

KENNETH C. BALDWIN

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Hartford, CT 06103-3597  
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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  
Firetown Station House  
344 Firetown Road, Simsbury, 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 Town of Simsbury (“Town”) in October 2003. Cellco’s shared use of the tower was approved by the Council in October 2014 (TS-VER-128-140819). A copy of the Town’s original tower approval and Cellco’s EM 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 antenna platform. 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 Simsbury’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 general power density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna platform with certain modifications, can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

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

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



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:

Eric Wellman, First Selectman for the Town of Simsbury  
Michael Glidden, Simsbury Director of Planning and Community Development  
Simsbury Fire District, the Property Owner  
Aleksey Tyurin

# **ATTACHMENT 1**



# Town of Simsbury

933 HOPMEADOW STREET

P.O. BOX 495

SIMSBURY, CONNECTICUT 06070

Office of Community Planning and Development

October 24, 2003

Mr. Kevin Kowalski, Fire Marshal  
Simsbury Fire District  
871 Hopmeadow Street  
Simsbury, CT 06070



REFERENCE: 344 Firetown Road

Dear Mr. Kowalski:

The Simsbury Zoning Commission, at a regular meeting held on October 20, 2003, approved your application to change the size of the foundation for a public safety antenna tower and to reduce the height of a public safety antenna tower on property at 344 Firetown Road.

If you have any questions, please call at your convenience.

Very Truly Yours,

William S. Voelker, AICP  
Director of Community Planning

cc: Department File  
Building Department  
Town Clerk  
Engineering Department

CERTIFIED MAIL NO: 70

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address or so that we can return the card to you. Attach this card to the back of the envelope or on the front if space permits.

1. Article Addressed to:  
Mr. Kevin Kowalski  
Fire Marshal  
Simsbury Fire District  
871 Hopmeadow Street  
Simsbury, CT 06070

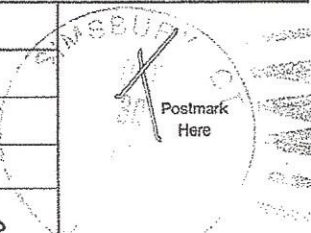
2. Article Number  
(Transfer from service label)

PS Form 3811, August 2001 344

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

## OFFICIAL USE

1u	Postage	\$ .37
	Certified Fee	2.30
	Return Receipt Fee (Endorsement Required)	1.75
	Restricted Delivery Fee (Endorsement Required)	
	<b>Total Postage &amp; Fees</b>	<b>\$ 4.42</b>



Sent To Kevin Kowalski, Fire Marshal  
Street, Apt. No., or PO Box No. Simsbury Fire District  
871 Hopmeadow Street  
City, State, ZIP+4 Simsbury, CT 06070

PS Form 3800, January 2001 See Reverse for Instructions

Telephone (860) 658-3245  
Facsimile (860) 658-3217

www.town.simsbury.ct.us

An Equal Opportunity Employer  
8:30 - 7:00 Monday  
8:30 - 4:30 Tuesday through Friday



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)

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

October 3, 2014

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

RE: **TS-VER-128-140819** – Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 344 Firetown Road, Simsbury, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on October 2, 2014, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures with the following conditions:

- Cellco shall plant native northern white cedar trees in lieu of eastern white pine trees for compound screening;
- Cellco's erosion and sedimentation controls shall be installed and maintained in accordance with the *2002 Connecticut Guidelines on Soil and Erosion Control*;
- Cellco shall implement the Wetland Protection Program;
- Any deviation from the proposed installation as specified in the original tower share request and supporting materials with the Council shall render this decision invalid;
- Any material changes to the proposed installation as specified in the original tower share request and supporting materials filed with the Council shall require an explicit request for modification to the Council pursuant to Connecticut General Statutes § 16-50aa, including all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65;
- Not less than 45 days after completion of the proposed installation, the Council shall be notified in writing that the installation has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by Cellco shall be removed within 60 days of the date the antenna ceased to function.
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.



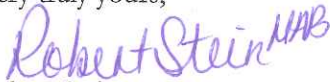
This decision is under the exclusive jurisdiction of the Council and applies only to this request for tower sharing dated August 19, 2014. This facility has been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower. Any deviation from the approved tower sharing request is enforceable under the provisions of Connecticut General Statutes § 16-50u.

The proposed shared use is to be implemented as specified in your letter dated August 19, 2014, including the placement of all necessary equipment and shelters within the tower compound.

Please be advised that the validity of this action shall expire one year from the date of this letter.

Thank you for your attention and cooperation.

Very truly yours,



Robert Stein  
Chairman

RS/MP/lm

- c: The Honorable Mary A. Glassman, First Selectman, Town of Simsbury  
Hiram Peck, Director of Community Planning and Development, Town of Simsbury  
Simsbury Fire Department

# **ATTACHMENT 2**





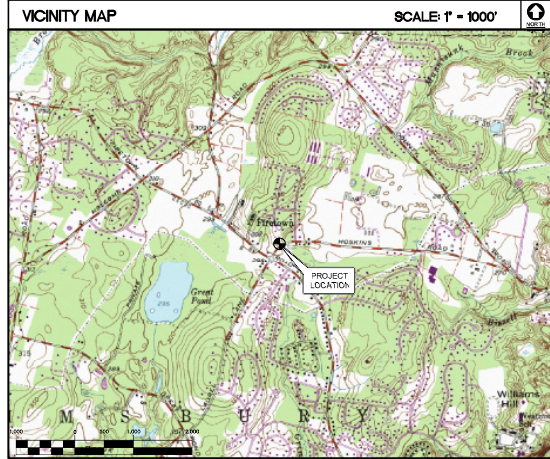
# WIRELESS COMMUNICATIONS FACILITY UPGRADE

## SIMSBURY NW CT

### 344 FIRETOWN ROAD, SIMSBURY, CT 06070

GENERAL NOTES	
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE IBC/IBC-222 REVISION "C" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2017 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE, AND LOCAL CODES.	11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
2. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.	12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.	13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO "EXTRA" WILL BE ALLOWED FOR MISSED ITEMS.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.	14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.	15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, AND ALL TRADES AS APPLICABLE. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.	16. THE 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.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.	17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.	18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB- CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.	19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.	20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.

SITE DIRECTIONS	
<b>FROM:</b> 20 ALEXANDER DRIVE WALLINGFORD, CONNECTICUT	<b>TO:</b> 344 FIRETOWN RD, SIMSBURY, CT 06070
1. START OUT GOING NORTH ON ALEXANDER DR TOWARD BARNES INDUSTRIAL RD.	0.18 MI
2. TURN RIGHT ONTO BARNES INDUSTRIAL RD.	0.11 MI
3. TAKE THE 1ST RIGHT ONTO CT-68.	1.92 MI
4. MERGE ONTO I-91 N VIA THE RAMP ON THE LEFT TOWARD HARTFORD.	27.53 MI
5. TAKE THE CT-178/PARK AVE EXIT, EXIT 36, TOWARD BLOOMFIELD.	0.23 MI
6. TURN LEFT ONTO PARK AVE/CT-178. CONTINUE TO FOLLOW CT-178.	1.98 MI
7. TURN RIGHT ONTO BLUE HILLS AVE/CT-187. CONTINUE TO FOLLOW CT-187.	4.74 MI
8. MERGE ONTO STATE HIGHWAY 189/CT-189 N TOWARD GRANBY/TARIFFVILLE.	1.61 MI
9. TURN LEFT ONTO ELM ST/CT-315.	0.48 MI
10. TURN RIGHT ONTO HARTFORD RD/CT-315.	1.43 MI
11. TURN RIGHT ONTO HOPMEADOW ST/US-202 E/CT-10.	0.16 MI
12. TURN LEFT ONTO HOSKINS RD.	0.66 MI
13. TURN SLIGHT LEFT TO STAY ON HOSKINS RD.	1.23 MI
14. TURN RIGHT ONTO FIRETOWN RD.	0.01 MI
15. 344 FIRETOWN RD, HARTFORD, CT, 06070-1640, 344 FIRETOWN RD.	



PROJECT SUMMARY	
1. THE PROPOSED UPGRADE SCOPE OF WORK AT THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY GENERALLY INCLUDES THE FOLLOWING:	
<b>A. AT THE EXISTING MONOPOLE MOUNTED ANTENNA SECTORS:</b>	
<ul style="list-style-type: none"> <li>REMOVE (3) EXISTING ANDREW HBX-6517DS-A1M ANTENNAS.</li> <li>REMOVE (6) EXISTING ANDREW LNX-6514DS-A1M ANTENNAS.</li> <li>REMOVE (6) EXISTING NOKIA RRUu.</li> <li>RETAIN (2) EXISTING HYBRID CABLES.</li> <li>RETAIN (2) EXISTING OVP BOXES.</li> <li>INSTALL (6) NEW COMMSCOPE NHH-65B-R2B ANTENNAS ON (3) NEW BASINAT-SBS-1-2 MOUNTS.</li> <li>INSTALL (3) NEW SAMSUNG BS/B13 RRH-BRD4C &amp; (3) NEW SAMSUNG BS/DBSA RRH-BRD4C.</li> <li>INSTALL (2) NEW OVP 6 BOXES</li> <li>INSTALL (2) NEW 6X12 LI HYBRIFLEX.</li> </ul>	

PROJECT INFORMATION	
<b>SITE NAME:</b>	SIMSBUY NW CT
<b>SITE ADDRESS:</b>	344 FIRETOWN RD, SIMSBURY, CT 06070
<b>LESSEE/TENANT:</b>	CELCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
<b>CONTACT PERSON:</b>	WALTER CHARCZNSKI (CONSTRUCTION MANAGER) VERIZON WIRELESS (860) 306-1806
<b>ENGINEER:</b>	CENITEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT 06405 (203) 488-0580
<b>PROJECT COORDINATES:</b>	LATITUDE: 41°-54'-11.4698"N LONGITUDE: 72°-49'-16.8168"W  (COORDINATES REFERENCED FROM VERIZON WIRELESS RPTS DATED 10/30/2020)

SHEET INDEX		
SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
N-1	NOTES AND SPECIFICATIONS	0
B-1	RF BILL OF MATERIALS	0
C-1	COMPOUND PLAN AND ELEVATION	0
C-2	ANTENNA SECTOR CONFIGURATION DETAILS	0
C-3	RF DETAILS	0
E-1	ELECTRICAL DETAILS AND SPECIFICATIONS	0

CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION

CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW

DATE: 06/05/21

SCALE: AS NOTED

JOB NO. 21007.08

TITLE SHEET

SIMSBURY NW CT

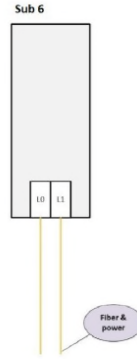
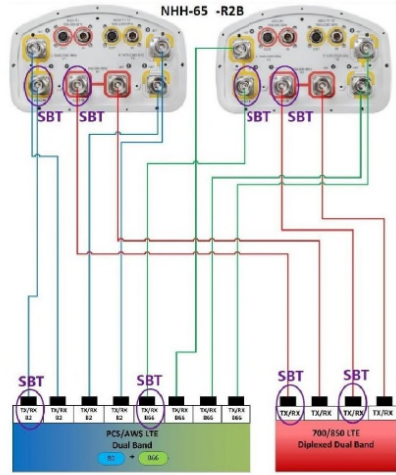
344 FIRETOWN ROAD,  
SIMSBURY, CT 06070

T-1

Sheet No. 1 of 1







- NOTES:**
1. INFORMATION SHOWN HEREIN IS FOR USE BY VERIZON WIRELESS EQUIPMENT OPERATIONS.
  2. THIS B.O.M. DRAWING IS BASED ON FACILITY UPGRADE DESIGN DRAWINGS PREPARED BY CENTEK ENGINEERING (REV.0 DATED: 07.01.21), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 10.30.20).

BILL OF MATERIALS		
TECHNOLOGY	QUANTITY	ANTENNA
LTE 700	6	COMMSCOPE ANTENNA MODEL: NHH-65B-R2B
LTE 850		
LTE PCS 1900		
LTE AWS 2100		
5G	3	SAMSUNG ANTENNA MODEL: MT6407-77A

CABLES	QUANTITY	LENGTH EA	COMMENTS
HYBRID CABLE	2	±145 FT EA 6X12 U HYBRID CABLE	

RADIOS	QUANTITY	COMMENTS
LTE 700	3	SAMSUNG MODEL: B5/B13 RRH-BRD4C
LTE 850		
LTE PCS 1900		
LTE AWS 2100	3	SAMSUNG MODEL: B2/B66A RRH-BRD49
5G	3	INTEGRATED INTO MT6407-77A ANTENNA

DIPLEXERS	QUANTITY	COMMENTS
-	0	-

OVP BOXES	QUANTITY	COMMENTS
OVP	2	OVP-6

ANTENNA MOUNT	QUANTITY	COMMENTS
SIDE-BY-SIDE MOUNTING KIT	3	COMMSCOPE MODEL: BASMT-SBS-1-2

CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION  
 CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW  
 DRAWING BY: [Signature]  
 DATE: [Date]  
 REV: [Revision]

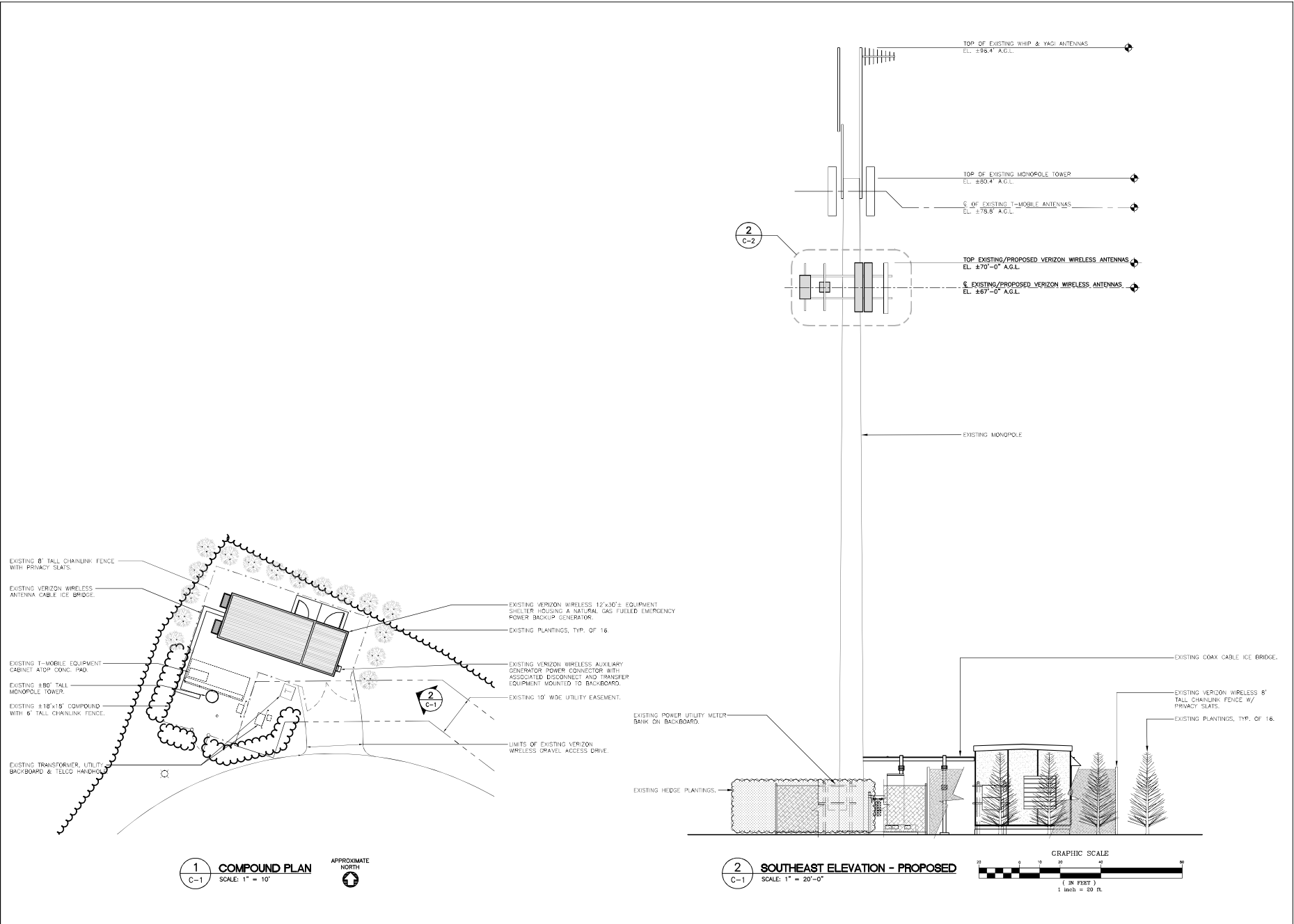


**CENTEK** Engineering  
 Centek on Solutions  
 (203) 468-0360  
 (203) 468-8387 Fax  
 65-2 North Branch Road  
 Meriden, CT 06465  
 www.CentekEng.com

**Cellco Partnership d/b/a Verizon Wireless**  
**SIMSBURY NW CT**  
 344 FIRETOWN ROAD,  
 SIMSBURY, CT 06070

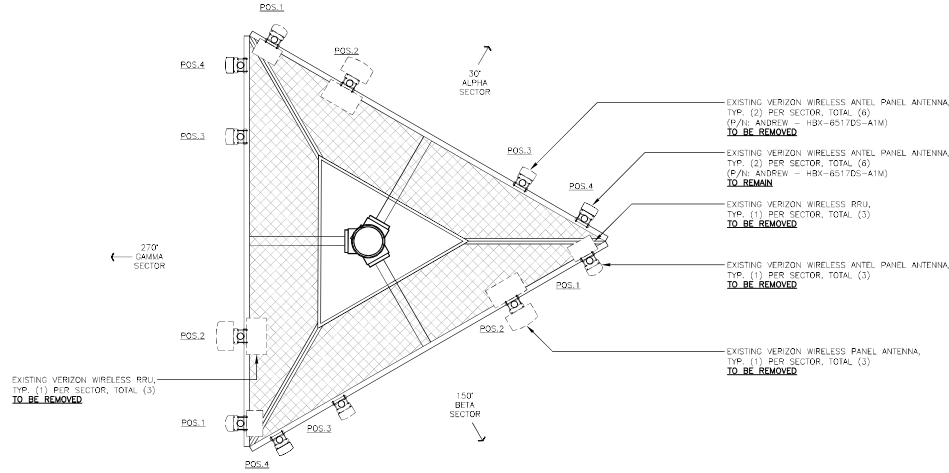
DATE: 06/09/21  
 SCALE: AS NOTED  
 JOB NO. 21007.08

RF BILL OF MATERIALS



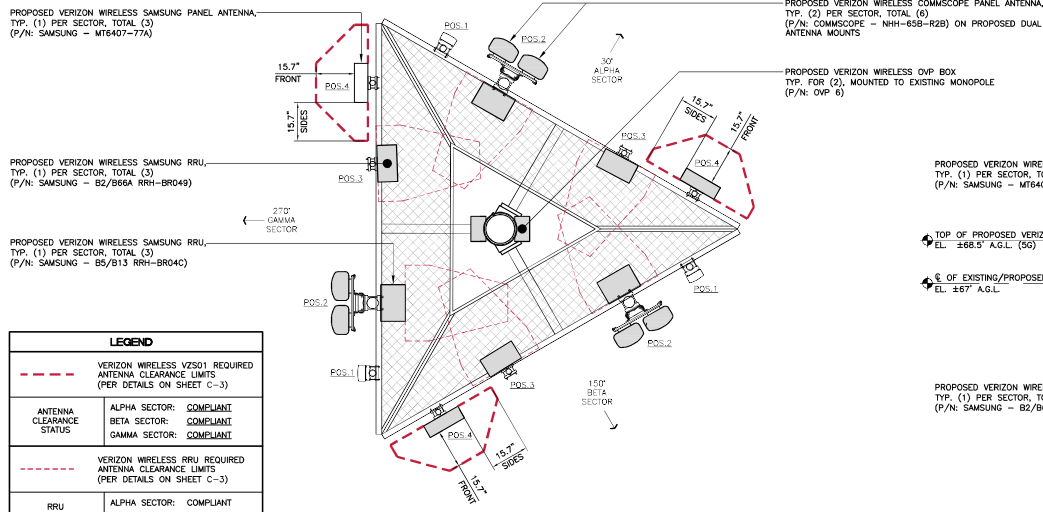
PROFESSIONAL ENGINEER SEAL	
DATE: 06/05/21	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
SCALE: AS NOTED	CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW
JOB NO. 210077.08	
<b>Centek Engineering</b> <small>Contractors &amp; Builders</small> (203) 466-4360 (203) 466-8387 Fax 65-2 North Branch Road Meriden, CT 06460 www.CentekEng.com	
<b>Cellco Partnership d/b/a Verizon Wireless</b> <b>SIMSBURY NW CT</b> 344 FIRETOWN ROAD, SIMSBURY, CT 06070	
<b>COMPOUND PLAN AND ELEVATION</b>	
<b>C-1</b>	
Sheet No. 4	of 1

**EXISTING ANTENNA CONFIGURATIONS**



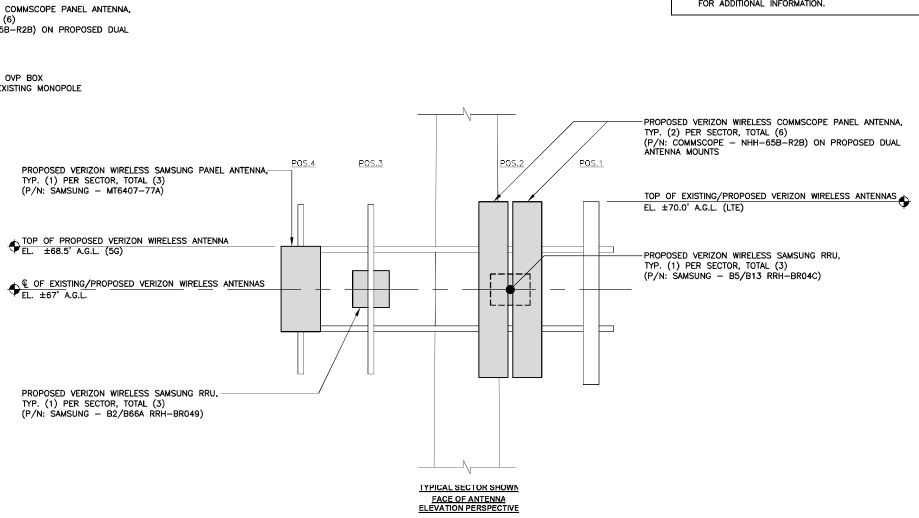
**1 EXISTING SECTOR CONFIGURATION PLAN**  
SCALE: 1/2" = 1'-0"  
APPROXIMATE HEIGHT

**PROPOSED ANTENNA CONFIGURATIONS**



LEGEND	
--- VERIZON WIRELESS VZS01 REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
ANTENNA CLEARANCE STATUS	ALPHA SECTOR: COMPLIANT BETA SECTOR: COMPLIANT GAMMA SECTOR: COMPLIANT
--- VERIZON WIRELESS RRU REQUIRED ANTENNA CLEARANCE LIMITS (PER DETAILS ON SHEET C-3)	
RRU CLEARANCE STATUS	ALPHA SECTOR: COMPLIANT BETA SECTOR: COMPLIANT GAMMA SECTOR: COMPLIANT

**1A PROPOSED SECTOR CONFIGURATION PLAN**  
SCALE: 1/2" = 1'-0"  
APPROXIMATE HEIGHT



**2 PROPOSED SECTOR CONFIGURATION ELEVATION**  
SCALE: 1/2" = 1'-0"

**ANTENNA MOUNT ANALYSIS NOTES:**  
1. REFER TO PASSING VERIZON WIRELESS MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING CONNECTICUT DATED 05/27/2021 FOR ADDITIONAL INFORMATION.

PROFESSIONAL ENGINEER SEAL

**verizon**

**CENTEK** Engineering  
Construction Solutions  
10031 866-4560  
10031 866-8587 Fax  
652 North Iron Road  
Meriden, CT 06461  
www.CentekEng.com

**Cellco Partnership d/b/a Verizon Wireless**  
**SIMSBURY NW CT**  
344 FIRETOWN ROAD,  
SIMSBURY, CT 06070

DATE: 06/09/21  
SCALE: AS NOTED  
JOB NO. 21007.08

ANTENNA SECTOR CONFIGURATION DETAILS

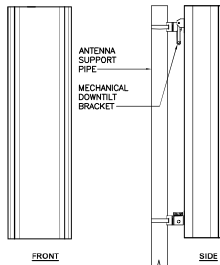
**C-2**  
Sheet No. 2 of 1



ANTENNA FRONT

SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: MT607-77A	35.1" x 16.1" x 5.5" (NOT TO EXCEED)	87 LBS (NOT TO EXCEED)
CLEARANCES AND SERVICE AREA		
TOP:	31.5"	HORIZONTAL DISTANCE: 31.5" (ANT. TO ANT.)
FRONT, SIDES & BOTTOM:	15.7"	VERTICAL DISTANCE: 63.0" (ANT. TO ANT.)
NOTES: 1. THIS ANTENNA HAS ITS OWN BUILT-IN RRH.		

1 SECTOR ANTENNA DETAIL  
C-3 NOT TO SCALE



FRONT

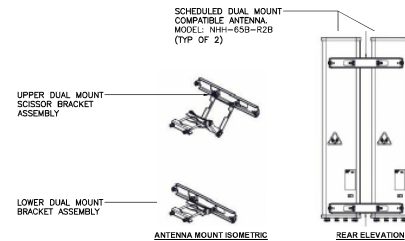
SIDE



NHH-65G-R2B (BOTTOM VIEW)

ALPHA/BETA/GAMMA ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT (WITH MOUNTING KIT)
MAKE: COMSCOPE MODEL: NHH-65B-R2B	72.0" L x 11.9" W x 7.0" D	43.7 LBS.

2 SECTOR ANTENNA DETAIL  
C-3 NOT TO SCALE



SCHEDULED DUAL MOUNT COMPATIBLE ANTENNA MODEL: NHH-65B-R2B (TYP. OF 2)

UPPER DUAL MOUNT SCISSOR BRACKET ASSEMBLY

LOWER DUAL MOUNT SCISSOR BRACKET ASSEMBLY

ANTENNA MOUNT ISOMETRIC

REAR ELEVATION

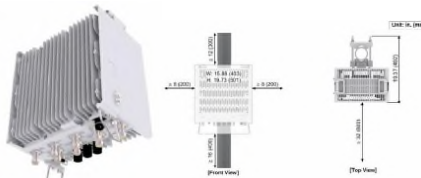
DUAL ANTENNA MOUNTING KIT	
EQUIPMENT	DESCRIPTION
MOUNT MAKE: COMSCOPE MODEL: BASMNT-SBS-1-2	<ul style="list-style-type: none"> <li>SIDE-BY-SIDE MOUNTING KIT, ACCOMMODATES (2) COMPATIBLE ANTENNAS</li> <li>ACCOMMODATES MAST DIAMETERS FROM 2.375" TO 4.8" (O.D.)</li> </ul>

3 DUAL ANTENNA MOUNT DETAIL  
C-3 NOT TO SCALE



OVP BOX		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: RFS MODEL: DB-B1-6C-12AB-0Z	29.0" H x 15.7" W x 10.3" D	32 LBS.
NOTES: 1. CONTRACTOR TO CONFIRM OVP BOX MAKE/MODEL AND QUANTITY WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.		

4 PROPOSED OVER-VOLTAGE PROTECTION BOX  
C-3 NOT TO SCALE

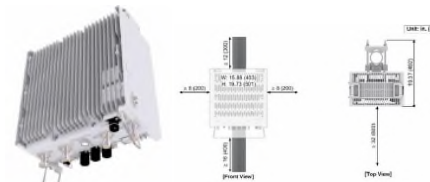


RRH ISOMETRIC

RRH CLEARANCES

DUAL BAND RRU (REMOTE RADIO UNIT)				
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT	
MAKE: SAMSUNG MODEL: B2/B66A RRH-BR049 (RRV011-D1A)	B2: PCS (1900 MHz) B66: AWS (2100 MHz)	15.0" H x 15.0" W x 10.0" D	84.4 LBS.	
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.				

5 DUAL-BAND AWS/PCS RADIO UNIT DETAIL  
C-3 NOT TO SCALE



RRH ISOMETRIC

RRH CLEARANCES

DUAL BAND RRU (REMOTE RADIO UNIT)				
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT	
MAKE: SAMSUNG MODEL: B5/B13 RRH-BR04C (RRV011-D2A)	B5: 850 MHz B13: 700 MHz	15.0" H x 15.0" W x 8.1" D	70.3 LBS.	
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.				

6 DUAL-BAND 700/850 MHz RADIO UNIT DETAIL  
C-3 NOT TO SCALE

DATE:	06/05/21
SCALE:	AS NOTED
JOB NO.:	21007.08
RF DETAILS	
C-3	of 1



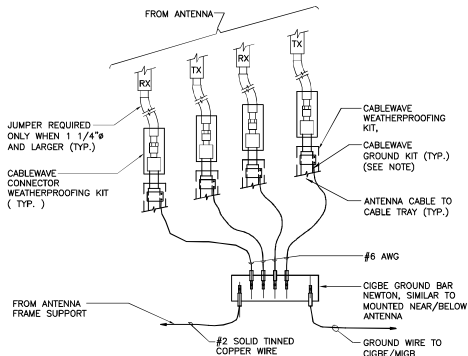
**CENTEK** Engineering  
 2031 464-0560  
 2031 468-8587 Fax  
 62 North Meriden Road  
 Meriden, CT 06460  
 www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless  
**SIMSBURY NW CT**  
 344 FIRETOWN ROAD,  
 SIMSBURY, CT 06070

DATE:	06/05/21
SCALE:	AS NOTED
JOB NO.:	21007.08

RF DETAILS

C-3  
 Sheet No. 1 of 1

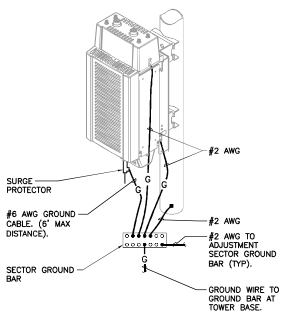


**NOTES**

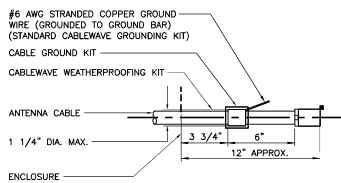
- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

**1 CONNECTION OF GROUND WIRES TO GROUND BAR**  
E-1 NOT TO SCALE

- EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:
- AT TOP OF THE CABINET
  - AT RIGHT SIDE OF THE CABINET.



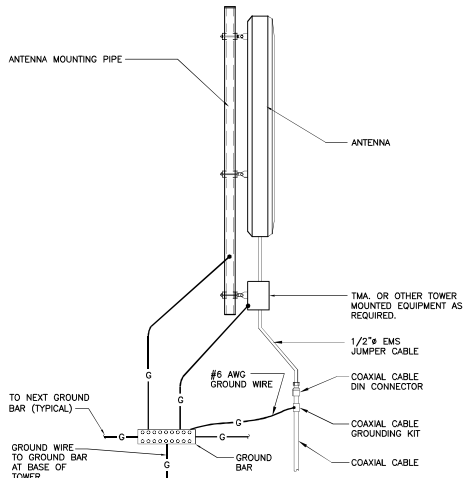
**2 RRH POLE MOUNT GROUNDING**  
E-1 NOT TO SCALE



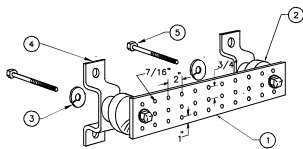
**NOTES**

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

**3 ANTENNA CABLE GROUNDING DETAIL**  
E-1 NOT TO SCALE



**4 TYPICAL ANTENNA GROUNDING DETAIL**  
E-1 NOT TO SCALE



**NOTES**

- TINNED COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4.
- 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056.
- 5/8-11 x 1" STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS.

**5 GROUND BAR DETAIL**  
E-1 NOT TO SCALE

**ELECTRICAL SPECIFICATIONS**

**SECTION 16010**

1.01. SCOPE OF WORK

A. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE (MAKE READY FOR OPERATION) ALL THE ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. CELLULAR GROUNDING SYSTEMS CONSISTING OF ANTENNA GROUNDING, GROUND BARS, ETC.

1.02. GENERAL REQUIREMENTS

A. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES THAT MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS THAT MAY BE REQUIRED BY THE LOCAL AUTHORITY.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.

E. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.

F. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.

G. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.

H. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE (1) WEEK PRIOR TO FINAL PUNCH LIST.

I. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

J. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.

K. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.

L. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH OWNER'S SPECIFICATIONS, AND REQUIREMENTS OF ALL LOCAL AUTHORITIES HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPROPRIATE INDIVIDUALS TO OBTAIN ALL SUCH SPECIFICATIONS AND REQUIREMENTS. NOTHING CONTAINED IN, OR OMITTED FROM, THESE DOCUMENTS SHALL RELIEVE CONTRACTOR FROM THIS OBLIGATION.

**SECTION 16450**

1.01. GROUNDING

A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.

B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.

C. EQUIPMENT GROUNDING CONDUCTOR:

1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122.

2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE #12 AWG COPPER.

D. CELLULAR GROUNDING SYSTEM:

PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:

- GROUND BARS
- ANTENNA GROUND CONNECTIONS AND PLATES.

E. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY N.E.C., MFG. SPECIFICATIONS, AND OWNER'S SPECIFICATIONS.

CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION  
CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW

DATE: 06/09/21  
SCALE: AS NOTED  
JOB NO. 21007.08

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK Engineering  
Contractors Inc. LLC  
02031 864-9360  
02031 868-8387 Fax  
65-2 North Ironwood Road  
Hartford, CT 06185  
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless  
**SIMSBURY NW CT**  
344 FIRETOWN ROAD,  
SIMSBURY, CT 06070

DATE: 06/09/21  
SCALE: AS NOTED  
JOB NO. 21007.08

ELECTRICAL  
DETAILS AND  
SPECIFICATIONS

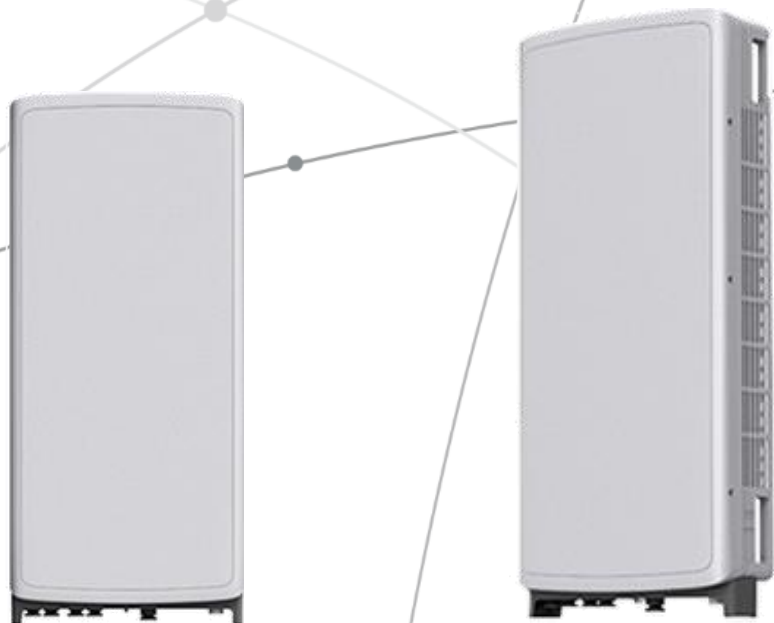
**E-1**  
Sheet No. 1 of 1

## **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



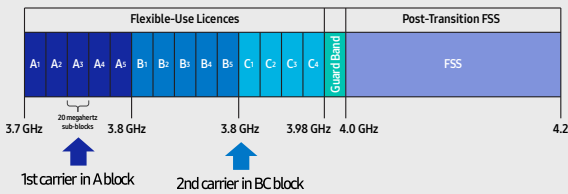
# Points of Differentiation

## 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

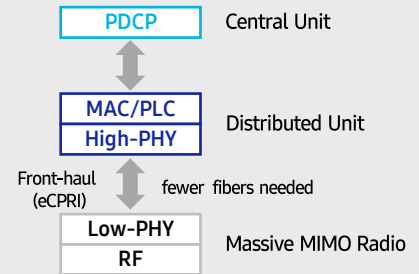
C-Band spectrum supported by Massive MIMO Radio



## 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.

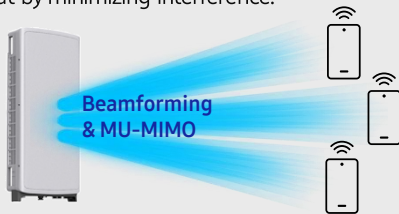


## Enhanced Performance

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.

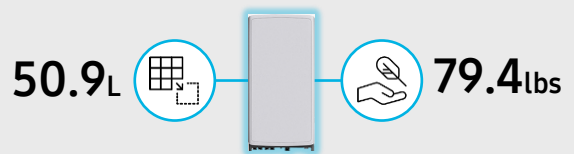
Furthermore, as C-Band massive MIMO Radio supports MU-MIMO (Multi-user MIMO), it enables to increase user throughput by minimizing interference.



## 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.

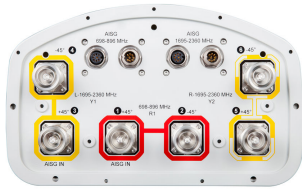
129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

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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

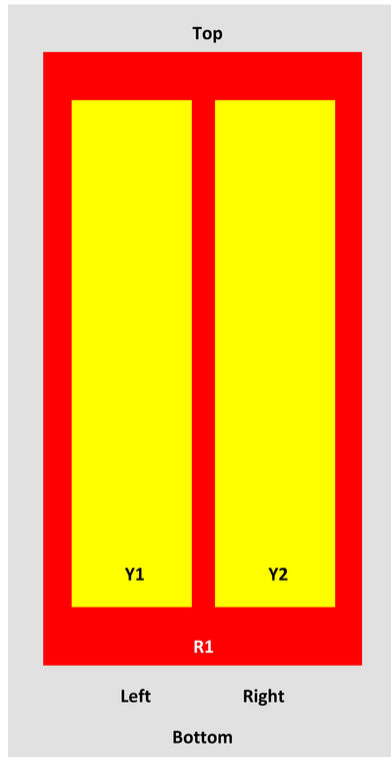
## Dimensions

<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

---

**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: Simsbury NW</b>								
<b>Tower Height: Verizon @ 67ft</b>								
CARRIER	# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total
*T-Mobile	2	1634	77	1950	0.2331	1.0000	2.33%	
*T-Mobile	2	817	77	1950	0.1166	1.0000	1.17%	
*T-Mobile	1	669	77	700	0.0477	0.4667	1.02%	
Simsbury FD							0.65%	
<b>VZW 700</b>	<b>4</b>	<b>641</b>	<b>67</b>	<b>0.0206</b>	<b>751</b>	<b>0.5007</b>	<b>4.10%</b>	
<b>VZW Cellular</b>	<b>4</b>	<b>700</b>	<b>67</b>	<b>0.0224</b>	<b>869</b>	<b>0.5793</b>	<b>3.87%</b>	
<b>VZW PCS</b>	<b>4</b>	<b>1390</b>	<b>67</b>	<b>0.0445</b>	<b>1975</b>	<b>1.0000</b>	<b>4.45%</b>	
<b>VZW AWS</b>	<b>4</b>	<b>1574</b>	<b>67</b>	<b>0.0504</b>	<b>2120</b>	<b>1.0000</b>	<b>5.04%</b>	
<b>VZW CBAND</b>	<b>4</b>	<b>6531</b>	<b>67</b>	<b>0.2093</b>	<b>3730.08</b>	<b>1.0000</b>	<b>20.93%</b>	
								<b>43.57%</b>
* Source: Siting Council								



# **ATTACHMENT 4**

**Structural Analysis Report**

*80-ft Existing Summit Monopole*

*Proposed Verizon Wireless  
Antenna Upgrade*

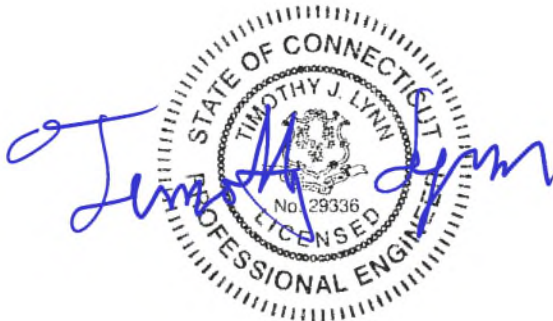
*Verizon Site Ref: Simsbury NW*

*344 Firetown Road  
Simsbury, CT*

*Centek Project No. 21007.08*

*Date: June 11, 2021*

*Max Stress Ratio = 79%*



**Prepared for:**  
Verizon Wireless  
20 Alexander Drive  
Wallingford, CT 06492

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- ANTENNA AND APPURTENANCE SUMMARY
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## Introduction

The purpose of this report is to summarize the results of the non-linear, P- $\Delta$  structural analysis of the antenna upgrade proposed by Verizon on the existing monopole (tower) located in Simsbury, Connecticut.

The host tower is a 80-ft tall, two-section, eighteen sided, tapered monopole, originally designed by Paul J. Ford and Company and manufactured by PennSummit Tubular, LLC job no; 29204-0034 dated February 16, 2004. The tower geometry, structure member sizes and foundation system information were obtained from the aforementioned PennSummit design documents.

Antenna and appurtenance information were obtained a previous structural analysis report prepared by Destek Engineering; job no;.1775015 dated March 17, 2017 and a Verizon RF data sheet.

The tower consists of two (2) tapered vertical sections consisting of A607-65 pole sections. The vertical tower sections are slip joint connected. The diameter of the pole (flat-flat) is 22.00-in at the top and 33.47-in at the base.

## Antenna and Appurtenance Summary

The existing, proposed and future loads considered in this analysis consist of the following:

- **UNKNOWN (EXISTING):**  
Antennas: One (1) 8-ft Omni-directional whip, one (1) 2-ft dish and one (1) broadcast antenna pipe mounted to the top of the tower.  
Coax Cables: One (1) 7/8"  $\varnothing$  coax cable running on the inside of the existing tower.
- **T-MOBILE (EXISTING):**  
Antennas: Three (3) Andrew LNX-6515DS panel antennas, three (3) RFS APX16DWV-16DWVS-E-A20 panel antennas and three (3) 10"x8"x3" TMAs mounted on a low profile platform with a RAD center elevation of 77-ft above grade.  
Coax Cables: Twelve (12) 7/8"  $\varnothing$  coax cables running on the inside of the existing tower.
- **VERIZON (EXISTING TO REMAIN):**  
Antennas: Three (3) Andrew HBX-6517DS panel antennas and two (2) main distribution boxes mounted on a low profile platform with a RAD center elevation of 67-ft above grade.  
Cables: Two (2) 1-5/8" dia. Hybriflex Fiber feeder cables running on the inside of the existing tower.
- **VERIZON (EXISTING TO REMOVE):**  
Antennas: Six (6) Andrew LNX-6514DS panel antennas, three (3) Andrew HBX-6517DS panel antennas, three (3) Alcatel-Lucent RRH2x40-07-U Remote Radio Heads, three (3) Alcatel-Lucent RRH2x40-AWS Remote Radio Heads and three (3) Alcatel-Lucent RRH2x40-PCS Remote Radio Heads mounted on a low profile platform with a RAD center elevation of 67-ft above grade.

- **VERIZON (PROPOSED):**  
**Antennas: Six (6) Commscope NHH-65B-R2B panel antennas, three (3) Samsung MT6407-77A panel antennas, three (3) Samsung B2/B66A remote radio heads and three (3) Samsung B5/B13 remote radio heads mounted on a low profile platform with a RAD center elevation of 67-ft above grade.**  
**Mount Modification: Install one (1) handrail kit per the mount analysis report prepared by Maser dated May 27, 2021.**

### Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents or reinforcement drawings.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All coax cables to be installed as indicated in this report.

## A n a l y s i s

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower, and the model assumes that the tower members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (3-second gust) with no ice and the applicable wind and ice combination to determine stresses in members as per guidelines of TIA-222-G-2005 entitled “Structural Standard for Antenna Support Structures and Antennas”, the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Load and Resistance Factor Design (LRFD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix N of the CSBC<sup>1</sup> and the wind speed data available in the TIA-222-G-2005 Standard.

## T o w e r L o a d i n g

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-G-2005, gravity loads of the tower structure and its components, and the application of 1.00” radial ice on the tower structure and its components.

Basic Wind Speed:	Simsbury; $v = 101$ mph (Vasd – Risk Cat III)	<i>[Appendix N of the 2018 CT Building Code]</i>
Load Cases:	<u>Load Case 1</u> ; 101 mph wind speed w/ no ice plus gravity load – used in calculation of tower stresses and rotation.	<i>[Appendix N of the 2018 CT Building Code]</i>
	<u>Load Case 2</u> ; 50 mph wind speed w/ 1.00” radial ice plus gravity load – used in calculation of tower stresses.	<i>[Annex B of TIA-222-G-2005]</i>

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<sup>1</sup> The 2015 International Building Code as amended by the 2018 Connecticut State Building Code (CSBC).

## Tower Capacity

Tower stresses were calculated utilizing the structural analysis software tnxTower. Allowable stresses were determined based on Table 4-8 of the TIA code.

- Calculated stresses were found to be within allowable limits.

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Pole Shaft (L2)	0'-41.5'	78.6%	<b>PASS</b>

## Foundation and Anchors

The existing foundation consists of a one (1) 5-ft square x 3.5-ft tall pier on a 17-ft square x 3.0-ft thick reinforced concrete mat. The existing foundation properties were obtained from the aforementioned design documents. The base of the tower is connected to the foundation by means of (8) 2.25"Ø, ASTM A615-75 anchor bolts embedded approximately 6-ft into the concrete foundation structure.

- The tower base reactions developed from the governing Load Case were used in the verification of the foundation and its anchors:

Location	Vector	Proposed Reactions
Base	Shear	15 kips
	Compression	14 kips
	Moment	955 kip-ft

- The foundation was found to be within allowable limits.

Foundation	Design Limit	TIA-222-G Section 9.4 FS <sup>(1)</sup>	Proposed Loading (FS) <sup>(1)</sup>	Result
Reinforced Concrete Pad and Pier	OTM <sup>(2)</sup>	1.0	1.99	<b>PASS</b>

Note 1: FS denotes Factor of Safety.

Note 2: OTM denotes Overturning Moment

- The anchor bolts and base plate were found to be within allowable limits.

Tower Component	Design Limit	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Combined Axial and Bending	58.0%	PASS
Base Plate	Bending	68.5%	PASS

### Conclusion

This analysis shows that the subject tower **is adequate** to support the proposed modified antenna configuration.

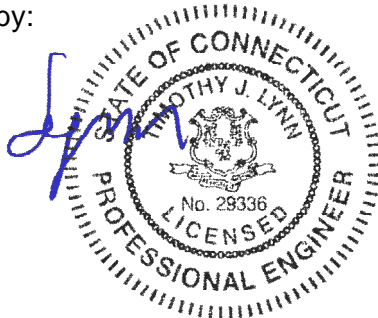
The analysis is based, in part, on the information provided to this office by Verizon. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:



Timothy J. Lynn, PE  
Structural Engineer





*Standard Conditions for Furnishing of  
Professional Engineering Services on  
Existing Structures*

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an un-corroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the “as new” condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance with generally accepted engineering principles and practices. Centek Engineering, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.

## GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

tnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, tnxTower, formerly ERITower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

### tnxTower Features:

- tnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided self-supporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-G (2005) standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD 9th Edition or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.

### DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
8' x 3" Dia Omni	90	HBX-6517DS-VTM (Verizon - Existing)	67
VHLP2-23	89	VZS01 (Verizon - Proposed)	67
6813 2-Bay w/Radome	85	NHH-65B-R2B (Verizon - Proposed)	67
10' x 6" Pipe	85	NHH-65B-R2B (Verizon - Proposed)	67
10'x2.5" Pipe Mount	84	HBX-6517DS-VTM (Verizon - Existing)	67
APX16DWV-16DWVS-E-A20 (T-Mobile)	77	VZS01 (Verizon - Proposed)	67
APX16DWV-16DWVS-E-A20 (T-Mobile)	77	NHH-65B-R2B (Verizon - Proposed)	67
LNx-6515DS (T-Mobile)	77	NHH-65B-R2B (Verizon - Proposed)	67
LNx-6515DS (T-Mobile)	77	HBX-6517DS-VTM (Verizon - Existing)	67
LNx-6515DS (T-Mobile)	77	B2/B66A RRH (Verizon - Proposed)	67
TMA 10"x8"x3" (T-Mobile)	77	B2/B66A RRH (Verizon - Proposed)	67
TMA 10"x8"x3" (T-Mobile)	77	B5/B13 RRH (Verizon - Proposed)	67
TMA 10"x8"x3" (T-Mobile)	77	B5/B13 RRH (Verizon - Proposed)	67
SitePro RMQP-496 (T-Mobile)	77	B5/B13 RRH (Verizon - Proposed)	67
APX16DWV-16DWVS-E-A20 (T-Mobile)	77	(2) RRFDC-3315-PF-48 (Verizon - Proposed)	67
SitePro 12' Handrail Kit HRK12 (Verizon - Proposed)	69	Valmont 13' Low Profile Platform (Verizon - Existing)	67
NHH-65B-R2B (Verizon - Proposed)	67	NHH-65B-R2B (Verizon - Proposed)	67
		VZS01 (Verizon - Proposed)	67

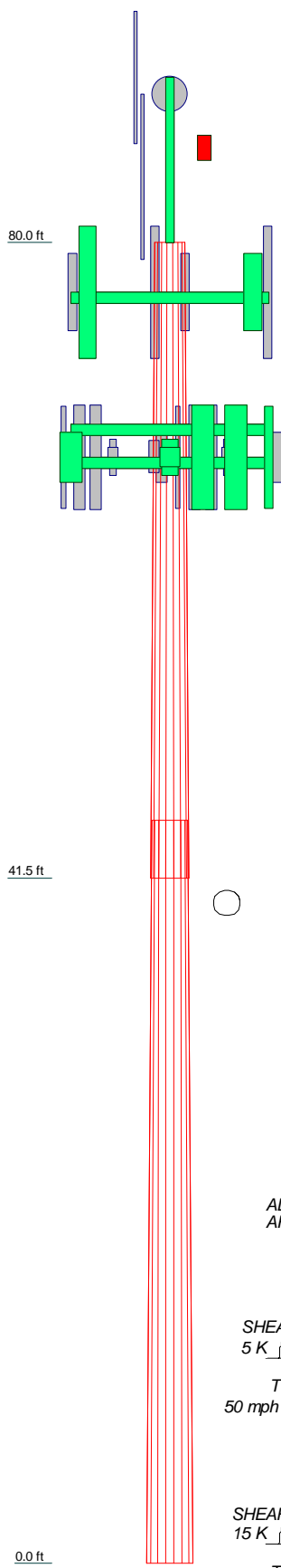
### MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-65	65 ksi	80 ksi			

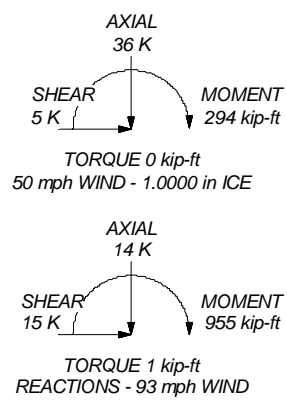
### TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-G Standard.
2. Tower designed for a 93 mph basic wind in accordance with the TIA-222-G Standard.
3. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Structure Class III.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
8. Welds are fabricated with ER-70S-6 electrodes.
9. TOWER RATING: 78.6%

Section	1	2
Length (ft)	38.50	45.00
Number of Sides	18	18
Thickness (in)	0.1875	0.2500
Socket Length (ft)	3.50	26.8068
Top Dia (in)	22.0000	33.4700
Bot Dia (in)	27.7000	
Grade	A607-65	A607-65
Weight (K)	1.9	3.6



ALL REACTIONS ARE FACTORED



<b>Centek Engineering Inc.</b>		Job: <b>21007.08 - Simsbury NW</b>	
63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587		Project: <b>80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT</b>	
Client: Verizon Wireless	Drawn by: T.JL	App'd:	
Code: TIA-222-G	Date: 06/14/21	Scale: NTS	
Path:	Dwg No. E-1		



<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 2 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

Section	Elevation	Section Length	Splice Length	Number of Sides	Top Diameter	Bottom Diameter	Wall Thickness	Bend Radius	Pole Grade
	ft	ft	ft		in	in	in	in	
L1	80.00-41.50	38.50	3.50	18	22.0000	27.7000	0.1875	0.7500	A607-65 (65 ksi)
L2	41.50-0.00	45.00		18	26.8068	33.4700	0.2500	1.0000	A607-65 (65 ksi)

### Tapered Pole Properties

Section	Tip Dia.	Area	I	r	C	I/C	J	It/Q	w	w/t
	in	in <sup>2</sup>	in <sup>4</sup>	in	in	in <sup>3</sup>	in <sup>4</sup>	in <sup>2</sup>	in	
L1	22.3105	12.9812	780.3007	7.7434	11.1760	69.8193	1561.6281	6.4918	3.5420	18.891
	28.0984	16.3734	1565.7983	9.7669	14.0716	111.2736	3133.6569	8.1882	4.5452	24.241
L2	27.7080	21.0728	1877.6407	9.4277	13.6179	137.8807	3757.7521	10.5384	4.2780	17.112
	33.9478	26.3601	3675.2194	11.7931	17.0028	216.1543	7355.2747	13.1825	5.4507	21.803

Tower Elevation	Gusset Area	Gusset Thickness	Gusset Grade	Adjust. Factor	Adjust. Factor	Weight Mult.	Double Angle	Double Angle	Double Angle
ft	ft <sup>2</sup>	in		A <sub>f</sub>	A <sub>r</sub>		Stitch Bolt Spacing	Stitch Bolt Spacing	Stitch Bolt Spacing
							Diagonals	Horizontals	Redundants
							in	in	in
L1 80.00-41.50				1	1	1			
L2 41.50-0.00				1	1	1			

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement	Total Number	C <sub>AA</sub>	Weight	
					ft		ft <sup>2</sup> /ft	plf	
7/8 (T-Mobile)	C	No	No	Inside Pole	77.00 - 0.00	12	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.54 0.54 0.54
7/8 (Town - Existing)	C	No	No	Inside Pole	80.00 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.54 0.54 0.54
HYBRIFLEX 1-5/8" (Verizon)	C	No	No	Inside Pole	67.00 - 0.00	2	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.90 1.90 1.90
7/8 (Town - Proposed)	C	No	No	Inside Pole	80.00 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.54 0.54 0.54

### Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation	Face	A <sub>R</sub>	A <sub>F</sub>	C <sub>AA</sub>	C <sub>AA</sub>	Weight
	ft		ft <sup>2</sup>	ft <sup>2</sup>	In Face	Out Face	K
					ft <sup>2</sup>	ft <sup>2</sup>	

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 3 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

Tower Section	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
L1	80.00-41.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.37
L2	41.50-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.47

### Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
L1	80.00-41.50	A	2.656	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.37
L2	41.50-0.00	A	2.388	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.47

### Feed Line Center of Pressure

Section	Elevation ft	CP <sub>X</sub> in	CP <sub>Z</sub> in	CP <sub>X</sub> Ice in	CP <sub>Z</sub> Ice in
L1	80.00-41.50	0.0000	0.0000	0.0000	0.0000
L2	41.50-0.00	0.0000	0.0000	0.0000	0.0000

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
10' x 6" Pipe	B	None		0.0000	85.00	No Ice	3.44	0.19
						1/2" Ice	6.39	0.24
						1" Ice	7.01	0.29
8' x 3" Dia Omni	A	From Face	1.50 0.00 0.00	0.0000	90.00	No Ice	2.40	0.03
						1/2" Ice	3.19	0.04
						1" Ice	3.67	0.07
6813 2-Bay w/Radome	B	From Face	1.50 0.00 0.00	0.0000	85.00	No Ice	10.10	0.17
						1/2" Ice	12.50	0.38
						1" Ice	14.90	0.58
10'x2.5" Pipe Mount	A	From Face	1.00	0.0000	84.00	No Ice	2.88	0.06

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b>		21007.08 - Simsbury NW		<b>Page</b>		4 of 23	
	<b>Project</b>		80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT		<b>Date</b>		10:03:37 06/14/21	
	<b>Client</b>		Verizon Wireless		<b>Designed by</b>		TJL	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz Lateral	Vert					
			0.00						
			0.00			1/2" Ice	3.91	3.91	0.08
			0.00			1" Ice	4.96	4.96	0.11
APX16DWV-16DWVS-E-A	A	From Face	3.00	0.0000	77.00	No Ice	6.46	2.15	0.04
20			-5.00			1/2" Ice	6.83	2.49	0.07
(T-Mobile)			0.00			1" Ice	7.21	2.84	0.11
APX16DWV-16DWVS-E-A	B	From Face	3.00	0.0000	77.00	No Ice	6.46	2.15	0.04
20			-5.00			1/2" Ice	6.83	2.49	0.07
(T-Mobile)			0.00			1" Ice	7.21	2.84	0.11
APX16DWV-16DWVS-E-A	C	From Face	3.00	0.0000	77.00	No Ice	6.46	2.15	0.04
20			-5.00			1/2" Ice	6.83	2.49	0.07
(T-Mobile)			0.00			1" Ice	7.21	2.84	0.11
LNX-6515DS	A	From Face	3.00	0.0000	77.00	No Ice	11.45	7.70	0.06
(T-Mobile)			5.00			1/2" Ice	12.06	8.29	0.12
			0.00			1" Ice	12.69	8.89	0.19
LNX-6515DS	B	From Face	3.00	0.0000	77.00	No Ice	11.45	7.70	0.06
(T-Mobile)			5.00			1/2" Ice	12.06	8.29	0.12
			0.00			1" Ice	12.69	8.89	0.19
LNX-6515DS	C	From Face	3.00	0.0000	77.00	No Ice	11.45	7.70	0.06
(T-Mobile)			5.00			1/2" Ice	12.06	8.29	0.12
			0.00			1" Ice	12.69	8.89	0.19
TMA 10"x8"x3"	A	From Face	3.00	0.0000	77.00	No Ice	0.00	0.00	0.02
(T-Mobile)			0.00			1/2" Ice	0.00	0.00	0.02
			0.00			1" Ice	0.00	0.00	0.03
TMA 10"x8"x3"	A	From Face	3.00	0.0000	77.00	No Ice	0.00	0.00	0.02
(T-Mobile)			0.00			1/2" Ice	0.00	0.00	0.02
			0.00			1" Ice	0.00	0.00	0.03
TMA 10"x8"x3"	A	From Face	3.00	0.0000	77.00	No Ice	0.00	0.00	0.02
(T-Mobile)			0.00			1/2" Ice	0.00	0.00	0.02
			0.00			1" Ice	0.00	0.00	0.03
SitePro RMQP-496	C	From Face	0.00	0.0000	77.00	No Ice	15.70	15.70	1.70
(T-Mobile)			0.00			1/2" Ice	20.10	20.10	2.00
			0.00			1" Ice	24.50	24.50	2.30
VZS01	A	From Face	3.00	0.0000	67.00	No Ice	4.71	1.84	0.00
(Verizon - Proposed)			6.00			1/2" Ice	5.00	2.06	0.03
			0.00			1" Ice	5.29	2.29	0.06
NHH-65B-R2B	A	From Face	3.00	0.0000	67.00	No Ice	11.19	8.69	0.07
(Verizon - Proposed)			-2.00			1/2" Ice	11.69	9.17	0.15
			0.00			1" Ice	12.20	9.66	0.24
NHH-65B-R2B	A	From Face	3.00	0.0000	67.00	No Ice	11.19	8.69	0.07
(Verizon - Proposed)			-4.00			1/2" Ice	11.69	9.17	0.15
			0.00			1" Ice	12.20	9.66	0.24
HBX-6517DS-VTM	A	From Face	3.00	0.0000	67.00	No Ice	5.24	3.30	0.01
(Verizon - Existing)			-6.00			1/2" Ice	5.71	3.75	0.04
			0.00			1" Ice	6.18	4.21	0.07
VZS01	B	From Face	3.00	0.0000	67.00	No Ice	4.71	1.84	0.00
(Verizon - Proposed)			6.00			1/2" Ice	5.00	2.06	0.03
			0.00			1" Ice	5.29	2.29	0.06
NHH-65B-R2B	B	From Face	3.00	0.0000	67.00	No Ice	11.19	8.69	0.07
(Verizon - Proposed)			-2.00			1/2" Ice	11.69	9.17	0.15
			0.00			1" Ice	12.20	9.66	0.24
NHH-65B-R2B	B	From Face	3.00	0.0000	67.00	No Ice	11.19	8.69	0.07
(Verizon - Proposed)			-4.00			1/2" Ice	11.69	9.17	0.15
			0.00			1" Ice	12.20	9.66	0.24
HBX-6517DS-VTM	B	From Face	3.00	0.0000	67.00	No Ice	5.24	3.30	0.01
(Verizon - Existing)			-6.00			1/2" Ice	5.71	3.75	0.04
			0.00			1" Ice	6.18	4.21	0.07
VZS01	C	From Face	3.00	0.0000	67.00	No Ice	4.71	1.84	0.00

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 5 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub>		Weight
			Horz	Lateral			Front	Side	
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
(Verizon - Proposed)			6.00			1/2" Ice	5.00	2.06	0.03
			0.00			1" Ice	5.29	2.29	0.06
NHH-65B-R2B	C	From Face	3.00		0.0000	No Ice	11.19	8.69	0.07
(Verizon - Proposed)			-2.00			1/2" Ice	11.69	9.17	0.15
			0.00			1" Ice	12.20	9.66	0.24
NHH-65B-R2B	C	From Face	3.00		0.0000	No Ice	11.19	8.69	0.07
(Verizon - Proposed)			-4.00			1/2" Ice	11.69	9.17	0.15
			0.00			1" Ice	12.20	9.66	0.24
HBX-6517DS-VTM	C	From Face	3.00		0.0000	No Ice	5.24	3.30	0.01
(Verizon - Existing)			-6.00			1/2" Ice	5.71	3.75	0.04
			0.00			1" Ice	6.18	4.21	0.07
B2/B66A RRH	A	From Face	3.00		0.0000	No Ice	2.54	1.61	0.06
(Verizon - Proposed)			0.00			1/2" Ice	2.75	1.79	0.08
			0.00			1" Ice	2.97	1.98	0.10
B2/B66A RRH	B	From Face	3.00		0.0000	No Ice	2.54	1.61	0.06
(Verizon - Proposed)			0.00			1/2" Ice	2.75	1.79	0.08
			0.00			1" Ice	2.97	1.98	0.10
B2/B66A RRH	C	From Face	3.00		0.0000	No Ice	2.54	1.61	0.06
(Verizon - Proposed)			0.00			1/2" Ice	2.75	1.79	0.08
			0.00			1" Ice	2.97	1.98	0.10
B5/B13 RRH	A	From Face	3.00		0.0000	No Ice	1.87	1.02	0.07
(Verizon - Proposed)			0.00			1/2" Ice	2.03	1.15	0.09
			0.00			1" Ice	2.21	1.29	0.11
B5/B13 RRH	B	From Face	3.00		0.0000	No Ice	1.87	1.02	0.07
(Verizon - Proposed)			0.00			1/2" Ice	2.03	1.15	0.09
			0.00			1" Ice	2.21	1.29	0.11
B5/B13 RRH	C	From Face	3.00		0.0000	No Ice	1.87	1.02	0.07
(Verizon - Proposed)			0.00			1/2" Ice	2.03	1.15	0.09
			0.00			1" Ice	2.21	1.29	0.11
(2) RRFDC-3315-PF-48	A	From Face	3.00		0.0000	No Ice	3.01	1.96	0.03
(Verizon - Proposed)			0.00			1/2" Ice	3.23	2.15	0.05
			0.00			1" Ice	3.46	2.35	0.08
Valmont 13' Low Profile Platform	C	None			0.0000	No Ice	15.70	15.70	1.30
(Verizon - Existing)						1/2" Ice	20.10	20.10	1.76
						1" Ice	24.50	24.50	2.23
SitePro 12' Handrail Kit	C	None			0.0000	No Ice	5.00	5.00	0.27
HRK12						1/2" Ice	8.00	8.00	0.35
(Verizon - Proposed)						1" Ice	11.00	11.00	0.44

## Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				Horz	Lateral							
			ft	ft	°	°	ft	ft	ft <sup>2</sup>	K		
VHLP2-23	A	Paraboloid w/Radome	From Leg	1.00		Worst		89.00	2.17	No Ice	3.72	0.03
				0.00						1/2" Ice	4.01	0.04
				0.00						1" Ice	4.30	0.05



<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 6 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

**Tower Pressures - No Ice**

$G_H = 1.100$

Section Elevation ft	z ft	$K_Z$	$q_z$ psf	$A_G$ ft <sup>2</sup>	F a c e	$A_F$ ft <sup>2</sup>	$A_R$ ft <sup>2</sup>	$A_{leg}$ ft <sup>2</sup>	Leg %	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>
L1 80.00-41.50	60.34	1.138	27.44	80.864	A	0.000	80.864	80.864	100.00	0.000	0.000
					B	0.000	80.864	100.00	0.000	0.000	
					C	0.000	80.864	100.00	0.000	0.000	
L2 41.50-0.00	20.83	0.91	22.15	106.613	A	0.000	106.613	106.613	100.00	0.000	0.000
					B	0.000	106.613	100.00	0.000	0.000	
					C	0.000	106.613	100.00	0.000	0.000	

**Tower Pressure - With Ice**

$G_H = 1.100$

Section Elevation ft	z ft	$K_Z$	$q_z$ psf	$t_z$ in	$A_G$ ft <sup>2</sup>	F a c e	$A_F$ ft <sup>2</sup>	$A_R$ ft <sup>2</sup>	$A_{leg}$ ft <sup>2</sup>	Leg %	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>
L1 80.00-41.50	60.34	1.138	6.90	2.6555	97.904	A	0.000	97.904	97.904	100.00	0.000	0.000
						B	0.000	97.904	100.00	0.000	0.000	
						C	0.000	97.904	100.00	0.000	0.000	
L2 41.50-0.00	20.83	0.91	5.57	2.3876	124.980	A	0.000	124.980	124.980	100.00	0.000	0.000
						B	0.000	124.980	100.00	0.000	0.000	
						C	0.000	124.980	100.00	0.000	0.000	

**Tower Pressure - Service**

$G_H = 1.100$

Section Elevation ft	z ft	$K_Z$	$q_z$ psf	$A_G$ ft <sup>2</sup>	F a c e	$A_F$ ft <sup>2</sup>	$A_R$ ft <sup>2</sup>	$A_{leg}$ ft <sup>2</sup>	Leg %	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>
L1 80.00-41.50	60.34	1.138	8.88	80.864	A	0.000	80.864	80.864	100.00	0.000	0.000
					B	0.000	80.864	100.00	0.000	0.000	
					C	0.000	80.864	100.00	0.000	0.000	
L2 41.50-0.00	20.83	0.91	7.17	106.613	A	0.000	106.613	106.613	100.00	0.000	0.000
					B	0.000	106.613	100.00	0.000	0.000	
					C	0.000	106.613	100.00	0.000	0.000	

**Tower Forces - No Ice - Wind Normal To Face**

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b>	21007.08 - Simsbury NW	<b>Page</b>	7 of 23
	<b>Project</b>	80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b>	10:03:37 06/14/21
	<b>Client</b>	Verizon Wireless	<b>Designed by</b>	TJL

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	1.92	A	1	0.65	27.44	1	1	80.864	1.59	41.20	C
			B	1	0.65		1	1	80.864			
			C	1	0.65		1	1	80.864			
L2 41.50-0.00	0.47	3.63	A	1	0.65	22.15	1	1	106.613	1.69	40.69	C
			B	1	0.65		1	1	106.613			
			C	1	0.65		1	1	106.613			
Sum Weight:	0.84	5.55						OTM	130.89 kip-ft	3.28		

**Tower Forces - No Ice - Wind 60 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	1.92	A	1	0.65	27.44	1	1	80.864	1.59	41.20	C
			B	1	0.65		1	1	80.864			
			C	1	0.65		1	1	80.864			
L2 41.50-0.00	0.47	3.63	A	1	0.65	22.15	1	1	106.613	1.69	40.69	C
			B	1	0.65		1	1	106.613			
			C	1	0.65		1	1	106.613			
Sum Weight:	0.84	5.55						OTM	130.89 kip-ft	3.28		

**Tower Forces - No Ice - Wind 90 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	1.92	A	1	0.65	27.44	1	1	80.864	1.59	41.20	C
			B	1	0.65		1	1	80.864			
			C	1	0.65		1	1	80.864			
L2 41.50-0.00	0.47	3.63	A	1	0.65	22.15	1	1	106.613	1.69	40.69	C
			B	1	0.65		1	1	106.613			
			C	1	0.65		1	1	106.613			
Sum Weight:	0.84	5.55						OTM	130.89 kip-ft	3.28		

**Tower Forces - With Ice - Wind Normal To Face**

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 8 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJJ

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	5.39	A	1	1.2	6.90	1	1	97.904	0.89	23.15	C
			B	1	1.2		1	1	97.904			
			C	1	1.2		1	1	97.904			
L2 41.50-0.00	0.47	7.64	A	1	1.2	5.57	1	1	123.127	0.90	21.81	C
			B	1	1.2		1	1	123.127			
			C	1	1.2		1	1	123.127			
Sum Weight:	0.84	13.04						OTM	72.62 kip-ft	1.80		

**Tower Forces - With Ice - Wind 60 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	5.39	A	1	1.2	6.90	1	1	97.904	0.89	23.15	C
			B	1	1.2		1	1	97.904			
			C	1	1.2		1	1	97.904			
L2 41.50-0.00	0.47	7.64	A	1	1.2	5.57	1	1	123.127	0.90	21.81	C
			B	1	1.2		1	1	123.127			
			C	1	1.2		1	1	123.127			
Sum Weight:	0.84	13.04						OTM	72.62 kip-ft	1.80		

**Tower Forces - With Ice - Wind 90 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	5.39	A	1	1.2	6.90	1	1	97.904	0.89	23.15	C
			B	1	1.2		1	1	97.904			
			C	1	1.2		1	1	97.904			
L2 41.50-0.00	0.47	7.64	A	1	1.2	5.57	1	1	123.127	0.90	21.81	C
			B	1	1.2		1	1	123.127			
			C	1	1.2		1	1	123.127			
Sum Weight:	0.84	13.04						OTM	72.62 kip-ft	1.80		

**Tower Forces - Service - Wind Normal To Face**

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 9 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJJ

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	1.92	A	1	0.65	8.88	1	1	80.864	0.51	13.34	C
			B	1	0.65		1	1	80.864			
			C	1	0.65		1	1	80.864			
L2 41.50-0.00	0.47	3.63	A	1	0.65	7.17	1	1	106.613	0.55	13.18	C
			B	1	0.65		1	1	106.613			
			C	1	0.65		1	1	106.613			
Sum Weight:	0.84	5.55						OTM	42.39 kip-ft	1.06		

**Tower Forces - Service - Wind 60 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	1.92	A	1	0.65	8.88	1	1	80.864	0.51	13.34	C
			B	1	0.65		1	1	80.864			
			C	1	0.65		1	1	80.864			
L2 41.50-0.00	0.47	3.63	A	1	0.65	7.17	1	1	106.613	0.55	13.18	C
			B	1	0.65		1	1	106.613			
			C	1	0.65		1	1	106.613			
Sum Weight:	0.84	5.55						OTM	42.39 kip-ft	1.06		

**Tower Forces - Service - Wind 90 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
L1 80.00-41.50	0.37	1.92	A	1	0.65	8.88	1	1	80.864	0.51	13.34	C
			B	1	0.65		1	1	80.864			
			C	1	0.65		1	1	80.864			
L2 41.50-0.00	0.47	3.63	A	1	0.65	7.17	1	1	106.613	0.55	13.18	C
			B	1	0.65		1	1	106.613			
			C	1	0.65		1	1	106.613			
Sum Weight:	0.84	5.55						OTM	42.39 kip-ft	1.06		

**Force Totals**

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 10 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, $M_x$ kip-ft	Sum of Overturning Moments, $M_z$ kip-ft	Sum of Torques kip-ft
Leg Weight	5.55					
Bracing Weight	0.00					
Total Member Self-Weight	5.55			0.99	0.21	
Total Weight	11.40			0.99	0.21	
Wind 0 deg - No Ice		-0.03	-9.47	-577.41	2.09	-0.05
Wind 30 deg - No Ice		4.73	-8.19	-498.98	-288.45	-0.33
Wind 60 deg - No Ice		8.22	-4.71	-286.58	-501.65	-0.51
Wind 90 deg - No Ice		9.51	0.03	2.88	-580.37	-0.56
Wind 120 deg - No Ice		8.25	4.76	291.82	-503.53	-0.46
Wind 150 deg - No Ice		4.78	8.22	502.84	-291.72	-0.23
Wind 180 deg - No Ice		0.03	9.47	579.39	-1.68	0.05
Wind 210 deg - No Ice		-4.73	8.19	500.96	288.87	0.33
Wind 240 deg - No Ice		-8.22	4.71	288.56	502.06	0.51
Wind 270 deg - No Ice		-9.51	-0.03	-0.90	580.79	0.56
Wind 300 deg - No Ice		-8.25	-4.76	-289.85	503.95	0.46
Wind 330 deg - No Ice		-4.78	-8.22	-500.87	292.13	0.23
Member Ice	7.48					
Total Weight Ice	33.36			-0.35	0.34	
Wind 0 deg - Ice		-0.01	-4.50	-269.80	0.89	0.04
Wind 30 deg - Ice		2.25	-3.89	-233.43	-134.23	-0.07
Wind 60 deg - Ice		3.90	-2.24	-134.60	-233.29	-0.16
Wind 90 deg - Ice		4.51	0.01	0.20	-269.75	-0.21
Wind 120 deg - Ice		3.91	2.26	134.86	-233.84	-0.20
Wind 150 deg - Ice		2.26	3.90	233.28	-135.18	-0.14
Wind 180 deg - Ice		0.01	4.50	269.11	-0.21	-0.04
Wind 210 deg - Ice		-2.25	3.89	232.73	134.91	0.07
Wind 240 deg - Ice		-3.90	2.24	133.91	233.97	0.16
Wind 270 deg - Ice		-4.51	-0.01	-0.89	270.43	0.21
Wind 300 deg - Ice		-3.91	-2.26	-135.55	234.52	0.20
Wind 330 deg - Ice		-2.26	-3.90	-233.98	135.86	0.14
Total Weight	11.40			0.99	0.21	
Wind 0 deg - Service		-0.01	-3.09	-187.87	0.82	-0.02
Wind 30 deg - Service		1.54	-2.67	-162.26	-94.04	-0.11
Wind 60 deg - Service		2.68	-1.54	-92.91	-163.65	-0.17
Wind 90 deg - Service		3.10	0.01	1.60	-189.36	-0.18
Wind 120 deg - Service		2.69	1.55	95.95	-164.26	-0.15
Wind 150 deg - Service		1.56	2.68	164.85	-95.10	-0.08
Wind 180 deg - Service		0.01	3.09	189.85	-0.40	0.02
Wind 210 deg - Service		-1.54	2.67	164.24	94.46	0.11
Wind 240 deg - Service		-2.68	1.54	94.89	164.07	0.17
Wind 270 deg - Service		-3.10	-0.01	0.38	189.77	0.18
Wind 300 deg - Service		-2.69	-1.55	-93.97	164.68	0.15
Wind 330 deg - Service		-1.56	-2.68	-162.87	95.52	0.08

## Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 11 of 23
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	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

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

### Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	80 - 41.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-26.12	0.38	0.15
			Max. Mx	20	-7.86	322.41	-0.20
			Max. My	14	-7.87	-0.77	-322.18
			Max. Vy	20	-12.67	322.41	-0.20
			Max. Vx	14	12.62	-0.77	-322.18
			Max. Torque	10			1.41
L2	41.5 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-35.98	0.38	0.15
			Max. Mx	20	-13.66	953.31	1.86
			Max. My	14	-13.66	-2.84	-950.71

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-15.23	953.31	1.86
			Max. Vx	14	15.18	-2.84	-950.71
			Max. Torque	8			0.98

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	37	35.98	3.91	2.26
	Max. H <sub>x</sub>	20	13.69	15.21	0.05
	Max. H <sub>z</sub>	2	13.69	0.05	15.16
	Max. M <sub>x</sub>	2	948.24	0.05	15.16
	Max. M <sub>z</sub>	8	952.79	-15.21	-0.05
	Max. Torsion	8	0.98	-15.21	-0.05
	Min. Vert	17	10.26	7.57	-13.10
	Min. H <sub>x</sub>	8	13.69	-15.21	-0.05
	Min. H <sub>z</sub>	14	13.69	-0.05	-15.16
	Min. M <sub>x</sub>	14	-950.71	-0.05	-15.16
	Min. M <sub>z</sub>	20	-953.31	15.21	0.05
	Min. Torsion	20	-0.97	15.21	0.05

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overtuning Moment, M <sub>x</sub> kip-ft	Overtuning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	11.40	0.00	0.00	1.01	0.21	-0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	13.69	-0.05	-15.16	-948.24	3.36	-0.07
0.9 Dead+1.6 Wind 0 deg - No Ice	10.26	-0.05	-15.16	-942.21	3.27	-0.07
1.2 Dead+1.6 Wind 30 deg - No Ice	13.69	7.57	-13.10	-819.49	-473.59	-0.55
0.9 Dead+1.6 Wind 30 deg - No Ice	10.26	7.57	-13.10	-814.32	-470.49	-0.54
1.2 Dead+1.6 Wind 60 deg - No Ice	13.69	13.15	-7.54	-470.82	-823.56	-0.88
0.9 Dead+1.6 Wind 60 deg - No Ice	10.26	13.15	-7.54	-467.98	-818.12	-0.86
1.2 Dead+1.6 Wind 90 deg - No Ice	13.69	15.21	0.05	4.34	-952.79	-0.98
0.9 Dead+1.6 Wind 90 deg - No Ice	10.26	15.21	0.05	4.00	-946.48	-0.95
1.2 Dead+1.6 Wind 120 deg - No Ice	13.69	13.19	7.62	478.66	-826.65	-0.81
0.9 Dead+1.6 Wind 120 deg - No Ice	10.26	13.19	7.62	475.14	-821.18	-0.79
1.2 Dead+1.6 Wind 150 deg - No Ice	13.69	7.64	13.15	825.05	-478.94	-0.42
0.9 Dead+1.6 Wind 150 deg - No Ice	10.26	7.64	13.15	819.22	-475.80	-0.41
1.2 Dead+1.6 Wind 180 deg - No Ice	13.69	0.05	15.16	950.71	-2.84	0.07

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587</p>	<p style="text-align: center;"><b>Job</b></p> <p style="text-align: center;">21007.08 - Simsbury NW</p>	<p style="text-align: center;"><b>Page</b></p> <p style="text-align: center;">13 of 23</p>
	<p style="text-align: center;"><b>Project</b></p> <p style="text-align: center;">80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT</p>	<p style="text-align: center;"><b>Date</b></p> <p style="text-align: center;">10:03:37 06/14/21</p>
	<p style="text-align: center;"><b>Client</b></p> <p style="text-align: center;">Verizon Wireless</p>	<p style="text-align: center;"><b>Designed by</b></p> <p style="text-align: center;">TJL</p>

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
No Ice						
0.9 Dead+1.6 Wind 180 deg - No Ice	10.26	0.05	15.16	944.04	-2.88	0.08
1.2 Dead+1.6 Wind 210 deg - No Ice	13.69	-7.57	13.10	821.96	474.10	0.55
0.9 Dead+1.6 Wind 210 deg - No Ice	10.26	-7.57	13.10	816.15	470.87	0.54
1.2 Dead+1.6 Wind 240 deg - No Ice	13.69	-13.15	7.54	473.30	824.08	0.88
0.9 Dead+1.6 Wind 240 deg - No Ice	10.26	-13.15	7.54	469.82	818.50	0.86
1.2 Dead+1.6 Wind 270 deg - No Ice	13.69	-15.21	-0.05	-1.86	953.31	0.97
0.9 Dead+1.6 Wind 270 deg - No Ice	10.26	-15.21	-0.05	-2.16	946.86	0.95
1.2 Dead+1.6 Wind 300 deg - No Ice	13.69	-13.19	-7.62	-476.18	827.17	0.81
0.9 Dead+1.6 Wind 300 deg - No Ice	10.26	-13.19	-7.62	-473.30	821.57	0.79
1.2 Dead+1.6 Wind 330 deg - No Ice	13.69	-7.64	-13.15	-822.58	479.47	0.43
0.9 Dead+1.6 Wind 330 deg - No Ice	10.26	-7.64	-13.15	-817.39	476.19	0.41
1.2 Dead+1.0 Ice+1.0 Temp	35.98	0.00	0.00	-0.15	0.38	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	35.98	-0.01	-4.50	-292.82	1.03	0.07
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	35.98	2.25	-3.89	-253.31	-145.72	-0.09
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	35.98	3.90	-2.24	-145.98	-253.30	-0.22
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	35.98	4.51	0.01	0.43	-292.90	-0.29
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	35.98	3.91	2.26	146.67	-253.90	-0.29
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	35.98	2.26	3.90	253.57	-146.75	-0.20
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	35.98	0.01	4.50	292.48	-0.16	-0.07
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	35.98	-2.25	3.89	252.97	146.59	0.09
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	35.98	-3.90	2.24	145.64	254.17	0.22
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	35.98	-4.51	-0.01	-0.76	293.77	0.29
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	35.98	-3.91	-2.26	-147.01	254.77	0.29
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	35.98	-2.26	-3.90	-253.91	147.62	0.20
Dead+Wind 0 deg - Service	11.40	-0.01	-3.09	-192.04	0.84	-0.02
Dead+Wind 30 deg - Service	11.40	1.54	-2.67	-165.86	-96.14	-0.11
Dead+Wind 60 deg - Service	11.40	2.68	-1.54	-94.96	-167.30	-0.18
Dead+Wind 90 deg - Service	11.40	3.10	0.01	1.65	-193.57	-0.20
Dead+Wind 120 deg - Service	11.40	2.69	1.55	98.10	-167.92	-0.16
Dead+Wind 150 deg - Service	11.40	1.56	2.68	168.54	-97.22	-0.08
Dead+Wind 180 deg - Service	11.40	0.01	3.09	194.09	-0.41	0.02
Dead+Wind 210 deg - Service	11.40	-1.54	2.67	167.92	96.57	0.11
Dead+Wind 240 deg - Service	11.40	-2.68	1.54	97.02	167.73	0.18
Dead+Wind 270 deg - Service	11.40	-3.10	-0.01	0.40	194.00	0.20
Dead+Wind 300 deg - Service	11.40	-2.69	-1.55	-96.05	168.35	0.16
Dead+Wind 330 deg - Service	11.40	-1.56	-2.68	-166.49	97.65	0.08



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## Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-11.40	0.00	0.00	11.40	0.00	0.000%
2	-0.05	-13.69	-15.16	0.05	13.69	15.16	0.000%
3	-0.05	-10.26	-15.16	0.05	10.26	15.16	0.000%
4	7.57	-13.69	-13.10	-7.57	13.69	13.10	0.000%
5	7.57	-10.26	-13.10	-7.57	10.26	13.10	0.000%
6	13.15	-13.69	-7.54	-13.15	13.69	7.54	0.000%
7	13.15	-10.26	-7.54	-13.15	10.26	7.54	0.000%
8	15.21	-13.69	0.05	-15.21	13.69	-0.05	0.000%
9	15.21	-10.26	0.05	-15.21	10.26	-0.05	0.000%
10	13.19	-13.69	7.62	-13.19	13.69	-7.62	0.000%
11	13.19	-10.26	7.62	-13.19	10.26	-7.62	0.000%
12	7.64	-13.69	13.15	-7.64	13.69	-13.15	0.000%
13	7.64	-10.26	13.15	-7.64	10.26	-13.15	0.000%
14	0.05	-13.69	15.16	-0.05	13.69	-15.16	0.000%
15	0.05	-10.26	15.16	-0.05	10.26	-15.16	0.000%
16	-7.57	-13.69	13.10	7.57	13.69	-13.10	0.000%
17	-7.57	-10.26	13.10	7.57	10.26	-13.10	0.000%
18	-13.15	-13.69	7.54	13.15	13.69	-7.54	0.000%
19	-13.15	-10.26	7.54	13.15	10.26	-7.54	0.000%
20	-15.21	-13.69	-0.05	15.21	13.69	0.05	0.000%
21	-15.21	-10.26	-0.05	15.21	10.26	0.05	0.000%
22	-13.19	-13.69	-7.62	13.19	13.69	7.62	0.000%
23	-13.19	-10.26	-7.62	13.19	10.26	7.62	0.000%
24	-7.64	-13.69	-13.15	7.64	13.69	13.15	0.000%
25	-7.64	-10.26	-13.15	7.64	10.26	13.15	0.000%
26	0.00	-35.98	0.00	0.00	35.98	0.00	0.000%
27	-0.01	-35.98	-4.50	0.01	35.98	4.50	0.000%
28	2.25	-35.98	-3.89	-2.25	35.98	3.89	0.000%
29	3.90	-35.98	-2.24	-3.90	35.98	2.24	0.000%
30	4.51	-35.98	0.01	-4.51	35.98	-0.01	0.000%
31	3.91	-35.98	2.26	-3.91	35.98	-2.26	0.000%
32	2.26	-35.98	3.90	-2.26	35.98	-3.90	0.000%
33	0.01	-35.98	4.50	-0.01	35.98	-4.50	0.000%
34	-2.25	-35.98	3.89	2.25	35.98	-3.89	0.000%
35	-3.90	-35.98	2.24	3.90	35.98	-2.24	0.000%
36	-4.51	-35.98	-0.01	4.51	35.98	0.01	0.000%
37	-3.91	-35.98	-2.26	3.91	35.98	2.26	0.000%
38	-2.26	-35.98	-3.90	2.26	35.98	3.90	0.000%
39	-0.01	-11.40	-3.09	0.01	11.40	3.09	0.000%
40	1.54	-11.40	-2.67	-1.54	11.40	2.67	0.000%
41	2.68	-11.40	-1.54	-2.68	11.40	1.54	0.000%
42	3.10	-11.40	0.01	-3.10	11.40	-0.01	0.000%
43	2.69	-11.40	1.55	-2.69	11.40	-1.55	0.000%
44	1.56	-11.40	2.68	-1.56	11.40	-2.68	0.000%
45	0.01	-11.40	3.09	-0.01	11.40	-3.09	0.000%
46	-1.54	-11.40	2.67	1.54	11.40	-2.67	0.000%
47	-2.68	-11.40	1.54	2.68	11.40	-1.54	0.000%
48	-3.10	-11.40	-0.01	3.10	11.40	0.01	0.000%
49	-2.69	-11.40	-1.55	2.69	11.40	1.55	0.000%
50	-1.56	-11.40	-2.68	1.56	11.40	2.68	0.000%

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## Non-Linear Convergence Results

<i>Load Combination</i>	<i>Converged?</i>	<i>Number of Cycles</i>	<i>Displacement Tolerance</i>	<i>Force Tolerance</i>
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00005832
3	Yes	4	0.00000001	0.00003344
4	Yes	5	0.00000001	0.00010099
5	Yes	5	0.00000001	0.00004224
6	Yes	5	0.00000001	0.00011143
7	Yes	5	0.00000001	0.00004690
8	Yes	4	0.00000001	0.00038268
9	Yes	4	0.00000001	0.00022726
10	Yes	5	0.00000001	0.00010129
11	Yes	5	0.00000001	0.00004209
12	Yes	5	0.00000001	0.00011027
13	Yes	5	0.00000001	0.00004608
14	Yes	4	0.00000001	0.00004238
15	Yes	4	0.00000001	0.00002293
16	Yes	5	0.00000001	0.00010944
17	Yes	5	0.00000001	0.00004584
18	Yes	5	0.00000001	0.00009987
19	Yes	5	0.00000001	0.00004154
20	Yes	4	0.00000001	0.00043776
21	Yes	4	0.00000001	0.00025983
22	Yes	5	0.00000001	0.00011272
23	Yes	5	0.00000001	0.00004730
24	Yes	5	0.00000001	0.00010286
25	Yes	5	0.00000001	0.00004294
26	Yes	4	0.00000001	0.00000001
27	Yes	5	0.00000001	0.00013984
28	Yes	5	0.00000001	0.00018597
29	Yes	5	0.00000001	0.00018953
30	Yes	5	0.00000001	0.00014096
31	Yes	5	0.00000001	0.00018572
32	Yes	5	0.00000001	0.00019015
33	Yes	5	0.00000001	0.00013952
34	Yes	5	0.00000001	0.00018810
35	Yes	5	0.00000001	0.00018573
36	Yes	5	0.00000001	0.00014168
37	Yes	5	0.00000001	0.00019303
38	Yes	5	0.00000001	0.00018733
39	Yes	4	0.00000001	0.00000001
40	Yes	4	0.00000001	0.00004213
41	Yes	4	0.00000001	0.00005995
42	Yes	4	0.00000001	0.00002402
43	Yes	4	0.00000001	0.00004466
44	Yes	4	0.00000001	0.00005622
45	Yes	4	0.00000001	0.00000001
46	Yes	4	0.00000001	0.00005643
47	Yes	4	0.00000001	0.00004392
48	Yes	4	0.00000001	0.00002474
49	Yes	4	0.00000001	0.00006090
50	Yes	4	0.00000001	0.00004392

## Maximum Tower Deflections - Service Wind

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 16 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJJ

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	80 - 41.5	8.309	44	0.7986	0.0034
L2	45 - 0	2.971	44	0.5793	0.0012

### Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
90.00	8' x 3" Dia Omni	44	8.309	0.7986	0.0034	25900
89.00	VHLP2-23	44	8.309	0.7986	0.0034	25900
85.00	10' x 6" Pipe	44	8.309	0.7986	0.0034	25900
84.00	10'x2.5" Pipe Mount	44	8.309	0.7986	0.0034	25900
77.00	APX16DWV-16DWVS-E-A20	44	7.795	0.7841	0.0032	25900
69.00	SitePro 12' Handrail Kit HRK12	44	6.444	0.7440	0.0026	11773
67.00	VZS01	44	6.115	0.7334	0.0025	9961

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	80 - 41.5	40.579	10	3.8810	0.0171
L2	45 - 0	14.563	10	2.8375	0.0059

### Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
90.00	8' x 3" Dia Omni	10	40.579	3.8810	0.0171	5375
89.00	VHLP2-23	10	40.579	3.8810	0.0171	5375
85.00	10' x 6" Pipe	10	40.579	3.8810	0.0171	5375
84.00	10'x2.5" Pipe Mount	10	40.579	3.8810	0.0171	5375
77.00	APX16DWV-16DWVS-E-A20	10	38.076	3.8132	0.0160	5375
69.00	SitePro 12' Handrail Kit HRK12	10	31.493	3.6251	0.0132	2442
67.00	VZS01	10	29.887	3.5749	0.0125	2066

### Compression Checks

### Pole Design Data

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 17 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$					
L1	80 - 78.1579	TP27.7x22x0.1875	38.50	0.00	0.0	13.1435	-0.62	933.09	0.001					
	78.1579 - 76.3158					13.3058	-3.00	941.01	0.003					
	76.3158 - 74.4737					13.4681	-3.11	948.84	0.003					
	74.4737 - 72.6316					13.6304	-3.23	956.58	0.003					
	72.6316 - 70.7895					13.7927	-3.35	964.23	0.003					
	70.7895 - 68.9474					13.9550	-3.77	971.79	0.004					
	68.9474 - 67.1053					14.1173	-3.89	979.27	0.004					
	67.1053 - 65.2632					14.2796	-6.28	986.66	0.006					
	65.2632 - 63.4211					14.4419	-6.41	993.96	0.006					
	63.4211 - 61.5789					14.6042	-6.54	1001.18	0.007					
	61.5789 - 59.7368					14.7665	-6.67	1008.30	0.007					
	59.7368 - 57.8947					14.9288	-6.81	1015.34	0.007					
	57.8947 - 56.0526					15.0912	-6.95	1022.29	0.007					
	56.0526 - 54.2105					15.2535	-7.10	1029.15	0.007					
	54.2105 - 52.3684					15.4158	-7.24	1035.92	0.007					
	52.3684 - 50.5263					15.5781	-7.39	1042.61	0.007					
	50.5263 - 48.6842					15.7404	-7.55	1049.20	0.007					
	48.6842 - 46.8421					15.9027	-7.70	1055.71	0.007					
	L2					46.8421 - 45	TP33.47x26.8068x0.25	45.00	0.00	0.0	16.0650	-7.86	1062.14	0.007
						45 - 41.5					16.3734	-3.66	1074.09	0.003
41.5 - 39.3158		21.4841	-4.78	1563.18	0.003									
39.3158 - 37.1316		21.7407	-8.69	1576.62	0.006									
37.1316 - 34.9474		21.9973	-8.93	1589.93	0.006									
34.9474 - 32.7632		22.2540	-9.18	1603.11	0.006									
32.7632 - 30.5789		22.5106	-9.43	1616.17	0.006									
30.5789 - 28.3947		22.7672	-9.69	1629.11	0.006									
28.3947 - 26.2105		23.0239	-9.95	1641.93	0.006									
26.2105 - 24.0263		23.2805	-10.22	1654.62	0.006									
24.0263 - 21.8421		23.5371	-10.48	1667.18	0.006									
21.8421 - 19.6579		23.7938	-10.76	1679.63	0.006									
19.6579 - 17.4737	24.0504	-11.03	1691.95	0.007										
17.4737 -	24.3070	-11.31	1704.14	0.007										
	24.5636	-11.59	1716.21	0.007										

<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b>	21007.08 - Simsbury NW	<b>Page</b>	18 of 23
	<b>Project</b>	80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b>	10:03:37 06/14/21
	<b>Client</b>	Verizon Wireless	<b>Designed by</b>	TJL

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
	15.2895								
	15.2895 - 13.1053					24.8203	-11.88	1728.16	0.007
	13.1053 - 10.9211					25.0769	-12.17	1739.99	0.007
	10.9211 - 8.73684					25.3335	-12.46	1751.69	0.007
	8.73684 - 6.55263					25.5902	-12.76	1763.26	0.007
	6.55263 - 4.36842					25.8468	-13.06	1774.72	0.007
	4.36842 - 2.18421					26.1034	-13.36	1786.05	0.007
	2.18421 - 0					26.3601	-13.66	1797.25	0.008

### Pole Bending Design Data

Section No.	Elevation ft	Size	M <sub>ux</sub> kip-ft	φM <sub>ux</sub> kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M <sub>uy</sub> kip-ft	φM <sub>uy</sub> kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
L1	80 - 78.1579	TP27.7x22x0.1875	9.70	423.49	0.023	0.00	423.49	0.000
	78.1579 - 76.3158		15.16	432.40	0.035	0.00	432.40	0.000
	76.3158 - 74.4737		23.59	441.37	0.053	0.00	441.37	0.000
	74.4737 - 72.6316		32.25	450.37	0.072	0.00	450.37	0.000
	72.6316 - 70.7895		41.13	459.43	0.090	0.00	459.43	0.000
	70.7895 - 68.9474		50.25	468.52	0.107	0.00	468.52	0.000
	68.9474 - 67.1053		60.09	477.66	0.126	0.00	477.66	0.000
	67.1053 - 65.2632		80.01	486.84	0.164	0.00	486.84	0.000
	65.2632 - 63.4211		100.90	496.06	0.203	0.00	496.06	0.000
	63.4211 - 61.5789		122.04	505.32	0.242	0.00	505.32	0.000
	61.5789 - 59.7368		143.48	514.62	0.279	0.00	514.62	0.000
	59.7368 - 57.8947		165.15	523.95	0.315	0.00	523.95	0.000
	57.8947 - 56.0526		187.04	533.31	0.351	0.00	533.31	0.000
	56.0526 - 54.2105		209.16	542.71	0.385	0.00	542.71	0.000
	54.2105 - 52.3684		231.50	552.13	0.419	0.00	552.13	0.000
	52.3684 - 50.5263		254.06	561.59	0.452	0.00	561.59	0.000
	50.5263 - 48.6842		276.85	571.07	0.485	0.00	571.07	0.000
	48.6842 - 46.8421		299.86	580.58	0.516	0.00	580.58	0.000
	46.8421 - 45		323.14	590.12	0.548	0.00	590.12	0.000

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	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

Section No.	Elevation ft	Size	$M_{ux}$	$\phi M_{rx}$	Ratio	$M_{uy}$	$\phi M_{ry}$	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{rx}}$	kip-ft	kip-ft	$\frac{M_{uy}}{\phi M_{ry}}$
L2	45 - 41.5	TP33.47x26.8068x0.25	162.15	608.30	0.267	0.00	608.30	0.000
	45 - 41.5		205.87	869.13	0.237	0.00	869.13	0.000
	41.5 - 39.3158		396.45	887.16	0.447	0.00	887.16	0.000
	39.3158 - 37.1316		425.19	905.30	0.470	0.00	905.30	0.000
	37.1316 - 34.9474		454.22	923.56	0.492	0.00	923.56	0.000
	34.9474 - 32.7632		483.53	941.91	0.513	0.00	941.91	0.000
	32.7632 - 30.5789		513.14	960.37	0.534	0.00	960.37	0.000
	30.5789 - 28.3947		543.02	978.93	0.555	0.00	978.93	0.000
	28.3947 - 26.2105		573.18	997.58	0.575	0.00	997.58	0.000
	26.2105 - 24.0263		603.61	1016.33	0.594	0.00	1016.33	0.000
	24.0263 - 21.8421		634.31	1035.18	0.613	0.00	1035.18	0.000
	21.8421 - 19.6579		665.28	1054.11	0.631	0.00	1054.11	0.000
	19.6579 - 17.4737		696.51	1073.13	0.649	0.00	1073.13	0.000
	17.4737 - 15.2895		727.99	1092.23	0.667	0.00	1092.23	0.000
	15.2895 - 13.1053		759.73	1111.43	0.684	0.00	1111.43	0.000
	13.1053 - 10.9211		791.72	1130.69	0.700	0.00	1130.69	0.000
	10.9211 - 8.73684		823.95	1150.03	0.716	0.00	1150.03	0.000
	8.73684 - 6.55263		856.42	1169.45	0.732	0.00	1169.45	0.000
	6.55263 - 4.36842		889.13	1188.94	0.748	0.00	1188.94	0.000
	4.36842 - 2.18421		922.06	1208.51	0.763	0.00	1208.51	0.000
2.18421 - 0	955.23	1228.13	0.778	0.00	1228.13	0.000		

### Pole Shear Design Data

Section No.	Elevation ft	Size	Actual $V_u$	$\phi V_n$	Ratio	Actual $T_u$	$\phi T_n$	Ratio
			K	K	$\frac{V_u}{\phi V_n}$	kip-ft	kip-ft	$\frac{T_u}{\phi T_n}$
L1	80 - 78.1579	TP27.7x22x0.1875	1.31	466.55	0.003	0.12	849.11	0.000
	78.1579 - 76.3158		4.51	470.50	0.010	0.61	866.96	0.001
	76.3158 - 74.4737		4.64	474.42	0.010	0.61	884.92	0.001
	74.4737 - 72.6316		4.76	478.29	0.010	0.61	902.96	0.001
	72.6316 - 70.7895		4.88	482.12	0.010	0.61	921.10	0.001
	70.7895 - 68.9474		5.28	485.90	0.011	0.61	939.33	0.001
	68.9474 - 68.9474		5.40	489.64	0.011	0.61	957.63	0.001

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	<b>Project</b>	80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b>	10:03:37 06/14/21
	<b>Client</b>	Verizon Wireless	<b>Designed by</b>	TJL

Section No.	Elevation ft	Size	Actual $V_u$ K	$\phi V_n$ K	Ratio $\frac{V_u}{\phi V_n}$	Actual $T_u$ kip-ft	$\phi T_n$ kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	67.1053							
	67.1053 - 65.2632		11.28	493.33	0.023	0.61	976.02	0.001
	65.2632 - 63.4211		11.41	496.98	0.023	0.07	994.50	0.000
	63.4211 - 61.5789		11.58	500.59	0.023	0.42	1013.04	0.000
	61.5789 - 59.7368		11.71	504.15	0.023	0.42	1031.67	0.000
	59.7368 - 57.8947		11.83	507.67	0.023	0.42	1050.36	0.000
	57.8947 - 56.0526		11.95	511.14	0.023	0.42	1069.12	0.000
	56.0526 - 54.2105		12.07	514.57	0.023	0.42	1087.94	0.000
	54.2105 - 52.3684		12.19	517.96	0.024	0.42	1106.83	0.000
	52.3684 - 50.5263		12.32	521.30	0.024	0.42	1125.77	0.000
	50.5263 - 48.6842		12.44	524.60	0.024	0.42	1144.77	0.000
	48.6842 - 46.8421		12.58	527.86	0.024	0.81	1163.82	0.001
	46.8421 - 45 - 41.5		12.70	531.07	0.024	0.81	1182.92	0.001
	45 - 41.5		5.78	537.05	0.011	0.36	1219.33	0.000
L2	45 - 41.5	TP33.47x26.8068x0.25	7.18	781.59	0.009	0.45	1742.79	0.000
	41.5 - 39.3158		13.10	788.31	0.017	0.81	1778.93	0.000
	39.3158 - 37.1316		13.23	794.96	0.017	0.81	1815.28	0.000
	37.1316 - 34.9474		13.37	801.56	0.017	0.81	1851.85	0.000
	34.9474 - 32.7632		13.50	808.09	0.017	0.81	1888.63	0.000
	32.7632 - 30.5789		13.63	814.56	0.017	0.81	1925.62	0.000
	30.5789 - 28.3947		13.76	820.96	0.017	0.81	1962.80	0.000
	28.3947 - 26.2105		13.88	827.31	0.017	0.81	2000.18	0.000
	26.2105 - 24.0263		14.01	833.59	0.017	0.81	2037.74	0.000
	24.0263 - 21.8421		14.13	839.81	0.017	0.81	2075.50	0.000
	21.8421 - 19.6579		14.25	845.97	0.017	0.81	2113.43	0.000
	19.6579 - 17.4737		14.37	852.07	0.017	0.81	2151.53	0.000
	17.4737 - 15.2895		14.49	858.11	0.017	0.81	2189.81	0.000
	15.2895 - 13.1053		14.60	864.08	0.017	0.81	2228.25	0.000
	13.1053 - 10.9211		14.72	869.99	0.017	0.81	2266.85	0.000
	10.9211 - 8.73684		14.83	875.84	0.017	0.81	2305.60	0.000
	8.73684 - 6.55263		14.94	881.63	0.017	0.81	2344.51	0.000
	6.55263 - 4.36842		15.05	887.36	0.017	0.81	2383.56	0.000
	4.36842 -		15.15	893.02	0.017	0.81	2422.74	0.000

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	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

Section No.	Elevation ft	Size	Actual $V_u$ K	$\phi V_n$ K	Ratio $\frac{V_u}{\phi V_n}$	Actual $T_u$ kip-ft	$\phi T_n$ kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	2.18421							
	2.18421 - 0		15.25	898.63	0.017	0.81	2462.07	0.000

### Pole Interaction Design Data

Section No.	Elevation ft	Ratio $P_u$ $\phi P_n$	Ratio $M_{ux}$ $\phi M_{nx}$	Ratio $M_{uy}$ $\phi M_{ny}$	Ratio $V_u$ $\phi V_n$	Ratio $T_u$ $\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	80 - 78.1579	0.001	0.023	0.000	0.003	0.000	0.024	1.000	4.8.2 ✓
	78.1579 - 76.3158	0.003	0.035	0.000	0.010	0.001	0.038	1.000	4.8.2 ✓
	76.3158 - 74.4737	0.003	0.053	0.000	0.010	0.001	0.057	1.000	4.8.2 ✓
	74.4737 - 72.6316	0.003	0.072	0.000	0.010	0.001	0.075	1.000	4.8.2 ✓
	72.6316 - 70.7895	0.003	0.090	0.000	0.010	0.001	0.093	1.000	4.8.2 ✓
	70.7895 - 68.9474	0.004	0.107	0.000	0.011	0.001	0.111	1.000	4.8.2 ✓
	68.9474 - 67.1053	0.004	0.126	0.000	0.011	0.001	0.130	1.000	4.8.2 ✓
	67.1053 - 65.2632	0.006	0.164	0.000	0.023	0.001	0.171	1.000	4.8.2 ✓
	65.2632 - 63.4211	0.006	0.203	0.000	0.023	0.000	0.210	1.000	4.8.2 ✓
	63.4211 - 61.5789	0.007	0.242	0.000	0.023	0.000	0.249	1.000	4.8.2 ✓
	61.5789 - 59.7368	0.007	0.279	0.000	0.023	0.000	0.286	1.000	4.8.2 ✓
	59.7368 - 57.8947	0.007	0.315	0.000	0.023	0.000	0.322	1.000	4.8.2 ✓
	57.8947 - 56.0526	0.007	0.351	0.000	0.023	0.000	0.358	1.000	4.8.2 ✓
	56.0526 - 54.2105	0.007	0.385	0.000	0.023	0.000	0.393	1.000	4.8.2 ✓
	54.2105 - 52.3684	0.007	0.419	0.000	0.024	0.000	0.427	1.000	4.8.2 ✓
	52.3684 - 50.5263	0.007	0.452	0.000	0.024	0.000	0.460	1.000	4.8.2 ✓
	50.5263 - 48.6842	0.007	0.485	0.000	0.024	0.000	0.493	1.000	4.8.2 ✓
	48.6842 - 46.8421	0.007	0.516	0.000	0.024	0.001	0.524	1.000	4.8.2 ✓
	46.8421 - 45	0.007	0.548	0.000	0.024	0.001	0.556	1.000	4.8.2 ✓
	45 - 41.5	0.003	0.267	0.000	0.011	0.000	0.270	1.000	4.8.2 ✓



<b>tnxTower</b>  <b>Centek Engineering Inc.</b> 63-2 North Branford Rd. Branford, CT 06405 Phone: (203) 488-0580 FAX: (203) 488-8587	<b>Job</b> 21007.08 - Simsbury NW	<b>Page</b> 22 of 23
	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
	<b>Client</b> Verizon Wireless	<b>Designed by</b> TJL

Section No.	Elevation ft	Ratio $P_u$	Ratio $M_{ux}$	Ratio $M_{uy}$	Ratio $V_u$	Ratio $T_u$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L2	45 - 41.5	0.003	0.237	0.000	0.009	0.000	0.240	1.000	4.8.2 ✓
	41.5 - 39.3158	0.006	0.447	0.000	0.017	0.000	0.453	1.000	4.8.2 ✓
	39.3158 - 37.1316	0.006	0.470	0.000	0.017	0.000	0.476	1.000	4.8.2 ✓
	37.1316 - 34.9474	0.006	0.492	0.000	0.017	0.000	0.498	1.000	4.8.2 ✓
	34.9474 - 32.7632	0.006	0.513	0.000	0.017	0.000	0.519	1.000	4.8.2 ✓
	32.7632 - 30.5789	0.006	0.534	0.000	0.017	0.000	0.541	1.000	4.8.2 ✓
	30.5789 - 28.3947	0.006	0.555	0.000	0.017	0.000	0.561	1.000	4.8.2 ✓
	28.3947 - 26.2105	0.006	0.575	0.000	0.017	0.000	0.581	1.000	4.8.2 ✓
	26.2105 - 24.0263	0.006	0.594	0.000	0.017	0.000	0.600	1.000	4.8.2 ✓
	24.0263 - 21.8421	0.006	0.613	0.000	0.017	0.000	0.619	1.000	4.8.2 ✓
	21.8421 - 19.6579	0.007	0.631	0.000	0.017	0.000	0.638	1.000	4.8.2 ✓
	19.6579 - 17.4737	0.007	0.649	0.000	0.017	0.000	0.656	1.000	4.8.2 ✓
	17.4737 - 15.2895	0.007	0.667	0.000	0.017	0.000	0.674	1.000	4.8.2 ✓
	15.2895 - 13.1053	0.007	0.684	0.000	0.017	0.000	0.691	1.000	4.8.2 ✓
	13.1053 - 10.9211	0.007	0.700	0.000	0.017	0.000	0.707	1.000	4.8.2 ✓
	10.9211 - 8.73684	0.007	0.716	0.000	0.017	0.000	0.724	1.000	4.8.2 ✓
	8.73684 - 6.55263	0.007	0.732	0.000	0.017	0.000	0.740	1.000	4.8.2 ✓
	6.55263 - 4.36842	0.007	0.748	0.000	0.017	0.000	0.755	1.000	4.8.2 ✓
	4.36842 - 2.18421	0.007	0.763	0.000	0.017	0.000	0.771	1.000	4.8.2 ✓
	2.18421 - 0	0.008	0.778	0.000	0.017	0.000	0.786	1.000	4.8.2 ✓

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail
L1	80 - 41.5	Pole	TP27.7x22x0.1875	1	-7.86	1062.14	55.6	Pass
L2	41.5 - 0	Pole	TP33.47x26.8068x0.25	2	-13.66	1797.25	78.6	Pass

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	<b>Project</b> 80' PennSummit Monopole - 344 Firetown Rd., Simsbury, CT	<b>Date</b> 10:03:37 06/14/21
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Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail	
							Summary		
							Pole (L2)	78.6	Pass
							<b>RATING =</b>	<b>78.6</b>	<b>Pass</b>

Program Version 8.1.1.0 - 6/3/2021 File:J:/Jobs/2100700.WI/08\_Simsbury SW/05\_Structural/Backup Documentation/ERI Files/80' PennSummit Monopole Simsbury.eri

**Anchor Bolt and Base Plate Analysis:**

**Input Data:**

Tower Reactions:

Overturing Moment =	OM := 955-ft-kips	(Input From trnTower)
Shear Force =	Shear := 15-kips	(Input From trnTower)
Axial Force =	Axial := 14-kips	(Input From trnTower)

Anchor Bolt Data:

ASTMA615 Grade 75

Number of Anchor Bolts =	N := 8	(User Input)
Bolt "Column" Distance =	l := 3.0-in	(User Input)
Bolt Ultimate Strength =	F <sub>u</sub> := 100-ksi	(User Input)
Bolt Yield Strength =	F <sub>y</sub> := 75-ksi	(User Input)
Bolt Modulus =	E := 29000-ksi	(User Input)
Diameter of Anchor Bolts =	D := 2.25-in	(User Input)
Threads per Inch =	n := 4.5	(User Input)
Top of Concrete to Bot Leveling Nut =	l <sub>ar</sub> := 2-in	(User Input)

Base Plate Data:

UseASTMA572 Grade 60

Plate Yield Strength =	F <sub>ybp</sub> := 60-ksi	(User Input)
Base Plate Thickness =	t <sub>bp</sub> := 2.0-in	(User Input)
Base Plate Diameter =	D <sub>bp</sub> := 38.0-in	(User Input)
Outer Pole Diameter =	D <sub>pole</sub> := 33.47-in	(User Input)
	η := 0.5	per TIA-222-G Section 4.9.9

**Geometric Layout Data:**

Distance from Bolts to Centroid of Pole:

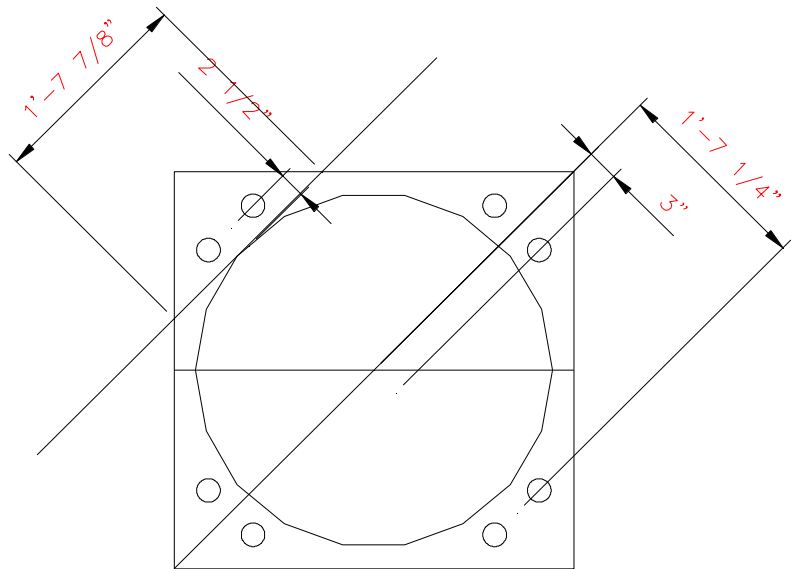
$d_1 := 19.25\text{in}$      $d_2 := 3\text{in}$     (User Input)

Critical Distances For Bending in Plate:

$ma_1 := 2.5\text{in}$     (User Input)

Effective Width of Baseplate for Bending =

$B_{\text{eff}} := 19.875\text{in}$     (User Input)



**Anchor Bolt Analysis:**

Calculated Anchor Bolt Properties:

Polar Moment of Inertia =  $I_p := [(d_1)^2 \cdot 4 + (d_2)^2 \cdot 4] = 1518.3 \cdot \text{in}^2$

Gross Area of Bolt =  $A_g := \frac{\pi}{4} \cdot D^2 = 3.976 \cdot \text{in}^2$

Net Area of Bolt =  $A_n := \frac{\pi}{4} \cdot \left( D - \frac{0.9743 \cdot \text{in}}{n} \right)^2 = 3.248 \cdot \text{in}^2$

Net Diameter =  $D_n := \frac{2 \cdot \sqrt{A_n}}{\sqrt{\pi}} = 2.033 \cdot \text{in}$

Radius of Gyration of Bolt =  $r := \frac{D_n}{4} = 0.508 \cdot \text{in}$

Section Modulus of Bolt =  $S_x := \frac{\pi \cdot D_n^3}{32} = 0.826 \cdot \text{in}^3$

Tensile Root Diameter =  $d_{rt} := D - \frac{0.9743 \cdot \text{in}}{n} = 2.033 \cdot \text{in}$

Plastic Section Modulus =  $Z := \frac{d_{rt}^3}{6} = 1.401 \cdot \text{in}^3$

Check Anchor Bolt Tension Force:

Maximum Tensile Force =  $T_{Max} := OM \cdot \frac{d_1}{I_p} - \frac{Axial}{N} = 143.6 \cdot \text{kips}$

Maximum Compressive Force =  $P_u := OM \cdot \frac{d_1}{I_p} + \frac{Axial}{N} = 147.1 \cdot \text{kips}$

Maximum Shear Force =  $V_u := \frac{Shear}{N} = 1.9 \cdot \text{kips}$

Design Tensile Strength =  $\Phi R_{nt} := 0.8 \cdot F_u \cdot A_n = 259.815 \cdot \text{k}$

Bolt % of Capacity =  $\frac{\left( P_u + \frac{V_u}{\eta} \right)}{\Phi R_{nt}} \cdot 100 = 58$

Condition1 =  $\text{Condition1} := \text{if} \left[ \frac{\left( P_u + \frac{V_u}{\eta} \right)}{\Phi R_{nt}} \leq 1.00, "OK", "Overstressed" \right]$

Condition1 = "OK"

**Base Plate Analysis:**

Force from Bolts =  $C_1 := \frac{OM \cdot d_1}{I_p} + \frac{Axial}{N} = 147.052 \text{ kips}$

$C_2 := \frac{OM \cdot d_2}{I_p} + \frac{Axial}{N} = 24.394 \text{ kips}$

Applied Bending Stress in Plate =  $f_{bp} := \frac{4(2 \cdot C_1 \cdot m a_1)}{B_{eff} t_{bp}^2} = 36.99 \text{ ksi}$

Allowable Bending Stress in Plate =  $F_{bp} := 0.9 \cdot F_y = 54 \text{ ksi}$

Plate Bending Stress % of Capacity =  $\frac{f_{bp}}{F_{bp}} = 68.5\%$

Condition2 =  $\text{if} \left( \frac{f_{bp}}{F_{bp}} < 1.00, \text{"Ok"}, \text{"Overstressed"} \right)$

Condition2 = "Ok"

**Standard Monopole Foundation:**

**Input Data:**

Tower Data

Overturing Moment =	OM := 955-ft-kips	(User Input)
Shear Force =	Shear := 15-kip	(User Input)
Axial Force =	Axial := 14-kip	(User Input)
Tower Height =	H <sub>t</sub> := 80-ft	(User Input)

Footing Data:

Overall Depth of Footing =	D <sub>f</sub> := 6-ft	(User Input)
Length of Pier =	L <sub>p</sub> := 3.5-ft	(User Input)
Extension of Pier Above Grade =	L <sub>pag</sub> := 0.5-ft	(User Input)
Diameter of Pier =	d <sub>p</sub> := 5.0-ft	(User Input)
Thickness of Footing =	T <sub>f</sub> := 3.0-ft	(User Input)
Width of Footing =	W <sub>f</sub> := 17.0-ft	(User Input)

Anchor Bolt Data:

Length of Anchor Bolts =	L <sub>st</sub> := 84-in	(User Input)
Projection of Anchor Bolts Above Pier =	A <sub>BP</sub> := 12.0-in	(User Input)
Anchor Bolt Diameter =	d <sub>anchor</sub> := 2.25-in	(User Input)
Base Plate Bolt Circle =	MP := 39-in	(User Input)

Material Properties:

Concrete Compressive Strength =	f <sub>c</sub> := 3000-psi	(User Input)
Steel Reinforcement Yield Strength =	f <sub>y</sub> := 60000-psi	(User Input)
Anchor Bolt Yield Strength =	f <sub>ya</sub> := 75000-psi	(User Input)
Internal Friction Angle of Soil =	Φ <sub>s</sub> := 30-deg	(User Input)
Ultimate Soil Bearing Capacity =	q <sub>u</sub> := 6000-psf	(User Input)
Allowable Soil Bearing Capacity =	q <sub>a</sub> := $\frac{q_u}{2}$ = 3000-psf	(User Input)
Unit Weight of Soil =	γ <sub>soil</sub> := 100-pcf	(User Input)
Unit Weight of Concrete =	γ <sub>conc</sub> := 150-pcf	(User Input)
Foundation Bouyancy =	Bouyancy := 0	(User Input) (Yes=1 / No=0)
Depth to Neglect =	n := 0-ft	(User Input)
Cohesion of Clay Type Soil =	c := 0-ksf	(User Input) (Use 0 for Sandy Soil)
Seismic Zone Factor =	Z := 2	(User Input) (UBC-1997 Fig 23-2)
Coefficient of Friction Between Concrete =	μ := 0.45	(User Input)

Pier Reinforcement

Bar Size =	$BS_{\text{pier}} := 11$	(User Input)	
Bar Diameter =	$d_{\text{bpier}} := 1.41 \cdot \text{in}$	(User Input)	
Number of Bars =	$NB_{\text{pier}} := 12$	(User Input)	
Clear Cover of Reinforcement =	$Cvr_{\text{pier}} := 3 \cdot \text{in}$	(User Input)	
Reinforcement Location Factor =	$\alpha_{\text{pier}} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Coating Factor =	$\beta_{\text{pier}} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Concrete Strength Factor =	$\lambda_{\text{pier}} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Reinforcement Size Factor =	$\gamma_{\text{pier}} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Diameter of Tie =	$d_{\text{Tie}} := 0.5 \cdot \text{in}$	(User Input)	

Pad Reinforcement

Bar Size =	$BS_{\text{top}} := 8$	(User Input)	(Top of Pad)
Bar Diameter =	$d_{\text{btop}} := 1.00 \cdot \text{in}$	(User Input)	(Top of Pad)
Number of Bars =	$NB_{\text{top}} := 17$	(User Input)	(Top of Pad)
Bar Size =	$BS_{\text{bot}} := 8$	(User Input)	(Bottom of Pad)
Bar Diameter =	$d_{\text{bbot}} := 1.00 \cdot \text{in}$	(User Input)	(Bottom of Pad)
Number of Bars =	$NB_{\text{bot}} := 17$	(User Input)	(Bottom of Pad)
Clear Cover of Reinforcement =	$Cvr_{\text{pad}} := 3.0 \cdot \text{in}$	(User Input)	
Reinforcement Location Factor =	$\alpha_{\text{pad}} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Coating Factor =	$\beta_{\text{pad}} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Concrete Strength Factor =	$\lambda_{\text{pad}} := 1.0$	(User Input)	(ACI-2008 12.2.4)
Reinforcement Size Factor =	$\gamma_{\text{pad}} := 1.0$	(User Input)	(ACI-2008 12.2.4)

**Calculated Factors:**

Pier Reinforcement Bar Area =	$A_{\text{bpier}} := \frac{\pi \cdot d_{\text{bpier}}^2}{4} = 1.561 \cdot \text{in}^2$
Pad Top Reinforcement Bar Area =	$A_{\text{btop}} := \frac{\pi \cdot d_{\text{btop}}^2}{4} = 0.785 \cdot \text{in}^2$
Pad Bottom Reinforcement Bar Area =	$A_{\text{bbot}} := \frac{\pi \cdot d_{\text{bbot}}^2}{4} = 0.785 \cdot \text{in}^2$
Coefficient of Lateral Soil Pressure =	$K_p := \frac{1 + \sin(\Phi_s)}{1 - \sin(\Phi_s)} = 3$



**Stability of Footing:**

Adjusted Concrete Unit Weight =

$$\gamma_c := \text{if}(\text{Bouyancy} = 1, \gamma_{\text{conc}} - 62.4\text{pcf}, \gamma_{\text{conc}}) = 150\text{-pcf}$$

Adjusted Soil Unit Weight =

$$\gamma_s := \text{if}(\text{Bouyancy} = 1, \gamma_{\text{soil}} - 62.4\text{pcf}, \gamma_{\text{soil}}) = 100\text{-pcf}$$

Passive Pressure =

$$P_{pn} := K_p \cdot \gamma_s \cdot n + c \cdot 2 \cdot \sqrt{K_p} = 0\text{-ksf}$$

$$P_{pt} := K_p \cdot \gamma_s \cdot (D_f - T_f) + c \cdot 2 \cdot \sqrt{K_p} = 0.9\text{-ksf}$$

$$P_{top} := \text{if}[n < (D_f - T_f), P_{pt}, P_{pn}] = 0.9\text{-ksf}$$

$$P_{bot} := K_p \cdot \gamma_s \cdot D_f + c \cdot 2 \cdot \sqrt{K_p} = 1.8\text{-ksf}$$

$$P_{ave} := \frac{P_{top} + P_{bot}}{2} = 1.35\text{-ksf}$$

$$T_p := \text{if}[n < (D_f - T_f), T_f, (D_f - n)] = 3$$

$$A_p := W_f \cdot T_p = 51$$

Ultimate Shear =

$$S_u := P_{ave} \cdot A_p = 68.85\text{-kip}$$

Weight of Concrete Pad =

$$WT_c := \left[ (W_f^2 \cdot T_f) + d_p^2 \cdot L_p \right] \cdot \gamma_c = 143.175\text{-kip}$$

Weight of Soil Above Footing =

$$WT_{s1} := \left[ (W_f^2 - d_p^2) \cdot (L_p - L_{pag} - n) \right] \cdot \gamma_s = 79.2\text{-kip}$$

Weight of Soil Wedge at Back Face =

$$WT_{s2} := \left( \frac{D_f^2 \cdot \tan(\phi_s)}{2} \cdot W_f \right) \cdot \gamma_s = 17.667\text{-kip}$$

Weight of Soil Wedge at back face Corners =

$$WT_{s3} := 2 \cdot \left[ (D_f)^3 \cdot \frac{\tan(\phi_s)}{3} \right] \cdot \gamma_s = 8.314\text{-kips}$$

Total Weight =

$$WT_{tot} := WT_c + WT_{s1} + \text{Axial} = 236.375\text{-kip}$$

Resisting Weight =

$$WT_R := 0.9 \cdot WT_c + 0.75 \cdot WT_{s1} + 0.75 \cdot \text{Axial} = 198.758\text{-kip}$$

Resisting Moment =

$$M_r := (WT_R) \cdot \frac{W_f}{2} + 0.75 \cdot S_u \cdot \frac{T_f}{3} + 0.75 \cdot \left[ (WT_{s2} + WT_{s3}) \cdot \left( W_f + \frac{D_f \cdot \tan(\phi_s)}{3} \right) \right] = 2095\text{-kip-ft}$$

Overturing Moment =

$$M_{ot} := \text{OM} + \text{Shear} \cdot (L_p + T_f) = 1053\text{-kip-ft}$$

Factor of Safety Actual =

$$FS := \frac{M_r}{M_{ot}} = 1.99$$

Factor of Safety Required =

$$FS_{req} := 1$$

$$\text{OverTurning\_Moment\_Check} := \text{if}(FS \geq FS_{req}, \text{"Okay"}, \text{"No Good"})$$

$$\text{OverTurning\_Moment\_Check} = \text{"Okay"}$$

**Shear Capacity in Pier:**

Shear Resistance of Pier =

$$S_p := \frac{P_{ave} \cdot A_p + \mu \cdot WT_{tot}}{FS_{req}} = 175.219 \text{ kips}$$

$$\text{Shear\_Check} := \text{if}(S_p > \text{Shear}, \text{"Okay"}, \text{"No Good"})$$

Shear\_Check = "Okay"

**Bearing Pressure Caused by Footing:**

Area of the Mat =

$$A_{mat} := W_f^2 = 289$$

Section Modulus of Mat =

$$S := \frac{W_f^3}{6} = 818.83 \text{ ft}^3$$

Maximum Pressure in Mat =

$$P_{max} := \frac{WT_{tot}}{A_{mat}} + \frac{M_{ot}}{S} = 2.103 \text{ ksf}$$

$$\text{Max\_Pressure\_Check} := \text{if}(P_{max} < .75 \cdot q_u, \text{"Okay"}, \text{"No Good"})$$

Max\_Pressure\_Check = "Okay"

Minimum Pressure in Mat =

$$P_{min} := \frac{WT_{tot}}{A_{mat}} - \frac{M_{ot}}{S} = -0.467 \text{ ksf}$$

$$\text{Min\_Pressure\_Check} := \text{if}((P_{min} \geq 0) \cdot (P_{min} < .75 \cdot q_u), \text{"Okay"}, \text{"No Good"})$$

Min\_Pressure\_Check = "No Good"

Distance to Resultant of Pressure Distribution =

$$X_p := \frac{P_{max}}{P_{max} - P_{min}} \cdot \frac{1}{3} = 4.636$$

Distance to Kern =

$$X_k := \frac{W_f}{6} = 2.833$$

Since Resultant Force is Not in Kern, Area to which Pressure is Applied Must be Reduced.

Eccentricity =

$$e := \frac{M_{ot}}{WT_{tot}} = 4.453$$

Adjusted Soil Pressure =

$$P_a := \frac{2 \cdot WT_{tot}}{3 \cdot W_f \left( \frac{W_f}{2} - e \right)} = 2.29 \text{ ksf}$$

$$q_{adj} := \text{if}(P_{min} < 0, P_a \cdot P_{max}) = 2.29 \text{ ksf}$$

$$\text{Pressure\_Check} := \text{if}(q_{adj} < .75 \cdot q_u, \text{"Okay"}, \text{"No Good"})$$

Pressure\_Check = "Okay"

**Concrete Bearing Capacity:**

Strength Reduction Factor =

$$\Phi_c := 0.65 \quad (\text{ACI-2008 9.3.2.2})$$

Bearing Strength Between Pier and Pad =

$$P_b := \Phi_c \cdot 0.85 \cdot f_c \cdot \frac{\pi \cdot d_p^2}{4} = 4.686 \times 10^3 \text{ kips} \quad (\text{ACI-2008 10.14})$$

$$\text{Bearing\_Check} := \text{if}(P_b > \text{Axial}, \text{"Okay"}, \text{"No Good"})$$

Bearing\_Check = "Okay"

**Shear Strength of Concrete:**

Beam Shear:

(Critical section located at a distance d from the face of Pier) (ACI 11.3.1.1)

$$\Phi_c := 0.85 \quad (\text{ACI 9.3.2.5})$$

$$d := T_f - C_{vr\_pad} - d_{bot} = 2.667$$

$$d_1 := \frac{W_f}{2} - \frac{d_p}{2}$$

$$d_2 := d_1 - d$$

$$L := \left( \frac{W_f}{2} - e \right) \cdot 3$$

$$\text{Slope} := \text{if} \left( L > W_f, \frac{P_{\max} - P_{\min}}{W_f}, \frac{q_{adj}}{L} \right)$$

$$V_{req} := \left[ (q_{adj} - \text{Slope} \cdot d_1) + \left( \frac{\text{Slope} \cdot d_1}{2} \right) \right] \cdot W_f \cdot d_1$$

$$V_{Avail} := \Phi_c \cdot 2 \cdot \sqrt{f_c \cdot \psi} \cdot W_f \cdot d \quad (\text{ACI-2008 11.2.1.1})$$

$$\text{Beam\_Shear\_Check} := \text{if}(V_{req} < V_{Avail}, \text{"Okay"}, \text{"No Good"})$$

Beam\_Shear\_Check = "Okay"

Punching Shear:

(Critical Section Located at a distance of d/2 from the face of pier) (ACI 11.11.1.2)

Critical Perimeter of Punching Shear =

$$b_o := (d_p + d) \cdot \pi = 24.1$$

Area Included Inside Perimeter =

$$A_{bo} := \frac{\pi \cdot (d_p + d)^2}{4} = 46.2$$

Area Outside of Perimeter =

$$A_{out} := A_{mat} - A_{bo} = 242.8$$

Guess Value =

$$v_u := 1 \text{ksf}$$

(From "Foundation Analysis and design", By Joseph Bowles, Eq. 8-9)

Given

$$d^2 + d_p \cdot d = \frac{W_{T_{tot}}}{\pi \cdot v_u}$$

$$v_u := \text{Find}(v_u) = 3.7 \cdot \text{ksf}$$

$$V_u := v_u \cdot d \cdot W_f = 166.8 \cdot \text{kips}$$

Required Shear Strength =

$$V_{req} := V_u = 166.8 \cdot \text{kips}$$

Available Shear Strength =

$$V_{Avail} := \phi_c \cdot 4 \cdot \sqrt{f_c \cdot \text{psi}} \cdot b_o \cdot d = 1722.4 \cdot \text{kip} \quad (\text{ACI-2008 11.11.2.1})$$

$$\text{Punching\_Shear\_Check} := \text{if}(V_{req} < V_{Avail}, \text{"Okay"}, \text{"No Good"})$$

$$\text{Punching\_Shear\_Check} = \text{"Okay"}$$

### Steel Reinforcement in Pad:

Required Reinforcement for Bending:

Strength Reduction Factor =

$$\phi_m := .90 \quad (\text{ACI-2008 9.3.2.1})$$

$$q_b := q_{adj} - d_1 \cdot \text{Slope} = 1.159 \cdot \text{ksf}$$

Maximum Bending at Face of Pier =

$$M_n := \frac{1}{\phi_m} \cdot \left[ (q_{adj} - q_b) \cdot \frac{d_1^2}{3} + q_b \cdot \frac{d_1^2}{2} \right] \cdot W_f = 650.4 \cdot \text{kip-ft}$$

$$\beta := \begin{cases} 0.85 & \text{if } 2500 \cdot \text{psi} \leq f_c \leq 4000 \cdot \text{psi} \\ 0.65 & \text{if } f_c > 8000 \cdot \text{psi} \end{cases} = 0.85$$

$$\left[ \left[ \left[ \left[ \frac{f_c}{\text{psi}} - 4000 \right] \right] \right] \cdot 0.5 \right] \text{ otherwise} \quad (\text{ACI-2008 10.2.7.3})$$

$$R_n := \frac{M_n}{W_f \cdot d^2} = 37.4 \cdot \text{psi}$$

$$\rho := \frac{0.85 \cdot f_c}{f_y} \left( 1 - \sqrt{1 - \frac{2 \cdot R_n}{0.85 \cdot f_c}} \right) = 0.0006$$

$$\rho_{min} := \rho = 0.00063$$

Required Reinforcement for Temperature and Shrinkage:

$$\rho_{sh} := \begin{cases} .0018 & \text{if } f_y \geq 60000 \text{ psi} \\ .0020 & \text{otherwise} \end{cases} \quad (\text{ACI-2008 7.12.2.1})$$

Check Bottom Bars:

$$A_s := \begin{cases} \rho_{min} \cdot W_f \cdot d & \text{if } \rho_{min} > \frac{\rho_{sh}}{2} = 5.875 \cdot \text{in}^2 \\ \rho_{sh} \cdot W_f \cdot \frac{d}{2} & \text{otherwise} \end{cases}$$

$$A_{s\_prov} := A_{bbot} \cdot NB_{bot} = 13.4 \cdot \text{in}^2$$

$$\text{Pad\_Reinforcement\_Bot} := \text{if}(A_{s\_prov} > A_s, \text{"Okay"}, \text{"No Good"})$$

Pad\_Reinforcement\_Bot = "Okay"

Check top Bars:

$$A_s := \rho_{sh} \cdot \left( W_f \cdot \frac{d}{2} \right) = 5.9 \cdot \text{in}^2$$

$$A_{s\_prov} := A_{btop} \cdot NB_{top} = 13.4 \cdot \text{in}^2$$

$$\text{Pad\_Reinforcement\_Top} := \text{if}(A_{s\_prov} > A_s, \text{"Okay"}, \text{"No Good"})$$

Pad\_Reinforcement\_Top = "Okay"

**Development Length Pad Reinforcement:**

Bar Spacing =

$$B_{sPad} := \frac{W_f - 2 \cdot C_{vr\_pad} - NB_{bot} \cdot d_{bbot}}{NB_{bot} - 1} = 11.31 \cdot \text{in}$$

Spacing or Cover Dimension =

$$c := \text{if} \left( C_{vr\_pad} < \frac{B_{sPad}}{2}, C_{vr\_pad}, \frac{B_{sPad}}{2} \right) = 3 \cdot \text{in}$$

Transverse Reinforcement Index =

$$k_{tr} := 0 \quad (\text{ACI-2008 12.2.3})$$

$$L_{dbt} := \frac{3 \cdot f_y \cdot \alpha_{pad} \cdot \beta_{pad} \cdot \gamma_{pad} \cdot \lambda_{pad}}{40 \cdot \sqrt{f_c \cdot \text{psi}} \cdot \frac{c + k_{tr}}{d_{bbot}}} \cdot d_{bbot} = 27.4 \cdot \text{in}$$

Minimum Development Length =

$$L_{dbmin} := 12 \cdot \text{in} \quad (\text{ACI-2008 12.2.1})$$

$$L_{dbtCheck} := \text{if}(L_{dbt} \geq L_{dbmin}, \text{"Use L.dbt"}, \text{"Use L.dbmin"})$$

Available Length in Pad =

$$L_{Pad} := \frac{W_f}{2} - \frac{d_p}{2} - C_{vr\_pad} = 69 \cdot \text{in}$$

$$L_{pad\_Check} := \text{if}(L_{Pad} > L_{dbt}, \text{"Okay"}, \text{"No Good"})$$

Lpad\_Check = "Okay"

**Steel Reinforcement in Pier:**

Area of Pier =

$$A_p := d_p^2 = 3600 \cdot \text{in}^2$$

$$A_{smin} := 0.01 \cdot 0.5 \cdot A_p = 18 \cdot \text{in}^2 \quad (\text{ACI-2008 10.8.4 \& 10.9.1})$$

$$A_{sprov} := N_{B_{pier}} \cdot A_{B_{pier}} = 18.74 \cdot \text{in}^2$$

$$\text{Steel\_Area\_Check} := \text{if}(A_{sprov} > A_{smin}, \text{"Okay"}, \text{"No Good"})$$

Steel\_Area\_Check = "Okay"

**NOTE:** Anchor Bolts are not accounted for in reinforcement calculation and will provide additional reinforcement to satisfy minimum requirement of steel.

Bar Spacing In Pier =

$$B_{sPier} := \frac{d_p \cdot \pi}{N_{B_{pier}}} - d_{B_{pier}} = 14.298 \cdot \text{in}$$

Diameter of Reinforcement Cage =

$$\text{Diam}_{cage} := d_p - 2 \cdot C_{vr_{pier}} = 54 \cdot \text{in}$$

Maximum Moment in Pier =

$$M_p := \left[ OM + \text{Shear} \cdot \left( L_p + \frac{A_{BP}}{2} \right) \right] = 12180 \cdot \text{in} \cdot \text{kips}$$

Pier Check evaluated from outside program and results are listed below;

$$(D \ N \ n \ P_u \ M_{xu}) := \left( d_p, 12 \ N_{B_{pier}} \ B_{S_{pier}} \ \frac{\text{Axial} \cdot 1.333}{\text{kips}} \ \frac{M_p}{\text{in} \cdot \text{kips}} \right)$$

$$(D \ N \ n \ P_u \ M_{xu}) = (60 \ 12 \ 11 \ 18.7 \ 12180)$$

$$(\phi P_n \ \phi M_{xn} \ f_{sp} \ \rho) := (0 \ 0 \ 0 \ 0)$$

$$(\phi P_n \ \phi M_{xn} \ f_{sp} \ \rho) := \phi P'_n (D, N, n, P_u, M_{xu})^T$$

$$(\phi P_n \ \phi M_{xn} \ f_{sp} \ \rho) = (38.4 \ 25041.5 \ -60 \ 0)$$

$$\text{Axial\_Load\_Check} := \text{if}(\phi P_n \geq P_u, \text{"Okay"}, \text{"No Good"})$$

Axial\_Load\_Check = "Okay"

$$\text{Bending\_Check} := \text{if}(\phi M_{xn} \geq M_{xu}, \text{"Okay"}, \text{"No Good"})$$

Bending\_Check = "Okay"

**Development Length Pier Reinforcement:**

Available Length in Foundation:

$$L_{\text{pier}} := L_p - C_{\text{vr}}_{\text{pier}} = 39 \cdot \text{in}$$

$$L_{\text{pad}} := T_f - C_{\text{vr}}_{\text{pad}} = 33 \cdot \text{in}$$

Tension:

(ACI-2008 12.2.3)

Spacing or Cover Dimension =

$$c := \text{if} \left( C_{\text{vr}}_{\text{pier}} < \frac{B_{\text{sPier}}}{2}, C_{\text{vr}}_{\text{pier}}, \frac{B_{\text{sPier}}}{2} \right) = 3 \cdot \text{in}$$

Transverse Reinforcement =

$$k_{\text{tr}} := 0$$

(ACI-2008 12.2.3)

$$L_{\text{dbt}} := \frac{3 \cdot f_y \cdot \alpha_{\text{pier}} \cdot \beta_{\text{pier}} \cdot \gamma_{\text{pier}} \cdot \lambda_{\text{pier}}}{40 \cdot \sqrt{f_c \cdot \text{psi}} \cdot \left( \frac{c + k_{\text{tr}}}{d_{\text{bpier}}} \right)} \cdot d_{\text{bpier}} = 54.45 \cdot \text{in}$$

Minimum Development Length =

$$L_{\text{dh}} := \frac{1200 \cdot d_{\text{bpier}}}{\sqrt{\frac{f_c}{\text{psi}}}} \cdot .7 = 21.624 \cdot \text{in} \quad (\text{ACI } 12.2.1)$$

Pier reinforcement bars are standard 90 degree hooks and therefore development in the pad is computed as follows:

$$L_{\text{db}} := \max(L_{\text{dbt}}, L_{\text{dbmin}})$$

$$L_{\text{tension\_Check}} := \text{if}(L_{\text{pier}} + L_{\text{pad}} > L_{\text{db}}, \text{"Okay"}, \text{"No Good"})$$

$$L_{\text{tension\_Check}} = \text{"Okay"}$$

Compression:

(ACI-2008 12.3.2)

$$L_{\text{dbc1}} := \frac{.02 \cdot d_{\text{bpier}} \cdot f_y}{\sqrt{f_c \cdot \text{psi}}} = 30.892 \cdot \text{in}$$

$$L_{\text{dbmin}} := 0.0003 \cdot \frac{\text{in}^2}{l_b} \cdot (d_{\text{bpier}} \cdot f_y) = 25.38 \cdot \text{in}$$

$$L_{\text{dbc}} := \text{if}(L_{\text{dbc1}} \geq L_{\text{dbmin}}, L_{\text{dbc1}}, L_{\text{dbmin}}) = 30.892 \cdot \text{in}$$

$$L_{\text{compression\_Check}} := \text{if}(L_{\text{pier}} + L_{\text{pad}} > L_{\text{dbc}}, \text{"Okay"}, \text{"No Good"})$$

$$L_{\text{compression\_Check}} = \text{"Okay"}$$



NORTH EAST > North East > New England > New England West > SIMSBURY NW  
Brauer, Mark - mark.brauer2@verizonwireless.com - 10/30/2020 13:38:13

### Project Details

<b>Carrier Aggregation:</b>	false
<b>MPT Id:</b>	
<b>eCIP-0:</b>	false
<b>Project Name:</b>	5G L-Sub6 - Carrier Add
<b>FUZE Project ID:</b>	16272231
<b>Designed Sector Carrier 4G:</b>	15
<b>Designed Sector Carrier 5G:</b>	N/A
<b>Additional Sector Carrier 4G:</b>	N/A
<b>Additional Sector Carrier 5G:</b>	N/A
<b>SiteTraker Project Id:</b>	
<b>FP Solution Type &amp; Tech Type:</b>	MODIFICATION;5G_L-Sub6-Prep,5G_Radio Swap
<b>RFDS Project Scope:</b>	sub 6 add Samsung RRH upgrade 850/PCS add Antenna upgrade for 4tx/Rx
<b>Suffix:</b>	

### Location Information

<b>Site ID:</b>	2163663
<b>E-NodeB ID:</b>	068536
<b>PSLC:</b>	467889
<b>Switch Name:</b>	Windsor 1
<b>Tower Owner:</b>	
<b>Tower Type:</b>	Self Support (Lattice Tower)
<b>Site Type:</b>	MACRO
<b>Street Address:</b>	344 Firetown Rd
<b>City:</b>	Simsbury
<b>State:</b>	CT
<b>Zip Code:</b>	06070
<b>County:</b>	Hartford
<b>Latitude:</b>	41.903186 / 41° 54' 11.4696" N
<b>Longitude:</b>	-72.821338 / 72° 49' 16.8168" W



## Antenna Summary

<b>Added</b>																			
700	850	1900	AWS	AW53	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
	LTE	LTE	LTE								COMMSCOPE	NHH-65B-R2B	67	70	30(D1) 150(D2) 270(D3)	true	true	PHYSICAL	6
											TBD	nL-Sub6 Antenna	67	69.1	30(0001) 150(0002) 270(0003)	false	false	PHYSICAL	3
<b>Removed</b>																			
700	850	1900	AWS	AW53	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
			LTE								ANDREW	HBX-6517DS-A1M	67	70.1	30(D1) 150(D2) 270(D3)	true	false	PHYSICAL	3
	LTE										ANDREW	LNX-6514DS-A1M	67	70	30(D1) 150(D2) 270(D3)	true	false	PHYSICAL	6
<b>Retained</b>																			
700	850	1900	AWS	AW53	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
											ANDREW	HBX-6517DS-A1M	67	70.1	30(D1) 150(D2) 270(D3)	true	false	PHYSICAL	0

Added: 9      Removed: 9      Retained: 0

## Equipment Summary

<b>Added</b>																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Mount	Tower												Commscope	BASMNT-SBS-1-2			PHYSICAL	3
RRU	Tower			LTE	LTE								Samsung	B2/B66A RRH-BR049 (RFV01U-D1A)			PHYSICAL	3
RRU	Tower	LTE	LTE										Samsung	B5/B13 RRH-BR04C (RFV01U-D2A)			PHYSICAL	3
RRU	Tower												Samsung	VZ501			PHYSICAL	3
Hybrid Cable	Tower													6x12 LI			PHYSICAL	2
OVP Box	Tower													OVP 6			PHYSICAL	2
<b>Removed</b>																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
RRU	Tower	LTE											Nokia	UHBB B13 RRH 2x40			PHYSICAL	3
RRU	Tower				LTE								Nokia	UHID B4 RRH 2x40			PHYSICAL	3
<b>Retained</b>																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Hybrid Cable	Tower																PHYSICAL	2
OVP Box	Tower																PHYSICAL	2

## Service Info

2100 MHZ LTE

0000

5GLS

Sector	D1	D2	D3
Azimuth	30	150	270
Cell / ENode B ID	068536	068536	068536
Antenna Model	HBX-6517DS-A1M	HBX-6517DS-A1M	HBX-6517DS-A1M
Antenna Make	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	67	67	67
Mechanical Down-Tilt(Deg.)	0	0	0
Electrical Down-Tilt	0	0	0
Tip Height	70.1	70.1	70.1
Regulatory Power	169.56	169.56	169.56
TMA Make			
TMA Model			
RRU Make	Nokia	Nokia	Nokia
RRU Model	UHID B4 RRH 2x40	UHID B4 RRH 2x40	UHID B4 RRH 2x40
Number of Tx, Rx Lines	2,2	2,2	2,2
Position			
Transmitter Id	1967838	1967843	1967919
Source	ATOLL_API	ATOLL_API	ATOLL_API

700 MHZ LTE

0000

5GLS

Sector	D1	D2	D3
Azimuth	30	150	270
Cell / ENode B ID	068536	068536	068536
Antenna Model	LNX-6514DS-A1M	LNX-6514DS-A1M	LNX-6514DS-A1M
Antenna Make	ANDREW	ANDREW	ANDREW
Antenna Centerline(Ft)	67	67	67
Mechanical Down-Tilt(Deg.)	0	0	0
Electrical Down-Tilt	2	2	4
Tip Height	70	70	70
Regulatory Power	99.28	99.28	98.21
TMA Make			
TMA Model			
RRU Make	Nokia	Nokia	Nokia
RRU Model	UHBE B13 RRH 2x40	UHBB B13 RRH 2x40	UHBB B13 RRH 2x40
Number of Tx, Rx Lines	2,2	2,2	2,2
Position			
Transmitter Id	1967835	1967840	1967916
Source	ATOLL_API	ATOLL_API	ATOLL_API

nL-Sub6

0001

5GLS

Sector	0001	0002	0003
Azimuth	30	150	270
Cell / ENode B ID			
Antenna Model	nL-Sub6 Antenna	nL-Sub6 Antenna	nL-Sub6 Antenna
Antenna Make	TBD	TBD	TBD
Antenna Centerline(Ft)	67	67	67
Mechanical Down-Tilt(Deg.)	0	0	0
Electrical Down-Tilt	3	3	3
Tip Height	69.1	69.1	69.1
Regulatory Power	0	0	0
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	VZ501	VZ501	VZ501
Number of Tx, Rx Lines	4,4	4,4	4,4
Position			
Transmitter Id	9038869	9038870	9038871
Source	ATOLL_API	ATOLL_API	ATOLL_API

1900 MHZ LTE

SGLS

Sector	01	02	03
Antenna Make	30	150	270
Antenna Centerline(Ft)	068536	068536	068536
Mechanical Down-Tilt(Deg.)	NHH-65B-R2B	NHH-65B-R2B	NHH-65B-R2B
Electrical Down-Tilt	COMMSCOPE	COMMSCOPE	COMMSCOPE
Tip Height	67	67	67
Regulatory Power	0	0	0
TMA Model	0	0	0
RRU Make	70	70	70
RRU Model	253.37	253.37	253.37
Number of Tx, Rx Lines			
Position			
Transmitter Id			
Source			

Samsung	Samsung	Samsung
B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)	B2/B66A RRH-BR049 (RFV01U-D1A)
4,4	4,4	4,4

9292773	9292774	9292775
ATOLL_API	ATOLL_API	ATOLL_API

850 MHZ LTE

SGLS

Sector	01	02	03
Antenna Make	30	150	270
Antenna Centerline(Ft)	068536	068536	068536
Mechanical Down-Tilt(Deg.)	NHH-65B-R2B	NHH-65B-R2B	NHH-65B-R2B
Electrical Down-Tilt	COMMSCOPE	COMMSCOPE	COMMSCOPE
Tip Height	67	67	67
Regulatory Power	0	0	0
TMA Model	0	0	2
RRU Make	70	70	70
RRU Model	311.04	311.04	306.77
Number of Tx, Rx Lines			
Position			
Transmitter Id			
Source			

Samsung	Samsung	Samsung
B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)	B5/B13 RRH-BR04C (RFV01U-D2A)
4,4	4,4	4,4

9292776	9292777	9292778
ATOLL_API	ATOLL_API	ATOLL_API

Service Comments

## Callsigns Per Antenna

Sector	Antenna Make	Antenna Mode	Ant. CL Height AGL	Tip Height	Azimuth (TN)	Electrical Tilt	Mechanical Tilt	Gain	Beamwidth	Regulatory Power	Callsigns	28 GHz	31 GHz	39 GHz			
											700	850	1900	2100	28 GHz	31 GHz	39 GHz

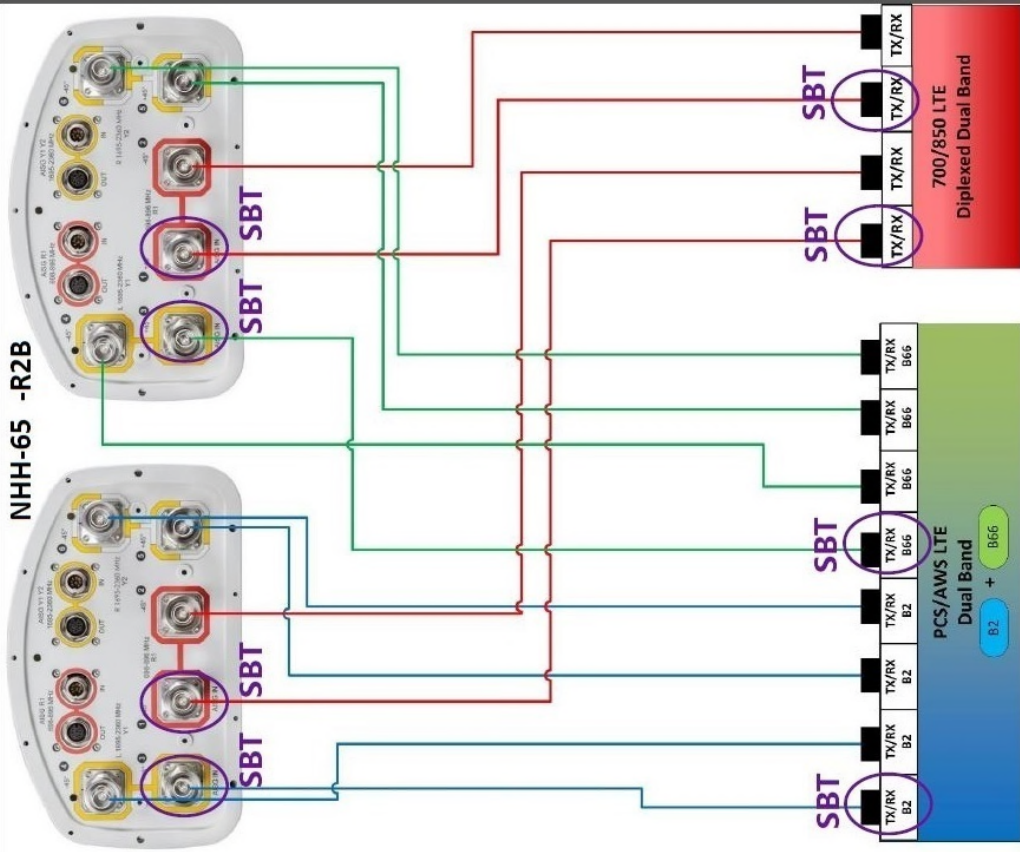
No data available.

# Callsigns

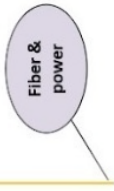
Callsign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHz	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POPs/Sq MI	Status	Action	Approved for Insvc
WQJG689	Northeast	WU	REA001	C	CT	Hartford	Cellico Partnership	Yes	22.000	746.000-757.000	776.000-787.000	.000-.000	.000-.000	71.26	1000	1216.19	Active	added	Yes
KMK4404	Hartford-New Britain-Bristol, CT	CL	CMA032	A	CT	Hartford	Cellico Partnership	Yes	25.000	824.000-835.000	869.000-880.000	845.000-846.500	890.000-891.500	311.04	400	1216.19	Active	added	Yes
WPOJ730	Hartford, CT	CW	BTA184	C	CT	Hartford	Cellico Partnership	Yes	15.000	1895.000-1902.500	1975.000-1982.500	.000-.000	.000-.000	253.37	1640	1216.19	Active	added	Yes
KNLH251	Hartford, CT	CW	BTA184	F	CT	Hartford	Cellico Partnership	Yes	10.000	1890.000-1895.000	1970.000-1975.000	.000-.000	.000-.000	253.37	1640	1216.19	Active	added	Yes
WQGB276	Hartford-New Britain-Bristol, CT	AW	CMA032	A	CT	Hartford	Cellico Partnership	Yes	20.000	1710.000-1720.000	2110.000-2120.000	.000-.000	.000-.000	143.46	1640	1216.19	Active	added	Yes
WOGA906	New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA	AW	BEA010	B	CT	Hartford	Cellico Partnership	Yes	20.000	1720.000-1730.000	2120.000-2130.000	.000-.000	.000-.000	143.46	1640	1216.19	Active	added	Yes
WPOH943	Hartford, CT	LD	BTA184	A	CT	Hartford	Cellico Partnership	Yes	300.000	29100.000-29250.000	31075.000-31225.000	.000-.000	.000-.000			1216.19	Active		No
WPLM398	Hartford, CT	LD	BTA184	B	CT	Hartford	Cellico Partnership	Yes	150.000	31000.000-31075.000	31225.000-31300.000	.000-.000	.000-.000			1216.19	Active		No
WRBA708	Hartford, CT	UU	BTA184	L1	CT	Hartford	Cellico Partnership	Yes	325.000	27500.000-27600.000	27700.000-27925.000	.000-.000	.000-.000			1216.19	Active		Yes
WRBA709	Hartford, CT	UU	BTA184	L2	CT	Hartford	Cellico Partnership	Yes	325.000	27925.000-28050.000	28150.000-28350.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD609	New York, NY	UU	PEA001	M1	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	37600.000-37700.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD610	New York, NY	UU	PEA001	M10	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38500.000-38600.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD611	New York, NY	UU	PEA001	M2	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	37700.000-37800.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD612	New York, NY	UU	PEA001	M3	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	37800.000-37900.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD613	New York, NY	UU	PEA001	M4	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	37900.000-38000.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD614	New York, NY	UU	PEA001	M5	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38000.000-38100.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD615	New York, NY	UU	PEA001	M6	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38100.000-38200.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes
WRHD616	New York, NY	UU	PEA001	M7	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38200.000-38300.000	.000-.000	.000-.000	.000-.000			1216.19	Active		Yes

WRHD617	New York, NY	UU	PEA001	M8	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38300.000-38400.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	1216.19	Active	Yes
WRHD618	New York, NY	UU	PEA001	M9	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38400.000-38500.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	1216.19	Active	Yes
WRHD619	New York, NY	UU	PEA001	N1	CT	Hartford	Straight Path Spectrum, LLC	Yes	100.000	38600.000-38700.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	1216.19	Active	No
WRDG500	New York, NY	UU	PEA001	S2	CT	Hartford	Calico Partnership	Yes	400.000	37800.000-38200.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	.000-.000	1216.19	Active	Yes

# NHH-65 -R2B



Sub 6







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## Antenna Mount Analysis Report and PMI Requirements

### Mount Analysis

SMART Tool Project #: 10044610  
Maser Consulting Connecticut Project #: 21777246A

May 27, 2021

#### Site Information

Site ID: 467889-VZW / SIMSBURY NW  
Site Name: SIMSBURY NW  
Carrier Name: Verizon Wireless  
Address: 344 Firetown Rd  
Simsbury, Connecticut 06070  
Hartford County  
Latitude: 41.903186°  
Longitude: -72.821338°

#### Structure Information

Tower Type: Monopole  
Mount Type: 12.58-Ft Platform

**FUZE ID # 16272231**

#### Analysis Results

Platform: **74.9% Pass\***

*\*Results valid after hardware upgrades noted in the PMI Requirements are installed*

#### \*\*\*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: Andy Hanes



Digitally signed by Derek Hartzell  
Date: 2021.05.27 10:40:23-07'00'

**Executive Summary:**

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

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

**Sources of Information:**

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon RFDS, Site ID: 2163663, dated April 12, 2021
Mount Mapping Report	Roaming Networks Inc., Site ID: 467889, dated April 5, 2021

**Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : 115 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.50 in Risk Category: II Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, $K_e$ : 0.989
Seismic Parameters:	$S_s$ : 0.173 $S_1$ : 0.054
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 mount:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
65.50	67.00	6	Commscope	NHH-65B-R2B	Added
		3	Samsung	MT6407-77A	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B3/B15 RRH-BR04C	
		3	Andrew	HBX-6517DS-A1M	Retained
		2	Raycap	RRFDC-3315-PF-48*	

\* Equipment to be flush mounted directly to the monopole tower. They are not mounted on the platform mount and are not included in this mount analysis.

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

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

**Standard Conditions:**

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation and field observations. 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

**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
Connection	74.9 %	Pass
Standoff	34.3 %	Pass
Standoff Crossmember	19.4 %	Pass
Corner Plate	15.3 %	Pass
Grating Support	12.9 %	Pass
Cross Arm Plate	39.8 %	Pass
Face Horizontal	15.2 %	Pass
Mount Pipe	27.9 %	Pass
Replacement Pipe	23.8 %	Pass
Support Rail	16.2 %	Pass
Support Rail Corner	26.1 %	Pass

<b>Structure Rating – (Controlling Utilization of all Components)</b>	<b>74.9%*</b>
---	---------------

*\*Results valid after hardware upgrades noted in the PMI Requirements are installed*

### **Recommendation:**


The existing mount is **SUFFICIENT** for the final loading upon the completion of the recommendations list in the Special Instructions section of the below referenced PMI document.

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.

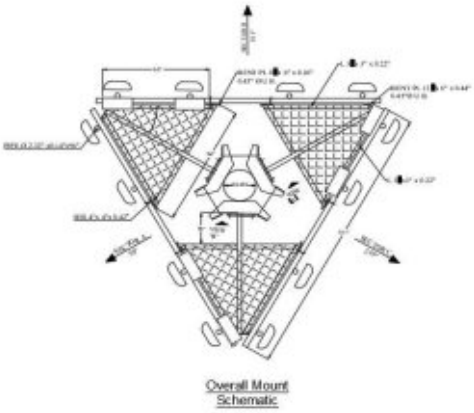
### **Attachments:**

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

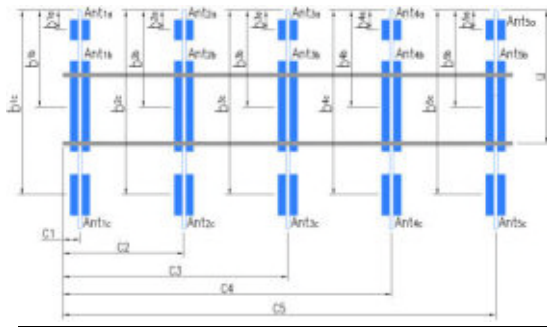
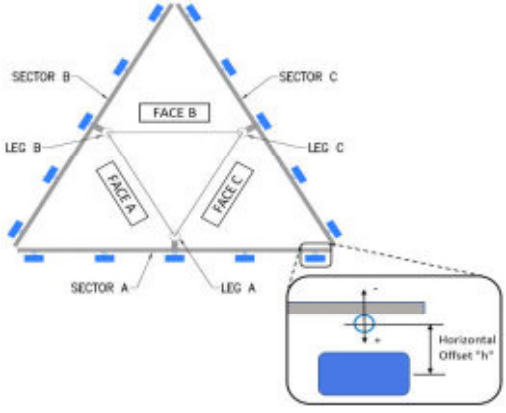


	<b>Antenna Mount Mapping Form (PATENT PENDING)</b>			FCC #
				N/A
Tower Owner:	Other	Mapping Date:	04.05.2021.	
Site Name:	SIMSBURY NW	Tower Type:	Monopole	
Site Number or ID:	467889	Tower Height (Ft.):	N/A	
Mapping Contractor:	Roaming Networks inc.	Mount Elevation (Ft.):	67.01	

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



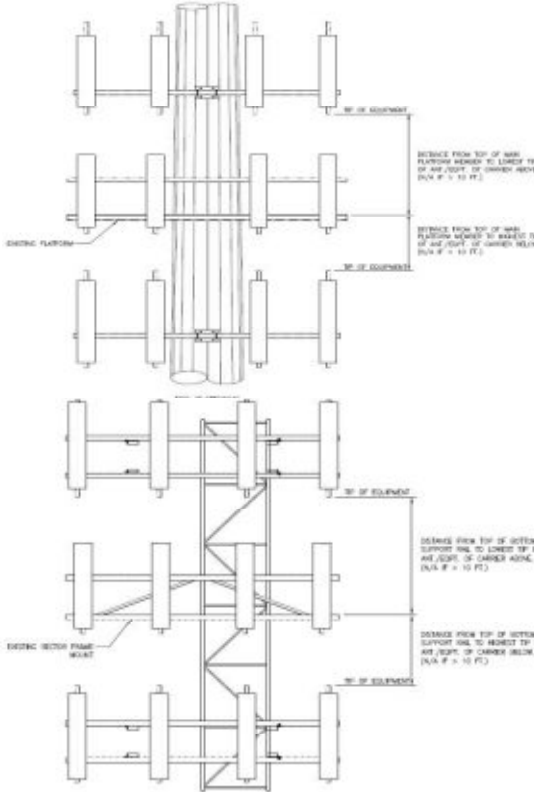
Mount Pipe Configuration and Geometries [Unit = Inches]								
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	
A1	PIPE Ø 2.32" x0.14"x96"	53.00	17.00	C1	PIPE Ø 2.32" x0.14"x96"	53.00	17.00	
A2	PIPE Ø 2.32" x0.14"x96"	53.00	61.00	C2	PIPE Ø 2.32" x0.14"x96"	53.00	61.00	
A3	PIPE Ø 2.32" x0.14"x96"	52.00	113.00	C3	PIPE Ø 2.32" x0.14"x96"	52.00	113.00	
A4	PIPE Ø 2.32" x0.14"x96"	52.00	137.00	C4	PIPE Ø 2.32" x0.14"x96"	52.00	137.00	
A5				C5				
A6				C6				
B1	PIPE Ø 2.32" x0.14"x96"	53.00	17.00	D1				
B2	PIPE Ø 2.32" x0.14"x96"	53.00	61.00	D2				
B3	PIPE Ø 2.32" x0.14"x96"	52.00	113.00	D3				
B4	PIPE Ø 2.32" x0.14"x96"	52.00	137.00	D4				
B5				D5				
B6				D6				
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :								
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :							7.25	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :								
Please enter additional information or comments below.								
Tower Face Width at Mount Elev. (ft.):			Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):					



Ants. Items	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b1a, b2a, b3a, b1b,..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	
<b>Sector A</b>										
Ant1a	UNKNOWN	6.80	3.60	75.00		68.4267	36.00	4.50	39.00	138
Ant1b										
Ant1c										
Ant2a	UNKNOWN	12	7.5	73.00		68.6767	33.00	6.00	39.00	138
Ant2b										
Ant2c										
Ant3a	HBXX-6517DS-VTM	12.08	6.535	75.04		67.9267	41.00	9.00	39.00	139
Ant3b										
Ant3c										
Ant4a	LNx-6514DS-A1M	11.85	7.106	80.63		68.0933	39.00	7.00	39.00	139
Ant4b										
Ant4c										
Ant5a										
Ant5b										
Ant5c										
Ant on Standoff	RRHx40-AWS	10.63	6.70	24.40		64.6767	28.00	7.00	39.00	138
Ant on Standoff	ATM200-A20	2.79	2.09	8.00			24.00	7.00	39.00	138
Ant on Tower										
Ant on Tower										

**Antenna Layout (Looking Out From Tower)**

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector				Sector B							
Sector A:	39.00	Deg	Leg A:		Deg	Ant <sub>1a</sub>	UNKNOWN	6.80	3.60	75.00	68.4267	36.00	4.50	161.00	148
Sector B:	161.00	Deg	Leg B:		Deg	Ant <sub>1b</sub>									
Sector C:	267.00	Deg	Leg C:		Deg	Ant <sub>1c</sub>									
Sector D:		Deg	Leg D:		Deg	Ant <sub>2a</sub>	UNKNOWN	12	7.5	73.00	68.6767	33.00	6.00	161.00	148
<b>Climbing Facility Information</b>						Ant <sub>2b</sub>									
Location:		Deg	Sector B			Ant <sub>2c</sub>									
Climbing Facility	Corrosion Type:	Good condition.				Ant <sub>3a</sub>	HBXX-6517DS-VTM	12.08	6.535	75.04	67.9267	41.00	9.00	161.00	147
	Access:	Climbing path was unobstructed.				Ant <sub>3b</sub>									
	Condition:	Good condition.				Ant <sub>3c</sub>									
						Ant <sub>4a</sub>	LNX-6514DS-A1M	11.85	7.106	80.63	68.0933	39.00	7.00	161.00	147
						Ant <sub>4b</sub>									
						Ant <sub>4c</sub>									
						Ant <sub>5a</sub>									
						Ant <sub>5b</sub>									
						Ant <sub>5c</sub>									
						Ant on Standoff	RRH2x40-AWS	10.63	6.70	24.40		28.00	7.00	161.00	148
						Ant on Standoff	ATM200-A20	2.79	2.09	8.00		24.00	7.00	161.00	148
						Ant on Tower									
						Ant on Tower									
						<b>Sector C</b>									
						Ant <sub>1a</sub>	UNKNOWN	6.80	3.60	75.00	68.4267	36.00	4.50	267.00	162
						Ant <sub>1b</sub>									
						Ant <sub>1c</sub>									
						Ant <sub>2a</sub>	UNKNOWN	12	7.5	73.00	68.6767	33.00	6.00	267.00	164
						Ant <sub>2b</sub>									
						Ant <sub>2c</sub>									
						Ant <sub>3a</sub>	HBXX-6517DS-VTM	12.08	6.535	75.04	67.9267	41.00	9.00	267.00	161
						Ant <sub>3b</sub>									
						Ant <sub>3c</sub>									
						Ant <sub>4a</sub>	LNX-6514DS-A1M	11.85	7.106	80.63	68.0933	39.00	7.00	267.00	161
						Ant <sub>4b</sub>									
						Ant <sub>4c</sub>									
						Ant <sub>5a</sub>									
						Ant <sub>5b</sub>									
						Ant <sub>5c</sub>									
						Ant on Standoff	RRH2x40-AWS	10.63	6.70	24.40		28.00	7.00	267.00	162
						Ant on Standoff	ATM200-A20	2.79	2.09	8.00		24.00	7.00	267.00	164
						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		
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)

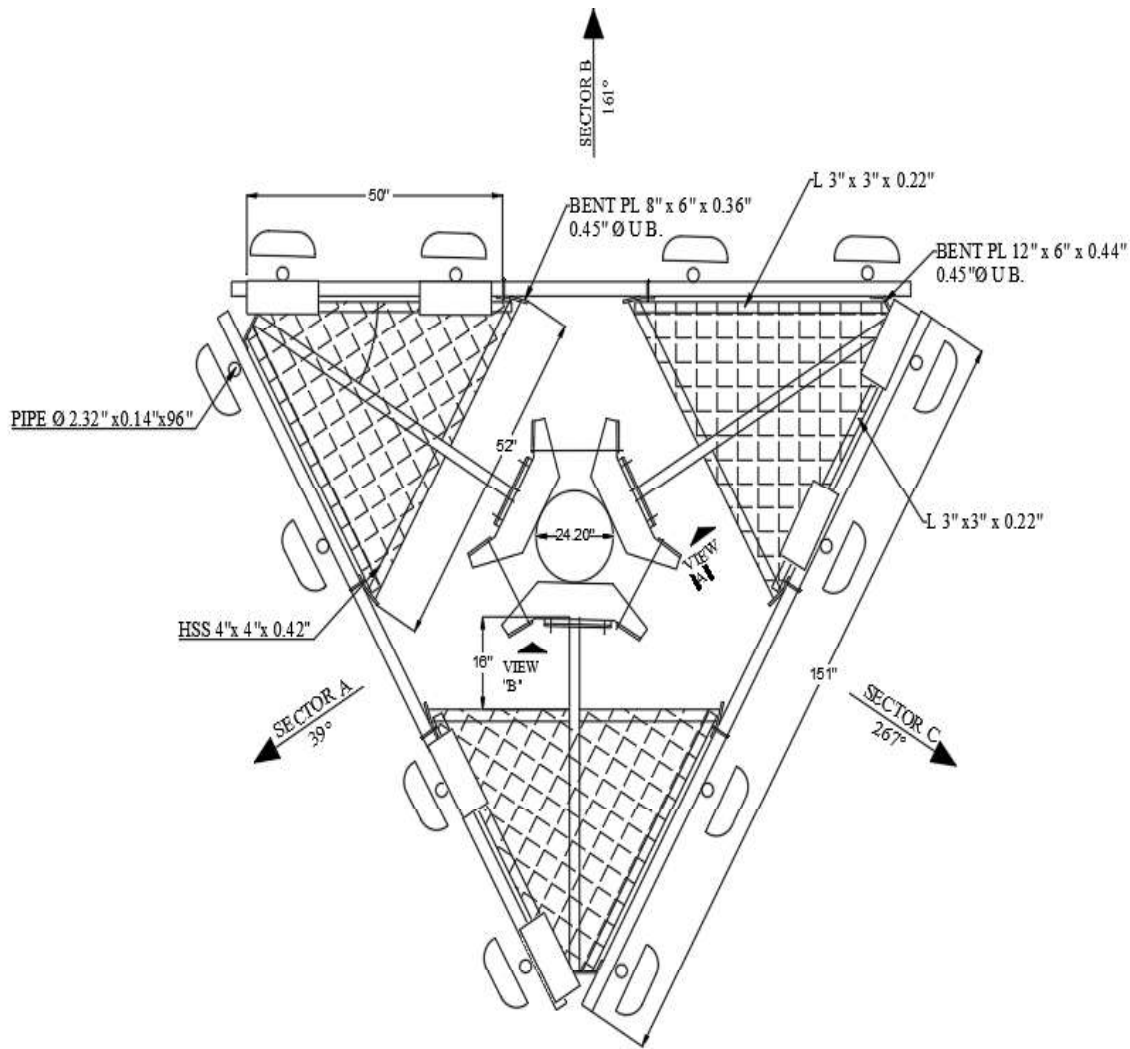
FCC #

N/A

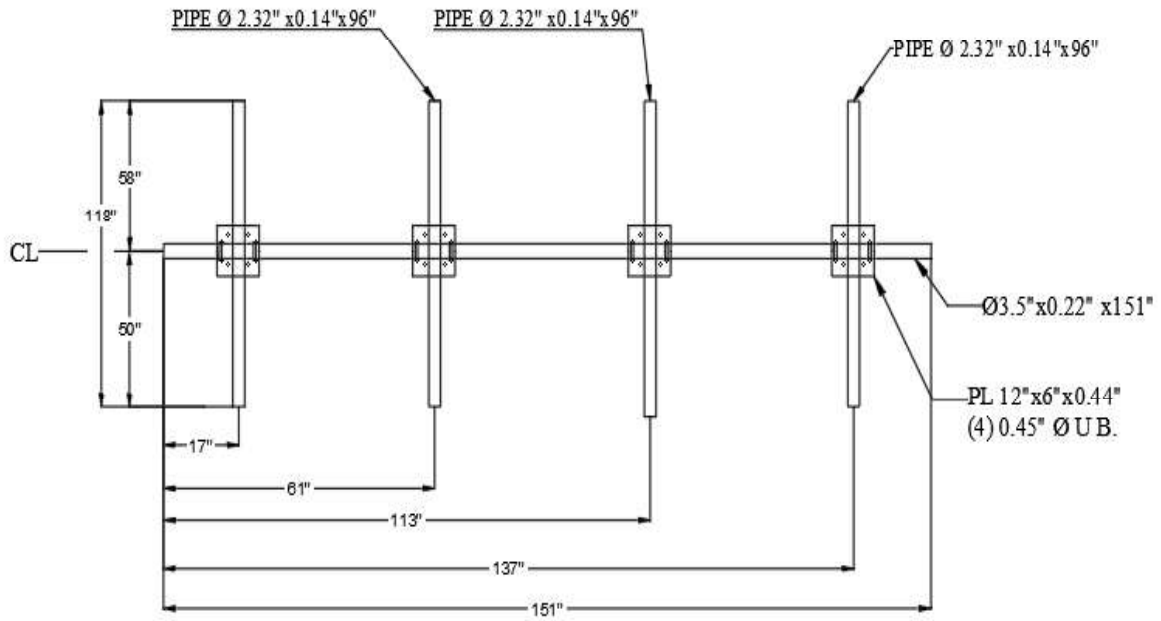
Tower Owner:	Other	Mapping Date:	04.05.2021.
Site Name:	SIMSBURY NW	Tower Type:	Monopole
Site Number or ID:	467889	Tower Height (Ft.):	N/A
Mapping Contractor:	Roaming Networks inc.	Mount Elevation (Ft.):	67.01

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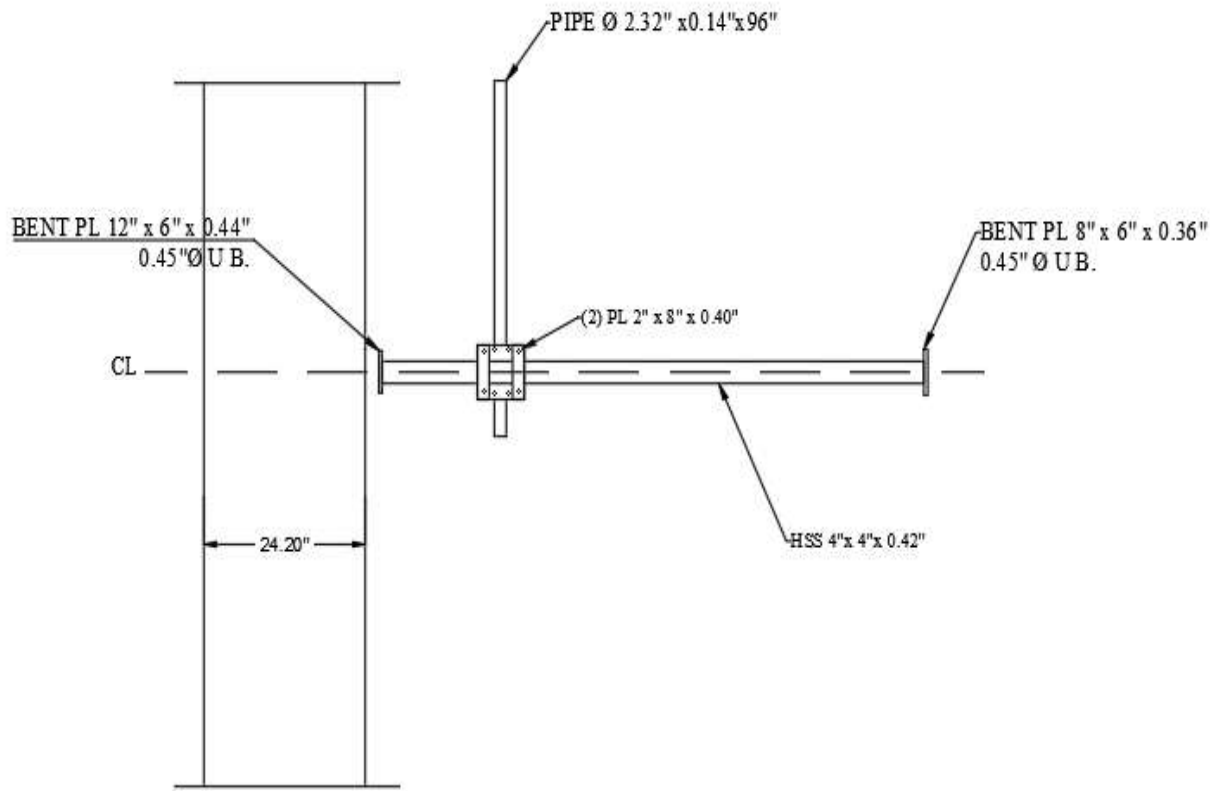
**Please Insert Sketches of the Antenna Mount**



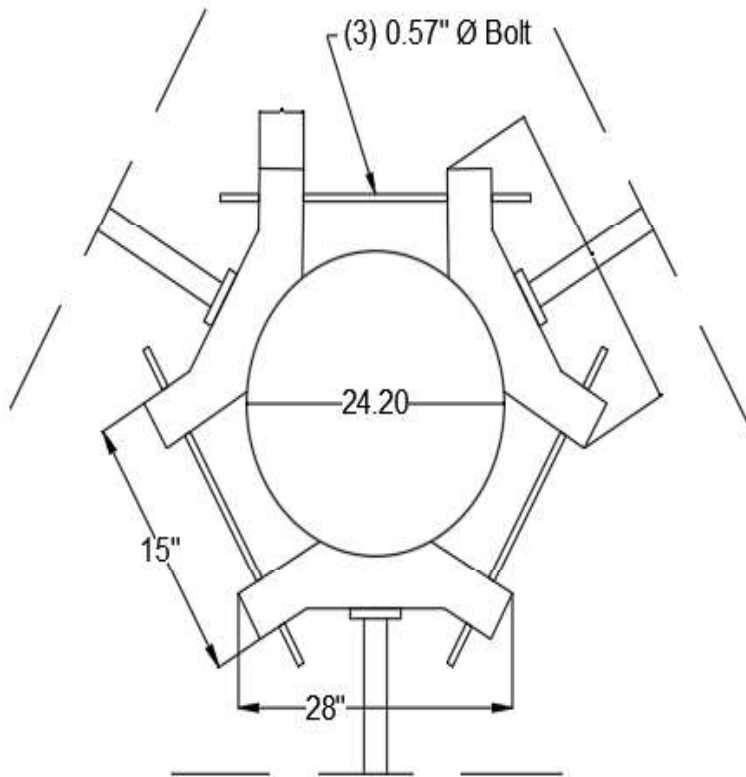
**Overall Mount  
Schematic**



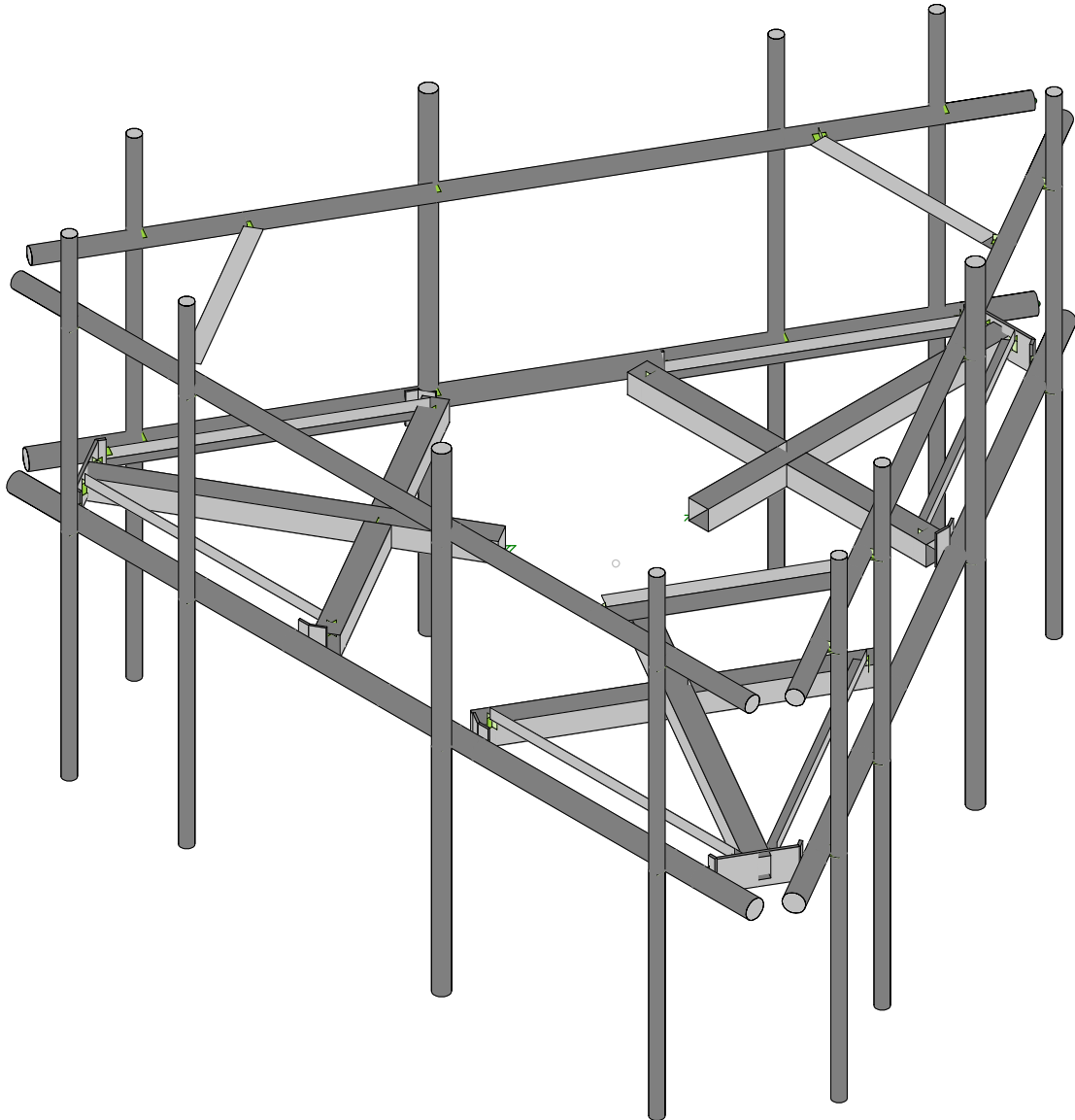
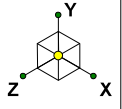
SECTOR A,B,C



VIEW "A"



Tower  
Attachment  
Detail



Envelope Only Solution

Maser Consulting

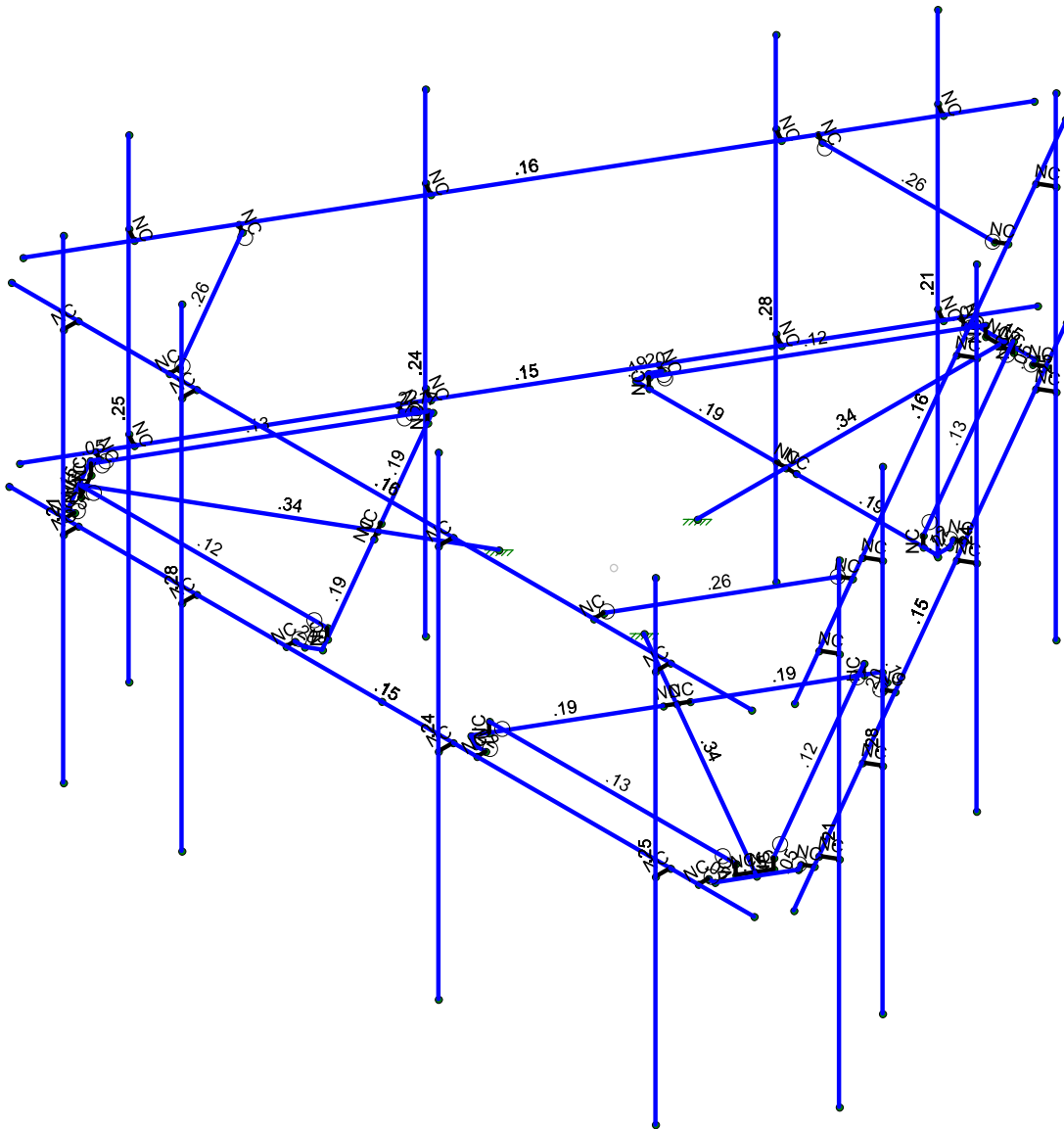
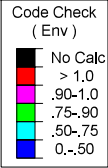
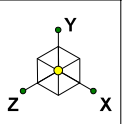
AJH

467889-VZW\_MT\_LO\_H

SK - 4

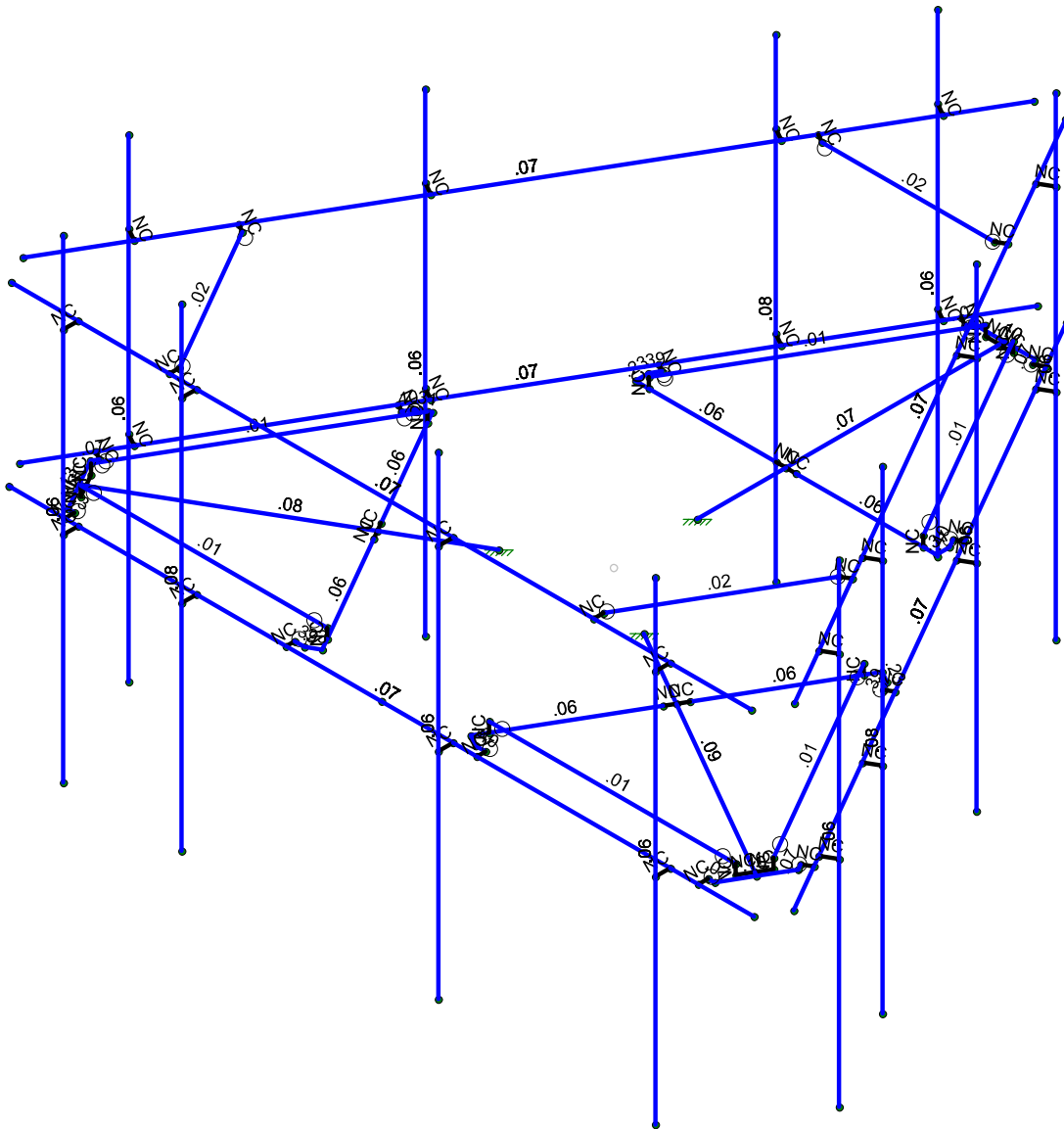
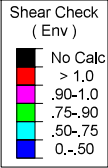
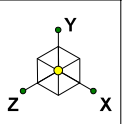
May 25, 2021 at 7:01 PM

467889-VZW\_MT\_LO\_H - Conditio...



Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Maser Consulting	467889-VZW_MT_LO_H	SK - 5
AJH		May 25, 2021 at 7:01 PM
		467889-VZW_MT_LO_H - Conditio...



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Maser Consulting	467889-VZW_MT_LO_H	SK - 6
AJH		May 25, 2021 at 7:01 PM
		467889-VZW_MT_LO_H - Conditio...





**Basic Load Cases**

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



**Basic Load Cases (Continued)**

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
57	Structure Wi (120 De...	None						114	
58	Structure Wi (150 De...	None						114	
59	Structure Wi (180 De...	None						114	
60	Structure Wi (210 De...	None						114	
61	Structure Wi (240 De...	None						114	
62	Structure Wi (270 De...	None						114	
63	Structure Wi (300 De...	None						114	
64	Structure Wi (330 De...	None						114	
65	Structure Wm (0 Deg)	None						114	
66	Structure Wm (30 De...	None						114	
67	Structure Wm (60 De...	None						114	
68	Structure Wm (90 De...	None						114	
69	Structure Wm (120 D...	None						114	
70	Structure Wm (150 D...	None						114	
71	Structure Wm (180 D...	None						114	
72	Structure Wm (210 D...	None						114	
73	Structure Wm (240 D...	None						114	
74	Structure Wm (270 D...	None						114	
75	Structure Wm (300 D...	None						114	
76	Structure Wm (330 D...	None						114	
77	Lm1	None					1		
78	Lm2	None					1		
79	Lv1	None					1		
80	Lv2	None					1		
81	BLC 39 Transient Are...	None						30	
82	BLC 40 Transient Are...	None						30	

**Load Combinations**

	Description	SoL...	P...	S...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...
1	1.2D+1.0Wo (0 D...	Yes	Y		1	1.2	39	1.2	3	1	41	1							
2	1.2D+1.0Wo (30 ...	Yes	Y		1	1.2	39	1.2	4	1	42	1							
3	1.2D+1.0Wo (60 ...	Yes	Y		1	1.2	39	1.2	5	1	43	1							
4	1.2D+1.0Wo (90 ...	Yes	Y		1	1.2	39	1.2	6	1	44	1							
5	1.2D+1.0Wo (12...	Yes	Y		1	1.2	39	1.2	7	1	45	1							
6	1.2D+1.0Wo (15...	Yes	Y		1	1.2	39	1.2	8	1	46	1							
7	1.2D+1.0Wo (18...	Yes	Y		1	1.2	39	1.2	9	1	47	1							
8	1.2D+1.0Wo (21...	Yes	Y		1	1.2	39	1.2	10	1	48	1							
9	1.2D+1.0Wo (24...	Yes	Y		1	1.2	39	1.2	11	1	49	1							
10	1.2D+1.0Wo (27...	Yes	Y		1	1.2	39	1.2	12	1	50	1							
11	1.2D+1.0Wo (30...	Yes	Y		1	1.2	39	1.2	13	1	51	1							
12	1.2D+1.0Wo (33...	Yes	Y		1	1.2	39	1.2	14	1	52	1							
13	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1			
14	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1			
15	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1			
16	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1			
17	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1			
18	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1			
19	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1			
20	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1			
21	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1			
22	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1			
23	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1			
24	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1			
25	1.2D + 1.5Lm1 + ...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1					
26	1.2D + 1.5Lm1 + ...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1					



**Load Combinations (Continued)**

Description	Sol...	P...	S...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...	BLC Fac...
27	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	29	1	67	1
28	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	30	1	68	1
29	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1
30	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1
31	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1
32	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1
33	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1
34	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1
35	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1
36	1.2D + 1.5Lm1 + ...	Yes	Y	1	1.2	39	1.2	77	1.5	38	1	76	1
37	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	27	1	65	1
38	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	28	1	66	1
39	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	29	1	67	1
40	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	30	1	68	1
41	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1
42	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1
43	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1
44	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1
45	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1
46	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1
47	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1
48	1.2D + 1.5Lm2 + ...	Yes	Y	1	1.2	39	1.2	78	1.5	38	1	76	1
49	1.2D + 1.5Lv1	Yes	Y	1	1.2	39	1.2	79	1.5				
50	1.2D + 1.5Lv2	Yes	Y	1	1.2	39	1.2	80	1.5				
51	1.4D	Yes	Y	1	1.4	39	1.4						
52	Seismic Mass		Y	1	1	39	1						
53	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX		SY	1	SZ	-1
54	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866
55	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5
56	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	1	SY	1	SZ	
57	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	.866	SY	1	SZ	.5
58	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	.5	SY	1	SZ	.866
59	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX		SY	1	SZ	1
60	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866
61	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5
62	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	-1	SY	1	SZ	
63	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5
64	1.2D + 1.0Ev + 1...		Y	1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866

**Joint Coordinates and Temperatures**

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N3	-0.	0	-17	0	
2	N5	-30.5	0	-35	0	
3	N6	27.78125	2	-35	0	
4	N7	-27.78125	2	-35	0	
5	N24	-0.	0	-35	0	
6	N27	-0.	0	-79.25	0	
7	CP	0	0	0	0	
8	N29	27.78125	0	-35	0	
9	N30	-27.78125	0	-35	0	
10	N101	30.5	0	-35	0	
11	N102	-2	0	-35	0	
12	N103A	2	0	-35	0	
13	N104A	-30.5	0	-37.625	0	
14	N105	30.5	0	-37.625	0	



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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**Joint Coordinates and Temperatures (Continued)**

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
15	N131	29.5	0	-39.357051	0	
16	N135	6.859375	0	-78.086278	0	
17	N144	-29.5	0	-39.357051	0	
18	N148	-6.859375	0	-78.086278	0	
19	N86A	31.015548	0	-40.232053	0	
20	N86B	-31.015548	0	-40.232053	0	
21	N86C	-6.1875	0	-79.25	0	
22	N87A	6.1875	0	-79.25	0	
23	N86D	8.585144	0	-79.082652	0	
24	N86E	-8.585144	0	-79.082652	0	
25	N88A	-0.	0	-78.25	0	
26	N87C	2.810851	2	-78.25	0	
27	N86G	2.810851	0	-78.25	0	
28	N87B	-2.810851	2	-78.25	0	
29	N88C	-2.810851	0	-78.25	0	
30	N30A	-14.722432	0	8.5	0	
31	N31	-15.060889	0	43.913775	0	
32	N32	-44.201514	2	-6.559268	0	
33	N33	-16.420264	2	41.559268	0	
34	N34	-30.310889	0	17.5	0	
35	N35	-68.632513	0	39.625	0	
36	N37	-44.201514	0	-6.559268	0	
37	N38	-16.420264	0	41.559268	0	
38	N39	-45.560889	0	-8.913775	0	
39	N40	-29.310889	0	19.232051	0	
40	N41	-31.310889	0	15.767949	0	
41	N42	-17.334206	0	45.226275	0	
42	N43	-47.834206	0	-7.601275	0	
43	N44	-48.834206	0	-5.869224	0	
44	N45	-71.054388	0	33.102746	0	
45	N46	-19.334206	0	45.226275	0	
46	N47	-64.195013	0	44.983532	0	
47	N48	-50.349754	0	-6.744226	0	
48	N49	-19.334206	0	46.976279	0	
49	N50	-65.538763	0	44.983532	0	
50	N51	-71.726263	0	34.266468	0	
51	N52	-72.780158	0	32.106373	0	
52	N53	-64.195013	0	46.976279	0	
53	N54	-67.766488	0	39.125	0	
54	N55	-69.171913	2	36.690732	0	
55	N56	-69.171913	0	36.690732	0	
56	N57	-66.361062	2	41.559268	0	
57	N58	-66.361062	0	41.559268	0	
58	N59	14.722432	0	8.5	0	
59	N60	45.560889	0	-8.913775	0	
60	N61	16.420264	2	41.559268	0	
61	N62	44.201514	2	-6.559268	0	
62	N63	30.310889	0	17.5	0	
63	N64	68.632513	0	39.625	0	
64	N66	16.420264	0	41.559268	0	
65	N67	44.201514	0	-6.559268	0	
66	N68	15.060889	0	43.913775	0	
67	N69	31.310889	0	15.767949	0	
68	N70	29.310889	0	19.232051	0	
69	N71	47.834206	0	-7.601275	0	
70	N72	17.334206	0	45.226275	0	
71	N73	19.334206	0	45.226275	0	



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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**Joint Coordinates and Temperatures (Continued)**

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
72	N74	64.195013	0	44.983532	0	
73	N75	48.834206	0	-5.869224	0	
74	N76	71.054388	0	33.102746	0	
75	N77	19.334206	0	46.976279	0	
76	N78	50.349754	0	-6.744226	0	
77	N79	71.726263	0	34.266468	0	
78	N80	65.538763	0	44.983532	0	
79	N81	64.195013	0	46.976279	0	
80	N82	72.780158	0	32.106373	0	
81	N83	67.766488	0	39.125	0	
82	N84	66.361062	2	41.559268	0	
83	N85	66.361062	0	41.559268	0	
84	N86	69.171913	2	36.690732	0	
85	N87	69.171913	0	36.690732	0	
86	N86F	0.	0	46.976279	0	
87	N87D	75.5	0	46.976279	0	
88	N88	-75.5	0	46.976279	0	
89	N90	2.932651	0	-88.873058	0	
90	N91	78.432651	0	41.896778	0	
91	N93	-78.432651	0	41.896779	0	
92	N94	-2.932651	0	-88.873057	0	
93	N93A	58.5	0	46.976279	0	
94	N94A	58.5	0	49.976279	0	
95	N95	58.5	52.5	49.976279	0	
96	N96	58.5	-43.5	49.976279	0	
97	N97	14.5	0	46.976279	0	
98	N98	14.5	0	49.976279	0	
99	N99	14.5	52.5	49.976279	0	
100	N100	14.5	-43.5	49.976279	0	
101	N101A	-37.5	0	46.976279	0	
102	N102A	-37.5	0	49.976279	0	
103	N103	-37.5	52.5	49.976279	0	
104	N104	-37.5	-43.5	49.976279	0	
105	N105A	-61.5	0	46.976279	0	
106	N106	-61.5	0	49.976279	0	
107	N107	-61.5	52.5	49.976279	0	
108	N108	-61.5	-43.5	49.976279	0	
109	N110	11.432651	0	-74.150626	0	
110	N111	14.030727	0	-75.650626	0	
111	N112	14.030727	52.5	-75.650626	0	
112	N113	14.030727	-43.5	-75.650626	0	
113	N114	33.432651	0	-36.045508	0	
114	N115	36.030727	0	-37.545508	0	
115	N116	36.030727	52.5	-37.545508	0	
116	N117	36.030727	-43.5	-37.545508	0	
117	N118	59.432651	0	8.987813	0	
118	N119	62.030727	0	7.487813	0	
119	N120	62.030727	52.5	7.487813	0	
120	N121	62.030727	-43.5	7.487813	0	
121	N122	71.432651	0	29.772423	0	
122	N123	74.030727	0	28.272423	0	
123	N124	74.030727	52.5	28.272423	0	
124	N125	74.030727	-43.5	28.272423	0	
125	N127	-69.932651	0	27.174347	0	
126	N128	-72.530727	0	25.674347	0	
127	N129	-72.530727	52.5	25.674347	0	
128	N130	-72.530727	-43.5	25.674347	0	



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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**Joint Coordinates and Temperatures (Continued)**

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
129	N131A	-47.932651	0	-10.930771	0	
130	N132	-50.530727	0	-12.430771	0	
131	N133	-50.530727	52.5	-12.430771	0	
132	N134	-50.530727	-43.5	-12.430771	0	
133	N135A	-21.932651	0	-55.964092	0	
134	N136	-24.530727	0	-57.464092	0	
135	N137	-24.530727	52.5	-57.464092	0	
136	N138	-24.530727	-43.5	-57.464092	0	
137	N139	-9.932651	0	-76.748702	0	
138	N140	-12.530727	0	-78.248702	0	
139	N141	-12.530727	52.5	-78.248702	0	
140	N142	-12.530727	-43.5	-78.248702	0	
141	N141A	75.	36	46.976279	0	
142	N142A	-75.	36	46.976279	0	
143	N143	58.5	36	46.976279	0	
144	N144A	58.5	36	49.976279	0	
145	N145	14.5	36	46.976279	0	
146	N146	14.5	36	49.976279	0	
147	N147	-37.5	36	46.976279	0	
148	N148A	-37.5	36	49.976279	0	
149	N149	-61.5	36	46.976279	0	
150	N150	-61.5	36	49.976279	0	
151	N151	43.	36	46.976279	0	
152	N152	43.	36	44.976279	0	
153	N153	-43.	36	46.976279	0	
154	N154	-43.	36	44.976279	0	
155	N155	3.182651	36	-88.440045	0	
156	N156	78.182651	36	41.463766	0	
157	N157	11.432651	36	-74.150626	0	
158	N158	14.030727	36	-75.650626	0	
159	N159	33.432651	36	-36.045508	0	
160	N160	36.030727	36	-37.545508	0	
161	N161	59.432651	36	8.987813	0	
162	N162	62.030727	36	7.487813	0	
163	N163	71.432651	36	29.772423	0	
164	N164	74.030727	36	28.272423	0	
165	N169	-78.182651	36	41.463766	0	
166	N170	-3.182651	36	-88.440045	0	
167	N171	-69.932651	36	27.174347	0	
168	N172	-72.530727	36	25.674347	0	
169	N173	-47.932651	36	-10.930771	0	
170	N174	-50.530727	36	-12.430771	0	
171	N175	-21.932651	36	-55.964092	0	
172	N176	-24.530727	36	-57.464092	0	
173	N177	-9.932651	36	-76.748702	0	
174	N178	-12.530727	36	-78.248702	0	
175	N183	19.182651	36	-60.727232	0	
176	N184	17.4506	36	-59.727232	0	
177	N185	62.182651	36	13.750953	0	
178	N186	60.4506	36	14.750953	0	
179	N187	-62.182651	36	13.750953	0	
180	N188	-60.4506	36	14.750953	0	
181	N189	-19.182651	36	-60.727232	0	
182	N190	-17.4506	36	-59.727232	0	





### Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	Standoff	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
3	Corner Plate	PL1/2x6	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237
4	Standoff Crossmember	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
5	Grating Support	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
6	Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
7	Cross Arm Plate	PL3/8x6	Beam	RECT	A36 Gr.36	Typical	2.25	.026	6.75	.101
8	Dual Antenna Mount Pipe	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
9	Support Rail	PIPE 2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
10	Support Rail Corner	L3X3X4	Column	Pipe	A53 Gr.B	Typical	1.44	1.23	1.23	.031
11	Replacement Pipe	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89

### Hot Rolled Steel Properties

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

### Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M4	N3	N27			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
2	M10	N101	N103A			Standoff Cross...	Beam	SquareTube	A500 Gr.B...	Typical
3	M43	N102	N5			Standoff Cross...	Beam	SquareTube	A500 Gr.B...	Typical
4	M46	N86C	N87A			Corner Plate	Beam	RECT	A36 Gr.36	Typical
5	M35A	N7	N30			RIGID	None	None	RIGID	Typical
6	M36A	N6	N29			RIGID	None	None	RIGID	Typical
7	M51B	N87C	N6			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
8	M52B	N7	N87B			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
9	M52	N87B	N88C			RIGID	None	None	RIGID	Typical
10	M58	N102	N24			RIGID	None	None	RIGID	Typical
11	M59	N24	N103A			RIGID	None	None	RIGID	Typical
12	M76	N101	N105			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
13	M77	N105	N131			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
14	M79	N131	N86A			RIGID	None	None	RIGID	Typical
15	M80	N87A	N135			Corner Plate	Beam	RECT	A36 Gr.36	Typical
16	M83	N135	N86D			RIGID	None	None	RIGID	Typical
17	M84	N5	N104A			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
18	M85	N104A	N144			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
19	M88	N144	N86B			RIGID	None	None	RIGID	Typical
20	M91	N86C	N148			Corner Plate	Beam	RECT	A36 Gr.36	Typical
21	M92	N148	N86E			RIGID	None	None	RIGID	Typical
22	M50	N88C	N88A			RIGID	None	None	RIGID	Typical
23	M51	N88A	N86G			RIGID	None	None	RIGID	Typical
24	M51A	N87C	N86G			RIGID	None	None	RIGID	Typical
25	M25	N30A	N35			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
26	M26	N39	N41			Standoff Cross...	Beam	SquareTube	A500 Gr.B...	Typical
27	M27	N40	N31			Standoff Cross...	Beam	SquareTube	A500 Gr.B...	Typical
28	M28	N50	N51			Corner Plate	Beam	RECT	A36 Gr.36	Typical



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
29	M29	N33	N38			RIGID	None	None	RIGID	Typical
30	M30	N32	N37			RIGID	None	None	RIGID	Typical
31	M31	N55	N32			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
32	M32	N33	N57			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
33	M33	N57	N58			RIGID	None	None	RIGID	Typical
34	M34	N40	N34			RIGID	None	None	RIGID	Typical
35	M35	N34	N41			RIGID	None	None	RIGID	Typical
36	M36	N39	N43			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
37	M37	N43	N44			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
38	M38	N44	N48			RIGID	None	None	RIGID	Typical
39	M39	N51	N45			Corner Plate	Beam	RECT	A36 Gr.36	Typical
40	M40	N45	N52			RIGID	None	None	RIGID	Typical
41	M41	N31	N42			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
42	M42	N42	N46			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
43	M43A	N46	N49			RIGID	None	None	RIGID	Typical
44	M44	N50	N47			Corner Plate	Beam	RECT	A36 Gr.36	Typical
45	M45	N47	N53			RIGID	None	None	RIGID	Typical
46	M46A	N58	N54			RIGID	None	None	RIGID	Typical
47	M47	N54	N56			RIGID	None	None	RIGID	Typical
48	M48	N55	N56			RIGID	None	None	RIGID	Typical
49	M49	N59	N64			Standoff	Beam	SquareTube	A500 Gr.B...	Typical
50	M50A	N68	N70			Standoff Cross...	Beam	SquareTube	A500 Gr.B...	Typical
51	M51C	N69	N60			Standoff Cross...	Beam	SquareTube	A500 Gr.B...	Typical
52	M52A	N79	N80			Corner Plate	Beam	RECT	A36 Gr.36	Typical
53	M53	N62	N67			RIGID	None	None	RIGID	Typical
54	M54	N61	N66			RIGID	None	None	RIGID	Typical
55	M55	N84	N61			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
56	M56	N62	N86			Grating Support	Beam	Single Angle	A36 Gr.36	Typical
57	M57	N86	N87			RIGID	None	None	RIGID	Typical
58	M58A	N69	N63			RIGID	None	None	RIGID	Typical
59	M59A	N63	N70			RIGID	None	None	RIGID	Typical
60	M60	N68	N72			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
61	M61	N72	N73			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
62	M62	N73	N77			RIGID	None	None	RIGID	Typical
63	M63	N80	N74			Corner Plate	Beam	RECT	A36 Gr.36	Typical
64	M64	N74	N81			RIGID	None	None	RIGID	Typical
65	M65	N60	N71			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
66	M66	N71	N75			Cross Arm Plate	Beam	RECT	A36 Gr.36	Typical
67	M67	N75	N78			RIGID	None	None	RIGID	Typical
68	M68	N79	N76			Corner Plate	Beam	RECT	A36 Gr.36	Typical
69	M69	N76	N82			RIGID	None	None	RIGID	Typical
70	M70	N87	N83			RIGID	None	None	RIGID	Typical
71	M71	N83	N85			RIGID	None	None	RIGID	Typical
72	M72	N84	N85			RIGID	None	None	RIGID	Typical
73	M73	N88	N87D			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
74	M74	N91	N90			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
75	M75	N94	N93			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
76	M76A	N93A	N94A			RIGID	None	None	RIGID	Typical
77	MP1A	N95	N96			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
78	M78	N97	N98			RIGID	None	None	RIGID	Typical
79	MP2A	N99	N100			Replacement ...	Column	Pipe	A53 Gr.B	Typical
80	M80A	N101A	N102A			RIGID	None	None	RIGID	Typical
81	MP3A	N103	N104			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
82	M82	N105A	N106			RIGID	None	None	RIGID	Typical
83	MP4A	N107	N108			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
84	M84A	N110	N111			RIGID	None	None	RIGID	Typical
85	MP1C	N112	N113			Mount Pipe	Column	Pipe	A53 Gr.B	Typical





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**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
86	M86	N114	N115			RIGID	None	None	RIGID	Typical
87	MP2C	N116	N117			Replacement ...	Column	Pipe	A53 Gr.B	Typical
88	M88A	N118	N119			RIGID	None	None	RIGID	Typical
89	MP3C	N120	N121			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
90	M90	N122	N123			RIGID	None	None	RIGID	Typical
91	MP4C	N124	N125			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
92	M92A	N127	N128			RIGID	None	None	RIGID	Typical
93	MP1B	N129	N130			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
94	M94	N131A	N132			RIGID	None	None	RIGID	Typical
95	MP2B	N133	N134			Replacement ...	Column	Pipe	A53 Gr.B	Typical
96	M96	N135A	N136			RIGID	None	None	RIGID	Typical
97	MP3B	N137	N138			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
98	M98	N139	N140			RIGID	None	None	RIGID	Typical
99	MP4B	N141	N142			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
100	M100	N142A	N141A			Support Rail	Beam	Pipe	A53 Gr.B	Typical
101	M101	N143	N144A			RIGID	None	None	RIGID	Typical
102	M102	N145	N146			RIGID	None	None	RIGID	Typical
103	M103	N147	N148A			RIGID	None	None	RIGID	Typical
104	M104	N149	N150			RIGID	None	None	RIGID	Typical
105	M105	N151	N152			RIGID	None	None	RIGID	Typical
106	M106	N153	N154			RIGID	None	None	RIGID	Typical
107	M107	N156	N155			Support Rail	Beam	Pipe	A53 Gr.B	Typical
108	M108	N157	N158			RIGID	None	None	RIGID	Typical
109	M109	N159	N160			RIGID	None	None	RIGID	Typical
110	M110	N161	N162			RIGID	None	None	RIGID	Typical
111	M111	N163	N164			RIGID	None	None	RIGID	Typical
112	M114	N170	N169			Support Rail	Beam	Pipe	A53 Gr.B	Typical
113	M115	N171	N172			RIGID	None	None	RIGID	Typical
114	M116	N173	N174			RIGID	None	None	RIGID	Typical
115	M117	N175	N176			RIGID	None	None	RIGID	Typical
116	M118	N177	N178			RIGID	None	None	RIGID	Typical
117	M121	N154	N188		90	Support Rail C...	Column	Pipe	A53 Gr.B	Typical
118	M122	N190	N184		90	Support Rail C...	Column	Pipe	A53 Gr.B	Typical
119	M123	N186	N152		90	Support Rail C...	Column	Pipe	A53 Gr.B	Typical
120	M124	N183	N184			RIGID	None	None	RIGID	Typical
121	M125	N185	N186			RIGID	None	None	RIGID	Typical
122	M126	N187	N188			RIGID	None	None	RIGID	Typical
123	M127	N189	N190			RIGID	None	None	RIGID	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	M4						Yes				None
2	M10						Yes	Default			None
3	M43						Yes	Default			None
4	M46						Yes	Default			None
5	M35A						Yes	** NA **			None
6	M36A						Yes	** NA **			None
7	M51B	OOOOOX	OOOOOX				Yes	Default			None
8	M52B	OOOOOX	OOOOOX				Yes	Default			None
9	M52						Yes	** NA **			None
10	M58						Yes	** NA **			None
11	M59						Yes	** NA **			None
12	M76						Yes				None
13	M77						Yes				None
14	M79		BenPIN				Yes	** NA **			None



**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
15	M80						Yes				None
16	M83		BenPIN				Yes	** NA **			None
17	M84						Yes				None
18	M85						Yes				None
19	M88		BenPIN				Yes	** NA **			None
20	M91						Yes				None
21	M92		BenPIN				Yes	** NA **			None
22	M50						Yes	** NA **			None
23	M51						Yes	** NA **			None
24	M51A						Yes	** NA **			None
25	M25						Yes				None
26	M26						Yes	Default			None
27	M27						Yes	Default			None
28	M28						Yes	Default			None
29	M29						Yes	** NA **			None
30	M30						Yes	** NA **			None
31	M31	OOOOOX	OOOOOX				Yes	Default			None
32	M32	OOOOOX	OOOOOX				Yes	Default			None
33	M33						Yes	** NA **			None
34	M34						Yes	** NA **			None
35	M35						Yes	** NA **			None
36	M36						Yes				None
37	M37						Yes				None
38	M38		BenPIN				Yes	** NA **			None
39	M39						Yes				None
40	M40		BenPIN				Yes	** NA **			None
41	M41						Yes				None
42	M42						Yes				None
43	M43A		BenPIN				Yes	** NA **			None
44	M44						Yes				None
45	M45		BenPIN				Yes	** NA **			None
46	M46A						Yes	** NA **			None
47	M47						Yes	** NA **			None
48	M48						Yes	** NA **			None
49	M49						Yes				None
50	M50A						Yes	Default			None
51	M51C						Yes	Default			None
52	M52A						Yes	Default			None
53	M53						Yes	** NA **			None
54	M54						Yes	** NA **			None
55	M55	OOOOOX	OOOOOX				Yes	Default			None
56	M56	OOOOOX	OOOOOX				Yes	Default			None
57	M57						Yes	** NA **			None
58	M58A						Yes	** NA **			None
59	M59A						Yes	** NA **			None
60	M60						Yes				None
61	M61						Yes				None
62	M62		BenPIN				Yes	** NA **			None
63	M63						Yes				None
64	M64		BenPIN				Yes	** NA **			None
65	M65						Yes				None
66	M66						Yes				None
67	M67		BenPIN				Yes	** NA **			None
68	M68						Yes				None
69	M69		BenPIN				Yes	** NA **			None
70	M70						Yes	** NA **			None
71	M71						Yes	** NA **			None



**Member Advanced Data (Continued)**

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
72	M72						Yes	** NA **			None
73	M73						Yes				None
74	M74						Yes				None
75	M75						Yes				None
76	M76A						Yes	** NA **			None
77	MP1A						Yes	** NA **			None
78	M78						Yes	** NA **			None
79	MP2A						Yes	** NA **			None
80	M80A						Yes	** NA **			None
81	MP3A						Yes	** NA **			None
82	M82						Yes	** NA **			None
83	MP4A						Yes	** NA **			None
84	M84A						Yes	** NA **			None
85	MP1C						Yes	** NA **			None
86	M86						Yes	** NA **			None
87	MP2C						Yes	** NA **			None
88	M88A						Yes	** NA **			None
89	MP3C						Yes	** NA **			None
90	M90						Yes	** NA **			None
91	MP4C						Yes	** NA **			None
92	M92A						Yes	** NA **			None
93	MP1B						Yes	** NA **			None
94	M94						Yes	** NA **			None
95	MP2B						Yes	** NA **			None
96	M96						Yes	** NA **			None
97	MP3B						Yes	** NA **			None
98	M98						Yes	** NA **			None
99	MP4B						Yes	** NA **			None
100	M100						Yes				None
101	M101						Yes	** NA **			None
102	M102						Yes	** NA **			None
103	M103						Yes	** NA **			None
104	M104						Yes	** NA **			None
105	M105	OOOOOX					Yes	** NA **			None
106	M106	OOOOOX					Yes	** NA **			None
107	M107						Yes				None
108	M108						Yes	** NA **			None
109	M109						Yes	** NA **			None
110	M110						Yes	** NA **			None
111	M111						Yes	** NA **			None
112	M114						Yes				None
113	M115						Yes	** NA **			None
114	M116						Yes	** NA **			None
115	M117						Yes	** NA **			None
116	M118						Yes	** NA **			None
117	M121						Yes	** NA **			None
118	M122						Yes	** NA **			None
119	M123						Yes	** NA **			None
120	M124	OOOOOX					Yes	** NA **			None
121	M125	OOOOOX					Yes	** NA **			None
122	M126	OOOOOX					Yes	** NA **			None
123	M127	OOOOOX					Yes	** NA **			None



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	Y	-21.85	6
2	MP2A	My	-.011	6
3	MP2A	Mz	.013	6
4	MP2A	Y	-21.85	66
5	MP2A	My	-.011	66
6	MP2A	Mz	.013	66
7	MP2B	Y	-21.85	6
8	MP2B	My	-.006	6
9	MP2B	Mz	-.016	6
10	MP2B	Y	-21.85	66
11	MP2B	My	-.006	66
12	MP2B	Mz	-.016	66
13	MP2C	Y	-21.85	6
14	MP2C	My	.017	6
15	MP2C	Mz	.003	6
16	MP2C	Y	-21.85	66
17	MP2C	My	.017	66
18	MP2C	Mz	.003	66
19	MP2A	Y	-21.85	6
20	MP2A	My	-.011	6
21	MP2A	Mz	-.013	6
22	MP2A	Y	-21.85	66
23	MP2A	My	-.011	66
24	MP2A	Mz	-.013	66
25	MP2B	Y	-21.85	6
26	MP2B	My	.017	6
27	MP2B	Mz	-.003	6
28	MP2B	Y	-21.85	66
29	MP2B	My	.017	66
30	MP2B	Mz	-.003	66
31	MP2C	Y	-21.85	6
32	MP2C	My	-.006	6
33	MP2C	Mz	.016	6
34	MP2C	Y	-21.85	66
35	MP2C	My	-.006	66
36	MP2C	Mz	.016	66
37	MP4A	Y	-43.55	24
38	MP4A	My	-.022	24
39	MP4A	Mz	0	24
40	MP4A	Y	-43.55	48
41	MP4A	My	-.022	48
42	MP4A	Mz	0	48
43	MP4B	Y	-43.55	24
44	MP4B	My	.011	24
45	MP4B	Mz	-.019	24
46	MP4B	Y	-43.55	48
47	MP4B	My	.011	48
48	MP4B	Mz	-.019	48
49	MP4C	Y	-43.55	24
50	MP4C	My	.011	24
51	MP4C	Mz	.019	24
52	MP4C	Y	-43.55	48
53	MP4C	My	.011	48
54	MP4C	Mz	.019	48
55	MP3A	Y	-84.4	36
56	MP3A	My	.042	36





Company : Maser Consulting  
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 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
20	MP2A	My	-.044	6
21	MP2A	Mz	-.051	6
22	MP2A	Y	-87.853	66
23	MP2A	My	-.044	66
24	MP2A	Mz	-.051	66
25	MP2B	Y	-87.853	6
26	MP2B	My	.066	6
27	MP2B	Mz	-.012	6
28	MP2B	Y	-87.853	66
29	MP2B	My	.066	66
30	MP2B	Mz	-.012	66
31	MP2C	Y	-87.853	6
32	MP2C	My	-.022	6
33	MP2C	Mz	.064	6
34	MP2C	Y	-87.853	66
35	MP2C	My	-.022	66
36	MP2C	Mz	.064	66
37	MP4A	Y	-51.81	24
38	MP4A	My	-.026	24
39	MP4A	Mz	0	24
40	MP4A	Y	-51.81	48
41	MP4A	My	-.026	48
42	MP4A	Mz	0	48
43	MP4B	Y	-51.81	24
44	MP4B	My	.013	24
45	MP4B	Mz	-.022	24
46	MP4B	Y	-51.81	48
47	MP4B	My	.013	48
48	MP4B	Mz	-.022	48
49	MP4C	Y	-51.81	24
50	MP4C	My	.013	24
51	MP4C	Mz	.022	24
52	MP4C	Y	-51.81	48
53	MP4C	My	.013	48
54	MP4C	Mz	.022	48
55	MP3A	Y	-65.736	36
56	MP3A	My	.033	36
57	MP3A	Mz	0	36
58	MP3B	Y	-65.736	36
59	MP3B	My	-.016	36
60	MP3B	Mz	.028	36
61	MP3C	Y	-65.736	36
62	MP3C	My	-.016	36
63	MP3C	Mz	-.028	36
64	MP2A	Y	-59.302	36
65	MP2A	My	.03	36
66	MP2A	Mz	0	36
67	MP2B	Y	-59.302	36
68	MP2B	My	-.015	36
69	MP2B	Mz	.026	36
70	MP2C	Y	-59.302	36
71	MP2C	My	-.015	36
72	MP2C	Mz	-.026	36
73	MP1A	Y	-51.159	6
74	MP1A	My	-.026	6
75	MP1A	Mz	0	6
76	MP1A	Y	-51.159	66





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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
40	MP4A	X	0	48
41	MP4A	Z	-77.901	48
42	MP4A	Mx	0	48
43	MP4B	X	0	24
44	MP4B	Z	-42.349	24
45	MP4B	Mx	.018	24
46	MP4B	X	0	48
47	MP4B	Z	-42.349	48
48	MP4B	Mx	.018	48
49	MP4C	X	0	24
50	MP4C	Z	-42.349	24
51	MP4C	Mx	-.018	24
52	MP4C	X	0	48
53	MP4C	Z	-42.349	48
54	MP4C	Mx	-.018	48
55	MP3A	X	0	36
56	MP3A	Z	-61.989	36
57	MP3A	Mx	0	36
58	MP3B	X	0	36
59	MP3B	Z	-46.575	36
60	MP3B	Mx	-.02	36
61	MP3C	X	0	36
62	MP3C	Z	-46.575	36
63	MP3C	Mx	.02	36
64	MP2A	X	0	36
65	MP2A	Z	-61.989	36
66	MP2A	Mx	0	36
67	MP2B	X	0	36
68	MP2B	Z	-40.67	36
69	MP2B	Mx	-.018	36
70	MP2C	X	0	36
71	MP2C	Z	-40.67	36
72	MP2C	Mx	.018	36
73	MP1A	X	0	6
74	MP1A	Z	-87.68	6
75	MP1A	Mx	0	6
76	MP1A	X	0	66
77	MP1A	Z	-87.68	66
78	MP1A	Mx	0	66
79	MP1B	X	0	6
80	MP1B	Z	-62.957	6
81	MP1B	Mx	.027	6
82	MP1B	X	0	66
83	MP1B	Z	-62.957	66
84	MP1B	Mx	.027	66
85	MP1C	X	0	6
86	MP1C	Z	-62.957	6
87	MP1C	Mx	-.027	6
88	MP1C	X	0	66
89	MP1C	Z	-62.957	66
90	MP1C	Mx	-.027	66

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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
1	MP2A	X	61.288	6
2	MP2A	Z	-106.155	6





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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
3	MP2A	Mx	-.093	6
4	MP2A	X	61.288	66
5	MP2A	Z	-106.155	66
6	MP2A	Mx	-.093	66
7	MP2B	X	44.268	6
8	MP2B	Z	-76.675	6
9	MP2B	Mx	.044	6
10	MP2B	X	44.268	66
11	MP2B	Z	-76.675	66
12	MP2B	Mx	.044	66
13	MP2C	X	61.288	6
14	MP2C	Z	-106.155	6
15	MP2C	Mx	.031	6
16	MP2C	X	61.288	66
17	MP2C	Z	-106.155	66
18	MP2C	Mx	.031	66
19	MP2A	X	61.288	6
20	MP2A	Z	-106.155	6
21	MP2A	Mx	.031	6
22	MP2A	X	61.288	66
23	MP2A	Z	-106.155	66
24	MP2A	Mx	.031	66
25	MP2B	X	44.268	6
26	MP2B	Z	-76.675	6
27	MP2B	Mx	.044	6
28	MP2B	X	44.268	66
29	MP2B	Z	-76.675	66
30	MP2B	Mx	.044	66
31	MP2C	X	61.288	6
32	MP2C	Z	-106.155	6
33	MP2C	Mx	-.093	6
34	MP2C	X	61.288	66
35	MP2C	Z	-106.155	66
36	MP2C	Mx	-.093	66
37	MP4A	X	33.025	24
38	MP4A	Z	-57.201	24
39	MP4A	Mx	-.017	24
40	MP4A	X	33.025	48
41	MP4A	Z	-57.201	48
42	MP4A	Mx	-.017	48
43	MP4B	X	15.249	24
44	MP4B	Z	-26.412	24
45	MP4B	Mx	.015	24
46	MP4B	X	15.249	48
47	MP4B	Z	-26.412	48
48	MP4B	Mx	.015	48
49	MP4C	X	33.025	24
50	MP4C	Z	-57.201	24
51	MP4C	Mx	-.017	24
52	MP4C	X	33.025	48
53	MP4C	Z	-57.201	48
54	MP4C	Mx	-.017	48
55	MP3A	X	28.426	36
56	MP3A	Z	-49.235	36
57	MP3A	Mx	.014	36
58	MP3B	X	20.718	36
59	MP3B	Z	-35.885	36



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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
60	MP3B	Mx	-.021	36
61	MP3C	X	28.426	36
62	MP3C	Z	-49.235	36
63	MP3C	Mx	.014	36
64	MP2A	X	27.442	36
65	MP2A	Z	-47.53	36
66	MP2A	Mx	.014	36
67	MP2B	X	16.782	36
68	MP2B	Z	-29.067	36
69	MP2B	Mx	-.017	36
70	MP2C	X	27.442	36
71	MP2C	Z	-47.53	36
72	MP2C	Mx	.014	36
73	MP1A	X	39.72	6
74	MP1A	Z	-68.796	6
75	MP1A	Mx	-.02	6
76	MP1A	X	39.72	66
77	MP1A	Z	-68.796	66
78	MP1A	Mx	-.02	66
79	MP1B	X	27.358	6
80	MP1B	Z	-47.385	6
81	MP1B	Mx	.027	6
82	MP1B	X	27.358	66
83	MP1B	Z	-47.385	66
84	MP1B	Mx	.027	66
85	MP1C	X	39.72	6
86	MP1C	Z	-68.796	6
87	MP1C	Mx	-.02	6
88	MP1C	X	39.72	66
89	MP1C	Z	-68.796	66
90	MP1C	Mx	-.02	66

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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
1	MP2A	X	86.502	6
2	MP2A	Z	-49.942	6
3	MP2A	Mx	-.072	6
4	MP2A	X	86.502	66
5	MP2A	Z	-49.942	66
6	MP2A	Mx	-.072	66
7	MP2B	X	86.502	6
8	MP2B	Z	-49.942	6
9	MP2B	Mx	.014	6
10	MP2B	X	86.502	66
11	MP2B	Z	-49.942	66
12	MP2B	Mx	.014	66
13	MP2C	X	115.981	6
14	MP2C	Z	-66.962	6
15	MP2C	Mx	.078	6
16	MP2C	X	115.981	66
17	MP2C	Z	-66.962	66
18	MP2C	Mx	.078	66
19	MP2A	X	86.502	6
20	MP2A	Z	-49.942	6
21	MP2A	Mx	-.014	6
22	MP2A	X	86.502	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
23	MP2A	Z	-49.942	66
24	MP2A	Mx	-.014	66
25	MP2B	X	86.502	6
26	MP2B	Z	-49.942	6
27	MP2B	Mx	.072	6
28	MP2B	X	86.502	66
29	MP2B	Z	-49.942	66
30	MP2B	Mx	.072	66
31	MP2C	X	115.981	6
32	MP2C	Z	-66.962	6
33	MP2C	Mx	-.078	6
34	MP2C	X	115.981	66
35	MP2C	Z	-66.962	66
36	MP2C	Mx	-.078	66
37	MP4A	X	36.675	24
38	MP4A	Z	-21.174	24
39	MP4A	Mx	-.018	24
40	MP4A	X	36.675	48
41	MP4A	Z	-21.174	48
42	MP4A	Mx	-.018	48
43	MP4B	X	36.675	24
44	MP4B	Z	-21.174	24
45	MP4B	Mx	.018	24
46	MP4B	X	36.675	48
47	MP4B	Z	-21.174	48
48	MP4B	Mx	.018	48
49	MP4C	X	67.464	24
50	MP4C	Z	-38.951	24
51	MP4C	Mx	0	24
52	MP4C	X	67.464	48
53	MP4C	Z	-38.951	48
54	MP4C	Mx	0	48
55	MP3A	X	40.335	36
56	MP3A	Z	-23.287	36
57	MP3A	Mx	.02	36
58	MP3B	X	40.335	36
59	MP3B	Z	-23.287	36
60	MP3B	Mx	-.02	36
61	MP3C	X	53.684	36
62	MP3C	Z	-30.995	36
63	MP3C	Mx	0	36
64	MP2A	X	35.221	36
65	MP2A	Z	-20.335	36
66	MP2A	Mx	.018	36
67	MP2B	X	35.221	36
68	MP2B	Z	-20.335	36
69	MP2B	Mx	-.018	36
70	MP2C	X	53.684	36
71	MP2C	Z	-30.995	36
72	MP2C	Mx	0	36
73	MP1A	X	54.522	6
74	MP1A	Z	-31.478	6
75	MP1A	Mx	-.027	6
76	MP1A	X	54.522	66
77	MP1A	Z	-31.478	66
78	MP1A	Mx	-.027	66
79	MP1B	X	54.522	6







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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
6	MP2A	Mx	-.014	66
7	MP2B	X	115.981	6
8	MP2B	Z	66.962	6
9	MP2B	Mx	-.078	6
10	MP2B	X	115.981	66
11	MP2B	Z	66.962	66
12	MP2B	Mx	-.078	66
13	MP2C	X	86.502	6
14	MP2C	Z	49.942	6
15	MP2C	Mx	.072	6
16	MP2C	X	86.502	66
17	MP2C	Z	49.942	66
18	MP2C	Mx	.072	66
19	MP2A	X	86.502	6
20	MP2A	Z	49.942	6
21	MP2A	Mx	-.072	6
22	MP2A	X	86.502	66
23	MP2A	Z	49.942	66
24	MP2A	Mx	-.072	66
25	MP2B	X	115.981	6
26	MP2B	Z	66.962	6
27	MP2B	Mx	.078	6
28	MP2B	X	115.981	66
29	MP2B	Z	66.962	66
30	MP2B	Mx	.078	66
31	MP2C	X	86.502	6
32	MP2C	Z	49.942	6
33	MP2C	Mx	.014	6
34	MP2C	X	86.502	66
35	MP2C	Z	49.942	66
36	MP2C	Mx	.014	66
37	MP4A	X	36.675	24
38	MP4A	Z	21.174	24
39	MP4A	Mx	-.018	24
40	MP4A	X	36.675	48
41	MP4A	Z	21.174	48
42	MP4A	Mx	-.018	48
43	MP4B	X	67.464	24
44	MP4B	Z	38.951	24
45	MP4B	Mx	0	24
46	MP4B	X	67.464	48
47	MP4B	Z	38.951	48
48	MP4B	Mx	0	48
49	MP4C	X	36.675	24
50	MP4C	Z	21.174	24
51	MP4C	Mx	.018	24
52	MP4C	X	36.675	48
53	MP4C	Z	21.174	48
54	MP4C	Mx	.018	48
55	MP3A	X	40.335	36
56	MP3A	Z	23.287	36
57	MP3A	Mx	.02	36
58	MP3B	X	53.684	36
59	MP3B	Z	30.995	36
60	MP3B	Mx	0	36
61	MP3C	X	40.335	36
62	MP3C	Z	23.287	36





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
26	MP2B	Z	106.155	6
27	MP2B	Mx	.031	6
28	MP2B	X	61.288	66
29	MP2B	Z	106.155	66
30	MP2B	Mx	.031	66
31	MP2C	X	44.268	6
32	MP2C	Z	76.675	6
33	MP2C	Mx	.044	6
34	MP2C	X	44.268	66
35	MP2C	Z	76.675	66
36	MP2C	Mx	.044	66
37	MP4A	X	33.025	24
38	MP4A	Z	57.201	24
39	MP4A	Mx	-.017	24
40	MP4A	X	33.025	48
41	MP4A	Z	57.201	48
42	MP4A	Mx	-.017	48
43	MP4B	X	33.025	24
44	MP4B	Z	57.201	24
45	MP4B	Mx	-.017	24
46	MP4B	X	33.025	48
47	MP4B	Z	57.201	48
48	MP4B	Mx	-.017	48
49	MP4C	X	15.249	24
50	MP4C	Z	26.412	24
51	MP4C	Mx	.015	24
52	MP4C	X	15.249	48
53	MP4C	Z	26.412	48
54	MP4C	Mx	.015	48
55	MP3A	X	28.426	36
56	MP3A	Z	49.235	36
57	MP3A	Mx	.014	36
58	MP3B	X	28.426	36
59	MP3B	Z	49.235	36
60	MP3B	Mx	.014	36
61	MP3C	X	20.718	36
62	MP3C	Z	35.885	36
63	MP3C	Mx	-.021	36
64	MP2A	X	27.442	36
65	MP2A	Z	47.53	36
66	MP2A	Mx	.014	36
67	MP2B	X	27.442	36
68	MP2B	Z	47.53	36
69	MP2B	Mx	.014	36
70	MP2C	X	16.782	36
71	MP2C	Z	29.067	36
72	MP2C	Mx	-.017	36
73	MP1A	X	39.72	6
74	MP1A	Z	68.796	6
75	MP1A	Mx	-.02	6
76	MP1A	X	39.72	66
77	MP1A	Z	68.796	66
78	MP1A	Mx	-.02	66
79	MP1B	X	39.72	6
80	MP1B	Z	68.796	6
81	MP1B	Mx	-.02	6
82	MP1B	X	39.72	66







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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
46	MP4B	X	0	48
47	MP4B	Z	42.349	48
48	MP4B	Mx	-.018	48
49	MP4C	X	0	24
50	MP4C	Z	42.349	24
51	MP4C	Mx	.018	24
52	MP4C	X	0	48
53	MP4C	Z	42.349	48
54	MP4C	Mx	.018	48
55	MP3A	X	0	36
56	MP3A	Z	61.989	36
57	MP3A	Mx	0	36
58	MP3B	X	0	36
59	MP3B	Z	46.575	36
60	MP3B	Mx	.02	36
61	MP3C	X	0	36
62	MP3C	Z	46.575	36
63	MP3C	Mx	-.02	36
64	MP2A	X	0	36
65	MP2A	Z	61.989	36
66	MP2A	Mx	0	36
67	MP2B	X	0	36
68	MP2B	Z	40.67	36
69	MP2B	Mx	.018	36
70	MP2C	X	0	36
71	MP2C	Z	40.67	36
72	MP2C	Mx	-.018	36
73	MP1A	X	0	6
74	MP1A	Z	87.68	6
75	MP1A	Mx	0	6
76	MP1A	X	0	66
77	MP1A	Z	87.68	66
78	MP1A	Mx	0	66
79	MP1B	X	0	6
80	MP1B	Z	62.957	6
81	MP1B	Mx	-.027	6
82	MP1B	X	0	66
83	MP1B	Z	62.957	66
84	MP1B	Mx	-.027	66
85	MP1C	X	0	6
86	MP1C	Z	62.957	6
87	MP1C	Mx	.027	6
88	MP1C	X	0	66
89	MP1C	Z	62.957	66
90	MP1C	Mx	.027	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	-61.288	6
2	MP2A	Z	106.155	6
3	MP2A	Mx	.093	6
4	MP2A	X	-61.288	66
5	MP2A	Z	106.155	66
6	MP2A	Mx	.093	66
7	MP2B	X	-44.268	6
8	MP2B	Z	76.675	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
9	MP2B	Mx	-.044	6
10	MP2B	X	-44.268	66
11	MP2B	Z	76.675	66
12	MP2B	Mx	-.044	66
13	MP2C	X	-61.288	6
14	MP2C	Z	106.155	6
15	MP2C	Mx	-.031	6
16	MP2C	X	-61.288	66
17	MP2C	Z	106.155	66
18	MP2C	Mx	-.031	66
19	MP2A	X	-61.288	6
20	MP2A	Z	106.155	6
21	MP2A	Mx	-.031	6
22	MP2A	X	-61.288	66
23	MP2A	Z	106.155	66
24	MP2A	Mx	-.031	66
25	MP2B	X	-44.268	6
26	MP2B	Z	76.675	6
27	MP2B	Mx	-.044	6
28	MP2B	X	-44.268	66
29	MP2B	Z	76.675	66
30	MP2B	Mx	-.044	66
31	MP2C	X	-61.288	6
32	MP2C	Z	106.155	6
33	MP2C	Mx	.093	6
34	MP2C	X	-61.288	66
35	MP2C	Z	106.155	66
36	MP2C	Mx	.093	66
37	MP4A	X	-33.025	24
38	MP4A	Z	57.201	24
39	MP4A	Mx	.017	24
40	MP4A	X	-33.025	48
41	MP4A	Z	57.201	48
42	MP4A	Mx	.017	48
43	MP4B	X	-15.249	24
44	MP4B	Z	26.412	24
45	MP4B	Mx	-.015	24
46	MP4B	X	-15.249	48
47	MP4B	Z	26.412	48
48	MP4B	Mx	-.015	48
49	MP4C	X	-33.025	24
50	MP4C	Z	57.201	24
51	MP4C	Mx	.017	24
52	MP4C	X	-33.025	48
53	MP4C	Z	57.201	48
54	MP4C	Mx	.017	48
55	MP3A	X	-28.426	36
56	MP3A	Z	49.235	36
57	MP3A	Mx	-.014	36
58	MP3B	X	-20.718	36
59	MP3B	Z	35.885	36
60	MP3B	Mx	.021	36
61	MP3C	X	-28.426	36
62	MP3C	Z	49.235	36
63	MP3C	Mx	-.014	36
64	MP2A	X	-27.442	36
65	MP2A	Z	47.53	36



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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
66	MP2A	Mx	-.014	36
67	MP2B	X	-16.782	36
68	MP2B	Z	29.067	36
69	MP2B	Mx	.017	36
70	MP2C	X	-27.442	36
71	MP2C	Z	47.53	36
72	MP2C	Mx	-.014	36
73	MP1A	X	-39.72	6
74	MP1A	Z	68.796	6
75	MP1A	Mx	.02	6
76	MP1A	X	-39.72	66
77	MP1A	Z	68.796	66
78	MP1A	Mx	.02	66
79	MP1B	X	-27.358	6
80	MP1B	Z	47.385	6
81	MP1B	Mx	-.027	6
82	MP1B	X	-27.358	66
83	MP1B	Z	47.385	66
84	MP1B	Mx	-.027	66
85	MP1C	X	-39.72	6
86	MP1C	Z	68.796	6
87	MP1C	Mx	.02	6
88	MP1C	X	-39.72	66
89	MP1C	Z	68.796	66
90	MP1C	Mx	.02	66

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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
1	MP2A	X	-86.502	6
2	MP2A	Z	49.942	6
3	MP2A	Mx	.072	6
4	MP2A	X	-86.502	66
5	MP2A	Z	49.942	66
6	MP2A	Mx	.072	66
7	MP2B	X	-86.502	6
8	MP2B	Z	49.942	6
9	MP2B	Mx	-.014	6
10	MP2B	X	-86.502	66
11	MP2B	Z	49.942	66
12	MP2B	Mx	-.014	66
13	MP2C	X	-115.981	6
14	MP2C	Z	66.962	6
15	MP2C	Mx	-.078	6
16	MP2C	X	-115.981	66
17	MP2C	Z	66.962	66
18	MP2C	Mx	-.078	66
19	MP2A	X	-86.502	6
20	MP2A	Z	49.942	6
21	MP2A	Mx	.014	6
22	MP2A	X	-86.502	66
23	MP2A	Z	49.942	66
24	MP2A	Mx	.014	66
25	MP2B	X	-86.502	6
26	MP2B	Z	49.942	6
27	MP2B	Mx	-.072	6
28	MP2B	X	-86.502	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
29	MP2B	Z	49.942	66
30	MP2B	Mx	-.072	66
31	MP2C	X	-115.981	6
32	MP2C	Z	66.962	6
33	MP2C	Mx	.078	6
34	MP2C	X	-115.981	66
35	MP2C	Z	66.962	66
36	MP2C	Mx	.078	66
37	MP4A	X	-36.675	24
38	MP4A	Z	21.174	24
39	MP4A	Mx	.018	24
40	MP4A	X	-36.675	48
41	MP4A	Z	21.174	48
42	MP4A	Mx	.018	48
43	MP4B	X	-36.675	24
44	MP4B	Z	21.174	24
45	MP4B	Mx	-.018	24
46	MP4B	X	-36.675	48
47	MP4B	Z	21.174	48
48	MP4B	Mx	-.018	48
49	MP4C	X	-67.464	24
50	MP4C	Z	38.951	24
51	MP4C	Mx	0	24
52	MP4C	X	-67.464	48
53	MP4C	Z	38.951	48
54	MP4C	Mx	0	48
55	MP3A	X	-40.335	36
56	MP3A	Z	23.287	36
57	MP3A	Mx	-.02	36
58	MP3B	X	-40.335	36
59	MP3B	Z	23.287	36
60	MP3B	Mx	.02	36
61	MP3C	X	-53.684	36
62	MP3C	Z	30.995	36
63	MP3C	Mx	0	36
64	MP2A	X	-35.221	36
65	MP2A	Z	20.335	36
66	MP2A	Mx	-.018	36
67	MP2B	X	-35.221	36
68	MP2B	Z	20.335	36
69	MP2B	Mx	.018	36
70	MP2C	X	-53.684	36
71	MP2C	Z	30.995	36
72	MP2C	Mx	0	36
73	MP1A	X	-54.522	6
74	MP1A	Z	31.478	6
75	MP1A	Mx	.027	6
76	MP1A	X	-54.522	66
77	MP1A	Z	31.478	66
78	MP1A	Mx	.027	66
79	MP1B	X	-54.522	6
80	MP1B	Z	31.478	6
81	MP1B	Mx	-.027	6
82	MP1B	X	-54.522	66
83	MP1B	Z	31.478	66
84	MP1B	Mx	-.027	66
85	MP1C	X	-75.933	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
49	MP4C	X	-66.05	24
50	MP4C	Z	0	24
51	MP4C	Mx	-.017	24
52	MP4C	X	-66.05	48
53	MP4C	Z	0	48
54	MP4C	Mx	-.017	48
55	MP3A	X	-41.437	36
56	MP3A	Z	0	36
57	MP3A	Mx	-.021	36
58	MP3B	X	-56.851	36
59	MP3B	Z	0	36
60	MP3B	Mx	.014	36
61	MP3C	X	-56.851	36
62	MP3C	Z	0	36
63	MP3C	Mx	.014	36
64	MP2A	X	-33.564	36
65	MP2A	Z	0	36
66	MP2A	Mx	-.017	36
67	MP2B	X	-54.883	36
68	MP2B	Z	0	36
69	MP2B	Mx	.014	36
70	MP2C	X	-54.883	36
71	MP2C	Z	0	36
72	MP2C	Mx	.014	36
73	MP1A	X	-54.716	6
74	MP1A	Z	0	6
75	MP1A	Mx	.027	6
76	MP1A	X	-54.716	66
77	MP1A	Z	0	66
78	MP1A	Mx	.027	66
79	MP1B	X	-79.439	6
80	MP1B	Z	0	6
81	MP1B	Mx	-.02	6
82	MP1B	X	-79.439	66
83	MP1B	Z	0	66
84	MP1B	Mx	-.02	66
85	MP1C	X	-79.439	6
86	MP1C	Z	0	6
87	MP1C	Mx	-.02	6
88	MP1C	X	-79.439	66
89	MP1C	Z	0	66
90	MP1C	Mx	-.02	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	-86.502	6
2	MP2A	Z	-49.942	6
3	MP2A	Mx	.014	6
4	MP2A	X	-86.502	66
5	MP2A	Z	-49.942	66
6	MP2A	Mx	.014	66
7	MP2B	X	-115.981	6
8	MP2B	Z	-66.962	6
9	MP2B	Mx	.078	6
10	MP2B	X	-115.981	66
11	MP2B	Z	-66.962	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
12	MP2B	Mx	.078	66
13	MP2C	X	-86.502	6
14	MP2C	Z	-49.942	6
15	MP2C	Mx	-.072	6
16	MP2C	X	-86.502	66
17	MP2C	Z	-49.942	66
18	MP2C	Mx	-.072	66
19	MP2A	X	-86.502	6
20	MP2A	Z	-49.942	6
21	MP2A	Mx	.072	6
22	MP2A	X	-86.502	66
23	MP2A	Z	-49.942	66
24	MP2A	Mx	.072	66
25	MP2B	X	-115.981	6
26	MP2B	Z	-66.962	6
27	MP2B	Mx	-.078	6
28	MP2B	X	-115.981	66
29	MP2B	Z	-66.962	66
30	MP2B	Mx	-.078	66
31	MP2C	X	-86.502	6
32	MP2C	Z	-49.942	6
33	MP2C	Mx	-.014	6
34	MP2C	X	-86.502	66
35	MP2C	Z	-49.942	66
36	MP2C	Mx	-.014	66
37	MP4A	X	-36.675	24
38	MP4A	Z	-21.174	24
39	MP4A	Mx	.018	24
40	MP4A	X	-36.675	48
41	MP4A	Z	-21.174	48
42	MP4A	Mx	.018	48
43	MP4B	X	-67.464	24
44	MP4B	Z	-38.951	24
45	MP4B	Mx	0	24
46	MP4B	X	-67.464	48
47	MP4B	Z	-38.951	48
48	MP4B	Mx	0	48
49	MP4C	X	-36.675	24
50	MP4C	Z	-21.174	24
51	MP4C	Mx	-.018	24
52	MP4C	X	-36.675	48
53	MP4C	Z	-21.174	48
54	MP4C	Mx	-.018	48
55	MP3A	X	-40.335	36
56	MP3A	Z	-23.287	36
57	MP3A	Mx	-.02	36
58	MP3B	X	-53.684	36
59	MP3B	Z	-30.995	36
60	MP3B	Mx	0	36
61	MP3C	X	-40.335	36
62	MP3C	Z	-23.287	36
63	MP3C	Mx	.02	36
64	MP2A	X	-35.221	36
65	MP2A	Z	-20.335	36
66	MP2A	Mx	-.018	36
67	MP2B	X	-53.684	36
68	MP2B	Z	-30.995	36





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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in. %]
69	MP2B	Mx	0	36
70	MP2C	X	-35.221	36
71	MP2C	Z	-20.335	36
72	MP2C	Mx	.018	36
73	MP1A	X	-54.522	6
74	MP1A	Z	-31.478	6
75	MP1A	Mx	.027	6
76	MP1A	X	-54.522	66
77	MP1A	Z	-31.478	66
78	MP1A	Mx	.027	66
79	MP1B	X	-75.933	6
80	MP1B	Z	-43.84	6
81	MP1B	Mx	0	6
82	MP1B	X	-75.933	66
83	MP1B	Z	-43.84	66
84	MP1B	Mx	0	66
85	MP1C	X	-54.522	6
86	MP1C	Z	-31.478	6
87	MP1C	Mx	-.027	6
88	MP1C	X	-54.522	66
89	MP1C	Z	-31.478	66
90	MP1C	Mx	-.027	66

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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in. %]
1	MP2A	X	-61.288	6
2	MP2A	Z	-106.155	6
3	MP2A	Mx	-.031	6
4	MP2A	X	-61.288	66
5	MP2A	Z	-106.155	66
6	MP2A	Mx	-.031	66
7	MP2B	X	-61.288	6
8	MP2B	Z	-106.155	6
9	MP2B	Mx	.093	6
10	MP2B	X	-61.288	66
11	MP2B	Z	-106.155	66
12	MP2B	Mx	.093	66
13	MP2C	X	-44.268	6
14	MP2C	Z	-76.675	6
15	MP2C	Mx	-.044	6
16	MP2C	X	-44.268	66
17	MP2C	Z	-76.675	66
18	MP2C	Mx	-.044	66
19	MP2A	X	-61.288	6
20	MP2A	Z	-106.155	6
21	MP2A	Mx	.093	6
22	MP2A	X	-61.288	66
23	MP2A	Z	-106.155	66
24	MP2A	Mx	.093	66
25	MP2B	X	-61.288	6
26	MP2B	Z	-106.155	6
27	MP2B	Mx	-.031	6
28	MP2B	X	-61.288	66
29	MP2B	Z	-106.155	66
30	MP2B	Mx	-.031	66
31	MP2C	X	-44.268	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
32	MP2C	Z	-76.675	6
33	MP2C	Mx	-.044	6
34	MP2C	X	-44.268	66
35	MP2C	Z	-76.675	66
36	MP2C	Mx	-.044	66
37	MP4A	X	-33.025	24
38	MP4A	Z	-57.201	24
39	MP4A	Mx	.017	24
40	MP4A	X	-33.025	48
41	MP4A	Z	-57.201	48
42	MP4A	Mx	.017	48
43	MP4B	X	-33.025	24
44	MP4B	Z	-57.201	24
45	MP4B	Mx	.017	24
46	MP4B	X	-33.025	48
47	MP4B	Z	-57.201	48
48	MP4B	Mx	.017	48
49	MP4C	X	-15.249	24
50	MP4C	Z	-26.412	24
51	MP4C	Mx	-.015	24
52	MP4C	X	-15.249	48
53	MP4C	Z	-26.412	48
54	MP4C	Mx	-.015	48
55	MP3A	X	-28.426	36
56	MP3A	Z	-49.235	36
57	MP3A	Mx	-.014	36
58	MP3B	X	-28.426	36
59	MP3B	Z	-49.235	36
60	MP3B	Mx	-.014	36
61	MP3C	X	-20.718	36
62	MP3C	Z	-35.885	36
63	MP3C	Mx	.021	36
64	MP2A	X	-27.442	36
65	MP2A	Z	-47.53	36
66	MP2A	Mx	-.014	36
67	MP2B	X	-27.442	36
68	MP2B	Z	-47.53	36
69	MP2B	Mx	-.014	36
70	MP2C	X	-16.782	36
71	MP2C	Z	-29.067	36
72	MP2C	Mx	.017	36
73	MP1A	X	-39.72	6
74	MP1A	Z	-68.796	6
75	MP1A	Mx	.02	6
76	MP1A	X	-39.72	66
77	MP1A	Z	-68.796	66
78	MP1A	Mx	.02	66
79	MP1B	X	-39.72	6
80	MP1B	Z	-68.796	6
81	MP1B	Mx	.02	6
82	MP1B	X	-39.72	66
83	MP1B	Z	-68.796	66
84	MP1B	Mx	.02	66
85	MP1C	X	-27.358	6
86	MP1C	Z	-47.385	6
87	MP1C	Mx	-.027	6
88	MP1C	X	-27.358	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
89	MP1C	Z	-47.385	66
90	MP1C	Mx	-.027	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	0	6
2	MP2A	Z	-29.021	6
3	MP2A	Mx	-.017	6
4	MP2A	X	0	66
5	MP2A	Z	-29.021	66
6	MP2A	Mx	-.017	66
7	MP2B	X	0	6
8	MP2B	Z	-22.497	6
9	MP2B	Mx	.016	6
10	MP2B	X	0	66
11	MP2B	Z	-22.497	66
12	MP2B	Mx	.016	66
13	MP2C	X	0	6
14	MP2C	Z	-22.497	6
15	MP2C	Mx	-.003	6
16	MP2C	X	0	66
17	MP2C	Z	-22.497	66
18	MP2C	Mx	-.003	66
19	MP2A	X	0	6
20	MP2A	Z	-29.021	6
21	MP2A	Mx	.017	6
22	MP2A	X	0	66
23	MP2A	Z	-29.021	66
24	MP2A	Mx	.017	66
25	MP2B	X	0	6
26	MP2B	Z	-22.497	6
27	MP2B	Mx	.003	6
28	MP2B	X	0	66
29	MP2B	Z	-22.497	66
30	MP2B	Mx	.003	66
31	MP2C	X	0	6
32	MP2C	Z	-22.497	6
33	MP2C	Mx	-.016	6
34	MP2C	X	0	66
35	MP2C	Z	-22.497	66
36	MP2C	Mx	-.016	66
37	MP4A	X	0	24
38	MP4A	Z	-17.418	24
39	MP4A	Mx	0	24
40	MP4A	X	0	48
41	MP4A	Z	-17.418	48
42	MP4A	Mx	0	48
43	MP4B	X	0	24
44	MP4B	Z	-10.105	24
45	MP4B	Mx	.004	24
46	MP4B	X	0	48
47	MP4B	Z	-10.105	48
48	MP4B	Mx	.004	48
49	MP4C	X	0	24
50	MP4C	Z	-10.105	24
51	MP4C	Mx	-.004	24



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
52	MP4C	X	0	48
53	MP4C	Z	-10.105	48
54	MP4C	Mx	-.004	48
55	MP3A	X	0	36
56	MP3A	Z	-15	36
57	MP3A	Mx	0	36
58	MP3B	X	0	36
59	MP3B	Z	-11.696	36
60	MP3B	Mx	-.005	36
61	MP3C	X	0	36
62	MP3C	Z	-11.696	36
63	MP3C	Mx	.005	36
64	MP2A	X	0	36
65	MP2A	Z	-15	36
66	MP2A	Mx	0	36
67	MP2B	X	0	36
68	MP2B	Z	-10.44	36
69	MP2B	Mx	-.005	36
70	MP2C	X	0	36
71	MP2C	Z	-10.44	36
72	MP2C	Mx	.005	36
73	MP1A	X	0	6
74	MP1A	Z	-20.267	6
75	MP1A	Mx	0	6
76	MP1A	X	0	66
77	MP1A	Z	-20.267	66
78	MP1A	Mx	0	66
79	MP1B	X	0	6
80	MP1B	Z	-15.274	6
81	MP1B	Mx	.007	6
82	MP1B	X	0	66
83	MP1B	Z	-15.274	66
84	MP1B	Mx	.007	66
85	MP1C	X	0	6
86	MP1C	Z	-15.274	6
87	MP1C	Mx	-.007	6
88	MP1C	X	0	66
89	MP1C	Z	-15.274	66
90	MP1C	Mx	-.007	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	13.423	6
2	MP2A	Z	-23.25	6
3	MP2A	Mx	-.02	6
4	MP2A	X	13.423	66
5	MP2A	Z	-23.25	66
6	MP2A	Mx	-.02	66
7	MP2B	X	10.161	6
8	MP2B	Z	-17.599	6
9	MP2B	Mx	.01	6
10	MP2B	X	10.161	66
11	MP2B	Z	-17.599	66
12	MP2B	Mx	.01	66
13	MP2C	X	13.423	6
14	MP2C	Z	-23.25	6



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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
15	MP2C	Mx	.007	6
16	MP2C	X	13.423	66
17	MP2C	Z	-23.25	66
18	MP2C	Mx	.007	66
19	MP2A	X	13.423	6
20	MP2A	Z	-23.25	6
21	MP2A	Mx	.007	6
22	MP2A	X	13.423	66
23	MP2A	Z	-23.25	66
24	MP2A	Mx	.007	66
25	MP2B	X	10.161	6
26	MP2B	Z	-17.599	6
27	MP2B	Mx	.01	6
28	MP2B	X	10.161	66
29	MP2B	Z	-17.599	66
30	MP2B	Mx	.01	66
31	MP2C	X	13.423	6
32	MP2C	Z	-23.25	6
33	MP2C	Mx	-.02	6
34	MP2C	X	13.423	66
35	MP2C	Z	-23.25	66
36	MP2C	Mx	-.02	66
37	MP4A	X	7.49	24
38	MP4A	Z	-12.973	24
39	MP4A	Mx	-.004	24
40	MP4A	X	7.49	48
41	MP4A	Z	-12.973	48
42	MP4A	Mx	-.004	48
43	MP4B	X	3.834	24
44	MP4B	Z	-6.641	24
45	MP4B	Mx	.004	24
46	MP4B	X	3.834	48
47	MP4B	Z	-6.641	48
48	MP4B	Mx	.004	48
49	MP4C	X	7.49	24
50	MP4C	Z	-12.973	24
51	MP4C	Mx	-.004	24
52	MP4C	X	7.49	48
53	MP4C	Z	-12.973	48
54	MP4C	Mx	-.004	48
55	MP3A	X	6.949	36
56	MP3A	Z	-12.037	36
57	MP3A	Mx	.003	36
58	MP3B	X	5.297	36
59	MP3B	Z	-9.175	36
60	MP3B	Mx	-.005	36
61	MP3C	X	6.949	36
62	MP3C	Z	-12.037	36
63	MP3C	Mx	.003	36
64	MP2A	X	6.74	36
65	MP2A	Z	-11.674	36
66	MP2A	Mx	.003	36
67	MP2B	X	4.46	36
68	MP2B	Z	-7.725	36
69	MP2B	Mx	-.004	36
70	MP2C	X	6.74	36
71	MP2C	Z	-11.674	36



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
72	MP2C	Mx	.003	36
73	MP1A	X	9.301	6
74	MP1A	Z	-16.11	6
75	MP1A	Mx	-.005	6
76	MP1A	X	9.301	66
77	MP1A	Z	-16.11	66
78	MP1A	Mx	-.005	66
79	MP1B	X	6.805	6
80	MP1B	Z	-11.786	6
81	MP1B	Mx	.007	6
82	MP1B	X	6.805	66
83	MP1B	Z	-11.786	66
84	MP1B	Mx	.007	66
85	MP1C	X	9.301	6
86	MP1C	Z	-16.11	6
87	MP1C	Mx	-.005	6
88	MP1C	X	9.301	66
89	MP1C	Z	-16.11	66
90	MP1C	Mx	-.005	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	19.483	6
2	MP2A	Z	-11.248	6
3	MP2A	Mx	-.016	6
4	MP2A	X	19.483	66
5	MP2A	Z	-11.248	66
6	MP2A	Mx	-.016	66
7	MP2B	X	19.483	6
8	MP2B	Z	-11.248	6
9	MP2B	Mx	.003	6
10	MP2B	X	19.483	66
11	MP2B	Z	-11.248	66
12	MP2B	Mx	.003	66
13	MP2C	X	25.133	6
14	MP2C	Z	-14.511	6
15	MP2C	Mx	.017	6
16	MP2C	X	25.133	66
17	MP2C	Z	-14.511	66
18	MP2C	Mx	.017	66
19	MP2A	X	19.483	6
20	MP2A	Z	-11.248	6
21	MP2A	Mx	-.003	6
22	MP2A	X	19.483	66
23	MP2A	Z	-11.248	66
24	MP2A	Mx	-.003	66
25	MP2B	X	19.483	6
26	MP2B	Z	-11.248	6
27	MP2B	Mx	.016	6
28	MP2B	X	19.483	66
29	MP2B	Z	-11.248	66
30	MP2B	Mx	.016	66
31	MP2C	X	25.133	6
32	MP2C	Z	-14.511	6
33	MP2C	Mx	-.017	6
34	MP2C	X	25.133	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
35	MP2C	Z	-14.511	66
36	MP2C	Mx	-.017	66
37	MP4A	X	8.751	24
38	MP4A	Z	-5.053	24
39	MP4A	Mx	-.004	24
40	MP4A	X	8.751	48
41	MP4A	Z	-5.053	48
42	MP4A	Mx	-.004	48
43	MP4B	X	8.751	24
44	MP4B	Z	-5.053	24
45	MP4B	Mx	.004	24
46	MP4B	X	8.751	48
47	MP4B	Z	-5.053	48
48	MP4B	Mx	.004	48
49	MP4C	X	15.084	24
50	MP4C	Z	-8.709	24
51	MP4C	Mx	0	24
52	MP4C	X	15.084	48
53	MP4C	Z	-8.709	48
54	MP4C	Mx	0	48
55	MP3A	X	10.129	36
56	MP3A	Z	-5.848	36
57	MP3A	Mx	.005	36
58	MP3B	X	10.129	36
59	MP3B	Z	-5.848	36
60	MP3B	Mx	-.005	36
61	MP3C	X	12.99	36
62	MP3C	Z	-7.5	36
63	MP3C	Mx	0	36
64	MP2A	X	9.041	36
65	MP2A	Z	-5.22	36
66	MP2A	Mx	.005	36
67	MP2B	X	9.041	36
68	MP2B	Z	-5.22	36
69	MP2B	Mx	-.005	36
70	MP2C	X	12.99	36
71	MP2C	Z	-7.5	36
72	MP2C	Mx	0	36
73	MP1A	X	13.227	6
74	MP1A	Z	-7.637	6
75	MP1A	Mx	-.007	6
76	MP1A	X	13.227	66
77	MP1A	Z	-7.637	66
78	MP1A	Mx	-.007	66
79	MP1B	X	13.227	6
80	MP1B	Z	-7.637	6
81	MP1B	Mx	.007	6
82	MP1B	X	13.227	66
83	MP1B	Z	-7.637	66
84	MP1B	Mx	.007	66
85	MP1C	X	17.552	6
86	MP1C	Z	-10.133	6
87	MP1C	Mx	0	6
88	MP1C	X	17.552	66
89	MP1C	Z	-10.133	66
90	MP1C	Mx	0	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	20.322	6
2	MP2A	Z	0	6
3	MP2A	Mx	-.01	6
4	MP2A	X	20.322	66
5	MP2A	Z	0	66
6	MP2A	Mx	-.01	66
7	MP2B	X	26.846	6
8	MP2B	Z	0	6
9	MP2B	Mx	-.007	6
10	MP2B	X	26.846	66
11	MP2B	Z	0	66
12	MP2B	Mx	-.007	66
13	MP2C	X	26.846	6
14	MP2C	Z	0	6
15	MP2C	Mx	.02	6
16	MP2C	X	26.846	66
17	MP2C	Z	0	66
18	MP2C	Mx	.02	66
19	MP2A	X	20.322	6
20	MP2A	Z	0	6
21	MP2A	Mx	-.01	6
22	MP2A	X	20.322	66
23	MP2A	Z	0	66
24	MP2A	Mx	-.01	66
25	MP2B	X	26.846	6
26	MP2B	Z	0	6
27	MP2B	Mx	.02	6
28	MP2B	X	26.846	66
29	MP2B	Z	0	66
30	MP2B	Mx	.02	66
31	MP2C	X	26.846	6
32	MP2C	Z	0	6
33	MP2C	Mx	-.007	6
34	MP2C	X	26.846	66
35	MP2C	Z	0	66
36	MP2C	Mx	-.007	66
37	MP4A	X	7.668	24
38	MP4A	Z	0	24
39	MP4A	Mx	-.004	24
40	MP4A	X	7.668	48
41	MP4A	Z	0	48
42	MP4A	Mx	-.004	48
43	MP4B	X	14.98	24
44	MP4B	Z	0	24
45	MP4B	Mx	.004	24
46	MP4B	X	14.98	48
47	MP4B	Z	0	48
48	MP4B	Mx	.004	48
49	MP4C	X	14.98	24
50	MP4C	Z	0	24
51	MP4C	Mx	.004	24
52	MP4C	X	14.98	48
53	MP4C	Z	0	48
54	MP4C	Mx	.004	48
55	MP3A	X	10.594	36
56	MP3A	Z	0	36
57	MP3A	Mx	.005	36





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
58	MP3B	X	13.899	36
59	MP3B	Z	0	36
60	MP3B	Mx	-.003	36
61	MP3C	X	13.899	36
62	MP3C	Z	0	36
63	MP3C	Mx	-.003	36
64	MP2A	X	8.92	36
65	MP2A	Z	0	36
66	MP2A	Mx	.004	36
67	MP2B	X	13.48	36
68	MP2B	Z	0	36
69	MP2B	Mx	-.003	36
70	MP2C	X	13.48	36
71	MP2C	Z	0	36
72	MP2C	Mx	-.003	36
73	MP1A	X	13.609	6
74	MP1A	Z	0	6
75	MP1A	Mx	-.007	6
76	MP1A	X	13.609	66
77	MP1A	Z	0	66
78	MP1A	Mx	-.007	66
79	MP1B	X	18.602	6
80	MP1B	Z	0	6
81	MP1B	Mx	.005	6
82	MP1B	X	18.602	66
83	MP1B	Z	0	66
84	MP1B	Mx	.005	66
85	MP1C	X	18.602	6
86	MP1C	Z	0	6
87	MP1C	Mx	.005	6
88	MP1C	X	18.602	66
89	MP1C	Z	0	66
90	MP1C	Mx	.005	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	19.483	6
2	MP2A	Z	11.248	6
3	MP2A	Mx	-.003	6
4	MP2A	X	19.483	66
5	MP2A	Z	11.248	66
6	MP2A	Mx	-.003	66
7	MP2B	X	25.133	6
8	MP2B	Z	14.511	6
9	MP2B	Mx	-.017	6
10	MP2B	X	25.133	66
11	MP2B	Z	14.511	66
12	MP2B	Mx	-.017	66
13	MP2C	X	19.483	6
14	MP2C	Z	11.248	6
15	MP2C	Mx	.016	6
16	MP2C	X	19.483	66
17	MP2C	Z	11.248	66
18	MP2C	Mx	.016	66
19	MP2A	X	19.483	6
20	MP2A	Z	11.248	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
21	MP2A	Mx	-.016	6
22	MP2A	X	19.483	66
23	MP2A	Z	11.248	66
24	MP2A	Mx	-.016	66
25	MP2B	X	25.133	6
26	MP2B	Z	14.511	6
27	MP2B	Mx	.017	6
28	MP2B	X	25.133	66
29	MP2B	Z	14.511	66
30	MP2B	Mx	.017	66
31	MP2C	X	19.483	6
32	MP2C	Z	11.248	6
33	MP2C	Mx	.003	6
34	MP2C	X	19.483	66
35	MP2C	Z	11.248	66
36	MP2C	Mx	.003	66
37	MP4A	X	8.751	24
38	MP4A	Z	5.053	24
39	MP4A	Mx	-.004	24
40	MP4A	X	8.751	48
41	MP4A	Z	5.053	48
42	MP4A	Mx	-.004	48
43	MP4B	X	15.084	24
44	MP4B	Z	8.709	24
45	MP4B	Mx	0	24
46	MP4B	X	15.084	48
47	MP4B	Z	8.709	48
48	MP4B	Mx	0	48
49	MP4C	X	8.751	24
50	MP4C	Z	5.053	24
51	MP4C	Mx	.004	24
52	MP4C	X	8.751	48
53	MP4C	Z	5.053	48
54	MP4C	Mx	.004	48
55	MP3A	X	10.129	36
56	MP3A	Z	5.848	36
57	MP3A	Mx	.005	36
58	MP3B	X	12.99	36
59	MP3B	Z	7.5	36
60	MP3B	Mx	0	36
61	MP3C	X	10.129	36
62	MP3C	Z	5.848	36
63	MP3C	Mx	-.005	36
64	MP2A	X	9.041	36
65	MP2A	Z	5.22	36
66	MP2A	Mx	.005	36
67	MP2B	X	12.99	36
68	MP2B	Z	7.5	36
69	MP2B	Mx	0	36
70	MP2C	X	9.041	36
71	MP2C	Z	5.22	36
72	MP2C	Mx	-.005	36
73	MP1A	X	13.227	6
74	MP1A	Z	7.637	6
75	MP1A	Mx	-.007	6
76	MP1A	X	13.227	66
77	MP1A	Z	7.637	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
78	MP1A	Mx	-.007	66
79	MP1B	X	17.552	6
80	MP1B	Z	10.133	6
81	MP1B	Mx	0	6
82	MP1B	X	17.552	66
83	MP1B	Z	10.133	66
84	MP1B	Mx	0	66
85	MP1C	X	13.227	6
86	MP1C	Z	7.637	6
87	MP1C	Mx	.007	6
88	MP1C	X	13.227	66
89	MP1C	Z	7.637	66
90	MP1C	Mx	.007	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	13.423	6
2	MP2A	Z	23.25	6
3	MP2A	Mx	.007	6
4	MP2A	X	13.423	66
5	MP2A	Z	23.25	66
6	MP2A	Mx	.007	66
7	MP2B	X	13.423	6
8	MP2B	Z	23.25	6
9	MP2B	Mx	-.02	6
10	MP2B	X	13.423	66
11	MP2B	Z	23.25	66
12	MP2B	Mx	-.02	66
13	MP2C	X	10.161	6
14	MP2C	Z	17.599	6
15	MP2C	Mx	.01	6
16	MP2C	X	10.161	66
17	MP2C	Z	17.599	66
18	MP2C	Mx	.01	66
19	MP2A	X	13.423	6
20	MP2A	Z	23.25	6
21	MP2A	Mx	-.02	6
22	MP2A	X	13.423	66
23	MP2A	Z	23.25	66
24	MP2A	Mx	-.02	66
25	MP2B	X	13.423	6
26	MP2B	Z	23.25	6
27	MP2B	Mx	.007	6
28	MP2B	X	13.423	66
29	MP2B	Z	23.25	66
30	MP2B	Mx	.007	66
31	MP2C	X	10.161	6
32	MP2C	Z	17.599	6
33	MP2C	Mx	.01	6
34	MP2C	X	10.161	66
35	MP2C	Z	17.599	66
36	MP2C	Mx	.01	66
37	MP4A	X	7.49	24
38	MP4A	Z	12.973	24
39	MP4A	Mx	-.004	24
40	MP4A	X	7.49	48



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
41	MP4A	Z	12.973	48
42	MP4A	Mx	-.004	48
43	MP4B	X	7.49	24
44	MP4B	Z	12.973	24
45	MP4B	Mx	-.004	24
46	MP4B	X	7.49	48
47	MP4B	Z	12.973	48
48	MP4B	Mx	-.004	48
49	MP4C	X	3.834	24
50	MP4C	Z	6.641	24
51	MP4C	Mx	.004	24
52	MP4C	X	3.834	48
53	MP4C	Z	6.641	48
54	MP4C	Mx	.004	48
55	MP3A	X	6.949	36
56	MP3A	Z	12.037	36
57	MP3A	Mx	.003	36
58	MP3B	X	6.949	36
59	MP3B	Z	12.037	36
60	MP3B	Mx	.003	36
61	MP3C	X	5.297	36
62	MP3C	Z	9.175	36
63	MP3C	Mx	-.005	36
64	MP2A	X	6.74	36
65	MP2A	Z	11.674	36
66	MP2A	Mx	.003	36
67	MP2B	X	6.74	36
68	MP2B	Z	11.674	36
69	MP2B	Mx	.003	36
70	MP2C	X	4.46	36
71	MP2C	Z	7.725	36
72	MP2C	Mx	-.004	36
73	MP1A	X	9.301	6
74	MP1A	Z	16.11	6
75	MP1A	Mx	-.005	6
76	MP1A	X	9.301	66
77	MP1A	Z	16.11	66
78	MP1A	Mx	-.005	66
79	MP1B	X	9.301	6
80	MP1B	Z	16.11	6
81	MP1B	Mx	-.005	6
82	MP1B	X	9.301	66
83	MP1B	Z	16.11	66
84	MP1B	Mx	-.005	66
85	MP1C	X	6.805	6
86	MP1C	Z	11.786	6
87	MP1C	Mx	.007	6
88	MP1C	X	6.805	66
89	MP1C	Z	11.786	66
90	MP1C	Mx	.007	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	0	6
2	MP2A	Z	29.021	6
3	MP2A	Mx	.017	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
4	MP2A	X	0	66
5	MP2A	Z	29.021	66
6	MP2A	Mx	.017	66
7	MP2B	X	0	6
8	MP2B	Z	22.497	6
9	MP2B	Mx	-.016	6
10	MP2B	X	0	66
11	MP2B	Z	22.497	66
12	MP2B	Mx	-.016	66
13	MP2C	X	0	6
14	MP2C	Z	22.497	6
15	MP2C	Mx	.003	6
16	MP2C	X	0	66
17	MP2C	Z	22.497	66
18	MP2C	Mx	.003	66
19	MP2A	X	0	6
20	MP2A	Z	29.021	6
21	MP2A	Mx	-.017	6
22	MP2A	X	0	66
23	MP2A	Z	29.021	66
24	MP2A	Mx	-.017	66
25	MP2B	X	0	6
26	MP2B	Z	22.497	6
27	MP2B	Mx	-.003	6
28	MP2B	X	0	66
29	MP2B	Z	22.497	66
30	MP2B	Mx	-.003	66
31	MP2C	X	0	6
32	MP2C	Z	22.497	6
33	MP2C	Mx	.016	6
34	MP2C	X	0	66
35	MP2C	Z	22.497	66
36	MP2C	Mx	.016	66
37	MP4A	X	0	24
38	MP4A	Z	17.418	24
39	MP4A	Mx	0	24
40	MP4A	X	0	48
41	MP4A	Z	17.418	48
42	MP4A	Mx	0	48
43	MP4B	X	0	24
44	MP4B	Z	10.105	24
45	MP4B	Mx	-.004	24
46	MP4B	X	0	48
47	MP4B	Z	10.105	48
48	MP4B	Mx	-.004	48
49	MP4C	X	0	24
50	MP4C	Z	10.105	24
51	MP4C	Mx	.004	24
52	MP4C	X	0	48
53	MP4C	Z	10.105	48
54	MP4C	Mx	.004	48
55	MP3A	X	0	36
56	MP3A	Z	15	36
57	MP3A	Mx	0	36
58	MP3B	X	0	36
59	MP3B	Z	11.696	36
60	MP3B	Mx	.005	36



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
61	MP3C	X	0	36
62	MP3C	Z	11.696	36
63	MP3C	Mx	-.005	36
64	MP2A	X	0	36
65	MP2A	Z	15	36
66	MP2A	Mx	0	36
67	MP2B	X	0	36
68	MP2B	Z	10.44	36
69	MP2B	Mx	.005	36
70	MP2C	X	0	36
71	MP2C	Z	10.44	36
72	MP2C	Mx	-.005	36
73	MP1A	X	0	6
74	MP1A	Z	20.267	6
75	MP1A	Mx	0	6
76	MP1A	X	0	66
77	MP1A	Z	20.267	66
78	MP1A	Mx	0	66
79	MP1B	X	0	6
80	MP1B	Z	15.274	6
81	MP1B	Mx	-.007	6
82	MP1B	X	0	66
83	MP1B	Z	15.274	66
84	MP1B	Mx	-.007	66
85	MP1C	X	0	6
86	MP1C	Z	15.274	6
87	MP1C	Mx	.007	6
88	MP1C	X	0	66
89	MP1C	Z	15.274	66
90	MP1C	Mx	.007	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	-13.423	6
2	MP2A	Z	23.25	6
3	MP2A	Mx	.02	6
4	MP2A	X	-13.423	66
5	MP2A	Z	23.25	66
6	MP2A	Mx	.02	66
7	MP2B	X	-10.161	6
8	MP2B	Z	17.599	6
9	MP2B	Mx	-.01	6
10	MP2B	X	-10.161	66
11	MP2B	Z	17.599	66
12	MP2B	Mx	-.01	66
13	MP2C	X	-13.423	6
14	MP2C	Z	23.25	6
15	MP2C	Mx	-.007	6
16	MP2C	X	-13.423	66
17	MP2C	Z	23.25	66
18	MP2C	Mx	-.007	66
19	MP2A	X	-13.423	6
20	MP2A	Z	23.25	6
21	MP2A	Mx	-.007	6
22	MP2A	X	-13.423	66
23	MP2A	Z	23.25	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
24	MP2A	Mx	-.007	66
25	MP2B	X	-10.161	6
26	MP2B	Z	17.599	6
27	MP2B	Mx	-.01	6
28	MP2B	X	-10.161	66
29	MP2B	Z	17.599	66
30	MP2B	Mx	-.01	66
31	MP2C	X	-13.423	6
32	MP2C	Z	23.25	6
33	MP2C	Mx	.02	6
34	MP2C	X	-13.423	66
35	MP2C	Z	23.25	66
36	MP2C	Mx	.02	66
37	MP4A	X	-7.49	24
38	MP4A	Z	12.973	24
39	MP4A	Mx	.004	24
40	MP4A	X	-7.49	48
41	MP4A	Z	12.973	48
42	MP4A	Mx	.004	48
43	MP4B	X	-3.834	24
44	MP4B	Z	6.641	24
45	MP4B	Mx	-.004	24
46	MP4B	X	-3.834	48
47	MP4B	Z	6.641	48
48	MP4B	Mx	-.004	48
49	MP4C	X	-7.49	24
50	MP4C	Z	12.973	24
51	MP4C	Mx	.004	24
52	MP4C	X	-7.49	48
53	MP4C	Z	12.973	48
54	MP4C	Mx	.004	48
55	MP3A	X	-6.949	36
56	MP3A	Z	12.037	36
57	MP3A	Mx	-.003	36
58	MP3B	X	-5.297	36
59	MP3B	Z	9.175	36
60	MP3B	Mx	.005	36
61	MP3C	X	-6.949	36
62	MP3C	Z	12.037	36
63	MP3C	Mx	-.003	36
64	MP2A	X	-6.74	36
65	MP2A	Z	11.674	36
66	MP2A	Mx	-.003	36
67	MP2B	X	-4.46	36
68	MP2B	Z	7.725	36
69	MP2B	Mx	.004	36
70	MP2C	X	-6.74	36
71	MP2C	Z	11.674	36
72	MP2C	Mx	-.003	36
73	MP1A	X	-9.301	6
74	MP1A	Z	16.11	6
75	MP1A	Mx	.005	6
76	MP1A	X	-9.301	66
77	MP1A	Z	16.11	66
78	MP1A	Mx	.005	66
79	MP1B	X	-6.805	6
80	MP1B	Z	11.786	6







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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
44	MP4B	Z	5.053	24
45	MP4B	Mx	-.004	24
46	MP4B	X	-8.751	48
47	MP4B	Z	5.053	48
48	MP4B	Mx	-.004	48
49	MP4C	X	-15.084	24
50	MP4C	Z	8.709	24
51	MP4C	Mx	0	24
52	MP4C	X	-15.084	48
53	MP4C	Z	8.709	48
54	MP4C	Mx	0	48
55	MP3A	X	-10.129	36
56	MP3A	Z	5.848	36
57	MP3A	Mx	-.005	36
58	MP3B	X	-10.129	36
59	MP3B	Z	5.848	36
60	MP3B	Mx	.005	36
61	MP3C	X	-12.99	36
62	MP3C	Z	7.5	36
63	MP3C	Mx	0	36
64	MP2A	X	-9.041	36
65	MP2A	Z	5.22	36
66	MP2A	Mx	-.005	36
67	MP2B	X	-9.041	36
68	MP2B	Z	5.22	36
69	MP2B	Mx	.005	36
70	MP2C	X	-12.99	36
71	MP2C	Z	7.5	36
72	MP2C	Mx	0	36
73	MP1A	X	-13.227	6
74	MP1A	Z	7.637	6
75	MP1A	Mx	.007	6
76	MP1A	X	-13.227	66
77	MP1A	Z	7.637	66
78	MP1A	Mx	.007	66
79	MP1B	X	-13.227	6
80	MP1B	Z	7.637	6
81	MP1B	Mx	-.007	6
82	MP1B	X	-13.227	66
83	MP1B	Z	7.637	66
84	MP1B	Mx	-.007	66
85	MP1C	X	-17.552	6
86	MP1C	Z	10.133	6
87	MP1C	Mx	0	6
88	MP1C	X	-17.552	66
89	MP1C	Z	10.133	66
90	MP1C	Mx	0	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	-20.322	6
2	MP2A	Z	0	6
3	MP2A	Mx	.01	6
4	MP2A	X	-20.322	66
5	MP2A	Z	0	66
6	MP2A	Mx	.01	66





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
64	MP2A	X	-8.92	36
65	MP2A	Z	0	36
66	MP2A	Mx	-.004	36
67	MP2B	X	-13.48	36
68	MP2B	Z	0	36
69	MP2B	Mx	.003	36
70	MP2C	X	-13.48	36
71	MP2C	Z	0	36
72	MP2C	Mx	.003	36
73	MP1A	X	-13.609	6
74	MP1A	Z	0	6
75	MP1A	Mx	.007	6
76	MP1A	X	-13.609	66
77	MP1A	Z	0	66
78	MP1A	Mx	.007	66
79	MP1B	X	-18.602	6
80	MP1B	Z	0	6
81	MP1B	Mx	-.005	6
82	MP1B	X	-18.602	66
83	MP1B	Z	0	66
84	MP1B	Mx	-.005	66
85	MP1C	X	-18.602	6
86	MP1C	Z	0	6
87	MP1C	Mx	-.005	6
88	MP1C	X	-18.602	66
89	MP1C	Z	0	66
90	MP1C	Mx	-.005	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	-19.483	6
2	MP2A	Z	-11.248	6
3	MP2A	Mx	.003	6
4	MP2A	X	-19.483	66
5	MP2A	Z	-11.248	66
6	MP2A	Mx	.003	66
7	MP2B	X	-25.133	6
8	MP2B	Z	-14.511	6
9	MP2B	Mx	.017	6
10	MP2B	X	-25.133	66
11	MP2B	Z	-14.511	66
12	MP2B	Mx	.017	66
13	MP2C	X	-19.483	6
14	MP2C	Z	-11.248	6
15	MP2C	Mx	-.016	6
16	MP2C	X	-19.483	66
17	MP2C	Z	-11.248	66
18	MP2C	Mx	-.016	66
19	MP2A	X	-19.483	6
20	MP2A	Z	-11.248	6
21	MP2A	Mx	.016	6
22	MP2A	X	-19.483	66
23	MP2A	Z	-11.248	66
24	MP2A	Mx	.016	66
25	MP2B	X	-25.133	6
26	MP2B	Z	-14.511	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
27	MP2B	Mx	-.017	6
28	MP2B	X	-25.133	66
29	MP2B	Z	-14.511	66
30	MP2B	Mx	-.017	66
31	MP2C	X	-19.483	6
32	MP2C	Z	-11.248	6
33	MP2C	Mx	-.003	6
34	MP2C	X	-19.483	66
35	MP2C	Z	-11.248	66
36	MP2C	Mx	-.003	66
37	MP4A	X	-8.751	24
38	MP4A	Z	-5.053	24
39	MP4A	Mx	.004	24
40	MP4A	X	-8.751	48
41	MP4A	Z	-5.053	48
42	MP4A	Mx	.004	48
43	MP4B	X	-15.084	24
44	MP4B	Z	-8.709	24
45	MP4B	Mx	0	24
46	MP4B	X	-15.084	48
47	MP4B	Z	-8.709	48
48	MP4B	Mx	0	48
49	MP4C	X	-8.751	24
50	MP4C	Z	-5.053	24
51	MP4C	Mx	-.004	24
52	MP4C	X	-8.751	48
53	MP4C	Z	-5.053	48
54	MP4C	Mx	-.004	48
55	MP3A	X	-10.129	36
56	MP3A	Z	-5.848	36
57	MP3A	Mx	-.005	36
58	MP3B	X	-12.99	36
59	MP3B	Z	-7.5	36
60	MP3B	Mx	0	36
61	MP3C	X	-10.129	36
62	MP3C	Z	-5.848	36
63	MP3C	Mx	.005	36
64	MP2A	X	-9.041	36
65	MP2A	Z	-5.22	36
66	MP2A	Mx	-.005	36
67	MP2B	X	-12.99	36
68	MP2B	Z	-7.5	36
69	MP2B	Mx	0	36
70	MP2C	X	-9.041	36
71	MP2C	Z	-5.22	36
72	MP2C	Mx	.005	36
73	MP1A	X	-13.227	6
74	MP1A	Z	-7.637	6
75	MP1A	Mx	.007	6
76	MP1A	X	-13.227	66
77	MP1A	Z	-7.637	66
78	MP1A	Mx	.007	66
79	MP1B	X	-17.552	6
80	MP1B	Z	-10.133	6
81	MP1B	Mx	0	6
82	MP1B	X	-17.552	66
83	MP1B	Z	-10.133	66





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
47	MP4B	Z	-12.973	48
48	MP4B	Mx	.004	48
49	MP4C	X	-3.834	24
50	MP4C	Z	-6.641	24
51	MP4C	Mx	-.004	24
52	MP4C	X	-3.834	48
53	MP4C	Z	-6.641	48
54	MP4C	Mx	-.004	48
55	MP3A	X	-6.949	36
56	MP3A	Z	-12.037	36
57	MP3A	Mx	-.003	36
58	MP3B	X	-6.949	36
59	MP3B	Z	-12.037	36
60	MP3B	Mx	-.003	36
61	MP3C	X	-5.297	36
62	MP3C	Z	-9.175	36
63	MP3C	Mx	.005	36
64	MP2A	X	-6.74	36
65	MP2A	Z	-11.674	36
66	MP2A	Mx	-.003	36
67	MP2B	X	-6.74	36
68	MP2B	Z	-11.674	36
69	MP2B	Mx	-.003	36
70	MP2C	X	-4.46	36
71	MP2C	Z	-7.725	36
72	MP2C	Mx	.004	36
73	MP1A	X	-9.301	6
74	MP1A	Z	-16.11	6
75	MP1A	Mx	.005	6
76	MP1A	X	-9.301	66
77	MP1A	Z	-16.11	66
78	MP1A	Mx	.005	66
79	MP1B	X	-9.301	6
80	MP1B	Z	-16.11	6
81	MP1B	Mx	.005	6
82	MP1B	X	-9.301	66
83	MP1B	Z	-16.11	66
84	MP1B	Mx	.005	66
85	MP1C	X	-6.805	6
86	MP1C	Z	-11.786	6
87	MP1C	Mx	-.007	6
88	MP1C	X	-6.805	66
89	MP1C	Z	-11.786	66
90	MP1C	Mx	-.007	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	0	6
2	MP2A	Z	-9.114	6
3	MP2A	Mx	-.005	6
4	MP2A	X	0	66
5	MP2A	Z	-9.114	66
6	MP2A	Mx	-.005	66
7	MP2B	X	0	6
8	MP2B	Z	-6.797	6
9	MP2B	Mx	.005	6









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 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
30	MP2B	Mx	.003	66
31	MP2C	X	4.171	6
32	MP2C	Z	-7.224	6
33	MP2C	Mx	-.006	6
34	MP2C	X	4.171	66
35	MP2C	Z	-7.224	66
36	MP2C	Mx	-.006	66
37	MP4A	X	2.247	24
38	MP4A	Z	-3.893	24
39	MP4A	Mx	-.001	24
40	MP4A	X	2.247	48
41	MP4A	Z	-3.893	48
42	MP4A	Mx	-.001	48
43	MP4B	X	1.038	24
44	MP4B	Z	-1.797	24
45	MP4B	Mx	.001	24
46	MP4B	X	1.038	48
47	MP4B	Z	-1.797	48
48	MP4B	Mx	.001	48
49	MP4C	X	2.247	24
50	MP4C	Z	-3.893	24
51	MP4C	Mx	-.001	24
52	MP4C	X	2.247	48
53	MP4C	Z	-3.893	48
54	MP4C	Mx	-.001	48
55	MP3A	X	1.934	36
56	MP3A	Z	-3.351	36
57	MP3A	Mx	.000967	36
58	MP3B	X	1.41	36
59	MP3B	Z	-2.442	36
60	MP3B	Mx	-.001	36
61	MP3C	X	1.934	36
62	MP3C	Z	-3.351	36
63	MP3C	Mx	.000968	36
64	MP2A	X	1.867	36
65	MP2A	Z	-3.235	36
66	MP2A	Mx	.000934	36
67	MP2B	X	1.142	36
68	MP2B	Z	-1.978	36
69	MP2B	Mx	-.001	36
70	MP2C	X	1.867	36
71	MP2C	Z	-3.235	36
72	MP2C	Mx	.000934	36
73	MP1A	X	2.703	6
74	MP1A	Z	-4.682	6
75	MP1A	Mx	-.001	6
76	MP1A	X	2.703	66
77	MP1A	Z	-4.682	66
78	MP1A	Mx	-.001	66
79	MP1B	X	1.862	6
80	MP1B	Z	-3.225	6
81	MP1B	Mx	.002	6
82	MP1B	X	1.862	66
83	MP1B	Z	-3.225	66
84	MP1B	Mx	.002	66
85	MP1C	X	2.703	6
86	MP1C	Z	-4.682	6





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
50	MP4C	Z	-2.651	24
51	MP4C	Mx	0	24
52	MP4C	X	4.591	48
53	MP4C	Z	-2.651	48
54	MP4C	Mx	0	48
55	MP3A	X	2.745	36
56	MP3A	Z	-1.585	36
57	MP3A	Mx	.001	36
58	MP3B	X	2.745	36
59	MP3B	Z	-1.585	36
60	MP3B	Mx	-.001	36
61	MP3C	X	3.653	36
62	MP3C	Z	-2.109	36
63	MP3C	Mx	0	36
64	MP2A	X	2.397	36
65	MP2A	Z	-1.384	36
66	MP2A	Mx	.001	36
67	MP2B	X	2.397	36
68	MP2B	Z	-1.384	36
69	MP2B	Mx	-.001	36
70	MP2C	X	3.653	36
71	MP2C	Z	-2.109	36
72	MP2C	Mx	0	36
73	MP1A	X	3.71	6
74	MP1A	Z	-2.142	6
75	MP1A	Mx	-.002	6
76	MP1A	X	3.71	66
77	MP1A	Z	-2.142	66
78	MP1A	Mx	-.002	66
79	MP1B	X	3.71	6
80	MP1B	Z	-2.142	6
81	MP1B	Mx	.002	6
82	MP1B	X	3.71	66
83	MP1B	Z	-2.142	66
84	MP1B	Mx	.002	66
85	MP1C	X	5.167	6
86	MP1C	Z	-2.983	6
87	MP1C	Mx	0	6
88	MP1C	X	5.167	66
89	MP1C	Z	-2.983	66
90	MP1C	Mx	0	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	6.025	6
2	MP2A	Z	0	6
3	MP2A	Mx	-.003	6
4	MP2A	X	6.025	66
5	MP2A	Z	0	66
6	MP2A	Mx	-.003	66
7	MP2B	X	8.342	6
8	MP2B	Z	0	6
9	MP2B	Mx	-.002	6
10	MP2B	X	8.342	66
11	MP2B	Z	0	66
12	MP2B	Mx	-.002	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
13	MP2C	X	8.342	6
14	MP2C	Z	0	6
15	MP2C	Mx	.006	6
16	MP2C	X	8.342	66
17	MP2C	Z	0	66
18	MP2C	Mx	.006	66
19	MP2A	X	6.025	6
20	MP2A	Z	0	6
21	MP2A	Mx	-.003	6
22	MP2A	X	6.025	66
23	MP2A	Z	0	66
24	MP2A	Mx	-.003	66
25	MP2B	X	8.342	6
26	MP2B	Z	0	6
27	MP2B	Mx	.006	6
28	MP2B	X	8.342	66
29	MP2B	Z	0	66
30	MP2B	Mx	.006	66
31	MP2C	X	8.342	6
32	MP2C	Z	0	6
33	MP2C	Mx	-.002	6
34	MP2C	X	8.342	66
35	MP2C	Z	0	66
36	MP2C	Mx	-.002	66
37	MP4A	X	2.075	24
38	MP4A	Z	0	24
39	MP4A	Mx	-.001	24
40	MP4A	X	2.075	48
41	MP4A	Z	0	48
42	MP4A	Mx	-.001	48
43	MP4B	X	4.495	24
44	MP4B	Z	0	24
45	MP4B	Mx	.001	24
46	MP4B	X	4.495	48
47	MP4B	Z	0	48
48	MP4B	Mx	.001	48
49	MP4C	X	4.495	24
50	MP4C	Z	0	24
51	MP4C	Mx	.001	24
52	MP4C	X	4.495	48
53	MP4C	Z	0	48
54	MP4C	Mx	.001	48
55	MP3A	X	2.82	36
56	MP3A	Z	0	36
57	MP3A	Mx	.001	36
58	MP3B	X	3.869	36
59	MP3B	Z	0	36
60	MP3B	Mx	-.000967	36
61	MP3C	X	3.869	36
62	MP3C	Z	0	36
63	MP3C	Mx	-.000967	36
64	MP2A	X	2.284	36
65	MP2A	Z	0	36
66	MP2A	Mx	.001	36
67	MP2B	X	3.735	36
68	MP2B	Z	0	36
69	MP2B	Mx	-.000934	36





Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
33	MP2C	Mx	.000961	6
34	MP2C	X	5.887	66
35	MP2C	Z	3.399	66
36	MP2C	Mx	.000961	66
37	MP4A	X	2.496	24
38	MP4A	Z	1.441	24
39	MP4A	Mx	-.001	24
40	MP4A	X	2.496	48
41	MP4A	Z	1.441	48
42	MP4A	Mx	-.001	48
43	MP4B	X	4.591	24
44	MP4B	Z	2.651	24
45	MP4B	Mx	0	24
46	MP4B	X	4.591	48
47	MP4B	Z	2.651	48
48	MP4B	Mx	0	48
49	MP4C	X	2.496	24
50	MP4C	Z	1.441	24
51	MP4C	Mx	.001	24
52	MP4C	X	2.496	48
53	MP4C	Z	1.441	48
54	MP4C	Mx	.001	48
55	MP3A	X	2.745	36
56	MP3A	Z	1.585	36
57	MP3A	Mx	.001	36
58	MP3B	X	3.653	36
59	MP3B	Z	2.109	36
60	MP3B	Mx	0	36
61	MP3C	X	2.745	36
62	MP3C	Z	1.585	36
63	MP3C	Mx	-.001	36
64	MP2A	X	2.397	36
65	MP2A	Z	1.384	36
66	MP2A	Mx	.001	36
67	MP2B	X	3.653	36
68	MP2B	Z	2.109	36
69	MP2B	Mx	0	36
70	MP2C	X	2.397	36
71	MP2C	Z	1.384	36
72	MP2C	Mx	-.001	36
73	MP1A	X	3.71	6
74	MP1A	Z	2.142	6
75	MP1A	Mx	-.002	6
76	MP1A	X	3.71	66
77	MP1A	Z	2.142	66
78	MP1A	Mx	-.002	66
79	MP1B	X	5.167	6
80	MP1B	Z	2.983	6
81	MP1B	Mx	0	6
82	MP1B	X	5.167	66
83	MP1B	Z	2.983	66
84	MP1B	Mx	0	66
85	MP1C	X	3.71	6
86	MP1C	Z	2.142	6
87	MP1C	Mx	.002	6
88	MP1C	X	3.71	66
89	MP1C	Z	2.142	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
90	MP1C	Mx	.002	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	4.171	6
2	MP2A	Z	7.224	6
3	MP2A	Mx	.002	6
4	MP2A	X	4.171	66
5	MP2A	Z	7.224	66
6	MP2A	Mx	.002	66
7	MP2B	X	4.171	6
8	MP2B	Z	7.224	6
9	MP2B	Mx	-.006	6
10	MP2B	X	4.171	66
11	MP2B	Z	7.224	66
12	MP2B	Mx	-.006	66
13	MP2C	X	3.013	6
14	MP2C	Z	5.218	6
15	MP2C	Mx	.003	6
16	MP2C	X	3.013	66
17	MP2C	Z	5.218	66
18	MP2C	Mx	.003	66
19	MP2A	X	4.171	6
20	MP2A	Z	7.224	6
21	MP2A	Mx	-.006	6
22	MP2A	X	4.171	66
23	MP2A	Z	7.224	66
24	MP2A	Mx	-.006	66
25	MP2B	X	4.171	6
26	MP2B	Z	7.224	6
27	MP2B	Mx	.002	6
28	MP2B	X	4.171	66
29	MP2B	Z	7.224	66
30	MP2B	Mx	.002	66
31	MP2C	X	3.013	6
32	MP2C	Z	5.218	6
33	MP2C	Mx	.003	6
34	MP2C	X	3.013	66
35	MP2C	Z	5.218	66
36	MP2C	Mx	.003	66
37	MP4A	X	2.247	24
38	MP4A	Z	3.893	24
39	MP4A	Mx	-.001	24
40	MP4A	X	2.247	48
41	MP4A	Z	3.893	48
42	MP4A	Mx	-.001	48
43	MP4B	X	2.247	24
44	MP4B	Z	3.893	24
45	MP4B	Mx	-.001	24
46	MP4B	X	2.247	48
47	MP4B	Z	3.893	48
48	MP4B	Mx	-.001	48
49	MP4C	X	1.038	24
50	MP4C	Z	1.797	24
51	MP4C	Mx	.001	24
52	MP4C	X	1.038	48









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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
73	MP1A	X	0	6
74	MP1A	Z	5.967	6
75	MP1A	Mx	0	6
76	MP1A	X	0	66
77	MP1A	Z	5.967	66
78	MP1A	Mx	0	66
79	MP1B	X	0	6
80	MP1B	Z	4.284	6
81	MP1B	Mx	-.002	6
82	MP1B	X	0	66
83	MP1B	Z	4.284	66
84	MP1B	Mx	-.002	66
85	MP1C	X	0	6
86	MP1C	Z	4.284	6
87	MP1C	Mx	.002	6
88	MP1C	X	0	66
89	MP1C	Z	4.284	66
90	MP1C	Mx	.002	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	-4.171	6
2	MP2A	Z	7.224	6
3	MP2A	Mx	.006	6
4	MP2A	X	-4.171	66
5	MP2A	Z	7.224	66
6	MP2A	Mx	.006	66
7	MP2B	X	-3.013	6
8	MP2B	Z	5.218	6
9	MP2B	Mx	-.003	6
10	MP2B	X	-3.013	66
11	MP2B	Z	5.218	66
12	MP2B	Mx	-.003	66
13	MP2C	X	-4.171	6
14	MP2C	Z	7.224	6
15	MP2C	Mx	-.002	6
16	MP2C	X	-4.171	66
17	MP2C	Z	7.224	66
18	MP2C	Mx	-.002	66
19	MP2A	X	-4.171	6
20	MP2A	Z	7.224	6
21	MP2A	Mx	-.002	6
22	MP2A	X	-4.171	66
23	MP2A	Z	7.224	66
24	MP2A	Mx	-.002	66
25	MP2B	X	-3.013	6
26	MP2B	Z	5.218	6
27	MP2B	Mx	-.003	6
28	MP2B	X	-3.013	66
29	MP2B	Z	5.218	66
30	MP2B	Mx	-.003	66
31	MP2C	X	-4.171	6
32	MP2C	Z	7.224	6
33	MP2C	Mx	.006	6
34	MP2C	X	-4.171	66
35	MP2C	Z	7.224	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
36	MP2C	Mx	.006	66
37	MP4A	X	-2.247	24
38	MP4A	Z	3.893	24
39	MP4A	Mx	.001	24
40	MP4A	X	-2.247	48
41	MP4A	Z	3.893	48
42	MP4A	Mx	.001	48
43	MP4B	X	-1.038	24
44	MP4B	Z	1.797	24
45	MP4B	Mx	-.001	24
46	MP4B	X	-1.038	48
47	MP4B	Z	1.797	48
48	MP4B	Mx	-.001	48
49	MP4C	X	-2.247	24
50	MP4C	Z	3.893	24
51	MP4C	Mx	.001	24
52	MP4C	X	-2.247	48
53	MP4C	Z	3.893	48
54	MP4C	Mx	.001	48
55	MP3A	X	-1.934	36
56	MP3A	Z	3.351	36
57	MP3A	Mx	-.000967	36
58	MP3B	X	-1.41	36
59	MP3B	Z	2.442	36
60	MP3B	Mx	.001	36
61	MP3C	X	-1.934	36
62	MP3C	Z	3.351	36
63	MP3C	Mx	-.000968	36
64	MP2A	X	-1.867	36
65	MP2A	Z	3.235	36
66	MP2A	Mx	-.000934	36
67	MP2B	X	-1.142	36
68	MP2B	Z	1.978	36
69	MP2B	Mx	.001	36
70	MP2C	X	-1.867	36
71	MP2C	Z	3.235	36
72	MP2C	Mx	-.000934	36
73	MP1A	X	-2.703	6
74	MP1A	Z	4.682	6
75	MP1A	Mx	.001	6
76	MP1A	X	-2.703	66
77	MP1A	Z	4.682	66
78	MP1A	Mx	.001	66
79	MP1B	X	-1.862	6
80	MP1B	Z	3.225	6
81	MP1B	Mx	-.002	6
82	MP1B	X	-1.862	66
83	MP1B	Z	3.225	66
84	MP1B	Mx	-.002	66
85	MP1C	X	-2.703	6
86	MP1C	Z	4.682	6
87	MP1C	Mx	.001	6
88	MP1C	X	-2.703	66
89	MP1C	Z	4.682	66
90	MP1C	Mx	.001	66





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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
58	MP3B	X	-2.745	36
59	MP3B	Z	1.585	36
60	MP3B	Mx	.001	36
61	MP3C	X	-3.653	36
62	MP3C	Z	2.109	36
63	MP3C	Mx	0	36
64	MP2A	X	-2.397	36
65	MP2A	Z	1.384	36
66	MP2A	Mx	-.001	36
67	MP2B	X	-2.397	36
68	MP2B	Z	1.384	36
69	MP2B	Mx	.001	36
70	MP2C	X	-3.653	36
71	MP2C	Z	2.109	36
72	MP2C	Mx	0	36
73	MP1A	X	-3.71	6
74	MP1A	Z	2.142	6
75	MP1A	Mx	.002	6
76	MP1A	X	-3.71	66
77	MP1A	Z	2.142	66
78	MP1A	Mx	.002	66
79	MP1B	X	-3.71	6
80	MP1B	Z	2.142	6
81	MP1B	Mx	-.002	6
82	MP1B	X	-3.71	66
83	MP1B	Z	2.142	66
84	MP1B	Mx	-.002	66
85	MP1C	X	-5.167	6
86	MP1C	Z	2.983	6
87	MP1C	Mx	0	6
88	MP1C	X	-5.167	66
89	MP1C	Z	2.983	66
90	MP1C	Mx	0	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	-6.025	6
2	MP2A	Z	0	6
3	MP2A	Mx	.003	6
4	MP2A	X	-6.025	66
5	MP2A	Z	0	66
6	MP2A	Mx	.003	66
7	MP2B	X	-8.342	6
8	MP2B	Z	0	6
9	MP2B	Mx	.002	6
10	MP2B	X	-8.342	66
11	MP2B	Z	0	66
12	MP2B	Mx	.002	66
13	MP2C	X	-8.342	6
14	MP2C	Z	0	6
15	MP2C	Mx	-.006	6
16	MP2C	X	-8.342	66
17	MP2C	Z	0	66
18	MP2C	Mx	-.006	66
19	MP2A	X	-6.025	6
20	MP2A	Z	0	6



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
21	MP2A	Mx	.003	6
22	MP2A	X	-6.025	66
23	MP2A	Z	0	66
24	MP2A	Mx	.003	66
25	MP2B	X	-8.342	6
26	MP2B	Z	0	6
27	MP2B	Mx	-.006	6
28	MP2B	X	-8.342	66
29	MP2B	Z	0	66
30	MP2B	Mx	-.006	66
31	MP2C	X	-8.342	6
32	MP2C	Z	0	6
33	MP2C	Mx	.002	6
34	MP2C	X	-8.342	66
35	MP2C	Z	0	66
36	MP2C	Mx	.002	66
37	MP4A	X	-2.075	24
38	MP4A	Z	0	24
39	MP4A	Mx	.001	24
40	MP4A	X	-2.075	48
41	MP4A	Z	0	48
42	MP4A	Mx	.001	48
43	MP4B	X	-4.495	24
44	MP4B	Z	0	24
45	MP4B	Mx	-.001	24
46	MP4B	X	-4.495	48
47	MP4B	Z	0	48
48	MP4B	Mx	-.001	48
49	MP4C	X	-4.495	24
50	MP4C	Z	0	24
51	MP4C	Mx	-.001	24
52	MP4C	X	-4.495	48
53	MP4C	Z	0	48
54	MP4C	Mx	-.001	48
55	MP3A	X	-2.82	36
56	MP3A	Z	0	36
57	MP3A	Mx	-.001	36
58	MP3B	X	-3.869	36
59	MP3B	Z	0	36
60	MP3B	Mx	.000967	36
61	MP3C	X	-3.869	36
62	MP3C	Z	0	36
63	MP3C	Mx	.000967	36
64	MP2A	X	-2.284	36
65	MP2A	Z	0	36
66	MP2A	Mx	-.001	36
67	MP2B	X	-3.735	36
68	MP2B	Z	0	36
69	MP2B	Mx	.000934	36
70	MP2C	X	-3.735	36
71	MP2C	Z	0	36
72	MP2C	Mx	.000934	36
73	MP1A	X	-3.724	6
74	MP1A	Z	0	6
75	MP1A	Mx	.002	6
76	MP1A	X	-3.724	66
77	MP1A	Z	0	66



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
78	MP1A	Mx	.002	66
79	MP1B	X	-5.406	6
80	MP1B	Z	0	6
81	MP1B	Mx	-.001	6
82	MP1B	X	-5.406	66
83	MP1B	Z	0	66
84	MP1B	Mx	-.001	66
85	MP1C	X	-5.406	6
86	MP1C	Z	0	6
87	MP1C	Mx	-.001	6
88	MP1C	X	-5.406	66
89	MP1C	Z	0	66
90	MP1C	Mx	-.001	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	MP2A	X	-5.887	6
2	MP2A	Z	-3.399	6
3	MP2A	Mx	.000961	6
4	MP2A	X	-5.887	66
5	MP2A	Z	-3.399	66
6	MP2A	Mx	.000961	66
7	MP2B	X	-7.893	6
8	MP2B	Z	-4.557	6
9	MP2B	Mx	.005	6
10	MP2B	X	-7.893	66
11	MP2B	Z	-4.557	66
12	MP2B	Mx	.005	66
13	MP2C	X	-5.887	6
14	MP2C	Z	-3.399	6
15	MP2C	Mx	-.005	6
16	MP2C	X	-5.887	66
17	MP2C	Z	-3.399	66
18	MP2C	Mx	-.005	66
19	MP2A	X	-5.887	6
20	MP2A	Z	-3.399	6
21	MP2A	Mx	.005	6
22	MP2A	X	-5.887	66
23	MP2A	Z	-3.399	66
24	MP2A	Mx	.005	66
25	MP2B	X	-7.893	6
26	MP2B	Z	-4.557	6
27	MP2B	Mx	-.005	6
28	MP2B	X	-7.893	66
29	MP2B	Z	-4.557	66
30	MP2B	Mx	-.005	66
31	MP2C	X	-5.887	6
32	MP2C	Z	-3.399	6
33	MP2C	Mx	-.000961	6
34	MP2C	X	-5.887	66
35	MP2C	Z	-3.399	66
36	MP2C	Mx	-.000961	66
37	MP4A	X	-2.496	24
38	MP4A	Z	-1.441	24
39	MP4A	Mx	.001	24
40	MP4A	X	-2.496	48



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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
41	MP4A	Z	-1.441	48
42	MP4A	Mx	.001	48
43	MP4B	X	-4.591	24
44	MP4B	Z	-2.651	24
45	MP4B	Mx	0	24
46	MP4B	X	-4.591	48
47	MP4B	Z	-2.651	48
48	MP4B	Mx	0	48
49	MP4C	X	-2.496	24
50	MP4C	Z	-1.441	24
51	MP4C	Mx	-.001	24
52	MP4C	X	-2.496	48
53	MP4C	Z	-1.441	48
54	MP4C	Mx	-.001	48
55	MP3A	X	-2.745	36
56	MP3A	Z	-1.585	36
57	MP3A	Mx	-.001	36
58	MP3B	X	-3.653	36
59	MP3B	Z	-2.109	36
60	MP3B	Mx	0	36
61	MP3C	X	-2.745	36
62	MP3C	Z	-1.585	36
63	MP3C	Mx	.001	36
64	MP2A	X	-2.397	36
65	MP2A	Z	-1.384	36
66	MP2A	Mx	-.001	36
67	MP2B	X	-3.653	36
68	MP2B	Z	-2.109	36
69	MP2B	Mx	0	36
70	MP2C	X	-2.397	36
71	MP2C	Z	-1.384	36
72	MP2C	Mx	.001	36
73	MP1A	X	-3.71	6
74	MP1A	Z	-2.142	6
75	MP1A	Mx	.002	6
76	MP1A	X	-3.71	66
77	MP1A	Z	-2.142	66
78	MP1A	Mx	.002	66
79	MP1B	X	-5.167	6
80	MP1B	Z	-2.983	6
81	MP1B	Mx	0	6
82	MP1B	X	-5.167	66
83	MP1B	Z	-2.983	66
84	MP1B	Mx	0	66
85	MP1C	X	-3.71	6
86	MP1C	Z	-2.142	6
87	MP1C	Mx	-.002	6
88	MP1C	X	-3.71	66
89	MP1C	Z	-2.142	66
90	MP1C	Mx	-.002	66

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

	Member Label	Direction	Magnitude[ lb.k-ft ]	Location[in.%]
1	MP2A	X	-4.171	6
2	MP2A	Z	-7.224	6
3	MP2A	Mx	-.002	6





Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
 Checked By: \_\_\_\_\_

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
4	MP2A	X	-4.171	66
5	MP2A	Z	-7.224	66
6	MP2A	Mx	-.002	66
7	MP2B	X	-4.171	6
8	MP2B	Z	-7.224	6
9	MP2B	Mx	.006	6
10	MP2B	X	-4.171	66
11	MP2B	Z	-7.224	66
12	MP2B	Mx	.006	66
13	MP2C	X	-3.013	6
14	MP2C	Z	-5.218	6
15	MP2C	Mx	-.003	6
16	MP2C	X	-3.013	66
17	MP2C	Z	-5.218	66
18	MP2C	Mx	-.003	66
19	MP2A	X	-4.171	6
20	MP2A	Z	-7.224	6
21	MP2A	Mx	.006	6
22	MP2A	X	-4.171	66
23	MP2A	Z	-7.224	66
24	MP2A	Mx	.006	66
25	MP2B	X	-4.171	6
26	MP2B	Z	-7.224	6
27	MP2B	Mx	-.002	6
28	MP2B	X	-4.171	66
29	MP2B	Z	-7.224	66
30	MP2B	Mx	-.002	66
31	MP2C	X	-3.013	6
32	MP2C	Z	-5.218	6
33	MP2C	Mx	-.003	6
34	MP2C	X	-3.013	66
35	MP2C	Z	-5.218	66
36	MP2C	Mx	-.003	66
37	MP4A	X	-2.247	24
38	MP4A	Z	-3.893	24
39	MP4A	Mx	.001	24
40	MP4A	X	-2.247	48
41	MP4A	Z	-3.893	48
42	MP4A	Mx	.001	48
43	MP4B	X	-2.247	24
44	MP4B	Z	-3.893	24
45	MP4B	Mx	.001	24
46	MP4B	X	-2.247	48
47	MP4B	Z	-3.893	48
48	MP4B	Mx	.001	48
49	MP4C	X	-1.038	24
50	MP4C	Z	-1.797	24
51	MP4C	Mx	-.001	24
52	MP4C	X	-1.038	48
53	MP4C	Z	-1.797	48
54	MP4C	Mx	-.001	48
55	MP3A	X	-1.934	36
56	MP3A	Z	-3.351	36
57	MP3A	Mx	-.000967	36
58	MP3B	X	-1.934	36
59	MP3B	Z	-3.351	36
60	MP3B	Mx	-.000968	36



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
61	MP3C	X	-1.41	36
62	MP3C	Z	-2.442	36
63	MP3C	Mx	.001	36
64	MP2A	X	-1.867	36
65	MP2A	Z	-3.235	36
66	MP2A	Mx	-.000934	36
67	MP2B	X	-1.867	36
68	MP2B	Z	-3.235	36
69	MP2B	Mx	-.000934	36
70	MP2C	X	-1.142	36
71	MP2C	Z	-1.978	36
72	MP2C	Mx	.001	36
73	MP1A	X	-2.703	6
74	MP1A	Z	-4.682	6
75	MP1A	Mx	.001	6
76	MP1A	X	-2.703	66
77	MP1A	Z	-4.682	66
78	MP1A	Mx	.001	66
79	MP1B	X	-2.703	6
80	MP1B	Z	-4.682	6
81	MP1B	Mx	.001	6
82	MP1B	X	-2.703	66
83	MP1B	Z	-4.682	66
84	MP1B	Mx	.001	66
85	MP1C	X	-1.862	6
86	MP1C	Z	-3.225	6
87	MP1C	Mx	-.002	6
88	MP1C	X	-1.862	66
89	MP1C	Z	-3.225	66
90	MP1C	Mx	-.002	66

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	M73	Y	-500	%60

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	M73	Y	-500	%9

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	M73	Y	-250	0

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[in.%]
1	M73	Y	-250	%50

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft.F...]	Start Location[in.%]	End Location[in.%]
1	M4	Y	-14.255	-14.255	0	%100
2	M10	Y	-14.255	-14.255	0	%100
3	M43	Y	-14.255	-14.255	0	%100
4	M46	Y	-14.969	-14.969	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
5	M51B	Y	-8.704	-8.704	0 %100
6	M52B	Y	-8.704	-8.704	0 %100
7	M76	Y	-14.952	-14.952	0 %100
8	M77	Y	-14.952	-14.952	0 %100
9	M80	Y	-14.969	-14.969	0 %100
10	M84	Y	-14.952	-14.952	0 %100
11	M85	Y	-14.952	-14.952	0 %100
12	M91	Y	-14.969	-14.969	0 %100
13	M25	Y	-14.255	-14.255	0 %100
14	M26	Y	-14.255	-14.255	0 %100
15	M27	Y	-14.255	-14.255	0 %100
16	M28	Y	-14.969	-14.969	0 %100
17	M31	Y	-8.704	-8.704	0 %100
18	M32	Y	-8.704	-8.704	0 %100
19	M36	Y	-14.952	-14.952	0 %100
20	M37	Y	-14.952	-14.952	0 %100
21	M39	Y	-14.969	-14.969	0 %100
22	M41	Y	-14.952	-14.952	0 %100
23	M42	Y	-14.952	-14.952	0 %100
24	M44	Y	-14.969	-14.969	0 %100
25	M49	Y	-14.255	-14.255	0 %100
26	M50A	Y	-14.255	-14.255	0 %100
27	M51C	Y	-14.255	-14.255	0 %100
28	M52A	Y	-14.969	-14.969	0 %100
29	M55	Y	-8.704	-8.704	0 %100
30	M56	Y	-8.704	-8.704	0 %100
31	M60	Y	-14.952	-14.952	0 %100
32	M61	Y	-14.952	-14.952	0 %100
33	M63	Y	-14.969	-14.969	0 %100
34	M65	Y	-14.952	-14.952	0 %100
35	M66	Y	-14.952	-14.952	0 %100
36	M68	Y	-14.969	-14.969	0 %100
37	M73	Y	-10.022	-10.022	0 %100
38	M74	Y	-10.022	-10.022	0 %100
39	M75	Y	-10.022	-10.022	0 %100
40	MP1A	Y	-7.814	-7.814	0 %100
41	MP2A	Y	-7.814	-7.814	0 %100
42	MP3A	Y	-7.814	-7.814	0 %100
43	MP4A	Y	-7.814	-7.814	0 %100
44	MP1C	Y	-7.814	-7.814	0 %100
45	MP2C	Y	-7.814	-7.814	0 %100
46	MP3C	Y	-7.814	-7.814	0 %100
47	MP4C	Y	-7.814	-7.814	0 %100
48	MP1B	Y	-7.814	-7.814	0 %100
49	MP2B	Y	-7.814	-7.814	0 %100
50	MP3B	Y	-7.814	-7.814	0 %100
51	MP4B	Y	-7.814	-7.814	0 %100
52	M100	Y	-8.795	-8.795	0 %100
53	M107	Y	-8.795	-8.795	0 %100
54	M114	Y	-8.795	-8.795	0 %100
55	M121	Y	-11.48	-11.48	0 %100
56	M122	Y	-11.48	-11.48	0 %100
57	M123	Y	-11.48	-11.48	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[in, %]	End Location[in, %]
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**Member Distributed Loads (BLC 41 : Structure Wo (0 Deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M10	X	0	0	0	%100
4	M10	Z	-9.972	-9.972	0	%100
5	M43	X	0	0	0	%100
6	M43	Z	-9.972	-9.972	0	%100
7	M46	X	0	0	0	%100
8	M46	Z	-19.89	-19.89	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	-2.761	-2.761	0	%100
11	M52B	X	0	0	0	%100
12	M52B	Z	-2.761	-2.761	0	%100
13	M76	X	0	0	0	%100
14	M76	Z	0	0	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	-5.064	-5.064	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	-5.334	-5.334	0	%100
19	M84	X	0	0	0	%100
20	M84	Z	0	0	0	%100
21	M85	X	0	0	0	%100
22	M85	Z	-5.064	-5.064	0	%100
23	M91	X	0	0	0	%100
24	M91	Z	-5.334	-5.334	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	-8.838	-8.838	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	-2.493	-2.493	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	-2.493	-2.493	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	-4.972	-4.972	0	%100
33	M31	X	0	0	0	%100
34	M31	Z	-2.761	-2.761	0	%100
35	M32	X	0	0	0	%100
36	M32	Z	-11.044	-11.044	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	-14.917	-14.917	0	%100
39	M37	X	0	0	0	%100
40	M37	Z	-5.064	-5.064	0	%100
41	M39	X	0	0	0	%100
42	M39	Z	-5.334	-5.334	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	-14.917	-14.917	0	%100
45	M42	X	0	0	0	%100
46	M42	Z	-20.258	-20.258	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	-21.337	-21.337	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	-8.838	-8.838	0	%100
51	M50A	X	0	0	0	%100
52	M50A	Z	-2.493	-2.493	0	%100
53	M51C	X	0	0	0	%100
54	M51C	Z	-2.493	-2.493	0	%100
55	M52A	X	0	0	0	%100
56	M52A	Z	-4.972	-4.972	0	%100
57	M55	X	0	0	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-11.044	-11.044	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	-2.761	-2.761	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	-14.917	-14.917	0 %100
63	M61	X	0	0	0 %100
64	M61	Z	-20.258	-20.258	0 %100
65	M63	X	0	0	0 %100
66	M63	Z	-21.337	-21.337	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	-14.917	-14.917	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	-5.064	-5.064	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	-5.334	-5.334	0 %100
73	M73	X	0	0	0 %100
74	M73	Z	-11.602	-11.602	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	-2.901	-2.901	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	-2.901	-2.901	0 %100
79	MP1A	X	0	0	0 %100
80	MP1A	Z	-7.873	-7.873	0 %100
81	MP2A	X	0	0	0 %100
82	MP2A	Z	-7.873	-7.873	0 %100
83	MP3A	X	0	0	0 %100
84	MP3A	Z	-7.873	-7.873	0 %100
85	MP4A	X	0	0	0 %100
86	MP4A	Z	-7.873	-7.873	0 %100
87	MP1C	X	0	0	0 %100
88	MP1C	Z	-7.873	-7.873	0 %100
89	MP2C	X	0	0	0 %100
90	MP2C	Z	-7.873	-7.873	0 %100
91	MP3C	X	0	0	0 %100
92	MP3C	Z	-7.873	-7.873	0 %100
93	MP4C	X	0	0	0 %100
94	MP4C	Z	-7.873	-7.873	0 %100
95	MP1B	X	0	0	0 %100
96	MP1B	Z	-7.873	-7.873	0 %100
97	MP2B	X	0	0	0 %100
98	MP2B	Z	-7.873	-7.873	0 %100
99	MP3B	X	0	0	0 %100
100	MP3B	Z	-7.873	-7.873	0 %100
101	MP4B	X	0	0	0 %100
102	MP4B	Z	-7.873	-7.873	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	-9.53	-9.53	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	-2.383	-2.383	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	-2.383	-2.383	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	-3.036	-3.036	0 %100
111	M122	X	0	0	0 %100
112	M122	Z	-12.146	-12.146	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	-3.036	-3.036	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	M4	X	1.473	1.473	0	%100
2	M4	Z	-2.551	-2.551	0	%100
3	M10	X	3.739	3.739	0	%100
4	M10	Z	-6.477	-6.477	0	%100
5	M43	X	3.739	3.739	0	%100
6	M43	Z	-6.477	-6.477	0	%100
7	M46	X	7.459	7.459	0	%100
8	M46	Z	-12.919	-12.919	0	%100
9	M51B	X	4.142	4.142	0	%100
10	M51B	Z	-7.174	-7.174	0	%100
11	M52B	X	0	0	0	%100
12	M52B	Z	0	0	0	%100
13	M76	X	2.486	2.486	0	%100
14	M76	Z	-4.306	-4.306	0	%100
15	M77	X	7.597	7.597	0	%100
16	M77	Z	-13.158	-13.158	0	%100
17	M80	X	8.001	8.001	0	%100
18	M80	Z	-13.859	-13.859	0	%100
19	M84	X	2.486	2.486	0	%100
20	M84	Z	-4.306	-4.306	0	%100
21	M85	X	0	0	0	%100
22	M85	Z	0	0	0	%100
23	M91	X	0	0	0	%100
24	M91	Z	0	0	0	%100
25	M25	X	1.473	1.473	0	%100
26	M25	Z	-2.551	-2.551	0	%100
27	M26	X	3.739	3.739	0	%100
28	M26	Z	-6.477	-6.477	0	%100
29	M27	X	3.739	3.739	0	%100
30	M27	Z	-6.477	-6.477	0	%100
31	M28	X	7.459	7.459	0	%100
32	M28	Z	-12.919	-12.919	0	%100
33	M31	X	0	0	0	%100
34	M31	Z	0	0	0	%100
35	M32	X	4.142	4.142	0	%100
36	M32	Z	-7.174	-7.174	0	%100
37	M36	X	2.486	2.486	0	%100
38	M36	Z	-4.306	-4.306	0	%100
39	M37	X	0	0	0	%100
40	M37	Z	0	0	0	%100
41	M39	X	0	0	0	%100
42	M39	Z	0	0	0	%100
43	M41	X	2.486	2.486	0	%100
44	M41	Z	-4.306	-4.306	0	%100
45	M42	X	7.597	7.597	0	%100
46	M42	Z	-13.158	-13.158	0	%100
47	M44	X	8.001	8.001	0	%100
48	M44	Z	-13.859	-13.859	0	%100
49	M49	X	5.892	5.892	0	%100
50	M49	Z	-10.206	-10.206	0	%100
51	M50A	X	0	0	0	%100
52	M50A	Z	0	0	0	%100
53	M51C	X	0	0	0	%100
54	M51C	Z	0	0	0	%100
55	M52A	X	0	0	0	%100
56	M52A	Z	0	0	0	%100
57	M55	X	4.142	4.142	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-7.174	-7.174	0 %100
59	M56	X	4.142	4.142	0 %100
60	M56	Z	-7.174	-7.174	0 %100
61	M60	X	9.945	9.945	0 %100
62	M60	Z	-17.225	-17.225	0 %100
63	M61	X	7.597	7.597	0 %100
64	M61	Z	-13.158	-13.158	0 %100
65	M63	X	8.001	8.001	0 %100
66	M63	Z	-13.859	-13.859	0 %100
67	M65	X	9.945	9.945	0 %100
68	M65	Z	-17.225	-17.225	0 %100
69	M66	X	7.597	7.597	0 %100
70	M66	Z	-13.158	-13.158	0 %100
71	M68	X	8.001	8.001	0 %100
72	M68	Z	-13.859	-13.859	0 %100
73	M73	X	4.351	4.351	0 %100
74	M73	Z	-7.536	-7.536	0 %100
75	M74	X	4.351	4.351	0 %100
76	M74	Z	-7.536	-7.536	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	0	0	0 %100
79	MP1A	X	3.936	3.936	0 %100
80	MP1A	Z	-6.818	-6.818	0 %100
81	MP2A	X	3.936	3.936	0 %100
82	MP2A	Z	-6.818	-6.818	0 %100
83	MP3A	X	3.936	3.936	0 %100
84	MP3A	Z	-6.818	-6.818	0 %100
85	MP4A	X	3.936	3.936	0 %100
86	MP4A	Z	-6.818	-6.818	0 %100
87	MP1C	X	3.936	3.936	0 %100
88	MP1C	Z	-6.818	-6.818	0 %100
89	MP2C	X	3.936	3.936	0 %100
90	MP2C	Z	-6.818	-6.818	0 %100
91	MP3C	X	3.936	3.936	0 %100
92	MP3C	Z	-6.818	-6.818	0 %100
93	MP4C	X	3.936	3.936	0 %100
94	MP4C	Z	-6.818	-6.818	0 %100
95	MP1B	X	3.936	3.936	0 %100
96	MP1B	Z	-6.818	-6.818	0 %100
97	MP2B	X	3.936	3.936	0 %100
98	MP2B	Z	-6.818	-6.818	0 %100
99	MP3B	X	3.936	3.936	0 %100
100	MP3B	Z	-6.818	-6.818	0 %100
101	MP4B	X	3.936	3.936	0 %100
102	MP4B	Z	-6.818	-6.818	0 %100
103	M100	X	3.574	3.574	0 %100
104	M100	Z	-6.19	-6.19	0 %100
105	M107	X	3.574	3.574	0 %100
106	M107	Z	-6.19	-6.19	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	0	0	0 %100
109	M121	X	4.555	4.555	0 %100
110	M121	Z	-7.889	-7.889	0 %100
111	M122	X	4.555	4.555	0 %100
112	M122	Z	-7.889	-7.889	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	0	0	0 %100





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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	7.654	7.654	0	%100
2	M4	Z	-4.419	-4.419	0	%100
3	M10	X	2.159	2.159	0	%100
4	M10	Z	-1.246	-1.246	0	%100
5	M43	X	2.159	2.159	0	%100
6	M43	Z	-1.246	-1.246	0	%100
7	M46	X	4.306	4.306	0	%100
8	M46	Z	-2.486	-2.486	0	%100
9	M51B	X	9.565	9.565	0	%100
10	M51B	Z	-5.522	-5.522	0	%100
11	M52B	X	2.391	2.391	0	%100
12	M52B	Z	-1.381	-1.381	0	%100
13	M76	X	12.919	12.919	0	%100
14	M76	Z	-7.459	-7.459	0	%100
15	M77	X	17.544	17.544	0	%100
16	M77	Z	-10.129	-10.129	0	%100
17	M80	X	18.479	18.479	0	%100
18	M80	Z	-10.669	-10.669	0	%100
19	M84	X	12.919	12.919	0	%100
20	M84	Z	-7.459	-7.459	0	%100
21	M85	X	4.386	4.386	0	%100
22	M85	Z	-2.532	-2.532	0	%100
23	M91	X	4.62	4.62	0	%100
24	M91	Z	-2.667	-2.667	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	0	0	0	%100
27	M26	X	8.636	8.636	0	%100
28	M26	Z	-4.986	-4.986	0	%100
29	M27	X	8.636	8.636	0	%100
30	M27	Z	-4.986	-4.986	0	%100
31	M28	X	17.225	17.225	0	%100
32	M28	Z	-9.945	-9.945	0	%100
33	M31	X	2.391	2.391	0	%100
34	M31	Z	-1.381	-1.381	0	%100
35	M32	X	2.391	2.391	0	%100
36	M32	Z	-1.381	-1.381	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	0	0	0	%100
39	M37	X	4.386	4.386	0	%100
40	M37	Z	-2.532	-2.532	0	%100
41	M39	X	4.62	4.62	0	%100
42	M39	Z	-2.667	-2.667	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	0	0	0	%100
45	M42	X	4.386	4.386	0	%100
46	M42	Z	-2.532	-2.532	0	%100
47	M44	X	4.62	4.62	0	%100
48	M44	Z	-2.667	-2.667	0	%100
49	M49	X	7.654	7.654	0	%100
50	M49	Z	-4.419	-4.419	0	%100
51	M50A	X	2.159	2.159	0	%100
52	M50A	Z	-1.246	-1.246	0	%100
53	M51C	X	2.159	2.159	0	%100
54	M51C	Z	-1.246	-1.246	0	%100
55	M52A	X	4.306	4.306	0	%100
56	M52A	Z	-2.486	-2.486	0	%100
57	M55	X	2.391	2.391	0	%100











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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	7.654	7.654	0	%100
2	M4	Z	4.419	4.419	0	%100
3	M10	X	2.159	2.159	0	%100
4	M10	Z	1.246	1.246	0	%100
5	M43	X	2.159	2.159	0	%100
6	M43	Z	1.246	1.246	0	%100
7	M46	X	4.306	4.306	0	%100
8	M46	Z	2.486	2.486	0	%100
9	M51B	X	2.391	2.391	0	%100
10	M51B	Z	1.381	1.381	0	%100
11	M52B	X	9.565	9.565	0	%100
12	M52B	Z	5.522	5.522	0	%100
13	M76	X	12.919	12.919	0	%100
14	M76	Z	7.459	7.459	0	%100
15	M77	X	4.386	4.386	0	%100
16	M77	Z	2.532	2.532	0	%100
17	M80	X	4.62	4.62	0	%100
18	M80	Z	2.667	2.667	0	%100
19	M84	X	12.919	12.919	0	%100
20	M84	Z	7.459	7.459	0	%100
21	M85	X	17.544	17.544	0	%100
22	M85	Z	10.129	10.129	0	%100
23	M91	X	18.479	18.479	0	%100
24	M91	Z	10.669	10.669	0	%100
25	M25	X	7.654	7.654	0	%100
26	M25	Z	4.419	4.419	0	%100
27	M26	X	2.159	2.159	0	%100
28	M26	Z	1.246	1.246	0	%100
29	M27	X	2.159	2.159	0	%100
30	M27	Z	1.246	1.246	0	%100
31	M28	X	4.306	4.306	0	%100
32	M28	Z	2.486	2.486	0	%100
33	M31	X	9.565	9.565	0	%100
34	M31	Z	5.522	5.522	0	%100
35	M32	X	2.391	2.391	0	%100
36	M32	Z	1.381	1.381	0	%100
37	M36	X	12.919	12.919	0	%100
38	M36	Z	7.459	7.459	0	%100
39	M37	X	17.544	17.544	0	%100
40	M37	Z	10.129	10.129	0	%100
41	M39	X	18.479	18.479	0	%100
42	M39	Z	10.669	10.669	0	%100
43	M41	X	12.919	12.919	0	%100
44	M41	Z	7.459	7.459	0	%100
45	M42	X	4.386	4.386	0	%100
46	M42	Z	2.532	2.532	0	%100
47	M44	X	4.62	4.62	0	%100
48	M44	Z	2.667	2.667	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	0	0	0	%100
51	M50A	X	8.636	8.636	0	%100
52	M50A	Z	4.986	4.986	0	%100
53	M51C	X	8.636	8.636	0	%100
54	M51C	Z	4.986	4.986	0	%100
55	M52A	X	17.225	17.225	0	%100
56	M52A	Z	9.945	9.945	0	%100
57	M55	X	2.391	2.391	0	%100



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
 Checked By: \_\_\_\_\_

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	1.381	1.381	0 %100
59	M56	X	2.391	2.391	0 %100
60	M56	Z	1.381	1.381	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	0	0	0 %100
63	M61	X	4.386	4.386	0 %100
64	M61	Z	2.532	2.532	0 %100
65	M63	X	4.62	4.62	0 %100
66	M63	Z	2.667	2.667	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	0	0	0 %100
69	M66	X	4.386	4.386	0 %100
70	M66	Z	2.532	2.532	0 %100
71	M68	X	4.62	4.62	0 %100
72	M68	Z	2.667	2.667	0 %100
73	M73	X	2.512	2.512	0 %100
74	M73	Z	1.45	1.45	0 %100
75	M74	X	2.512	2.512	0 %100
76	M74	Z	1.45	1.45	0 %100
77	M75	X	10.048	10.048	0 %100
78	M75	Z	5.801	5.801	0 %100
79	MP1A	X	6.818	6.818	0 %100
80	MP1A	Z	3.936	3.936	0 %100
81	MP2A	X	6.818	6.818	0 %100
82	MP2A	Z	3.936	3.936	0 %100
83	MP3A	X	6.818	6.818	0 %100
84	MP3A	Z	3.936	3.936	0 %100
85	MP4A	X	6.818	6.818	0 %100
86	MP4A	Z	3.936	3.936	0 %100
87	MP1C	X	6.818	6.818	0 %100
88	MP1C	Z	3.936	3.936	0 %100
89	MP2C	X	6.818	6.818	0 %100
90	MP2C	Z	3.936	3.936	0 %100
91	MP3C	X	6.818	6.818	0 %100
92	MP3C	Z	3.936	3.936	0 %100
93	MP4C	X	6.818	6.818	0 %100
94	MP4C	Z	3.936	3.936	0 %100
95	MP1B	X	6.818	6.818	0 %100
96	MP1B	Z	3.936	3.936	0 %100
97	MP2B	X	6.818	6.818	0 %100
98	MP2B	Z	3.936	3.936	0 %100
99	MP3B	X	6.818	6.818	0 %100
100	MP3B	Z	3.936	3.936	0 %100
101	MP4B	X	6.818	6.818	0 %100
102	MP4B	Z	3.936	3.936	0 %100
103	M100	X	2.063	2.063	0 %100
104	M100	Z	1.191	1.191	0 %100
105	M107	X	2.063	2.063	0 %100
106	M107	Z	1.191	1.191	0 %100
107	M114	X	8.254	8.254	0 %100
108	M114	Z	4.765	4.765	0 %100
109	M121	X	2.63	2.63	0 %100
110	M121	Z	1.518	1.518	0 %100
111	M122	X	2.63	2.63	0 %100
112	M122	Z	1.518	1.518	0 %100
113	M123	X	10.518	10.518	0 %100
114	M123	Z	6.073	6.073	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[in, %]	End Location[in, %]
1	M4	X	1.473	1.473	0	%100
2	M4	Z	2.551	2.551	0	%100
3	M10	X	3.739	3.739	0	%100
4	M10	Z	6.477	6.477	0	%100
5	M43	X	3.739	3.739	0	%100
6	M43	Z	6.477	6.477	0	%100
7	M46	X	7.459	7.459	0	%100
8	M46	Z	12.919	12.919	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	0	0	0	%100
11	M52B	X	4.142	4.142	0	%100
12	M52B	Z	7.174	7.174	0	%100
13	M76	X	2.486	2.486	0	%100
14	M76	Z	4.306	4.306	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	0	0	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	0	0	0	%100
19	M84	X	2.486	2.486	0	%100
20	M84	Z	4.306	4.306	0	%100
21	M85	X	7.597	7.597	0	%100
22	M85	Z	13.158	13.158	0	%100
23	M91	X	8.001	8.001	0	%100
24	M91	Z	13.859	13.859	0	%100
25	M25	X	5.892	5.892	0	%100
26	M25	Z	10.206	10.206	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	0	0	0	%100
33	M31	X	4.142	4.142	0	%100
34	M31	Z	7.174	7.174	0	%100
35	M32	X	4.142	4.142	0	%100
36	M32	Z	7.174	7.174	0	%100
37	M36	X	9.945	9.945	0	%100
38	M36	Z	17.225	17.225	0	%100
39	M37	X	7.597	7.597	0	%100
40	M37	Z	13.158	13.158	0	%100
41	M39	X	8.001	8.001	0	%100
42	M39	Z	13.859	13.859	0	%100
43	M41	X	9.945	9.945	0	%100
44	M41	Z	17.225	17.225	0	%100
45	M42	X	7.597	7.597	0	%100
46	M42	Z	13.158	13.158	0	%100
47	M44	X	8.001	8.001	0	%100
48	M44	Z	13.859	13.859	0	%100
49	M49	X	1.473	1.473	0	%100
50	M49	Z	2.551	2.551	0	%100
51	M50A	X	3.739	3.739	0	%100
52	M50A	Z	6.477	6.477	0	%100
53	M51C	X	3.739	3.739	0	%100
54	M51C	Z	6.477	6.477	0	%100
55	M52A	X	7.459	7.459	0	%100
56	M52A	Z	12.919	12.919	0	%100
57	M55	X	4.142	4.142	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[in, %]	End Location[in, %]
58	M55	Z	7.174	7.174	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	0	0	0 %100
61	M60	X	2.486	2.486	0 %100
62	M60	Z	4.306	4.306	0 %100
63	M61	X	7.597	7.597	0 %100
64	M61	Z	13.158	13.158	0 %100
65	M63	X	8.001	8.001	0 %100
66	M63	Z	13.859	13.859	0 %100
67	M65	X	2.486	2.486	0 %100
68	M65	Z	4.306	4.306	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	0	0	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	0	0	0 %100
73	M73	X	4.351	4.351	0 %100
74	M73	Z	7.536	7.536	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	0	0	0 %100
77	M75	X	4.351	4.351	0 %100
78	M75	Z	7.536	7.536	0 %100
79	MP1A	X	3.936	3.936	0 %100
80	MP1A	Z	6.818	6.818	0 %100
81	MP2A	X	3.936	3.936	0 %100
82	MP2A	Z	6.818	6.818	0 %100
83	MP3A	X	3.936	3.936	0 %100
84	MP3A	Z	6.818	6.818	0 %100
85	MP4A	X	3.936	3.936	0 %100
86	MP4A	Z	6.818	6.818	0 %100
87	MP1C	X	3.936	3.936	0 %100
88	MP1C	Z	6.818	6.818	0 %100
89	MP2C	X	3.936	3.936	0 %100
90	MP2C	Z	6.818	6.818	0 %100
91	MP3C	X	3.936	3.936	0 %100
92	MP3C	Z	6.818	6.818	0 %100
93	MP4C	X	3.936	3.936	0 %100
94	MP4C	Z	6.818	6.818	0 %100
95	MP1B	X	3.936	3.936	0 %100
96	MP1B	Z	6.818	6.818	0 %100
97	MP2B	X	3.936	3.936	0 %100
98	MP2B	Z	6.818	6.818	0 %100
99	MP3B	X	3.936	3.936	0 %100
100	MP3B	Z	6.818	6.818	0 %100
101	MP4B	X	3.936	3.936	0 %100
102	MP4B	Z	6.818	6.818	0 %100
103	M100	X	3.574	3.574	0 %100
104	M100	Z	6.19	6.19	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	0	0	0 %100
107	M114	X	3.574	3.574	0 %100
108	M114	Z	6.19	6.19	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	0	0	0 %100
111	M122	X	4.555	4.555	0 %100
112	M122	Z	7.889	7.889	0 %100
113	M123	X	4.555	4.555	0 %100
114	M123	Z	7.889	7.889	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[in, %]	End Location[in, %]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M10	X	0	0	0	%100
4	M10	Z	9.972	9.972	0	%100
5	M43	X	0	0	0	%100
6	M43	Z	9.972	9.972	0	%100
7	M46	X	0	0	0	%100
8	M46	Z	19.89	19.89	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	2.761	2.761	0	%100
11	M52B	X	0	0	0	%100
12	M52B	Z	2.761	2.761	0	%100
13	M76	X	0	0	0	%100
14	M76	Z	0	0	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	5.064	5.064	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	5.334	5.334	0	%100
19	M84	X	0	0	0	%100
20	M84	Z	0	0	0	%100
21	M85	X	0	0	0	%100
22	M85	Z	5.064	5.064	0	%100
23	M91	X	0	0	0	%100
24	M91	Z	5.334	5.334	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	8.838	8.838	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	2.493	2.493	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	2.493	2.493	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	4.972	4.972	0	%100
33	M31	X	0	0	0	%100
34	M31	Z	2.761	2.761	0	%100
35	M32	X	0	0	0	%100
36	M32	Z	11.044	11.044	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	14.917	14.917	0	%100
39	M37	X	0	0	0	%100
40	M37	Z	5.064	5.064	0	%100
41	M39	X	0	0	0	%100
42	M39	Z	5.334	5.334	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	14.917	14.917	0	%100
45	M42	X	0	0	0	%100
46	M42	Z	20.258	20.258	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	21.337	21.337	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	8.838	8.838	0	%100
51	M50A	X	0	0	0	%100
52	M50A	Z	2.493	2.493	0	%100
53	M51C	X	0	0	0	%100
54	M51C	Z	2.493	2.493	0	%100
55	M52A	X	0	0	0	%100
56	M52A	Z	4.972	4.972	0	%100
57	M55	X	0	0	0	%100





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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	11,044	11,044	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	2,761	2,761	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	14,917	14,917	0 %100
63	M61	X	0	0	0 %100
64	M61	Z	20,258	20,258	0 %100
65	M63	X	0	0	0 %100
66	M63	Z	21,337	21,337	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	14,917	14,917	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	5,064	5,064	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	5,334	5,334	0 %100
73	M73	X	0	0	0 %100
74	M73	Z	11,602	11,602	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	2,901	2,901	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	2,901	2,901	0 %100
79	MP1A	X	0	0	0 %100
80	MP1A	Z	7,873	7,873	0 %100
81	MP2A	X	0	0	0 %100
82	MP2A	Z	7,873	7,873	0 %100
83	MP3A	X	0	0	0 %100
84	MP3A	Z	7,873	7,873	0 %100
85	MP4A	X	0	0	0 %100
86	MP4A	Z	7,873	7,873	0 %100
87	MP1C	X	0	0	0 %100
88	MP1C	Z	7,873	7,873	0 %100
89	MP2C	X	0	0	0 %100
90	MP2C	Z	7,873	7,873	0 %100
91	MP3C	X	0	0	0 %100
92	MP3C	Z	7,873	7,873	0 %100
93	MP4C	X	0	0	0 %100
94	MP4C	Z	7,873	7,873	0 %100
95	MP1B	X	0	0	0 %100
96	MP1B	Z	7,873	7,873	0 %100
97	MP2B	X	0	0	0 %100
98	MP2B	Z	7,873	7,873	0 %100
99	MP3B	X	0	0	0 %100
100	MP3B	Z	7,873	7,873	0 %100
101	MP4B	X	0	0	0 %100
102	MP4B	Z	7,873	7,873	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	9,53	9,53	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	2,383	2,383	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	2,383	2,383	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	3,036	3,036	0 %100
111	M122	X	0	0	0 %100
112	M122	Z	12,146	12,146	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	3,036	3,036	0 %100



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
 Checked By: \_\_\_\_\_

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-1.473	-1.473	0 %100
2	M4	Z	2.551	2.551	0 %100
3	M10	X	-3.739	-3.739	0 %100
4	M10	Z	6.477	6.477	0 %100
5	M43	X	-3.739	-3.739	0 %100
6	M43	Z	6.477	6.477	0 %100
7	M46	X	-7.459	-7.459	0 %100
8	M46	Z	12.919	12.919	0 %100
9	M51B	X	-4.142	-4.142	0 %100
10	M51B	Z	7.174	7.174	0 %100
11	M52B	X	0	0	0 %100
12	M52B	Z	0	0	0 %100
13	M76	X	-2.486	-2.486	0 %100
14	M76	Z	4.306	4.306	0 %100
15	M77	X	-7.597	-7.597	0 %100
16	M77	Z	13.158	13.158	0 %100
17	M80	X	-8.001	-8.001	0 %100
18	M80	Z	13.859	13.859	0 %100
19	M84	X	-2.486	-2.486	0 %100
20	M84	Z	4.306	4.306	0 %100
21	M85	X	0	0	0 %100
22	M85	Z	0	0	0 %100
23	M91	X	0	0	0 %100
24	M91	Z	0	0	0 %100
25	M25	X	-1.473	-1.473	0 %100
26	M25	Z	2.551	2.551	0 %100
27	M26	X	-3.739	-3.739	0 %100
28	M26	Z	6.477	6.477	0 %100
29	M27	X	-3.739	-3.739	0 %100
30	M27	Z	6.477	6.477	0 %100
31	M28	X	-7.459	-7.459	0 %100
32	M28	Z	12.919	12.919	0 %100
33	M31	X	0	0	0 %100
34	M31	Z	0	0	0 %100
35	M32	X	-4.142	-4.142	0 %100
36	M32	Z	7.174	7.174	0 %100
37	M36	X	-2.486	-2.486	0 %100
38	M36	Z	4.306	4.306	0 %100
39	M37	X	0	0	0 %100
40	M37	Z	0	0	0 %100
41	M39	X	0	0	0 %100
42	M39	Z	0	0	0 %100
43	M41	X	-2.486	-2.486	0 %100
44	M41	Z	4.306	4.306	0 %100
45	M42	X	-7.597	-7.597	0 %100
46	M42	Z	13.158	13.158	0 %100
47	M44	X	-8.001	-8.001	0 %100
48	M44	Z	13.859	13.859	0 %100
49	M49	X	-5.892	-5.892	0 %100
50	M49	Z	10.206	10.206	0 %100
51	M50A	X	0	0	0 %100
52	M50A	Z	0	0	0 %100
53	M51C	X	0	0	0 %100
54	M51C	Z	0	0	0 %100
55	M52A	X	0	0	0 %100
56	M52A	Z	0	0	0 %100
57	M55	X	-4.142	-4.142	0 %100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	7.174	7.174	0 %100
59	M56	X	-4.142	-4.142	0 %100
60	M56	Z	7.174	7.174	0 %100
61	M60	X	-9.945	-9.945	0 %100
62	M60	Z	17.225	17.225	0 %100
63	M61	X	-7.597	-7.597	0 %100
64	M61	Z	13.158	13.158	0 %100
65	M63	X	-8.001	-8.001	0 %100
66	M63	Z	13.859	13.859	0 %100
67	M65	X	-9.945	-9.945	0 %100
68	M65	Z	17.225	17.225	0 %100
69	M66	X	-7.597	-7.597	0 %100
70	M66	Z	13.158	13.158	0 %100
71	M68	X	-8.001	-8.001	0 %100
72	M68	Z	13.859	13.859	0 %100
73	M73	X	-4.351	-4.351	0 %100
74	M73	Z	7.536	7.536	0 %100
75	M74	X	-4.351	-4.351	0 %100
76	M74	Z	7.536	7.536	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	0	0	0 %100
79	MP1A	X	-3.936	-3.936	0 %100
80	MP1A	Z	6.818	6.818	0 %100
81	MP2A	X	-3.936	-3.936	0 %100
82	MP2A	Z	6.818	6.818	0 %100
83	MP3A	X	-3.936	-3.936	0 %100
84	MP3A	Z	6.818	6.818	0 %100
85	MP4A	X	-3.936	-3.936	0 %100
86	MP4A	Z	6.818	6.818	0 %100
87	MP1C	X	-3.936	-3.936	0 %100
88	MP1C	Z	6.818	6.818	0 %100
89	MP2C	X	-3.936	-3.936	0 %100
90	MP2C	Z	6.818	6.818	0 %100
91	MP3C	X	-3.936	-3.936	0 %100
92	MP3C	Z	6.818	6.818	0 %100
93	MP4C	X	-3.936	-3.936	0 %100
94	MP4C	Z	6.818	6.818	0 %100
95	MP1B	X	-3.936	-3.936	0 %100
96	MP1B	Z	6.818	6.818	0 %100
97	MP2B	X	-3.936	-3.936	0 %100
98	MP2B	Z	6.818	6.818	0 %100
99	MP3B	X	-3.936	-3.936	0 %100
100	MP3B	Z	6.818	6.818	0 %100
101	MP4B	X	-3.936	-3.936	0 %100
102	MP4B	Z	6.818	6.818	0 %100
103	M100	X	-3.574	-3.574	0 %100
104	M100	Z	6.19	6.19	0 %100
105	M107	X	-3.574	-3.574	0 %100
106	M107	Z	6.19	6.19	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	0	0	0 %100
109	M121	X	-4.555	-4.555	0 %100
110	M121	Z	7.889	7.889	0 %100
111	M122	X	-4.555	-4.555	0 %100
112	M122	Z	7.889	7.889	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	0	0	0 %100





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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	1.381	1.381	0 %100
59	M56	X	-9.565	-9.565	0 %100
60	M56	Z	5.522	5.522	0 %100
61	M60	X	-12.919	-12.919	0 %100
62	M60	Z	7.459	7.459	0 %100
63	M61	X	-4.386	-4.386	0 %100
64	M61	Z	2.532	2.532	0 %100
65	M63	X	-4.62	-4.62	0 %100
66	M63	Z	2.667	2.667	0 %100
67	M65	X	-12.919	-12.919	0 %100
68	M65	Z	7.459	7.459	0 %100
69	M66	X	-17.544	-17.544	0 %100
70	M66	Z	10.129	10.129	0 %100
71	M68	X	-18.479	-18.479	0 %100
72	M68	Z	10.669	10.669	0 %100
73	M73	X	-2.512	-2.512	0 %100
74	M73	Z	1.45	1.45	0 %100
75	M74	X	-10.048	-10.048	0 %100
76	M74	Z	5.801	5.801	0 %100
77	M75	X	-2.512	-2.512	0 %100
78	M75	Z	1.45	1.45	0 %100
79	MP1A	X	-6.818	-6.818	0 %100
80	MP1A	Z	3.936	3.936	0 %100
81	MP2A	X	-6.818	-6.818	0 %100
82	MP2A	Z	3.936	3.936	0 %100
83	MP3A	X	-6.818	-6.818	0 %100
84	MP3A	Z	3.936	3.936	0 %100
85	MP4A	X	-6.818	-6.818	0 %100
86	MP4A	Z	3.936	3.936	0 %100
87	MP1C	X	-6.818	-6.818	0 %100
88	MP1C	Z	3.936	3.936	0 %100
89	MP2C	X	-6.818	-6.818	0 %100
90	MP2C	Z	3.936	3.936	0 %100
91	MP3C	X	-6.818	-6.818	0 %100
92	MP3C	Z	3.936	3.936	0 %100
93	MP4C	X	-6.818	-6.818	0 %100
94	MP4C	Z	3.936	3.936	0 %100
95	MP1B	X	-6.818	-6.818	0 %100
96	MP1B	Z	3.936	3.936	0 %100
97	MP2B	X	-6.818	-6.818	0 %100
98	MP2B	Z	3.936	3.936	0 %100
99	MP3B	X	-6.818	-6.818	0 %100
100	MP3B	Z	3.936	3.936	0 %100
101	MP4B	X	-6.818	-6.818	0 %100
102	MP4B	Z	3.936	3.936	0 %100
103	M100	X	-2.063	-2.063	0 %100
104	M100	Z	1.191	1.191	0 %100
105	M107	X	-8.254	-8.254	0 %100
106	M107	Z	4.765	4.765	0 %100
107	M114	X	-2.063	-2.063	0 %100
108	M114	Z	1.191	1.191	0 %100
109	M121	X	-10.518	-10.518	0 %100
110	M121	Z	6.073	6.073	0 %100
111	M122	X	-2.63	-2.63	0 %100
112	M122	Z	1.518	1.518	0 %100
113	M123	X	-2.63	-2.63	0 %100
114	M123	Z	1.518	1.518	0 %100









Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
 Checked By: \_\_\_\_\_

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-7.654	-7.654	0	%100
2	M4	Z	-4.419	-4.419	0	%100
3	M10	X	-2.159	-2.159	0	%100
4	M10	Z	-1.246	-1.246	0	%100
5	M43	X	-2.159	-2.159	0	%100
6	M43	Z	-1.246	-1.246	0	%100
7	M46	X	-4.306	-4.306	0	%100
8	M46	Z	-2.486	-2.486	0	%100
9	M51B	X	-2.391	-2.391	0	%100
10	M51B	Z	-1.381	-1.381	0	%100
11	M52B	X	-9.565	-9.565	0	%100
12	M52B	Z	-5.522	-5.522	0	%100
13	M76	X	-12.919	-12.919	0	%100
14	M76	Z	-7.459	-7.459	0	%100
15	M77	X	-4.386	-4.386	0	%100
16	M77	Z	-2.532	-2.532	0	%100
17	M80	X	-4.62	-4.62	0	%100
18	M80	Z	-2.667	-2.667	0	%100
19	M84	X	-12.919	-12.919	0	%100
20	M84	Z	-7.459	-7.459	0	%100
21	M85	X	-17.544	-17.544	0	%100
22	M85	Z	-10.129	-10.129	0	%100
23	M91	X	-18.479	-18.479	0	%100
24	M91	Z	-10.669	-10.669	0	%100
25	M25	X	-7.654	-7.654	0	%100
26	M25	Z	-4.419	-4.419	0	%100
27	M26	X	-2.159	-2.159	0	%100
28	M26	Z	-1.246	-1.246	0	%100
29	M27	X	-2.159	-2.159	0	%100
30	M27	Z	-1.246	-1.246	0	%100
31	M28	X	-4.306	-4.306	0	%100
32	M28	Z	-2.486	-2.486	0	%100
33	M31	X	-9.565	-9.565	0	%100
34	M31	Z	-5.522	-5.522	0	%100
35	M32	X	-2.391	-2.391	0	%100
36	M32	Z	-1.381	-1.381	0	%100
37	M36	X	-12.919	-12.919	0	%100
38	M36	Z	-7.459	-7.459	0	%100
39	M37	X	-17.544	-17.544	0	%100
40	M37	Z	-10.129	-10.129	0	%100
41	M39	X	-18.479	-18.479	0	%100
42	M39	Z	-10.669	-10.669	0	%100
43	M41	X	-12.919	-12.919	0	%100
44	M41	Z	-7.459	-7.459	0	%100
45	M42	X	-4.386	-4.386	0	%100
46	M42	Z	-2.532	-2.532	0	%100
47	M44	X	-4.62	-4.62	0	%100
48	M44	Z	-2.667	-2.667	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	0	0	0	%100
51	M50A	X	-8.636	-8.636	0	%100
52	M50A	Z	-4.986	-4.986	0	%100
53	M51C	X	-8.636	-8.636	0	%100
54	M51C	Z	-4.986	-4.986	0	%100
55	M52A	X	-17.225	-17.225	0	%100
56	M52A	Z	-9.945	-9.945	0	%100
57	M55	X	-2.391	-2.391	0	%100





Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
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**Member Distributed Loads (BLC 51 : Structure Wo (300 Deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-1.381	-1.381	0 %100
59	M56	X	-2.391	-2.391	0 %100
60	M56	Z	-1.381	-1.381	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	0	0	0 %100
63	M61	X	-4.386	-4.386	0 %100
64	M61	Z	-2.532	-2.532	0 %100
65	M63	X	-4.62	-4.62	0 %100
66	M63	Z	-2.667	-2.667	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	0	0	0 %100
69	M66	X	-4.386	-4.386	0 %100
70	M66	Z	-2.532	-2.532	0 %100
71	M68	X	-4.62	-4.62	0 %100
72	M68	Z	-2.667	-2.667	0 %100
73	M73	X	-2.512	-2.512	0 %100
74	M73	Z	-1.45	-1.45	0 %100
75	M74	X	-2.512	-2.512	0 %100
76	M74	Z	-1.45	-1.45	0 %100
77	M75	X	-10.048	-10.048	0 %100
78	M75	Z	-5.801	-5.801	0 %100
79	MP1A	X	-6.818	-6.818	0 %100
80	MP1A	Z	-3.936	-3.936	0 %100
81	MP2A	X	-6.818	-6.818	0 %100
82	MP2A	Z	-3.936	-3.936	0 %100
83	MP3A	X	-6.818	-6.818	0 %100
84	MP3A	Z	-3.936	-3.936	0 %100
85	MP4A	X	-6.818	-6.818	0 %100
86	MP4A	Z	-3.936	-3.936	0 %100
87	MP1C	X	-6.818	-6.818	0 %100
88	MP1C	Z	-3.936	-3.936	0 %100
89	MP2C	X	-6.818	-6.818	0 %100
90	MP2C	Z	-3.936	-3.936	0 %100
91	MP3C	X	-6.818	-6.818	0 %100
92	MP3C	Z	-3.936	-3.936	0 %100
93	MP4C	X	-6.818	-6.818	0 %100
94	MP4C	Z	-3.936	-3.936	0 %100
95	MP1B	X	-6.818	-6.818	0 %100
96	MP1B	Z	-3.936	-3.936	0 %100
97	MP2B	X	-6.818	-6.818	0 %100
98	MP2B	Z	-3.936	-3.936	0 %100
99	MP3B	X	-6.818	-6.818	0 %100
100	MP3B	Z	-3.936	-3.936	0 %100
101	MP4B	X	-6.818	-6.818	0 %100
102	MP4B	Z	-3.936	-3.936	0 %100
103	M100	X	-2.063	-2.063	0 %100
104	M100	Z	-1.191	-1.191	0 %100
105	M107	X	-2.063	-2.063	0 %100
106	M107	Z	-1.191	-1.191	0 %100
107	M114	X	-8.254	-8.254	0 %100
108	M114	Z	-4.765	-4.765	0 %100
109	M121	X	-2.63	-2.63	0 %100
110	M121	Z	-1.518	-1.518	0 %100
111	M122	X	-2.63	-2.63	0 %100
112	M122	Z	-1.518	-1.518	0 %100
113	M123	X	-10.518	-10.518	0 %100
114	M123	Z	-6.073	-6.073	0 %100



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
 Checked By: \_\_\_\_\_

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-1.473	-1.473	0 %100
2	M4	Z	-2.551	-2.551	0 %100
3	M10	X	-3.739	-3.739	0 %100
4	M10	Z	-6.477	-6.477	0 %100
5	M43	X	-3.739	-3.739	0 %100
6	M43	Z	-6.477	-6.477	0 %100
7	M46	X	-7.459	-7.459	0 %100
8	M46	Z	-12.919	-12.919	0 %100
9	M51B	X	0	0	0 %100
10	M51B	Z	0	0	0 %100
11	M52B	X	-4.142	-4.142	0 %100
12	M52B	Z	-7.174	-7.174	0 %100
13	M76	X	-2.486	-2.486	0 %100
14	M76	Z	-4.306	-4.306	0 %100
15	M77	X	0	0	0 %100
16	M77	Z	0	0	0 %100
17	M80	X	0	0	0 %100
18	M80	Z	0	0	0 %100
19	M84	X	-2.486	-2.486	0 %100
20	M84	Z	-4.306	-4.306	0 %100
21	M85	X	-7.597	-7.597	0 %100
22	M85	Z	-13.158	-13.158	0 %100
23	M91	X	-8.001	-8.001	0 %100
24	M91	Z	-13.859	-13.859	0 %100
25	M25	X	-5.892	-5.892	0 %100
26	M25	Z	-10.206	-10.206	0 %100
27	M26	X	0	0	0 %100
28	M26	Z	0	0	0 %100
29	M27	X	0	0	0 %100
30	M27	Z	0	0	0 %100
31	M28	X	0	0	0 %100
32	M28	Z	0	0	0 %100
33	M31	X	-4.142	-4.142	0 %100
34	M31	Z	-7.174	-7.174	0 %100
35	M32	X	-4.142	-4.142	0 %100
36	M32	Z	-7.174	-7.174	0 %100
37	M36	X	-9.945	-9.945	0 %100
38	M36	Z	-17.225	-17.225	0 %100
39	M37	X	-7.597	-7.597	0 %100
40	M37	Z	-13.158	-13.158	0 %100
41	M39	X	-8.001	-8.001	0 %100
42	M39	Z	-13.859	-13.859	0 %100
43	M41	X	-9.945	-9.945	0 %100
44	M41	Z	-17.225	-17.225	0 %100
45	M42	X	-7.597	-7.597	0 %100
46	M42	Z	-13.158	-13.158	0 %100
47	M44	X	-8.001	-8.001	0 %100
48	M44	Z	-13.859	-13.859	0 %100
49	M49	X	-1.473	-1.473	0 %100
50	M49	Z	-2.551	-2.551	0 %100
51	M50A	X	-3.739	-3.739	0 %100
52	M50A	Z	-6.477	-6.477	0 %100
53	M51C	X	-3.739	-3.739	0 %100
54	M51C	Z	-6.477	-6.477	0 %100
55	M52A	X	-7.459	-7.459	0 %100
56	M52A	Z	-12.919	-12.919	0 %100
57	M55	X	-4.142	-4.142	0 %100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-7.174	-7.174	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	0	0	0 %100
61	M60	X	-2.486	-2.486	0 %100
62	M60	Z	-4.306	-4.306	0 %100
63	M61	X	-7.597	-7.597	0 %100
64	M61	Z	-13.158	-13.158	0 %100
65	M63	X	-8.001	-8.001	0 %100
66	M63	Z	-13.859	-13.859	0 %100
67	M65	X	-2.486	-2.486	0 %100
68	M65	Z	-4.306	-4.306	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	0	0	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	0	0	0 %100
73	M73	X	-4.351	-4.351	0 %100
74	M73	Z	-7.536	-7.536	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	0	0	0 %100
77	M75	X	-4.351	-4.351	0 %100
78	M75	Z	-7.536	-7.536	0 %100
79	MP1A	X	-3.936	-3.936	0 %100
80	MP1A	Z	-6.818	-6.818	0 %100
81	MP2A	X	-3.936	-3.936	0 %100
82	MP2A	Z	-6.818	-6.818	0 %100
83	MP3A	X	-3.936	-3.936	0 %100
84	MP3A	Z	-6.818	-6.818	0 %100
85	MP4A	X	-3.936	-3.936	0 %100
86	MP4A	Z	-6.818	-6.818	0 %100
87	MP1C	X	-3.936	-3.936	0 %100
88	MP1C	Z	-6.818	-6.818	0 %100
89	MP2C	X	-3.936	-3.936	0 %100
90	MP2C	Z	-6.818	-6.818	0 %100
91	MP3C	X	-3.936	-3.936	0 %100
92	MP3C	Z	-6.818	-6.818	0 %100
93	MP4C	X	-3.936	-3.936	0 %100
94	MP4C	Z	-6.818	-6.818	0 %100
95	MP1B	X	-3.936	-3.936	0 %100
96	MP1B	Z	-6.818	-6.818	0 %100
97	MP2B	X	-3.936	-3.936	0 %100
98	MP2B	Z	-6.818	-6.818	0 %100
99	MP3B	X	-3.936	-3.936	0 %100
100	MP3B	Z	-6.818	-6.818	0 %100
101	MP4B	X	-3.936	-3.936	0 %100
102	MP4B	Z	-6.818	-6.818	0 %100
103	M100	X	-3.574	-3.574	0 %100
104	M100	Z	-6.19	-6.19	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	0	0	0 %100
107	M114	X	-3.574	-3.574	0 %100
108	M114	Z	-6.19	-6.19	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	0	0	0 %100
111	M122	X	-4.555	-4.555	0 %100
112	M122	Z	-7.889	-7.889	0 %100
113	M123	X	-4.555	-4.555	0 %100
114	M123	Z	-7.889	-7.889	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M10	X	0	0	0	%100
4	M10	Z	-3.297	-3.297	0	%100
5	M43	X	0	0	0	%100
6	M43	Z	-3.297	-3.297	0	%100
7	M46	X	0	0	0	%100
8	M46	Z	-4.985	-4.985	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	-0.937	-0.937	0	%100
11	M52B	X	0	0	0	%100
12	M52B	Z	-0.937	-0.937	0	%100
13	M76	X	0	0	0	%100
14	M76	Z	0	0	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	-1.251	-1.251	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	-1.302	-1.302	0	%100
19	M84	X	0	0	0	%100
20	M84	Z	0	0	0	%100
21	M85	X	0	0	0	%100
22	M85	Z	-1.251	-1.251	0	%100
23	M91	X	0	0	0	%100
24	M91	Z	-1.302	-1.302	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	-3.023	-3.023	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	-0.824	-0.824	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	-0.824	-0.824	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	-1.246	-1.246	0	%100
33	M31	X	0	0	0	%100
34	M31	Z	-0.937	-0.937	0	%100
35	M32	X	0	0	0	%100
36	M32	Z	-3.749	-3.749	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	-3.701	-3.701	0	%100
39	M37	X	0	0	0	%100
40	M37	Z	-1.251	-1.251	0	%100
41	M39	X	0	0	0	%100
42	M39	Z	-1.302	-1.302	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	-3.701	-3.701	0	%100
45	M42	X	0	0	0	%100
46	M42	Z	-5.004	-5.004	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	-5.208	-5.208	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	-3.023	-3.023	0	%100
51	M50A	X	0	0	0	%100
52	M50A	Z	-0.824	-0.824	0	%100
53	M51C	X	0	0	0	%100
54	M51C	Z	-0.824	-0.824	0	%100
55	M52A	X	0	0	0	%100
56	M52A	Z	-1.246	-1.246	0	%100
57	M55	X	0	0	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-3.749	-3.749	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	-.937	-.937	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	-3.701	-3.701	0 %100
63	M61	X	0	0	0 %100
64	M61	Z	-5.004	-5.004	0 %100
65	M63	X	0	0	0 %100
66	M63	Z	-5.208	-5.208	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	-3.701	-3.701	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	-1.251	-1.251	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	-1.302	-1.302	0 %100
73	M73	X	0	0	0 %100
74	M73	Z	-4.207	-4.207	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	-1.052	-1.052	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	-1.052	-1.052	0 %100
79	MP1A	X	0	0	0 %100
80	MP1A	Z	-3.502	-3.502	0 %100
81	MP2A	X	0	0	0 %100
82	MP2A	Z	-3.502	-3.502	0 %100
83	MP3A	X	0	0	0 %100
84	MP3A	Z	-3.502	-3.502	0 %100
85	MP4A	X	0	0	0 %100
86	MP4A	Z	-3.502	-3.502	0 %100
87	MP1C	X	0	0	0 %100
88	MP1C	Z	-3.502	-3.502	0 %100
89	MP2C	X	0	0	0 %100
90	MP2C	Z	-3.502	-3.502	0 %100
91	MP3C	X	0	0	0 %100
92	MP3C	Z	-3.502	-3.502	0 %100
93	MP4C	X	0	0	0 %100
94	MP4C	Z	-3.502	-3.502	0 %100
95	MP1B	X	0	0	0 %100
96	MP1B	Z	-3.502	-3.502	0 %100
97	MP2B	X	0	0	0 %100
98	MP2B	Z	-3.502	-3.502	0 %100
99	MP3B	X	0	0	0 %100
100	MP3B	Z	-3.502	-3.502	0 %100
101	MP4B	X	0	0	0 %100
102	MP4B	Z	-3.502	-3.502	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	-3.815	-3.815	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	-.954	-.954	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	-.954	-.954	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	-.922	-.922	0 %100
111	M122	X	0	0	0 %100
112	M122	Z	-3.689	-3.689	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	-.922	-.922	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	.504	.504	0	%100
2	M4	Z	-.873	-.873	0	%100
3	M10	X	1.236	1.236	0	%100
4	M10	Z	-2.141	-2.141	0	%100
5	M43	X	1.236	1.236	0	%100
6	M43	Z	-2.141	-2.141	0	%100
7	M46	X	1.869	1.869	0	%100
8	M46	Z	-3.238	-3.238	0	%100
9	M51B	X	1.406	1.406	0	%100
10	M51B	Z	-2.435	-2.435	0	%100
11	M52B	X	0	0	0	%100
12	M52B	Z	0	0	0	%100
13	M76	X	.617	.617	0	%100
14	M76	Z	-1.068	-1.068	0	%100
15	M77	X	1.876	1.876	0	%100
16	M77	Z	-3.25	-3.25	0	%100
17	M80	X	1.953	1.953	0	%100
18	M80	Z	-3.383	-3.383	0	%100
19	M84	X	.617	.617	0	%100
20	M84	Z	-1.068	-1.068	0	%100
21	M85	X	0	0	0	%100
22	M85	Z	0	0	0	%100
23	M91	X	0	0	0	%100
24	M91	Z	0	0	0	%100
25	M25	X	.504	.504	0	%100
26	M25	Z	-.873	-.873	0	%100
27	M26	X	1.236	1.236	0	%100
28	M26	Z	-2.141	-2.141	0	%100
29	M27	X	1.236	1.236	0	%100
30	M27	Z	-2.141	-2.141	0	%100
31	M28	X	1.869	1.869	0	%100
32	M28	Z	-3.238	-3.238	0	%100
33	M31	X	0	0	0	%100
34	M31	Z	0	0	0	%100
35	M32	X	1.406	1.406	0	%100
36	M32	Z	-2.435	-2.435	0	%100
37	M36	X	.617	.617	0	%100
38	M36	Z	-1.068	-1.068	0	%100
39	M37	X	0	0	0	%100
40	M37	Z	0	0	0	%100
41	M39	X	0	0	0	%100
42	M39	Z	0	0	0	%100
43	M41	X	.617	.617	0	%100
44	M41	Z	-1.068	-1.068	0	%100
45	M42	X	1.876	1.876	0	%100
46	M42	Z	-3.25	-3.25	0	%100
47	M44	X	1.953	1.953	0	%100
48	M44	Z	-3.383	-3.383	0	%100
49	M49	X	2.016	2.016	0	%100
50	M49	Z	-3.491	-3.491	0	%100
51	M50A	X	0	0	0	%100
52	M50A	Z	0	0	0	%100
53	M51C	X	0	0	0	%100
54	M51C	Z	0	0	0	%100
55	M52A	X	0	0	0	%100
56	M52A	Z	0	0	0	%100
57	M55	X	1.406	1.406	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-2.435	-2.435	0 %100
59	M56	X	1.406	1.406	0 %100
60	M56	Z	-2.435	-2.435	0 %100
61	M60	X	2.467	2.467	0 %100
62	M60	Z	-4.273	-4.273	0 %100
63	M61	X	1.876	1.876	0 %100
64	M61	Z	-3.25	-3.25	0 %100
65	M63	X	1.953	1.953	0 %100
66	M63	Z	-3.383	-3.383	0 %100
67	M65	X	2.467	2.467	0 %100
68	M65	Z	-4.273	-4.273	0 %100
69	M66	X	1.876	1.876	0 %100
70	M66	Z	-3.25	-3.25	0 %100
71	M68	X	1.953	1.953	0 %100
72	M68	Z	-3.383	-3.383	0 %100
73	M73	X	1.577	1.577	0 %100
74	M73	Z	-2.732	-2.732	0 %100
75	M74	X	1.577	1.577	0 %100
76	M74	Z	-2.732	-2.732	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	0	0	0 %100
79	MP1A	X	1.751	1.751	0 %100
80	MP1A	Z	-3.032	-3.032	0 %100
81	MP2A	X	1.751	1.751	0 %100
82	MP2A	Z	-3.032	-3.032	0 %100
83	MP3A	X	1.751	1.751	0 %100
84	MP3A	Z	-3.032	-3.032	0 %100
85	MP4A	X	1.751	1.751	0 %100
86	MP4A	Z	-3.032	-3.032	0 %100
87	MP1C	X	1.751	1.751	0 %100
88	MP1C	Z	-3.032	-3.032	0 %100
89	MP2C	X	1.751	1.751	0 %100
90	MP2C	Z	-3.032	-3.032	0 %100
91	MP3C	X	1.751	1.751	0 %100
92	MP3C	Z	-3.032	-3.032	0 %100
93	MP4C	X	1.751	1.751	0 %100
94	MP4C	Z	-3.032	-3.032	0 %100
95	MP1B	X	1.751	1.751	0 %100
96	MP1B	Z	-3.032	-3.032	0 %100
97	MP2B	X	1.751	1.751	0 %100
98	MP2B	Z	-3.032	-3.032	0 %100
99	MP3B	X	1.751	1.751	0 %100
100	MP3B	Z	-3.032	-3.032	0 %100
101	MP4B	X	1.751	1.751	0 %100
102	MP4B	Z	-3.032	-3.032	0 %100
103	M100	X	1.431	1.431	0 %100
104	M100	Z	-2.478	-2.478	0 %100
105	M107	X	1.431	1.431	0 %100
106	M107	Z	-2.478	-2.478	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	0	0	0 %100
109	M121	X	1.384	1.384	0 %100
110	M121	Z	-2.396	-2.396	0 %100
111	M122	X	1.384	1.384	0 %100
112	M122	Z	-2.396	-2.396	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	0	0	0 %100









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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	- .469	- .469	0 %100
59	M56	X	3.246	3.246	0 %100
60	M56	Z	-1.874	-1.874	0 %100
61	M60	X	3.205	3.205	0 %100
62	M60	Z	-1.85	-1.85	0 %100
63	M61	X	1.083	1.083	0 %100
64	M61	Z	- .625	- .625	0 %100
65	M63	X	1.128	1.128	0 %100
66	M63	Z	- .651	- .651	0 %100
67	M65	X	3.205	3.205	0 %100
68	M65	Z	-1.85	-1.85	0 %100
69	M66	X	4.334	4.334	0 %100
70	M66	Z	-2.502	-2.502	0 %100
71	M68	X	4.51	4.51	0 %100
72	M68	Z	-2.604	-2.604	0 %100
73	M73	X	.911	.911	0 %100
74	M73	Z	- .526	- .526	0 %100
75	M74	X	3.643	3.643	0 %100
76	M74	Z	-2.103	-2.103	0 %100
77	M75	X	.911	.911	0 %100
78	M75	Z	- .526	- .526	0 %100
79	MP1A	X	3.032	3.032	0 %100
80	MP1A	Z	-1.751	-1.751	0 %100
81	MP2A	X	3.032	3.032	0 %100
82	MP2A	Z	-1.751	-1.751	0 %100
83	MP3A	X	3.032	3.032	0 %100
84	MP3A	Z	-1.751	-1.751	0 %100
85	MP4A	X	3.032	3.032	0 %100
86	MP4A	Z	-1.751	-1.751	0 %100
87	MP1C	X	3.032	3.032	0 %100
88	MP1C	Z	-1.751	-1.751	0 %100
89	MP2C	X	3.032	3.032	0 %100
90	MP2C	Z	-1.751	-1.751	0 %100
91	MP3C	X	3.032	3.032	0 %100
92	MP3C	Z	-1.751	-1.751	0 %100
93	MP4C	X	3.032	3.032	0 %100
94	MP4C	Z	-1.751	-1.751	0 %100
95	MP1B	X	3.032	3.032	0 %100
96	MP1B	Z	-1.751	-1.751	0 %100
97	MP2B	X	3.032	3.032	0 %100
98	MP2B	Z	-1.751	-1.751	0 %100
99	MP3B	X	3.032	3.032	0 %100
100	MP3B	Z	-1.751	-1.751	0 %100
101	MP4B	X	3.032	3.032	0 %100
102	MP4B	Z	-1.751	-1.751	0 %100
103	M100	X	.826	.826	0 %100
104	M100	Z	- .477	- .477	0 %100
105	M107	X	3.304	3.304	0 %100
106	M107	Z	-1.907	-1.907	0 %100
107	M114	X	.826	.826	0 %100
108	M114	Z	- .477	- .477	0 %100
109	M121	X	3.195	3.195	0 %100
110	M121	Z	-1.845	-1.845	0 %100
111	M122	X	.799	.799	0 %100
112	M122	Z	- .461	- .461	0 %100
113	M123	X	.799	.799	0 %100
114	M123	Z	- .461	- .461	0 %100







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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	2.618	2.618	0 %100
2	M4	Z	1.512	1.512	0 %100
3	M10	X	.714	.714	0 %100
4	M10	Z	.412	.412	0 %100
5	M43	X	.714	.714	0 %100
6	M43	Z	.412	.412	0 %100
7	M46	X	1.079	1.079	0 %100
8	M46	Z	.623	.623	0 %100
9	M51B	X	.812	.812	0 %100
10	M51B	Z	.469	.469	0 %100
11	M52B	X	3.246	3.246	0 %100
12	M52B	Z	1.874	1.874	0 %100
13	M76	X	3.205	3.205	0 %100
14	M76	Z	1.85	1.85	0 %100
15	M77	X	1.083	1.083	0 %100
16	M77	Z	.625	.625	0 %100
17	M80	X	1.128	1.128	0 %100
18	M80	Z	.651	.651	0 %100
19	M84	X	3.205	3.205	0 %100
20	M84	Z	1.85	1.85	0 %100
21	M85	X	4.334	4.334	0 %100
22	M85	Z	2.502	2.502	0 %100
23	M91	X	4.51	4.51	0 %100
24	M91	Z	2.604	2.604	0 %100
25	M25	X	2.618	2.618	0 %100
26	M25	Z	1.512	1.512	0 %100
27	M26	X	.714	.714	0 %100
28	M26	Z	.412	.412	0 %100
29	M27	X	.714	.714	0 %100
30	M27	Z	.412	.412	0 %100
31	M28	X	1.079	1.079	0 %100
32	M28	Z	.623	.623	0 %100
33	M31	X	3.246	3.246	0 %100
34	M31	Z	1.874	1.874	0 %100
35	M32	X	.812	.812	0 %100
36	M32	Z	.469	.469	0 %100
37	M36	X	3.205	3.205	0 %100
38	M36	Z	1.85	1.85	0 %100
39	M37	X	4.334	4.334	0 %100
40	M37	Z	2.502	2.502	0 %100
41	M39	X	4.51	4.51	0 %100
42	M39	Z	2.604	2.604	0 %100
43	M41	X	3.205	3.205	0 %100
44	M41	Z	1.85	1.85	0 %100
45	M42	X	1.083	1.083	0 %100
46	M42	Z	.625	.625	0 %100
47	M44	X	1.128	1.128	0 %100
48	M44	Z	.651	.651	0 %100
49	M49	X	0	0	0 %100
50	M49	Z	0	0	0 %100
51	M50A	X	2.855	2.855	0 %100
52	M50A	Z	1.648	1.648	0 %100
53	M51C	X	2.855	2.855	0 %100
54	M51C	Z	1.648	1.648	0 %100
55	M52A	X	4.317	4.317	0 %100
56	M52A	Z	2.492	2.492	0 %100
57	M55	X	.812	.812	0 %100





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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	.504	.504	0	%100
2	M4	Z	.873	.873	0	%100
3	M10	X	1.236	1.236	0	%100
4	M10	Z	2.141	2.141	0	%100
5	M43	X	1.236	1.236	0	%100
6	M43	Z	2.141	2.141	0	%100
7	M46	X	1.869	1.869	0	%100
8	M46	Z	3.238	3.238	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	0	0	0	%100
11	M52B	X	1.406	1.406	0	%100
12	M52B	Z	2.435	2.435	0	%100
13	M76	X	.617	.617	0	%100
14	M76	Z	1.068	1.068	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	0	0	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	0	0	0	%100
19	M84	X	.617	.617	0	%100
20	M84	Z	1.068	1.068	0	%100
21	M85	X	1.876	1.876	0	%100
22	M85	Z	3.25	3.25	0	%100
23	M91	X	1.953	1.953	0	%100
24	M91	Z	3.383	3.383	0	%100
25	M25	X	2.016	2.016	0	%100
26	M25	Z	3.491	3.491	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	0	0	0	%100
33	M31	X	1.406	1.406	0	%100
34	M31	Z	2.435	2.435	0	%100
35	M32	X	1.406	1.406	0	%100
36	M32	Z	2.435	2.435	0	%100
37	M36	X	2.467	2.467	0	%100
38	M36	Z	4.273	4.273	0	%100
39	M37	X	1.876	1.876	0	%100
40	M37	Z	3.25	3.25	0	%100
41	M39	X	1.953	1.953	0	%100
42	M39	Z	3.383	3.383	0	%100
43	M41	X	2.467	2.467	0	%100
44	M41	Z	4.273	4.273	0	%100
45	M42	X	1.876	1.876	0	%100
46	M42	Z	3.25	3.25	0	%100
47	M44	X	1.953	1.953	0	%100
48	M44	Z	3.383	3.383	0	%100
49	M49	X	.504	.504	0	%100
50	M49	Z	.873	.873	0	%100
51	M50A	X	1.236	1.236	0	%100
52	M50A	Z	2.141	2.141	0	%100
53	M51C	X	1.236	1.236	0	%100
54	M51C	Z	2.141	2.141	0	%100
55	M52A	X	1.869	1.869	0	%100
56	M52A	Z	3.238	3.238	0	%100
57	M55	X	1.406	1.406	0	%100







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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M10	X	0	0	0	%100
4	M10	Z	3.297	3.297	0	%100
5	M43	X	0	0	0	%100
6	M43	Z	3.297	3.297	0	%100
7	M46	X	0	0	0	%100
8	M46	Z	4.985	4.985	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	.937	.937	0	%100
11	M52B	X	0	0	0	%100
12	M52B	Z	.937	.937	0	%100
13	M76	X	0	0	0	%100
14	M76	Z	0	0	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	1.251	1.251	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	1.302	1.302	0	%100
19	M84	X	0	0	0	%100
20	M84	Z	0	0	0	%100
21	M85	X	0	0	0	%100
22	M85	Z	1.251	1.251	0	%100
23	M91	X	0	0	0	%100
24	M91	Z	1.302	1.302	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	3.023	3.023	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	.824	.824	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	.824	.824	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	1.246	1.246	0	%100
33	M31	X	0	0	0	%100
34	M31	Z	.937	.937	0	%100
35	M32	X	0	0	0	%100
36	M32	Z	3.749	3.749	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	3.701	3.701	0	%100
39	M37	X	0	0	0	%100
40	M37	Z	1.251	1.251	0	%100
41	M39	X	0	0	0	%100
42	M39	Z	1.302	1.302	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	3.701	3.701	0	%100
45	M42	X	0	0	0	%100
46	M42	Z	5.004	5.004	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	5.208	5.208	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	3.023	3.023	0	%100
51	M50A	X	0	0	0	%100
52	M50A	Z	.824	.824	0	%100
53	M51C	X	0	0	0	%100
54	M51C	Z	.824	.824	0	%100
55	M52A	X	0	0	0	%100
56	M52A	Z	1.246	1.246	0	%100
57	M55	X	0	0	0	%100





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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	3.749	3.749	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	.937	.937	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	3.701	3.701	0 %100
63	M61	X	0	0	0 %100
64	M61	Z	5.004	5.004	0 %100
65	M63	X	0	0	0 %100
66	M63	Z	5.208	5.208	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	3.701	3.701	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	1.251	1.251	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	1.302	1.302	0 %100
73	M73	X	0	0	0 %100
74	M73	Z	4.207	4.207	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	1.052	1.052	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	1.052	1.052	0 %100
79	MP1A	X	0	0	0 %100
80	MP1A	Z	3.502	3.502	0 %100
81	MP2A	X	0	0	0 %100
82	MP2A	Z	3.502	3.502	0 %100
83	MP3A	X	0	0	0 %100
84	MP3A	Z	3.502	3.502	0 %100
85	MP4A	X	0	0	0 %100
86	MP4A	Z	3.502	3.502	0 %100
87	MP1C	X	0	0	0 %100
88	MP1C	Z	3.502	3.502	0 %100
89	MP2C	X	0	0	0 %100
90	MP2C	Z	3.502	3.502	0 %100
91	MP3C	X	0	0	0 %100
92	MP3C	Z	3.502	3.502	0 %100
93	MP4C	X	0	0	0 %100
94	MP4C	Z	3.502	3.502	0 %100
95	MP1B	X	0	0	0 %100
96	MP1B	Z	3.502	3.502	0 %100
97	MP2B	X	0	0	0 %100
98	MP2B	Z	3.502	3.502	0 %100
99	MP3B	X	0	0	0 %100
100	MP3B	Z	3.502	3.502	0 %100
101	MP4B	X	0	0	0 %100
102	MP4B	Z	3.502	3.502	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	3.815	3.815	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	.954	.954	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	.954	.954	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	.922	.922	0 %100
111	M122	X	0	0	0 %100
112	M122	Z	3.689	3.689	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	.922	.922	0 %100





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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
58	M55	Z	2.435	2.435	0 %100
59	M56	X	-1.406	-1.406	0 %100
60	M56	Z	2.435	2.435	0 %100
61	M60	X	-2.467	-2.467	0 %100
62	M60	Z	4.273	4.273	0 %100
63	M61	X	-1.876	-1.876	0 %100
64	M61	Z	3.25	3.25	0 %100
65	M63	X	-1.953	-1.953	0 %100
66	M63	Z	3.383	3.383	0 %100
67	M65	X	-2.467	-2.467	0 %100
68	M65	Z	4.273	4.273	0 %100
69	M66	X	-1.876	-1.876	0 %100
70	M66	Z	3.25	3.25	0 %100
71	M68	X	-1.953	-1.953	0 %100
72	M68	Z	3.383	3.383	0 %100
73	M73	X	-1.577	-1.577	0 %100
74	M73	Z	2.732	2.732	0 %100
75	M74	X	-1.577	-1.577	0 %100
76	M74	Z	2.732	2.732	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	0	0	0 %100
79	MP1A	X	-1.751	-1.751	0 %100
80	MP1A	Z	3.032	3.032	0 %100
81	MP2A	X	-1.751	-1.751	0 %100
82	MP2A	Z	3.032	3.032	0 %100
83	MP3A	X	-1.751	-1.751	0 %100
84	MP3A	Z	3.032	3.032	0 %100
85	MP4A	X	-1.751	-1.751	0 %100
86	MP4A	Z	3.032	3.032	0 %100
87	MP1C	X	-1.751	-1.751	0 %100
88	MP1C	Z	3.032	3.032	0 %100
89	MP2C	X	-1.751	-1.751	0 %100
90	MP2C	Z	3.032	3.032	0 %100
91	MP3C	X	-1.751	-1.751	0 %100
92	MP3C	Z	3.032	3.032	0 %100
93	MP4C	X	-1.751	-1.751	0 %100
94	MP4C	Z	3.032	3.032	0 %100
95	MP1B	X	-1.751	-1.751	0 %100
96	MP1B	Z	3.032	3.032	0 %100
97	MP2B	X	-1.751	-1.751	0 %100
98	MP2B	Z	3.032	3.032	0 %100
99	MP3B	X	-1.751	-1.751	0 %100
100	MP3B	Z	3.032	3.032	0 %100
101	MP4B	X	-1.751	-1.751	0 %100
102	MP4B	Z	3.032	3.032	0 %100
103	M100	X	-1.431	-1.431	0 %100
104	M100	Z	2.478	2.478	0 %100
105	M107	X	-1.431	-1.431	0 %100
106	M107	Z	2.478	2.478	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	0	0	0 %100
109	M121	X	-1.384	-1.384	0 %100
110	M121	Z	2.396	2.396	0 %100
111	M122	X	-1.384	-1.384	0 %100
112	M122	Z	2.396	2.396	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	0	0	0 %100



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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-2.618	-2.618	0	%100
2	M4	Z	1.512	1.512	0	%100
3	M10	X	-7.714	-7.714	0	%100
4	M10	Z	.412	.412	0	%100
5	M43	X	-7.714	-7.714	0	%100
6	M43	Z	.412	.412	0	%100
7	M46	X	-1.079	-1.079	0	%100
8	M46	Z	.623	.623	0	%100
9	M51B	X	-3.246	-3.246	0	%100
10	M51B	Z	1.874	1.874	0	%100
11	M52B	X	-8.812	-8.812	0	%100
12	M52B	Z	.469	.469	0	%100
13	M76	X	-3.205	-3.205	0	%100
14	M76	Z	1.85	1.85	0	%100
15	M77	X	-4.334	-4.334	0	%100
16	M77	Z	2.502	2.502	0	%100
17	M80	X	-4.51	-4.51	0	%100
18	M80	Z	2.604	2.604	0	%100
19	M84	X	-3.205	-3.205	0	%100
20	M84	Z	1.85	1.85	0	%100
21	M85	X	-1.083	-1.083	0	%100
22	M85	Z	.625	.625	0	%100
23	M91	X	-1.128	-1.128	0	%100
24	M91	Z	.651	.651	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	0	0	0	%100
27	M26	X	-2.855	-2.855	0	%100
28	M26	Z	1.648	1.648	0	%100
29	M27	X	-2.855	-2.855	0	%100
30	M27	Z	1.648	1.648	0	%100
31	M28	X	-4.317	-4.317	0	%100
32	M28	Z	2.492	2.492	0	%100
33	M31	X	-8.812	-8.812	0	%100
34	M31	Z	.469	.469	0	%100
35	M32	X	-8.812	-8.812	0	%100
36	M32	Z	.469	.469	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	0	0	0	%100
39	M37	X	-1.083	-1.083	0	%100
40	M37	Z	.625	.625	0	%100
41	M39	X	-1.128	-1.128	0	%100
42	M39	Z	.651	.651	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	0	0	0	%100
45	M42	X	-1.083	-1.083	0	%100
46	M42	Z	.625	.625	0	%100
47	M44	X	-1.128	-1.128	0	%100
48	M44	Z	.651	.651	0	%100
49	M49	X	-2.618	-2.618	0	%100
50	M49	Z	1.512	1.512	0	%100
51	M50A	X	-7.714	-7.714	0	%100
52	M50A	Z	.412	.412	0	%100
53	M51C	X	-7.714	-7.714	0	%100
54	M51C	Z	.412	.412	0	%100
55	M52A	X	-1.079	-1.079	0	%100
56	M52A	Z	.623	.623	0	%100
57	M55	X	-8.812	-8.812	0	%100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	.469	.469	0 %100
59	M56	X	-3.246	-3.246	0 %100
60	M56	Z	1.874	1.874	0 %100
61	M60	X	-3.205	-3.205	0 %100
62	M60	Z	1.85	1.85	0 %100
63	M61	X	-1.083	-1.083	0 %100
64	M61	Z	.625	.625	0 %100
65	M63	X	-1.128	-1.128	0 %100
66	M63	Z	.651	.651	0 %100
67	M65	X	-3.205	-3.205	0 %100
68	M65	Z	1.85	1.85	0 %100
69	M66	X	-4.334	-4.334	0 %100
70	M66	Z	2.502	2.502	0 %100
71	M68	X	-4.51	-4.51	0 %100
72	M68	Z	2.604	2.604	0 %100
73	M73	X	-.911	-.911	0 %100
74	M73	Z	.526	.526	0 %100
75	M74	X	-3.643	-3.643	0 %100
76	M74	Z	2.103	2.103	0 %100
77	M75	X	-.911	-.911	0 %100
78	M75	Z	.526	.526	0 %100
79	MP1A	X	-3.032	-3.032	0 %100
80	MP1A	Z	1.751	1.751	0 %100
81	MP2A	X	-3.032	-3.032	0 %100
82	MP2A	Z	1.751	1.751	0 %100
83	MP3A	X	-3.032	-3.032	0 %100
84	MP3A	Z	1.751	1.751	0 %100
85	MP4A	X	-3.032	-3.032	0 %100
86	MP4A	Z	1.751	1.751	0 %100
87	MP1C	X	-3.032	-3.032	0 %100
88	MP1C	Z	1.751	1.751	0 %100
89	MP2C	X	-3.032	-3.032	0 %100
90	MP2C	Z	1.751	1.751	0 %100
91	MP3C	X	-3.032	-3.032	0 %100
92	MP3C	Z	1.751	1.751	0 %100
93	MP4C	X	-3.032	-3.032	0 %100
94	MP4C	Z	1.751	1.751	0 %100
95	MP1B	X	-3.032	-3.032	0 %100
96	MP1B	Z	1.751	1.751	0 %100
97	MP2B	X	-3.032	-3.032	0 %100
98	MP2B	Z	1.751	1.751	0 %100
99	MP3B	X	-3.032	-3.032	0 %100
100	MP3B	Z	1.751	1.751	0 %100
101	MP4B	X	-3.032	-3.032	0 %100
102	MP4B	Z	1.751	1.751	0 %100
103	M100	X	-.826	-.826	0 %100
104	M100	Z	.477	.477	0 %100
105	M107	X	-3.304	-3.304	0 %100
106	M107	Z	1.907	1.907	0 %100
107	M114	X	-.826	-.826	0 %100
108	M114	Z	.477	.477	0 %100
109	M121	X	-3.195	-3.195	0 %100
110	M121	Z	1.845	1.845	0 %100
111	M122	X	-.799	-.799	0 %100
112	M122	Z	.461	.461	0 %100
113	M123	X	-.799	-.799	0 %100
114	M123	Z	.461	.461	0 %100





Company : Maser Consulting  
 Designer : AJH  
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**Member Distributed Loads (BLC 62 : Structure Wi (270 Deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]	
58	M55	Z	0	0	0	%100
59	M56	X	-2.811	-2.811	0	%100
60	M56	Z	0	0	0	%100
61	M60	X	-1.234	-1.234	0	%100
62	M60	Z	0	0	0	%100
63	M61	X	0	0	0	%100
64	M61	Z	0	0	0	%100
65	M63	X	0	0	0	%100
66	M63	Z	0	0	0	%100
67	M65	X	-1.234	-1.234	0	%100
68	M65	Z	0	0	0	%100
69	M66	X	-3.753	-3.753	0	%100
70	M66	Z	0	0	0	%100
71	M68	X	-3.906	-3.906	0	%100
72	M68	Z	0	0	0	%100
73	M73	X	0	0	0	%100
74	M73	Z	0	0	0	%100
75	M74	X	-3.155	-3.155	0	%100
76	M74	Z	0	0	0	%100
77	M75	X	-3.155	-3.155	0	%100
78	M75	Z	0	0	0	%100
79	MP1A	X	-3.502	-3.502	0	%100
80	MP1A	Z	0	0	0	%100
81	MP2A	X	-3.502	-3.502	0	%100
82	MP2A	Z	0	0	0	%100
83	MP3A	X	-3.502	-3.502	0	%100
84	MP3A	Z	0	0	0	%100
85	MP4A	X	-3.502	-3.502	0	%100
86	MP4A	Z	0	0	0	%100
87	MP1C	X	-3.502	-3.502	0	%100
88	MP1C	Z	0	0	0	%100
89	MP2C	X	-3.502	-3.502	0	%100
90	MP2C	Z	0	0	0	%100
91	MP3C	X	-3.502	-3.502	0	%100
92	MP3C	Z	0	0	0	%100
93	MP4C	X	-3.502	-3.502	0	%100
94	MP4C	Z	0	0	0	%100
95	MP1B	X	-3.502	-3.502	0	%100
96	MP1B	Z	0	0	0	%100
97	MP2B	X	-3.502	-3.502	0	%100
98	MP2B	Z	0	0	0	%100
99	MP3B	X	-3.502	-3.502	0	%100
100	MP3B	Z	0	0	0	%100
101	MP4B	X	-3.502	-3.502	0	%100
102	MP4B	Z	0	0	0	%100
103	M100	X	0	0	0	%100
104	M100	Z	0	0	0	%100
105	M107	X	-2.861	-2.861	0	%100
106	M107	Z	0	0	0	%100
107	M114	X	-2.861	-2.861	0	%100
108	M114	Z	0	0	0	%100
109	M121	X	-2.767	-2.767	0	%100
110	M121	Z	0	0	0	%100
111	M122	X	0	0	0	%100
112	M122	Z	0	0	0	%100
113	M123	X	-2.767	-2.767	0	%100
114	M123	Z	0	0	0	%100





Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
 Checked By: \_\_\_\_\_

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-2.618	-2.618	0 %100
2	M4	Z	-1.512	-1.512	0 %100
3	M10	X	-0.714	-0.714	0 %100
4	M10	Z	-0.412	-0.412	0 %100
5	M43	X	-0.714	-0.714	0 %100
6	M43	Z	-0.412	-0.412	0 %100
7	M46	X	-1.079	-1.079	0 %100
8	M46	Z	-0.623	-0.623	0 %100
9	M51B	X	-0.812	-0.812	0 %100
10	M51B	Z	-0.469	-0.469	0 %100
11	M52B	X	-3.246	-3.246	0 %100
12	M52B	Z	-1.874	-1.874	0 %100
13	M76	X	-3.205	-3.205	0 %100
14	M76	Z	-1.85	-1.85	0 %100
15	M77	X	-1.083	-1.083	0 %100
16	M77	Z	-0.625	-0.625	0 %100
17	M80	X	-1.128	-1.128	0 %100
18	M80	Z	-0.651	-0.651	0 %100
19	M84	X	-3.205	-3.205	0 %100
20	M84	Z	-1.85	-1.85	0 %100
21	M85	X	-4.334	-4.334	0 %100
22	M85	Z	-2.502	-2.502	0 %100
23	M91	X	-4.51	-4.51	0 %100
24	M91	Z	-2.604	-2.604	0 %100
25	M25	X	-2.618	-2.618	0 %100
26	M25	Z	-1.512	-1.512	0 %100
27	M26	X	-0.714	-0.714	0 %100
28	M26	Z	-0.412	-0.412	0 %100
29	M27	X	-0.714	-0.714	0 %100
30	M27	Z	-0.412	-0.412	0 %100
31	M28	X	-1.079	-1.079	0 %100
32	M28	Z	-0.623	-0.623	0 %100
33	M31	X	-3.246	-3.246	0 %100
34	M31	Z	-1.874	-1.874	0 %100
35	M32	X	-0.812	-0.812	0 %100
36	M32	Z	-0.469	-0.469	0 %100
37	M36	X	-3.205	-3.205	0 %100
38	M36	Z	-1.85	-1.85	0 %100
39	M37	X	-4.334	-4.334	0 %100
40	M37	Z	-2.502	-2.502	0 %100
41	M39	X	-4.51	-4.51	0 %100
42	M39	Z	-2.604	-2.604	0 %100
43	M41	X	-3.205	-3.205	0 %100
44	M41	Z	-1.85	-1.85	0 %100
45	M42	X	-1.083	-1.083	0 %100
46	M42	Z	-0.625	-0.625	0 %100
47	M44	X	-1.128	-1.128	0 %100
48	M44	Z	-0.651	-0.651	0 %100
49	M49	X	0	0	0 %100
50	M49	Z	0	0	0 %100
51	M50A	X	-2.855	-2.855	0 %100
52	M50A	Z	-1.648	-1.648	0 %100
53	M51C	X	-2.855	-2.855	0 %100
54	M51C	Z	-1.648	-1.648	0 %100
55	M52A	X	-4.317	-4.317	0 %100
56	M52A	Z	-2.492	-2.492	0 %100
57	M55	X	-0.812	-0.812	0 %100





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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-469	-469	0 %100
59	M56	X	-812	-812	0 %100
60	M56	Z	-469	-469	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	0	0	0 %100
63	M61	X	-1.083	-1.083	0 %100
64	M61	Z	-.625	-.625	0 %100
65	M63	X	-1.128	-1.128	0 %100
66	M63	Z	-.651	-.651	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	0	0	0 %100
69	M66	X	-1.083	-1.083	0 %100
70	M66	Z	-.625	-.625	0 %100
71	M68	X	-1.128	-1.128	0 %100
72	M68	Z	-.651	-.651	0 %100
73	M73	X	-.911	-.911	0 %100
74	M73	Z	-.526	-.526	0 %100
75	M74	X	-.911	-.911	0 %100
76	M74	Z	-.526	-.526	0 %100
77	M75	X	-3.643	-3.643	0 %100
78	M75	Z	-2.103	-2.103	0 %100
79	MP1A	X	-3.032	-3.032	0 %100
80	MP1A	Z	-1.751	-1.751	0 %100
81	MP2A	X	-3.032	-3.032	0 %100
82	MP2A	Z	-1.751	-1.751	0 %100
83	MP3A	X	-3.032	-3.032	0 %100
84	MP3A	Z	-1.751	-1.751	0 %100
85	MP4A	X	-3.032	-3.032	0 %100
86	MP4A	Z	-1.751	-1.751	0 %100
87	MP1C	X	-3.032	-3.032	0 %100
88	MP1C	Z	-1.751	-1.751	0 %100
89	MP2C	X	-3.032	-3.032	0 %100
90	MP2C	Z	-1.751	-1.751	0 %100
91	MP3C	X	-3.032	-3.032	0 %100
92	MP3C	Z	-1.751	-1.751	0 %100
93	MP4C	X	-3.032	-3.032	0 %100
94	MP4C	Z	-1.751	-1.751	0 %100
95	MP1B	X	-3.032	-3.032	0 %100
96	MP1B	Z	-1.751	-1.751	0 %100
97	MP2B	X	-3.032	-3.032	0 %100
98	MP2B	Z	-1.751	-1.751	0 %100
99	MP3B	X	-3.032	-3.032	0 %100
100	MP3B	Z	-1.751	-1.751	0 %100
101	MP4B	X	-3.032	-3.032	0 %100
102	MP4B	Z	-1.751	-1.751	0 %100
103	M100	X	-.826	-.826	0 %100
104	M100	Z	-.477	-.477	0 %100
105	M107	X	-.826	-.826	0 %100
106	M107	Z	-.477	-.477	0 %100
107	M114	X	-3.304	-3.304	0 %100
108	M114	Z	-1.907	-1.907	0 %100
109	M121	X	-.799	-.799	0 %100
110	M121	Z	-.461	-.461	0 %100
111	M122	X	-.799	-.799	0 %100
112	M122	Z	-.461	-.461	0 %100
113	M123	X	-3.195	-3.195	0 %100
114	M123	Z	-1.845	-1.845	0 %100



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
 Checked By: \_\_\_\_\_

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-504	-504	0	%100
2	M4	Z	-873	-873	0	%100
3	M10	X	-1.236	-1.236	0	%100
4	M10	Z	-2.141	-2.141	0	%100
5	M43	X	-1.236	-1.236	0	%100
6	M43	Z	-2.141	-2.141	0	%100
7	M46	X	-1.869	-1.869	0	%100
8	M46	Z	-3.238	-3.238	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	0	0	0	%100
11	M52B	X	-1.406	-1.406	0	%100
12	M52B	Z	-2.435	-2.435	0	%100
13	M76	X	-617	-617	0	%100
14	M76	Z	-1.068	-1.068	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	0	0	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	0	0	0	%100
19	M84	X	-617	-617	0	%100
20	M84	Z	-1.068	-1.068	0	%100
21	M85	X	-1.876	-1.876	0	%100
22	M85	Z	-3.25	-3.25	0	%100
23	M91	X	-1.953	-1.953	0	%100
24	M91	Z	-3.383	-3.383	0	%100
25	M25	X	-2.016	-2.016	0	%100
26	M25	Z	-3.491	-3.491	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	0	0	0	%100
33	M31	X	-1.406	-1.406	0	%100
34	M31	Z	-2.435	-2.435	0	%100
35	M32	X	-1.406	-1.406	0	%100
36	M32	Z	-2.435	-2.435	0	%100
37	M36	X	-2.467	-2.467	0	%100
38	M36	Z	-4.273	-4.273	0	%100
39	M37	X	-1.876	-1.876	0	%100
40	M37	Z	-3.25	-3.25	0	%100
41	M39	X	-1.953	-1.953	0	%100
42	M39	Z	-3.383	-3.383	0	%100
43	M41	X	-2.467	-2.467	0	%100
44	M41	Z	-4.273	-4.273	0	%100
45	M42	X	-1.876	-1.876	0	%100
46	M42	Z	-3.25	-3.25	0	%100
47	M44	X	-1.953	-1.953	0	%100
48	M44	Z	-3.383	-3.383	0	%100
49	M49	X	-504	-504	0	%100
50	M49	Z	-873	-873	0	%100
51	M50A	X	-1.236	-1.236	0	%100
52	M50A	Z	-2.141	-2.141	0	%100
53	M51C	X	-1.236	-1.236	0	%100
54	M51C	Z	-2.141	-2.141	0	%100
55	M52A	X	-1.869	-1.869	0	%100
56	M52A	Z	-3.238	-3.238	0	%100
57	M55	X	-1.406	-1.406	0	%100



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-2.435	-2.435	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	0	0	0 %100
61	M60	X	-0.617	-0.617	0 %100
62	M60	Z	-1.068	-1.068	0 %100
63	M61	X	-1.876	-1.876	0 %100
64	M61	Z	-3.25	-3.25	0 %100
65	M63	X	-1.953	-1.953	0 %100
66	M63	Z	-3.383	-3.383	0 %100
67	M65	X	-0.617	-0.617	0 %100
68	M65	Z	-1.068	-1.068	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	0	0	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	0	0	0 %100
73	M73	X	-1.577	-1.577	0 %100
74	M73	Z	-2.732	-2.732	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	0	0	0 %100
77	M75	X	-1.577	-1.577	0 %100
78	M75	Z	-2.732	-2.732	0 %100
79	MP1A	X	-1.751	-1.751	0 %100
80	MP1A	Z	-3.032	-3.032	0 %100
81	MP2A	X	-1.751	-1.751	0 %100
82	MP2A	Z	-3.032	-3.032	0 %100
83	MP3A	X	-1.751	-1.751	0 %100
84	MP3A	Z	-3.032	-3.032	0 %100
85	MP4A	X	-1.751	-1.751	0 %100
86	MP4A	Z	-3.032	-3.032	0 %100
87	MP1C	X	-1.751	-1.751	0 %100
88	MP1C	Z	-3.032	-3.032	0 %100
89	MP2C	X	-1.751	-1.751	0 %100
90	MP2C	Z	-3.032	-3.032	0 %100
91	MP3C	X	-1.751	-1.751	0 %100
92	MP3C	Z	-3.032	-3.032	0 %100
93	MP4C	X	-1.751	-1.751	0 %100
94	MP4C	Z	-3.032	-3.032	0 %100
95	MP1B	X	-1.751	-1.751	0 %100
96	MP1B	Z	-3.032	-3.032	0 %100
97	MP2B	X	-1.751	-1.751	0 %100
98	MP2B	Z	-3.032	-3.032	0 %100
99	MP3B	X	-1.751	-1.751	0 %100
100	MP3B	Z	-3.032	-3.032	0 %100
101	MP4B	X	-1.751	-1.751	0 %100
102	MP4B	Z	-3.032	-3.032	0 %100
103	M100	X	-1.431	-1.431	0 %100
104	M100	Z	-2.478	-2.478	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	0	0	0 %100
107	M114	X	-1.431	-1.431	0 %100
108	M114	Z	-2.478	-2.478	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	0	0	0 %100
111	M122	X	-1.384	-1.384	0 %100
112	M122	Z	-2.396	-2.396	0 %100
113	M123	X	-1.384	-1.384	0 %100
114	M123	Z	-2.396	-2.396	0 %100



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M10	X	0	0	0	%100
4	M10	Z	-.679	-.679	0	%100
5	M43	X	0	0	0	%100
6	M43	Z	-.679	-.679	0	%100
7	M46	X	0	0	0	%100
8	M46	Z	-1.354	-1.354	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	-.188	-.188	0	%100
11	M52B	X	0	0	0	%100
12	M52B	Z	-.188	-.188	0	%100
13	M76	X	0	0	0	%100
14	M76	Z	0	0	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	-.345	-.345	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	-.363	-.363	0	%100
19	M84	X	0	0	0	%100
20	M84	Z	0	0	0	%100
21	M85	X	0	0	0	%100
22	M85	Z	-.345	-.345	0	%100
23	M91	X	0	0	0	%100
24	M91	Z	-.363	-.363	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	-.601	-.601	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	-.17	-.17	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	-.17	-.17	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	-.338	-.338	0	%100
33	M31	X	0	0	0	%100
34	M31	Z	-.188	-.188	0	%100
35	M32	X	0	0	0	%100
36	M32	Z	-.752	-.752	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	-1.015	-1.015	0	%100
39	M37	X	0	0	0	%100
40	M37	Z	-.345	-.345	0	%100
41	M39	X	0	0	0	%100
42	M39	Z	-.363	-.363	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	-1.015	-1.015	0	%100
45	M42	X	0	0	0	%100
46	M42	Z	-1.379	-1.379	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	-1.452	-1.452	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	-.601	-.601	0	%100
51	M50A	X	0	0	0	%100
52	M50A	Z	-.17	-.17	0	%100
53	M51C	X	0	0	0	%100
54	M51C	Z	-.17	-.17	0	%100
55	M52A	X	0	0	0	%100
56	M52A	Z	-.338	-.338	0	%100
57	M55	X	0	0	0	%100



Company : Maser Consulting  
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**Member Distributed Loads (BLC 65 : Structure Wm (0 Deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-0.752	-0.752	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	-0.188	-0.188	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	-1.015	-1.015	0 %100
63	M61	X	0	0	0 %100
64	M61	Z	-1.379	-1.379	0 %100
65	M63	X	0	0	0 %100
66	M63	Z	-1.452	-1.452	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	-1.015	-1.015	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	-0.345	-0.345	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	-0.363	-0.363	0 %100
73	M73	X	0	0	0 %100
74	M73	Z	-0.79	-0.79	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	-0.197	-0.197	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	-0.197	-0.197	0 %100
79	MP1A	X	0	0	0 %100
80	MP1A	Z	-0.536	-0.536	0 %100
81	MP2A	X	0	0	0 %100
82	MP2A	Z	-0.536	-0.536	0 %100
83	MP3A	X	0	0	0 %100
84	MP3A	Z	-0.536	-0.536	0 %100
85	MP4A	X	0	0	0 %100
86	MP4A	Z	-0.536	-0.536	0 %100
87	MP1C	X	0	0	0 %100
88	MP1C	Z	-0.536	-0.536	0 %100
89	MP2C	X	0	0	0 %100
90	MP2C	Z	-0.536	-0.536	0 %100
91	MP3C	X	0	0	0 %100
92	MP3C	Z	-0.536	-0.536	0 %100
93	MP4C	X	0	0	0 %100
94	MP4C	Z	-0.536	-0.536	0 %100
95	MP1B	X	0	0	0 %100
96	MP1B	Z	-0.536	-0.536	0 %100
97	MP2B	X	0	0	0 %100
98	MP2B	Z	-0.536	-0.536	0 %100
99	MP3B	X	0	0	0 %100
100	MP3B	Z	-0.536	-0.536	0 %100
101	MP4B	X	0	0	0 %100
102	MP4B	Z	-0.536	-0.536	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	-0.649	-0.649	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	-0.162	-0.162	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	-0.162	-0.162	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	-0.207	-0.207	0 %100
111	M122	X	0	0	0 %100
112	M122	Z	-0.827	-0.827	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	-0.207	-0.207	0 %100



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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	M4	X	.1	.1	0 %100
2	M4	Z	-.174	-.174	0 %100
3	M10	X	.254	.254	0 %100
4	M10	Z	-.441	-.441	0 %100
5	M43	X	.254	.254	0 %100
6	M43	Z	-.441	-.441	0 %100
7	M46	X	.508	.508	0 %100
8	M46	Z	-.879	-.879	0 %100
9	M51B	X	.282	.282	0 %100
10	M51B	Z	-.488	-.488	0 %100
11	M52B	X	0	0	0 %100
12	M52B	Z	0	0	0 %100
13	M76	X	.169	.169	0 %100
14	M76	Z	-.293	-.293	0 %100
15	M77	X	.517	.517	0 %100
16	M77	Z	-.895	-.895	0 %100
17	M80	X	.545	.545	0 %100
18	M80	Z	-.943	-.943	0 %100
19	M84	X	.169	.169	0 %100
20	M84	Z	-.293	-.293	0 %100
21	M85	X	0	0	0 %100
22	M85	Z	0	0	0 %100
23	M91	X	0	0	0 %100
24	M91	Z	0	0	0 %100
25	M25	X	.1	.1	0 %100
26	M25	Z	-.174	-.174	0 %100
27	M26	X	.254	.254	0 %100
28	M26	Z	-.441	-.441	0 %100
29	M27	X	.254	.254	0 %100
30	M27	Z	-.441	-.441	0 %100
31	M28	X	.508	.508	0 %100
32	M28	Z	-.879	-.879	0 %100
33	M31	X	0	0	0 %100
34	M31	Z	0	0	0 %100
35	M32	X	.282	.282	0 %100
36	M32	Z	-.488	-.488	0 %100
37	M36	X	.169	.169	0 %100
38	M36	Z	-.293	-.293	0 %100
39	M37	X	0	0	0 %100
40	M37	Z	0	0	0 %100
41	M39	X	0	0	0 %100
42	M39	Z	0	0	0 %100
43	M41	X	.169	.169	0 %100
44	M41	Z	-.293	-.293	0 %100
45	M42	X	.517	.517	0 %100
46	M42	Z	-.895	-.895	0 %100
47	M44	X	.545	.545	0 %100
48	M44	Z	-.943	-.943	0 %100
49	M49	X	.401	.401	0 %100
50	M49	Z	-.695	-.695	0 %100
51	M50A	X	0	0	0 %100
52	M50A	Z	0	0	0 %100
53	M51C	X	0	0	0 %100
54	M51C	Z	0	0	0 %100
55	M52A	X	0	0	0 %100
56	M52A	Z	0	0	0 %100
57	M55	X	.282	.282	0 %100







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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	.521	.521	0	%100
2	M4	Z	-.301	-.301	0	%100
3	M10	X	.147	.147	0	%100
4	M10	Z	-.085	-.085	0	%100
5	M43	X	.147	.147	0	%100
6	M43	Z	-.085	-.085	0	%100
7	M46	X	.293	.293	0	%100
8	M46	Z	-.169	-.169	0	%100
9	M51B	X	.651	.651	0	%100
10	M51B	Z	-.376	-.376	0	%100
11	M52B	X	.163	.163	0	%100
12	M52B	Z	-.094	-.094	0	%100
13	M76	X	.879	.879	0	%100
14	M76	Z	-.508	-.508	0	%100
15	M77	X	1.194	1.194	0	%100
16	M77	Z	-.689	-.689	0	%100
17	M80	X	1.258	1.258	0	%100
18	M80	Z	-.726	-.726	0	%100
19	M84	X	.879	.879	0	%100
20	M84	Z	-.508	-.508	0	%100
21	M85	X	.298	.298	0	%100
22	M85	Z	-.172	-.172	0	%100
23	M91	X	.314	.314	0	%100
24	M91	Z	-.182	-.182	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	0	0	0	%100
27	M26	X	.588	.588	0	%100
28	M26	Z	-.339	-.339	0	%100
29	M27	X	.588	.588	0	%100
30	M27	Z	-.339	-.339	0	%100
31	M28	X	1.172	1.172	0	%100
32	M28	Z	-.677	-.677	0	%100
33	M31	X	.163	.163	0	%100
34	M31	Z	-.094	-.094	0	%100
35	M32	X	.163	.163	0	%100
36	M32	Z	-.094	-.094	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	0	0	0	%100
39	M37	X	.298	.298	0	%100
40	M37	Z	-.172	-.172	0	%100
41	M39	X	.314	.314	0	%100
42	M39	Z	-.182	-.182	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	0	0	0	%100
45	M42	X	.298	.298	0	%100
46	M42	Z	-.172	-.172	0	%100
47	M44	X	.314	.314	0	%100
48	M44	Z	-.182	-.182	0	%100
49	M49	X	.521	.521	0	%100
50	M49	Z	-.301	-.301	0	%100
51	M50A	X	.147	.147	0	%100
52	M50A	Z	-.085	-.085	0	%100
53	M51C	X	.147	.147	0	%100
54	M51C	Z	-.085	-.085	0	%100
55	M52A	X	.293	.293	0	%100
56	M52A	Z	-.169	-.169	0	%100
57	M55	X	.163	.163	0	%100











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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	.521	.521	0	%100
2	M4	Z	.301	.301	0	%100
3	M10	X	.147	.147	0	%100
4	M10	Z	.085	.085	0	%100
5	M43	X	.147	.147	0	%100
6	M43	Z	.085	.085	0	%100
7	M46	X	.293	.293	0	%100
8	M46	Z	.169	.169	0	%100
9	M51B	X	.163	.163	0	%100
10	M51B	Z	.094	.094	0	%100
11	M52B	X	.651	.651	0	%100
12	M52B	Z	.376	.376	0	%100
13	M76	X	.879	.879	0	%100
14	M76	Z	.508	.508	0	%100
15	M77	X	.298	.298	0	%100
16	M77	Z	.172	.172	0	%100
17	M80	X	.314	.314	0	%100
18	M80	Z	.182	.182	0	%100
19	M84	X	.879	.879	0	%100
20	M84	Z	.508	.508	0	%100
21	M85	X	1.194	1.194	0	%100
22	M85	Z	.689	.689	0	%100
23	M91	X	1.258	1.258	0	%100
24	M91	Z	.726	.726	0	%100
25	M25	X	.521	.521	0	%100
26	M25	Z	.301	.301	0	%100
27	M26	X	.147	.147	0	%100
28	M26	Z	.085	.085	0	%100
29	M27	X	.147	.147	0	%100
30	M27	Z	.085	.085	0	%100
31	M28	X	.293	.293	0	%100
32	M28	Z	.169	.169	0	%100
33	M31	X	.651	.651	0	%100
34	M31	Z	.376	.376	0	%100
35	M32	X	.163	.163	0	%100
36	M32	Z	.094	.094	0	%100
37	M36	X	.879	.879	0	%100
38	M36	Z	.508	.508	0	%100
39	M37	X	1.194	1.194	0	%100
40	M37	Z	.689	.689	0	%100
41	M39	X	1.258	1.258	0	%100
42	M39	Z	.726	.726	0	%100
43	M41	X	.879	.879	0	%100
44	M41	Z	.508	.508	0	%100
45	M42	X	.298	.298	0	%100
46	M42	Z	.172	.172	0	%100
47	M44	X	.314	.314	0	%100
48	M44	Z	.182	.182	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	0	0	0	%100
51	M50A	X	.588	.588	0	%100
52	M50A	Z	.339	.339	0	%100
53	M51C	X	.588	.588	0	%100
54	M51C	Z	.339	.339	0	%100
55	M52A	X	1.172	1.172	0	%100
56	M52A	Z	.677	.677	0	%100
57	M55	X	.163	.163	0	%100





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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in.%,]	End Location[in.%,]
1	M4	X	.1	.1	0	%100
2	M4	Z	.174	.174	0	%100
3	M10	X	.254	.254	0	%100
4	M10	Z	.441	.441	0	%100
5	M43	X	.254	.254	0	%100
6	M43	Z	.441	.441	0	%100
7	M46	X	.508	.508	0	%100
8	M46	Z	.879	.879	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	0	0	0	%100
11	M52B	X	.282	.282	0	%100
12	M52B	Z	.488	.488	0	%100
13	M76	X	.169	.169	0	%100
14	M76	Z	.293	.293	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	0	0	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	0	0	0	%100
19	M84	X	.169	.169	0	%100
20	M84	Z	.293	.293	0	%100
21	M85	X	.517	.517	0	%100
22	M85	Z	.895	.895	0	%100
23	M91	X	.545	.545	0	%100
24	M91	Z	.943	.943	0	%100
25	M25	X	.401	.401	0	%100
26	M25	Z	.695	.695	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	0	0	0	%100
33	M31	X	.282	.282	0	%100
34	M31	Z	.488	.488	0	%100
35	M32	X	.282	.282	0	%100
36	M32	Z	.488	.488	0	%100
37	M36	X	.677	.677	0	%100
38	M36	Z	1.172	1.172	0	%100
39	M37	X	.517	.517	0	%100
40	M37	Z	.895	.895	0	%100
41	M39	X	.545	.545	0	%100
42	M39	Z	.943	.943	0	%100
43	M41	X	.677	.677	0	%100
44	M41	Z	1.172	1.172	0	%100
45	M42	X	.517	.517	0	%100
46	M42	Z	.895	.895	0	%100
47	M44	X	.545	.545	0	%100
48	M44	Z	.943	.943	0	%100
49	M49	X	.1	.1	0	%100
50	M49	Z	.174	.174	0	%100
51	M50A	X	.254	.254	0	%100
52	M50A	Z	.441	.441	0	%100
53	M51C	X	.254	.254	0	%100
54	M51C	Z	.441	.441	0	%100
55	M52A	X	.508	.508	0	%100
56	M52A	Z	.879	.879	0	%100
57	M55	X	.282	.282	0	%100







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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	0	0	0	%100
2	M4	Z	0	0	0	%100
3	M10	X	0	0	0	%100
4	M10	Z	.679	.679	0	%100
5	M43	X	0	0	0	%100
6	M43	Z	.679	.679	0	%100
7	M46	X	0	0	0	%100
8	M46	Z	1.354	1.354	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	.188	.188	0	%100
11	M52B	X	0	0	0	%100
12	M52B	Z	.188	.188	0	%100
13	M76	X	0	0	0	%100
14	M76	Z	0	0	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	.345	.345	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	.363	.363	0	%100
19	M84	X	0	0	0	%100
20	M84	Z	0	0	0	%100
21	M85	X	0	0	0	%100
22	M85	Z	.345	.345	0	%100
23	M91	X	0	0	0	%100
24	M91	Z	.363	.363	0	%100
25	M25	X	0	0	0	%100
26	M25	Z	.601	.601	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	.17	.17	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	.17	.17	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	.338	.338	0	%100
33	M31	X	0	0	0	%100
34	M31	Z	.188	.188	0	%100
35	M32	X	0	0	0	%100
36	M32	Z	.752	.752	0	%100
37	M36	X	0	0	0	%100
38	M36	Z	1.015	1.015	0	%100
39	M37	X	0	0	0	%100
40	M37	Z	.345	.345	0	%100
41	M39	X	0	0	0	%100
42	M39	Z	.363	.363	0	%100
43	M41	X	0	0	0	%100
44	M41	Z	1.015	1.015	0	%100
45	M42	X	0	0	0	%100
46	M42	Z	1.379	1.379	0	%100
47	M44	X	0	0	0	%100
48	M44	Z	1.452	1.452	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	.601	.601	0	%100
51	M50A	X	0	0	0	%100
52	M50A	Z	.17	.17	0	%100
53	M51C	X	0	0	0	%100
54	M51C	Z	.17	.17	0	%100
55	M52A	X	0	0	0	%100
56	M52A	Z	.338	.338	0	%100
57	M55	X	0	0	0	%100





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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	.752	.752	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	.188	.188	0 %100
61	M60	X	0	0	0 %100
62	M60	Z	1.015	1.015	0 %100
63	M61	X	0	0	0 %100
64	M61	Z	1.379	1.379	0 %100
65	M63	X	0	0	0 %100
66	M63	Z	1.452	1.452	0 %100
67	M65	X	0	0	0 %100
68	M65	Z	1.015	1.015	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	.345	.345	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	.363	.363	0 %100
73	M73	X	0	0	0 %100
74	M73	Z	.79	.79	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	.197	.197	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	.197	.197	0 %100
79	MP1A	X	0	0	0 %100
80	MP1A	Z	.536	.536	0 %100
81	MP2A	X	0	0	0 %100
82	MP2A	Z	.536	.536	0 %100
83	MP3A	X	0	0	0 %100
84	MP3A	Z	.536	.536	0 %100
85	MP4A	X	0	0	0 %100
86	MP4A	Z	.536	.536	0 %100
87	MP1C	X	0	0	0 %100
88	MP1C	Z	.536	.536	0 %100
89	MP2C	X	0	0	0 %100
90	MP2C	Z	.536	.536	0 %100
91	MP3C	X	0	0	0 %100
92	MP3C	Z	.536	.536	0 %100
93	MP4C	X	0	0	0 %100
94	MP4C	Z	.536	.536	0 %100
95	MP1B	X	0	0	0 %100
96	MP1B	Z	.536	.536	0 %100
97	MP2B	X	0	0	0 %100
98	MP2B	Z	.536	.536	0 %100
99	MP3B	X	0	0	0 %100
100	MP3B	Z	.536	.536	0 %100
101	MP4B	X	0	0	0 %100
102	MP4B	Z	.536	.536	0 %100
103	M100	X	0	0	0 %100
104	M100	Z	.649	.649	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	.162	.162	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	.162	.162	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	.207	.207	0 %100
111	M122	X	0	0	0 %100
112	M122	Z	.827	.827	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	.207	.207	0 %100





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

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	.488	.488	0 %100
59	M56	X	-.282	-.282	0 %100
60	M56	Z	.488	.488	0 %100
61	M60	X	-.677	-.677	0 %100
62	M60	Z	1.172	1.172	0 %100
63	M61	X	-.517	-.517	0 %100
64	M61	Z	.895	.895	0 %100
65	M63	X	-.545	-.545	0 %100
66	M63	Z	.943	.943	0 %100
67	M65	X	-.677	-.677	0 %100
68	M65	Z	1.172	1.172	0 %100
69	M66	X	-.517	-.517	0 %100
70	M66	Z	.895	.895	0 %100
71	M68	X	-.545	-.545	0 %100
72	M68	Z	.943	.943	0 %100
73	M73	X	-.296	-.296	0 %100
74	M73	Z	.513	.513	0 %100
75	M74	X	-.296	-.296	0 %100
76	M74	Z	.513	.513	0 %100
77	M75	X	0	0	0 %100
78	M75	Z	0	0	0 %100
79	MP1A	X	-.268	-.268	0 %100
80	MP1A	Z	.464	.464	0 %100
81	MP2A	X	-.268	-.268	0 %100
82	MP2A	Z	.464	.464	0 %100
83	MP3A	X	-.268	-.268	0 %100
84	MP3A	Z	.464	.464	0 %100
85	MP4A	X	-.268	-.268	0 %100
86	MP4A	Z	.464	.464	0 %100
87	MP1C	X	-.268	-.268	0 %100
88	MP1C	Z	.464	.464	0 %100
89	MP2C	X	-.268	-.268	0 %100
90	MP2C	Z	.464	.464	0 %100
91	MP3C	X	-.268	-.268	0 %100
92	MP3C	Z	.464	.464	0 %100
93	MP4C	X	-.268	-.268	0 %100
94	MP4C	Z	.464	.464	0 %100
95	MP1B	X	-.268	-.268	0 %100
96	MP1B	Z	.464	.464	0 %100
97	MP2B	X	-.268	-.268	0 %100
98	MP2B	Z	.464	.464	0 %100
99	MP3B	X	-.268	-.268	0 %100
100	MP3B	Z	.464	.464	0 %100
101	MP4B	X	-.268	-.268	0 %100
102	MP4B	Z	.464	.464	0 %100
103	M100	X	-.243	-.243	0 %100
104	M100	Z	.421	.421	0 %100
105	M107	X	-.243	-.243	0 %100
106	M107	Z	.421	.421	0 %100
107	M114	X	0	0	0 %100
108	M114	Z	0	0	0 %100
109	M121	X	-.31	-.31	0 %100
110	M121	Z	.537	.537	0 %100
111	M122	X	-.31	-.31	0 %100
112	M122	Z	.537	.537	0 %100
113	M123	X	0	0	0 %100
114	M123	Z	0	0	0 %100



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
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**Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-.521	-.521	0 %100
2	M4	Z	.301	.301	0 %100
3	M10	X	-.147	-.147	0 %100
4	M10	Z	.085	.085	0 %100
5	M43	X	-.147	-.147	0 %100
6	M43	Z	.085	.085	0 %100
7	M46	X	-.293	-.293	0 %100
8	M46	Z	.169	.169	0 %100
9	M51B	X	-.651	-.651	0 %100
10	M51B	Z	.376	.376	0 %100
11	M52B	X	-.163	-.163	0 %100
12	M52B	Z	.094	.094	0 %100
13	M76	X	-.879	-.879	0 %100
14	M76	Z	.508	.508	0 %100
15	M77	X	-1.194	-1.194	0 %100
16	M77	Z	.689	.689	0 %100
17	M80	X	-1.258	-1.258	0 %100
18	M80	Z	.726	.726	0 %100
19	M84	X	-.879	-.879	0 %100
20	M84	Z	.508	.508	0 %100
21	M85	X	-.298	-.298	0 %100
22	M85	Z	.172	.172	0 %100
23	M91	X	-.314	-.314	0 %100
24	M91	Z	.182	.182	0 %100
25	M25	X	0	0	0 %100
26	M25	Z	0	0	0 %100
27	M26	X	-.588	-.588	0 %100
28	M26	Z	.339	.339	0 %100
29	M27	X	-.588	-.588	0 %100
30	M27	Z	.339	.339	0 %100
31	M28	X	-1.172	-1.172	0 %100
32	M28	Z	.677	.677	0 %100
33	M31	X	-.163	-.163	0 %100
34	M31	Z	.094	.094	0 %100
35	M32	X	-.163	-.163	0 %100
36	M32	Z	.094	.094	0 %100
37	M36	X	0	0	0 %100
38	M36	Z	0	0	0 %100
39	M37	X	-.298	-.298	0 %100
40	M37	Z	.172	.172	0 %100
41	M39	X	-.314	-.314	0 %100
42	M39	Z	.182	.182	0 %100
43	M41	X	0	0	0 %100
44	M41	Z	0	0	0 %100
45	M42	X	-.298	-.298	0 %100
46	M42	Z	.172	.172	0 %100
47	M44	X	-.314	-.314	0 %100
48	M44	Z	.182	.182	0 %100
49	M49	X	-.521	-.521	0 %100
50	M49	Z	.301	.301	0 %100
51	M50A	X	-.147	-.147	0 %100
52	M50A	Z	.085	.085	0 %100
53	M51C	X	-.147	-.147	0 %100
54	M51C	Z	.085	.085	0 %100
55	M52A	X	-.293	-.293	0 %100
56	M52A	Z	.169	.169	0 %100
57	M55	X	-.163	-.163	0 %100











Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
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**Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-.521	-.521	0	%100
2	M4	Z	-.301	-.301	0	%100
3	M10	X	-.147	-.147	0	%100
4	M10	Z	-.085	-.085	0	%100
5	M43	X	-.147	-.147	0	%100
6	M43	Z	-.085	-.085	0	%100
7	M46	X	-.293	-.293	0	%100
8	M46	Z	-.169	-.169	0	%100
9	M51B	X	-.163	-.163	0	%100
10	M51B	Z	-.094	-.094	0	%100
11	M52B	X	-.651	-.651	0	%100
12	M52B	Z	-.376	-.376	0	%100
13	M76	X	-.879	-.879	0	%100
14	M76	Z	-.508	-.508	0	%100
15	M77	X	-.298	-.298	0	%100
16	M77	Z	-.172	-.172	0	%100
17	M80	X	-.314	-.314	0	%100
18	M80	Z	-.182	-.182	0	%100
19	M84	X	-.879	-.879	0	%100
20	M84	Z	-.508	-.508	0	%100
21	M85	X	-1.194	-1.194	0	%100
22	M85	Z	-.689	-.689	0	%100
23	M91	X	-1.258	-1.258	0	%100
24	M91	Z	-.726	-.726	0	%100
25	M25	X	-.521	-.521	0	%100
26	M25	Z	-.301	-.301	0	%100
27	M26	X	-.147	-.147	0	%100
28	M26	Z	-.085	-.085	0	%100
29	M27	X	-.147	-.147	0	%100
30	M27	Z	-.085	-.085	0	%100
31	M28	X	-.293	-.293	0	%100
32	M28	Z	-.169	-.169	0	%100
33	M31	X	-.651	-.651	0	%100
34	M31	Z	-.376	-.376	0	%100
35	M32	X	-.163	-.163	0	%100
36	M32	Z	-.094	-.094	0	%100
37	M36	X	-.879	-.879	0	%100
38	M36	Z	-.508	-.508	0	%100
39	M37	X	-1.194	-1.194	0	%100
40	M37	Z	-.689	-.689	0	%100
41	M39	X	-1.258	-1.258	0	%100
42	M39	Z	-.726	-.726	0	%100
43	M41	X	-.879	-.879	0	%100
44	M41	Z	-.508	-.508	0	%100
45	M42	X	-.298	-.298	0	%100
46	M42	Z	-.172	-.172	0	%100
47	M44	X	-.314	-.314	0	%100
48	M44	Z	-.182	-.182	0	%100
49	M49	X	0	0	0	%100
50	M49	Z	0	0	0	%100
51	M50A	X	-.588	-.588	0	%100
52	M50A	Z	-.339	-.339	0	%100
53	M51C	X	-.588	-.588	0	%100
54	M51C	Z	-.339	-.339	0	%100
55	M52A	X	-1.172	-1.172	0	%100
56	M52A	Z	-.677	-.677	0	%100
57	M55	X	-.163	-.163	0	%100







Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
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**Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
1	M4	X	-1	-1	0	%100
2	M4	Z	-.174	-.174	0	%100
3	M10	X	-.254	-.254	0	%100
4	M10	Z	-.441	-.441	0	%100
5	M43	X	-.254	-.254	0	%100
6	M43	Z	-.441	-.441	0	%100
7	M46	X	-.508	-.508	0	%100
8	M46	Z	-.879	-.879	0	%100
9	M51B	X	0	0	0	%100
10	M51B	Z	0	0	0	%100
11	M52B	X	-.282	-.282	0	%100
12	M52B	Z	-.488	-.488	0	%100
13	M76	X	-.169	-.169	0	%100
14	M76	Z	-.293	-.293	0	%100
15	M77	X	0	0	0	%100
16	M77	Z	0	0	0	%100
17	M80	X	0	0	0	%100
18	M80	Z	0	0	0	%100
19	M84	X	-.169	-.169	0	%100
20	M84	Z	-.293	-.293	0	%100
21	M85	X	-.517	-.517	0	%100
22	M85	Z	-.895	-.895	0	%100
23	M91	X	-.545	-.545	0	%100
24	M91	Z	-.943	-.943	0	%100
25	M25	X	-.401	-.401	0	%100
26	M25	Z	-.695	-.695	0	%100
27	M26	X	0	0	0	%100
28	M26	Z	0	0	0	%100
29	M27	X	0	0	0	%100
30	M27	Z	0	0	0	%100
31	M28	X	0	0	0	%100
32	M28	Z	0	0	0	%100
33	M31	X	-.282	-.282	0	%100
34	M31	Z	-.488	-.488	0	%100
35	M32	X	-.282	-.282	0	%100
36	M32	Z	-.488	-.488	0	%100
37	M36	X	-.677	-.677	0	%100
38	M36	Z	-1.172	-1.172	0	%100
39	M37	X	-.517	-.517	0	%100
40	M37	Z	-.895	-.895	0	%100
41	M39	X	-.545	-.545	0	%100
42	M39	Z	-.943	-.943	0	%100
43	M41	X	-.677	-.677	0	%100
44	M41	Z	-1.172	-1.172	0	%100
45	M42	X	-.517	-.517	0	%100
46	M42	Z	-.895	-.895	0	%100
47	M44	X	-.545	-.545	0	%100
48	M44	Z	-.943	-.943	0	%100
49	M49	X	-.1	-.1	0	%100
50	M49	Z	-.174	-.174	0	%100
51	M50A	X	-.254	-.254	0	%100
52	M50A	Z	-.441	-.441	0	%100
53	M51C	X	-.254	-.254	0	%100
54	M51C	Z	-.441	-.441	0	%100
55	M52A	X	-.508	-.508	0	%100
56	M52A	Z	-.879	-.879	0	%100
57	M55	X	-.282	-.282	0	%100



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
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**Member Distributed Loads (BLC 76 : Structure Wm (330 Deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in, %]	End Location[in, %]
58	M55	Z	-.488	-.488	0 %100
59	M56	X	0	0	0 %100
60	M56	Z	0	0	0 %100
61	M60	X	-.169	-.169	0 %100
62	M60	Z	-.293	-.293	0 %100
63	M61	X	-.517	-.517	0 %100
64	M61	Z	-.895	-.895	0 %100
65	M63	X	-.545	-.545	0 %100
66	M63	Z	-.943	-.943	0 %100
67	M65	X	-.169	-.169	0 %100
68	M65	Z	-.293	-.293	0 %100
69	M66	X	0	0	0 %100
70	M66	Z	0	0	0 %100
71	M68	X	0	0	0 %100
72	M68	Z	0	0	0 %100
73	M73	X	-.296	-.296	0 %100
74	M73	Z	-.513	-.513	0 %100
75	M74	X	0	0	0 %100
76	M74	Z	0	0	0 %100
77	M75	X	-.296	-.296	0 %100
78	M75	Z	-.513	-.513	0 %100
79	MP1A	X	-.268	-.268	0 %100
80	MP1A	Z	-.464	-.464	0 %100
81	MP2A	X	-.268	-.268	0 %100
82	MP2A	Z	-.464	-.464	0 %100
83	MP3A	X	-.268	-.268	0 %100
84	MP3A	Z	-.464	-.464	0 %100
85	MP4A	X	-.268	-.268	0 %100
86	MP4A	Z	-.464	-.464	0 %100
87	MP1C	X	-.268	-.268	0 %100
88	MP1C	Z	-.464	-.464	0 %100
89	MP2C	X	-.268	-.268	0 %100
90	MP2C	Z	-.464	-.464	0 %100
91	MP3C	X	-.268	-.268	0 %100
92	MP3C	Z	-.464	-.464	0 %100
93	MP4C	X	-.268	-.268	0 %100
94	MP4C	Z	-.464	-.464	0 %100
95	MP1B	X	-.268	-.268	0 %100
96	MP1B	Z	-.464	-.464	0 %100
97	MP2B	X	-.268	-.268	0 %100
98	MP2B	Z	-.464	-.464	0 %100
99	MP3B	X	-.268	-.268	0 %100
100	MP3B	Z	-.464	-.464	0 %100
101	MP4B	X	-.268	-.268	0 %100
102	MP4B	Z	-.464	-.464	0 %100
103	M100	X	-.243	-.243	0 %100
104	M100	Z	-.421	-.421	0 %100
105	M107	X	0	0	0 %100
106	M107	Z	0	0	0 %100
107	M114	X	-.243	-.243	0 %100
108	M114	Z	-.421	-.421	0 %100
109	M121	X	0	0	0 %100
110	M121	Z	0	0	0 %100
111	M122	X	-.31	-.31	0 %100
112	M122	Z	-.537	-.537	0 %100
113	M123	X	-.31	-.31	0 %100
114	M123	Z	-.537	-.537	0 %100



**Member Distributed Loads (BLC 81 : BLC 39 Transient Area Loads)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in.-%]	End Location[in.-%]
1	M51B	Y	-65	-4.435	0	9.988
2	M51B	Y	-4.435	-7.418	9.988	19.976
3	M51B	Y	-7.418	-8.361	19.976	29.964
4	M51B	Y	-8.361	-6.652	29.964	39.953
5	M51B	Y	-6.652	-3.527	39.953	49.941
6	M52B	Y	-3.47	-6.523	0	9.988
7	M52B	Y	-6.523	-8.107	9.988	19.976
8	M52B	Y	-8.107	-6.903	19.976	29.964
9	M52B	Y	-6.903	-4.329	29.964	39.953
10	M52B	Y	-4.329	-1.704	39.953	49.941
11	M31	Y	-1.665	-4.226	0	9.988
12	M31	Y	-4.226	-6.901	9.988	19.976
13	M31	Y	-6.901	-8.189	19.976	29.964
14	M31	Y	-8.189	-6.544	29.964	39.953
15	M31	Y	-6.544	-3.463	39.953	49.941
16	M32	Y	-3.469	-6.578	0	9.988
17	M32	Y	-6.578	-8.256	9.988	19.976
18	M32	Y	-8.256	-7.041	19.976	29.964
19	M32	Y	-7.041	-4.429	29.964	39.953
20	M32	Y	-4.429	-1.881	39.953	49.941
21	M55	Y	-1.884	-4.426	0	9.988
22	M55	Y	-4.426	-7.044	9.988	19.976
23	M55	Y	-7.044	-8.26	19.976	29.964
24	M55	Y	-8.26	-6.573	29.964	39.953
25	M55	Y	-6.573	-3.462	39.953	49.941
26	M56	Y	-3.463	-6.545	0	9.988
27	M56	Y	-6.545	-8.189	9.988	19.976
28	M56	Y	-8.189	-6.902	19.976	29.964
29	M56	Y	-6.902	-4.228	29.964	39.953
30	M56	Y	-4.228	-1.661	39.953	49.941

**Member Distributed Loads (BLC 82 : BLC 40 Transient Area Loads)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in.-%]	End Location[in.-%]
1	M51B	Y	-1.519	-10.374	0	9.988
2	M51B	Y	-10.374	-17.35	9.988	19.976
3	M51B	Y	-17.35	-19.557	19.976	29.964
4	M51B	Y	-19.557	-15.56	29.964	39.953
5	M51B	Y	-15.56	-8.249	39.953	49.941
6	M52B	Y	-8.115	-15.257	0	9.988
7	M52B	Y	-15.257	-18.962	9.988	19.976
8	M52B	Y	-18.962	-16.146	19.976	29.964
9	M52B	Y	-16.146	-10.127	29.964	39.953
10	M52B	Y	-10.127	-3.985	39.953	49.941
11	M31	Y	-3.895	-9.885	0	9.988
12	M31	Y	-9.885	-16.141	9.988	19.976
13	M31	Y	-16.141	-19.155	19.976	29.964
14	M31	Y	-19.155	-15.306	29.964	39.953
15	M31	Y	-15.306	-8.1	39.953	49.941
16	M32	Y	-8.115	-15.385	0	9.988
17	M32	Y	-15.385	-19.31	9.988	19.976
18	M32	Y	-19.31	-16.47	19.976	29.964
19	M32	Y	-16.47	-10.36	29.964	39.953
20	M32	Y	-10.36	-4.399	39.953	49.941
21	M55	Y	-4.408	-10.353	0	9.988
22	M55	Y	-10.353	-16.477	9.988	19.976
23	M55	Y	-16.477	-19.321	19.976	29.964



**Member Distributed Loads (BLC 82 : BLC 40 Transient Area Loads) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,F,...]	Start Location[in.%]	End Location[in.%]
24	M55	Y	-19.321	-15.375	29.964	39.953
25	M55	Y	-15.375	-8.097	39.953	49.941
26	M56	Y	-8.1	-15.308	0	9.988
27	M56	Y	-15.308	-19.153	9.988	19.976
28	M56	Y	-19.153	-16.144	19.976	29.964
29	M56	Y	-16.144	-9.89	29.964	39.953
30	M56	Y	-9.89	-3.886	39.953	49.941

**Member Area Loads (BLC 39 : Structure D)**

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N87C	N87B	N7	N6	Y	Two Way	-.005
2	N55	N57	N33	N32	Y	Two Way	-.005
3	N84	N86	N62	N61	Y	Two Way	-.005

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N87C	N87B	N7	N6	Y	Two Way	-.012
2	N55	N57	N33	N32	Y	Two Way	-.012
3	N84	N86	N62	N61	Y	Two Way	-.012

**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	N3	max	821.167	10	2749.205	13	1829.37	1	5.513	13	1.27	4	.031	5
2		min	-824.278	4	421.726	7	-1977.12	7	.04	7	-1.272	10	-.136	47
3	N30A	max	1620.253	9	2749.78	21	991.044	1	-.037	3	1.27	12	-.026	3
4		min	-1746.935	3	421.876	3	-914.558	7	-2.761	45	-1.273	6	-4.78	21
5	N59	max	1677.493	11	2750.454	17	1133.483	1	-.005	11	1.27	8	4.773	17
6		min	-1548.256	5	422.109	11	-1062.219	7	-2.765	17	-1.273	2	.045	11
7	Totals:	max	3953.759	10	7755.533	19	3953.897	1						
8		min	-3953.758	4	3081.206	1	-3953.897	7						

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

Member	Shape	Code Check	Loc[in]	LC	Shear	...	Loc[in]	Dir	LC	phi*Pnc [...]	phi*Pnt [lb]	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	M4	HSS4X4X4	.343	0	13	.073	0	y	14	124657.7...	139518	16.181	16.181	3...	H1-1b
2	M10	HSS4X4X4	.194	28.5	14	.059	28.5	y	24	136263.03	139518	16.181	16.181	1...	H1-1b
3	M43	HSS4X4X4	.190	0	24	.061	0	y	13	136263.03	139518	16.181	16.181	1...	H1-1b
4	M46	PL1/2x6	.153	6.188	6	.101	0	y	22	66009.234	97200	1.012	12.15	1...	H1-1b
5	M51B	L2x2x3	.129	0	2	.015	49.941	y	16	9823.122	23392.8	.558	1.084	1...	H2-1
6	M52B	L2x2x3	.120	0	12	.014	0	y	22	9823.122	23392.8	.558	1.084	1...	H2-1
7	M76	PL3/8x6	.171	0	10	.311	0	y	18	70677.939	72900	.57	9.113	1...	H1-1b
8	M77	PL3/8x6	.216	2	8	.397	0	y	13	71601.728	72900	.57	9.113	1...	H1-1b
9	M80	PL1/2x6	.051	1.344	1	.074	1.344	y	5	96757.507	97200	1.012	12.15	1...	H1-1b
10	M84	PL3/8x6	.187	0	1	.234	0	y	20	70677.939	72900	.57	9.113	1...	H1-1b
11	M85	PL3/8x6	.205	2	6	.392	0	y	24	71601.728	72900	.57	9.113	1...	H1-1b
12	M91	PL1/2x6	.053	1.344	1	.073	0	y	3	96757.507	97200	1.012	12.15	1...	H1-1b
13	M25	HSS4X4X4	.343	0	21	.083	0	y	44	124657.7...	139518	16.181	16.181	3...	H1-1b
14	M26	HSS4X4X4	.194	28.5	22	.059	28.5	y	20	136263.03	139518	16.181	16.181	1...	H1-1b
15	M27	HSS4X4X4	.190	0	20	.061	0	y	21	136263.03	139518	16.181	16.181	1...	H1-1b
16	M28	PL1/2x6	.153	6.188	2	.126	6.188	y	47	66009.234	97200	1.012	12.15	1...	H1-1b
17	M31	L2x2x3	.129	0	10	.015	0	y	13	9823.122	23392.8	.558	1.084	1...	H2-1
18	M32	L2x2x3	.120	0	8	.014	49.941	y	17	9823.122	23392.8	.558	1.084	1...	H2-1
19	M36	PL3/8x6	.171	0	6	.311	0	y	14	70677.939	72900	.57	9.113	1...	H1-1b



Company : Maser Consulting  
 Designer : AJH  
 Job Number :  
 Model Name : 467889-VZW\_MT\_LO\_H

May 25, 2021  
 7:00 PM  
 Checked By: \_\_\_\_\_

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

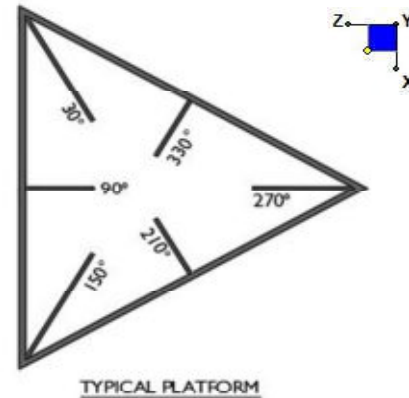
Member	Shape	Code Check	Loc[in]	LC	Shear	...	Loc[in]	Dir	LC	phi*Pnc	I...	phi*Pnt	Ib	phi*Mn	y...	phi*Mn	z...	Cb	Egn
20	M37	PL3/8x6	.216	2	4	.397	0	y	21	71601.728	72900	.57	9.113	1...	H1-1b				
21	M39	PL1/2x6	.051	1.344	9	.074	1.344	y	1	96757.507	97200	1.012	12.15	1...	H1-1b				
22	M41	PL3/8x6	.187	0	9	.234	0	y	16	70677.939	72900	.57	9.113	1...	H1-1b				
23	M42	PL3/8x6	.205	2	2	.392	0	y	20	71601.728	72900	.57	9.113	1...	H1-1b				
24	M44	PL1/2x6	.053	1.344	9	.130	0	y	47	96757.507	97200	1.012	12.15	1...	H1-1b				
25	M49	HSS4X4X4	.343	0	17	.087	0	y	30	124657.7...	139518	16.181	16.181	3...	H1-1b				
26	M50A	HSS4X4X4	.194	28.5	18	.059	28.5	y	16	136263.03	139518	16.181	16.181	1...	H1-1b				
27	M51C	HSS4X4X4	.190	0	16	.061	0	y	17	136263.03	139518	16.181	16.181	1...	H1-1b				
28	M52A	PL1/2x6	.153	6.188	10	.101	0	y	14	66009.234	97200	1.012	12.15	1...	H1-1b				
29	M55	L2x2x3	.129	0	6	.015	0	y	21	9823.122	23392.8	.558	1.084	1...	H2-1				
30	M56	L2x2x3	.120	0	4	.014	0	y	14	9823.122	23392.8	.558	1.084	1...	H2-1				
31	M60	PL3/8x6	.171	0	2	.311	0	y	22	70677.939	72900	.57	9.113	1...	H1-1b				
32	M61	PL3/8x6	.216	2	12	.398	0	y	17	71601.728	72900	.57	9.113	1...	H1-1b				
33	M63	PL1/2x6	.051	1.344	5	.074	1.344	y	9	96757.507	97200	1.012	12.15	1...	H1-1b				
34	M65	PL3/8x6	.187	0	5	.234	0	y	24	70677.939	72900	.57	9.113	1...	H1-1b				
35	M66	PL3/8x6	.205	2	10	.392	0	y	16	71601.728	72900	.57	9.113	1...	H1-1b				
36	M68	PL1/2x6	.053	1.344	5	.073	0	y	7	96757.507	97200	1.012	12.15	1...	H1-1b				
37	M73	PIPE 3.0	.152	56.625	20	.069	94.375		6	27936.207	65205	5.749	5.749	2...	H1-1b				
38	M74	PIPE 3.0	.152	56.625	16	.069	94.375		2	27936.207	65205	5.749	5.749	2...	H1-1b				
39	M75	PIPE 3.0	.152	56.625	24	.069	94.375		10	27936.207	65205	5.749	5.749	2...	H1-1b				
40	MP1A	PIPE 2.0	.254	52	9	.058	17		7	14916.096	32130	1.872	1.872	1...	H1-1b				
41	MP2A	PIPE 2.5	.238	52	10	.065	35		11	30038.461	50715	3.596	3.596	1...	H1-1b				
42	MP3A	PIPE 2.0	.279	52	5	.076	52		6	14916.096	32130	1.872	1.872	1...	H1-1b				
43	MP4A	PIPE 2.0	.211	52	5	.061	17		6	14916.096	32130	1.872	1.872	1...	H1-1b				
44	MP1C	PIPE 2.0	.254	52	5	.058	17		3	14916.096	32130	1.872	1.872	1...	H1-1b				
45	MP2C	PIPE 2.5	.238	52	6	.065	35		7	30038.461	50715	3.596	3.596	1...	H1-1b				
46	MP3C	PIPE 2.0	.279	52	1	.076	52		2	14916.096	32130	1.872	1.872	1...	H1-1b				
47	MP4C	PIPE 2.0	.211	52	1	.061	17		2	14916.096	32130	1.872	1.872	1...	H1-1b				
48	MP1B	PIPE 2.0	.254	52	1	.058	17		11	14916.096	32130	1.872	1.872	1...	H1-1b				
49	MP2B	PIPE 2.5	.238	52	2	.065	35		3	30038.461	50715	3.596	3.596	1...	H1-1b				
50	MP3B	PIPE 2.0	.279	52	9	.076	52		10	14916.096	32130	1.872	1.872	1...	H1-1b				
51	MP4B	PIPE 2.0	.211	52	9	.061	17		10	14916.096	32130	1.872	1.872	1...	H1-1b				
52	M100	PIPE 2.5	.162	90.625	9	.069	37.5		8	14558.792	50715	3.596	3.596	2...	H1-1b				
53	M107	PIPE 2.5	.162	90.625	5	.069	37.5		4	14558.792	50715	3.596	3.596	2...	H1-1b				
54	M114	PIPE 2.5	.162	90.625	1	.069	37.5		12	14558.792	50715	3.596	3.596	2...	H1-1b				
55	M121	L3X3X4	.261	0	5	.019	0	y	6	37805.568	45360	1.641	3.651	2...	H2-1				
56	M122	L3X3X4	.261	0	9	.019	0	y	10	37805.568	45360	1.641	3.651	2...	H2-1				
57	M123	L3X3X4	.261	0	1	.019	6.18	y	2	37805.568	45360	1.641	3.651	2...	H2-1				



## I. Mount-to-Tower Connection Check

### RISA Model Data

Nodes (labeled per RISA)	Orientation (per graphic of typical platform)
N30A	30
N3	270
N59	150



### 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):

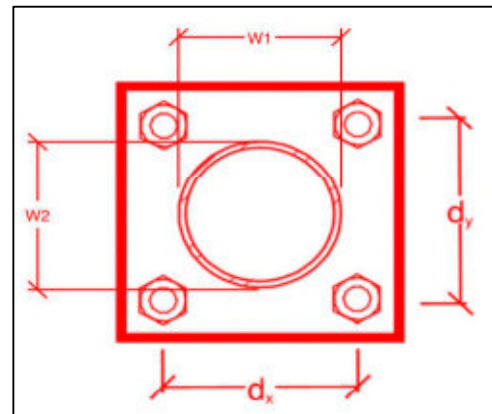
Tensile Strength / bolt (kips):

Shear Strength / bolt (kips):

Tensile Capacity Overall:

Shear Capacity Overall:

yes
4
6
6
A325N
0.625
22.4
4.0
20.7
12.4
<b>27.0%*</b>
<b>8.1%</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):

 $W_1$  (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
10
4
4
36
0.75
3
4.18
3.13
<b>30.8%</b>
<b>74.9%</b>

### Max Plate Bending Strengths

$M_{u_{xx}}$ (kip-in) :	11.2
$\Phi * M_{n_{xx}}$ (kip-in) :	36.5
$M_{u_{yy}}$ (kip-in) :	0.0
$\Phi * M_{n_{yy}}$ (kip-in) :	45.6

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

## Documents & Photos Required from Contractor – Passing Mount Analysis

---

**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 installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

### **Base Requirements:**

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed 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.vzsmart.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 equipment 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 equipment.
    - 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





**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

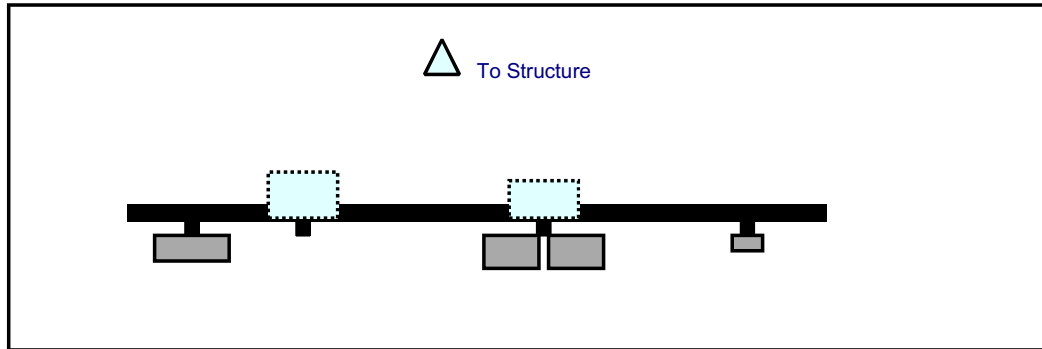
Sector: A  
 Structure Type: Monopole  
 Mount Elev: 65.50

5/27/2021

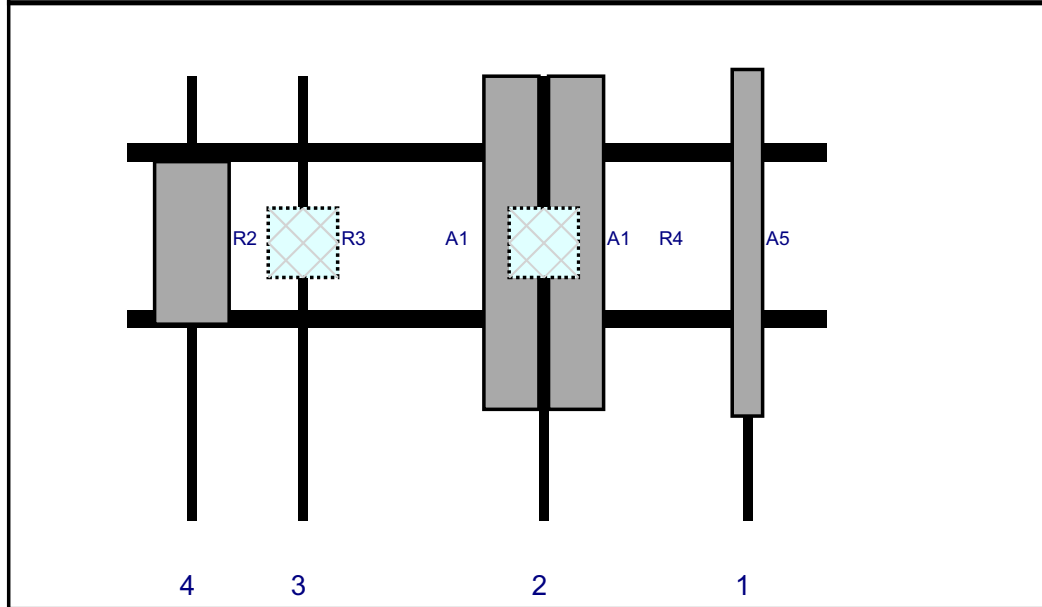
Page: 1



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
A5	HBX-6517DS-A1M	74.9	6.6	134	1	a	Front	36	0	Retained	04/05/2021
A1	NHH-65B-R2B	72	11.9	90	2	a	Front	36	7	Added	
A1	NHH-65B-R2B	72	11.9	90	2	b	Front	36	-7	Added	
R4	B3/B15 RRH-BR04C	15	15	90	2	a	Behind	36	0	Added	
R3	B2/B66A RRH-BR049	15	15	38	3	a	Behind	36	0	Added	
R2	MT6407-77A	35.1	16.1	14	4	a	Front	36	0	Added	

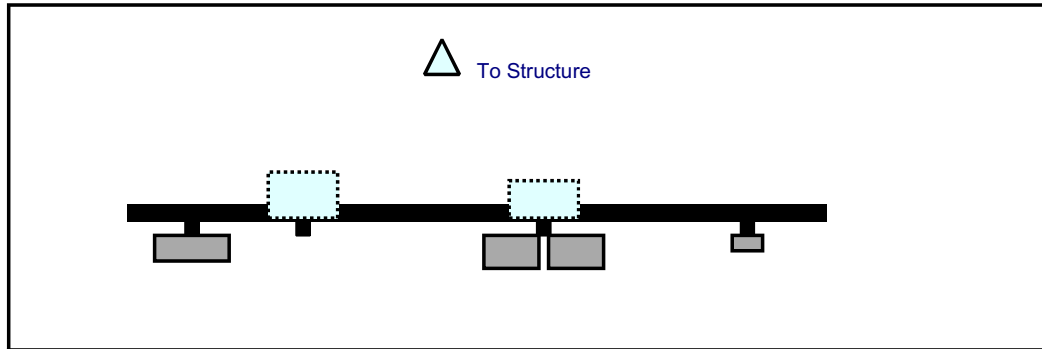
Sector: **B**  
 Structure Type: Monopole  
 Mount Elev: 65.50

5/27/2021

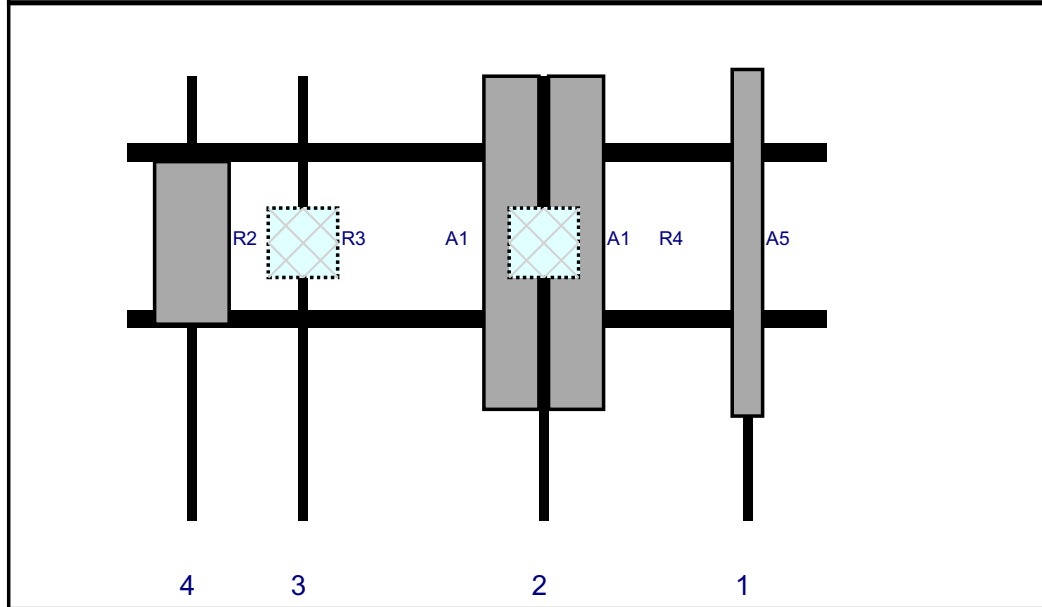
Page: 2



Plan View

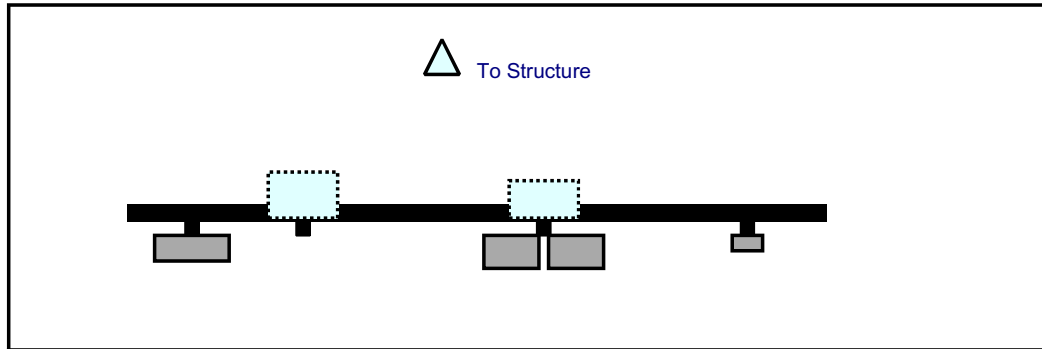


Front View  
 Looking at Structure

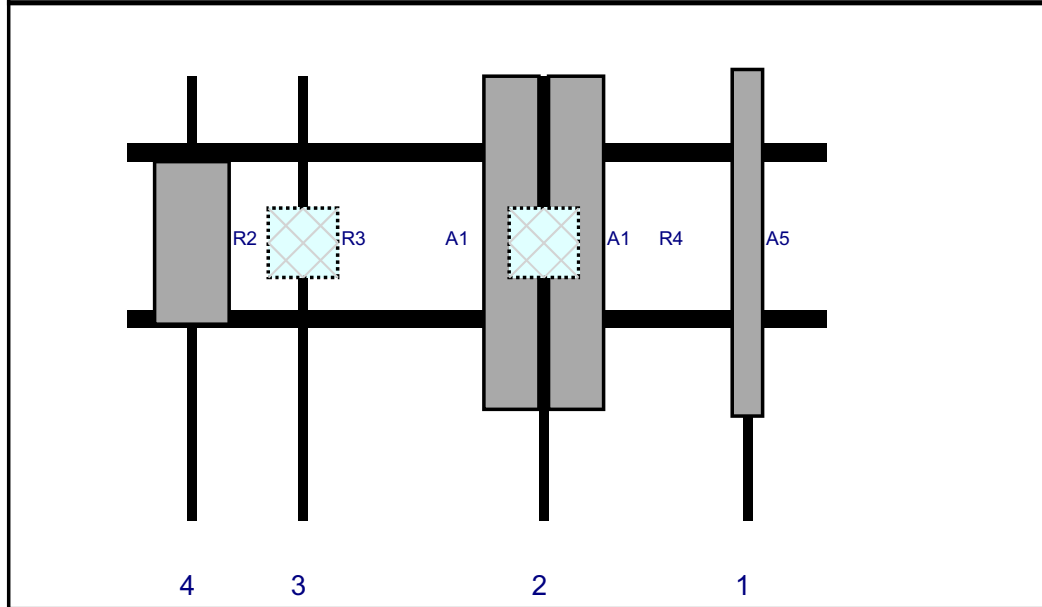


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A5	HBX-6517DS-A1M	74.9	6.6	134	1	a	Front	36	0	Retained	04/05/2021
A1	NHH-65B-R2B	72	11.9	90	2	a	Front	36	7	Added	
A1	NHH-65B-R2B	72	11.9	90	2	b	Front	36	-7	Added	
R4	B3/B15 RRH-BR04C	15	15	90	2	a	Behind	36	0	Added	
R3	B2/B66A RRH-BR049	15	15	38	3	a	Behind	36	0	Added	
R2	MT6407-77A	35.1	16.1	14	4	a	Front	36	0	Added	

Plan View



Front View  
 Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A5	HBX-6517DS-A1M	74.9	6.6	134	1	a	Front	36	0	Retained	04/05/2021
A1	NHH-65B-R2B	72	11.9	90	2	a	Front	36	7	Added	
A1	NHH-65B-R2B	72	11.9	90	2	b	Front	36	-7	Added	
R4	B3/B15 RRH-BR04C	15	15	90	2	a	Behind	36	0	Added	
R2	MT6407-77A	35.1	16.1	14	4	a	Front	36	0	Added	
R3	B2/B66A RRH-BR049	15	15	38	3	a	Behind	36	0	Added	

# Maser Consulting Connecticut

**Subject**

TIA-222-H Usage

**Site Information**

Site ID: 467889-VZW / SIMSBURY NW  
Site Name: SIMSBURY NW  
Carrier Name: Verizon Wireless  
Address: 344 Firetown Rd  
Simsbury, Connecticut 06070  
Hartford County  
Latitude: 41.903186°  
Longitude: -72.821338°

**Structure Information**

Tower Type: Monopole  
Mount Type: 12.58-Ft Platform

To Whom It May Concern,

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

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

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

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

Sincerely,

Derek Hartzell, PE  
Technical Specialist

# **ATTACHMENT 5**



# Town of Simsbury Parcel Map

Parcel: F05 302 001

Address 344 FIRETOWN ROAD

302

2  
# 188

3  
# 354

**SIMSBURY  
FIRE  
DISTRICT**

1  
# 344

# 195

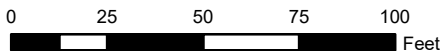
**Firetown Rd**

**Hoskins Rd**

**Laurel Ln**

4-A  
# 101

1 inch = 50 feet



Disclaimer: This map is for informational purposes only All information is subject to verification by any user. The Town of Simsbury and its mapping contractors assume no legal responsibility for the information contained herein.

Map Produced: February 2021





# Town of Simsbury, CT

## Property Listing Report

Map Block Lot

F05 302 001

Building # 1

Unique Identifier

04007603

### Property Information

Property Location	344 FIRETOWN ROAD
Mailing Address	869 HOPMEADOW STREET SIMSBURY CT 06070
Land Use	Fire Station - Volunteer
Zoning Code	R-40
Neighborhood	0215

Owner	SIMSBURY FIRE DISTRICT
Co-Owner	
Book / Page	0142/0236
Land Class	Public Utility
Census Tract	4662010
Acreage	1.29

### Valuation Summary

(Assessed value = 70% of Appraised Value)

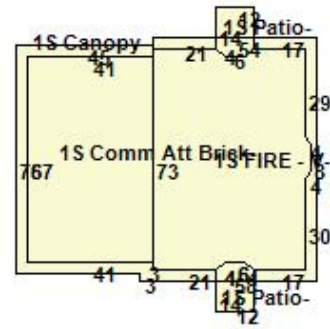
Item	Appraised	Assessed
Buildings	961304	672910
Outbuildings	21504	15050
Land	197370	138160
Total	1180178	826120

### Utility Information

Electric	No
Gas	No
Sewer	No
Public Water	No
Well	No



F05-302-001-2L 03/15/2012



### Primary Construction Details

Year Built	2002
Building Desc.	Commercial
Building Style	
Stories	1
Exterior Walls	B. V. Solid
Exterior Walls 2	
Interior Walls	Dry Wall
Interior Walls 2	
Interior Floors 1	Hardwood
Interior Floors 2	

Heating Fuel	Gas
Heating Type	Hot Water
AC Type	Central
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	10
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Livable Area (ft)	3618
Building Use	Fire Station -
Building Condition	VG
Frame Type	Good
Building Grade	50
Fireplaces	0
Wood Stoves	0
Attic Access	
Roof Style	
Roof Cover	Asphalt

Bsmt Area	0
Fin Bsmt Area	0
Fin Bsmt Quality	
Bsmt Access	
Bsmt Gar	0
Bsmt Sump Pump	No



# **ATTACHMENT 6**



SIMSBURY NW  
**Certificate of Mailing — Firm**

Name and Address of Sender  Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	TOTAL NO. of Pieces Listed by Sender  <div style="text-align: center; font-size: 2em;">3</div>	TOTAL NO. of Pieces Received at Post Office™  <div style="text-align: center; font-size: 2em;">3</div>	Affix Stamp Here <i>Postmark with Date of Receipt.</i>  <div style="text-align: right; color: magenta;">           neopost<sup>®</sup>            07/13/2021  <b>US POSTAGE \$002.89<sup>0</sup></b> </div> <div style="text-align: right; margin-top: 10px;">            ZIP 06103            041L12203937         </div>
Postmaster, per (name of receiving employee)  <div style="text-align: center; font-size: 2em;">J.P.</div>			

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Eric Wellman, First Selectman Town of Simsbury 933 Hopmeadow Street Simsbury, CT 06070				
2.	Michael Glidden, Director of Planning and Community Development Town of Simsbury 933 Hopmeadow Street Simsbury, CT 06070				
3.	Simsbury Fire District 871 Hopmeadow Street Simsbury, CT 06070				
4.					
5.					
6.					

