	-4.453	-4.453	0	%100
26	M27B	Z	0	0	0	%100
27	M28	X	-8.566	-8.566	0	%100
28	M28	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-2.493	-2.493	0	%100
2	M2	Z	-1.439	-1.439	0	%100
3	MP1A	X	-9.973	-9.973	0	%100
4	MP1A	Z	-5.758	-5.758	0	%100
5	M12	X	-11.289	-11.289	0	%100
6	M12	Z	-6.517	-6.517	0	%100
7	M13	X	-2.493	-2.493	0	%100
8	M13	Z	-1.439	-1.439	0	%100
9	M19	X	-7.013	-7.013	0	%100
10	M19	Z	-4.049	-4.049	0	%100
11	M20	X	-7.013	-7.013	0	%100
12	M20	Z	-4.049	-4.049	0	%100
13	M21	X	-8.155	-8.155	0	%100
14	M21	Z	-4.708	-4.708	0	%100
15	MP2A	X	-12.072	-12.072	0	%100
16	MP2A	Z	-6.97	-6.97	0	%100
17	MP3A	X	-9.973	-9.973	0	%100
18	MP3A	Z	-5.758	-5.758	0	%100
19	MP4A	X	-9.973	-9.973	0	%100
20	MP4A	Z	-5.758	-5.758	0	%100
21	M25A	X	-9.972	-9.972	0	%100
22	M25A	Z	-5.757	-5.757	0	%100
23	M26A	X	-11.877	-11.877	0	%100
24	M26A	Z	-6.857	-6.857	0	%100
25	M27B	X	-1.284	-1.284	0	%100
26	M27B	Z	-.741	-.741	0	%100
27	M28	X	-2.433	-2.433	0	%100
28	M28	Z	-1.404	-1.404	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-4.318	-4.318	0	%100
2	M2	Z	-7.479	-7.479	0	%100
3	MP1A	X	-5.758	-5.758	0	%100
4	MP1A	Z	-9.973	-9.973	0	%100
5	M12	X	-6.517	-6.517	0	%100
6	M12	Z	-11.289	-11.289	0	%100
7	M13	X	-4.318	-4.318	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
8	M13	Z	-7.479	-7.479	0	%100
9	M19	X	-1.35	-1.35	0	%100
10	M19	Z	-2.338	-2.338	0	%100
11	M20	X	-1.35	-1.35	0	%100
12	M20	Z	-2.338	-2.338	0	%100
13	M21	X	-4.708	-4.708	0	%100
14	M21	Z	-8.155	-8.155	0	%100
15	MP2A	X	-6.97	-6.97	0	%100
16	MP2A	Z	-12.072	-12.072	0	%100
17	MP3A	X	-5.758	-5.758	0	%100
18	MP3A	Z	-9.973	-9.973	0	%100
19	MP4A	X	-5.758	-5.758	0	%100
20	MP4A	Z	-9.973	-9.973	0	%100
21	M25A	X	-4.353	-4.353	0	%100
22	M25A	Z	-7.54	-7.54	0	%100
23	M26A	X	-10.003	-10.003	0	%100
24	M26A	Z	-17.326	-17.326	0	%100
25	M27B	X	-3.887	-3.887	0	%100
26	M27B	Z	-6.732	-6.732	0	%100
27	M28	X	-.000285	-.000285	0	%100
28	M28	Z	-.000494	-.000494	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-3.912	-3.912	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-3.912	-3.912	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	-4.282	-4.282	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	-3.912	-3.912	0	%100
9	M19	X	0	0	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	0	0	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	0	0	0	%100
14	M21	Z	-3.187	-3.187	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-4.319	-4.319	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	-3.912	-3.912	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	-3.912	-3.912	0	%100
21	M25A	X	0	0	0	%100
22	M25A	Z	-1.002	-1.002	0	%100
23	M26A	X	0	0	0	%100
24	M26A	Z	-4.529	-4.529	0	%100
25	M27B	X	0	0	0	%100
26	M27B	Z	-4.529	-4.529	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-1.002	-1.002	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	1.467	1.467	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
2	M2	Z	-2.541	-2.541	0	%100
3	MP1A	X	1.956	1.956	0	%100
4	MP1A	Z	-3.388	-3.388	0	%100
5	M12	X	2.141	2.141	0	%100
6	M12	Z	-3.708	-3.708	0	%100
7	M13	X	1.467	1.467	0	%100
8	M13	Z	-2.541	-2.541	0	%100
9	M19	X	.394	.394	0	%100
10	M19	Z	-.683	-.683	0	%100
11	M20	X	.394	.394	0	%100
12	M20	Z	-.683	-.683	0	%100
13	M21	X	1.593	1.593	0	%100
14	M21	Z	-2.76	-2.76	0	%100
15	MP2A	X	2.16	2.16	0	%100
16	MP2A	Z	-3.741	-3.741	0	%100
17	MP3A	X	1.956	1.956	0	%100
18	MP3A	Z	-3.388	-3.388	0	%100
19	MP4A	X	1.956	1.956	0	%100
20	MP4A	Z	-3.388	-3.388	0	%100
21	M25A	X	9.7e-5	9.7e-5	0	%100
22	M25A	Z	-.000168	-.000168	0	%100
23	M26A	X	1.033	1.033	0	%100
24	M26A	Z	-1.79	-1.79	0	%100
25	M27B	X	2.659	2.659	0	%100
26	M27B	Z	-4.606	-4.606	0	%100
27	M28	X	1.479	1.479	0	%100
28	M28	Z	-2.561	-2.561	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.847	.847	0	%100
2	M2	Z	-.489	-.489	0	%100
3	MP1A	X	3.388	3.388	0	%100
4	MP1A	Z	-1.956	-1.956	0	%100
5	M12	X	3.708	3.708	0	%100
6	M12	Z	-2.141	-2.141	0	%100
7	M13	X	.847	.847	0	%100
8	M13	Z	-.489	-.489	0	%100
9	M19	X	2.049	2.049	0	%100
10	M19	Z	-1.183	-1.183	0	%100
11	M20	X	2.049	2.049	0	%100
12	M20	Z	-1.183	-1.183	0	%100
13	M21	X	2.76	2.76	0	%100
14	M21	Z	-1.593	-1.593	0	%100
15	MP2A	X	3.741	3.741	0	%100
16	MP2A	Z	-2.16	-2.16	0	%100
17	MP3A	X	3.388	3.388	0	%100
18	MP3A	Z	-1.956	-1.956	0	%100
19	MP4A	X	3.388	3.388	0	%100
20	MP4A	Z	-1.956	-1.956	0	%100
21	M25A	X	.826	.826	0	%100
22	M25A	Z	-.477	-.477	0	%100
23	M26A	X	.341	.341	0	%100
24	M26A	Z	-.197	-.197	0	%100
25	M27B	X	3.158	3.158	0	%100
26	M27B	Z	-1.823	-1.823	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
27	M28	X	3.388	3.388	0	%100
28	M28	Z	-1.956	-1.956	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	3.912	3.912	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	4.282	4.282	0	%100
6	M12	Z	0	0	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	0	0	0	%100
9	M19	X	3.155	3.155	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	3.155	3.155	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	3.187	3.187	0	%100
14	M21	Z	0	0	0	%100
15	MP2A	X	4.319	4.319	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	3.912	3.912	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	3.912	3.912	0	%100
20	MP4A	Z	0	0	0	%100
21	M25A	X	2.91	2.91	0	%100
22	M25A	Z	0	0	0	%100
23	M26A	X	1.184	1.184	0	%100
24	M26A	Z	0	0	0	%100
25	M27B	X	1.184	1.184	0	%100
26	M27B	Z	0	0	0	%100
27	M28	X	2.91	2.91	0	%100
28	M28	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.847	.847	0	%100
2	M2	Z	.489	.489	0	%100
3	MP1A	X	3.388	3.388	0	%100
4	MP1A	Z	1.956	1.956	0	%100
5	M12	X	3.708	3.708	0	%100
6	M12	Z	2.141	2.141	0	%100
7	M13	X	.847	.847	0	%100
8	M13	Z	.489	.489	0	%100
9	M19	X	2.049	2.049	0	%100
10	M19	Z	1.183	1.183	0	%100
11	M20	X	2.049	2.049	0	%100
12	M20	Z	1.183	1.183	0	%100
13	M21	X	2.76	2.76	0	%100
14	M21	Z	1.593	1.593	0	%100
15	MP2A	X	3.741	3.741	0	%100
16	MP2A	Z	2.16	2.16	0	%100
17	MP3A	X	3.388	3.388	0	%100
18	MP3A	Z	1.956	1.956	0	%100
19	MP4A	X	3.388	3.388	0	%100
20	MP4A	Z	1.956	1.956	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	M25A	X	3.388	3.388	0	%100
22	M25A	Z	1.956	1.956	0	%100
23	M26A	X	3.158	3.158	0	%100
24	M26A	Z	1.823	1.823	0	%100
25	M27B	X	.341	.341	0	%100
26	M27B	Z	.197	.197	0	%100
27	M28	X	.826	.826	0	%100
28	M28	Z	.477	.477	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	1.467	1.467	0	%100
2	M2	Z	2.541	2.541	0	%100
3	MP1A	X	1.956	1.956	0	%100
4	MP1A	Z	3.388	3.388	0	%100
5	M12	X	2.141	2.141	0	%100
6	M12	Z	3.708	3.708	0	%100
7	M13	X	1.467	1.467	0	%100
8	M13	Z	2.541	2.541	0	%100
9	M19	X	.394	.394	0	%100
10	M19	Z	.683	.683	0	%100
11	M20	X	.394	.394	0	%100
12	M20	Z	.683	.683	0	%100
13	M21	X	1.593	1.593	0	%100
14	M21	Z	2.76	2.76	0	%100
15	MP2A	X	2.16	2.16	0	%100
16	MP2A	Z	3.741	3.741	0	%100
17	MP3A	X	1.956	1.956	0	%100
18	MP3A	Z	3.388	3.388	0	%100
19	MP4A	X	1.956	1.956	0	%100
20	MP4A	Z	3.388	3.388	0	%100
21	M25A	X	1.479	1.479	0	%100
22	M25A	Z	2.561	2.561	0	%100
23	M26A	X	2.659	2.659	0	%100
24	M26A	Z	4.606	4.606	0	%100
25	M27B	X	1.033	1.033	0	%100
26	M27B	Z	1.79	1.79	0	%100
27	M28	X	9.7e-5	9.7e-5	0	%100
28	M28	Z	.000168	.000168	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	3.912	3.912	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	3.912	3.912	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	4.282	4.282	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	3.912	3.912	0	%100
9	M19	X	0	0	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	0	0	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	0	0	0	%100
14	M21	Z	3.187	3.187	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	MP2A	X	0	0	0	%100
16	MP2A	Z	4.319	4.319	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	3.912	3.912	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	3.912	3.912	0	%100
21	M25A	X	0	0	0	%100
22	M25A	Z	1.002	1.002	0	%100
23	M26A	X	0	0	0	%100
24	M26A	Z	4.529	4.529	0	%100
25	M27B	X	0	0	0	%100
26	M27B	Z	4.529	4.529	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	1.002	1.002	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-1.467	-1.467	0	%100
2	M2	Z	2.541	2.541	0	%100
3	MP1A	X	-1.956	-1.956	0	%100
4	MP1A	Z	3.388	3.388	0	%100
5	M12	X	-2.141	-2.141	0	%100
6	M12	Z	3.708	3.708	0	%100
7	M13	X	-1.467	-1.467	0	%100
8	M13	Z	2.541	2.541	0	%100
9	M19	X	-.394	-.394	0	%100
10	M19	Z	.683	.683	0	%100
11	M20	X	-.394	-.394	0	%100
12	M20	Z	.683	.683	0	%100
13	M21	X	-1.593	-1.593	0	%100
14	M21	Z	2.76	2.76	0	%100
15	MP2A	X	-2.16	-2.16	0	%100
16	MP2A	Z	3.741	3.741	0	%100
17	MP3A	X	-1.956	-1.956	0	%100
18	MP3A	Z	3.388	3.388	0	%100
19	MP4A	X	-1.956	-1.956	0	%100
20	MP4A	Z	3.388	3.388	0	%100
21	M25A	X	-9.7e-5	-9.7e-5	0	%100
22	M25A	Z	.000168	.000168	0	%100
23	M26A	X	-1.033	-1.033	0	%100
24	M26A	Z	1.79	1.79	0	%100
25	M27B	X	-2.659	-2.659	0	%100
26	M27B	Z	4.606	4.606	0	%100
27	M28	X	-1.479	-1.479	0	%100
28	M28	Z	2.561	2.561	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.847	-.847	0	%100
2	M2	Z	.489	.489	0	%100
3	MP1A	X	-3.388	-3.388	0	%100
4	MP1A	Z	1.956	1.956	0	%100
5	M12	X	-3.708	-3.708	0	%100
6	M12	Z	2.141	2.141	0	%100
7	M13	X	-.847	-.847	0	%100
8	M13	Z	.489	.489	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
9	M19	X	-2.049	-2.049	0	%100
10	M19	Z	1.183	1.183	0	%100
11	M20	X	-2.049	-2.049	0	%100
12	M20	Z	1.183	1.183	0	%100
13	M21	X	-2.76	-2.76	0	%100
14	M21	Z	1.593	1.593	0	%100
15	MP2A	X	-3.741	-3.741	0	%100
16	MP2A	Z	2.16	2.16	0	%100
17	MP3A	X	-3.388	-3.388	0	%100
18	MP3A	Z	1.956	1.956	0	%100
19	MP4A	X	-3.388	-3.388	0	%100
20	MP4A	Z	1.956	1.956	0	%100
21	M25A	X	-.826	-.826	0	%100
22	M25A	Z	.477	.477	0	%100
23	M26A	X	-.341	-.341	0	%100
24	M26A	Z	.197	.197	0	%100
25	M27B	X	-3.158	-3.158	0	%100
26	M27B	Z	1.823	1.823	0	%100
27	M28	X	-3.388	-3.388	0	%100
28	M28	Z	1.956	1.956	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	-3.912	-3.912	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	-4.282	-4.282	0	%100
6	M12	Z	0	0	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	0	0	0	%100
9	M19	X	-3.155	-3.155	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	-3.155	-3.155	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	-3.187	-3.187	0	%100
14	M21	Z	0	0	0	%100
15	MP2A	X	-4.319	-4.319	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	-3.912	-3.912	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	-3.912	-3.912	0	%100
20	MP4A	Z	0	0	0	%100
21	M25A	X	-2.91	-2.91	0	%100
22	M25A	Z	0	0	0	%100
23	M26A	X	-1.184	-1.184	0	%100
24	M26A	Z	0	0	0	%100
25	M27B	X	-1.184	-1.184	0	%100
26	M27B	Z	0	0	0	%100
27	M28	X	-2.91	-2.91	0	%100
28	M28	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.847	-.847	0	%100
2	M2	Z	-.489	-.489	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
3	MP1A	X	-3.388	-3.388	0	%100
4	MP1A	Z	-1.956	-1.956	0	%100
5	M12	X	-3.708	-3.708	0	%100
6	M12	Z	-2.141	-2.141	0	%100
7	M13	X	-.847	-.847	0	%100
8	M13	Z	-.489	-.489	0	%100
9	M19	X	-2.049	-2.049	0	%100
10	M19	Z	-1.183	-1.183	0	%100
11	M20	X	-2.049	-2.049	0	%100
12	M20	Z	-1.183	-1.183	0	%100
13	M21	X	-2.76	-2.76	0	%100
14	M21	Z	-1.593	-1.593	0	%100
15	MP2A	X	-3.741	-3.741	0	%100
16	MP2A	Z	-2.16	-2.16	0	%100
17	MP3A	X	-3.388	-3.388	0	%100
18	MP3A	Z	-1.956	-1.956	0	%100
19	MP4A	X	-3.388	-3.388	0	%100
20	MP4A	Z	-1.956	-1.956	0	%100
21	M25A	X	-3.388	-3.388	0	%100
22	M25A	Z	-1.956	-1.956	0	%100
23	M26A	X	-3.158	-3.158	0	%100
24	M26A	Z	-1.823	-1.823	0	%100
25	M27B	X	-.341	-.341	0	%100
26	M27B	Z	-.197	-.197	0	%100
27	M28	X	-.826	-.826	0	%100
28	M28	Z	-.477	-.477	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-1.467	-1.467	0	%100
2	M2	Z	-2.541	-2.541	0	%100
3	MP1A	X	-1.956	-1.956	0	%100
4	MP1A	Z	-3.388	-3.388	0	%100
5	M12	X	-2.141	-2.141	0	%100
6	M12	Z	-3.708	-3.708	0	%100
7	M13	X	-1.467	-1.467	0	%100
8	M13	Z	-2.541	-2.541	0	%100
9	M19	X	-.394	-.394	0	%100
10	M19	Z	-.683	-.683	0	%100
11	M20	X	-.394	-.394	0	%100
12	M20	Z	-.683	-.683	0	%100
13	M21	X	-1.593	-1.593	0	%100
14	M21	Z	-2.76	-2.76	0	%100
15	MP2A	X	-2.16	-2.16	0	%100
16	MP2A	Z	-3.741	-3.741	0	%100
17	MP3A	X	-1.956	-1.956	0	%100
18	MP3A	Z	-3.388	-3.388	0	%100
19	MP4A	X	-1.956	-1.956	0	%100
20	MP4A	Z	-3.388	-3.388	0	%100
21	M25A	X	-1.479	-1.479	0	%100
22	M25A	Z	-2.561	-2.561	0	%100
23	M26A	X	-2.659	-2.659	0	%100
24	M26A	Z	-4.606	-4.606	0	%100
25	M27B	X	-1.033	-1.033	0	%100
26	M27B	Z	-1.79	-1.79	0	%100
27	M28	X	-9.7e-5	-9.7e-5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
28	M28	Z	-.000168	-.000168	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-.696	-.696	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-.696	-.696	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	-.788	-.788	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	-.696	-.696	0	%100
9	M19	X	0	0	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	0	0	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	0	0	0	%100
14	M21	Z	-.569	-.569	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-.843	-.843	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	-.696	-.696	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	-.696	-.696	0	%100
21	M25A	X	0	0	0	%100
22	M25A	Z	-.178	-.178	0	%100
23	M26A	X	0	0	0	%100
24	M26A	Z	-1.03	-1.03	0	%100
25	M27B	X	0	0	0	%100
26	M27B	Z	-1.03	-1.03	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-.178	-.178	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.261	.261	0	%100
2	M2	Z	-.452	-.452	0	%100
3	MP1A	X	.348	.348	0	%100
4	MP1A	Z	-.603	-.603	0	%100
5	M12	X	.394	.394	0	%100
6	M12	Z	-.683	-.683	0	%100
7	M13	X	.261	.261	0	%100
8	M13	Z	-.452	-.452	0	%100
9	M19	X	.082	.082	0	%100
10	M19	Z	-.141	-.141	0	%100
11	M20	X	.082	.082	0	%100
12	M20	Z	-.141	-.141	0	%100
13	M21	X	.285	.285	0	%100
14	M21	Z	-.493	-.493	0	%100
15	MP2A	X	.421	.421	0	%100
16	MP2A	Z	-.73	-.73	0	%100
17	MP3A	X	.348	.348	0	%100
18	MP3A	Z	-.603	-.603	0	%100
19	MP4A	X	.348	.348	0	%100
20	MP4A	Z	-.603	-.603	0	%100
21	M25A	X	1.7e-5	1.7e-5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
22	M25A	Z	-3e-5	-3e-5	0	%100
23	M26A	X	.235	.235	0	%100
24	M26A	Z	-.407	-.407	0	%100
25	M27B	X	.605	.605	0	%100
26	M27B	Z	-1.048	-1.048	0	%100
27	M28	X	.263	.263	0	%100
28	M28	Z	-.456	-.456	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.151	.151	0	%100
2	M2	Z	-.087	-.087	0	%100
3	MP1A	X	.603	.603	0	%100
4	MP1A	Z	-.348	-.348	0	%100
5	M12	X	.683	.683	0	%100
6	M12	Z	-.394	-.394	0	%100
7	M13	X	.151	.151	0	%100
8	M13	Z	-.087	-.087	0	%100
9	M19	X	.424	.424	0	%100
10	M19	Z	-.245	-.245	0	%100
11	M20	X	.424	.424	0	%100
12	M20	Z	-.245	-.245	0	%100
13	M21	X	.493	.493	0	%100
14	M21	Z	-.285	-.285	0	%100
15	MP2A	X	.73	.73	0	%100
16	MP2A	Z	-.421	-.421	0	%100
17	MP3A	X	.603	.603	0	%100
18	MP3A	Z	-.348	-.348	0	%100
19	MP4A	X	.603	.603	0	%100
20	MP4A	Z	-.348	-.348	0	%100
21	M25A	X	.147	.147	0	%100
22	M25A	Z	-.085	-.085	0	%100
23	M26A	X	.078	.078	0	%100
24	M26A	Z	-.045	-.045	0	%100
25	M27B	X	.718	.718	0	%100
26	M27B	Z	-.415	-.415	0	%100
27	M28	X	.603	.603	0	%100
28	M28	Z	-.348	-.348	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	.696	.696	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	.788	.788	0	%100
6	M12	Z	0	0	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	0	0	0	%100
9	M19	X	.653	.653	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	.653	.653	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	.569	.569	0	%100
14	M21	Z	0	0	0	%100
15	MP2A	X	.843	.843	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
16	MP2A	Z	0	0	0	%100
17	MP3A	X	.696	.696	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	.696	.696	0	%100
20	MP4A	Z	0	0	0	%100
21	M25A	X	.518	.518	0	%100
22	M25A	Z	0	0	0	%100
23	M26A	X	.269	.269	0	%100
24	M26A	Z	0	0	0	%100
25	M27B	X	.269	.269	0	%100
26	M27B	Z	0	0	0	%100
27	M28	X	.518	.518	0	%100
28	M28	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.151	.151	0	%100
2	M2	Z	.087	.087	0	%100
3	MP1A	X	.603	.603	0	%100
4	MP1A	Z	.348	.348	0	%100
5	M12	X	.683	.683	0	%100
6	M12	Z	.394	.394	0	%100
7	M13	X	.151	.151	0	%100
8	M13	Z	.087	.087	0	%100
9	M19	X	.424	.424	0	%100
10	M19	Z	.245	.245	0	%100
11	M20	X	.424	.424	0	%100
12	M20	Z	.245	.245	0	%100
13	M21	X	.493	.493	0	%100
14	M21	Z	.285	.285	0	%100
15	MP2A	X	.73	.73	0	%100
16	MP2A	Z	.421	.421	0	%100
17	MP3A	X	.603	.603	0	%100
18	MP3A	Z	.348	.348	0	%100
19	MP4A	X	.603	.603	0	%100
20	MP4A	Z	.348	.348	0	%100
21	M25A	X	.603	.603	0	%100
22	M25A	Z	.348	.348	0	%100
23	M26A	X	.718	.718	0	%100
24	M26A	Z	.415	.415	0	%100
25	M27B	X	.078	.078	0	%100
26	M27B	Z	.045	.045	0	%100
27	M28	X	.147	.147	0	%100
28	M28	Z	.085	.085	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.261	.261	0	%100
2	M2	Z	.452	.452	0	%100
3	MP1A	X	.348	.348	0	%100
4	MP1A	Z	.603	.603	0	%100
5	M12	X	.394	.394	0	%100
6	M12	Z	.683	.683	0	%100
7	M13	X	.261	.261	0	%100
8	M13	Z	.452	.452	0	%100
9	M19	X	.082	.082	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
10	M19	Z	.141	.141	0	%100
11	M20	X	.082	.082	0	%100
12	M20	Z	.141	.141	0	%100
13	M21	X	.285	.285	0	%100
14	M21	Z	.493	.493	0	%100
15	MP2A	X	.421	.421	0	%100
16	MP2A	Z	.73	.73	0	%100
17	MP3A	X	.348	.348	0	%100
18	MP3A	Z	.603	.603	0	%100
19	MP4A	X	.348	.348	0	%100
20	MP4A	Z	.603	.603	0	%100
21	M25A	X	.263	.263	0	%100
22	M25A	Z	.456	.456	0	%100
23	M26A	X	.605	.605	0	%100
24	M26A	Z	1.048	1.048	0	%100
25	M27B	X	.235	.235	0	%100
26	M27B	Z	.407	.407	0	%100
27	M28	X	1.7e-5	1.7e-5	0	%100
28	M28	Z	3e-5	3e-5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	.696	.696	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	.696	.696	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	.788	.788	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	.696	.696	0	%100
9	M19	X	0	0	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	0	0	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	0	0	0	%100
14	M21	Z	.569	.569	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	.843	.843	0	%100
17	MP3A	X	0	0	0	%100
18	MP3A	Z	.696	.696	0	%100
19	MP4A	X	0	0	0	%100
20	MP4A	Z	.696	.696	0	%100
21	M25A	X	0	0	0	%100
22	M25A	Z	.178	.178	0	%100
23	M26A	X	0	0	0	%100
24	M26A	Z	1.03	1.03	0	%100
25	M27B	X	0	0	0	%100
26	M27B	Z	1.03	1.03	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	.178	.178	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.261	-.261	0	%100
2	M2	Z	.452	.452	0	%100
3	MP1A	X	-.348	-.348	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
4	MP1A	Z	.603	.603	0	%100
5	M12	X	-.394	-.394	0	%100
6	M12	Z	.683	.683	0	%100
7	M13	X	-.261	-.261	0	%100
8	M13	Z	.452	.452	0	%100
9	M19	X	-.082	-.082	0	%100
10	M19	Z	.141	.141	0	%100
11	M20	X	-.082	-.082	0	%100
12	M20	Z	.141	.141	0	%100
13	M21	X	-.285	-.285	0	%100
14	M21	Z	.493	.493	0	%100
15	MP2A	X	-.421	-.421	0	%100
16	MP2A	Z	.73	.73	0	%100
17	MP3A	X	-.348	-.348	0	%100
18	MP3A	Z	.603	.603	0	%100
19	MP4A	X	-.348	-.348	0	%100
20	MP4A	Z	.603	.603	0	%100
21	M25A	X	-1.7e-5	-1.7e-5	0	%100
22	M25A	Z	3e-5	3e-5	0	%100
23	M26A	X	-.235	-.235	0	%100
24	M26A	Z	.407	.407	0	%100
25	M27B	X	-.605	-.605	0	%100
26	M27B	Z	1.048	1.048	0	%100
27	M28	X	-.263	-.263	0	%100
28	M28	Z	.456	.456	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.151	-.151	0	%100
2	M2	Z	.087	.087	0	%100
3	MP1A	X	-.603	-.603	0	%100
4	MP1A	Z	.348	.348	0	%100
5	M12	X	-.683	-.683	0	%100
6	M12	Z	.394	.394	0	%100
7	M13	X	-.151	-.151	0	%100
8	M13	Z	.087	.087	0	%100
9	M19	X	-.424	-.424	0	%100
10	M19	Z	.245	.245	0	%100
11	M20	X	-.424	-.424	0	%100
12	M20	Z	.245	.245	0	%100
13	M21	X	-.493	-.493	0	%100
14	M21	Z	.285	.285	0	%100
15	MP2A	X	-.73	-.73	0	%100
16	MP2A	Z	.421	.421	0	%100
17	MP3A	X	-.603	-.603	0	%100
18	MP3A	Z	.348	.348	0	%100
19	MP4A	X	-.603	-.603	0	%100
20	MP4A	Z	.348	.348	0	%100
21	M25A	X	-.147	-.147	0	%100
22	M25A	Z	.085	.085	0	%100
23	M26A	X	-.078	-.078	0	%100
24	M26A	Z	.045	.045	0	%100
25	M27B	X	-.718	-.718	0	%100
26	M27B	Z	.415	.415	0	%100
27	M28	X	-.603	-.603	0	%100
28	M28	Z	.348	.348	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	-.696	-.696	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	-.788	-.788	0	%100
6	M12	Z	0	0	0	%100
7	M13	X	0	0	0	%100
8	M13	Z	0	0	0	%100
9	M19	X	-.653	-.653	0	%100
10	M19	Z	0	0	0	%100
11	M20	X	-.653	-.653	0	%100
12	M20	Z	0	0	0	%100
13	M21	X	-.569	-.569	0	%100
14	M21	Z	0	0	0	%100
15	MP2A	X	-.843	-.843	0	%100
16	MP2A	Z	0	0	0	%100
17	MP3A	X	-.696	-.696	0	%100
18	MP3A	Z	0	0	0	%100
19	MP4A	X	-.696	-.696	0	%100
20	MP4A	Z	0	0	0	%100
21	M25A	X	-.518	-.518	0	%100
22	M25A	Z	0	0	0	%100
23	M26A	X	-.269	-.269	0	%100
24	M26A	Z	0	0	0	%100
25	M27B	X	-.269	-.269	0	%100
26	M27B	Z	0	0	0	%100
27	M28	X	-.518	-.518	0	%100
28	M28	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.151	-.151	0	%100
2	M2	Z	-.087	-.087	0	%100
3	MP1A	X	-.603	-.603	0	%100
4	MP1A	Z	-.348	-.348	0	%100
5	M12	X	-.683	-.683	0	%100
6	M12	Z	-.394	-.394	0	%100
7	M13	X	-.151	-.151	0	%100
8	M13	Z	-.087	-.087	0	%100
9	M19	X	-.424	-.424	0	%100
10	M19	Z	-.245	-.245	0	%100
11	M20	X	-.424	-.424	0	%100
12	M20	Z	-.245	-.245	0	%100
13	M21	X	-.493	-.493	0	%100
14	M21	Z	-.285	-.285	0	%100
15	MP2A	X	-.73	-.73	0	%100
16	MP2A	Z	-.421	-.421	0	%100
17	MP3A	X	-.603	-.603	0	%100
18	MP3A	Z	-.348	-.348	0	%100
19	MP4A	X	-.603	-.603	0	%100
20	MP4A	Z	-.348	-.348	0	%100
21	M25A	X	-.603	-.603	0	%100
22	M25A	Z	-.348	-.348	0	%100
23	M26A	X	-.718	-.718	0	%100
24	M26A	Z	-.415	-.415	0	%100
25	M27B	X	-.078	-.078	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
26	M27B	Z	-.045	-.045	0	%100
27	M28	X	-.147	-.147	0	%100
28	M28	Z	-.085	-.085	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.261	-.261	0	%100
2	M2	Z	-.452	-.452	0	%100
3	MP1A	X	-.348	-.348	0	%100
4	MP1A	Z	-.603	-.603	0	%100
5	M12	X	-.394	-.394	0	%100
6	M12	Z	-.683	-.683	0	%100
7	M13	X	-.261	-.261	0	%100
8	M13	Z	-.452	-.452	0	%100
9	M19	X	-.082	-.082	0	%100
10	M19	Z	-.141	-.141	0	%100
11	M20	X	-.082	-.082	0	%100
12	M20	Z	-.141	-.141	0	%100
13	M21	X	-.285	-.285	0	%100
14	M21	Z	-.493	-.493	0	%100
15	MP2A	X	-.421	-.421	0	%100
16	MP2A	Z	-.73	-.73	0	%100
17	MP3A	X	-.348	-.348	0	%100
18	MP3A	Z	-.603	-.603	0	%100
19	MP4A	X	-.348	-.348	0	%100
20	MP4A	Z	-.603	-.603	0	%100
21	M25A	X	-.263	-.263	0	%100
22	M25A	Z	-.456	-.456	0	%100
23	M26A	X	-.605	-.605	0	%100
24	M26A	Z	-1.048	-1.048	0	%100
25	M27B	X	-.235	-.235	0	%100
26	M27B	Z	-.407	-.407	0	%100
27	M28	X	-1.7e-5	-1.7e-5	0	%100
28	M28	Z	-3e-5	-3e-5	0	%100

Member Area Loads

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

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

	Member	Shape	Code Check	L...	LC	Shear C...	Loc.....	...	phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
1	M2	PIPE_2.0	.548	1...	5	.167	12....		2 6295....	32130	1.872	1.872	...	H1-1a
2	MP1A	PIPE_2.0	.342	5....	11	.135	5.25		9 17855..	32130	1.872	1.872	...	H1-1b
3	M12	PIPE_3.0	.261	3....	11	.292	.875		11 58029..	65205	5.749	5.749	...	H3-6
4	M13	PIPE_2.0	.445	6....	11	.151	6.25		7 6295....	32130	1.872	1.872	...	H1-1b
5	M19	HSS3X3...	.243	0	11	.275	1.5...	z	11 11935..	121716	10.005	10.005	...	H3-6
6	M20	HSS3X3...	.258	0	11	.289	1.4...	z	11 11935..	121716	10.005	10.005	...	H3-6
7	M21	PIPE_2.0	.286	3	11	.262	3		11 30698..	32130	1.872	1.872	...	H3-6
8	MP2A	PIPE_2.5	.171	5....	11	.082	5.25		2 33961..	50715	3.596	3.596	...	H1-1b
9	MP3A	PIPE_2.0	.235	5....	39	.124	5.25		11 17855..	32130	1.872	1.872	...	H1-1b
10	MP4A	PIPE_2.0	.195	4....	48	.091	5.25		11 17855..	32130	1.872	1.872	...	H1-1b
11	M25A	PIPE_2.0	.166	0	48	.006	7.4...		23 16517..	32130	1.872	1.872	...	H1-1b
12	M26A	L2.5x2.5...	.100	2....	12	.015	5.9...	z	12 12267..	38556	1.114	2.159	...	H2-1

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

	Member	Shape	Code Check	L...	LC	Shear C...	Loc...	...	...	phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
13	M27B	L2.5x2.5...	.159	3...	9	.022	5.9...	y	8	12267...	38556	1.114	2.159	...	H2-1
14	M28	PIPE_2.0	.271	0	3	.009	0		3	16517...	32130	1.872	1.872	...	H1-1b

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	N41A	max	706.876	11	844.347	24	1510.186	1	-.013	6	0	75	2.22	11
2		min	-634.138	5	30.162	6	-804.094	7	-.352	24	0	1	-1.905	5
3	N42	max	479.467	5	816.238	21	335.911	1	-.058	3	0	75	2.39	11
4		min	-578.728	11	138.767	3	-934.735	7	-.34	21	0	1	-2.073	5
5	N46A	max	105.536	6	56.276	24	423.116	12	0	75	0	75	0	75
6		min	-219.576	12	17.652	68	-238.176	6	0	1	0	1	0	1
7	N49	max	2043.696	11	567.261	5	453.896	11	.005	9	0	2	0	8
8		min	-2046.406	3	-267.766	11	-898.442	5	-.003	3	0	8	-.002	2
9	N52	max	496.343	3	83.283	9	923.587	3	0	75	0	75	0	75
10		min	-378.224	9	-36.22	2	-736.465	9	0	1	0	1	0	1
11	Totals:	max	1720.672	10	2007.65	17	2514.306	1						
12		min	-1720.684	4	625.928	74	-2514.339	7						

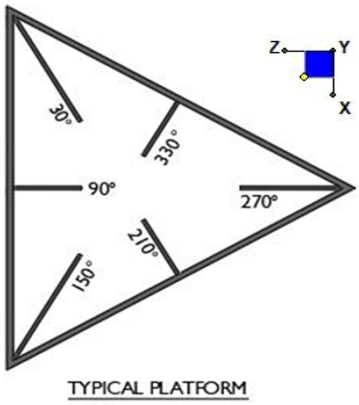
Client:	Verizon Wireless	Date:	12/21/2021
Site Name:	SCOTLAND CT		
Project No.	21777796A		
Title:	Antenna Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

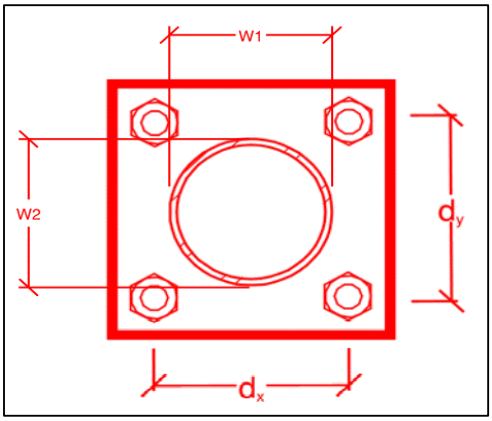
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N41A	90
N42	90



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	10
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	1.25
Bolt Type:	A307
Bolt Diameter (in):	0.5
Required Tensile Strength (kips):	7.9
Required Shear Strength (kips):	6.5
Tensile Strength / bolt (kips):	6.4
Shear Strength / bolt (kips):	3.8
Tensile Capacity Overall:	**30.7%***
Shear Capacity Overall:	**42.1%**



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

Maser Consulting Connecticut

Subject	*TIA-222-H Usage*	
Site Information	*Site ID:*	*467618-VZW / SCOTLAND CT*
	Site Name:	*SCOTLAND CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*165 Huntington Road* *Scotland, Connecticut 06247* *Windham County*
	Latitude:	*41.695911°*
	Longitude:	*-72.097069°*
Structure Information	*Tower Type:*	*240-Ft Self Support*
	Mount Type:	*12.50-Ft T-Frame*

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H Standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

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

Sincerely,

Peter Albano, P.E.
Senior Project Manager

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' T-FRAME

TOWER OWNER: SBA TOWERS
TOWER OWNER SITE NUMBER: CT00990

CARRIER SITE NAME: SCOTLAND CT
CARRIER SITE NUMBER: 467618
FUZE ID: 16078712

165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT 06247
WINDHAM COUNTY

LATITUDE: 41.695911° N
LONGITUDE: 72.097069° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 122 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 367.1'

ICE LOADS

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

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .189
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS
ADDRESS: 118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP: WESTBOROUGH, MA 01581
CONTACT: ANDREW CANDIELLO
EMAIL: ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY: MASER CONSULTING
CONTACT: PETER ALBANO
PHONE: 856-797-0412
E-MAIL: PETER.ALBANO@COLLIERSENGINEERING.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10123269
VZW LOCATION CODE (PSLC): 467618
ANALYSIS DATE: 12/21/2021

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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

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SCALE: AS SHOWN
JOB NUMBER: 21777796A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
3	2/17/2022	ISSUED FOR CONSTRUCTION	CDH	DRH
2	12/23/2021	ISSUED FOR CONSTRUCTION	DC	DRH
1	11/24/2021	ISSUED FOR CONSTRUCTION	DC	DRH
0	08/27/2021	ISSUED FOR CONSTRUCTION	DC	DRH

STATE OF CONNECTICUT
PETER MICHAEL ALBANO
No. 35449
LICENSED PROFESSIONAL ENGINEER
02/21/22

SITE NAME:

SCOTLAND CT
467618

165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT
06247
WINDHAM COUNTY

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

SHEET TITLE: TITLE SHEET

SHEET NUMBER: ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	VZWSMART	VZWSMART-SFK1	TIE BACK ASSEMBLY	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PRCTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.	72	216
3		VZWSMART-SFK3-SL	V-BRACING KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1	117	351
6		VZWSMART-MSK1	CROSSOVER PLATE		14	84

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	-	-	84" LONG, P2 1/2 STD	GALVANIZED.CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).	35	105
					TOTAL:	756

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTES:

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

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WINDHAM COUNTY

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

SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: SBOM-1

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO
      PETER.ALBANO@COLLIERSENGINEERING.COM
   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC COTE).
9. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
10. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
11. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
12. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
13. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

WELDING NOTES

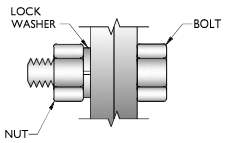
1. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTION (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE, DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A THIRD PARTY CERTIFIED WELD INSPECTOR (CWI) THROUGHOUT THE ENTIRETY OF THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
3. THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CWI REPORT, THAT ALL WELDING OPERATIONS PRE, DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF ALL WELDING. ALL CWI WELD INSPECTION DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.
4. IN CASES WHERE A WELD IS SPECIFIED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT-UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.
5. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
6. CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.

BOLT SCHEDULE (IN.)

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

WORKABLE GAGES (IN.)

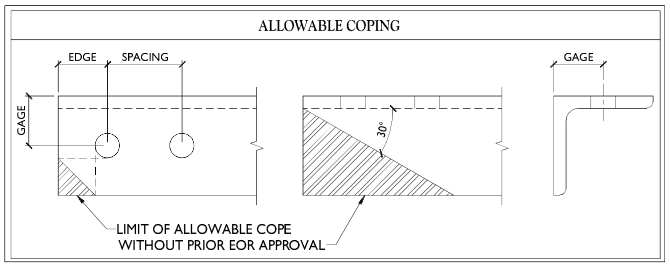
LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

NOTES:

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



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REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
3	2/17/2022	ISSUED FOR CONSTRUCTION	CDH	DRH
2	12/23/2021	ISSUED FOR CONSTRUCTION	DC	DRH
1	11/24/2021	ISSUED FOR CONSTRUCTION	DC	DRH
0	08/27/2021	ISSUED FOR CONSTRUCTION	DC	DRH

STATE OF CONNECTICUT
PETER MICHAEL ALBANO
No. 35449
LICENSED PROFESSIONAL ENGINEER
2/21/22

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SITE NAME:

SCOTLAND CT
467618

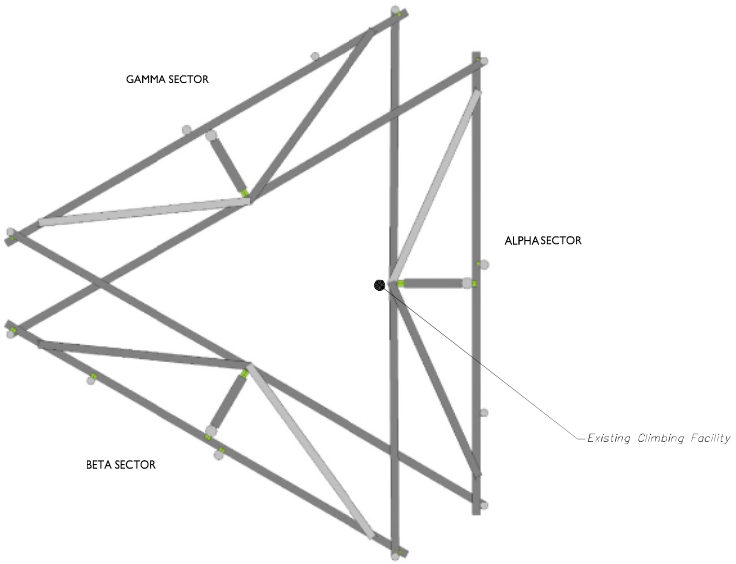
165 HUNTINGTON ROAD
SCOTLAND, CONNECTICUT
06247
WINDHAM COUNTY

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

SHEET TITLE:
MODIFICATION NOTES

SHEET NUMBER:
SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HUDSON DESIGN GROUP, LLC ON 6/4/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (228'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

CLIMBING FACILITY PHOTO

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Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
CLIMBING FACILITY DETAIL

SHEET NUMBER:
SCF-1

LEGEND:

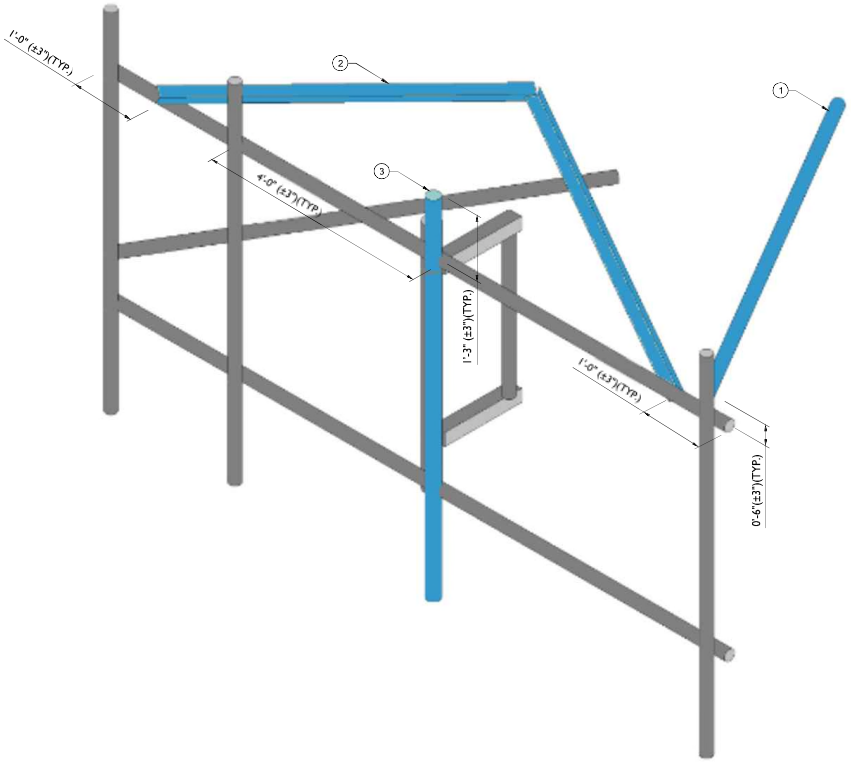
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	228'-0"	3	PROPOSED TIE BACK ASSEMBLY (PART #: VZWSMART-SFK1)	CONNECT OTHER END TO ADJACENT TOWER LEG. PROPOSED TIE-BACK SHALL EXTEND NO MORE THAN 12" BEYOND THE TOWER LEG. CONTRACTOR SHALL TRIM AS REQUIRED AND PROTECT CUT END WITH TWO COATS OF ZINGA OR ZINC COTE.
2		3	PROPOSED V-BRACING KIT (PART #: VZWSMART-SFK3-SL)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1
3		3	84" LONG, P2 1/2 STD MOUNT PIPE	GALVANIZED.CONNECT NEW MOUNT PIPE TO EXISTING HORIZONTALS WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).

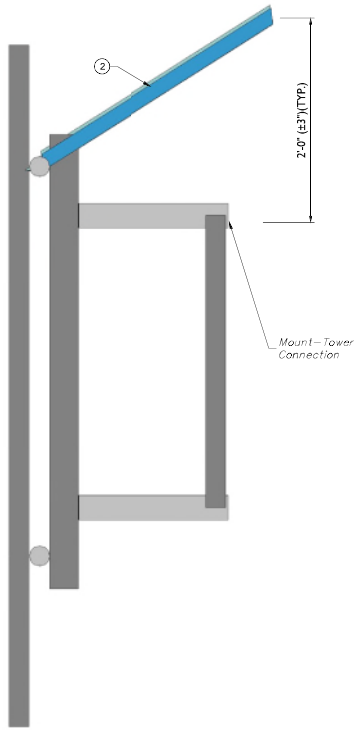
NOTES.

MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.



1 PROPOSED ISOMETRIC VIEW

SCALE : N.T.S.



2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

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Fax: 856.722.1120

SHEET TITLE :

MODIFICATION DETAILS

SHEET NUMBER :

SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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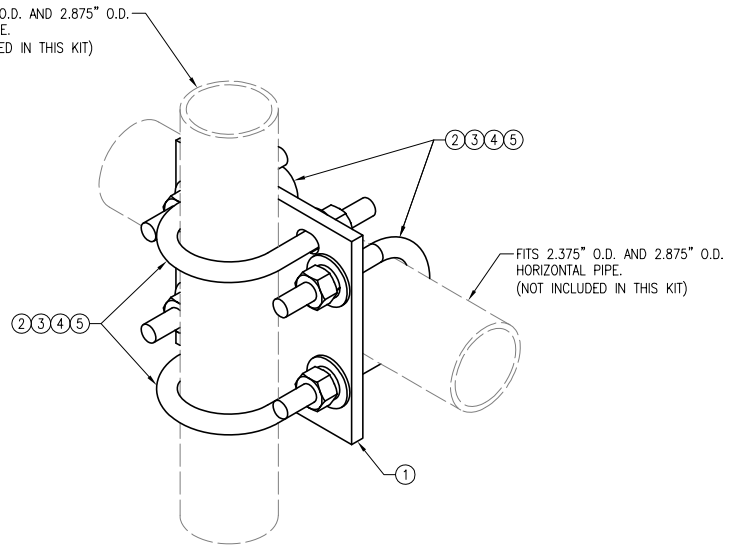
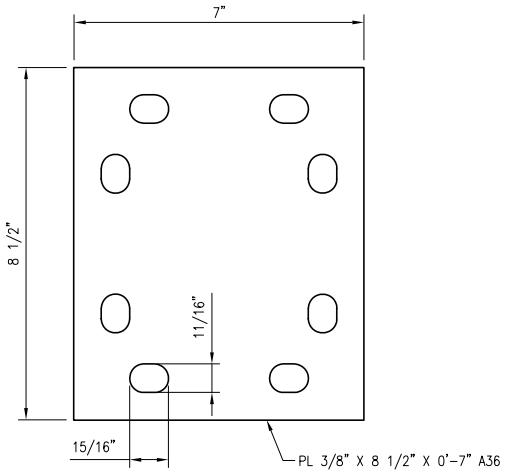
SHEET TITLE:

MOUNT PHOTOS

SHEET NUMBER:

SS-2





PL375-857

VZWSMART-MSK1 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	14

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

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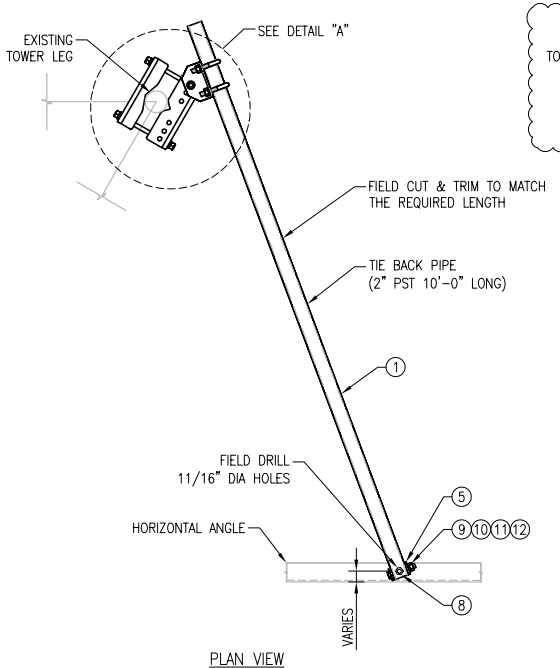
DRAWN BY: H.R	CHECKED BY: HMA

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

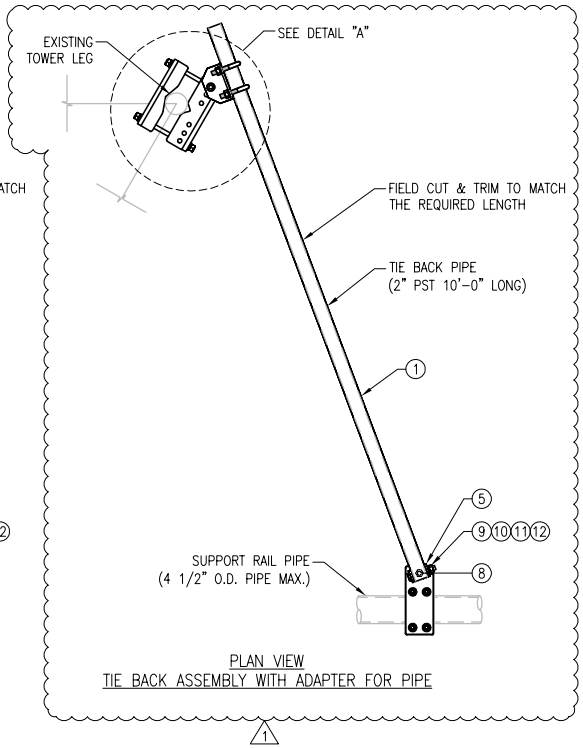
SHEET TITLE:

VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER:	REV #:
VZWSMART-MSK1	0

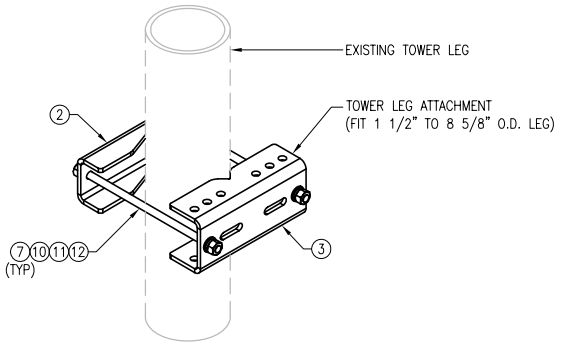


PLAN VIEW
TIE BACK ASSEMBLY

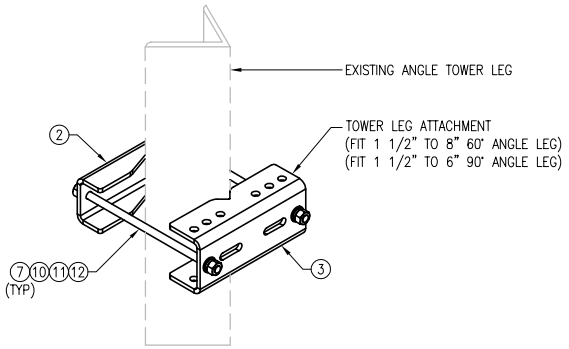


PLAN VIEW
TIE BACK ASSEMBLY WITH ADAPTER FOR PIPE

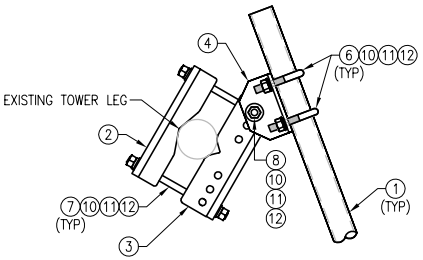
1



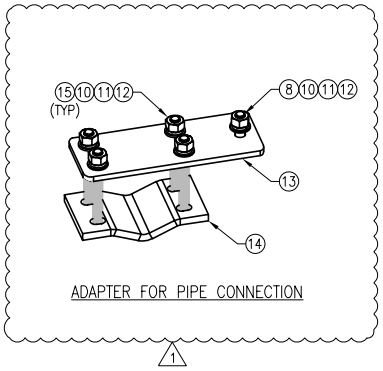
ROUND TOWER LEG ATTACHMENT DETAIL



ANGLE TOWER LEG ATTACHMENT DETAIL



DETAIL "A"



ADAPTER FOR PIPE CONNECTION

1

VZWSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-B 35KSI	SFK1-F1	38
2	1	BP825-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BP6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	15	LW-625	5/8" HDG LOCK WASHER	---	0
12	15	NUT-625	5/8" HDG HEX NUT	---	2
13	1	PL375-4511	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	---	BOLT 5/8" X 6" FULL THREAD SAE GR 5	---	0
			GALVANIZED WT		84

1

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

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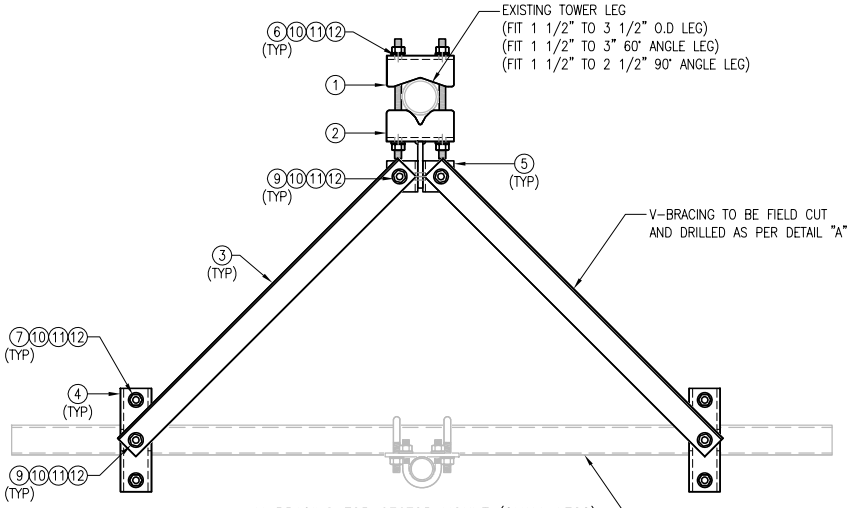
DRAWN BY: BT	CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

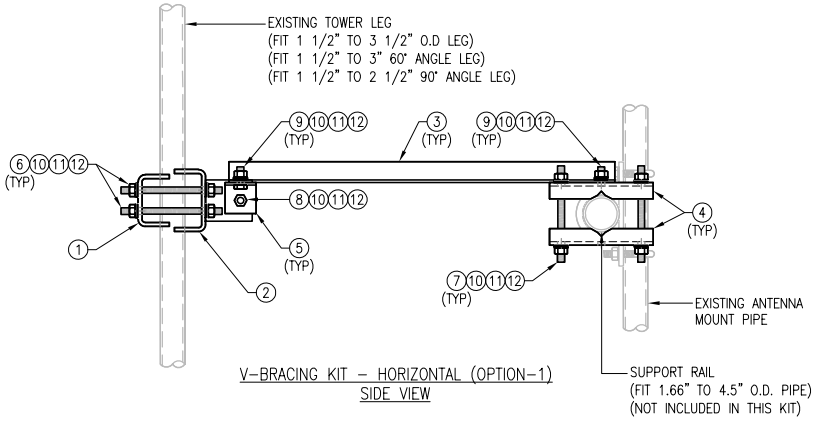
SHEET TITLE:
VZWSMART-SFK1
TIE BACK ASSEMBLY

SHEET NUMBER: VZWSMART-SFK1

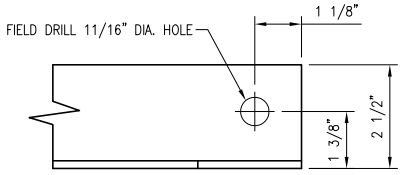
REV #: 1



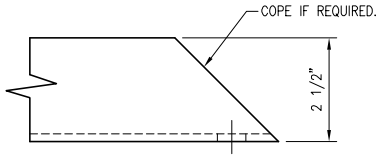
V-BRACING FOR SECTOR MOUNT (SMALL LEGS)
PLAN VIEW



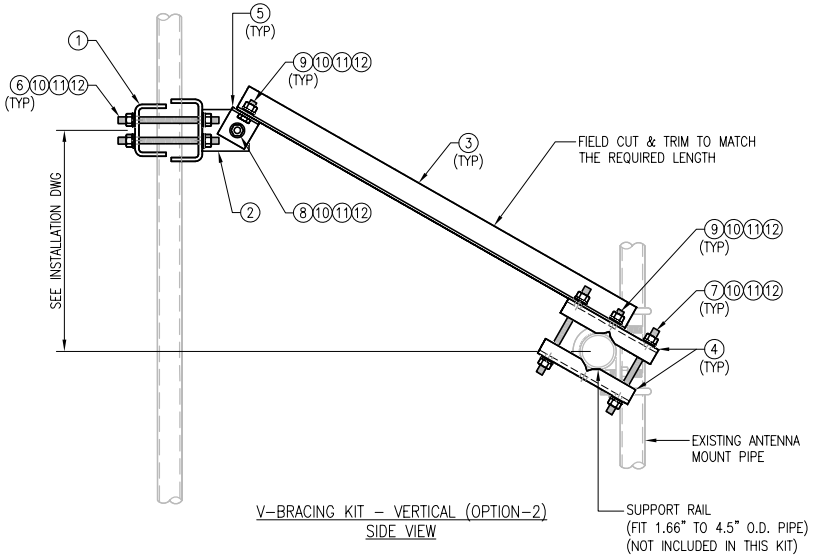
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT - VERTICAL (OPTION-2)
SIDE VIEW

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

VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE	VBSM-SL-F1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-F3	11
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	4	---	BOLT 5/8" X 1 3/4" A325	---	--
10	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
11	21	LW-625	5/8" HDG LOCK WASHER	---	0
12	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	117

VzW SMART Tool© Vendor

verizon

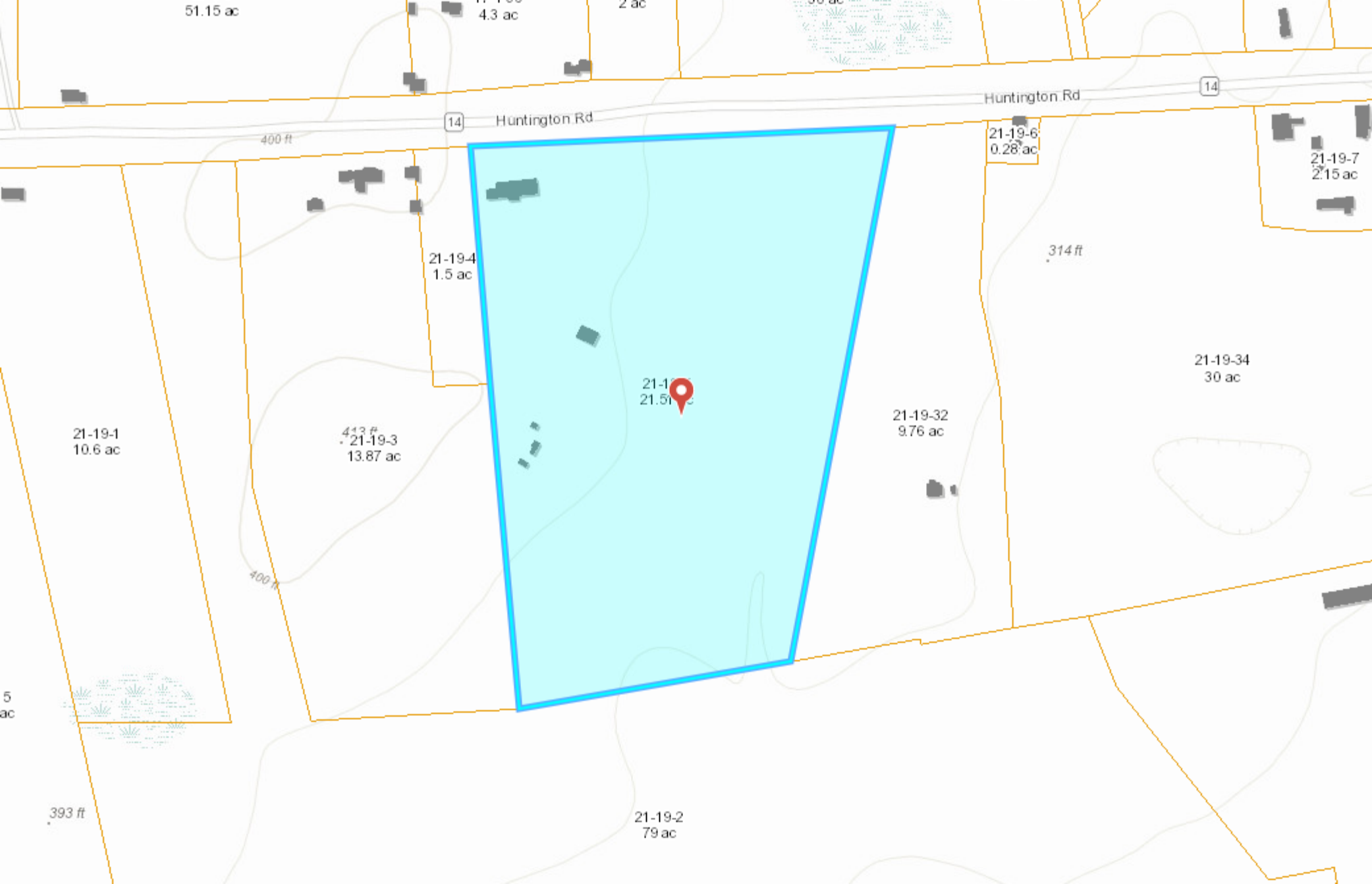
DRAWN BY: BT | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:
VZWSMART-SFK3-SL
V-BRACING KIT
FOR SMALL LEGS

SHEET NUMBER: VZWSMART-SFK3-SL
REV #: 0

ATTACHMENT 5


51.15 ac
4.3 ac
2 ac
Huntington Rd
14
Huntington Rd
14
400 ft
21-19-6
0.28 ac
21-19-7
2.15 ac
21-19-4
1.5 ac
314 ft
21-19-34
30 ac
21-19-1
10.6 ac
413 ft
21-19-3
13.87 ac
21-19-32
9.76 ac
400 ft
393 ft
21-19-2
79 ac

neccog

Ashford Brooklyn Canterbury Chaplin Eastford Hampton Killingly Plainfield Pomfret Putnam Scotland Sterling Thompson Union Voluntown Woodstock

Parcel Information:

Report Generated: *3/22/2022 11:24:14 AM*

GIS ID: CT-123-21-19-5

Assessment: $492,800.00

Owner Name: ***PASSARELLO PAULINE M & GUY T***

Appraisal: $703,800.00

Street Address: 165 HUNTINGTON RD

Mailing Address: PO BOX 153
SCOTLAND CT 06264

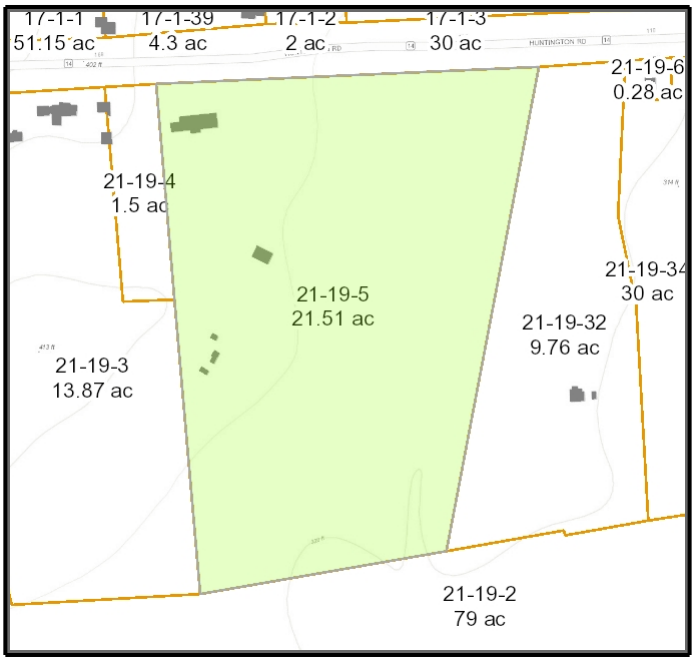
Land: 21.51 **Buildings:** 2.00

	Land Value:	Improvement Value:	Total Value:
Appraised	$222,200.00	$481,600.00	$703,800.00
Assessed		$337,200.00	$492,800.00

Sale Date: **Sale Price:**

Year Built: 1951 **Primary Structure Area:** 1,410.00 sq. ft.

No Photo Available



Taxlot highlighted in blue

neccog

Ashford Brooklyn Canterbury Chaplin Eastford Hampton Killingly Plainfield Pomfret Putnam Scotland Sterling Thompson Union Voluntown Woodstock

Parcel Information:

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Mailing Address: PO BOX 153

SCOTLAND CT 06264

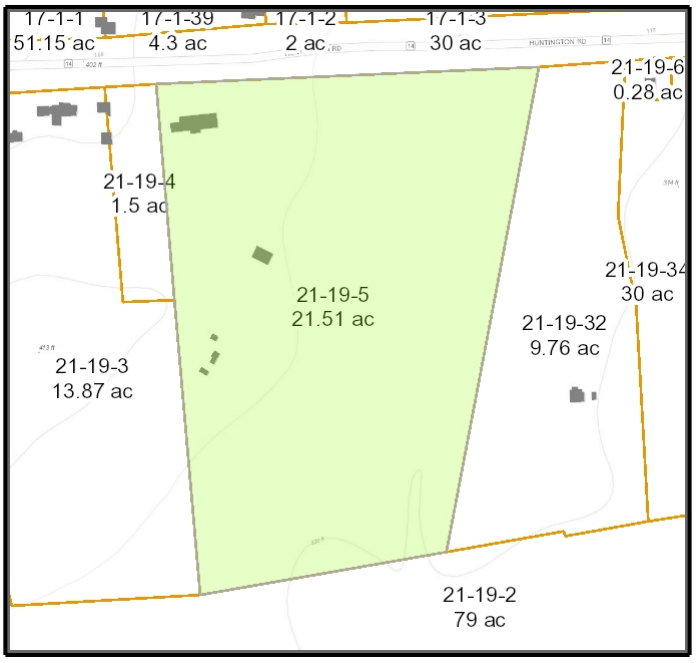
Land: 21.51 **Buildings:** 2.00

	Land Value:	Improvement Value:	Total Value:
Appraised	$222,200.00	$481,600.00	$703,800.00
Assessed		$337,200.00	$492,800.00

Sale Date: **Sale Price:**

Year Built: 1953 **Primary Structure Area:** 3,052.00 sq. ft.

No Photo Available



Taxlot highlighted in blue

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

SCOTLAND

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	neopost 03/23/2022 US POSTAGE $002.99 ZIP 06103 041L1220
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Gary Greenberg, First Selectman Town of Scotland 9 Devotion Road Scotland, CT 06264				
2.	Melissa Gil, Zoning Enforcement Officer Town of Scotland 9 Devotion Road Scotland, CT 06264				
3.	Pauline and Guy Passarello P.O. Box 153 Scotland, CT 06264				
4.					
5.					
6.					

OLD LYME HOUSE STATION MAR 23 2022 USPS

PS Form **3665**, January 2017 (Page 1 of 1) PSN 7530-17-000-5549

See Reverse for Instructions