

KENNETH C. BALDWIN

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

Also admitted in Massachusetts  
and New York

July 13, 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  
723 Farmington Avenue, New Britain, 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 tower was approved by the Siting Council (“Council”) in June 2005 (Docket No. 303). Cellco’s shared use of the tower was approved by the Council in May 2007 (Petition No. 807). A copy of the Council’s Docket No. 303 Decision and Order and Cellco’s Petition No. 807 approval are included in Attachment 1.

Cellco now intends to modify its facility by replacing nine (9) existing antennas with three (3) new Samsung MT6407-77A antennas, six (6) NHH-65B-R2B antennas and replacing six (6) remote radio heads (“RRHs”) with six (6) new RRHs all on Cellco’s existing t-arm antenna mounts. A set of project plans showing Cellco’s proposed facility modifications and new antennas and RRHs 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 New Britain’s Chief Elected Official and Land Use Officer.

Melanie A. Bachman, Esq.  
July 13, 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 replacement antennas will be installed on Cellco's 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 power density table for Cellco's modified facility 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 t-arm 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.  
July 13, 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:

Erin Stewart, Mayor for the City of New Britain  
Steven Schiller, AICP, New Britain City Planner  
Falcons Academic and Athletic Association Inc., the Property Owner  
Aleksy Tyurin

# **ATTACHMENT 1**

**DOCKET NO. 303** – Sprint Spectrum, L.P. application for a }  
Certificate of Environmental Compatibility and Public Need for }  
the construction, maintenance and operation of a }  
telecommunications facility located at 723 Farmington Avenue, }  
New Britain, Connecticut. }

Connecticut

Siting

Council

June 28, 2005

### **Decision and Order**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Sprint Spectrum, L.P., hereinafter referred to as the Certificate Holder, for a telecommunications facility at 723 Farmington Avenue, New Britain, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of Sprint Spectrum, L.P and other entities, both public and private, but such tower shall not exceed a height of 110 feet above ground level. The height at the top of the antennas shall not exceed a height of 110 feet above ground level, including antennas.
2. Panel antennas shall be installed on the monopole using a flush or T-arm mounting configuration. T-arm antenna mounts shall be designed to reduce the visual profile of the antenna configuration to the greatest extent possible without compromising coverage objectives.
3. Landscaping shall include the addition of deciduous tree plantings between the existing paved driveway and the compound site, preferably along the north edge of the existing driveway.
4. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the City of New Britain for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and
  - b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

5. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
6. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
7. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
8. The Certificate Holder shall provide reasonable space on the tower for no compensation for any City of New Britain public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
9. If the facility does not initially provide wireless services within one year of completion of construction or within two years from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), whichever is earlier, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating these deadlines.
10. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
11. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.
12. Any request for extension of the period referred to in Condition 9 shall be filed with the Council not later than sixty days prior to the expiration date of this Certificate and shall be served on all parties and intervenors and the City of New Britain, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.
13. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

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

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

The parties and intervenors to this proceeding are:

**Applicant**

Sprint Spectrum, L.P.  
d/b/a Sprint PCS

**Its Representative**

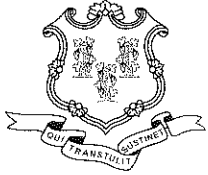
Thomas J. Regan, Esq.  
Brown Rudnick Berlack Israels LLP  
CityPlace I, 38<sup>th</sup> Floor  
185 Asylum Street  
Hartford, CT 06103-3402

**Intervenor**

New Cingular Wireless, PCS, LLC

**Its Representative**

Wendell G. Davis  
Blackwell, Davis & Spadaccini, LLC  
158 East Center Street  
Manchester, CT 06040



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

Daniel F. Caruso

Chairman

### **CERTIFIED MAIL RETURN RECEIPT REQUESTED**

May 2, 2007

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

RE: **PETITION NO. 807** - Cellco Partnership d/b/a Verizon Wireless petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to an existing telecommunications facility located at 723 Farmington Avenue, New Britain, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on May 1, 2007, the Connecticut Siting Council (Council) considered and ruled that this proposal would not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need with the condition that Verizon mount the antennas on t-arms to conform with the Decision and Order in Docket No. 303 (Condition No. 2), dated June 28, 2005.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition, dated April 2, 2007.

Enclosed for your information is a copy of the staff report on this project and the Decision and Order for Docket No. 303.

Very truly yours,

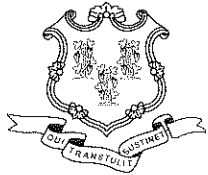
Daniel F. Caruso  
Chairman

DFC/RM/laf

Enclosure: Staff Report dated May 1, 2007  
Docket No. 303 Decision and Order, dated June 28, 2005

c: The Honorable Timothy T. Stewart, Mayor, City of New Britain  
Steven P. Schiller, Director of Planning, City of New Britain





Daniel F. Caruso  
Chairman

# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

Petition No. 807

Cellco Partnership

723 Farmington Avenue, New Britain

May 1, 2007

Staff Report

On April 2, 2007, the Connecticut Siting Council (Council) received a petition from Cellco Partnership d/b/a Verizon Wireless for declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed extension of an existing telecommunications facility located at the Nest 88 Polish Falcons Alliance of America property at 723 Farmington Avenue in New Britain. The petition was field reviewed by Council member Philip Ashton and Council staff member Robert Mercier on April 25, 2007. Verizon Wireless representative Kenneth Baldwin attended the field review. Town officials, the property owners and abutting landowners were notified on the proposal.

Verizon Wireless (Verizon) seeks to place a 10-foot extension on an existing 110-foot monopole owned by SBA Towers, Inc. The Council approved the 110-foot tower on June 28, 2005 under Docket 303. The tower and foundation were designed to support a 20-foot extension. The tower currently supports Sprint Nextel at the 109-foot level, Cingular at the 98-foot level, and T-Mobile at the 88-foot level.

Verizon would install the 10-foot extension and mount 12 panel antennas on a platform at a centerline height of 118 feet above ground level (agl). The top of the tower with the proposed extension and antennas would not exceed 120 feet agl. Verizon would install a 12-foot by 30-foot equipment shelter within the compound.

The existing tower is structurally capable of supporting the extension and antenna mounting configuration. With Verizon's equipment, the collective radio frequency electromagnetic radiation power density level would be 51.5% of the applicable FCC standard.

The site is on a 31-acre parcel used primarily for recreation purposes. The tower is screened by woodland to the north and east. Open ball fields are located to the west and south. Residential areas exist to the south beyond the ball fields along Joy Lane. Four residences in this area have year-round views of most of the existing tower and four 60-foot light towers. An additional 45 residences within a half-mile of the site have year-round views of the upper portion of the existing tower. Although the tower would be increased in height, the additional visibility would not be significant when compared to existing views.

The Council's Decision and Order for Docket 303 limited the antenna mounting equipment to t-arms or flush mounts. Approval of the petition should contain a condition to replace the proposed antenna platform with t-arm antenna mounts.



<p><b>DOCKET NO. 303</b> – Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 723 Farmington Avenue, New Britain, Connecticut.</p>	<p>} } }</p>	<p>Connecticut Siting Council June 28, 2005</p>
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**Decision and Order**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Sprint Spectrum, L.P., hereinafter referred to as the Certificate Holder, for a telecommunications facility at 723 Farmington Avenue, New Britain, Connecticut.

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

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The parties and intervenors to this proceeding are:

**Applicant**

Sprint Spectrum, L.P.  
d/b/a Sprint PCS

**Its Representative**

Thomas J. Regan, Esq.  
Brown Rudnick Berlack Israels LLP  
CityPlace I, 38<sup>th</sup> Floor  
185 Asylum Street  
Hartford, CT 06103-3402

**Intervenor**

New Cingular Wireless, PCS, LLC

**Its Representative**

Wendell G. Davis  
Blackwell, Davis & Spadaccini, LLC  
158 East Center Street  
Manchester, CT 06040

# **ATTACHMENT 2**



## WIRELESS COMMUNICATIONS FACILITY

SITE NAME:  
NEW BRITAIN 6 CT

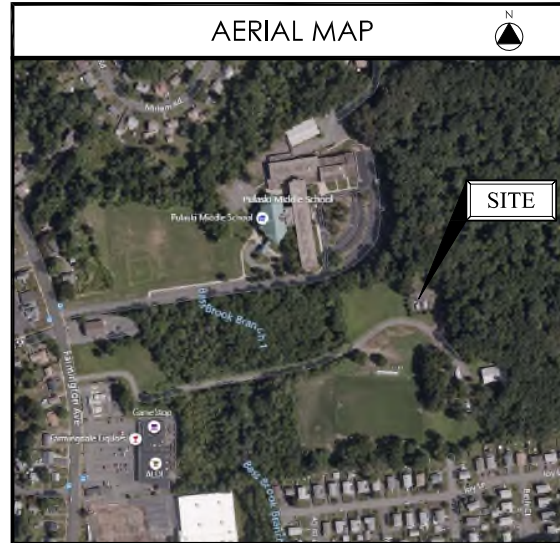
SBA SITE # CT08558  
723 FARMINGTON AVE.  
NEW BRITAIN, CT 06053

### ANTENNA MODIFICATION

#### PROJECT SUMMARY

SITE NAME:	NEW BRITAIN 6 CT
SITE ADDRESS:	723 FARMINGTON AVE. NEW BRITAIN, CT 06053
PROPERTY OWNER:	FALCONS ACADEMIC & ATHLETIC ASSOC. INC. 201 WASHINGTON ST. NEW BRITAIN, CT 06051
TOWER OWNER/MGMT:	SBA SITE # CT08558
PARCEL ID:	C3A-1
COORDINATES:	41° 41' 54.2904" N 72° 47' 09.3984" W
VERIZON CONSTRUCTION:	WALTER CHARCZYNSKI (860) 306-1806
VERIZON REAL ESTATE:	ALEX TYURIN (860) 550-3195

#### AERIAL MAP

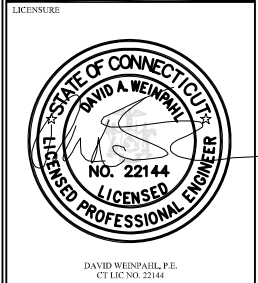


#### SHEET INDEX

DE-1	TITLE SHEET
DE-2	COMPOUND PLAN & ELEVATION
DE-3	ANTENNA PLANS & ELEVATION
DE-4	RF PLUMBING DIAGRAM & B.O.M.
DE-5	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	04.09.21	REVIEW
1	05.29.21	PERMITTING/CONSTRUCTION

NO.	DATE	DESCRIPTION

DRAWN BY: MF  
CHECKED BY: DW

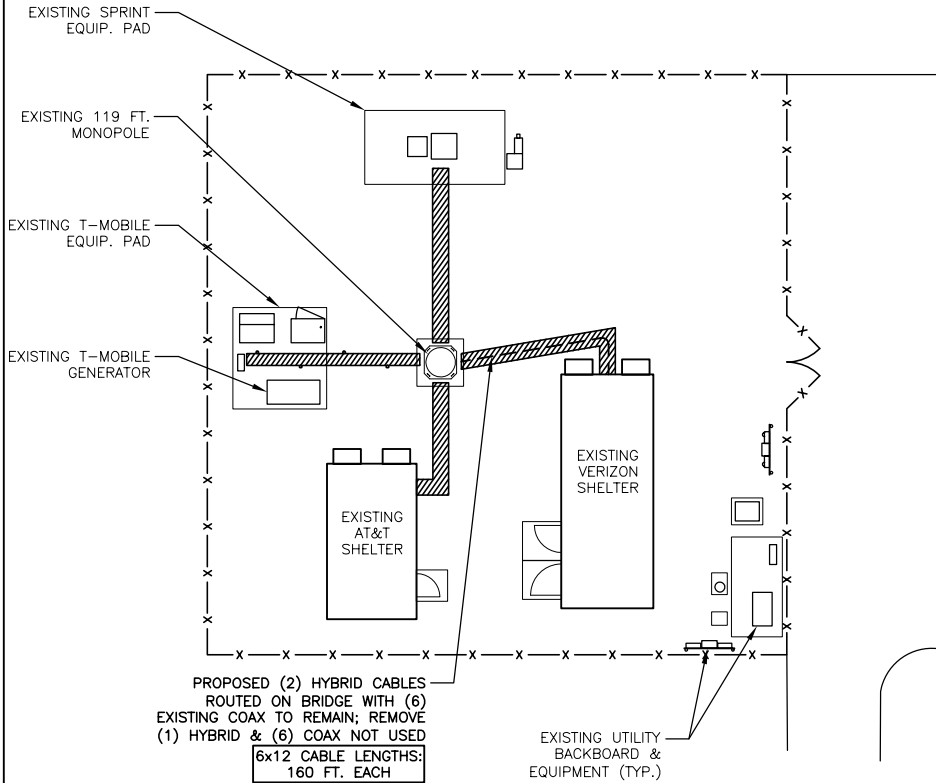
PROJECT NAME:  
**ANTMO  
MT6407-850-LTE-PCS  
DESIGN EXHIBITS**

SITE NAME:  
**NEW BRITAIN 6 CT**

SITE ADDRESS:  
**SBA SITE # CT08558-S  
723 FARMINGTON AVE.  
NEW BRITAIN, CT 06053**

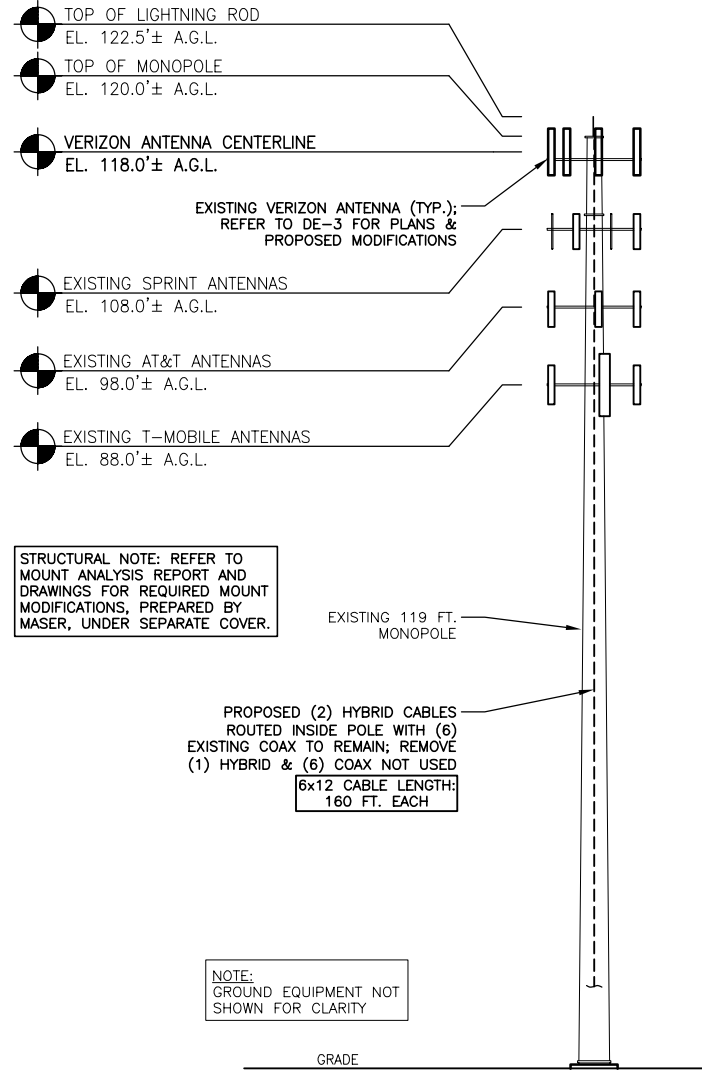
SHEET TITLE:  
**TITLE SHEET**

SHEET NUMBER:  
**DE-1**



NOTES:  
 1. COMPOUND PLAN IS COMPILED FROM EXISTING DRAWINGS ON FILE WITH THE CT SITING COUNCIL AND A LIMITED DESIGN VISIT ON 12-04-20 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** COMPOUND PLAN  
 DE-2 Scale: 1/16" = 1'-0"



STRUCTURAL NOTE: REFER TO MOUNT ANALYSIS REPORT AND DRAWINGS FOR REQUIRED MOUNT MODIFICATIONS, PREPARED BY MASER, UNDER SEPARATE COVER.

NOTE: GROUND EQUIPMENT NOT SHOWN FOR CLARITY

**2** ELEVATION  
 DE-2 Scale: NTS

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

NO.	DATE	REVIEW
0	04.09.21	REVIEW
1	05.29.21	PERMITTING/CONSTRUCTION

NO. DATE DESCRIPTION

DRAWN BY: MF  
 CHECKED BY: DW

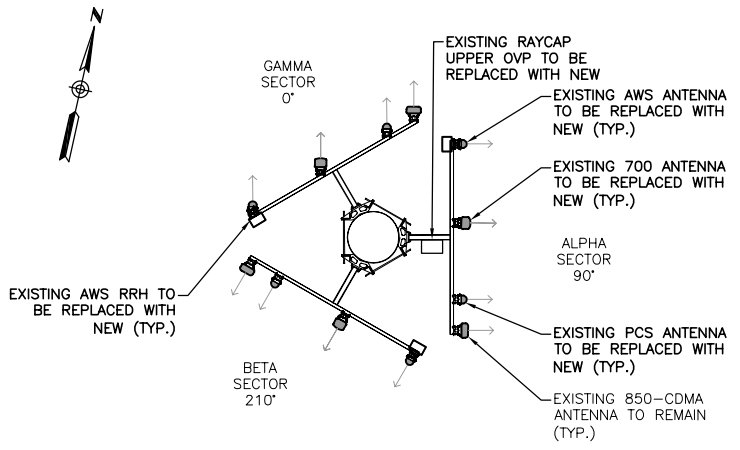
PROJECT NAME:  
**ANTMO  
 MT6407-850-LTE-PCS  
 DESIGN EXHIBITS**

SITE NAME:  
**NEW BRITAIN 6 CT**

SITE ADDRESS:  
**SBA SITE # CT08558-S  
 723 FARMINGTON AVE.  
 NEW BRITAIN, CT 06053**

SHEET TITLE:  
**COMPOUND PLAN  
 & ELEVATION**

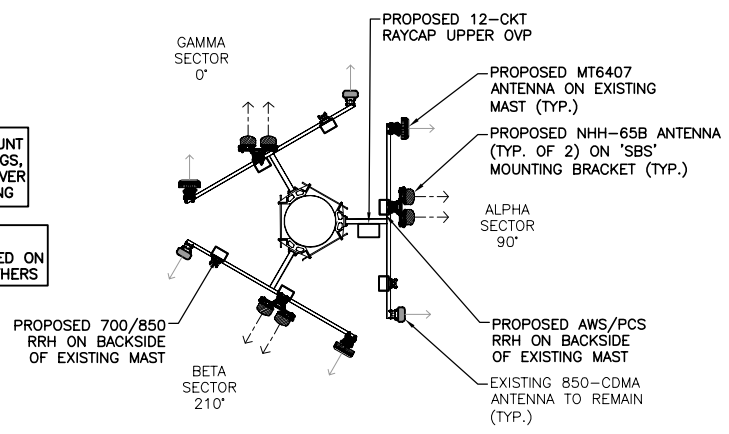
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**DE-2**



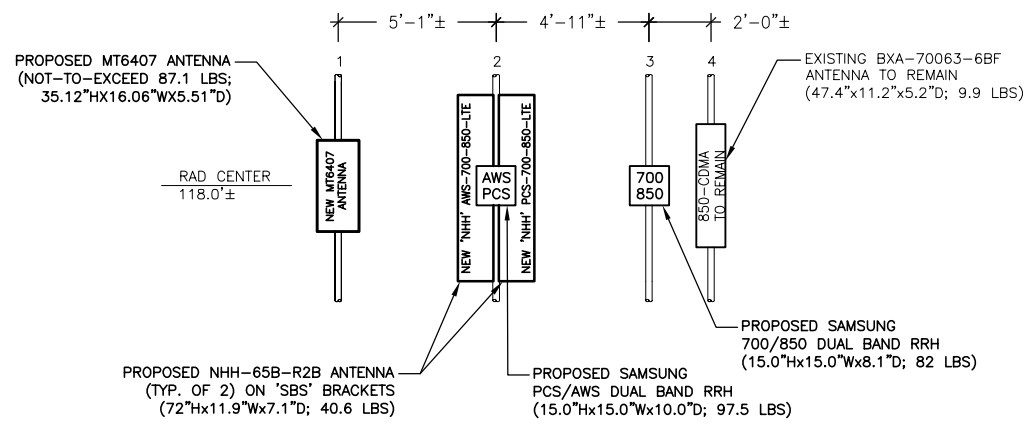
1 ANTENNA PLAN @ 118 FT. - EXISTING  
DE-3 Scale: 1/8" = 1'-0"

NOTE: REFER TO MOUNT MODIFICATION DRAWINGS, UNDER SEPARATE COVER BY MASER CONSULTING

NOTE: NEW DUAL RRH LOCATIONS SHOWN BASED ON MOUNT ANALYSIS BY OTHERS



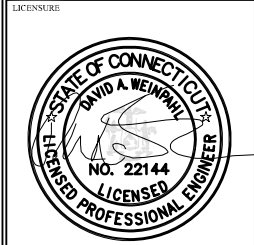
2 ANTENNA PLAN @ 118 FT. - PROPOSED  
DE-3 Scale: 1/8" = 1'-0"



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

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

SUBMITTALS	
NO.	DATE
0	04.09.21
1	05.29.21

NO.	DATE	DESCRIPTION

PROJECT NAME:  
**ANTMO  
MT6407-850-LTE-PCS  
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SITE NAME:  
**NEW BRITAIN 6 CT**

SITE ADDRESS:  
**SBA SITE # CT08558-S  
723 FARMINGTON AVE.  
NEW BRITAIN, CT 06053**

SHEET TITLE:  
**ANTENNA PLANS  
& ELEVATION**

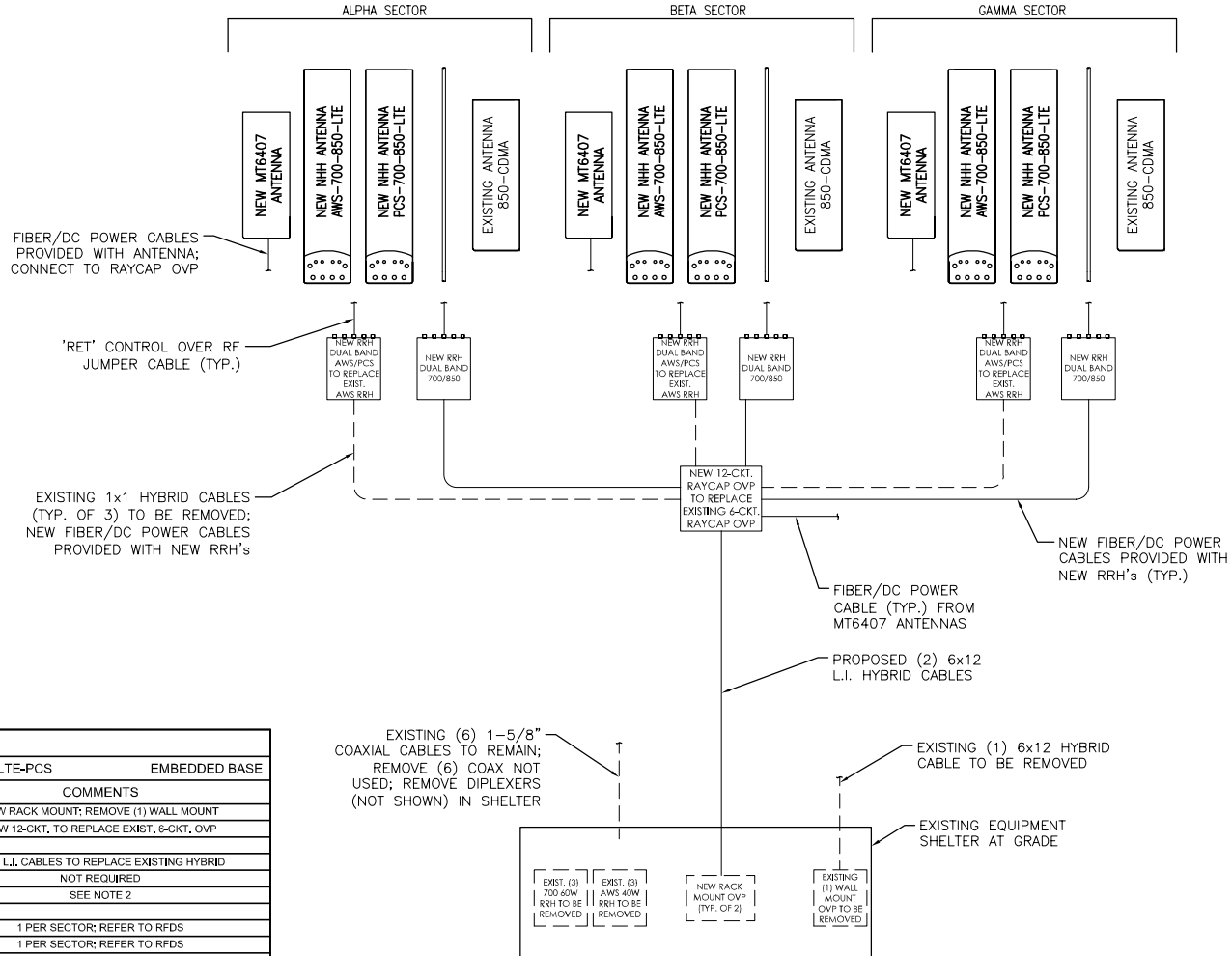
SHEET NUMBER:  
**DE-3**



**GENERAL NOTES:**

- 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.
- 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.
- ALL CABLES SHALL BE ROUTED AND SECURED ON STRUCTURAL MEMBERS ONLY - DO NOT "LOOP" THE CABLES IN MID-AIR BETWEEN ANTENNAS
- REFER TO RFDS FOR DETAILED PLUMBING DIAGRAM SHOWING ALL JUMPER AND OTHER CABLING CONNECTIONS AT ANTENNAS, RRH'S, DIPLEXERS OR OTHER DEVICES.

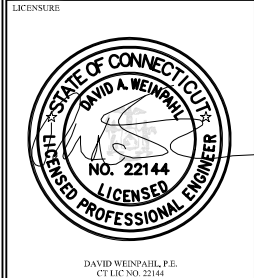
NOTE: ALL ANTENNAS VIEWED FROM REAR



BILL OF MATERIALS			
SITE NAME: NEW BRITAIN 6 CT		ANTMO MT6407-850-LTE-PCS	
DESCRIPTION	QTY	LENGTH	COMMENTS
6-CKT. LOWER OVP	2	-	NEW RACK MOUNT; REMOVE (1) WALL MOUNT
12-CKT. UPPER OVP	1	-	NEW 12-CKT. TO REPLACE EXIST. 6-CKT. OVP
6x12 L.L. HYBRID CABLE	2	160 FT.	NEW L.L. CABLES TO REPLACE EXISTING HYBRID
RET CONTROL CABLE	-	-	NOT REQUIRED
1/2" JUMPERS	-	-	SEE NOTE 2
AWS/PCS DUAL BAND RRH	3	-	1 PER SECTOR; REFER TO RFDS
700/850 DUAL BAND RRH	3	-	1 PER SECTOR; REFER TO RFDS
MT6407 ANTENNA	3	-	SAMSUNG INTEGRATED - 1 PER SECTOR - REFER TO RFDS
NHH AWS-700-850-LTE ANTENNA	3	-	1 PER SECTOR; REFER TO RFDS
NHH PCS-700-850-LTE ANTENNA	3	-	1 PER SECTOR; REFER TO RFDS
SBS MOUNTING BRACKET	3	-	1 PER SECTOR; REFER TO RFDS
LNX-6514DS ANTENNA	-	-	EXISTING (3) TO REMAIN - 1 PER SECTOR

- NOTES:
- 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.
  - CONTRACTOR SHALL DETERMINE AND PROVIDE ALL REQUIRED PRE-FAB JUMPER QUANTITIES AND LENGTHS, KEEPING ALL LENGTHS TO A MINIMUM.

1 RF PLUMBING DIAGRAM  
DE-4 Scale: N.T.S



SUBMITTALS	
NO.	DATE
0	04.09.21
1	05.29.21

PROJECT NAME:  
**ANTMO MT6407-850-LTE-PCS DESIGN EXHIBITS**

SITE NAME:  
**NEW BRITAIN 6 CT**

SITE ADDRESS:  
**SBA SITE # CT08558-S  
723 FARMINGTON AVE.  
NEW BRITAIN, CT 06053**

SHEET TITLE:  
**RF PLUMBING DIAGRAM & B.O.M.**

SHEET NUMBER:  
**DE-4**

**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.




WIRELESS COMMUNICATIONS FACILITY

20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492



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

LICENSURE



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

SUBMITTALS		
0	04.09.21	REVIEW
1	05.29.21	PERMITTING/CONSTRUCTION

NO.	DATE	DESCRIPTION
DRAWN BY:	MF	
CHECKED BY:	DW	

PROJECT NAME:  
**ANTMO  
MT6407-850-LTE-PCS  
DESIGN EXHIBITS**

SITE NAME:  
**NEW BRITAIN 6 CT**

SITE ADDRESS:  
**SBA SITE # CT08558-S  
723 FARMINGTON AVE.  
NEW BRITAIN, CT 06053**

SHEET TITLE:  
**GENERAL  
CONSTRUCTION  
NOTES**

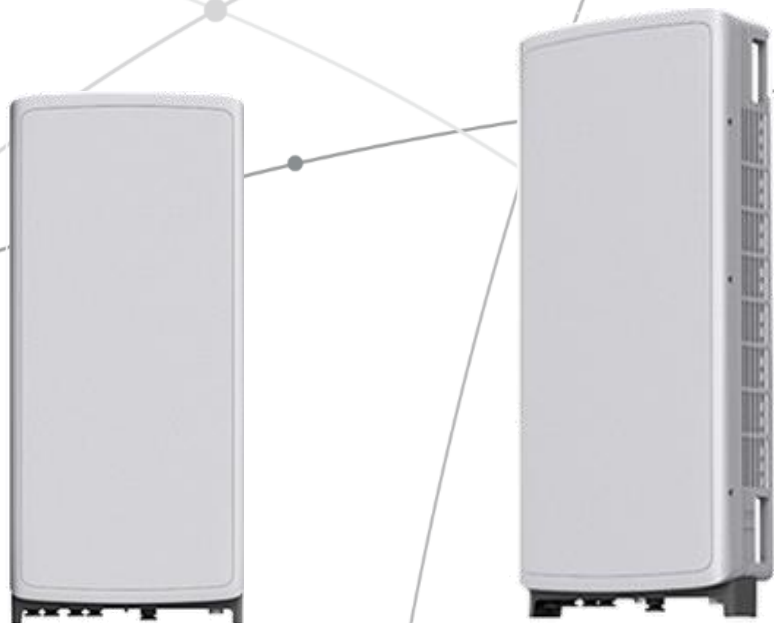
SHEET NUMBER:  
**DE-5**

## **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



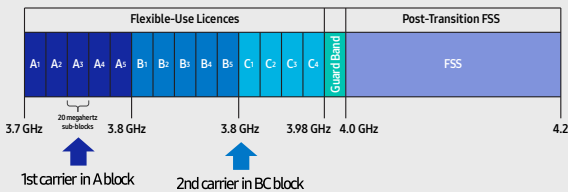
## Points of Differentiation

### 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

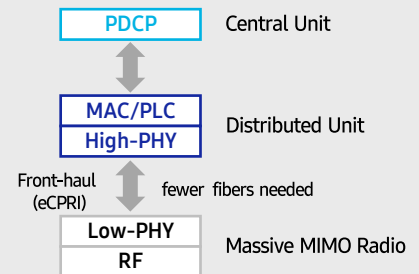
C-Band spectrum supported by Massive MIMO Radio



### 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.

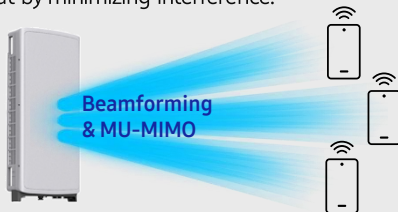


### Enhanced Performance

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.

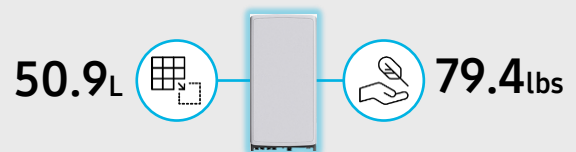
Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



### 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.**

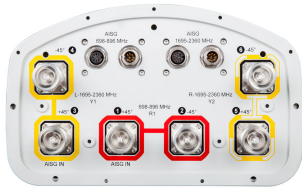
Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

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

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# NHH-65B-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 2x RET. Both high bands share the same electrical tilt.

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

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Color</b>	Light gray
<b>Effective Projective Area (EPA), frontal</b>	0.26 m <sup>2</sup>   2.799 ft <sup>2</sup>
<b>Effective Projective Area (EPA), lateral</b>	0.22 m <sup>2</sup>   2.368 ft <sup>2</sup>
<b>Grounding Type</b>	RF connector body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
<b>RF Connector Interface</b>	7-16 DIN Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	4
<b>RF Connector Quantity, low band</b>	2
<b>RF Connector Quantity, total</b>	6

## Remote Electrical Tilt (RET) Information, General

<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	2 female   2 male

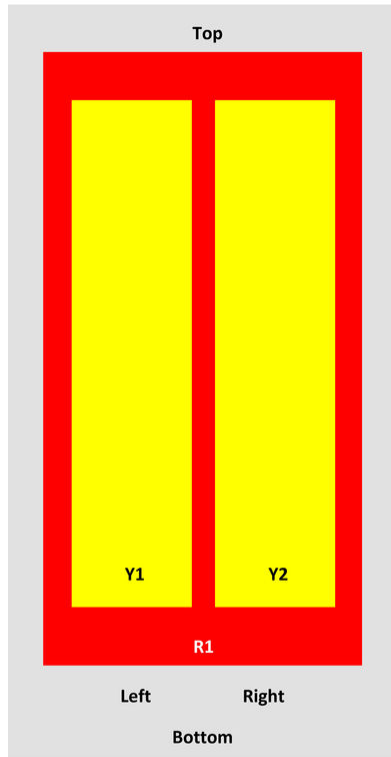
## Dimensions

<b>Width</b>	301 mm   11.85 in
<b>Length</b>	1828 mm   71.969 in
<b>Depth</b>	180 mm   7.087 in

## Array Layout

# NHH-65B-R2B

NHH



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANXXXXXXXXXXXXXXXXX1
Y1	1695-2360	3-4	2	ANXXXXXXXXXXXXXXXXX2
Y2	1695-2360	5-6		

View from the front of the antenna  
(Sizes of colored boxes are not true depictions of array sizes)

## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2360 MHz   698 – 896 MHz
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Remote Electrical Tilt (RET) Information, Electrical

<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Power Consumption, normal conditions, maximum</b>	13 W
<b>Input Voltage</b>	10–30 Vdc
<b>Internal Bias Tee</b>	Port 1   Port 3
<b>Internal RET</b>	High band (1)   Low band (1)

# NHH-65B-R2B

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	15	17.7	17.9	18.4	18.7
Beamwidth, Horizontal, degrees	65	60	71	69	64	57
Beamwidth, Vertical, degrees	12.4	11.2	5.7	5.2	4.9	4.6
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	13	14	18	18	19	18
Front-to-Back Ratio at 180°, dB	30	29	31	30	29	31
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR   Return loss, dB	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	300	300	300	300	300	300

## Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.5	17.3	17.7	18.1	18.5
Gain by all Beam Tilts Tolerance, dB	±0.6	±1.1	±0.4	±0.4	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0°   14.4 7°   14.6 14°   14.3	0°   14.7 7°   14.7 14°   14.1	0°   17.2 4°   17.3 7°   17.3	0°   17.6 4°   17.7 7°   17.7	0°   18.0 4°   18.2 7°   18.1	0°   18.3 4°   18.5 7°   18.6
Beamwidth, Horizontal Tolerance, degrees	±2	±2.1	±3	±4.1	±6.5	±2.9
Beamwidth, Vertical Tolerance, degrees	±0.7	±0.7	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	13	14	16	16	17	15
Front-to-Back Total Power at 180° ± 30°, dB	23	22	27	27	25	25
CPR at Boresight, dB	22	21	23	23	22	19
CPR at Sector, dB	10	7	16	13	11	4

## Material Specifications

Radiator Material

Low loss circuit board



# NHH-65B-R2B

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**Reflector Material** Aluminum

## Mechanical Specifications

**Wind Loading at Velocity, frontal** 278.0 N @ 150 km/h | 63.6 lbf @ 150 km/h  
**Wind Loading at Velocity, lateral** 230.0 N @ 150 km/h | 51.7 lbf @ 150 km/h  
**Wind Loading at Velocity, maximum** 120.7 lbf @ 150 km/h | 537.0 N @ 150 km/h  
**Wind Speed, maximum** 241 km/h | 149.75 mph

## Packaging and Weights

**Width, packed** 409 mm | 16.102 in  
**Depth, packed** 299 mm | 11.772 in  
**Length, packed** 1952 mm | 76.85 in  
**Net Weight, without mounting kit** 19.8 kg | 43.651 lb  
**Weight, gross** 32.3 kg | 71.209 lb

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant



## Included Products

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

## \* Footnotes

**Performance Note** Severe environmental conditions may degrade optimum performance

# SAMSUNG

## Dual-Band Radio Unit AWS/PCS (B66/B2)

RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

### Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

### Key Technical Specifications

Duplex Type: FDD

Operating Frequencies:

B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)

B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)

Instantaneous Bandwidth:

70MHz(B66) + 60MHz(B2)

RF Chain: 4T4R/2T4R/2T2R

Output Power: Total 320W

DU-RU Interface: CPRI (10Gbps)

Dimensions: 380 x 380 x 255mm (36.8L)

Weight: 38.3kg

Input Power: -48V DC

Operating Temp.: -40 - 55°(w/o solar load)

Cooling: Natural convection

# SAMSUNG

## Dual-Band Radio Unit 700/850MHz (B13/B5) RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

### Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation

### Key Technical Specifications

Duplex Type: FDD  
Operating Frequencies:  
B13: DL(746-756MHz)/UL(777-787MHz)  
B5: DL(869-894MHz)/UL(824-849MHz)  
Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)  
RF Chain: 4T4R/2T4R/2T2R  
Output Power: Total 320W  
DU-RU Interface: CPRI (10Gbps)  
Dimensions: 380 x 380 x 207mm (29.9L)  
Weight: 31.9kg  
Input Power: -48V DC  
Operating Temp.: -40 - 55°(w/o solar load)  
Cooling: Natural convection

# **ATTACHMENT 3**

	General	Power	Density					
<b>Site Name: New Britain 6</b>								
<b>Tower Height: Verizon @ 118ft</b>								
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total
*Sprint	4	13	108	1900	0.0018	1.0000	0.02%	
*Sprint	1	12	108	850	0.0004	0.5667	0.01%	
*Sprint	2	13	108	2500	0.0009	1.0000	0.01%	
*Clearwire	2	153	108	2496	0.0106	1.0000	0.11%	
*Clearwire	1	211	112	11 GHz	0.0068	1.0000	0.07%	
*MetroPCS CDMA	3	727	78	2135	0.1513	1.0000	1.51%	
*MetroPCS LTE	1	1200	78	2130	0.0832	1.0000	0.83%	
*AT&T	1	279	98	850	0.0119	0.5667	0.21%	
*AT&T	1	659	98	1900	0.0280	1.0000	0.28%	
*AT&T	1	1000	98	850	0.0425	0.5667	0.75%	
*AT&T	1	3664	98	1900	0.1557	1.0000	1.56%	
*AT&T	1	3837	98	2100	0.1630	1.0000	1.63%	
*AT&T	1	1476	98	737	0.0627	0.4913	1.28%	
*AT&T	1	1285	98	2300	0.0546	1.0000	0.55%	
*T-Mobile	1	19239	88	2500	1.0290	1.0000	10.29%	
*T-Mobile	1	19239	88	2500	1.0290	1.0000	10.29%	
*T-Mobile	2	592	88	600	0.0633	0.4000	1.58%	
*T-Mobile	1	1578	88	600	0.0844	0.4000	2.11%	
*T-Mobile	2	649	88	700	0.0694	0.4667	1.49%	
*T-Mobile	2	2204	88	1900	0.2358	1.0000	2.36%	
*T-Mobile	2	1295	88	2100	0.1385	1.0000	1.39%	
*T-Mobile	4	1028	88	1900	0.2199	1.0000	2.20%	
*T-Mobile	2	2057	88	1900	0.2200	1.0000	2.20%	
*T-Mobile	2	2308	88	2100	0.2469	1.0000	2.47%	
<b>VZW 700</b>	<b>4</b>	<b>2686</b>	<b>118</b>	<b>0.0069</b>	<b>751</b>	<b>0.5007</b>	<b>1.39%</b>	
<b>VZW CDMA</b>	<b>2</b>	<b>830</b>	<b>1118</b>	<b>0.0021</b>	<b>869</b>	<b>0.5793</b>	<b>0.37%</b>	
<b>VZW Cellular</b>	<b>4</b>	<b>2755</b>	<b>118</b>	<b>0.0071</b>	<b>874</b>	<b>0.5827</b>	<b>1.22%</b>	
<b>VZW PCS</b>	<b>4</b>	<b>5676</b>	<b>118</b>	<b>0.0147</b>	<b>1975</b>	<b>1.0000</b>	<b>1.47%</b>	
<b>VZW AWS</b>	<b>4</b>	<b>6398</b>	<b>118</b>	<b>0.0165</b>	<b>2120</b>	<b>1.0000</b>	<b>1.65%</b>	
<b>VZW CBAND</b>	<b>4</b>	<b>26125</b>	<b>118</b>	<b>0.0675</b>	<b>3730.08</b>	<b>1.0000</b>	<b>6.75%</b>	
								<b>58.02%</b>
* Source: Siting Council								

# **ATTACHMENT 4**



**Tower Engineering Solutions**

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

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## Structural Analysis Report

**Existing 119 ft SABRE Monopole**  
**Customer Name: SBA Communications Corp**  
**Customer Site Number: CT08558-B**  
**Customer Site Name: New Britain 3, CT**  
**Carrier Name: Verizon (App#: 150256, V2)**  
**Carrier Site ID / Name: 468551 / New Britain 6 CT**  
**Site Location: 723 Farmington Ave**  
**New Britain, Connecticut**  
**Hartford County**  
**Latitude: 41.698414**  
**Longitude: -72.785944**

**Analysis Result:**

**Max Structural Usage: 90.6% [Pass]**  
**Max Foundation Usage: 85.0% [Pass]**  
**Additional Usage Caused by New Mount/Mount Modification: +4.0%**

**Report Prepared By: Younus Alkarawi**





**Tower Engineering Solutions**

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

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## **Structural Analysis Report**

**Existing 119 ft SABRE Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT08558-B**

**Customer Site Name: New Britain 3, CT**

**Carrier Name: Verizon (App#: 150256, V2)**

**Carrier Site ID / Name: 468551 / New Britain 6 CT**

**Site Location: 723 Farmington Ave**

**New Britain, Connecticut**

**Hartford County**

**Latitude: 41.698414**

**Longitude: -72.785944**

### **Analysis Result:**

**Max Structural Usage: 90.6% [Pass]**

**Max Foundation Usage: 85.0% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification:**

**Report Prepared By: Younus Alkarawi**



## Introduction

The purpose of this report is to summarize the analysis results on the 119 ft SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

## Sources of Information

<b>Tower Drawings</b>	Original Tower drawings by Sabre, Job# 06-08008, dated 08/1/2005
<b>Foundation Drawing</b>	Original Foundation drawings by Sabre, Job# 06-08008, dated 08/1/2005
<b>Geotechnical Report</b>	Geotechnical Report prepared by DR. Clarence Welti, dated 07/7/2005
<b>Modification Drawings</b>	
<b>Mount Analysis</b>	Verizon MA by Maser Consulting Connecticut #: 20777623A, dated 04/28/2021

## Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-

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

<b>Wind Speed Used in the Analysis:</b>	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 1" radial ice concurrent
<b>Operational Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	
<b>Structure Class:</b>	
<b>Topographic Category:</b>	
<b>Crest Height:</b>	0 ft
<b>Seismic Parameters:</b>	

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

## Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			Kathrein 800 10735V01 Panels	(3) T-Arms	Hybrid	Verizon
			Antel BXA-171063-12BF Panels			
			Antel BXA-171063-8BF Panels			
			Antel BXA-70063-6BF Panels			
			RFS DB-T1-6Z-8AB-OZ Dist. Box			
			RFS FD9R6004/2C-3L Diplexers			
			ALU RRH2x40-AWS RRU's			
			ALU 1900MHz RRU's	(3) T-Arms	Hybrid	Clearwire/ Sprint
			ALU 800 MHz Filters			
			ALU 800 MHz RRU's			
			Kathrein 840 10054 Panels			
			RFS ACU-A20-N RET's			
			RFS APXVSP18-C-A20 Panels			
			RFS APXVTM14-C-120 Panels			
			DragonwaveHorizon ODU Radios			
		1	Powerwave P40-16-XLPP-RR-A Panels			
			ALU TD-RRH8x20-25 RRU's			
			Andrew VHLP2.5 Dishes	(3) Commscope T-Arms	Power (2) 3/8" Fiber	
			Cci OPA-65R-LCUU-H6 - Panel			
		3	Powerwave 7770 w/Mount Pipe - Panel			
			Powerwave LGP21402 TMA			
			Ericsson RRUS 11 RRU			
			Powerwave LGP13519 Diplexer			
			Raycap DC6-48-60-0-8F COVP			
			Ericsson RRUS 8843 B25/B66A RRU			
			Ericsson RRUS 32 RRU			
			Quintel QS66512-2 - Panel	(3) T-Arms	Coax  Hybrid	T-Mobile
			Ericsson AIR6449 B41			
			Ericsson AIR32 KRD901146-1_B66A (Octa)			
			RFS APXVAARR24_43-U-NA20 (Octa)			
			Ericsson KRY 112 144/2			
			Commscope SDX1926Q-43			
			Ericsson 4415 B25			
			Ericsson 4449 B71 + B85			

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
		6	Commscope NHH-65B-R2B - Panel	(3) Modified T-Arms W/ (3) Valmont Site Pro VZWSMART-SFK4 (T-Arm kit), (3) Commscope BASMNT-SBS-1-2 (side-by-side mounts), (1) Valmont Site Pro VZWSMART-PLK7 (Collar Mount), (12) Valmont Site Pro VZWSMART-MSK2 (Crossover Plates) & (3) Site Pro P30150 (P3.0 STD pipe)	Hybrid	Verizon
			Samsung MT6407-77A - Panel			
		3	Amphenol BXA-70063-6BF- Panel			
			Samsung B5/B13 RRH-BR04C			
			Samsung B2/B66A RRH-BR049			
			Raycap RVZDC-6627-PF-48-OVP			

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

## **Analysis Results**

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:			
Pass/Fail	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions		
Analysis Reactions		
Factored Reactions*		
% of Design Reactions		

\* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

Two foundation design options were included in the referenced foundation design document. Since it is not known which option was installed, both designs were analyzed using the supplied documents and soils report and both were found adequate. Therefore, no modification to the foundation will be required.

### **Operational Condition (Rigidity):**

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.3759 degrees under the operational wind speed as specified in the Analysis Criteria.

### **Conclusions**

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

## Standard Conditions

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

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

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

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

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

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

# Usage Diagram - Max Ratio 90.64% at 0.0ft

**Structure:** CT08558-B-SBA  
**Site Name:** New Britain 3, CT  
**Height:** 119.00 (ft)  
**Base Elev:** 0.000 (ft)

**Code:** EIA/TIA-222-G  
**Exposure:** C  
**Gh:** 1.1

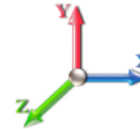
6/8/2021



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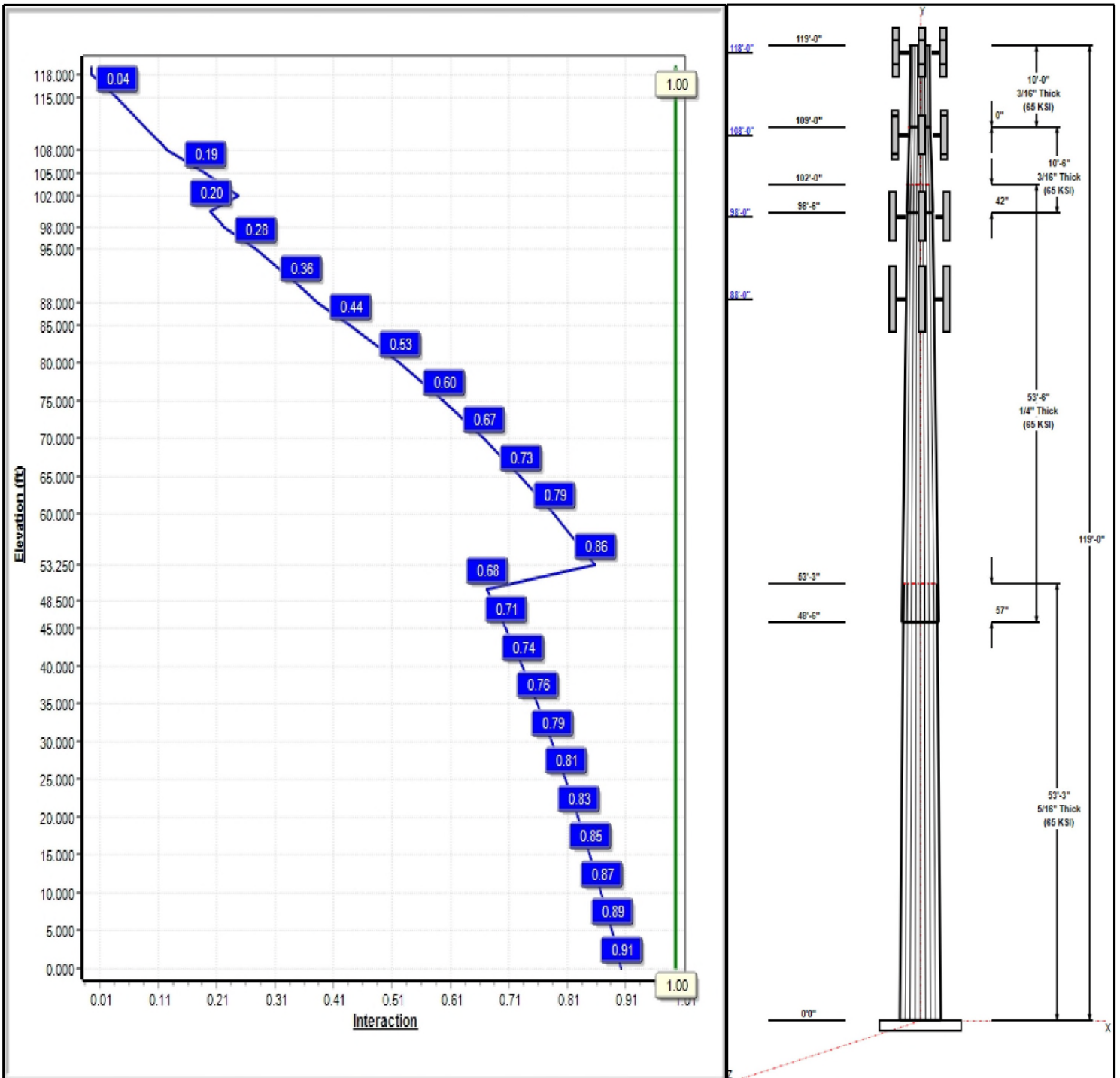
**Dead Load Factor:** 1.20  
**Wind Load Factor:** 1.60

**Load Case : 1.2D + 1.6W 97 mph Wind**



**Iterations:** 23

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## Structure: CT08558-B-SBA

**Type:** Tapered  
**Site Name:** New Britain 3, CT  
**Height:** 119.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.22164

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### Shaft Properties

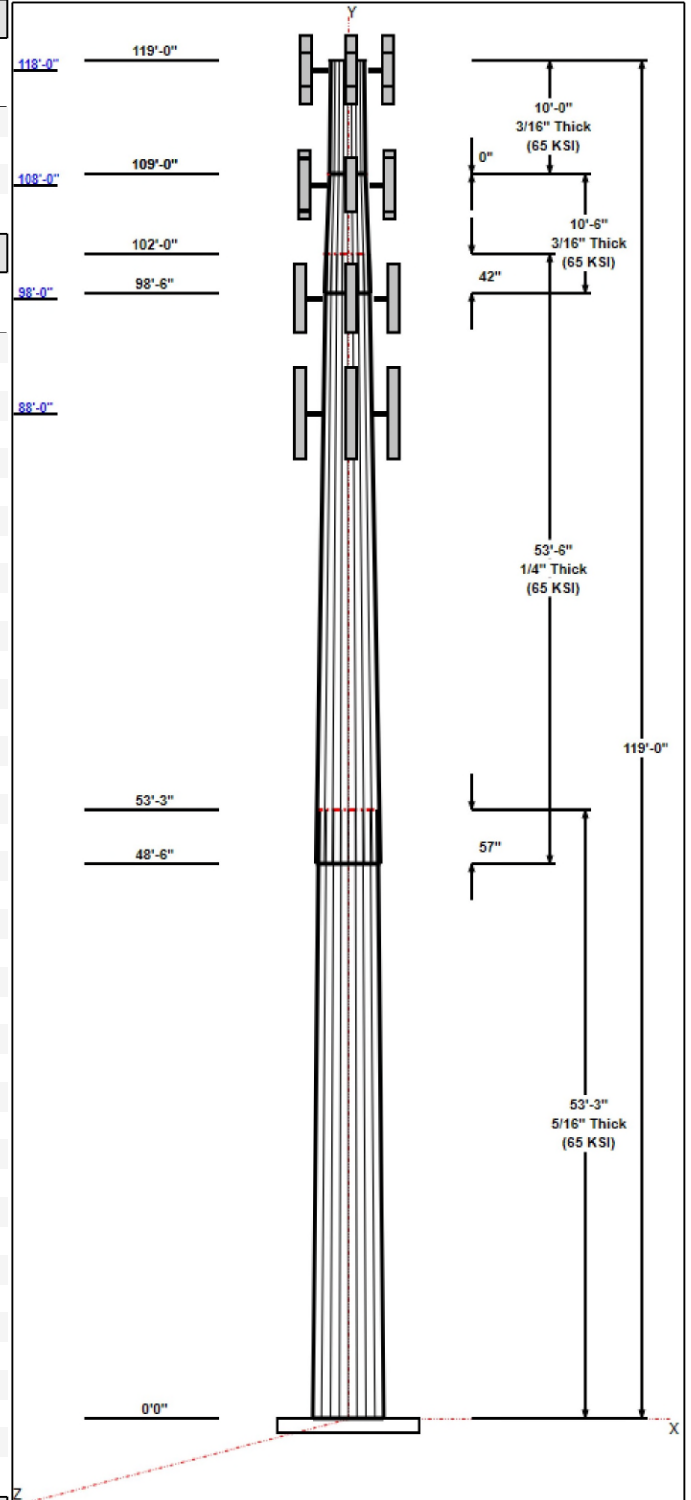
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	35.70	47.50	0.313		0.22164	65
2	53.50	25.39	37.25	0.250	Slip	0.22164	65
3	10.50	24.22	26.54	0.188	Slip	0.22164	65
4	10.00	22.00	24.22	0.188	Butt	0.22164	65

### Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
118.00	118.00	3	BXA-70063-6BF	Verizon
118.00	118.00	3	T-Arm	Verizon
118.00	118.00	6	Commscope	Verizon
118.00	118.00	3	Samsung MT6407-77A	Verizon
118.00	118.00	1	(3) T-Arm Kit	Verizon
118.00	118.00	3	BSAMNT-SBS-1-2	Verizon
118.00	118.00	1	Collar	Verizon
118.00	118.00	3	Samsung B5/B13	Verizon
118.00	118.00	1	Raycap	Verizon
118.00	118.00	3	B2/B66A RRH-BR049	Verizon
108.00	108.00	3	1900MHz RRH	Clearwire
108.00	108.00	3	800 MHz Filters	Clearwire
108.00	108.00	3	800 MHz	Clearwire
108.00	108.00	3	840 10054	Clearwire
108.00	108.00	4	ACU-A20-N	Clearwire
108.00	108.00	2	APXVSP18-C-A20	Clearwire
108.00	108.00	3	APXVTM14-C-120	Clearwire
108.00	108.00	2	Horizon	Clearwire
108.00	108.00	1	P40-16-XLPP-RR-A	Clearwire
108.00	108.00	3	TD-RRH8x20-25	Clearwire
108.00	108.00	2	VHLP2.5	Clearwire
108.00	108.00	3	T-Arm	Clearwire
98.00	98.00	3	Cci OPA-65R-LCUU-H6	AT&T
98.00	98.00	3	Powerwave 7770 w/Mount	AT&T
98.00	98.00	9	Powerwave LGP21402	AT&T
98.00	98.00	3	Ericsson RRUS 11	AT&T
98.00	98.00	6	Powerwave LGP13519	AT&T
98.00	98.00	2	Raycap DC6-48-60-0-8F	AT&T
98.00	98.00	3	T-Arm	AT&T
98.00	98.00	3	Quintel QS66512-2	AT&T
98.00	98.00	3	Ericsson RRUS 8843	AT&T
98.00	98.00	3	Ericsson RRUS 32	AT&T
88.00	88.00	3	AIR6449 B41	T-Mobile
88.00	88.00	3	SDX1926Q-43	T-Mobile
88.00	88.00	3	RRUS 4415 B25	T-Mobile
88.00	88.00	3	AIR32	T-Mobile
88.00	88.00	3	APXVAARR24_43-U-NA20	T-Mobile
88.00	88.00	3	KRY 112 144/2	T-Mobile
88.00	88.00	3	4449 B71 + B85	T-Mobile
88.00	88.00	3	T-Arm w/ mod	T-Mobile

### Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	118.00	Inside	1 5/8" Coax	Verizon
0.00	118.00	Outside	1 5/8" Hybrid	Verizon





**Structure: CT08558-B-SBA**

**Type:** Tapered  
**Site Name:** New Britain 3, CT  
**Height:** 119.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.22164

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0.00	108.00	Inside	1-1/4" Hybrid	Clearwire/Sprint
0.00	108.00	Inside	1/2" Coax	Clearwire/Sprint
0.00	108.00	Inside	5/16" Coax	Clearwire/Sprint
0.00	98.00	Inside	1 5/8" Coax	AT&T
0.00	98.00	Inside	3/4" DC Power	AT&T
0.00	98.00	Inside	3/8" Fiber	AT&T
0.00	88.00	Inside	1 5/8" Coax	T-Mobile
0.00	88.00	Inside	1-1/4" Hybrid	T-Mobile

**Anchor Bolts**

Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Cluster

**Base Plate**

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	52.0	60.0	Clipped

**Reactions**

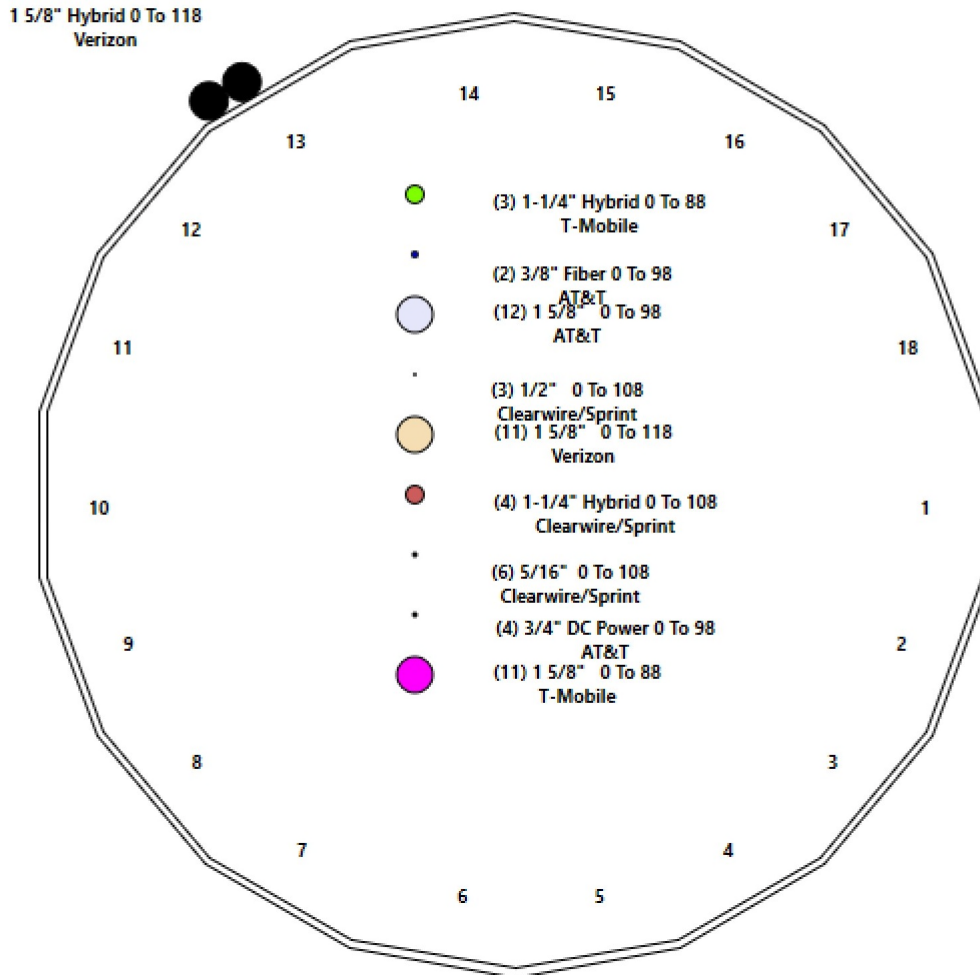
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	2621.7	28.6	33.3
0.9D + 1.6W 97 mph Wind	2594.7	28.6	25.0
1.2D + 1.0Di + 1.0Wi 50 mph Wind	759.9	8.2	62.8
1.2D + 1.0E	151.5	1.5	33.4
0.9D + 1.0E	149.8	1.5	25.0
1.0D + 1.0W 60 mph Wind	623.5	6.8	27.8

# Structure: CT08558-B-SBA - Coax Line Placement

Type: Monopole  
Site Name: New Britain 3, CT  
Height: 119.00 (ft)

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## Shaft Properties

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.3125	65		0.00	7,420
2	18	53.500	0.2500	65	Slip	57.00	4,488
3	18	10.500	0.1875	65	Slip	42.00	536
4	18	10.000	0.1875	65	Flange	0.00	464
<b>Total Shaft Weight:</b>							<b>12,908</b>

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	47.50	0.00	46.80	13166.65	25.39	152.00	35.70	53.25	35.10	5552.15	18.73	114.2	0.221639
2	37.25	48.50	29.36	5078.18	24.86	149.00	25.39	102.00	19.95	1593.41	16.50	101.5	0.221639
3	26.54	98.50	15.68	1376.54	23.55	141.57	24.22	109.00	14.30	1043.15	21.36	129.1	0.221639
4	24.22	109.0	14.30	1043.15	21.36	129.15	22.00	119.00	12.98	780.30	19.28	117.3	0.221639

## Load Summary

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	118.00	BXA-70063-6BF	3	17.00	7.57	0.70	201.47	11.168	0.70	0.00	0.00
2	118.00	T-Arm	3	350.00	10.00	0.75	668.05	21.359	0.75	0.00	0.00
3	118.00	Commscope NHH-65B-R2B	6	43.70	8.08	0.83	321.49	9.797	0.83	0.00	0.00
4	118.00	Samsung MT6407-77A	3	79.40	4.69	0.70	245.05	5.940	0.70	0.00	0.00
5	118.00	(3) T-Arm Kit VZWSMART-SFK4	1	500.00	16.50	1.00	1272.41	37.491	1.00	0.00	0.00
6	118.00	BSAMNT-SBS-1-2	3	25.35	0.00	1.00	48.39	0.000	1.00	0.00	0.00
7	118.00	Collar Mount-VZWSMART-PLK7	1	150.60	2.50	1.00	424.30	5.908	1.00	0.00	0.00
8	118.00	Samsung B5/B13 RRH-BR04C	3	70.30	1.88	0.67	133.61	2.598	0.67	0.00	0.00
9	118.00	Raycap RVZDC-6627-PF-48-OVP	1	32.00	3.79	1.00	206.22	4.867	1.00	0.00	0.00
10	118.00	B2/B66A RRH-BR049	3	84.40	1.87	0.67	191.50	2.638	0.67	0.00	0.00
11	108.00	1900MHz RRH	3	44.00	3.80	0.67	184.85	5.593	0.67	0.00	0.00
12	108.00	800 MHz Filters	3	64.00	2.40	0.67	163.61	3.844	0.67	0.00	0.00
13	108.00	800 MHz	3	53.00	2.49	0.67	148.43	3.966	0.67	0.00	0.00
14	108.00	840 10054	3	35.00	4.59	0.61	143.73	6.748	0.61	0.00	0.00
15	108.00	ACU-A20-N	4	1.00	0.14	0.67	6.54	0.523	0.67	0.00	0.00
16	108.00	APXVSP18-C-A20	2	57.00	8.02	0.83	280.02	11.625	0.83	0.00	0.00
17	108.00	APXVTM14-C-120	3	56.00	6.34	0.79	275.27	7.803	0.79	0.00	0.00
18	108.00	Horizon	2	10.60	0.43	1.00	39.67	1.090	1.00	0.00	0.00
19	108.00	P40-16-XLPP-RR-A	1	53.00	9.08	1.00	336.69	10.719	1.00	0.00	0.00
20	108.00	TD-RRH8x20-25	3	70.00	4.05	0.67	221.31	5.123	0.67	0.00	0.00
21	108.00	VHLP2.5	2	47.60	8.43	1.00	270.41	10.632	1.00	0.00	0.00
22	108.00	T-Arm	3	350.00	8.00	0.75	665.25	17.007	0.75	0.00	0.00
23	98.00	Cci OPA-65R-LCUU-H6	3	80.00	9.66	0.79	390.45	11.434	0.79	0.00	0.00
24	98.00	Powerwave 7770 w/Mount Pipe	3	27.00	5.54	0.72	173.04	8.268	0.72	0.00	0.00
25	98.00	Powerwave LGP21402 TMA	9	14.10	1.29	1.00	46.05	2.358	1.00	0.00	0.00
26	98.00	Ericsson RRUS 11	3	44.00	2.52	0.67	123.67	3.329	0.67	0.00	0.00
27	98.00	Powerwave LGP13519 Diplexer	6	5.30	0.34	1.00	17.44	0.920	1.00	0.00	0.00
28	98.00	Raycap DC6-48-60-0-8F	2	31.80	0.92	1.00	110.80	1.480	1.00	0.00	0.00
29	98.00	T-Arm	3	350.00	10.00	0.75	662.20	21.150	0.75	0.00	0.00
30	98.00	Quintel QS66512-2	3	111.00	8.13	0.92	415.64	9.820	0.92	0.00	0.00
31	98.00	Ericsson RRUS 8843 B25/B66A	3	75.00	1.65	0.67	177.07	2.358	0.67	0.00	0.00
32	98.00	Ericsson RRUS 32	3	53.00	2.74	0.67	173.05	3.691	0.67	0.00	0.00
33	88.00	AIR6449 B41	3	103.00	5.65	0.71	276.33	6.852	0.71	0.00	0.00
34	88.00	SDX1926Q-43	3	5.50	0.23	0.67	15.22	0.695	0.67	0.00	0.00
35	88.00	RRUS 4415 B25	3	46.00	1.64	0.67	97.96	2.291	0.67	0.00	0.00
36	88.00	AIR32 KRD901146-1_B66A	3	132.20	6.51	0.87	376.67	8.012	0.87	0.00	0.00
37	88.00	APXVAARR24_43-U-NA20	3	128.00	20.24	0.70	674.18	22.666	0.75	0.00	0.00
38	88.00	KRY 112 144/2	3	11.00	0.41	0.70	24.63	1.011	0.75	0.00	0.00
39	88.00	4449 B71 + B85	3	74.00	2.57	0.67	195.46	3.386	0.67	0.00	0.00
40	88.00	T-Arm w/ mod	3	350.00	14.00	0.75	658.86	29.443	0.75	0.00	0.00
<b>Totals:</b>			<b>121</b>	<b>10,118.95</b>			<b>29,290.36</b>				

### Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	118.00	(11) 1 5/8" Coax	0.00	Inside

## Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	118.00	(2) 1 5/8" Hybrid		0.00							
0.00	108.00	(4) 1-1/4" Hybrid		0.00							
0.00	108.00	(3) 1/2" Coax		0.00							
0.00	108.00	(6) 5/16" Coax		0.00							
0.00	98.00	(12) 1 5/8" Coax		0.00							
0.00	98.00	(4) 3/4" DC Power		0.00							
0.00	98.00	(2) 3/8" Fiber		0.00							
0.00	88.00	(11) 1 5/8" Coax		0.00							
0.00	88.00	(3) 1-1/4" Hybrid		0.00							

## Shaft Section Properties

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Increment Length:** 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in <sup>3</sup> )	Weight (lb)
0.00		0.3125	47.500	46.802	13166.7	25.39	152.00	71.5	546.0	0.0
5.00		0.3125	46.392	45.703	12260.6	24.77	148.45	72.3	520.5	786.9
10.00		0.3125	45.284	44.604	11397.1	24.14	144.91	73.0	495.7	768.2
15.00		0.3125	44.175	43.505	10575.2	23.52	141.36	73.7	471.5	749.5
20.00		0.3125	43.067	42.406	9793.7	22.89	137.82	74.5	447.9	730.8
25.00		0.3125	41.959	41.307	9051.7	22.26	134.27	75.2	424.9	712.1
30.00		0.3125	40.851	40.208	8348.2	21.64	130.72	75.9	402.5	693.4
35.00		0.3125	39.743	39.108	7682.1	21.01	127.18	76.7	380.7	674.7
40.00		0.3125	38.634	38.009	7052.4	20.39	123.63	77.4	359.5	656.0
45.00		0.3125	37.526	36.910	6458.1	19.76	120.08	78.2	339.0	637.3
48.50	Bot - Section 2	0.3125	36.751	36.141	6062.6	19.33	117.60	78.7	324.9	435.0
50.00		0.3125	36.418	35.811	5898.2	19.14	116.54	78.9	319.0	332.8
53.25	Top - Section 1	0.2500	36.198	28.524	4656.9	24.12	144.79	0.0	0.0	710.7
55.00		0.2500	35.810	28.216	4507.8	23.85	143.24	73.4	247.9	168.9
60.00		0.2500	34.702	27.336	4099.4	23.06	138.81	74.3	232.7	472.6
65.00		0.2500	33.593	26.457	3716.4	22.28	134.37	75.2	217.9	457.6
70.00		0.2500	32.485	25.578	3358.0	21.50	129.94	76.1	203.6	442.7
75.00		0.2500	31.377	24.698	3023.4	20.72	125.51	77.0	189.8	427.7
80.00		0.2500	30.269	23.819	2711.9	19.94	121.08	77.9	176.5	412.7
85.00		0.2500	29.161	22.940	2422.5	19.16	116.64	78.9	163.6	397.8
88.00		0.2500	28.496	22.412	2259.2	18.69	113.98	79.4	156.2	231.5
90.00		0.2500	28.053	22.061	2154.5	18.38	112.21	79.8	151.3	151.3
95.00		0.2500	26.944	21.181	1907.0	17.59	107.78	80.7	139.4	367.9
98.00		0.2500	26.279	20.654	1768.0	17.12	105.12	81.3	132.5	213.5
98.50	Bot - Section 3	0.2500	26.169	20.566	1745.5	17.05	104.67	81.4	131.4	35.1
100.00		0.2500	25.836	20.302	1679.2	16.81	103.34	81.6	128.0	183.8
102.00	Top - Section 2	0.1875	25.768	15.223	1258.5	22.82	137.43	0.0	0.0	241.5
105.00		0.1875	25.103	14.827	1162.9	22.20	133.88	75.3	91.2	153.4
108.00		0.1875	24.438	14.432	1072.3	21.57	130.34	76.0	86.4	149.3
109.00	Top - Section 3	0.1875	24.216	14.300	1043.1	21.36	129.15	76.3	84.8	48.9
109.00	Bot - Section 4	0.1875	24.216	14.300	1043.1	21.36	129.15	76.3	84.8	
110.00		0.1875	23.995	14.168	1014.5	21.15	127.97	76.5	83.3	48.4
115.00		0.1875	22.887	13.508	879.4	20.11	122.06	77.7	75.7	235.4
118.00		0.1875	22.222	13.113	804.3	19.49	118.52	78.5	71.3	135.9
119.00		0.1875	22.000	12.981	780.3	19.28	117.33	78.7	69.9	44.4

**12908.1**

## Wind Loading - Shaft

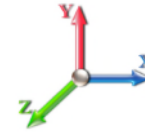
<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.60



**Iterations** 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	359.45	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	351.07	0.650	0.000	5.00	19.863	12.91	442.0	0.0	944.3
10.00		1.00	0.85	19.450	21.40	342.68	0.650	0.000	5.00	19.394	12.61	431.5	0.0	921.9
15.00		1.00	0.85	19.450	21.40	334.29	0.650	0.000	5.00	18.925	12.30	421.1	0.0	899.4
20.00		1.00	0.90	20.638	22.70	335.71	0.650	0.000	5.00	18.456	12.00	435.7	0.0	877.0
25.00		1.00	0.95	21.630	23.79	334.84	0.650	0.000	5.00	17.987	11.69	445.1	0.0	854.6
30.00		1.00	0.98	22.477	24.72	332.32	0.650	0.000	5.00	17.518	11.39	450.4	0.0	832.1
35.00		1.00	1.01	23.218	25.54	328.59	0.650	0.000	5.00	17.049	11.08	452.9	0.0	809.7
40.00		1.00	1.04	23.880	26.27	323.95	0.650	0.000	5.00	16.580	10.78	453.0	0.0	787.2
45.00		1.00	1.07	24.479	26.93	318.58	0.650	0.000	5.00	16.112	10.47	451.2	0.0	764.8
48.50	Bot - Section 2	1.00	1.09	24.869	27.36	314.47	0.650	0.000	3.50	10.999	7.15	312.9	0.0	522.0
50.00		1.00	1.09	25.029	27.53	312.62	0.650	0.000	1.50	4.707	3.06	134.8	0.0	399.4
53.25	Top - Section 1	1.00	1.11	25.363	27.90	308.48	0.650	0.000	3.25	10.054	6.53	291.7	0.0	852.8
55.00		1.00	1.12	25.536	28.09	310.50	0.650	0.000	1.75	5.332	3.47	155.8	0.0	202.7
60.00		1.00	1.14	26.008	28.61	303.66	0.650	0.000	5.00	14.917	9.70	443.8	0.0	567.1
65.00		1.00	1.16	26.450	29.09	296.45	0.650	0.000	5.00	14.448	9.39	437.2	0.0	549.1
70.00		1.00	1.17	26.866	29.55	288.92	0.650	0.000	5.00	13.979	9.09	429.6	0.0	531.2
75.00		1.00	1.19	27.259	29.98	281.09	0.650	0.000	5.00	13.510	8.78	421.3	0.0	513.2
80.00		1.00	1.21	27.632	30.39	273.01	0.650	0.000	5.00	13.041	8.48	412.2	0.0	495.3
85.00		1.00	1.22	27.987	30.79	264.70	0.650	0.000	5.00	12.572	8.17	402.5	0.0	477.3
88.00	Appurtenance(s)	1.00	1.23	28.192	31.01	259.61	0.650	0.000	3.00	7.318	4.76	236.0	0.0	277.8
90.00		1.00	1.24	28.325	31.16	256.18	0.650	0.000	2.00	4.785	3.11	155.1	0.0	181.6
95.00		1.00	1.25	28.650	31.51	247.46	0.650	0.000	5.00	11.634	7.56	381.3	0.0	441.4
98.00	Appurtenance(s)	1.00	1.26	28.838	31.72	242.15	0.650	0.000	3.00	6.756	4.39	222.9	0.0	256.2
98.50	Bot - Section 3	1.00	1.26	28.869	31.76	241.26	0.650	0.000	0.50	1.110	0.72	36.6	0.0	42.1
100.00		1.00	1.27	28.961	31.86	238.57	0.650	0.000	1.50	3.348	2.18	110.9	0.0	220.6
102.00	Top - Section 2	1.00	1.27	29.082	31.99	234.97	0.650	0.000	2.00	4.398	2.86	146.3	0.0	289.8
105.00		1.00	1.28	29.260	32.19	232.99	0.650	0.000	3.00	6.457	4.20	216.1	0.0	184.1
108.00	Appurtenance(s)	1.00	1.29	29.434	32.38	227.50	0.650	0.000	3.00	6.288	4.09	211.7	0.0	179.2
109.00	Top - Section 3	1.00	1.29	29.491	32.44	225.65	0.650	0.000	1.00	2.059	1.34	69.5	0.0	58.7
110.00		1.00	1.29	29.548	32.50	223.80	0.650	0.000	1.00	2.040	1.33	69.0	0.0	58.1
115.00		1.00	1.30	29.826	32.81	214.47	0.650	0.000	5.00	9.918	6.45	338.4	0.0	282.5
118.00	Appurtenance(s)	1.00	1.31	29.988	32.99	208.80	0.650	0.000	3.00	5.726	3.72	196.4	0.0	163.1
119.00		1.00	1.31	30.041	33.05	206.90	0.650	0.000	1.00	1.871	1.22	64.3	0.0	53.3
<b>Totals:</b>									<b>119.00</b>			<b>9,879.2</b>		<b>15,489.7</b>

## Discrete Appurtenance Forces

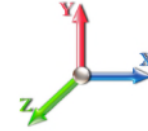
<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 10
	<b>Struct Class:</b> II	



**Load Case:** 1.2D + 1.6W 97 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



**Iterations** 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)			
1	118.00	(3) T-Arm Kit	1	29.988	32.986	0.75	0.75	12.38	600.00	0.000	0.000	653.13	0.00	0.00			
2	118.00	BXA-70063-6BF	3	29.988	32.986	0.63	0.90	14.31	61.20	0.000	0.000	755.12	0.00	0.00			
3	118.00	T-Arm	3	29.988	32.986	0.56	0.75	16.88	1260.00	0.000	0.000	890.63	0.00	0.00			
4	118.00	Commscope	6	29.988	32.986	0.75	0.90	36.21	314.64	0.000	0.000	1911.34	0.00	0.00			
5	118.00	Samsung MT6407-77A	3	29.988	32.986	0.63	0.90	8.86	285.84	0.000	0.000	467.83	0.00	0.00			
6	118.00	B2/B66A RRRH-BR049	3	29.988	32.986	0.60	0.90	3.38	303.84	0.000	0.000	178.54	0.00	0.00			
7	118.00	Collar	1	29.988	32.986	0.75	0.75	1.88	180.72	0.000	0.000	98.96	0.00	0.00			
8	118.00	Samsung B5/B13	3	29.988	32.986	0.60	0.90	3.40	253.08	0.000	0.000	179.49	0.00	0.00			
9	118.00	Raycap	1	29.988	32.986	0.90	0.90	3.41	38.40	0.000	0.000	180.03	0.00	0.00			
10	118.00	BSAMNT-SBS-1-2	3	29.988	32.986	0.75	0.75	0.00	91.26	0.000	0.000	0.00	0.00	0.00			
11	108.00	APXVTM14-C-120	3	29.434	32.377	0.63	0.80	12.02	201.60	0.000	0.000	622.71	0.00	0.00			
12	108.00	800 MHz	3	29.434	32.377	0.54	0.80	4.00	190.80	0.000	0.000	207.42	0.00	0.00			
13	108.00	840 10054	3	29.434	32.377	0.49	0.80	6.72	126.00	0.000	0.000	348.11	0.00	0.00			
14	108.00	ACU-A20-N	4	29.434	32.377	0.54	0.80	0.30	4.80	0.000	0.000	15.55	0.00	0.00			
15	108.00	APXVSP18-C-A20	2	29.434	32.377	0.66	0.80	10.65	136.80	0.000	0.000	551.74	0.00	0.00			
16	108.00	TD-RRH8x20-25	3	29.434	32.377	0.54	0.80	6.51	252.00	0.000	0.000	337.37	0.00	0.00			
17	108.00	Horizon	2	29.434	32.377	0.80	0.80	0.69	25.44	0.000	0.000	35.64	0.00	0.00			
18	108.00	P40-16-XLPP-RR-A	1	29.434	32.377	0.80	0.80	7.26	63.60	0.000	0.000	376.30	0.00	0.00			
19	108.00	VHLP2.5	2	29.434	32.377	1.00	1.00	16.86	114.24	0.000	0.000	873.41	0.00	0.00			
20	108.00	T-Arm	3	29.434	32.377	0.56	0.75	13.50	1260.00	0.000	0.000	699.35	0.00	0.00			
21	108.00	800 MHz Filters	3	29.434	32.377	0.54	0.80	3.86	230.40	0.000	0.000	199.92	0.00	0.00			
22	108.00	1900MHz RRRH	3	29.434	32.377	0.54	0.80	6.11	158.40	0.000	0.000	316.54	0.00	0.00			
23	98.00	Powerwave LGP13519	6	28.838	31.722	0.80	0.80	1.63	38.16	0.000	0.000	82.83	0.00	0.00			
24	98.00	Cci OPA-65R-LCUU-H6	3	28.838	31.722	0.63	0.80	18.32	288.00	0.000	0.000	929.59	0.00	0.00			
25	98.00	Powerwave LGP21402	9	28.838	31.722	0.80	0.80	9.29	152.28	0.000	0.000	471.41	0.00	0.00			
26	98.00	Ericsson RRUS 11	3	28.838	31.722	0.54	0.80	4.05	158.40	0.000	0.000	205.67	0.00	0.00			
27	98.00	Powerwave 7770 w/Mount	3	28.838	31.722	0.58	0.80	9.57	97.20	0.000	0.000	485.88	0.00	0.00			
28	98.00	T-Arm	3	28.838	31.722	0.56	0.75	16.88	1260.00	0.000	0.000	856.48	0.00	0.00			
29	98.00	Quintel QS66512-2	3	28.838	31.722	0.74	0.80	17.95	399.60	0.000	0.000	911.10	0.00	0.00			
30	98.00	Ericsson RRUS 8843	3	28.838	31.722	0.54	0.80	2.65	270.00	0.000	0.000	134.66	0.00	0.00			
31	98.00	Ericsson RRUS 32	3	28.838	31.722	0.54	0.80	4.41	190.80	0.000	0.000	223.62	0.00	0.00			
32	98.00	Raycap DC6-48-60-0-8F	2	28.838	31.722	0.80	0.80	1.47	76.32	0.000	0.000	74.71	0.00	0.00			
33	88.00	4449 B71 + B85	3	28.192	31.011	0.54	0.80	4.13	266.40	0.000	0.000	205.05	0.00	0.00			
34	88.00	AIR32	3	28.192	31.011	0.70	0.80	13.59	475.92	0.000	0.000	674.44	0.00	0.00			
35	88.00	APXVAARR24_43-U-NA2	3	28.192	31.011	0.56	0.80	34.00	460.80	0.000	0.000	1687.15	0.00	0.00			
36	88.00	KRY 112 144/2	3	28.192	31.011	0.56	0.80	0.69	39.60	0.000	0.000	34.18	0.00	0.00			
37	88.00	SDX1926Q-43	3	28.192	31.011	0.54	0.80	0.37	19.80	0.000	0.000	18.35	0.00	0.00			
38	88.00	T-Arm w/ mod	3	28.192	31.011	0.56	0.75	23.63	1260.00	0.000	0.000	1172.21	0.00	0.00			
39	88.00	AIR6449 B41	3	28.192	31.011	0.57	0.80	9.63	370.80	0.000	0.000	477.70	0.00	0.00			
40	88.00	RRUS 4415 B25	3	28.192	31.011	0.54	0.80	2.64	165.60	0.000	0.000	130.85	0.00	0.00			
<b>Totals:</b>								<b>12,142.74</b>							<b>18,675.00</b>		



## Total Applied Force Summary

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

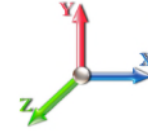


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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



**Iterations** 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		441.96	1225.84	0.00	0.00
10.00		431.53	1203.40	0.00	0.00
15.00		421.10	1180.95	0.00	0.00
20.00		435.73	1158.51	0.00	0.00
25.00		445.09	1136.07	0.00	0.00
30.00		450.45	1113.63	0.00	0.00
35.00		452.85	1091.19	0.00	0.00
40.00		452.96	1068.75	0.00	0.00
45.00		451.20	1046.31	0.00	0.00
48.50		312.92	719.06	0.00	0.00
50.00		134.78	483.82	0.00	0.00
53.25		291.71	1035.80	0.00	0.00
55.00		155.75	301.25	0.00	0.00
60.00		443.81	848.60	0.00	0.00
65.00		437.17	830.65	0.00	0.00
70.00		429.63	812.70	0.00	0.00
75.00		421.29	794.74	0.00	0.00
80.00		412.24	776.79	0.00	0.00
85.00		402.52	758.84	0.00	0.00
88.00	(24) attachments	4635.95	3505.61	0.00	0.00
90.00		155.06	259.88	0.00	0.00
95.00		381.32	637.12	0.00	0.00
98.00	(38) attachments	4598.82	3304.42	0.00	0.00
98.50		36.64	53.13	0.00	0.00
100.00		110.92	253.77	0.00	0.00
102.00		146.33	333.96	0.00	0.00
105.00		216.13	250.36	0.00	0.00
108.00	(32) attachments	4795.78	3009.59	0.00	0.00
109.00		69.45	75.03	0.00	0.00
110.00		68.95	74.49	0.00	0.00
115.00		338.39	364.37	0.00	0.00
118.00	(27) attachments	5511.50	3601.14	0.00	0.00
119.00		64.30	53.27	0.00	0.00
	<b>Totals:</b>	<b>28,554.24</b>	<b>33,363.03</b>	<b>0.00</b>	<b>0.00</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

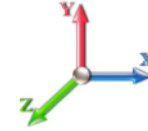


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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



**Iterations** 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	13.20
10.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	13.20
15.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	13.20
20.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	20.638	0.00	13.20
25.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.630	0.00	13.20
30.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	22.477	0.00	13.20
35.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.218	0.00	13.20
40.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.880	0.00	13.20
45.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.479	0.00	13.20
48.50	1 5/8" Hybrid	Yes	3.50	0.000	0.00	0.00	0.00	0.000	0.000	24.869	0.00	9.24
50.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	25.029	0.00	3.96
53.25	1 5/8" Hybrid	Yes	3.25	0.000	0.00	0.00	0.00	0.000	0.000	25.363	0.00	8.58
55.00	1 5/8" Hybrid	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	25.536	0.00	4.62
60.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.008	0.00	13.20
65.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.450	0.00	13.20
70.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.866	0.00	13.20
75.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.259	0.00	13.20
80.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.632	0.00	13.20
85.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.987	0.00	13.20
88.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	28.192	0.00	7.92
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.325	0.00	5.28
95.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.650	0.00	13.20
98.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	28.838	0.00	7.92
98.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	1.32
100.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	28.961	0.00	3.96
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.082	0.00	5.28
105.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.260	0.00	7.92
108.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.434	0.00	7.92
109.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.491	0.00	2.64
110.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.548	0.00	2.64
115.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.826	0.00	13.20
118.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.988	0.00	7.92
<b>Totals:</b>											<b>0.0</b>	<b>311.5</b>

## Calculated Forces

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.6W 97 mph Wind

**Iterations** 23

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-33.29	-28.64	0.00	-2621.7	0.00	2621.70	3013.27	1506.63	5849.73	2929.21	0.00	0.000	0.000	0.906
5.00	-31.93	-28.35	0.00	-2478.5	0.00	2478.53	2972.75	1486.38	5634.65	2821.52	0.15	-0.276	0.000	0.890
10.00	-30.59	-28.06	0.00	-2336.8	0.00	2336.80	2930.78	1465.39	5420.60	2714.33	0.59	-0.555	0.000	0.872
15.00	-29.28	-27.77	0.00	-2196.5	0.00	2196.53	2887.35	1443.68	5207.78	2607.76	1.32	-0.838	0.000	0.853
20.00	-27.99	-27.45	0.00	-2057.7	0.00	2057.70	2842.47	1421.24	4996.39	2501.91	2.35	-1.124	0.000	0.833
25.00	-26.73	-27.12	0.00	-1920.4	0.00	1920.45	2796.14	1398.07	4786.62	2396.87	3.68	-1.413	0.000	0.811
30.00	-25.49	-26.77	0.00	-1784.8	0.00	1784.87	2748.35	1374.17	4578.69	2292.75	5.32	-1.704	0.000	0.788
35.00	-24.28	-26.40	0.00	-1651.0	0.00	1651.04	2699.10	1349.55	4372.78	2189.64	7.26	-1.997	0.000	0.763
40.00	-23.10	-26.03	0.00	-1519.0	0.00	1519.03	2648.40	1324.20	4169.10	2087.65	9.51	-2.290	0.000	0.737
45.00	-21.96	-25.63	0.00	-1388.8	0.00	1388.89	2596.25	1298.12	3967.85	1986.88	12.07	-2.583	0.000	0.708
48.50	-21.19	-25.34	0.00	-1299.1	0.00	1299.19	2558.87	1279.44	3828.53	1917.11	14.04	-2.791	0.000	0.686
50.00	-20.65	-25.23	0.00	-1261.1	0.00	1261.18	2542.63	1271.32	3769.24	1887.42	14.93	-2.881	0.000	0.677
53.25	-19.57	-24.94	0.00	-1179.1	0.00	1179.19	1874.80	937.40	2771.76	1387.94	16.96	-3.072	0.000	0.861
55.00	-19.18	-24.84	0.00	-1135.5	0.00	1135.55	1862.74	931.37	2724.01	1364.03	18.10	-3.176	0.000	0.844
60.00	-18.22	-24.45	0.00	-1011.3	0.00	1011.36	1827.31	913.65	2588.34	1296.09	21.61	-3.515	0.000	0.791
65.00	-17.28	-24.06	0.00	-889.10	0.00	889.10	1790.42	895.21	2453.92	1228.78	25.47	-3.844	0.000	0.734
70.00	-16.37	-23.66	0.00	-768.79	0.00	768.79	1752.08	876.04	2320.96	1162.21	29.67	-4.162	0.000	0.672
75.00	-15.49	-23.26	0.00	-650.47	0.00	650.47	1712.28	856.14	2189.66	1096.46	34.19	-4.462	0.000	0.603
80.00	-14.65	-22.86	0.00	-534.15	0.00	534.15	1671.02	835.51	2060.22	1031.64	39.01	-4.741	0.000	0.527
85.00	-13.85	-22.44	0.00	-419.87	0.00	419.87	1628.32	814.16	1932.84	967.86	44.11	-4.991	0.000	0.443
88.00	-10.73	-17.53	0.00	-352.55	0.00	352.55	1601.99	801.00	1857.49	930.12	47.28	-5.127	0.000	0.386
90.00	-10.45	-17.38	0.00	-317.49	0.00	317.49	1584.15	792.08	1807.72	905.20	49.45	-5.212	0.000	0.358
95.00	-9.81	-16.96	0.00	-230.59	0.00	230.59	1538.53	769.27	1685.06	843.78	55.00	-5.393	0.000	0.280
98.00	-6.94	-12.08	0.00	-179.70	0.00	179.70	1510.46	755.23	1612.73	807.56	58.42	-5.484	0.000	0.227
98.50	-6.89	-12.04	0.00	-173.66	0.00	173.66	1505.73	752.87	1600.77	801.57	58.99	-5.499	0.000	0.221
100.00	-6.64	-11.91	0.00	-155.60	0.00	155.60	1491.46	745.73	1565.06	783.69	60.72	-5.539	0.000	0.203
102.00	-6.31	-11.74	0.00	-131.78	0.00	131.78	1021.50	510.75	1074.26	537.93	63.05	-5.588	0.000	0.252
105.00	-6.07	-11.51	0.00	-96.57	0.00	96.57	1004.76	502.38	1028.99	515.26	66.58	-5.649	0.000	0.194
108.00	-3.54	-6.44	0.00	-62.05	0.00	62.05	987.50	493.75	984.13	492.79	70.14	-5.707	0.000	0.130
109.00	-3.48	-6.36	0.00	-55.62	0.00	55.62	981.63	490.81	969.27	485.35	71.34	-5.723	0.000	0.118
109.00	-3.48	-6.36	0.00	-55.62	0.00	55.62	981.63	490.81	969.27	485.35	71.34	-5.723	0.000	0.118
110.00	-3.40	-6.29	0.00	-49.26	0.00	49.26	975.70	487.85	954.46	477.94	72.54	-5.737	0.000	0.107
115.00	-3.07	-5.92	0.00	-17.82	0.00	17.82	945.18	472.59	881.23	441.27	78.56	-5.784	0.000	0.044
118.00	-0.05	-0.07	0.00	-0.07	0.00	0.07	926.18	463.09	838.01	419.63	82.20	-5.793	0.000	0.000
119.00	0.00	-0.06	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	83.41	-5.793	0.000	0.000

## Wind Loading - Shaft

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



**Iterations** 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	359.45	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	351.07	0.650	0.000	5.00	19.863	12.91	442.0	0.0	708.2
10.00		1.00	0.85	19.450	21.40	342.68	0.650	0.000	5.00	19.394	12.61	431.5	0.0	691.4
15.00		1.00	0.85	19.450	21.40	334.29	0.650	0.000	5.00	18.925	12.30	421.1	0.0	674.6
20.00		1.00	0.90	20.638	22.70	335.71	0.650	0.000	5.00	18.456	12.00	435.7	0.0	657.8
25.00		1.00	0.95	21.630	23.79	334.84	0.650	0.000	5.00	17.987	11.69	445.1	0.0	640.9
30.00		1.00	0.98	22.477	24.72	332.32	0.650	0.000	5.00	17.518	11.39	450.4	0.0	624.1
35.00		1.00	1.01	23.218	25.54	328.59	0.650	0.000	5.00	17.049	11.08	452.9	0.0	607.3
40.00		1.00	1.04	23.880	26.27	323.95	0.650	0.000	5.00	16.580	10.78	453.0	0.0	590.4
45.00		1.00	1.07	24.479	26.93	318.58	0.650	0.000	5.00	16.112	10.47	451.2	0.0	573.6
48.50	Bot - Section 2	1.00	1.09	24.869	27.36	314.47	0.650	0.000	3.50	10.999	7.15	312.9	0.0	391.5
50.00		1.00	1.09	25.029	27.53	312.62	0.650	0.000	1.50	4.707	3.06	134.8	0.0	299.5
53.25	Top - Section 1	1.00	1.11	25.363	27.90	308.48	0.650	0.000	3.25	10.054	6.53	291.7	0.0	639.6
55.00		1.00	1.12	25.536	28.09	310.50	0.650	0.000	1.75	5.332	3.47	155.8	0.0	152.0
60.00		1.00	1.14	26.008	28.61	303.66	0.650	0.000	5.00	14.917	9.70	443.8	0.0	425.3
65.00		1.00	1.16	26.450	29.09	296.45	0.650	0.000	5.00	14.448	9.39	437.2	0.0	411.9
70.00		1.00	1.17	26.866	29.55	288.92	0.650	0.000	5.00	13.979	9.09	429.6	0.0	398.4
75.00		1.00	1.19	27.259	29.98	281.09	0.650	0.000	5.00	13.510	8.78	421.3	0.0	384.9
80.00		1.00	1.21	27.632	30.39	273.01	0.650	0.000	5.00	13.041	8.48	412.2	0.0	371.5
85.00		1.00	1.22	27.987	30.79	264.70	0.650	0.000	5.00	12.572	8.17	402.5	0.0	358.0
88.00	Appurtenance(s)	1.00	1.23	28.192	31.01	259.61	0.650	0.000	3.00	7.318	4.76	236.0	0.0	208.3
90.00		1.00	1.24	28.325	31.16	256.18	0.650	0.000	2.00	4.785	3.11	155.1	0.0	136.2
95.00		1.00	1.25	28.650	31.51	247.46	0.650	0.000	5.00	11.634	7.56	381.3	0.0	331.1
98.00	Appurtenance(s)	1.00	1.26	28.838	31.72	242.15	0.650	0.000	3.00	6.756	4.39	222.9	0.0	192.2
98.50	Bot - Section 3	1.00	1.26	28.869	31.76	241.26	0.650	0.000	0.50	1.110	0.72	36.6	0.0	31.6
100.00		1.00	1.27	28.961	31.86	238.57	0.650	0.000	1.50	3.348	2.18	110.9	0.0	165.5
102.00	Top - Section 2	1.00	1.27	29.082	31.99	234.97	0.650	0.000	2.00	4.398	2.86	146.3	0.0	217.3
105.00		1.00	1.28	29.260	32.19	232.99	0.650	0.000	3.00	6.457	4.20	216.1	0.0	138.0
108.00	Appurtenance(s)	1.00	1.29	29.434	32.38	227.50	0.650	0.000	3.00	6.288	4.09	211.7	0.0	134.4
109.00	Top - Section 3	1.00	1.29	29.491	32.44	225.65	0.650	0.000	1.00	2.059	1.34	69.5	0.0	44.0
110.00		1.00	1.29	29.548	32.50	223.80	0.650	0.000	1.00	2.040	1.33	69.0	0.0	43.6
115.00		1.00	1.30	29.826	32.81	214.47	0.650	0.000	5.00	9.918	6.45	338.4	0.0	211.9
118.00	Appurtenance(s)	1.00	1.31	29.988	32.99	208.80	0.650	0.000	3.00	5.726	3.72	196.4	0.0	122.3
119.00		1.00	1.31	30.041	33.05	206.90	0.650	0.000	1.00	1.871	1.22	64.3	0.0	40.0
<b>Totals:</b>									<b>119.00</b>			<b>9,879.2</b>		<b>11,617.3</b>

## Discrete Appurtenance Forces

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



**Iterations** 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	(3) T-Arm Kit	1	29.988	32.986	0.75	0.75	12.38	450.00	0.000	0.000	653.13	0.00	0.00
2	118.00	BXA-70063-6BF	3	29.988	32.986	0.63	0.90	14.31	45.90	0.000	0.000	755.12	0.00	0.00
3	118.00	T-Arm	3	29.988	32.986	0.56	0.75	16.88	945.00	0.000	0.000	890.63	0.00	0.00
4	118.00	Commscope	6	29.988	32.986	0.75	0.90	36.21	235.98	0.000	0.000	1911.34	0.00	0.00
5	118.00	Samsung MT6407-77A	3	29.988	32.986	0.63	0.90	8.86	214.38	0.000	0.000	467.83	0.00	0.00
6	118.00	B2/B66A RRRH-BR049	3	29.988	32.986	0.60	0.90	3.38	227.88	0.000	0.000	178.54	0.00	0.00
7	118.00	Collar	1	29.988	32.986	0.75	0.75	1.88	135.54	0.000	0.000	98.96	0.00	0.00
8	118.00	Samsung B5/B13	3	29.988	32.986	0.60	0.90	3.40	189.81	0.000	0.000	179.49	0.00	0.00
9	118.00	Raycap	1	29.988	32.986	0.90	0.90	3.41	28.80	0.000	0.000	180.03	0.00	0.00
10	118.00	BSAMNT-SBS-1-2	3	29.988	32.986	0.75	0.75	0.00	68.45	0.000	0.000	0.00	0.00	0.00
11	108.00	APXVTM14-C-120	3	29.434	32.377	0.63	0.80	12.02	151.20	0.000	0.000	622.71	0.00	0.00
12	108.00	800 MHz	3	29.434	32.377	0.54	0.80	4.00	143.10	0.000	0.000	207.42	0.00	0.00
13	108.00	840 10054	3	29.434	32.377	0.49	0.80	6.72	94.50	0.000	0.000	348.11	0.00	0.00
14	108.00	ACU-A20-N	4	29.434	32.377	0.54	0.80	0.30	3.60	0.000	0.000	15.55	0.00	0.00
15	108.00	APXVSP18-C-A20	2	29.434	32.377	0.66	0.80	10.65	102.60	0.000	0.000	551.74	0.00	0.00
16	108.00	TD-RRH8x20-25	3	29.434	32.377	0.54	0.80	6.51	189.00	0.000	0.000	337.37	0.00	0.00
17	108.00	Horizon	2	29.434	32.377	0.80	0.80	0.69	19.08	0.000	0.000	35.64	0.00	0.00
18	108.00	P40-16-XLPP-RR-A	1	29.434	32.377	0.80	0.80	7.26	47.70	0.000	0.000	376.30	0.00	0.00
19	108.00	VHLP2.5	2	29.434	32.377	1.00	1.00	16.86	85.68	0.000	0.000	873.41	0.00	0.00
20	108.00	T-Arm	3	29.434	32.377	0.56	0.75	13.50	945.00	0.000	0.000	699.35	0.00	0.00
21	108.00	800 MHz Filters	3	29.434	32.377	0.54	0.80	3.86	172.80	0.000	0.000	199.92	0.00	0.00
22	108.00	1900MHz RRRH	3	29.434	32.377	0.54	0.80	6.11	118.80	0.000	0.000	316.54	0.00	0.00
23	98.00	Powerwave LGP13519	6	28.838	31.722	0.80	0.80	1.63	28.62	0.000	0.000	82.83	0.00	0.00
24	98.00	Cci OPA-65R-LCUU-H6	3	28.838	31.722	0.63	0.80	18.32	216.00	0.000	0.000	929.59	0.00	0.00
25	98.00	Powerwave LGP21402	9	28.838	31.722	0.80	0.80	9.29	114.21	0.000	0.000	471.41	0.00	0.00
26	98.00	Ericsson RRUS 11	3	28.838	31.722	0.54	0.80	4.05	118.80	0.000	0.000	205.67	0.00	0.00
27	98.00	Powerwave 7770 w/Mount	3	28.838	31.722	0.58	0.80	9.57	72.90	0.000	0.000	485.88	0.00	0.00
28	98.00	T-Arm	3	28.838	31.722	0.56	0.75	16.88	945.00	0.000	0.000	856.48	0.00	0.00
29	98.00	Quintel QS66512-2	3	28.838	31.722	0.74	0.80	17.95	299.70	0.000	0.000	911.10	0.00	0.00
30	98.00	Ericsson RRUS 8843	3	28.838	31.722	0.54	0.80	2.65	202.50	0.000	0.000	134.66	0.00	0.00
31	98.00	Ericsson RRUS 32	3	28.838	31.722	0.54	0.80	4.41	143.10	0.000	0.000	223.62	0.00	0.00
32	98.00	Raycap DC6-48-60-0-8F	2	28.838	31.722	0.80	0.80	1.47	57.24	0.000	0.000	74.71	0.00	0.00
33	88.00	4449 B71 + B85	3	28.192	31.011	0.54	0.80	4.13	199.80	0.000	0.000	205.05	0.00	0.00
34	88.00	AIR32	3	28.192	31.011	0.70	0.80	13.59	356.94	0.000	0.000	674.44	0.00	0.00
35	88.00	APXVAARR24_43-U-NA2	3	28.192	31.011	0.56	0.80	34.00	345.60	0.000	0.000	1687.15	0.00	0.00
36	88.00	KRY 112 144/2	3	28.192	31.011	0.56	0.80	0.69	29.70	0.000	0.000	34.18	0.00	0.00
37	88.00	SDX1926Q-43	3	28.192	31.011	0.54	0.80	0.37	14.85	0.000	0.000	18.35	0.00	0.00
38	88.00	T-Arm w/ mod	3	28.192	31.011	0.56	0.75	23.63	945.00	0.000	0.000	1172.21	0.00	0.00
39	88.00	AIR6449 B41	3	28.192	31.011	0.57	0.80	9.63	278.10	0.000	0.000	477.70	0.00	0.00
40	88.00	RRUS 4415 B25	3	28.192	31.011	0.54	0.80	2.64	124.20	0.000	0.000	130.85	0.00	0.00

**Totals:** 9,107.06

**18,675.00**

## Total Applied Force Summary

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

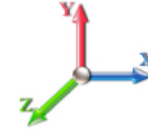


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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



**Iterations** 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		441.96	919.38	0.00	0.00
10.00		431.53	902.55	0.00	0.00
15.00		421.10	885.72	0.00	0.00
20.00		435.73	868.89	0.00	0.00
25.00		445.09	852.05	0.00	0.00
30.00		450.45	835.22	0.00	0.00
35.00		452.85	818.39	0.00	0.00
40.00		452.96	801.56	0.00	0.00
45.00		451.20	784.73	0.00	0.00
48.50		312.92	539.30	0.00	0.00
50.00		134.78	362.86	0.00	0.00
53.25		291.71	776.85	0.00	0.00
55.00		155.75	225.94	0.00	0.00
60.00		443.81	636.45	0.00	0.00
65.00		437.17	622.99	0.00	0.00
70.00		429.63	609.52	0.00	0.00
75.00		421.29	596.06	0.00	0.00
80.00		412.24	582.59	0.00	0.00
85.00		402.52	569.13	0.00	0.00
88.00	(24) attachments	4635.95	2629.20	0.00	0.00
90.00		155.06	194.91	0.00	0.00
95.00		381.32	477.84	0.00	0.00
98.00	(38) attachments	4598.82	2478.31	0.00	0.00
98.50		36.64	39.85	0.00	0.00
100.00		110.92	190.33	0.00	0.00
102.00		146.33	250.47	0.00	0.00
105.00		216.13	187.77	0.00	0.00
108.00	(32) attachments	4795.78	2257.19	0.00	0.00
109.00		69.45	56.27	0.00	0.00
110.00		68.95	55.87	0.00	0.00
115.00		338.39	273.27	0.00	0.00
118.00	(27) attachments	5511.50	2700.85	0.00	0.00
119.00		64.30	39.96	0.00	0.00
	<b>Totals:</b>	<b>28,554.24</b>	<b>25,022.27</b>	<b>0.00</b>	<b>0.00</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

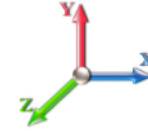


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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



**Iterations** 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	9.90
10.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	9.90
15.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	9.90
20.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	20.638	0.00	9.90
25.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.630	0.00	9.90
30.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	22.477	0.00	9.90
35.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.218	0.00	9.90
40.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.880	0.00	9.90
45.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	24.479	0.00	9.90
48.50	1 5/8" Hybrid	Yes	3.50	0.000	0.00	0.00	0.00	0.000	0.000	24.869	0.00	6.93
50.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	25.029	0.00	2.97
53.25	1 5/8" Hybrid	Yes	3.25	0.000	0.00	0.00	0.00	0.000	0.000	25.363	0.00	6.44
55.00	1 5/8" Hybrid	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	25.536	0.00	3.47
60.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.008	0.00	9.90
65.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.450	0.00	9.90
70.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.866	0.00	9.90
75.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.259	0.00	9.90
80.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.632	0.00	9.90
85.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.987	0.00	9.90
88.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	28.192	0.00	5.94
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.325	0.00	3.96
95.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.650	0.00	9.90
98.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	28.838	0.00	5.94
98.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	0.99
100.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	28.961	0.00	2.97
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.082	0.00	3.96
105.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.260	0.00	5.94
108.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.434	0.00	5.94
109.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.491	0.00	1.98
110.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.548	0.00	1.98
115.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.826	0.00	9.90
118.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	29.988	0.00	5.94
<b>Totals:</b>											<b>0.0</b>	<b>233.6</b>

## Calculated Forces

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	<b>6/8/2021</b>
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



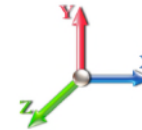
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**Load Case:** 0.9D + 1.6W 97 mph Wind

**Iterations** 23

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-24.95	-28.61	0.00	-2594.6	0.00	2594.67	3013.27	1506.63	5849.73	2929.21	0.00	0.000	0.000	0.894
5.00	-23.90	-28.28	0.00	-2451.6	0.00	2451.60	2972.75	1486.38	5634.65	2821.52	0.15	-0.273	0.000	0.877
10.00	-22.86	-27.96	0.00	-2310.1	0.00	2310.18	2930.78	1465.39	5420.60	2714.33	0.58	-0.549	0.000	0.859
15.00	-21.85	-27.63	0.00	-2170.3	0.00	2170.39	2887.35	1443.68	5207.78	2607.76	1.31	-0.828	0.000	0.840
20.00	-20.85	-27.29	0.00	-2032.2	0.00	2032.22	2842.47	1421.24	4996.39	2501.91	2.33	-1.111	0.000	0.820
25.00	-19.88	-26.92	0.00	-1895.7	0.00	1895.79	2796.14	1398.07	4786.62	2396.87	3.64	-1.396	0.000	0.798
30.00	-18.92	-26.55	0.00	-1761.1	0.00	1761.18	2748.35	1374.17	4578.69	2292.75	5.26	-1.684	0.000	0.775
35.00	-17.98	-26.16	0.00	-1628.4	0.00	1628.45	2699.10	1349.55	4372.78	2189.64	7.18	-1.973	0.000	0.751
40.00	-17.07	-25.76	0.00	-1497.6	0.00	1497.66	2648.40	1324.20	4169.10	2087.65	9.40	-2.262	0.000	0.724
45.00	-16.20	-25.35	0.00	-1368.8	0.00	1368.85	2596.25	1298.12	3967.85	1986.88	11.92	-2.551	0.000	0.696
48.50	-15.61	-25.05	0.00	-1280.1	0.00	1280.13	2558.87	1279.44	3828.53	1917.11	13.87	-2.755	0.000	0.674
50.00	-15.19	-24.94	0.00	-1242.5	0.00	1242.56	2542.63	1271.32	3769.24	1887.42	14.75	-2.844	0.000	0.665
53.25	-14.37	-24.64	0.00	-1161.5	0.00	1161.52	1874.80	937.40	2771.76	1387.94	16.75	-3.033	0.000	0.845
55.00	-14.06	-24.53	0.00	-1118.4	0.00	1118.40	1862.74	931.37	2724.01	1364.03	17.88	-3.135	0.000	0.828
60.00	-13.31	-24.12	0.00	-995.77	0.00	995.77	1827.31	913.65	2588.34	1296.09	21.35	-3.468	0.000	0.776
65.00	-12.58	-23.72	0.00	-875.15	0.00	875.15	1790.42	895.21	2453.92	1228.78	25.15	-3.793	0.000	0.720
70.00	-11.88	-23.31	0.00	-756.56	0.00	756.56	1752.08	876.04	2320.96	1162.21	29.29	-4.105	0.000	0.658
75.00	-11.20	-22.90	0.00	-640.00	0.00	640.00	1712.28	856.14	2189.66	1096.46	33.75	-4.401	0.000	0.591
80.00	-10.55	-22.49	0.00	-525.48	0.00	525.48	1671.02	835.51	2060.22	1031.64	38.51	-4.675	0.000	0.516
85.00	-9.95	-22.08	0.00	-413.01	0.00	413.01	1628.32	814.16	1932.84	967.86	43.53	-4.921	0.000	0.434
88.00	-7.70	-17.25	0.00	-346.78	0.00	346.78	1601.99	801.00	1857.49	930.12	46.67	-5.055	0.000	0.378
90.00	-7.48	-17.09	0.00	-312.29	0.00	312.29	1584.15	792.08	1807.72	905.20	48.80	-5.138	0.000	0.350
95.00	-7.00	-16.68	0.00	-226.83	0.00	226.83	1538.53	769.27	1685.06	843.78	54.28	-5.316	0.000	0.274
98.00	-4.95	-11.88	0.00	-176.78	0.00	176.78	1510.46	755.23	1612.73	807.56	57.64	-5.406	0.000	0.222
98.50	-4.91	-11.84	0.00	-170.84	0.00	170.84	1505.73	752.87	1600.77	801.57	58.21	-5.420	0.000	0.217
100.00	-4.72	-11.72	0.00	-153.08	0.00	153.08	1491.46	745.73	1565.06	783.69	59.92	-5.460	0.000	0.199
102.00	-4.48	-11.55	0.00	-129.65	0.00	129.65	1021.50	510.75	1074.26	537.93	62.21	-5.508	0.000	0.246
105.00	-4.30	-11.32	0.00	-95.00	0.00	95.00	1004.76	502.38	1028.99	515.26	65.69	-5.568	0.000	0.189
108.00	-2.52	-6.33	0.00	-61.03	0.00	61.03	987.50	493.75	984.13	492.79	69.20	-5.625	0.000	0.127
109.00	-2.47	-6.26	0.00	-54.70	0.00	54.70	981.63	490.81	969.27	485.35	70.38	-5.641	0.000	0.115
109.00	-2.47	-6.26	0.00	-54.70	0.00	54.70	981.63	490.81	969.27	485.35	70.38	-5.641	0.000	0.115
110.00	-2.41	-6.18	0.00	-48.45	0.00	48.45	975.70	487.85	954.46	477.94	71.56	-5.655	0.000	0.104
115.00	-2.17	-5.82	0.00	-17.53	0.00	17.53	945.18	472.59	881.23	441.27	77.50	-5.701	0.000	0.042
118.00	-0.03	-0.07	0.00	-0.07	0.00	0.07	926.18	463.09	838.01	419.63	81.08	-5.710	0.000	0.000
119.00	0.00	-0.06	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	82.28	-5.710	0.000	0.000



## Wind Loading - Shaft

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi 50 mph Wind	<b>Iterations</b> 23
<b>Dead Load Factor</b> 1.20	
<b>Wind Load Factor</b> 1.00	

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	21.243	25.49	144.9	498.4	1442.7
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	20.873	25.05	142.4	523.1	1445.0
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	20.465	24.56	139.6	532.8	1432.2
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	20.041	24.05	145.1	535.7	1412.7
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	19.608	23.53	148.8	534.8	1389.4
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	19.169	23.00	151.1	531.4	1363.5
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	18.726	22.47	152.5	526.0	1335.7
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	18.279	21.94	153.1	519.3	1306.5
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	5.00	17.831	21.40	153.1	511.4	1276.2
48.50	Bot - Section 2	1.00	1.09	6.608	7.27	0.00	1.200	2.079	3.50	12.212	14.65	106.5	353.7	875.8
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	1.50	5.228	6.27	45.9	152.7	552.1
53.25	Top - Section 1	1.00	1.11	6.739	7.41	0.00	1.200	2.098	3.25	11.190	13.43	99.5	327.0	1179.8
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	1.75	5.945	7.13	53.2	174.9	377.6
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	16.686	20.02	152.2	489.5	1056.6
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	16.231	19.48	150.6	478.8	1028.0
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	15.776	18.93	148.6	467.6	998.8
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	15.319	18.38	146.5	456.0	969.2
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	14.862	17.83	144.0	444.0	939.2
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	14.404	17.29	141.4	431.6	908.9
88.00	Appurtenance(s)	1.00	1.23	7.491	8.24	0.00	1.200	2.206	3.00	8.421	10.11	83.3	254.4	532.2
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	2.00	5.522	6.63	54.9	167.5	349.1
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	5.00	13.487	16.18	135.5	405.9	847.3
98.00	Appurtenance(s)	1.00	1.26	7.662	8.43	0.00	1.200	2.230	3.00	7.871	9.44	79.6	238.8	495.0
98.50	Bot - Section 3	1.00	1.26	7.671	8.44	0.00	1.200	2.231	0.50	1.295	1.55	13.1	39.7	81.7
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	1.50	3.907	4.69	39.7	119.4	340.0
102.00	Top - Section 2	1.00	1.27	7.727	8.50	0.00	1.200	2.239	2.00	5.145	6.17	52.5	157.0	446.7
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	3.00	7.580	9.10	77.8	230.6	414.7
108.00	Appurtenance(s)	1.00	1.29	7.821	8.60	0.00	1.200	2.252	3.00	7.414	8.90	76.5	225.7	404.9
109.00	Top - Section 3	1.00	1.29	7.836	8.62	0.00	1.200	2.254	1.00	2.434	2.92	25.2	74.7	133.3
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	1.00	2.416	2.90	25.0	74.1	132.2
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	11.806	14.17	123.5	356.7	639.2
118.00	Appurtenance(s)	1.00	1.31	7.968	8.76	0.00	1.200	2.272	3.00	6.861	8.23	72.2	208.9	372.0
119.00		1.00	1.31	7.982	8.78	0.00	1.200	2.274	1.00	2.250	2.70	23.7	69.1	122.3
<b>Totals:</b>									<b>119.00</b>			<b>3,401.4</b>		<b>26,600.9</b>

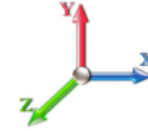
## Discrete Appurtenance Forces

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Dead Load Factor**    1.20  
**Wind Load Factor**    1.00



**Iterations**    23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	(3) T-Arm Kit	1	7.968	8.765	0.75	0.75	28.12	1222.41	0.000	0.000	246.45	0.00	0.00
2	118.00	BXA-70063-6BF	3	7.968	8.765	0.63	0.90	21.11	492.80	0.000	0.000	184.99	0.00	0.00
3	118.00	T-Arm	3	7.968	8.765	0.56	0.75	36.04	1824.15	0.000	0.000	315.90	0.00	0.00
4	118.00	Commscope	6	7.968	8.765	0.75	0.90	43.91	1981.40	0.000	0.000	384.85	0.00	0.00
5	118.00	Samsung MT6407-77A	3	7.968	8.765	0.63	0.90	11.23	782.78	0.000	0.000	98.40	0.00	0.00
6	118.00	B2/B66A RRRH-BR049	3	7.968	8.765	0.60	0.90	4.77	625.15	0.000	0.000	41.83	0.00	0.00
7	118.00	Collar	1	7.968	8.765	0.75	0.75	4.43	388.12	0.000	0.000	38.83	0.00	0.00
8	118.00	Samsung B5/B13	3	7.968	8.765	0.60	0.90	4.70	408.20	0.000	0.000	41.18	0.00	0.00
9	118.00	Raycap	1	7.968	8.765	0.90	0.90	4.38	212.62	0.000	0.000	38.39	0.00	0.00
10	118.00	BSAMNT-SBS-1-2	3	7.968	8.765	0.75	0.75	0.00	156.92	0.000	0.000	0.00	0.00	0.00
11	108.00	APXVTM14-C-120	3	7.821	8.603	0.63	0.80	14.79	859.41	0.000	0.000	127.28	0.00	0.00
12	108.00	800 MHz	3	7.821	8.603	0.54	0.80	6.38	413.78	0.000	0.000	54.86	0.00	0.00
13	108.00	840 10054	3	7.821	8.603	0.49	0.80	9.88	379.88	0.000	0.000	84.99	0.00	0.00
14	108.00	ACU-A20-N	4	7.821	8.603	0.54	0.80	1.12	21.77	0.000	0.000	9.64	0.00	0.00
15	108.00	APXVSP18-C-A20	2	7.821	8.603	0.66	0.80	15.44	483.84	0.000	0.000	132.80	0.00	0.00
16	108.00	TD-RRH8x20-25	3	7.821	8.603	0.54	0.80	8.24	705.92	0.000	0.000	70.86	0.00	0.00
17	108.00	Horizon	2	7.821	8.603	0.80	0.80	1.74	70.78	0.000	0.000	15.00	0.00	0.00
18	108.00	P40-16-XLPP-RR-A	1	7.821	8.603	0.80	0.80	8.57	347.29	0.000	0.000	73.77	0.00	0.00
19	108.00	VHLP2.5	2	7.821	8.603	1.00	1.00	21.26	461.07	0.000	0.000	182.93	0.00	0.00
20	108.00	T-Arm	3	7.821	8.603	0.56	0.75	28.70	1995.74	0.000	0.000	246.89	0.00	0.00
21	108.00	800 MHz Filters	3	7.821	8.603	0.54	0.80	6.18	462.93	0.000	0.000	53.17	0.00	0.00
22	108.00	1900MHz RRRH	3	7.821	8.603	0.54	0.80	8.99	487.34	0.000	0.000	77.38	0.00	0.00
23	98.00	Powerwave LGP13519	6	7.662	8.429	0.80	0.80	4.42	94.77	0.000	0.000	37.23	0.00	0.00
24	98.00	Cci OPA-65R-LCUU-H6	3	7.662	8.429	0.63	0.80	21.68	1219.36	0.000	0.000	182.73	0.00	0.00
25	98.00	Powerwave LGP21402	9	7.662	8.429	0.80	0.80	16.98	375.89	0.000	0.000	143.09	0.00	0.00
26	98.00	Ericsson RRUS 11	3	7.662	8.429	0.54	0.80	5.35	354.22	0.000	0.000	45.12	0.00	0.00
27	98.00	Powerwave 7770 w/Mount	3	7.662	8.429	0.58	0.80	14.29	437.23	0.000	0.000	120.42	0.00	0.00
28	98.00	T-Arm	3	7.662	8.429	0.56	0.75	35.69	1986.59	0.000	0.000	300.82	0.00	0.00
29	98.00	Quintel QS66512-2	3	7.662	8.429	0.74	0.80	21.68	1313.53	0.000	0.000	182.76	0.00	0.00
30	98.00	Ericsson RRUS 8843	3	7.662	8.429	0.54	0.80	3.79	576.21	0.000	0.000	31.96	0.00	0.00
31	98.00	Ericsson RRUS 32	3	7.662	8.429	0.54	0.80	5.94	550.96	0.000	0.000	50.03	0.00	0.00
32	98.00	Raycap DC6-48-60-0-8F	2	7.662	8.429	0.80	0.80	2.37	198.92	0.000	0.000	19.95	0.00	0.00
33	88.00	4449 B71 + B85	3	7.491	8.240	0.54	0.80	5.45	659.28	0.000	0.000	44.87	0.00	0.00
34	88.00	AIR32	3	7.491	8.240	0.70	0.80	16.73	1209.32	0.000	0.000	137.84	0.00	0.00
35	88.00	APXVAARR24_43-U-NA2	3	7.491	8.240	0.60	0.80	40.80	2099.33	0.000	0.000	336.16	0.00	0.00
36	88.00	KRY 112 144/2	3	7.491	8.240	0.60	0.80	1.82	71.19	0.000	0.000	14.99	0.00	0.00
37	88.00	SDX1926Q-43	3	7.491	8.240	0.54	0.80	1.12	42.36	0.000	0.000	9.21	0.00	0.00
38	88.00	T-Arm w/ mod	3	7.491	8.240	0.56	0.75	49.68	1976.57	0.000	0.000	409.39	0.00	0.00
39	88.00	AIR6449 B41	3	7.491	8.240	0.57	0.80	11.68	795.69	0.000	0.000	96.20	0.00	0.00
40	88.00	RRUS 4415 B25	3	7.491	8.240	0.54	0.80	3.68	293.27	0.000	0.000	30.36	0.00	0.00
<b>Totals:</b>								<b>29,039.01</b>				<b>4,713.52</b>		

## Total Applied Force Summary

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

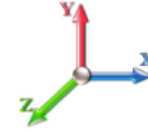


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



**Iterations** 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		144.91	1770.07	0.00	0.00
10.00		142.39	1776.71	0.00	0.00
15.00		139.61	1766.69	0.00	0.00
20.00		145.06	1749.29	0.00	0.00
25.00		148.75	1727.62	0.00	0.00
30.00		151.11	1703.12	0.00	0.00
35.00		152.49	1676.57	0.00	0.00
40.00		153.10	1648.47	0.00	0.00
45.00		153.09	1619.15	0.00	0.00
48.50		106.51	1116.25	0.00	0.00
50.00		45.89	655.26	0.00	0.00
53.25		99.54	1403.66	0.00	0.00
55.00		53.25	498.24	0.00	0.00
60.00		152.20	1402.05	0.00	0.00
65.00		150.57	1374.10	0.00	0.00
70.00		148.65	1345.61	0.00	0.00
75.00		146.46	1316.65	0.00	0.00
80.00		144.03	1287.25	0.00	0.00
85.00		141.39	1257.48	0.00	0.00
88.00	(24) attachments	1162.29	7888.52	0.00	0.00
90.00		54.86	454.46	0.00	0.00
95.00		135.52	1111.09	0.00	0.00
98.00	(38) attachments	1193.70	7761.14	0.00	0.00
98.50		13.12	99.63	0.00	0.00
100.00		39.68	393.70	0.00	0.00
102.00		52.47	518.46	0.00	0.00
105.00		77.78	522.40	0.00	0.00
108.00	(32) attachments	1206.11	7202.55	0.00	0.00
109.00		25.18	163.59	0.00	0.00
110.00		25.04	162.52	0.00	0.00
115.00		123.50	790.99	0.00	0.00
118.00	(27) attachments	1463.00	8557.75	0.00	0.00
119.00		23.71	122.35	0.00	0.00
	<b>Totals:</b>	<b>8,114.95</b>	<b>62,843.42</b>	<b>0.00</b>	<b>0.00</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 23

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	59.05
10.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	63.39
15.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	66.16
20.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	68.24
25.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.747	0.00	69.91
30.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	71.33
35.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.169	0.00	72.56
40.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	73.65
45.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	74.63
48.50	1 5/8" Hybrid	Yes	3.50	0.000	0.00	0.00	0.00	0.000	0.000	6.608	0.00	52.68
50.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	22.66
53.25	1 5/8" Hybrid	Yes	3.25	0.000	0.00	0.00	0.00	0.000	0.000	6.739	0.00	49.44
55.00	1 5/8" Hybrid	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	26.72
60.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	77.10
65.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.028	0.00	77.81
70.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	78.48
75.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.243	0.00	79.11
80.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	79.70
85.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.436	0.00	80.26
88.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.491	0.00	48.35
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	32.32
95.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.612	0.00	81.31
98.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.662	0.00	48.96
98.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	7.671	0.00	8.17
100.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	24.54
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.727	0.00	32.79
105.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.774	0.00	49.36
108.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.821	0.00	49.52
109.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.836	0.00	16.53
110.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.851	0.00	16.54
115.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.925	0.00	83.15
118.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	7.968	0.00	50.04
<b>Totals:</b>											<b>0.0</b>	<b>1,784.5</b>

## Calculated Forces

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

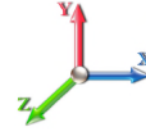


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 23

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-62.84	-8.16	0.00	-759.90	0.00	759.90	3013.27	1506.63	5849.73	2929.21	0.00	0.000	0.000	0.280
5.00	-61.06	-8.10	0.00	-719.10	0.00	719.10	2972.75	1486.38	5634.65	2821.52	0.04	-0.080	0.000	0.275
10.00	-59.27	-8.04	0.00	-678.61	0.00	678.61	2930.78	1465.39	5420.60	2714.33	0.17	-0.161	0.000	0.270
15.00	-57.49	-7.97	0.00	-638.43	0.00	638.43	2887.35	1443.68	5207.78	2607.76	0.38	-0.243	0.000	0.265
20.00	-55.73	-7.90	0.00	-598.55	0.00	598.55	2842.47	1421.24	4996.39	2501.91	0.68	-0.326	0.000	0.259
25.00	-53.99	-7.82	0.00	-559.05	0.00	559.05	2796.14	1398.07	4786.62	2396.87	1.07	-0.410	0.000	0.253
30.00	-52.28	-7.73	0.00	-519.94	0.00	519.94	2748.35	1374.17	4578.69	2292.75	1.54	-0.495	0.000	0.246
35.00	-50.59	-7.64	0.00	-481.26	0.00	481.26	2699.10	1349.55	4372.78	2189.64	2.11	-0.581	0.000	0.239
40.00	-48.94	-7.54	0.00	-443.06	0.00	443.06	2648.40	1324.20	4169.10	2087.65	2.76	-0.666	0.000	0.231
45.00	-47.31	-7.43	0.00	-405.34	0.00	405.34	2596.25	1298.12	3967.85	1986.88	3.51	-0.752	0.000	0.222
48.50	-46.19	-7.34	0.00	-379.33	0.00	379.33	2558.87	1279.44	3828.53	1917.11	4.08	-0.812	0.000	0.216
50.00	-45.53	-7.32	0.00	-368.31	0.00	368.31	2542.63	1271.32	3769.24	1887.42	4.34	-0.838	0.000	0.213
53.25	-44.12	-7.23	0.00	-344.52	0.00	344.52	1874.80	937.40	2771.76	1387.94	4.93	-0.894	0.000	0.272
55.00	-43.62	-7.22	0.00	-331.86	0.00	331.86	1862.74	931.37	2724.01	1364.03	5.27	-0.925	0.000	0.267
60.00	-42.20	-7.12	0.00	-295.75	0.00	295.75	1827.31	913.65	2588.34	1296.09	6.29	-1.024	0.000	0.251
65.00	-40.82	-7.01	0.00	-260.15	0.00	260.15	1790.42	895.21	2453.92	1228.78	7.41	-1.120	0.000	0.235
70.00	-39.47	-6.90	0.00	-225.10	0.00	225.10	1752.08	876.04	2320.96	1162.21	8.64	-1.213	0.000	0.216
75.00	-38.15	-6.78	0.00	-190.62	0.00	190.62	1712.28	856.14	2189.66	1096.46	9.95	-1.301	0.000	0.196
80.00	-36.85	-6.65	0.00	-156.74	0.00	156.74	1671.02	835.51	2060.22	1031.64	11.36	-1.383	0.000	0.174
85.00	-35.59	-6.52	0.00	-123.47	0.00	123.47	1628.32	814.16	1932.84	967.86	12.85	-1.456	0.000	0.149
88.00	-27.73	-5.17	0.00	-103.92	0.00	103.92	1601.99	801.00	1857.49	930.12	13.78	-1.496	0.000	0.129
90.00	-27.28	-5.12	0.00	-93.59	0.00	93.59	1584.15	792.08	1807.72	905.20	14.41	-1.521	0.000	0.121
95.00	-26.17	-4.97	0.00	-68.00	0.00	68.00	1538.53	769.27	1685.06	843.78	16.03	-1.575	0.000	0.098
98.00	-18.44	-3.57	0.00	-53.09	0.00	53.09	1510.46	755.23	1612.73	807.56	17.03	-1.602	0.000	0.078
98.50	-18.34	-3.55	0.00	-51.31	0.00	51.31	1505.73	752.87	1600.77	801.57	17.20	-1.606	0.000	0.076
100.00	-17.95	-3.51	0.00	-45.98	0.00	45.98	1491.46	745.73	1565.06	783.69	17.71	-1.618	0.000	0.071
102.00	-17.43	-3.45	0.00	-38.96	0.00	38.96	1021.50	510.75	1074.26	537.93	18.39	-1.632	0.000	0.090
105.00	-16.91	-3.36	0.00	-28.63	0.00	28.63	1004.76	502.38	1028.99	515.26	19.42	-1.650	0.000	0.072
108.00	-9.74	-1.95	0.00	-18.55	0.00	18.55	987.50	493.75	984.13	492.79	20.46	-1.668	0.000	0.048
109.00	-9.58	-1.92	0.00	-16.61	0.00	16.61	981.63	490.81	969.27	485.35	20.81	-1.672	0.000	0.044
109.00	-9.58	-1.92	0.00	-16.61	0.00	16.61	981.63	490.81	969.27	485.35	20.81	-1.672	0.000	0.044
110.00	-9.42	-1.89	0.00	-14.69	0.00	14.69	975.70	487.85	954.46	477.94	21.16	-1.676	0.000	0.040
115.00	-8.63	-1.74	0.00	-5.25	0.00	5.25	945.18	472.59	881.23	441.27	22.93	-1.690	0.000	0.021
118.00	-0.12	-0.03	0.00	-0.03	0.00	0.03	926.18	463.09	838.01	419.63	23.99	-1.693	0.000	0.000
119.00	0.00	-0.02	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	24.35	-1.693	0.000	0.000

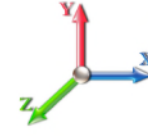
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0E				<b>Iterations</b> 21
<b>Gust Response Factor</b>	1.10	<b>Sds</b>	0.20	<b>Ss</b> 0.19
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b>	1.00	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.39	<b>SA</b> 0.03
				<b>Seismic Importance Factor</b> 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		786.94	0.00	0.04	0.02	18.66	
10.00		768.24	0.01	0.06	0.03	24.82	
15.00		749.54	0.03	0.07	0.04	26.89	
20.00		730.84	0.05	0.07	0.04	27.46	
25.00		712.14	0.08	0.07	0.04	27.62	
30.00		693.44	0.12	0.07	0.03	27.72	
35.00		674.74	0.16	0.07	0.03	27.64	
40.00		656.04	0.21	0.06	0.02	26.90	
45.00		637.33	0.27	0.05	0.01	24.74	
48.50	Bot - Section 2	435.01	0.31	0.04	0.01	15.23	
50.00		332.81	0.33	0.04	0.01	10.85	
53.25	Top - Section 1	710.69	0.38	0.02	0.01	18.20	
55.00		168.94	0.40	0.02	0.01	3.51	
60.00		472.58	0.48	-0.01	0.01	1.58	
65.00		457.62	0.56	-0.04	0.01	-7.45	
70.00		442.66	0.65	-0.07	0.02	-14.41	
75.00		427.70	0.75	-0.10	0.04	-17.69	
80.00		412.74	0.85	-0.12	0.07	-17.05	
85.00		397.78	0.96	-0.12	0.11	-12.88	
88.00	Appurtenance(s)	2780.5	1.03	-0.10	0.15	-63.68	
90.00		151.33	1.08	-0.08	0.18	-2.25	
95.00		367.85	1.20	0.01	0.26	4.06	
98.00	Appurtenance(s)	2655.8	1.28	0.10	0.32	81.37	
98.50	Bot - Section 3	35.06	1.29	0.11	0.33	1.20	
100.00		183.85	1.33	0.17	0.37	8.35	
102.00	Top - Section 2	241.47	1.39	0.26	0.42	14.87	
105.00		153.38	1.47	0.43	0.51	13.56	
108.00	Appurtenance(s)	2452.7	1.56	0.65	0.61	290.60	
109.00	Top - Section 3	48.88	1.59	0.73	0.65	6.32	
110.00		48.43	1.61	0.83	0.69	6.80	
115.00		235.44	1.77	1.38	0.92	47.40	
118.00	Appurtenance(s)	2960.0	1.86	1.82	1.08	717.56	
119.00		44.39	1.89	1.98	1.14	11.40	
<b>Totals:</b>		<b>23,027.0</b>				<b>1,349.9</b>	<b>Total Wind: 28,554.2</b>

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

## Calculated Forces

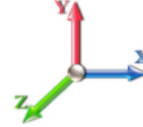
<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	<b>6/8/2021</b>	
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C		
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00		
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil		
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II	<b>Page:</b> 25



**Load Case:** 1.2D + 1.0E

**Iterations** 21

<b>Gust Response Factor</b> 1.10	<b>Sds</b> 0.20	<b>Ss</b> 0.19	
<b>Dead Load Factor</b> 1.20	<b>Seismic Load Factor</b> 1.00	<b>Sd1</b> 0.09	<b>S1</b> 0.06
<b>Wind Load Factor</b> 0.00	<b>Structure Frequency (f1)</b> 0.39	<b>SA</b> 0.03	<b>Seismic Importance Factor</b> 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-33.36	-1.49	0.00	-151.54	0.00	151.54	3013.27	1506.63	5849.73	2929.21	0.00	0.00	0.00	0.063
5.00	-32.14	-1.48	0.00	-144.09	0.00	144.09	2972.75	1486.38	5634.65	2821.52	0.01	-0.02	0.062	
10.00	-30.93	-1.46	0.00	-136.70	0.00	136.70	2930.78	1465.39	5420.60	2714.33	0.03	-0.03	0.061	
15.00	-29.75	-1.44	0.00	-129.38	0.00	129.38	2887.35	1443.68	5207.78	2607.76	0.08	-0.05	0.060	
20.00	-28.59	-1.42	0.00	-122.16	0.00	122.16	2842.47	1421.24	4996.39	2501.91	0.14	-0.07	0.059	
25.00	-27.46	-1.40	0.00	-115.05	0.00	115.05	2796.14	1398.07	4786.62	2396.87	0.22	-0.08	0.058	
30.00	-26.34	-1.38	0.00	-108.03	0.00	108.03	2748.35	1374.17	4578.69	2292.75	0.31	-0.10	0.057	
35.00	-25.25	-1.36	0.00	-101.12	0.00	101.12	2699.10	1349.55	4372.78	2189.64	0.43	-0.12	0.056	
40.00	-24.18	-1.34	0.00	-94.32	0.00	94.32	2648.40	1324.20	4169.10	2087.65	0.56	-0.14	0.054	
45.00	-23.13	-1.32	0.00	-87.63	0.00	87.63	2596.25	1298.12	3967.85	1986.88	0.71	-0.15	0.053	
48.50	-22.42	-1.30	0.00	-83.02	0.00	83.02	2558.87	1279.44	3828.53	1917.11	0.83	-0.17	0.052	
50.00	-21.93	-1.29	0.00	-81.07	0.00	81.07	2542.63	1271.32	3769.24	1887.42	0.88	-0.17	0.052	
53.25	-20.90	-1.28	0.00	-76.86	0.00	76.86	1874.80	937.40	2771.76	1387.94	1.01	-0.19	0.067	
55.00	-20.59	-1.28	0.00	-74.62	0.00	74.62	1862.74	931.37	2724.01	1364.03	1.08	-0.19	0.066	
60.00	-19.74	-1.28	0.00	-68.23	0.00	68.23	1827.31	913.65	2588.34	1296.09	1.29	-0.22	0.063	
65.00	-18.91	-1.29	0.00	-61.83	0.00	61.83	1790.42	895.21	2453.92	1228.78	1.53	-0.24	0.061	
70.00	-18.10	-1.29	0.00	-55.40	0.00	55.40	1752.08	876.04	2320.96	1162.21	1.79	-0.26	0.058	
75.00	-17.31	-1.29	0.00	-48.96	0.00	48.96	1712.28	856.14	2189.66	1096.46	2.08	-0.28	0.055	
80.00	-16.53	-1.29	0.00	-42.50	0.00	42.50	1671.02	835.51	2060.22	1031.64	2.38	-0.30	0.051	
85.00	-15.77	-1.29	0.00	-36.04	0.00	36.04	1628.32	814.16	1932.84	967.86	2.71	-0.32	0.047	
88.00	-12.26	-1.28	0.00	-32.15	0.00	32.15	1601.99	801.00	1857.49	930.12	2.92	-0.34	0.042	
90.00	-12.00	-1.28	0.00	-29.60	0.00	29.60	1584.15	792.08	1807.72	905.20	3.06	-0.34	0.040	
95.00	-11.37	-1.27	0.00	-23.22	0.00	23.22	1538.53	769.27	1685.06	843.78	3.43	-0.36	0.035	
98.00	-8.06	-1.17	0.00	-19.40	0.00	19.40	1510.46	755.23	1612.73	807.56	3.66	-0.37	0.029	
98.50	-8.01	-1.17	0.00	-18.82	0.00	18.82	1505.73	752.87	1600.77	801.57	3.70	-0.37	0.029	
100.00	-7.75	-1.16	0.00	-17.06	0.00	17.06	1491.46	745.73	1565.06	783.69	3.82	-0.38	0.027	
102.00	-7.42	-1.14	0.00	-14.75	0.00	14.75	1021.50	510.75	1074.26	537.93	3.98	-0.38	0.035	
105.00	-7.17	-1.13	0.00	-11.32	0.00	11.32	1004.76	502.38	1028.99	515.26	4.22	-0.39	0.029	
108.00	-4.16	-0.82	0.00	-7.93	0.00	7.93	987.50	493.75	984.13	492.79	4.47	-0.40	0.020	
109.00	-4.09	-0.81	0.00	-7.11	0.00	7.11	981.63	490.81	969.27	485.35	4.55	-0.40	0.019	
109.00	-4.09	-0.81	0.00	-7.11	0.00	7.11	981.63	490.81	969.27	485.35	4.55	-0.40	0.019	
110.00	-4.01	-0.80	0.00	-6.30	0.00	6.30	975.70	487.85	954.46	477.94	4.64	-0.40	0.017	
115.00	-3.65	-0.75	0.00	-2.28	0.00	2.28	945.18	472.59	881.23	441.27	5.06	-0.41	0.009	
118.00	-0.05	-0.01	0.00	-0.01	0.00	0.01	926.18	463.09	838.01	419.63	5.32	-0.41	0.000	
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	5.40	-0.41	0.000	

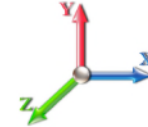
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0E				<b>Iterations</b> 21
<b>Gust Response Factor</b>	1.10	<b>Sds</b>	0.20	<b>Ss</b> 0.19
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.39	<b>SA</b> 0.03
				<b>Seismic Importance Factor</b> 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		786.94	0.00	0.04	0.02	18.66	
10.00		768.24	0.01	0.06	0.03	24.82	
15.00		749.54	0.03	0.07	0.04	26.89	
20.00		730.84	0.05	0.07	0.04	27.46	
25.00		712.14	0.08	0.07	0.04	27.62	
30.00		693.44	0.12	0.07	0.03	27.72	
35.00		674.74	0.16	0.07	0.03	27.64	
40.00		656.04	0.21	0.06	0.02	26.90	
45.00		637.33	0.27	0.05	0.01	24.74	
48.50	Bot - Section 2	435.01	0.31	0.04	0.01	15.23	
50.00		332.81	0.33	0.04	0.01	10.85	
53.25	Top - Section 1	710.69	0.38	0.02	0.01	18.20	
55.00		168.94	0.40	0.02	0.01	3.51	
60.00		472.58	0.48	-0.01	0.01	1.58	
65.00		457.62	0.56	-0.04	0.01	-7.45	
70.00		442.66	0.65	-0.07	0.02	-14.41	
75.00		427.70	0.75	-0.10	0.04	-17.69	
80.00		412.74	0.85	-0.12	0.07	-17.05	
85.00		397.78	0.96	-0.12	0.11	-12.88	
88.00	Appurtenance(s)	2780.5	1.03	-0.10	0.15	-63.68	
90.00		151.33	1.08	-0.08	0.18	-2.25	
95.00		367.85	1.20	0.01	0.26	4.06	
98.00	Appurtenance(s)	2655.8	1.28	0.10	0.32	81.37	
98.50	Bot - Section 3	35.06	1.29	0.11	0.33	1.20	
100.00		183.85	1.33	0.17	0.37	8.35	
102.00	Top - Section 2	241.47	1.39	0.26	0.42	14.87	
105.00		153.38	1.47	0.43	0.51	13.56	
108.00	Appurtenance(s)	2452.7	1.56	0.65	0.61	290.60	
109.00	Top - Section 3	48.88	1.59	0.73	0.65	6.32	
110.00		48.43	1.61	0.83	0.69	6.80	
115.00		235.44	1.77	1.38	0.92	47.40	
118.00	Appurtenance(s)	2960.0	1.86	1.82	1.08	717.56	
119.00		44.39	1.89	1.98	1.14	11.40	
<b>Totals:</b>		<b>23,027.0</b>				<b>1,349.9</b>	<b>Total Wind: 28,554.2</b>

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required



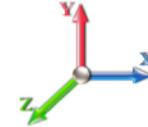
## Calculated Forces

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0E						<b>Iterations</b> 21
<b>Gust Response Factor</b>	1.10		<b>Sds</b>	0.20		<b>Ss</b> 0.19
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.09	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.39	<b>SA</b>	0.03	<b>Seismic Importance Factor</b> 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-25.02	-1.49	0.00	-149.84	0.00	149.84	3013.27	1506.63	5849.73	2929.21	0.00	0.00	0.00	0.059
5.00	-24.10	-1.48	0.00	-142.40	0.00	142.40	2972.75	1486.38	5634.65	2821.52	0.01	-0.02	0.059	
10.00	-23.20	-1.46	0.00	-135.02	0.00	135.02	2930.78	1465.39	5420.60	2714.33	0.03	-0.03	0.058	
15.00	-22.31	-1.44	0.00	-127.73	0.00	127.73	2887.35	1443.68	5207.78	2607.76	0.08	-0.05	0.057	
20.00	-21.44	-1.41	0.00	-120.55	0.00	120.55	2842.47	1421.24	4996.39	2501.91	0.14	-0.06	0.056	
25.00	-20.59	-1.39	0.00	-113.48	0.00	113.48	2796.14	1398.07	4786.62	2396.87	0.21	-0.08	0.055	
30.00	-19.76	-1.37	0.00	-106.52	0.00	106.52	2748.35	1374.17	4578.69	2292.75	0.31	-0.10	0.054	
35.00	-18.94	-1.35	0.00	-99.68	0.00	99.68	2699.10	1349.55	4372.78	2189.64	0.42	-0.12	0.053	
40.00	-18.14	-1.32	0.00	-92.95	0.00	92.95	2648.40	1324.20	4169.10	2087.65	0.55	-0.13	0.051	
45.00	-17.35	-1.30	0.00	-86.34	0.00	86.34	2596.25	1298.12	3967.85	1986.88	0.70	-0.15	0.050	
48.50	-16.81	-1.29	0.00	-81.79	0.00	81.79	2558.87	1279.44	3828.53	1917.11	0.82	-0.17	0.049	
50.00	-16.45	-1.28	0.00	-79.86	0.00	79.86	2542.63	1271.32	3769.24	1887.42	0.87	-0.17	0.049	
53.25	-15.67	-1.26	0.00	-75.71	0.00	75.71	1874.80	937.40	2771.76	1387.94	0.99	-0.18	0.063	
55.00	-15.44	-1.26	0.00	-73.51	0.00	73.51	1862.74	931.37	2724.01	1364.03	1.06	-0.19	0.062	
60.00	-14.81	-1.26	0.00	-67.22	0.00	67.22	1827.31	913.65	2588.34	1296.09	1.27	-0.21	0.060	
65.00	-14.18	-1.26	0.00	-60.91	0.00	60.91	1790.42	895.21	2453.92	1228.78	1.51	-0.23	0.057	
70.00	-13.57	-1.27	0.00	-54.59	0.00	54.59	1752.08	876.04	2320.96	1162.21	1.77	-0.26	0.055	
75.00	-12.98	-1.27	0.00	-48.26	0.00	48.26	1712.28	856.14	2189.66	1096.46	2.05	-0.28	0.052	
80.00	-12.39	-1.27	0.00	-41.92	0.00	41.92	1671.02	835.51	2060.22	1031.64	2.35	-0.30	0.048	
85.00	-11.83	-1.27	0.00	-35.57	0.00	35.57	1628.32	814.16	1932.84	967.86	2.68	-0.32	0.044	
88.00	-9.20	-1.26	0.00	-31.76	0.00	31.76	1601.99	801.00	1857.49	930.12	2.88	-0.33	0.040	
90.00	-9.00	-1.26	0.00	-29.25	0.00	29.25	1584.15	792.08	1807.72	905.20	3.02	-0.34	0.038	
95.00	-8.52	-1.25	0.00	-22.96	0.00	22.96	1538.53	769.27	1685.06	843.78	3.39	-0.36	0.033	
98.00	-6.04	-1.16	0.00	-19.20	0.00	19.20	1510.46	755.23	1612.73	807.56	3.61	-0.37	0.028	
98.50	-6.00	-1.16	0.00	-18.62	0.00	18.62	1505.73	752.87	1600.77	801.57	3.65	-0.37	0.027	
100.00	-5.81	-1.15	0.00	-16.89	0.00	16.89	1491.46	745.73	1565.06	783.69	3.77	-0.37	0.025	
102.00	-5.56	-1.13	0.00	-14.60	0.00	14.60	1021.50	510.75	1074.26	537.93	3.93	-0.38	0.033	
105.00	-5.38	-1.12	0.00	-11.20	0.00	11.20	1004.76	502.38	1028.99	515.26	4.17	-0.38	0.027	
108.00	-3.12	-0.81	0.00	-7.86	0.00	7.86	987.50	493.75	984.13	492.79	4.41	-0.39	0.019	
109.00	-3.06	-0.80	0.00	-7.05	0.00	7.05	981.63	490.81	969.27	485.35	4.49	-0.39	0.018	
109.00	-3.06	-0.80	0.00	-7.05	0.00	7.05	981.63	490.81	969.27	485.35	4.49	-0.39	0.018	
110.00	-3.01	-0.80	0.00	-6.24	0.00	6.24	975.70	487.85	954.46	477.94	4.58	-0.40	0.016	
115.00	-2.74	-0.75	0.00	-2.26	0.00	2.26	945.18	472.59	881.23	441.27	4.99	-0.40	0.008	
118.00	-0.04	-0.01	0.00	-0.01	0.00	0.01	926.18	463.09	838.01	419.63	5.25	-0.40	0.000	
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	5.33	-0.40	0.000	

## Wind Loading - Shaft

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.0D + 1.0W 60 mph Wind	<b>Iterations</b> 22
<b>Dead Load Factor</b> 1.00	
<b>Wind Load Factor</b> 1.00	

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	222.34	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	217.15	0.650	0.000	5.00	19.863	12.91	105.7	0.0	786.9
10.00		1.00	0.85	7.442	8.19	211.97	0.650	0.000	5.00	19.394	12.61	103.2	0.0	768.2
15.00		1.00	0.85	7.442	8.19	206.78	0.650	0.000	5.00	18.925	12.30	100.7	0.0	749.5
20.00		1.00	0.90	7.896	8.69	207.65	0.650	0.000	5.00	18.456	12.00	104.2	0.0	730.8
25.00		1.00	0.95	8.276	9.10	207.12	0.650	0.000	5.00	17.987	11.69	106.4	0.0	712.1
30.00		1.00	0.98	8.600	9.46	205.56	0.650	0.000	5.00	17.518	11.39	107.7	0.0	693.4
35.00		1.00	1.01	8.883	9.77	203.25	0.650	0.000	5.00	17.049	11.08	108.3	0.0	674.7
40.00		1.00	1.04	9.137	10.05	200.38	0.650	0.000	5.00	16.580	10.78	108.3	0.0	656.0
45.00		1.00	1.07	9.366	10.30	197.06	0.650	0.000	5.00	16.112	10.47	107.9	0.0	637.3
48.50	Bot - Section 2	1.00	1.09	9.515	10.47	194.52	0.650	0.000	3.50	10.999	7.15	74.8	0.0	435.0
50.00		1.00	1.09	9.576	10.53	193.37	0.650	0.000	1.50	4.707	3.06	32.2	0.0	332.8
53.25	Top - Section 1	1.00	1.11	9.704	10.67	190.81	0.650	0.000	3.25	10.054	6.53	69.8	0.0	710.7
55.00		1.00	1.12	9.770	10.75	192.06	0.650	0.000	1.75	5.332	3.47	37.2	0.0	168.9
60.00		1.00	1.14	9.951	10.95	187.83	0.650	0.000	5.00	14.917	9.70	106.1	0.0	472.6
65.00		1.00	1.16	10.120	11.13	183.37	0.650	0.000	5.00	14.448	9.39	104.5	0.0	457.6
70.00		1.00	1.17	10.279	11.31	178.71	0.650	0.000	5.00	13.979	9.09	102.7	0.0	442.7
75.00		1.00	1.19	10.430	11.47	173.87	0.650	0.000	5.00	13.510	8.78	100.7	0.0	427.7
80.00		1.00	1.21	10.572	11.63	168.88	0.650	0.000	5.00	13.041	8.48	98.6	0.0	412.7
85.00		1.00	1.22	10.708	11.78	163.73	0.650	0.000	5.00	12.572	8.17	96.3	0.0	397.8
88.00	Appurtenance(s)	1.00	1.23	10.787	11.87	160.59	0.650	0.000	3.00	7.318	4.76	56.4	0.0	231.5
90.00		1.00	1.24	10.838	11.92	158.46	0.650	0.000	2.00	4.785	3.11	37.1	0.0	151.3
95.00		1.00	1.25	10.962	12.06	153.07	0.650	0.000	5.00	11.634	7.56	91.2	0.0	367.9
98.00	Appurtenance(s)	1.00	1.26	11.034	12.14	149.78	0.650	0.000	3.00	6.756	4.39	53.3	0.0	213.5
98.50	Bot - Section 3	1.00	1.26	11.046	12.15	149.23	0.650	0.000	0.50	1.110	0.72	8.8	0.0	35.1
100.00		1.00	1.27	11.081	12.19	147.57	0.650	0.000	1.50	3.348	2.18	26.5	0.0	183.8
102.00	Top - Section 2	1.00	1.27	11.127	12.24	145.34	0.650	0.000	2.00	4.398	2.86	35.0	0.0	241.5
105.00		1.00	1.28	11.195	12.31	144.12	0.650	0.000	3.00	6.457	4.20	51.7	0.0	153.4
108.00	Appurtenance(s)	1.00	1.29	11.262	12.39	140.72	0.650	0.000	3.00	6.288	4.09	50.6	0.0	149.3
109.00	Top - Section 3	1.00	1.29	11.284	12.41	139.58	0.650	0.000	1.00	2.059	1.34	16.6	0.0	48.9
110.00		1.00	1.29	11.305	12.44	138.43	0.650	0.000	1.00	2.040	1.33	16.5	0.0	48.4
115.00		1.00	1.30	11.412	12.55	132.66	0.650	0.000	5.00	9.918	6.45	80.9	0.0	235.4
118.00	Appurtenance(s)	1.00	1.31	11.474	12.62	129.16	0.650	0.000	3.00	5.726	3.72	47.0	0.0	135.9
119.00		1.00	1.31	11.494	12.64	127.98	0.650	0.000	1.00	1.871	1.22	15.4	0.0	44.4
<b>Totals:</b>								<b>119.00</b>				<b>2,362.4</b>		<b>12,908.1</b>

## Discrete Appurtenance Forces

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

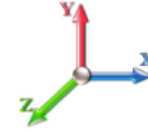


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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor	x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	118.00	(3) T-Arm Kit	1	11.474	12.621	0.75	0.75	12.38	500.00	0.000	0.000	156.19	0.00	0.00	
2	118.00	BXA-70063-6BF	3	11.474	12.621	0.63	0.90	14.31	51.00	0.000	0.000	180.57	0.00	0.00	
3	118.00	T-Arm	3	11.474	12.621	0.56	0.75	16.88	1050.00	0.000	0.000	212.98	0.00	0.00	
4	118.00	Commscope	6	11.474	12.621	0.75	0.90	36.21	262.20	0.000	0.000	457.06	0.00	0.00	
5	118.00	Samsung MT6407-77A	3	11.474	12.621	0.63	0.90	8.86	238.20	0.000	0.000	111.87	0.00	0.00	
6	118.00	B2/B66A RRH-BR049	3	11.474	12.621	0.60	0.90	3.38	253.20	0.000	0.000	42.69	0.00	0.00	
7	118.00	Collar	1	11.474	12.621	0.75	0.75	1.88	150.60	0.000	0.000	23.66	0.00	0.00	
8	118.00	Samsung B5/B13	3	11.474	12.621	0.60	0.90	3.40	210.90	0.000	0.000	42.92	0.00	0.00	
9	118.00	Raycap	1	11.474	12.621	0.90	0.90	3.41	32.00	0.000	0.000	43.05	0.00	0.00	
10	118.00	BSAMNT-SBS-1-2	3	11.474	12.621	0.75	0.75	0.00	76.05	0.000	0.000	0.00	0.00	0.00	
11	108.00	APXVTM14-C-120	3	11.262	12.388	0.63	0.80	12.02	168.00	0.000	0.000	148.91	0.00	0.00	
12	108.00	800 MHz	3	11.262	12.388	0.54	0.80	4.00	159.00	0.000	0.000	49.60	0.00	0.00	
13	108.00	840 10054	3	11.262	12.388	0.49	0.80	6.72	105.00	0.000	0.000	83.24	0.00	0.00	
14	108.00	ACU-A20-N	4	11.262	12.388	0.54	0.80	0.30	4.00	0.000	0.000	3.72	0.00	0.00	
15	108.00	APXVSP18-C-A20	2	11.262	12.388	0.66	0.80	10.65	114.00	0.000	0.000	131.94	0.00	0.00	
16	108.00	TD-RRH8x20-25	3	11.262	12.388	0.54	0.80	6.51	210.00	0.000	0.000	80.68	0.00	0.00	
17	108.00	Horizon	2	11.262	12.388	0.80	0.80	0.69	21.20	0.000	0.000	8.52	0.00	0.00	
18	108.00	P40-16-XLPP-RR-A	1	11.262	12.388	0.80	0.80	7.26	53.00	0.000	0.000	89.99	0.00	0.00	
19	108.00	VHLP2.5	2	11.262	12.388	1.00	1.00	16.86	95.20	0.000	0.000	208.86	0.00	0.00	
20	108.00	T-Arm	3	11.262	12.388	0.56	0.75	13.50	1050.00	0.000	0.000	167.24	0.00	0.00	
21	108.00	800 MHz Filters	3	11.262	12.388	0.54	0.80	3.86	192.00	0.000	0.000	47.81	0.00	0.00	
22	108.00	1900MHz RRH	3	11.262	12.388	0.54	0.80	6.11	132.00	0.000	0.000	75.70	0.00	0.00	
23	98.00	Powerwave LGP13519	6	11.034	12.137	0.80	0.80	1.63	31.80	0.000	0.000	19.81	0.00	0.00	
24	98.00	Cci OPA-65R-LCUU-H6	3	11.034	12.137	0.63	0.80	18.32	240.00	0.000	0.000	222.30	0.00	0.00	
25	98.00	Powerwave LGP21402	9	11.034	12.137	0.80	0.80	9.29	126.90	0.000	0.000	112.73	0.00	0.00	
26	98.00	Ericsson RRUS 11	3	11.034	12.137	0.54	0.80	4.05	132.00	0.000	0.000	49.18	0.00	0.00	
27	98.00	Powerwave 7770 w/Mount	3	11.034	12.137	0.58	0.80	9.57	81.00	0.000	0.000	116.19	0.00	0.00	
28	98.00	T-Arm	3	11.034	12.137	0.56	0.75	16.88	1050.00	0.000	0.000	204.81	0.00	0.00	
29	98.00	Quintel QS66512-2	3	11.034	12.137	0.74	0.80	17.95	333.00	0.000	0.000	217.87	0.00	0.00	
30	98.00	Ericsson RRUS 8843	3	11.034	12.137	0.54	0.80	2.65	225.00	0.000	0.000	32.20	0.00	0.00	
31	98.00	Ericsson RRUS 32	3	11.034	12.137	0.54	0.80	4.41	159.00	0.000	0.000	53.48	0.00	0.00	
32	98.00	Raycap DC6-48-60-0-8F	2	11.034	12.137	0.80	0.80	1.47	63.60	0.000	0.000	17.87	0.00	0.00	
33	88.00	4449 B71 + B85	3	10.787	11.865	0.54	0.80	4.13	222.00	0.000	0.000	49.03	0.00	0.00	
34	88.00	AIR32	3	10.787	11.865	0.70	0.80	13.59	396.60	0.000	0.000	161.28	0.00	0.00	
35	88.00	APXVAARR24_43-U-NA2	3	10.787	11.865	0.56	0.80	34.00	384.00	0.000	0.000	403.45	0.00	0.00	
36	88.00	KRY 112 144/2	3	10.787	11.865	0.56	0.80	0.69	33.00	0.000	0.000	8.17	0.00	0.00	
37	88.00	SDX1926Q-43	3	10.787	11.865	0.54	0.80	0.37	16.50	0.000	0.000	4.39	0.00	0.00	
38	88.00	T-Arm w/ mod	3	10.787	11.865	0.56	0.75	23.63	1050.00	0.000	0.000	280.31	0.00	0.00	
39	88.00	AIR6449 B41	3	10.787	11.865	0.57	0.80	9.63	309.00	0.000	0.000	114.23	0.00	0.00	
40	88.00	RRUS 4415 B25	3	10.787	11.865	0.54	0.80	2.64	138.00	0.000	0.000	31.29	0.00	0.00	

**Totals:** 10,118.95

**4,465.80**

## Total Applied Force Summary

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

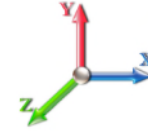


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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		105.69	1021.53	0.00	0.00
10.00		103.19	1002.83	0.00	0.00
15.00		100.70	984.13	0.00	0.00
20.00		104.20	965.43	0.00	0.00
25.00		106.44	946.73	0.00	0.00
30.00		107.72	928.03	0.00	0.00
35.00		108.29	909.33	0.00	0.00
40.00		108.32	890.63	0.00	0.00
45.00		107.90	871.92	0.00	0.00
48.50		74.83	599.22	0.00	0.00
50.00		32.23	403.18	0.00	0.00
53.25		69.76	863.17	0.00	0.00
55.00		37.25	251.04	0.00	0.00
60.00		106.13	707.17	0.00	0.00
65.00		104.54	692.21	0.00	0.00
70.00		102.74	677.25	0.00	0.00
75.00		100.75	662.29	0.00	0.00
80.00		98.58	647.33	0.00	0.00
85.00		96.26	632.37	0.00	0.00
88.00	(24) attachments	1108.61	2921.34	0.00	0.00
90.00		37.08	216.56	0.00	0.00
95.00		91.19	530.93	0.00	0.00
98.00	(38) attachments	1099.73	2753.68	0.00	0.00
98.50		8.76	44.27	0.00	0.00
100.00		26.53	211.47	0.00	0.00
102.00		34.99	278.30	0.00	0.00
105.00		51.68	208.63	0.00	0.00
108.00	(32) attachments	1146.83	2507.99	0.00	0.00
109.00		16.61	62.52	0.00	0.00
110.00		16.49	62.07	0.00	0.00
115.00		80.92	303.64	0.00	0.00
118.00	(27) attachments	1317.98	3000.95	0.00	0.00
119.00		15.38	44.39	0.00	0.00
	<b>Totals:</b>	<b>6,828.25</b>	<b>27,802.53</b>	<b>0.00</b>	<b>0.00</b>

## Linear Appurtenance Segment Forces (Factored)

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.0D + 1.0W 60 mph Wind	<b>Iterations</b> 22
<b>Dead Load Factor</b> 1.00	
<b>Wind Load Factor</b> 1.00	

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	11.00
10.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	11.00
15.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	11.00
20.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	11.00
25.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.276	0.00	11.00
30.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	11.00
35.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.883	0.00	11.00
40.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	11.00
45.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	11.00
48.50	1 5/8" Hybrid	Yes	3.50	0.000	0.00	0.00	0.00	0.000	0.000	9.515	0.00	7.70
50.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	3.30
53.25	1 5/8" Hybrid	Yes	3.25	0.000	0.00	0.00	0.00	0.000	0.000	9.704	0.00	7.15
55.00	1 5/8" Hybrid	Yes	1.75	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	3.85
60.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	11.00
65.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.120	0.00	11.00
70.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	11.00
75.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.430	0.00	11.00
80.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	11.00
85.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.708	0.00	11.00
88.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	10.787	0.00	6.60
90.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	4.40
95.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.962	0.00	11.00
98.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	11.034	0.00	6.60
98.50	1 5/8" Hybrid	Yes	0.50	0.000	0.00	0.00	0.00	0.000	0.000	11.046	0.00	1.10
100.00	1 5/8" Hybrid	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	3.30
102.00	1 5/8" Hybrid	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	11.127	0.00	4.40
105.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	11.195	0.00	6.60
108.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	11.262	0.00	6.60
109.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.284	0.00	2.20
110.00	1 5/8" Hybrid	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	11.305	0.00	2.20
115.00	1 5/8" Hybrid	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.412	0.00	11.00
118.00	1 5/8" Hybrid	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	11.474	0.00	6.60
<b>Totals:</b>											<b>0.0</b>	<b>259.6</b>

## Calculated Forces

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.0D + 1.0W 60 mph Wind	<b>Iterations</b> 22
<b>Dead Load Factor</b> 1.00	
<b>Wind Load Factor</b> 1.00	

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-27.80	-6.84	0.00	-623.55	0.00	623.55	3013.27	1506.63	5849.73	2929.21	0.00	0.000	0.000	0.222
5.00	-26.77	-6.77	0.00	-589.33	0.00	589.33	2972.75	1486.38	5634.65	2821.52	0.04	-0.066	0.000	0.218
10.00	-25.76	-6.69	0.00	-555.49	0.00	555.49	2930.78	1465.39	5420.60	2714.33	0.14	-0.132	0.000	0.213
15.00	-24.77	-6.62	0.00	-522.02	0.00	522.02	2887.35	1443.68	5207.78	2607.76	0.31	-0.199	0.000	0.209
20.00	-23.79	-6.54	0.00	-488.93	0.00	488.93	2842.47	1421.24	4996.39	2501.91	0.56	-0.267	0.000	0.204
25.00	-22.84	-6.46	0.00	-456.23	0.00	456.23	2796.14	1398.07	4786.62	2396.87	0.88	-0.336	0.000	0.199
30.00	-21.91	-6.37	0.00	-423.96	0.00	423.96	2748.35	1374.17	4578.69	2292.75	1.26	-0.405	0.000	0.193
35.00	-20.99	-6.28	0.00	-392.12	0.00	392.12	2699.10	1349.55	4372.78	2189.64	1.73	-0.475	0.000	0.187
40.00	-20.09	-6.19	0.00	-360.73	0.00	360.73	2648.40	1324.20	4169.10	2087.65	2.26	-0.544	0.000	0.180
45.00	-19.22	-6.09	0.00	-329.79	0.00	329.79	2596.25	1298.12	3967.85	1986.88	2.87	-0.614	0.000	0.173
48.50	-18.61	-6.02	0.00	-308.48	0.00	308.48	2558.87	1279.44	3828.53	1917.11	3.34	-0.663	0.000	0.168
50.00	-18.21	-5.99	0.00	-299.45	0.00	299.45	2542.63	1271.32	3769.24	1887.42	3.55	-0.684	0.000	0.166
53.25	-17.34	-5.92	0.00	-279.97	0.00	279.97	1874.80	937.40	2771.76	1387.94	4.03	-0.730	0.000	0.211
55.00	-17.09	-5.90	0.00	-269.61	0.00	269.61	1862.74	931.37	2724.01	1364.03	4.30	-0.755	0.000	0.207
60.00	-16.37	-5.81	0.00	-240.11	0.00	240.11	1827.31	913.65	2588.34	1296.09	5.14	-0.835	0.000	0.194
65.00	-15.67	-5.71	0.00	-211.09	0.00	211.09	1790.42	895.21	2453.92	1228.78	6.05	-0.913	0.000	0.181
70.00	-14.99	-5.62	0.00	-182.53	0.00	182.53	1752.08	876.04	2320.96	1162.21	7.05	-0.989	0.000	0.166
75.00	-14.32	-5.52	0.00	-154.44	0.00	154.44	1712.28	856.14	2189.66	1096.46	8.13	-1.060	0.000	0.149
80.00	-13.67	-5.43	0.00	-126.84	0.00	126.84	1671.02	835.51	2060.22	1031.64	9.27	-1.126	0.000	0.131
85.00	-13.04	-5.33	0.00	-99.71	0.00	99.71	1628.32	814.16	1932.84	967.86	10.49	-1.186	0.000	0.111
88.00	-10.14	-4.16	0.00	-83.73	0.00	83.73	1601.99	801.00	1857.49	930.12	11.24	-1.218	0.000	0.096
90.00	-9.92	-4.13	0.00	-75.41	0.00	75.41	1584.15	792.08	1807.72	905.20	11.76	-1.238	0.000	0.090
95.00	-9.39	-4.03	0.00	-54.78	0.00	54.78	1538.53	769.27	1685.06	843.78	13.08	-1.281	0.000	0.071
98.00	-6.66	-2.87	0.00	-42.69	0.00	42.69	1510.46	755.23	1612.73	807.56	13.89	-1.303	0.000	0.057
98.50	-6.62	-2.86	0.00	-41.26	0.00	41.26	1505.73	752.87	1600.77	801.57	14.03	-1.306	0.000	0.056
100.00	-6.40	-2.83	0.00	-36.97	0.00	36.97	1491.46	745.73	1565.06	783.69	14.44	-1.316	0.000	0.051
102.00	-6.13	-2.79	0.00	-31.31	0.00	31.31	1021.50	510.75	1074.26	537.93	14.99	-1.327	0.000	0.064
105.00	-5.92	-2.73	0.00	-22.94	0.00	22.94	1004.76	502.38	1028.99	515.26	15.83	-1.342	0.000	0.050
108.00	-3.44	-1.53	0.00	-14.74	0.00	14.74	987.50	493.75	984.13	492.79	16.68	-1.356	0.000	0.033
109.00	-3.38	-1.51	0.00	-13.21	0.00	13.21	981.63	490.81	969.27	485.35	16.96	-1.359	0.000	0.031
109.00	-3.38	-1.51	0.00	-13.21	0.00	13.21	981.63	490.81	969.27	485.35	16.96	-1.359	0.000	0.031
110.00	-3.31	-1.49	0.00	-11.70	0.00	11.70	975.70	487.85	954.46	477.94	17.25	-1.363	0.000	0.028
115.00	-3.01	-1.41	0.00	-4.23	0.00	4.23	945.18	472.59	881.23	441.27	18.68	-1.374	0.000	0.013
118.00	-0.04	-0.02	0.00	-0.02	0.00	0.02	926.18	463.09	838.01	419.63	19.55	-1.376	0.000	0.000
119.00	0.00	-0.02	0.00	0.00	0.00	0.00	919.72	459.86	823.73	412.48	19.83	-1.376	0.000	0.000

## Final Analysis Summary

<b>Structure:</b> CT08558-B-SBA	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	28.6	0.00	33.29	0.00	0.00	2621.70
0.9D + 1.6W 97 mph Wind	28.6	0.00	24.95	0.00	0.00	2594.67
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.2	0.00	62.84	0.00	0.00	759.90
1.2D + 1.0E	1.5	0.00	33.36	0.00	0.00	151.54
0.9D + 1.0E	1.5	0.00	25.02	0.00	0.00	149.84
1.0D + 1.0W 60 mph Wind	6.8	0.00	27.80	0.00	0.00	623.55

### Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-33.29	-28.64	0.00	-2621.7	0.00	-2621.7	3013.27	1506.6	5849.73	2929.21	0.00	0.906
0.9D + 1.6W 97 mph Wind	-24.95	-28.61	0.00	-2594.6	0.00	-2594.6	3013.27	1506.6	5849.73	2929.21	0.00	0.894
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-62.84	-8.16	0.00	-759.90	0.00	-759.90	3013.27	1506.6	5849.73	2929.21	0.00	0.280
1.2D + 1.0E	-20.90	-1.28	0.00	-76.86	0.00	-76.86	1874.80	937.40	2771.76	1387.94	53.25	0.067
0.9D + 1.0E	-15.67	-1.26	0.00	-75.71	0.00	-75.71	1874.80	937.40	2771.76	1387.94	53.25	0.063
1.0D + 1.0W 60 mph Wind	-27.80	-6.84	0.00	-623.55	0.00	-623.55	3013.27	1506.6	5849.73	2929.21	0.00	0.222

## Base Plate Summary

<b>Structure:</b> CT08558-B-SB	<b>Code:</b> EIA/TIA-222-G	6/8/2021
<b>Site Name:</b> New Britain 3, CT	<b>Exposure:</b> C	
<b>Height:</b> 119.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 34



Reactions	Base Plate	Anchor Bolts
Original Design	<b>Yield (ksi):</b> 60.00	<b>Bolt Circle:</b> 54.00
<b>Moment (kip-ft):</b> 2356.00	<b>Width (in):</b> 52.00	<b>Number Bolts:</b> 12.00
<b>Axial (kip):</b> 27.50	<b>Style:</b> Clipped	<b>Bolt Type:</b> 2.25" 18J
<b>Shear (kip):</b> 24.70	<b>Polygon Sides:</b> 4.00	<b>Bolt Diameter (in):</b> 2.25
Analysis (1.2D + 1.6W)	<b>Clip Length (in):</b> 9.00	<b>Yield (ksi):</b> 75.00
<b>Moment (kip-ft):</b> 2621.70	<b>Effective Len (in):</b> 9.84	<b>Ultimate (ksi):</b> 100.00
<b>Axial (kip):</b> 33.29	<b>Moment (kip-in):</b> 648.17	<b>Arrangement:</b> Clustered
<b>Shear (kip):</b> 28.64	<b>Allow Stress (ksi):</b> 81.00	<b>Cluster Dist (in):</b> 6.00
	<b>Applied Stress (ksi):</b> 52.65	<b>Start Angle (deg):</b> 45.00
	<b>Stress Ratio:</b> 0.65	Compression
		<b>Force (kip):</b> 199.44
		<b>Allowable (kip):</b> 260.00
		<b>Ratio:</b> 0.79
		Tension
		<b>Force (kip):</b> 188.96
		<b>Allowable (kip):</b> 260.00
		<b>Ratio:</b> 0.75





Pier Foundation Design For Monopole			Date
			6/8/2021
Customer Name:	Verizon	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	119
Site Number:	CT08558-B-SBA	Engineer Name:	T. Alajaj
Engr. Number:	109833	Manager Login Req'd:	

**Foundation Info Obtained from:** Drawings/Calculations

**Structure Type:** Monopole

**Analysis or Design?** Analysis

**Base Reactions (Factored):**

Axial Load (Kips):	33.3	Shear Force (Kips):	28.6
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2621.7

**Foundation Geometries:**

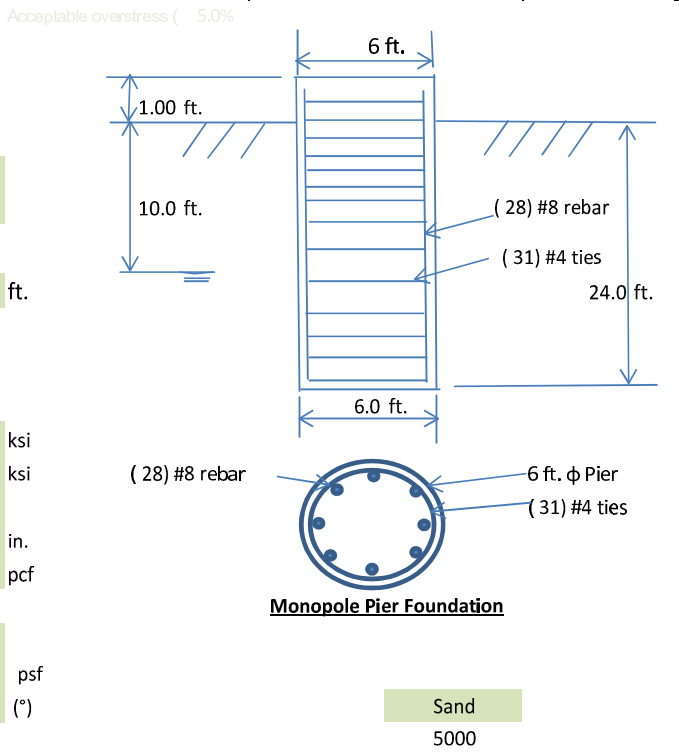
Diameter of Pier (ft.):	6.0	Depth of Base B. G. S. :	24.0 ft.
Pier Height A. G. (ft.):	1.00		

**Material Properties and Rebar Info:**

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000 ksi
Vertical bar yield (ksi):	60	Tie steel yield strength:	60 ksi
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4
Qty. of Vertical Rebars:	28	Tie Spacing:	12.0 in.
Concrete Cover (in.):	3	Concrete unit weight:	150.0 pcf

**Soil Design Parameters:**

Water Table B.G.S. (ft):	10.0	Unit weight of water:	62.4 psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30 (°)
Skin Frictions are to be obtained from:	Soil Report		



Depth of Layers (ft)		$\gamma_{soil}$	$\phi$	Cohesion	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types					
Top	Bottom	(pcf)	(°)	(psf)								
0.0	2.0	135	0	0	0	0	Sand					
2.0	10.0	135	34	0	0	0	Sand					
10.0	25.0	137	34	0	0	0	Sand					
25.0	30.0	137	34	0	0	0	Sand					

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

**Foundation Analysis and Design:**

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75
Total Dry Soil Volume from Conical Failure (cu. Ft.):	5907	Dry Soil Weight from Conical Failure:	797 Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	2024	Buoyant Soil Weight from Conical Failure (Kips):	193 Kips
Total Dry Concrete Volume (cu. Ft.):	311	Total Dry Concrete Weight:	46.7 Kips
Total Buoyant Concrete Volume (cu. Ft.):	395.8	Total Buoyant Concrete Weight:	34.68 Kips
Total Effective Concrete Weight (Kips):	81.3	Total Effective Soil Weight:	990.1 Kips
Total Effective Vertical Load on Base (Kips):	38.8		

Check Soil Capacities:

Allowable Foundation Overturning Resistance (kips-ft.):  
Factor of Safety of Passive Soil Resistance against Moment:

Design Factored Moment (kips-ft):

Usage

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):  
Strength reduction factor (Axial compression):

0.90 Strength reduction factor (Shear):  
0.65 Wind Load Factor on Concrete Design:

Reinforcing Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):  
Calculated Moment Capacity (Mn,Kips-Ft):  
Calculated Shear Capacity (Kips):  
Calculated Tension Capacity (Tn, Kips):  
Calculated Compression Capacity (Pn, Kips):  
Moment & Axial Strength Combination:  
Pier Reinforcement Ratio:

Tie / Stirrup Area (sq. in./each):  
> Design Factored Moment (Mu, K-Ft):  
> Design Factored Shear (Kips):  
> Design Factored Tension (Tu Kips):  
> Design Factored Axial Load (Pu Kips):  
0.85 OK! Max. Allowable Tie/Stirrup Spacing:  
Reinforcement Ratio is satisfied per ACI

Usage

in.



# Monopole Mat Foundation Design

Date

6/8/2021

<b>Customer Name:</b>	Verizon	<b>EIA/TIA Standard:</b>	EIA-222-G
<b>Site Name:</b>		<b>Structure Height (Ft.):</b>	119
<b>Site Number:</b>	CT08558-B-SBA	<b>Engineer Name:</b>	T. Alajaj
<b>Engr. Number:</b>	109833	<b>Engineer Login ID:</b>	

**Foundation Info Obtained from:**

Drawings/Calculations
Monopole
Analysis

**Structure Type:**

**Analysis or Design?**

**Base Reactions (Factored):**

Axial Load (Kips):	33.3	Shear Force (Kips):	28.6
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2621.7

Allowable overstress %: 5.0%

**Foundation Geometries:**

Diameter of Pier (ft.):	6.0	Mods required -Yes/No ?:	No
Pier Height A. G. (ft.):	1.00	Depth of Base BG (ft.):	5.5
Length of Pad (ft.):	21.5	Thickness of Pad (ft.):	1.50
		Width of Pad (ft.):	21.5

Final Length of pad (ft)	21.5	Final width of pad (ft):	21.5
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**Material Properties and Rebar Info:**

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	40	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	30	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf

Rebar at the bottom of the concrete pad:

Qty. of Rebar in Pad (L):	38	Qty. of Rebar in Pad (W):	38
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Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	38	Qty. of Rebar in Pad (W):	38
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Apply 1.35 factor for e/w Per G: 1.35

**Soil Design Parameters:**

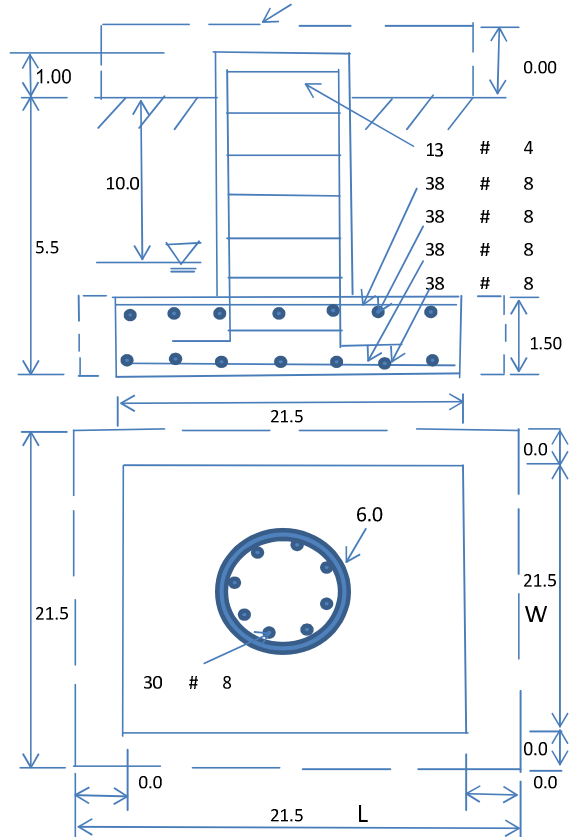
Soil Unit Weight (pcf):	128.0	Soil Buoyant Weight:	50.0	Pcf	Angle from Top of Pad:	30
Water Table B.G.S. (ft):	10.0	Unit Weight of Water:	62.4	pcf	Angle from Bottm of Pad:	25
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Reduction factor on the maximum soil bearing pressure:	1.00
Consider soil hor. resist. for OTM.:	No					

**Foundation Analysis and Design:**

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1735.90	Total Dry Soil Weight (Kips):	222.20
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	222.20	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	834.75	Total Dry Concrete Weight (Kips):	125.21
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	125.21	Total Vertical Load on Base (Kips):	380.71

**Check Soil Capacities:**

Calculated Maxium Net Soil Pressure under the base (psf):	3176	< Allowable Factored Soil Bearing (psf):	9000	0.35	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	3719.1	> Design Factored Momont (kips-ft):	2808	0.75	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.32				OK!



**Check the capacities of Reinforcing Concrete:**

Strength reduction factor (Flexure and axial tension):

Strength reduction factor (Axial compression):

**(1) Concrete Pier:**

- Vertical Steel Rebar Area (sq. in./each):
- Calculated Moment Capacity (Mn,Kips-Ft):
- Calculated Shear Capacity (Kips):
- Calculated Tension Capacity (Tn, Kips):
- Calculated Compression Capacity (Pn, Kips):
- Moment & Axial Strength Combination:
- Pier Reinforcement Ratio:

**(2).Concrete Pad:**

- One-Way Design Shear Capacity (L-Direction, Kips):
- One-Way Design Shear Capacity (W-Direction, Kips):
- One-Way Design Shear Capacity (Corner-Corner, Kips):
- Lower Steel Pad Reinforcement Ratio (L-Direct. ):
- Lower Steel Pad Moment Capacity (L-Direction, Kips-ft):
- Lower Steel Pad Moment Capacity (W-Direction, Kips-ft):
- Lower Steel Pad Moment Capacity (Corner-Corner, K-ft):
- Upper Steel Pad Reinforcement Ratio (L-Direct. ):
- Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):
- Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):
- Upper Steel Pad Moment Capacity (Corner-Corner, K-ft):

**(3).Check Punching Shear Capacity due to Moment in the Pier:**

- Moment transferred by punching shear:
- Max. factored shear stress  $v_{u,AB}$
- Max. factored shear stress  $v_u$

Strength reduction factor (Shear):

Wind Load Factor on Concrete Design:

- Tie / Stirrup Area (sq. in./each):
- > Design Factored Moment (Mu, Kips-
- > Design Factored Shear (Kips):
- > Design Factored Tension (Tu Kips):
- > Design Factored Axial Load (Pu Kips):

OK! Check Tie Spacing (Design/Required):  
Reinforcement Ratio is satisfied per ACI

ad  
Capacity  
Ratio

- One-Way Factored Shear (L-D, Kips): 203.8
- One-Way Factored Shear (W-D., Kips)
- One-Way Factored Shear (C-C, Kips): 214.4
- Lower Steel Pad Reinf. Ratio (W-Direc
- Moment at Bottom ( L-Dir. K-Ft):
- Moment at Bottom ( W-Dir. K-Ft):
- Moment at Bottom ( C-C Dir. K-Ft): 1186.3
- Upper Steel Reinf. Ratio (W-Dir. ):
- Moment at the top (L-Dir K-Ft):
- Moment at the top (W-Dir K-Ft):
- Moment at the top (C-C Dir. K-Ft):

- 1048.7 k-ft.
- Psi
- Psi

- Max. factored shear stress  $v_{u,CD}$
- Factored shear Strength  $\phi v_n$
- Check Usage of Punching Shear Capacity:

- Psi
- Psi
- OK!



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## Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10044775  
Maser Consulting Connecticut Project #: 20777623A

April 28, 2021

### Site Information

Site ID: 468551-VZW / NEW BRITAIN 6 CT  
Site Name: NEW BRITAIN 6 CT  
Carrier Name: Verizon Wireless  
Address: 723 Farmington Ave  
New Britain, Connecticut 06050  
Hartford County  
Latitude: 41.698414°  
Longitude: -72.785944°

### Structure Information

Tower Type: 118.5-Ft Monopole  
Mount Type: 12.50-Ft T-Arm

FUZE ID # 16232005

### Analysis Results

T-Arm: 54.1% 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*

Report Prepared By: Nathan LaPorte



## **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:**

<b>Document Type</b>	<b>Remarks</b>
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS, Site ID: 674977, dated April 12, 2021</i>
<i>Mount Mapping Report</i>	<i>RKS Design &amp; Engineering LLC, Site ID: SBA: CT08558-S, dated January 10, 2021</i>
<i>Previous Mount Analysis</i>	<i>Maser Consulting Connecticut, Project #: 20777623A, Dated March 3, 2021</i>
<i>Mount Modification Drawings</i>	<i>Maser Consulting Connecticut, Project #: 20777623A, Dated April 28, 2021</i>

## **Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : 117 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.50 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:	$S_s$ : 0.192 $S_1$ : 0.055
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
116.90	118.00	6	Commscope	NHH-65B-R2B	Added
		3	Samsung	MT6407-77A	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	Raycap	RVZDC-6627-PF-48	
		2	Amphenol	BXA-70063-6BF-EDIN-4	Retained
		1	Amphenol	BXA-70063-6BF-EDIN-2	

**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 by Maser Consulting Connecticut, 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:
  - o Channel, Solid Round, Angle, Plate      ASTM A36 (Gr. 36)
  - o HSS (Rectangular)                            ASTM 500 (Gr. B-46)
  - o Pipe    ASTM A53 (Gr. B-35)
  - o Threaded Rod                                    F1554 (Gr. 36)
  - o 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>Mount Pipe</i>	<i>54.1%</i>	<i>Pass</i>
<i>Face Horizontal</i>	<i>36.6%</i>	<i>Pass</i>
<i>Standoff Horizontal</i>	<i>33.6%</i>	<i>Pass</i>
<i>Secondary Face Horizontal</i>	<i>26.1%</i>	<i>Pass</i>
<i>Proposed Standoff Arm</i>	<i>42.7%</i>	<i>Pass</i>
<i>Mount Connection</i>	<i>46.9%</i>	<i>Pass</i>

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>54.1%</b>
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**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:**

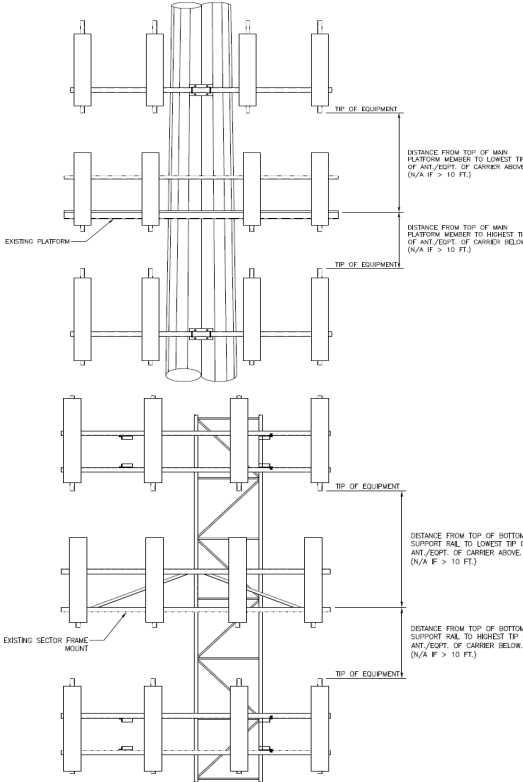
1. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
- 4. Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Wind Speed Usage and Adoption Letter







Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector				Sector B									
Sector A:	340.00	Deg	Leg A:		Deg	Ant <sub>1a</sub>	9442 RRH 2X40-AWS	10.60	6.70	24.40		118	20.25	-6.50		23, 211	
Sector B:	100.00	Deg	Leg B:		Deg	Ant <sub>1b</sub>	BXA-171063-12BF-ED	6.10	4.10	72.50		116	44.25	8.25	100.00	23, 211	
Sector C:	220.00	Deg	Leg C:		Deg	Ant <sub>1c</sub>											
Sector D:		Deg	Leg D:		Deg	Ant <sub>2a</sub>											
<b>Climbing Facility Information</b>							Ant <sub>2b</sub>	80010735V01	11.90	3.90	76.10		116.479	38.50	9.00	100.00	23, 217
Location:	0.00	Deg	N/A			Ant <sub>2c</sub>											
Climbing Facility	Corrosion Type:	N/A				Ant <sub>3a</sub>											
	Access:	Climbing path was unobstructed.				Ant <sub>3b</sub>	BXA-171063-8BF-EDIN	6.10	4.10	48.50		116.667	36.25	8.00	100.00	23, 220	
	Condition:	Good condition.				Ant <sub>3c</sub>											
						Ant <sub>4a</sub>											
						Ant <sub>4b</sub>	BXA-70063-6BF-EDIN	11.20	5.30	68.60		116.854	34.00	9.25	100.00	23, 220	
						Ant <sub>4c</sub>											
						Ant <sub>5a</sub>											
						Ant <sub>5b</sub>											
						Ant <sub>5c</sub>											
						Ant on Standoff	(2)UNKNOWN TMA	6.50	1.00	5.00			2.00			212, 219	
						Ant on Standoff	RRFDC-3315-PF-48	15.73	10.25	25.66			10.50			23, 153	
						Ant on Tower											
						Ant on Tower											
<b>Sector C</b>							Ant <sub>1a</sub>	9442 RRH 2X40-AWS	10.60	6.70	24.40		118.104	19.00	-6.50		30, 223
						Ant <sub>1b</sub>	BXA-171063-12BF-ED	6.10	4.10	72.50		116.667	36.25	8.25	220.00	30, 223	
						Ant <sub>1c</sub>											
						Ant <sub>2a</sub>											
						Ant <sub>2b</sub>	80010735V01	11.90	3.90	76.10		116.521	38.00	9.00	220.00	30, 227	
						Ant <sub>2c</sub>											
						Ant <sub>3a</sub>											
						Ant <sub>3b</sub>	BXA-171063-8BF-EDIN	6.10	4.10	48.50		117	32.25	8.00	220.00	30, 230	
						Ant <sub>3c</sub>											
						Ant <sub>4a</sub>											
						Ant <sub>4b</sub>	BXA-70063-6BF-EDIN	11.20	5.30	68.60		116.708	35.75	9.25	220.00	30, 230	
						Ant <sub>4c</sub>											
						Ant <sub>5a</sub>											
						Ant <sub>5b</sub>											
						Ant <sub>5c</sub>											
						Ant on Standoff	(2)UNKNOWN TMA	6.50	1.00	5.00			2.00			225, 230	
						Ant on Standoff											
						Ant on Tower											
						Ant on Tower											
<b>Sector D</b>							Ant <sub>1a</sub>										
						Ant <sub>1b</sub>											
						Ant <sub>1c</sub>											
						Ant <sub>2a</sub>											
						Ant <sub>2b</sub>											
						Ant <sub>2c</sub>											
						Ant <sub>3a</sub>											
						Ant <sub>3b</sub>											
						Ant <sub>3c</sub>											
						Ant <sub>4a</sub>											
						Ant <sub>4b</sub>											
						Ant <sub>4c</sub>											
						Ant <sub>5a</sub>											
						Ant <sub>5b</sub>											
						Ant <sub>5c</sub>											
						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, (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.



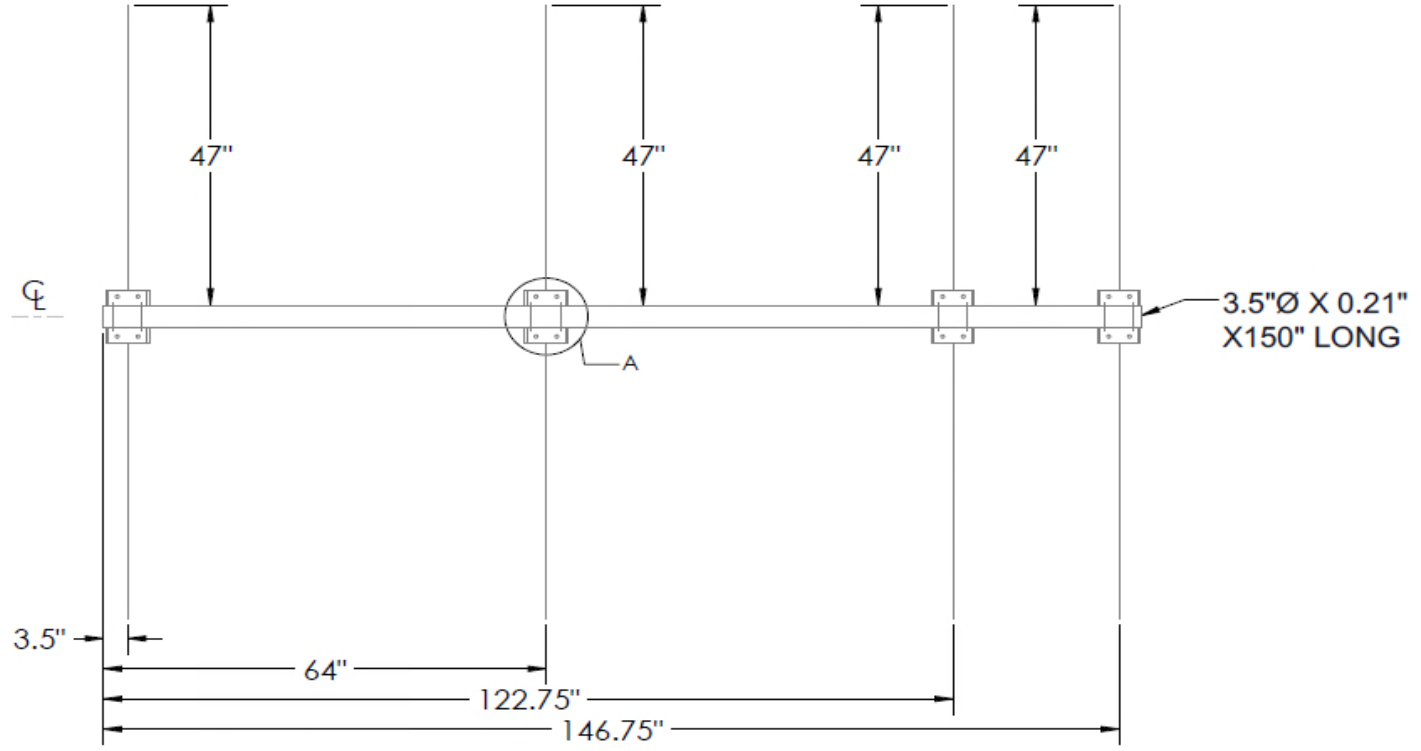
### Antenna Mount Mapping Form (PATENT PENDING)

FCC #  
1251709

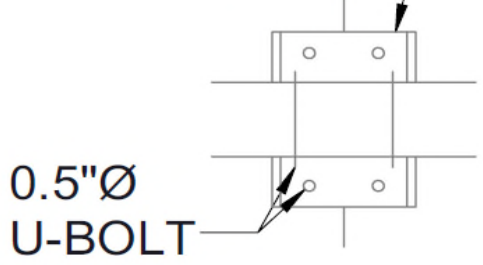
<b>Tower Owner:</b>	SBA	<b>Mapping Date:</b>	1/10/2021
<b>Site Name:</b>	VZW: NEW BRITAIN 6 CT	<b>Tower Type:</b>	Monopole
<b>Site Number or ID:</b>	SBA: CT08558-S	<b>Tower Height (Ft.):</b>	118.5
<b>Mapping Contractor:</b>	RKS Design & Engineering LLC	<b>Mount Elevation (Ft.):</b>	115.625

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

**Please Insert Sketches of the Antenna Mount**

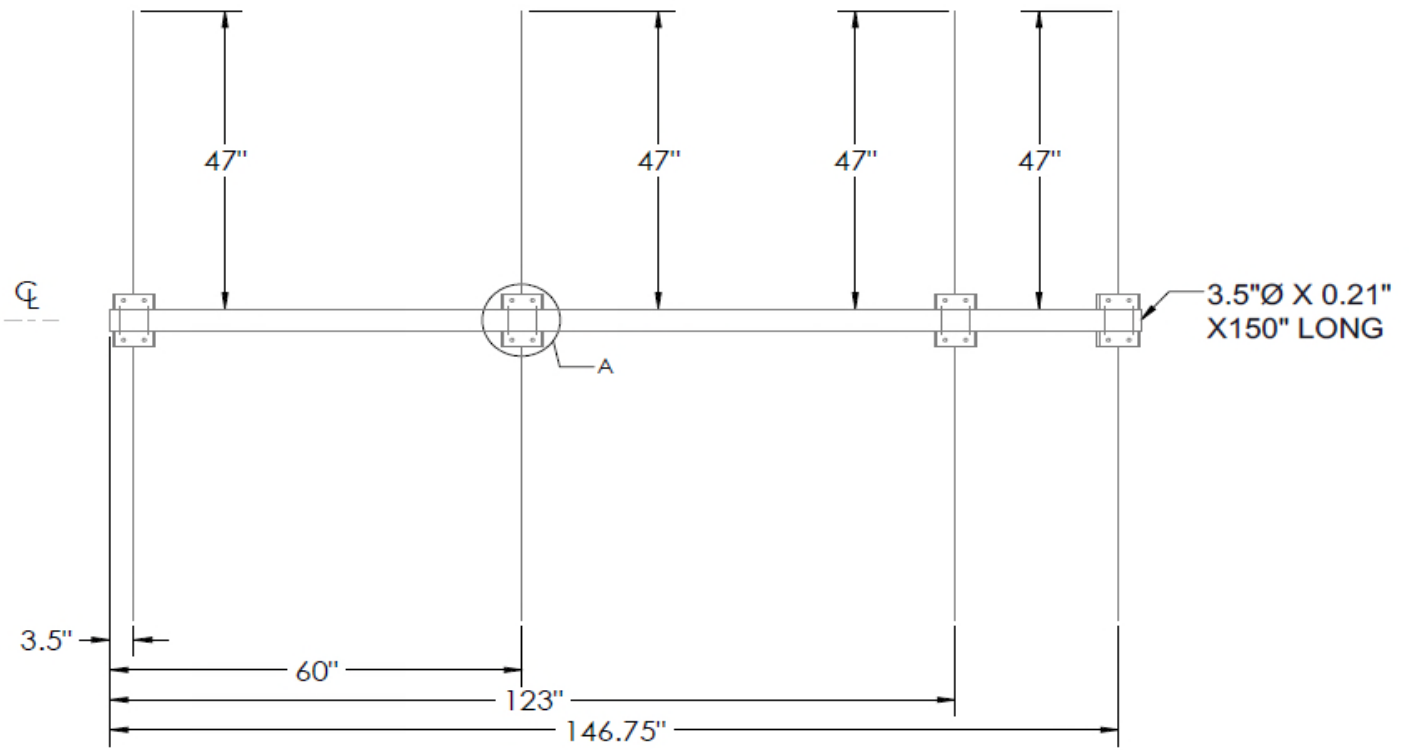


**C 2.5" X 6.25" X 0.31"  
X 8.25" LONG**

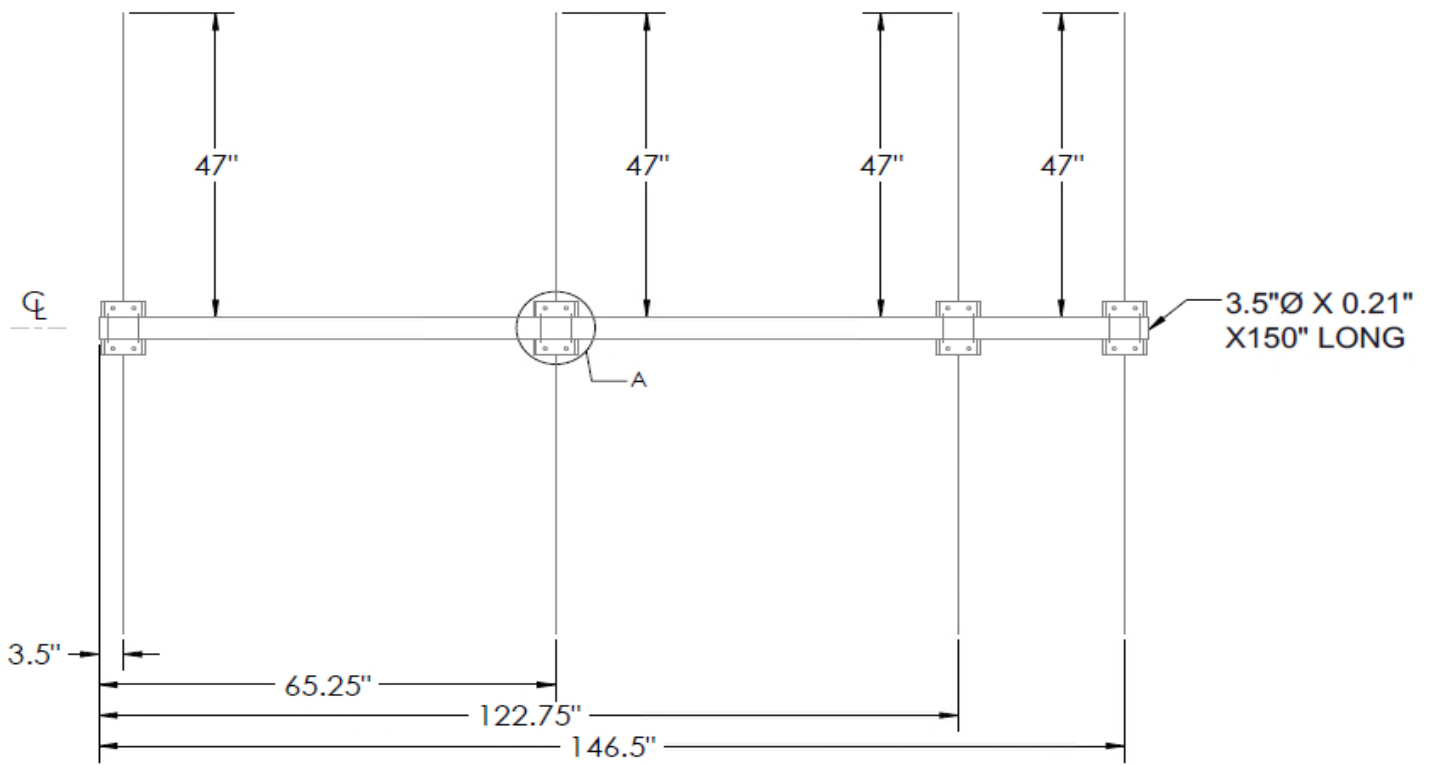


**DETAIL A**

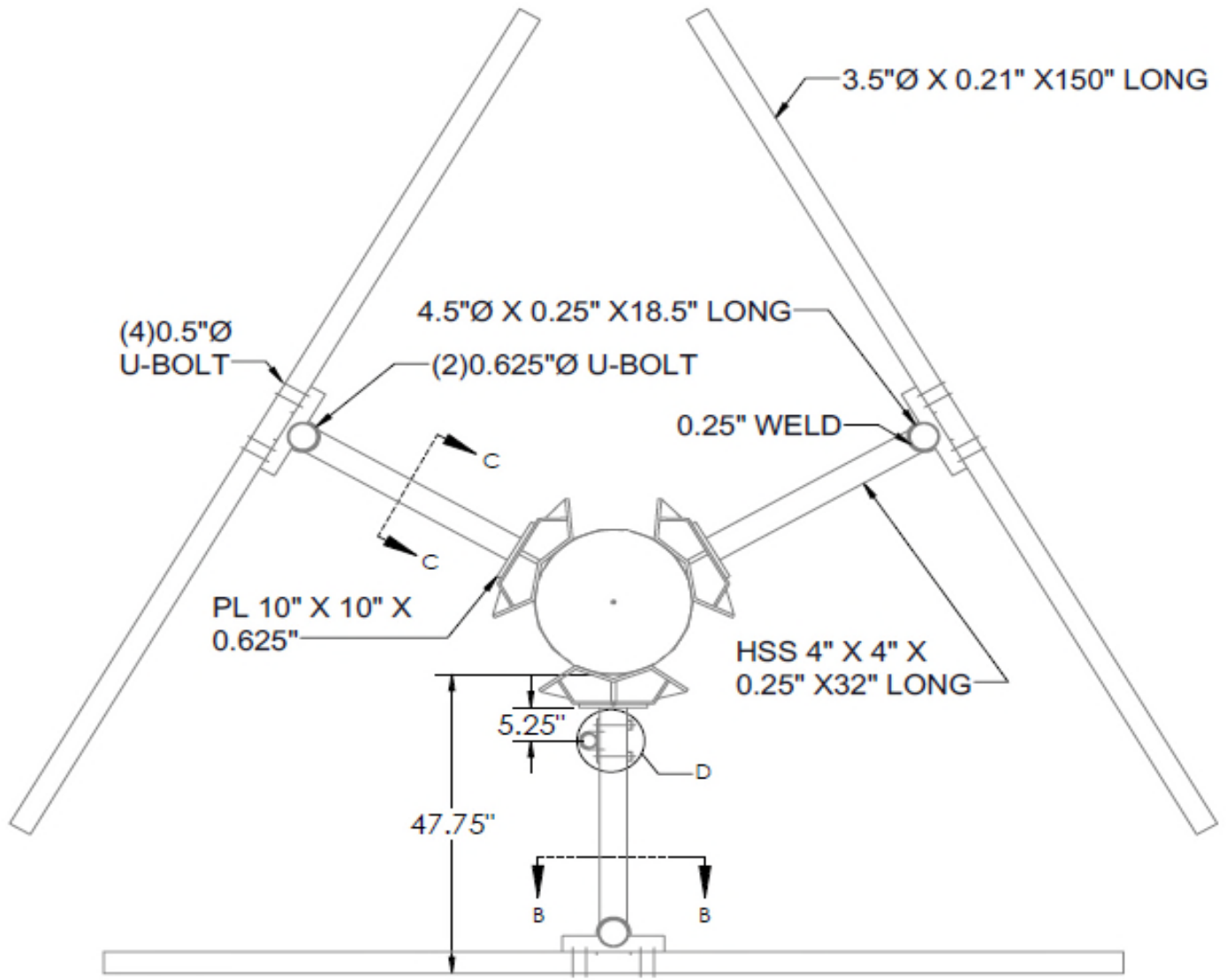
Please Insert Sketches of the Antenna Mount, cont'd



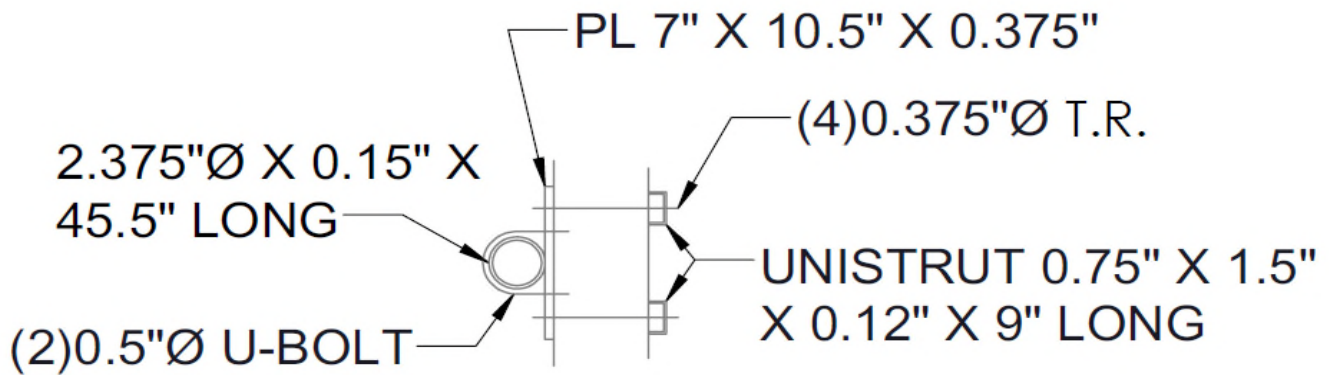
SECTOR B



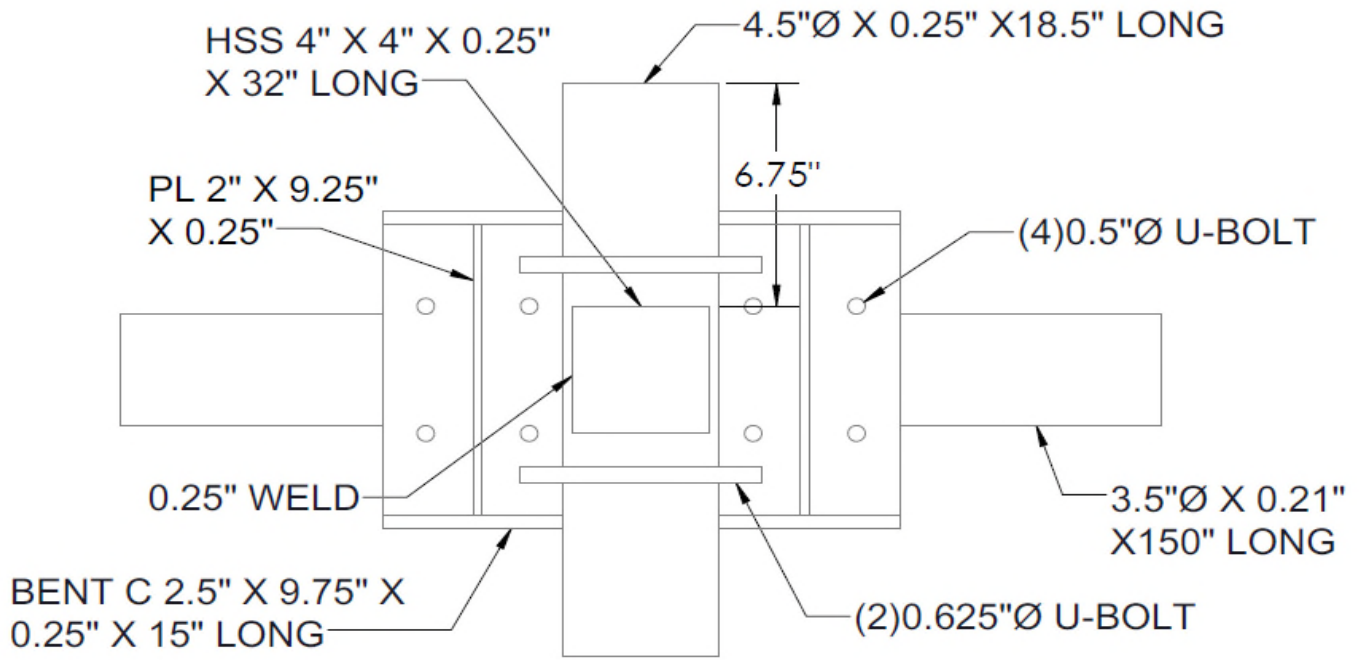
SECTOR C



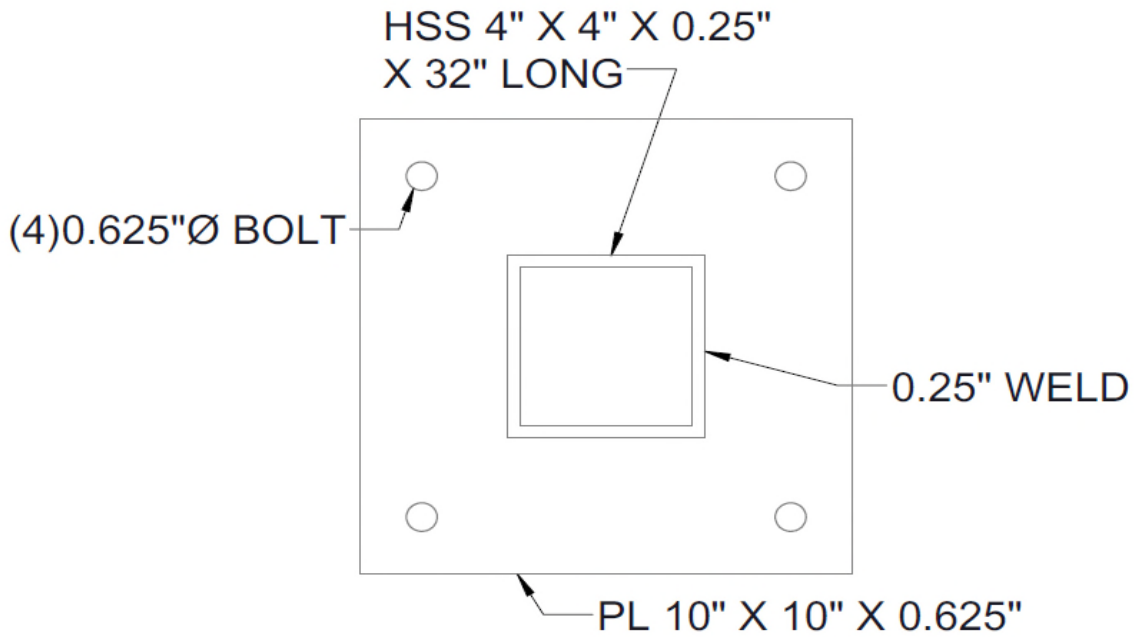
MOUNT PLAN VIEW



DETAIL D

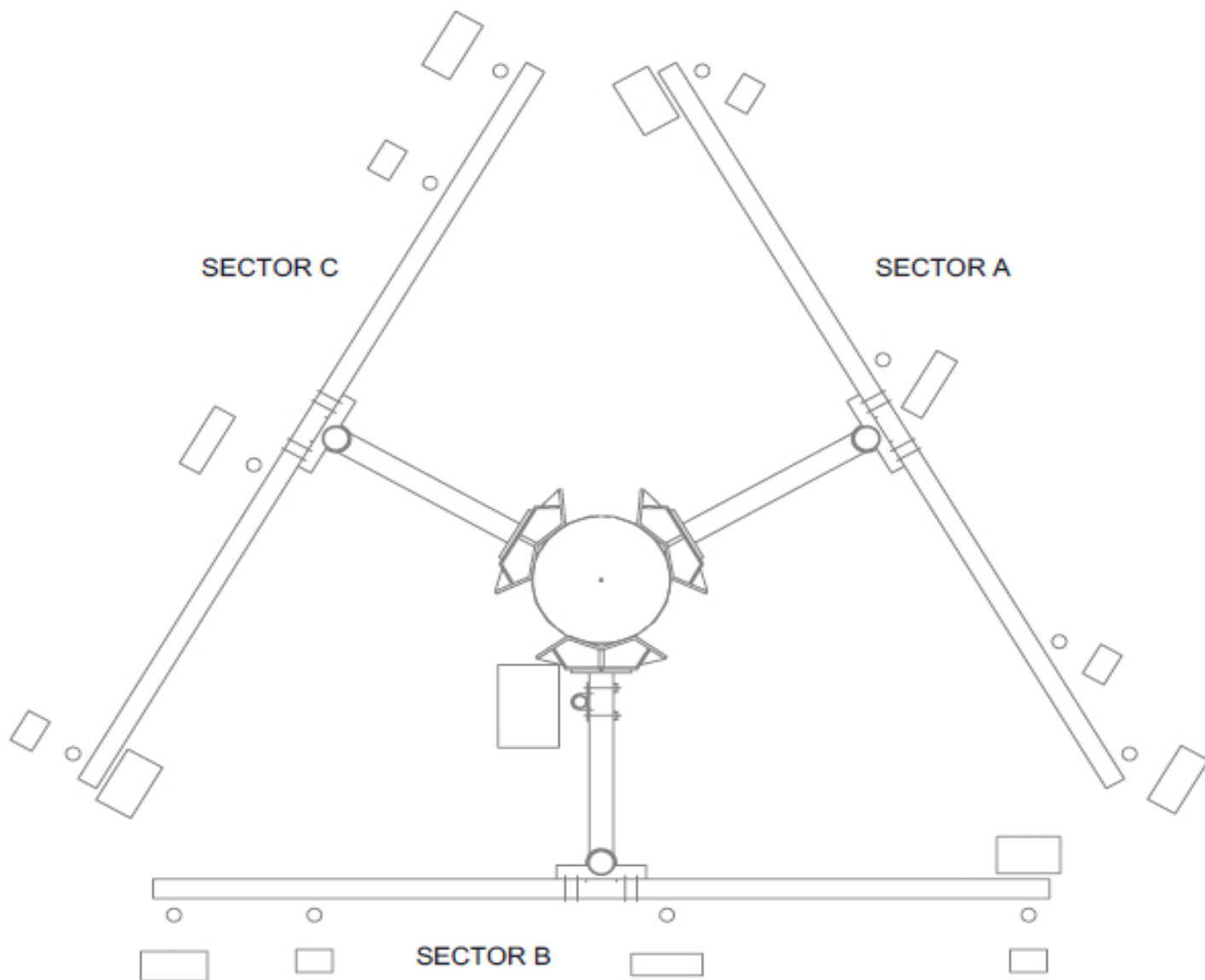


SECTION B-B

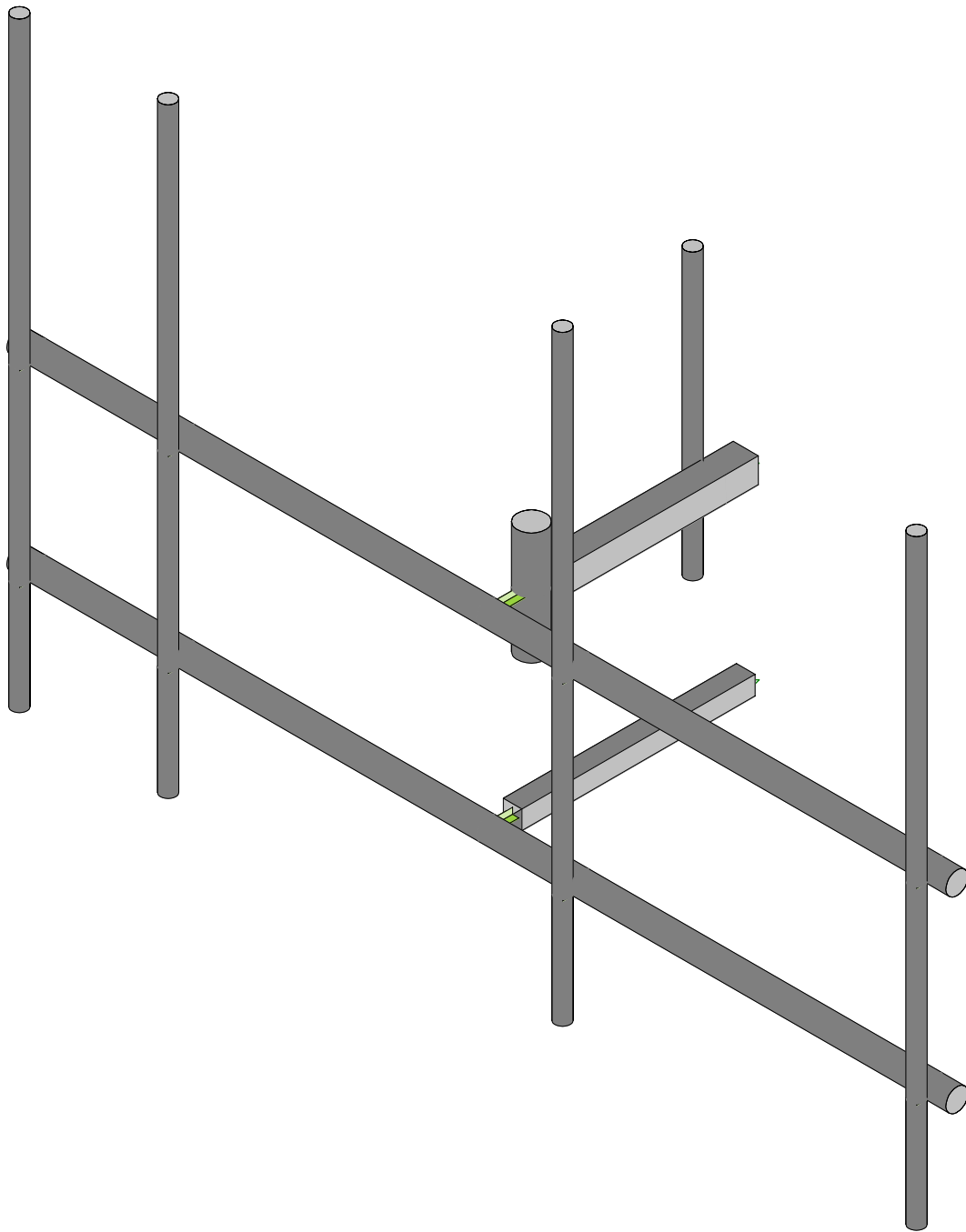
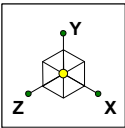


SECTION C-C



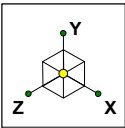


ANTENNA PLAN VIEW

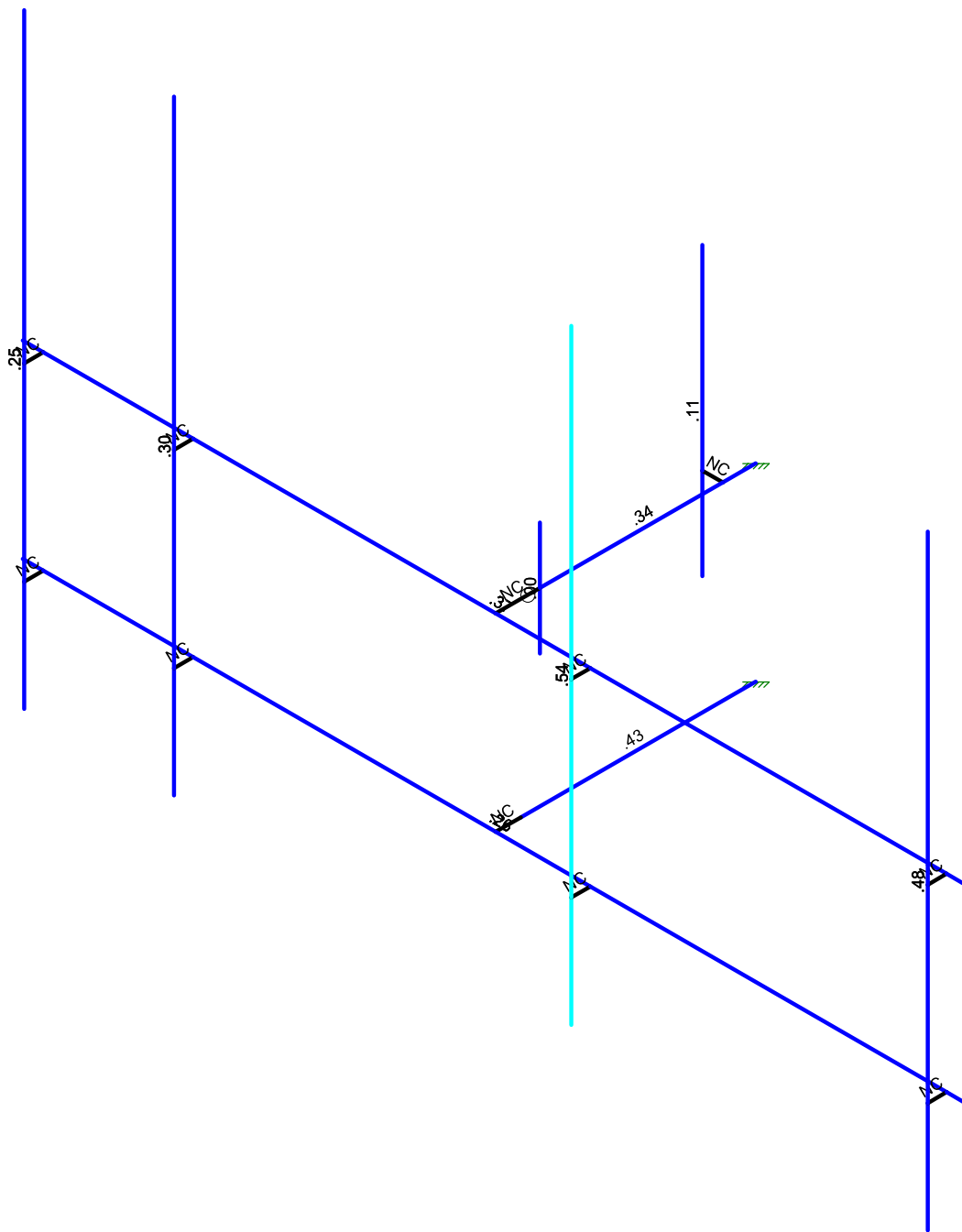


Envelope Only Solution

Maser Consulting	468551-VZW_MT_LOT_SectorA_H	SK - 1
		Mar 26, 2021 at 10:24 AM
Project No. 10035986		468551-VZW_MT_LOT_A_H.r3d

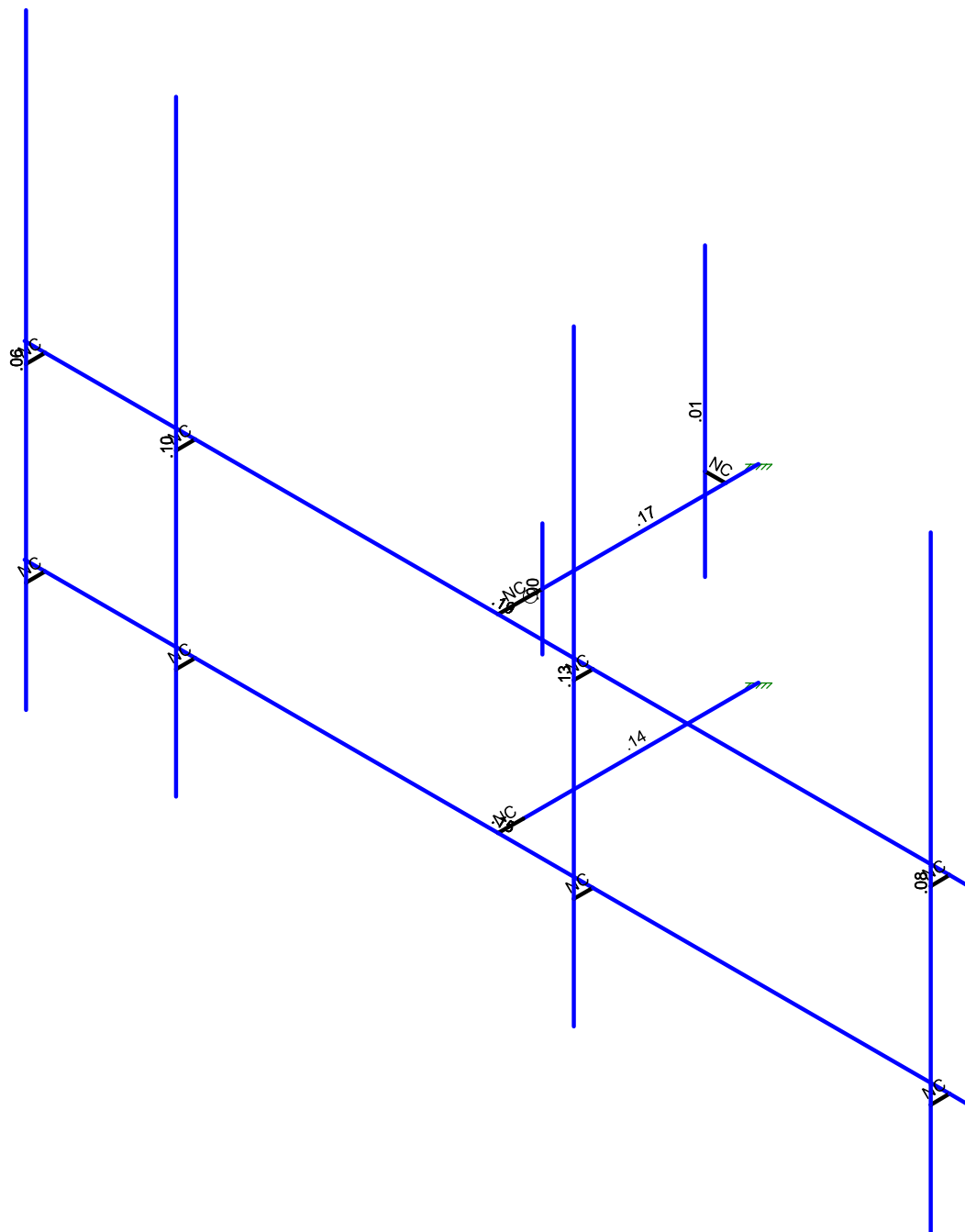
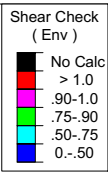
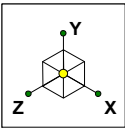


Code Check ( Env )	
Black	No Calc
Red	> 1.0
Pink	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Maser Consulting	468551-VZW_MT_LOT_SectorA_H	SK - 2
		Mar 26, 2021 at 10:24 AM
Project No. 10035986		468551-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Maser Consulting	468551-VZW_MT_LOT_SectorA_H	SK - 3
		Mar 26, 2021 at 10:24 AM
Project No. 10035986		468551-VZW_MT_LOT_A_H.r3d



**Basic Load Cases**

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



**Basic Load Cases (Continued)**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
57	Structure Wi (120 De..	None						20	
58	Structure Wi (150 De..	None						20	
59	Structure Wi (180 De..	None						20	
60	Structure Wi (210 De..	None						20	
61	Structure Wi (240 De..	None						20	
62	Structure Wi (270 De..	None						20	
63	Structure Wi (300 De..	None						20	
64	Structure Wi (330 De..	None						20	
65	Structure Wm (0 Deg)	None						20	
66	Structure Wm (30 De..	None						20	
67	Structure Wm (60 De..	None						20	
68	Structure Wm (90 De..	None						20	
69	Structure Wm (120 D..	None						20	
70	Structure Wm (150 D..	None						20	
71	Structure Wm (180 D..	None						20	
72	Structure Wm (210 D..	None						20	
73	Structure Wm (240 D..	None						20	
74	Structure Wm (270 D..	None						20	
75	Structure Wm (300 D..	None						20	
76	Structure Wm (330 D..	None						20	
77	Lm1	None					1		
78	Lm2	None					1		
79	Lv1	None					1		
80	Lv2	None					1		

**Load Combinations**

	Description	Solve	PD...	SR...	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..	BLC Fact..
1	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	3	1	41	1					
2	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	4	1	42	1					
3	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	5	1	43	1					
4	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	6	1	44	1					
5	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	7	1	45	1					
6	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	8	1	46	1					
7	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	9	1	47	1					
8	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	10	1	48	1					
9	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	11	1	49	1					
10	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	12	1	50	1					
11	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	13	1	51	1					
12	1.2D+1.0...	Yes	Y		1	1.2	39	1.2	14	1	52	1					
13	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1	
14	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1	
15	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1	
16	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1	
17	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1	
18	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1	
19	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1	
20	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1	
21	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1	
22	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1	
23	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1	
24	1.2D + 1.0...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1	
25	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1			
26	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1			
27	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1			
28	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1			



**Load Combinations (Continued)**

	Description	Solve	PD	SR	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.	BLC Fact.
29	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1
30	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1
31	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1
32	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1
33	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1
34	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1
35	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1
36	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1
37	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1
38	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1
39	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1
40	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1
41	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1
42	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1
43	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1
44	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1
45	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1
46	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1
47	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1
48	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1
49	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	79	1.5				
50	1.2D + 1.5...	Yes	Y		1	1.2	39	1.2	80	1.5				
51	1.4D	Yes	Y		1	1.4	39	1.4						
52	Seismic M...		Y		1	1	39	1						
53	1.2D + 1.0...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1
54	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866
55	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5
56	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ	
57	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5
58	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866
59	1.2D + 1.0...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1
60	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866
61	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5
62	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ	
63	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5
64	1.2D + 1.0...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866

**Joint Coordinates and Temperatures**

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N2	-7.416667	.76	.25	0	
2	N3	5.083333	.76	.25	0	
3	N46A	4.791667	.76	.25	0	
4	N50	4.791667	.76	.5	0	
5	N52	4.791667	4.801667	.5	0	
6	N53	4.791667	-3.198333	.5	0	
7	N53A	-1.166667	.76	.25	0	
8	N54A	-1.166667	.76	-0.333333	0	
9	N33A	-1.166667	1.51	-0.333333	0	
10	N34A	-1.166667	.01	-0.333333	0	
11	N35B	-1.166667	.76	-3.1875	0	
12	N26	-1.166667	.76	-2.75	0	
13	N27	-1.4375	.76	-2.75	0	
14	N26A	-1.4375	-0.448333	-2.75	0	
15	N27A	-1.4375	3.343333	-2.75	0	
16	N16	0.083333	.76	.25	0	



### Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
17	N17	0.083333	.76	.5	0	
18	N18	0.083333	4.801667	.5	0	
19	N19	0.083333	-3.198333	.5	0	
20	N20	-5.166667	.76	.25	0	
21	N21	-5.166667	.76	.5	0	
22	N22	-5.166667	4.801667	.5	0	
23	N23	-5.166667	-3.198333	.5	0	
24	N24	-7.145833	.76	.25	0	
25	N25	-7.145833	.76	.5	0	
26	N26B	-7.145833	4.801667	.5	0	
27	N27B	-7.145833	-3.198333	.5	0	
28	N28	-7.416667	-1.74	.25	0	
29	N29	5.083333	-1.74	.25	0	
30	N30	4.791667	-1.74	.25	0	
31	N31	4.791667	-1.74	.5	0	
32	N32	0.083333	-1.74	.25	0	
33	N33	0.083333	-1.74	.5	0	
34	N34	-5.166667	-1.74	.25	0	
35	N35	-5.166667	-1.74	.5	0	
36	N36	-7.145833	-1.74	.25	0	
37	N37	-7.145833	-1.74	.5	0	
38	N38	-1.166667	-1.74	.25	0	
39	N40	-1.166667	-1.74	-0.083333	0	
40	N41	-1.166667	-1.74	-3.1875	0	

### Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE 3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
3	Standoff Horizontal	HSS4X4X4	Beam	SquareT...	A500 Gr. B 46	Typical	3.37	7.8	7.8	12.8
4	Standoff Mount Pipe	PIPE 4.0	Column	Pipe	A53 Gr. B	Typical	2.96	6.82	6.82	13.6
5	MOD Horizontal	PIPE 3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
6	MOD Standoff	HSS3X3X4	Beam	SquareT...	A500 Gr. B 46	Typical	2.44	3.02	3.02	5.08

### Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Face Horizo...	12.5			Lbyy						Lateral
2	MP1A	Mount Pipe	8									Lateral
3	M17A	Standoff Mo...	1.5									Lateral
4	M18A	Standoff Ho...	2.854			Lbyy						Lateral
5	OVP	Mount Pipe	3.792									Lateral
6	MP2A	Mount Pipe	8									Lateral
7	MP3A	Mount Pipe	8									Lateral
8	MP4A	Mount Pipe	8									Lateral
9	M15	MOD Horiz...	12.5			Lbyy						Lateral
10	M21	MOD Stand...	3.104			Lbyy						Lateral

### Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N3			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
2	M28	N46A	N50			RIGID	None	None	RIGID	Typical
3	MP1A	N52	N53			Mount Pipe	Column	Pipe	A53 Gr. B	Typical





**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
4	M31A	N53A	N54A			RIGID	None	None	RIGID	Typical
5	M17A	N34A	N33A			Standoff Moun...	Column	Pipe	A53 Gr. B	Typical
6	M18A	N54A	N35B			Standoff Horiz...	Beam	SquareTube	A500 Gr. ...	Typical
7	M13	N26	N27			RIGID	None	None	RIGID	Typical
8	OVP	N27A	N26A			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
9	M9	N16	N17			RIGID	None	None	RIGID	Typical
10	MP2A	N18	N19			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
11	M11	N20	N21			RIGID	None	None	RIGID	Typical
12	MP3A	N22	N23			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
13	M13A	N24	N25			RIGID	None	None	RIGID	Typical
14	MP4A	N26B	N27B			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
15	M15	N28	N29			MOD Horizontal	Beam	Pipe	A53 Gr. B	Typical
16	M16	N30	N31			RIGID	None	None	RIGID	Typical
17	M17	N32	N33			RIGID	None	None	RIGID	Typical
18	M18	N34	N35			RIGID	None	None	RIGID	Typical
19	M19	N36	N37			RIGID	None	None	RIGID	Typical
20	M20	N38	N40			RIGID	None	None	RIGID	Typical
21	M21	N40	N41			MOD Standoff	Beam	SquareTube	A500 Gr. ...	Typical

**Member Advanced Data**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M28						Yes	** NA **			None
3	MP1A						Yes	** NA **			None
4	M31A		OOOOOO				Yes	** NA **			None
5	M17A						Yes	** NA **			None
6	M18A						Yes	Default			None
7	M13						Yes	** NA **			None
8	OVP						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	MP2A						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	MP3A						Yes	** NA **			None
13	M13A						Yes	** NA **			None
14	MP4A						Yes	** NA **			None
15	M15						Yes				None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M21						Yes	Default			None

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	Y	-21.85	.5
2	MP2A	My	-.011	.5
3	MP2A	Mz	.013	.5
4	MP2A	Y	-21.85	6
5	MP2A	My	-.011	6
6	MP2A	Mz	.013	6
7	MP2A	Y	-21.85	.5
8	MP2A	My	-.011	.5
9	MP2A	Mz	-.013	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
10	MP2A	Y	-21.85	6
11	MP2A	My	-.011	6
12	MP2A	Mz	-.013	6
13	MP1A	Y	-43.55	2.5
14	MP1A	My	-.022	2.5
15	MP1A	Mz	0	2.5
16	MP1A	Y	-43.55	4
17	MP1A	My	-.022	4
18	MP1A	Mz	0	4
19	MP4A	Y	-8.5	.5
20	MP4A	My	-.004	.5
21	MP4A	Mz	0	.5
22	MP4A	Y	-8.5	6
23	MP4A	My	-.004	6
24	MP4A	Mz	0	6
25	MP2A	Y	-70.3	3
26	MP2A	My	.035	3
27	MP2A	Mz	0	3
28	MP3A	Y	-84.4	3
29	MP3A	My	.042	3
30	MP3A	Mz	0	3
31	OVP	Y	-32	1
32	OVP	My	0	1
33	OVP	Mz	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	Y	-93.952	.5
2	MP2A	My	-.047	.5
3	MP2A	Mz	.055	.5
4	MP2A	Y	-93.952	6
5	MP2A	My	-.047	6
6	MP2A	Mz	.055	6
7	MP2A	Y	-93.952	.5
8	MP2A	My	-.047	.5
9	MP2A	Mz	-.055	.5
10	MP2A	Y	-93.952	6
11	MP2A	My	-.047	6
12	MP2A	Mz	-.055	6
13	MP1A	Y	-55.447	2.5
14	MP1A	My	-.028	2.5
15	MP1A	Mz	0	2.5
16	MP1A	Y	-55.447	4
17	MP1A	My	-.028	4
18	MP1A	Mz	0	4
19	MP4A	Y	-80.732	.5
20	MP4A	My	-.04	.5
21	MP4A	Mz	0	.5
22	MP4A	Y	-80.732	6
23	MP4A	My	-.04	6
24	MP4A	Mz	0	6
25	MP2A	Y	-63.526	3
26	MP2A	My	.032	3
27	MP2A	Mz	0	3
28	MP3A	Y	-70.374	3
29	MP3A	My	.035	3



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	MP3A	Mz	0	3
31	OVP	Y	-117.461	1
32	OVP	My	0	1
33	OVP	Mz	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	-123.889	.5
3	MP2A	Mx	-.072	.5
4	MP2A	X	0	6
5	MP2A	Z	-123.889	6
6	MP2A	Mx	-.072	6
7	MP2A	X	0	.5
8	MP2A	Z	-123.889	.5
9	MP2A	Mx	.072	.5
10	MP2A	X	0	6
11	MP2A	Z	-123.889	6
12	MP2A	Mx	.072	6
13	MP1A	X	0	2.5
14	MP1A	Z	-72.064	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	-72.064	4
18	MP1A	Mx	0	4
19	MP4A	X	0	.5
20	MP4A	Z	-116.069	.5
21	MP4A	Mx	0	.5
22	MP4A	X	0	6
23	MP4A	Z	-116.069	6
24	MP4A	Mx	0	6
25	MP2A	X	0	3
26	MP2A	Z	-57.205	3
27	MP2A	Mx	0	3
28	MP3A	X	0	3
29	MP3A	Z	-57.205	3
30	MP3A	Mx	0	3
31	OVP	X	0	1
32	OVP	Z	-76.554	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	56.696	.5
2	MP2A	Z	-98.2	.5
3	MP2A	Mx	-.086	.5
4	MP2A	X	56.696	6
5	MP2A	Z	-98.2	6
6	MP2A	Mx	-.086	6
7	MP2A	X	56.696	.5
8	MP2A	Z	-98.2	.5
9	MP2A	Mx	.029	.5
10	MP2A	X	56.696	6
11	MP2A	Z	-98.2	6
12	MP2A	Mx	.029	6
13	MP1A	X	30.551	2.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
14	MP1A	Z	-52.915	2.5
15	MP1A	Mx	-.015	2.5
16	MP1A	X	30.551	4
17	MP1A	Z	-52.915	4
18	MP1A	Mx	-.015	4
19	MP4A	X	51.495	.5
20	MP4A	Z	-89.192	.5
21	MP4A	Mx	-.026	.5
22	MP4A	X	51.495	6
23	MP4A	Z	-89.192	6
24	MP4A	Mx	-.026	6
25	MP2A	X	25.323	3
26	MP2A	Z	-43.862	3
27	MP2A	Mx	.013	3
28	MP3A	X	26.232	3
29	MP3A	Z	-45.434	3
30	MP3A	Mx	.013	3
31	OVP	X	43.165	1
32	OVP	Z	-74.763	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	80.02	.5
2	MP2A	Z	-46.2	.5
3	MP2A	Mx	-.067	.5
4	MP2A	X	80.02	6
5	MP2A	Z	-46.2	6
6	MP2A	Mx	-.067	6
7	MP2A	X	80.02	.5
8	MP2A	Z	-46.2	.5
9	MP2A	Mx	-.013	.5
10	MP2A	X	80.02	6
11	MP2A	Z	-46.2	6
12	MP2A	Mx	-.013	6
13	MP1A	X	33.927	2.5
14	MP1A	Z	-19.588	2.5
15	MP1A	Mx	-.017	2.5
16	MP1A	X	33.927	4
17	MP1A	Z	-19.588	4
18	MP1A	Mx	-.017	4
19	MP4A	X	66.54	.5
20	MP4A	Z	-38.417	.5
21	MP4A	Mx	-.033	.5
22	MP4A	X	66.54	6
23	MP4A	Z	-38.417	6
24	MP4A	Mx	-.033	6
25	MP2A	X	32.503	3
26	MP2A	Z	-18.766	3
27	MP2A	Mx	.016	3
28	MP3A	X	37.222	3
29	MP3A	Z	-21.49	3
30	MP3A	Mx	.019	3
31	OVP	X	91.694	1
32	OVP	Z	-52.94	1
33	OVP	Mx	0	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	81.902	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	-.041	.5
4	MP2A	X	81.902	6
5	MP2A	Z	0	6
6	MP2A	Mx	-.041	6
7	MP2A	X	81.902	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.041	.5
10	MP2A	X	81.902	6
11	MP2A	Z	0	6
12	MP2A	Mx	-.041	6
13	MP1A	X	28.213	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.014	2.5
16	MP1A	X	28.213	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.014	4
19	MP4A	X	63.755	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	-.032	.5
22	MP4A	X	63.755	6
23	MP4A	Z	0	6
24	MP4A	Mx	-.032	6
25	MP2A	X	30.973	3
26	MP2A	Z	0	3
27	MP2A	Mx	.015	3
28	MP3A	X	38.239	3
29	MP3A	Z	0	3
30	MP3A	Mx	.019	3
31	OVP	X	115.654	1
32	OVP	Z	0	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	80.02	.5
2	MP2A	Z	46.2	.5
3	MP2A	Mx	-.013	.5
4	MP2A	X	80.02	6
5	MP2A	Z	46.2	6
6	MP2A	Mx	-.013	6
7	MP2A	X	80.02	.5
8	MP2A	Z	46.2	.5
9	MP2A	Mx	-.067	.5
10	MP2A	X	80.02	6
11	MP2A	Z	46.2	6
12	MP2A	Mx	-.067	6
13	MP1A	X	33.927	2.5
14	MP1A	Z	19.588	2.5
15	MP1A	Mx	-.017	2.5
16	MP1A	X	33.927	4
17	MP1A	Z	19.588	4
18	MP1A	Mx	-.017	4
19	MP4A	X	66.54	.5
20	MP4A	Z	38.417	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
21	MP4A	Mx	-.033	.5
22	MP4A	X	66.54	6
23	MP4A	Z	38.417	6
24	MP4A	Mx	-.033	6
25	MP2A	X	32.503	3
26	MP2A	Z	18.766	3
27	MP2A	Mx	.016	3
28	MP3A	X	37.222	3
29	MP3A	Z	21.49	3
30	MP3A	Mx	.019	3
31	OVP	X	91.694	1
32	OVP	Z	52.94	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	56.696	.5
2	MP2A	Z	98.2	.5
3	MP2A	Mx	.029	.5
4	MP2A	X	56.696	6
5	MP2A	Z	98.2	6
6	MP2A	Mx	.029	6
7	MP2A	X	56.696	.5
8	MP2A	Z	98.2	.5
9	MP2A	Mx	-.086	.5
10	MP2A	X	56.696	6
11	MP2A	Z	98.2	6
12	MP2A	Mx	-.086	6
13	MP1A	X	30.551	2.5
14	MP1A	Z	52.915	2.5
15	MP1A	Mx	-.015	2.5
16	MP1A	X	30.551	4
17	MP1A	Z	52.915	4
18	MP1A	Mx	-.015	4
19	MP4A	X	51.495	.5
20	MP4A	Z	89.192	.5
21	MP4A	Mx	-.026	.5
22	MP4A	X	51.495	6
23	MP4A	Z	89.192	6
24	MP4A	Mx	-.026	6
25	MP2A	X	25.323	3
26	MP2A	Z	43.862	3
27	MP2A	Mx	.013	3
28	MP3A	X	26.232	3
29	MP3A	Z	45.434	3
30	MP3A	Mx	.013	3
31	OVP	X	43.165	1
32	OVP	Z	74.763	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	0	.5
2	MP2A	Z	123.889	.5
3	MP2A	Mx	.072	.5
4	MP2A	X	0	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
5	MP2A	Z	123.889	6
6	MP2A	Mx	.072	6
7	MP2A	X	0	.5
8	MP2A	Z	123.889	.5
9	MP2A	Mx	-.072	.5
10	MP2A	X	0	6
11	MP2A	Z	123.889	6
12	MP2A	Mx	-.072	6
13	MP1A	X	0	2.5
14	MP1A	Z	72.064	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	72.064	4
18	MP1A	Mx	0	4
19	MP4A	X	0	.5
20	MP4A	Z	116.069	.5
21	MP4A	Mx	0	.5
22	MP4A	X	0	6
23	MP4A	Z	116.069	6
24	MP4A	Mx	0	6
25	MP2A	X	0	3
26	MP2A	Z	57.205	3
27	MP2A	Mx	0	3
28	MP3A	X	0	3
29	MP3A	Z	57.205	3
30	MP3A	Mx	0	3
31	OVP	X	0	1
32	OVP	Z	76.554	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-56.696	.5
2	MP2A	Z	98.2	.5
3	MP2A	Mx	.086	.5
4	MP2A	X	-56.696	6
5	MP2A	Z	98.2	6
6	MP2A	Mx	.086	6
7	MP2A	X	-56.696	.5
8	MP2A	Z	98.2	.5
9	MP2A	Mx	-.029	.5
10	MP2A	X	-56.696	6
11	MP2A	Z	98.2	6
12	MP2A	Mx	-.029	6
13	MP1A	X	-30.551	2.5
14	MP1A	Z	52.915	2.5
15	MP1A	Mx	.015	2.5
16	MP1A	X	-30.551	4
17	MP1A	Z	52.915	4
18	MP1A	Mx	.015	4
19	MP4A	X	-51.495	.5
20	MP4A	Z	89.192	.5
21	MP4A	Mx	.026	.5
22	MP4A	X	-51.495	6
23	MP4A	Z	89.192	6
24	MP4A	Mx	.026	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	MP2A	X	-25.323	3
26	MP2A	Z	43.862	3
27	MP2A	Mx	-.013	3
28	MP3A	X	-26.232	3
29	MP3A	Z	45.434	3
30	MP3A	Mx	-.013	3
31	OVP	X	-43.165	1
32	OVP	Z	74.763	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-80.02	.5
2	MP2A	Z	46.2	.5
3	MP2A	Mx	.067	.5
4	MP2A	X	-80.02	6
5	MP2A	Z	46.2	6
6	MP2A	Mx	.067	6
7	MP2A	X	-80.02	.5
8	MP2A	Z	46.2	.5
9	MP2A	Mx	.013	.5
10	MP2A	X	-80.02	6
11	MP2A	Z	46.2	6
12	MP2A	Mx	.013	6
13	MP1A	X	-33.927	2.5
14	MP1A	Z	19.588	2.5
15	MP1A	Mx	.017	2.5
16	MP1A	X	-33.927	4
17	MP1A	Z	19.588	4
18	MP1A	Mx	.017	4
19	MP4A	X	-66.54	.5
20	MP4A	Z	38.417	.5
21	MP4A	Mx	.033	.5
22	MP4A	X	-66.54	6
23	MP4A	Z	38.417	6
24	MP4A	Mx	.033	6
25	MP2A	X	-32.503	3
26	MP2A	Z	18.766	3
27	MP2A	Mx	-.016	3
28	MP3A	X	-37.222	3
29	MP3A	Z	21.49	3
30	MP3A	Mx	-.019	3
31	OVP	X	-91.694	1
32	OVP	Z	52.94	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-81.902	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	.041	.5
4	MP2A	X	-81.902	6
5	MP2A	Z	0	6
6	MP2A	Mx	.041	6
7	MP2A	X	-81.902	.5
8	MP2A	Z	0	.5





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
9	MP2A	Mx	.041	.5
10	MP2A	X	-81.902	6
11	MP2A	Z	0	6
12	MP2A	Mx	.041	6
13	MP1A	X	-28.213	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	.014	2.5
16	MP1A	X	-28.213	4
17	MP1A	Z	0	4
18	MP1A	Mx	.014	4
19	MP4A	X	-63.755	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	.032	.5
22	MP4A	X	-63.755	6
23	MP4A	Z	0	6
24	MP4A	Mx	.032	6
25	MP2A	X	-30.973	3
26	MP2A	Z	0	3
27	MP2A	Mx	-.015	3
28	MP3A	X	-38.239	3
29	MP3A	Z	0	3
30	MP3A	Mx	-.019	3
31	OVP	X	-115.654	1
32	OVP	Z	0	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-80.02	.5
2	MP2A	Z	-46.2	.5
3	MP2A	Mx	.013	.5
4	MP2A	X	-80.02	6
5	MP2A	Z	-46.2	6
6	MP2A	Mx	.013	6
7	MP2A	X	-80.02	.5
8	MP2A	Z	-46.2	.5
9	MP2A	Mx	.067	.5
10	MP2A	X	-80.02	6
11	MP2A	Z	-46.2	6
12	MP2A	Mx	.067	6
13	MP1A	X	-33.927	2.5
14	MP1A	Z	-19.588	2.5
15	MP1A	Mx	.017	2.5
16	MP1A	X	-33.927	4
17	MP1A	Z	-19.588	4
18	MP1A	Mx	.017	4
19	MP4A	X	-66.54	.5
20	MP4A	Z	-38.417	.5
21	MP4A	Mx	.033	.5
22	MP4A	X	-66.54	6
23	MP4A	Z	-38.417	6
24	MP4A	Mx	.033	6
25	MP2A	X	-32.503	3
26	MP2A	Z	-18.766	3
27	MP2A	Mx	-.016	3
28	MP3A	X	-37.222	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
29	MP3A	Z	-21.49	3
30	MP3A	Mx	-.019	3
31	OVP	X	-91.694	1
32	OVP	Z	-52.94	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-56.696	.5
2	MP2A	Z	-98.2	.5
3	MP2A	Mx	-.029	.5
4	MP2A	X	-56.696	6
5	MP2A	Z	-98.2	6
6	MP2A	Mx	-.029	6
7	MP2A	X	-56.696	.5
8	MP2A	Z	-98.2	.5
9	MP2A	Mx	.086	.5
10	MP2A	X	-56.696	6
11	MP2A	Z	-98.2	6
12	MP2A	Mx	.086	6
13	MP1A	X	-30.551	2.5
14	MP1A	Z	-52.915	2.5
15	MP1A	Mx	.015	2.5
16	MP1A	X	-30.551	4
17	MP1A	Z	-52.915	4
18	MP1A	Mx	.015	4
19	MP4A	X	-51.495	.5
20	MP4A	Z	-89.192	.5
21	MP4A	Mx	.026	.5
22	MP4A	X	-51.495	6
23	MP4A	Z	-89.192	6
24	MP4A	Mx	.026	6
25	MP2A	X	-25.323	3
26	MP2A	Z	-43.862	3
27	MP2A	Mx	-.013	3
28	MP3A	X	-26.232	3
29	MP3A	Z	-45.434	3
30	MP3A	Mx	-.013	3
31	OVP	X	-43.165	1
32	OVP	Z	-74.763	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	0	.5
2	MP2A	Z	-26.15	.5
3	MP2A	Mx	-.015	.5
4	MP2A	X	0	6
5	MP2A	Z	-26.15	6
6	MP2A	Mx	-.015	6
7	MP2A	X	0	.5
8	MP2A	Z	-26.15	.5
9	MP2A	Mx	.015	.5
10	MP2A	X	0	6
11	MP2A	Z	-26.15	6
12	MP2A	Mx	.015	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP1A	X	0	2.5
14	MP1A	Z	-15.719	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	-15.719	4
18	MP1A	Mx	0	4
19	MP4A	X	0	.5
20	MP4A	Z	-24.635	.5
21	MP4A	Mx	0	.5
22	MP4A	X	0	6
23	MP4A	Z	-24.635	6
24	MP4A	Mx	0	6
25	MP2A	X	0	3
26	MP2A	Z	-13.563	3
27	MP2A	Mx	0	3
28	MP3A	X	0	3
29	MP3A	Z	-13.563	3
30	MP3A	Mx	0	3
31	OVP	X	0	1
32	OVP	Z	-17.749	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	12.103	.5
2	MP2A	Z	-20.962	.5
3	MP2A	Mx	-.018	.5
4	MP2A	X	12.103	6
5	MP2A	Z	-20.962	6
6	MP2A	Mx	-.018	6
7	MP2A	X	12.103	.5
8	MP2A	Z	-20.962	.5
9	MP2A	Mx	.006	.5
10	MP2A	X	12.103	6
11	MP2A	Z	-20.962	6
12	MP2A	Mx	.006	6
13	MP1A	X	6.766	2.5
14	MP1A	Z	-11.718	2.5
15	MP1A	Mx	-.003	2.5
16	MP1A	X	6.766	4
17	MP1A	Z	-11.718	4
18	MP1A	Mx	-.003	4
19	MP4A	X	11.095	.5
20	MP4A	Z	-19.218	.5
21	MP4A	Mx	-.006	.5
22	MP4A	X	11.095	6
23	MP4A	Z	-19.218	6
24	MP4A	Mx	-.006	6
25	MP2A	X	6.099	3
26	MP2A	Z	-10.564	3
27	MP2A	Mx	.003	3
28	MP3A	X	6.287	3
29	MP3A	Z	-10.89	3
30	MP3A	Mx	.003	3
31	OVP	X	9.843	1
32	OVP	Z	-17.048	1



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	17.593	.5
2	MP2A	Z	-10.157	.5
3	MP2A	Mx	-.015	.5
4	MP2A	X	17.593	6
5	MP2A	Z	-10.157	6
6	MP2A	Mx	-.015	6
7	MP2A	X	17.593	.5
8	MP2A	Z	-10.157	.5
9	MP2A	Mx	-.003	.5
10	MP2A	X	17.593	6
11	MP2A	Z	-10.157	6
12	MP2A	Mx	-.003	6
13	MP1A	X	7.929	2.5
14	MP1A	Z	-4.578	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	7.929	4
17	MP1A	Z	-4.578	4
18	MP1A	Mx	-.004	4
19	MP4A	X	14.983	.5
20	MP4A	Z	-8.651	.5
21	MP4A	Mx	-.007	.5
22	MP4A	X	14.983	6
23	MP4A	Z	-8.651	6
24	MP4A	Mx	-.007	6
25	MP2A	X	8.202	3
26	MP2A	Z	-4.735	3
27	MP2A	Mx	.004	3
28	MP3A	X	9.178	3
29	MP3A	Z	-5.299	3
30	MP3A	Mx	.005	3
31	OVP	X	20.402	1
32	OVP	Z	-11.779	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	18.37	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	-.009	.5
4	MP2A	X	18.37	6
5	MP2A	Z	0	6
6	MP2A	Mx	-.009	6
7	MP2A	X	18.37	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.009	.5
10	MP2A	X	18.37	6
11	MP2A	Z	0	6
12	MP2A	Mx	-.009	6
13	MP1A	X	6.968	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.003	2.5
16	MP1A	X	6.968	4



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
17	MP1A	Z	0	4
18	MP1A	Mx	-.003	4
19	MP4A	X	14.856	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	-.007	.5
22	MP4A	X	14.856	6
23	MP4A	Z	0	6
24	MP4A	Mx	-.007	6
25	MP2A	X	8.106	3
26	MP2A	Z	0	3
27	MP2A	Mx	.004	3
28	MP3A	X	9.609	3
29	MP3A	Z	0	3
30	MP3A	Mx	.005	3
31	OVP	X	25.494	1
32	OVP	Z	0	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP2A	X	17.593	.5
2	MP2A	Z	10.157	.5
3	MP2A	Mx	-.003	.5
4	MP2A	X	17.593	6
5	MP2A	Z	10.157	6
6	MP2A	Mx	-.003	6
7	MP2A	X	17.593	.5
8	MP2A	Z	10.157	.5
9	MP2A	Mx	-.015	.5
10	MP2A	X	17.593	6
11	MP2A	Z	10.157	6
12	MP2A	Mx	-.015	6
13	MP1A	X	7.929	2.5
14	MP1A	Z	4.578	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	7.929	4
17	MP1A	Z	4.578	4
18	MP1A	Mx	-.004	4
19	MP4A	X	14.983	.5
20	MP4A	Z	8.651	.5
21	MP4A	Mx	-.007	.5
22	MP4A	X	14.983	6
23	MP4A	Z	8.651	6
24	MP4A	Mx	-.007	6
25	MP2A	X	8.202	3
26	MP2A	Z	4.735	3
27	MP2A	Mx	.004	3
28	MP3A	X	9.178	3
29	MP3A	Z	5.299	3
30	MP3A	Mx	.005	3
31	OVP	X	20.402	1
32	OVP	Z	11.779	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
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**Member Point Loads (BLC 20 : Antenna Wi (150 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	12.103	.5
2	MP2A	Z	20.962	.5
3	MP2A	Mx	.006	.5
4	MP2A	X	12.103	6
5	MP2A	Z	20.962	6
6	MP2A	Mx	.006	6
7	MP2A	X	12.103	.5
8	MP2A	Z	20.962	.5
9	MP2A	Mx	-.018	.5
10	MP2A	X	12.103	6
11	MP2A	Z	20.962	6
12	MP2A	Mx	-.018	6
13	MP1A	X	6.766	2.5
14	MP1A	Z	11.718	2.5
15	MP1A	Mx	-.003	2.5
16	MP1A	X	6.766	4
17	MP1A	Z	11.718	4
18	MP1A	Mx	-.003	4
19	MP4A	X	11.095	.5
20	MP4A	Z	19.218	.5
21	MP4A	Mx	-.006	.5
22	MP4A	X	11.095	6
23	MP4A	Z	19.218	6
24	MP4A	Mx	-.006	6
25	MP2A	X	6.099	3
26	MP2A	Z	10.564	3
27	MP2A	Mx	.003	3
28	MP3A	X	6.287	3
29	MP3A	Z	10.89	3
30	MP3A	Mx	.003	3
31	OVP	X	9.843	1
32	OVP	Z	17.048	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft. %]
1	MP2A	X	0	.5
2	MP2A	Z	26.15	.5
3	MP2A	Mx	.015	.5
4	MP2A	X	0	6
5	MP2A	Z	26.15	6
6	MP2A	Mx	.015	6
7	MP2A	X	0	.5
8	MP2A	Z	26.15	.5
9	MP2A	Mx	-.015	.5
10	MP2A	X	0	6
11	MP2A	Z	26.15	6
12	MP2A	Mx	-.015	6
13	MP1A	X	0	2.5
14	MP1A	Z	15.719	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	15.719	4
18	MP1A	Mx	0	4
19	MP4A	X	0	.5
20	MP4A	Z	24.635	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
21	MP4A	Mx	0	.5
22	MP4A	X	0	6
23	MP4A	Z	24.635	6
24	MP4A	Mx	0	6
25	MP2A	X	0	3
26	MP2A	Z	13.563	3
27	MP2A	Mx	0	3
28	MP3A	X	0	3
29	MP3A	Z	13.563	3
30	MP3A	Mx	0	3
31	OVP	X	0	1
32	OVP	Z	17.749	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-12.103	.5
2	MP2A	Z	20.962	.5
3	MP2A	Mx	.018	.5
4	MP2A	X	-12.103	6
5	MP2A	Z	20.962	6
6	MP2A	Mx	.018	6
7	MP2A	X	-12.103	.5
8	MP2A	Z	20.962	.5
9	MP2A	Mx	-.006	.5
10	MP2A	X	-12.103	6
11	MP2A	Z	20.962	6
12	MP2A	Mx	-.006	6
13	MP1A	X	-6.766	2.5
14	MP1A	Z	11.718	2.5
15	MP1A	Mx	.003	2.5
16	MP1A	X	-6.766	4
17	MP1A	Z	11.718	4
18	MP1A	Mx	.003	4
19	MP4A	X	-11.095	.5
20	MP4A	Z	19.218	.5
21	MP4A	Mx	.006	.5
22	MP4A	X	-11.095	6
23	MP4A	Z	19.218	6
24	MP4A	Mx	.006	6
25	MP2A	X	-6.099	3
26	MP2A	Z	10.564	3
27	MP2A	Mx	-.003	3
28	MP3A	X	-6.287	3
29	MP3A	Z	10.89	3
30	MP3A	Mx	-.003	3
31	OVP	X	-9.843	1
32	OVP	Z	17.048	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-17.593	.5
2	MP2A	Z	10.157	.5
3	MP2A	Mx	.015	.5
4	MP2A	X	-17.593	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
5	MP2A	Z	10.157	6
6	MP2A	Mx	.015	6
7	MP2A	X	-17.593	.5
8	MP2A	Z	10.157	.5
9	MP2A	Mx	.003	.5
10	MP2A	X	-17.593	6
11	MP2A	Z	10.157	6
12	MP2A	Mx	.003	6
13	MP1A	X	-7.929	2.5
14	MP1A	Z	4.578	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-7.929	4
17	MP1A	Z	4.578	4
18	MP1A	Mx	.004	4
19	MP4A	X	-14.983	.5
20	MP4A	Z	8.651	.5
21	MP4A	Mx	.007	.5
22	MP4A	X	-14.983	6
23	MP4A	Z	8.651	6
24	MP4A	Mx	.007	6
25	MP2A	X	-8.202	3
26	MP2A	Z	4.735	3
27	MP2A	Mx	-.004	3
28	MP3A	X	-9.178	3
29	MP3A	Z	5.299	3
30	MP3A	Mx	-.005	3
31	OVP	X	-20.402	1
32	OVP	Z	11.779	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-18.37	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	.009	.5
4	MP2A	X	-18.37	6
5	MP2A	Z	0	6
6	MP2A	Mx	.009	6
7	MP2A	X	-18.37	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	.009	.5
10	MP2A	X	-18.37	6
11	MP2A	Z	0	6
12	MP2A	Mx	.009	6
13	MP1A	X	-6.968	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	.003	2.5
16	MP1A	X	-6.968	4
17	MP1A	Z	0	4
18	MP1A	Mx	.003	4
19	MP4A	X	-14.856	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	.007	.5
22	MP4A	X	-14.856	6
23	MP4A	Z	0	6
24	MP4A	Mx	.007	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
25	MP2A	X	-8.106	3
26	MP2A	Z	0	3
27	MP2A	Mx	-.004	3
28	MP3A	X	-9.609	3
29	MP3A	Z	0	3
30	MP3A	Mx	-.005	3
31	OVP	X	-25.494	1
32	OVP	Z	0	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-17.593	.5
2	MP2A	Z	-10.157	.5
3	MP2A	Mx	.003	.5
4	MP2A	X	-17.593	6
5	MP2A	Z	-10.157	6
6	MP2A	Mx	.003	6
7	MP2A	X	-17.593	.5
8	MP2A	Z	-10.157	.5
9	MP2A	Mx	.015	.5
10	MP2A	X	-17.593	6
11	MP2A	Z	-10.157	6
12	MP2A	Mx	.015	6
13	MP1A	X	-7.929	2.5
14	MP1A	Z	-4.578	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-7.929	4
17	MP1A	Z	-4.578	4
18	MP1A	Mx	.004	4
19	MP4A	X	-14.983	.5
20	MP4A	Z	-8.651	.5
21	MP4A	Mx	.007	.5
22	MP4A	X	-14.983	6
23	MP4A	Z	-8.651	6
24	MP4A	Mx	.007	6
25	MP2A	X	-8.202	3
26	MP2A	Z	-4.735	3
27	MP2A	Mx	-.004	3
28	MP3A	X	-9.178	3
29	MP3A	Z	-5.299	3
30	MP3A	Mx	-.005	3
31	OVP	X	-20.402	1
32	OVP	Z	-11.779	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-12.103	.5
2	MP2A	Z	-20.962	.5
3	MP2A	Mx	-.006	.5
4	MP2A	X	-12.103	6
5	MP2A	Z	-20.962	6
6	MP2A	Mx	-.006	6
7	MP2A	X	-12.103	.5
8	MP2A	Z	-20.962	.5



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
9	MP2A	Mx	.018	.5
10	MP2A	X	-12.103	6
11	MP2A	Z	-20.962	6
12	MP2A	Mx	.018	6
13	MP1A	X	-6.766	2.5
14	MP1A	Z	-11.718	2.5
15	MP1A	Mx	.003	2.5
16	MP1A	X	-6.766	4
17	MP1A	Z	-11.718	4
18	MP1A	Mx	.003	4
19	MP4A	X	-11.095	.5
20	MP4A	Z	-19.218	.5
21	MP4A	Mx	.006	.5
22	MP4A	X	-11.095	6
23	MP4A	Z	-19.218	6
24	MP4A	Mx	.006	6
25	MP2A	X	-6.099	3
26	MP2A	Z	-10.564	3
27	MP2A	Mx	-.003	3
28	MP3A	X	-6.287	3
29	MP3A	Z	-10.89	3
30	MP3A	Mx	-.003	3
31	OVP	X	-9.843	1
32	OVP	Z	-17.048	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	MP2A	X	0	.5
2	MP2A	Z	-8.145	.5
3	MP2A	Mx	-.005	.5
4	MP2A	X	0	6
5	MP2A	Z	-8.145	6
6	MP2A	Mx	-.005	6
7	MP2A	X	0	.5
8	MP2A	Z	-8.145	.5
9	MP2A	Mx	.005	.5
10	MP2A	X	0	6
11	MP2A	Z	-8.145	6
12	MP2A	Mx	.005	6
13	MP1A	X	0	2.5
14	MP1A	Z	-4.738	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	-4.738	4
18	MP1A	Mx	0	4
19	MP4A	X	0	.5
20	MP4A	Z	-7.631	.5
21	MP4A	Mx	0	.5
22	MP4A	X	0	6
23	MP4A	Z	-7.631	6
24	MP4A	Mx	0	6
25	MP2A	X	0	3
26	MP2A	Z	-3.761	3
27	MP2A	Mx	0	3
28	MP3A	X	0	3



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
29	MP3A	Z	-3.761	3
30	MP3A	Mx	0	3
31	OVP	X	0	1
32	OVP	Z	-5.033	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	3.728	.5
2	MP2A	Z	-6.456	.5
3	MP2A	Mx	-.006	.5
4	MP2A	X	3.728	6
5	MP2A	Z	-6.456	6
6	MP2A	Mx	-.006	6
7	MP2A	X	3.728	.5
8	MP2A	Z	-6.456	.5
9	MP2A	Mx	.002	.5
10	MP2A	X	3.728	6
11	MP2A	Z	-6.456	6
12	MP2A	Mx	.002	6
13	MP1A	X	2.009	2.5
14	MP1A	Z	-3.479	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	2.009	4
17	MP1A	Z	-3.479	4
18	MP1A	Mx	-.001	4
19	MP4A	X	3.386	.5
20	MP4A	Z	-5.864	.5
21	MP4A	Mx	-.002	.5
22	MP4A	X	3.386	6
23	MP4A	Z	-5.864	6
24	MP4A	Mx	-.002	6
25	MP2A	X	1.665	3
26	MP2A	Z	-2.884	3
27	MP2A	Mx	.000832	3
28	MP3A	X	1.725	3
29	MP3A	Z	-2.987	3
30	MP3A	Mx	.000863	3
31	OVP	X	2.838	1
32	OVP	Z	-4.915	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	5.261	.5
2	MP2A	Z	-3.037	.5
3	MP2A	Mx	-.004	.5
4	MP2A	X	5.261	6
5	MP2A	Z	-3.037	6
6	MP2A	Mx	-.004	6
7	MP2A	X	5.261	.5
8	MP2A	Z	-3.037	.5
9	MP2A	Mx	-.000859	.5
10	MP2A	X	5.261	6
11	MP2A	Z	-3.037	6
12	MP2A	Mx	-.000859	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
13	MP1A	X	2.231	2.5
14	MP1A	Z	-1.288	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	2.231	4
17	MP1A	Z	-1.288	4
18	MP1A	Mx	-.001	4
19	MP4A	X	4.375	.5
20	MP4A	Z	-2.526	.5
21	MP4A	Mx	-.002	.5
22	MP4A	X	4.375	6
23	MP4A	Z	-2.526	6
24	MP4A	Mx	-.002	6
25	MP2A	X	2.137	3
26	MP2A	Z	-1.234	3
27	MP2A	Mx	.001	3
28	MP3A	X	2.447	3
29	MP3A	Z	-1.413	3
30	MP3A	Mx	.001	3
31	OVP	X	6.029	1
32	OVP	Z	-3.481	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	5.385	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	-.003	.5
4	MP2A	X	5.385	6
5	MP2A	Z	0	6
6	MP2A	Mx	-.003	6
7	MP2A	X	5.385	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	-.003	.5
10	MP2A	X	5.385	6
11	MP2A	Z	0	6
12	MP2A	Mx	-.003	6
13	MP1A	X	1.855	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.000927	2.5
16	MP1A	X	1.855	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.000927	4
19	MP4A	X	4.192	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	-.002	.5
22	MP4A	X	4.192	6
23	MP4A	Z	0	6
24	MP4A	Mx	-.002	6
25	MP2A	X	2.036	3
26	MP2A	Z	0	3
27	MP2A	Mx	.001	3
28	MP3A	X	2.514	3
29	MP3A	Z	0	3
30	MP3A	Mx	.001	3
31	OVP	X	7.604	1
32	OVP	Z	0	1



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.261	.5
2	MP2A	Z	3.037	.5
3	MP2A	Mx	-.000859	.5
4	MP2A	X	5.261	6
5	MP2A	Z	3.037	6
6	MP2A	Mx	-.000859	6
7	MP2A	X	5.261	.5
8	MP2A	Z	3.037	.5
9	MP2A	Mx	-.004	.5
10	MP2A	X	5.261	6
11	MP2A	Z	3.037	6
12	MP2A	Mx	-.004	6
13	MP1A	X	2.231	2.5
14	MP1A	Z	1.288	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	2.231	4
17	MP1A	Z	1.288	4
18	MP1A	Mx	-.001	4
19	MP4A	X	4.375	.5
20	MP4A	Z	2.526	.5
21	MP4A	Mx	-.002	.5
22	MP4A	X	4.375	6
23	MP4A	Z	2.526	6
24	MP4A	Mx	-.002	6
25	MP2A	X	2.137	3
26	MP2A	Z	1.234	3
27	MP2A	Mx	.001	3
28	MP3A	X	2.447	3
29	MP3A	Z	1.413	3
30	MP3A	Mx	.001	3
31	OVP	X	6.029	1
32	OVP	Z	3.481	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	3.728	.5
2	MP2A	Z	6.456	.5
3	MP2A	Mx	.002	.5
4	MP2A	X	3.728	6
5	MP2A	Z	6.456	6
6	MP2A	Mx	.002	6
7	MP2A	X	3.728	.5
8	MP2A	Z	6.456	.5
9	MP2A	Mx	-.006	.5
10	MP2A	X	3.728	6
11	MP2A	Z	6.456	6
12	MP2A	Mx	-.006	6
13	MP1A	X	2.009	2.5
14	MP1A	Z	3.479	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	2.009	4



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP1A	Z	3.479	4
18	MP1A	Mx	-.001	4
19	MP4A	X	3.386	.5
20	MP4A	Z	5.864	.5
21	MP4A	Mx	-.002	.5
22	MP4A	X	3.386	6
23	MP4A	Z	5.864	6
24	MP4A	Mx	-.002	6
25	MP2A	X	1.665	3
26	MP2A	Z	2.884	3
27	MP2A	Mx	.000832	3
28	MP3A	X	1.725	3
29	MP3A	Z	2.987	3
30	MP3A	Mx	.000863	3
31	OVP	X	2.838	1
32	OVP	Z	4.915	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.5
2	MP2A	Z	8.145	.5
3	MP2A	Mx	.005	.5
4	MP2A	X	0	6
5	MP2A	Z	8.145	6
6	MP2A	Mx	.005	6
7	MP2A	X	0	.5
8	MP2A	Z	8.145	.5
9	MP2A	Mx	-.005	.5
10	MP2A	X	0	6
11	MP2A	Z	8.145	6
12	MP2A	Mx	-.005	6
13	MP1A	X	0	2.5
14	MP1A	Z	4.738	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	4.738	4
18	MP1A	Mx	0	4
19	MP4A	X	0	.5
20	MP4A	Z	7.631	.5
21	MP4A	Mx	0	.5
22	MP4A	X	0	6
23	MP4A	Z	7.631	6
24	MP4A	Mx	0	6
25	MP2A	X	0	3
26	MP2A	Z	3.761	3
27	MP2A	Mx	0	3
28	MP3A	X	0	3
29	MP3A	Z	3.761	3
30	MP3A	Mx	0	3
31	OVP	X	0	1
32	OVP	Z	5.033	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
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**Member Point Loads (BLC 34 : Antenna Wm (210 Deg)) (Continued)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-3.728	.5
2	MP2A	Z	6.456	.5
3	MP2A	Mx	.006	.5
4	MP2A	X	-3.728	6
5	MP2A	Z	6.456	6
6	MP2A	Mx	.006	6
7	MP2A	X	-3.728	.5
8	MP2A	Z	6.456	.5
9	MP2A	Mx	-.002	.5
10	MP2A	X	-3.728	6
11	MP2A	Z	6.456	6
12	MP2A	Mx	-.002	6
13	MP1A	X	-2.009	2.5
14	MP1A	Z	3.479	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-2.009	4
17	MP1A	Z	3.479	4
18	MP1A	Mx	.001	4
19	MP4A	X	-3.386	.5
20	MP4A	Z	5.864	.5
21	MP4A	Mx	.002	.5
22	MP4A	X	-3.386	6
23	MP4A	Z	5.864	6
24	MP4A	Mx	.002	6
25	MP2A	X	-1.665	3
26	MP2A	Z	2.884	3
27	MP2A	Mx	-.000832	3
28	MP3A	X	-1.725	3
29	MP3A	Z	2.987	3
30	MP3A	Mx	-.000863	3
31	OVP	X	-2.838	1
32	OVP	Z	4.915	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.261	.5
2	MP2A	Z	3.037	.5
3	MP2A	Mx	.004	.5
4	MP2A	X	-5.261	6
5	MP2A	Z	3.037	6
6	MP2A	Mx	.004	6
7	MP2A	X	-5.261	.5
8	MP2A	Z	3.037	.5
9	MP2A	Mx	.000859	.5
10	MP2A	X	-5.261	6
11	MP2A	Z	3.037	6
12	MP2A	Mx	.000859	6
13	MP1A	X	-2.231	2.5
14	MP1A	Z	1.288	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-2.231	4
17	MP1A	Z	1.288	4
18	MP1A	Mx	.001	4
19	MP4A	X	-4.375	.5
20	MP4A	Z	2.526	.5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
21	MP4A	Mx	.002	.5
22	MP4A	X	-4.375	6
23	MP4A	Z	2.526	6
24	MP4A	Mx	.002	6
25	MP2A	X	-2.137	3
26	MP2A	Z	1.234	3
27	MP2A	Mx	-.001	3
28	MP3A	X	-2.447	3
29	MP3A	Z	1.413	3
30	MP3A	Mx	-.001	3
31	OVP	X	-6.029	1
32	OVP	Z	3.481	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-5.385	.5
2	MP2A	Z	0	.5
3	MP2A	Mx	.003	.5
4	MP2A	X	-5.385	6
5	MP2A	Z	0	6
6	MP2A	Mx	.003	6
7	MP2A	X	-5.385	.5
8	MP2A	Z	0	.5
9	MP2A	Mx	.003	.5
10	MP2A	X	-5.385	6
11	MP2A	Z	0	6
12	MP2A	Mx	.003	6
13	MP1A	X	-1.855	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	.000927	2.5
16	MP1A	X	-1.855	4
17	MP1A	Z	0	4
18	MP1A	Mx	.000927	4
19	MP4A	X	-4.192	.5
20	MP4A	Z	0	.5
21	MP4A	Mx	.002	.5
22	MP4A	X	-4.192	6
23	MP4A	Z	0	6
24	MP4A	Mx	.002	6
25	MP2A	X	-2.036	3
26	MP2A	Z	0	3
27	MP2A	Mx	-.001	3
28	MP3A	X	-2.514	3
29	MP3A	Z	0	3
30	MP3A	Mx	-.001	3
31	OVP	X	-7.604	1
32	OVP	Z	0	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-5.261	.5
2	MP2A	Z	-3.037	.5
3	MP2A	Mx	.000859	.5
4	MP2A	X	-5.261	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
5	MP2A	Z	-3.037	6
6	MP2A	Mx	.000859	6
7	MP2A	X	-5.261	.5
8	MP2A	Z	-3.037	.5
9	MP2A	Mx	.004	.5
10	MP2A	X	-5.261	6
11	MP2A	Z	-3.037	6
12	MP2A	Mx	.004	6
13	MP1A	X	-2.231	2.5
14	MP1A	Z	-1.288	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-2.231	4
17	MP1A	Z	-1.288	4
18	MP1A	Mx	.001	4
19	MP4A	X	-4.375	.5
20	MP4A	Z	-2.526	.5
21	MP4A	Mx	.002	.5
22	MP4A	X	-4.375	6
23	MP4A	Z	-2.526	6
24	MP4A	Mx	.002	6
25	MP2A	X	-2.137	3
26	MP2A	Z	-1.234	3
27	MP2A	Mx	-.001	3
28	MP3A	X	-2.447	3
29	MP3A	Z	-1.413	3
30	MP3A	Mx	-.001	3
31	OVP	X	-6.029	1
32	OVP	Z	-3.481	1
33	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP2A	X	-3.728	.5
2	MP2A	Z	-6.456	.5
3	MP2A	Mx	-.002	.5
4	MP2A	X	-3.728	6
5	MP2A	Z	-6.456	6
6	MP2A	Mx	-.002	6
7	MP2A	X	-3.728	.5
8	MP2A	Z	-6.456	.5
9	MP2A	Mx	.006	.5
10	MP2A	X	-3.728	6
11	MP2A	Z	-6.456	6
12	MP2A	Mx	.006	6
13	MP1A	X	-2.009	2.5
14	MP1A	Z	-3.479	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-2.009	4
17	MP1A	Z	-3.479	4
18	MP1A	Mx	.001	4
19	MP4A	X	-3.386	.5
20	MP4A	Z	-5.864	.5
21	MP4A	Mx	.002	.5
22	MP4A	X	-3.386	6
23	MP4A	Z	-5.864	6
24	MP4A	Mx	.002	6



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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
25	MP2A	X	-1.665	3
26	MP2A	Z	-2.884	3
27	MP2A	Mx	-.000832	3
28	MP3A	X	-1.725	3
29	MP3A	Z	-2.987	3
30	MP3A	Mx	-.000863	3
31	OVP	X	-2.838	1
32	OVP	Z	-4.915	1
33	OVP	Mx	0	1

**Member Point Loads (BLC 77 : Lm1)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	M16	Y	-500	0

**Member Point Loads (BLC 78 : Lm2)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	M17	Y	-500	0

**Member Point Loads (BLC 79 : Lv1)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	M15	Y	-250	0

**Member Point Loads (BLC 80 : Lv2)**

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft, %]
1	M15	Y	-250	%50

**Member Distributed Loads (BLC 40 : Structure Di)**

	Member Label	Direction	Start Magnitude[lb/ft, ...]	End Magnitude[lb/ft, F...]	Start Location[ft, %]	End Location[ft, %]
1	M1	Y	-10.803	-10.803	0	%100
2	MP1A	Y	-8.466	-8.466	0	%100
3	M17A	Y	-12.881	-12.881	0	%100
4	M18A	Y	-15.284	-15.284	0	%100
5	OVP	Y	-8.466	-8.466	0	%100
6	MP2A	Y	-8.466	-8.466	0	%100
7	MP3A	Y	-8.466	-8.466	0	%100
8	MP4A	Y	-8.466	-8.466	0	%100
9	M15	Y	-10.803	-10.803	0	%100
10	M21	Y	-12.346	-12.346	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft, ...]	End Magnitude[lb/ft, F...]	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	-10.68	-10.68	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-7.247	-7.247	0	%100
5	M17A	X	0	0	0	%100
6	M17A	Z	-7.92	-7.92	0	%100
7	M18A	X	0	0	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	0	0	0	%100
10	OVP	Z	-6.463	-6.463	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-7.247	-7.247	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-7.247	-7.247	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-7.247	-7.247	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-10.68	-10.68	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	4.005	4.005	0	%100
2	M1	Z	-6.937	-6.937	0	%100
3	MP1A	X	3.624	3.624	0	%100
4	MP1A	Z	-6.276	-6.276	0	%100
5	M17A	X	3.96	3.96	0	%100
6	M17A	Z	-6.859	-6.859	0	%100
7	M18A	X	1.183	1.183	0	%100
8	M18A	Z	-2.049	-2.049	0	%100
9	OVP	X	3.232	3.232	0	%100
10	OVP	Z	-5.597	-5.597	0	%100
11	MP2A	X	3.624	3.624	0	%100
12	MP2A	Z	-6.276	-6.276	0	%100
13	MP3A	X	3.624	3.624	0	%100
14	MP3A	Z	-6.276	-6.276	0	%100
15	MP4A	X	3.624	3.624	0	%100
16	MP4A	Z	-6.276	-6.276	0	%100
17	M15	X	4.005	4.005	0	%100
18	M15	Z	-6.937	-6.937	0	%100
19	M21	X	.959	.959	0	%100
20	M21	Z	-1.661	-1.661	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	2.312	2.312	0	%100
2	M1	Z	-1.335	-1.335	0	%100
3	MP1A	X	6.276	6.276	0	%100
4	MP1A	Z	-3.624	-3.624	0	%100
5	M17A	X	6.859	6.859	0	%100
6	M17A	Z	-3.96	-3.96	0	%100
7	M18A	X	6.147	6.147	0	%100
8	M18A	Z	-3.549	-3.549	0	%100
9	OVP	X	5.597	5.597	0	%100
10	OVP	Z	-3.232	-3.232	0	%100
11	MP2A	X	6.276	6.276	0	%100
12	MP2A	Z	-3.624	-3.624	0	%100
13	MP3A	X	6.276	6.276	0	%100
14	MP3A	Z	-3.624	-3.624	0	%100
15	MP4A	X	6.276	6.276	0	%100
16	MP4A	Z	-3.624	-3.624	0	%100
17	M15	X	2.312	2.312	0	%100
18	M15	Z	-1.335	-1.335	0	%100
19	M21	X	4.982	4.982	0	%100
20	M21	Z	-2.876	-2.876	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	MP1A	X	7.247	7.247	0	%100
4	MP1A	Z	0	0	0	%100
5	M17A	X	7.92	7.92	0	%100
6	M17A	Z	0	0	0	%100
7	M18A	X	9.464	9.464	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	6.463	6.463	0	%100
10	OVP	Z	0	0	0	%100
11	MP2A	X	7.247	7.247	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	7.247	7.247	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	7.247	7.247	0	%100
16	MP4A	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	7.67	7.67	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	2.312	2.312	0	%100
2	M1	Z	1.335	1.335	0	%100
3	MP1A	X	6.276	6.276	0	%100
4	MP1A	Z	3.624	3.624	0	%100
5	M17A	X	6.859	6.859	0	%100
6	M17A	Z	3.96	3.96	0	%100
7	M18A	X	6.147	6.147	0	%100
8	M18A	Z	3.549	3.549	0	%100
9	OVP	X	5.597	5.597	0	%100
10	OVP	Z	3.232	3.232	0	%100
11	MP2A	X	6.276	6.276	0	%100
12	MP2A	Z	3.624	3.624	0	%100
13	MP3A	X	6.276	6.276	0	%100
14	MP3A	Z	3.624	3.624	0	%100
15	MP4A	X	6.276	6.276	0	%100
16	MP4A	Z	3.624	3.624	0	%100
17	M15	X	2.312	2.312	0	%100
18	M15	Z	1.335	1.335	0	%100
19	M21	X	4.982	4.982	0	%100
20	M21	Z	2.876	2.876	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	4.005	4.005	0	%100
2	M1	Z	6.937	6.937	0	%100
3	MP1A	X	3.624	3.624	0	%100
4	MP1A	Z	6.276	6.276	0	%100
5	M17A	X	3.96	3.96	0	%100
6	M17A	Z	6.859	6.859	0	%100
7	M18A	X	1.183	1.183	0	%100
8	M18A	Z	2.049	2.049	0	%100
9	OVP	X	3.232	3.232	0	%100
10	OVP	Z	5.597	5.597	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP2A	X	3.624	3.624	0	%100
12	MP2A	Z	6.276	6.276	0	%100
13	MP3A	X	3.624	3.624	0	%100
14	MP3A	Z	6.276	6.276	0	%100
15	MP4A	X	3.624	3.624	0	%100
16	MP4A	Z	6.276	6.276	0	%100
17	M15	X	4.005	4.005	0	%100
18	M15	Z	6.937	6.937	0	%100
19	M21	X	.959	.959	0	%100
20	M21	Z	1.661	1.661	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	10.68	10.68	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	7.247	7.247	0	%100
5	M17A	X	0	0	0	%100
6	M17A	Z	7.92	7.92	0	%100
7	M18A	X	0	0	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	0	0	0	%100
10	OVP	Z	6.463	6.463	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	7.247	7.247	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	7.247	7.247	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	7.247	7.247	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	10.68	10.68	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-4.005	-4.005	0	%100
2	M1	Z	6.937	6.937	0	%100
3	MP1A	X	-3.624	-3.624	0	%100
4	MP1A	Z	6.276	6.276	0	%100
5	M17A	X	-3.96	-3.96	0	%100
6	M17A	Z	6.859	6.859	0	%100
7	M18A	X	-1.183	-1.183	0	%100
8	M18A	Z	2.049	2.049	0	%100
9	OVP	X	-3.232	-3.232	0	%100
10	OVP	Z	5.597	5.597	0	%100
11	MP2A	X	-3.624	-3.624	0	%100
12	MP2A	Z	6.276	6.276	0	%100
13	MP3A	X	-3.624	-3.624	0	%100
14	MP3A	Z	6.276	6.276	0	%100
15	MP4A	X	-3.624	-3.624	0	%100
16	MP4A	Z	6.276	6.276	0	%100
17	M15	X	-4.005	-4.005	0	%100
18	M15	Z	6.937	6.937	0	%100
19	M21	X	-.959	-.959	0	%100
20	M21	Z	1.661	1.661	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-2.312	-2.312	0	%100
2	M1	Z	1.335	1.335	0	%100
3	MP1A	X	-6.276	-6.276	0	%100
4	MP1A	Z	3.624	3.624	0	%100
5	M17A	X	-6.859	-6.859	0	%100
6	M17A	Z	3.96	3.96	0	%100
7	M18A	X	-6.147	-6.147	0	%100
8	M18A	Z	3.549	3.549	0	%100
9	OVP	X	-5.597	-5.597	0	%100
10	OVP	Z	3.232	3.232	0	%100
11	MP2A	X	-6.276	-6.276	0	%100
12	MP2A	Z	3.624	3.624	0	%100
13	MP3A	X	-6.276	-6.276	0	%100
14	MP3A	Z	3.624	3.624	0	%100
15	MP4A	X	-6.276	-6.276	0	%100
16	MP4A	Z	3.624	3.624	0	%100
17	M15	X	-2.312	-2.312	0	%100
18	M15	Z	1.335	1.335	0	%100
19	M21	X	-4.982	-4.982	0	%100
20	M21	Z	2.876	2.876	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	MP1A	X	-7.247	-7.247	0	%100
4	MP1A	Z	0	0	0	%100
5	M17A	X	-7.92	-7.92	0	%100
6	M17A	Z	0	0	0	%100
7	M18A	X	-9.464	-9.464	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	-6.463	-6.463	0	%100
10	OVP	Z	0	0	0	%100
11	MP2A	X	-7.247	-7.247	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-7.247	-7.247	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	-7.247	-7.247	0	%100
16	MP4A	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	-7.67	-7.67	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-2.312	-2.312	0	%100
2	M1	Z	-1.335	-1.335	0	%100
3	MP1A	X	-6.276	-6.276	0	%100
4	MP1A	Z	-3.624	-3.624	0	%100
5	M17A	X	-6.859	-6.859	0	%100
6	M17A	Z	-3.96	-3.96	0	%100
7	M18A	X	-6.147	-6.147	0	%100
8	M18A	Z	-3.549	-3.549	0	%100
9	OVP	X	-5.597	-5.597	0	%100
10	OVP	Z	-3.232	-3.232	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.%]
11	MP2A	X	-6.276	-6.276	0	%100
12	MP2A	Z	-3.624	-3.624	0	%100
13	MP3A	X	-6.276	-6.276	0	%100
14	MP3A	Z	-3.624	-3.624	0	%100
15	MP4A	X	-6.276	-6.276	0	%100
16	MP4A	Z	-3.624	-3.624	0	%100
17	M15	X	-2.312	-2.312	0	%100
18	M15	Z	-1.335	-1.335	0	%100
19	M21	X	-4.982	-4.982	0	%100
20	M21	Z	-2.876	-2.876	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-4.005	-4.005	0	%100
2	M1	Z	-6.937	-6.937	0	%100
3	MP1A	X	-3.624	-3.624	0	%100
4	MP1A	Z	-6.276	-6.276	0	%100
5	M17A	X	-3.96	-3.96	0	%100
6	M17A	Z	-6.859	-6.859	0	%100
7	M18A	X	-1.183	-1.183	0	%100
8	M18A	Z	-2.049	-2.049	0	%100
9	OVP	X	-3.232	-3.232	0	%100
10	OVP	Z	-5.597	-5.597	0	%100
11	MP2A	X	-3.624	-3.624	0	%100
12	MP2A	Z	-6.276	-6.276	0	%100
13	MP3A	X	-3.624	-3.624	0	%100
14	MP3A	Z	-6.276	-6.276	0	%100
15	MP4A	X	-3.624	-3.624	0	%100
16	MP4A	Z	-6.276	-6.276	0	%100
17	M15	X	-4.005	-4.005	0	%100
18	M15	Z	-6.937	-6.937	0	%100
19	M21	X	-.959	-.959	0	%100
20	M21	Z	-1.661	-1.661	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	-3.846	-3.846	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-3.219	-3.219	0	%100
5	M17A	X	0	0	0	%100
6	M17A	Z	-2.736	-2.736	0	%100
7	M18A	X	0	0	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	0	0	0	%100
10	OVP	Z	-2.668	-2.668	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-3.219	-3.219	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-3.219	-3.219	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-3.219	-3.219	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-3.846	-3.846	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.442	1.442	0	%100
2	M1	Z	-2.498	-2.498	0	%100
3	MP1A	X	1.609	1.609	0	%100
4	MP1A	Z	-2.788	-2.788	0	%100
5	M17A	X	1.368	1.368	0	%100
6	M17A	Z	-2.37	-2.37	0	%100
7	M18A	X	.387	.387	0	%100
8	M18A	Z	-.671	-.671	0	%100
9	OVP	X	1.334	1.334	0	%100
10	OVP	Z	-2.31	-2.31	0	%100
11	MP2A	X	1.609	1.609	0	%100
12	MP2A	Z	-2.788	-2.788	0	%100
13	MP3A	X	1.609	1.609	0	%100
14	MP3A	Z	-2.788	-2.788	0	%100
15	MP4A	X	1.609	1.609	0	%100
16	MP4A	Z	-2.788	-2.788	0	%100
17	M15	X	1.442	1.442	0	%100
18	M15	Z	-2.498	-2.498	0	%100
19	M21	X	.35	.35	0	%100
20	M21	Z	-.607	-.607	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.833	.833	0	%100
2	M1	Z	-.481	-.481	0	%100
3	MP1A	X	2.788	2.788	0	%100
4	MP1A	Z	-1.609	-1.609	0	%100
5	M17A	X	2.37	2.37	0	%100
6	M17A	Z	-1.368	-1.368	0	%100
7	M18A	X	2.013	2.013	0	%100
8	M18A	Z	-1.162	-1.162	0	%100
9	OVP	X	2.31	2.31	0	%100
10	OVP	Z	-1.334	-1.334	0	%100
11	MP2A	X	2.788	2.788	0	%100
12	MP2A	Z	-1.609	-1.609	0	%100
13	MP3A	X	2.788	2.788	0	%100
14	MP3A	Z	-1.609	-1.609	0	%100
15	MP4A	X	2.788	2.788	0	%100
16	MP4A	Z	-1.609	-1.609	0	%100
17	M15	X	.833	.833	0	%100
18	M15	Z	-.481	-.481	0	%100
19	M21	X	1.821	1.821	0	%100
20	M21	Z	-1.051	-1.051	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	MP1A	X	3.219	3.219	0	%100
4	MP1A	Z	0	0	0	%100
5	M17A	X	2.736	2.736	0	%100
6	M17A	Z	0	0	0	%100
7	M18A	X	3.1	3.1	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	2.668	2.668	0	%100
10	OVP	Z	0	0	0	%100





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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP2A	X	3.219	3.219	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	3.219	3.219	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	3.219	3.219	0	%100
16	MP4A	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	2.803	2.803	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.833	.833	0	%100
2	M1	Z	.481	.481	0	%100
3	MP1A	X	2.788	2.788	0	%100
4	MP1A	Z	1.609	1.609	0	%100
5	M17A	X	2.37	2.37	0	%100
6	M17A	Z	1.368	1.368	0	%100
7	M18A	X	2.013	2.013	0	%100
8	M18A	Z	1.162	1.162	0	%100
9	OVP	X	2.31	2.31	0	%100
10	OVP	Z	1.334	1.334	0	%100
11	MP2A	X	2.788	2.788	0	%100
12	MP2A	Z	1.609	1.609	0	%100
13	MP3A	X	2.788	2.788	0	%100
14	MP3A	Z	1.609	1.609	0	%100
15	MP4A	X	2.788	2.788	0	%100
16	MP4A	Z	1.609	1.609	0	%100
17	M15	X	.833	.833	0	%100
18	M15	Z	.481	.481	0	%100
19	M21	X	1.821	1.821	0	%100
20	M21	Z	1.051	1.051	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	1.442	1.442	0	%100
2	M1	Z	2.498	2.498	0	%100
3	MP1A	X	1.609	1.609	0	%100
4	MP1A	Z	2.788	2.788	0	%100
5	M17A	X	1.368	1.368	0	%100
6	M17A	Z	2.37	2.37	0	%100
7	M18A	X	.387	.387	0	%100
8	M18A	Z	.671	.671	0	%100
9	OVP	X	1.334	1.334	0	%100
10	OVP	Z	2.31	2.31	0	%100
11	MP2A	X	1.609	1.609	0	%100
12	MP2A	Z	2.788	2.788	0	%100
13	MP3A	X	1.609	1.609	0	%100
14	MP3A	Z	2.788	2.788	0	%100
15	MP4A	X	1.609	1.609	0	%100
16	MP4A	Z	2.788	2.788	0	%100
17	M15	X	1.442	1.442	0	%100
18	M15	Z	2.498	2.498	0	%100
19	M21	X	.35	.35	0	%100
20	M21	Z	.607	.607	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	3.846	3.846	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	3.219	3.219	0	%100
5	M17A	X	0	0	0	%100
6	M17A	Z	2.736	2.736	0	%100
7	M18A	X	0	0	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	0	0	0	%100
10	OVP	Z	2.668	2.668	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	3.219	3.219	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	3.219	3.219	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	3.219	3.219	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	3.846	3.846	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-1.442	-1.442	0	%100
2	M1	Z	2.498	2.498	0	%100
3	MP1A	X	-1.609	-1.609	0	%100
4	MP1A	Z	2.788	2.788	0	%100
5	M17A	X	-1.368	-1.368	0	%100
6	M17A	Z	2.37	2.37	0	%100
7	M18A	X	-.387	-.387	0	%100
8	M18A	Z	.671	.671	0	%100
9	OVP	X	-1.334	-1.334	0	%100
10	OVP	Z	2.31	2.31	0	%100
11	MP2A	X	-1.609	-1.609	0	%100
12	MP2A	Z	2.788	2.788	0	%100
13	MP3A	X	-1.609	-1.609	0	%100
14	MP3A	Z	2.788	2.788	0	%100
15	MP4A	X	-1.609	-1.609	0	%100
16	MP4A	Z	2.788	2.788	0	%100
17	M15	X	-1.442	-1.442	0	%100
18	M15	Z	2.498	2.498	0	%100
19	M21	X	-.35	-.35	0	%100
20	M21	Z	.607	.607	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-.833	-.833	0	%100
2	M1	Z	.481	.481	0	%100
3	MP1A	X	-2.788	-2.788	0	%100
4	MP1A	Z	1.609	1.609	0	%100
5	M17A	X	-2.37	-2.37	0	%100
6	M17A	Z	1.368	1.368	0	%100
7	M18A	X	-2.013	-2.013	0	%100
8	M18A	Z	1.162	1.162	0	%100
9	OVP	X	-2.31	-2.31	0	%100
10	OVP	Z	1.334	1.334	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.%]
11	MP2A	X	-2.788	-2.788	0	%100
12	MP2A	Z	1.609	1.609	0	%100
13	MP3A	X	-2.788	-2.788	0	%100
14	MP3A	Z	1.609	1.609	0	%100
15	MP4A	X	-2.788	-2.788	0	%100
16	MP4A	Z	1.609	1.609	0	%100
17	M15	X	-.833	-.833	0	%100
18	M15	Z	.481	.481	0	%100
19	M21	X	-1.821	-1.821	0	%100
20	M21	Z	1.051	1.051	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	MP1A	X	-3.219	-3.219	0	%100
4	MP1A	Z	0	0	0	%100
5	M17A	X	-2.736	-2.736	0	%100
6	M17A	Z	0	0	0	%100
7	M18A	X	-3.1	-3.1	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	-2.668	-2.668	0	%100
10	OVP	Z	0	0	0	%100
11	MP2A	X	-3.219	-3.219	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-3.219	-3.219	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	-3.219	-3.219	0	%100
16	MP4A	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	-2.803	-2.803	0	%100
20	M21	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	-.833	-.833	0	%100
2	M1	Z	-.481	-.481	0	%100
3	MP1A	X	-2.788	-2.788	0	%100
4	MP1A	Z	-1.609	-1.609	0	%100
5	M17A	X	-2.37	-2.37	0	%100
6	M17A	Z	-1.368	-1.368	0	%100
7	M18A	X	-2.013	-2.013	0	%100
8	M18A	Z	-1.162	-1.162	0	%100
9	OVP	X	-2.31	-2.31	0	%100
10	OVP	Z	-1.334	-1.334	0	%100
11	MP2A	X	-2.788	-2.788	0	%100
12	MP2A	Z	-1.609	-1.609	0	%100
13	MP3A	X	-2.788	-2.788	0	%100
14	MP3A	Z	-1.609	-1.609	0	%100
15	MP4A	X	-2.788	-2.788	0	%100
16	MP4A	Z	-1.609	-1.609	0	%100
17	M15	X	-.833	-.833	0	%100
18	M15	Z	-.481	-.481	0	%100
19	M21	X	-1.821	-1.821	0	%100
20	M21	Z	-1.051	-1.051	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-1.442	-1.442	0	%100
2	M1	Z	-2.498	-2.498	0	%100
3	MP1A	X	-1.609	-1.609	0	%100
4	MP1A	Z	-2.788	-2.788	0	%100
5	M17A	X	-1.368	-1.368	0	%100
6	M17A	Z	-2.37	-2.37	0	%100
7	M18A	X	-.387	-.387	0	%100
8	M18A	Z	-.671	-.671	0	%100
9	OVP	X	-1.334	-1.334	0	%100
10	OVP	Z	-2.31	-2.31	0	%100
11	MP2A	X	-1.609	-1.609	0	%100
12	MP2A	Z	-2.788	-2.788	0	%100
13	MP3A	X	-1.609	-1.609	0	%100
14	MP3A	Z	-2.788	-2.788	0	%100
15	MP4A	X	-1.609	-1.609	0	%100
16	MP4A	Z	-2.788	-2.788	0	%100
17	M15	X	-1.442	-1.442	0	%100
18	M15	Z	-2.498	-2.498	0	%100
19	M21	X	-.35	-.35	0	%100
20	M21	Z	-.607	-.607	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	-.702	-.702	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-.476	-.476	0	%100
5	M17A	X	0	0	0	%100
6	M17A	Z	-.521	-.521	0	%100
7	M18A	X	0	0	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	0	0	0	%100
10	OVP	Z	-.425	-.425	0	%100
11	MP2A	X	0	0	0	%100
12	MP2A	Z	-.476	-.476	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-.476	-.476	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	-.476	-.476	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	-.702	-.702	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.263	.263	0	%100
2	M1	Z	-.456	-.456	0	%100
3	MP1A	X	.238	.238	0	%100
4	MP1A	Z	-.413	-.413	0	%100
5	M17A	X	.26	.26	0	%100
6	M17A	Z	-.451	-.451	0	%100
7	M18A	X	.078	.078	0	%100
8	M18A	Z	-.135	-.135	0	%100
9	OVP	X	.212	.212	0	%100
10	OVP	Z	-.368	-.368	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP2A	X	.238	.238	0	%100
12	MP2A	Z	-.413	-.413	0	%100
13	MP3A	X	.238	.238	0	%100
14	MP3A	Z	-.413	-.413	0	%100
15	MP4A	X	.238	.238	0	%100
16	MP4A	Z	-.413	-.413	0	%100
17	M15	X	.263	.263	0	%100
18	M15	Z	-.456	-.456	0	%100
19	M21	X	.063	.063	0	%100
20	M21	Z	-.109	-.109	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	.152	.152	0	%100
2	M1	Z	-.088	-.088	0	%100
3	MP1A	X	.413	.413	0	%100
4	MP1A	Z	-.238	-.238	0	%100
5	M17A	X	.451	.451	0	%100
6	M17A	Z	-.26	-.26	0	%100
7	M18A	X	.404	.404	0	%100
8	M18A	Z	-.233	-.233	0	%100
9	OVP	X	.368	.368	0	%100
10	OVP	Z	-.212	-.212	0	%100
11	MP2A	X	.413	.413	0	%100
12	MP2A	Z	-.238	-.238	0	%100
13	MP3A	X	.413	.413	0	%100
14	MP3A	Z	-.238	-.238	0	%100
15	MP4A	X	.413	.413	0	%100
16	MP4A	Z	-.238	-.238	0	%100
17	M15	X	.152	.152	0	%100
18	M15	Z	-.088	-.088	0	%100
19	M21	X	.328	.328	0	%100
20	M21	Z	-.189	-.189	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	MP1A	X	.476	.476	0	%100
4	MP1A	Z	0	0	0	%100
5	M17A	X	.521	.521	0	%100
6	M17A	Z	0	0	0	%100
7	M18A	X	.622	.622	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	.425	.425	0	%100
10	OVP	Z	0	0	0	%100
11	MP2A	X	.476	.476	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	.476	.476	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	.476	.476	0	%100
16	MP4A	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	.504	.504	0	%100
20	M21	Z	0	0	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	.152	.152	0	%100
2	M1	Z	.088	.088	0	%100
3	MP1A	X	.413	.413	0	%100
4	MP1A	Z	.238	.238	0	%100
5	M17A	X	.451	.451	0	%100
6	M17A	Z	.26	.26	0	%100
7	M18A	X	.404	.404	0	%100
8	M18A	Z	.233	.233	0	%100
9	OVP	X	.368	.368	0	%100
10	OVP	Z	.212	.212	0	%100
11	MP2A	X	.413	.413	0	%100
12	MP2A	Z	.238	.238	0	%100
13	MP3A	X	.413	.413	0	%100
14	MP3A	Z	.238	.238	0	%100
15	MP4A	X	.413	.413	0	%100
16	MP4A	Z	.238	.238	0	%100
17	M15	X	.152	.152	0	%100
18	M15	Z	.088	.088	0	%100
19	M21	X	.328	.328	0	%100
20	M21	Z	.189	.189	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	.263	.263	0	%100
2	M1	Z	.456	.456	0	%100
3	MP1A	X	.238	.238	0	%100
4	MP1A	Z	.413	.413	0	%100
5	M17A	X	.26	.26	0	%100
6	M17A	Z	.451	.451	0	%100
7	M18A	X	.078	.078	0	%100
8	M18A	Z	.135	.135	0	%100
9	OVP	X	.212	.212	0	%100
10	OVP	Z	.368	.368	0	%100
11	MP2A	X	.238	.238	0	%100
12	MP2A	Z	.413	.413	0	%100
13	MP3A	X	.238	.238	0	%100
14	MP3A	Z	.413	.413	0	%100
15	MP4A	X	.238	.238	0	%100
16	MP4A	Z	.413	.413	0	%100
17	M15	X	.263	.263	0	%100
18	M15	Z	.456	.456	0	%100
19	M21	X	.063	.063	0	%100
20	M21	Z	.109	.109	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	.702	.702	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	.476	.476	0	%100
5	M17A	X	0	0	0	%100
6	M17A	Z	.521	.521	0	%100
7	M18A	X	0	0	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	0	0	0	%100
10	OVP	Z	.425	.425	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP2A	X	0	0	0	%100
12	MP2A	Z	.476	.476	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	.476	.476	0	%100
15	MP4A	X	0	0	0	%100
16	MP4A	Z	.476	.476	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	.702	.702	0	%100
19	M21	X	0	0	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.263	-.263	0	%100
2	M1	Z	.456	.456	0	%100
3	MP1A	X	-.238	-.238	0	%100
4	MP1A	Z	.413	.413	0	%100
5	M17A	X	-.26	-.26	0	%100
6	M17A	Z	.451	.451	0	%100
7	M18A	X	-.078	-.078	0	%100
8	M18A	Z	.135	.135	0	%100
9	OVP	X	-.212	-.212	0	%100
10	OVP	Z	.368	.368	0	%100
11	MP2A	X	-.238	-.238	0	%100
12	MP2A	Z	.413	.413	0	%100
13	MP3A	X	-.238	-.238	0	%100
14	MP3A	Z	.413	.413	0	%100
15	MP4A	X	-.238	-.238	0	%100
16	MP4A	Z	.413	.413	0	%100
17	M15	X	-.263	-.263	0	%100
18	M15	Z	.456	.456	0	%100
19	M21	X	-.063	-.063	0	%100
20	M21	Z	.109	.109	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
1	M1	X	-.152	-.152	0	%100
2	M1	Z	.088	.088	0	%100
3	MP1A	X	-.413	-.413	0	%100
4	MP1A	Z	.238	.238	0	%100
5	M17A	X	-.451	-.451	0	%100
6	M17A	Z	.26	.26	0	%100
7	M18A	X	-.404	-.404	0	%100
8	M18A	Z	.233	.233	0	%100
9	OVP	X	-.368	-.368	0	%100
10	OVP	Z	.212	.212	0	%100
11	MP2A	X	-.413	-.413	0	%100
12	MP2A	Z	.238	.238	0	%100
13	MP3A	X	-.413	-.413	0	%100
14	MP3A	Z	.238	.238	0	%100
15	MP4A	X	-.413	-.413	0	%100
16	MP4A	Z	.238	.238	0	%100
17	M15	X	-.152	-.152	0	%100
18	M15	Z	.088	.088	0	%100
19	M21	X	-.328	-.328	0	%100
20	M21	Z	.189	.189	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	MP1A	X	-.476	-.476	0	%100
4	MP1A	Z	0	0	0	%100
5	M17A	X	-.521	-.521	0	%100
6	M17A	Z	0	0	0	%100
7	M18A	X	-.622	-.622	0	%100
8	M18A	Z	0	0	0	%100
9	OVP	X	-.425	-.425	0	%100
10	OVP	Z	0	0	0	%100
11	MP2A	X	-.476	-.476	0	%100
12	MP2A	Z	0	0	0	%100
13	MP3A	X	-.476	-.476	0	%100
14	MP3A	Z	0	0	0	%100
15	MP4A	X	-.476	-.476	0	%100
16	MP4A	Z	0	0	0	%100
17	M15	X	0	0	0	%100
18	M15	Z	0	0	0	%100
19	M21	X	-.504	-.504	0	%100
20	M21	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-.152	-.152	0	%100
2	M1	Z	-.088	-.088	0	%100
3	MP1A	X	-.413	-.413	0	%100
4	MP1A	Z	-.238	-.238	0	%100
5	M17A	X	-.451	-.451	0	%100
6	M17A	Z	-.26	-.26	0	%100
7	M18A	X	-.404	-.404	0	%100
8	M18A	Z	-.233	-.233	0	%100
9	OVP	X	-.368	-.368	0	%100
10	OVP	Z	-.212	-.212	0	%100
11	MP2A	X	-.413	-.413	0	%100
12	MP2A	Z	-.238	-.238	0	%100
13	MP3A	X	-.413	-.413	0	%100
14	MP3A	Z	-.238	-.238	0	%100
15	MP4A	X	-.413	-.413	0	%100
16	MP4A	Z	-.238	-.238	0	%100
17	M15	X	-.152	-.152	0	%100
18	M15	Z	-.088	-.088	0	%100
19	M21	X	-.328	-.328	0	%100
20	M21	Z	-.189	-.189	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft, %]	End Location[ft, %]
1	M1	X	-.263	-.263	0	%100
2	M1	Z	-.456	-.456	0	%100
3	MP1A	X	-.238	-.238	0	%100
4	MP1A	Z	-.413	-.413	0	%100
5	M17A	X	-.26	-.26	0	%100
6	M17A	Z	-.451	-.451	0	%100
7	M18A	X	-.078	-.078	0	%100
8	M18A	Z	-.135	-.135	0	%100
9	OVP	X	-.212	-.212	0	%100
10	OVP	Z	-.368	-.368	0	%100





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

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft.F...	Start Location[ft.%]	End Location[ft.%]
11	MP2A	X	-.238	-.238	0 %100
12	MP2A	Z	-.413	-.413	0 %100
13	MP3A	X	-.238	-.238	0 %100
14	MP3A	Z	-.413	-.413	0 %100
15	MP4A	X	-.238	-.238	0 %100
16	MP4A	Z	-.413	-.413	0 %100
17	M15	X	-.263	-.263	0 %100
18	M15	Z	-.456	-.456	0 %100
19	M21	X	-.063	-.063	0 %100
20	M21	Z	-.109	-.109	0 %100

**Member Area Loads**

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

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

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc.....	LC	phi*Pn...	phi*Pn...	phi*Mn...	phi*Mn.....	Eqn	
1	MP2A	PIPE_2.0	.541	4	1	.135	6.083	20	14916...	32130	1.872	1.872	3..H1-1b
2	MP1A	PIPE_2.0	.477	4.083	29	.081	6.5	25	14916...	32130	1.872	1.872	2..H1-1b
3	M21	HSS3X3X4	.427	3.104	33	.142	0	z 28	93678...	101016	8.556	8.556	2..H1-1b
4	M1	PIPE_3.0	.366	6.25	30	.191	6.25	1	28250...	65205	5.749	5.749	1..H1-1b
5	M18A	HSS4X4X4	.336	2.854	29	.170	2.854	y 27	13484...	139518	16.181	16.181	1..H1-1b
6	MP3A	PIPE_2.0	.300	4.083	21	.101	4.083	20	14916...	32130	1.872	1.872	2..H1-1b
7	M15	PIPE_3.0	.261	6.25	26	.148	6.25	17	28250...	65205	5.749	5.749	1..H1-1b
8	MP4A	PIPE_2.0	.252	4	7	.064	6.5	6	14916...	32130	1.872	1.872	2..H1-1b
9	OVP	PIPE_2.0	.109	2.567	4	.014	2.567	4	27042...	32130	1.872	1.872	2..H1-1b
10	M17A	PIPE_4.0	.000	.75	7	.000	.75	7	92571...	93240	10.631	10.631	1 H1-1b

**Envelope Joint Reactions**

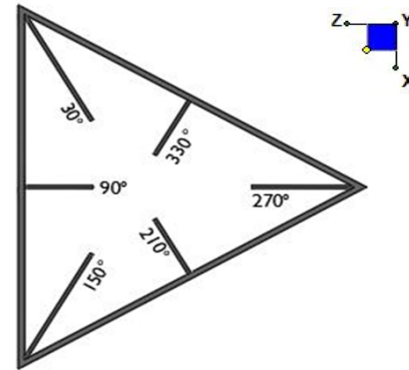
Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC		
1	N35B	max	1017.07	11	1689.067	13	1154.253	1	-.883	1	2.624	11	1.935	28
2		min	-1114.93	5	501.099	7	-1676.357	7	-4.504	19	-2.897	5	-.875	49
3	N41	max	789.831	29	836.888	19	840.239	13	-.329	1	2.306	35	.829	27
4		min	-333.056	49	198.406	1	78.283	7	-2.098	19	-.953	49	-.413	49
5	Totals:	max	1015.55	10	2476.46	16	1598.086	1						
6		min	-1015.549	4	902.559	10	-1598.075	7						



## I. Mount-to-Tower Connection Check - Proposed Standoff

### RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N41	90

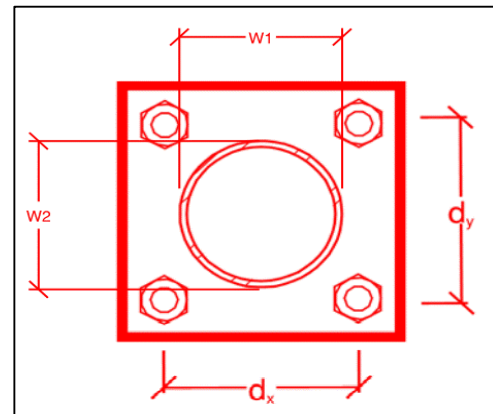


TYPICAL PLATFORM

### 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
4
6
6
A325N
0.625
11.1
4.3
20.7
12.4
13.4%*
8.6%



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

### Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:  
 Plate Width (in):  
 Plate Height (in):  
 $W_1$  (in):  
 $W_2$  (in):  
 $F_y$  (ksi, plate):  
 $t_{plate}$  (in):  
 Weld Size (1/16 in):  
 $\Phi * R_n$  (kip/in):  
 Required Weld Strength (kip/in):  
 Plate Bending Capacity:  
 Weld Capacity:

Rect
8.25
8.25
3
3
36
0.75
5
6.96
2.77
29.9%
39.8%

### Max Plate Bending Strengths

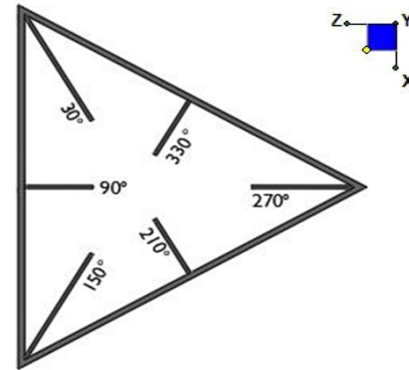
$M_{u_{xx}}$ (kip-in) :	4.1
$\Phi * M_{n_{xx}}$ (kip-in) :	37.6
$M_{u_{yy}}$ (kip-in) :	7.1
$\Phi * M_{n_{yy}}$ (kip-in) :	37.6



## I. Mount-to-Tower Connection Check

### RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N35B	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):

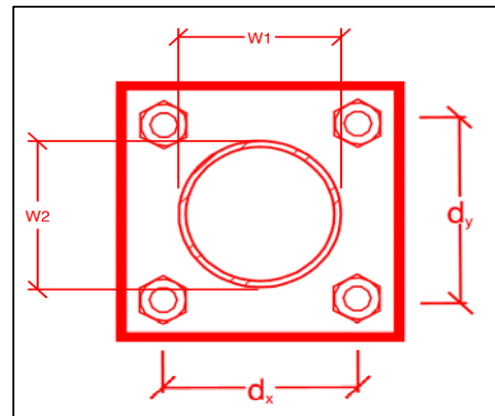
Tensile Strength / bolt (kips):

Shear Strength / bolt (kips):

Tensile Capacity Overall:

Shear Capacity Overall:

yes
4
7
7
A325N
0.625
16.6
8.0
20.7
12.4
<b>20.0%*</b>
<b>16.1%</b>



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

### Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:

Plate Width (in):

Plate Height (in):

W1 (in):

W2 (in):

Fy (ksi, plate):

$t_{plate}$  (in):

Weld Size (1/16 in):

$\Phi * R_n$  (kip/in):

Required Weld Strength (kip/in):

Plate Bending Capacity:

Weld Capacity:

Rect
10
10
4
4
36
0.625
4
5.57
2.61
<b>45.3%</b>
<b>46.9%</b>

### Max Plate Bending Strengths

$M_{u_{xx}}$ (kip-in) :	7.9
$\Phi * M_{n_{xx}}$ (kip-in) :	31.6
$M_{u_{yy}}$ (kip-in) :	6.4
$\Phi * M_{n_{yy}}$ (kip-in) :	31.6

# Mount Desktop – Post Modification Inspection (PMI) Report Requirements

## Documents & Photos Required from Contractor – Mount Modification

---

**Purpose** – to provide Maser Consulting Connecticut the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the 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:**

- 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) must be shown.
- Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.
- Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to <https://pmi.vzwsmart.com> as depicted on the drawings

### **Photo Requirements:**

- Base and “During Installation Photos”
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - “During Installation Photos if provided - must be placed only in this folder
- Photos taken at ground level
  - Overall tower structure before and after installation of the modifications
  - Photos of the appropriate mount before and 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 each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
    - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
  - Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
  - Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
  - Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
  - Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (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, a tape drop measurement shall be provided before the elevation change
  - 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.

**Material Certification:**

- Materials utilized must be as per specification on the drawings or the equivalent as validated by Maser Consulting Connecticut.
  - If the drawings are as specified on the drawings
    - The contractor should provide the packing list or the materials utilized to perform the mount modification
  - If an equivalent is utilized
    - It is required that the Maser Consulting Connecticut certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.
- The contractor must certify that the materials meet these specifications by one of these methods.
  - ▣ The Material utilized was as specified on the Maser Consulting Connecticut Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials
  - ▣ The material utilized was an "equivalent" and included as part of the contractor submission is the Maser Consulting Connecticut certification, invoices, or specifications validating accepted status

Certifying Individual: Company \_\_\_\_\_

Name \_\_\_\_\_

Signature \_\_\_\_\_

**Antenna & equipment placement and Geometry Confirmation:**

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.
- The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.
- The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual:      Company \_\_\_\_\_

Name \_\_\_\_\_

Signature \_\_\_\_\_

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


















**Issue:**

Install proposed OVP on the exiting equipment pipe connected to the alpha sector.

Contractor to ensure existing and proposed mount connections do not nor will not interfere with safety climb wire rope. Contractor to install safety climb wire rope guide as necessary.

**Response:**

## **Schedule A – Photo & Document File Structure**

-  VzW Site Number / Name
  -  Base & “During Installation” Photos
  -  Pre-Installation Photos
    -  Alpha
    -  Beta
    -  Gamma
    -  Ground Level
    -  Tape Drop
  -  Post-Installation Photos
    -  Alpha
    -  Beta
    -  Gamma
    -  Ground Level
    -  Tape Drop
    -  Photos of climbing facility and safety climb – If Present
-  Certifications – Submission of this document including certifications
-  Specific Required Additional Photos

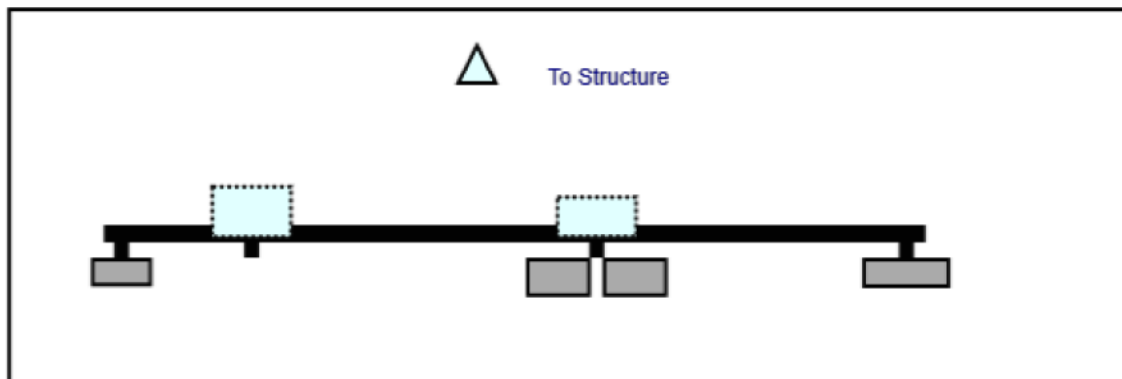
Sector: **A**  
 Structure Type: Monopole  
 Mount Elev: 116.90

4/28/2021

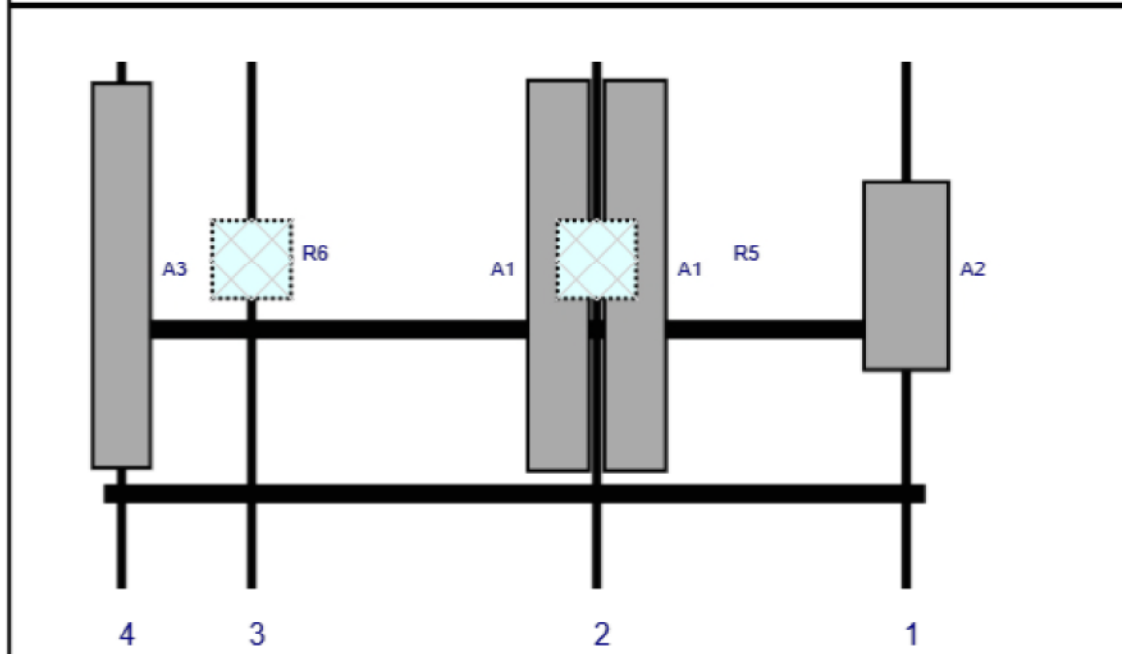
Page: 1



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
A2	MT6407-77A	35.1	16.1	146.5	1	a	Front	39	0	Added	
A1	NHH-65B-R2B	72	11.9	90	2	a	Front	39	7	Added	
A1	NHH-65B-R2B	72	11.9	90	2	b	Front	39	-7	Added	
R5	B5/B13 RRH-BR04C	15	15	90	2	a	Behind	36	0	Added	
R6	B2/B66A RRH-BR049	15	15	27	3	a	Behind	36	0	Added	
A3	BXA-70063-6BF-EDIN-4	71	11.2	3.25	4	a	Front	39	0	Retained	01/10/2021



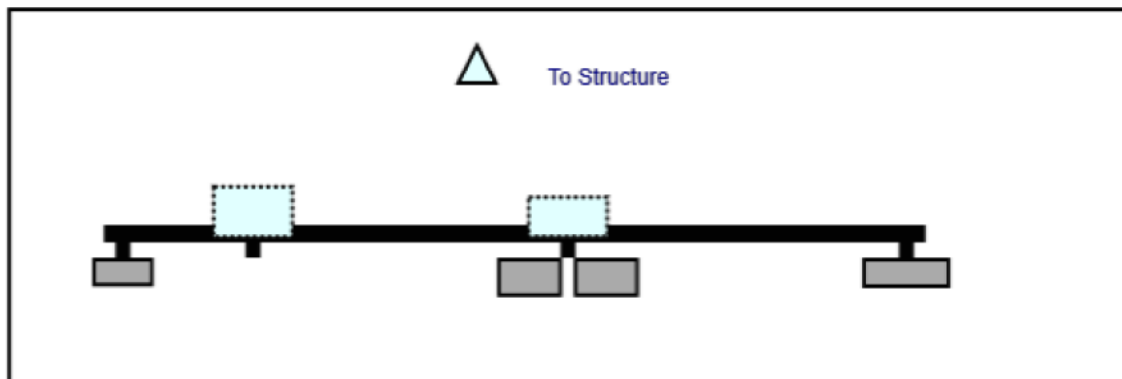
Sector: **B**  
 Structure Type: Monopole  
 Mount Elev: 116.90

4/28/2021

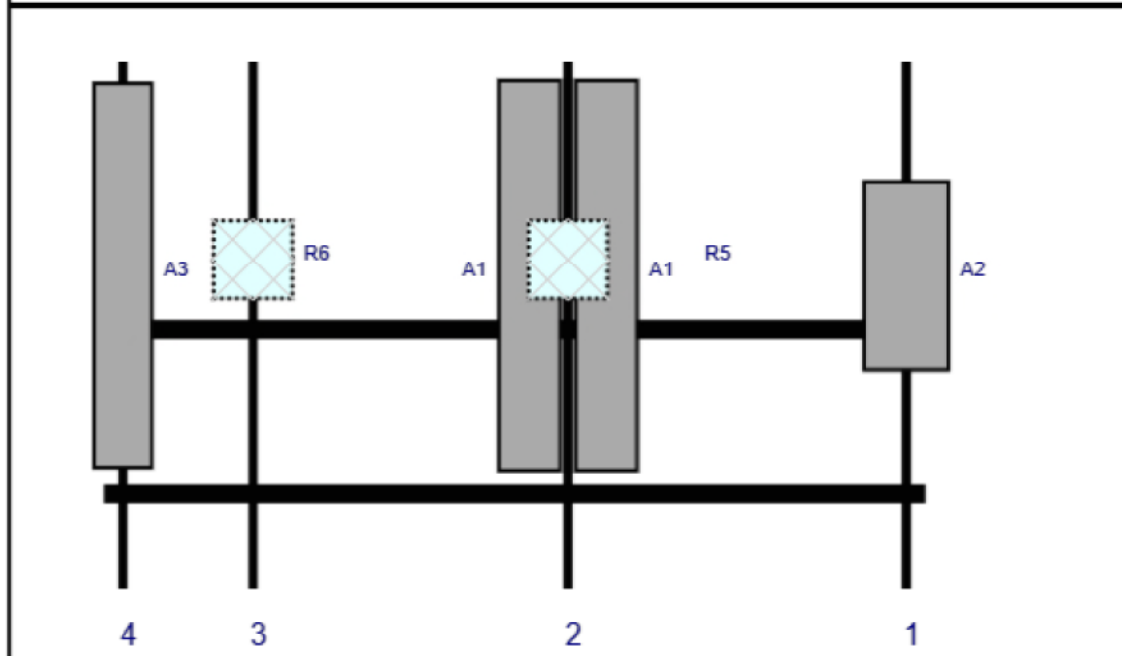
Page: 2



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
A2	MT6407-77A	35.1	16.1	146.5	1	a	Front	39	0	Added	
A1	NHH-65B-R2B	72	11.9	84.75	2	a	Front	39	7	Added	
A1	NHH-65B-R2B	72	11.9	84.75	2	b	Front	39	-7	Added	
R5	B5/B13 RRH-BR04C	15	15	84.75	2	a	Behind	36	0	Added	
R6	B2/B66A RRH-BR049	15	15	27.25	3	a	Behind	36	0	Added	
A3	BXA-70063-6BF-EDIN-4	71	11.2	3.5	4	a	Front	39	0	Retained	01/10/2021

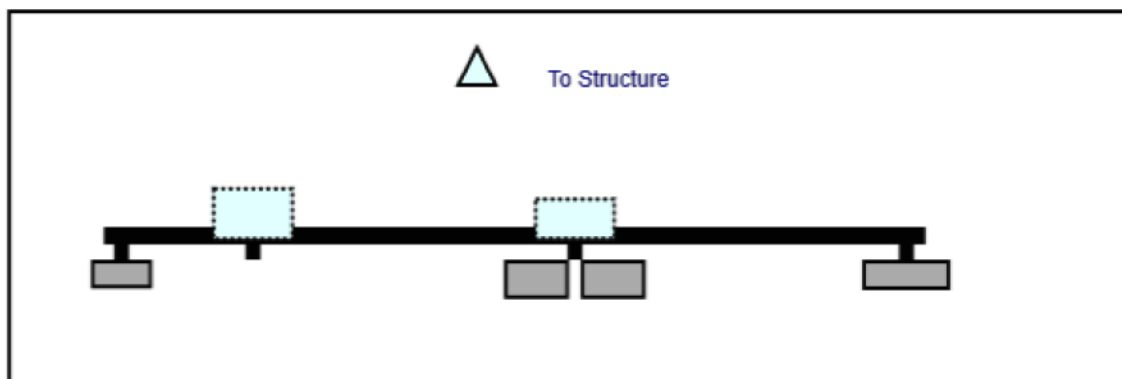
Sector: C  
 Structure Type: Monopole  
 Mount Elev: 116.90

4/28/2021

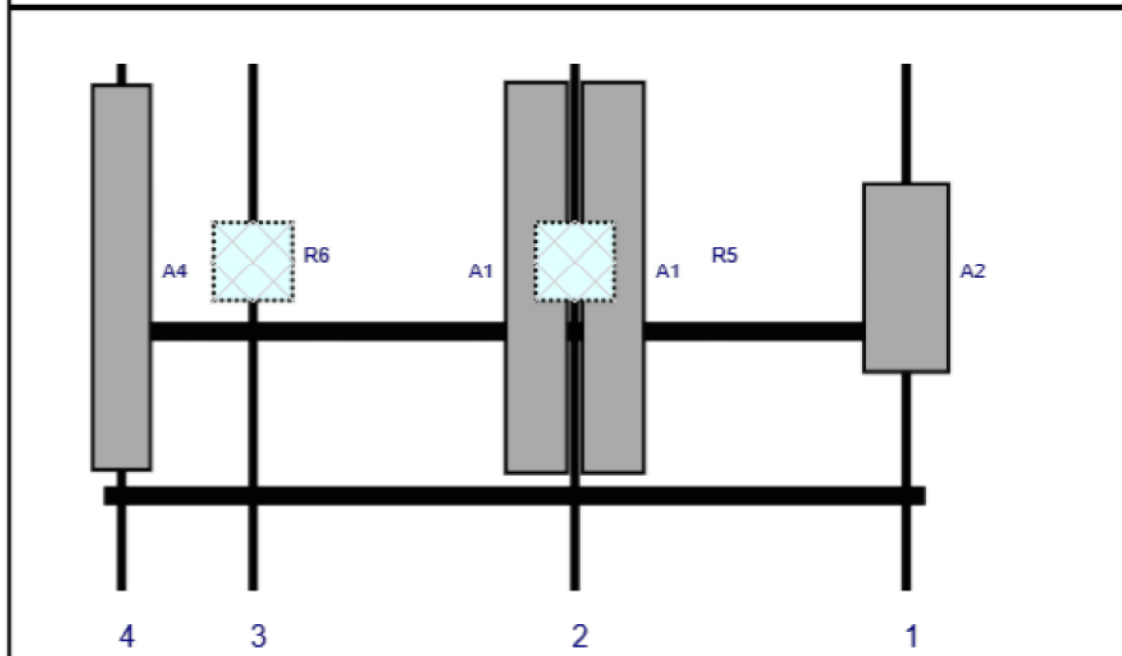
Page: 3



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
A2	MT6407-77A	35.1	16.1	146.5	1	a	Front	39	0	Added	
A1	NHH-65B-R2B	72	11.9	86	2	a	Front	39	7	Added	
A1	NHH-65B-R2B	72	11.9	86	2	b	Front	39	-7	Added	
R5	B5/B13 RRH-BR04C	15	15	86	2	a	Behind	36	0	Added	
R6	B2/B66A RRH-BR049	15	15	27.25	3	a	Behind	36	0	Added	
A4	BXA-70063-6BF-EDIN-2	71	11.2	3.25	4	a	Front	39	0	Retained	01/10/2021

# Maser Consulting Connecticut

**Subject**

TIA-222-H Usage

**Site Information**

Site ID: 468551-VZW / NEW BRITAIN 6 CT

Site Name: NEW BRITAIN 6 CT

Carrier Name: Verizon Wireless

Address: 723 Farmington Ave  
New Britain, Connecticut 06050  
Hartford County

Latitude: 41.698414°

Longitude: -72.785944°

**Structure Information**

Tower Type: 118.5-Ft Monopole

Mount Type: 12.50-Ft T-Arm

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,



Petros Tsoukalas, PE  
Geographic Discipline Leader

## PROJECT NOTES

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

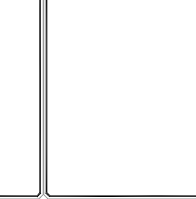


## MOUNT MODIFICATION DRAWINGS EXISTING 12.50' T-ARM

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SITE NUMBER: 468551

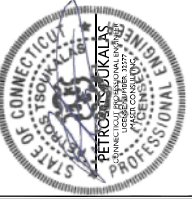
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01/15/2021	1	AS SHOWN	01/15/2021	ISSUED FOR PERMITS
01/15/2021	2	AS SHOWN	01/15/2021	ISSUED FOR PERMITS
01/15/2021	3	AS SHOWN	01/15/2021	ISSUED FOR PERMITS
01/15/2021	4	AS SHOWN	01/15/2021	ISSUED FOR PERMITS
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NEW BRITAIN, CT 06050  
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SHEET TITLE:  
T-1  
TITLE SHEET

PROJECT INFORMATION	
<b>SITE INFORMATION</b>	
Latitude	41.68841° N
Longitude	72.85944° W
JURISDICTION:	HARTFORD COUNTY
<b>APPLICANT/LESEE</b>	
COMPANY:	VERIZON WIRELESS
<b>CLIENT REPRESENTATIVE</b>	
COMPANY:	VERIZON WIRELESS
ADDRESS:	723 FARMINGTON AVENUE, THIRD FLOOR
CITY, STATE, ZIP:	WESTBOROUGH, MA 01581
CONTACT:	ANDREW CANDELLO
EMAIL:	ANDREW.CANDELLO@VERIZONWIRELESS.COM
<b>PROJECT MANAGER</b>	
COMPANY:	MASER CONSULTING
CONTACT:	GREG DULNIK
PHONE:	(617) 486-2575
EMAIL:	GREG.DULNIK@COLLIERSENGINEERING.COM

SHEET INDEX	
SHEET	DESCRIPTION
T-1	TITLE SHEET
S-1	BILL OF MATERIALS
S-2	MODIFICATION NOTES
S-3	MODIFICATION NOTES
S-4	MODIFICATION DETAILS
S-5	MODIFICATION DETAILS
S-6	MOUNT PHOTOS
	SPECIFICATION SHEETS

CONTRACTOR PMI REQUIREMENTS	
PMI LOCATION:	HTTPS://PMI.VZVSMART.COM
SMART TOOL PROJECT #:	1003986
VZW LOCATION CODE (PLC):	468551
FUZE ID:	16237005

CONTRACTOR PMI REQUIREMENTS	
SMART TOOL PROJECT #:	1003986
MASER CONSULTING PROJECT #:	2077623A
ANALYSIS DATE:	2/19/2021

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CONSENT OF MASER CONSULTING.

## BILL OF MATERIALS

QUANTITY		MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
<b>VZWSMART KITS</b>					
3			VZWSMART-SPK4	T-ARM KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEEL NOTES ON SHEET S-2
1			VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY	
12			VZWSMART-HSK2	CROSSOVER PLATE	
<b>OTHER REQUIRED PARTS</b>					
3				15" LONG P30 STD	GALVANIZED

**NOTE: ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR**

### VZWSMART KITS - APPROVED VENDORS

<b>COMMSCOPE</b>
CONTACT: SALVADOR ANGUIANO
PHONE: (817) 304-7492
EMAIL: SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE: WWW.COMMSCOPE.COM
<b>METROSITE FABRICATORS, LLC</b>
CONTACT: KENT RAMEY
PHONE: (766) 335-7645 (O), (766) 982-9788 (F)
EMAIL: KENT@METROSITELLC.COM
WEBSITE: METROSITEFABRICATORS.COM
<b>PERFECT-VISION</b>
CONTACT: WIRELESS SALES
PHONE: (841) 887-6723
EMAIL: WWW.PERFECT-VISION.COM
WEBSITE: WIRELESS@PERFECT-VISION.COM
<b>SABRE INDUSTRIES, INC.</b>
CONTACT: ANGIE WELCH
PHONE: (866) 428-6937
EMAIL: AKWELCH@SABREINDUSTRIES.COM
WEBSITE: WWW.SABRESOLUTIONS.COM
<b>SITE PRO 1</b>
CONTACT: PAULA BOSWELL
PHONE: (972) 236-9843
EMAIL: PAULA.BOSWELL@VALMONT.COM
WEBSITE: WWW.SITEPRO1.COM

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



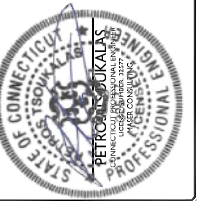
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**BILL OF MATERIALS**

**GENERAL NOTES**

- 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.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL DIMENSIONS AND CONDITIONS. CONTRACTOR SHALL BE PROMPT 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.
- IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
- ALL CONSTRUCTION MEANS AND METHODS, INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESGIE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSITIA-332 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSITIA-332(LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
- WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30MPH). 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 OTHERS STRUCTURAL HANDING AND BRACING NECESSARY TO MAINTAIN THE STRUCTURE FULLY COMPLETED DURING CONSTRUCTION AND OTHER STRUCTURAL WORKS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
- ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSITIA-332.
- CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
- 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.
- DO NOT SCALE DRAWINGS.
- ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ALL MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR TO ALTERED SIZE AND/OR STRENGTHS MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
- THE POINT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

**DESIGN LOADS**

- WIND LOADS**
- BASIC WIND SPEED (3 SECOND GUST),  $V = 117$  MPH
  - EXPOSURE CATEGORY B
  - TOPOGRAPHIC CATEGORY I
  - MEAN BASE ELEVATION (AMS) = 313.5'
- ICE LOADS**
- ICE WIND SPEED (3 SECOND GUST),  $V = 50$  MPH
  - ICE THICKNESS = 1.50 IN
- SEISMIC LOADS**
- SEISMIC DESIGN CATEGORY B
  - SHORT TERM MCR GROUND MOTION,  $S_s = .192$
  - LONG TERM MCR GROUND MOTION,  $S_1 = .055$

**STRUCTURAL STEEL**

- DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
  - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
  - SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
  - AISC CODE OF STANDARD PRACTICE
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:
  - CHANNELS, ANGLES, PLATES, ETC. ASTM A99 (GR 36)
  - STEEL PIPE ASTM A57 (GR 35)
  - BOLTS ASTM A325
  - WASHERS LOCKING STRUCTURAL GRADE
  - LOCK WASHERS
- ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPAIRS, SHALL BE NOTED IN SHOP DRAWINGS. COSTS ASSOCIATED WITH THE SUBSTITUTIONS SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SUBCONTRACTORS SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
- PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
  - SUBMIT SHOP DRAWINGS TO GREGDUNN@COLLIERENGINEERING.COM
  - PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
- 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.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL NEW STEEL SHALL BE HOT DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
- 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.
- 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.
- FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND TYPE. MEET ALL AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
- ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT IT ENDS ON THE BEARING SURFACE OF THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL NEW STEEL SHALL BE HOT DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO

- PROTECT STEEL BY ANY OTHER MEANS.
- ALL EXISTING PAINTED GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINCA OR ZINC COTE) AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
- ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

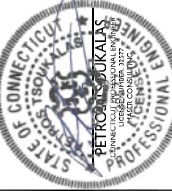
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1	REVISION	DATE	BY
0	ISSUED FOR CONSTRUCTION	12/12/27	PK



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**SITE NAME:**  
**NEW BRITAIN 6 CT**  
 468551  
 723 FARMINGTON AVENUE  
 NEW BRITAIN, CT 06105  
 HARTFORD COUNTY



**MODIFICATION NOTES**

SEE TITLE

SEE DRAWING

S-2

**MODIFICATION INSPECTION NOTES**

MI CHECKLIST	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING (REQUIRED COMPLETED BY EOR)	REPORT ITEM
X	PRE-CONSTRUCTION
X	MI CHECKLIST DRAWING
X	FOR APPROVED SHOP DRAWINGS
NA	FABRICATION INSPECTION
NA	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
NA	FABRICATOR NDE INSPECTION
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
	CONSTRUCTION
X	CONSTRUCTION INSPECTIONS
NA	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
X	ON SITE COLD GALVANIZING VERIFICATION
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
	POST-CONSTRUCTION
X	MI INSPECTOR (REDLINE OR RECORD DRAWINGS)
X	VZV PMI DOCUMENTS
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT REQUIRED FOR THE MI REPORT  
 NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS COMPLETED AS SHOWN ON THE ORIGINAL DRAWINGS AND AS SHOWN IN THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN. THE MI INSPECTOR SHALL TAKE A REVIEW OF THE MODIFICATION DESIGN PRIOR TO CONDUCTING THE MI. THE MI INSPECTOR SHALL ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET. IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE MODIFICATION AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY.

**MI INSPECTOR**

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO: AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS
- THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO EOR.

**GENERAL CONTRACTOR**

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO: AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS
- THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

**RECOMMENDATIONS**

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE MI INSPECTOR SHOULD COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT. WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RETENSIONING OPERATIONS. IT MAY BE BENEFICIAL TO INSTALL ALL MODIFICATIONS PRIOR TO CONDUCTING THE MI.
- COMMENCE WITH ON-SITE VISUAL INSPECTIONS AT A LOW THE FOUNDATION AND MI INSPECTIONS TO WHEN POSSIBLE. IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON-SITE.

**CORRECTION OF FAILING MIS**

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REMEDIATION PLAN:

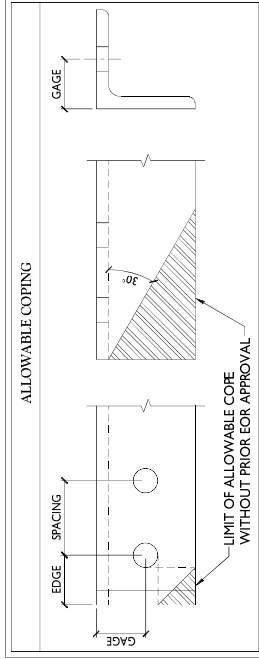
- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

**REQUIRED PHOTOS**

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

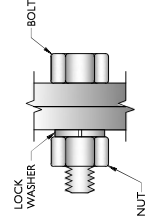
- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION
- RAW MATERIALS
- PHOTOS OF ALL CRITICAL DETAILS
- FOUNDATION MODIFICATIONS
- FOUNDATION CONSTRUCTION
- BOLT INSTALLATION
- FINAL INSTALLED CONDITION
- SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
- FINAL IN-FIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.



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

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

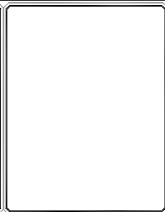


**TYP. BOLT ASSEMBLY**

- NOTES:**
- ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE ASC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
  - THE DIMENSIONS PROVIDED ARE MINIMUMS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE ASC MINIMUM REQUIREMENTS.
  - SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS.
  - MATCH EXISTING GAGES WHEN APPLICABLE. UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

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DATE	AS SHOWN	REVISION	DATE
			2017/07/12/1A

**PETROS DUKAKIS**  
 Professional Engineer  
 No. 20772-12-1A  
 State of Connecticut  
 1000 W. 10th Street, Suite 100  
 Waukegan, IL 60087  
 Phone: 847-977-8112  
 Fax: 847-972-1100

IF THE SIGNATURE OF ANY PERSON UNLESS THE SIGNATURE UNDER THE DIRECTION OF THE ENGINEER, IS NOT ON THIS DOCUMENT, IT IS VOID.

**SITE NAME:**  
 NEW BRITAIN 6 CT  
 468551  
 713 FARMINGTON AVENUE  
 NEW BRITAIN, CT 06105  
 HARTFORD COUNTY



**MODIFICATION NOTES**

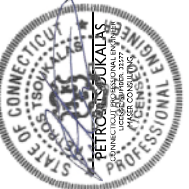


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1	08/14/2021	ISSUED FOR PERMITTING	MM	MM
2	08/14/2021	ISSUED FOR PERMITTING	MM	MM
3	08/14/2021	ISSUED FOR PERMITTING	MM	MM
4	08/14/2021	ISSUED FOR PERMITTING	MM	MM



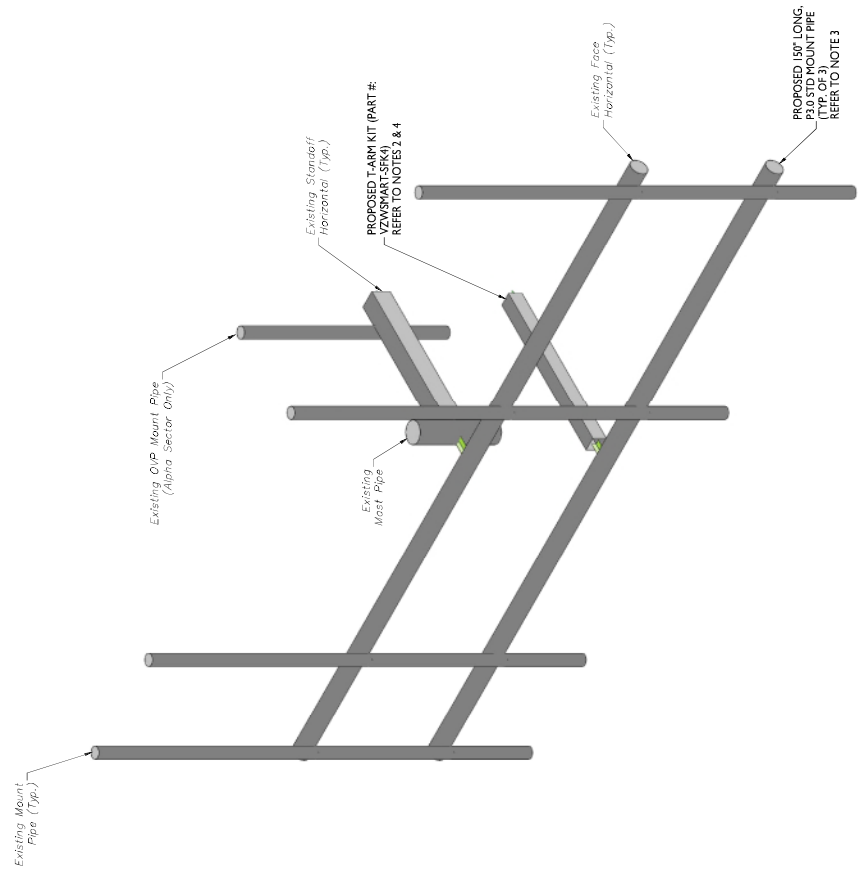
IT IS THE POLICY OF MASER CONSULTING AND PERSONNEL TO PROVIDE THE BEST SERVICE TO OUR CLIENTS. UNLESS OTHERWISE SPECIFIED, ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE INTERNATIONAL BUILDING CODES AND ALL APPLICABLE LOCAL ORDINANCES. THIS DOCUMENT IS THE PROPERTY OF MASER CONSULTING AND SHALL BE RETURNED TO US UPON COMPLETION OF THE PROJECT.

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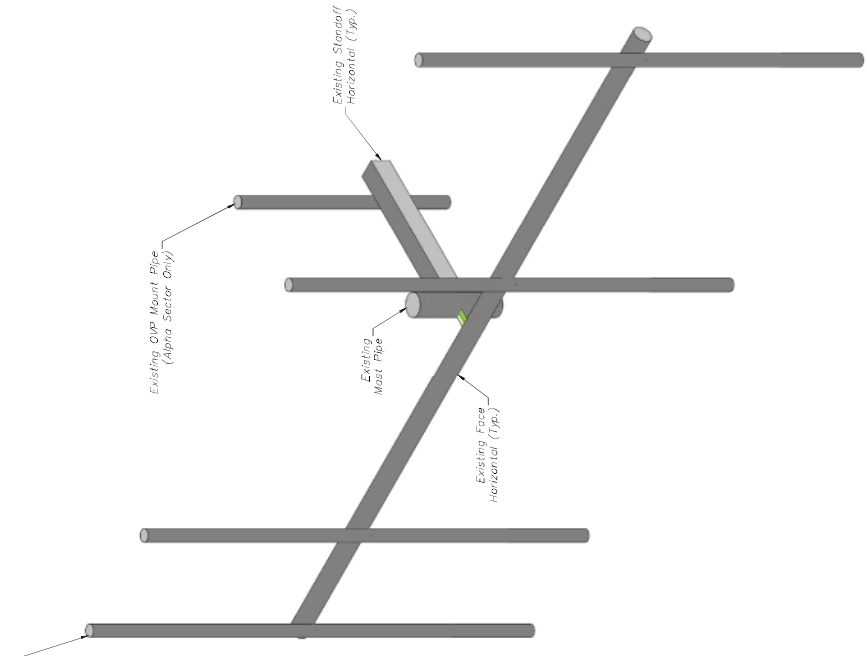
**MODIFICATION DETAILS**

S-4



**2** PROPOSED T-ARM ISOMETRIC VIEW (TYP. ALL SECTORS)  
 SCALE: N.T.S.

- MODIFICATION NOTES:**
1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
  2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE STRUCTURAL STEEL NOTES ON SHEET S-2.
  3. CONNECT NEW HORIZONTAL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
  4. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT (PART #: VZWSMART-PLK7).



**1** EXISTING T-ARM ISOMETRIC VIEW (TYP. ALL SECTORS)  
 SCALE: N.T.S.

- STRUCTURAL NOTES:**
1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING, LLC ON 1/10/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (116'-11") ARE IN GOOD CONDITION MASER DOES NOT WARRANT THIS INFORMATION.
  2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE CLIMBING FACILITY. SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE, TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.





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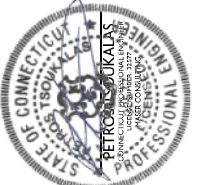
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1		ISSUED FOR PERMITS	IN	RET
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PROJECT: AS SHOWN  
 DRAWING: 2077521A



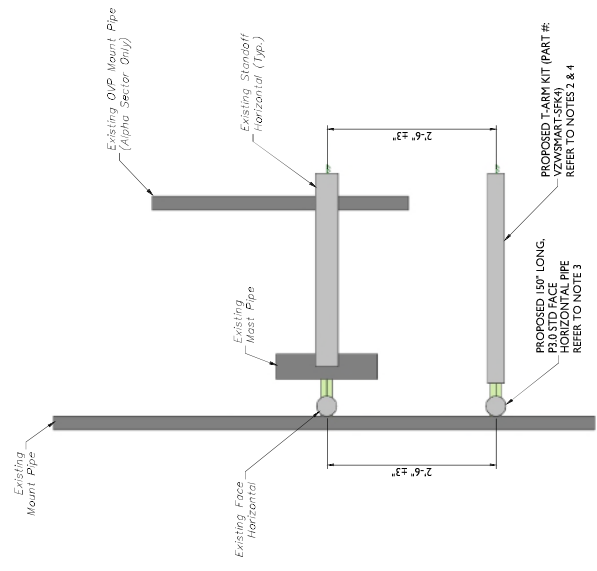
THESE PLANS HAVE BEEN PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT. ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF SUCH PROFESSIONAL PERSON SHALL BE CONSIDERED A PRACTICER OF THIS DOCUMENT.

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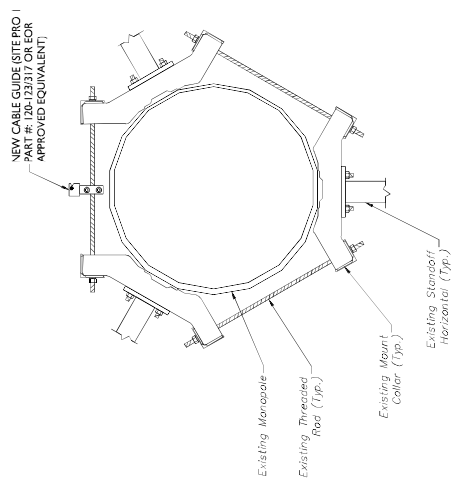
**MODIFICATION DETAILS**

S-5



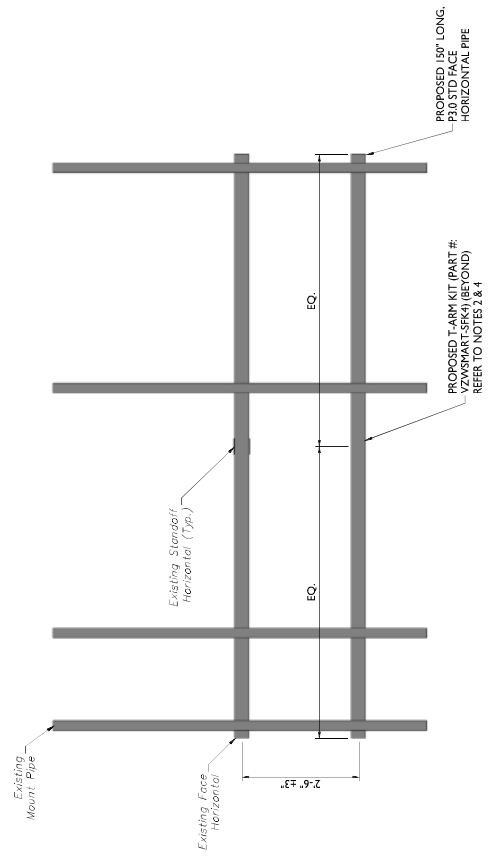
**PROPOSED SIDE ELEVATION (TYP. ALL SECTORS)**  
 SCALE: N.T.S.

2



**PROPOSED CABLE GUIDE THREADED ROD ATTACHMENT - PLAN**  
 SCALE: N.T.S.

3



**PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)**  
 SCALE: N.T.S.

1

- MODIFICATION NOTES:**
- MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
  - CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
  - CONNECT NEW HORIZONTAL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
  - CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT (PART #: VZWSMART-PLK7).

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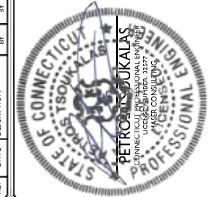
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PROJECT:	AS SHOWN	DATE:	02/27/2021
REV#	DATE	DESCRIPTION	BY
1	02/27/2021	ISSUED FOR CONSTRUCTION	IN
2	02/27/2021	ISSUED FOR CONSTRUCTION	PHS
3	02/27/2021	ISSUED FOR CONSTRUCTION	DK



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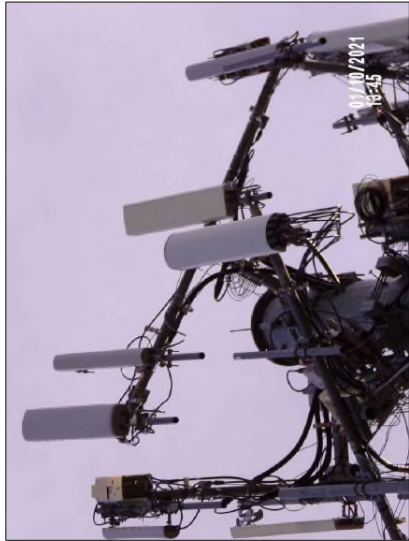
**MOUNT PHOTOS**



MOUNT PHOTO 2



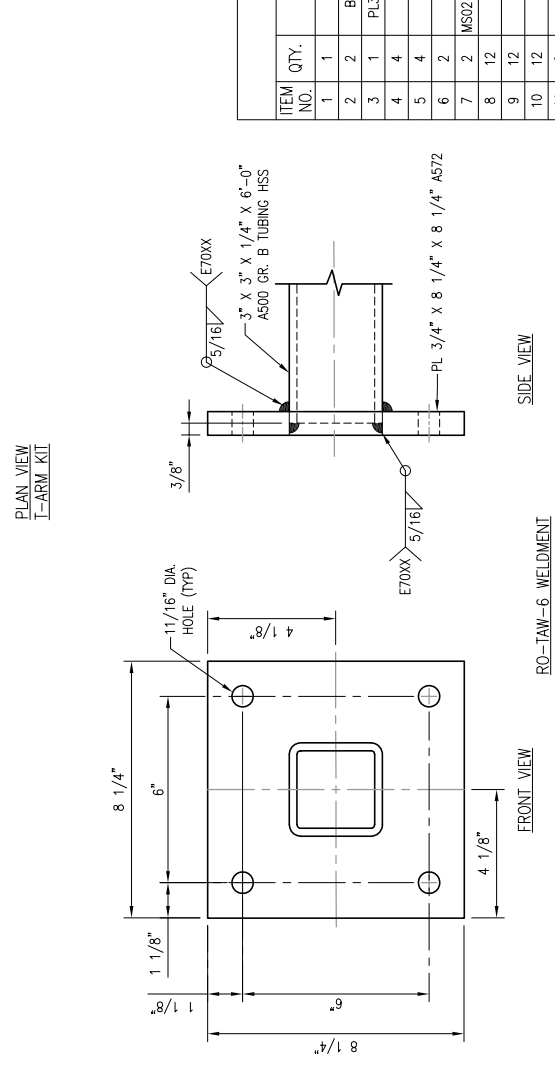
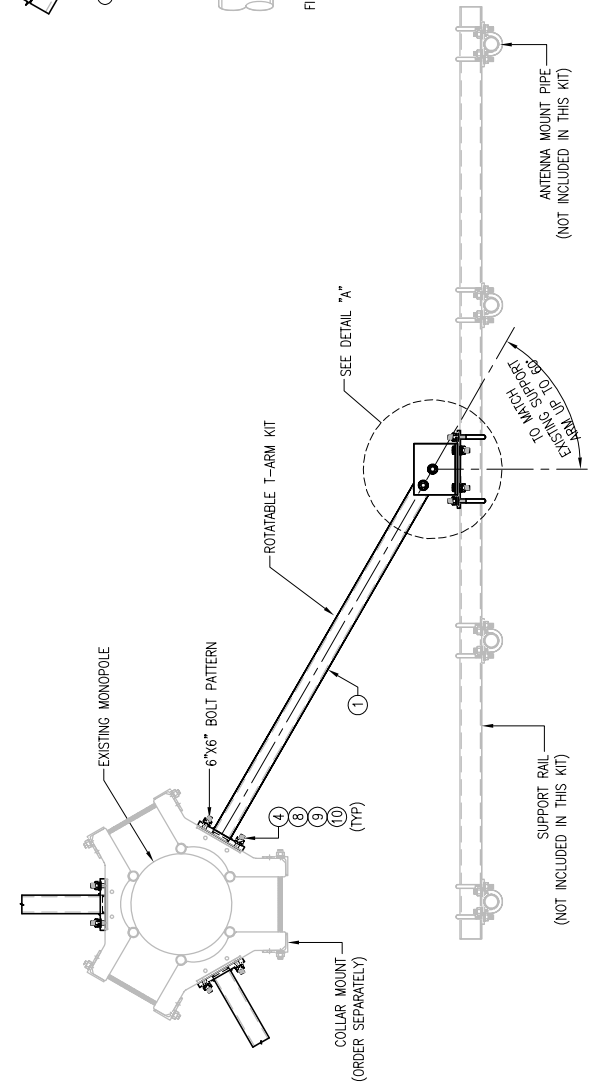
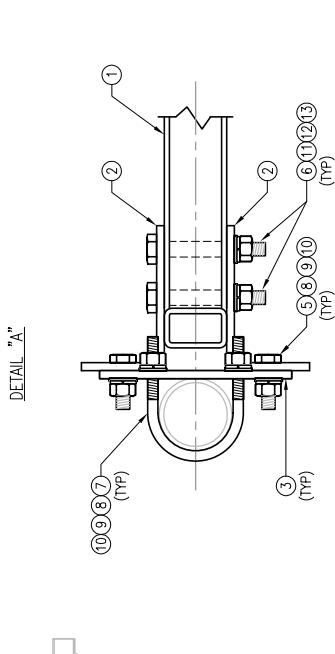
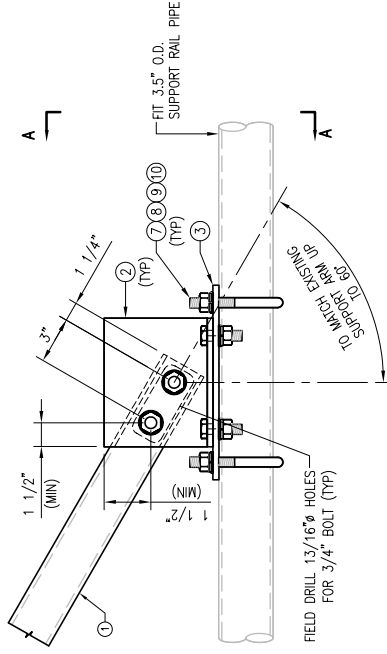
MOUNT PHOTO 4



MOUNT PHOTO 1



MOUNT PHOTO 3



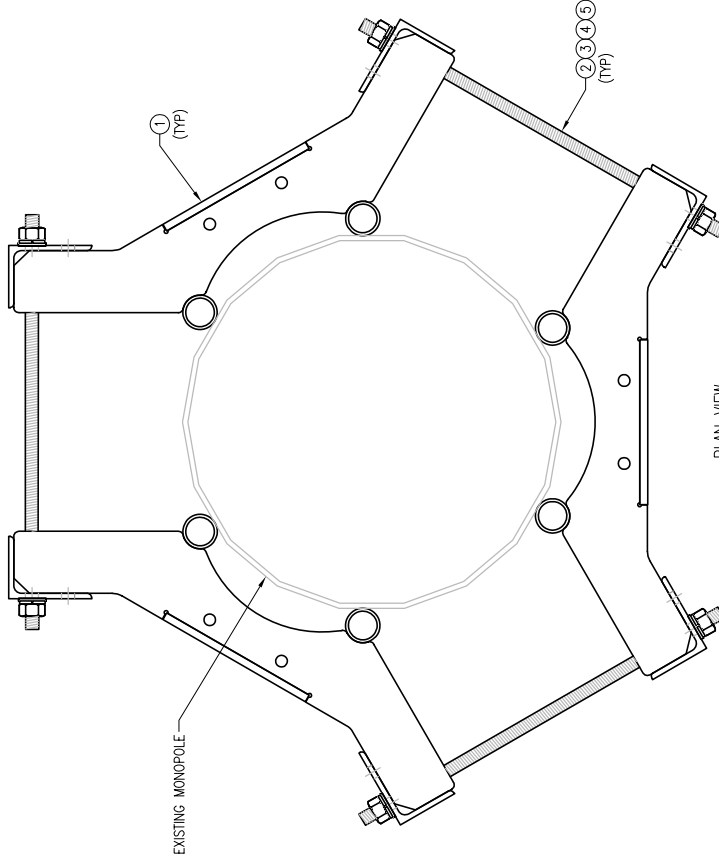
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	RO-TAW-6	T-ARM WELDMENT	SFK4-F1	71
2	2	BR825-94375	PL 3/8" X 8 1/4" X 9 7/16" A36 BEND PLATE	SFK4-F2	17
3	1	PL375-92512025	PL 3/8" X 9 1/4" X 1-0 1/2" A36	SFK4-F3	12
4	4	---	BOLT 5/8" X 2 1/4" A325	---	0
5	4	---	BOLT 5/8" X 2" A325	---	0
6	2	---	BOLT 3/4" X 5 1/4" A325	---	0
7	2	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
8	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
9	12	LW-625	5/8" HDG LOCK WASHER	---	0
10	12	NUT-625	5/8" HDG HEX NUT	---	1
11	2	FW-75	3/4" HDG USS FLAT WASHER	---	0
12	2	LW-75	3/4" HDG LOCK WASHER	---	0
13	2	NUT-75	3/4" HDG HEX NUT	---	0
				GALVANIZED	WT
					106

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

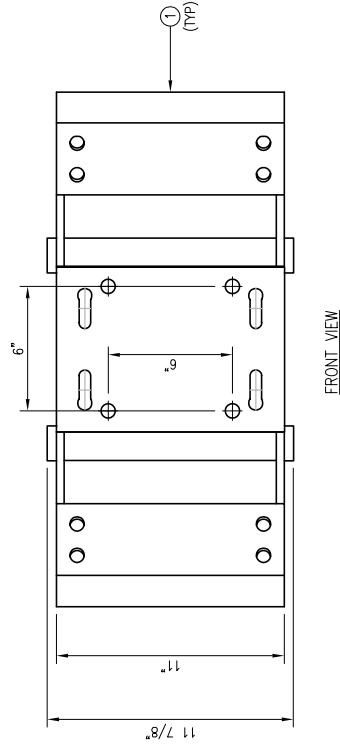
DRAWN BY: BT      CHECKED BY: HMA/KW  
 REV.      DESCRIPTION      BY      DATE  
 1      FIRST ISSUE      BT      05/11/20

SHEET TITLE:  
 VZWSMART-PLK7  
 MONOPOLE COLLAR  
 MOUNT ASSEMBLY

SHEET NUMBER:  
 VZWSMART-PLK7      0



PLAN VIEW  
 MONOPOLE COLLAR MOUNT ASSEMBLY

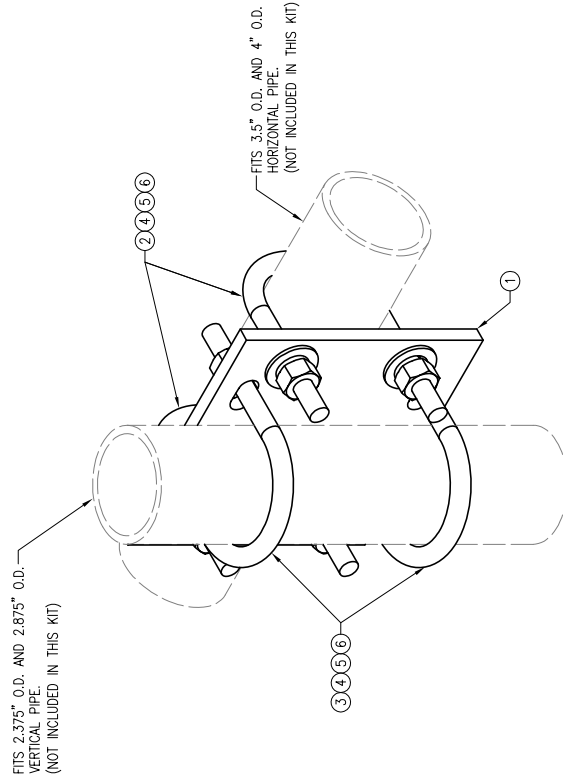
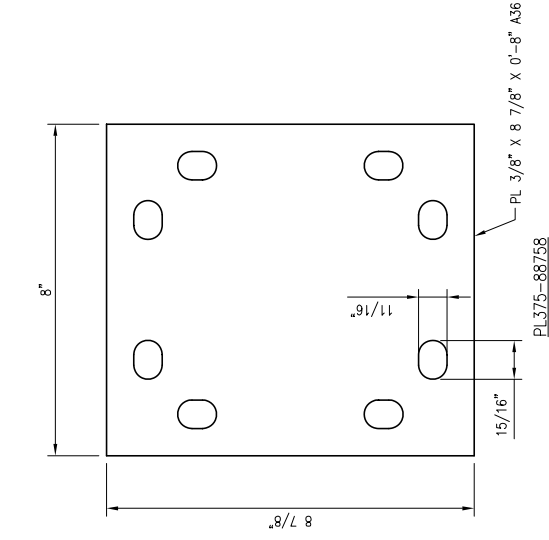


FRONT VIEW

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	---
3	12	FW-625	5/8" HDC USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDC LOCK WASHER	---	0
5	12	NUT-625	5/8" HDC HEX NUT	---	1
				GALVANIZED	WT 150

NOTES:  
 1. FIT 12" TO 45" DIA MONOPOLE.  
 2. HOT-DIPPED GALVANIZED PER ASTM A123.



ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" LW. X 6" LL. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" LW. X 5" LL. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED	WT
					15

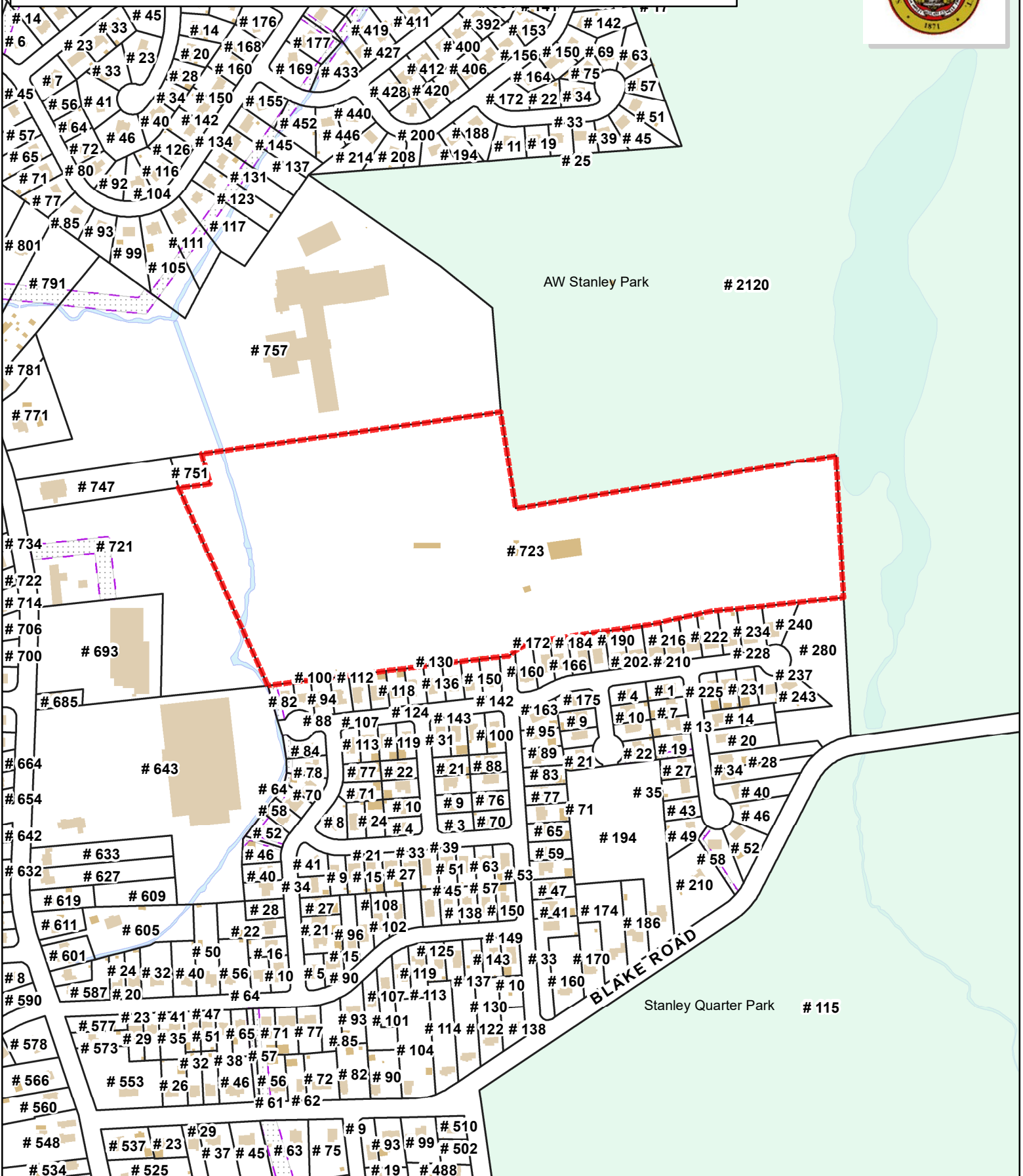
NOTES:  
 1. HOT-DIPPED GALVANIZED PER ASTM A123.

# **ATTACHMENT 5**

# City of New Britain, Connecticut - Assessment Parcel Map

MBL: C3A 1

Address: 723 FARMINGTON AVE



Approximate Scale:

1 inch = 400 feet



**Disclaimer:**

This map is for informational purposes only.  
All information is subject to verification by any user.  
The City of New Britain and its mapping contractors  
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Map Produced April 2020



Property Information

Property Location	723 FARMINGTON AVE
Owner	FALCONS ACADEMIC + ATHLETIC ASSOC INC
Co-Owner	
Mailing Address	201 WASHINGTON ST NEW BRITAIN CT 06051
Land Use	3531 Fratnl Org Lnd
Land Class	C
Zoning Code	T
Census Tract	417500

Neighborhood	103
Acreage	25.69
Utilities	All Public
Lot Setting/Desc	Level,Rolling,Wood
Fire District	
Book / Page	2025/628

Primary Construction Details

Year Built	0
Building Desc.	Fratnl Org Lnd
Building Style	UNKNOWN
Building Grade	
Stories	
Occupancy	
Exterior Walls	
Exterior Walls 2	NA
Roof Style	
Roof Cover	
Interior Walls	
Interior Walls 2	NA
Interior Floors 1	
Interior Floors 2	NA

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	NA
Rec Rm Area	0
Rec Rm Quality	NA
Bsmt Gar	0
Fireplaces	0

Photo



Sketch



(\*Industrial / Commercial Details)

Building Use	Vacant
Building Condition	
Sprinkler %	NA
Heat / AC	NA
Frame Type	NA
Baths / Plumbing	NA
Ceiling / Wall	NA
Rooms / Prtns	NA
Wall Height	NA
First Floor Use	NA
Foundation	





**Valuation Summary** (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Improvements		
Outbuildings	208000	145600
Land	279400	195580
<b>Total</b>	<b>487400</b>	<b>341180</b>

**Sub Areas**

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
<b>Total Area</b>	<b>0</b>	<b>0</b>

**Outbuilding and Extra Features**

Type	Description
Fence-6' Chain	300 L.F.
PreCastConcCel	100 S.F.
PreCastConcCel	360 S.F.


**Sales History**

Owner of Record	Book/ Page	Sale Date	Sale Price
FALCONS ACADEMIC + ATHLETIC ASSOC INC	2025/628	2019-07-29	
NEST 88 POLISH FALCONS ALLIANCE	1412/0329	2002-05-30	0
NEST 88 POLISH FALCONS ALLIANC	0474/0342	1958-12-22 -----	0
NEST 88 POLISH FALCONS	0327/0077	1948-06-14	0
EDWARD SZCZEPANIK	0324/0597	1948-05-21	0
SEBASTIANO & VINCENZA FORMICA	0305/0273	1945-10-09	0
JOSEPHINE BURGIO	0302/0276	1944-10-11	0
MARY FALLETTI &	0295/0251	1943-09-01 -----	0

# **ATTACHMENT 6**



NEW BRITAIN 6  
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	Postmaster, per (name of receiving employee)  <p style="font-size: 2em; text-align: center;">JL</p>		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
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2.	Steven Schiller, City Planner City of New Britain 27 West Main Street New Britain, CT 06051				
3.	Falcons Academic and Athletic Association Inc. 201 Washington Street New Britain, CT 06051				
4.					
5.					
6.					

