

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

October 19, 2021

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification
2 Hinckley Hill Road, Norwich, 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 related equipment on the ground, near the base of the tower. The original tower was approved by the City of Norwich (“City”) in September of 1999. Cellco’s shared use of the tower was approved by the Council in June of 2000 (TS-BAM-148-000607). A copy of the City’s tower approval and Cellco’s tower share approval are included in Attachment 1.

Cellco now intends to modify its facility by installing three (3) new Samsung MT6407-77A antennas (one antenna per sector). A set of project plans showing Cellco’s proposed facility modifications and the new antennas specifications are included in Attachment 2.

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

Melanie A. Bachman, Esq.
October 19, 2021
Page 2

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 platform.
2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The installation of Cellco's new antennas 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 Maximum Permissible Exposure table, including Cellco's proposed facility modifications, and Cellco's far field tables are 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 mounts, with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

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

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

Melanie A. Bachman, Esq.
October 19, 2021
Page 3

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Enclosures

Copy to:

Peter A. Nystrom, Norwich Mayor
Deanna Rhodes, Director of Planning and Neighborhood Services
17 Mile Real Estate LLC, Property Owner
Aleksey Tyurin

ATTACHMENT 1



FILE COPY

CITY OF NORWICH
CONNECTICUT

CERTIFIED MAIL
#Z149574215

SITE PLAN APPROVAL

Date: Sept. 22, 1999

Site Development Plan #805 - Cordless Data Transfer, Inc.; construction of 140-ft. wireless communications tower & equipment pad.

Name: Cordless Data Transfer, Inc.
Box 363
17 Ridgewood Drive
Marlborough, CT 06447

Location: in the Town of Norwich off 2 Hinckley Hill, Preston.

The final plan of Site Development Plan # 805 as referenced above was considered at the regular meeting of the Commission on the City Plan held on Sept. 21, 1999.

After careful consideration the Commission voted unanimously to approve the site plan.

A coastal site plan review was not required in accordance with Chapter 444 of the Connecticut General Statutes. After careful consideration the Commission on the City Plan voted n/a to n/a the coastal site plan application.

The approval of the above referenced site plan is subject to the following conditions and/or modifications:

1. Bond in the amount of \$25,000.00 for site work shall be posted prior to endorsement of the plan;
2. Bond in the amount of \$12,000.00 for removal of the facility in the event it is abandoned shall be posted prior to endorsement of the plan;
3. Pursuant to Sec. 7.5.6(a) of the Zoning Regulations, the fifty (50) foot buffer around the tower shall be provided in perpetuity and noted on the plan prior to endorsement of the plan;
4. The Memorandum of Management Agreement shall be filed with the City Clerk prior to endorsement of the plan.

Please provide the following plans, bond, and deeds to the Planning Department, 23 Union Street, within 60 days after the date of approval.

1. Two sets of mylars and six sets of prints of the final site plan; one set of the mylars shall be produced by one of the following processes: wash-off photographic polyester film; fixed line photographic polyester film; original ink drawing on polyester film or linen. All modifications of approval shall be incorporated into the final plan.

2. All R.O.W. and/or easement deeds associated with the site plan.

3. Post a passbook or surety bond with the Commission on the City Plan in a form acceptable to the Corporation Counsel and in the amount approved by the Director of Public Works.

The Chairperson of the Commission on the City Plan must endorse the site plans prior to filing the approved plans with the City Clerk and prior to the issuance of a zoning compliance permit and a building permit.

The Planning Department will contact you after the site plan has been endorsed by the chairperson. You are responsible for filing the plan with the City Clerk within 90 days after approval by the Commission; provided acceptable plans and bond are submitted by the applicant. If an acceptable plan is not filed with the clerk within the 90 day period, the Commission's approval is invalid.

CHANGES TO THE APPROVED PLAN: All site activities shall be constructed in accordance with the approved plans, specifications and documents of record. Any change to the plans must be approved by the Commission on the City Plan.

EROSION AND SEDIMENT CONTROL: The erosion and sediment control measures shall be installed in accordance with the Connecticut Guidelines for Erosion and Sediment Control; such measures shall be installed prior to site disturbance. Additional erosion and sediment control measures shall be provided if determined to be necessary by a representative of the Planning Department or Public Works Department.

PRE-CONSTRUCTION CONFERENCE: It is the responsibility of the permittee or the contractor to schedule a pre-construction conference with the Planning Department for the purpose of inspecting the installation of the erosion and sediment control measures, and Public Works to set up an inspection schedule for road, drainage and sidewalk construction. City Hall telephone number: Planning Department, (860) 823-3766; Public Works Department, (860) 823-3798.

PUBLIC UTILITIES: Contact the Department of Public Utilities for an inspection of the sewer, water, electric and gas lines installation.

TIME PERIODS: Site plan approval is valid for one year, however, an extension to such approval may be granted by the Commission. In addition, all construction in the approved site plan must be completed within 5 years, based on Section 8.3.i of the Connecticut General Statutes.

CONSTRUCTION REQUIREMENTS: The following conditions shall be a requirement of the approval:

1. Unsuitable material in the pavement areas must be removed and replaced with suitable material as directed by the City Road Inspector.

2. If blasting is required for construction, a pre-blast survey shall be conducted prior to blasting. Contact the Fire Marshal, telephone (860) 887-2780.

ZONING PERMIT: After the plan has been filed, a zoning permit can be applied for through the zoning enforcement officer: telephone (860) 823-3766.

BUILDING PERMIT: For any building construction, please submit building plans and separate application to the building inspector.

CERTIFICATE OF COMPLIANCE will be issued after all parking, sidewalks, recreation area (for multi-family development) and public safety concerns are addressed in accordance with the approved site plan.

CERTIFICATE OF OCCUPANCY is issued by the building inspector. Certificate of Compliance must be obtained prior to the issuance of a Certificate of Occupancy.

AS-BUILT DRAWING may be required by the Commission prior to the final release of the bond.

Congratulations on the successful completion of your application.



Peter W. Davis
Planning Director

cc-Director of Public Works

-City Engineer

-Building Inspector

-John F. Bilda, Engineer, Public Utilities Dept.

Memorandum of Management Agreement

This memorandum evidences that a Management Agreement was made and entered into by a written Agreement dated July 1, 1997 by and between Mr. James C. Irwin and Mrs. LaVerne G. Irwin, jointly, as individuals (Owners) and owners of property located in the City of Norwich, Connecticut located on assessors map # 27 Block 1 lot 6A, and Cordless Data Transfer, Incorporated, a Connecticut corporation (CDT) maintaining an office at 17 Ridgewood Drive Marlborough, Connecticut 06447.

Such Agreement provides in part that Owners grant CDT unrestricted access to the proposed tower site on the property for the installation, operation and maintenance of driveways, electric and telephone service and the tower structure and equipment and facilities located thereon.

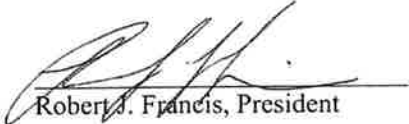
The term of this agreement is for a period of five years with three five year, automatic extension periods at the option of the Owners.

CDT and the Owners hereby acknowledge that the City of Norwich has a rule or regulation requiring that the tower structure be removed should it become abandoned or cease to be used as a licensed communications facility. Should the tower become abandoned and it is not removed as per the City's regulations, then, the Owners and CDT grant to the City of Norwich permission to enter the property and remove the tower structure.

Complete copies of this Management Agreement are on file at the office of Cordless Data Transfer, Inc. at 17 Ridgewood Drive, Marlborough, Connecticut 06447.

In witness whereof the parties have executed this Memorandum as of the date below.

Cordless Data Transfer, Inc. (CDT)


Robert J. Francis, President

9/15/99
Date

James C. Irwin

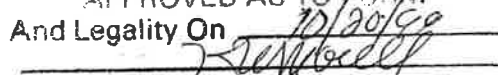


15 Sept 1999
Date

LaVerne G. Irwin



15 Sept 1999
Date

APPROVED AS TO FORM
And Legality On 10/20/99

Corporation Counsel
City of Norwich, Conn.

RECEIVED FOR RECORD AT NORWICH, CONN.
ON 10-20-99 AT 4:15 P. M.
Attest Beverly C. Muldoon, Town Clerk

294593

Received for Record in Norwich, CT

CT 20 1994 at 4:15 PM, and

Recorded in Norwich Land Records in

Vol. 1463 at Page 219

Beverly C. Muldrew Town Clerk

My word - Ed. Finnea

Bd 10 -

June 26, 2000

Sandy M. Carter
Manager-Regulatory
Verizon Wireless
20 Alexander Drive
P.O. Box 5029
Wallingford, CT 06492-2430

RE: TS-BAM-104-000607 - Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 2 Hinckley Hill Road in Norwich, Connecticut.

Dear Ms. Carter:

At a public meeting held June 20, 2000, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point 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.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction. The proposed shared use is to be implemented as specified in your letter dated June 6, 2000.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/PMA/grg

c: Honorable Richard J. Abele, President City Council, City of Norwich

ATTACHMENT 2



WIRELESS COMMUNICATIONS FACILITY

SITE NAME:

NORWICH EAST CT

EVEREST SITE #702499

2 HINCKLEY HILL RD.

PRESTON, CT 06365

CITY OF NORWICH

ANTENNA MODIFICATION

PROJECT SUMMARY

SITE NAME:	NORWICH EAST CT
SITE ADDRESS:	2 HINCKLEY HILL RD. PRESTON, CT 06365
PROPERTY OWNER:	17 MILE REAL ESTATE LLC 69 HARRY ST. CONSHOHOCKEN, PA 19428
TOWER OWNER/MGMT:	EVEREST SITE #702499
PARCEL ID:	119-001-001.000-0001
COORDINATES:	41° 30' 53.4528" N 72° 03' 42.0768" W
VERIZON CONSTRUCTION:	WALTER CHARCZYNSKI (860) 306-1806
VERIZON REAL ESTATE:	ALEX TYURIN (860) 550-3195

AERIAL MAP



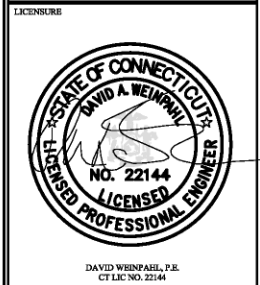
SHEET INDEX

DE-1	TITLE SHEET
DE-2	KEY MAP & PLOT PLAN
DE-3	SITE LAYOUT & ELEVATION
DE-4	ANTENNA PLANS & ELEVATION
DE-5	RF PLUMBING DIAGRAM & B.O.M.
DE-6	GENERAL CONSTRUCTION NOTES

verizon
WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

On Air Engineering, LLC
88 Foundry Pond Road
Cold Spring, NY 10516
201-456-4624
onair@optonline.net



SUBMITTALS		
0	03.04.21	REVIEW
1	05.26.21	PERMITTING/CONSTRUCTION
2	12.29.21	REVISED PER NEW RFDS

NO	DATE	DESCRIPTION
DRAWN BY:	AS	
CHECKED BY:	DW	

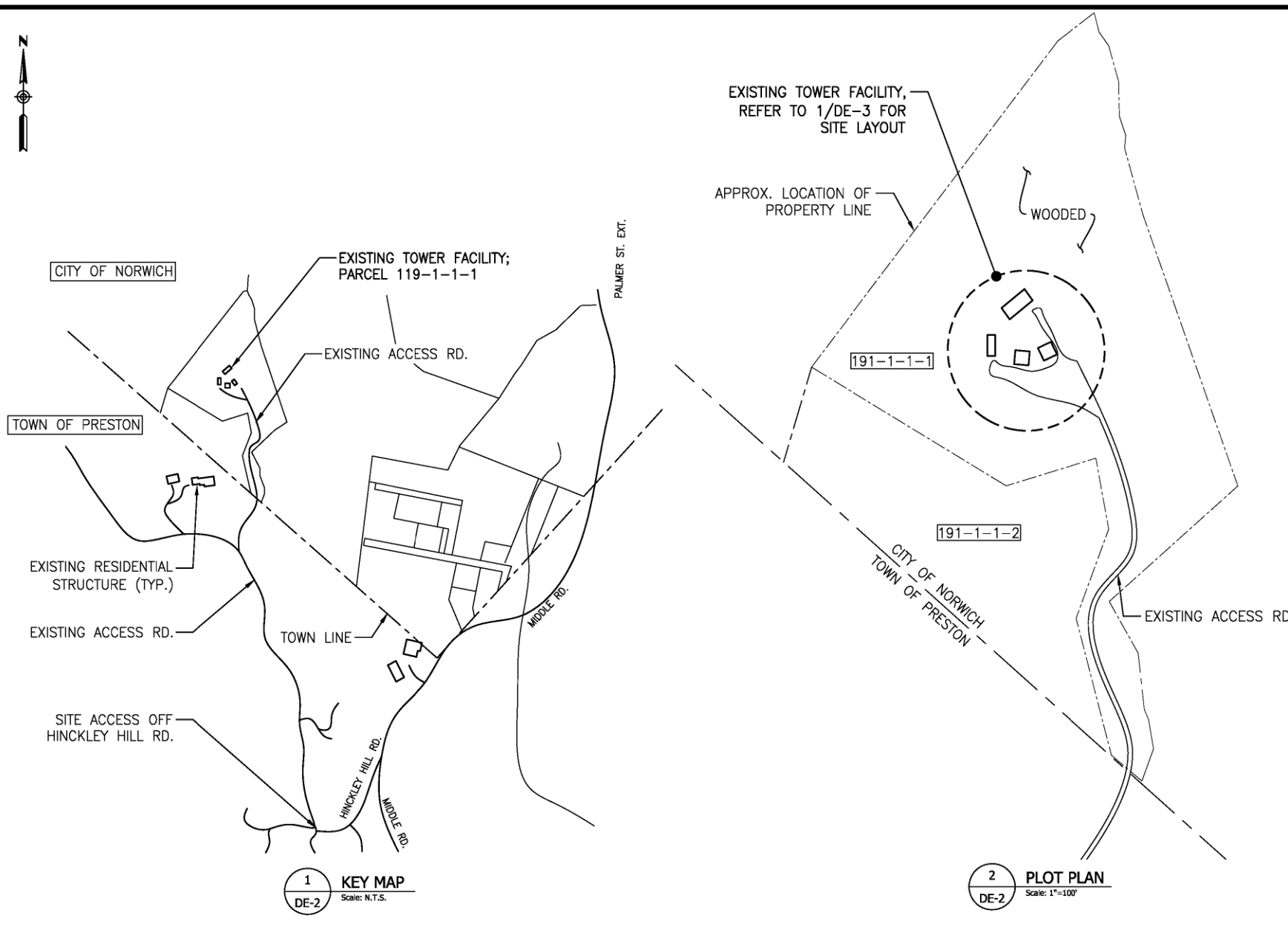
PROJECT NAME:
**ANTMO
MT6407
DESIGN EXHIBITS**

SITE NAME:
NORWICH EAST CT

SITE ADDRESS:
**EVEREST SITE #702499
2 HINCKLEY HILL RD.
PRESTON, CT 06365**

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
DE-1



WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

On Air Engineering, LLC
88 Foundry Pond Road
Cold Spring, NY 10516
201-456-4624
onair@optonline.net

LICENSURE

DAVID WEINPAHL, P.E.
CT LIC NO. 22144

SUBMITTALS

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1	05.26.21	PERMITTING/CONSTRUCTION
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NO DATE DESCRIPTION

DRAWN BY: AS

CHECKED BY: DW

PROJECT NAME:

ANTMO
MT6407
DESIGN EXHIBITS

SITE NAME:

NORWICH EAST CT

SITE ADDRESS:

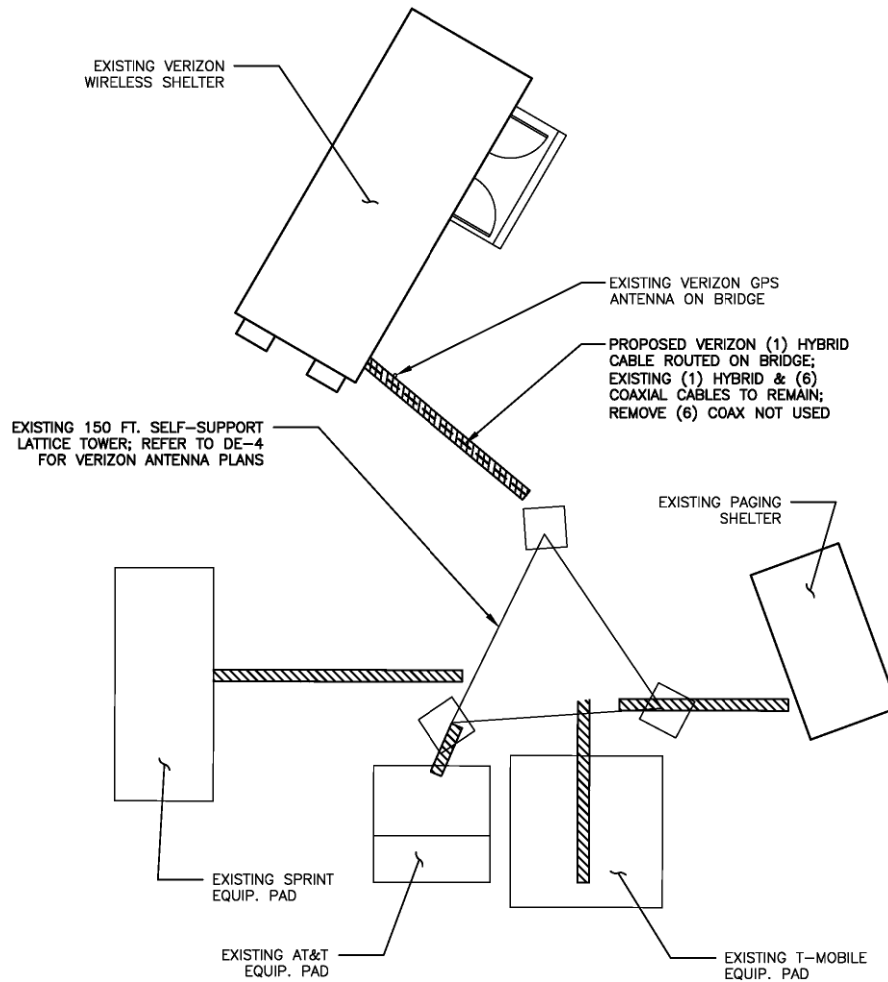
EVEREST SITE #702499
2 HINCKLEY HILL RD.
PRESTON, CT 06365

SHEET TITLE:

KEY MAP &
PLOT PLAN

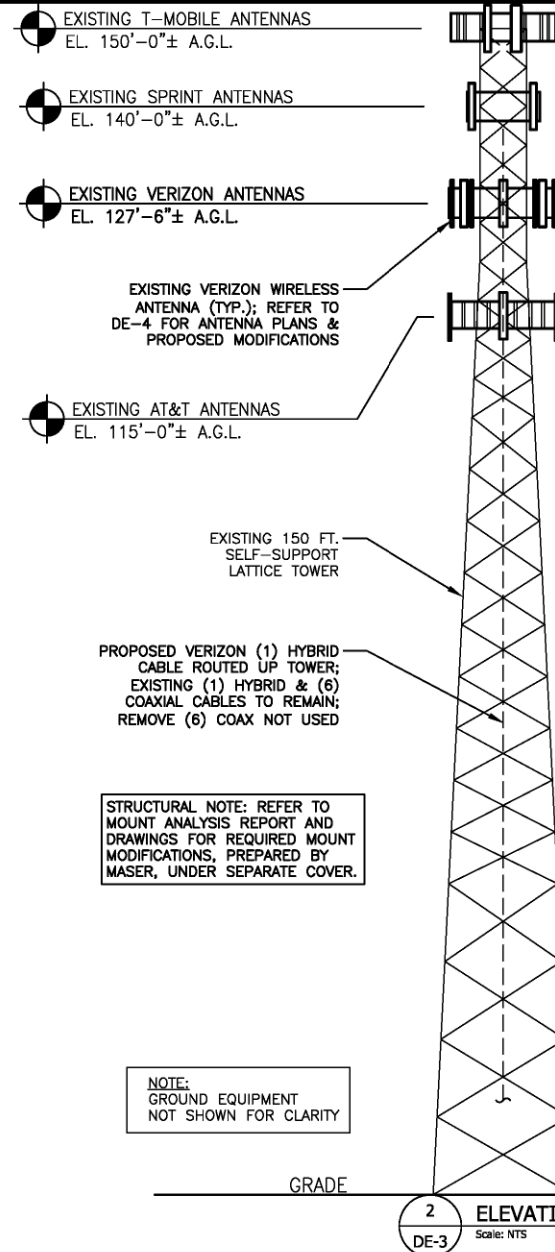
SHEET NUMBER:

DE-2



NOTES:
1. SITE LAYOUT IS COMPILED FROM EXISTING DRAWINGS ON FILE WITH THE CT SITING COUNCIL AND A LIMITED DESIGN VISIT ON 11-02-20 FOR A PROPOSED VERIZON ANTENNA MODIFICATION.
2. PLANS ARE DIAGRAMMATIC ONLY AND NOT TO BE SCALED.
3. REFER TO STRUCTURAL TOWER AND MOUNT ANALYSIS REPORTS, BY OTHERS UNDER SEPARATE COVER, FOR ANY REQUIRED TOWER & MOUNT REINFORCEMENTS, WHICH MUST BE PERFORMED PRIOR TO ANY OTHER VERIZON ANTENNA MODIFICATIONS.

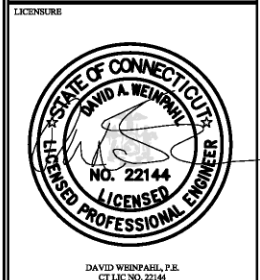
1 SITE LAYOUT
DE-3 Scale: 3/32" = 1'-0"



verizon
WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

On Air Engineering, LLC
88 Foundry Pond Road
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201-456-4624
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NO.	DATE	DESCRIPTION
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CHECKED BY:	DW	

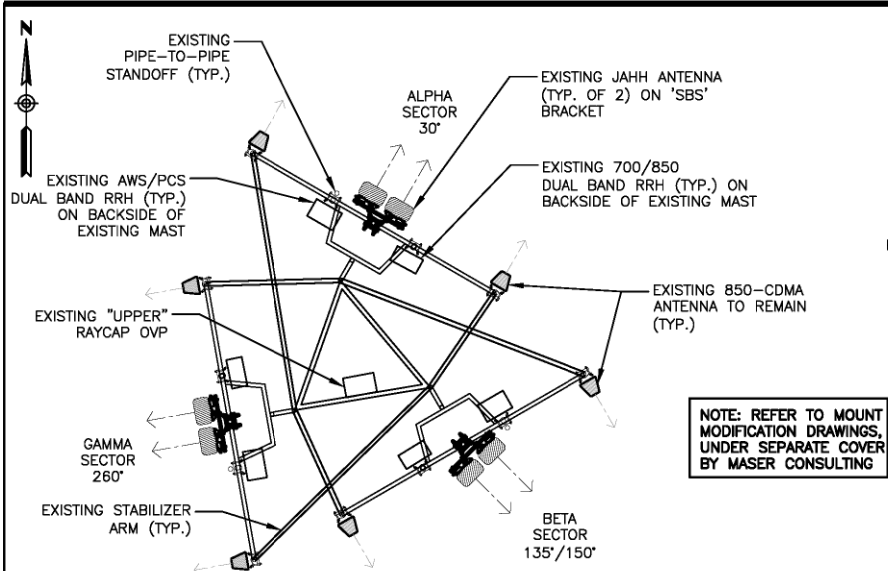
PROJECT NAME:
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MT6407
DESIGN EXHIBITS**

SITE NAME:
NORWICH EAST CT

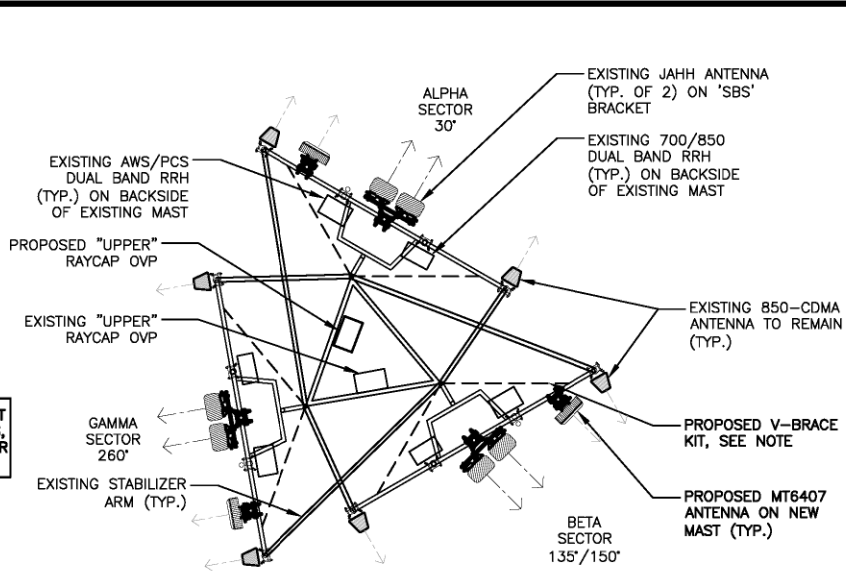
SITE ADDRESS:
**EVEREST SITE #702499
2 HINCKLEY HILL RD.
PRESTON, CT 06365**

SHEET TITLE:
**SITE LAYOUT &
ELEVATION**

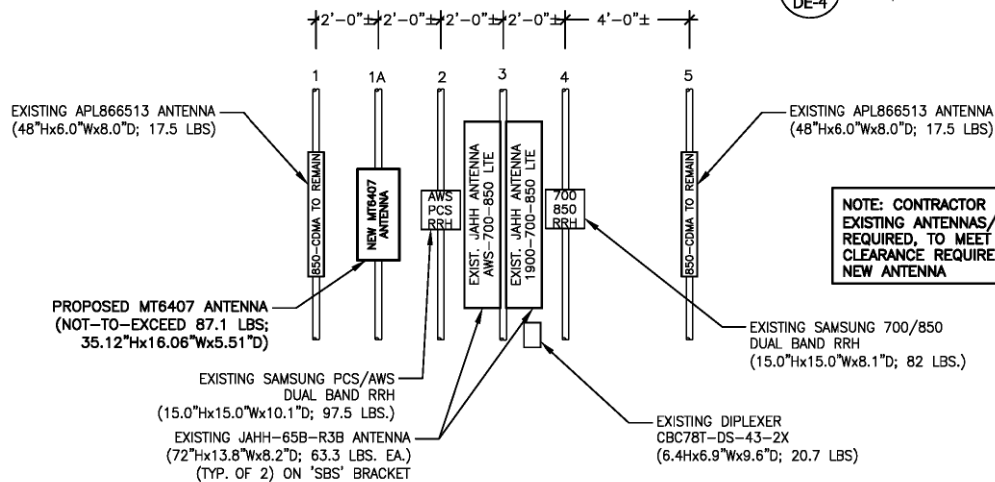
SHEET NUMBER:
DE-3



1 ANTENNA SECTOR PLAN - EXISTING
 DE-4 Scale: 3/16" = 1'-0"



2 ANTENNA SECTOR PLAN - PROPOSED
 DE-4 Scale: 3/16" = 1'-0"



3 ANTENNA CONFIGURATION - PROPOSED (TYP. ALL SECTORS)
 DE-4 Scale: 1/4" = 1'-0"

WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

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DAVID WEINMAN, P.E.
CT LIC NO. 22144

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DRAWN BY: AS	CHECKED BY: DW

PROJECT NAME:

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MT6407
DESIGN EXHIBITS**

SITE NAME:

NORWICH EAST CT

SITE ADDRESS:

**EVEREST SITE #702499
2 HINCKLEY HILL RD.
PRESTON, CT 06365**

SHEET TITLE:

**ANTENNA PLANS
& ELEVATION**

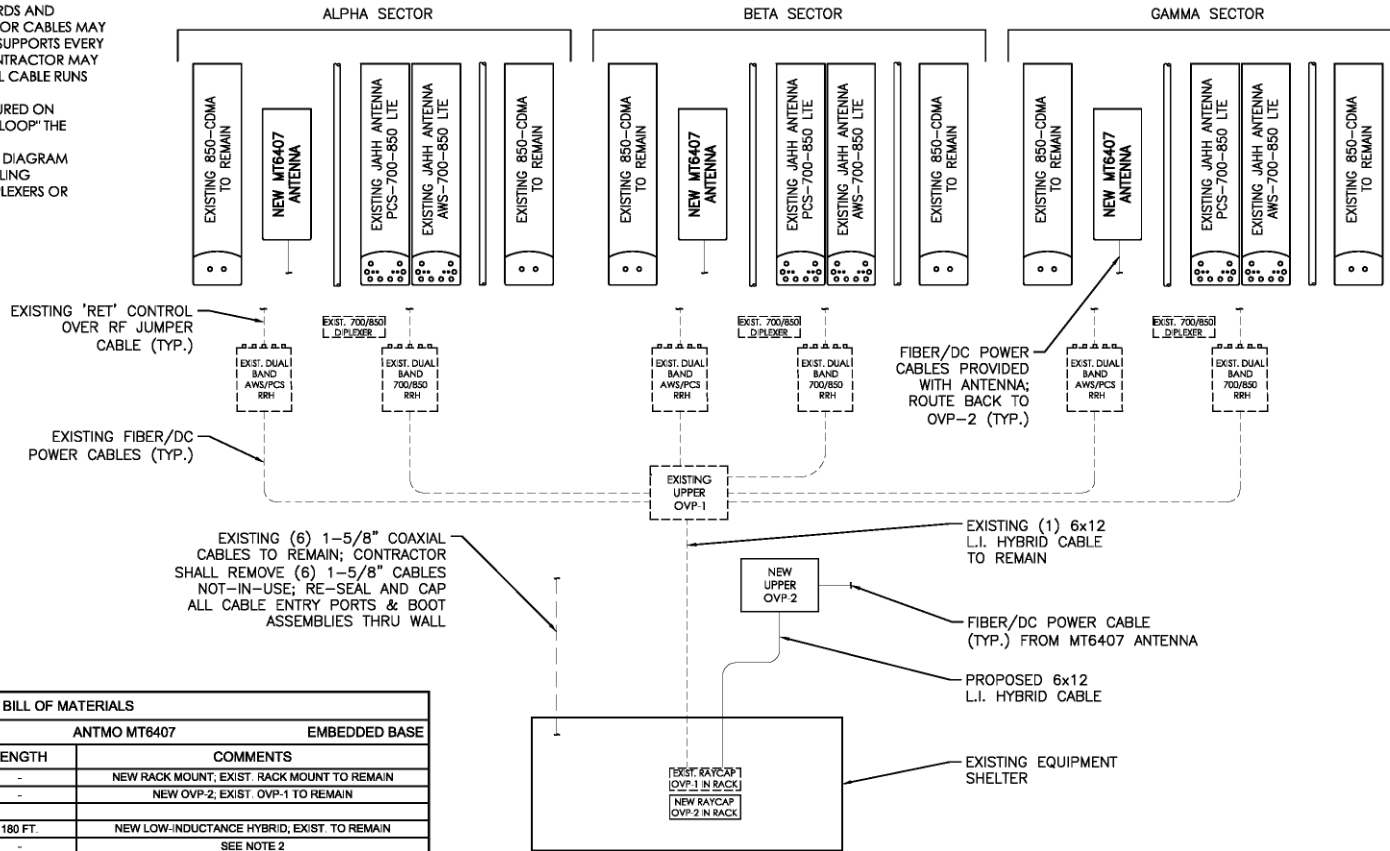
SHEET NUMBER:

DE-4

GENERAL NOTES:

1. CONTRACTOR SHALL REFER TO THE LATEST VERIZON WIRELESS RFDS WHICH MAY INCLUDE ANTENNA SECTOR AZIMUTHS/ANTENNA CHANGES, ETC. THAT ARE REQUIRED AS PART OF THE PROJECT.
2. CONTRACTOR SHALL SECURE ALL CONTROL CABLES IN ACCORDANCE WITH INDUSTRY STANDARDS AND MANUFACTURERS INSTRUCTIONS. EXTERIOR CABLES MAY BE TAPED OR TIE-WRAPPED TO EXISTING SUPPORTS EVERY 4 FT. MAX. FOR HORIZONTAL RUNS. CONTRACTOR MAY USE HOISTING GRIPS AT TOP OF VERTICAL CABLE RUNS WHEN REQUIRED.
3. ALL CABLES SHALL BE ROUTED AND SECURED ON STRUCTURAL MEMBERS ONLY - DO NOT "LOOP" THE CABLES IN MID-AIR BETWEEN ANTENNAS
4. REFER TO RFDS FOR DETAILED PLUMBING DIAGRAM SHOWING ALL JUMPER AND OTHER CABLING CONNECTIONS AT ANTENNAS, RRH's, DIPLEXERS OR OTHER DEVICES.

NOTE: ALL ANTENNAS VIEWED FROM REAR



BILL OF MATERIALS			
SITE NAME: NORWICH EAST CT		ANTMO MT6407	
DESCRIPTION	QTY	LENGTH	COMMENTS
LOWER 6-CKT. RAYCAP OVP	1	-	NEW RACK MOUNT; EXIST. RACK MOUNT TO REMAIN
UPPER 6-CKT. RAYCAP OVP	1	-	NEW OVP-2; EXIST. OVP-1 TO REMAIN
6x12 HYBRID CABLE	1	180 FT.	NEW LOW-INDUCTANCE HYBRID, EXIST. TO REMAIN
1/2" JUMPERS	-	-	SEE NOTE 2
AWS/PCS DUAL BAND RRH	-	-	EXISTING (3) TO REMAIN - 1 PER SECTOR
700/850 DUAL BAND RRH	-	-	EXISTING (3) TO REMAIN - 1 PER SECTOR
700/850 TWIN DIPLEXER	-	-	EXISTING (3) TO REMAIN - 1 PER SECTOR
MT6407 ANTENNA	3	-	SAMSUNG INTEGRATED - REFER TO RFDS
JAHH ANTENNA AWS-700-850-LTE	-	-	EXISTING (3) TO REMAIN - 1 PER SECTOR
JAHH ANTENNA PCS-700-850-LTE	-	-	EXISTING (3) TO REMAIN - 1 PER SECTOR
SIDE-BY-SIDE MTG. BRACKET	-	-	EXISTING (3) TO REMAIN - 1 PER SECTOR
850-CDMA ANTENNA	-	-	EXISTING (6) TO REMAIN - 2 PER SECTOR

NOTES:

1. ITEMS SHOWN ARE FOR MAJOR DESIGN ELEMENTS ONLY. REFER TO VERIZON WIRELESS RFDS FOR ALL MANUFACTURER PART NUMBERS AND ACCESSORY ITEMS REQUIRED FOR A COMPLETE INSTALLATION.
2. CONTRACTOR SHALL DETERMINE AND PROVIDE ALL REQUIRED PRE-FAB JUMPER QUANTITIES AND LENGTHS, KEEPING ALL LENGTHS TO A MINIMUM.

1
DE-5
RF PLUMBING DIAGRAM
Scale: N.T.S.

verizon
WIRELESS COMMUNICATIONS FACILITY

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WALLINGFORD, CT 06492

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PROJECT NAME:

ANTMO
MT6407
DESIGN EXHIBITS

SITE NAME:

NORWICH EAST CT

SITE ADDRESS:

EVEREST SITE #702499
2 HINCKLEY HILL RD.
PRESTON, CT 06365

SHEET TITLE:

RF PLUMBING
DIAGRAM & B.O.M.

SHEET NUMBER:

DE-5

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL NOT COMMENCE ANY WORK UNTIL HE OBTAINS, AT HIS OWN EXPENSE, ALL INSURANCE REQUIRED BY *CELLCO PARTNERSHIP d/b/a VERIZON, THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.*
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS AND ALL LOCAL LAWS AND REGULATIONS, CURRENT EDITIONS.
3. CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.
5. CONTRACTOR IS TO REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUB-CONTRACTORS AND ALL RELATED PARTIES. THE SUB-CONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
6. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON DRAWINGS OR WRITTEN IN SPECIFICATIONS.
7. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
8. CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS AND ALL INSPECTIONS REQUIRED FROM FEDERAL AND STATE GOVERNMENTS, COUNTIES, MUNICIPALITIES AND OTHER REGULATORY AGENCIES WHICH MAY BE REQUIRED FOR THE PROJECT.
10. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
11. ALL MATERIAL PROVIDED BY *CELLCO PARTNERSHIP d/b/a VERIZON IS TO BE* REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTOR PRIOR TO INSTALLATION. ANY DEFICIENCIES TO PROVIDED MATERIALS SHALL BE BROUGHT TO THE CONSTRUCTION MANAGERS ATTENTION IMMEDIATELY.
12. THE MATERIALS INSTALLED IN THE WORK SHALL MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO SUBSTITUTIONS ARE ALLOWED.
13. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION, FOR SEQUENCES AND PROCEDURES TO BE USED, AND TO ENSURE THE SAFETY OF THE EXISTING BUILDING AND ITS COMPONENT DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY.
14. CONTRACTOR SHALL COORDINATE ALL CIVIL, STRUCTURAL AND ELECTRICAL DRAWINGS FOR THE LOCATION OF ALL OPENINGS, RECESSES, BUILT-IN WORK, ETC.
15. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
16. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND TO BE IN THE FIELD.

17. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST-ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS, AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL O.S.H.A REQUIREMENTS.

19. CONTRACTOR SHALL COORDINATE HIS WORK AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.

20. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.

21. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OR WHERE LOCAL CODES OR REGULATIONS MAY TAKE PRECEDENCE.

22. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING, ANTENNA AND ANTENNA CABLES AND REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.

23. CONTRACTOR SHALL REPAIR ALL EXISTING SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.

24. CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DEBRIS AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITIONS AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.

25. BEFORE FINAL ACCEPTANCE OF THE WORK, CONTRACTOR SHALL REMOVE ALL EQUIPMENT, TEMPORARY WORKS, UNUSED AND USELESS MATERIALS, RUBBISH AND TEMPORARY STRUCTURES.

verizon
WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

 **On Air Engineering LLC**
88 Foundry Pond Road
Cold Spring, NY 10516
201-456-4624
onair@optonline.net

LICENSURE



DAVID WEINPAAL, P.E.
CT LIC NO. 22144

SUBMITTALS		
0	03.04.21	REVIEW
1	05.26.21	PERMITTING/CONSTRUCTION
2	12.29.21	REVISD PER NEW RFDS

NO DATE DESCRIPTION

DRAWN BY: AS
CHECKED BY: DW

PROJECT NAME:
**ANTMO
MT6407
DESIGN EXHIBITS**

SITE NAME:
NORWICH EAST CT

SITE ADDRESS:
**EVEREST SITE #702499
2 HINCKLEY HILL RD.
PRESTON, CT 06365**

SHEET TITLE:
**GENERAL
CONSTRUCTION
NOTES**

SHEET NUMBER:
DE-6

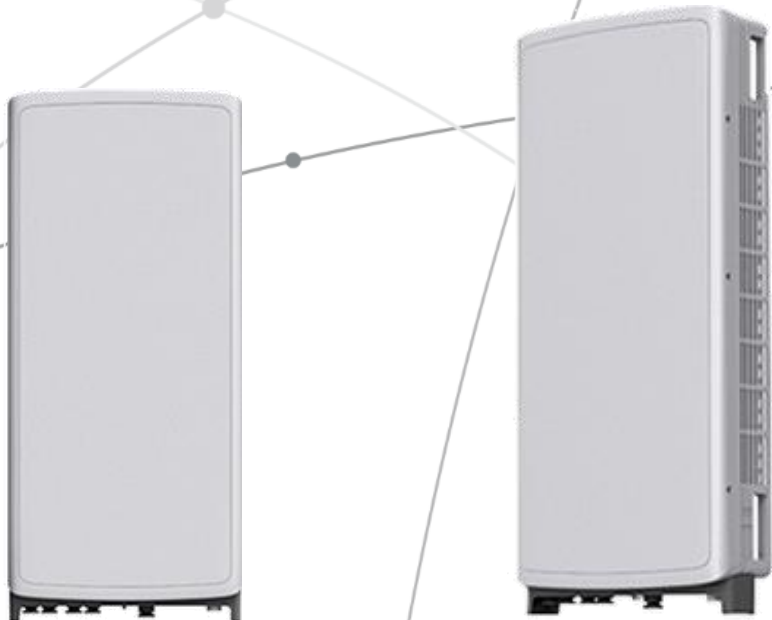
SAMSUNG

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



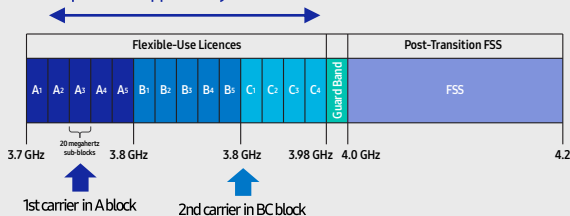
Points of Differentiation

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

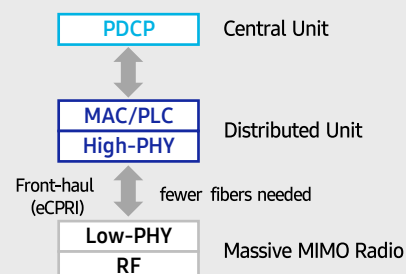
C-Band spectrum supported by Massive MIMO Radio



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.

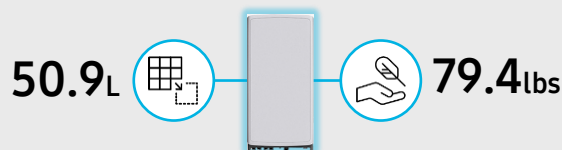
Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



Well Matched Design

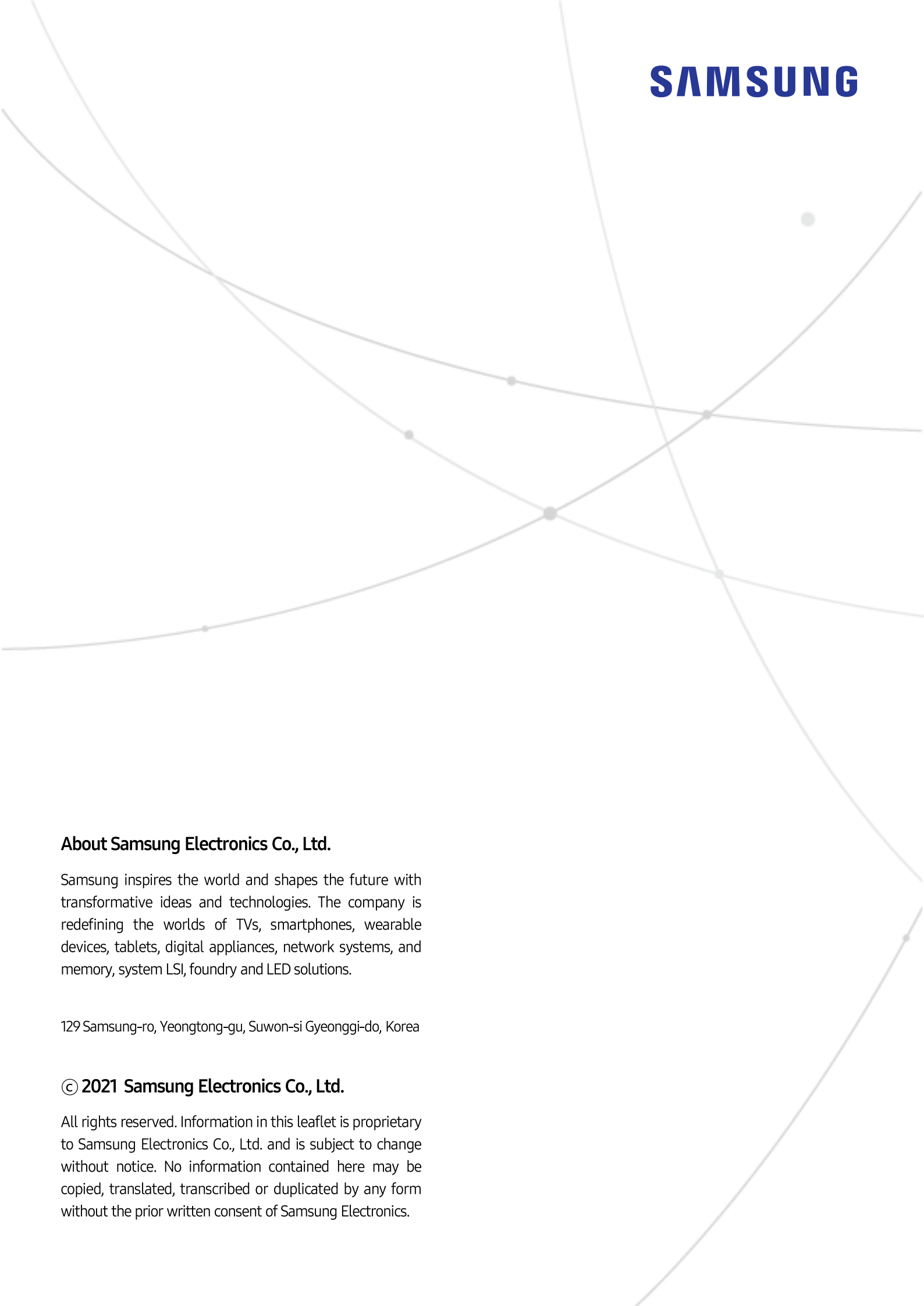
Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. Despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

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.

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ATTACHMENT 3

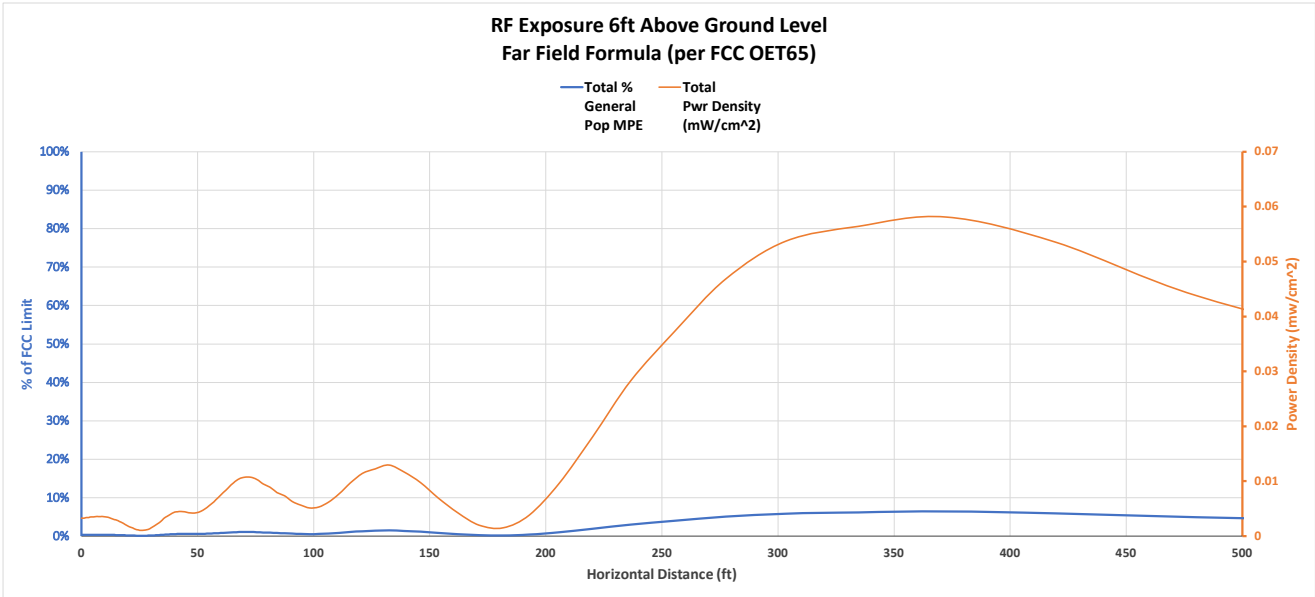
CUMULATIVE MPE TABLE

Carrier	MPE %
Dish	8.28 %
Sprint	2.74 %
T-Mobile	3.38 %
AT&T	8.44 %
TSR Paging	0.20 %
Aquis Paging	0.18 %
*Verizon Wireless	6.4 %
<i>Site Total</i>	<i>29.62 %</i>

*See attached Verizon Wireless General Power Density table.

Note: MPE percentages for the carriers in the above table was compiled from the Fox Hill Telecom Radio Frequency Emissions Analysis Report, dated October 11, 2021 submitted by DISH on February 4, 2022 (TS-DISH-104-220207).

Location	Norwich East CT					
Date	9/27/2022					
Band	C-Band	AWS	PCS	850-LTE	850-CDMA	700
Operating Frequency (MHz)	3,700	2,145	1,970	880	869	746
General Population MPE (mW/cm^2)	1	1	1	0.586666667	0.579333333	0.497333333
ERP Per Transmitter (Watts)	13,335	1,633	1,593	794	369	634
Number of Transmitters	2	4	4	4	2	4
Antenna Centerline (feet)	127.5	127.5	127.5	127.5	127.5	127.5
Total ERP (Watts)	26,670	6,534	6,372	3,176	738	2,534
Total ERP (dBm)	74	68	68	65	59	64
Maximum % of General Population Limit	6.4%					



Angle Below Horizon	Power Density (mW/cm^2)						Percent of General Population MPE										Distance	Total Pwr Density (mW/cm^2)	Total % General Pop MPE
	C-Band	AWS	PCS	850-LTE	850-CDMA	700 MHz	39GHz	28GHz	C-Band	CBRS	AWS	PCS	Cellular	CDMA	700 MHz				
90	0.003211598	1.10116E-06	8.31669E-07	5.25472E-05	1.79773E-06	1.82202E-05	0.00%	0.00%	0.32%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0	0.003286096	0.33%	
89	0.003211367	2.18183E-06	2.51721E-07	5.50198E-05	1.7976E-06	1.86432E-05	0.00%	0.00%	0.32%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	1.029848831	0.003289261	0.33%	
88	0.003285461	3.11693E-06	4.48565E-08	5.82673E-05	1.79721E-06	1.77594E-05	0.00%	0.00%	0.33%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	2.0603254	0.003366446	0.34%	
87	0.003329967	3.90455E-06	2.12163E-07	6.24121E-05	1.79656E-06	1.58954E-05	0.00%	0.00%	0.33%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	3.092058978	0.003414188	0.35%	
86	0.003405812	4.69193E-06	9.94146E-07	6.6842E-05	1.79566E-06	1.36475E-05	0.00%	0.00%	0.34%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	4.125681905	0.003493783	0.36%	
85	0.003403596	5.42087E-06	3.03506E-06	7.07566E-05	1.79449E-06	1.15816E-05	0.00%	0.00%	0.34%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	5.161831148	0.003496184	0.36%	
84	0.003480097	5.88467E-06	6.52861E-06	7.40321E-05	1.79306E-06	9.94084E-06	0.00%	0.00%	0.35%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	6.201149881	0.003578276	0.36%	
83	0.003476802	6.0717E-06	1.04812E-05	7.63851E-05	1.79136E-06	8.79046E-06	0.00%	0.00%	0.35%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	7.244289093	0.003580322	0.36%	
82	0.003472986	6.43923E-06	1.33331E-05	7.82586E-05	1.78939E-06	8.17588E-06	0.00%	0.00%	0.35%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	8.291909247	0.003580983	0.36%	
81	0.003468644	7.66109E-06	1.46349E-05	7.97974E-05	2.05193E-06	8.12814E-06	0.00%	0.00%	0.35%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	9.344681979	0.003580917	0.36%	
80	0.003384923	9.87824E-06	1.54803E-05	8.13537E-05	2.29907E-06	8.53848E-06	0.00%	0.00%	0.34%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	10.40329186	0.003502472	0.36%	
79	0.003302698	1.24451E-05	1.73819E-05	8.35022E-05	2.51693E-06	9.28326E-06	0.00%	0.00%	0.33%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	11.46843824	0.003427828	0.35%	
78	0.003148609	1.41987E-05	2.10062E-05	8.64863E-05	2.81917E-06	1.02082E-05	0.00%	0.00%	0.31%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	12.54083714	0.003283328	0.34%	
77	0.002932897	1.44686E-05	2.63953E-05	9.08083E-05	3.23072E-06	1.1095E-05	0.00%	0.00%	0.29%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	13.62122328	0.003078895	0.32%	
76	0.002795125	1.35685E-05	3.39337E-05	9.62122E-05	3.53512E-06	1.16744E-05	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	14.71035217	0.002954048	0.30%	
75	0.002602736	1.24612E-05	4.50464E-05	0.00010192	3.86752E-06	1.16483E-05	0.00%	0.00%	0.26%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	15.80900235	0.002777679	0.29%	
74	0.002367998	1.19265E-05	6.08991E-05	0.000107699	3.94807E-06	1.08446E-05	0.00%	0.00%	0.24%	0.00%	0.00%	0.01%	0.02%	0.00%	0.00%	16.91797776	0.002563315	0.27%	
73	0.002105004	1.21167E-05	8.23156E-05	0.000112223	4.41831E-06	9.24878E-06	0.00%	0.00%	0.21%	0.00%	0.00%	0.01%	0.02%	0.00%	0.00%	18.03811021	0.002325326	0.24%	
72	0.00178666	1.27695E-05	0.000108711	0.000114781	4.61365E-06	7.343E-06	0.00%	0.00%	0.18%	0.00%	0.00%	0.01%	0.02%	0.00%	0.00%	19.17026208	0.002034878	0.21%	

71	0.001498808	1.3548E-05	0.000138031	0.000114967	4.81669E-06	6.03362E-06	0.00%	0.00%	0.15%	0.00%	0.00%	0.01%	0.02%	0.00%	0.00%	20.31532918	0.001776205	0.19%
70	0.001271634	1.39795E-05	0.000166185	0.000113029	5.02765E-06	5.9319E-06	0.00%	0.00%	0.13%	0.00%	0.00%	0.02%	0.02%	0.00%	0.00%	21.47424382	0.001575788	0.17%
69	0.001054113	1.36779E-05	0.000186688	0.000109576	5.24675E-06	7.8835E-06	0.00%	0.00%	0.11%	0.00%	0.00%	0.02%	0.02%	0.00%	0.00%	22.64797807	0.001377186	0.15%
68	0.000873611	1.25444E-05	0.000192109	0.00010499	5.22782E-06	1.46605E-05	0.00%	0.00%	0.09%	0.00%	0.00%	0.02%	0.02%	0.00%	0.00%	23.83754732	0.001203142	0.13%
67	0.00075275	1.08588E-05	0.000176962	0.000100573	5.08925E-06	2.88059E-05	0.00%	0.00%	0.08%	0.00%	0.00%	0.02%	0.02%	0.00%	0.01%	25.04401416	0.001075038	0.12%
66	0.00067151	9.75016E-06	0.000141942	9.63185E-05	4.84043E-06	4.95122E-05	0.00%	0.00%	0.08%	0.00%	0.00%	0.01%	0.02%	0.00%	0.01%	26.26849243	0.001069515	0.12%
65	0.000857048	1.15647E-05	9.46749E-05	9.28611E-05	4.29545E-06	7.70614E-05	0.00%	0.00%	0.09%	0.00%	0.00%	0.01%	0.02%	0.00%	0.02%	27.51215183	0.001137506	0.13%
64	0.000979532	2.02838E-05	4.73422E-05	8.97114E-05	3.81085E-06	0.000112681	0.00%	0.00%	0.10%	0.00%	0.00%	0.00%	0.02%	0.00%	0.02%	28.77622273	0.001253361	0.14%
63	0.00122438	4.05552E-05	1.28572E-05	8.78507E-05	3.22789E-06	0.000156945	0.00%	0.00%	0.12%	0.00%	0.00%	0.00%	0.01%	0.00%	0.03%	30.06200152	0.001525816	0.17%
62	0.001498625	7.56526E-05	3.05438E-06	8.84141E-05	2.55091E-06	0.000211118	0.00%	0.00%	0.15%	0.00%	0.01%	0.00%	0.02%	0.00%	0.04%	31.37085647	0.001879415	0.22%
61	0.001711366	0.000124587	2.73258E-05	9.40095E-05	1.838E-06	0.000276169	0.00%	0.00%	0.17%	0.00%	0.01%	0.00%	0.02%	0.00%	0.06%	32.70423404	0.002235295	0.26%
60	0.00191364	0.000182386	9.29158E-05	0.000108066	1.66672E-06	0.000351311	0.00%	0.00%	0.19%	0.00%	0.02%	0.01%	0.02%	0.00%	0.07%	34.06366588	0.002649985	0.31%
59	0.002183927	0.000240641	0.000204394	0.000133373	1.65669E-06	0.000436586	0.00%	0.00%	0.22%	0.00%	0.02%	0.02%	0.02%	0.00%	0.09%	35.45077652	0.003200576	0.37%
58	0.002272321	0.000287475	0.000363663	0.000172305	1.64616E-06	0.000528812	0.00%	0.00%	0.23%	0.00%	0.03%	0.04%	0.03%	0.00%	0.11%	36.86729176	0.003626222	0.43%
57	0.002251891	0.000308801	0.000563348	0.000227707	1.63512E-06	0.000624279	0.00%	0.00%	0.23%	0.00%	0.03%	0.06%	0.04%	0.00%	0.13%	38.315048	0.003977661	0.48%
56	0.002235954	0.000289463	0.000788302	0.000299428	3.09361E-06	0.000716629	0.00%	0.00%	0.22%	0.00%	0.03%	0.08%	0.05%	0.00%	0.14%	39.79600249	0.00433287	0.53%
55	0.002023987	0.000226641	0.0101014933	0.000389078	6.26918E-06	0.000799907	0.00%	0.00%	0.20%	0.00%	0.02%	0.10%	0.07%	0.00%	0.16%	41.31224475	0.004460815	0.55%
54	0.001761052	0.000135489	0.001216191	0.000492721	1.00873E-05	0.00087017	0.00%	0.00%	0.18%	0.00%	0.01%	0.12%	0.08%	0.00%	0.17%	42.86600915	0.00448571	0.57%
53	0.001452601	5.66601E-05	0.001372069	0.000602525	1.58544E-05	0.000916174	0.00%	0.00%	0.15%	0.00%	0.01%	0.14%	0.10%	0.00%	0.18%	44.45968896	0.004415884	0.58%
52	0.001082229	4.4921E-05	0.001477572	0.000711456	2.27155E-05	0.000935731	0.00%	0.00%	0.11%	0.00%	0.00%	0.15%	0.12%	0.00%	0.19%	46.09585196	0.004274624	0.57%
51	0.000741786	0.000158083	0.001547064	0.000805578	3.03586E-05	0.000927065	0.00%	0.00%	0.17%	0.00%	0.02%	0.15%	0.14%	0.01%	0.19%	47.77725796	0.004202656	0.57%
50	0.000442601	0.000399157	0.001607837	0.000870645	3.78456E-05	0.000886838	0.00%	0.00%	0.04%	0.00%	0.04%	0.16%	0.15%	0.01%	0.18%	49.50687824	0.004244924	0.58%
49	0.00027638	0.000777387	0.001685529	0.000896057	4.50308E-05	0.000819103	0.00%	0.00%	0.03%	0.00%	0.08%	0.17%	0.15%	0.01%	0.16%	51.28791753	0.004499486	0.60%
48	0.000255121	0.001232756	0.001802918	0.000872118	5.23298E-05	0.000728749	0.00%	0.00%	0.03%	0.00%	0.12%	0.18%	0.15%	0.01%	0.15%	53.12383861	0.004943991	0.63%
47	0.000390585	0.001697642	0.001972173	0.000800837	5.67177E-05	0.000621652	0.00%	0.00%	0.04%	0.00%	0.17%	0.20%	0.14%	0.01%	0.12%	55.01839008	0.005539607	0.68%
46	0.00069406	0.002096657	0.00216289	0.000687425	6.00343E-05	0.000504927	0.00%	0.00%	0.07%	0.00%	0.21%	0.22%	0.12%	0.01%	0.10%	56.97563771	0.006259392	0.73%
45	0.001137029	0.002381783	0.002540979	0.000546513	6.06421E-05	0.000386014	0.00%	0.00%	0.11%	0.00%	0.24%	0.25%	0.09%	0.01%	0.08%	59	0.007052959	0.79%
44	0.00172512	0.002540679	0.002917755	0.000393231	5.84551E-05	0.000273937	0.00%	0.00%	0.17%	0.00%	0.25%	0.29%	0.07%	0.01%	0.06%	61.09628851	0.007909177	0.85%
43	0.002457638	0.002598056	0.003286605	0.000249084	5.25437E-05	0.000185076	0.00%	0.00%	0.25%	0.00%	0.26%	0.33%	0.04%	0.01%	0.04%	63.26975389	0.008829003	0.92%
42	0.003333064	0.002605999	0.003491992	0.000129322	4.50658E-05	0.000140177	0.00%	0.00%	0.33%	0.00%	0.26%	0.35%	0.02%	0.01%	0.03%	65.52613837	0.00974562	1.00%
41	0.004224523	0.002617587	0.003372873	4.71628E-05	3.60391E-05	0.000124624	0.00%	0.00%	0.42%	0.00%	0.26%	0.34%	0.01%	0.01%	0.03%	67.87173603	0.010422739	1.06%
40	0.005120001	0.002663181	0.002821627	8.63175E-06	2.68703E-05	0.000108668	0.00%	0.00%	0.51%	0.00%	0.27%	0.28%	0.00%	0.01%	0.02%	70.31346196	0.01074898	1.09%
39	0.00597464	0.002706714	0.001916643	1.33395E-05	1.91124E-05	9.55308E-05	0.00%	0.00%	0.60%	0.00%	0.27%	0.19%	0.00%	0.00%	0.02%	72.85893224	0.01072598	1.08%
38	0.006635321	0.002648455	0.000922766	1.9395E-05	1.4889E-05	8.44683E-05	0.00%	0.00%	0.66%	0.00%	0.26%	0.09%	0.00%	0.00%	0.02%	75.5165563	0.010325294	1.04%
37	0.006805878	0.002366	0.000202355	3.10966E-05	1.52717E-05	6.74087E-05	0.00%	0.00%	0.68%	0.00%	0.24%	0.02%	0.01%	0.00%	0.01%	78.29564448	0.00948801	0.96%
36	0.007020023	0.001784305	1.12349E-05	4.4378E-05	2.01531E-05	3.78591E-05	0.00%	0.00%	0.70%	0.00%	0.18%	0.00%	0.01%	0.00%	0.01%	81.20653331	0.008917953	0.90%
35	0.006504013	0.001009978	0.000314348	5.42014E-05	2.91195E-05	3.4595E-05	0.00%	0.00%	0.65%	0.00%	0.10%	0.03%	0.01%	0.01%	0.01%	84.2607324	0.007946255	0.80%
34	0.006016794	0.000325459	0.000788124	6.38548E-05	4.29901E-05	8.3984E-05	0.00%	0.00%	0.60%	0.00%	0.03%	0.08%	0.01%	0.01%	0.02%	87.47109714	0.007321205	0.75%
33	0.004975508	4.10174E-05	0.001028175	8.27306E-05	5.64729E-05	0.000112116	0.00%	0.00%	0.50%	0.00%	0.03%	0.10%	0.01%	0.00%	0.02%	90.85203287	0.00629602	0.65%
32	0.004212509	0.000271439	0.000842889	0.000120884	7.07203E-05	0.000134083	0.00%	0.00%	0.42%	0.00%	0.03%	0.08%	0.02%	0.01%	0.03%	94.41973721	0.005652524	0.59%
31	0.003510851	0.000811976	0.000388725	0.000195543	7.87799E-05	0.000154612	0.00%	0.00%	0.35%	0.00%	0.08%	0.04%	0.03%	0.01%	0.03%	98.19248946	0.005140486	0.55%
30	0.003399247	0.00126332	4.16497E-05	0.000326747	8.36345E-05	0.000176691	0.00%	0.00%	0.34%	0.00%	0.13%	0.00%	0.06%	0.01%	0.04%	102.1909976	0.005291289	0.58%
29	0.004012131	0.001319793	7.13846E-05	0.000521439	8.07938E-05	0.000204742	0.00%	0.00%	0.40%	0.00%	0.13%	0.01%	0.09%	0.01%	0.04%	106.4388176	0.006210284	0.68%
28	0.005203615	0.001010266	0.000413556	0.000774701	6.93918E-05	0.00024442	0.00%	0.00%	0.52%	0.00%	0.10%	0.04%	0.13%	0.01%	0.05%	110.9628615	0.007715949	0.86%
27	0.006903655	0.000621169	0.000728297	0.001059029	5.29763E-05	0.000304727	0.00%	0.00%	0.69%	0.00%	0.06%	0.07%	0.18%	0.01%	0.06%	115.7940198	0.009669853	1.08%
26	0.00852301	0.000403389	0.000712562	0.001337894	3.59415E-05	0.000393029	0.00%	0.00%	0.85%	0.00%	0.04%	0.07%	0.23%	0.01%	0.08%	120.9679267	0.011405825	1.28%
25	0.009456519	0.000347426	0.00038191	0.001557973	1.88684E-05	0.000506481	0.00%	0.00%	0.95%	0.00%	0.03%	0.04%	0.27%	0.00%	0.10%	126.5259083	0.012269177	1.39%
24	0.010312523	0.000273839	5.52834E-05	0.00167569	6.67372E-06	0.000624017	0.00%	0.00%	1.03%	0.00%	0.03%	0.10%	0.29%	0.00%	0.13%	132.5161697	0.012948026	1.48%
23	0.009127448	0.000108513	4.60871E-05	0.00165264	1.78383E-06	0.000714794	0.00%	0.00%	0.91%	0.00%	0.01%	0.00%	0.28%	0.00%	0.14%	138.9952896	0.011651265	1.35%
22	0.007153562	1.42119E-05	0.000344153	0.001473503	3.36144E-06	0.000752236	0.00%	0.00%	0.72%	0.00%	0.00%	0.03%	0.25%	0.00%	0.15%	146.0301244	0.009741028	1.15%
21	0.00424327	0.000185708	0.000623635	0.001160191	9.99318E-06	0.000717022	0.00%	0.00%	0.42%	0.00%	0.02%	0.06%	0.20%	0.00%	0.14%	153.7002548	0.006939818	0.85%
20	0.001724553	0.000545516	0.000580639	0.000762966	1.74052E-05	0.000607447	0.00%	0.00%	0.17%	0.00%	0.05%	0.06%	0.13%	0.00%	0.12%	162.1011677	0.004238525	0.54%
19	0.000148667	0.00075569	0.000262085	0.000381103	2.13411E-05	0.0004406	0.00%	0.00%	0.01%	0.00%	0.08%	0.03%	0.06%	0.00%	0.09%	171.3484418	0.002009486	0.27%
18	0.000483102	0.000580991	3.52589E-05	0.000136103	1.97261E-05	0.000245398	0.00%	0.00%	0.05%	0.00%	0.06%	0.00%	0.02%	0.00%	0.05%	181.5833287	0.001500579	0.19%
17	0.003287304	0.000198596	0.0															

ATTACHMENT 4

Report Date: August 17, 2022

Client: Everest Infrastructure Partners
Two Allegheny Center
Pittsburgh, PA 15212
Attn: Thomas Rigg
(603) 498-7462
tom.rigg@everestinfrastructure.com

Structure: Existing 150-ft Self Support Tower
Site Name: Norwich CDT
Site Reference #: 702499
Site Address: 2 Hinkley Hill Rd
City, County, State: Preston, New London County, CT
Latitude, Longitude: 41.514847°, -72.061689°

PJF Project: A13321-0008.004.8700

Paul J. Ford and Company is pleased to submit this "**Structural Analysis Report**" to determine the tower stress level.

Analysis Criteria:

This analysis utilizes an ultimate 3-second gust wind speed of 135 mph (converted to an equivalent 105 mph nominal 3-second gust wind speed per Section 1609.3.1 for use with TIA-222 G) as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Proposed Appurtenance Loads:

The structure was analyzed with the proposed loading configuration shown in Table 1 combined with the other considered equipment shown in Table 2 of this report.

Summary of Analysis Results:

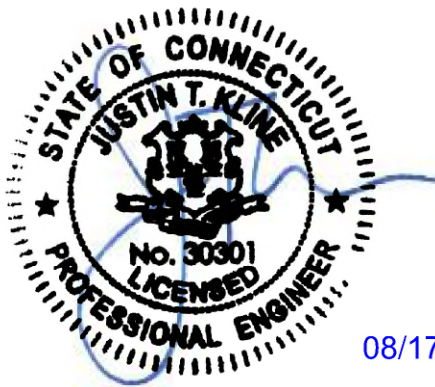
Existing Structure: Pass – 85.1%
Existing Foundation: Pass – 90.6%

We at Paul J. Ford and Company appreciate the opportunity of providing our continuing professional services to you and Everest Infrastructure Partners. If you have any questions or need further assistance on this or any other projects, please give us a call.

Respectfully Submitted by:
Paul J. Ford and Company



Anna Trudo, E.I.
Structural Designer
atrudo@pauljford.com



08/17/2022

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1) INTRODUCTION

This tower is a 150 ft Self Support tower designed by Fred A Nudd Corporation in July of 1999. All tower geometry and foundation information were taken from a previous structural analysis by Fred Nudd Corp dated 6/11/2018.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-G
Risk Category:	II
Wind Speed:	105 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	0.75 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
126.0	127.5	3	commscope	CBC78T-DS-43-2X	11 2	1-5/8 hybrid
		6	commscope	JAHH-65B-R3B w/ Mount Pipe		
		1	raycap	DB-B1-6C-12AB-0Z		
		1	raycap	RRFDC-3315-PF-48		
		6	rfs celwave	APL868013 w/ Mount Pipe		
		3	samsung telecommunications	B2/B66A RRH-BR049		
		3	samsung telecommunications	B5/B13 RRH-BR04C		
		3	samsung telecommunications	MT6407-77A w/ Mount Pipe		
	126.0	3	commscope	BSAMNT-SBS-2-2 (Mount Bracket)		
		1	tower mounts	Sector Mount [SM 802-3] with mount modifications		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
150.0	150.0	3	ericsson	AIR 32 B66AA B2P_T-MOBILE w/ Mount Pipe	6 3	1-5/8 1-1/4
		3	ericsson	AIR 6449 B41 w/ Mount Pipe		
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	ericsson	RRUS 4415 B25		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
		3	tower mounts	Site Pro 1 VFA12-HD		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
140.0	140.0	6	alcatel lucent	1900 MHz 4x45W RRH	4	1-1/4
		6	alcatel lucent	RRH2X50-800		
		3	alcatel lucent	TD-RRH8x20-25		
		3	commscope	DT465B-2XR w/ Mount Pipe		
		3	rfs celwave	APXV9ERR18-C-A20 w/ Mount Pipe		
		1	tower mounts	Sector Mount [SM 802-3]		
115.0	115.0	2	cci antennas	DMP65R-BU6D w/ Mount Pipe	6 8 2	1-1/4 DC cable fiber
		1	cci antennas	DMP65R-BU8D w/ Mount Pipe		
		2	cci antennas	OPA-65R-LCUU-H6 w/ Mount Pipe		
		1	cci antennas	OPA-65R-LCUU-H8 w/ Mount Pipe		
		3	ericsson	RRUS 32 B2		
		3	ericsson	RRUS 32 B30		
		3	ericsson	RRUS 32 B66A		
		3	ericsson	RRUS 4449 B5/B12		
		3	ericsson	RRUS 4478 B14		
		3	ericsson	RRUS E2 B29		
		2	kmw communications	EPBQ-654L8H6-L2 w/ Mount Pipe		
		1	kmw communications	EPBQ-654L8H8-L2 w/ Mount Pipe		
		3	powerwave technologies	7770_TIA w/ Mount Pipe		
		6	powerwave technologies	LGP21401		
		4	raycap	DC6-48-60-18-8F		
		3	tower mounts	Site Pro 1 VFA12-HD		
105.0	105.0	3	fujitsu	TA08025-B604	1	1-5/8
		3	fujitsu	TA08025-B605		
		3	jma wireless	MX08FRO665-21 w/ Mount Pipe		
		1	mounts	Sabre_C10837002C-32788_Sector_(3)		
		1	raycap	RDIDC-9181-PF-48		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Source
Tower Structural Analysis	Nudd Corp #118-23067 dated 6/11/2018	on file
Mount Analysis and PMI Requirements	Verizon/Maser #16227609 dated 11/24/2021	emailed
Mount Modification CDs	Verizon/Maser #16227609 dated 11/24/2021	emailed

3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

- 1) Tower and structures were maintained in accordance with the TIA-222 Standard.
 - 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
 - 3) All tower geometry and foundation information were taken from a previous structural analysis by Fred Nudd Corp dated 6/11/2018.
 - 4) The antenna feedlines are assumed to be placed as indicated in Appendix B.
- This analysis may be affected if any assumptions are not valid or have been made in error. Paul J. Ford and Company should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (lb)	SF*P_allow (lb)	% Capacity	Pass / Fail
T1	150 - 140	Leg	Pipe 2.875" x 0.203" (2.5 STD)	2	-11649	82352	14.1	Pass
T2	140 - 120	Leg	Pipe 2.875" x 0.203" (2.5 STD)	21	-51706	62849	82.3	Pass
T3	120 - 100	Leg	Pipe 4.5" x 0.237" (4 STD)	48	-108911	138323	78.7	Pass
T4	100 - 80	Leg	Pipe 5.563" x 0.258" (5 STD)	75	-156650	184163	85.1	Pass
T5	80 - 60	Leg	Pipe 6.625" x 0.280" (6 STD)	94	-199906	248307	80.5	Pass
T6	60 - 40	Leg	Pipe 8.625" x 0.322" (8 STD)	115	-239684	387660	61.8	Pass
T7	40 - 20	Leg	Pipe 8.625" x 0.50" (8 XS)	136	-274234	550137	49.8	Pass
T8	20 - 0	Leg	Pipe 8.625" x 0.50" (8 XS)	151	-308756	550137	56.1	Pass
T1	150 - 140	Diagonal	L 1.5 x 1.5 x 3/16	9	-2659	6096	43.6	Pass
T2	140 - 120	Diagonal	L 2 x 2 x 3/16	24	-7242	12216	59.3 74.6 (b)	Pass
T3	120 - 100	Diagonal	L 2 x 2 x 3/16	54	-7692	9453	81.4	Pass
T4	100 - 80	Diagonal	L 2.5 x 2.5 x 3/16	81	-7891	11411	69.2 84.6 (b)	Pass
T5	80 - 60	Diagonal	L 3 x 3 x 3/16	101	-7907	14952	52.9 82.0 (b)	Pass
T6	60 - 40	Diagonal	L 3 x 3 x 3/16	122	-8408	11937	70.4 84.4 (b)	Pass
T7	40 - 20	Diagonal	L 3.5 x 3.5 x 1/4	143	-9111	16716	54.5 62.5 (b)	Pass
T8	20 - 0	Diagonal	L 3.5 x 3.5 x 1/4	158	-9652	13815	69.9	Pass
T1	150 - 140	Top Girt	L 3 x 3 x 1/4	5	-717	23047	3.1 9.0 (b)	Pass
							Summary	
							Leg (T4)	85.1 Pass
							Diagonal (T4)	84.6 Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (lb)	SF*P _{allow} (lb)	% Capacity	Pass / Fail
						Top Girt (T1)	9.0	Pass
						Bolt Checks	84.6	Pass
						Rating =	85.1	Pass

Table 5 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	85.5	Pass
1	Base Foundation (Soil Interaction)	0	90.6	Pass

Structure Rating (max from all components) =	90.6%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.

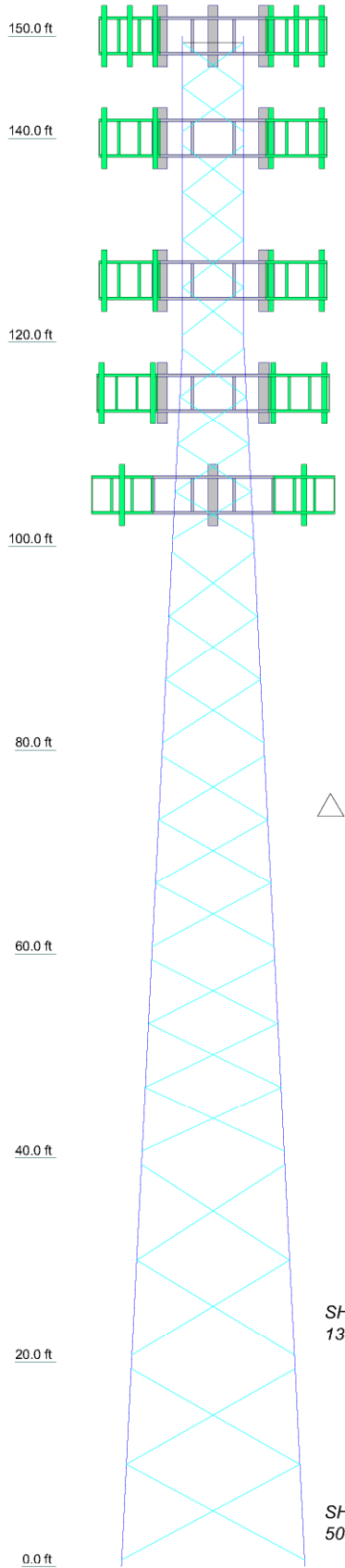
4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Section	T8	T7	T6	T5	T4	T3	T2	T1
Legs	Pipe 8.625" x 0.50" (8 XS)		Pipe 8.625" x 0.322" (8 STD)	Pipe 6.625" x 0.280" (6 STD)	Pipe 5.563" x 0.258" (5 STD)	Pipe 4.5" x 0.237" (4 STD)	Pipe 2.875" x 0.203" (2.5 STD)	
Leg Grade								
Diagonals	L 3.5 x 3.5 x 1/4		L 3 x 3 x 3/16		L 2.5 x 2.5 x 3/16		L 2 x 2 x 3/16	
Diagonal Grade								A
Top Girts								L 3 x 3 x 1/4
Face Width (ft)	18	16	14	12	10	8	6	
# Panels @ (ft)	4 @ 9.33333			9 @ 6.25		8 @ 4.66667	2 @ 4.33333	
Weight (lb) / 7912.3	4343.5	4212.4	2949.8	2184.8	1833.5	1294.8	870.9	463.5

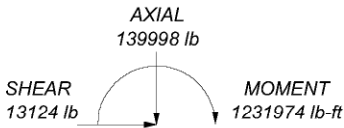


ALL REACTIONS
ARE FACTORED

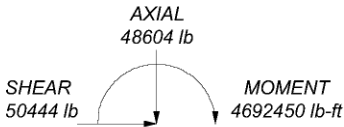
MAX. CORNER REACTIONS AT BASE:

DOWN: 317221 lb
SHEAR: 30961 lb

UPLIFT: -280050 lb
SHEAR: 28344 lb



TORQUE 7373 lb-ft
50 mph WIND - 0.750 in ICE



TORQUE 18691 lb-ft
REACTIONS - 105 mph WIND

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L 1.5 x 1.5 x 3/16		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A500M-54	54 ksi	70 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 105 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 85.1%



Paul J. Ford and Company
250 East Broad St., Suite 600
Columbus, OH 43215
Phone: 614-221-6679
FAX:

Job: 150-ft Norwich, CT S/S Tower

Project: **PJF 13321-0008**

Client: Everest Infrastructure Partners

Code: TIA-222-G

Path:

Drawn by: Anna Trudo

Date: 08/17/22

Scale: NTS

Dwg No. E-1

C:\CNC\526133 - Everest Infrastructure Partners\2022\13321-0008 - Norwich, CT\13321-0008-004.dwg VZW 8/17/22 13321-0008-004.dwg

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 150.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 6.00 ft at the top and 18.00 ft at the base.

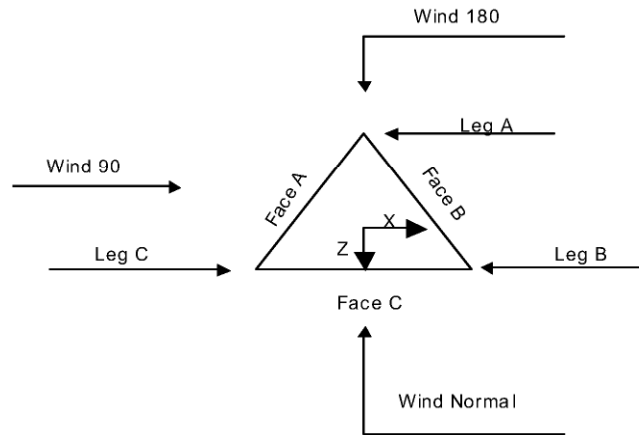
This tower is designed using the TIA-222-G standard.

The following design criteria apply:

- Tower is located in New London County, Connecticut.
- ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).
- Basic wind speed of 105 mph.
- Structure Class II.
- Exposure Category B.
- Topographic Category 1.
- Crest Height 0.00 ft.
- Nominal ice thickness of 0.750 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in tower member design is 1.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	150.00-140.00			6.00	1	10.00
T2	140.00-120.00			6.00	1	20.00
T3	120.00-100.00			6.00	1	20.00
T4	100.00-80.00			8.00	1	20.00
T5	80.00-60.00			10.00	1	20.00
T6	60.00-40.00			12.00	1	20.00
T7	40.00-20.00			14.00	1	20.00
T8	20.00-0.00			16.00	1	20.00

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	150.00-140.00	4.33	X Brace	No	No	8.000	8.000
T2	140.00-120.00	4.67	X Brace	No	No	8.000	8.000
T3	120.00-100.00	4.67	X Brace	No	No	8.000	8.000
T4	100.00-80.00	6.25	X Brace	No	No	7.500	7.500
T5	80.00-60.00	6.25	X Brace	No	No	7.500	7.500
T6	60.00-40.00	6.25	X Brace	No	No	7.500	7.500
T7	40.00-20.00	9.33	X Brace	No	No	8.000	8.000
T8	20.00-0.00	9.33	X Brace	No	No	8.000	8.000

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 150.00-140.00	Pipe	Pipe 2.875" x 0.203" (2.5 STD)	A500M-54 (54 ksi)	Single Angle	L 1.5 x 1.5 x 3/16	A36 (36 ksi)
T2 140.00-120.00	Pipe	Pipe 2.875" x 0.203" (2.5 STD)	A500M-54 (54 ksi)	Single Angle	L 2 x 2 x 3/16	A36 (36 ksi)
T3 120.00-100.00	Pipe	Pipe 4.5" x 0.237" (4 STD)	A500M-54 (54 ksi)	Single Angle	L 2 x 2 x 3/16	A36 (36 ksi)
T4 100.00-80.00	Pipe	Pipe 5.563" x 0.258" (5 STD)	A500M-54 (54 ksi)	Single Angle	L 2.5 x 2.5 x 3/16	A36 (36 ksi)
T5 80.00-60.00	Pipe	Pipe 6.625" x 0.280" (6 STD)	A500M-54 (54 ksi)	Single Angle	L 3 x 3 x 3/16	A36 (36 ksi)
T6 60.00-40.00	Pipe	Pipe 8.625" x 0.322" (8 STD)	A500M-54 (54 ksi)	Single Angle	L 3 x 3 x 3/16	A36 (36 ksi)
T7 40.00-20.00	Pipe	Pipe 8.625" x 0.50" (8 XS)	A500M-54 (54 ksi)	Single Angle	L 3.5 x 3.5 x 1/4	A36 (36 ksi)
T8 20.00-0.00	Pipe	Pipe 8.625" x 0.50" (8 XS)	A500M-54 (54 ksi)	Single Angle	L 3.5 x 3.5 x 1/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 150.00-140.00	Single Angle	L 3 x 3 x 1/4	A36 (36 ksi)	Single Angle		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontal in	Double Angle Stitch Bolt Spacing Redundants in
T1 150.00-140.00	0.00	0.000	A36 (36 ksi)	1.03	1	1.1	0.000	0.000	36.000
T2 140.00-120.00	0.00	0.000	A36 (36 ksi)	1.03	1	1.1	0.000	0.000	36.000
T3 120.00-100.00	0.00	0.000	A36 (36 ksi)	1.03	1	1.1	0.000	0.000	36.000
T4 100.00-80.00	0.00	0.000	A36 (36 ksi)	1.03	1	1.1	0.000	0.000	36.000
T5 80.00-60.00	0.00	0.000	A36 (36 ksi)	1.03	1	1.1	0.000	0.000	36.000
T6 60.00-40.00	0.00	0.000	A36 (36 ksi)	1.03	1	1.1	0.000	0.000	36.000
T7 40.00-20.00	0.00	0.000	A36 (36 ksi)	1.03	1	1.1	0.000	0.000	36.000
T8 20.00-0.00	0.00	0.000	A36 (36 ksi)	1.03	1	1.1	0.000	0.000	36.000

Tower Section Geometry (cont'd)

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors ¹							
			Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 150.00-140.00	Yes	No	1	1	1	1	1	1	1	1
T2 140.00-120.00	Yes	No	1	1	1	1	1	1	1	1
T3 120.00-100.00	Yes	No	1	1	1	1	1	1	1	1
T4 100.00-80.00	Yes	No	1	1	1	1	1	1	1	1
T5 80.00-60.00	Yes	No	1	1	1	1	1	1	1	1
T6 60.00-40.00	Yes	No	1	1	1	1	1	1	1	1
T7 40.00-20.00	Yes	No	1	1	1	1	1	1	1	1
T8 20.00-0.00	Yes	No	1	1	1	1	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 150.00-140.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T2 140.00-120.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T3 120.00-100.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T4 100.00-80.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T5 80.00-60.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T6 60.00-40.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T7 40.00-20.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T8 20.00-0.00	0.000	1	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub- Diagonal		Redundant Sub- Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 150.00-140.00	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T2 140.00-120.00	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T3 120.00-100.00	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T4 100.00-80.00	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub- Diagonal		Redundant Sub- Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T5 80.00- 60.00	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T6 60.00- 40.00	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T7 40.00- 20.00	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T8 20.00-0.00	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

Tower Section Geometry (cont'd)

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 150.00- 140.00	Flange	0.750 A325N	4	0.500 A325N	1	0.500 A325N	1	0.625 A325N	0	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0
T2 140.00- 120.00	Flange	1.000 A325N	4	0.625 A325N	1	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0
T3 120.00- 100.00	Flange	1.000 A325N	6	0.625 A325N	1	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0
T4 100.00- 80.00	Flange	1.000 A325N	8	0.625 A325N	1	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0
T5 80.00- 60.00	Flange	1.250 A325N	8	0.625 A325N	1	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0
T6 60.00- 40.00	Flange	1.250 A325N	8	0.625 A325N	1	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0
T7 40.00- 20.00	Flange	1.250 A325N	8	0.750 A325N	1	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0
T8 20.00-0.00	Flange	1.500 A325N	0	0.750 A325N	1	0.000 A325N	0	0.625 A325N	0	0.625 A325N	0	0.000 A325N	0	0.625 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacin g in	Width or Diameter in	Perimete r in	Weight plf
Safety Line 3/8	C	No	No	Ar (CaAa)	150.00 - 0.00	0.000	-0.5	1	1	0.375	0.375		0.22
1.5" flat Cable Ladder Rail	C	No	No	Af (CaAa)	150.00 - 0.00	0.000	-0.25	2	2	30.000 1.500	1.500		1.80
LDF7-50A(1- 5/8")	C	No	No	Ar (CaAa)	150.00 - 0.00	0.000	-0.25	6	6	1.980	1.980		0.82
AVA6-50(1- 1/4") **	C	No	No	Ar (CaAa)	150.00 - 0.00	0.000	-0.25	3	3	1.560	1.560		0.45
1.5" flat Cable Ladder Rail	A	No	No	Af (CaAa)	140.00 - 0.00	0.000	-0.25	2	2	30.000 1.500	1.500		1.80
AVA6-50(1- 1/4") **	A	No	No	Ar (CaAa)	140.00 - 0.00	0.000	-0.25	4	4	1.560	1.560		0.45
1.5" flat Cable Ladder Rail	B	No	No	Af (CaAa)	127.50 - 0.00	0.000	-0.25	2	2	30.000 1.500	1.500		1.80

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
LDF7-50A(1-5/8") **	B	No	No	Ar (CaAa)	127.50 - 0.00	0.000	-0.25	13	13	1.000 1.980	1.980		0.82
1.5" flat Cable Ladder Rail	C	No	No	Af (CaAa)	115.00 - 0.00	0.000	0.25	2	2	30.000 1.500	1.500		1.80
AVA6-50(1-1/4")	C	No	No	Ar (CaAa)	115.00 - 0.00	0.000	0.25	6	6	1.560	1.560		0.45
DC (3/4")	C	No	No	Ar (CaAa)	115.00 - 0.00	0.000	0.25	2	2	1.090	0.750		0.33
DC (3/4")	C	No	No	Ar (CaAa)	115.00 - 0.00	0.000	0.25	6	6	1.090	0.001		0.33
Fiber (3/8")	C	No	No	Ar (CaAa)	115.00 - 0.00	0.000	0.25	2	1	1.090	0.001		0.33
3" (Nominal) Conduit **	C	No	No	Ar (CaAa)	115.00 - 0.00	0.000	0.25	1	1	3.500	3.500		1.49
HB158-21U6S12-XXXM-01(1-5/8)	A	No	No	Ar (CaAa)	105.00 - 0.00	0.000	-0.2	1	1	1.990	1.990		1.90

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight lb
T1	150.00-140.00	A	0.000	0.000	0.000	0.000	0
		B	0.000	0.000	0.000	0.000	0
		C	0.000	0.000	21.935	0.000	101
T2	140.00-120.00	A	0.000	0.000	22.480	0.000	108
		B	0.000	0.000	23.055	0.000	107
		C	0.000	0.000	43.870	0.000	202
T3	120.00-100.00	A	0.000	0.000	23.475	0.000	118
		B	0.000	0.000	61.480	0.000	285
		C	0.000	0.000	72.922	0.000	368
T4	100.00-80.00	A	0.000	0.000	26.460	0.000	146
		B	0.000	0.000	61.480	0.000	285
		C	0.000	0.000	82.606	0.000	424
T5	80.00-60.00	A	0.000	0.000	26.460	0.000	146
		B	0.000	0.000	61.480	0.000	285
		C	0.000	0.000	82.606	0.000	424
T6	60.00-40.00	A	0.000	0.000	26.460	0.000	146
		B	0.000	0.000	61.480	0.000	285
		C	0.000	0.000	82.606	0.000	424
T7	40.00-20.00	A	0.000	0.000	26.460	0.000	146
		B	0.000	0.000	61.480	0.000	285
		C	0.000	0.000	82.606	0.000	424
T8	20.00-0.00	A	0.000	0.000	26.460	0.000	146
		B	0.000	0.000	61.480	0.000	285
		C	0.000	0.000	82.606	0.000	424

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight lb
T1	150.00-140.00	A	1.739	0.000	0.000	0.000	0.000	0
		B		0.000	0.000	0.000	0.000	0
		C		0.000	0.000	63.554	0.000	933
T2	140.00-120.00	A	1.720	0.000	0.000	61.780	0.000	900

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight lb
T3	120.00-100.00	B	1.692	0.000	0.000	47.851	0.000	748
		C		0.000	0.000	126.645	0.000	1846
		A		0.000	0.000	64.058	0.000	932
T4	100.00-80.00	B	1.658	0.000	0.000	127.216	0.000	1968
		C		0.000	0.000	235.433	0.000	3266
		A		0.000	0.000	71.501	0.000	1051
T5	80.00-60.00	B	1.617	0.000	0.000	126.759	0.000	1935
		C		0.000	0.000	269.813	0.000	3672
		A		0.000	0.000	70.746	0.000	1023
T6	60.00-40.00	B	1.564	0.000	0.000	126.199	0.000	1895
		C		0.000	0.000	267.224	0.000	3577
		A		0.000	0.000	69.765	0.000	988
T7	40.00-20.00	B	1.486	0.000	0.000	125.472	0.000	1844
		C		0.000	0.000	263.861	0.000	3456
		A		0.000	0.000	68.339	0.000	937
T8	20.00-0.00	B	1.331	0.000	0.000	124.415	0.000	1769
		C		0.000	0.000	258.974	0.000	3284
		A		0.000	0.000	65.513	0.000	839
		B		0.000	0.000	122.320	0.000	1625
		C		0.000	0.000	249.297	0.000	2954
		A		0.000	0.000		0.000	

Feed Line Center of Pressure

Section	Elevation ft	CP_x in	CP_z in	CP_x Ice in	CP_z Ice in
T1	150.00-140.00	6.944	3.692	9.464	5.993
T2	140.00-120.00	2.655	-1.738	4.560	0.848
T3	120.00-100.00	0.270	-5.858	-0.505	-1.102
T4	100.00-80.00	-1.116	-6.099	-2.664	-0.187
T5	80.00-60.00	-1.239	-6.686	-3.022	-0.343
T6	60.00-40.00	-1.376	-7.338	-3.329	-0.569
T7	40.00-20.00	-1.595	-8.459	-3.765	-0.983
T8	20.00-0.00	-1.746	-9.228	-3.938	-1.817

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	1	Safety Line 3/8	140.00 - 150.00	0.6000	0.6000
T1	2	1.5" flat Cable Ladder Rail	140.00 - 150.00	0.6000	0.6000
T1	3	LDF7-50A(1-5/8")	140.00 - 150.00	0.6000	0.6000
T1	4	AVA6-50(1-1/4")	140.00 - 150.00	0.6000	0.6000
T2	1	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T2	2	1.5" flat Cable Ladder Rail	120.00 - 140.00	0.6000	0.6000
T2	3	LDF7-50A(1-5/8")	120.00 - 140.00	0.6000	0.6000
T2	4	AVA6-50(1-1/4")	120.00 - 140.00	0.6000	0.6000
T2	6	1.5" flat Cable Ladder Rail	120.00 - 140.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T2	7	AVA6-50(1-1/4")	120.00 - 140.00	0.6000	0.6000
T2	9	1.5" flat Cable Ladder Rail	120.00 - 127.50	0.6000	0.6000
T2	10	LDF7-50A(1-5/8")	120.00 - 127.50	0.6000	0.6000
T3	1	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T3	2	1.5" flat Cable Ladder Rail	100.00 - 120.00	0.6000	0.6000
T3	3	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T3	4	AVA6-50(1-1/4")	100.00 - 120.00	0.6000	0.6000
T3	6	1.5" flat Cable Ladder Rail	100.00 - 120.00	0.6000	0.6000
T3	7	AVA6-50(1-1/4")	100.00 - 120.00	0.6000	0.6000
T3	9	1.5" flat Cable Ladder Rail	100.00 - 120.00	0.6000	0.6000
T3	10	LDF7-50A(1-5/8")	100.00 - 120.00	0.6000	0.6000
T3	13	1.5" flat Cable Ladder Rail	100.00 - 115.00	0.6000	0.6000
T3	14	AVA6-50(1-1/4")	100.00 - 115.00	0.6000	0.6000
T3	15	DC (3/4")	100.00 - 115.00	0.6000	0.6000
T3	16	DC (3/4")	100.00 - 115.00	0.6000	0.6000
T3	17	Fiber (3/8")	100.00 - 115.00	0.6000	0.6000
T3	18	3" (Nominal) Conduit	100.00 - 115.00	0.6000	0.6000
T3	20	HB158-21U6S12-XXXM-01(1-5/8)	100.00 - 105.00	0.6000	0.6000
T4	1	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T4	2	1.5" flat Cable Ladder Rail	80.00 - 100.00	0.6000	0.6000
T4	3	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T4	4	AVA6-50(1-1/4")	80.00 - 100.00	0.6000	0.6000
T4	6	1.5" flat Cable Ladder Rail	80.00 - 100.00	0.6000	0.6000
T4	7	AVA6-50(1-1/4")	80.00 - 100.00	0.6000	0.6000
T4	9	1.5" flat Cable Ladder Rail	80.00 - 100.00	0.6000	0.6000
T4	10	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T4	13	1.5" flat Cable Ladder Rail	80.00 - 100.00	0.6000	0.6000
T4	14	AVA6-50(1-1/4")	80.00 - 100.00	0.6000	0.6000
T4	15	DC (3/4")	80.00 - 100.00	0.6000	0.6000
T4	16	DC (3/4")	80.00 - 100.00	0.6000	0.6000
T4	17	Fiber (3/8")	80.00 - 100.00	0.6000	0.6000
T4	18	3" (Nominal) Conduit	80.00 - 100.00	0.6000	0.6000
T4	20	HB158-21U6S12-XXXM-01(1-5/8)	80.00 - 100.00	0.6000	0.6000
T5	1	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T5	2	1.5" flat Cable Ladder Rail	60.00 - 80.00	0.6000	0.6000
T5	3	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T5	4	AVA6-50(1-1/4")	60.00 - 80.00	0.6000	0.6000
T5	6	1.5" flat Cable Ladder Rail	60.00 - 80.00	0.6000	0.6000
T5	7	AVA6-50(1-1/4")	60.00 - 80.00	0.6000	0.6000
T5	9	1.5" flat Cable Ladder Rail	60.00 - 80.00	0.6000	0.6000
T5	10	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T5	13	1.5" flat Cable Ladder Rail	60.00 - 80.00	0.6000	0.6000
T5	14	AVA6-50(1-1/4")	60.00 - 80.00	0.6000	0.6000
T5	15	DC (3/4")	60.00 - 80.00	0.6000	0.6000
T5	16	DC (3/4")	60.00 - 80.00	0.6000	0.6000
T5	17	Fiber (3/8")	60.00 - 80.00	0.6000	0.6000
T5	18	3" (Nominal) Conduit	60.00 - 80.00	0.6000	0.6000
T5	20	HB158-21U6S12-XXM-01(1-5/8)	60.00 - 80.00	0.6000	0.6000
T6	1	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T6	2	1.5" flat Cable Ladder Rail	40.00 - 60.00	0.6000	0.6000
T6	3	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T6	4	AVA6-50(1-1/4")	40.00 - 60.00	0.6000	0.6000
T6	6	1.5" flat Cable Ladder Rail	40.00 - 60.00	0.6000	0.6000
T6	7	AVA6-50(1-1/4")	40.00 - 60.00	0.6000	0.6000
T6	9	1.5" flat Cable Ladder Rail	40.00 - 60.00	0.6000	0.6000
T6	10	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T6	13	1.5" flat Cable Ladder Rail	40.00 - 60.00	0.6000	0.6000
T6	14	AVA6-50(1-1/4")	40.00 - 60.00	0.6000	0.6000
T6	15	DC (3/4")	40.00 - 60.00	0.6000	0.6000
T6	16	DC (3/4")	40.00 - 60.00	0.6000	0.6000
T6	17	Fiber (3/8")	40.00 - 60.00	0.6000	0.6000
T6	18	3" (Nominal) Conduit	40.00 - 60.00	0.6000	0.6000
T6	20	HB158-21U6S12-XXM-01(1-5/8)	40.00 - 60.00	0.6000	0.6000
T7	1	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T7	2	1.5" flat Cable Ladder Rail	20.00 - 40.00	0.6000	0.6000
T7	3	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T7	4	AVA6-50(1-1/4")	20.00 - 40.00	0.6000	0.6000
T7	6	1.5" flat Cable Ladder Rail	20.00 - 40.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T7	7	AVA6-50(1-1/4")	20.00 - 40.00	0.6000	0.6000
T7	9	1.5" flat Cable Ladder Rail	20.00 - 40.00	0.6000	0.6000
T7	10	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T7	13	1.5" flat Cable Ladder Rail	20.00 - 40.00	0.6000	0.6000
T7	14	AVA6-50(1-1/4")	20.00 - 40.00	0.6000	0.6000
T7	15	DC (3/4")	20.00 - 40.00	0.6000	0.6000
T7	16	DC (3/4")	20.00 - 40.00	0.6000	0.6000
T7	17	Fiber (3/8")	20.00 - 40.00	0.6000	0.6000
T7	18	3" (Nominal) Conduit	20.00 - 40.00	0.6000	0.6000
T7	20	HB158-21U6S12-XXXM-01(1-5/8)	20.00 - 40.00	0.6000	0.6000
T8	1	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000
T8	2	1.5" flat Cable Ladder Rail	0.00 - 20.00	0.6000	0.6000
T8	3	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T8	4	AVA6-50(1-1/4")	0.00 - 20.00	0.6000	0.6000
T8	6	1.5" flat Cable Ladder Rail	0.00 - 20.00	0.6000	0.6000
T8	7	AVA6-50(1-1/4")	0.00 - 20.00	0.6000	0.6000
T8	9	1.5" flat Cable Ladder Rail	0.00 - 20.00	0.6000	0.6000
T8	10	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T8	13	1.5" flat Cable Ladder Rail	0.00 - 20.00	0.6000	0.6000
T8	14	AVA6-50(1-1/4")	0.00 - 20.00	0.6000	0.6000
T8	15	DC (3/4")	0.00 - 20.00	0.6000	0.6000
T8	16	DC (3/4")	0.00 - 20.00	0.6000	0.6000
T8	17	Fiber (3/8")	0.00 - 20.00	0.6000	0.6000
T8	18	3" (Nominal) Conduit	0.00 - 20.00	0.6000	0.6000
T8	20	HB158-21U6S12-XXXM-01(1-5/8)	0.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight lb
Site Pro 1 VFA12-HD	A	From Leg	2.00	0.000	150.00	No Ice	13.20	9.20	658
			0			1/2"	19.50	14.60	804
			0			Ice	25.80	19.50	1015
Site Pro 1 VFA12-HD	B	From Leg	2.00	0.000	150.00	1" Ice	13.20	9.20	658
			0			No Ice	19.50	14.60	804
			0			1/2"	25.80	19.50	1015
Site Pro 1 VFA12-HD	C	From Leg	2.00	0.000	150.00	1" Ice	13.20	9.20	658
			0			No Ice	19.50	14.60	804
			0			1/2"	25.80	19.50	1015
8' x 2" Sch 40 Pipe Mount	A	From Leg	4.00	0.000	150.00	1" Ice	1.90	1.90	29
			0			No Ice	2.73	2.73	44
			0			1/2"	3.40	3.40	63
8' x 2" Sch 40 Pipe Mount	B	From Leg	4.00	0.000	150.00	1" Ice	1.90	1.90	29
						No Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
			0			1/2"	2.73	2.73	44
			0			Ice	3.40	3.40	63
8' x 2" Sch 40 Pipe Mount	C	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	1.90	1.90	29
			0			1/2"	2.73	2.73	44
			0			Ice	3.40	3.40	63
AIR 32 B66AA B2P_T-MOBILE_TIA w/ Mount Pipe	A	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	7.09	6.39	158
			0			1/2"	7.56	7.25	222
			0			Ice	8.02	7.99	292
AIR 32 B66AA B2P_T-MOBILE_TIA w/ Mount Pipe	B	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	7.09	6.39	158
			0			1/2"	7.56	7.25	222
			0			Ice	8.02	7.99	292
AIR 32 B66AA B2P_T-MOBILE_TIA w/ Mount Pipe	C	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	7.09	6.39	158
			0			1/2"	7.56	7.25	222
			0			Ice	8.02	7.99	292
APXVAARR24_43-U-NA20_TIA w/ Mount Pipe	A	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	20.48	11.02	186
			0			1/2"	21.23	12.55	322
			0			Ice	21.99	14.10	469
APXVAARR24_43-U-NA20_TIA w/ Mount Pipe	B	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	20.48	11.02	186
			0			1/2"	21.23	12.55	322
			0			Ice	21.99	14.10	469
APXVAARR24_43-U-NA20_TIA w/ Mount Pipe	C	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	20.48	11.02	186
			0			1/2"	21.23	12.55	322
			0			Ice	21.99	14.10	469
AIR 6449 B41_TIA w/ Mount Pipe	A	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	5.87	3.27	128
			0			1/2"	6.23	3.73	177
			0			Ice	6.61	4.20	232
AIR 6449 B41_TIA w/ Mount Pipe	B	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	5.87	3.27	128
			0			1/2"	6.23	3.73	177
			0			Ice	6.61	4.20	232
AIR 6449 B41_TIA w/ Mount Pipe	C	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	5.87	3.27	128
			0			1/2"	6.23	3.73	177
			0			Ice	6.61	4.20	232
RRUS 4415 B25	A	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	1.64	0.68	44
			0			1/2"	1.80	0.79	56
			0			Ice	1.97	0.91	71
RRUS 4415 B25	B	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	1.64	0.68	44
			0			1/2"	1.80	0.79	56
			0			Ice	1.97	0.91	71
RRUS 4415 B25	C	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	1.64	0.68	44
			0			1/2"	1.80	0.79	56
			0			Ice	1.97	0.91	71
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	1.97	1.59	73
			0			1/2"	2.15	1.75	93
			0			Ice	2.33	1.92	116
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	1.97	1.59	73
			0			1/2"	2.15	1.75	93
			0			Ice	2.33	1.92	116
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	4.00	0.000	150.00	1" Ice			
			0			No Ice	1.97	1.59	73
			0			1/2"	2.15	1.75	93

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
			0			1/2" Ice 1" Ice	2.33	1.92	116
** Sector Mount [SM 802-3]	C	None		0.000	140.00	No Ice 1/2" Ice 1" Ice	25.34 33.44 41.56	25.34 33.44 41.56	930 1388 1977
DT465B-2XR_TIA w/ Mount Pipe	A	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	9.34 9.91 10.44	7.63 8.82 9.72	84 160 245
DT465B-2XR_TIA w/ Mount Pipe	B	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	9.34 9.91 10.44	7.63 8.82 9.72	84 160 245
DT465B-2XR_TIA w/ Mount Pipe	C	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	9.34 9.91 10.44	7.63 8.82 9.72	84 160 245
TD-RRH8x20-25	A	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70 97 128
TD-RRH8x20-25	B	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70 97 128
TD-RRH8x20-25	C	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70 97 128
(2) 1900 MHz 4x45W RRH	A	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	60 83 110
(2) 1900 MHz 4x45W RRH	B	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	60 83 110
(2) 1900 MHz 4x45W RRH	C	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	60 83 110
APXV9ERR18-C-A20_TIA w/ Mount Pipe	A	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	8.26 8.82 9.35	7.47 8.66 9.56	95 166 244
APXV9ERR18-C-A20_TIA w/ Mount Pipe	B	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	8.26 8.82 9.35	7.47 8.66 9.56	95 166 244
APXV9ERR18-C-A20_TIA w/ Mount Pipe	C	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	8.26 8.82 9.35	7.47 8.66 9.56	95 166 244
(2) RRH2X50-800	A	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	1.70 1.86 2.03	1.28 1.43 1.58	53 70 90
(2) RRH2X50-800	B	From Leg	4.00 0 0	0.000	140.00	No Ice 1/2" Ice 1" Ice	1.70 1.86 2.03	1.28 1.43 1.58	53 70 90
(2) RRH2X50-800	C	From Leg	4.00	0.000	140.00	No Ice	1.70	1.28	53

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
			0			1/2"	1.86	1.43	70
			0			Ice	2.03	1.58	90
						1" Ice			
** Sector Mount [SM 802-3]	C	None		0.000	126.00	No Ice	25.34	25.34	930
						1/2"	33.44	33.44	1388
						Ice	41.56	41.56	1977
						1" Ice			
BSAMNT-SBS-2-2 (Mount Bracket)	A	From Leg	4.00	0.000	126.00	No Ice	0.00	0.00	67
			0			1/2"	0.00	0.00	88
			0			Ice	0.00	0.00	108
						1" Ice			
BSAMNT-SBS-2-2 (Mount Bracket)	B	From Leg	4.00	0.000	126.00	No Ice	0.00	0.00	67
			0			1/2"	0.00	0.00	88
			0			Ice	0.00	0.00	108
						1" Ice			
BSAMNT-SBS-2-2 (Mount Bracket)	C	From Leg	4.00	0.000	126.00	No Ice	0.00	0.00	67
			0			1/2"	0.00	0.00	88
			0			Ice	0.00	0.00	108
						1" Ice			
Miscellaneous [NA 509-1]	A	From Leg	2.00	0.000	126.00	No Ice	6.32	4.85	275
			0			1/2"	7.79	6.36	417
			0			Ice	9.36	7.94	598
						1" Ice			
Miscellaneous [NA 509-1]	B	From Leg	2.00	0.000	126.00	No Ice	6.32	4.85	275
			0			1/2"	7.79	6.36	417
			0			Ice	9.36	7.94	598
						1" Ice			
Miscellaneous [NA 509-1]	C	From Leg	2.00	0.000	126.00	No Ice	6.32	4.85	275
			0			1/2"	7.79	6.36	417
			0			Ice	9.36	7.94	598
						1" Ice			
12.5' x 2.375" Pipe (Hoirz)	A	From Leg	4.00	0.000	126.00	No Ice	2.97	1.07	30
			0			1/2"	4.25	1.54	52
			0			Ice	5.54	2.01	83
						1" Ice			
12.5' x 2.375" Pipe (Hoirz)	B	From Leg	4.00	0.000	126.00	No Ice	2.97	1.07	30
			0			1/2"	4.25	1.54	52
			0			Ice	5.54	2.01	83
						1" Ice			
12.5' x 2.375" Pipe (Hoirz)	C	From Leg	4.00	0.000	126.00	No Ice	2.97	1.07	30
			0			1/2"	4.25	1.54	52
			0			Ice	5.54	2.01	83
						1" Ice			
MT6407-77A w/ Mount Pipe	A	From Leg	4.00	0.000	126.00	No Ice	4.91	2.68	96
			0			1/2"	5.26	3.14	136
			2			Ice	5.61	3.62	180
						1" Ice			
MT6407-77A w/ Mount Pipe	B	From Leg	4.00	0.000	126.00	No Ice	4.91	2.68	96
			0			1/2"	5.26	3.14	136
			2			Ice	5.61	3.62	180
						1" Ice			
MT6407-77A w/ Mount Pipe	C	From Leg	4.00	0.000	126.00	No Ice	4.91	2.68	96
			0			1/2"	5.26	3.14	136
			2			Ice	5.61	3.62	180
						1" Ice			
(2) JAHB-65B-R3B_TIA w/ Mount Pipe	A	From Leg	4.00	0.000	126.00	No Ice	9.35	7.65	89
			0			1/2"	9.92	8.83	165
			2			Ice	10.46	9.73	250
						1" Ice			
(2) JAHB-65B-R3B_TIA w/ Mount Pipe	B	From Leg	4.00	0.000	126.00	No Ice	9.35	7.65	89
			0			1/2"	9.92	8.83	165
			2			Ice	10.46	9.73	250
						1" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
(2) JAHH-65B-R3B_TIA w/ Mount Pipe	C	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	9.35 9.92 10.46	7.65 8.83 9.73	89 165 250
(2) APL868013_TIA w/ Mount Pipe	A	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	3.10 3.48 3.85	4.80 5.42 6.04	30 69 113
(2) APL868013_TIA w/ Mount Pipe	B	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	3.10 3.48 3.85	4.80 5.42 6.04	30 69 113
(2) APL868013_TIA w/ Mount Pipe	C	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	3.10 3.48 3.85	4.80 5.42 6.04	30 69 113
B2/B66A RRH-BR049	A	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	70 87 106
B2/B66A RRH-BR049	B	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	70 87 106
B2/B66A RRH-BR049	C	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	70 87 106
B5/B13 RRH-BR04C	A	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	70 87 106
B5/B13 RRH-BR04C	B	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	70 87 106
B5/B13 RRH-BR04C	C	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	70 87 106
CBC78T-DS-43-2X	A	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	0.37 0.45 0.53	0.51 0.60 0.70	21 27 35
CBC78T-DS-43-2X	B	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	0.37 0.45 0.53	0.51 0.60 0.70	21 27 35
CBC78T-DS-43-2X	C	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	0.37 0.45 0.53	0.51 0.60 0.70	21 27 35
RRFDC-3315-PF-48	A	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	3.36 3.60 3.84	2.19 2.39 2.61	32 61 93
DB-B1-6C-12AB-0Z	B	From Leg	4.00 0 2	0.000	126.00	No Ice 1/2" Ice 1" Ice	2.60 2.81 3.04	2.08 2.27 2.47	55 78 105
**									
Site Pro 1 VFA12-HD	A	From Leg	2.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	13.20 19.50 25.80	9.20 14.60 19.50	658 804 1015

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
Site Pro 1 VFA12-HD	B	From Leg	2.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	13.20 19.50 25.80	9.20 14.60 19.50	658 804 1015
Site Pro 1 VFA12-HD	C	From Leg	2.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	13.20 19.50 25.80	9.20 14.60 19.50	658 804 1015
7770_TIA w/ Mount Pipe	A	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	5.75 6.18 6.61	4.25 5.01 5.71	55 103 157
7770_TIA w/ Mount Pipe	B	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	5.75 6.18 6.61	4.25 5.01 5.71	55 103 157
7770_TIA w/ Mount Pipe	C	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	5.75 6.18 6.61	4.25 5.01 5.71	55 103 157
OPA-65R-LCUU-H8_TIA w/ Mount Pipe	A	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	13.00 13.69 14.38	9.56 11.03 12.49	103 198 303
OPA-65R-LCUU-H6_TIA w/ Mount Pipe	B	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	9.68 10.25 10.79	7.12 8.30 9.20	106 181 265
OPA-65R-LCUU-H6_TIA w/ Mount Pipe	C	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	9.68 10.25 10.79	7.12 8.30 9.20	106 181 265
EPBQ-654L8H8-L2_TIA w/ Mount Pipe	A	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	18.33 19.06 19.81	9.17 10.68 12.22	119 236 363
EPBQ-654L8H6-L2_TIA w/ Mount Pipe	B	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	13.47 14.09 14.66	6.64 7.83 8.75	110 201 300
EPBQ-654L8H6-L2_TIA w/ Mount Pipe	C	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	13.47 14.09 14.66	6.64 7.83 8.75	110 201 300
DMP65R-BU8D_TIA w/ Mount Pipe	A	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	18.11 18.84 19.59	10.26 11.78 13.33	138 260 392
DMP65R-BU6D_TIA w/ Mount Pipe	B	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	12.95 13.55 14.11	7.26 8.43 9.31	115 207 308
DMP65R-BU6D_TIA w/ Mount Pipe	C	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	12.95 13.55 14.11	7.26 8.43 9.31	115 207 308
RRUS E2 B29	A	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	3.15 3.36 3.59	1.29 1.44 1.60	60 83 110
RRUS E2 B29	B	From Leg	4.00 0 0	0.000	115.00	No Ice 1/2" Ice 1" Ice	3.15 3.36 3.59	1.29 1.44 1.60	60 83 110
RRUS E2 B29	C	From Leg	4.00	0.000	115.00	No Ice	3.15	1.29	60

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight lb
			0			1/2"	3.36	1.44	83
			0			Ice	3.59	1.60	110
RRUS 4449 B5/B12	A	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	1.97	1.41	73
			0			1/2"	2.14	1.56	92
			0			Ice	2.33	1.73	113
RRUS 4449 B5/B12	B	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	1.97	1.41	73
			0			1/2"	2.14	1.56	92
			0			Ice	2.33	1.73	113
RRUS 4449 B5/B12	C	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	1.97	1.41	73
			0			1/2"	2.14	1.56	92
			0			Ice	2.33	1.73	113
RRUS 4478 B14	A	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.02	1.25	59
			0			1/2"	2.20	1.40	77
			0			Ice	2.39	1.55	97
RRUS 4478 B14	B	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.02	1.25	59
			0			1/2"	2.20	1.40	77
			0			Ice	2.39	1.55	97
RRUS 4478 B14	C	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.02	1.25	59
			0			1/2"	2.20	1.40	77
			0			Ice	2.39	1.55	97
RRUS 32 B66A	A	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.86	1.78	55
			0			1/2"	3.09	1.97	77
			0			Ice	3.32	2.17	103
RRUS 32 B66A	B	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.86	1.78	55
			0			1/2"	3.09	1.97	77
			0			Ice	3.32	2.17	103
RRUS 32 B66A	C	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.86	1.78	55
			0			1/2"	3.09	1.97	77
			0			Ice	3.32	2.17	103
RRUS 32 B30	A	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.74	1.67	53
			0			1/2"	2.96	1.86	74
			0			Ice	3.19	2.05	98
RRUS 32 B30	B	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.74	1.67	53
			0			1/2"	2.96	1.86	74
			0			Ice	3.19	2.05	98
RRUS 32 B30	C	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.74	1.67	53
			0			1/2"	2.96	1.86	74
			0			Ice	3.19	2.05	98
RRUS 32 B2	A	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.74	1.67	53
			0			1/2"	2.96	1.86	74
			0			Ice	3.19	2.05	98
RRUS 32 B2	B	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.74	1.67	53
			0			1/2"	2.96	1.86	74
			0			Ice	3.19	2.05	98
RRUS 32 B2	C	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	2.74	1.67	53
			0			1/2"	2.96	1.86	74
			0			Ice	3.19	2.05	98
(2) DC6-48-60-18-8F	A	From Leg	0.00	0.000	115.00	1" Ice			
			0			No Ice	1.21	1.21	33
							1.89	1.89	55

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb
			0			1/2" Ice	2.11	2.11	80
DC6-48-60-18-8F	B	From Leg	0.00	0.000	115.00	1" Ice			
			0			No Ice	1.21	1.21	33
			0			1/2"	1.89	1.89	55
			0			Ice	2.11	2.11	80
DC6-48-60-18-8F	C	From Leg	0.00	0.000	115.00	1" Ice			
			0			No Ice	1.21	1.21	33
			0			1/2"	1.89	1.89	55
			0			Ice	2.11	2.11	80
(2) LGP21401	A	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	1.10	0.35	14
			0			1/2"	1.24	0.44	21
			0			Ice	1.38	0.54	30
(2) LGP21401	B	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	1.10	0.35	14
			0			1/2"	1.24	0.44	21
			0			Ice	1.38	0.54	30
(2) LGP21401	C	From Leg	4.00	0.000	115.00	1" Ice			
			0			No Ice	1.10	0.35	14
			0			1/2"	1.24	0.44	21
			0			Ice	1.38	0.54	30
**						1" Ice			
TA08025-B604	A	From Leg	4.00	0.000	105.00	No Ice	1.96	0.98	64
			0			1/2"	2.14	1.11	81
			0			Ice	2.32	1.25	100
TA08025-B605	A	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	1.96	1.13	75
			0			1/2"	2.14	1.27	93
			0			Ice	2.32	1.41	114
RDIDC-9181-PF-48	A	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	2.01	1.17	22
			0			1/2"	2.19	1.31	40
			0			Ice	2.37	1.46	60
TA08025-B604	B	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	1.96	0.98	64
			0			1/2"	2.14	1.11	81
			0			Ice	2.32	1.25	100
TA08025-B605	B	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	1.96	1.13	75
			0			1/2"	2.14	1.27	93
			0			Ice	2.32	1.41	114
TA08025-B604	C	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	1.96	0.98	64
			0			1/2"	2.14	1.11	81
			0			Ice	2.32	1.25	100
TA08025-B605	C	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	1.96	1.13	75
			0			1/2"	2.14	1.27	93
			0			Ice	2.32	1.41	114
MX08FRO665-21_TIA w/ Mount Pipe	A	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	12.73	7.53	108
			0			1/2"	13.33	8.72	200
			0			Ice	13.89	9.62	301
MX08FRO665-21_TIA w/ Mount Pipe	B	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	12.73	7.53	108
			0			1/2"	13.33	8.72	200
			0			Ice	13.89	9.62	301
MX08FRO665-21_TIA w/ Mount Pipe	C	From Leg	4.00	0.000	105.00	1" Ice			
			0			No Ice	12.73	7.53	108
			0			1/2"	13.33	8.72	200
			0			Ice	13.89	9.62	301
						1" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight lb
Sabre_C10837002C- 32788_Sector_(3)	A	None		0.000	105.00	No Ice 1/2" Ice 1" Ice	18.52 28.00 37.48	18.52 28.00 37.48	2028 3067 4106
**									

Load Combinations

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

Comb. No.	Description
50	Dead+Wind 330 deg - Service

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Leg C	Max. Vert	18	317221	26801	-15502
	Max. H _x	18	317221	26801	-15502
	Max. H _z	7	-280050	-24532	14197
	Min. Vert	7	-280050	-24532	14197
	Min. H _x	7	-280050	-24532	14197
	Min. H _z	18	317221	26801	-15502
Leg B	Max. Vert	10	307209	-25868	-14601
	Max. H _x	23	-270212	23576	13265
	Max. H _z	23	-270212	23576	13265
	Min. Vert	23	-270212	23576	13265
	Min. H _x	10	307209	-25868	-14601
	Min. H _z	10	307209	-25868	-14601
Leg A	Max. Vert	2	313911	-23	30463
	Max. H _x	21	12103	3582	797
	Max. H _z	2	313911	-23	30463
	Min. Vert	15	-277185	23	-27838
	Min. H _x	9	11999	-3584	789
	Min. H _z	15	-277185	23	-27838

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	40503	0	0	1785	710	0
1.2 Dead+1.6 Wind 0 deg - No Ice	48604	-6	-49526	-4640835	1641	-713
0.9 Dead+1.6 Wind 0 deg - No Ice	36453	-6	-49526	-4634317	1429	-715
1.2 Dead+1.6 Wind 30 deg - No Ice	48604	24542	-42679	-3996130	-2296019	8667
0.9 Dead+1.6 Wind 30 deg - No Ice	36453	24542	-42679	-3990592	-2292737	8664
1.2 Dead+1.6 Wind 60 deg - No Ice	48604	42054	-24372	-2287475	-3946434	-729
0.9 Dead+1.6 Wind 60 deg - No Ice	36453	42054	-24372	-2284529	-3940636	-732
1.2 Dead+1.6 Wind 90 deg - No Ice	48604	44782	6	2901	-4270544	-16169
0.9 Dead+1.6 Wind 90 deg - No Ice	36453	44782	6	2361	-4264175	-16171
1.2 Dead+1.6 Wind 120 deg - No Ice	48604	41691	24169	2278865	-3922435	9315
0.9 Dead+1.6 Wind 120 deg - No Ice	36453	41691	24169	2274853	-3916661	9314
1.2 Dead+1.6 Wind 150 deg - No Ice	48604	22614	39329	3777013	-2167863	18691
0.9 Dead+1.6 Wind 150 deg - No Ice	36453	22614	39329	3770629	-2164715	18691
1.2 Dead+1.6 Wind 180 deg - No Ice	48604	6	47688	4517760	32	713
0.9 Dead+1.6 Wind 180 deg - No Ice	36453	6	47688	4510303	-177	715
1.2 Dead+1.6 Wind 210 deg - No Ice	48604	-24542	42679	4000469	2297642	-8668

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
0.9 Dead+1.6 Wind 210 deg	36453	-24542	42679	3993852	2293942	-8665
- No Ice						
1.2 Dead+1.6 Wind 240 deg	48604	-43646	25291	2355459	4058436	729
- No Ice						
0.9 Dead+1.6 Wind 240 deg	36453	-43646	25291	2351366	4052098	732
- No Ice						
1.2 Dead+1.6 Wind 270 deg	48604	-44782	-6	1291	4272235	16169
- No Ice						
0.9 Dead+1.6 Wind 270 deg	36453	-44782	-6	754	4265445	16171
- No Ice						
1.2 Dead+1.6 Wind 300 deg	48604	-40099	-23251	-2210848	3813829	-9314
- No Ice						
0.9 Dead+1.6 Wind 300 deg	36453	-40099	-23251	-2207984	3807757	-9313
- No Ice						
1.2 Dead+1.6 Wind 330 deg	48604	-22614	-39329	-3772669	2169630	-18690
- No Ice						
0.9 Dead+1.6 Wind 330 deg	36453	-22614	-39329	-3767364	2166060	-18691
- No Ice						
1.2 Dead+1.0 Ice+1.0 Temp	139998	0	0	27501	4169	0
1.2 Dead+1.0 Wind 0	139998	-1	-13124	-1191417	4279	-1052
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 30	139998	6422	-11140	-1008543	-593012	3098
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 60	139998	10781	-6233	-555180	-1003806	268
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 90	139998	11527	1	27908	-1091650	-677
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 120	139998	10350	5986	594123	-974766	5637
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 150	139998	6074	10536	1024488	-570284	7373
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 180	139998	1	12902	1231967	4020	1052
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 210	139998	-6422	11140	1064105	601305	-3098
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240	139998	-10973	6344	618242	1025102	-269
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270	139998	-11527	-1	27648	1099950	677
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	139998	-10158	-5875	-531055	970072	-5636
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	139998	-6074	-10536	-968925	578592	-7373
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	40503	-1	-10313	-954541	869	-146
Dead+Wind 30 deg - Service	40503	5111	-8888	-821799	-472434	1763
Dead+Wind 60 deg - Service	40503	8760	-5077	-469876	-812481	-151
Dead+Wind 90 deg - Service	40503	9345	1	1953	-879850	-3298
Dead+Wind 120 deg - Service	40503	8686	5035	470823	-807589	1899
Dead+Wind 150 deg - Service	40503	4718	8204	779808	-446308	3809
Dead+Wind 180 deg - Service	40503	1	9938	932144	541	146
Dead+Wind 210 deg - Service	40503	-5111	8888	825382	473841	-1763
Dead+Wind 240 deg - Service	40503	-9085	5264	486447	836390	151
Dead+Wind 270 deg - Service	40503	-9345	-1	1624	881260	3298
Dead+Wind 300 deg - Service	40503	-8362	-4848	-454251	786501	-1899
Dead+Wind 330 deg - Service	40503	-4718	-8204	-776224	447721	-3809

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0	-40503	0	0	40503	0	0.000%
2	-6	-48604	-49526	6	48604	49526	0.000%
3	-6	-36453	-49526	6	36453	49526	0.000%
4	24542	-48604	-42679	-24542	48604	42679	0.000%
5	24542	-36453	-42679	-24542	36453	42679	0.000%
6	42054	-48604	-24372	-42054	48604	24372	0.000%
7	42054	-36453	-24372	-42054	36453	24372	0.000%
8	44782	-48604	6	-44782	48604	-6	0.000%
9	44782	-36453	6	-44782	36453	-6	0.000%
10	41691	-48604	24169	-41691	48604	-24169	0.000%
11	41691	-36453	24169	-41691	36453	-24169	0.000%
12	22614	-48604	39329	-22614	48604	-39329	0.000%
13	22614	-36453	39329	-22614	36453	-39329	0.000%
14	6	-48604	47688	-6	48604	-47688	0.000%
15	6	-36453	47688	-6	36453	-47688	0.000%
16	-24542	-48604	42679	24542	48604	-42679	0.000%
17	-24542	-36453	42679	24542	36453	-42679	0.000%
18	-43646	-48604	25291	43646	48604	-25291	0.000%
19	-43646	-36453	25291	43646	36453	-25291	0.000%
20	-44782	-48604	-6	44782	48604	6	0.000%
21	-44782	-36453	-6	44782	36453	6	0.000%
22	-40099	-48604	-23251	40099	48604	23251	0.000%
23	-40099	-36453	-23251	40099	36453	23251	0.000%
24	-22614	-48604	-39329	22614	48604	39329	0.000%
25	-22614	-36453	-39329	22614	36453	39329	0.000%
26	0	-139998	0	0	139998	0	0.000%
27	-1	-139998	-13124	1	139998	13124	0.000%
28	6422	-139998	-11140	-6422	139998	11140	0.000%
29	10781	-139998	-6233	-10781	139998	6233	0.000%
30	11527	-139998	1	-11527	139998	-1	0.000%
31	10350	-139998	5986	-10350	139998	-5986	0.000%
32	6074	-139998	10536	-6074	139998	-10536	0.000%
33	1	-139998	12902	-1	139998	-12902	0.000%
34	-6422	-139998	11140	6422	139998	-11140	0.000%
35	-10973	-139998	6344	10973	139998	-6344	0.000%
36	-11527	-139998	-1	11527	139998	1	0.000%
37	-10158	-139998	-5875	10158	139998	5875	0.000%
38	-6074	-139998	-10536	6074	139998	10536	0.000%
39	-1	-40503	-10313	1	40503	10313	0.000%
40	5111	-40503	-8888	-5111	40503	8888	0.000%
41	8760	-40503	-5077	-8760	40503	5077	0.000%
42	9345	-40503	1	-9345	40503	-1	0.000%
43	8686	-40503	5035	-8686	40503	-5035	0.000%
44	4718	-40503	8204	-4718	40503	-8204	0.000%
45	1	-40503	9938	-1	40503	-9938	0.000%
46	-5111	-40503	8888	5111	40503	-8888	0.000%
47	-9085	-40503	5264	9085	40503	-5264	0.000%
48	-9345	-40503	-1	9345	40503	1	0.000%
49	-8362	-40503	-4848	8362	40503	4848	0.000%
50	-4718	-40503	-8204	4718	40503	8204	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00000197
3	Yes	4	0.00000001	0.00000155
4	Yes	4	0.00000001	0.00000173
5	Yes	4	0.00000001	0.00000130
6	Yes	4	0.00000001	0.00000153
7	Yes	4	0.00000001	0.00000102
8	Yes	4	0.00000001	0.00000168
9	Yes	4	0.00000001	0.00000121
10	Yes	4	0.00000001	0.00000192
11	Yes	4	0.00000001	0.00000150
12	Yes	4	0.00000001	0.00000175
13	Yes	4	0.00000001	0.00000129
14	Yes	4	0.00000001	0.00000155
15	Yes	4	0.00000001	0.00000104
16	Yes	4	0.00000001	0.00000172
17	Yes	4	0.00000001	0.00000128
18	Yes	4	0.00000001	0.00000192
19	Yes	4	0.00000001	0.00000149
20	Yes	4	0.00000001	0.00000167
21	Yes	4	0.00000001	0.00000120
22	Yes	4	0.00000001	0.00000152
23	Yes	4	0.00000001	0.00000101
24	Yes	4	0.00000001	0.00000175
25	Yes	4	0.00000001	0.00000130
26	Yes	4	0.00000001	0.00000001
27	Yes	4	0.00000001	0.00002055
28	Yes	4	0.00000001	0.00002056
29	Yes	4	0.00000001	0.00002056
30	Yes	4	0.00000001	0.00002027
31	Yes	4	0.00000001	0.00002054
32	Yes	4	0.00000001	0.00002078
33	Yes	4	0.00000001	0.00002101
34	Yes	4	0.00000001	0.00002072
35	Yes	4	0.00000001	0.00002037
36	Yes	4	0.00000001	0.00001991
37	Yes	4	0.00000001	0.00002007
38	Yes	4	0.00000001	0.00002027
39	Yes	4	0.00000001	0.00000001
40	Yes	4	0.00000001	0.00000001
41	Yes	4	0.00000001	0.00000001
42	Yes	4	0.00000001	0.00000001
43	Yes	4	0.00000001	0.00000001
44	Yes	4	0.00000001	0.00000001
45	Yes	4	0.00000001	0.00000001
46	Yes	4	0.00000001	0.00000001
47	Yes	4	0.00000001	0.00000001
48	Yes	4	0.00000001	0.00000001
49	Yes	4	0.00000001	0.00000001
50	Yes	4	0.00000001	0.00000001

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	150 - 140	3.63	47	0.236	0.018
T2	140 - 120	3.11	47	0.233	0.017
T3	120 - 100	2.14	47	0.193	0.016
T4	100 - 80	1.38	47	0.146	0.012
T5	80 - 60	0.82	47	0.101	0.009
T6	60 - 40	0.44	47	0.062	0.006
T7	40 - 20	0.20	47	0.036	0.003
T8	20 - 0	0.06	47	0.018	0.002

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
150.00	Site Pro 1 VFA12-HD	47	3.63	0.236	0.018	104169
140.00	Sector Mount [SM 802-3]	47	3.11	0.233	0.017	53328
126.00	Sector Mount [SM 802-3]	47	2.42	0.207	0.016	25868
115.00	Site Pro 1 VFA12-HD	47	1.93	0.180	0.015	21728
105.00	TA08025-B604	47	1.55	0.157	0.013	22583

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	150 - 140	17.78	18	1.158	0.088
T2	140 - 120	15.21	18	1.142	0.081
T3	120 - 100	10.47	18	0.943	0.076
T4	100 - 80	6.71	18	0.714	0.059
T5	80 - 60	3.96	18	0.492	0.042
T6	60 - 40	2.14	18	0.302	0.028
T7	40 - 20	0.97	18	0.173	0.016
T8	20 - 0	0.31	18	0.086	0.008

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
150.00	Site Pro 1 VFA12-HD	18	17.78	1.158	0.088	21448
140.00	Sector Mount [SM 802-3]	18	15.21	1.142	0.081	10976
126.00	Sector Mount [SM 802-3]	18	11.81	1.016	0.077	5292
115.00	Site Pro 1 VFA12-HD	18	9.43	0.884	0.073	4425
105.00	TA08025-B604	18	7.55	0.770	0.064	4597

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load Allowable	Allowable Ratio	Criteria
T1	150	Leg	A325N	0.750	4	2154	29821	0.072	✓	Bolt Tension
		Diagonal	A325N	0.500	1	2775	6986	0.397	✓	Member Block Shear
		Top Girt	A325N	0.500	1	717	7952	0.090	✓	Bolt Shear
T2	140	Leg	A325N	1.000	4	12638	53014	0.238	✓	Bolt Tension
		Diagonal	A325N	0.625	1	7305	9788	0.746	✓	Member Bearing
T3	120	Leg	A325N	1.000	6	16674	53014	0.315	✓	Bolt Tension
		Diagonal	A325N	0.625	1	7736	9788	0.790	✓	Member Bearing
T4	100	Leg	A325N	1.000	8	18219	53014	0.344	✓	Bolt Tension

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load Allowable	Allowable Ratio	Criteria
T5	80	Diagonal	A325N	0.625	1	8276	9788	0.846 ✓	1	Member Bearing
		Leg	A325N	1.250	8	23087	82835	0.279 ✓	1	Bolt Tension
T6	60	Diagonal	A325N	0.625	1	8024	9788	0.820 ✓	1	Member Bearing
		Leg	A325N	1.250	8	27482	82835	0.332 ✓	1	Bolt Tension
T7	40	Diagonal	A325N	0.625	1	8260	9788	0.844 ✓	1	Member Bearing
		Leg	A325N	1.250	8	31465	82835	0.380 ✓	1	Bolt Tension
T8	20	Diagonal	A325N	0.750	1	8966	14355	0.625 ✓	1	Member Bearing
		Diagonal	A325N	0.750	1	9427	14355	0.657 ✓	1	Member Bearing

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	150 - 140	Pipe 2.875" x 0.203" (2.5 STD)	10.00	0.67	8.4 K=1.00	1.704	-11649	82352	0.141 ¹ ✓
T2	140 - 120	Pipe 2.875" x 0.203" (2.5 STD)	20.00	4.67	59.1 K=1.00	1.704	-51706	62849	0.823 ¹ ✓
T3	120 - 100	Pipe 4.5" x 0.237" (4 STD)	20.03	4.67	37.2 K=1.00	3.174	-108911	138323	0.787 ¹ ✓
T4	100 - 80	Pipe 5.563" x 0.258" (5 STD)	20.03	6.26	40.0 K=1.00	4.300	-156650	184163	0.851 ¹ ✓
T5	80 - 60	Pipe 6.625" x 0.280" (6 STD)	20.03	6.26	33.5 K=1.00	5.581	-199906	248307	0.805 ¹ ✓
T6	60 - 40	Pipe 8.625" x 0.322" (8 STD)	20.03	6.26	25.6 K=1.00	8.399	-239684	387660	0.618 ¹ ✓
T7	40 - 20	Pipe 8.625" x 0.50" (8 XS)	20.03	9.35	39.0 K=1.00	12.763	-274234	550137	0.498 ¹ ✓
T8	20 - 0	Pipe 8.625" x 0.50" (8 XS)	20.03	9.35	39.0 K=1.00	12.763	-308756	550137	0.561 ¹ ✓

¹ P_u / φP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	150 - 140	L 1.5 x 1.5 x 3/16	7.40	3.42	139.8 K=1.00	0.527	-2659	6096	0.436 ¹ ✓
T2	140 - 120	L 2 x 2 x 3/16	7.60	3.51	110.3 K=1.03	0.715	-7242	12216	0.593 ¹ ✓
T3	120 - 100	L 2 x 2 x 3/16	9.00	4.28	130.5 K=1.00	0.715	-7692	9453	0.814 ¹ ✓

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T4	100 - 80	L 2.5 x 2.5 x 3/16	11.48	5.51	133.7 K=1.00	0.902	-7891	11411	0.692 ¹ ✓
T5	80 - 60	L 3 x 3 x 3/16	13.20	6.33	127.4 K=1.00	1.090	-7907	14952	0.529 ¹ ✓
T6	60 - 40	L 3 x 3 x 3/16	14.99	7.14	143.6 K=1.00	1.090	-8408	11937	0.704 ¹ ✓
T7	40 - 20	L 3.5 x 3.5 x 1/4	18.07	8.74	151.1 K=1.00	1.690	-9111	16716	0.545 ¹ ✓
T8	20 - 0	L 3.5 x 3.5 x 1/4	19.81	9.61	166.2 K=1.00	1.690	-9652	13815	0.699 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	150 - 140	L 3 x 3 x 1/4	6.00	5.49	115.6 K=1.04	1.438	-717	23047	0.031 ¹ ✓

¹ P_u / φP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	150 - 140	Pipe 2.875" x 0.203" (2.5 STD)	10.00	0.67	8.4	1.704	8615	82817	0.104 ¹ ✓
T2	140 - 120	Pipe 2.875" x 0.203" (2.5 STD)	20.00	0.67	8.4	1.704	50552	82817	0.610 ¹ ✓
T3	120 - 100	Pipe 4.5" x 0.237" (4 STD)	20.03	0.67	5.3	3.174	100043	154259	0.649 ¹ ✓
T4	100 - 80	Pipe 5.563" x 0.258" (5 STD)	20.03	0.63	4.0	4.300	145752	208974	0.697 ¹ ✓
T5	80 - 60	Pipe 6.625" x 0.280" (6 STD)	20.03	0.63	3.3	5.581	184699	271254	0.681 ¹ ✓
T6	60 - 40	Pipe 8.625" x 0.322" (8 STD)	20.03	0.63	2.6	8.399	219856	408204	0.539 ¹ ✓
T7	40 - 20	Pipe 8.625" x 0.50" (8 XS)	20.03	0.67	2.8	12.763	251718	620268	0.406 ¹ ✓
T8	20 - 0	Pipe 8.625" x 0.50" (8 XS)	20.03	0.67	2.8	12.763	281270	620268	0.453 ¹ ✓

¹ P_u / φP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	150 - 140	L 1.5 x 1.5 x 3/16	7.40	3.42	93.4	0.308	2775	13381	0.207 ¹ ✓
T2	140 - 120	L 2 x 2 x 3/16	7.60	3.51	71.0	0.431	7305	18739	0.390 ¹ ✓
T3	120 - 100	L 2 x 2 x 3/16	9.00	4.28	86.0	0.431	7736	18739	0.413 ¹ ✓
T4	100 - 80	L 2.5 x 2.5 x 3/16	10.45	5.01	79.3	0.571	8276	24840	0.333 ¹ ✓
T5	80 - 60	L 3 x 3 x 3/16	12.11	5.79	75.7	0.712	8024	30968	0.259 ¹ ✓
T6	60 - 40	L 3 x 3 x 3/16	13.86	6.58	85.7	0.712	8260	30968	0.267 ¹ ✓
T7	40 - 20	L 3.5 x 3.5 x 1/4	18.07	8.74	97.8	1.103	8966	48000	0.187 ¹ ✓
T8	20 - 0	L 3.5 x 3.5 x 1/4	19.81	9.61	107.4	1.103	9427	48000	0.196 ¹ ✓

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u lb	φP _n lb	Ratio $\frac{P_u}{\phi P_n}$
T1	150 - 140	L 3 x 3 x 1/4	6.00	5.49	74.3	0.961	691	41801	0.017 ¹ ✓

¹ P_u / φP_n controls

Section Capacity Table

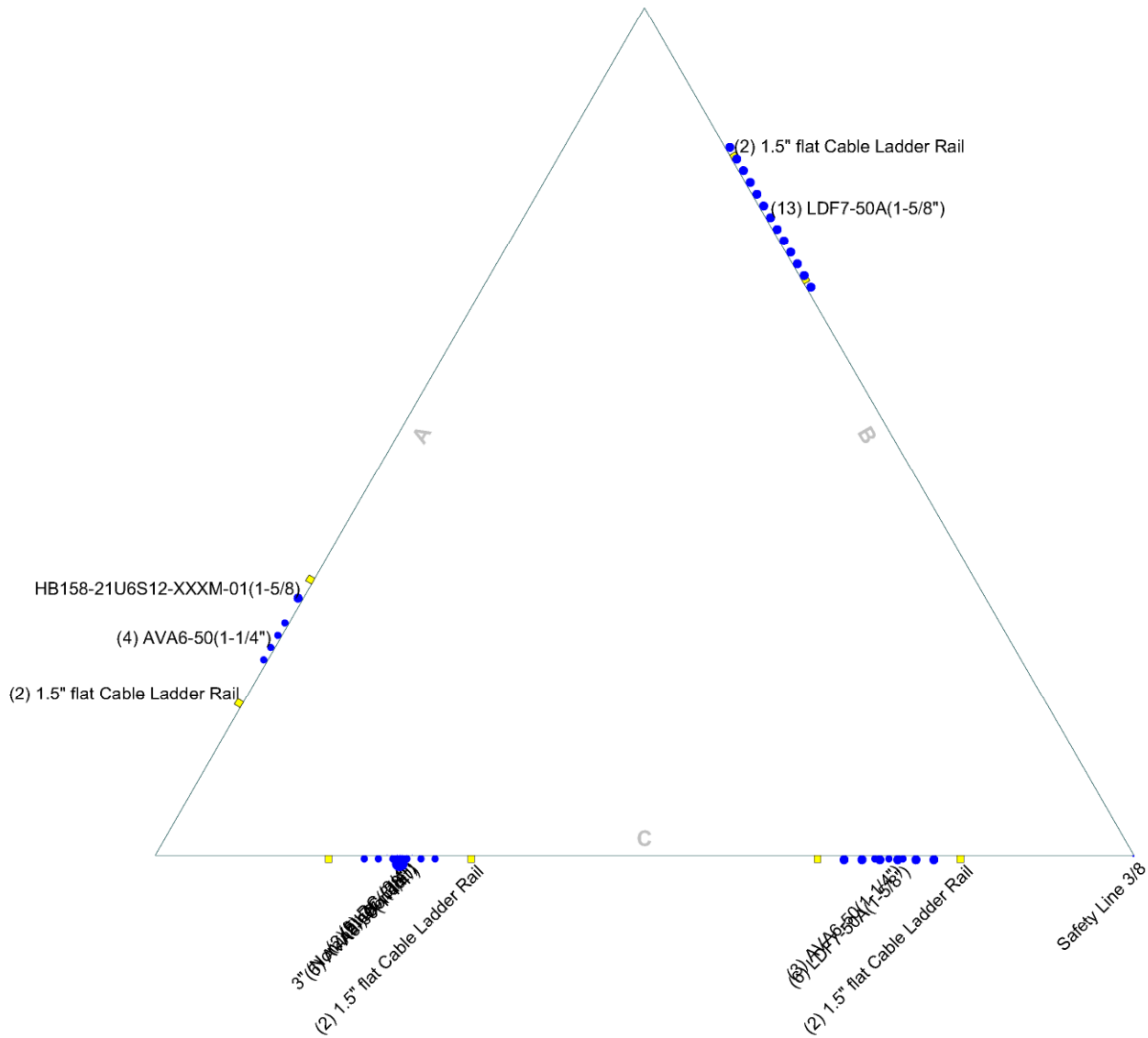
Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	φP _{allow} lb	% Capacity	Pass Fail
T1	150 - 140	Leg	Pipe 2.875" x 0.203" (2.5 STD)	2	-11649	82352	14.1	Pass
T2	140 - 120	Leg	Pipe 2.875" x 0.203" (2.5 STD)	21	-51706	62849	82.3	Pass
T3	120 - 100	Leg	Pipe 4.5" x 0.237" (4 STD)	48	-108911	138323	78.7	Pass
T4	100 - 80	Leg	Pipe 5.563" x 0.258" (5 STD)	75	-156650	184163	85.1	Pass
T5	80 - 60	Leg	Pipe 6.625" x 0.280" (6 STD)	94	-199906	248307	80.5	Pass
T6	60 - 40	Leg	Pipe 8.625" x 0.322" (8 STD)	115	-239684	387660	61.8	Pass
T7	40 - 20	Leg	Pipe 8.625" x 0.50" (8 XS)	136	-274234	550137	49.8	Pass
T8	20 - 0	Leg	Pipe 8.625" x 0.50" (8 XS)	151	-308756	550137	56.1	Pass
T1	150 - 140	Diagonal	L 1.5 x 1.5 x 3/16	9	-2659	6096	43.6	Pass
T2	140 - 120	Diagonal	L 2 x 2 x 3/16	24	-7242	12216	59.3	Pass
							74.6 (b)	
T3	120 - 100	Diagonal	L 2 x 2 x 3/16	54	-7692	9453	81.4	Pass
T4	100 - 80	Diagonal	L 2.5 x 2.5 x 3/16	81	-7891	11411	69.2	Pass
							84.6 (b)	
T5	80 - 60	Diagonal	L 3 x 3 x 3/16	101	-7907	14952	52.9	Pass
							82.0 (b)	
T6	60 - 40	Diagonal	L 3 x 3 x 3/16	122	-8408	11937	70.4	Pass
							84.4 (b)	
T7	40 - 20	Diagonal	L 3.5 x 3.5 x 1/4	143	-9111	16716	54.5	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T8	20 - 0	Diagonal	L 3.5 x 3.5 x 1/4	158	-9652	13815	62.5 (b)	
T1	150 - 140	Top Girt	L 3 x 3 x 1/4	5	-717	23047	69.9	Pass
							3.1	Pass
							9.0 (b)	
							Summary	
						Leg (T4)	85.1	Pass
						Diagonal (T4)	84.6	Pass
						Top Girt (T1)	9.0	Pass
						Bolt	84.6	Pass
						Checks		
						RATING =	85.1	Pass

APPENDIX B
BASE LEVEL DRAWING

Feed Line Plan

Round Flat App In Face App Out Face



Paul J. Ford and Company
250 East Broad St., Suite 600
Columbus, OH 43215
Phone: 614-221-6679
FAX:

Job: **150-ft Norwich, CT S/S Tower**

Project: **PJF 13321-0008**

Client: **Everest Infrastructure Partners** Drawn by: **Anna Trudo** App'd:

Code: **TIA-222-G**

Date: **07/12/22**

Scale: **NTS**

Path: **D:\C206520133 Everest Infrastructure Partners\2022\13321-0008\150-ft Norwich, CT S/S Tower\13321-0008-004.dwg**

Dwg No. **E-7**

APPENDIX C

ADDITIONAL CALCULATIONS

Self-Support Tower Anchor Rod Capacity - TIA-G

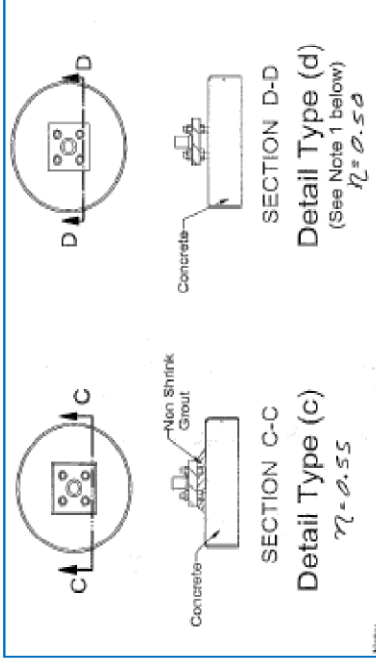
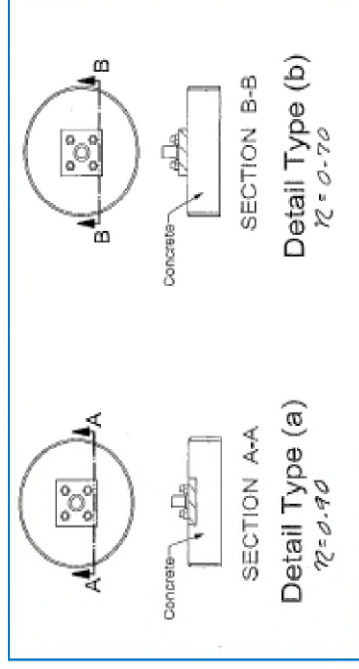
Loads			
Compression :	317 kips	Tension :	280 kips
Comp. Shear :	31 kips	Ten. Shear :	28 kips

Existing Anchor Rods			
Anchor Rod Condition (n) :	0.5		
Anchor Rod ϕ :	1 1/2 in		
Anchor Rod Quantity :	8		
Anchor Rod Grade :	F1554 Gr. 36		

F_y :	36 ksi
F_u :	58 ksi
Threads per Inch	6
Net Tensile Area	1.41 in ²
ϕ_t :	0.80
$\phi_t R_{nt}$:	521.63 kip
Anchor Rod Ratio :	0.855

Code:	TIA-G
Maximum Ratio:	1.00

l_{ar} :	1.5 inches
Comp. M_u :	30.23 k-in
ϕ_v :	0.75
ϕ_f :	0.90
$\phi_v R_{nv}$:	276.74 kips
$\phi_f R_{nm}$:	97.44 k-in



DRILLED PIER STEEL ANALYSIS - STEEL CALCULATIONS - TIA-222-G

BASED ON ACI 318-05, SECTIONS 9 & 10 (ASSUMING TIE REINFORCEMENT)

Factored Internal Loads from Analysis

Reference Standard =	TIA-222-G
ACI Code =	ACI 318-05
Maximum Ratio =	100.0%
Axial Load, Pu =	317.2 kips, (+Comp, -Tension)
Moment, Mu =	133.1 k-ft (Must be Positive)
Depth to Analysis Section =	3.80 ft, from Grade

Factored Internal Loads

Load Factor =	1.0
Axial Load, Pu = ΦP_n =	317.2 kips
Moment, Mu =	133.1 k-ft

Drilled Pier Geometry and Concrete Specifications

Diameter =	42 in
f'_c =	0.416 ksi
ϵ_c =	0.003 in/in
β_1 =	0.85
Ag =	1385.4 in ²
Height Above Grade =	0.5 ft
Depth Below Grade =	3.8 ft

Nominal Axial Load and Moment

$\Phi P_n(\text{max})$ =	488.4 kips
$\Phi P_n(\text{min})$ =	-406.4 kips
ΦP_n =	317.2 kips
Φ =	0.650
ΦM_n (Resultant) =	191.1 k-ft
at θ =	180.00 degrees
NA Depth =	30.50 in

Rebar Size and Specifications

Bar Size =	Existing	Bar Circle 2
Override Bar Diameter =	#10	
Bar Diameter =		in
Bar Area =	1.2700	0.0000 in ²
Effective Bar Area =	1.2700	0.0000 in ²
Number Bars =	5	
Spacing =	Symmetric	
f_y =	71.111111	ksi
Es =	29000	ksi
ϵ_y =	0.00245	in/in
Tie Size =	#4	
Clear Cover to Ties =	6.865	in
Bar Circle =	26	in
Adjust =	18.0000	
% of Area Effective =	100.0%	100.0%
Include in Calcs =	Yes	Yes
Bar Circle Valid =	Yes	No

ROCK ANCHOR CHECK -
TOWER COMPRESSION LEG

AXIAL RATIO = 65.0% OK

MOMENT RATIO = 69.7% OK

Minimum Required Steel

Seismic Design Category =	D	
As(min) =	3.90	sq in
As =	6.35	sq in
Stl Area Reduction Factor =	1.00	

ACI Section 10.5.1 & 10.5.3

DRILLED PIER STEEL ANALYSIS - STEEL CALCULATIONS - TIA-222-G

BASED ON ACI 318-05, SECTIONS 9 & 10 (ASSUMING TIE REINFORCEMENT)

Factored Internal Loads from Analysis

Reference Standard =	TIA-222-G
ACI Code =	ACI 318-05
Maximum Ratio =	100.0%
Axial Load, Pu =	-280.0 kips, (+Comp, -Tension)
Moment, Mu =	121.7 k-ft (Must be Positive)
Depth to Analysis Section =	3.80 ft, from Grade

Factored Internal Loads

Load Factor =	1.0
Axial Load, Pu = ΦP_n =	-280.0 kips
Moment, Mu =	121.7 k-ft

Drilled Pier Geometry and Concrete Specifications

Diameter =	42 in
f'_c =	0.416 ksi
ϵ_c =	0.003 in/in
β_1 =	0.85
Ag =	1385.4 in ²
Height Above Grade =	0.5 ft
Depth Below Grade =	3.8 ft

Nominal Axial Load and Moment

$\Phi P_n(\text{max})$ =	488.4 kips
$\Phi P_n(\text{min})$ =	-406.4 kips
ΦP_n =	-280.0 kips
Φ =	0.900
ΦM_n (Resultant) =	134.4 k-ft
at θ =	0.00 degrees
NA Depth =	7.52 in

Rebar Size and Specifications

Bar Size =	Existing	Bar Circle 2
Override Bar Diameter =	#10	
Bar Diameter =		in
Bar Area =	1.2700	0.0000 in ²
Effective Bar Area =	1.2700	0.0000 in ²
Number Bars =	5	
Spacing =	Symmetric	
f_y =	71.111111	ksi
Es =	29000	ksi
ϵ_y =	0.00245	in/in
Tie Size =	#4	
Clear Cover to Ties =	6.865	in
Bar Circle =	26	in
Adjust =	18.0000	
% of Area Effective =	100.0%	100.0%
Include in Calcs =	Yes	Yes
Bar Circle Valid =	Yes	No

ROCK ANCHOR CHECK -
TOWER UPLIFT LEG

AXIAL RATIO = 68.9% OK

MOMENT RATIO = 90.6% OK

Minimum Required Steel

Seismic Design Category =	D	
As(min) =	3.90	sq in
As =	6.35	sq in
Stl Area Reduction Factor =	1.00	

ACI Section 10.5.1 & 10.5.3

STANDARD CONDITIONS FOR FURNISHING OF PROFESSIONAL ENGINEERING SERVICES ON
EXISTING STRUCTURES BY PAUL J. FORD AND COMPANY

- 1) Paul J. Ford and Company has not made a field inspection to verify the tower member sizes or the antenna/coax loading. If the existing conditions are not as represented on these drawings, we should be contacted immediately to evaluate the significance of the deviation.
- 2) No allowance was made for any damaged, missing, or rusted members. The analysis of this tower assumes that no physical deterioration has occurred in any of the structural components of the tower and that all the tower members have the same load carrying capacity as the day the tower was erected.
- 3) It is not possible to have all the detailed information to perform a thorough analysis of every structural sub-component of an existing tower. The structural analysis by Paul J. Ford and Company verifies the adequacy of the main structural members of the tower. Paul J. Ford and Company provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc.
- 4) The structural integrity of the existing tower foundation can only be verified if exact foundation sizes and soil conditions are known. Paul J. Ford and Company will not accept any responsibility for the adequacy of the existing foundations unless the foundation sizes and a soils report are provided.
- 5) This tower has been analyzed according to the minimum design wind loads recommended by the Telecommunications Industry Association Standard ANSI/TIA-222-G. If the owner or local or state agencies require a higher design wind load, Paul J. Ford and Company should be made aware of this requirement.
- 6) The enclosed sketches are a schematic representation of the tower that we have analyzed. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions and for the proper fit and clearance in the field.
- 7) Miscellaneous items such as antenna mounts etc. have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.



Maser Consulting Connecticut
1055 Washington Blvd
Stamford, CT 06901
203.324.0800
greg.dulnik@colliersengineering.com

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10116992
Maser Consulting Connecticut Project #: 20777335A (Rev. 1)

November 24, 2021

Site Information

Site ID: 467272-VZW / Norwich East CT
Site Name: Norwich East CT
Carrier Name: Verizon Wireless
Address: 2 Hinckley Hill Road
Preston, Connecticut 06365
New London County
Latitude: 41.514848°
Longitude: -72.061688°

Structure Information

Tower Type: Self-Support
Mount Type: 12.00-Ft Sector Frame

FUZE ID # 16227609

Analysis Results

Sector Frame: **78.2% Pass**

***Contractor PMI Requirements:

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

Contractor - Please Review Specific Site PMI Requirements Upon Award

Requirements also Noted on Mount Modification Drawings

Requirements may also be Noted on A & E drawings

For additional questions and support, please reach out to:

pmisupport@colliersengineering.com

Report Prepared By: Prasanna Dhakal



Executive Summary:

The objective of this report is to 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: 674998, dated November 9, 2021
Mount Mapping Report	RKS Design & Engineering LLC, Site ID: EVEREST: 702499, VZW: 467272, dated October 29, 2020
Previous Mount Analysis	Maser Consulting Connecticut, Project #: 20777335A (Rev. 1), dated November 12, 2021
Mount Modification Drawing	Maser Consulting Connecticut, Project #: 20777335A (Rev. 1), dated November 24, 2021

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 125 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: B Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.989
Seismic Parameters:	S_s : 0.193 g S_1 : 0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, L_v : 250 lbs. Maintenance Live Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V17)

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
126.00	127.50	3	Samsung	MT6407-77A	Added
		1	RFS	DB-B1-6C-12AB-0Z	
		6	Andrew	JAHH-65B-R3B	Retained
		6	RFS	APL868013	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		3	Commscope	CBC78T-DS-43-2X	
		1	Raycap	RRFDC-3315-PF-48*	

* Equipment to be flush mounted directly to the Self Support. They are not mounted on sector frame mounts and are not included in this mount analysis.

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

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to 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
<i>Face Horizontal</i>	78.2%	<i>Pass</i>
<i>Face Vertical</i>	33.2%	<i>Pass</i>
<i>Standoff Arm</i>	74.8%	<i>Pass</i>
<i>Mast Pipe</i>	49.7%	<i>Pass</i>
<i>Standoff Plate</i>	43.7%	<i>Pass</i>
<i>Tieback</i>	11.3%	<i>Pass</i>
<i>Standoff Vertical</i>	21.1%	<i>Pass</i>
<i>Mount Pipe</i>	45.5%	<i>Pass</i>
<i>Threaded Rod</i>	6.5%	<i>Pass</i>
<i>Mod Threaded Rod</i>	68.0%	<i>Pass</i>
<i>Mod Horizontal</i>	22.6%	<i>Pass</i>
<i>Mod V Bracing</i>	8.5%	<i>Pass</i>
<i>Mod Standoff Bracing</i>	7.6%	<i>Pass</i>
<i>Mount Connection</i>	10.8%	<i>Pass</i>

Structure Rating – (Controlling Utilization of all Components)	78.2%
---	--------------

Recommendation:

The existing mounts will be **SUFFICIENT** for the final loading after the proposed modifications 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. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter



Antenna Mount Mapping Form (PATENT PENDING)

FCC #
UNKNOWN

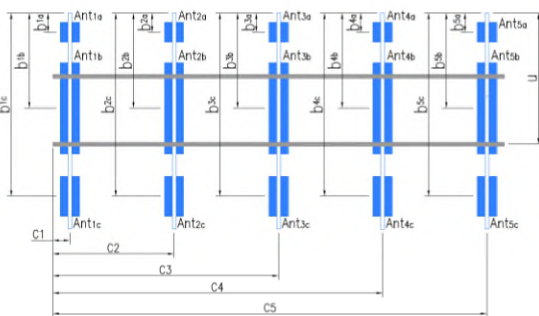
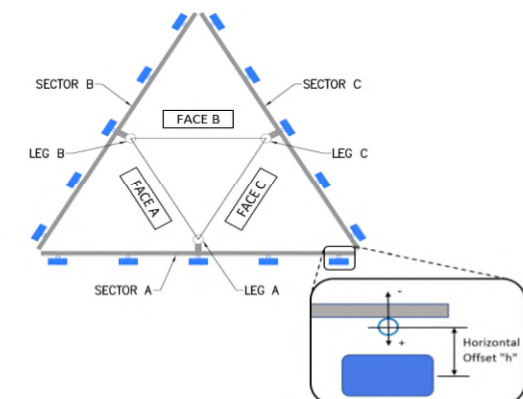
Tower Owner:	EVEREST	Mapping Date:	10-29-2020
Site Name:	EVEREST: Norwich CDT, VZW: Norwich East Ct	Tower Type:	Self Support
Site Number or ID:	EVEREST: 702499, VZW: 467272	Tower Height (Ft.):	UNKNOWN
Mapping Contractor:	RKS Design & Engineering LLC.	Mount Elevation (Ft.):	126

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

Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "U"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "U"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	0.00	C1	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	0.00
A2	PIPE 2.375"Ø x 0.15" x 72.5" LONG	57.50	48.00	C2	PIPE 2.375"Ø x 0.15" x 72.5" LONG	57.50	48.00
A3	PIPE 2.375"Ø x 0.15" x 72.5" LONG	61.25	72.00	C3	PIPE 2.375"Ø x 0.15" x 72.5" LONG	61.25	72.00
A4	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	96.00	C4	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	96.00
A5	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	144.00	C5	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	144.00
A6				C6			
B1	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	0.00	D1			
B2	PIPE 2.375"Ø x 0.15" x 72.5" LONG	57.50	48.00	D2			
B3	PIPE 2.375"Ø x 0.15" x 72.5" LONG	61.25	72.00	D3			
B4	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	96.00	D4			
B5	PIPE 1.9"Ø x 0.15" x 20" LONG	53.25	144.00	D5			
B6				D6			
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							17.75
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :							9.4
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :							1
Please enter additional information or comments below.							
Tower Face Width at Mount Elev. (ft.):		6	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):		2.875		

	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center- line (Ft.)	Vertical Distances" ^b _{1a} , ^b _{2a} , ^b _{3a} , ^b _{1b} ,..." (Inches)	Horiz. Offset " ^h " (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant _{1a}										
Ant _{1b}	UNKNOWN	6.00	7.50	48.50		126.938	24.25	8.75	20.00	13, 213
Ant _{1c}										
Ant _{2a}	RFV01U-D1A	15.00	10.00	15.00		126.688	31.50	-6.19		213
Ant _{2b}										
Ant _{2c}										
Ant _{3a}	CBC78T-DS-43-2X	6.90	9.60	6.40		125.025	55.20	-6.00		355
Ant _{3b}	(2)JAHH-65B-R3B	13.00	8.20	72.00		126.667	35.50	13.00	40.00	13, 214
Ant _{3c}										
Ant _{4a}	RFV01U-D2A	15.00	8.00	15.00		126.333	31.50	-4.72		215
Ant _{4b}										
Ant _{4c}										
Ant _{5a}										
Ant _{5b}	UNKNOWN	6.00	7.50	48.50		126.938	24.25	8.75	20.00	13, 215
Ant _{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower	RRFDC-3315-PF-48	15.70	10.25	26.66			47.50	6.19		192, 195
Ant on Tower										



Antenna Layout (Looking Out From Tower)

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector		Sector B																							
Sector A:	20.00	Deg	Leg A:	30.00	Deg	Ant _{1a}																							
Sector B:	140.00	Deg	Leg B:	150.00	Deg	Ant _{1b}	UNKNOWN	6.00	7.50	48.50		126.938	24.25	8.75	140.00	21, 217													
Sector C:	270.00	Deg	Leg C:	270.00	Deg	Ant _{1c}																							
Sector D:		Deg	Leg D:		Deg	Ant _{2a}	RFV01U-D1A	15.00	10.00	15.00		126.688	31.50	-6.19		217													
Climbing Facility Information						Ant _{2b}																							
						Ant _{2c}																							
Location:	30.00	Deg	On Leg A			Ant _{3a}	CBC78T-DS-43-2X	6.90	9.60	6.40		125.025	55.20	-6.00		217													
Climbing Facility	Corrosion Type:		Good condition.			Ant _{3b}	(2)JAHH-65B-R3B	13.00	8.20	72.00		126.667	35.50	13.00	150.00	21, 217													
	Access:		Climbing path was unobstructed.			Ant _{3c}																							
	Condition:		Good condition.			Ant _{4a}	RFV01U-D2A	15.00	8.00	15.00		126.333	31.50	-6.19		217													
						Ant _{4b}																							
						Ant _{4c}																							
						Ant _{5a}																							
						Ant _{5b}	UNKNOWN	6.00	7.50	48.50		126.938	24.25	8.75	140.00	21, 218													
						Ant _{5c}																							
						Sector C						Ant on Standoff																	
												Ant on Standoff																	
												Ant on Tower																	
												Ant on Tower																	
												Ant _{1a}																	
												Ant _{1b}	UNKNOWN	6.00	7.50	48.50		126.938	24.25	8.75	270.00	28, 220							
												Ant _{1c}																	
												Ant _{2a}	RFV01U-D1A	15.00	10.00	15.00		126.688	31.50	-6.19		220							
												Ant _{2b}																	
												Ant _{2c}																	
						Sector D						Ant _{3a}	CBC78T-DS-43-2X	6.90	9.60	6.40		125.025	55.20	-6.00		220							
												Ant _{3b}	(2)JAHH-65B-R3B	13.00	8.20	72.00		126.667	35.50	13.00	280.00	28, 220							
												Ant _{3c}																	
												Ant _{4a}	RFV01U-D2A	15.00	8.00	15.00		126.333	31.50	-6.19		220							
												Ant _{4b}																	
												Ant _{4c}																	
												Ant _{5a}																	
												Ant _{5b}	UNKNOWN	6.00	7.50	48.50		126.938	24.25	8.75	270.00	28							
												Ant _{5c}																	
												Ant on Standoff																	
						Ant on Standoff																							
						Ant on Tower																							
						Ant on Tower																							

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

1	COAX TOTAL (13): (12) FH 1-5/8"Ø, (1) 1.5"Ø HYBRID	
2		
3		
4		
5		
6		
7		
8		

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



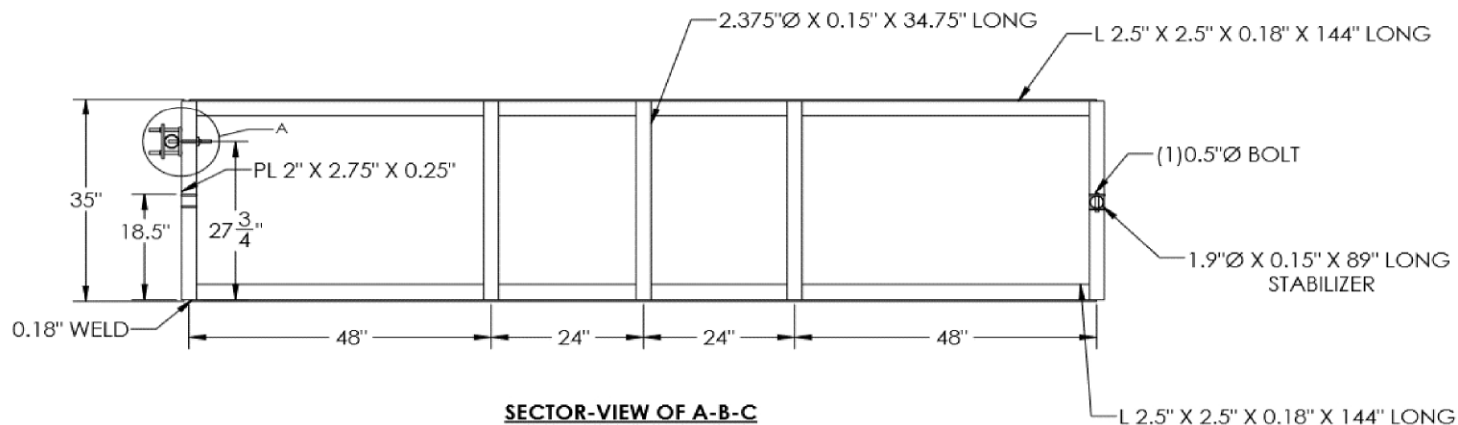
Antenna Mount Mapping Form (PATENT PENDING)

FCC #
UNKNOWN

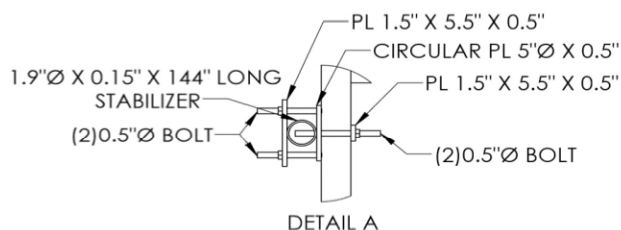
Tower Owner:	EVEREST	Mapping Date:	10-29-2020
Site Name:	EVEREST: Norwich CDT, VZW: Norwich East Ct	Tower Type:	Self Support
Site Number or ID:	EVEREST: 702499, VZW: 467272	Tower Height (Ft.):	UNKNOWN
Mapping Contractor:	RKS Design & Engineering LLC	Mount Elevation (Ft.):	126

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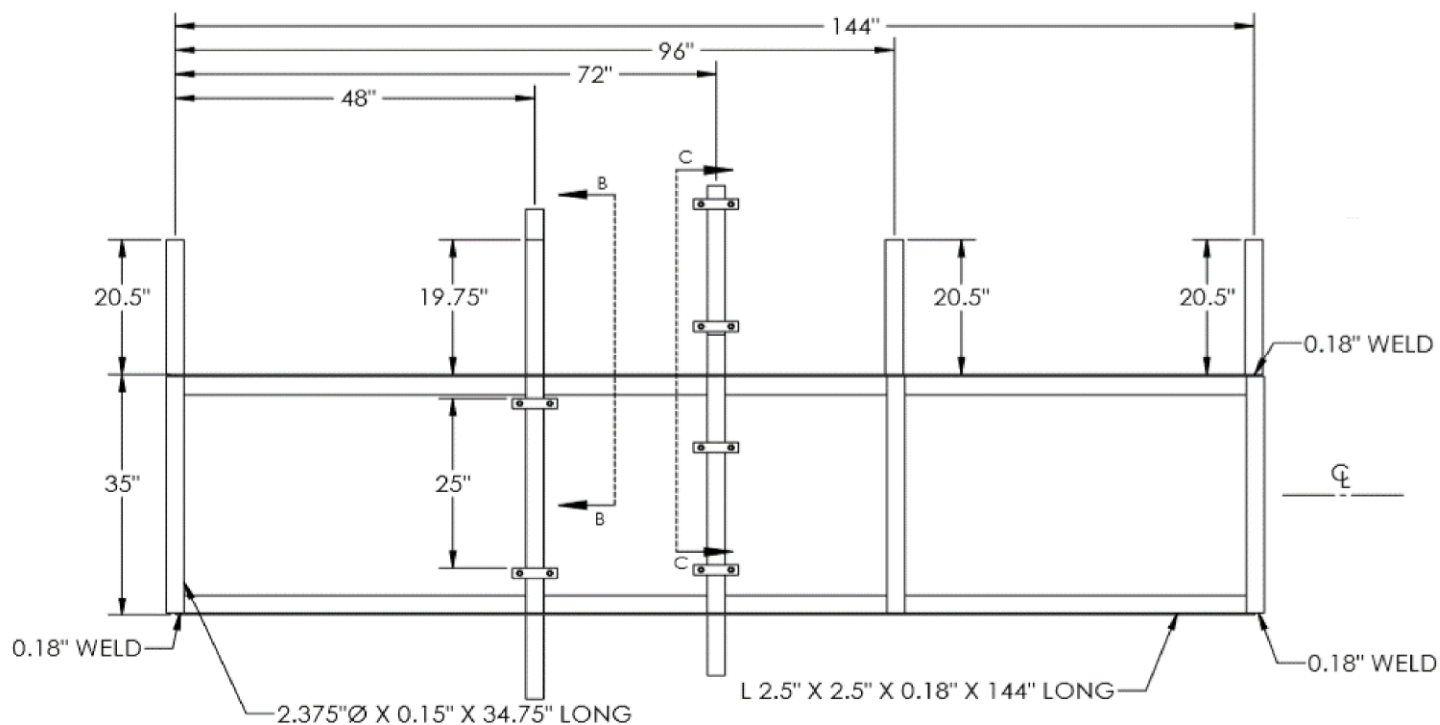
Please Insert Sketches of the Antenna Mount



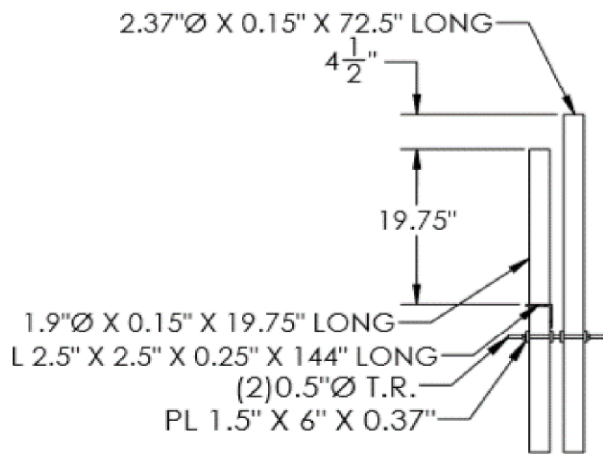
SECTOR-VIEW OF A-B-C



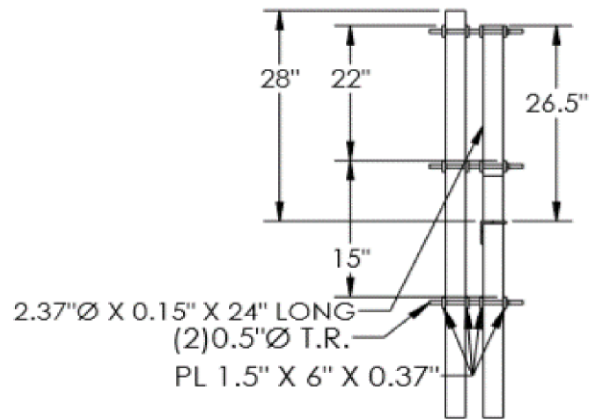
DETAIL A



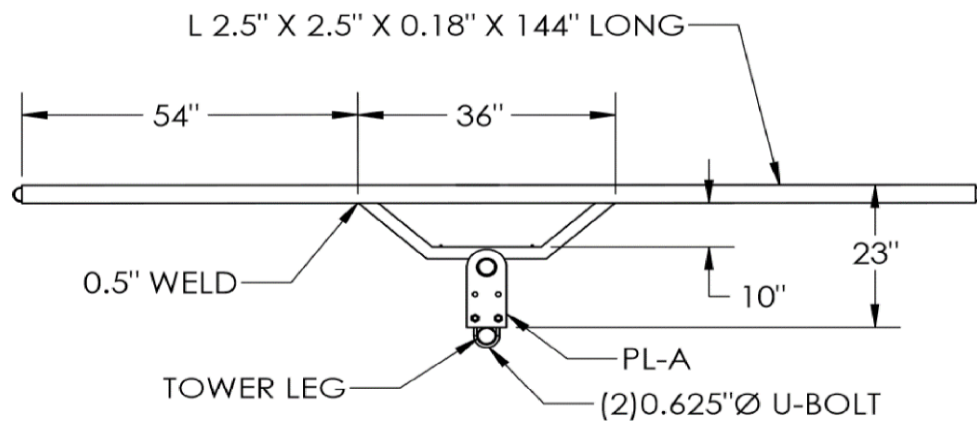
ELEVATION VIEW OF SECTOR-A-B-C



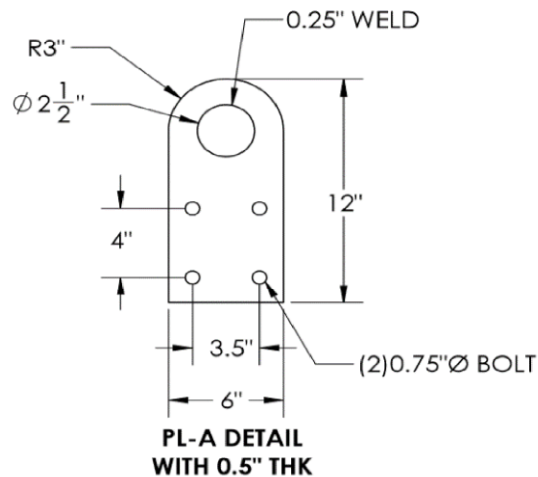
SECTION B-B

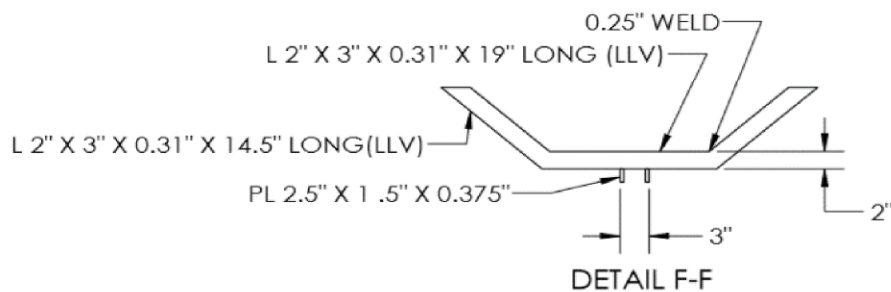
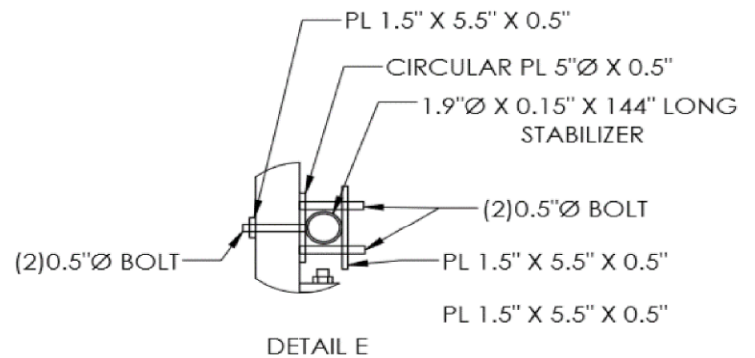
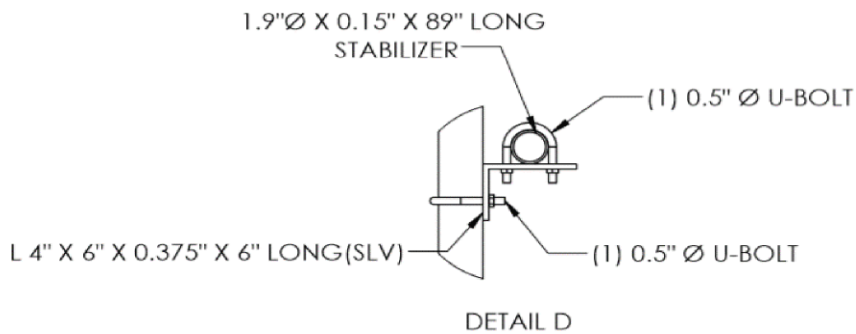
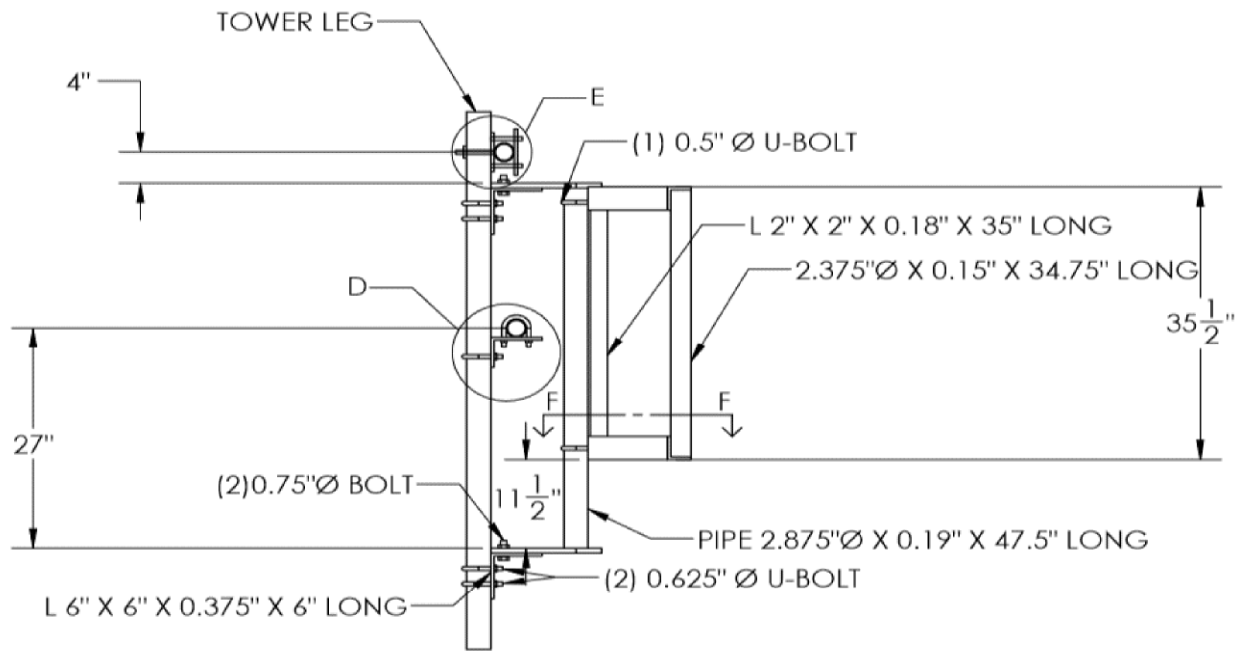


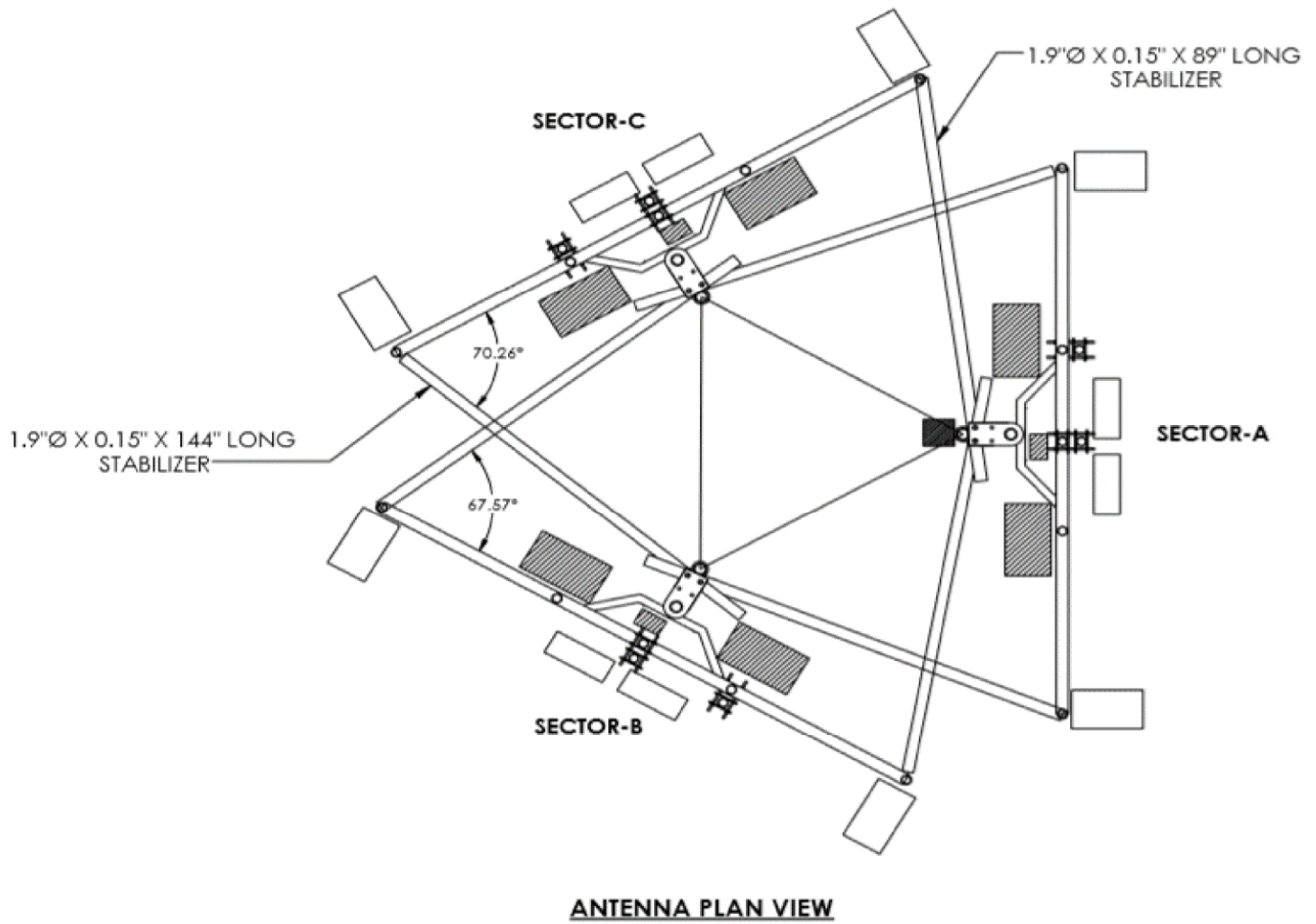
SECTION C-C

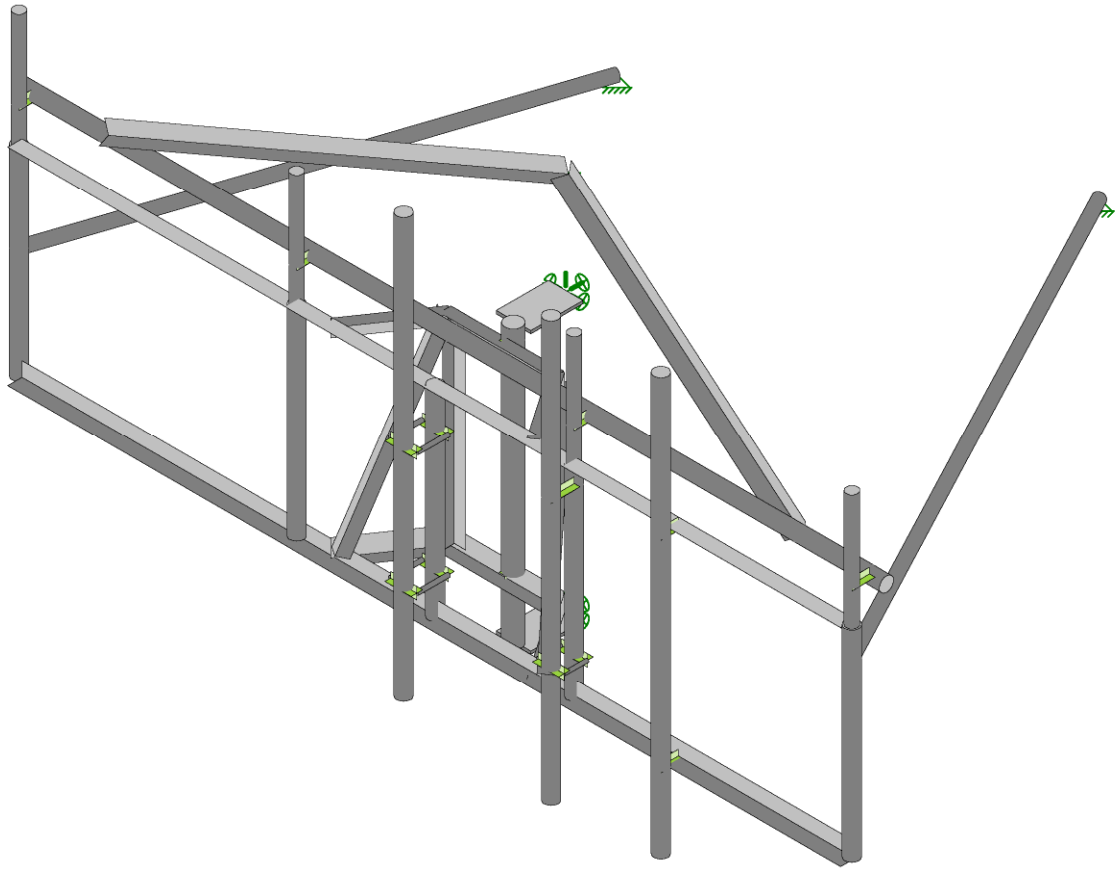
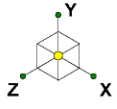


MOUNT PLAN VIEW









Envelope Only Solution

Maser Consulting

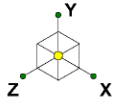
Project # 20777335A

Antenna Mount Analysis

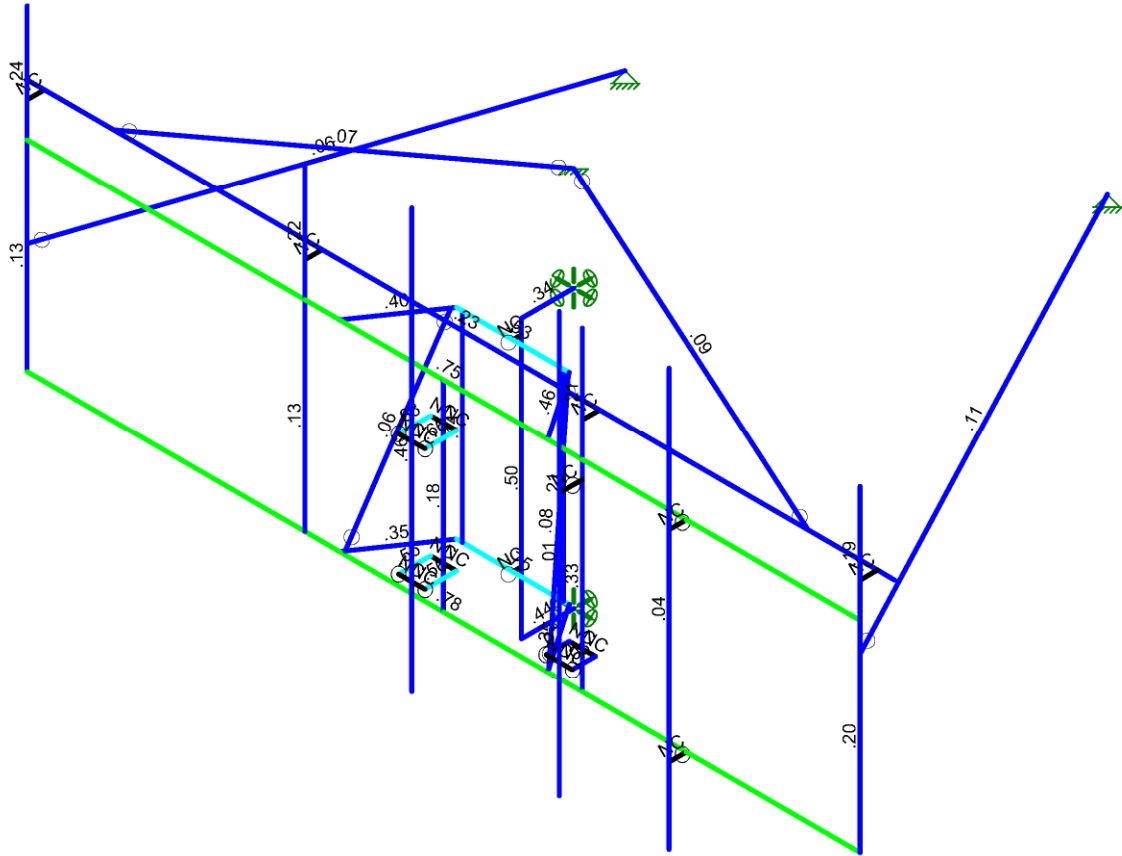
SK - 1

Nov 24, 2021 at 3:16 PM

467272-VZW_MT_LOT_C_H.r3d



Code Check (Env)	
No Calc	> 1.0
	.90-1.0
	.75-.90
	.50-.75
	0-.50



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting

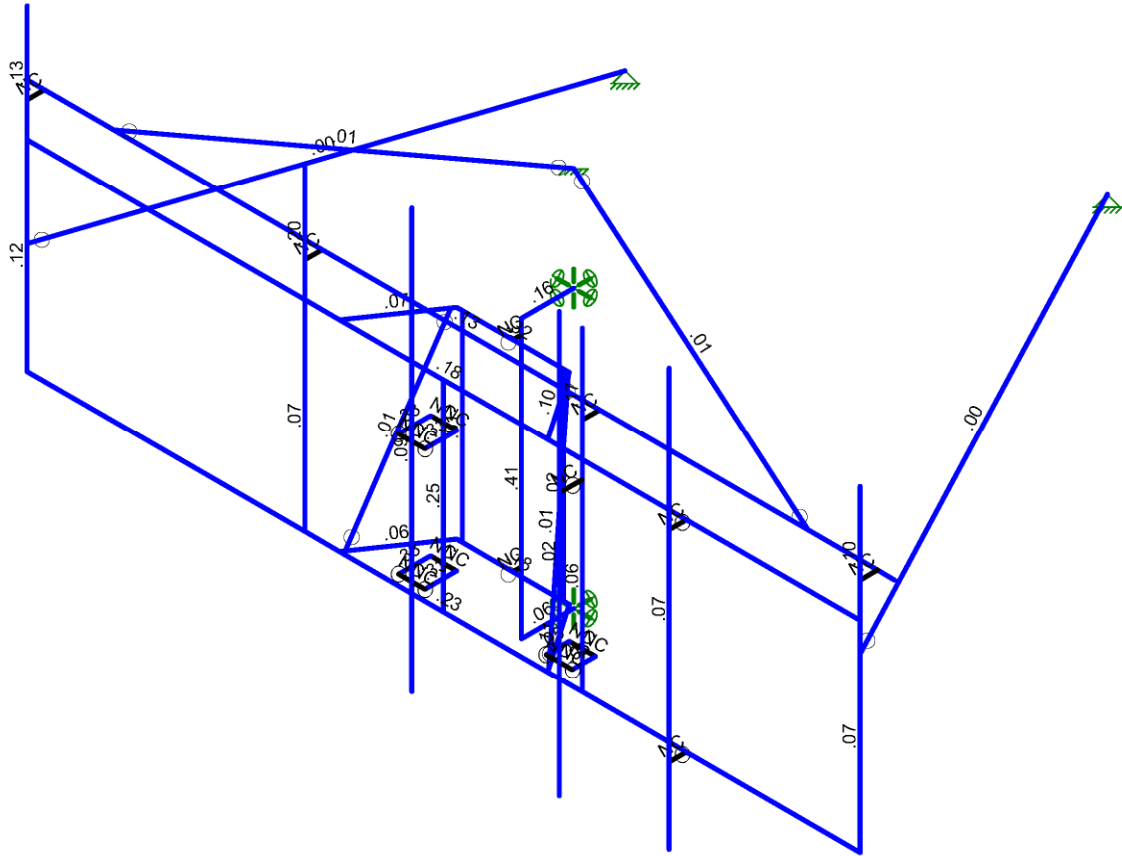
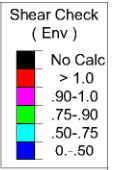
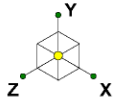
Antenna Mount Analysis

SK - 2

Nov 24, 2021 at 3:17 PM

Project # 20777335A

467272-VZW_MT_LOT_C_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting

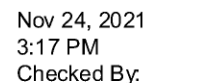
Project # 20777335A

Antenna Mount Analysis

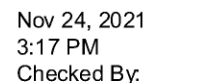
SK - 3

Nov 24, 2021 at 3:17 PM

467272-VZW_MT_LOT_C_H.r3d



BLC Description		Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					42			
2	Antenna Di	None					42			
3	Antenna W o (0 Deg)	None					42			
4	Antenna W o (30 Deg)	None					42			
5	Antenna W o (60 Deg)	None					42			
6	Antenna W o (90 Deg)	None					42			
7	Antenna W o (120 Deg)	None					42			
8	Antenna W o (150 Deg)	None					42			
9	Antenna W o (180 Deg)	None					42			
10	Antenna W o (210 Deg)	None					42			
11	Antenna W o (240 Deg)	None					42			
12	Antenna W o (270 Deg)	None					42			
13	Antenna W o (300 Deg)	None					42			
14	Antenna W o (330 Deg)	None					42			
15	Antenna W i (0 Deg)	None					42			
16	Antenna W i (30 Deg)	None					42			
17	Antenna W i (60 Deg)	None					42			
18	Antenna W i (90 Deg)	None					42			
19	Antenna W i (120 Deg)	None					42			
20	Antenna W i (150 Deg)	None					42			
21	Antenna W i (180 Deg)	None					42			
22	Antenna W i (210 Deg)	None					42			
23	Antenna W i (240 Deg)	None					42			
24	Antenna W i (270 Deg)	None					42			
25	Antenna W i (300 Deg)	None					42			
26	Antenna W i (330 Deg)	None					42			
27	Antenna W m (0 Deg)	None					42			
28	Antenna W m (30 Deg)	None					42			
29	Antenna W m (60 Deg)	None					42			
30	Antenna W m (90 Deg)	None					42			
31	Antenna W m (120 De...	None					42			
32	Antenna W m (150 De...	None					42			
33	Antenna W m (180 De...	None					42			
34	Antenna W m (210 De...	None					42			
35	Antenna W m (240 De...	None					42			
36	Antenna W m (270 De...	None					42			
37	Antenna W m (300 De...	None					42			
38	Antenna W m (330 De...	None					42			
39	Structure D	None		-1						
40	Structure Di	None						38		
41	Structure Wo (0 Deg)	None						76		
42	Structure Wo (30 Deg)	None						76		
43	Structure Wo (60 Deg)	None						76		
44	Structure Wo (90 Deg)	None						76		
45	Structure Wo (120 D...	None						76		
46	Structure Wo (150 D...	None						76		
47	Structure Wo (180 D...	None						76		
48	Structure Wo (210 D...	None						76		
49	Structure Wo (240 D...	None						76		
50	Structure Wo (270 D...	None						76		
51	Structure Wo (300 D...	None						76		



Load Combinations (Continued)

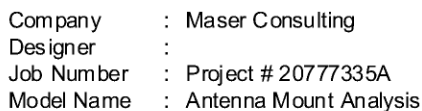
	Description	S...	P...	S...	B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...
13	1.2D + 1.0Di + 1.0Wi (0 D...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1		
14	1.2D + 1.0Di + 1.0Wi (30 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1		
15	1.2D + 1.0Di + 1.0Wi (60 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1		
16	1.2D + 1.0Di + 1.0Wi (90 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1		
17	1.2D + 1.0Di + 1.0Wi (120 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1		
18	1.2D + 1.0Di + 1.0Wi (150 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1		
19	1.2D + 1.0Di + 1.0Wi (180 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1		
20	1.2D + 1.0Di + 1.0Wi (210 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1		
21	1.2D + 1.0Di + 1.0Wi (240 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1		
22	1.2D + 1.0Di + 1.0Wi (270 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1		
23	1.2D + 1.0Di + 1.0Wi (300 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1		
24	1.2D + 1.0Di + 1.0Wi (330 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1		
25	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1				
26	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1				
27	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1				
28	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1				
29	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1				
30	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1				
31	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1				
32	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1				
33	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1				
34	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1				
35	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1				
36	1.2D + 1.5Lm1 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1				
37	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1				
38	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1				
39	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1				
40	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1				
41	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1				
42	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1				
43	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1				
44	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1				
45	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1				
46	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1				
47	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1				
48	1.2D + 1.5Lm2 + 1.0Wm (...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1				
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5								
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5								
51	1.4D	Yes	Y		1	1.4	39	1.4										
52	1.2D + 1.0Ev + 1.0Eh (0 D...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83	ELZ	1	E...
53	1.2D + 1.0Ev + 1.0Eh (30 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	ELZ	.866
54	1.2D + 1.0Ev + 1.0Eh (60 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	ELZ	.5
55	1.2D + 1.0Ev + 1.0Eh (90 ...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	ELZ	E...
56	1.2D + 1.0Ev + 1.0Eh (120...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	ELZ	-.5
57	1.2D + 1.0Ev + 1.0Eh (150...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.866	83	.5	ELZ	-.866
58	1.2D + 1.0Ev + 1.0Eh (180...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		ELZ	-1
59	1.2D + 1.0Ev + 1.0Eh (210...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.866	83	-.5	ELZ	-.866
60	1.2D + 1.0Ev + 1.0Eh (240...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.866	ELZ	-.5
61	1.2D + 1.0Ev + 1.0Eh (270...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	ELZ	E...
62	1.2D + 1.0Ev + 1.0Eh (300...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.866	ELZ	.5
63	1.2D + 1.0Ev + 1.0Eh (330...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	ELZ	.866
64	0.9D - 1.0Ev + 1.0Eh (0 D...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		ELZ	1

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...B...	Fac...									
65	0.9D - 1.0Ev + 1.0Eh (30 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	ELZ	.866	E...	.5				
66	0.9D - 1.0Ev + 1.0Eh (60 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	ELZ	.5	E...	.866				
67	0.9D - 1.0Ev + 1.0Eh (90 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	ELZ		E...	1				
68	0.9D - 1.0Ev + 1.0Eh (120 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	ELZ	-.5	E...	.866				
69	0.9D - 1.0Ev + 1.0Eh (150 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.866	83	.5	ELZ	-.866	E...	.5				
70	0.9D - 1.0Ev + 1.0Eh (180 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		ELZ	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh (210 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.866	83	-.5	ELZ	-.866	E...	-.5				
72	0.9D - 1.0Ev + 1.0Eh (240 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.866	ELZ	-.5	E...	-.866				
73	0.9D - 1.0Ev + 1.0Eh (270 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	ELZ		E...	-1				
74	0.9D - 1.0Ev + 1.0Eh (300 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.866	ELZ	.5	E...	-.866				
75	0.9D - 1.0Ev + 1.0Eh (330 ...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	ELZ	.866	E...	-.5				

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	1	-0.145833	0	0	
2	N2	13	-0.145833	0	0	
3	N3	1	2.75	0	0	
4	N4	13	2.75	0	0	
5	N9	7	-0.145833	0	0	
6	N10	7	2.75	0	0	
7	N55	7	-0.145833	-1	0	
8	N56	7	2.75	-1	0	
9	N57	8.5	-0.145833	0	0	
10	N58	8.5	2.75	0	0	
11	N59	5.5	-0.145833	0	0	
12	N60	5.5	2.75	0	0	
13	N61	7.8125	-0.145833	-1	0	
14	N62	7.8125	2.75	-1	0	
15	N63	6.1875	-0.145833	-1	0	
16	N64	6.1875	2.75	-1	0	
17	N65	7	-0.145833	-1.125	0	
18	N66	7	2.75	-1.125	0	
19	N67	7	2.958333	-1.125	0	
20	N68	7	-1.041667	-1.125	0	
21	N71	7	2.958333	-1.875	0	
22	N74	1	1.447917	0	0	
23	N75	6.2705	-0.145833	-1	0	
24	N76	6.2705	2.75	-1	0	
25	N77	7.7295	-0.145833	-1	0	
26	N78	7.7295	2.75	-1	0	
27	N77A	7	-1.041667	-1.875	0	
28	N35	9	-0.145833	0	0	
29	N36	9	2.75	0	0	
30	N37	5	-0.145833	0	0	
31	N38	5	2.75	0	0	
32	N39	13	4.416667	0	0	
33	N40	9	4.395833	0	0	
34	N41	9	2.5	0	0	
35	N42	9	2.5	0.333333	0	
36	N43	9	4.770833	0.333333	0	

**Joint Coordinates and Temperatures (Continued)**

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Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
89	N89	5.534375	-0.145833	-0.05	0	
90	N90	8.465625	2.75	-0.05	0	
91	N91	7.846875	2.75	-0.95	0	
92	N92	8.465625	-0.145833	-0.05	0	

Hot Rolled Steel Section Sets

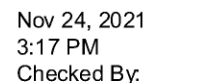
	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011
2	Face Vertical	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
3	Threded Rod	SR 0.5	Beam	BAR	A36 Gr.36	Typical	.196	.003	.003	.006
4	Mount Pipe (2.4" Diame...	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
5	Mount Pipe (1.9" Diame...	PIPE 1.5	Beam	Pipe	A53 Gr. B	Typical	.749	.293	.293	.586
6	Standoff Plate	PL 1/2x6	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237
7	Mast Pipe	PIPE 2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
8	Standoff Vertical	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
9	Standoff Arm	L3X2X4	Beam	Single Angle	A36 Gr.36	Typical	1.2	.39	1.09	.027
10	TES standoff	L3X3X3	Beam	Single Angle	A36 Gr.36	Typical	1.09	.948	.948	.014
11	Tieback	PIPE 1.5	Beam	Pipe	A53 Gr. B	Typical	.749	.293	.293	.586
12	Mod Threaded Rod	SR 0.625	Beam	BAR	A36 Gr.36	Typical	.307	.007	.007	.015
13	Mod Horizontal	PIPE 2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
14	Mod V Bracing	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
15	Mod Standoff Bracing	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009

Hot Rolled Steel Properties

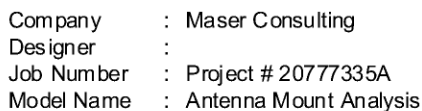
	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	.3	.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	M1	N1	N2			Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
2	M2	N3	N4		90	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
3	D1	N9	N10			Face Vertical	Beam	Pipe	A53 Gr. B	Typical
4	RCP	N64	N60		180	Standoff Arm	Beam	Single Angle	A36 Gr.36	Typical
5	M43	N62	N64		180	Standoff Arm	Beam	Single Angle	A36 Gr.36	Typical
6	M44	N58	N62		180	Standoff Arm	Beam	Single Angle	A36 Gr.36	Typical
7	M45	N59	N63			Standoff Arm	Beam	Single Angle	A36 Gr.36	Typical
8	M46	N63	N61			Standoff Arm	Beam	Single Angle	A36 Gr.36	Typical
9	M47	N61	N57			Standoff Arm	Beam	Single Angle	A36 Gr.36	Typical
10	M48	N56	N66			RIGID	None	None	RIGID	Typical
11	M49	N55	N65			RIGID	None	None	RIGID	Typical
12	M50	N67	N68			Mast Pipe	Beam	Pipe	A53 Gr. B	Typical
13	M51	N67	N71		90	Standoff Plate	Beam	RECT	A36 Gr.36	Typical



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Member Advanced Data

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Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
53	M55C	BenPIN	BenPIN				Yes				None
54	M56C	BenPIN	BenPIN				Yes	Default			None
55	M57	BenPIN	BenPIN				Yes	Default			None
56	MP4A						Yes				None
57	MP1A						Yes				None
58	M58A						Yes				None
59	M59						Yes				None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-43.55	2
2	MP2A	My	-.021	2
3	MP2A	Mz	.004	2
4	MP2A	Y	-43.55	3.5
5	MP2A	My	-.021	3.5
6	MP2A	Mz	.004	3.5
7	MP3A	Y	-31.65	.5
8	MP3A	My	-.012	.5
9	MP3A	Mz	.022	.5
10	MP3A	Y	-31.65	5
11	MP3A	My	-.012	5
12	MP3A	Mz	.022	5
13	MP3A	Y	-31.65	.5
14	MP3A	My	-.019	.5
15	MP3A	Mz	-.017	.5
16	MP3A	Y	-31.65	5
17	MP3A	My	-.019	5
18	MP3A	Mz	-.017	5
19	MP1A	Y	-3.15	.5
20	MP1A	My	-.002	.5
21	MP1A	Mz	.000273	.5
22	M59	Y	-3.15	1.833
23	M59	My	-.002	1.833
24	M59	Mz	.000273	1.833
25	MP4A	Y	-3.15	.5
26	MP4A	My	-.002	.5
27	MP4A	Mz	.000273	.5
28	M58A	Y	-3.15	1.833
29	M58A	My	-.002	1.833
30	M58A	Mz	.000273	1.833
31	M50	Y	-32	2.5
32	M50	My	0	2.5
33	M50	Mz	0	2.5
34	R1	Y	-84.4	1
35	R1	My	0	1
36	R1	Mz	0	1
37	R2	Y	-70.3	1
38	R2	My	0	1
39	R2	Mz	0	1
40	D1	Y	-10.4	1.5

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

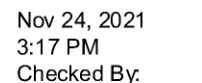
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
41	D1	My	0	1.5
42	D1	Mz	0	1.5

Member Point Loads (BLC 2 : Antenna Di)

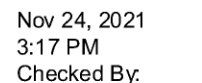
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-35.279	2
2	MP2A	My	-.017	2
3	MP2A	Mz	.003	2
4	MP2A	Y	-35.279	3.5
5	MP2A	My	-.017	3.5
6	MP2A	Mz	.003	3.5
7	MP3A	Y	-69.303	.5
8	MP3A	My	-.027	.5
9	MP3A	Mz	.049	.5
10	MP3A	Y	-69.303	5
11	MP3A	My	-.027	5
12	MP3A	Mz	.049	5
13	MP3A	Y	-69.303	.5
14	MP3A	My	-.042	.5
15	MP3A	Mz	-.037	.5
16	MP3A	Y	-69.303	5
17	MP3A	My	-.042	5
18	MP3A	Mz	-.037	5
19	MP1A	Y	-30.934	.5
20	MP1A	My	-.015	.5
21	MP1A	Mz	.003	.5
22	M59	Y	-30.934	1.833
23	M59	My	-.015	1.833
24	M59	Mz	.003	1.833
25	MP4A	Y	-30.934	.5
26	MP4A	My	-.015	.5
27	MP4A	Mz	.003	.5
28	M58A	Y	-30.934	1.833
29	M58A	My	-.015	1.833
30	M58A	Mz	.003	1.833
31	M50	Y	-75.178	2.5
32	M50	My	0	2.5
33	M50	Mz	0	2.5
34	R1	Y	-44.433	1
35	R1	My	0	1
36	R1	Mz	0	1
37	R2	Y	-39.956	1
38	R2	My	0	1
39	R2	Mz	0	1
40	D1	Y	-10.616	1.5
41	D1	My	0	1.5
42	D1	Mz	0	1.5

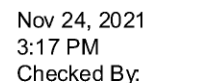
Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	2



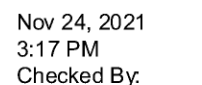
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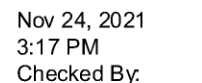
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
14	MP3A	Z	-56.833	.5
15	MP3A	Mx	-.029	.5
16	MP3A	X	98.437	5
17	MP3A	Z	-56.833	5
18	MP3A	Mx	-.029	5
19	MP1A	X	54.676	.5
20	MP1A	Z	-31.567	.5
21	MP1A	Mx	-.03	.5
22	M59	X	54.676	1.833
23	M59	Z	-31.567	1.833
24	M59	Mx	-.03	1.833
25	MP4A	X	54.676	.5
26	MP4A	Z	-31.567	.5
27	MP4A	Mx	-.03	.5
28	M58A	X	54.676	1.833
29	M58A	Z	-31.567	1.833
30	M58A	Mx	-.03	1.833
31	M50	X	107.346	2.5
32	M50	Z	-61.976	2.5
33	M50	Mx	0	2.5
34	R1	X	53.059	1
35	R1	Z	-30.634	1
36	R1	Mx	0	1
37	R2	X	51.222	1
38	R2	Z	-29.573	1
39	R2	Mx	0	1
40	D1	X	10.565	1.5
41	D1	Z	-6.1	1.5
42	D1	Mx	0	1.5

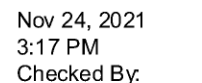
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP2A	X	34.486	2
2	MP2A	Z	0	2
3	MP2A	Mx	-.017	2
4	MP2A	X	34.486	3.5
5	MP2A	Z	0	3.5
6	MP2A	Mx	-.017	3.5
7	MP3A	X	108.806	.5
8	MP3A	Z	0	.5
9	MP3A	Mx	-.042	.5
10	MP3A	X	108.806	5
11	MP3A	Z	0	5
12	MP3A	Mx	-.042	5
13	MP3A	X	108.806	.5
14	MP3A	Z	0	.5
15	MP3A	Mx	-.065	.5
16	MP3A	X	108.806	5
17	MP3A	Z	0	5
18	MP3A	Mx	-.065	5
19	MP1A	X	64.308	.5



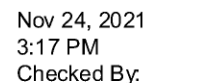
	Member Label	Direction	Magnitude [lb, k-ft]	Location [ft, %]
20	MP1A	Z	0	.5
21	MP1A	Mx	-.032	.5
22	M59	X	64.308	1.833
23	M59	Z	0	1.833
24	M59	Mx	-.032	1.833
25	MP4A	X	64.308	.5
26	MP4A	Z	0	.5
27	MP4A	Mx	-.032	.5
28	M58A	X	64.308	1.833
29	M58A	Z	0	1.833
30	M58A	Mx	-.032	1.833
31	M50	X	135.396	2.5
32	M50	Z	0	2.5
33	M50	Mx	0	2.5
34	R1	X	66.805	1
35	R1	Z	0	1
36	R1	Mx	0	1
37	R2	X	66.805	1
38	R2	Z	0	1
39	R2	Mx	0	1
40	D1	X	13.218	1.5
41	D1	Z	0	1.5
42	D1	Mx	0	1.5

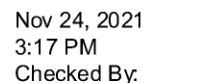
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP2A	X	46.849	2
2	MP2A	Z	27.048	2
3	MP2A	Mx	-.021	2
4	MP2A	X	46.849	3.5
5	MP2A	Z	27.048	3.5
6	MP2A	Mx	-.021	3.5
7	MP3A	X	112.796	.5
8	MP3A	Z	65.123	.5
9	MP3A	Mx	.002	.5
10	MP3A	X	112.796	5
11	MP3A	Z	65.123	5
12	MP3A	Mx	.002	5
13	MP3A	X	112.796	.5
14	MP3A	Z	65.123	.5
15	MP3A	Mx	-.102	.5
16	MP3A	X	112.796	5
17	MP3A	Z	65.123	5
18	MP3A	Mx	-.102	5
19	MP1A	X	51.209	.5
20	MP1A	Z	29.566	.5
21	MP1A	Mx	-.023	.5
22	M59	X	51.209	1.833
23	M59	Z	29.566	1.833
24	M59	Mx	-.023	1.833
25	MP4A	X	51.209	.5

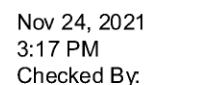
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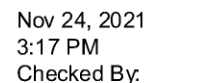


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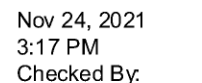


Member Point Loads (BLC 16 : Antenna Wi (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	M50	X	9.38	2.5
32	M50	Z	-16.246	2.5
33	M50	Mx	0	2.5
34	R1	X	4.926	1
35	R1	Z	-8.531	1
36	R1	Mx	0	1
37	R2	X	4.371	1
38	R2	Z	-7.571	1
39	R2	Mx	0	1
40	D1	X	1.257	1.5
41	D1	Z	-2.177	1.5
42	D1	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.485	2
2	MP2A	Z	-3.744	2
3	MP2A	Mx	-.004	2
4	MP2A	X	6.485	3.5
5	MP2A	Z	-3.744	3.5
6	MP2A	Mx	-.004	3.5
7	MP3A	X	17.795	.5
8	MP3A	Z	-10.274	.5
9	MP3A	Mx	-.014	.5
10	MP3A	X	17.795	5
11	MP3A	Z	-10.274	5
12	MP3A	Mx	-.014	5
13	MP3A	X	17.795	.5
14	MP3A	Z	-10.274	.5
15	MP3A	Mx	-.005	.5
16	MP3A	X	17.795	5
17	MP3A	Z	-10.274	5
18	MP3A	Mx	-.005	5
19	MP1A	X	10.148	.5
20	MP1A	Z	-5.859	.5
21	MP1A	Mx	-.006	.5
22	M59	X	10.148	1.833
23	M59	Z	-5.859	1.833
24	M59	Mx	-.006	1.833
25	MP4A	X	10.148	.5
26	MP4A	Z	-5.859	.5
27	MP4A	Mx	-.006	.5
28	M58A	X	10.148	1.833
29	M58A	Z	-5.859	1.833
30	M58A	Mx	-.006	1.833
31	M50	X	19.613	2.5
32	M50	Z	-11.324	2.5
33	M50	Mx	0	2.5
34	R1	X	10.216	1
35	R1	Z	-5.898	1
36	R1	Mx	0	1



	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	R2	X	9.896	1
38	R2	Z	-5.713	1
39	R2	Mx	0	1
40	D1	X	2.512	1.5
41	D1	Z	-1.45	1.5
42	D1	Mx	0	1.5

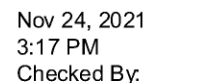
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.73	2
2	MP2A	Z	0	2
3	MP2A	Mx	-.003	2
4	MP2A	X	6.73	3.5
5	MP2A	Z	0	3.5
6	MP2A	Mx	-.003	3.5
7	MP3A	X	19.759	.5
8	MP3A	Z	0	.5
9	MP3A	Mx	-.008	.5
10	MP3A	X	19.759	5
11	MP3A	Z	0	5
12	MP3A	Mx	-.008	5
13	MP3A	X	19.759	.5
14	MP3A	Z	0	.5
15	MP3A	Mx	-.012	.5
16	MP3A	X	19.759	5
17	MP3A	Z	0	5
18	MP3A	Mx	-.012	5
19	MP1A	X	11.909	.5
20	MP1A	Z	0	.5
21	MP1A	Mx	-.006	.5
22	M59	X	11.909	1.833
23	M59	Z	0	1.833
24	M59	Mx	-.006	1.833
25	MP4A	X	11.909	.5
26	MP4A	Z	0	.5
27	MP4A	Mx	-.006	.5
28	M58A	X	11.909	1.833
29	M58A	Z	0	1.833
30	M58A	Mx	-.006	1.833
31	M50	X	24.592	2.5
32	M50	Z	0	2.5
33	M50	Mx	0	2.5
34	R1	X	12.769	1
35	R1	Z	0	1
36	R1	Mx	0	1
37	R2	X	12.769	1
38	R2	Z	0	1
39	R2	Mx	0	1
40	D1	X	3.094	1.5
41	D1	Z	0	1.5
42	D1	Mx	0	1.5

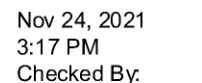
Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

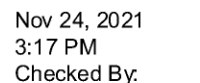
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	8.723	2
2	MP2A	Z	5.036	2
3	MP2A	Mx	-.004	2
4	MP2A	X	8.723	3.5
5	MP2A	Z	5.036	3.5
6	MP2A	Mx	-.004	3.5
7	MP3A	X	20.127	.5
8	MP3A	Z	11.62	.5
9	MP3A	Mx	.000435	.5
10	MP3A	X	20.127	5
11	MP3A	Z	11.62	5
12	MP3A	Mx	.000435	5
13	MP3A	X	20.127	.5
14	MP3A	Z	11.62	.5
15	MP3A	Mx	-.018	.5
16	MP3A	X	20.127	5
17	MP3A	Z	11.62	5
18	MP3A	Mx	-.018	5
19	MP1A	X	9.585	.5
20	MP1A	Z	5.534	.5
21	MP1A	Mx	-.004	.5
22	M59	X	9.585	1.833
23	M59	Z	5.534	1.833
24	M59	Mx	-.004	1.833
25	MP4A	X	9.585	.5
26	MP4A	Z	5.534	.5
27	MP4A	Mx	-.004	.5
28	M58A	X	9.585	1.833
29	M58A	Z	5.534	1.833
30	M58A	Mx	-.004	1.833
31	M50	X	19.613	2.5
32	M50	Z	11.324	2.5
33	M50	Mx	0	2.5
34	R1	X	10.216	1
35	R1	Z	5.898	1
36	R1	Mx	0	1
37	R2	X	9.896	1
38	R2	Z	5.713	1
39	R2	Mx	0	1
40	D1	X	2.512	1.5
41	D1	Z	1.45	1.5
42	D1	Mx	0	1.5

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

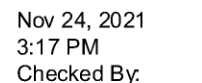
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	7.087	2
2	MP2A	Z	12.274	2
3	MP2A	Mx	-.002	2
4	MP2A	X	7.087	3.5
5	MP2A	Z	12.274	3.5
6	MP2A	Mx	-.002	3.5





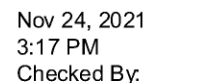


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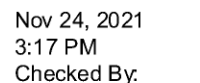
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	R2	X	-9.896	1
38	R2	Z	-5.713	1
39	R2	Mx	0	1
40	D1	X	-2.512	1.5
41	D1	Z	-1.45	1.5
42	D1	Mx	0	1.5

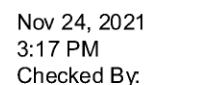
	Member Label	Direction	Magnitude[<i>lb,k-ft</i>]	Location[<i>ft,%</i>]
1	MP2A	X	-7.087	2
2	MP2A	Z	-12.274	2
3	MP2A	Mx	.002	2
4	MP2A	X	-7.087	3.5
5	MP2A	Z	-12.274	3.5
6	MP2A	Mx	.002	3.5
7	MP3A	X	-13.755	.5
8	MP3A	Z	-23.825	.5
9	MP3A	Mx	-.011	.5
10	MP3A	X	-13.755	5
11	MP3A	Z	-23.825	5
12	MP3A	Mx	-.011	5
13	MP3A	X	-13.755	.5
14	MP3A	Z	-23.825	.5
15	MP3A	Mx	.021	.5
16	MP3A	X	-13.755	5
17	MP3A	Z	-23.825	5
18	MP3A	Mx	.021	5
19	MP1A	X	-5.018	.5
20	MP1A	Z	-8.692	.5
21	MP1A	Mx	.002	.5
22	M59	X	-5.018	1.833
23	M59	Z	-8.692	1.833
24	M59	Mx	.002	1.833
25	MP4A	X	-5.018	.5
26	MP4A	Z	-8.692	.5
27	MP4A	Mx	.002	.5
28	M58A	X	-5.018	1.833
29	M58A	Z	-8.692	1.833
30	M58A	Mx	.002	1.833
31	M50	X	-9.38	2.5
32	M50	Z	-16.246	2.5
33	M50	Mx	0	2.5
34	R1	X	-4.926	1
35	R1	Z	-8.531	1
36	R1	Mx	0	1
37	R2	X	-4.371	1
38	R2	Z	-7.571	1
39	R2	Mx	0	1
40	D1	X	-1.257	1.5
41	D1	Z	-2.177	1.5
42	D1	Mx	0	1.5

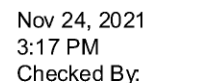


	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP3A	X	5.67	.5
14	MP3A	Z	-3.274	.5
15	MP3A	Mx	-.002	.5
16	MP3A	X	5.67	5
17	MP3A	Z	-3.274	5
18	MP3A	Mx	-.002	5
19	MP1A	X	3.149	.5
20	MP1A	Z	-1.818	.5
21	MP1A	Mx	-.002	.5
22	M59	X	3.149	1.833
23	M59	Z	-1.818	1.833
24	M59	Mx	-.002	1.833
25	MP4A	X	3.149	.5
26	MP4A	Z	-1.818	.5
27	MP4A	Mx	-.002	.5
28	M58A	X	3.149	1.833
29	M58A	Z	-1.818	1.833
30	M58A	Mx	-.002	1.833
31	M50	X	6.183	2.5
32	M50	Z	-3.57	2.5
33	M50	Mx	0	2.5
34	R1	X	3.056	1
35	R1	Z	-1.765	1
36	R1	Mx	0	1
37	R2	X	2.95	1
38	R2	Z	-1.703	1
39	R2	Mx	0	1
40	D1	X	.609	1.5
41	D1	Z	-.351	1.5
42	D1	Mx	0	1.5

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	1.986	2
2	MP2A	Z	0	2
3	MP2A	Mx	-.000978	2
4	MP2A	X	1.986	3.5
5	MP2A	Z	0	3.5
6	MP2A	Mx	-.000978	3.5
7	MP3A	X	6.267	.5
8	MP3A	Z	0	.5
9	MP3A	Mx	-.002	.5
10	MP3A	X	6.267	5
11	MP3A	Z	0	5
12	MP3A	Mx	-.002	5
13	MP3A	X	6.267	.5
14	MP3A	Z	0	.5
15	MP3A	Mx	-.004	.5
16	MP3A	X	6.267	5
17	MP3A	Z	0	5
18	MP3A	Mx	-.004	5

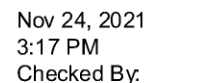
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	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	M50	X	2.911	2.5
32	M50	Z	5.041	2.5
33	M50	Mx	0	2.5
34	R1	X	1.446	1
35	R1	Z	2.504	1
36	R1	Mx	0	1
37	R2	X	1.262	1
38	R2	Z	2.186	1
39	R2	Mx	0	1
40	D1	X	.293	1.5
41	D1	Z	.507	1.5
42	D1	Mx	0	1.5

	Member Label	Direction	Magnitude [lb, k-ft]	Location [ft, %]
1	MP2A	X	0	2
2	MP2A	Z	4.758	2
3	MP2A	Mx	.000413	2
4	MP2A	X	0	3.5
5	MP2A	Z	4.758	3.5
6	MP2A	Mx	.000413	3.5
7	MP3A	X	0	.5
8	MP3A	Z	9.297	.5
9	MP3A	Mx	.007	.5
10	MP3A	X	0	5
11	MP3A	Z	9.297	5
12	MP3A	Mx	.007	5
13	MP3A	X	0	.5
14	MP3A	Z	9.297	.5
15	MP3A	Mx	-.005	.5
16	MP3A	X	0	5
17	MP3A	Z	9.297	5
18	MP3A	Mx	-.005	5
19	MP1A	X	0	.5
20	MP1A	Z	2.973	.5
21	MP1A	Mx	.000258	.5
22	M59	X	0	1.833
23	M59	Z	2.973	1.833
24	M59	Mx	.000258	1.833
25	MP4A	X	0	.5
26	MP4A	Z	2.973	.5
27	MP4A	Mx	.000258	.5
28	M58A	X	0	1.833
29	M58A	Z	2.973	1.833
30	M58A	Mx	.000258	1.833
31	M50	X	0	2.5
32	M50	Z	5.162	2.5
33	M50	Mx	0	2.5
34	R1	X	0	1
35	R1	Z	2.572	1
36	R1	Mx	0	1



	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	R2	X	0	1
38	R2	Z	2.083	1
39	R2	Mx	0	1
40	D1	X	0	1.5
41	D1	Z	.527	1.5
42	D1	Mx	0	1.5

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP2A	X	-1.814	2
2	MP2A	Z	3.142	2
3	MP2A	Mx	.001	2
4	MP2A	X	-1.814	3.5
5	MP2A	Z	3.142	3.5
6	MP2A	Mx	.001	3.5
7	MP3A	X	-4.031	.5
8	MP3A	Z	6.982	.5
9	MP3A	Mx	.006	.5
10	MP3A	X	-4.031	5
11	MP3A	Z	6.982	5
12	MP3A	Mx	.006	5
13	MP3A	X	-4.031	.5
14	MP3A	Z	6.982	.5
15	MP3A	Mx	-.001	.5
16	MP3A	X	-4.031	5
17	MP3A	Z	6.982	5
18	MP3A	Mx	-.001	5
19	MP1A	X	-1.635	.5
20	MP1A	Z	2.833	.5
21	MP1A	Mx	.001	.5
22	M59	X	-1.635	1.833
23	M59	Z	2.833	1.833
24	M59	Mx	.001	1.833
25	MP4A	X	-1.635	.5
26	MP4A	Z	2.833	.5
27	MP4A	Mx	.001	.5
28	M58A	X	-1.635	1.833
29	M58A	Z	2.833	1.833
30	M58A	Mx	.001	1.833
31	M50	X	-2.911	2.5
32	M50	Z	5.041	2.5
33	M50	Mx	0	2.5
34	R1	X	-1.446	1
35	R1	Z	2.504	1
36	R1	Mx	0	1
37	R2	X	-1.262	1
38	R2	Z	2.186	1
39	R2	Mx	0	1
40	D1	X	-.293	1.5
41	D1	Z	.507	1.5
42	D1	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-1.942	2
2	MP2A	Z	1.121	2
3	MP2A	Mx	.001	2
4	MP2A	X	-1.942	3.5
5	MP2A	Z	1.121	3.5
6	MP2A	Mx	.001	3.5
7	MP3A	X	-5.67	.5
8	MP3A	Z	3.274	.5
9	MP3A	Mx	.004	.5
10	MP3A	X	-5.67	5
11	MP3A	Z	3.274	5
12	MP3A	Mx	.004	5
13	MP3A	X	-5.67	.5
14	MP3A	Z	3.274	.5
15	MP3A	Mx	.002	.5
16	MP3A	X	-5.67	5
17	MP3A	Z	3.274	5
18	MP3A	Mx	.002	5
19	MP1A	X	-3.149	.5
20	MP1A	Z	1.818	.5
21	MP1A	Mx	.002	.5
22	M59	X	-3.149	1.833
23	M59	Z	1.818	1.833
24	M59	Mx	.002	1.833
25	MP4A	X	-3.149	.5
26	MP4A	Z	1.818	.5
27	MP4A	Mx	.002	.5
28	M58A	X	-3.149	1.833
29	M58A	Z	1.818	1.833
30	M58A	Mx	.002	1.833
31	M50	X	-6.183	2.5
32	M50	Z	3.57	2.5
33	M50	Mx	0	2.5
34	R1	X	-3.056	1
35	R1	Z	1.765	1
36	R1	Mx	0	1
37	R2	X	-2.95	1
38	R2	Z	1.703	1
39	R2	Mx	0	1
40	D1	X	-.609	1.5
41	D1	Z	.351	1.5
42	D1	Mx	0	1.5

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

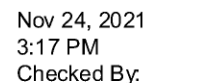
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-1.986	2
2	MP2A	Z	0	2
3	MP2A	Mx	.000978	2
4	MP2A	X	-1.986	3.5
5	MP2A	Z	0	3.5
6	MP2A	Mx	.000978	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP3A	X	-6.267	.5
8	MP3A	Z	0	.5
9	MP3A	Mx	.002	.5
10	MP3A	X	-6.267	5
11	MP3A	Z	0	5
12	MP3A	Mx	.002	5
13	MP3A	X	-6.267	.5
14	MP3A	Z	0	.5
15	MP3A	Mx	.004	.5
16	MP3A	X	-6.267	5
17	MP3A	Z	0	5
18	MP3A	Mx	.004	5
19	MP1A	X	-3.704	.5
20	MP1A	Z	0	.5
21	MP1A	Mx	.002	.5
22	M59	X	-3.704	1.833
23	M59	Z	0	1.833
24	M59	Mx	.002	1.833
25	MP4A	X	-3.704	.5
26	MP4A	Z	0	.5
27	MP4A	Mx	.002	.5
28	M58A	X	-3.704	1.833
29	M58A	Z	0	1.833
30	M58A	Mx	.002	1.833
31	M50	X	-7.799	2.5
32	M50	Z	0	2.5
33	M50	Mx	0	2.5
34	R1	X	-3.848	1
35	R1	Z	0	1
36	R1	Mx	0	1
37	R2	X	-3.848	1
38	R2	Z	0	1
39	R2	Mx	0	1
40	D1	X	-.761	1.5
41	D1	Z	0	1.5
42	D1	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.699	2
2	MP2A	Z	-1.558	2
3	MP2A	Mx	.001	2
4	MP2A	X	-2.699	3.5
5	MP2A	Z	-1.558	3.5
6	MP2A	Mx	.001	3.5
7	MP3A	X	-6.497	.5
8	MP3A	Z	-3.751	.5
9	MP3A	Mx	-.00014	.5
10	MP3A	X	-6.497	5
11	MP3A	Z	-3.751	5
12	MP3A	Mx	-.00014	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP1A	X	-1.52	.5
20	MP1A	Z	-2.633	.5
21	MP1A	Mx	.00052	.5
22	M59	X	-1.52	1.833
23	M59	Z	-2.633	1.833
24	M59	Mx	.00052	1.833
25	MP4A	X	-1.52	.5
26	MP4A	Z	-2.633	.5
27	MP4A	Mx	.00052	.5
28	M58A	X	-1.52	1.833
29	M58A	Z	-2.633	1.833
30	M58A	Mx	.00052	1.833
31	M50	X	-2.911	2.5
32	M50	Z	-5.041	2.5
33	M50	Mx	0	2.5
34	R1	X	-1.446	1
35	R1	Z	-2.504	1
36	R1	Mx	0	1
37	R2	X	-1.262	1
38	R2	Z	-2.186	1
39	R2	Mx	0	1
40	D1	X	-.293	1.5
41	D1	Z	-.507	1.5
42	D1	Mx	0	1.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%50

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M60A	Y	-500	%100

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

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

Member Point Loads (BLC 81 : Antenna Ev)

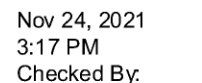
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-1.793	2
2	MP2A	My	-.000883	2
3	MP2A	Mz	.000156	2
4	MP2A	Y	-1.793	3.5
5	MP2A	My	-.000883	3.5
6	MP2A	Mz	.000156	3.5

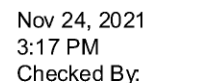
Member Point Loads (BLC 81 : Antenna Ev) (Continued)

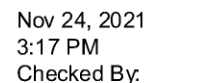
	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP3A	Y	-1.303	.5
8	MP3A	My	-.0005	.5
9	MP3A	Mz	.000915	.5
10	MP3A	Y	-1.303	5
11	MP3A	My	-.0005	5
12	MP3A	Mz	.000915	5
13	MP3A	Y	-1.303	.5
14	MP3A	My	-.000783	.5
15	MP3A	Mz	-.000689	.5
16	MP3A	Y	-1.303	5
17	MP3A	My	-.000783	5
18	MP3A	Mz	-.000689	5
19	MP1A	Y	-.13	.5
20	MP1A	My	-6.4e-5	.5
21	MP1A	Mz	1.1e-5	.5
22	M59	Y	-.13	1.833
23	M59	My	-6.4e-5	1.833
24	M59	Mz	1.1e-5	1.833
25	MP4A	Y	-.13	.5
26	MP4A	My	-6.4e-5	.5
27	MP4A	Mz	1.1e-5	.5
28	M58A	Y	-.13	1.833
29	M58A	My	-6.4e-5	1.833
30	M58A	Mz	1.1e-5	1.833
31	M50	Y	-1.318	2.5
32	M50	My	0	2.5
33	M50	Mz	0	2.5
34	R1	Y	-3.475	1
35	R1	My	0	1
36	R1	Mz	0	1
37	R2	Y	-2.894	1
38	R2	My	0	1
39	R2	Mz	0	1
40	D1	Y	-.428	1.5
41	D1	My	0	1.5
42	D1	Mz	0	1.5

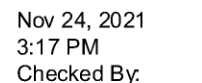
Member Point Loads (BLC 82 : Antenna Eh (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Z	-4.483	2
2	MP2A	Mx	-.000389	2
3	MP2A	Z	-4.483	3.5
4	MP2A	Mx	-.000389	3.5
5	MP3A	Z	-3.258	.5
6	MP3A	Mx	-.002	.5
7	MP3A	Z	-3.258	5
8	MP3A	Mx	-.002	5
9	MP3A	Z	-3.258	.5
10	MP3A	Mx	.002	.5
11	MP3A	Z	-3.258	5
12	MP3A	Mx	.002	5

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

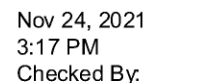
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
34	R2	Z	-5.937	-5.937	0	%100
35	M26	X	2.476	2.476	0	%100
36	M26	Z	-4.288	-4.288	0	%100
37	M28	X	4.242	4.242	0	%100
38	M28	Z	-7.348	-7.348	0	%100
39	M30	X	.153	.153	0	%100
40	M30	Z	-.265	-.265	0	%100
41	M31	X	.153	.153	0	%100
42	M31	Z	-.265	-.265	0	%100
43	M48A	X	.195	.195	0	%100
44	M48A	Z	-.338	-.338	0	%100
45	M49A	X	.195	.195	0	%100
46	M49A	Z	-.338	-.338	0	%100
47	M55B	X	.195	.195	0	%100
48	M55B	Z	-.338	-.338	0	%100
49	M56B	X	.195	.195	0	%100
50	M56B	Z	-.338	-.338	0	%100
51	MP3A	X	4.242	4.242	0	%100
52	MP3A	Z	-7.348	-7.348	0	%100
53	M58	X	2.484	2.484	0	%100
54	M58	Z	-4.303	-4.303	0	%100
55	M60	X	2.426	2.426	0	%100
56	M60	Z	-4.202	-4.202	0	%100
57	MP2A	X	4.242	4.242	0	%100
58	MP2A	Z	-7.348	-7.348	0	%100
59	M53A	X	3.182	3.182	0	%100
60	M53A	Z	-5.511	-5.511	0	%100
61	M54A	X	3.538	3.538	0	%100
62	M54A	Z	-6.128	-6.128	0	%100
63	M55C	X	7.137	7.137	0	%100
64	M55C	Z	-12.362	-12.362	0	%100
65	M56C	X	4.658	4.658	0	%100
66	M56C	Z	-8.068	-8.068	0	%100
67	M57	X	5.193	5.193	0	%100
68	M57	Z	-8.995	-8.995	0	%100
69	MP4A	X	4.089	4.089	0	0
70	MP4A	Z	-7.083	-7.083	0	0
71	MP1A	X	4.089	4.089	0	0
72	MP1A	Z	-7.083	-7.083	0	0
73	M58A	X	4.089	4.089	0	2.896
74	M58A	Z	-7.083	-7.083	0	2.896
75	M59	X	4.089	4.089	0	2.896
76	M59	Z	-7.083	-7.083	0	2.896

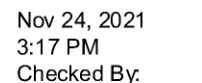
Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	3.223	3.223	0	%100
2	M1	Z	-1.861	-1.861	0	%100
3	M2	X	3.223	3.223	0	%100
4	M2	Z	-1.861	-1.861	0	%100
5	D1	X	5.937	5.937	0	%100

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

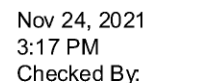
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
6	D1	Z	-3.428	-3.428	0	%100
7	RCP	X	1.869	1.869	0	%100
8	RCP	Z	-1.079	-1.079	0	%100
9	M43	X	2.664	2.664	0	%100
10	M43	Z	-1.538	-1.538	0	%100
11	M44	X	10.028	10.028	0	%100
12	M44	Z	-5.79	-5.79	0	%100
13	M45	X	1.869	1.869	0	%100
14	M45	Z	-1.079	-1.079	0	%100
15	M46	X	2.664	2.664	0	%100
16	M46	Z	-1.538	-1.538	0	%100
17	M47	X	10.028	10.028	0	%100
18	M47	Z	-5.79	-5.79	0	%100
19	M50	X	7.527	7.527	0	%100
20	M50	Z	-4.346	-4.346	0	%100
21	M51	X	1.16	1.16	0	%100
22	M51	Z	-.67	-.67	0	%100
23	M55	X	2.599	2.599	0	%100
24	M55	Z	-1.5	-1.5	0	%100
25	M56	X	9.002	9.002	0	%100
26	M56	Z	-5.197	-5.197	0	%100
27	M56A	X	9.002	9.002	0	%100
28	M56A	Z	-5.197	-5.197	0	%100
29	M55A	X	1.16	1.16	0	%100
30	M55A	Z	-.67	-.67	0	%100
31	R1	X	5.937	5.937	0	%100
32	R1	Z	-3.428	-3.428	0	%100
33	R2	X	5.937	5.937	0	%100
34	R2	Z	-3.428	-3.428	0	%100
35	M26	X	4.288	4.288	0	%100
36	M26	Z	-2.476	-2.476	0	%100
37	M28	X	7.348	7.348	0	%100
38	M28	Z	-4.242	-4.242	0	%100
39	M30	X	.795	.795	0	%100
40	M30	Z	-.459	-.459	0	%100
41	M31	X	.795	.795	0	%100
42	M31	Z	-.459	-.459	0	%100
43	M48A	X	1.015	1.015	0	%100
44	M48A	Z	-.586	-.586	0	%100
45	M49A	X	1.015	1.015	0	%100
46	M49A	Z	-.586	-.586	0	%100
47	M55B	X	1.015	1.015	0	%100
48	M55B	Z	-.586	-.586	0	%100
49	M56B	X	1.015	1.015	0	%100
50	M56B	Z	-.586	-.586	0	%100
51	MP3A	X	7.348	7.348	0	%100
52	MP3A	Z	-4.242	-4.242	0	%100
53	M58	X	4.303	4.303	0	%100
54	M58	Z	-2.484	-2.484	0	%100
55	M60	X	5.869	5.869	0	%100
56	M60	Z	-3.388	-3.388	0	%100
57	MP2A	X	7.348	7.348	0	%100

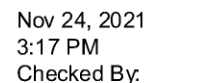


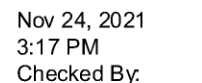


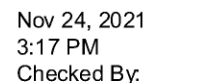
Member Distributed Loads (BLC 45 : Structure Wo (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
2	M1	Z	1.861	1.861	0	%100
3	M2	X	3.223	3.223	0	%100
4	M2	Z	1.861	1.861	0	%100
5	D1	X	5.937	5.937	0	%100
6	D1	Z	3.428	3.428	0	%100
7	RCP	X	10.028	10.028	0	%100
8	RCP	Z	5.79	5.79	0	%100
9	M43	X	2.664	2.664	0	%100
10	M43	Z	1.538	1.538	0	%100
11	M44	X	1.869	1.869	0	%100
12	M44	Z	1.079	1.079	0	%100
13	M45	X	10.028	10.028	0	%100
14	M45	Z	5.79	5.79	0	%100
15	M46	X	2.664	2.664	0	%100
16	M46	Z	1.538	1.538	0	%100
17	M47	X	1.869	1.869	0	%100
18	M47	Z	1.079	1.079	0	%100
19	M50	X	7.527	7.527	0	%100
20	M50	Z	4.346	4.346	0	%100
21	M51	X	1.16	1.16	0	%100
22	M51	Z	.67	.67	0	%100
23	M55	X	5.638	5.638	0	%100
24	M55	Z	3.255	3.255	0	%100
25	M56	X	9.002	9.002	0	%100
26	M56	Z	5.197	5.197	0	%100
27	M56A	X	9.002	9.002	0	%100
28	M56A	Z	5.197	5.197	0	%100
29	M55A	X	1.16	1.16	0	%100
30	M55A	Z	.67	.67	0	%100
31	R1	X	5.937	5.937	0	%100
32	R1	Z	3.428	3.428	0	%100
33	R2	X	5.937	5.937	0	%100
34	R2	Z	3.428	3.428	0	%100
35	M26	X	4.288	4.288	0	%100
36	M26	Z	2.476	2.476	0	%100
37	M28	X	7.348	7.348	0	%100
38	M28	Z	4.242	4.242	0	%100
39	M30	X	.795	.795	0	%100
40	M30	Z	.459	.459	0	%100
41	M31	X	.795	.795	0	%100
42	M31	Z	.459	.459	0	%100
43	M48A	X	1.015	1.015	0	%100
44	M48A	Z	.586	.586	0	%100
45	M49A	X	1.015	1.015	0	%100
46	M49A	Z	.586	.586	0	%100
47	M55B	X	1.015	1.015	0	%100
48	M55B	Z	.586	.586	0	%100
49	M56B	X	1.015	1.015	0	%100
50	M56B	Z	.586	.586	0	%100
51	MP3A	X	7.348	7.348	0	%100
52	MP3A	Z	4.242	4.242	0	%100
53	M58	X	4.303	4.303	0	%100







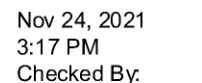


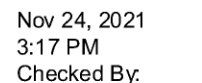
Member Distributed Loads (BLC 48 : Structure Wo (210 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
25	M56	X	-5.197	-5.197	0	%100
26	M56	Z	9.002	9.002	0	%100
27	M56A	X	-5.197	-5.197	0	%100
28	M56A	Z	9.002	9.002	0	%100
29	M55A	X	-.223	-.223	0	%100
30	M55A	Z	.387	.387	0	%100
31	R1	X	-3.428	-3.428	0	%100
32	R1	Z	5.937	5.937	0	%100
33	R2	X	-3.428	-3.428	0	%100
34	R2	Z	5.937	5.937	0	%100
35	M26	X	-2.476	-2.476	0	%100
36	M26	Z	4.288	4.288	0	%100
37	M28	X	-4.242	-4.242	0	%100
38	M28	Z	7.348	7.348	0	%100
39	M30	X	-.153	-.153	0	%100
40	M30	Z	.265	.265	0	%100
41	M31	X	-.153	-.153	0	%100
42	M31	Z	.265	.265	0	%100
43	M48A	X	-.195	-.195	0	%100
44	M48A	Z	.338	.338	0	%100
45	M49A	X	-.195	-.195	0	%100
46	M49A	Z	.338	.338	0	%100
47	M55B	X	-.195	-.195	0	%100
48	M55B	Z	.338	.338	0	%100
49	M56B	X	-.195	-.195	0	%100
50	M56B	Z	.338	.338	0	%100
51	MP3A	X	-4.242	-4.242	0	%100
52	MP3A	Z	7.348	7.348	0	%100
53	M58	X	-2.484	-2.484	0	%100
54	M58	Z	4.303	4.303	0	%100
55	M60	X	-2.426	-2.426	0	%100
56	M60	Z	4.202	4.202	0	%100
57	MP2A	X	-4.242	-4.242	0	%100
58	MP2A	Z	7.348	7.348	0	%100
59	M53A	X	-3.182	-3.182	0	%100
60	M53A	Z	5.511	5.511	0	%100
61	M54A	X	-3.538	-3.538	0	%100
62	M54A	Z	6.128	6.128	0	%100
63	M55C	X	-7.137	-7.137	0	%100
64	M55C	Z	12.362	12.362	0	%100
65	M56C	X	-4.658	-4.658	0	%100
66	M56C	Z	8.068	8.068	0	%100
67	M57	X	-5.193	-5.193	0	%100
68	M57	Z	8.995	8.995	0	%100
69	MP4A	X	-4.089	-4.089	0	0
70	MP4A	Z	7.083	7.083	0	0
71	MP1A	X	-4.089	-4.089	0	0
72	MP1A	Z	7.083	7.083	0	0
73	M58A	X	-4.089	-4.089	0	2.896
74	M58A	Z	7.083	7.083	0	2.896
75	M59	X	-4.089	-4.089	0	2.896
76	M59	Z	7.083	7.083	0	2.896

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	M1	X	-3.223	-3.223	0	%100
2	M1	Z	1.861	1.861	0	%100
3	M2	X	-3.223	-3.223	0	%100
4	M2	Z	1.861	1.861	0	%100
5	D1	X	-5.937	-5.937	0	%100
6	D1	Z	3.428	3.428	0	%100
7	RCP	X	-1.869	-1.869	0	%100
8	RCP	Z	1.079	1.079	0	%100
9	M43	X	-2.664	-2.664	0	%100
10	M43	Z	1.538	1.538	0	%100
11	M44	X	-10.028	-10.028	0	%100
12	M44	Z	5.79	5.79	0	%100
13	M45	X	-1.869	-1.869	0	%100
14	M45	Z	1.079	1.079	0	%100
15	M46	X	-2.664	-2.664	0	%100
16	M46	Z	1.538	1.538	0	%100
17	M47	X	-10.028	-10.028	0	%100
18	M47	Z	5.79	5.79	0	%100
19	M50	X	-7.527	-7.527	0	%100
20	M50	Z	4.346	4.346	0	%100
21	M51	X	-1.16	-1.16	0	%100
22	M51	Z	.67	.67	0	%100
23	M55	X	-2.599	-2.599	0	%100
24	M55	Z	1.5	1.5	0	%100
25	M56	X	-9.002	-9.002	0	%100
26	M56	Z	5.197	5.197	0	%100
27	M56A	X	-9.002	-9.002	0	%100
28	M56A	Z	5.197	5.197	0	%100
29	M55A	X	-1.16	-1.16	0	%100
30	M55A	Z	.67	.67	0	%100
31	R1	X	-5.937	-5.937	0	%100
32	R1	Z	3.428	3.428	0	%100
33	R2	X	-5.937	-5.937	0	%100
34	R2	Z	3.428	3.428	0	%100
35	M26	X	-4.288	-4.288	0	%100
36	M26	Z	2.476	2.476	0	%100
37	M28	X	-7.348	-7.348	0	%100
38	M28	Z	4.242	4.242	0	%100
39	M30	X	-.795	-.795	0	%100
40	M30	Z	.459	.459	0	%100
41	M31	X	-.795	-.795	0	%100
42	M31	Z	.459	.459	0	%100
43	M48A	X	-1.015	-1.015	0	%100
44	M48A	Z	.586	.586	0	%100
45	M49A	X	-1.015	-1.015	0	%100
46	M49A	Z	.586	.586	0	%100
47	M55B	X	-1.015	-1.015	0	%100
48	M55B	Z	.586	.586	0	%100
49	M56B	X	-1.015	-1.015	0	%100
50	M56B	Z	.586	.586	0	%100
51	MP3A	X	-7.348	-7.348	0	%100
52	MP3A	Z	4.242	4.242	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	M1	X	-3.223	-3.223	0	%100
2	M1	Z	-1.861	-1.861	0	%100
3	M2	X	-3.223	-3.223	0	%100
4	M2	Z	-1.861	-1.861	0	%100
5	D1	X	-5.937	-5.937	0	%100
6	D1	Z	-3.428	-3.428	0	%100
7	RCP	X	-10.028	-10.028	0	%100
8	RCP	Z	-5.79	-5.79	0	%100
9	M43	X	-2.664	-2.664	0	%100
10	M43	Z	-1.538	-1.538	0	%100
11	M44	X	-1.869	-1.869	0	%100
12	M44	Z	-1.079	-1.079	0	%100
13	M45	X	-10.028	-10.028	0	%100
14	M45	Z	-5.79	-5.79	0	%100
15	M46	X	-2.664	-2.664	0	%100
16	M46	Z	-1.538	-1.538	0	%100
17	M47	X	-1.869	-1.869	0	%100
18	M47	Z	-1.079	-1.079	0	%100
19	M50	X	-7.527	-7.527	0	%100
20	M50	Z	-4.346	-4.346	0	%100
21	M51	X	-1.16	-1.16	0	%100
22	M51	Z	-.67	-.67	0	%100
23	M55	X	-5.638	-5.638	0	%100
24	M55	Z	-3.255	-3.255	0	%100
25	M56	X	-9.002	-9.002	0	%100
26	M56	Z	-5.197	-5.197	0	%100
27	M56A	X	-9.002	-9.002	0	%100
28	M56A	Z	-5.197	-5.197	0	%100
29	M55A	X	-1.16	-1.16	0	%100
30	M55A	Z	-.67	-.67	0	%100
31	R1	X	-5.937	-5.937	0	%100
32	R1	Z	-3.428	-3.428	0	%100
33	R2	X	-5.937	-5.937	0	%100
34	R2	Z	-3.428	-3.428	0	%100
35	M26	X	-4.288	-4.288	0	%100
36	M26	Z	-2.476	-2.476	0	%100
37	M28	X	-7.348	-7.348	0	%100
38	M28	Z	-4.242	-4.242	0	%100
39	M30	X	-.795	-.795	0	%100
40	M30	Z	-.459	-.459	0	%100
41	M31	X	-.795	-.795	0	%100
42	M31	Z	-.459	-.459	0	%100
43	M48A	X	-1.015	-1.015	0	%100
44	M48A	Z	-.586	-.586	0	%100
45	M49A	X	-1.015	-1.015	0	%100
46	M49A	Z	-.586	-.586	0	%100
47	M55B	X	-1.015	-1.015	0	%100
48	M55B	Z	-.586	-.586	0	%100
49	M56B	X	-1.015	-1.015	0	%100
50	M56B	Z	-.586	-.586	0	%100
51	MP3A	X	-7.348	-7.348	0	%100
52	MP3A	Z	-4.242	-4.242	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
53	M58	X	-4.303	-4.303	0	%100
54	M58	Z	-2.484	-2.484	0	%100
55	M60	X	-1.677	-1.677	0	%100
56	M60	Z	-.968	-.968	0	%100
57	MP2A	X	-7.348	-7.348	0	%100
58	MP2A	Z	-4.242	-4.242	0	%100
59	M53A	X	-1.837	-1.837	0	%100
60	M53A	Z	-1.061	-1.061	0	%100
61	M54A	X	-7.41	-7.41	0	%100
62	M54A	Z	-4.278	-4.278	0	%100
63	M55C	X	-1.176	-1.176	0	%100
64	M55C	Z	-.679	-.679	0	%100
65	M56C	X	-9.2	-9.2	0	%100
66	M56C	Z	-5.312	-5.312	0	%100
67	M57	X	-8.273	-8.273	0	%100
68	M57	Z	-4.777	-4.777	0	%100
69	MP4A	X	-7.083	-7.083	0	0
70	MP4A	Z	-4.089	-4.089	0	0
71	MP1A	X	-7.083	-7.083	0	0
72	MP1A	Z	-4.089	-4.089	0	0
73	M58A	X	-7.083	-7.083	0	2.896
74	M58A	Z	-4.089	-4.089	0	2.896
75	M59	X	-7.083	-7.083	0	2.896
76	M59	Z	-4.089	-4.089	0	2.896

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

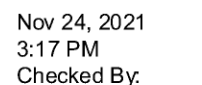
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-5.582	-5.582	0	%100
2	M1	Z	-9.668	-9.668	0	%100
3	M2	X	-5.582	-5.582	0	%100
4	M2	Z	-9.668	-9.668	0	%100
5	D1	X	-3.428	-3.428	0	%100
6	D1	Z	-5.937	-5.937	0	%100
7	RCP	X	-4.747	-4.747	0	%100
8	RCP	Z	-8.222	-8.222	0	%100
9	M43	X	-4.614	-4.614	0	%100
10	M43	Z	-7.992	-7.992	0	%100
11	M44	X	-.036	-.036	0	%100
12	M44	Z	-.062	-.062	0	%100
13	M45	X	-4.747	-4.747	0	%100
14	M45	Z	-8.222	-8.222	0	%100
15	M46	X	-4.614	-4.614	0	%100
16	M46	Z	-7.992	-7.992	0	%100
17	M47	X	-.036	-.036	0	%100
18	M47	Z	-.062	-.062	0	%100
19	M50	X	-4.346	-4.346	0	%100
20	M50	Z	-7.527	-7.527	0	%100
21	M51	X	-.223	-.223	0	%100
22	M51	Z	-.387	-.387	0	%100
23	M55	X	-1.893	-1.893	0	%100
24	M55	Z	-3.279	-3.279	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,%]
25	M56	X	-5.197	-5.197	0	%100
26	M56	Z	-9.002	-9.002	0	%100
27	M56A	X	-5.197	-5.197	0	%100
28	M56A	Z	-9.002	-9.002	0	%100
29	M55A	X	-.223	-.223	0	%100
30	M55A	Z	-.387	-.387	0	%100
31	R1	X	-3.428	-3.428	0	%100
32	R1	Z	-5.937	-5.937	0	%100
33	R2	X	-3.428	-3.428	0	%100
34	R2	Z	-5.937	-5.937	0	%100
35	M26	X	-2.476	-2.476	0	%100
36	M26	Z	-4.288	-4.288	0	%100
37	M28	X	-4.242	-4.242	0	%100
38	M28	Z	-7.348	-7.348	0	%100
39	M30	X	-.153	-.153	0	%100
40	M30	Z	-.265	-.265	0	%100
41	M31	X	-.153	-.153	0	%100
42	M31	Z	-.265	-.265	0	%100
43	M48A	X	-.195	-.195	0	%100
44	M48A	Z	-.338	-.338	0	%100
45	M49A	X	-.195	-.195	0	%100
46	M49A	Z	-.338	-.338	0	%100
47	M55B	X	-.195	-.195	0	%100
48	M55B	Z	-.338	-.338	0	%100
49	M56B	X	-.195	-.195	0	%100
50	M56B	Z	-.338	-.338	0	%100
51	MP3A	X	-4.242	-4.242	0	%100
52	MP3A	Z	-7.348	-7.348	0	%100
53	M58	X	-2.484	-2.484	0	%100
54	M58	Z	-4.303	-4.303	0	%100
55	M60	X	-.005	-.005	0	%100
56	M60	Z	-.009	-.009	0	%100
57	MP2A	X	-4.242	-4.242	0	%100
58	MP2A	Z	-7.348	-7.348	0	%100
59	M53A	X	-3.182	-3.182	0	%100
60	M53A	Z	-5.511	-5.511	0	%100
61	M54A	X	-7.137	-7.137	0	%100
62	M54A	Z	-12.362	-12.362	0	%100
63	M55C	X	-3.538	-3.538	0	%100
64	M55C	Z	-6.128	-6.128	0	%100
65	M56C	X	-5.193	-5.193	0	%100
66	M56C	Z	-8.995	-8.995	0	%100
67	M57	X	-4.658	-4.658	0	%100
68	M57	Z	-8.068	-8.068	0	%100
69	MP4A	X	-4.089	-4.089	0	0
70	MP4A	Z	-7.083	-7.083	0	0
71	MP1A	X	-4.089	-4.089	0	0
72	MP1A	Z	-7.083	-7.083	0	0
73	M58A	X	-4.089	-4.089	0	2.896
74	M58A	Z	-7.083	-7.083	0	2.896
75	M59	X	-4.089	-4.089	0	2.896
76	M59	Z	-7.083	-7.083	0	2.896

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	M1	X	0	0	0	%100
2	M1	Z	-3.689	-3.689	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	-3.689	-3.689	0	%100
5	D1	X	0	0	0	%100
6	D1	Z	-2.167	-2.167	0	%100
7	RCP	X	0	0	0	%100
8	RCP	Z	-.873	-.873	0	%100
9	M43	X	0	0	0	%100
10	M43	Z	-2.877	-2.877	0	%100
11	M44	X	0	0	0	%100
12	M44	Z	-.873	-.873	0	%100
13	M45	X	0	0	0	%100
14	M45	Z	-.873	-.873	0	%100
15	M46	X	0	0	0	%100
16	M46	Z	-2.877	-2.877	0	%100
17	M47	X	0	0	0	%100
18	M47	Z	-.873	-.873	0	%100
19	M50	X	0	0	0	%100
20	M50	Z	-2.601	-2.601	0	%100
21	M51	X	0	0	0	%100
22	M51	Z	0	0	0	%100
23	M55	X	0	0	0	%100
24	M55	Z	-.237	-.237	0	%100
25	M56	X	0	0	0	%100
26	M56	Z	-2.733	-2.733	0	%100
27	M56A	X	0	0	0	%100
28	M56A	Z	-2.733	-2.733	0	%100
29	M55A	X	0	0	0	%100
30	M55A	Z	0	0	0	%100
31	R1	X	0	0	0	%100
32	R1	Z	-2.167	-2.167	0	%100
33	R2	X	0	0	0	%100
34	R2	Z	-2.167	-2.167	0	%100
35	M26	X	0	0	0	%100
36	M26	Z	-1.703	-1.703	0	%100
37	M28	X	0	0	0	%100
38	M28	Z	-2.665	-2.665	0	%100
39	M30	X	0	0	0	%100
40	M30	Z	0	0	0	%100
41	M31	X	0	0	0	%100
42	M31	Z	0	0	0	%100
43	M48A	X	0	0	0	%100
44	M48A	Z	0	0	0	%100
45	M49A	X	0	0	0	%100
46	M49A	Z	0	0	0	%100
47	M55B	X	0	0	0	%100
48	M55B	Z	0	0	0	%100
49	M56B	X	0	0	0	%100
50	M56B	Z	0	0	0	%100
51	MP3A	X	0	0	0	%100
52	MP3A	Z	-2.665	-2.665	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, %]
25	M56	X	1.366	1.366	0	%100
26	M56	Z	-2.367	-2.367	0	%100
27	M56A	X	1.366	1.366	0	%100
28	M56A	Z	-2.367	-2.367	0	%100
29	M55A	X	.135	.135	0	%100
30	M55A	Z	-.234	-.234	0	%100
31	R1	X	1.083	1.083	0	%100
32	R1	Z	-1.876	-1.876	0	%100
33	R2	X	1.083	1.083	0	%100
34	R2	Z	-1.876	-1.876	0	%100
35	M26	X	.852	.852	0	%100
36	M26	Z	-1.475	-1.475	0	%100
37	M28	X	1.332	1.332	0	%100
38	M28	Z	-2.308	-2.308	0	%100
39	M30	X	.12	.12	0	%100
40	M30	Z	-.207	-.207	0	%100
41	M31	X	.12	.12	0	%100
42	M31	Z	-.207	-.207	0	%100
43	M48A	X	.127	.127	0	%100
44	M48A	Z	-.219	-.219	0	%100
45	M49A	X	.127	.127	0	%100
46	M49A	Z	-.219	-.219	0	%100
47	M55B	X	.127	.127	0	%100
48	M55B	Z	-.219	-.219	0	%100
49	M56B	X	.127	.127	0	%100
50	M56B	Z	-.219	-.219	0	%100
51	MP3A	X	1.332	1.332	0	%100
52	MP3A	Z	-2.308	-2.308	0	%100
53	M58	X	.854	.854	0	%100
54	M58	Z	-1.48	-1.48	0	%100
55	M60	X	.855	.855	0	%100
56	M60	Z	-1.481	-1.481	0	%100
57	MP2A	X	1.332	1.332	0	%100
58	MP2A	Z	-2.308	-2.308	0	%100
59	M53A	X	.999	.999	0	%100
60	M53A	Z	-1.731	-1.731	0	%100
61	M54A	X	.877	.877	0	%100
62	M54A	Z	-1.519	-1.519	0	%100
63	M55C	X	1.769	1.769	0	%100
64	M55C	Z	-3.063	-3.063	0	%100
65	M56C	X	1.225	1.225	0	%100
66	M56C	Z	-2.122	-2.122	0	%100
67	M57	X	1.366	1.366	0	%100
68	M57	Z	-2.366	-2.366	0	%100
69	MP4A	X	1.295	1.295	0	0
70	MP4A	Z	-2.243	-2.243	0	0
71	MP1A	X	1.295	1.295	0	0
72	MP1A	Z	-2.243	-2.243	0	0
73	M58A	X	1.295	1.295	0	2.896
74	M58A	Z	-2.243	-2.243	0	2.896
75	M59	X	1.295	1.295	0	2.896
76	M59	Z	-2.243	-2.243	0	2.896

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

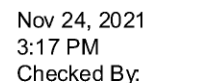
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	.799	.799	0	%100
2	M1	Z	-.461	-.461	0	%100
3	M2	X	.799	.799	0	%100
4	M2	Z	-.461	-.461	0	%100
5	D1	X	1.876	1.876	0	%100
6	D1	Z	-1.083	-1.083	0	%100
7	RCP	X	.436	.436	0	%100
8	RCP	Z	-.252	-.252	0	%100
9	M43	X	.623	.623	0	%100
10	M43	Z	-.36	-.36	0	%100
11	M44	X	2.341	2.341	0	%100
12	M44	Z	-1.352	-1.352	0	%100
13	M45	X	.436	.436	0	%100
14	M45	Z	-.252	-.252	0	%100
15	M46	X	.623	.623	0	%100
16	M46	Z	-.36	-.36	0	%100
17	M47	X	2.341	2.341	0	%100
18	M47	Z	-1.352	-1.352	0	%100
19	M50	X	2.252	2.252	0	%100
20	M50	Z	-1.3	-1.3	0	%100
21	M51	X	.703	.703	0	%100
22	M51	Z	-.406	-.406	0	%100
23	M55	X	.916	.916	0	%100
24	M55	Z	-.529	-.529	0	%100
25	M56	X	2.367	2.367	0	%100
26	M56	Z	-1.366	-1.366	0	%100
27	M56A	X	2.367	2.367	0	%100
28	M56A	Z	-1.366	-1.366	0	%100
29	M55A	X	.703	.703	0	%100
30	M55A	Z	-.406	-.406	0	%100
31	R1	X	1.876	1.876	0	%100
32	R1	Z	-1.083	-1.083	0	%100
33	R2	X	1.876	1.876	0	%100
34	R2	Z	-1.083	-1.083	0	%100
35	M26	X	1.475	1.475	0	%100
36	M26	Z	-.852	-.852	0	%100
37	M28	X	2.308	2.308	0	%100
38	M28	Z	-1.332	-1.332	0	%100
39	M30	X	.622	.622	0	%100
40	M30	Z	-.359	-.359	0	%100
41	M31	X	.622	.622	0	%100
42	M31	Z	-.359	-.359	0	%100
43	M48A	X	.658	.658	0	%100
44	M48A	Z	-.38	-.38	0	%100
45	M49A	X	.658	.658	0	%100
46	M49A	Z	-.38	-.38	0	%100
47	M55B	X	.658	.658	0	%100
48	M55B	Z	-.38	-.38	0	%100
49	M56B	X	.658	.658	0	%100
50	M56B	Z	-.38	-.38	0	%100
51	MP3A	X	2.308	2.308	0	%100
52	MP3A	Z	-1.332	-1.332	0	%100

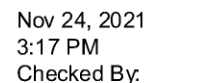
Member Distributed Loads (BLC 55 : Structure Wi (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
53	M58	X	1.48	1.48	0	%100
54	M58	Z	-.854	-.854	0	%100
55	M60	X	2.069	2.069	0	%100
56	M60	Z	-1.195	-1.195	0	%100
57	MP2A	X	2.308	2.308	0	%100
58	MP2A	Z	-1.332	-1.332	0	%100
59	M53A	X	.577	.577	0	%100
60	M53A	Z	-.333	-.333	0	%100
61	M54A	X	.291	.291	0	%100
62	M54A	Z	-.168	-.168	0	%100
63	M55C	X	1.836	1.836	0	%100
64	M55C	Z	-1.06	-1.06	0	%100
65	M56C	X	2.176	2.176	0	%100
66	M56C	Z	-1.256	-1.256	0	%100
67	M57	X	2.42	2.42	0	%100
68	M57	Z	-1.397	-1.397	0	%100
69	MP4A	X	2.243	2.243	0	0
70	MP4A	Z	-1.295	-1.295	0	0
71	MP1A	X	2.243	2.243	0	0
72	MP1A	Z	-1.295	-1.295	0	0
73	M58A	X	2.243	2.243	0	2.896
74	M58A	Z	-1.295	-1.295	0	2.896
75	M59	X	2.243	2.243	0	2.896
76	M59	Z	-1.295	-1.295	0	2.896

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	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	D1	X	2.167	2.167	0	%100
6	D1	Z	0	0	0	%100
7	RCP	X	1.847	1.847	0	%100
8	RCP	Z	0	0	0	%100
9	M43	X	0	0	0	%100
10	M43	Z	0	0	0	%100
11	M44	X	1.847	1.847	0	%100
12	M44	Z	0	0	0	%100
13	M45	X	1.847	1.847	0	%100
14	M45	Z	0	0	0	%100
15	M46	X	0	0	0	%100
16	M46	Z	0	0	0	%100
17	M47	X	1.847	1.847	0	%100
18	M47	Z	0	0	0	%100
19	M50	X	2.601	2.601	0	%100
20	M50	Z	0	0	0	%100
21	M51	X	1.083	1.083	0	%100
22	M51	Z	0	0	0	%100
23	M55	X	2.157	2.157	0	%100
24	M55	Z	0	0	0	%100



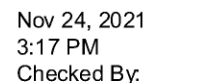


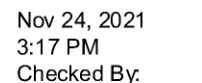
Member Distributed Loads (BLC 57 : Structure Wi (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M58	X	1.48	1.48	0	%100
54	M58	Z	.854	.854	0	%100
55	M60	X	.591	.591	0	%100
56	M60	Z	.341	.341	0	%100
57	MP2A	X	2.308	2.308	0	%100
58	MP2A	Z	1.332	1.332	0	%100
59	M53A	X	.577	.577	0	%100
60	M53A	Z	.333	.333	0	%100
61	M54A	X	1.836	1.836	0	%100
62	M54A	Z	1.06	1.06	0	%100
63	M55C	X	.291	.291	0	%100
64	M55C	Z	.168	.168	0	%100
65	M56C	X	2.42	2.42	0	%100
66	M56C	Z	1.397	1.397	0	%100
67	M57	X	2.176	2.176	0	%100
68	M57	Z	1.256	1.256	0	%100
69	MP4A	X	2.243	2.243	0	0
70	MP4A	Z	1.295	1.295	0	0
71	MP1A	X	2.243	2.243	0	0
72	MP1A	Z	1.295	1.295	0	0
73	M58A	X	2.243	2.243	0	2.896
74	M58A	Z	1.295	1.295	0	2.896
75	M59	X	2.243	2.243	0	2.896
76	M59	Z	1.295	1.295	0	2.896

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	M1	X	1.383	1.383	0	%100
2	M1	Z	2.396	2.396	0	%100
3	M2	X	1.383	1.383	0	%100
4	M2	Z	2.396	2.396	0	%100
5	D1	X	1.083	1.083	0	%100
6	D1	Z	1.876	1.876	0	%100
7	RCP	X	1.108	1.108	0	%100
8	RCP	Z	1.92	1.92	0	%100
9	M43	X	1.079	1.079	0	%100
10	M43	Z	1.869	1.869	0	%100
11	M44	X	.008	.008	0	%100
12	M44	Z	.015	.015	0	%100
13	M45	X	1.108	1.108	0	%100
14	M45	Z	1.92	1.92	0	%100
15	M46	X	1.079	1.079	0	%100
16	M46	Z	1.869	1.869	0	%100
17	M47	X	.008	.008	0	%100
18	M47	Z	.015	.015	0	%100
19	M50	X	1.3	1.3	0	%100
20	M50	Z	2.252	2.252	0	%100
21	M51	X	.135	.135	0	%100
22	M51	Z	.234	.234	0	%100
23	M55	X	.668	.668	0	%100
24	M55	Z	1.156	1.156	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, %]
53	M58	X	0	0	0	%100
54	M58	Z	1.709	1.709	0	%100
55	M60	X	0	0	0	%100
56	M60	Z	.518	.518	0	%100
57	MP2A	X	0	0	0	%100
58	MP2A	Z	2.665	2.665	0	%100
59	M53A	X	0	0	0	%100
60	M53A	Z	2.665	2.665	0	%100
61	M54A	X	0	0	0	%100
62	M54A	Z	3.354	3.354	0	%100
63	M55C	X	0	0	0	%100
64	M55C	Z	3.354	3.354	0	%100
65	M56C	X	0	0	0	%100
66	M56C	Z	2.56	2.56	0	%100
67	M57	X	0	0	0	%100
68	M57	Z	2.56	2.56	0	%100
69	MP4A	X	0	0	0	0
70	MP4A	Z	2.59	2.59	0	0
71	MP1A	X	0	0	0	0
72	MP1A	Z	2.59	2.59	0	0
73	M58A	X	0	0	0	2.896
74	M58A	Z	2.59	2.59	0	2.896
75	M59	X	0	0	0	2.896
76	M59	Z	2.59	2.59	0	2.896

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	M1	X	-1.383	-1.383	0	%100
2	M1	Z	2.396	2.396	0	%100
3	M2	X	-1.383	-1.383	0	%100
4	M2	Z	2.396	2.396	0	%100
5	D1	X	-1.083	-1.083	0	%100
6	D1	Z	1.876	1.876	0	%100
7	RCP	X	-.008	-.008	0	%100
8	RCP	Z	.015	.015	0	%100
9	M43	X	-1.079	-1.079	0	%100
10	M43	Z	1.869	1.869	0	%100
11	M44	X	-1.108	-1.108	0	%100
12	M44	Z	1.92	1.92	0	%100
13	M45	X	-.008	-.008	0	%100
14	M45	Z	.015	.015	0	%100
15	M46	X	-1.079	-1.079	0	%100
16	M46	Z	1.869	1.869	0	%100
17	M47	X	-1.108	-1.108	0	%100
18	M47	Z	1.92	1.92	0	%100
19	M50	X	-1.3	-1.3	0	%100
20	M50	Z	2.252	2.252	0	%100
21	M51	X	-.135	-.135	0	%100
22	M51	Z	.234	.234	0	%100
23	M55	X	-.049	-.049	0	%100
24	M55	Z	.085	.085	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M56	X	-1.366	-1.366	0	%100
26	M56	Z	2.367	2.367	0	%100
27	M56A	X	-1.366	-1.366	0	%100
28	M56A	Z	2.367	2.367	0	%100
29	M55A	X	-.135	-.135	0	%100
30	M55A	Z	.234	.234	0	%100
31	R1	X	-1.083	-1.083	0	%100
32	R1	Z	1.876	1.876	0	%100
33	R2	X	-1.083	-1.083	0	%100
34	R2	Z	1.876	1.876	0	%100
35	M26	X	-.852	-.852	0	%100
36	M26	Z	1.475	1.475	0	%100
37	M28	X	-1.332	-1.332	0	%100
38	M28	Z	2.308	2.308	0	%100
39	M30	X	-.12	-.12	0	%100
40	M30	Z	.207	.207	0	%100
41	M31	X	-.12	-.12	0	%100
42	M31	Z	.207	.207	0	%100
43	M48A	X	-.127	-.127	0	%100
44	M48A	Z	.219	.219	0	%100
45	M49A	X	-.127	-.127	0	%100
46	M49A	Z	.219	.219	0	%100
47	M55B	X	-.127	-.127	0	%100
48	M55B	Z	.219	.219	0	%100
49	M56B	X	-.127	-.127	0	%100
50	M56B	Z	.219	.219	0	%100
51	MP3A	X	-1.332	-1.332	0	%100
52	MP3A	Z	2.308	2.308	0	%100
53	M58	X	-.854	-.854	0	%100
54	M58	Z	1.48	1.48	0	%100
55	M60	X	-.855	-.855	0	%100
56	M60	Z	1.481	1.481	0	%100
57	MP2A	X	-1.332	-1.332	0	%100
58	MP2A	Z	2.308	2.308	0	%100
59	M53A	X	-.999	-.999	0	%100
60	M53A	Z	1.731	1.731	0	%100
61	M54A	X	-.877	-.877	0	%100
62	M54A	Z	1.519	1.519	0	%100
63	M55C	X	-1.769	-1.769	0	%100
64	M55C	Z	3.063	3.063	0	%100
65	M56C	X	-1.225	-1.225	0	%100
66	M56C	Z	2.122	2.122	0	%100
67	M57	X	-1.366	-1.366	0	%100
68	M57	Z	2.366	2.366	0	%100
69	MP4A	X	-1.295	-1.295	0	0
70	MP4A	Z	2.243	2.243	0	0
71	MP1A	X	-1.295	-1.295	0	0
72	MP1A	Z	2.243	2.243	0	0
73	M58A	X	-1.295	-1.295	0	2.896
74	M58A	Z	2.243	2.243	0	2.896
75	M59	X	-1.295	-1.295	0	2.896
76	M59	Z	2.243	2.243	0	2.896

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

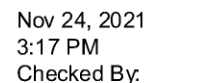
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-.799	-.799	0	%100
2	M1	Z	.461	.461	0	%100
3	M2	X	-.799	-.799	0	%100
4	M2	Z	.461	.461	0	%100
5	D1	X	-1.876	-1.876	0	%100
6	D1	Z	1.083	1.083	0	%100
7	RCP	X	-.436	-.436	0	%100
8	RCP	Z	.252	.252	0	%100
9	M43	X	-.623	-.623	0	%100
10	M43	Z	.36	.36	0	%100
11	M44	X	-2.341	-2.341	0	%100
12	M44	Z	1.352	1.352	0	%100
13	M45	X	-.436	-.436	0	%100
14	M45	Z	.252	.252	0	%100
15	M46	X	-.623	-.623	0	%100
16	M46	Z	.36	.36	0	%100
17	M47	X	-2.341	-2.341	0	%100
18	M47	Z	1.352	1.352	0	%100
19	M50	X	-2.252	-2.252	0	%100
20	M50	Z	1.3	1.3	0	%100
21	M51	X	-.703	-.703	0	%100
22	M51	Z	.406	.406	0	%100
23	M55	X	-.916	-.916	0	%100
24	M55	Z	.529	.529	0	%100
25	M56	X	-2.367	-2.367	0	%100
26	M56	Z	1.366	1.366	0	%100
27	M56A	X	-2.367	-2.367	0	%100
28	M56A	Z	1.366	1.366	0	%100
29	M55A	X	-.703	-.703	0	%100
30	M55A	Z	.406	.406	0	%100
31	R1	X	-1.876	-1.876	0	%100
32	R1	Z	1.083	1.083	0	%100
33	R2	X	-1.876	-1.876	0	%100
34	R2	Z	1.083	1.083	0	%100
35	M26	X	-1.475	-1.475	0	%100
36	M26	Z	.852	.852	0	%100
37	M28	X	-2.308	-2.308	0	%100
38	M28	Z	1.332	1.332	0	%100
39	M30	X	-.622	-.622	0	%100
40	M30	Z	.359	.359	0	%100
41	M31	X	-.622	-.622	0	%100
42	M31	Z	.359	.359	0	%100
43	M48A	X	-.658	-.658	0	%100
44	M48A	Z	.38	.38	0	%100
45	M49A	X	-.658	-.658	0	%100
46	M49A	Z	.38	.38	0	%100
47	M55B	X	-.658	-.658	0	%100
48	M55B	Z	.38	.38	0	%100
49	M56B	X	-.658	-.658	0	%100
50	M56B	Z	.38	.38	0	%100
51	MP3A	X	-2.308	-2.308	0	%100
52	MP3A	Z	1.332	1.332	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, %]
53	M58	X	-1.48	-1.48	0	%100
54	M58	Z	.854	.854	0	%100
55	M60	X	-2.069	-2.069	0	%100
56	M60	Z	1.195	1.195	0	%100
57	MP2A	X	-2.308	-2.308	0	%100
58	MP2A	Z	1.332	1.332	0	%100
59	M53A	X	-.577	-.577	0	%100
60	M53A	Z	.333	.333	0	%100
61	M54A	X	-.291	-.291	0	%100
62	M54A	Z	.168	.168	0	%100
63	M55C	X	-1.836	-1.836	0	%100
64	M55C	Z	1.06	1.06	0	%100
65	M56C	X	-2.176	-2.176	0	%100
66	M56C	Z	1.256	1.256	0	%100
67	M57	X	-2.42	-2.42	0	%100
68	M57	Z	1.397	1.397	0	%100
69	MP4A	X	-2.243	-2.243	0	0
70	MP4A	Z	1.295	1.295	0	0
71	MP1A	X	-2.243	-2.243	0	0
72	MP1A	Z	1.295	1.295	0	0
73	M58A	X	-2.243	-2.243	0	2.896
74	M58A	Z	1.295	1.295	0	2.896
75	M59	X	-2.243	-2.243	0	2.896
76	M59	Z	1.295	1.295	0	2.896

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	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	D1	X	-2.167	-2.167	0	%100
6	D1	Z	0	0	0	%100
7	RCP	X	-1.847	-1.847	0	%100
8	RCP	Z	0	0	0	%100
9	M43	X	0	0	0	%100
10	M43	Z	0	0	0	%100
11	M44	X	-1.847	-1.847	0	%100
12	M44	Z	0	0	0	%100
13	M45	X	-1.847	-1.847	0	%100
14	M45	Z	0	0	0	%100
15	M46	X	0	0	0	%100
16	M46	Z	0	0	0	%100
17	M47	X	-1.847	-1.847	0	%100
18	M47	Z	0	0	0	%100
19	M50	X	-2.601	-2.601	0	%100
20	M50	Z	0	0	0	%100
21	M51	X	-1.083	-1.083	0	%100
22	M51	Z	0	0	0	%100
23	M55	X	-2.157	-2.157	0	%100
24	M55	Z	0	0	0	%100



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

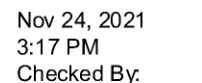
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	- .799	- .799	0	%100
2	M1	Z	- .461	- .461	0	%100
3	M2	X	- .799	- .799	0	%100
4	M2	Z	- .461	- .461	0	%100
5	D1	X	-1.876	-1.876	0	%100
6	D1	Z	-1.083	-1.083	0	%100
7	RCP	X	-2.341	-2.341	0	%100
8	RCP	Z	-1.352	-1.352	0	%100
9	M43	X	- .623	- .623	0	%100
10	M43	Z	- .36	- .36	0	%100
11	M44	X	- .436	- .436	0	%100
12	M44	Z	- .252	- .252	0	%100
13	M45	X	-2.341	-2.341	0	%100
14	M45	Z	-1.352	-1.352	0	%100
15	M46	X	- .623	- .623	0	%100
16	M46	Z	- .36	- .36	0	%100
17	M47	X	- .436	- .436	0	%100
18	M47	Z	- .252	- .252	0	%100
19	M50	X	-2.252	-2.252	0	%100
20	M50	Z	-1.3	-1.3	0	%100
21	M51	X	- .703	- .703	0	%100
22	M51	Z	- .406	- .406	0	%100
23	M55	X	-1.988	-1.988	0	%100
24	M55	Z	-1.148	-1.148	0	%100
25	M56	X	-2.367	-2.367	0	%100
26	M56	Z	-1.366	-1.366	0	%100
27	M56A	X	-2.367	-2.367	0	%100
28	M56A	Z	-1.366	-1.366	0	%100
29	M55A	X	- .703	- .703	0	%100
30	M55A	Z	- .406	- .406	0	%100
31	R1	X	-1.876	-1.876	0	%100
32	R1	Z	-1.083	-1.083	0	%100
33	R2	X	-1.876	-1.876	0	%100
34	R2	Z	-1.083	-1.083	0	%100
35	M26	X	-1.475	-1.475	0	%100
36	M26	Z	- .852	- .852	0	%100
37	M28	X	-2.308	-2.308	0	%100
38	M28	Z	-1.332	-1.332	0	%100
39	M30	X	- .622	- .622	0	%100
40	M30	Z	- .359	- .359	0	%100
41	M31	X	- .622	- .622	0	%100
42	M31	Z	- .359	- .359	0	%100
43	M48A	X	- .658	- .658	0	%100
44	M48A	Z	- .38	- .38	0	%100
45	M49A	X	- .658	- .658	0	%100
46	M49A	Z	- .38	- .38	0	%100
47	M55B	X	- .658	- .658	0	%100
48	M55B	Z	- .38	- .38	0	%100
49	M56B	X	- .658	- .658	0	%100
50	M56B	Z	- .38	- .38	0	%100
51	MP3A	X	-2.308	-2.308	0	%100
52	MP3A	Z	-1.332	-1.332	0	%100

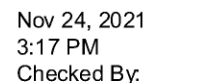
Member Distributed Loads (BLC 63 : Structure Wi (300 Deg)) (Continued)

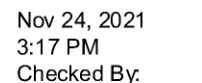
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M58	X	-1.48	-1.48	0	%100
54	M58	Z	-.854	-.854	0	%100
55	M60	X	-.591	-.591	0	%100
56	M60	Z	-.341	-.341	0	%100
57	MP2A	X	-2.308	-2.308	0	%100
58	MP2A	Z	-1.332	-1.332	0	%100
59	M53A	X	-.577	-.577	0	%100
60	M53A	Z	-.333	-.333	0	%100
61	M54A	X	-1.836	-1.836	0	%100
62	M54A	Z	-1.06	-1.06	0	%100
63	M55C	X	-.291	-.291	0	%100
64	M55C	Z	-.168	-.168	0	%100
65	M56C	X	-2.42	-2.42	0	%100
66	M56C	Z	-1.397	-1.397	0	%100
67	M57	X	-2.176	-2.176	0	%100
68	M57	Z	-1.256	-1.256	0	%100
69	MP4A	X	-2.243	-2.243	0	0
70	MP4A	Z	-1.295	-1.295	0	0
71	MP1A	X	-2.243	-2.243	0	0
72	MP1A	Z	-1.295	-1.295	0	0
73	M58A	X	-2.243	-2.243	0	2.896
74	M58A	Z	-1.295	-1.295	0	2.896
75	M59	X	-2.243	-2.243	0	2.896
76	M59	Z	-1.295	-1.295	0	2.896

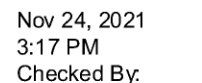
Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))

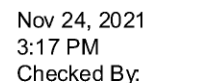
	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.383	-1.383	0	%100
2	M1	Z	-2.396	-2.396	0	%100
3	M2	X	-1.383	-1.383	0	%100
4	M2	Z	-2.396	-2.396	0	%100
5	D1	X	-1.083	-1.083	0	%100
6	D1	Z	-1.876	-1.876	0	%100
7	RCP	X	-1.108	-1.108	0	%100
8	RCP	Z	-1.92	-1.92	0	%100
9	M43	X	-1.079	-1.079	0	%100
10	M43	Z	-1.869	-1.869	0	%100
11	M44	X	-.008	-.008	0	%100
12	M44	Z	-.015	-.015	0	%100
13	M45	X	-1.108	-1.108	0	%100
14	M45	Z	-1.92	-1.92	0	%100
15	M46	X	-1.079	-1.079	0	%100
16	M46	Z	-1.869	-1.869	0	%100
17	M47	X	-.008	-.008	0	%100
18	M47	Z	-.015	-.015	0	%100
19	M50	X	-1.3	-1.3	0	%100
20	M50	Z	-2.252	-2.252	0	%100
21	M51	X	-.135	-.135	0	%100
22	M51	Z	-.234	-.234	0	%100
23	M55	X	-.668	-.668	0	%100
24	M55	Z	-1.156	-1.156	0	%100

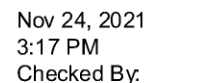


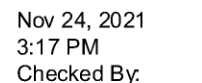


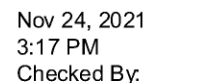




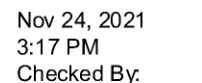


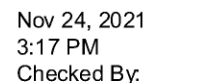


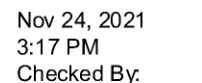




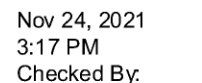
RISA-3D Version 17.0.4 [\\.\..\..\..\..\RISA\467272-VZW_MT_LOT_C_H.r3d] Page 88

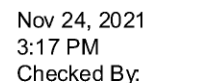


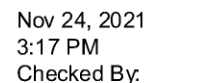


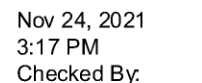


RISA-3D Version 17.0.4 [\\.\..\..\..\RISA\467272-VZW MT LOT C H.r3d] Page 91



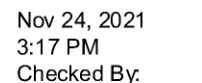


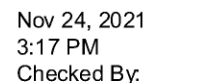


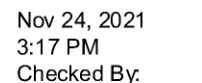


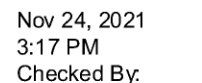
Member Distributed Loads (BLC 74 : Structure Wm (270 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M56	X	-.599	-.599	0	%100
26	M56	Z	0	0	0	%100
27	M56A	X	-.599	-.599	0	%100
28	M56A	Z	0	0	0	%100
29	M55A	X	-.103	-.103	0	%100
30	M55A	Z	0	0	0	%100
31	R1	X	-.395	-.395	0	%100
32	R1	Z	0	0	0	%100
33	R2	X	-.395	-.395	0	%100
34	R2	Z	0	0	0	%100
35	M26	X	-.285	-.285	0	%100
36	M26	Z	0	0	0	%100
37	M28	X	-.489	-.489	0	%100
38	M28	Z	0	0	0	%100
39	M30	X	-.07	-.07	0	%100
40	M30	Z	0	0	0	%100
41	M31	X	-.07	-.07	0	%100
42	M31	Z	0	0	0	%100
43	M48A	X	-.09	-.09	0	%100
44	M48A	Z	0	0	0	%100
45	M49A	X	-.09	-.09	0	%100
46	M49A	Z	0	0	0	%100
47	M55B	X	-.09	-.09	0	%100
48	M55B	Z	0	0	0	%100
49	M56B	X	-.09	-.09	0	%100
50	M56B	Z	0	0	0	%100
51	MP3A	X	-.489	-.489	0	%100
52	MP3A	Z	0	0	0	%100
53	M58	X	-.286	-.286	0	%100
54	M58	Z	0	0	0	%100
55	M60	X	-.306	-.306	0	%100
56	M60	Z	0	0	0	%100
57	MP2A	X	-.489	-.489	0	%100
58	MP2A	Z	0	0	0	%100
59	M53A	X	0	0	0	%100
60	M53A	Z	0	0	0	%100
61	M54A	X	-.121	-.121	0	%100
62	M54A	Z	0	0	0	%100
63	M55C	X	-.121	-.121	0	%100
64	M55C	Z	0	0	0	%100
65	M56C	X	-.588	-.588	0	%100
66	M56C	Z	0	0	0	%100
67	M57	X	-.588	-.588	0	%100
68	M57	Z	0	0	0	%100
69	MP4A	X	-.471	-.471	0	0
70	MP4A	Z	0	0	0	0
71	MP1A	X	-.471	-.471	0	0
72	MP1A	Z	0	0	0	0
73	M58A	X	-.471	-.471	0	2.896
74	M58A	Z	0	0	0	2.896
75	M59	X	-.471	-.471	0	2.896
76	M59	Z	0	0	0	2.896









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

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N71	max	1068.534	4	879.636	20	961.593	1	-.104	2	0	75	.096	10
2		min	-1351.022	10	199.41	2	-1421.435	7	-.342	20	0	1	-.076	4
3	N77A	max	1345.697	10	1082.051	24	793.394	1	-.096	6	0	75	.018	10
4		min	-1064.754	4	207.711	6	-219.613	7	-.397	24	0	1	-.014	3
5	N76B	max	318.917	2	30.798	20	641.927	2	0	75	0	75	0	75
6		min	-235.595	8	9.244	75	-488.214	8	0	1	0	1	0	1
7	N77B	max	61.396	6	25.2	22	385.521	11	0	75	0	75	0	75
8		min	-110.245	12	7.456	68	-242.557	5	0	1	0	1	0	1
9	N79A	max	1899.898	10	489.742	18	61.228	12	.002	23	0	49	0	6
10		min	-1930.855	4	4.332	11	-583.07	18	0	5	0	6	0	49
11	Totals:	max	1659.992	10	2376.013	22	2340.628	1						
12		min	-1660.009	4	734.419	68	-2340.631	7						

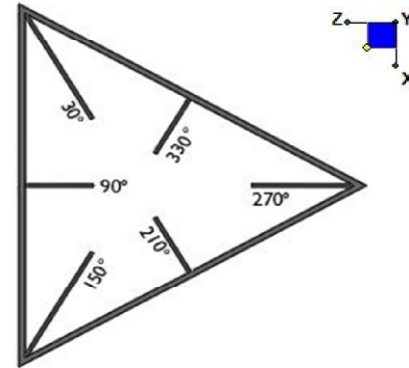
	Member	Shape	Code Check	Loc[...LC	Shear Check	Loc[ft]	Dir	LC	phi*Pn...	phi*Pnt...	phi*Mn...	phi*Mn...Cb	Eqn
1	M1	L2.5x2.5x3	.782	8 46	.230	8	y	23	2280.5...	29192.4	.873	1.691	3...H2-1
2	M2	L2.5x2.5x3	.754	6 8	.181	8	z	24	2280.5...	29192.4	.873	1.188	1...H2-1
3	M46	L3X2X4	.748	.813 11	.179	1.557	z	11	34908...	38880	.826	2.489	1...H2-1
4	M48A	SR_0.625	.680	.458 5	.329	.458		18	9312.4...	9940.19	.104	.104	1...H1-1b
5	M49A	SR_0.625	.664	.458 5	.329	.458		19	9312.4...	9940.19	.104	.104	1...H1-1b
6	M55B	SR_0.625	.564	.458 24	.330	.458		13	9312.4...	9940.19	.104	.104	1...H1-1b
7	M56B	SR_0.625	.561	.458 13	.330	.458		13	9312.4...	9940.19	.104	.104	1...H1-1b
8	M43	L3X2X4	.534	.813 8	.324	.068	y	45	34908...	38880	.826	2.489	1...H2-1
9	M50	PIPE_2.5	.497	3.125 10	.413	.208		10	44490...	50715	3.596	3.596	3...H3-6
10	M44	L3X2X4	.464	1.214 9	.100	1.214	y	46	36612...	38880	.826	2.489	2...H2-1
11	MP3A	PIPE_2.0	.455	2.895 7	.090	2.895		9	20741...	32130	1.872	1.872	1...H1-1b
12	M55A	PL1/2x6	.437	0 24	.059	.75	y	10	79337...	97200	1.012	12.15	1...H1-1b
13	RCP	L3X2X4	.396	0 5	.065	0	y	15	36612...	38880	.826	2.489	2...H2-1
14	M47	L3X2X4	.351	0 11	.109	1.163	y	46	36612...	38880	.826	2.489	1...H2-1
15	M45	L3X2X4	.348	0 9	.065	.051	y	3	36612...	38880	.826	2.489	2...H2-1
16	M51	PL1/2x6	.342	.75 20	.161	0	y	10	79337...	97200	1.012	12.15	1...H1-1b
17	R1	PIPE_2.0	.332	0 47	.056	2.655		44	29056...	32130	1.872	1.872	2...H1-1b
18	MP4A	PIPE_1.5	.238	1.181 49	.133	1.181		11	22390...	23593.5	1.105	1.105	2...H1-1b
19	M53A	PIPE_2.0	.226	11.1... 5	.128	1.172		11	6295.4...	32130	1.872	1.872	2...H1-1b
20	M58	PIPE_1.5	.219	1.667 11	.202	1.181		11	22390...	23593.5	1.105	1.105	3...H1-1b
21	M56A	L2x2x3	.211	0 45	.016	0	z	17	15368...	23392.8	.558	1.239	2...H2-1
22	M26	PIPE_1.5	.206	1.646 11	.173	1.149		11	22419...	23593.5	1.105	1.105	4...H1-1b
23	M59	PIPE_2.0	.202	.422 3	.066	0		39	29056...	32130	1.872	1.872	1...H1-1b
24	MP1A	PIPE_1.5	.186	1.181 40	.105	1.181		3	22390...	23593.5	1.105	1.105	2...H1-1b
25	D1	PIPE_2.0	.184	2.383 7	.248	2.896		4	29056...	32130	1.872	1.872	2...H1-1b
26	M56	L2x2x3	.144	2.896 16	.011	0	y	20	15368...	23392.8	.558	1.239	2...H2-1
27	M58A	PIPE_2.0	.133	1.297 11	.117	2.896		11	29056...	32130	1.872	1.872	1...H1-1b
28	R2	PIPE_2.0	.131	0 49	.074	0		49	29056...	32130	1.872	1.872	2...H1-1b
29	M60	PIPE_1.5	.113	4.244 3	.005	0		21	6381.34	23593.5	1.105	1.105	1...H1-1b



I. Mount-to-Tower Connection Check

RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N71	90
N77A	90



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:

Bolt Quantity per Reaction:

d_x (in) (Delta X of typ. bolt config. sketch):

d_y (in) (Delta Y of typ. bolt config. sketch):

Bolt Type:

Bolt Diameter (in):

Required Tensile Strength (kips):

Required Shear Strength (kips):

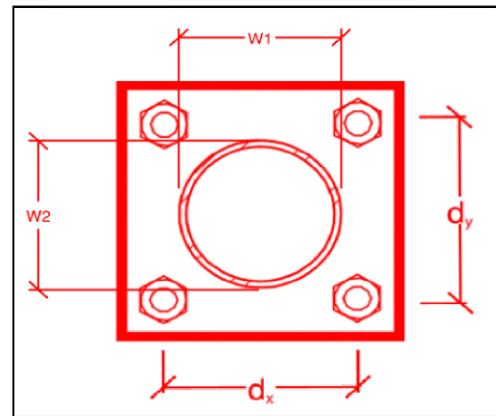
Tensile Strength / bolt (kips):

Shear Strength / bolt (kips):

Tensile Capacity Overall:

Shear Capacity Overall:

yes
2
4
2
U-Bolt
0.625
5.5
2.0
25.5
15.3
10.8%*
6.5%



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

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

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 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:

--

Certifying Individual:

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

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:

1. Contractor to install new (1) OVP directly on to the standoff mast pipe in gamma sector.

Response:

--

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

☐ Yes ☐ No

Contractor certifies no new damage/obstructions created during the current installation:

☐ Yes ☐ No

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

☐ Safety climb in good condition with no obstructions ☐ Safety Climb Damaged
☐ Safety Climb Obstructed

Comments:

--

Sector: **A**

11/22/2021

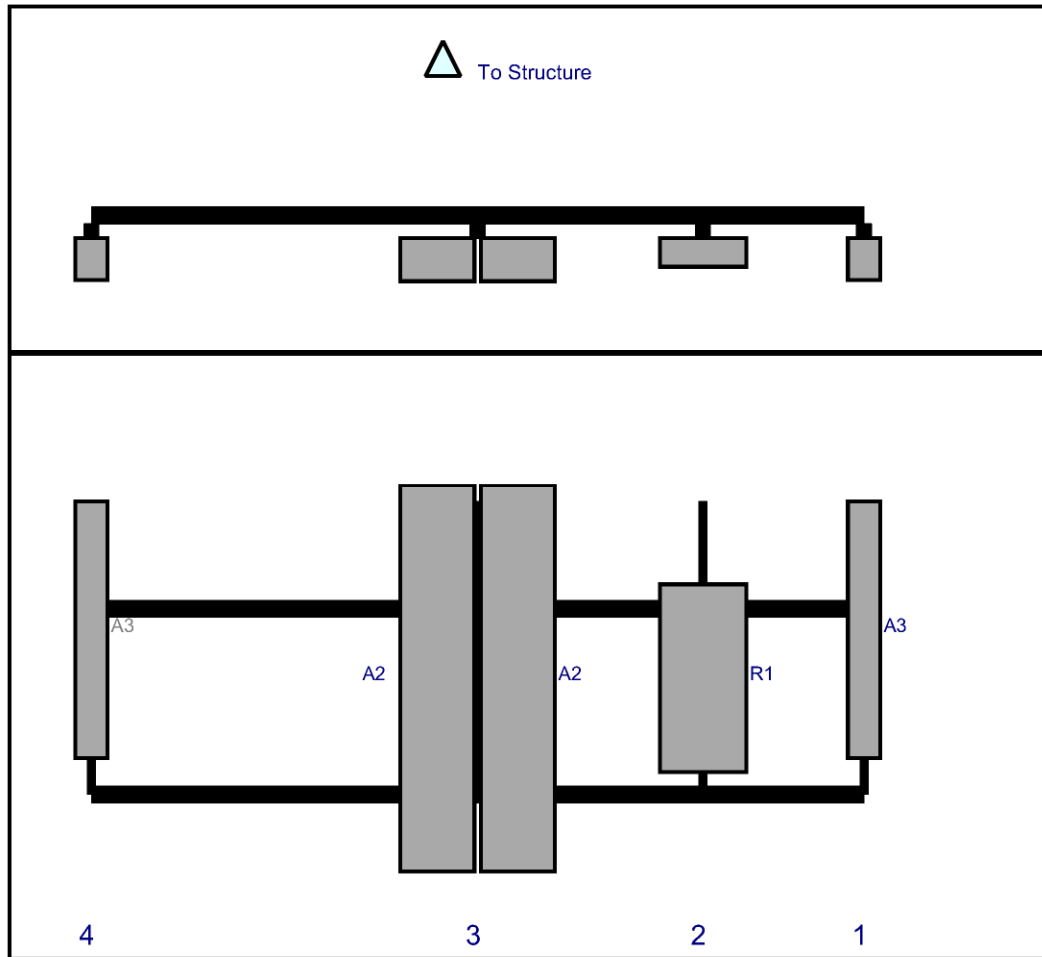
Structure Type: Self Support

10116992

Mount Elev: 126.00

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
A3	APL868013	48	6	144	1	a	Front	24	0	Retained	10/29/2020
R1	MT6407-77A	35.1	16.1	114	2	a	Front	33	0	Added	
A2	JAHH-65B-R3B	72	13.8	72	3	a	Front	33	7.5	Retained	10/29/2020
A2	JAHH-65B-R3B	72	13.8	72	3	b	Front	33	-7.5	Retained	10/29/2020
A3	APL868013	48	6	0	4	a	Front	24	0	Retained	10/29/2020

Sector: **B**

11/22/2021

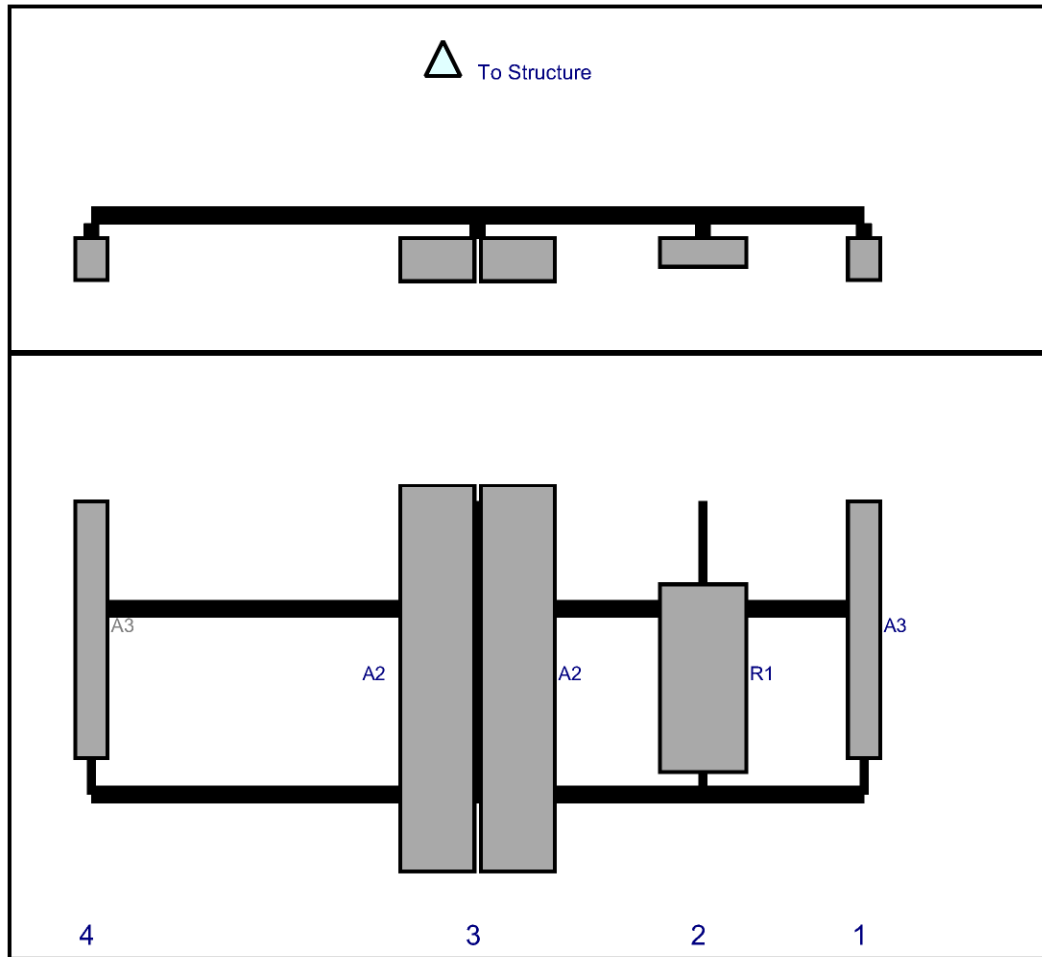
Structure Type: Self Support

10116992

Mount Elev: 126.00

Page: 2

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
A3	APL868013	48	6	144	1	a	Front	24	0	Retained	10/29/2020
R1	MT6407-77A	35.1	16.1	114	2	a	Front	33	0	Added	
A2	JAHH-65B-R3B	72	13.8	72	3	a	Front	33	7.5	Retained	10/29/2020
A2	JAHH-65B-R3B	72	13.8	72	3	b	Front	33	-7.5	Retained	10/29/2020
A3	APL868013	48	6	0	4	a	Front	24	0	Retained	10/29/2020

Sector: C

11/22/2021

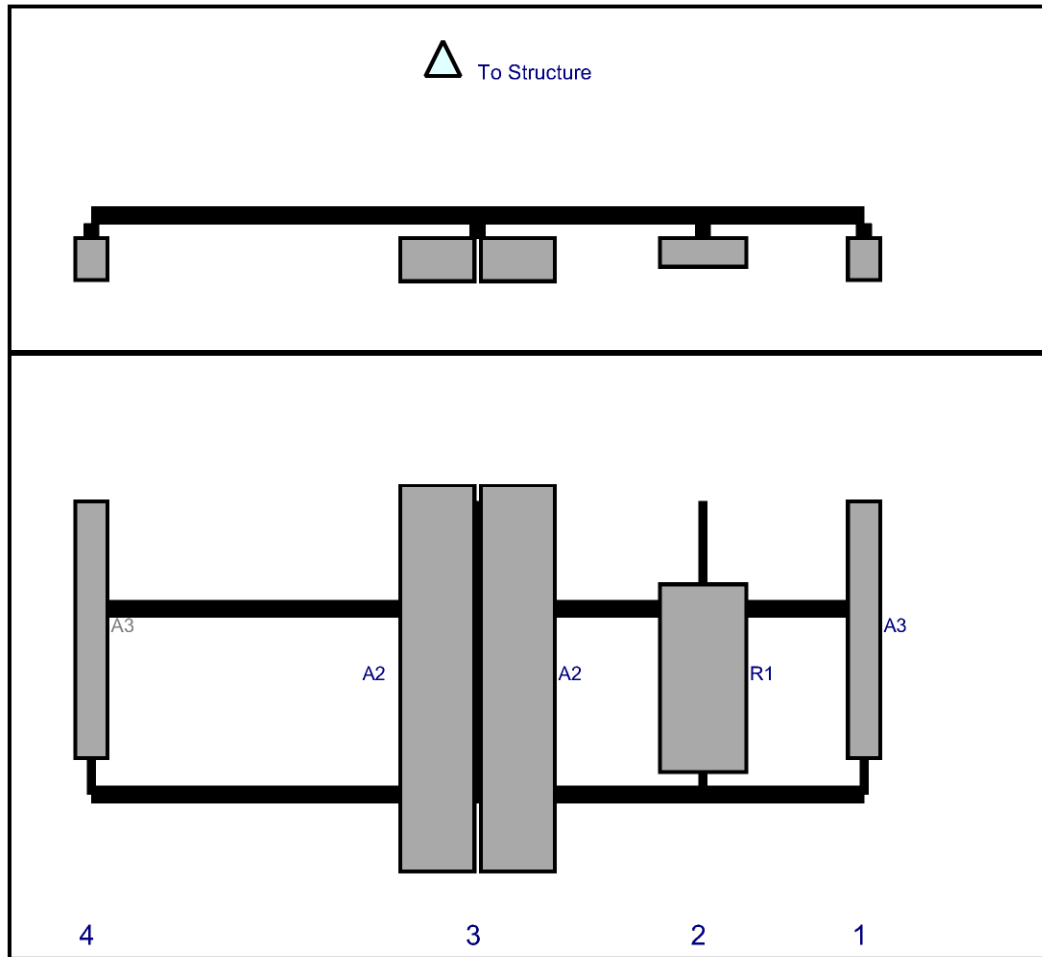
Structure Type: Self Support

10116992

Mount Elev: 126.00

Page: 3

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
A3	APL868013	48	6	144	1	a	Front	24	0	Retained	10/29/2020
R1	MT6407-77A	35.1	16.1	114	2	a	Front	33	0	Added	
A2	JAHH-65B-R3B	72	13.8	72	3	a	Front	33	7.5	Retained	10/29/2020
A2	JAHH-65B-R3B	72	13.8	72	3	b	Front	33	-7.5	Retained	10/29/2020
A3	APL868013	48	6	0	4	a	Front	24	0	Retained	10/29/2020

Maser Consulting Connecticut

Subject

TIA-222-H Usage

Site Information

Site ID: 467272-VZW / NORWICH EAST CT

Site Name: NORWICH EAST CT

Carrier Name: Verizon Wireless

Address: 2 Hinckley Hill Road

Preston, Connecticut 06365

New London County

Latitude: 41.514848°

Longitude: -72.061688°

Structure Information

Tower Type: Self-Support

Mount Type: 12.00-Ft Sector 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. The TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

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

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

Sincerely,



Derek Hartzell, PE
Technical Specialist

[illegible]

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE		CONTACT	SALVADOR ANGUIANO (817) 304-7492 WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC		CONTACT	KENT RANEY (707) 335-7045 (O), 706-938-9788 (M) KENT@METROSITELLC.COM METROSITEFABRICATORS.COM
PERFECT-VISION		CONTACT	WIRELESS SALES (844) 887-4723 WWW.PERFECT-VISION.COM WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.		CONTACT	ANGIE WELCH (866) 438-9377 AKWELCH@SABREINDUSTRIES.COM WWW.SABRETSOLUTIONS.COM
SITE PRO 1		CONTACT	PALLA BOSWELL (972) 236-9849 PALLA.BOSWELL@VALPOINT.COM WWW.SITPRO1.COM

NOTE: WHEN SPECIFIED, VZWSMART KITS SHALL BE REQUIRED AND WILL BE VERIFIED DURING THE DESKTOP PMI

 MASER WILLIAMS-SONNET CORPORATION 10000 WILSON AVENUE, SUITE 100 WILSON, NJ 07094 Phone: 201.544.6800 Fax: 201.544.6801 E-mail: maser@williams-sonnet.com Other Locations: ■ NEW JERSEY ■ NEW YORK ■ NEW MEXICO ■ NORTH CAROLINA ■ PENNSYLVANIA ■ VIRGINIA ■ FLORIDA ■ SOUTH CAROLINA ■ TEXAS ■ TENNESSEE ■ COLORADO				811 Call before you dig 1-800-4-A-DAWG 1-800-472-6294 FOR DATE SPECIFIC SERVICE INFORMATION VISIT www.811.com		NEW JERSEY LOCAL 811 ALL INFORMATION CONTAINED HEREIN IS THE PROPERTY OF THE NEW JERSEY LOCAL 811 CENTER. IT IS TO BE USED FOR THE PURPOSES OF IDENTIFYING AND LOCATING UTILITIES PRIOR TO DIGGING. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.	
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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 ANY CAUSE OTHER THAN THE CONTRACTOR'S NEGLIGENCE SHALL BE THE CONTRACTOR'S RESPONSIBILITY 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 SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR'S 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 MODIFICATIONS TO MAINTAIN THE STRENGTH AND STABILITY OF THE STRUCTURE DURING 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 THE ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-322.
10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOPRAC, 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. MODIFICATIONS, INCLUDING BUT NOT LIMITED TO, CUTTING, ALTERED SIZE AND/OR STRENGTH, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
15. THE POINT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

DESIGN LOADS

WIND LOADS

- a. BASIC WIND SPEED (3 SECOND GUST), $V = 125$ MPH
- b. EXPOSURE CATEGORY B
- c. TOPOGRAPHIC CATEGORY 1
- d. MEAN BASE ELEVATION (AMSL) = 292.2'

ICE LOADS

- a. ICE WIND SPEED (3 SECOND GUST), $V = 50$ MPH

SEISMIC LOADS

- a. SEISMIC DESIGN CATEGORY B
- b. SHORT TERM MCBR GROUND MOTION, $S_s = .193$
- c. LONG TERM MCBR GROUND MOTION, $S_1 = .054$

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 (11TH 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.

- a. CHANNELS, ANGLES, PLATES, ETC. ASTM A58 (GR 36)
- b. STEEL PIPE ASTM A53 (GR 35)
- c. BOLTS ASTM A325
- d. NUTS ASTM A490

LOCK WASHERS

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 EQUIVALENT TO THE ORIGINAL DESIGN. ANY SUBSTITUTIONS 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 GREG.DULNICK@COLLIERENGINEERING.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 DIP GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.

8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.

9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.

11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.

12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.

13. ALL NEW STEEL SHALL BE HOT DIP GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.

14. ALL EXISTING PAINTED GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (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.



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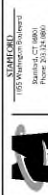
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Digitally signed by Derek R. Hartzell
Date: 2021.11.24 11:36:11 -0500

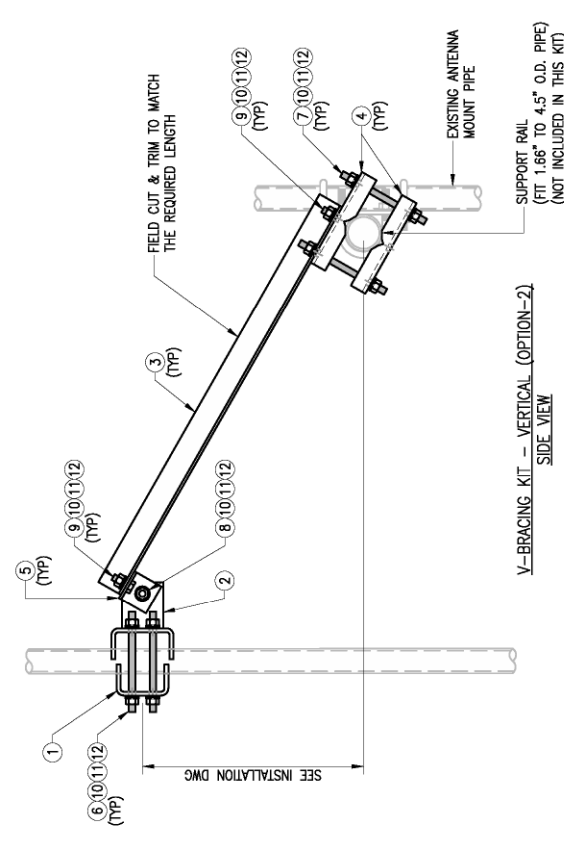
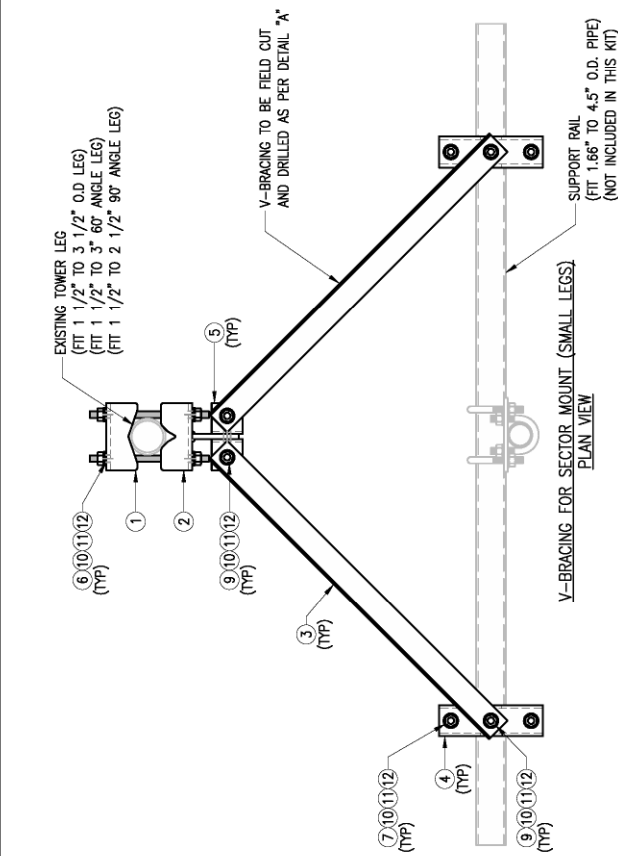
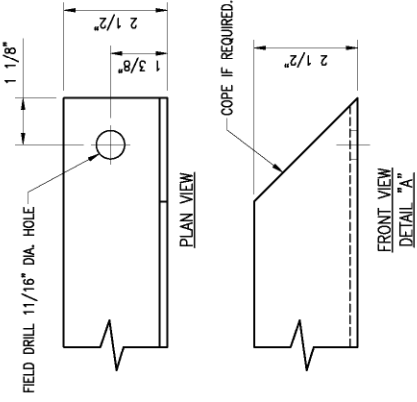
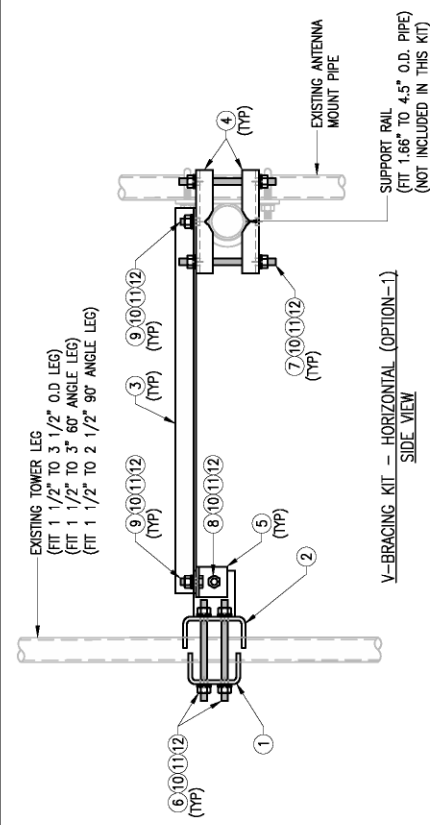
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NORWICH EAST CT
467272
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PRESTON, CT 06465
NEW LONDON COUNTY



MODIFICATION NOTES

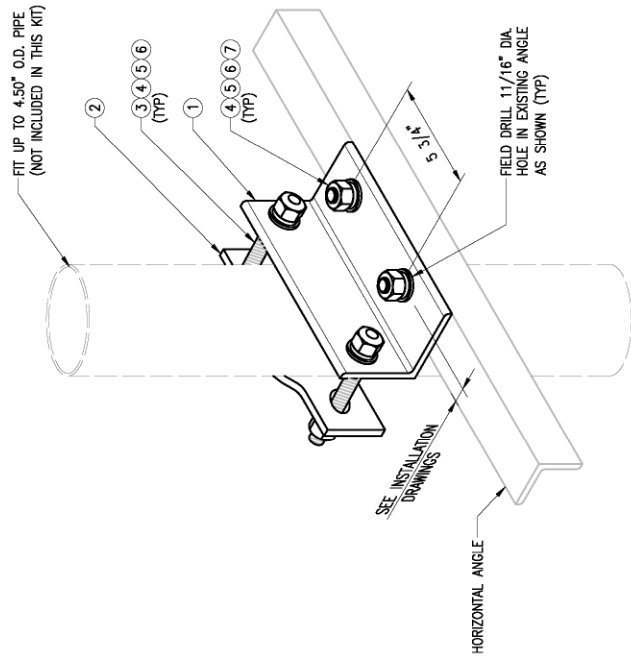
S-2



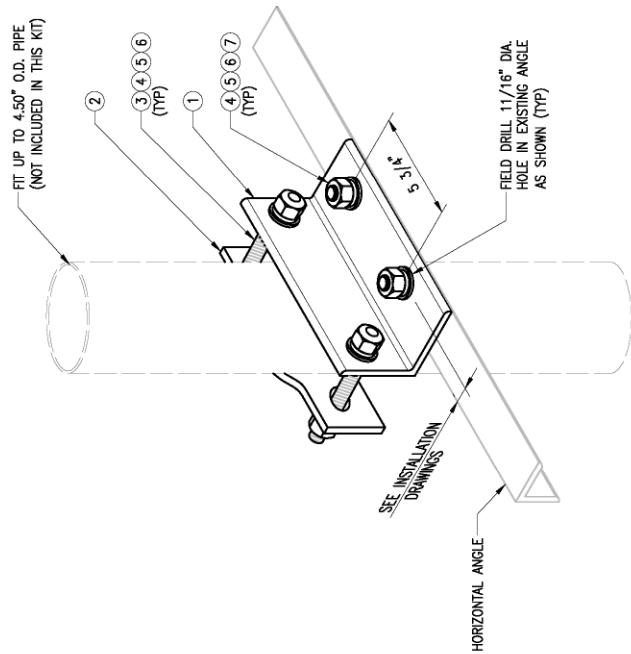
VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)

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	BP8875-10	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

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



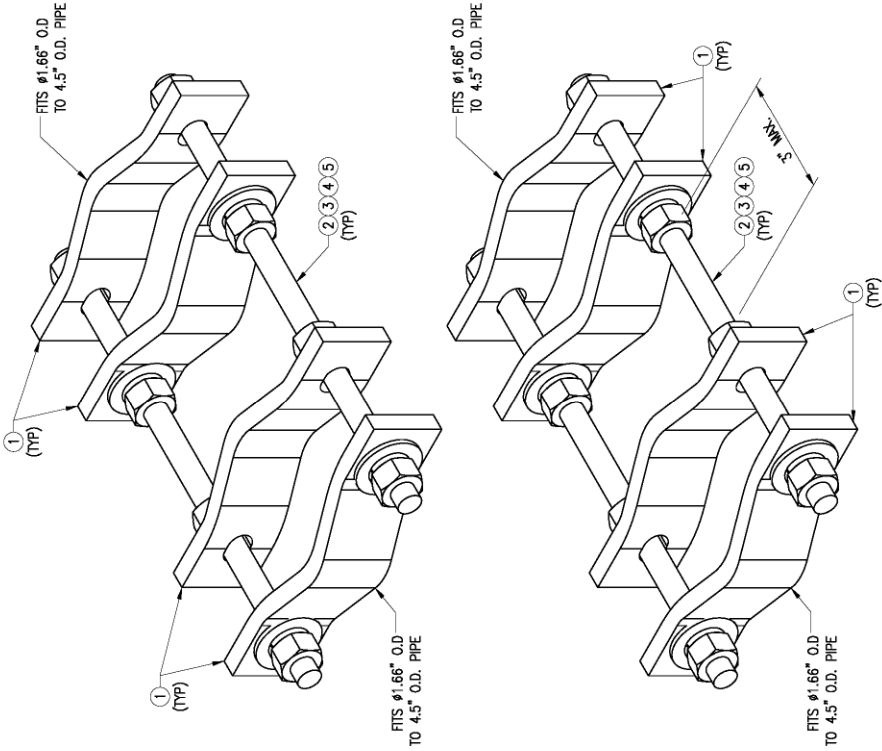
OPTION 2



OPTION 1

ANGLE TO ANGLE CROSSOVER KIT

VZWSMART-MSK7 (ANGLE TO ANGLE CROSSOVER KIT)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	L3325-0.7	L 3" X 3" X 1/4" X 0'-8" A36	MSK7-F2	3.33
2	1	VCP	PL 1/2" X 2" X 8 5/8" A36 BENT PLATE	MSK7-F1	2.4
3	2	----	BOLT 5/8" DIA. X 6" FULL THREAD. SAE GR 5	----	----
4	4	NUT-625	5/8"-HDG HEX NUT	----	0
5	8	FW-625	5/8"-HDG USS FLAT WASHER	----	0
6	4	LW-625	5/8"-HDG LOCK WASHER	----	0
7	2	----	BOLT 5/8" X 2" A325	----	0
GALVANIZED WT					7

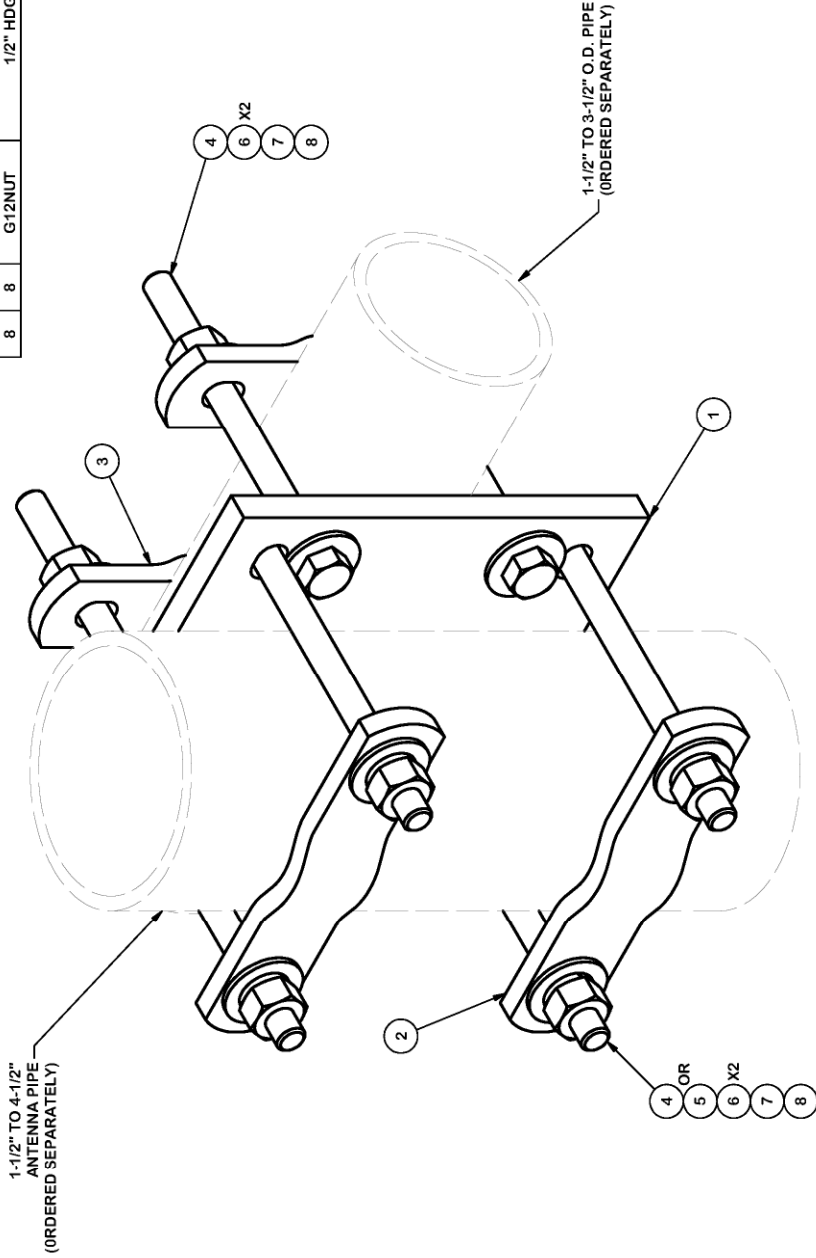


VZSMART-MSK3
PIPE TO PIPE CLAMPS

VZSMART-MSK3 (PIPE TO PIPE CLAMPS)				
ITEM NO.	QTY.	PART NO.	DESCRIPTION	WT
1	8	VCP	PL 1/2" X 2" X 8 5/8" A36 BENT PLATE	20
2	4	---	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	---
3	16	FW-625	5/8" HDG USS FLAT WASHER	1
4	16	LW-625	5/8" HDG LOCK WASHER	0
5	16	NUT-625	5/8" HDG HEX NUT	2
GALVANIZED				WT
				20

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.
2. FITS UP TO 4 1/2" O.D. PIPE

PARTS LIST					
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.
1	1	SCX7	CROSSOVER PLATE	8 in	7.55
2	2	X-115765	5" V-CLAMP		1.02
3	2	X-100064	CLAMP (S) (4" V-CLAMP) GALVANIZED		0.91
4	8	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41
5	4	G12045	1/2" x 4.5" HDG HEX BOLT GR5 FULL THREAD	4 1/2 in	0.30
6	16	G12FW	1/2" HDG USS FLATWASHER		0.03
7	8	G12LW	1/2" HDG LOCKWASHER		0.01
8	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07
TOTAL WT. #					16.98



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
 SAWED, SHEARED AND GAS CUT EDGES ($\pm 0.030"$)
 DRILLED AND GAS CUT HOLES ($\pm 0.030"$) - NO CONING OF HOLES
 LASER CUT EDGES AND HOLES ($\pm 0.010"$) - NO CONING OF HOLES
 BENDS ARE $\pm 1/2$ DEGREE
 ALL OTHER MACHINING ($\pm 0.030"$)
 ALL OTHER ASSEMBLY ($\pm 0.060"$)

PROPRIETARY NOTE:
 ALL DIMENSIONS AND TOLERANCES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION
 CROSSOVER PLATE
 (V-CLAMP STYLE)

CPD NO.	DRAWN BY	ENG. APPROVAL
CEK	10/7/2010	
CLASS	SUB	CHECKED BY
81	01	BMC

CUSTOMER
 10/8/2010

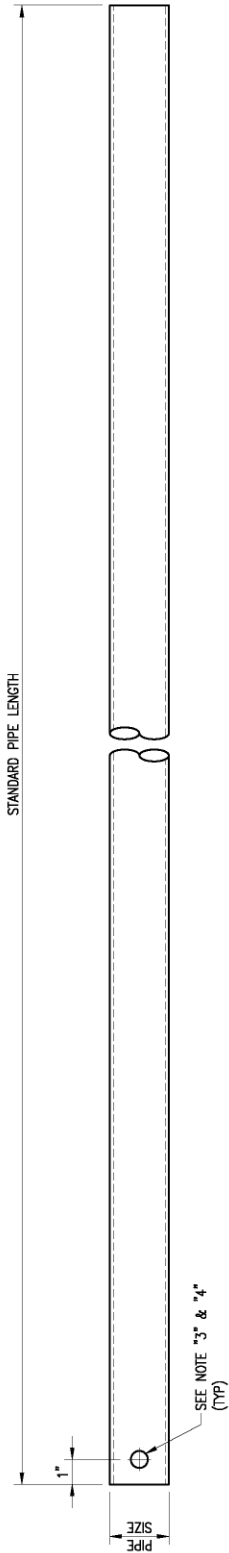
PART NO.
 SCX7-U

DWG. NO.
 SCX7-U



Locations:
 New York, NY
 Atlanta, GA
 Los Angeles, CA
 Plymouth, IN
 Houston, TX
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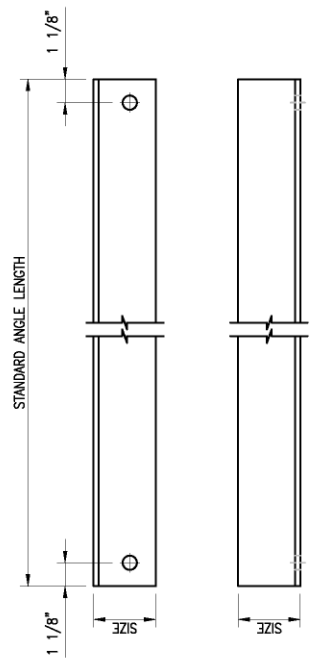
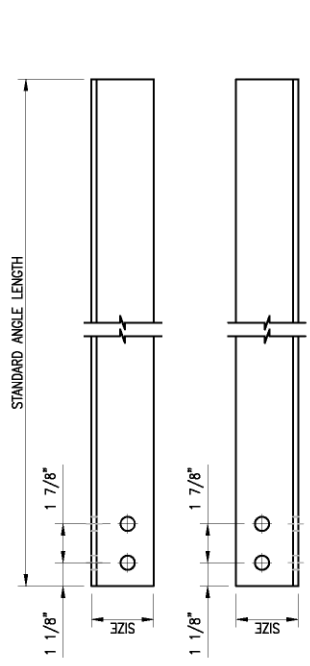
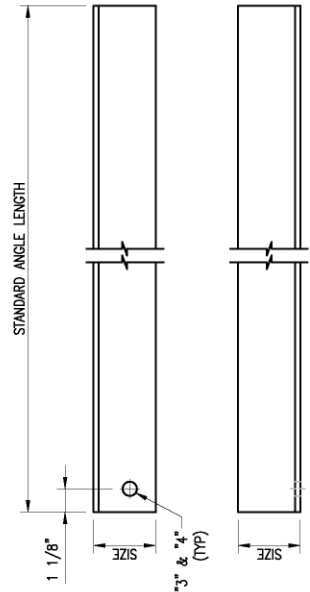
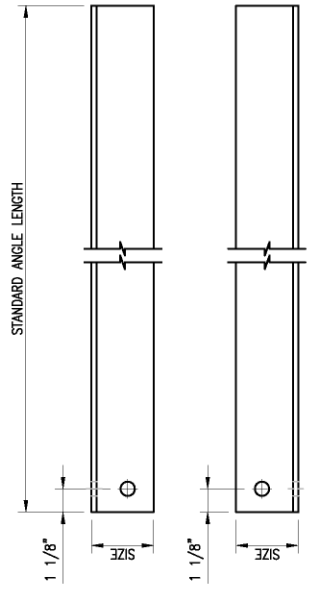
Engineering
 Support Team:
 1-888-753-7446



VZWSMART Standard Pipe		
VZWSMART Number	Size	Length
P40-238X048	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	48"
P40-238X072	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	72"
P40-238X096	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	96"
P40-238X120	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	120"
P40-238X126	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	126"
P40-238X150	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	150"
P40-238X174	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	174"
P40-278X048	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	48"
P40-278X072	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	72"
P40-278X096	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	96"
P40-278X120	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	120"
P40-278X126	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	126"
P40-278X150	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	150"
P40-278X174	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	174"
P40-312X048	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	48"
P40-312X072	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	72"
P40-312X126	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	126"
P40-312X150	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	150"
P40-312X174	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	174"

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION
PIPES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE.
SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

NOTES:
1. ALL PIPE GRADE A53-B OR BETTER.
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. ALL HOLES ARE 11/16" DIA. UNO.
4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS
OF ZINGA OR ZINC COAT PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.



VZWSMART Standard Angle					
VZWSMART Number	Size	Length	Hole Style	Hole Gage	Also Used In:
A-PLK2-01	L 3" X 3" X 1/4"	96"	A	1-3/4"	VZWSMART-PLK2
A-PLK5-01	L 3" X 3" X 3/16"	96"	B	1-3/4"	VZWSMART-PLK5
A-SFK3-01	L 2-1/2" X 2-1/2" X 1/4"	96"	C	1-3/8"	VZWSMART-SFK3, SFK3-SL, -PIK6, & -PIK8
A-L25X25X4X120	L 2-1/2" X 2-1/2" X 1/4"	120"	D	1-5/16"	
A-L25X25X4X240	L 2-1/2" X 2-1/2" X 1/4"	240"	D	1-5/16"	
A-L30X30X4X120	L 3" X 3" X 1/4"	120"	D	1-1/2"	
A-L30X30X4X240	L 3" X 3" X 1/4"	240"	D	1-1/2"	
A-L40X40X4X120	L 4" X 4" X 1/4"	120"	D	2"	
A-L40X40X4X240	L 4" X 4" X 1/4"	240"	D	2"	
A-L50X30X6X120	L 5" X 3" X 3/8"	120"	D	2-1/2"	
A-L50X50X6X120	L 5" X 5" X 3/8"	120"	D	2-1/2"	

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION ANGLES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE. SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

NOTES:
1. ALL ANGLE GRADE A36 OR BETTER.
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. ALL HOLES ARE 11/16" DIA. UNLO.
4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA OR ZINC COTE PER ASTM A780 AND MANUFACTURE'S RECOMMENDATIONS.

ATTACHMENT 5

21

55

54

2

1-1

1-2

15

14

13

3

12 11

5

4

8

7

9

6

10

Middle Rd

Middle Rd

Palmer St Ext

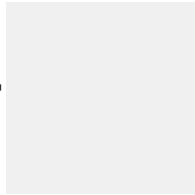
Palmer St Ext

Palmer St Ext

Bromley



NORWICH,CT



2 HINCKLEY HILL RD REAR

Location

2 HINCKLEY HILL RD REAR

Mblu

119/ 1/ 1/ 1/

Acct#

0052410001

Owner

17 MILE REAL ESTATE LLC

Assessment

\$847,500

Appraisal

\$1,210,700

PID

5166

Building Count

1

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2018	\$1,043,100	\$167,600	\$1,210,700

Assessment

Valuation Year	Improvements	Land	Total
2018	\$730,200	\$117,300	\$847,500

Parcel Addresses

Additional Addresses

No Additional Addresses available for this parcel

Owner of Record

Owner 17 MILE REAL ESTATE LLC
Address 69 HARRY ST
CONSHOHOCKEN, PA 19428

Sale Price \$1,803,750

Certificate

Book & Page 3118/0239

Sale Date 04/30/2019

Instrument 00

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
17 MILE REAL ESTATE LLC	\$1,803,750		3118/0239	00	04/30/2019
IRWIN LAVERNE G	\$0		3118/0227	1S	04/30/2019
IRWIN JAMES C +	\$0		2379/0094	1A	05/08/2007
IRWIN JAMES C + LAVERENE G	\$0		0532/0280	1A	05/01/1980

Building Information

Building 1 : Section 1

Year Built:

Living Area: 0

Replacement Cost: \$0

Building Percent Good:

Replacement Cost

Less Depreciation: \$0

Building Attributes

Field	Description
Style	Outbuildings
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Fireplace (s)	
Whirlpool	

FPLG Gas	
FPLW Wood	
FPO	
Usrflid 107	
park	
Fireplaces	
Usrflid 108	
Usrflid 101	
Usrflid 102	
Usrflid 100	
Usrflid 300	
Usrflid 301	

Building Photo



Building Layout 

Building Sub-Areas (sq ft) Legend

No Data for Building Sub-Areas

Extra Features**Extra Features Legend**

No Data for Extra Features

Land

Land Use

Use Code 431V

Description TEL REL TW M-00

Zone R40

Neighborhood

Alt Land Appr No

Category

Land Line Valuation

Size (Acres) 3.59

Frontage 0

Depth 0

Assessed Value \$117,300

Appraised Value \$167,600

Outbuildings

Outbuildings Legend

Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
SHD4	Shed Comm. Wd.			128.00 S.F.	\$1,300	1
SHD5	Shed Comm Mas			360.00 S.F.	\$4,500	1
TWR	CELL TOWER			150.00 UNITS	\$101,300	1
MSC5	ARRAYS			4.00 UNIT	\$936,000	1

Valuation History

Appraisal

Valuation Year	Improvements	Land	Total
2020	\$1,043,100	\$167,600	\$1,210,700
2019	\$1,043,100	\$167,600	\$1,210,700
2018	\$1,043,100	\$167,600	\$1,210,700

Assessment

Valuation Year	Improvements	Land	Total
2020	\$730,200	\$117,300	\$847,500
2019	\$730,200	\$117,300	\$847,500
2018	\$730,200	\$117,300	\$847,500

ATTACHMENT 6



NORWICH EAST
Certificate of Mailing — Firm

Name and Address of Sender Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here <i>Postmark with Date of Receipt.</i> 			
	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.	Peter A. Nystrom, Mayor City of Norwich 100 Broadway Norwich, CT 06360					
	Deanna Rhodes, Director of Planning & Neighborhood Services City of Norwich 23 Union Street Norwich, CT 06360					
2.	17 Mile Real Estate LLC 69 Harry Street Conshohocken, PA 19428					
3.						
4.						
5.						
6.						