



1 Cityplace Dr, Suite 490  
Creve Coeur, MO 63141

Phone: (314) 513-0147  
www.crowncastle.com

November 19, 2021

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

RE: **Notice of Exempt Modification for T-Mobile  
Crown Site ID#801367; T-Mobile Site ID#CT11352C  
1121 Summit Road Cheshire, CT 06410  
Latitude: 41° 32' 11.20/ Longitude: -72° 57' 26.30**

Dear Ms. Bachman:

T-Mobile currently maintains (9) antennas at the 138-foot mounts on the existing 167-foot Monopole Tower located at **1121 Summit Road, CHESHIRE**. The property is owned by Timothy Didomizio and the Tower by Crown Castle. T-Mobile now intends to replace three (3) antennas. This modification/proposal includes hardware that is both 4G(LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

**Planned Modifications:**

**Tower:**

**REMOVE AND REPLACE**

- (3) Ericsson – AIR32 KRD901146-1\_B66A\_B2A Antennas (**REMOVE**), (3) Ericsson – AIR6449 B41 (**REPLACE**)
- (3) Ericsson – Radio 4449 B71+B85 Remote Radio head's (**REMOVE**), (3) Ericsson Radio 4460 B25 + B66 Remote Radio heads (**REPLACE**)
- (1) 6X12 Hybrid Cable (**REMOVE**), (1) 6X12 6AWG Hybrid Cable (1-3/8") (**REPLACE**)

**INSTALL:**

- (3) Ericsson – Radio 4480 B71+B85
- (2) 6X24 4AWG Hybrid Cable (1-5/8")

**REMOVE**

- (3) RFS – APX16DWV-16DWV-S-E-A20 Antennas (**REMOVE**),
- (3) TMA Generic Twin Style 1A – PCS (**REMOVE**)
- (3) TMA Generic Twin Style 1B –AWS (**REMOVE**)
- (17) Coax Cable (**REMOVE**)

**Ground:**

**REMOVE:**

- (1) BB 5216 in RBS 6201 Cabinet
- (1) XMU in RBS 6201 Cabinet
- (6) RUS01 B2 in RBS 6201 Cabinet
- (6) RUS01 B4 in RBS 6201 Cabinet



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**INSTALL:**

- (1) 19 Inch Rack
- (1) Power 6230 Cabinet
- (1) BB 6648 in RBS 6201 Cabinet
- (1) BB 6648 in 19 Inch Rack
- (1) PSU 4813 Voltage Booster to 19 In Rack
- (1) CSR IXRE V2 to 19 Inch Rack

The Facility was approved by the Connecticut Siting Council on April 12, 2001, Docket#199. The approval was with conditions which this exempt modification complies with.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72(b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to Robert J. Oris, Jr Town of Cheshire Chairman, William S. Voelker Town of Cheshire Planner and Timothy Didomizio the property owner.

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Ersilia Davis  
NETWORK BUILDING + CONSULTING  
Project Manager  
1777 Sentry Parkway W | VEVA 17, Suite 400, Blue Bell, PA 19422  
[edavis@nbcllc.com](mailto:edavis@nbcllc.com)  
(551)804-0667



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cc:

Robert J. Oris, Jr, Chairman  
84 South Main Street  
Cheshire, CT 06410  
(860) 267-4468  
*(Via Fedex)*

William S. Voelker, Town Planner  
84 South Main Street  
Cheshire, CT 06410  
(203) 271- 6670  
*(Via Fedex)*

Timothy Didomizio  
1119 Summit Road  
Cheshire, CT 06410  
203-271-3355  
*(Via Fedex)*



TRACK ANOTHER SHIPMENT

775266573109



[ADD NICKNAME](#)

Delivered  
Monday, 11/22/2021 at 9:30 am



**DELIVERED**

Signed for by: D.VOELKET

[GET STATUS UPDATES](#)

[OBTAIN PROOF OF DELIVERY](#)

**FROM**

Ersilia Davis  
1777 Sentry Parkway  
VEVA 17, Suite 210  
Blue Bell, PA US 19422  
551-804-0667

**TO**

Robert J. Oris, Jr, Chairman  
Town of Cheshire  
84 South Main Street  
CHESHIRE, CT US 06410  
203-271-6601

[MANAGE DELIVERY](#)

Travel History

**TIME ZONE**

Local Scan Time

Monday, November 22,  
2021

9:30 AM	CHESHIRE, CT	Delivered
8:00 AM	NORTH HAVEN, CT	On FedEx vehicle for delivery
7:31 AM	NORTH HAVEN, CT	At local FedEx facility

Sunday, November 21,  
2021

8:44 PM	EAST GRANBY, CT	At destination sort facility
5:38 PM	MEMPHIS, TN	Departed FedEx hub



TRACK ANOTHER SHIPMENT

775266603653



[ADD NICKNAME](#)

Delivered  
Monday, 11/22/2021 at 9:30 am



**DELIVERED**

Signed for by: D.VOELKET

[GET STATUS UPDATES](#)

[OBTAIN PROOF OF DELIVERY](#)

**FROM**

Ersilia Davis  
1777 Sentry Parkway  
VEVA 17, Suite 210  
Blue Bell, PA US 19422  
551-804-0667

**TO**

William S. Voelker, Town Planner  
Town of Cheshire  
84 South Main Street  
CHESHIRE, CT US 06410  
203-271-6670

[MANAGE DELIVERY](#)

Travel History

**TIME ZONE**

Local Scan Time

Monday, November 22,  
2021

9:30 AM	CHESHIRE, CT	Delivered
7:57 AM	NORTH HAVEN, CT	On FedEx vehicle for delivery
7:44 AM	NORTH HAVEN, CT	At local FedEx facility

Sunday, November 21,  
2021

8:44 PM	EAST GRANBY, CT	At destination sort facility
5:38 PM	MEMPHIS, TN	Departed FedEx hub



TRACK ANOTHER SHIPMENT

775266650453



[ADD NICKNAME](#)

Delivered  
Monday, 11/22/2021 at 11:48 am



**DELIVERED**

Signature not required

[GET STATUS UPDATES](#)

[OBTAIN PROOF OF DELIVERY](#)

**FROM**

Ersilia Davis

1777 Sentry Parkway  
VEVA 17, Suite 210  
Blue Bell, PA US 19422  
551-804-0667

**TO**

Timothy DiDomizio

1119 Summit Road  
CHESHIRE, CT US 06410  
203-271-3355

[MANAGE DELIVERY](#)

Travel History

**TIME ZONE**

Local Scan Time



Monday, November 22,  
2021

11:48 AM	CHESHIRE, CT	Delivered Package delivered to recipient address - release authorized
8:17 AM	NORTH HAVEN, CT	On FedEx vehicle for delivery
7:29 AM	NORTH HAVEN, CT	At local FedEx facility

Sunday, November 21,  
2021

8:44 PM	EAST GRANBY, CT	At destination sort facility
5:38 PM	MEMPHIS, TN	Departed FedEx hub

# Exhibit A

## **Original Facility Approval**

# Connecticut Siting Council<sup>(/CSC)</sup>

[CT.gov Home](#) [\(/\)](#) [Connecticut Siting Council](#) [\(/CSC\)](#) Cheshire Docket No. 199 Decision

[Decisions \(/CSC/Decisions/Decisions\)](#) >

[Meetings and Minutes \(/CSC/Common-Elements/v4-template/Council-Activity\)](#) >

[Pending Matters \(/CSC/1\\_Applications-and-Other-Pending-Matters/Pending-Matters\)](#) >

[About Us \(/CSC/Common-Elements/Common-Elements/Connecticut-Siting-Council---Description\)](#) >

[Contact Us \(/CSC/Common-Elements/Common-Elements/Contact-Us\)](#) >

**Search Connecticut Siting Council**



**DOCKET NO. 199** - Crown Atlantic Company LLC and Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a cellular telecommunications facility at 1119 Summit Road, Cheshire, Connecticut.

}

Connecticut  
Siting

}

Council

}

April 12,  
2001

## Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility at the proposed alternate site in Cheshire, Connecticut, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Crown Atlantic Company LLC and Cellco Partnership d/b/a Verizon Wireless for the construction, maintenance and operation of a cellular



telecommunications facility at the proposed alternate site located at 1119 Summit Road, Cheshire, Connecticut. We deny certification of the proposed prime site located at 1119 Summit Road, Cheshire, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of AT&T, Voicestream, Sprint, the Town of Cheshire and other entities, both public and private, but such tower shall not exceed a height of 170 feet above ground level.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include: a final site plan(s) for site development to include the location and specifications for the tower, tower foundation, antennas, a single equipment building capable to house all proposed users including the Town of Cheshire, security fence, access road, utility line, and landscaping plan. The D&M Plan shall also include construction plans to be submitted prior to construction for site clearing, water drainage, and erosion and sedimentation control consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall provide a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. If the facility does not initially provide, or permanently ceases to provide cellular services following completion of construction, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to

the Council before any such use is made.

7. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and ceases to function.

8. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the effective date of this Decision and Order or within three years after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Hartford Courant, The Cheshire Herald, The Waterbury Republican-American and The Record Journal.

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

The parties and intervenors to this proceeding are:

Crown Atlantic Company LLC  
And Cellco Partnership d/b/a  
Verizon Wireless

Robert Stanford, Project Manager  
Crown Atlantic Company LLC  
703 Hebron Avenue  
Glastonbury, CT 06033  
Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597

AT&T Wireless Services, Inc.

Anthony B. Gioffre III, Esq.  
Cuddy & Feder & Worby  
90 Maple Avenue  
White Plains, NY 10601

# Exhibit B

## Property Card



# Town of Cheshire, CT

## Property Listing Report

Map Block Lot **24 2**

Building # **1**

Unique Identifier

**00087800**

### Property Information

Property Location	<b>1119 SUMMIT RD</b>
Mailing Address	<b>1119 SUMMIT ROAD</b> <b>CHESHIRE CT 06410</b>
Land Use	<b>Residential</b>
Zoning Code	<b>R-80</b>
Neighborhood	<b>2B</b>

Owner	<b>DIDOMIZIO TIMOTHY</b>
Co-Owner	
Book / Page	<b>2850/ 331</b>
Land Class	<b>Residential</b>
Census Tract	<b>3432</b>
Acreage	<b>22.52</b>

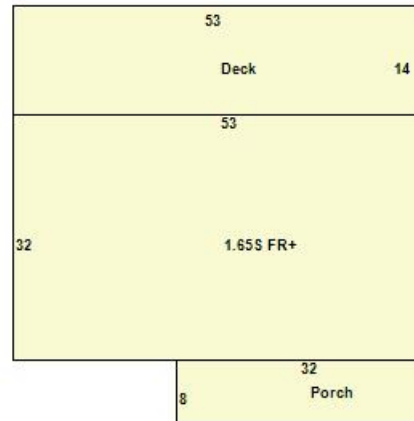
### Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	<b>543472</b>	<b>380430</b>
Outbuildings	<b>5880</b>	<b>4120</b>
Land	<b>572860</b>	<b>252980</b>
	<b>1122212</b>	<b>637530</b>

### Utility Information

Electric	<b>No</b>
Gas	<b>No</b>
Sewer	<b>No</b>
Public Water	<b>No</b>
Well	<b>Yes</b>



**0087800 03/08/2012**

### Primary Construction Details

Year Built	<b>2018</b>
Building Desc.	<b>Residential</b>
Building Style	<b>Cape</b>
Stories	<b>1.65</b>
Exterior Walls	<b>Vinyl</b>
Interior Walls	<b>Drywall</b>
Interior Floors 1	<b>Hardwood</b>

Heating Fuel	<b>Propane</b>
Heating Type	<b>FHA</b>
AC Type	<b>Central</b>
Bedrooms	<b>4</b>
Full Bathrooms	<b>2</b>
Half Bathrooms	<b>1</b>
Extra Fixtures	<b>0</b>
Total Rooms	<b>8</b>
Bath Style	<b>NA</b>
Kitchen Style	<b>Modern</b>
Occupancy	<b>1</b>

Building Use	<b>Single Family</b>
Building Condition	<b>Average</b>
Frame Type	<b>Wood Frame</b>
Fireplaces	<b>1</b>
Bsmt Gar	<b>2</b>
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	<b>-10</b>
Roof Style	<b>Gable</b>
Roof Cover	<b>Arch Shingles</b>

Report Created On

**11/19/2021**



# Town of Cheshire, CT

Property Listing Report

Map Block Lot **24 2**

Building # **1**

Unique Identifier

**00087800**

## Detached Outbuildings

Type	Description	Area (sq ft)	Condition	Year Built
Fencing	Fencing	1600	Average	2002

## Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built
Porch	Open	256	Average	2018
Deck	Wood	742	Average	2019

## Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
DIDOMIZIO TIMOTHY	2850_ 331	5/21/2018	0
DIDOMIZIO M JOANNE	798_ 74	4/3/2017	0



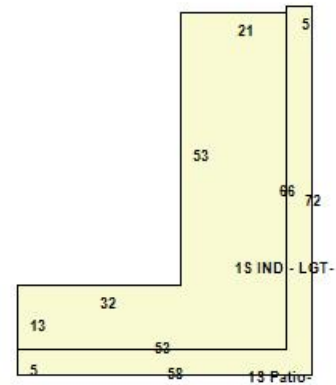
# Town of Cheshire, CT

Property Listing Report

Map Block Lot **24 2**

Building # **2**

Unique Identifier **00087800**



## Primary Construction Details

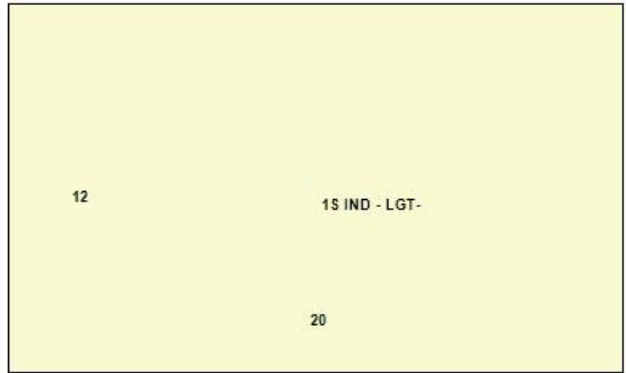
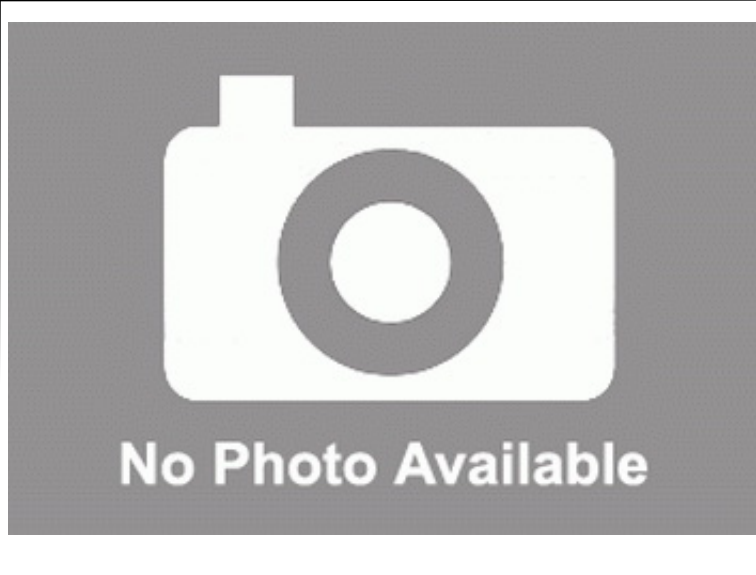
Year Built	<b>2002</b>
Building Desc.	<b>Light Industrial</b>
Building Style	
Stories	<b>1.00</b>
Exterior Walls	<b>Stone</b>
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	
Interior Floors 2	

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	<b>0</b>
Full Bathrooms	<b>0</b>
Half Bathrooms	<b>0</b>
Extra Fixtures	<b>0</b>
Total Rooms	<b>0</b>
Bath Style	<b>NA</b>
Kitchen Style	
Occupancy	<b>0</b>

Building Use	<b>Commercial</b>
Building Condition	<b>Average</b>
Frame Type	<b>Good</b>
Fireplaces	<b>0</b>
Bsmt Gar	<b>0</b>
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	<b>0</b>
Roof Style	<b>Flat</b>
Roof Cover	

## Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built
<b>Patio</b>	<b>Concrete</b>	<b>625</b>	<b>Average</b>	<b>2002</b>



Primary Construction Details

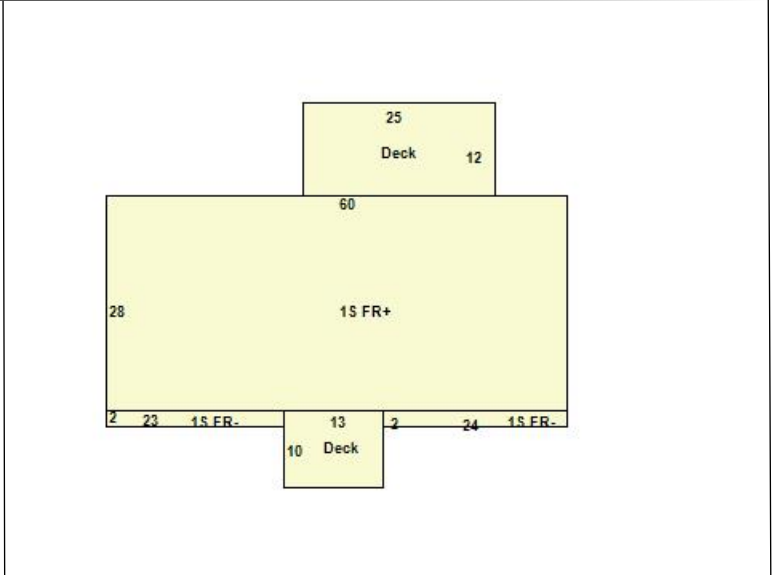
Year Built	2004
Building Desc.	Light Industrial
Building Style	
Stories	1.00
Exterior Walls	Concrete Block
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	
Interior Floors 2	

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	
Occupancy	0

Building Use	Commercial
Building Condition	Average
Frame Type	Good
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	Flat
Roof Cover	

Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built



**Primary Construction Details**

Year Built	1990
Building Desc.	Single Family
Building Style	Ranch
Stories	1.00
Exterior Walls	Clapboards
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	Hardwood
Interior Floors 2	

Heating Fuel	Oil
Heating Type	FHA
AC Type	
Bedrooms	2
Full Bathrooms	3
Half Bathrooms	1
Extra Fixtures	0
Total Rooms	7
Bath Style	NA
Kitchen Style	
Occupancy	1

Building Use	Residential
Building Condition	Average
Frame Type	Wood Frame
Fireplaces	0
Bsmt Gar	2
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	-5
Roof Style	Gable
Roof Cover	Asphalt

**Attached Extra Features**

Type	Description	Area (sq ft)	Condition	Year Built
Deck	Wood	130	Average	1990
Deck	Wood	300	Average	1990



# Exhibit C

## **Construction Drawings**

# T-Mobile

**T-MOBILE SITE NUMBER:** CT11352C  
**T-MOBILE SITE NAME:** CROWNE CHESHIRE  
**SITE TYPE:** MONOPOLE  
**TOWER HEIGHT:** 167'-0"

**BUSINESS UNIT #:** 801367  
**SITE ADDRESS:** 1121 SUMMIT ROAD  
 CHESHIRE, CT 06410  
**COUNTY:** NEW HAVEN  
**JURISDICTION:** CONNECTICUT  
**SITING COUNCIL**

**T-MOBILE ANCHOR SITE CONFIGURATION:** 67E5A998E P6230

T-Mobile  
 35 GRIFFIN ROAD  
 BLOOMFIELD, CT 06002

CROWN CASTLE  
 3 CORPORATE PARK DRIVE, SUITE 101  
 CLIFTON PARK, NY 12065

B+T GRP  
 1717 S. BOULDER  
 SUITE 300  
 TULSA, OK 74119  
 PH: (918) 587-4630  
 www.btgrp.com

T-MOBILE SITE NUMBER:  
**CT11352C**  
 BU #: 801367  
**CT NHV-2075 CAC 801367**  
 1121 SUMMIT ROAD  
 CHESHIRE, CT 06410  
 EXISTING  
 167'-0" MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/28/21	AJA	CONSTRUCTION	MTJ

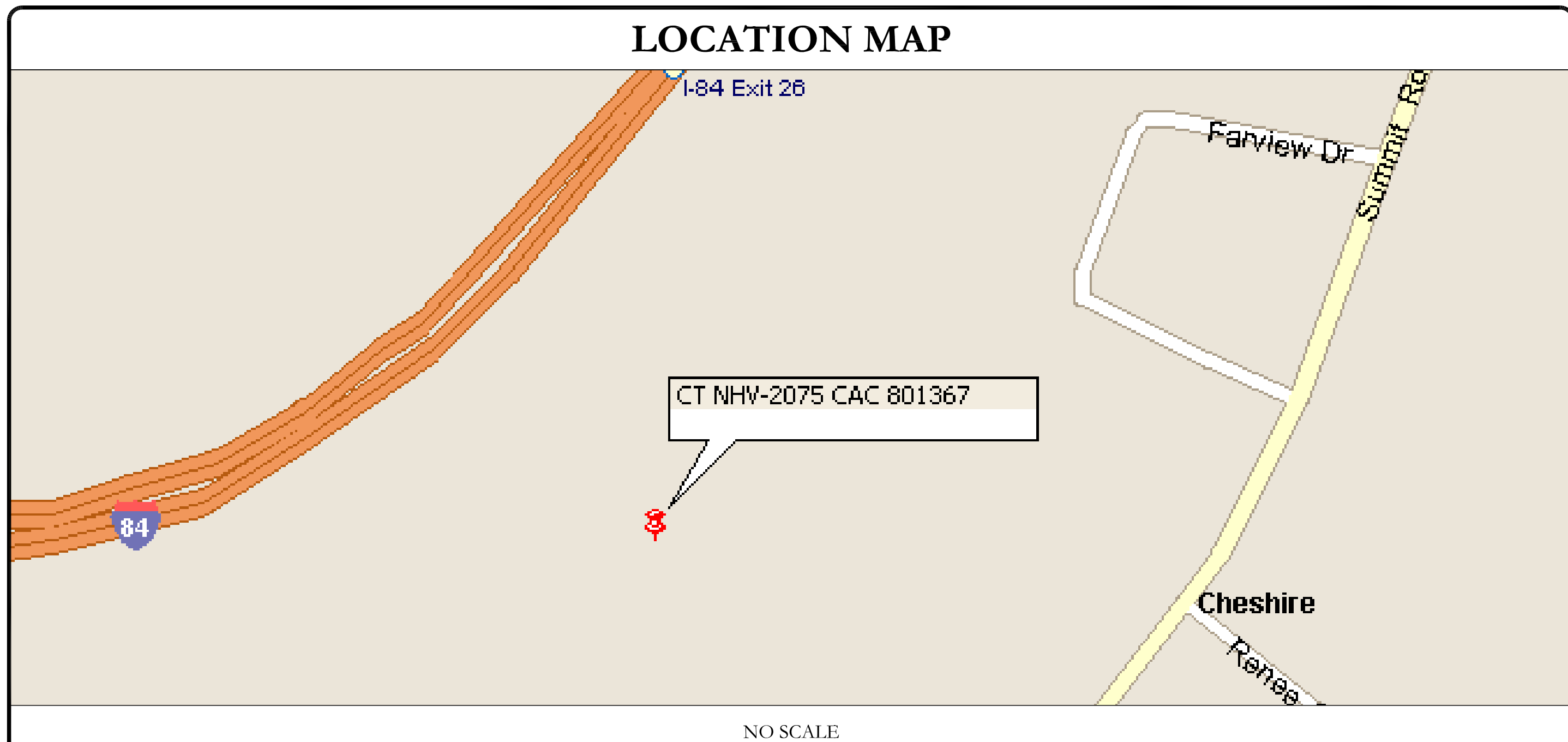
**SITE INFORMATION**

CROWN CASTLE USA INC. SITE NAME:	CT NHV-2075 CAC 801367
SITE ADDRESS:	1121 SUMMIT ROAD CHESHIRE, CT 06410
COUNTY:	NEW HAVEN
MAP/PARCEL #:	24-2
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41.53640000
LONGITUDE:	-72.95730000
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	629'
CURRENT ZONING:	R-80
JURISDICTION:	CONNECTICUT SITING COUNCIL
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	DIDOMIZIO TIMOTHY 1119 SUMMIT ROAD CHESHIRE, CT 06410
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 35 GRIFFIN ROAD BLOOMFIELD, CT 06002
ELECTRIC PROVIDER:	T.B.D
TELCO PROVIDER:	T.B.D

**DRAWING INDEX**

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.1	OVERALL SITE PLAN
C-1.2	SITE PLAN & ENLARGED SITE PLAN
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	ANTENNA & CABLE SCHEDULE
C-4	PLUMBING DIAGRAM
C-5	EQUIPMENT SPECS
G-1	ANTENNA GROUNDING DIAGRAM
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 24X36. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



**PROJECT TEAM**

A&E FIRM:	B+T GROUP 1717 S. BOULDER AVE. TULSA, OK 74119 MARVIN PHILLIPS marvin.phillips@btgrp.com
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3 CORPORATE PARK DRIVE, SUITE 101 CLIFTON PARK, NY 12065
	TRICIA PELON - PROJECT MANAGER TRICIA.PELON@CROWNCastle.COM

**PROJECT DESCRIPTION**

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

**TOWER SCOPE OF WORK:**

- REMOVE (6) ANTENNAS
- REMOVE (6) TMAs
- REMOVE (3) RADIOS
- REMOVE (17) 1-5/8" COAX CABLES
- REMOVE (1) HYBRID CABLE (1-1/2")
- INSTALL (3) ANTENNAS
- INSTALL (6) RADIOS
- INSTALL (2) 6X24 4AWG HYBRID CABLE
- INSTALL (1) 6X12 6AWG HYBRID CABLE

**GROUND SCOPE OF WORK:**

- REMOVE (1) BB 5216 IN RBS 6201 CABINET
- REMOVE (1) XMU IN RBS 6201 CABINET
- REMOVE (6) RUS01 B2 IN RBS 6201 CABINET
- REMOVE (6) RUS01 B4 IN RBS 6201 CABINET
- INSTALL (1) 19 INCH RACK
- INSTALL (1) POWER 6230 CABINET
- INSTALL (1) BB 6648 IN RBS 6201 CABINET
- INSTALL (1) BB 6648 IN 19 INCH RACK
- INSTALL (1) PSU 4813 VOLTAGE BOOSTER TO NEW 19 INCH RACK
- INSTALL (1) CSR IXRE V2 TO NEW 19 INCH RACK

**NOTES:** PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

**APPLICABLE CODES/REFERENCE DOCUMENTS**

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

CODE TYPE	CODE
BUILDING	2015 IBC WITH AMENDMENTS
MECHANICAL	2015 IMC WITH AMENDMENTS
ELECTRICAL	2014 NEC WITH AMENDMENTS

**REFERENCE DOCUMENTS:**

STRUCTURAL ANALYSIS:	B+T GROUP
DATED:	10/19/21
MOUNT ANALYSIS:	TEP
DATED:	10/14/21
RFDS REVISION:	6
DATED:	9/13/21
ORDER ID:	586785
REVISION:	0

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**APPROVALS**

APPROVAL	SIGNATURE	DATE
PROPERTY OWNER OR REP.	_____	_____
LAND USE PLANNER	_____	_____
T-MOBILE	_____	_____
OPERATIONS	_____	_____
RF	_____	_____
NETWORK	_____	_____
BACKHAUL	_____	_____
CONSTRUCTION MANAGER	_____	_____

THE PARTIES ABOVE HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND ANY CHANGES AND MODIFICATIONS THEY MAY IMPOSE.

**PROFESSIONAL ENGINEER**

B&T ENGINEERING, INC.  
 PEC.0001564  
 Expires 2/10/22

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

<b>SHEET NUMBER:</b> <b>T-1</b>	<b>REVISION:</b> <b>0</b>
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CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- 1. NOTICE TO PROCEED-- NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
- 2. "LOOK UP" - CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT: THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
- 3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
- 4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED-STP-10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA-322 (LATEST EDITION).
- 5. ALL SITE WORK TO COMPLY WITH QAS-STP-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED-STP-10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
- 6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- 7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- 8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
- 11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- 12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- 13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
- 14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
- 15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- 16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
- 18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- 19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- 20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- 21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- 22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GREENFIELD GROUNDING NOTES:

- 1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- 2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
- 4. METAL CONDUIT AND TRAY SHALL BE GROUND AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- 5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- 6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
- 7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
- 8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- 9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- 10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- 11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- 12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- 13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- 14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- 15. APPROVED ANTI-OXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- 16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- 17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- 18. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
- 19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
- 20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
- 21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

GENERAL NOTES:

- 1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION CARRIER: T-MOBILE TOWER OWNER: CROWN CASTLE USA INC.
- 2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- 3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
- 4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
- 5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
- 6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
- 7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- 8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- 9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- 11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
- 12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
- 13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- 14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- 2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- 3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (fc) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°F AT TIME OF PLACEMENT.
- 4. CONCRETE EXPOSED TO FREEZE--THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
- 5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS: #4 BARS AND SMALLER.....40 ksi #5 BARS AND LARGER.....60 ksi
- 6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3" CONCRETE EXPOSED TO EARTH OR WEATHER: #6 BARS AND LARGER.....2" #5 BARS AND SMALLER.....1-1/2" CONCRETE NOT EXPOSED TO EARTH OR WEATHER: SLAB AND WALLS.....3/4" BEAMS AND COLUMNS.....1-1/2"
- 7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

- 1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- 2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- 3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- 4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC. 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE. 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
- 5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
- 6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
- 7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- 8. ALL THE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- 12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- 13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
- 14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEC AND NEC.
- 15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- 16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- 17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- 18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- 19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET WITH ANY AFRM NOT OCCURRABLE.
- 20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEC AND THE NEC.
- 21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIEMOLD SPECIMATE WIREWAY).
- 22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- 23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKOUT ON OUTSIDE AND INSIDE.
- 24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
- 25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- 26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- 27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
- 29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "T-MOBILE".
- 30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
	GROUND	GREEN
277/480V, 3Ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
DC VOLTAGE	POS (+)	RED**
	NEG (-)	BLACK**

\* SEE NEC 210.5(C)(1) AND (2)  
\*\* POLARITY MARKED AT TERMINATION

ABBREVIATIONS:

- ANT ANTENNA
- (E) EXISTING
- FIF FACILITY INTERFACE FRAME
- GEN GENERATOR
- GPS GLOBAL POSITIONING SYSTEM
- GSM GLOBAL SYSTEM FOR MOBILE
- LTE LONG TERM EVOLUTION
- MGB MASTER GROUND BAR
- MW MICROWAVE
- (N) NEW
- NEC NATIONAL ELECTRIC CODE
- (P) PROPOSED
- PP POWER PLANT
- QTY QUANTITY
- RECT RECTIFIER
- RBS RADIO BASE STATION
- RET REMOTE ELECTRIC TILT
- RFDS RADIO FREQUENCY DATA SHEET
- RRH REMOTE RADIO HEAD
- RRU REMOTE RADIO UNIT
- SIAD SMART INTEGRATED DEVICE
- TMA TOWER MOUNTED AMPLIFIER
- TYP TYPICAL
- UMTS UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
- W.P. WORK POINT

APWA UNIFORM COLOR CODE:

- WHITE PROPOSED EXCAVATION
- PINK TEMPORARY SURVEY MARKINGS
- RED ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
- YELLOW GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
- ORANGE COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
- BLUE POTABLE WATER
- PURPLE RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
- GREEN SEWERS AND DRAIN LINES

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CLIFTON PARK, NY 12065

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PH: (918) 587-4630  
www.btgrp.com

T-MOBILE SITE NUMBER:  
**CT11352C**

BU #: **801367**  
**CT NHV-2075 CAC 801367**

1121 SUMMIT ROAD  
CHESHIRE, CT 06410

EXISTING  
167'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/28/21	AJA	CONSTRUCTION	MTJ

10/28/21

B&T ENGINEERING, INC.  
PEC.0001564  
Expires 2/10/22

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SHEET NUMBER: **T-2** REVISION: **0**

**SITE PLAN DISCLAIMER:**  
 PROPERTY LINES AND STRUCTURES HAVE BEEN DERIVED FROM TAX ASSESSORS DATA. CROWN CASTLE USA INC. HAS NOT COMPLETED A SITE SURVEY AND THEREFORE MAKES NO CLAIMS AS TO THE ACCURACY OF INFORMATION DEPICTED ON THIS SHEET.

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**ISSUED FOR:**

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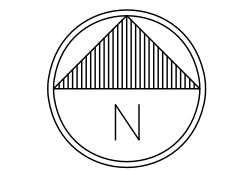
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**SHEET NUMBER:** C-1.1  
**REVISION:** 0

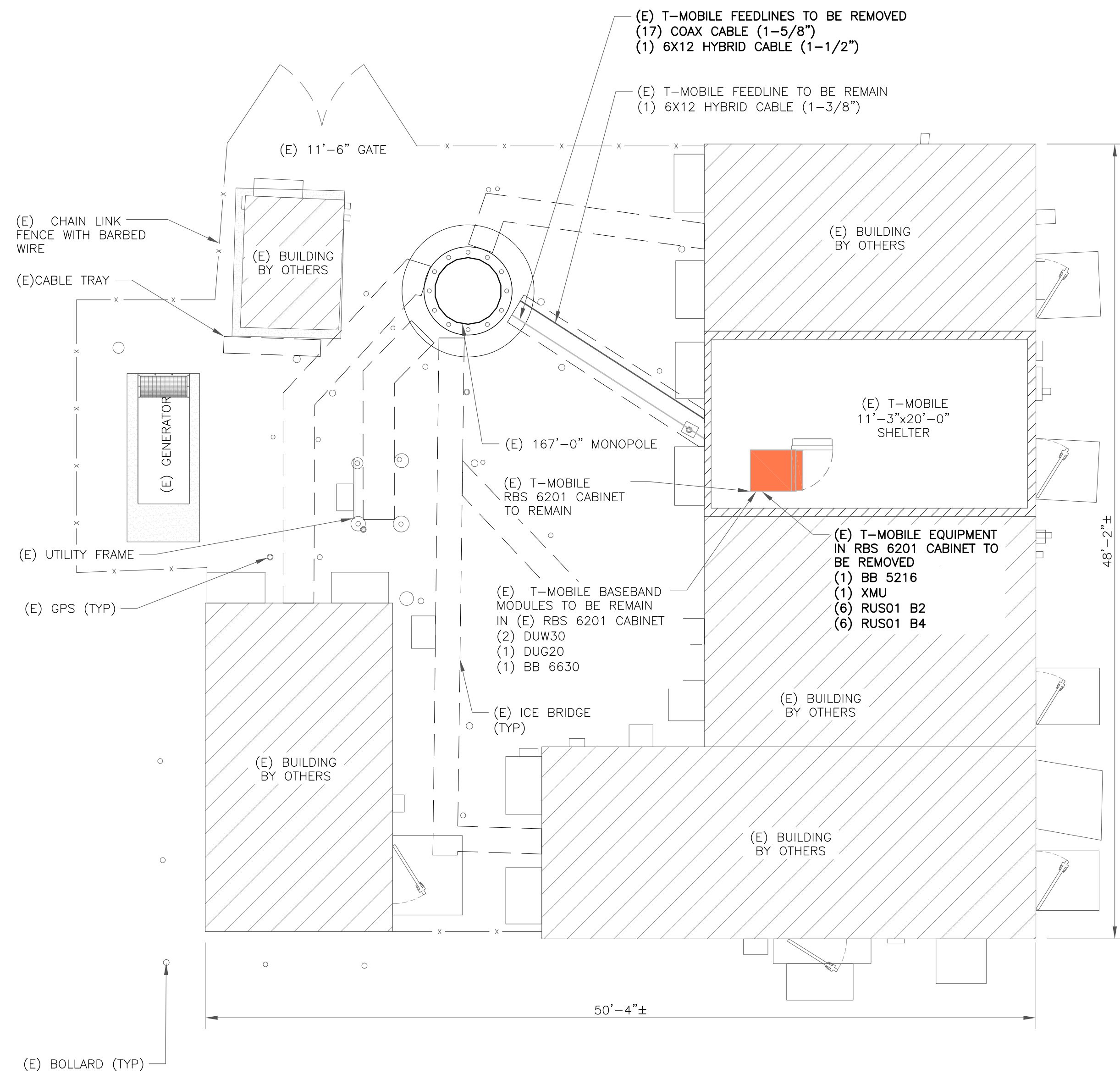


**1 OVERALL SITE PLAN**  
 SCALE: 1" = 80'-0" (FULL SIZE)  
 1" = 160'-0" (11x17)

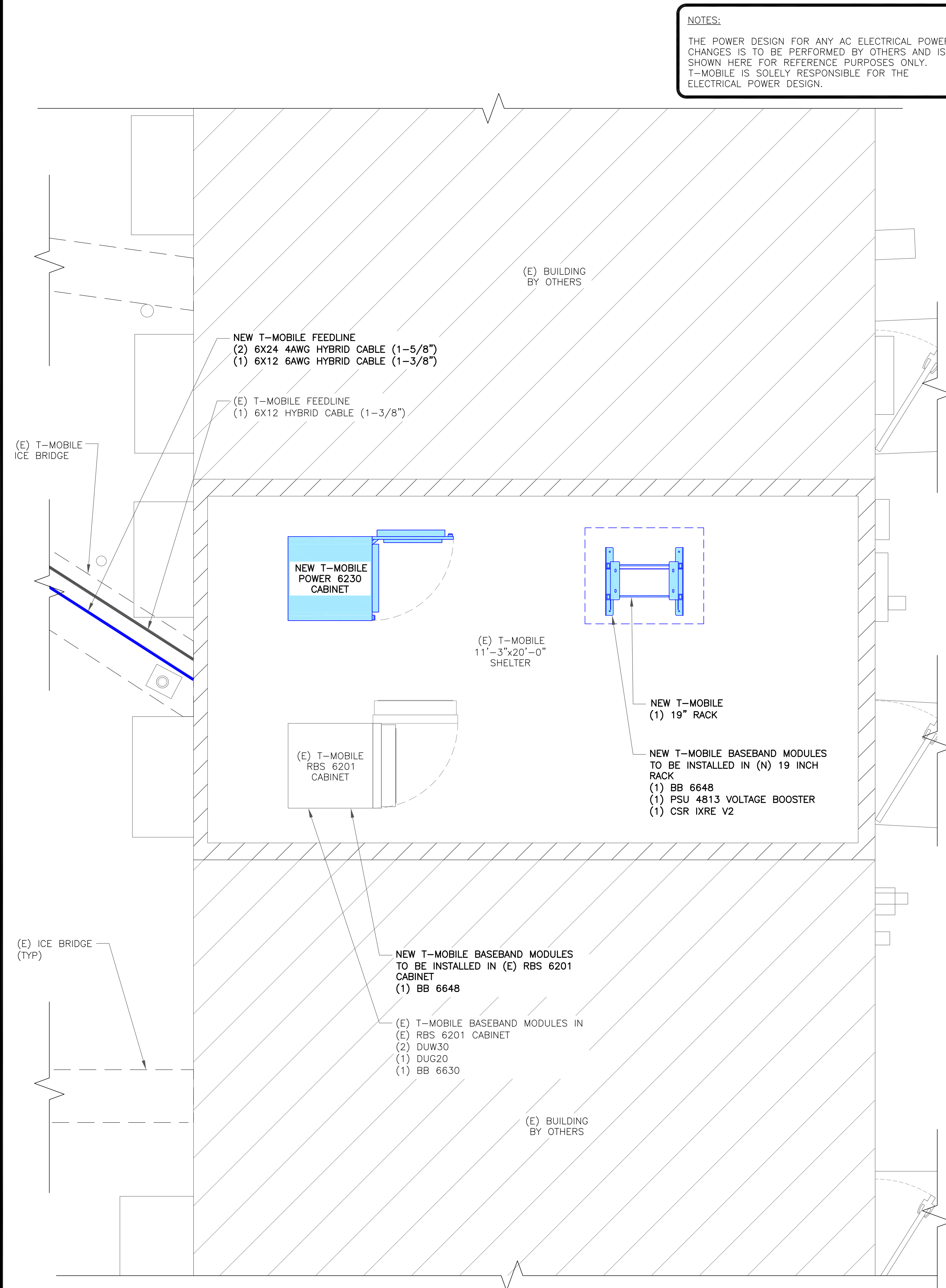
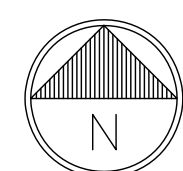


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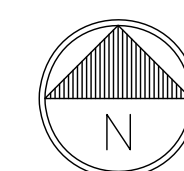
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1 SITE PLAN  
 SCALE: 3/16"=1'-0" (FULL SIZE)  
 3/32"=1'-0" (11x17)



2 ENLARGED SITE PLAN  
 SCALE: 1/2"=1'-0" (FULL SIZE)  
 1/4"=1'-0" (11x17)



NOTES:  
 THE POWER DESIGN FOR ANY AC ELECTRICAL POWER CHANGES IS TO BE PERFORMED BY OTHERS AND IS SHOWN HERE FOR REFERENCE PURPOSES ONLY. T-MOBILE IS SOLELY RESPONSIBLE FOR THE ELECTRICAL POWER DESIGN.

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BU #: 801367  
 CT NHV-2075 CAC 801367

1121 SUMMIT ROAD  
 CHESHIRE, CT 06410

EXISTING  
 167'-0" MONOPOLE

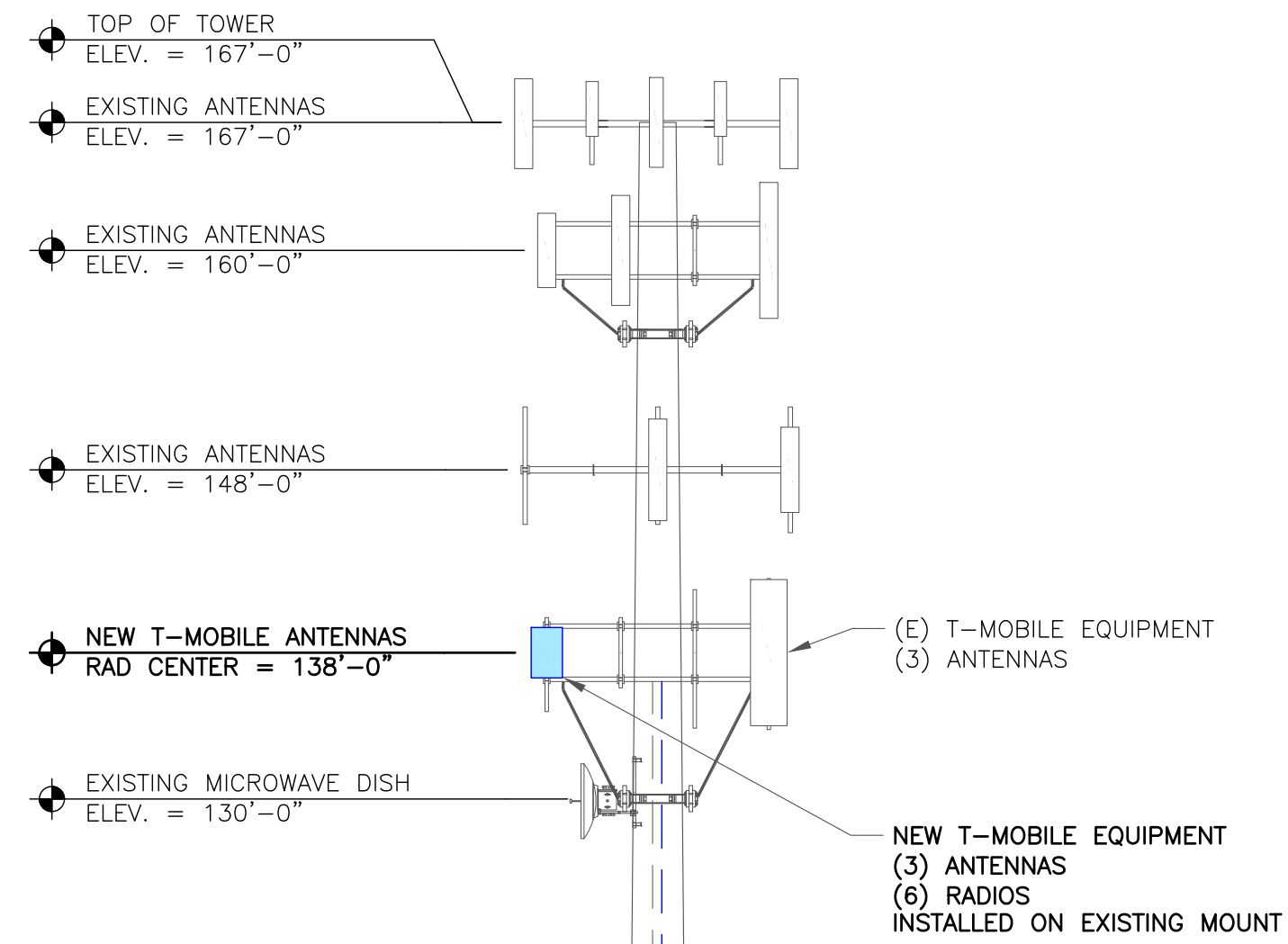
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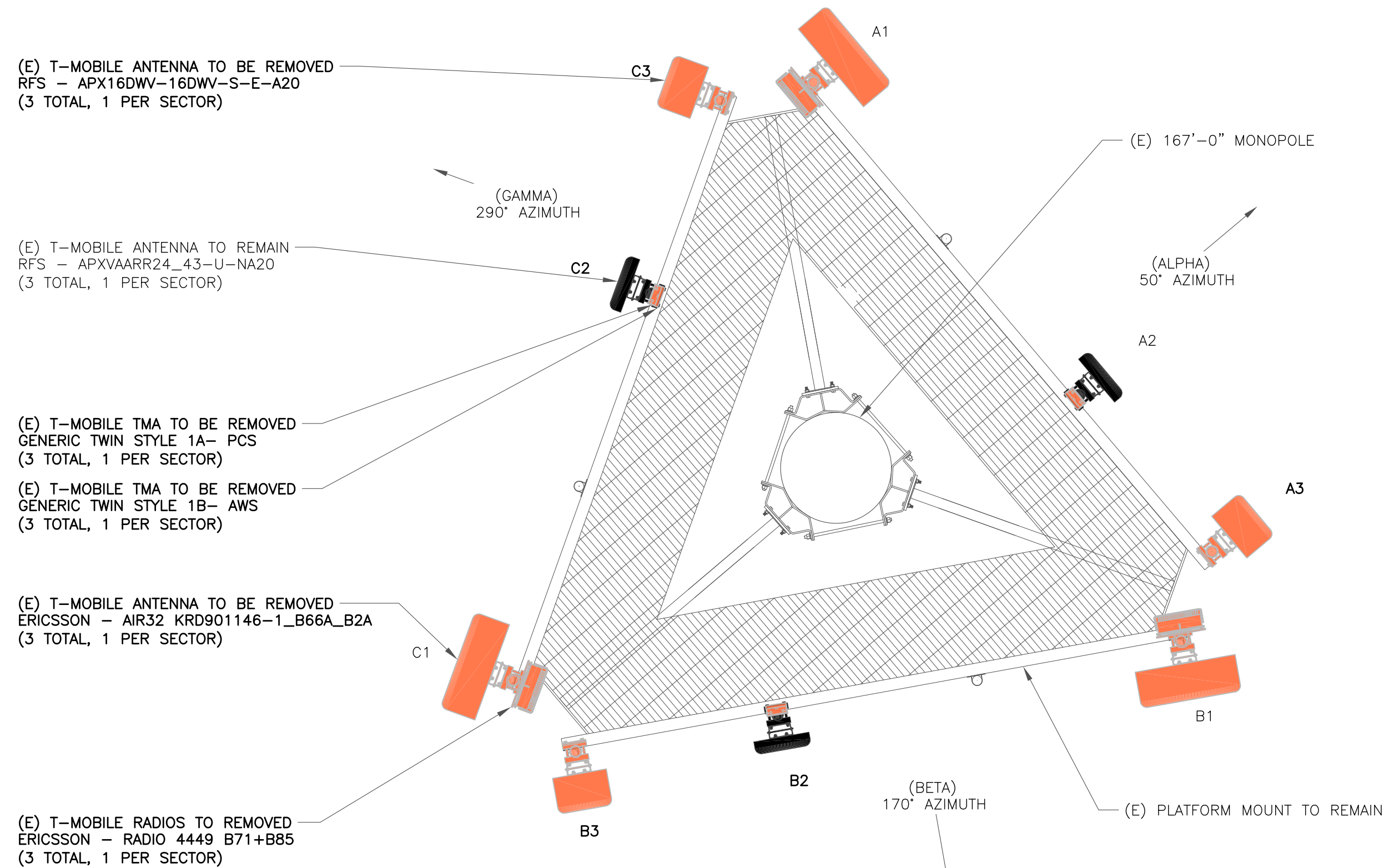


**T-MOBILE EQUIPMENT**

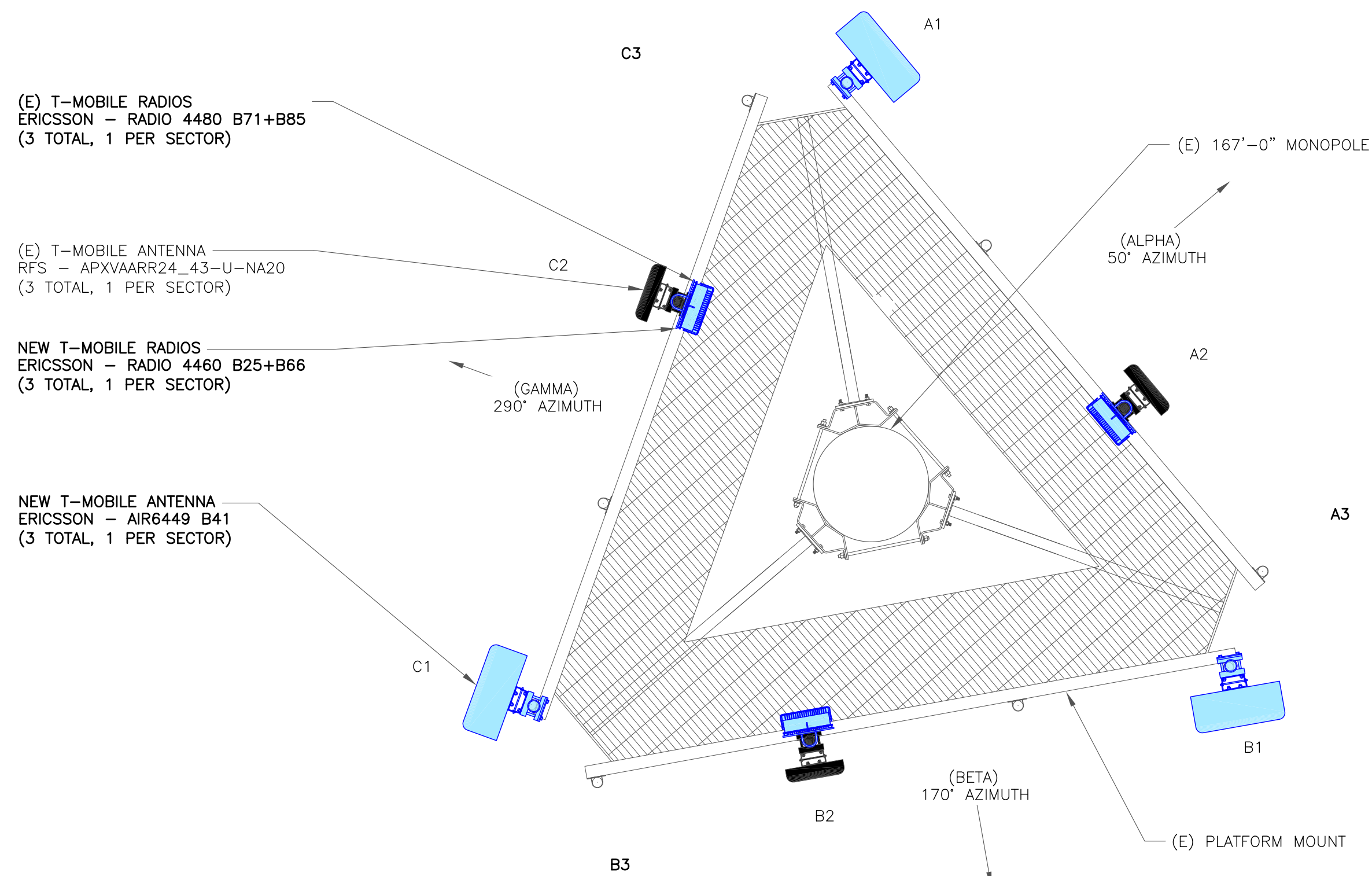
ANTENNA CL: 138'-0"  
MOUNT CL: 138'-0"

ANY AND ALL TOWER MOUNTED EQUIPMENT MUST NOT TRAP OR INTERFERE W/ EXISTING SAFETY CLIMB

1 FINAL ELEVATION  
SCALE: NOT TO SCALE



2 EXISTING ANTENNA LAYOUT  
SCALE: NOT TO SCALE



3 FINAL ANTENNA LAYOUT  
SCALE: NOT TO SCALE

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SHEET NUMBER:

**C-2**

REVISION:

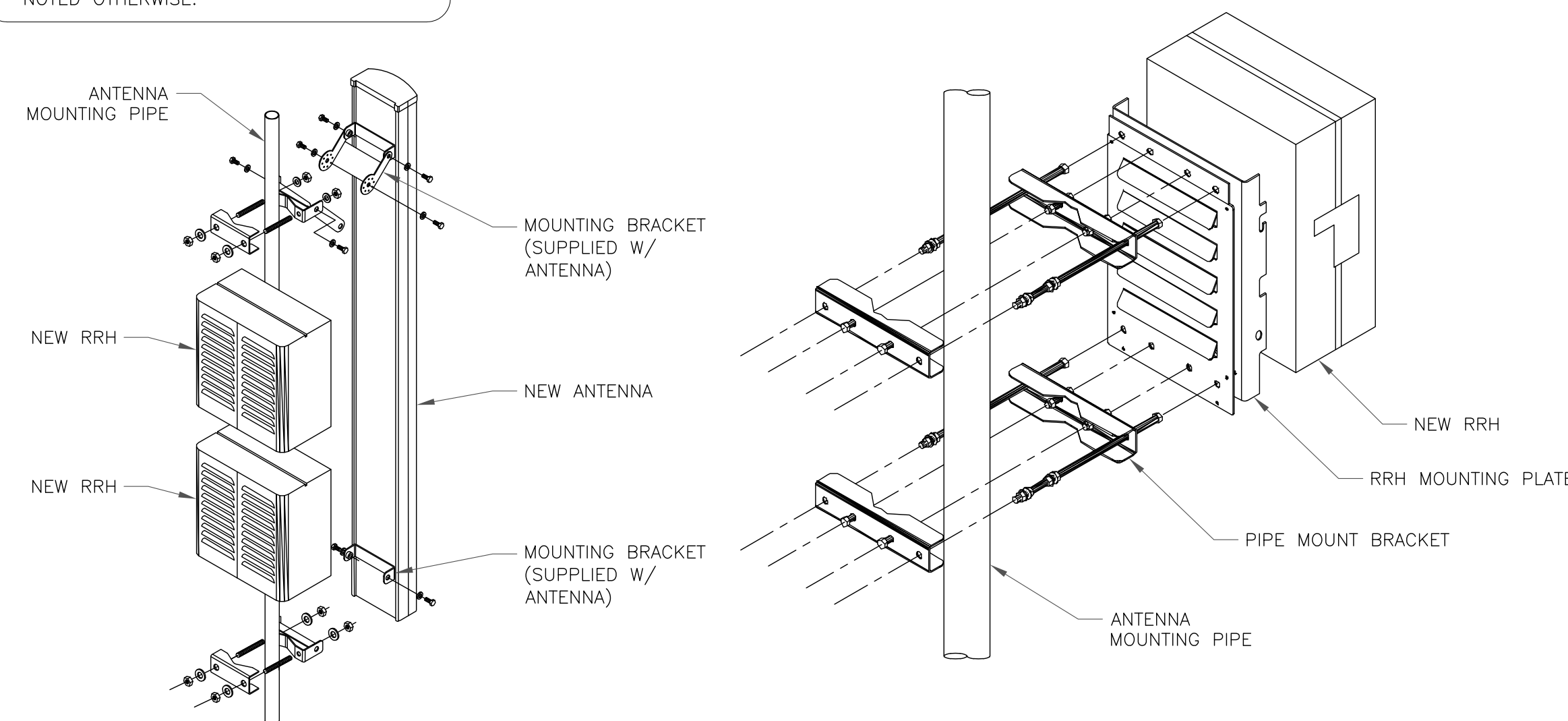
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RF SYSTEM SCHEDULE										
SECTOR	ANTENNA	TECH	MANUFACTURER	ANTENNA MODEL	AZIMUTH	M-TILT	E-TILT	RAD CENTER	TMA/RRU	FEEDLINE TYPE
ALPHA	A1	L2500/N2500	ERICSSON	AIR6449 B41	50°	0°	2°/2'	138'-0"	-	(1) 6X12 HYBRID CABLE
	-	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-
	A2	L700/L600/N600/ U2100/G1900/ U1900/L2100/ L1900	RFS	APXVAARR24_43-U-NA20	50°	0°	2°/2'/2' /2'	138'-0"	(1) ERICSSON - RADIO 4480 B71+B85 (1) ERICSSON - RADIO 4460 B25+B66	-
BETA	B1	L2500/N2500	ERICSSON	AIR6449 B41	170°	0°	2°/2'	138'-0"	-	(1) 6X12 HYBRID CABLE
	-	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-
	B2	L700/L600/N600/ U2100/G1900/ U1900/L2100/ L1900	RFS	APXVAARR24_43-U-NA20	170°	0°	2°/2'/2' /2'	138'-0"	(1) ERICSSON - RADIO 4480 B71+B85 (1) ERICSSON - RADIO 4460 B25+B66	-
GAMMA	C1	L2500/N2500	ERICSSON	AIR6449 B41	290°	0°	2°/2'	138'-0"	-	(2) 6X24 HYBRID CABLE
	-	-	-	EMPTY MOUNT PIPE	-	-	-	-	-	-
	C2	L700/L600/N600/ U2100/G1900/ U1900/L2100/ L1900	RFS	APXVAARR24_43-U-NA20	290°	0°	2°/2'/2' /2'	138'-0"	(1) ERICSSON - RADIO 4480 B71+B85 (1) ERICSSON - RADIO 4460 B25+B66	-
	C3	-	-	-	-	-	-	-	-	

1 ANTENNA AND CABLE SCHEDULE  
SCALE: NOT TO SCALE

**INSTALLER NOTES:**

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



2 ANTENNA WITH RRHs MOUNTING DETAIL  
SCALE: NOT TO SCALE

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T-MOBILE SITE NUMBER:  
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BU #: 801367  
**CT NHV-2075 CAC 801367**

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CHESHIRE, CT 06410

EXISTING  
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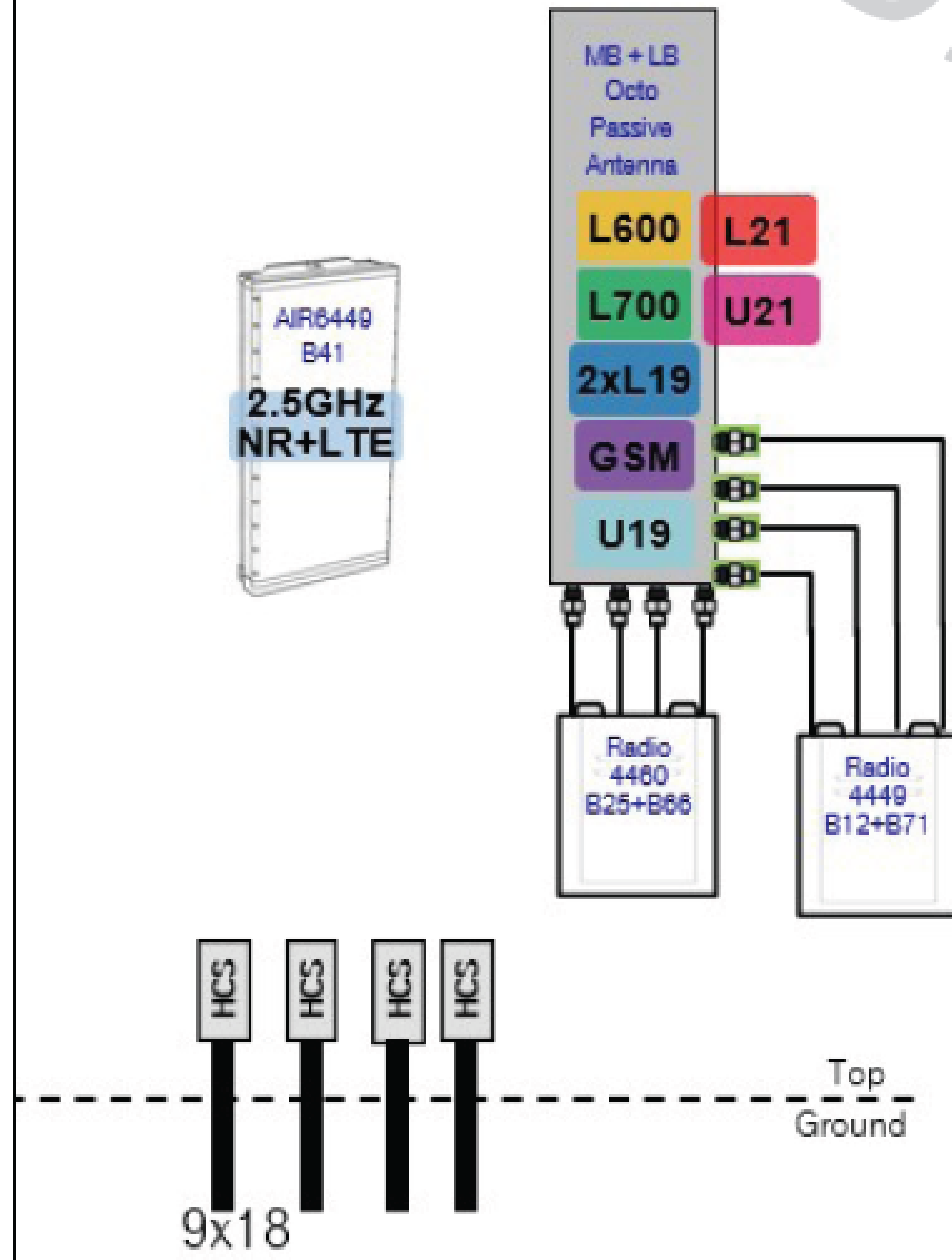


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SHEET NUMBER: **C-3** REVISION: **0**

# Final Config: 67D5A998E



Notes:

1 PLUMBING DIAGRAM  
SCALE: NOT TO SCALE

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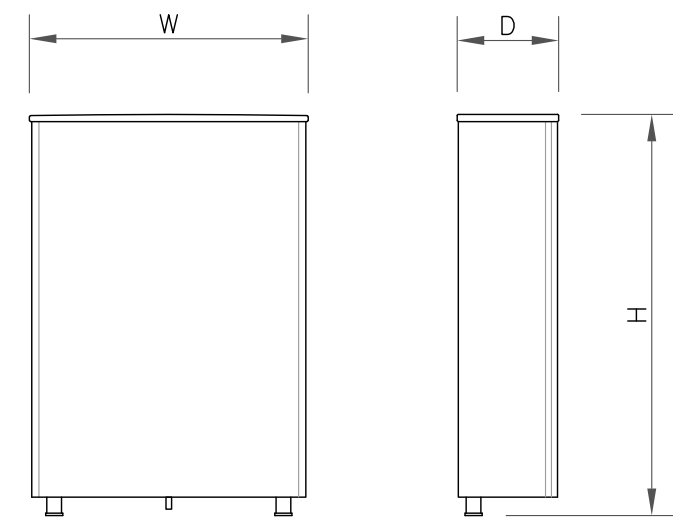
SHEET NUMBER:

**C-4**

REVISION:

**0**

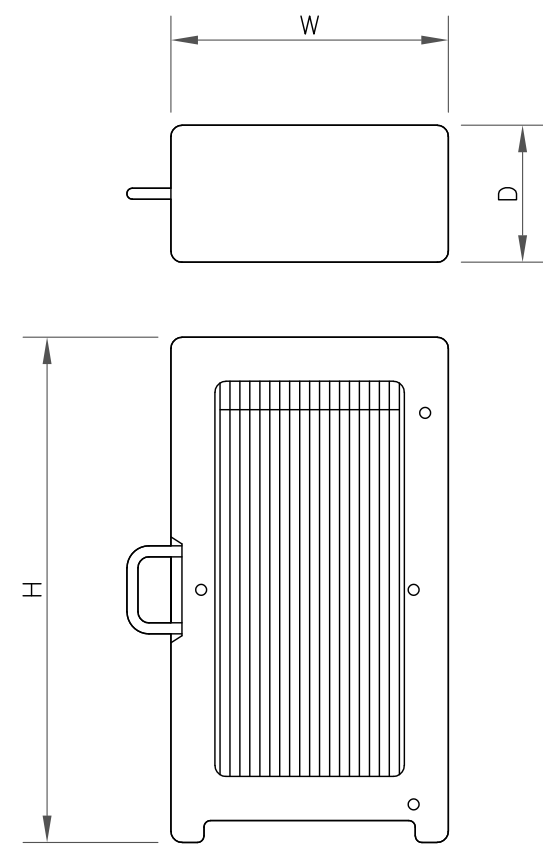




**ANTENNA SPECS**

MANUFACTURER	ERICSSON
MODEL #	AIR6449 B41
WIDTH	20.51"
DEPTH	8.54"
HEIGHT	33.11"
WEIGHT	114.63 LBS

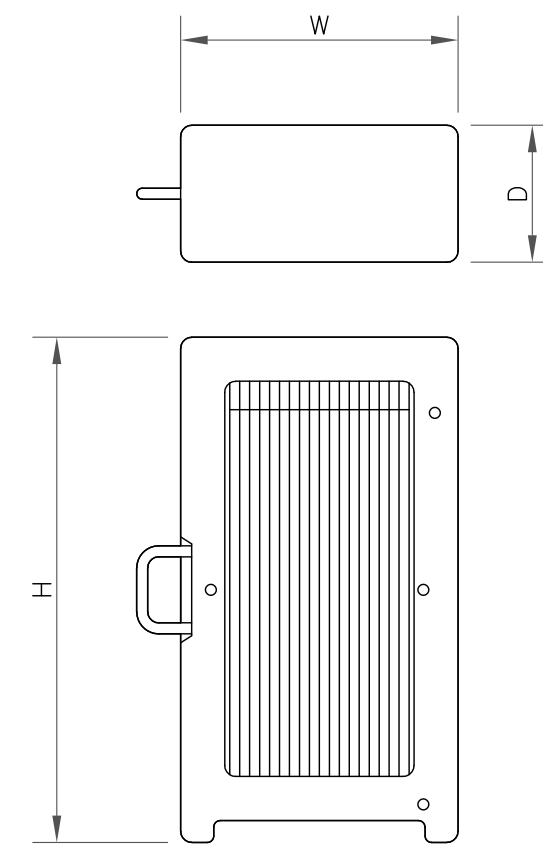
1 ANTENNA SPECS  
SCALE: NOT TO SCALE



**RRU SPECIFICATIONS**

MANUFACTURER	ERICSSON
MODEL #	RADIO 4460 B25+B66
WIDTH	15.10"
DEPTH	11.90"
HEIGHT	17.00"
WEIGHT	109.00 LBS

2 RRU SPECS  
SCALE: NOT TO SCALE



**RRU SPECIFICATIONS**

MANUFACTURER	ERICSSON
MODEL #	RADIO 4480 B71+B85
WIDTH	15.10"
DEPTH	11.90"
HEIGHT	17.00"
WEIGHT	109.00 LBS

3 RRU SPECS  
SCALE: NOT TO SCALE

4 NOT USED  
SCALE: NOT TO SCALE

5 NOT USED  
SCALE: NOT TO SCALE

6 NOT USED  
SCALE: NOT TO SCALE

7 NOT USED  
SCALE: NOT TO SCALE

8 NOT USED  
SCALE: NOT TO SCALE



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**C-5**

REVISION:

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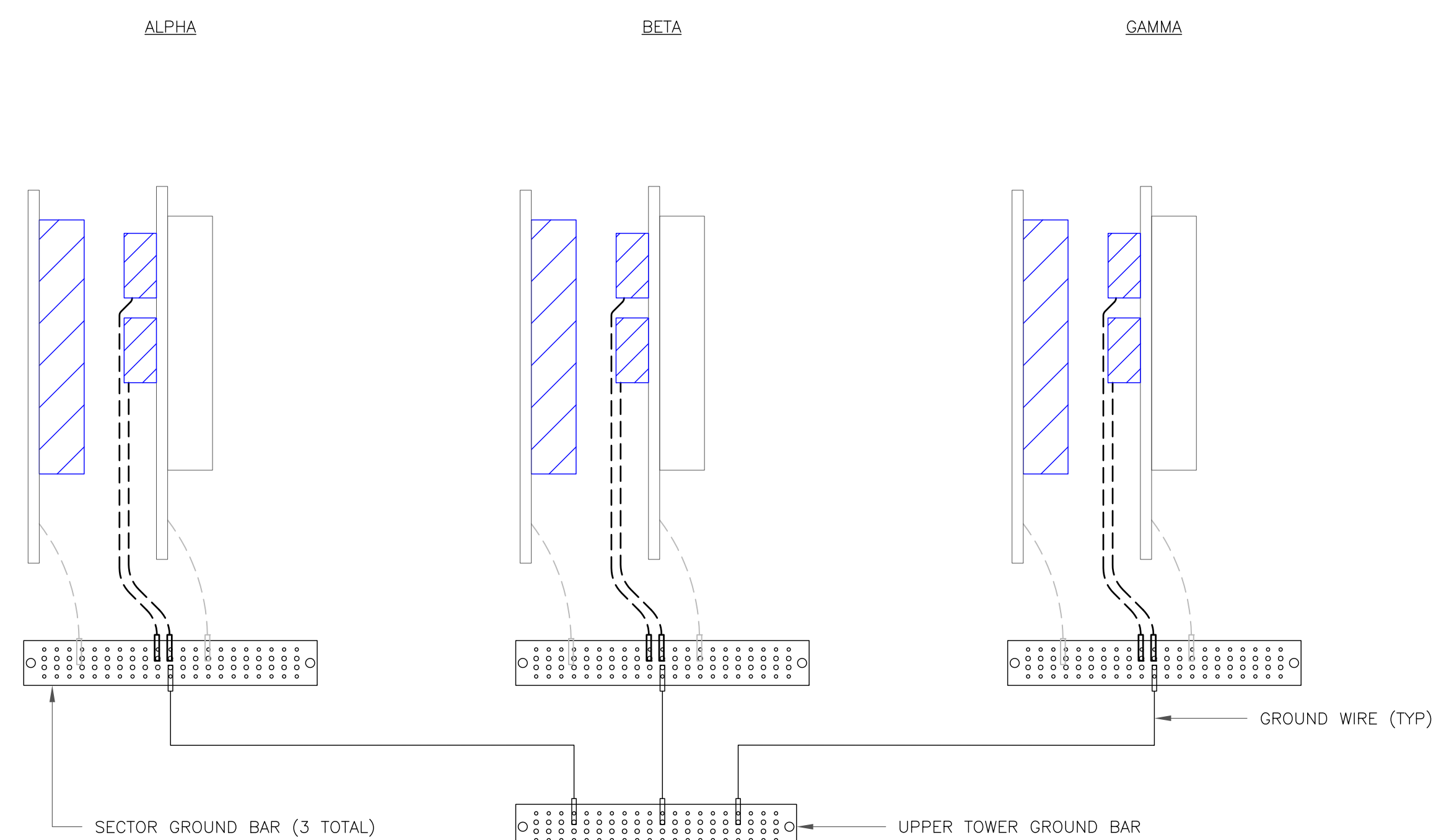
BU #: **801367**  
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EXISTING  
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0	10/28/21	AJA	CONSTRUCTION	MTJ



**NOTE:**  
ALL NEW GROUNDS TO BE #6 STRANDED  
COPPER WITH GREEN INSULATION UNLESS  
NOTED OTHERWISE.

**1** ANTENNA GROUNDING DIAGRAM  
SCALE: NOT TO SCALE



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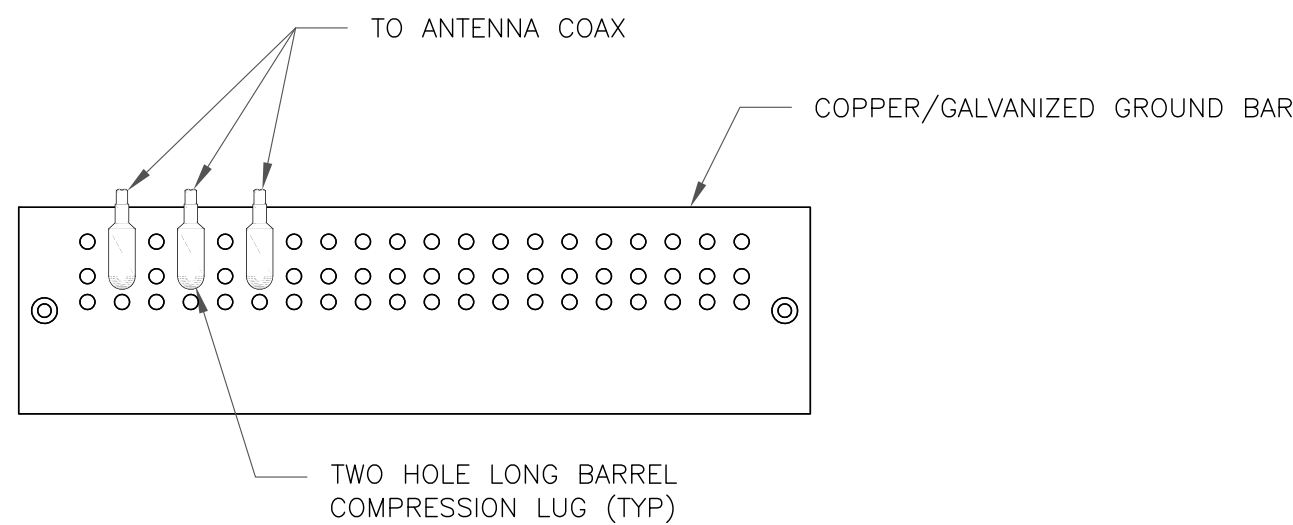
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SHEET NUMBER:

**G-1**

REVISION:

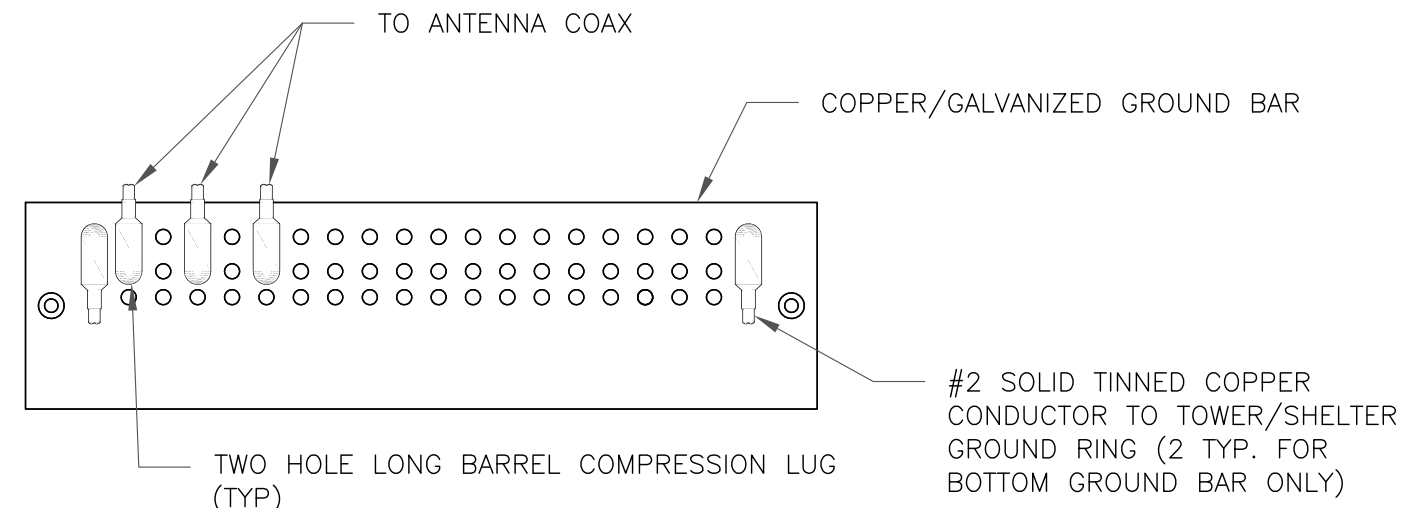
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NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

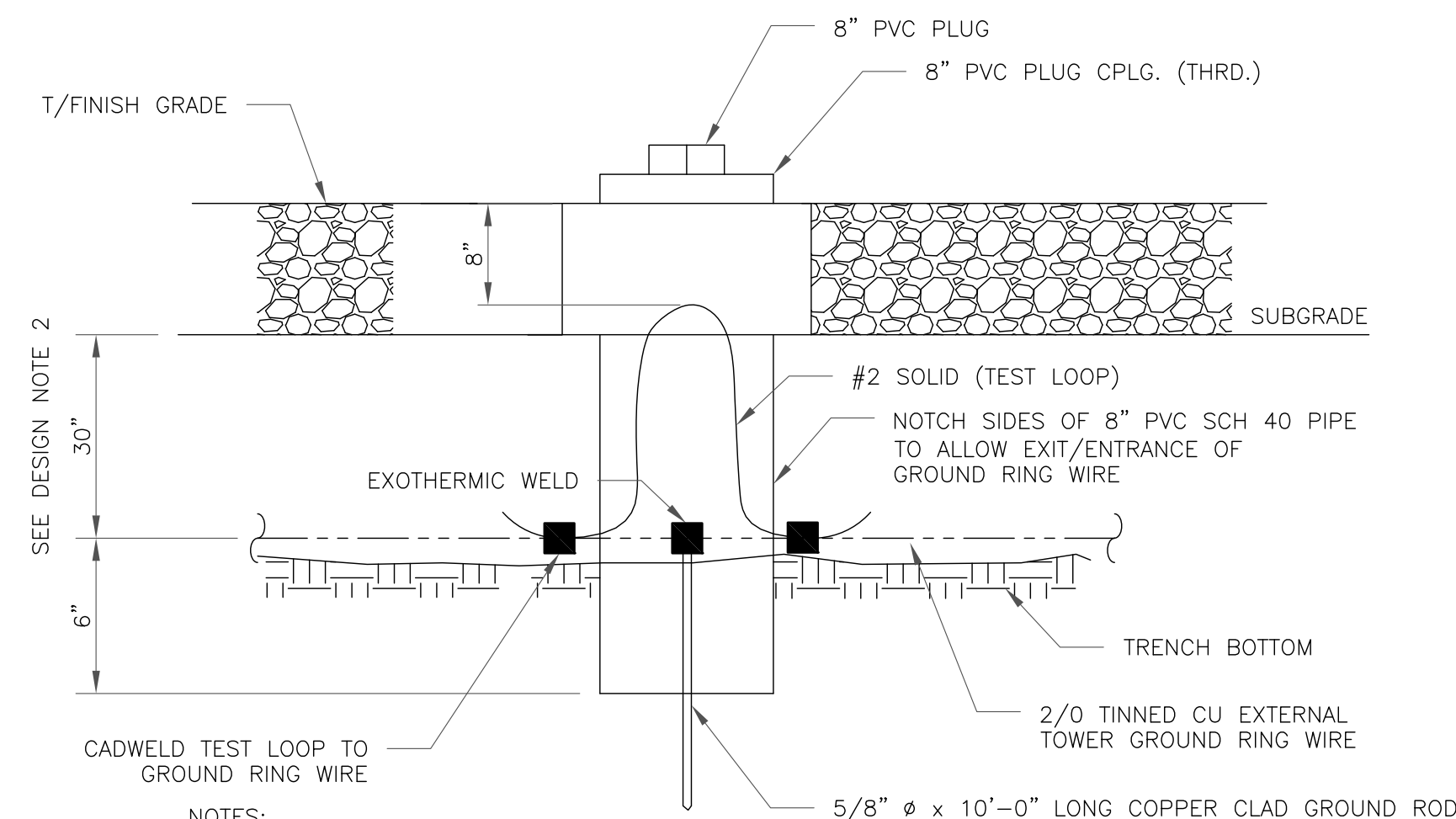
1 ANTENNA SECTOR GROUND BAR DETAIL  
SCALE: NOT TO SCALE



NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

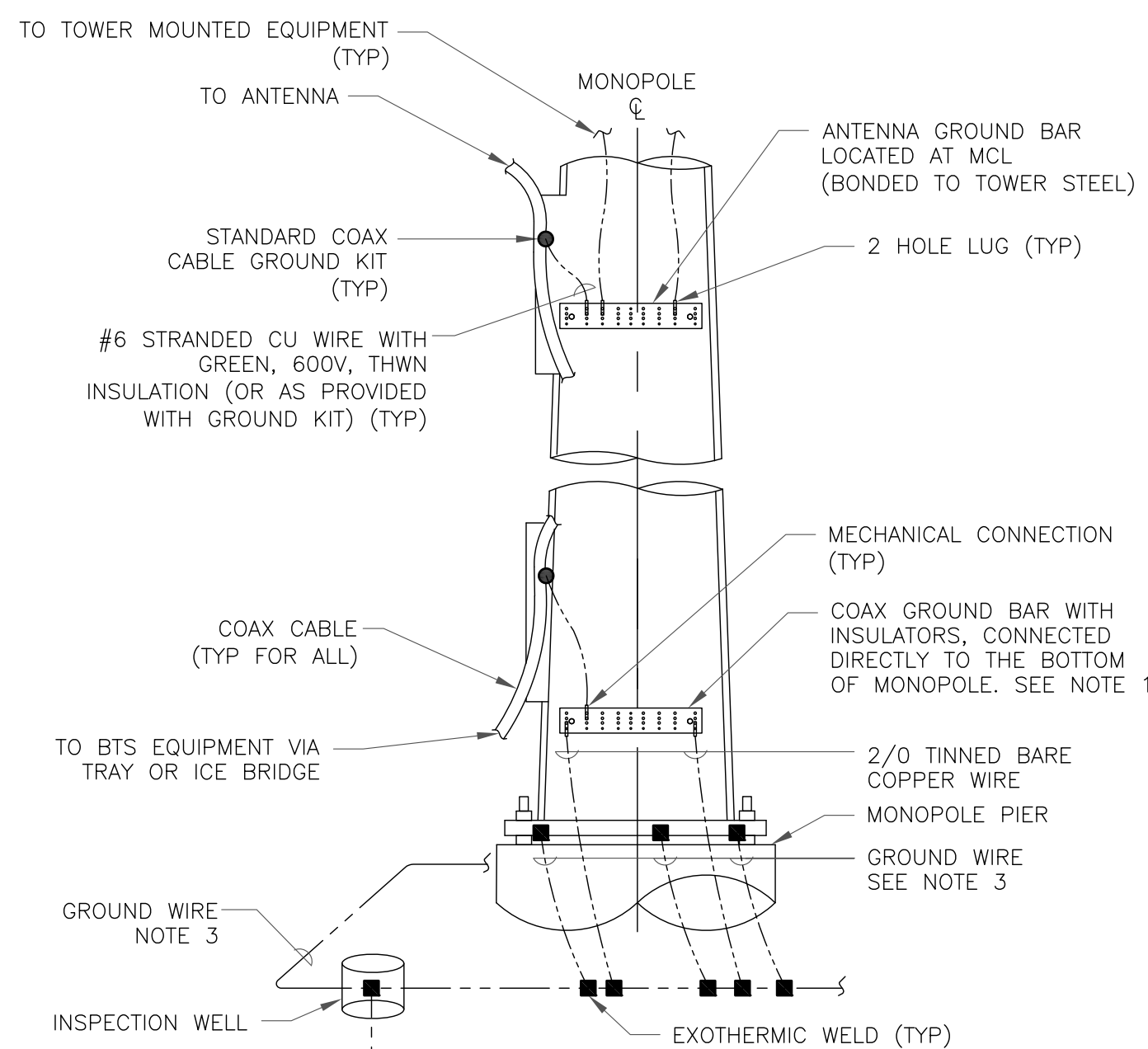
2 TOWER/SHELTER GROUND BAR DETAIL  
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D).

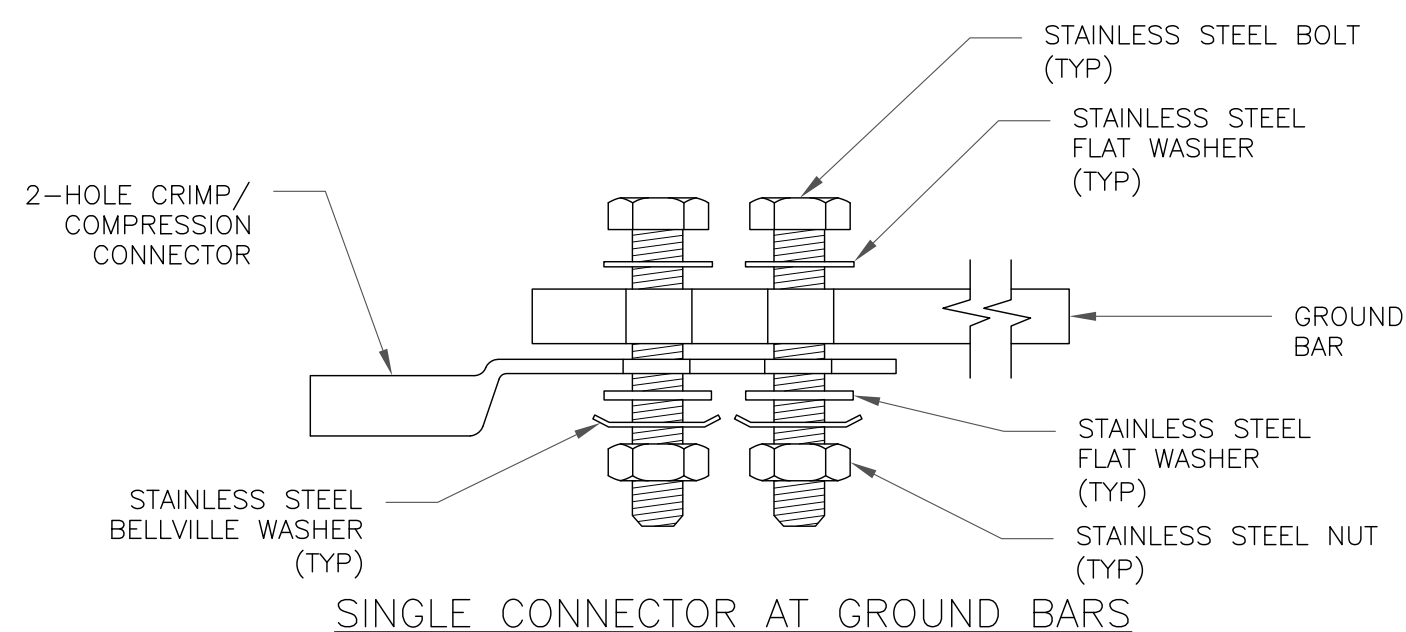
3 INSPECTION WELL DETAIL  
SCALE: NOT TO SCALE



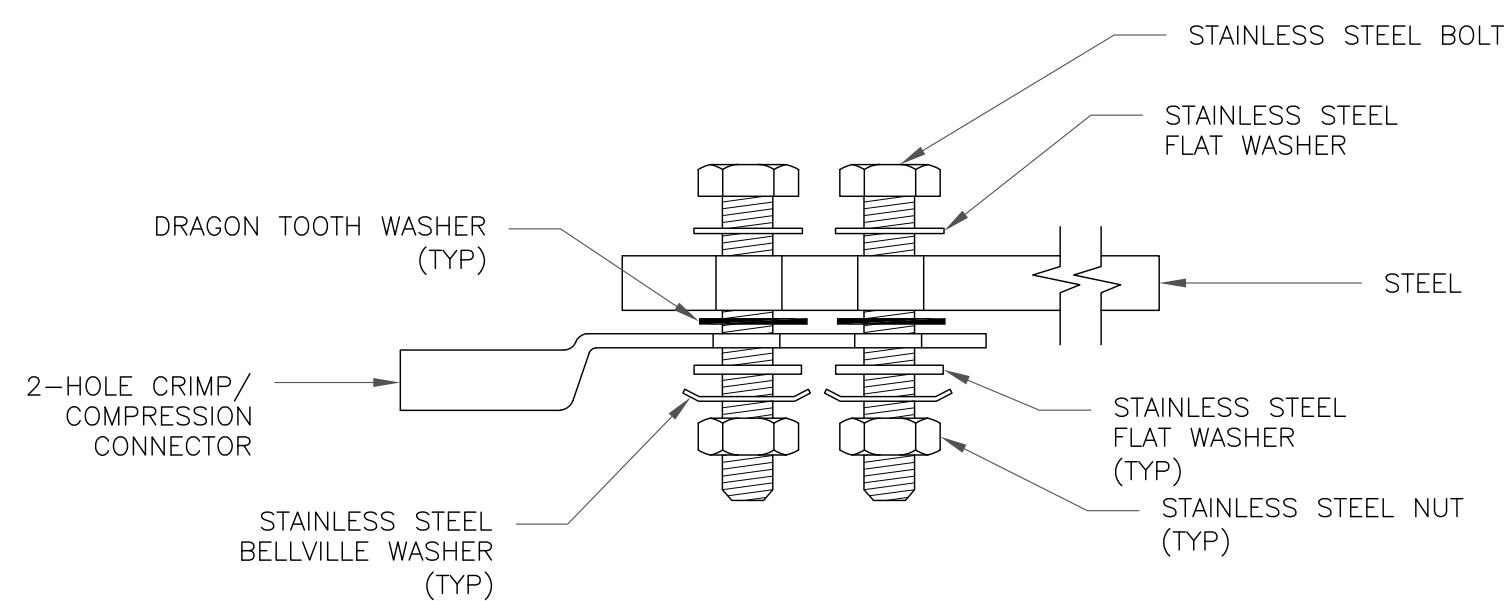
NOTES:

1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

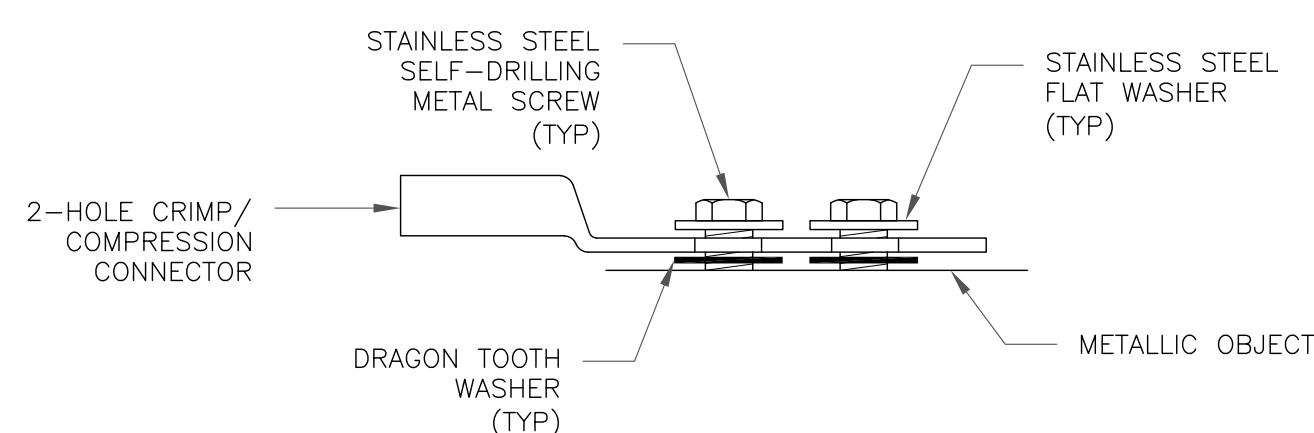
4 TYPICAL ANTENNA CABLE GROUNDING  
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

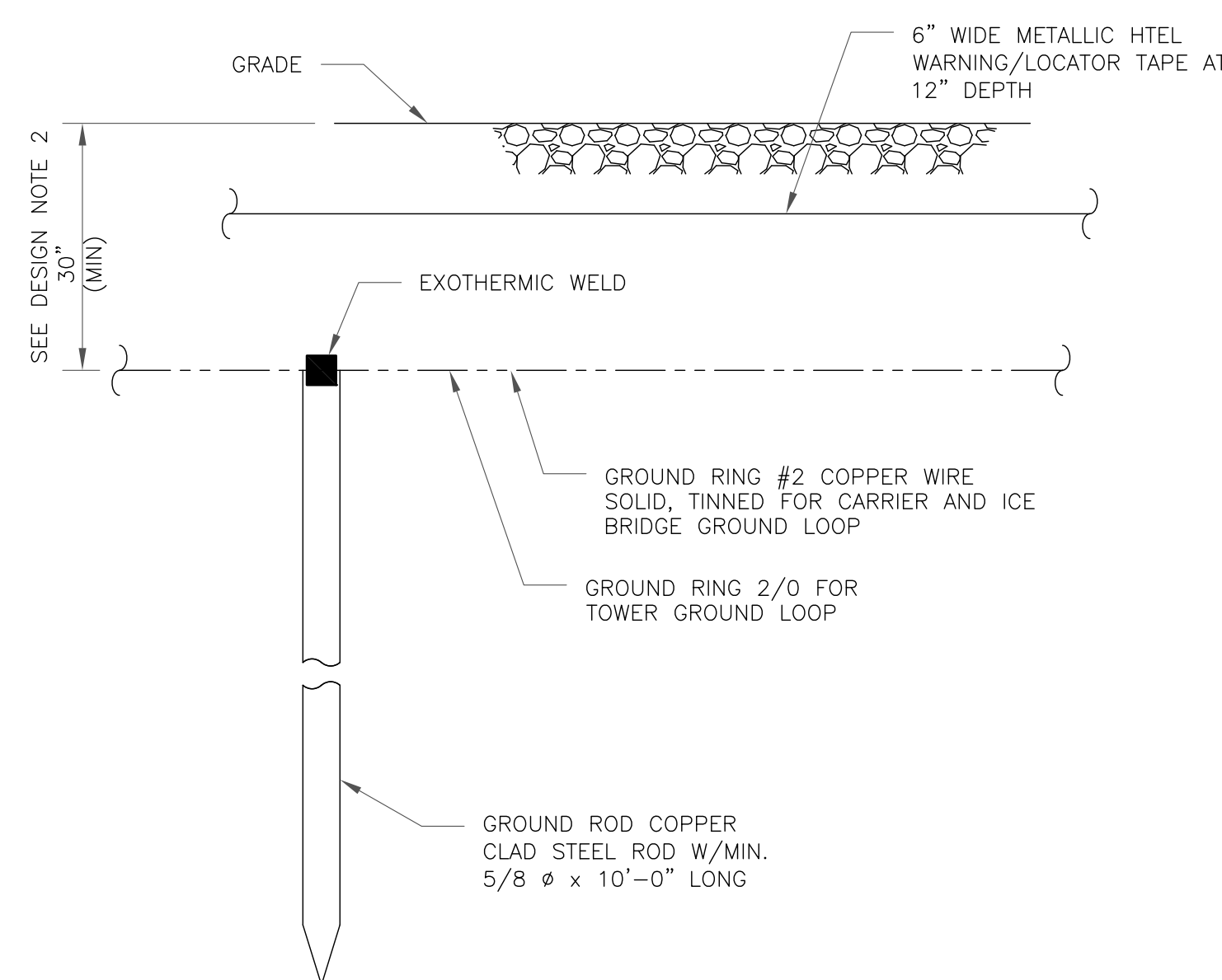


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS  
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D).

6 GROUND ROD DETAIL  
SCALE: NOT TO SCALE

T-Mobile

35 GRIFFIN ROAD  
BLOOMFIELD, CT 06002

CROWN CASTLE

3 CORPORATE PARK DRIVE, SUITE 101  
CLIFTON PARK, NY 12065

B+T GRP

1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com

T-MOBILE SITE NUMBER:  
CT11352C

BU #: 801367  
CT NHV-2075 CAC 801367

1121 SUMMIT ROAD  
CHESHIRE, CT 06410

EXISTING  
167'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/28/21	AJA	CONSTRUCTION	MTJ



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PEC.0001564  
Expires 2/10/22

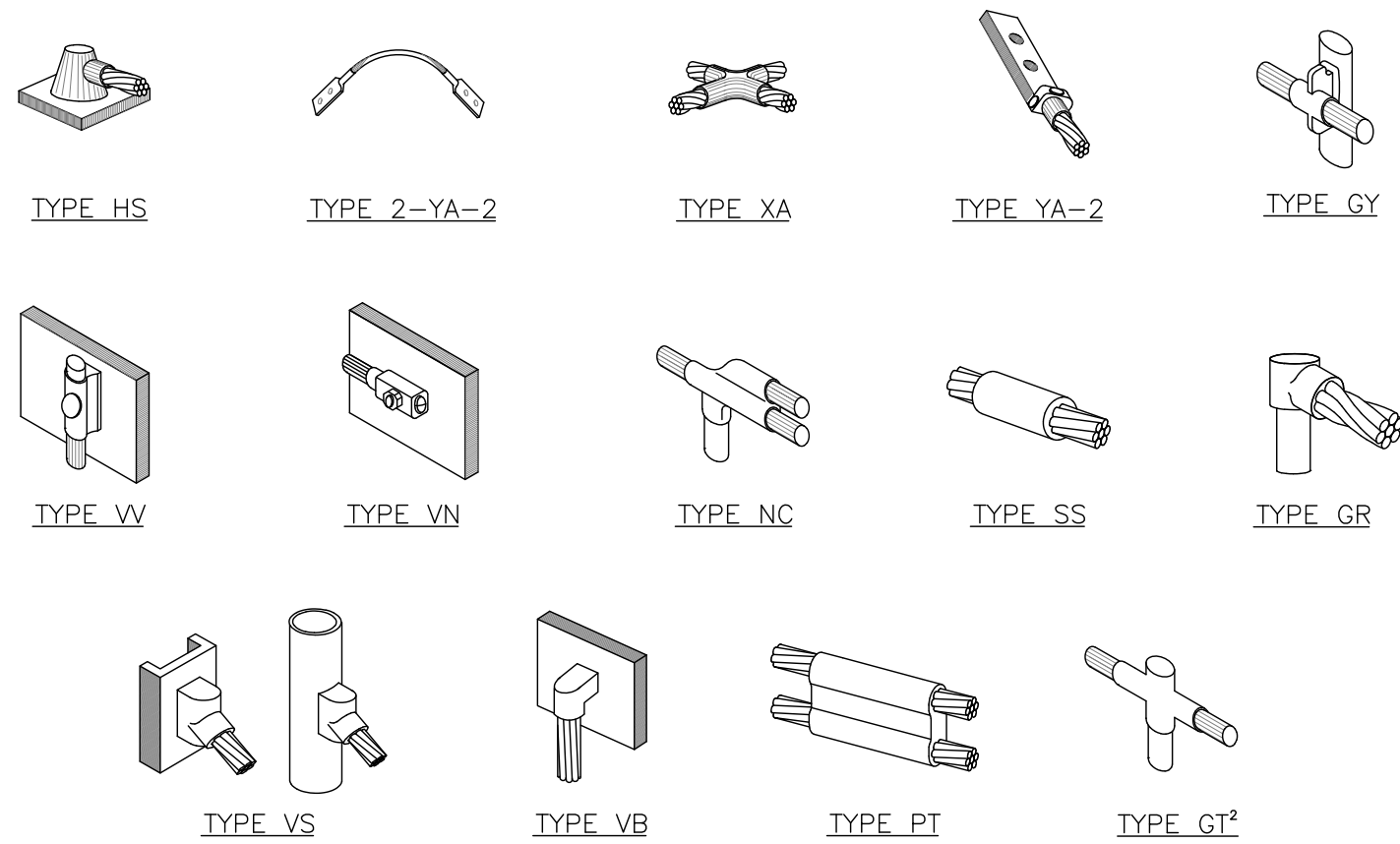
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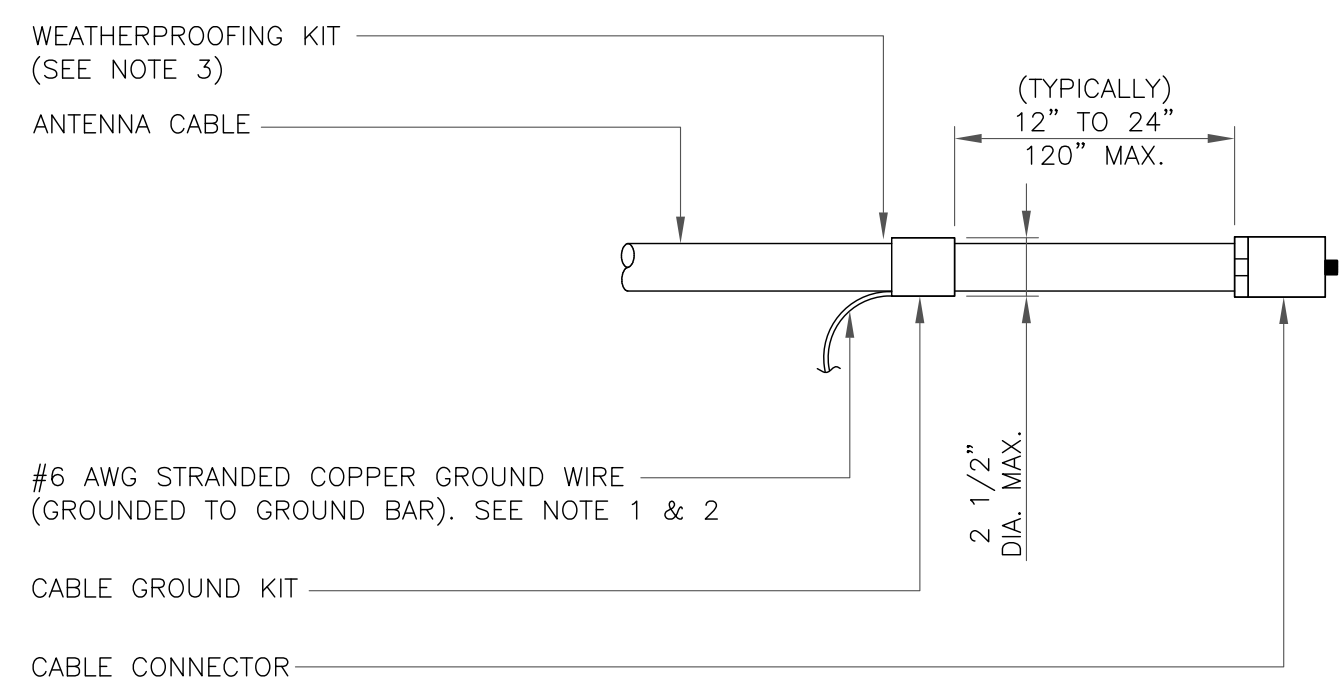
0



**NOTE:**

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

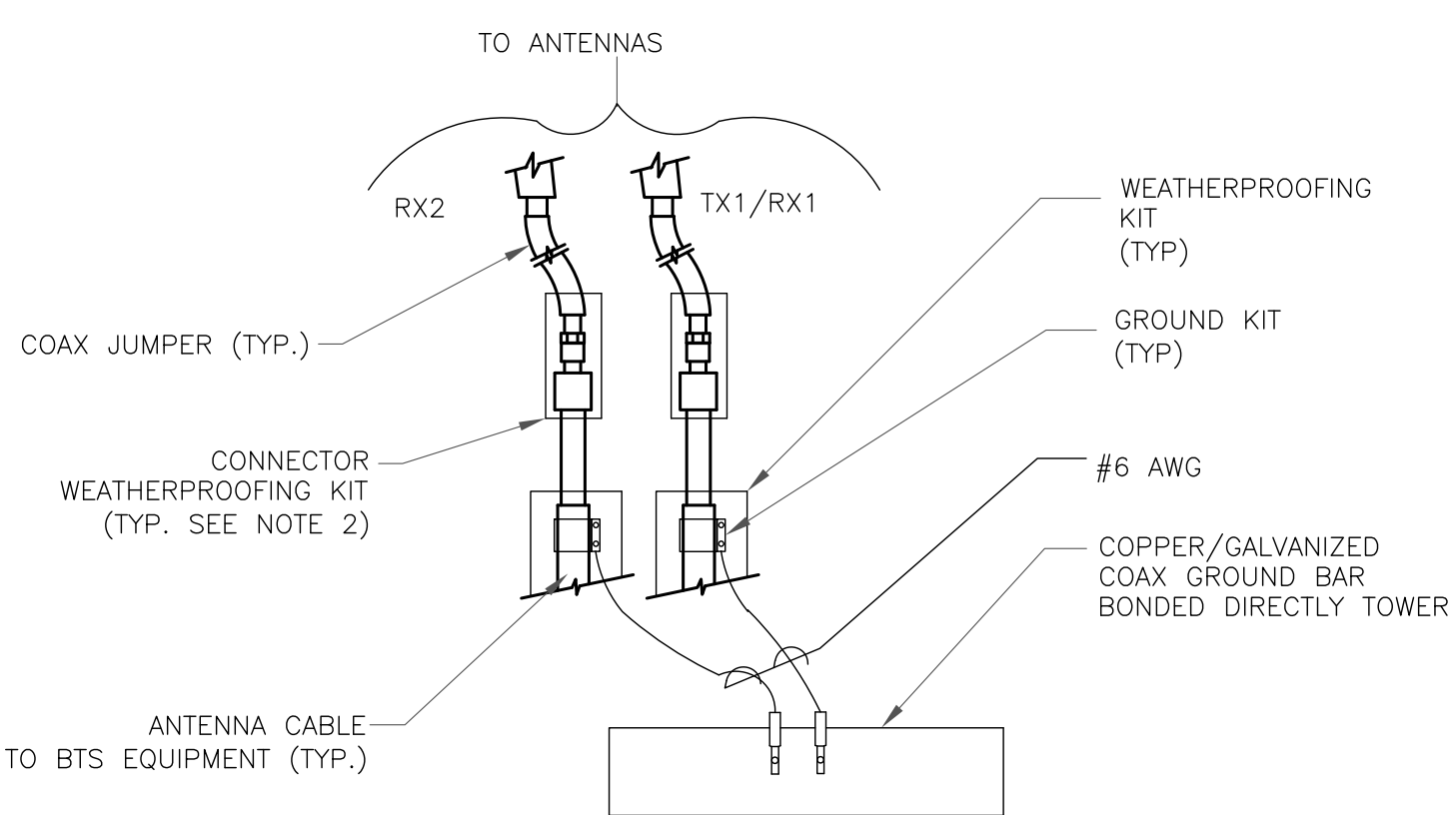
**1 CADWELD GROUNDING CONNECTIONS**  
SCALE: NOT TO SCALE



**NOTES:**

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

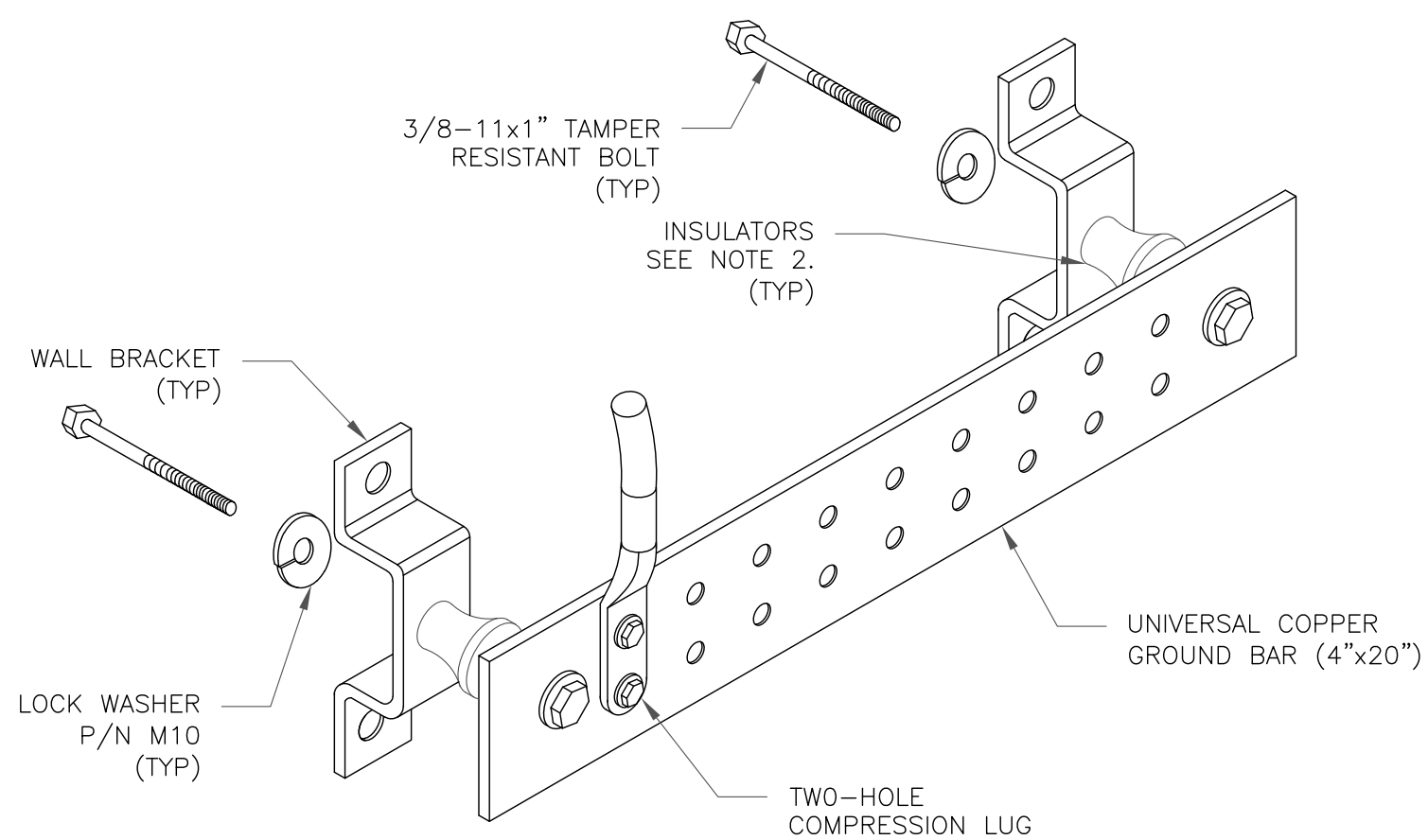
**3 CABLE GROUND KIT CONNECTION**  
SCALE: NOT TO SCALE



**NOTES:**

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

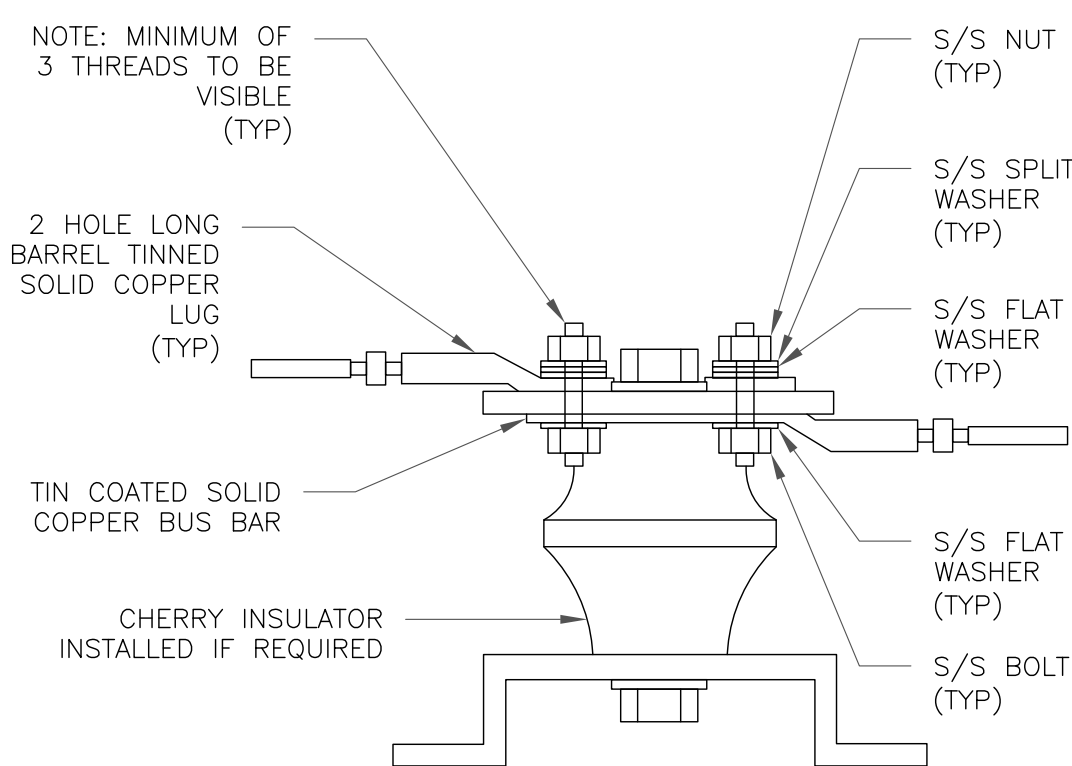
**4 GROUND CABLE CONNECTION**  
SCALE: NOT TO SCALE



**NOTES:**

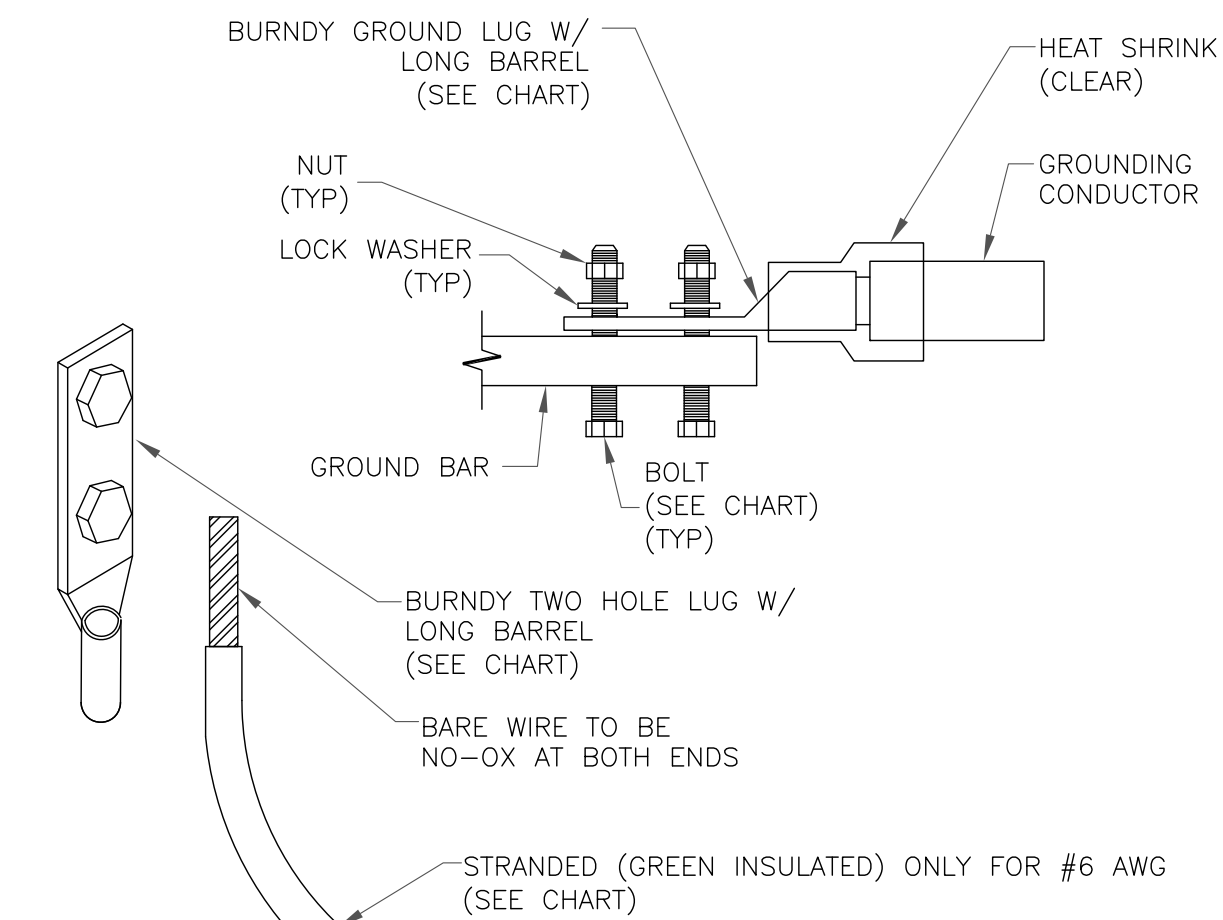
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

**6 GROUND BAR DETAIL**  
SCALE: NOT TO SCALE



**7 LUG DETAIL**  
SCALE: NOT TO SCALE

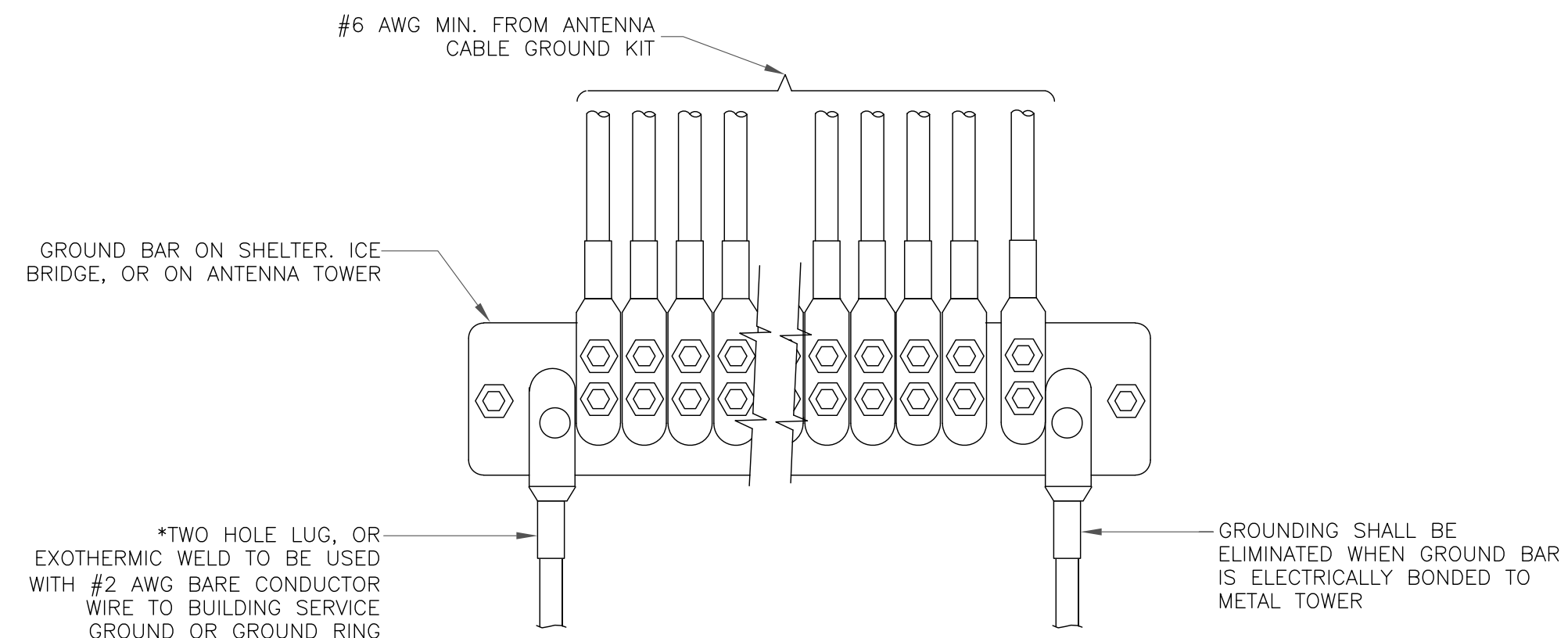
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



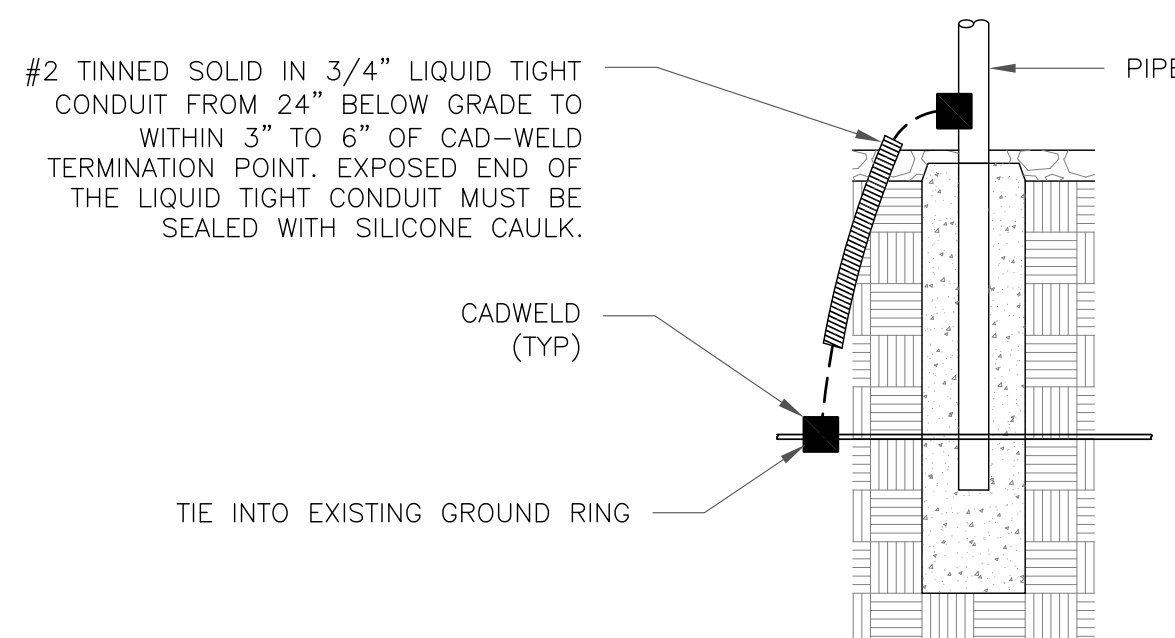
**NOTES:**

1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

**2 MECHANICAL LUG CONNECTION**  
SCALE: NOT TO SCALE



**5 GROUNDWIRE INSTALLATION**  
SCALE: NOT TO SCALE



**8 TRANSITIONING GROUND DETAIL**  
SCALE: NOT TO SCALE

**T-Mobile**  
35 GRIFFIN ROAD  
BLOOMFIELD, CT 06002

**CROWN CASTLE**  
3 CORPORATE PARK DRIVE, SUITE 101  
CLIFTON PARK, NY 12065

**B+T GRP**  
1717 S. BOULDER  
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T-MOBILE SITE NUMBER:  
**CT11352C**

BU #: 801367  
**CT NHV-2075 CAC 801367**

1121 SUMMIT ROAD  
CHESHIRE, CT 06410

EXISTING  
167'-0" MONOPOLE

**ISSUED FOR:**

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/28/21	AJA	CONSTRUCTION	MTJ



B&T ENGINEERING, INC.  
PEC.0001564  
Expires 2/10/22

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SHEET NUMBER:

**G-3**

REVISION:

**0**

# Exhibit D

## Structural Analysis Report

Date: **October 19, 2021**



B+T Group  
1717 S. Boulder, Suite 300  
Tulsa, OK 74119  
(918) 587-4630

**Subject:** **Structural Analysis Report**

**Carrier Designation:** **T-Mobile Co-Locate**  
**Site Number:** CT11352C

**Crown Castle Designation:** **BU Number:** 801367  
**Site Name:** CT NHV-2075 CAC 801367  
**JDE Job Number:** 686819  
**Work Order Number:** 2030573  
**Order Number:** 586785 Rev. 0

**Engineering Firm Designation:** **B+T Group Project Number:** 156975.002.01

**Site Data:** **1121 Summit Road, Cheshire, New Haven County, CT**  
**Latitude 41° 32' 11.2", Longitude -72° 57' 26.3"**  
**167 Foot - Monopole Tower**

B+T Group is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

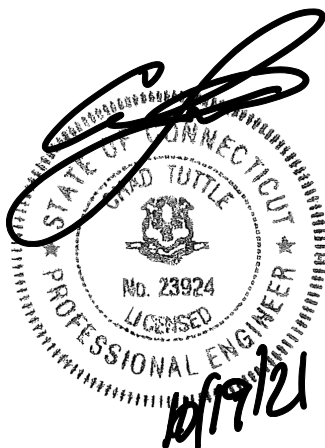
LC7: Proposed Equipment Configuration

**Sufficient Capacity**

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2015 International Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Rose Denny

Respectfully submitted by: B+T Engineering, Inc.  
COA: PEC.0001564; Expires: 02/10/2022



Chad E. Tuttle, P.E.

## TABLE OF CONTENTS

### 1) INTRODUCTION

### 2) ANALYSIS CRITERIA

Table 1 - Proposed Equipment Configuration

Table 2 - Other Considered Equipment

### 3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

### 4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Table 5 – Tower Component Stresses vs. Capacity

4.1) Recommendations

### 5) APPENDIX A

tnxTower Output

### 6) APPENDIX B

Base Level Drawing

### 7) APPENDIX C

Additional Calculations

## 1) INTRODUCTION

This tower is a 167 ft Monopole tower designed by Summit Manufacturing Inc. The tower has been modified multiple times to accommodate additional loading. The modification has been considered ineffective in this analysis.

## 2) ANALYSIS CRITERIA

<b>TIA-222 Revision:</b>	TIA-222-H
<b>Risk Category:</b>	II
<b>Wind Speed:</b>	118 mph
<b>Exposure Category:</b>	B
<b>Topographic Factor:</b>	1
<b>Ice Thickness:</b>	1 in
<b>Wind Speed with Ice:</b>	50 mph
<b>Service Wind Speed:</b>	60 mph

**Table 1 - Proposed Equipment Configuration**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
138.0	138.0	3	Ericsson	AIR6449 B41_T-MOBILE	2 2	1-5/8 1-3/8
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	Ericsson	Radio 4480_TMOV2		
		3	Rfs Celwave	APXVAARR24_43-U-NA20		
		1	--	Platform Mount [LP 1201-1_KCKR-HR-1]		

**Table 2 - Other Considered Equipment**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	
167.0	169.0	1	Gps	GPS_A	19 2 1	1-5/8 7/8 1/2	
		1	RFI Antennas	FSA10-41-DIN			
	168.5	3	SitePro 1	HRK12 Support Rail Kit			
	168.0	1	RFI Antennas	FSA10-67-DIN			
	167.0	167.0	6	Antel			LPA-80063-6CF-EDIN
			6	Jma Wireless			MX06FRO660-03
			1	Raycap			RVZDC-6627-PF-48
			3	Samsung Telecom.			MT6407-77A
			3	Samsung Telecom.			RFV01U-D1A
			3	Samsung Telecom.			RFV01U-D2A
			1	--			Platform Mount [LP 1201-1]
	165.5	3	SitePro 1	HRK12 Support Rail Kit			
	164.5	6	SitePro 1	PRK-SFS			
160.0	162.0	3	Powerwave Tech.	7770.00	12 4 2	1-5/8 3/4 3/8	
	161.0	3	Cci Antennas	TPA-65R-LCUUUU-H8			
	160.0	3	Andrew	SBNH-1D6565C			
		3	Ericsson	RRUS 11 B12			



Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		3	Ericsson	RRUS 32 B2		
		3	Ericsson	RRUS 32 B30		
		6	Kaelus	DBC0061F1V51-2		
		3	Kathrein	78211056		
		6	Powerwave Tech.	LGP21401		
		2	Raycap	DC6-48-60-18-8F		
		1	--	Platform Mount [LP 1201-1_KCKR-HR-1]		
150.0	152.0	3	Alcatel Lucent	800MHZ 2X50W RRH W/Filter	--	--
	150.0	3	Alcatel Lucent	PCS 1900MHZ 4X45W-65MHZ		
		1	--	Side Arm Mount [SO 102-3]		
		1	--	Pipe Mount [PM 601-3]		
148.0	150.0	3	Alcatel Lucent	TD-RRH8X20-25	4	1-1/4
	148.0	3	Rfs Celwave	APXVSP18-C-A20		
		3	Rfs Celwave	APXVTM14-ALU-I20		
		1	--	Platform Mount [LP 1201-1]		
130.0	130.0	1	RFS Celwave	SC3-W100AC	1	EW90
		1	--	Side Arm Mount [SO 701-1]		
		1	--	Pipe Mount [PM 601-1]		
123.0	123.0	1	--	Commscope MC-PK8-DSH	1	1-3/8
		3	Fujitsu	TA08025-B604		
		3	Fujitsu	TA08025-B605		
		3	Jma Wireless	MX08FRO665-21		
		1	Raycap	RDIDC-9181-PF-48		

### 3) ANALYSIS PROCEDURE

**Table 3 - Documents Provided**

Document	Reference	Source
Tower Manufacturer Drawing	799210	CCI Sites
Mount Analysis Report	10014922	CCI Sites
Tower Modification Drawing	3245562	CCI Sites
Post Modification Inspection	3379750	CCI Sites
Tower Modification Drawing	3461318	CCI Sites
Post Modification Inspection	3847627	CCI Sites
Foundation Mapping	842573	CCI Sites
Geotech Report	445076	CCI Sites
Crown CAD Package	Date: 10/07/2021	CCI Sites

### 3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

### 3.2) Assumptions

- 1) The tower and structures were maintained in accordance with the - TIA-222 standard.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the tower.

## 4) ANALYSIS RESULTS

**Table 4 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	167 - 118.25	Pole	TP32.36x24x0.25	1	-27.816	1527.456	64.4	Pass
L2	118.25 - 77.75	Pole	TP44.297x31.088x0.313	2	-38.031	2581.435	70.6	Pass
L3	77.75 - 38.25	Pole	TP52.877x42.058x0.375	3	-52.216	3719.824	66.7	Pass
L4	38.25 - 0	Pole	TP61.04x50.504x0.438	4	-72.355	5169.171	60.9	Pass
							Summary	
						Pole (L2)	70.6	Pass
						Rating =	70.6	Pass

**Table 5 - Tower Component Stresses vs. Capacity**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	Base	58.4	Pass
1	Base Plate	Base	47.2	Pass
1	Base Foundation (Structure)	Base	38.6	Pass
1	Base Foundation (Soil Interaction)	Base	54.5	Pass

<b>Structure Rating (max from all components) =</b>	<b>70.6%</b>
---	--------------

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
- 2) Rating per TIA-222-H Section 15.5.

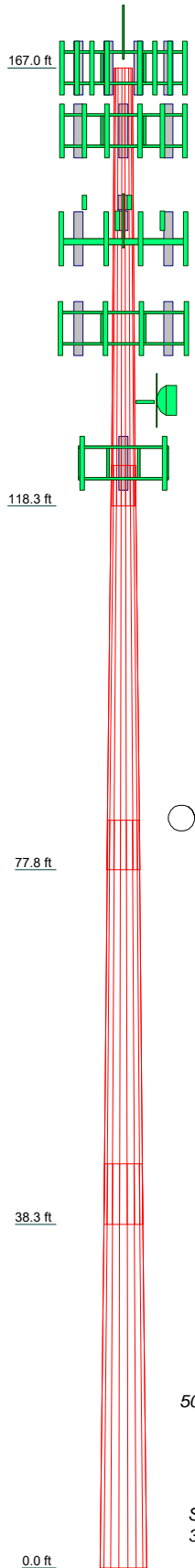
### 4.1) Recommendations

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

**APPENDIX A**

**TNXTOWER OUTPUT**

Section	1	2	3	4	
Length (ft)	48.750	45.000	45.000	45.000	
Number of Sides	18	18	18	18	
Thickness (in)	0.250	0.313	0.375	0.438	
Socket Length (ft)	4.500	5.500	6.750	50.504	
Top Dia (in)	24.000	31.088	42.058	61.040	
Bot Dia (in)	32.360	44.297	52.877		
Grade		A607-65			
Weight (K)	3.7	5.7	8.6	11.8	29.7



### MATERIAL STRENGTH

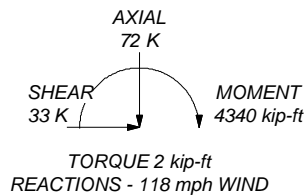
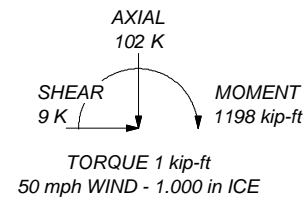
GRADE	Fy	Fu	GRADE	Fy	Fu
A607-65	65 ksi	80 ksi			

### TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 70.6%

167.0 ft  
118.3 ft  
77.8 ft  
38.3 ft  
0.0 ft

ALL REACTIONS  
ARE FACTORED



**B+T Group**  
1717 S. Boulder, Suite 300  
Tulsa, OK 74119  
Phone: (918) 587-4630  
FAX: (918) 295-0265

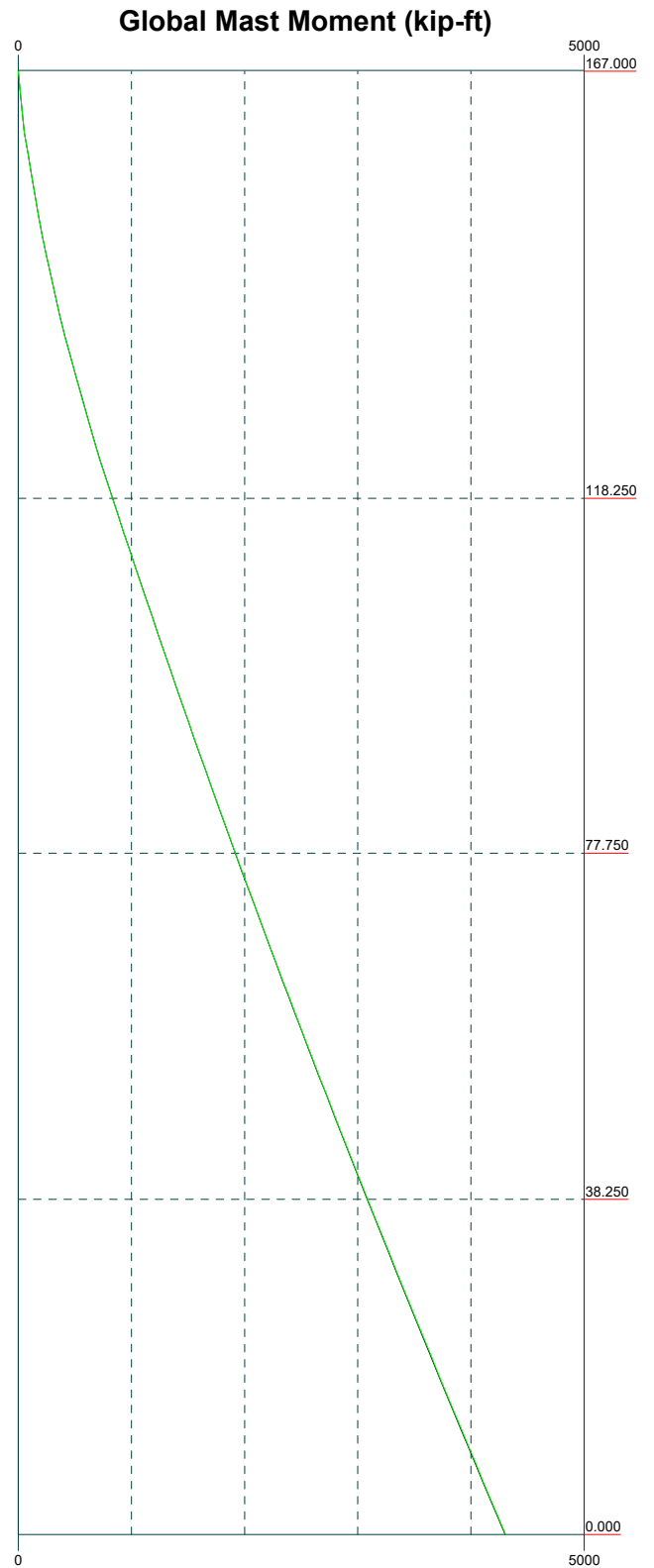
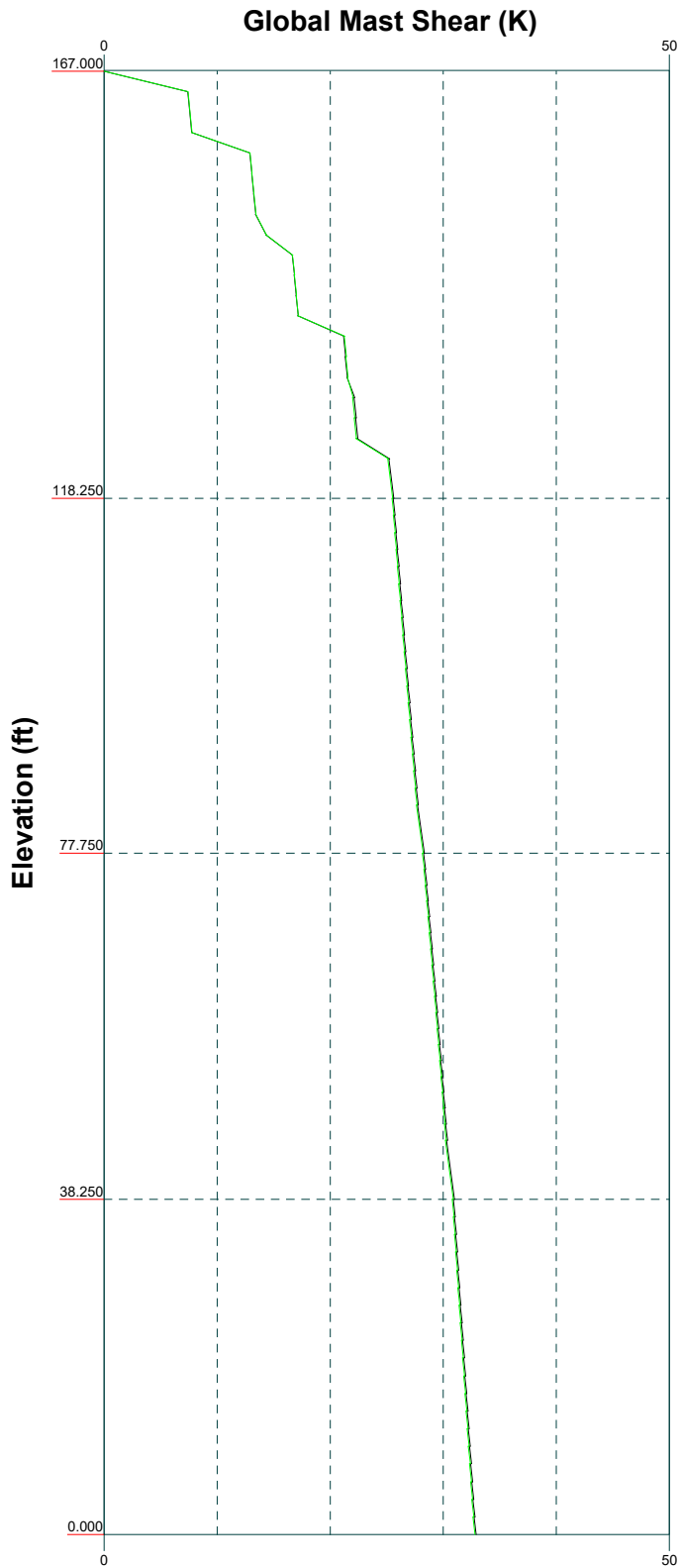
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Project:	Client: Crown Castle	App'd:
Code: TIA-222-H	Drawn by: Pavan Upadhyia	Scale: NTS
Path:	Date: 10/16/21	Dwg No. E-1

Vx

Vz

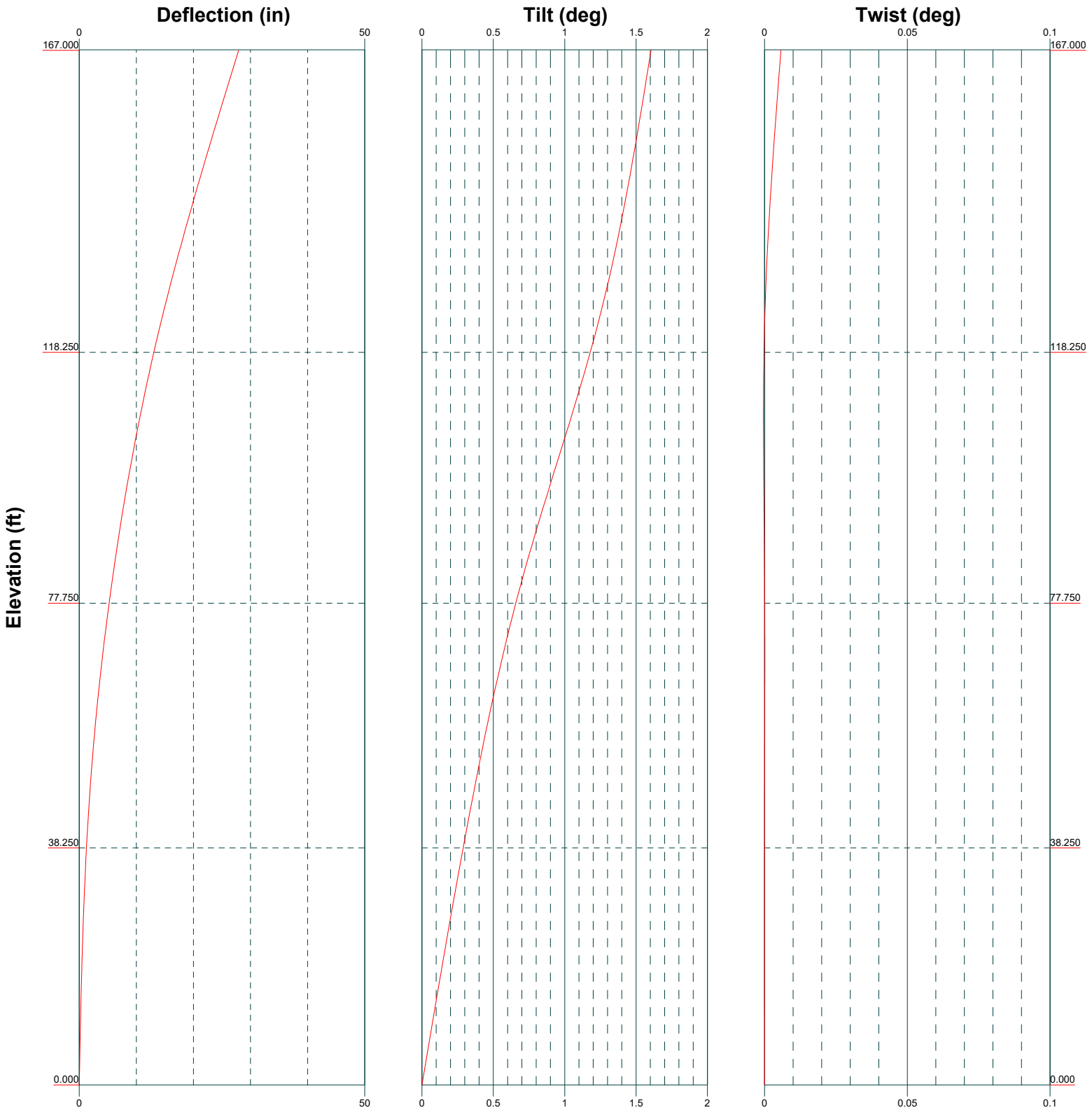
Mx


Mz



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 Tulsa, OK 74119  
 Phone: (918) 587-4630  
 FAX: (918) 295-0265

Job: <b>156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 80136)</b>		
Project:		
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Code: TIA-222-H	Date: 10/16/21	Scale: NTS
Path:		Dwg No. E-4

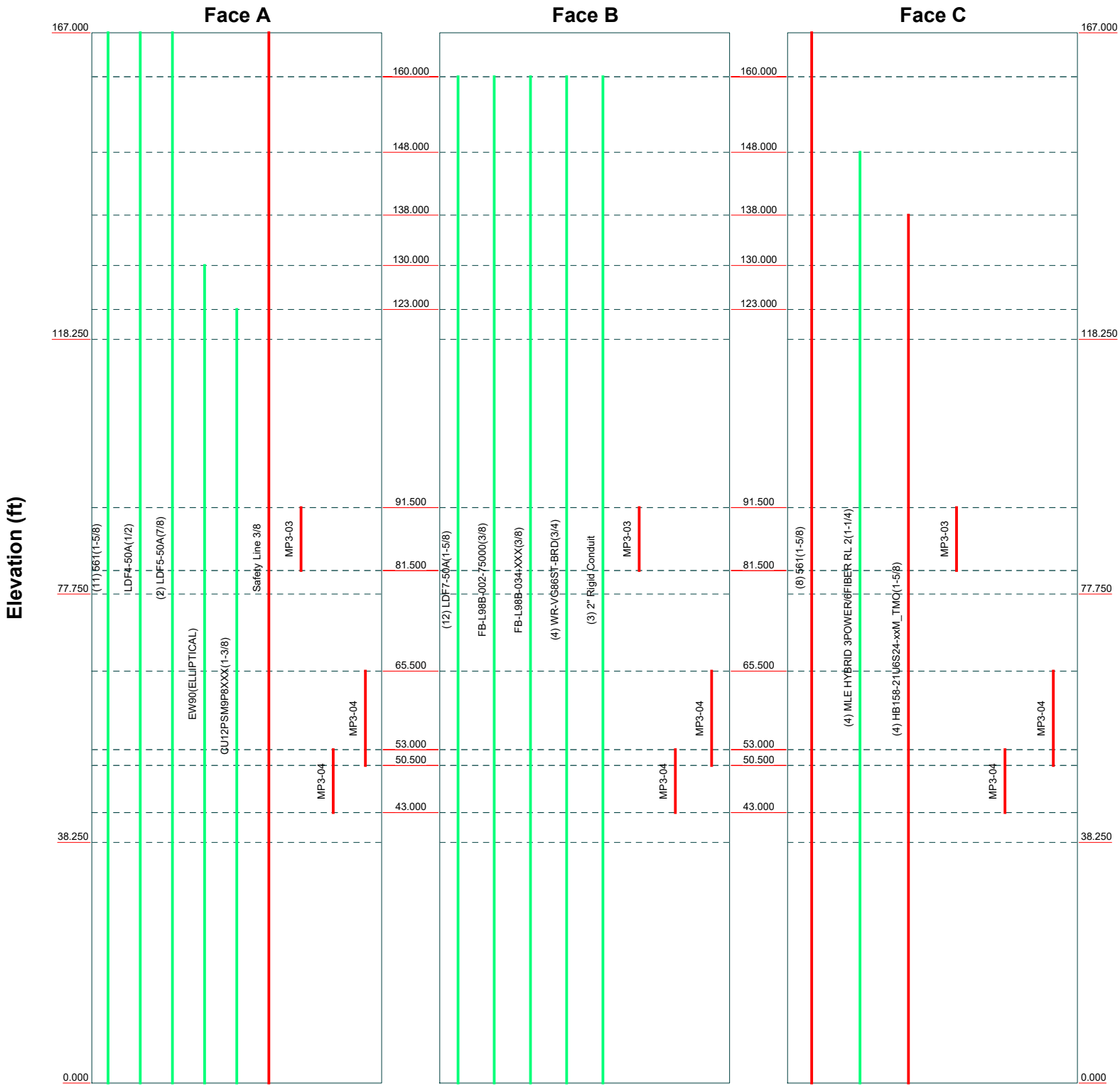


 <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	Job: <b>156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 80136)</b>		
	Project:		
	Client: Crown Castle	Drawn by: Pavan Upadhya	App'd:
	Code: TIA-222-H	Date: 10/16/21	Scale: NTS
	Path:	Dwg No. E-5	

# Feed Line Distribution Chart

## 0' - 167'

— Round   
 — Flat   
 — App In Face   
 — App Out Face   
 — Truss Leg



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	Project:		
	Client: Crown Castle	Drawn by: Pavan Upadhy	App'd:
	Code: TIA-222-H	Date: 10/16/21	Scale: NTS
	Path:	Dwg No. E-7	

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)</p>	<p><b>Page</b> 1 of 20</p>
	<p><b>Project</b></p>	<p><b>Date</b> 15:42:02 10/16/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Pavan Upadhy</p>

## Tower Input Data

The tower is a monopole.

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

The following design criteria apply:

Tower is located in New Haven County, Connecticut.

Tower base elevation above sea level: 616.000 ft.

Basic wind speed of 118 mph.

Risk Category II.

Exposure Category B.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.000 ft.

Nominal ice thickness of 1.000 in.

Ice thickness is considered to increase with height.

Ice density of 56.000 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50.000 °F.

Deflections calculated using a wind speed of 60 mph.

TIA-222-H Annex S.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

Tower analysis based on target reliabilities in accordance with Annex S.

Load Modification Factors used:  $K_{es}(F_w) = 0.95$ ,  $K_{es}(t_i) = 0.85$ .

Maximum demand-capacity ratio is: 1.05.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

## Options

<ul style="list-style-type: none"> <li>Consider Moments - Legs</li> <li>Consider Moments - Horizontals</li> <li>Consider Moments - Diagonals</li> <li>Use Moment Magnification</li> <li>√ Use Code Stress Ratios</li> <li>√ Use Code Safety Factors - Guys</li> <li>Escalate Ice</li> <li>Always Use Max Kz</li> <li>Use Special Wind Profile</li> <li>Include Bolts In Member Capacity</li> <li>Leg Bolts Are At Top Of Section</li> <li>Secondary Horizontal Braces Leg</li> <li>Use Diamond Inner Bracing (4 Sided)</li> <li>SR Members Have Cut Ends</li> <li>SR Members Are Concentric</li> </ul>	<ul style="list-style-type: none"> <li>Distribute Leg Loads As Uniform</li> <li>Assume Legs Pinned</li> <li>√ Assume Rigid Index Plate</li> <li>√ Use Clear Spans For Wind Area</li> <li>Use Clear Spans For KL/r</li> <li>Retension Guys To Initial Tension</li> <li>√ Bypass Mast Stability Checks</li> <li>√ Use Azimuth Dish Coefficients</li> <li>√ Project Wind Area of Appurt.</li> <li>Autocalc Torque Arm Areas</li> <li>Add IBC .6D+W Combination</li> <li>Sort Capacity Reports By Component</li> <li>Triangulate Diamond Inner Bracing</li> <li>Treat Feed Line Bundles As Cylinder</li> <li>Ignore KL/ry For 60 Deg. Angle Legs</li> </ul>	<ul style="list-style-type: none"> <li>Use ASCE 10 X-Brace Ly Rules</li> <li>Calculate Redundant Bracing Forces</li> <li>Ignore Redundant Members in FEA</li> <li>SR Leg Bolts Resist Compression</li> <li>All Leg Panels Have Same Allowable</li> <li>Offset Girt At Foundation</li> <li>√ Consider Feed Line Torque</li> <li>Include Angle Block Shear Check</li> <li>Use TIA-222-H Bracing Resist. Exemption</li> <li>Use TIA-222-H Tension Splice Exemption</li> <li style="text-align: center;">Poles</li> <li>√ Include Shear-Torsion Interaction</li> <li>Always Use Sub-Critical Flow</li> <li>Use Top Mounted Sockets</li> <li>Pole Without Linear Attachments</li> <li>Pole With Shroud Or No Appurtenances</li> <li>Outside and Inside Corner Radii Are Known</li> </ul>
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<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)	<b>Page</b> 2 of 20
	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhy

### Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	167.000-118.250	48.750	4.500	18	24.000	32.360	0.250	1.000	A607-65 (65 ksi)
L2	118.250-77.750	45.000	5.500	18	31.088	44.297	0.313	1.250	A607-65 (65 ksi)
L3	77.750-38.250	45.000	6.750	18	42.058	52.877	0.375	1.500	A607-65 (65 ksi)
L4	38.250-0.000	45.000		18	50.504	61.040	0.438	1.750	A607-65 (65 ksi)

### Tapered Pole Properties

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	I <sup>2</sup> /Q in <sup>2</sup>	w in	w/t
L1	24.332	18.846	1342.998	8.431	12.192	110.154	2687.762	9.425	3.784	15.136
	32.821	25.479	3318.985	11.399	16.439	201.898	6642.337	12.742	5.255	21.021
L2	32.861	30.526	3652.774	10.925	15.793	231.293	7310.354	15.266	4.922	15.749
	44.932	43.627	10663.343	15.614	22.503	473.866	21340.717	21.818	7.246	23.188
L3	43.991	49.613	10890.308	14.797	21.365	509.720	21794.946	24.811	6.742	17.979
	53.635	62.491	21762.219	18.638	26.862	810.163	43553.074	31.251	8.646	23.057
L4	52.820	69.524	22017.423	17.774	25.656	858.176	44063.818	34.768	8.119	18.557
	61.914	84.154	39047.573	21.514	31.008	1259.261	78146.527	42.085	9.973	22.796

Tower Elevation ft	Gusset Area (per face) ft <sup>2</sup>	Gusset Thickness in	Gusset Grade	Adjust. Factor A <sub>f</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
167.000-118.250				1	1	1			
118.250-77.750				1	1	1			
77.750-38.250				1	1	1			
38.250-0.000				1	1	1			

### Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
561(1-5/8)	C	No	Surface Ar (CaAa)	167.000 - 0.000	8	8	0.000 - 0.320	1.625		0.001
* HB158-21U6S24-xxM_T MO(1-5/8)	C	No	Surface Ar (CaAa)	138.000 - 0.000	4	2	0.350 - 0.400	1.996		0.003



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	<p><b>Project</b></p>	<p><b>Date</b> 15:42:02 10/16/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Pavan Upadhya</p>

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C <sub>AA</sub> ft <sup>2</sup> /ft	Weight klf
MLE HYBRID 3POWER/6FIBER RL 2(1-1/4) *	C	No	No	Inside Pole	148.000 - 0.000	4	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
EW90(ELLIPTICAL) *	A	No	No	Inside Pole	130.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
CU12PSM9P8XXX(1-3/8) *	A	No	No	Inside Pole	123.000 - 0.000	1	No Ice	0.000	0.002
							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002

### Feed Line/Linear Appurtenances Section Areas

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	167.000-118.250	A	0.000	0.000	1.828	0.000	0.786
		B	0.000	0.000	0.000	0.000	0.864
		C	0.000	0.000	71.259	0.000	0.805
L2	118.250-77.750	A	0.000	0.000	8.285	0.000	0.822
		B	0.000	0.000	6.767	0.000	0.937
		C	0.000	0.000	75.584	0.000	1.052
L3	77.750-38.250	A	0.000	0.000	21.237	0.000	1.058
		B	0.000	0.000	19.756	0.000	1.170
		C	0.000	0.000	86.875	0.000	1.282
L4	38.250-0.000	A	0.000	0.000	1.434	0.000	0.683
		B	0.000	0.000	0.000	0.000	0.791
		C	0.000	0.000	64.994	0.000	0.900

### 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	167.000-118.250	A	0.983	0.000	0.000	11.416	0.000	0.865
		B		0.000	0.000	0.000	0.000	0.864
		C		0.000	0.000	105.914	0.000	1.608
L2	118.250-77.750	A	0.947	0.000	0.000	17.633	0.000	0.946
		B		0.000	0.000	8.149	0.000	0.994
		C		0.000	0.000	114.084	0.000	1.960
L3	77.750-38.250	A	0.899	0.000	0.000	32.620	0.000	1.269
		B		0.000	0.000	23.658	0.000	1.320
		C		0.000	0.000	126.259	0.000	2.232
L4	38.250-0.000	A	0.803	0.000	0.000	8.312	0.000	0.737
		B		0.000	0.000	0.000	0.000	0.791
		C		0.000	0.000	98.437	0.000	1.635

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	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

### Feed Line Center of Pressure

Section	Elevation	CP <sub>x</sub>	CP <sub>z</sub>	CP <sub>x</sub> Ice	CP <sub>z</sub> Ice
	ft	in	in	in	in
L1	167.000-118.250	-2.676	6.128	-2.423	4.468
L2	118.250-77.750	-3.246	6.500	-3.076	5.046
L3	77.750-38.250	-2.984	5.986	-3.014	4.978
L4	38.250-0.000	-4.133	8.303	-3.835	6.389

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

### Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
L1	2	561(1-5/8)	118.25 - 167.00	1.0000	1.0000
L1	21	HB158-21U6S24-xxM_TMO (1-5/8)	118.25 - 138.00	1.0000	1.0000
L1	27	Safety Line 3/8	118.25 - 167.00	1.0000	1.0000
L2	2	561(1-5/8)	77.75 - 118.25	1.0000	1.0000
L2	21	HB158-21U6S24-xxM_TMO (1-5/8)	77.75 - 118.25	1.0000	1.0000
L2	27	Safety Line 3/8	77.75 - 118.25	1.0000	1.0000
L2	29	MP3-03	81.50 - 91.50	1.0000	1.0000
L2	30	MP3-03	81.50 - 91.50	1.0000	1.0000
L2	31	MP3-03	81.50 - 91.50	1.0000	1.0000
L3	2	561(1-5/8)	38.25 - 77.75	1.0000	1.0000
L3	21	HB158-21U6S24-xxM_TMO (1-5/8)	38.25 - 77.75	1.0000	1.0000
L3	27	Safety Line 3/8	38.25 - 77.75	1.0000	1.0000
L3	32	MP3-04	43.00 - 53.00	1.0000	1.0000
L3	33	MP3-04	43.00 - 53.00	1.0000	1.0000
L3	34	MP3-04	43.00 - 53.00	1.0000	1.0000
L3	36	MP3-04	50.50 - 65.50	1.0000	1.0000
L3	37	MP3-04	50.50 - 65.50	1.0000	1.0000
L3	38	MP3-04	50.50 - 65.50	1.0000	1.0000
L4	2	561(1-5/8)	0.00 - 38.25	1.0000	1.0000
L4	21	HB158-21U6S24-xxM_TMO (1-5/8)	0.00 - 38.25	1.0000	1.0000
L4	27	Safety Line 3/8	0.00 - 38.25	1.0000	1.0000

### Effective Width of Flat Linear Attachments / Feed Lines

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	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L2	29	MP3-03	81.50 - 91.50	Auto	0.0000
L2	30	MP3-03	81.50 - 91.50	Auto	0.0000
L2	31	MP3-03	81.50 - 91.50	Auto	0.0000
L3	32	MP3-04	43.00 - 53.00	Auto	0.0000
L3	33	MP3-04	43.00 - 53.00	Auto	0.0000
L3	34	MP3-04	43.00 - 53.00	Auto	0.0000
L3	36	MP3-04	50.50 - 65.50	Auto	0.0000
L3	37	MP3-04	50.50 - 65.50	Auto	0.0000
L3	38	MP3-04	50.50 - 65.50	Auto	0.0000

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight	
			Horz Lateral	Vert						
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K	
14" x 2' Top Hat	C	None			0.000	168.000	No Ice	1.167	1.167	0.110
							1/2" Ice	1.823	1.823	0.133
							1" Ice	2.022	2.022	0.160
Lightning Rod 5/8"x6'	C	None			0.000	171.000	No Ice	0.375	0.375	0.006
							1/2" Ice	0.989	0.989	0.010
							1" Ice	1.619	1.619	0.019
* FSA10-41-DIN	A	From Leg	4.000	0.000	0.000	167.000	No Ice	6.100	6.100	0.032
							1/2" Ice	8.472	8.472	0.112
							1" Ice	10.874	10.874	0.219
FSA10-67-DIN	A	From Leg	4.000	0.000	0.000	167.000	No Ice	1.400	1.400	0.009
							1/2" Ice	2.261	2.261	0.030
							1" Ice	3.148	3.148	0.060
* GPS_A	A	From Leg	4.000	0.000	0.000	167.000	No Ice	0.255	0.255	0.001
							1/2" Ice	0.320	0.320	0.005
							1" Ice	0.393	0.393	0.010
(2) LPA-80063-6CF-EDIN w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	167.000	No Ice	9.970	10.248	0.052
							1/2" Ice	10.541	11.422	0.145
							1" Ice	11.077	12.309	0.247
(2) LPA-80063-6CF-EDIN w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	167.000	No Ice	9.970	10.248	0.052
							1/2" Ice	10.541	11.422	0.145
							1" Ice	11.077	12.309	0.247
(2) LPA-80063-6CF-EDIN w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	167.000	No Ice	9.970	10.248	0.052
							1/2" Ice	10.541	11.422	0.145
							1" Ice	11.077	12.309	0.247
(2) MX06FRO660-03 w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	167.000	No Ice	6.540	5.550	0.103
							1/2" Ice	7.060	6.050	0.185
							1" Ice	7.600	6.570	0.277
(2) MX06FRO660-03 w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	167.000	No Ice	6.540	5.550	0.103
							1/2" Ice	7.060	6.050	0.185
							1" Ice	7.600	6.570	0.277
(2) MX06FRO660-03 w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	167.000	No Ice	6.540	5.550	0.103
							1/2" Ice	7.060	6.050	0.185
							1" Ice	7.600	6.570	0.277

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	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight	
			Horz	Lateral						Vert
MT6407-77A	A	From Leg	4.000	0.000	0.000	167.000	No Ice	4.692	1.840	0.082
			0.000				1/2" Ice	4.980	2.063	0.111
			0.000				1" Ice	5.275	2.292	0.144
MT6407-77A	B	From Leg	4.000	0.000	0.000	167.000	No Ice	4.692	1.840	0.082
			0.000				1/2" Ice	4.980	2.063	0.111
			0.000				1" Ice	5.275	2.292	0.144
MT6407-77A	C	From Leg	4.000	0.000	0.000	167.000	No Ice	4.692	1.840	0.082
			0.000				1/2" Ice	4.980	2.063	0.111
			0.000				1" Ice	5.275	2.292	0.144
RVZDC-6627-PF-48	A	From Leg	4.000	0.000	0.000	167.000	No Ice	3.792	2.514	0.032
			0.000				1/2" Ice	4.044	2.727	0.063
			0.000				1" Ice	4.303	2.947	0.099
RFV01U-D2A	A	From Leg	4.000	0.000	0.000	167.000	No Ice	1.875	1.013	0.070
			0.000				1/2" Ice	2.045	1.145	0.087
			0.000				1" Ice	2.223	1.284	0.106
(2) RFV01U-D2A	B	From Leg	4.000	0.000	0.000	167.000	No Ice	1.875	1.013	0.070
			0.000				1/2" Ice	2.045	1.145	0.087
			0.000				1" Ice	2.223	1.284	0.106
(3) RFV01U-D1A	C	From Leg	4.000	0.000	0.000	167.000	No Ice	1.875	1.250	0.084
			0.000				1/2" Ice	2.045	1.393	0.103
			0.000				1" Ice	2.223	1.543	0.124
2' x 2" Pipe Mount	A	From Leg	4.000	0.000	0.000	167.000	No Ice	0.023	0.023	0.007
			0.000				1/2" Ice	0.049	0.049	0.008
			4.000				1" Ice	0.085	0.085	0.009
3' x 2" Pipe Mount	A	From Leg	4.000	0.000	0.000	167.000	No Ice	0.583	0.583	0.011
			0.000				1/2" Ice	0.770	0.770	0.017
			0.000				1" Ice	0.967	0.967	0.024
7' x 2.5" Mount Pipe	A	From Leg	4.000	0.000	0.000	167.000	No Ice	2.013	2.013	0.041
			0.000				1/2" Ice	2.589	2.589	0.055
			0.000				1" Ice	3.018	3.018	0.075
7' x 2.5" Mount Pipe	B	From Leg	4.000	0.000	0.000	167.000	No Ice	2.013	2.013	0.041
			0.000				1/2" Ice	2.589	2.589	0.055
			0.000				1" Ice	3.018	3.018	0.075
7' x 2.5" Mount Pipe	C	From Leg	4.000	0.000	0.000	167.000	No Ice	2.013	2.013	0.041
			0.000				1/2" Ice	2.589	2.589	0.055
			0.000				1" Ice	3.018	3.018	0.075
10' x 2" Mount Pipe	A	From Leg	4.000	0.000	0.000	167.000	No Ice	2.375	2.375	0.037
			0.000				1/2" Ice	3.403	3.403	0.054
			0.000				1" Ice	4.448	4.448	0.079
13'x2.5 STD Horizontal Pipe	A	From Leg	4.000	0.000	0.000	167.000	No Ice	3.594	3.594	0.041
			0.000				1/2" Ice	4.876	4.876	0.067
			1.500				1" Ice	6.175	6.175	0.101
13'x2.5 STD Horizontal Pipe	B	From Leg	4.000	0.000	0.000	167.000	No Ice	3.594	3.594	0.041
			0.000				1/2" Ice	4.876	4.876	0.067
			1.500				1" Ice	6.175	6.175	0.101
13'x2.5 STD Horizontal Pipe	C	From Leg	4.000	0.000	0.000	167.000	No Ice	3.594	3.594	0.041
			0.000				1/2" Ice	4.876	4.876	0.067
			1.500				1" Ice	6.175	6.175	0.101
13'x2.5 STD Horizontal Pipe	A	From Leg	4.000	0.000	0.000	167.000	No Ice	3.594	3.594	0.041
			0.000				1/2" Ice	4.876	4.876	0.067
			-1.500				1" Ice	6.175	6.175	0.101
13'x2.5 STD Horizontal Pipe	B	From Leg	4.000	0.000	0.000	167.000	No Ice	3.594	3.594	0.041
			0.000				1/2" Ice	4.876	4.876	0.067
			-1.500				1" Ice	6.175	6.175	0.101
13'x2.5 STD Horizontal Pipe	C	From Leg	4.000	0.000	0.000	167.000	No Ice	3.594	3.594	0.041
			0.000				1/2" Ice	4.876	4.876	0.067
			-1.500				1" Ice	6.175	6.175	0.101

<b>Job</b>	156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)	<b>Page</b>	8 of 20
<b>Project</b>		<b>Date</b>	15:42:02 10/16/21
<b>Client</b>	Crown Castle	<b>Designed by</b>	Pavan Upadhy

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	
(2) L 2.5x2.5x3/16x4.75'	A	From Leg	4.000 0.000 -2.500	0.000	167.000	No Ice 1.250 1/2" Ice 1.601 1" Ice 1.959	0.005 0.024 0.049	0.025 0.032 0.044	
(2) L 2.5x2.5x3/16x4.75'	B	From Leg	4.000 0.000 -2.500	0.000	167.000	No Ice 1.250 1/2" Ice 1.601 1" Ice 1.959	0.005 0.024 0.049	0.025 0.032 0.044	
(2) L 2.5x2.5x3/16x4.75'	C	From Leg	4.000 0.000 -2.500	0.000	167.000	No Ice 1.250 1/2" Ice 1.601 1" Ice 1.959	0.005 0.024 0.049	0.025 0.032 0.044	
Platform Mount [LP 1201-1]	C	None		0.000	167.000	No Ice 18.380 1/2" Ice 22.110 1" Ice 25.870	18.380 22.110 25.870	2.100 2.652 3.263	
*									
SBNH-1D6565C w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 5.560 1/2" Ice 6.070 1" Ice 6.590	4.470 4.970 5.470	0.085 0.167 0.262	
SBNH-1D6565C w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 5.560 1/2" Ice 6.070 1" Ice 6.590	4.470 4.970 5.470	0.085 0.167 0.262	
SBNH-1D6565C w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 5.560 1/2" Ice 6.070 1" Ice 6.590	4.470 4.970 5.470	0.085 0.167 0.262	
TPA-65R-LCUUUU-H8 w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	160.000	No Ice 11.850 1/2" Ice 12.770 1" Ice 13.710	8.990 9.880 10.790	0.115 0.210 0.319	
TPA-65R-LCUUUU-H8 w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	160.000	No Ice 11.850 1/2" Ice 12.770 1" Ice 13.710	8.990 9.880 10.790	0.115 0.210 0.319	
TPA-65R-LCUUUU-H8 w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	160.000	No Ice 11.850 1/2" Ice 12.770 1" Ice 13.710	8.990 9.880 10.790	0.115 0.210 0.319	
7770.00 w/ Mount Pipe	A	From Leg	4.000 0.000 2.000	0.000	160.000	No Ice 5.746 1/2" Ice 6.179 1" Ice 6.607	4.254 5.014 5.711	0.055 0.103 0.157	
7770.00 w/ Mount Pipe	B	From Leg	4.000 0.000 2.000	0.000	160.000	No Ice 5.746 1/2" Ice 6.179 1" Ice 6.607	4.254 5.014 5.711	0.055 0.103 0.157	
7770.00 w/ Mount Pipe	C	From Leg	4.000 0.000 2.000	0.000	160.000	No Ice 5.746 1/2" Ice 6.179 1" Ice 6.607	4.254 5.014 5.711	0.055 0.103 0.157	
RRUS 11 B12	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 2.833 1/2" Ice 3.043 1" Ice 3.259	1.182 1.330 1.485	0.051 0.072 0.095	
RRUS 11 B12	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 2.833 1/2" Ice 3.043 1" Ice 3.259	1.182 1.330 1.485	0.051 0.072 0.095	
RRUS 11 B12	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 2.833 1/2" Ice 3.043 1" Ice 3.259	1.182 1.330 1.485	0.051 0.072 0.095	
RRUS 32 B2	A	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 2.731 1/2" Ice 2.953 1" Ice 3.182	1.668 1.855 2.049	0.053 0.074 0.098	
RRUS 32 B2	B	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 2.731 1/2" Ice 2.953 1" Ice 3.182	1.668 1.855 2.049	0.053 0.074 0.098	
RRUS 32 B2	C	From Leg	4.000 0.000 0.000	0.000	160.000	No Ice 2.731 1/2" Ice 2.953	1.668 1.855	0.053 0.074	

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)	<b>Page</b> 9 of 20
	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Lateral					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
DC6-48-60-18-8F	A	From Leg	0.000		0.000	160.000	1" Ice	2.049	0.098
			4.000				No Ice	1.212	0.033
			0.000				1/2" Ice	1.892	0.055
DC6-48-60-18-8F	C	From Leg	0.000		0.000	160.000	1" Ice	2.105	0.080
			4.000				No Ice	1.212	0.033
			0.000				1/2" Ice	1.892	0.055
78211056	A	From Leg	0.000		0.000	160.000	1" Ice	2.105	0.080
			4.000				No Ice	0.147	0.002
			0.000				1/2" Ice	0.199	0.003
78211056	B	From Leg	0.000		0.000	160.000	1" Ice	0.258	0.006
			4.000				No Ice	0.147	0.002
			0.000				1/2" Ice	0.199	0.003
78211056	C	From Leg	0.000		0.000	160.000	1" Ice	0.258	0.006
			4.000				No Ice	0.147	0.002
			0.000				1/2" Ice	0.199	0.003
RRUS 32 B30	A	From Leg	0.000		0.000	160.000	1" Ice	0.258	0.006
			4.000				No Ice	2.692	0.060
			0.000				1/2" Ice	2.912	0.080
RRUS 32 B30	B	From Leg	0.000		0.000	160.000	1" Ice	3.138	0.104
			4.000				No Ice	2.692	0.060
			0.000				1/2" Ice	2.912	0.080
RRUS 32 B30	C	From Leg	0.000		0.000	160.000	1" Ice	3.138	0.104
			4.000				No Ice	2.692	0.060
			0.000				1/2" Ice	2.912	0.080
(2) DBC0061F1V51-2	A	From Leg	0.000		0.000	160.000	1" Ice	3.138	0.104
			4.000				No Ice	0.433	0.025
			0.000				1/2" Ice	0.518	0.031
(2) DBC0061F1V51-2	B	From Leg	0.000		0.000	160.000	1" Ice	0.609	0.038
			4.000				No Ice	0.433	0.025
			0.000				1/2" Ice	0.518	0.031
(2) DBC0061F1V51-2	C	From Leg	0.000		0.000	160.000	1" Ice	0.609	0.038
			4.000				No Ice	0.433	0.025
			0.000				1/2" Ice	0.518	0.031
(2) LGP21401	A	From Leg	0.000		0.000	160.000	1" Ice	0.609	0.038
			4.000				No Ice	1.104	0.014
			0.000				1/2" Ice	1.239	0.021
(2) LGP21401	B	From Leg	0.000		0.000	160.000	1" Ice	1.381	0.030
			4.000				No Ice	1.104	0.014
			0.000				1/2" Ice	1.239	0.021
(2) LGP21401	C	From Leg	0.000		0.000	160.000	1" Ice	1.381	0.030
			4.000				No Ice	1.104	0.014
			0.000				1/2" Ice	1.239	0.021
6' x 2" Mount Pipe	A	From Leg	0.000		0.000	160.000	1" Ice	1.381	0.030
			4.000				No Ice	1.425	0.022
			0.000				1/2" Ice	1.925	0.033
6' x 2" Mount Pipe	B	From Leg	0.000		0.000	160.000	1" Ice	2.294	0.048
			4.000				No Ice	1.425	0.022
			0.000				1/2" Ice	1.925	0.033
6' x 2" Mount Pipe	C	From Leg	0.000		0.000	160.000	1" Ice	2.294	0.048
			4.000				No Ice	1.425	0.022
			0.000				1/2" Ice	1.925	0.033
Platform Mount [LP 1201-1_KCKR-HR-1]	C	None	0.000		0.000	160.000	1" Ice	2.294	0.048
			4.000				No Ice	37.610	2.631
			0.000				1/2" Ice	45.620	3.478
* PCS 1900MHZ	A	From Leg	0.000		0.000	150.000	1" Ice	53.590	4.462
			1.000				No Ice	2.322	0.060
			0.000						



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	<b>Project</b>				<b>Date</b>		15:42:02 10/16/21	
	<b>Client</b>		Crown Castle		<b>Designed by</b>		Pavan Upadhy	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Lateral					
4X45W-65MHZ			0.000			1/2" Ice	2.527	2.441	0.083
			0.000			1" Ice	2.739	2.651	0.110
(2) PCS 1900MHZ	B	From Leg	1.000	0.000	150.000	No Ice	2.322	2.238	0.060
4X45W-65MHZ			0.000			1/2" Ice	2.527	2.441	0.083
			0.000			1" Ice	2.739	2.651	0.110
800MHZ 2X50W RRH	A	From Leg	1.000	0.000	150.000	No Ice	2.058	1.932	0.064
W/FILTER			0.000			1/2" Ice	2.240	2.109	0.086
			2.000			1" Ice	2.429	2.293	0.111
(2) 800MHZ 2X50W RRH	C	From Leg	1.000	0.000	150.000	No Ice	2.058	1.932	0.064
W/FILTER			0.000			1/2" Ice	2.240	2.109	0.086
			2.000			1" Ice	2.429	2.293	0.111
Side Arm Mount [SO 102-3]	C	None		0.000	150.000	No Ice	3.600	3.600	0.075
						1/2" Ice	4.180	4.180	0.105
						1" Ice	4.750	4.750	0.135
Pipe Mount [PM 601-3]	C	None		0.000	150.000	No Ice	3.170	3.170	0.195
						1/2" Ice	3.790	3.790	0.232
						1" Ice	4.420	4.420	0.279
*									
APXVTM14-ALU-I20 w/	A	From Leg	4.000	0.000	148.000	No Ice	4.090	2.860	0.077
Mount Pipe			0.000			1/2" Ice	4.480	3.230	0.127
			0.000			1" Ice	4.880	3.610	0.185
APXVTM14-ALU-I20 w/	B	From Leg	4.000	0.000	148.000	No Ice	4.090	2.860	0.077
Mount Pipe			0.000			1/2" Ice	4.480	3.230	0.127
			0.000			1" Ice	4.880	3.610	0.185
APXVTM14-ALU-I20 w/	C	From Leg	4.000	0.000	148.000	No Ice	4.090	2.860	0.077
Mount Pipe			0.000			1/2" Ice	4.480	3.230	0.127
			0.000			1" Ice	4.880	3.610	0.185
APXVSP18-C-A20 w/	A	From Leg	4.000	0.000	148.000	No Ice	4.600	4.010	0.095
Mount Pipe			0.000			1/2" Ice	5.050	4.450	0.160
			0.000			1" Ice	5.500	4.890	0.235
APXVSP18-C-A20 w/	B	From Leg	4.000	0.000	148.000	No Ice	4.600	4.010	0.095
Mount Pipe			0.000			1/2" Ice	5.050	4.450	0.160
			0.000			1" Ice	5.500	4.890	0.235
APXVSP18-C-A20 w/	C	From Leg	4.000	0.000	148.000	No Ice	4.600	4.010	0.095
Mount Pipe			0.000			1/2" Ice	5.050	4.450	0.160
			0.000			1" Ice	5.500	4.890	0.235
TD-RRH8X20-25	A	From Leg	4.000	0.000	148.000	No Ice	4.045	1.535	0.070
			0.000			1/2" Ice	4.298	1.714	0.097
			2.000			1" Ice	4.557	1.901	0.128
TD-RRH8X20-25	B	From Leg	4.000	0.000	148.000	No Ice	4.045	1.535	0.070
			0.000			1/2" Ice	4.298	1.714	0.097
			2.000			1" Ice	4.557	1.901	0.128
TD-RRH8X20-25	C	From Leg	4.000	0.000	148.000	No Ice	4.045	1.535	0.070
			0.000			1/2" Ice	4.298	1.714	0.097
			2.000			1" Ice	4.557	1.901	0.128
6' x 2" Mount Pipe	A	From Leg	4.000	0.000	148.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	B	From Leg	4.000	0.000	148.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	C	From Leg	4.000	0.000	148.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
Platform Mount [LP 1201-1]	C	None		0.000	148.000	No Ice	18.380	18.380	2.100
						1/2" Ice	22.110	22.110	2.652
						1" Ice	25.870	25.870	3.263

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	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
*									
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	138.000	No Ice 14.690	6.870	0.186
			0.000				1/2" Ice 15.460	7.550	0.315
			0.000				1" Ice 16.230	8.250	0.458
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	138.000	No Ice 14.690	6.870	0.186
			0.000				1/2" Ice 15.460	7.550	0.315
			0.000				1" Ice 16.230	8.250	0.458
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	138.000	No Ice 14.690	6.870	0.186
			0.000				1/2" Ice 15.460	7.550	0.315
			0.000				1" Ice 16.230	8.250	0.458
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	138.000	No Ice 5.190	2.710	0.128
			0.000				1/2" Ice 5.590	3.040	0.174
			0.000				1" Ice 6.020	3.380	0.227
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	138.000	No Ice 5.190	2.710	0.128
			0.000				1/2" Ice 5.590	3.040	0.174
			0.000				1" Ice 6.020	3.380	0.227
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	138.000	No Ice 5.190	2.710	0.128
			0.000				1/2" Ice 5.590	3.040	0.174
			0.000				1" Ice 6.020	3.380	0.227
(2) Radio 4480_TMOV2	A	From Leg	4.000	0.000	0.000	138.000	No Ice 2.878	1.397	0.081
			0.000				1/2" Ice 3.091	1.558	0.103
			0.000				1" Ice 3.312	1.727	0.128
Radio 4480_TMOV2	C	From Leg	4.000	0.000	0.000	138.000	No Ice 2.878	1.397	0.081
			0.000				1/2" Ice 3.091	1.558	0.103
			0.000				1" Ice 3.312	1.727	0.128
(2) RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.000	0.000	0.000	138.000	No Ice 2.139	1.686	0.109
			0.000				1/2" Ice 2.321	1.850	0.131
			0.000				1" Ice 2.511	2.022	0.156
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.000	0.000	0.000	138.000	No Ice 2.139	1.686	0.109
			0.000				1/2" Ice 2.321	1.850	0.131
			0.000				1" Ice 2.511	2.022	0.156
(2) 7'x2" Antenna Mount Pipe	A	From Leg	4.000	0.000	0.000	138.000	No Ice 1.663	1.663	0.026
			0.000				1/2" Ice 2.391	2.391	0.039
			0.000				1" Ice 2.825	2.825	0.056
(2) 7'x2" Antenna Mount Pipe	B	From Leg	4.000	0.000	0.000	138.000	No Ice 1.663	1.663	0.026
			0.000				1/2" Ice 2.391	2.391	0.039
			0.000				1" Ice 2.825	2.825	0.056
(2) 7'x2" Antenna Mount Pipe	C	From Leg	4.000	0.000	0.000	138.000	No Ice 1.663	1.663	0.026
			0.000				1/2" Ice 2.391	2.391	0.039
			0.000				1" Ice 2.825	2.825	0.056
Platform Mount [LP 1201-1_KCKR-HR-1]	C	None		0.000		138.000	No Ice 37.610	37.610	2.631
							1/2" Ice 45.620	45.620	3.478
							1" Ice 53.590	53.590	4.462
*									
Side Arm Mount [SO 701-1]	B	From Leg	1.500	0.000	0.000	130.000	No Ice 0.850	1.670	0.065
			0.000				1/2" Ice 1.140	2.340	0.079
			0.000				1" Ice 1.430	3.010	0.093
Pipe Mount [PM 601-1]	B	From Leg	3.000	0.000	0.000	130.000	No Ice 1.320	1.320	0.065
			0.000				1/2" Ice 1.580	1.580	0.077
			0.000				1" Ice 1.840	1.840	0.093
*									
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	123.000	No Ice 8.010	4.230	0.108
			0.000				1/2" Ice 8.520	4.690	0.194
			0.000				1" Ice 9.040	5.160	0.292
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	123.000	No Ice 8.010	4.230	0.108
			0.000				1/2" Ice 8.520	4.690	0.194
			0.000				1" Ice 9.040	5.160	0.292

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	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz Lateral	Vert					
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	123.000	No Ice 8.010	4.230	0.108
			0.000				1/2" Ice 8.520	4.690	0.194
			0.000				1" Ice 9.040	5.160	0.292
TA08025-B604	A	From Leg	4.000	0.000	0.000	123.000	No Ice 1.964	0.981	0.064
			0.000				1/2" Ice 2.138	1.112	0.081
			0.000				1" Ice 2.320	1.250	0.100
TA08025-B604	B	From Leg	4.000	0.000	0.000	123.000	No Ice 1.964	0.981	0.064
			0.000				1/2" Ice 2.138	1.112	0.081
			0.000				1" Ice 2.320	1.250	0.100
TA08025-B604	C	From Leg	4.000	0.000	0.000	123.000	No Ice 1.964	0.981	0.064
			0.000				1/2" Ice 2.138	1.112	0.081
			0.000				1" Ice 2.320	1.250	0.100
TA08025-B605	A	From Leg	4.000	0.000	0.000	123.000	No Ice 1.964	1.129	0.075
			0.000				1/2" Ice 2.138	1.267	0.093
			0.000				1" Ice 2.320	1.411	0.114
TA08025-B605	B	From Leg	4.000	0.000	0.000	123.000	No Ice 1.964	1.129	0.075
			0.000				1/2" Ice 2.138	1.267	0.093
			0.000				1" Ice 2.320	1.411	0.114
TA08025-B605	C	From Leg	4.000	0.000	0.000	123.000	No Ice 1.964	1.129	0.075
			0.000				1/2" Ice 2.138	1.267	0.093
			0.000				1" Ice 2.320	1.411	0.114
RDIDC-9181-PF-48	A	From Leg	4.000	0.000	0.000	123.000	No Ice 2.012	1.168	0.022
			0.000				1/2" Ice 2.189	1.311	0.040
			0.000				1" Ice 2.373	1.461	0.060
(2) 8' x 2" Mount Pipe	A	From Leg	4.000	0.000	0.000	123.000	No Ice 1.900	1.900	0.029
			0.000				1/2" Ice 2.728	2.728	0.044
			0.000				1" Ice 3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000	0.000	0.000	123.000	No Ice 1.900	1.900	0.029
			0.000				1/2" Ice 2.728	2.728	0.044
			0.000				1" Ice 3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000	0.000	0.000	123.000	No Ice 1.900	1.900	0.029
			0.000				1/2" Ice 2.728	2.728	0.044
			0.000				1" Ice 3.401	3.401	0.063
Commscope MC-PK8-DSH	C	None			0.000	123.000	No Ice 34.240	34.240	1.749
							1/2" Ice 62.950	62.950	2.099
							1" Ice 91.660	91.660	2.450

\*

## Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight
				Horz Lateral	Vert						
SC3-W100AC	B	Paraboloid w/Shroud (HP)	From Leg	3.000	-27.000			130.000	3.292	No Ice 8.510	0.046
				0.000						1/2" Ice 8.946	0.092
				0.000						1" Ice 9.383	0.138

\*

<p><b>tnxTower</b></p> <p><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b> 156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)</p>	<p><b>Page</b> 13 of 20</p>
	<p><b>Project</b></p>	<p><b>Date</b> 15:42:02 10/16/21</p>
	<p><b>Client</b> Crown Castle</p>	<p><b>Designed by</b> Pavan Upadhya</p>

## Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 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

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)	<b>Page</b> 14 of 20
	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhy

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	167 - 118.25	Pole	Max Tension	36	0.000	-0.004	-0.001
			Max. Compression	26	-48.854	-0.025	-1.008
			Max. Mx	20	-27.811	717.321	-2.042
			Max. My	14	-27.821	0.086	-718.665
			Max. Vy	20	-25.264	717.321	-2.042
			Max. Vx	14	25.162	0.086	-718.665
			Max. Torque	20			-2.280
L2	118.25 - 77.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.351	0.085	-4.297
			Max. Mx	20	-38.053	1765.052	-4.563
			Max. My	14	-38.060	-0.594	-1763.909
			Max. Vy	20	-27.801	1765.052	-4.563
			Max. Vx	14	27.698	-0.594	-1763.909
			Max. Torque	8			1.548
L3	77.75 - 38.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-78.436	0.208	-7.989
			Max. Mx	20	-52.231	2880.179	-7.386
			Max. My	14	-52.234	-1.232	-2877.036
			Max. Vy	20	-30.386	2880.179	-7.386
			Max. Vx	14	30.283	-1.232	-2877.036
			Max. Torque	8			1.541
L4	38.25 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-101.758	0.360	-12.716
			Max. Mx	20	-72.355	4306.980	-11.008
			Max. My	14	-72.355	-1.953	-4301.923
			Max. Vy	20	-32.912	4306.980	-11.008
			Max. Vx	14	32.810	-1.953	-4301.923
			Max. Torque	8			1.538

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	33	101.758	-0.001	-8.980
	Max. H <sub>x</sub>	20	72.373	32.871	-0.018
	Max. H <sub>z</sub>	3	54.280	-0.038	32.766
	Max. M <sub>x</sub>	2	4284.968	-0.038	32.766
	Max. M <sub>z</sub>	8	4296.075	-32.793	0.023
	Max. Torsion	8	1.537	-32.793	0.023
	Min. Vert	25	54.280	16.516	28.320
	Min. H <sub>x</sub>	8	72.373	-32.793	0.023
	Min. H <sub>z</sub>	15	54.280	-0.016	-32.770
	Min. M <sub>x</sub>	14	-4301.923	-0.016	-32.770
	Min. M <sub>z</sub>	20	-4306.980	32.871	-0.018
	Min. Torsion	20	-1.403	32.871	-0.018

### Tower Mast Reaction Summary

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
Dead Only	60.311	0.000	0.000	6.578	0.016	0.000

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265</p>	<p><b>Job</b></p> <p style="text-align: center;">156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)</p>	<p><b>Page</b></p> <p style="text-align: center;">15 of 20</p>
	<p><b>Project</b></p>	<p><b>Date</b></p> <p style="text-align: center;">15:42:02 10/16/21</p>
	<p><b>Client</b></p> <p style="text-align: center;">Crown Castle</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Pavan Upadhyha</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
1.2 Dead+1.0 Wind 0 deg - No Ice	72.373	0.038	-32.766	-4284.968	-5.496	0.710
0.9 Dead+1.0 Wind 0 deg - No Ice	54.280	0.038	-32.766	-4213.192	-5.416	0.729
1.2 Dead+1.0 Wind 30 deg - No Ice	72.373	16.478	-28.360	-3707.684	-2159.541	-0.124
0.9 Dead+1.0 Wind 30 deg - No Ice	54.280	16.478	-28.360	-3645.875	-2122.400	-0.106
1.2 Dead+1.0 Wind 60 deg - No Ice	72.373	28.440	-16.357	-2135.071	-3726.368	-1.076
0.9 Dead+1.0 Wind 60 deg - No Ice	54.280	28.440	-16.357	-2100.334	-3662.260	-1.064
1.2 Dead+1.0 Wind 90 deg - No Ice	72.373	32.793	-0.023	4.862	-4296.075	-1.537
0.9 Dead+1.0 Wind 90 deg - No Ice	54.280	32.793	-0.023	2.756	-4222.174	-1.534
1.2 Dead+1.0 Wind 120 deg - No Ice	72.373	28.751	16.527	2167.210	-3756.350	-1.522
0.9 Dead+1.0 Wind 120 deg - No Ice	54.280	28.751	16.527	2127.987	-3691.912	-1.528
1.2 Dead+1.0 Wind 150 deg - No Ice	72.373	16.442	28.332	3720.030	-2154.104	-1.129
0.9 Dead+1.0 Wind 150 deg - No Ice	54.280	16.442	28.332	3653.992	-2117.070	-1.144
1.2 Dead+1.0 Wind 180 deg - No Ice	72.373	0.016	32.770	4301.923	-1.953	-0.626
0.9 Dead+1.0 Wind 180 deg - No Ice	54.280	0.016	32.770	4225.851	-1.938	-0.645
1.2 Dead+1.0 Wind 210 deg - No Ice	72.373	-16.541	28.336	3720.712	2168.213	0.190
0.9 Dead+1.0 Wind 210 deg - No Ice	54.280	-16.541	28.336	3654.663	2130.931	0.172
1.2 Dead+1.0 Wind 240 deg - No Ice	72.373	-28.518	16.371	2153.334	3737.034	0.986
0.9 Dead+1.0 Wind 240 deg - No Ice	54.280	-28.518	16.371	2114.254	3672.759	0.974
1.2 Dead+1.0 Wind 270 deg - No Ice	72.373	-32.871	0.018	11.008	4306.980	1.403
0.9 Dead+1.0 Wind 270 deg - No Ice	54.280	-32.871	0.018	8.797	4232.894	1.400
1.2 Dead+1.0 Wind 300 deg - No Ice	72.373	-28.832	-16.547	-2153.500	3767.595	1.314
0.9 Dead+1.0 Wind 300 deg - No Ice	54.280	-28.832	-16.547	-2118.552	3702.949	1.320
1.2 Dead+1.0 Wind 330 deg - No Ice	72.373	-16.516	-28.320	-3701.970	2164.356	0.808
0.9 Dead+1.0 Wind 330 deg - No Ice	54.280	-16.516	-28.320	-3640.257	2127.128	0.822
1.2 Dead+1.0 Ice+1.0 Temp	101.758	-0.000	0.000	12.716	0.360	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	101.758	0.009	-8.979	-1171.556	-1.030	0.133
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	101.758	4.509	-7.774	-1012.556	-594.687	-0.200
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	101.758	7.788	-4.486	-578.859	-1027.179	-0.509
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	101.758	8.983	-0.006	12.027	-1184.554	-0.641
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	101.758	7.780	4.477	603.472	-1025.946	-0.589
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	101.758	4.499	7.766	1037.453	-593.141	-0.384

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	<p><b>Project</b></p>	<p><b>Date</b></p> <p>15:42:02 10/16/21</p>
	<p><b>Client</b></p> <p>Crown Castle</p>	<p><b>Designed by</b></p> <p>Pavan Upadhya</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
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	101.758	0.001	8.980	1197.627	0.220	-0.116
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	101.758	-4.521	7.769	1037.859	597.220	0.213
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	101.758	-7.804	4.489	605.197	1030.105	0.491
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	101.758	-8.998	0.005	13.813	1187.528	0.615
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	101.758	-7.796	-4.481	-578.078	1028.985	0.548
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	101.758	-4.513	-7.764	-1011.119	595.948	0.321
Dead+Wind 0 deg - Service	60.311	0.009	-7.981	-1028.756	-1.317	0.172
Dead+Wind 30 deg - Service	60.311	4.014	-6.908	-889.516	-520.872	-0.036
Dead+Wind 60 deg - Service	60.311	6.928	-3.985	-510.206	-898.793	-0.271
Dead+Wind 90 deg - Service	60.311	7.988	-0.005	5.946	-1036.213	-0.384
Dead+Wind 120 deg - Service	60.311	7.004	4.026	527.528	-906.066	-0.377
Dead+Wind 150 deg - Service	60.311	4.005	6.902	902.056	-519.569	-0.277
Dead+Wind 180 deg - Service	60.311	0.004	7.983	1042.418	-0.463	-0.151
Dead+Wind 210 deg - Service	60.311	-4.029	6.902	902.227	522.993	0.052
Dead+Wind 240 deg - Service	60.311	-6.947	3.988	524.168	901.403	0.249
Dead+Wind 270 deg - Service	60.311	-8.007	0.004	7.428	1038.872	0.351
Dead+Wind 300 deg - Service	60.311	-7.023	-4.031	-514.674	908.795	0.326
Dead+Wind 330 deg - Service	60.311	-4.023	-6.899	-888.138	522.052	0.199

## 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	0.000	-60.311	0.000	0.000	60.311	-0.000	0.000%
2	0.038	-72.373	-32.766	-0.038	72.373	32.766	0.000%
3	0.038	-54.280	-32.766	-0.038	54.280	32.766	0.000%
4	16.478	-72.373	-28.360	-16.478	72.373	28.360	0.000%
5	16.478	-54.280	-28.360	-16.478	54.280	28.360	0.000%
6	28.440	-72.373	-16.357	-28.440	72.373	16.357	0.000%
7	28.440	-54.280	-16.357	-28.440	54.280	16.357	0.000%
8	32.793	-72.373	-0.023	-32.793	72.373	0.023	0.000%
9	32.793	-54.280	-0.023	-32.793	54.280	0.023	0.000%
10	28.751	-72.373	16.527	-28.751	72.373	-16.527	0.000%
11	28.751	-54.280	16.527	-28.751	54.280	-16.527	0.000%
12	16.442	-72.373	28.332	-16.442	72.373	-28.332	0.000%
13	16.442	-54.280	28.332	-16.442	54.280	-28.332	0.000%
14	0.016	-72.373	32.770	-0.016	72.373	-32.770	0.000%
15	0.016	-54.280	32.770	-0.016	54.280	-32.770	0.000%
16	-16.541	-72.373	28.336	16.541	72.373	-28.336	0.000%
17	-16.541	-54.280	28.336	16.541	54.280	-28.336	0.000%
18	-28.518	-72.373	16.371	28.518	72.373	-16.371	0.000%
19	-28.518	-54.280	16.371	28.518	54.280	-16.371	0.000%
20	-32.871	-72.373	0.018	32.871	72.373	-0.018	0.000%
21	-32.871	-54.280	0.018	32.871	54.280	-0.018	0.000%
22	-28.832	-72.373	-16.547	28.832	72.373	16.547	0.000%
23	-28.832	-54.280	-16.547	28.832	54.280	16.547	0.000%
24	-16.516	-72.373	-28.320	16.516	72.373	28.320	0.000%
25	-16.516	-54.280	-28.320	16.516	54.280	28.320	0.000%
26	0.000	-101.758	0.000	0.000	101.758	-0.000	0.000%
27	0.009	-101.758	-8.979	-0.009	101.758	8.979	0.000%
28	4.509	-101.758	-7.774	-4.509	101.758	7.774	0.000%

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	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
29	7.788	-101.758	-4.486	-7.788	101.758	4.486	0.000%
30	8.983	-101.758	-0.006	-8.983	101.758	0.006	0.000%
31	7.780	-101.758	4.477	-7.780	101.758	-4.477	0.000%
32	4.499	-101.758	7.766	-4.499	101.758	-7.766	0.000%
33	0.001	-101.758	8.980	-0.001	101.758	-8.980	0.000%
34	-4.521	-101.758	7.769	4.521	101.758	-7.769	0.000%
35	-7.803	-101.758	4.489	7.804	101.758	-4.489	0.000%
36	-8.998	-101.758	0.005	8.998	101.758	-0.005	0.000%
37	-7.796	-101.758	-4.481	7.796	101.758	4.481	0.000%
38	-4.513	-101.758	-7.764	4.513	101.758	7.764	0.000%
39	0.009	-60.311	-7.981	-0.009	60.311	7.981	0.000%
40	4.014	-60.311	-6.908	-4.014	60.311	6.908	0.000%
41	6.928	-60.311	-3.985	-6.928	60.311	3.985	0.000%
42	7.988	-60.311	-0.005	-7.988	60.311	0.005	0.000%
43	7.004	-60.311	4.026	-7.004	60.311	-4.026	0.000%
44	4.005	-60.311	6.902	-4.005	60.311	-6.902	0.000%
45	0.004	-60.311	7.983	-0.004	60.311	-7.983	0.000%
46	-4.029	-60.311	6.902	4.029	60.311	-6.902	0.000%
47	-6.947	-60.311	3.988	6.947	60.311	-3.988	0.000%
48	-8.007	-60.311	0.004	8.007	60.311	-0.004	0.000%
49	-7.023	-60.311	-4.031	7.023	60.311	4.031	0.000%
50	-4.023	-60.311	-6.899	4.023	60.311	6.899	0.000%

## Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.0000001	0.00000914
2	Yes	5	0.0000001	0.00008351
3	Yes	4	0.0000001	0.00095565
4	Yes	6	0.0000001	0.00031609
5	Yes	6	0.0000001	0.00010805
6	Yes	6	0.0000001	0.00032123
7	Yes	6	0.0000001	0.00011010
8	Yes	5	0.0000001	0.00015239
9	Yes	5	0.0000001	0.00007674
10	Yes	6	0.0000001	0.00031497
11	Yes	6	0.0000001	0.00010704
12	Yes	6	0.0000001	0.00032267
13	Yes	6	0.0000001	0.00011040
14	Yes	5	0.0000001	0.00007404
15	Yes	4	0.0000001	0.00090401
16	Yes	6	0.0000001	0.00032190
17	Yes	6	0.0000001	0.00010987
18	Yes	6	0.0000001	0.00031491
19	Yes	6	0.0000001	0.00010721
20	Yes	5	0.0000001	0.00013210
21	Yes	5	0.0000001	0.00006630
22	Yes	6	0.0000001	0.00032614
23	Yes	6	0.0000001	0.00011157
24	Yes	6	0.0000001	0.00031441
25	Yes	6	0.0000001	0.00010735
26	Yes	4	0.0000001	0.00005369
27	Yes	5	0.0000001	0.00079118
28	Yes	5	0.0000001	0.00099297
29	Yes	6	0.0000001	0.00014793



<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)	<b>Page</b> 18 of 20
	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

30	Yes	5	0.00000001	0.00079925
31	Yes	6	0.00000001	0.00014853
32	Yes	6	0.00000001	0.00015015
33	Yes	5	0.00000001	0.00080502
34	Yes	6	0.00000001	0.00015063
35	Yes	6	0.00000001	0.00014945
36	Yes	5	0.00000001	0.00080162
37	Yes	6	0.00000001	0.00014819
38	Yes	5	0.00000001	0.00099291
39	Yes	4	0.00000001	0.00017364
40	Yes	4	0.00000001	0.00077770
41	Yes	4	0.00000001	0.00082237
42	Yes	4	0.00000001	0.00019999
43	Yes	4	0.00000001	0.00077613
44	Yes	4	0.00000001	0.00083614
45	Yes	4	0.00000001	0.00017542
46	Yes	4	0.00000001	0.00082237
47	Yes	4	0.00000001	0.00077968
48	Yes	4	0.00000001	0.00019611
49	Yes	4	0.00000001	0.00084110
50	Yes	4	0.00000001	0.00076713

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	167 - 118.25	27.909	43	1.605	0.006
L2	122.75 - 77.75	14.218	43	1.231	0.001
L3	83.25 - 38.25	6.055	43	0.724	0.000
L4	45 - 0	1.697	43	0.346	0.000

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

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
171.000	Lightning Rod 5/8"x6'	43	27.909	1.605	0.006	33484
168.000	14" x 2' Top Hat	43	27.909	1.605	0.006	33484
167.000	FSA10-41-DIN	43	27.909	1.605	0.006	33484
160.000	SBNH-1D6565C w/ Mount Pipe	43	25.584	1.555	0.005	23917
150.000	PCS 1900MHZ 4X45W-65MHZ	43	22.312	1.481	0.004	9848
148.000	APXVTM14-ALU-I20 w/ Mount Pipe	43	21.670	1.466	0.004	8811
138.000	APXVAARR24 43-U-NA20 w/ Mount Pipe	43	18.551	1.383	0.003	5772
130.000	SC3-W100AC	43	16.202	1.308	0.002	4523
123.000	MX08FRO665-21 w/ Mount Pipe	43	14.284	1.234	0.001	3888

### Maximum Tower Deflections - Design Wind

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)	<b>Page</b> 19 of 20
	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhyia

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	167 - 118.25	115.632	22	6.661	0.022
L2	122.75 - 77.75	58.935	22	5.112	0.005
L3	83.25 - 38.25	25.097	22	3.006	0.002
L4	45 - 0	7.030	22	1.435	0.001

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

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
171.000	Lightning Rod 5/8"x6'	22	115.632	6.661	0.023	8273
168.000	14" x 2' Top Hat	22	115.632	6.661	0.023	8273
167.000	FSA10-41-DIN	22	115.632	6.661	0.023	8273
160.000	SBNH-1D6565C w/ Mount Pipe	22	106.007	6.457	0.020	5909
150.000	PCS 1900MHZ 4X45W-65MHZ	22	92.458	6.152	0.015	2431
148.000	APXVTM14-ALU-I20 w/ Mount Pipe	22	89.798	6.088	0.014	2174
138.000	APXVAARR24_43-U-NA20 w/ Mount Pipe	22	76.885	5.744	0.010	1422
130.000	SC3-W100AC	22	67.155	5.432	0.008	1112
123.000	MX08FRO665-21 w/ Mount Pipe	22	59.208	5.124	0.006	954

### Compression Checks

### Pole Design Data

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	167 - 118.25	TP32.36x24x0.25	48.750	0.000	0.0	24.867	-27.816	1454.720	0.019
L2	118.25 - 77.75	TP44.297x31.088x0.313	45.000	0.000	0.0	42.026	-38.031	2458.510	0.015
L3	77.75 - 38.25	TP52.877x42.058x0.375	45.000	0.000	0.0	60.559	-52.216	3542.690	0.015
L4	38.25 - 0 (4)	TP61.04x50.504x0.438	45.000	0.000	0.0	84.154	-72.355	4923.020	0.015

### 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	167 - 118.25	TP32.36x24x0.25	718.836	1099.992	0.653	0.000	1099.992	0.000
L2	118.25 - 77.75	TP44.297x31.088x0.313	1770.092	2445.117	0.724	0.000	2445.117	0.000

<b>tnxTower</b>  <b>B+T Group</b> 1717 S. Boulder, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 295-0265	<b>Job</b> 156975.002.01 - CT NHV-2075 CAC 801367, CT (BU# 801367)	<b>Page</b> 20 of 20
	<b>Project</b>	<b>Date</b> 15:42:02 10/16/21
	<b>Client</b> Crown Castle	<b>Designed by</b> Pavan Upadhy

Section No.	Elevation ft	Size	$M_{ux}$ kip-ft	$\phi M_{nx}$ kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	$M_{uy}$ kip-ft	$\phi M_{ny}$ kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L3	77.75 - 38.25 (3)	TP52.877x42.058x0.375	2897.250	4229.900	0.685	0.000	4229.900	0.000
L4	38.25 - 0 (4)	TP61.04x50.504x0.438	4339.625	6946.783	0.625	0.000	6946.783	0.000

### Pole Shear Design Data

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 $\frac{T_u}{\phi T_n}$
L1	167 - 118.25 (1)	TP32.36x24x0.25	25.205	436.415	0.058	0.192	1197.717	0.000
L2	118.25 - 77.75 (2)	TP44.297x31.088x0.313	28.081	737.554	0.038	1.317	2736.742	0.000
L3	77.75 - 38.25 (3)	TP52.877x42.058x0.375	30.756	1062.810	0.029	1.315	4735.592	0.000
L4	38.25 - 0 (4)	TP61.04x50.504x0.438	33.283	1476.910	0.023	1.314	7838.325	0.000

### Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	167 - 118.25 (1)	0.019	0.653	0.000	0.058	0.000	0.676	1.050	4.8.2 ✓
L2	118.25 - 77.75 (2)	0.015	0.724	0.000	0.038	0.000	0.741	1.050	4.8.2 ✓
L3	77.75 - 38.25 (3)	0.015	0.685	0.000	0.029	0.000	0.701	1.050	4.8.2 ✓
L4	38.25 - 0 (4)	0.015	0.625	0.000	0.023	0.000	0.640	1.050	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	167 - 118.25	Pole	TP32.36x24x0.25	1	-27.816	1527.456	64.4	Pass
L2	118.25 - 77.75	Pole	TP44.297x31.088x0.313	2	-38.031	2581.435	70.6	Pass
L3	77.75 - 38.25	Pole	TP52.877x42.058x0.375	3	-52.216	3719.824	66.7	Pass
L4	38.25 - 0	Pole	TP61.04x50.504x0.438	4	-72.355	5169.171	60.9	Pass
Summary								
Pole (L2)							70.6	Pass
<b>RATING =</b>							<b>70.6</b>	<b>Pass</b>

**APPENDIX B**  
**BASE LEVEL DRAWING**

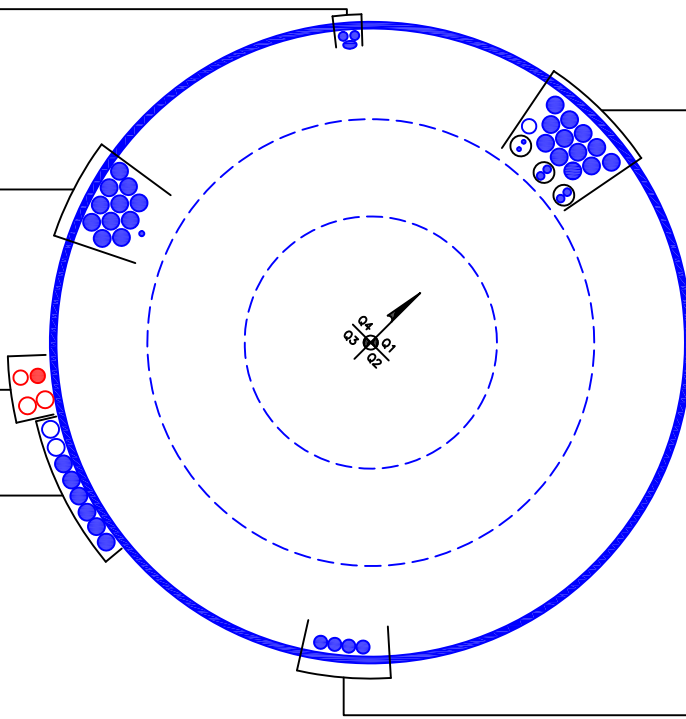
(OTHER CONSIDERED EQUIPMENT)  
(2) 7/8" TO 167 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)  
(1) EW90 TO 130 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)  
(1) 1/2" TO 167 FT LEVEL  
(11) 1-5/8" TO 167 FT LEVEL

(PROPOSED EQUIPMENT CONFIGURATION)  
(2) 1-3/8" TO 138 FT LEVEL  
(2) 1-5/8" TO 138 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)  
(8) 1-5/8" TO 167 FT LEVEL



(OTHER CONSIDERED EQUIPMENT)  
(1) 1-3/8" TO 123 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)  
(2) 3/8" TO 160 FT LEVEL - IN CONDUIT  
(4) 3/4" TO 160 FT LEVEL - IN CONDUIT  
(12) 1-5/8" TO 160 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)  
(4) 1-1/4" TO 148 FT LEVEL

BUSINESS UNIT: 801367

**APPENDIX C**  
**ADDITIONAL CALCULATIONS**

# Monopole Base Plate Connection

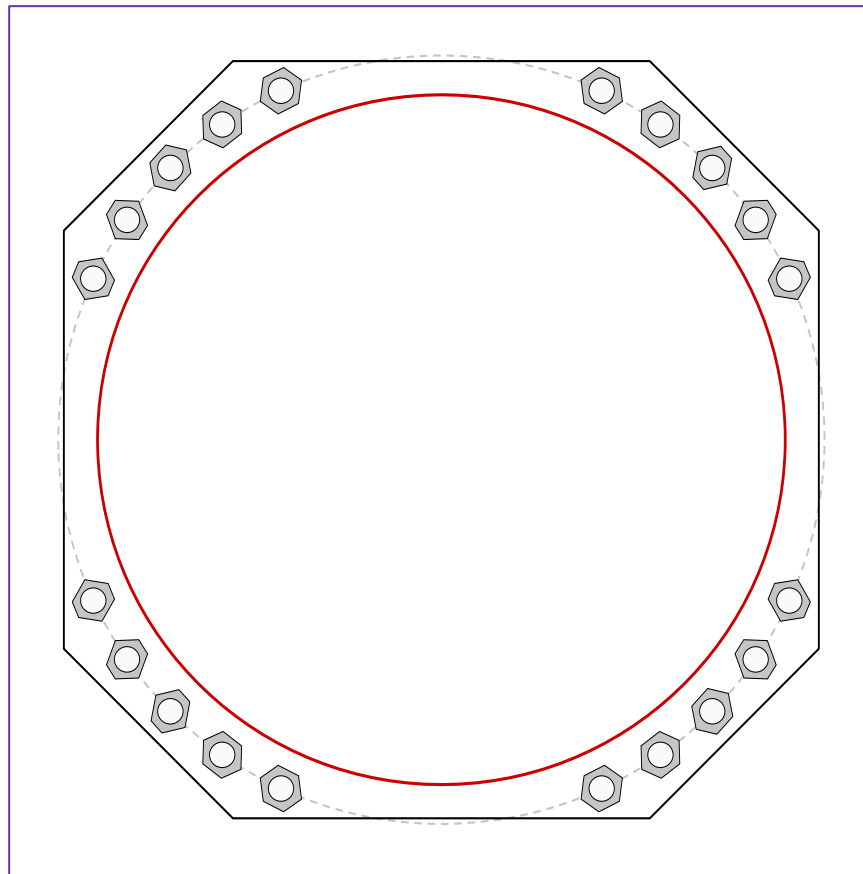


Site Info	
BU #	801367
Site Name	NHV-2075 CAC 801367
Order #	586785, Rev# 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
$l_{ar}$ (in)	1

Applied Loads	
Moment (kip-ft)	4339.62
Axial Force (kips)	72.35
Shear Force (kips)	33.28

\*TIA-222-H Section 15.5 Applied



Connection Properties	Analysis Results
-----------------------	------------------

Anchor Rod Data
(20) 2-1/4" $\phi$ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 68" BC <i>Anchor Spacing: 6 in</i>
Base Plate Data
67" W x 3" Plate (A572-55; $F_y=55$ ksi, $F_u=70$ ksi); Clip: 15 in
Stiffener Data
N/A
Pole Data
61.04" x 0.4375" 18-sided pole (A607-65; $F_y=65$ ksi, $F_u=80$ ksi)

Anchor Rod Summary			<i>(units of kips, kip-in)</i>
$P_{u,t} = 149.48$	$\phi P_{n,t} = 243.75$	<b>Stress Rating</b>	
$V_u = 1.66$	$\phi V_n = 149.1$	<b>58.4%</b>	
$M_u = n/a$	$\phi M_n = n/a$	<b>Pass</b>	
Base Plate Summary			
Max Stress (ksi):	24.55	(Flexural)	
Allowable Stress (ksi):	49.5		
Stress Rating:	<b>47.2%</b>	<b>Pass</b>	

# Pier and Pad Foundation



**BU #:** 801367  
**Site Name:** CT NHV-2075 CA0  
**App. Number:** 586785, Rev# 0

**TIA-222 Revision:** H  
**Tower Type:** Monopole

**Top & Bot. Pad Rein. Different?:**   
**Block Foundation?:**   
**Rectangular Pad?:**

Superstructure Analysis Reactions		
Compression, $P_{comp}$ :	72	kips
Base Shear, $Vu_{comp}$ :	33	kips
Moment, $M_u$ :	4340	ft-kips
Tower Height, $H$ :	167	ft
BP Dist. Above Fdn, $bp_{dist}$ :	3.25	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	418.80	33.00	7.5%	Pass
<i>Bearing Pressure (ksf)</i>	12.00	2.47	20.6%	Pass
<i>Overturning (kip*ft)</i>	8432.65	4596.44	54.5%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	10992.95	4455.50	38.6%	Pass
<i>Pier Compression (kip)</i>	23994.73	103.67	0.4%	Pass
<i>Pad Flexure (kip*ft)</i>	8284.82	1514.41	17.4%	Pass
<i>Pad Shear - 1-way (kips)</i>	1104.67	208.55	18.0%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.164	0.024	13.8%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	12679.86	2673.30	20.1%	Pass

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, $dpier$ :	8	ft
Ext. Above Grade, $E$ :	0.5	ft
Pier Rebar Size, $Sc$ :	11	
Pier Rebar Quantity, $mc$ :	40	
Pier Tie/Spiral Size, $St$ :	4	
Pier Tie/Spiral Quantity, $mt$ :	12	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, $cc_{pier}$ :	3	in

\*Rating per TIA-222-H Section 15.5

Structural Rating*:	38.6%
Soil Rating*:	54.5%

Pad Properties		
Depth, $D$ :	7	ft
Pad Width, $W_1$ :	26	ft
Pad Thickness, $T$ :	4	ft
Pad Rebar Size (Bottom dir. 2), $Sp_2$ :	10	
Pad Rebar Quantity (Bottom dir. 2), $mp_2$ :	35	
Pad Clear Cover, $cc_{pad}$ :	3	in

Material Properties		
Rebar Grade, $F_y$ :	60	ksi
Concrete Compressive Strength, $F'_c$ :	3	ksi
Dry Concrete Density, $\delta_c$ :	150	pcf

Soil Properties		
Total Soil Unit Weight, $\gamma$ :	135	pcf
Ultimate Gross Bearing, $Q_{ult}$ :	16.000	ksf
Cohesion, $C_u$ :	0.000	ksf
Friction Angle, $\phi$ :	35	degrees
SPT Blow Count, $N_{blows}$ :	100	
Base Friction, $\mu$ :		
Neglected Depth, $N$ :	2.00	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, $gw$ :	N/A	ft

<--Toggle between Gross and Net

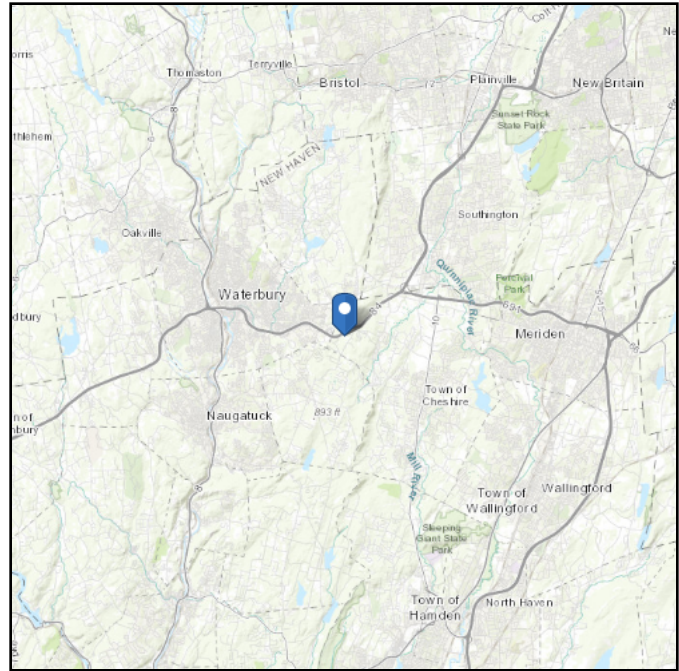


# ASCE 7 Hazards Report

**Address:**  
No Address at This Location

**Standard:** ASCE/SEI 7-16  
**Risk Category:** II  
**Soil Class:** D - Default (see Section 11.4.3)

**Elevation:** 615.93 ft (NAVD 88)  
**Latitude:** 41.536444  
**Longitude:** -72.957306



## Wind

### Results:

Wind Speed:	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2  
Date Accessed: Sat Oct 16 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

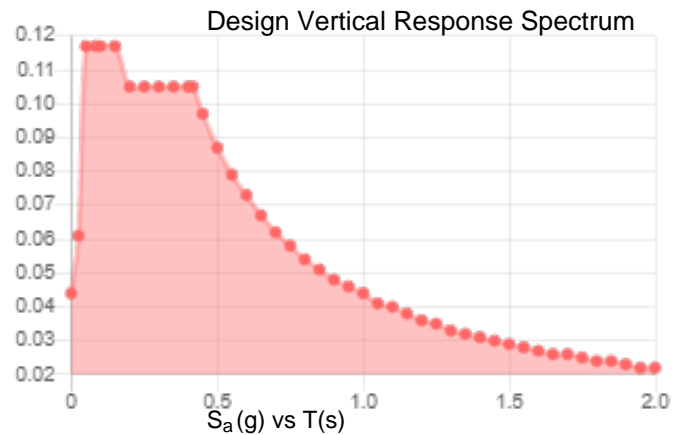
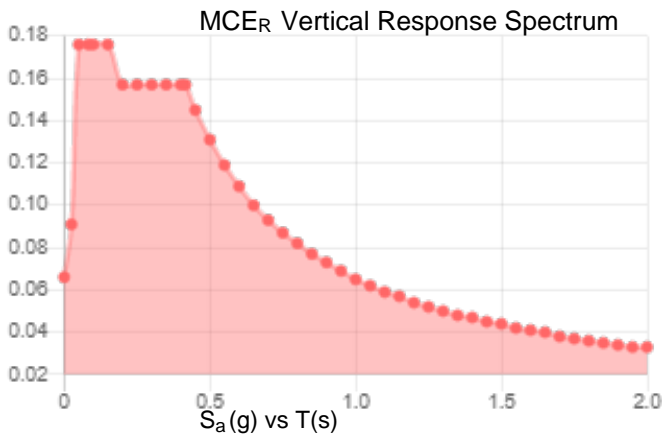
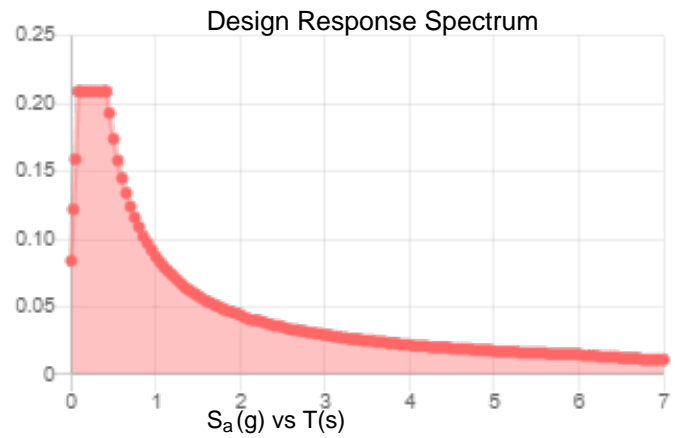
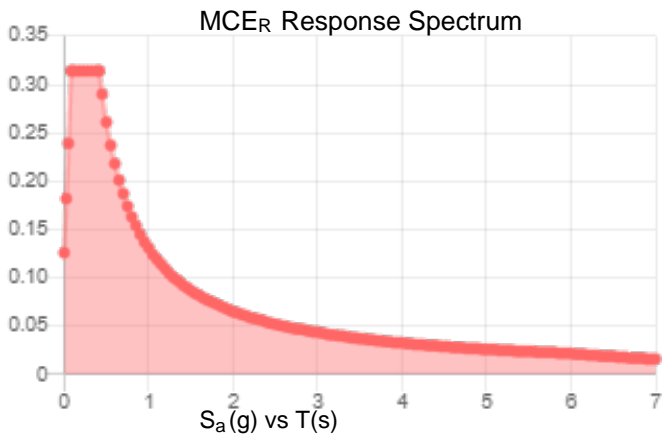
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

**Site Soil Class:** D - Default (see Section 11.4.3)

**Results:**

$S_s$ :	0.196	$S_{D1}$ :	0.087
$S_1$ :	0.054	$T_L$ :	6
$F_a$ :	1.6	PGA :	0.108
$F_v$ :	2.4	PGA <sub>M</sub> :	0.172
$S_{MS}$ :	0.314	$F_{PGA}$ :	1.583
$S_{M1}$ :	0.131	$I_e$ :	1
$S_{DS}$ :	0.209	$C_v$ :	0.7

**Seismic Design Category** B



**Data Accessed:**

Sat Oct 16 2021

**Date Source:**

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

## Ice

---

**Results:**

Ice Thickness: 1.00 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

**Data Source:** Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

**Date Accessed:** Sat Oct 16 2021

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

---

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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# Exhibit E

## **Mount Analysis**

October 14, 2021



Tower Engineering Professionals  
326 Tryon Road  
Raleigh, NC 27603  
(919) 661-6351  
[CrownMA@tepgroup.net](mailto:CrownMA@tepgroup.net)

**Subject:** Mount Analysis

**Carrier Designation:** T-Mobile Reconfiguration  
**Client Site Number:** CT11352C  
**Client Site Name:** Crowne Cheshire

**Crown Castle Designation:** **Crown Castle BU Number:** 801367  
**Crown Castle Site Name:** CT NHV-2075 CAC 801367  
**Crown Castle JDE Job Number:** 686819  
**Crown Castle Order Number:** 586785 Rev. 0

**Engineering Firm Designation:** **TEP Project Number:** 25630.610605

**Site Data:** 1121 Summit Road, Cheshire, New Haven County, CT 06410  
Latitude 41° 32' 11.20", Longitude -72° 57' 26.30"

**Structure Information:** **Tower Height & Type:** 167.0± ft Monopole  
**Mount Elevation:** 138.0 ft  
**Mount Width & Type:** 14.0 ft Platform w/ Support Rail

Tower Engineering Professionals is pleased to submit this "Mount Analysis" to determine the structural integrity of T-Mobile's antenna mounting system with proposed appurtenance and equipment addition on the above mentioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis, we have determined the mount stress level to be:

**Platform w/ Support Rail Mount**

**Sufficient Capacity**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Danny Murillo / SEB

Respectfully submitted by:

Aaron T. Rucker, P.E.  
Structural Division Manager  
919-661-6351  
[arucker@tepgroup.net](mailto:arucker@tepgroup.net)



Electronic Copy

10/14/2021

## TABLE OF CONTENTS

### 1) INTRODUCTION

### 2) ANALYSIS CRITERIA

Table 1 - Proposed Equipment Configuration

### 3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

### 4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity

4.1) Recommendations

### 5) APPENDIX A

Wire Frame and Rendered Models

### 6) APPENDIX B

Software Input Calculations

### 7) APPENDIX C

Software Analysis Output

## 1) INTRODUCTION

The mount is an existing 14.0-ft 3-sector Platform w/ Support Rail mount, mapped by Tower Engineering Professionals. The mount is installed at the 138.0 ft elevation on the 167.0± ft Monopole.

## 2) ANALYSIS CRITERIA

<b>Building Code:</b>	2018 Connecticut State Building Code
<b>TIA-222 Revision:</b>	TIA-222-H
<b>Risk Category:</b>	II
<b>Ultimate Wind Speed:</b>	125 mph
<b>Exposure Category:</b>	B
<b>Topographic Category at Base:</b>	1.0
<b>Topographic Category at Mount:</b>	1.0
<b>Ice Thickness:</b>	1.50 in
<b>Wind Speed with Ice:</b>	50 mph
<b>Seismic Design Category:</b>	B
<b>Seismic S<sub>s</sub>:</b>	0.186
<b>Seismic S<sub>1</sub>:</b>	0.063
<b>Live Loading Wind Speed:</b>	30 mph
<b>Live Loading at Mid/End-Points:</b>	250 lb
<b>Man Live Loading at Mount Pipes:</b>	500 lb

**Table 1 - Proposed Equipment Configuration**

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
138.0	138.0	3	Ericsson	AIR6449 B41_T-Mobile	Platform w/ Support Rail Mount
		3	RFS/Celwave	APXVAARR24_43-U-NA20	
		3	Ericsson	Radio 4460 B2/B25 B66_TMO	
		3	Ericsson	Radio 4480_TMOV2	

### 3) ANALYSIS PROCEDURE

**Table 2 - Documents Provided**

Document	Remarks	Reference	Source
Mount Mapping	Tower Engineering Professionals	Doc ID: 7841796	CCI sites
Previous Mount Modification	Maser Consulting	Doc ID: 7920672	CCI sites
RFDS	T-Mobile	RFDS Site ID: CT11352C	CCI sites
Loading Application	T-Mobile	Order 586785 Rev. 0	CCI sites

#### 3.1) Analysis Method

RISA-3D (Version 17.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the mount and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A and Appendix C.

TEP Mount Analysis Tool, a tool internally developed by TEP using Microsoft Excel, was used to calculate member loading for various load cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis (Revision D)*.

#### 3.2) Assumptions

- 1) The mount was built in accordance with the manufacturer's specifications.
- 2) The mount has been maintained in accordance with the manufacturer's specification.
- 3) The configuration of antennas, mounts and other appurtenances are as specified in Table 1. All mount components have been assumed to be in sufficient condition to carry their full design capacity for this analysis. Refer to the issued mapping for any structural and/or maintenance issues found during our site visit if applicable.
- 4) All mount components are in sufficient condition to carry their full design capacity.
- 5) TEP did not analyze the collar mount connection to the pole and assumes it to have sufficient structural capacity to transfer the applied forces from the mount to the tower.
- 6) All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15<sup>th</sup> Edition. See RISA-3D output for confirmation on grades used in this analysis.

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the antenna mounting system.



#### 4) ANALYSIS RESULTS

**Table 3 - Mount Component Stresses vs. Capacity (Platform w/ Support Rail Mount)**

Notes	Component	Critical Member	Mount Centerline (ft)	% Capacity	Pass / Fail
1	Face Horizontals	FFTH-3	138.0	61.1	Pass
1	Support Rails	SR-2	138.0	83.0	Pass
1	Support Arms	SA-3A	138.0	22.9	Pass
1	Internals	GSI-3	138.0	43.4	Pass
1	Kickers	K-2	138.0	12.5	Pass
1	Mount Pipes	MP-2	138.0	34.5	Pass

<b>Structure Rating (max from all components) =</b>	<b>83.0%</b>
---	--------------

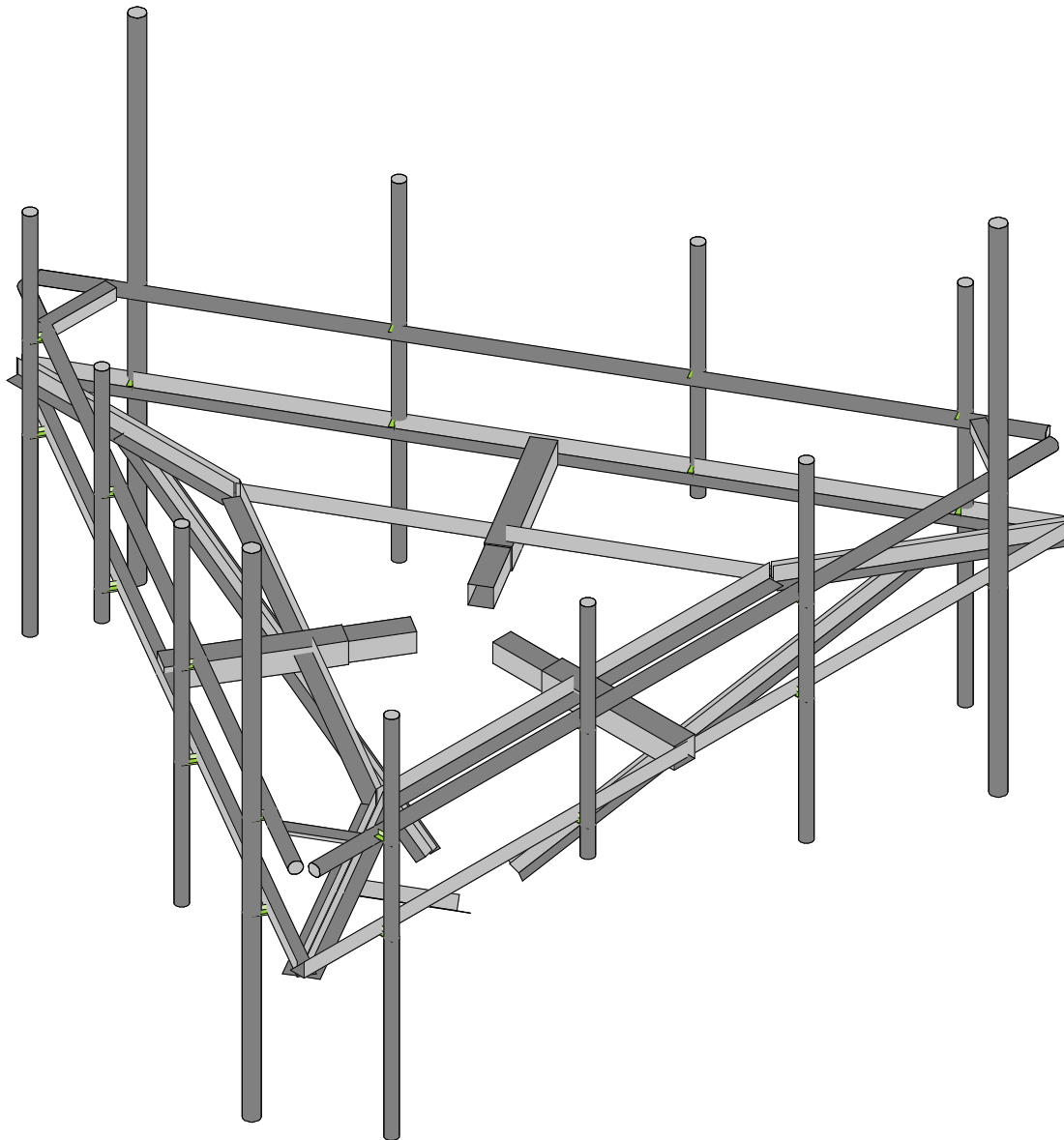
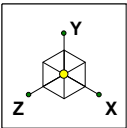
Notes:

- 1) See additional documentation in "Appendix C - Analysis Output" for calculations supporting the % capacity listed.

#### 4.1) Recommendations

- 1) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
- 2) The mount and its connection have sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.

**APPENDIX A**  
**WIRE FRAME AND RENDERED MODELS**



Envelope Only Solution

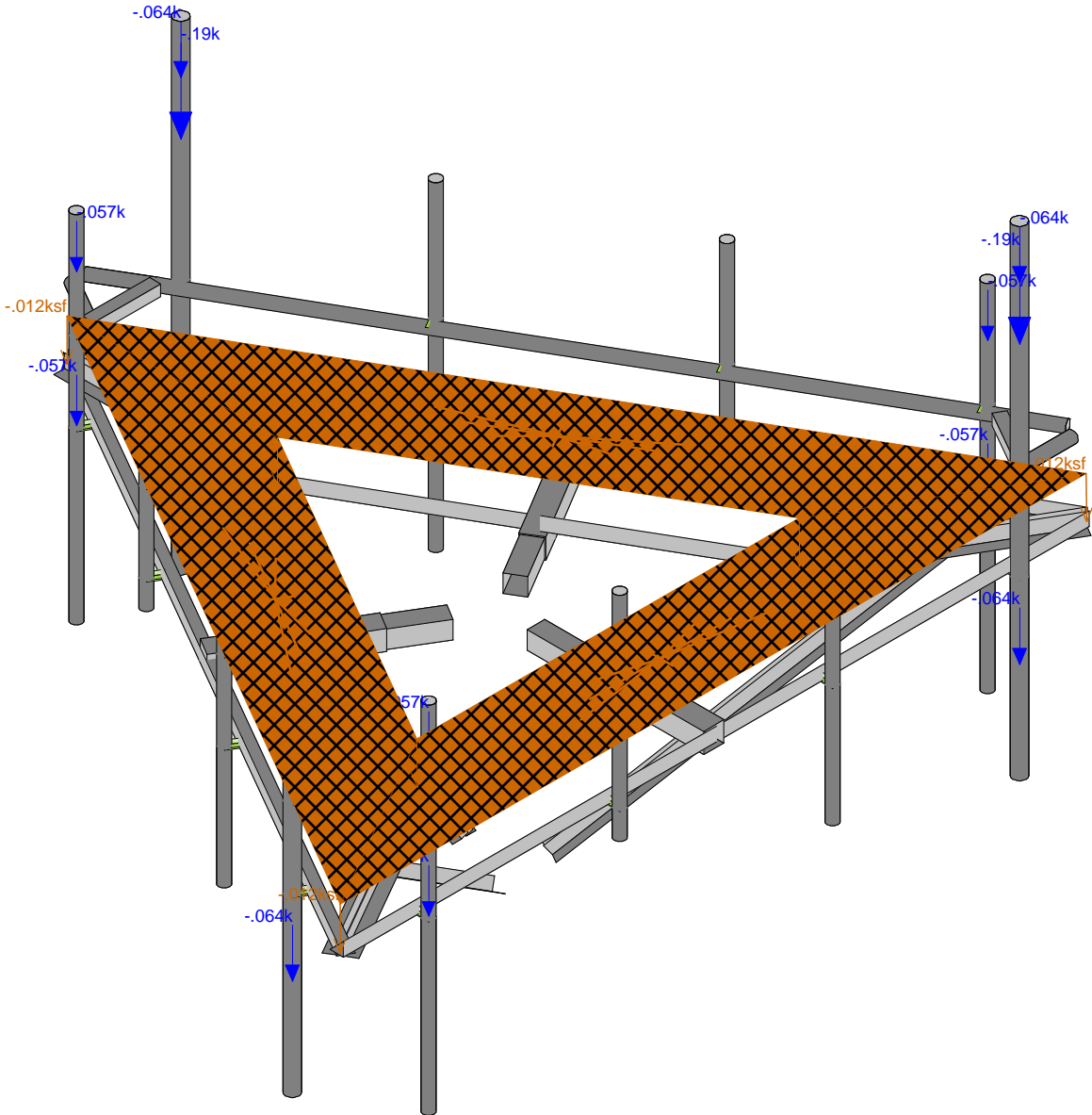
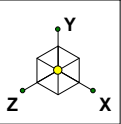
Tower Engineering Profess...  
DJM  
TEP#25630.610605

BU 801367

SK - 1

Oct 14, 2021 at 2:08 PM

PL-9 Platform Mount (14ft Low Profil...



Loads: BLC 1, Dead  
Envelope Only Solution

Tower Engineering Profess...

DJM

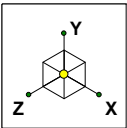
TEP#25630.610605

BU 801367

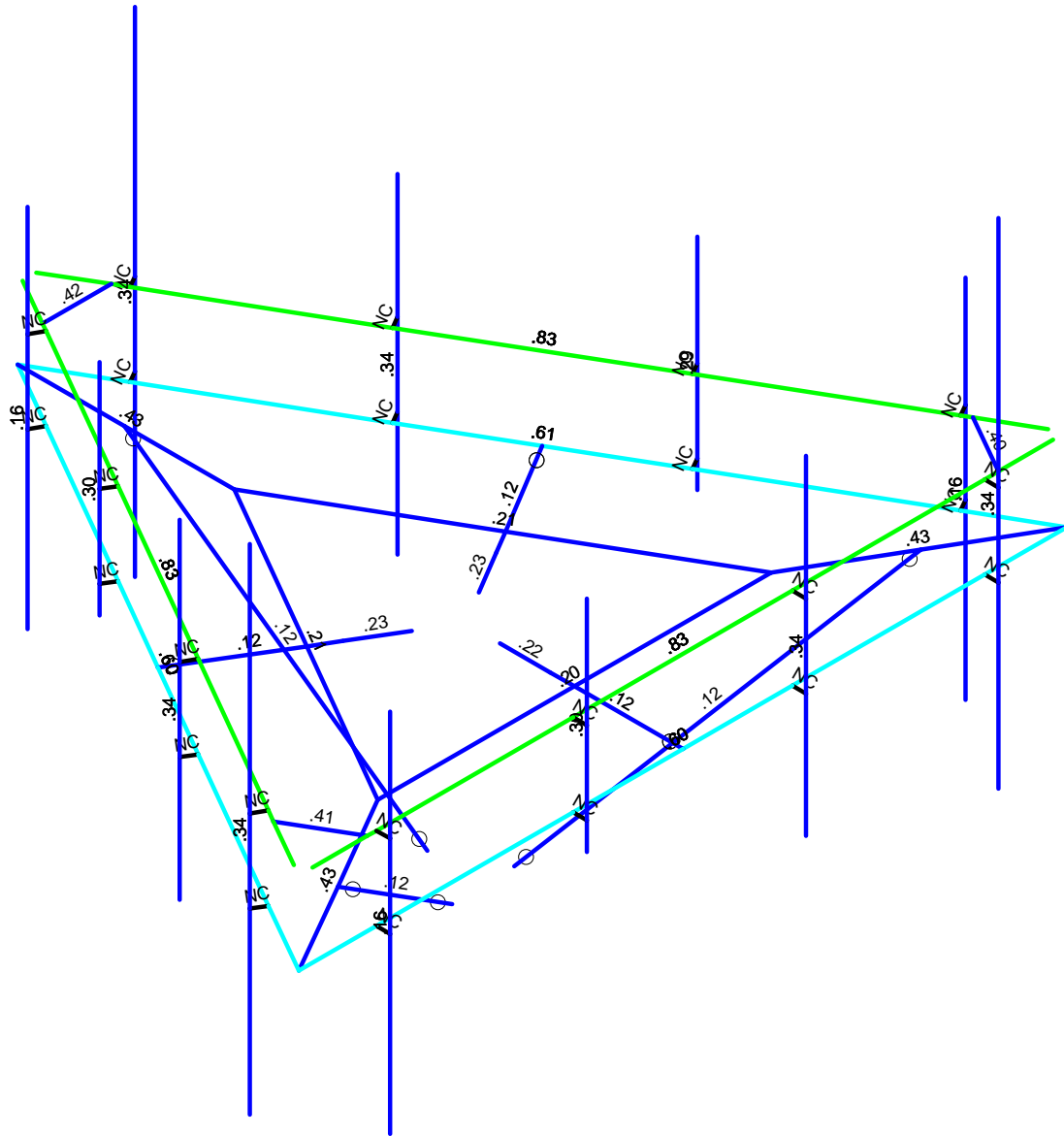
SK - 2

Oct 14, 2021 at 2:09 PM

PL-9 Platform Mount (14ft Low Profil...

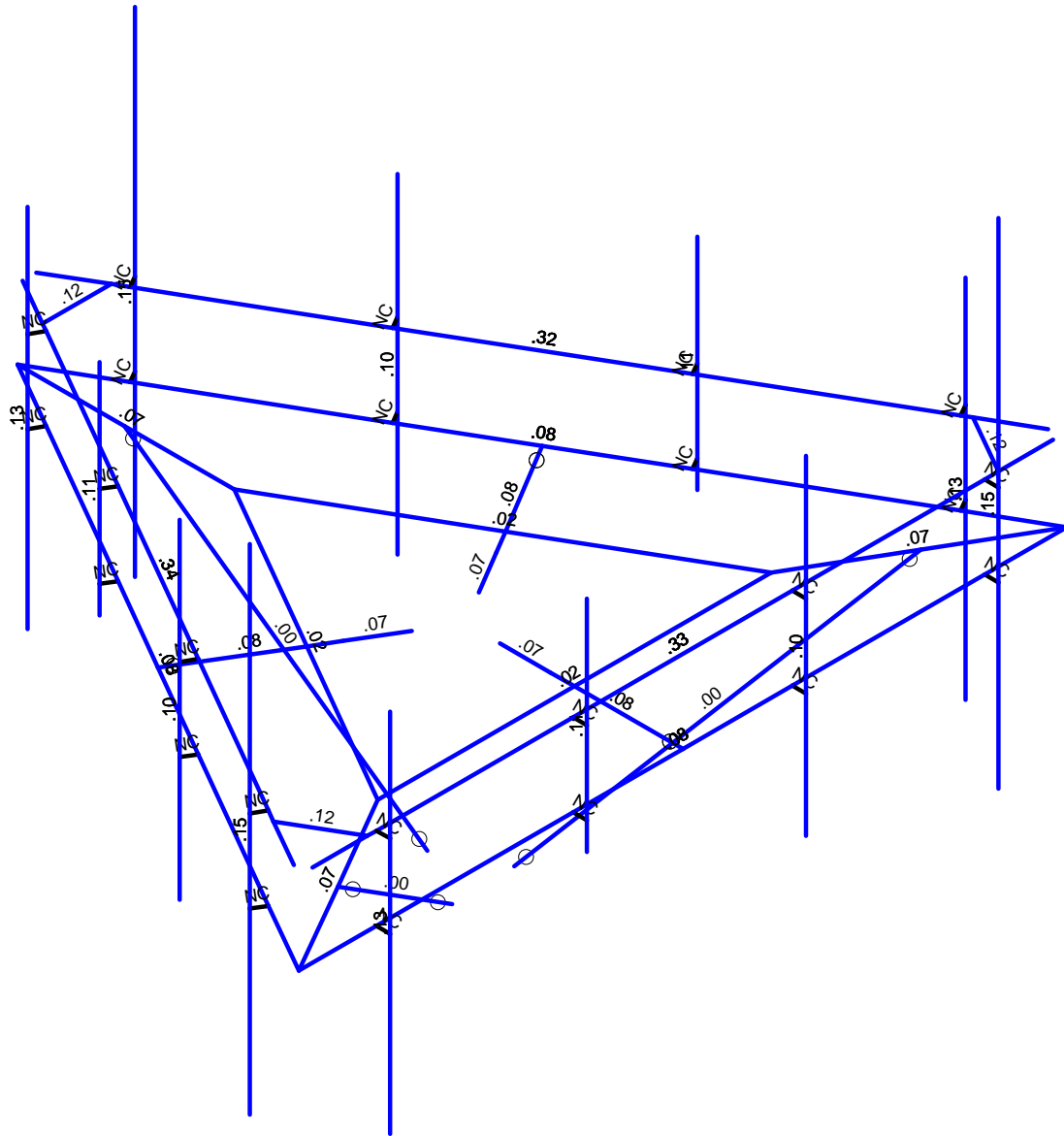
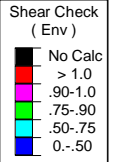
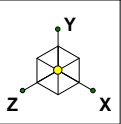


Code Check (Env)	
Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Tower Engineering Profess...	BU 801367	SK - 3
DJM		Oct 14, 2021 at 2:09 PM
TEP#25630.610605		PL-9 Platform Mount (14ft Low Profil...



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

Tower Engineering Profess...

DJM

TEP#25630.610605

BU 801367

SK - 4

Oct 14, 2021 at 2:09 PM

PL-9 Platform Mount (14ft Low Profil...

**APPENDIX B**  
**SOFTWARE INPUT CALCULATIONS**



Code Revisions:	TIA-222-H	IBC 2015
Tower Type:	Monopole	

Wind Inputs:		
Ult. Wind Velocity:	125.0	mph
Live Load Velocity:	30.0	mph
Ice Wind Velocity:	50.0	mph
Base Ice Thickness:	1.50	inches
Mount Centerline:	138.0	ft
Antenna Centerline:	138.0	ft
Exposure Category:	B	
Topo Category:	1	
Risk Category:	II	
Ground Elevation:	616	ft

Wind Calculations:		
$K_{zt}$ :	1.000	Section 2.6.6
$K_d$ :	0.950	
$K_{z-Mount}$ :	1.083	Section 2.6.5.2
$K_{z-Antenna}$ :	1.083	Section 2.6.5.2
$K_{iz}$ :	1.154	Section 2.6.10
Ice Thickness:	1.731	inches - Section 2.6.10

Without Ice - (psf)	With Ice - (psf)
$(q_z G_h)_{Mount}$ : 40.26	$(q_z G_h)_{Mount}$ : 6.44
$(q_z G_h)_{Antenna}$ : 40.26	$(q_z G_h)_{Antenna}$ : 6.44

Seismic Code Revisions:	TIA-222-H
Seismic Risk Category:	II

Seismic Input		
$S_{DS}$ :	0.199	Design Short Period Spectral Accel.
$I_p$ :	1.0	Importance Factor
$R_p$ :	2.0	Response Modification Factor
$\rho$ :	1.0	
$A_s$ :	1.0	Applification Factor - TIA-222-H Section 2.7.8.1
$S_1$ :	0.064	Spectral Acceleration at a Period of 1 Second

Seismic Design Force			
$C_s$ :	0.100	kips/kip	TIA-H Sec 2.7.7.1.1
$C_{s-min}$ :	0.030	kips/kip	TIA-H Sec 2.7.7.1.1





CCI BU No. 801367  
 TEP No. 25630.610605  
 Analysis By: DJM 10/14/2021  
 Checked By: SEB 10/14/2021

Antenna Loads are Calculated in Accordance with TIA-222-H

Azimuth is the absolute angle measured clockwise from RISA-3D global X-axis.

MFR	Model	Height (in)	Width (in)	Depth (in)	Wt. (lbs)	Azimuth°	Qty	Shape	Member Label	Distance from start node of the member		
										Location #1 (ft,%)	Location #2 (ft,%)	Location #3 (ft,%)
RFS/Celwave	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	0.00	1	Flat	MP-1	1.00	7.20	
Ericsson	AIR6449 B41_T-Mobile	33.11	20.51	8.54	114.63	0.00	1	Flat	MP-4	1.00	3.50	
RFS/Celwave	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	120.00	1	Flat	MP-5	1.00	7.20	
Ericsson	AIR6449 B41_T-Mobile	33.11	20.51	8.54	114.63	120.00	1	Flat	MP-8	1.00	3.50	
RFS/Celwave	APXVAARR24_43-U-NA20	95.90	24.00	8.70	128.00	240.00	1	Flat	MP-9	1.00	7.20	
Ericsson	AIR6449 B41_T-Mobile	33.11	20.51	8.54	114.63	240.00	1	Flat	MP-12	1.00	3.50	
Ericsson	Radio 4460 B2/B25 B66_TMO	17.00	15.10	11.90	109.00	90.00	1	Flat	MP-1	2.00		
Ericsson	Radio 4480_TMOV2	22.00	15.70	7.50	81.00	90.00	1	Flat	MP-1	2.00		
Ericsson	Radio 4460 B2/B25 B66_TMO	17.00	15.10	11.90	109.00	210.00	1	Flat	MP-5	2.00		
Ericsson	Radio 4480_TMOV2	22.00	15.70	7.50	81.00	210.00	1	Flat	MP-5	2.00		
Ericsson	Radio 4460 B2/B25 B66_TMO	17.00	15.10	11.90	109.00	330.00	1	Flat	MP-9	2.00		
Ericsson	Radio 4480_TMOV2	22.00	15.70	7.50	81.00	330.00	1	Flat	MP-9	2.00		



Member Forces are Calculated in Accordance with TIA-222-H

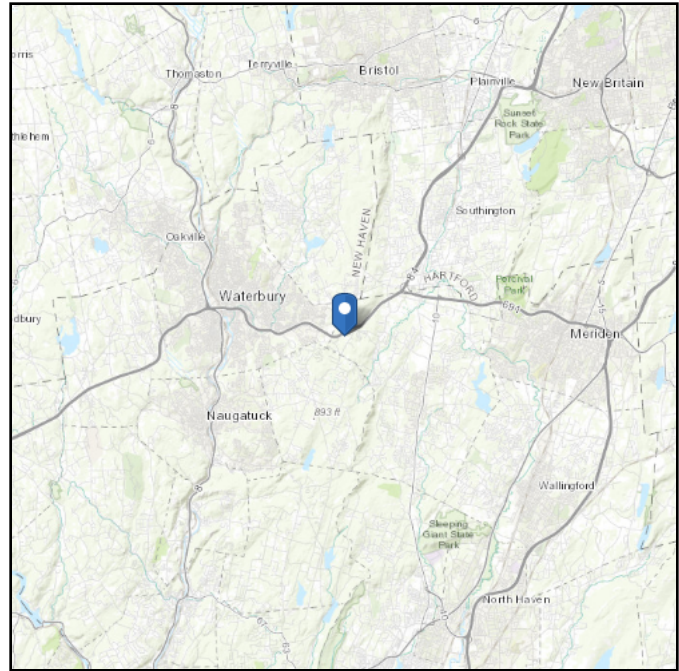
Member Name	Wind Proj. (in)	Length (in)	Shape	$\theta$ (°)	Perimeter (in)
FFTH-1	3.000	168.00	Flat	90.00	12.00
FFTH-2	3.000	168.00	Flat	-30.00	12.00
FFTH-3	3.000	168.00	Flat	30.00	12.00
GSI-1	3.000	47.33	Flat	-60.00	18.00
GSI-2	3.000	47.33	Flat	0.00	18.00
GSI-3	3.000	47.33	Flat	60.00	18.00
GSIP-1	3.000	86.02	Flat	90.00	12.00
GSIP-2	3.000	86.02	Flat	-30.00	12.00
GSIP-3	3.000	86.02	Flat	30.00	12.00
K-1	2.500	81.28	Flat		15.00
K-2	2.500	81.28	Flat		15.00
K-3	2.500	80.94	Flat		15.00
MP-1	2.875	108.00	Round		9.03
MP-2	2.375	72.00	Round		7.46
MP-3	2.375	48.00	Round		7.46
MP-4	2.375	80.00	Round		7.46
MP-5	2.875	108.00	Round		9.03
MP-6	2.375	72.00	Round		7.46
MP-7	2.375	48.00	Round		7.46
MP-8	2.375	80.00	Round		7.46
MP-9	2.875	108.00	Round		9.03
MP-10	2.375	72.00	Round		7.46
MP-11	2.375	48.00	Round		7.46
MP-12	2.375	80.00	Round		7.46
SA-1A	4.000	11.00	Flat	0.00	16.00
SA-1B	4.500	29.00	Flat	0.00	18.00
SA-2A	4.000	11.00	Flat	58.97	16.00
SA-2B	4.500	29.43	Flat	58.97	18.00
SA-3A	4.000	11.00	Flat	-58.97	16.00
SA-3C	4.500	29.43	Flat	-58.97	18.00
SR-1	2.375	162.00	Round	90.00	7.46
SR-2	2.375	162.00	Round	-30.00	7.46
SR-3	2.375	162.00	Round	30.00	7.46
SRC-1	2.500	15.00	Flat	30.00	10.00
SRC-2	2.500	15.00	Flat	90.00	10.00
SRC-3	2.500	15.00	Flat	-30.00	10.00

# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

**Standard:** ASCE/SEI 7-10  
**Risk Category:** II  
**Soil Class:** D - Stiff Soil

**Elevation:** 615.93 ft (NAVD 88)  
**Latitude:** 41.536444  
**Longitude:** -72.957306



## Wind

### Results:

Wind Speed:	122 Vmph	117 Vmph per 7-16
10-year MRI	76 Vmph	
25-year MRI	86 Vmph	
50-year MRI	92 Vmph	
100-year MRI	99 Vmph	

**Data Source:** ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

**Date Accessed:** Wed Oct 24 2018

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

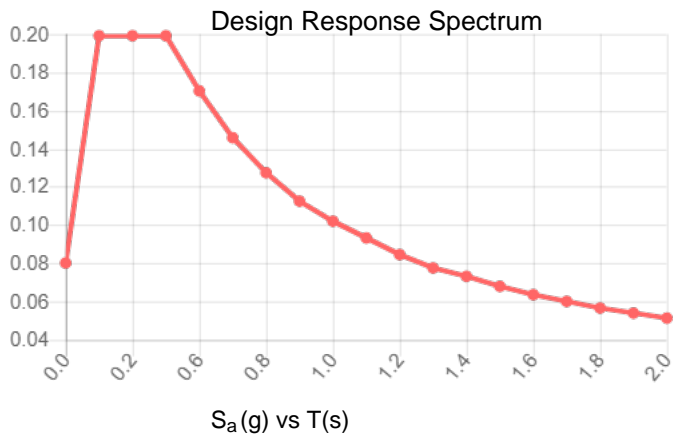
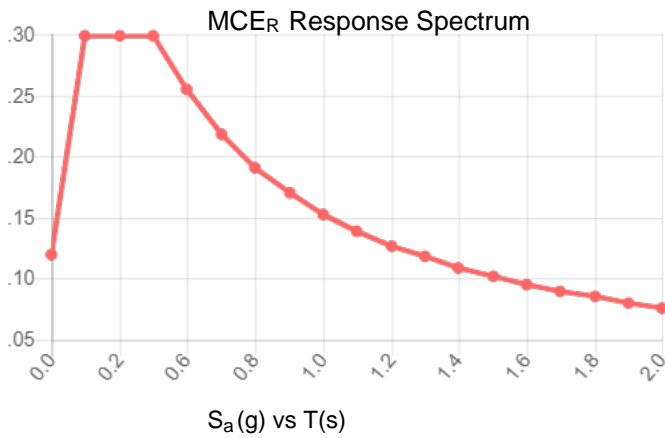
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

**Site Soil Class:** D - Stiff Soil

**Results:**

$S_s$ :	0.187	$S_{DS}$ :	0.199
$S_1$ :	0.064	$S_{D1}$ :	0.102
$F_a$ :	1.600	$T_L$ :	6.000
$F_v$ :	2.400	PGA :	0.097
$S_{MS}$ :	0.299	PGA <sub>M</sub> :	0.154
$S_{M1}$ :	0.153	F <sub>PGA</sub> :	1.600
		$I_e$ :	1

**Seismic Design Category** B



**Data Accessed:**

Wed Oct 24 2018

**Date Source:**

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

## Ice

---

### Results:

Ice Thickness: 0.75 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

**Data Source:** Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

**Date Accessed:** Wed Oct 24 2018

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

---

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

**APPENDIX C**  
**SOFTWARE ANALYSIS OUTPUT**

**(Global) Model Settings**

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	No
RISACONNECTION CODE	None
Cold Formed Steel Code	None
Wood Code	None
Wood Temperature	< 100F
Concrete Code	None
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET ASTM615
Min % Steel for Column	1
Max % Steel for Column	8

**(Global) Model Settings, Continued**

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1

**Material Takeoff**

	Material	Size	Pieces	Length[ft]	Weight[K]
1	General				
2	RIGID		24	6	0
3	Total General		24	6	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	L2.5x2.5x4	3	3.8	.015
7	A36 Gr.36	L3X3X4	6	63.5	.311
8	A36 Gr.36	LL2.5x2.5x3x3	3	20.3	.124
9	A36 Gr.36	LL3x3x4x0	3	11.8	.116
10	A500 Gr.B Rect	HSS4.5X4.5X3	3	7.3	.079
11	A500 Gr.B Rect	HSS4X4X4	3	2.8	.034
12	A53 Gr.B	PIPE 2.0	12	90.5	.314
13	A53 Gr.B	PIPE 2.5	3	27	.148
14	Total HR Steel		36	227	1.141

**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

**Cold Formed Steel Properties**

Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]	
1	A653 SS Gr33	29500	11346	.3	.65	.49	33	45
2	A653 SS Gr50/1	29500	11346	.3	.65	.49	50	65





**Member Advanced Data (Continued)**

Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic ...
29	M49					Yes	** NA **			None
30	M50					Yes	** NA **			None
31	M51					Yes	** NA **			None
32	M52					Yes	** NA **			None
33	M53					Yes	** NA **			None
34	M54					Yes	** NA **			None
35	M55					Yes	** NA **			None
36	M56					Yes	** NA **			None
37	MP-1					Yes	** NA **			None
38	MP-2					Yes	** NA **			None
39	MP-3					Yes	** NA **			None
40	MP-4					Yes	** NA **			None
41	MP-5					Yes	** NA **			None
42	MP-6					Yes	** NA **			None
43	MP-7					Yes	** NA **			None
44	MP-8					Yes	** NA **			None
45	MP-9					Yes	** NA **			None
46	MP-10					Yes	** NA **			None
47	MP-11					Yes	** NA **			None
48	MP-12					Yes	** NA **			None
49	SA-1A					Yes	** NA **			None
50	SA-1B		BenPIN			Yes	** NA **			None
51	SA-2A					Yes	** NA **			None
52	SA-2B		BenPIN			Yes	** NA **			None
53	SA-3A					Yes	** NA **			None
54	SA-3C		BenPIN			Yes	** NA **			None
55	SR-1					Yes	** NA **			None
56	SR-2					Yes	** NA **			None
57	SR-3					Yes	** NA **			None
58	SRC-1					Yes	** NA **			None
59	SRC-2					Yes	** NA **			None
60	SRC-3					Yes	** NA **			None

**Hot Rolled Steel Design Parameters**

Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torque[ft]	Kyy	Kzz	Cb	Funci...
1	FFTH-1	Face Horizontal	14	7	7			1	1		Lateral
2	FFTH-2	Face Horizontal	14	7	7			1	1		Lateral
3	FFTH-3	Face Horizontal	14	7	7			1	1		Lateral
4	GSI-1	Corner Internal	3,944					1	1		Lateral
5	GSI-2	Corner Internal	3,944					1	1		Lateral
6	GSI-3	Corner Internal	3,944					1	1		Lateral
7	GSIP-1	Internal	7.168	3.583	3.583			1	1		Lateral
8	GSIP-2	Internal	7.168	3.583	3.583			1	1		Lateral
9	GSIP-3	Internal	7.168	3.583	3.583			1	1		Lateral
10	K-1	PRK-1245L	6.773					1	1		Lateral
11	K-2	PRK-1245L	6.773					1	1		Lateral
12	K-3	PRK-1245L	6.745					1	1		Lateral
13	MP-1	2.5 MP	9	Segment	Segment			2.1	2.1		Lateral
14	MP-2	Mount Pipe 2.0	6	Segment	Segment			2.1	2.1		Lateral
15	MP-3	Mount Pipe 2.0	4	Segment	Segment			2.1	2.1		Lateral
16	MP-4	Mount Pipe 2.0	6.667	Segment	Segment			2.1	2.1		Lateral
17	MP-5	2.5 MP	9	Segment	Segment			2.1	2.1		Lateral
18	MP-6	Mount Pipe 2.0	6	Segment	Segment			2.1	2.1		Lateral
19	MP-7	Mount Pipe 2.0	4	Segment	Segment			2.1	2.1		Lateral
20	MP-8	Mount Pipe 2.0	6.667	Segment	Segment			2.1	2.1		Lateral
21	MP-9	2.5 MP	9	Segment	Segment			2.1	2.1		Lateral
22	MP-10	Mount Pipe 2.0	6	Segment	Segment			2.1	2.1		Lateral
23	MP-11	Mount Pipe 2.0	4	Segment	Segment			2.1	2.1		Lateral
24	MP-12	Mount Pipe 2.0	6.667	Segment	Segment			2.1	2.1		Lateral
25	SA-1A	Support Arm A	.917					1	1		Lateral
26	SA-1B	Support Arm B	2.417					1	1		Lateral

**Hot Rolled Steel Design Parameters (Continued)**

Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torque[ft]	Kyy	Kzz	Cb	Funci...
27	SA-2A	Support Arm A	.917					1	1		Lateral
28	SA-2B	Support Arm B	2.452					1	1		Lateral
29	SA-3A	Support Arm A	.917					1	1		Lateral
30	SA-3C	Support Arm B	2.452					1	1		Lateral
31	SR-1	HRK 14-U	13.5					2.1	2.1		Lateral
32	SR-2	HRK 14-U	13.5					2.1	2.1		Lateral
33	SR-3	HRK 14-U	13.5					2.1	2.1		Lateral
34	SRC-1	SRC	1.25					.65	.65		Lateral
35	SRC-2	SRC	1.25					.65	.65		Lateral
36	SRC-3	SRC	1.25					.65	.65		Lateral

**Cold Formed Steel Design Parameters**

Label	Shape	Length...	Lbyy[ft]	Lbzz[ft]	Lcomp to...	Lcomp b...	Kyy	Kzz	Cm-vy	Cm-zz	Cb	R	y sway	sway
No Data to Print ...														

**Basic Load Cases**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	Dead	None	-1			18	3	
2	0 Wind - No Ice	None				18	36	
3	30 Wind - No Ice	None				36	72	
4	45 Wind - No Ice	None				36	72	
5	60 Wind - No Ice	None				36	72	
6	90 Wind - No Ice	None				18	36	
7	120 Wind - No Ice	None				36	72	
8	135 Wind - No Ice	None				36	72	
9	150 Wind - No Ice	None				36	72	
10	180 Wind - No Ice	None				18	36	
11	210 Wind - No Ice	None				36	72	
12	225 Wind - No Ice	None				36	72	
13	240 Wind - No Ice	None				36	72	
14	270 Wind - No Ice	None				18	36	
15	300 Wind - No Ice	None				36	72	
16	315 Wind - No Ice	None				36	72	
17	330 Wind - No Ice	None				36	72	
18	Ice Weight	None				18	36	3
19	0 Wind - Ice	None				18	36	
20	30 Wind - Ice	None				36	72	
21	45 Wind - Ice	None				36	72	
22	60 Wind - Ice	None				36	72	
23	90 Wind - Ice	None				18	36	
24	120 Wind - Ice	None				36	72	
25	135 Wind - Ice	None				36	72	
26	150 Wind - Ice	None				36	72	
27	180 Wind - Ice	None				18	36	
28	210 Wind - Ice	None				36	72	
29	225 Wind - Ice	None				36	72	
30	240 Wind - Ice	None				36	72	
31	270 Wind - Ice	None				18	36	
32	300 Wind - Ice	None				36	72	
33	315 Wind - Ice	None				36	72	
34	330 Wind - Ice	None				36	72	
35	Lm	None			1			
36	Lv	None			1			
37	Seismic Load X	ELX	-1			18		
38	Seismic Load Z	ELZ		-1		18		
39	BLC 1 Transient Area...	None					32	
40	BLC 18 Transient Are...	None					32	





**Member Point Loads (BLC 1 : Dead) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
13	MP-1	-0.64	7.2
14	MP-4	-0.57	3.5
15	MP-5	-0.64	7.2
16	MP-8	-0.57	3.5
17	MP-9	-0.64	7.2
18	MP-12	-0.57	3.5

**Member Point Loads (BLC 2 : 0 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-2.66	1
2	MP-4	-0.95	1
3	MP-5	-1.39	1
4	MP-8	-0.51	1
5	MP-9	-1.39	1
6	MP-12	-0.51	1
7	MP-1	-0.61	2
8	MP-1	-0.51	2
9	MP-5	-0.73	2
10	MP-5	-0.91	2
11	MP-9	-0.73	2
12	MP-9	-0.91	2
13	MP-1	-2.66	7.2
14	MP-4	-0.95	3.5
15	MP-5	-1.39	7.2
16	MP-8	-0.51	3.5
17	MP-9	-1.39	7.2
18	MP-12	-0.51	3.5

**Member Point Loads (BLC 3 : 30 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-1.94	1
2	MP-4	-0.7	1
3	MP-5	-0.83	1
4	MP-8	-0.32	1
5	MP-9	-1.94	1
6	MP-12	-0.7	1
7	MP-1	-0.56	2
8	MP-1	-0.55	2
9	MP-5	-0.67	2
10	MP-5	-0.9	2
11	MP-9	-0.56	2
12	MP-9	-0.55	2
13	MP-1	-1.94	7.2
14	MP-4	-0.7	3.5
15	MP-5	-0.83	7.2
16	MP-8	-0.32	3.5
17	MP-9	-1.94	7.2
18	MP-12	-0.7	3.5
19	MP-1	-1.12	1
20	MP-4	-0.4	1
21	MP-5	-0.48	1
22	MP-8	-0.18	1
23	MP-9	-1.12	1
24	MP-12	-0.4	1
25	MP-1	-0.33	2
26	MP-1	-0.32	2
27	MP-5	-0.39	2
28	MP-5	-0.52	2
29	MP-9	-0.33	2
30	MP-9	-0.32	2
31	MP-1	-1.12	7.2
32	MP-4	-0.4	3.5



**Member Point Loads (BLC 3 : 30 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
33	MP-5	-0.48	7.2
34	MP-8	-0.18	3.5
35	MP-9	-1.12	7.2
36	MP-12	-0.4	3.5

**Member Point Loads (BLC 4 : 45 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-1.28	1
2	MP-4	-0.47	1
3	MP-5	-0.76	1
4	MP-8	-0.29	1
5	MP-9	-1.8	1
6	MP-12	-0.65	1
7	MP-1	-0.49	2
8	MP-1	-0.55	2
9	MP-5	-0.54	2
10	MP-5	-0.71	2
11	MP-9	-0.44	2
12	MP-9	-0.38	2
13	MP-1	-1.28	7.2
14	MP-4	-0.47	3.5
15	MP-5	-0.76	7.2
16	MP-8	-0.29	3.5
17	MP-9	-1.8	7.2
18	MP-12	-0.65	3.5
19	MP-1	-1.28	1
20	MP-4	-0.47	1
21	MP-5	-0.76	1
22	MP-8	-0.29	1
23	MP-9	-1.8	1
24	MP-12	-0.65	1
25	MP-1	-0.49	2
26	MP-1	-0.55	2
27	MP-5	-0.54	2
28	MP-5	-0.71	2
29	MP-9	-0.44	2
30	MP-9	-0.38	2
31	MP-1	-1.28	7.2
32	MP-4	-0.47	3.5
33	MP-5	-0.76	7.2
34	MP-8	-0.29	3.5
35	MP-9	-1.8	7.2
36	MP-12	-0.65	3.5

**Member Point Loads (BLC 5 : 60 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-0.69	1
2	MP-4	-0.26	1
3	MP-5	-0.69	1
4	MP-8	-0.26	1
5	MP-9	-1.33	1
6	MP-12	-0.48	1
7	MP-1	-0.37	2
8	MP-1	-0.45	2
9	MP-5	-0.37	2
10	MP-5	-0.45	2
11	MP-9	-0.31	2
12	MP-9	-0.25	2
13	MP-1	-0.69	7.2
14	MP-4	-0.26	3.5
15	MP-5	-0.69	7.2
16	MP-8	-0.26	3.5



**Member Point Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
17	MP-9	X	-.133	7.2
18	MP-12	X	-.048	3.5
19	MP-1	Z	-.12	1
20	MP-4	Z	-.045	1
21	MP-5	Z	-.12	1
22	MP-8	Z	-.045	1
23	MP-9	Z	-.23	1
24	MP-12	Z	-.083	1
25	MP-1	Z	-.064	2
26	MP-1	Z	-.079	2
27	MP-5	Z	-.064	2
28	MP-5	Z	-.079	2
29	MP-9	Z	-.053	2
30	MP-9	Z	-.044	2
31	MP-1	Z	-.12	7.2
32	MP-4	Z	-.045	3.5
33	MP-5	Z	-.12	7.2
34	MP-8	Z	-.045	3.5
35	MP-9	Z	-.23	7.2
36	MP-12	Z	-.083	3.5

**Member Point Loads (BLC 6 : 90 Wind - No Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	Z	-.096	1
2	MP-4	Z	-.037	1
3	MP-5	Z	-.223	1
4	MP-8	Z	-.081	1
5	MP-9	Z	-.223	1
6	MP-12	Z	-.081	1
7	MP-1	Z	-.078	2
8	MP-1	Z	-.104	2
9	MP-5	Z	-.065	2
10	MP-5	Z	-.064	2
11	MP-9	Z	-.065	2
12	MP-9	Z	-.064	2
13	MP-1	Z	-.096	7.2
14	MP-4	Z	-.037	3.5
15	MP-5	Z	-.223	7.2
16	MP-8	Z	-.081	3.5
17	MP-9	Z	-.223	7.2
18	MP-12	Z	-.081	3.5

**Member Point Loads (BLC 7 : 120 Wind - No Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	X	.069	1
2	MP-4	X	.026	1
3	MP-5	X	.133	1
4	MP-8	X	.048	1
5	MP-9	X	.069	1
6	MP-12	X	.026	1
7	MP-1	X	.037	2
8	MP-1	X	.045	2
9	MP-5	X	.031	2
10	MP-5	X	.025	2
11	MP-9	X	.037	2
12	MP-9	X	.045	2
13	MP-1	X	.069	7.2
14	MP-4	X	.026	3.5
15	MP-5	X	.133	7.2
16	MP-8	X	.048	3.5
17	MP-9	X	.069	7.2
18	MP-12	X	.026	3.5



**Member Point Loads (BLC 7 : 120 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
19	MP-1	Z	-.12	1
20	MP-4	Z	-.045	1
21	MP-5	Z	-.23	1
22	MP-8	Z	-.083	1
23	MP-9	Z	-.12	1
24	MP-12	Z	-.045	1
25	MP-1	Z	-.064	2
26	MP-1	Z	-.079	2
27	MP-5	Z	-.053	2
28	MP-5	Z	-.044	2
29	MP-9	Z	-.064	2
30	MP-9	Z	-.079	2
31	MP-1	Z	-.12	7.2
32	MP-4	Z	-.045	3.5
33	MP-5	Z	-.23	7.2
34	MP-8	Z	-.083	3.5
35	MP-9	Z	-.12	7.2
36	MP-12	Z	-.045	3.5

**Member Point Loads (BLC 8 : 135 Wind - No Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	X	.128	1
2	MP-4	X	.047	1
3	MP-5	X	.18	1
4	MP-8	X	.065	1
5	MP-9	X	.076	1
6	MP-12	X	.029	1
7	MP-1	X	.049	2
8	MP-1	X	.055	2
9	MP-5	X	.044	2
10	MP-5	X	.038	2
11	MP-9	X	.054	2
12	MP-9	X	.071	2
13	MP-1	X	.128	7.2
14	MP-4	X	.047	3.5
15	MP-5	X	.18	7.2
16	MP-8	X	.065	3.5
17	MP-9	X	.076	7.2
18	MP-12	X	.029	3.5
19	MP-1	Z	-.128	1
20	MP-4	Z	-.047	1
21	MP-5	Z	-.18	1
22	MP-8	Z	-.065	1
23	MP-9	Z	-.076	1
24	MP-12	Z	-.029	1
25	MP-1	Z	-.049	2
26	MP-1	Z	-.055	2
27	MP-5	Z	-.044	2
28	MP-5	Z	-.038	2
29	MP-9	Z	-.054	2
30	MP-9	Z	-.071	2
31	MP-1	Z	-.128	7.2
32	MP-4	Z	-.047	3.5
33	MP-5	Z	-.18	7.2
34	MP-8	Z	-.065	3.5
35	MP-9	Z	-.076	7.2
36	MP-12	Z	-.029	3.5

**Member Point Loads (BLC 9 : 150 Wind - No Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft, %]
1	MP-1	X	.194	1
2	MP-4	X	.07	1



**Member Point Loads (BLC 9 : 150 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
3	MP-5	X	.194	1
4	MP-8	X	.07	1
5	MP-9	X	.083	1
6	MP-12	X	.032	1
7	MP-1	X	.056	2
8	MP-1	X	.055	2
9	MP-5	X	.056	2
10	MP-5	X	.055	2
11	MP-9	X	.067	2
12	MP-9	X	.09	2
13	MP-1	X	.194	7.2
14	MP-4	X	.07	3.5
15	MP-5	X	.194	7.2
16	MP-8	X	.07	3.5
17	MP-9	X	.083	7.2
18	MP-12	X	.032	3.5
19	MP-1	Z	-.112	1
20	MP-4	Z	-.04	1
21	MP-5	Z	-.112	1
22	MP-8	Z	-.04	1
23	MP-9	Z	-.048	1
24	MP-12	Z	-.018	1
25	MP-1	Z	-.033	2
26	MP-1	Z	-.032	2
27	MP-5	Z	-.033	2
28	MP-5	Z	-.032	2
29	MP-9	Z	-.039	2
30	MP-9	Z	-.052	2
31	MP-1	Z	-.112	7.2
32	MP-4	Z	-.04	3.5
33	MP-5	Z	-.112	7.2
34	MP-8	Z	-.04	3.5
35	MP-9	Z	-.048	7.2
36	MP-12	Z	-.018	3.5

**Member Point Loads (BLC 10 : 180 Wind - No Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.266	1
2	MP-4	X	.095	1
3	MP-5	X	.139	1
4	MP-8	X	.051	1
5	MP-9	X	.139	1
6	MP-12	X	.051	1
7	MP-1	X	.061	2
8	MP-1	X	.051	2
9	MP-5	X	.073	2
10	MP-5	X	.091	2
11	MP-9	X	.073	2
12	MP-9	X	.091	2
13	MP-1	X	.266	7.2
14	MP-4	X	.095	3.5
15	MP-5	X	.139	7.2
16	MP-8	X	.051	3.5
17	MP-9	X	.139	7.2
18	MP-12	X	.051	3.5

**Member Point Loads (BLC 11 : 210 Wind - No Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.194	1
2	MP-4	X	.07	1
3	MP-5	X	.083	1
4	MP-8	X	.032	1



**Member Point Loads (BLC 11 : 210 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
5	MP-9	X	.194	1
6	MP-12	X	.07	1
7	MP-1	X	.056	2
8	MP-1	X	.055	2
9	MP-5	X	.067	2
10	MP-5	X	.09	2
11	MP-9	X	.056	2
12	MP-9	X	.055	2
13	MP-1	X	.194	7.2
14	MP-4	X	.07	3.5
15	MP-5	X	.083	7.2
16	MP-8	X	.032	3.5
17	MP-9	X	.194	7.2
18	MP-12	X	.07	3.5
19	MP-1	Z	.112	1
20	MP-4	Z	.04	1
21	MP-5	Z	.048	1
22	MP-8	Z	.018	1
23	MP-9	Z	.112	1
24	MP-12	Z	.04	1
25	MP-1	Z	.033	2
26	MP-1	Z	.032	2
27	MP-5	Z	.039	2
28	MP-5	Z	.052	2
29	MP-9	Z	.033	2
30	MP-9	Z	.032	2
31	MP-1	Z	.112	7.2
32	MP-4	Z	.04	3.5
33	MP-5	Z	.048	7.2
34	MP-8	Z	.018	3.5
35	MP-9	Z	.112	7.2
36	MP-12	Z	.04	3.5

**Member Point Loads (BLC 12 : 225 Wind - No Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.128	1
2	MP-4	X	.047	1
3	MP-5	X	.076	1
4	MP-8	X	.029	1
5	MP-9	X	.18	1
6	MP-12	X	.065	1
7	MP-1	X	.049	2
8	MP-1	X	.055	2
9	MP-5	X	.054	2
10	MP-5	X	.071	2
11	MP-9	X	.044	2
12	MP-9	X	.038	2
13	MP-1	X	.128	7.2
14	MP-4	X	.047	3.5
15	MP-5	X	.076	7.2
16	MP-8	X	.029	3.5
17	MP-9	X	.18	7.2
18	MP-12	X	.065	3.5
19	MP-1	Z	.128	1
20	MP-4	Z	.047	1
21	MP-5	Z	.076	1
22	MP-8	Z	.029	1
23	MP-9	Z	.18	1
24	MP-12	Z	.065	1
25	MP-1	Z	.049	2
26	MP-1	Z	.055	2
27	MP-5	Z	.054	2



**Member Point Loads (BLC 12 : 225 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
28	MP-5	.071	2
29	MP-9	.044	2
30	MP-9	.038	2
31	MP-1	.128	7.2
32	MP-4	.047	3.5
33	MP-5	.076	7.2
34	MP-8	.029	3.5
35	MP-9	.18	7.2
36	MP-12	.065	3.5

**Member Point Loads (BLC 13 : 240 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	.069	1
2	MP-4	.026	1
3	MP-5	.069	1
4	MP-8	.026	1
5	MP-9	.133	1
6	MP-12	.048	1
7	MP-1	.037	2
8	MP-1	.045	2
9	MP-5	.037	2
10	MP-5	.045	2
11	MP-9	.031	2
12	MP-9	.025	2
13	MP-1	.069	7.2
14	MP-4	.026	3.5
15	MP-5	.069	7.2
16	MP-8	.026	3.5
17	MP-9	.133	7.2
18	MP-12	.048	3.5
19	MP-1	.12	1
20	MP-4	.045	1
21	MP-5	.12	1
22	MP-8	.045	1
23	MP-9	.23	1
24	MP-12	.083	1
25	MP-1	.064	2
26	MP-1	.079	2
27	MP-5	.064	2
28	MP-5	.079	2
29	MP-9	.053	2
30	MP-9	.044	2
31	MP-1	.12	7.2
32	MP-4	.045	3.5
33	MP-5	.12	7.2
34	MP-8	.045	3.5
35	MP-9	.23	7.2
36	MP-12	.083	3.5

**Member Point Loads (BLC 14 : 270 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	.096	1
2	MP-4	.037	1
3	MP-5	.223	1
4	MP-8	.081	1
5	MP-9	.223	1
6	MP-12	.081	1
7	MP-1	.078	2
8	MP-1	.104	2
9	MP-5	.065	2
10	MP-5	.064	2
11	MP-9	.065	2



**Member Point Loads (BLC 14 : 270 Wind - No Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
12	MP-9	.064	2
13	MP-1	.096	7.2
14	MP-4	.037	3.5
15	MP-5	.223	7.2
16	MP-8	.081	3.5
17	MP-9	.223	7.2
18	MP-12	.081	3.5

**Member Point Loads (BLC 15 : 300 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-.069	1
2	MP-4	-.026	1
3	MP-5	-.133	1
4	MP-8	-.048	1
5	MP-9	-.069	1
6	MP-12	-.026	1
7	MP-1	-.037	2
8	MP-1	-.045	2
9	MP-5	-.031	2
10	MP-5	-.025	2
11	MP-9	-.037	2
12	MP-9	-.045	2
13	MP-1	-.069	7.2
14	MP-4	-.026	3.5
15	MP-5	-.133	7.2
16	MP-8	-.048	3.5
17	MP-9	-.069	7.2
18	MP-12	-.026	3.5
19	MP-1	.12	1
20	MP-4	.045	1
21	MP-5	.23	1
22	MP-8	.083	1
23	MP-9	.12	1
24	MP-12	.045	1
25	MP-1	.064	2
26	MP-1	.079	2
27	MP-5	.053	2
28	MP-5	.044	2
29	MP-9	.064	2
30	MP-9	.079	2
31	MP-1	.12	7.2
32	MP-4	.045	3.5
33	MP-5	.23	7.2
34	MP-8	.083	3.5
35	MP-9	.12	7.2
36	MP-12	.045	3.5

**Member Point Loads (BLC 16 : 315 Wind - No Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-.128	1
2	MP-4	-.047	1
3	MP-5	-.18	1
4	MP-8	-.065	1
5	MP-9	-.076	1
6	MP-12	-.029	1
7	MP-1	-.049	2
8	MP-1	-.055	2
9	MP-5	-.044	2
10	MP-5	-.038	2
11	MP-9	-.054	2
12	MP-9	-.071	2
13	MP-1	-.128	7.2



**Member Point Loads (BLC 16 : 315 Wind - No Ice) (Continued)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
14	MP-4	X	-.047	3.5
15	MP-5	X	-.18	7.2
16	MP-8	X	-.065	3.5
17	MP-9	X	-.076	7.2
18	MP-12	X	-.029	3.5
19	MP-1	Z	.128	1
20	MP-4	Z	.047	1
21	MP-5	Z	.18	1
22	MP-8	Z	.065	1
23	MP-9	Z	.076	1
24	MP-12	Z	.029	1
25	MP-1	Z	.049	2
26	MP-1	Z	.055	2
27	MP-5	Z	.044	2
28	MP-5	Z	.038	2
29	MP-9	Z	.054	2
30	MP-9	Z	.071	2
31	MP-1	Z	.128	7.2
32	MP-4	Z	.047	3.5
33	MP-5	Z	.18	7.2
34	MP-8	Z	.065	3.5
35	MP-9	Z	.076	7.2
36	MP-12	Z	.029	3.5

**Member Point Loads (BLC 17 : 330 Wind - No Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.194	1
2	MP-4	X	-.07	1
3	MP-5	X	-.194	1
4	MP-8	X	-.07	1
5	MP-9	X	-.083	1
6	MP-12	X	-.032	1
7	MP-1	X	-.056	2
8	MP-1	X	-.055	2
9	MP-5	X	-.056	2
10	MP-5	X	-.055	2
11	MP-9	X	-.067	2
12	MP-9	X	-.09	2
13	MP-1	X	-.194	7.2
14	MP-4	X	-.07	3.5
15	MP-5	X	-.194	7.2
16	MP-8	X	-.07	3.5
17	MP-9	X	-.083	7.2
18	MP-12	X	-.032	3.5
19	MP-1	Z	.112	1
20	MP-4	Z	.04	1
21	MP-5	Z	.112	1
22	MP-8	Z	.04	1
23	MP-9	Z	.048	1
24	MP-12	Z	.018	1
25	MP-1	Z	.033	2
26	MP-1	Z	.032	2
27	MP-5	Z	.033	2
28	MP-5	Z	.032	2
29	MP-9	Z	.039	2
30	MP-9	Z	.052	2
31	MP-1	Z	.112	7.2
32	MP-4	Z	.04	3.5
33	MP-5	Z	.112	7.2
34	MP-8	Z	.04	3.5
35	MP-9	Z	.048	7.2
36	MP-12	Z	.018	3.5



**Member Point Loads (BLC 18 : Ice Weight)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Y	-.213	1
2	MP-4	Y	-.077	1
3	MP-5	Y	-.213	1
4	MP-8	Y	-.077	1
5	MP-9	Y	-.213	1
6	MP-12	Y	-.077	1
7	MP-1	Y	-.09	2
8	MP-1	Y	-.089	2
9	MP-5	Y	-.09	2
10	MP-5	Y	-.089	2
11	MP-9	Y	-.09	2
12	MP-9	Y	-.089	2
13	MP-1	Y	-.213	7.2
14	MP-4	Y	-.077	3.5
15	MP-5	Y	-.213	7.2
16	MP-8	Y	-.077	3.5
17	MP-9	Y	-.213	7.2
18	MP-12	Y	-.077	3.5

**Member Point Loads (BLC 19 : 0 Wind - Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.049	1
2	MP-4	X	-.019	1
3	MP-5	X	-.049	1
4	MP-8	X	-.019	1
5	MP-9	X	-.049	1
6	MP-12	X	-.019	1
7	MP-1	X	-.018	2
8	MP-1	X	-.024	2
9	MP-5	X	-.018	2
10	MP-5	X	-.024	2
11	MP-9	X	-.018	2
12	MP-9	X	-.024	2
13	MP-1	X	-.049	7.2
14	MP-4	X	-.019	3.5
15	MP-5	X	-.049	7.2
16	MP-8	X	-.019	3.5
17	MP-9	X	-.049	7.2
18	MP-12	X	-.019	3.5

**Member Point Loads (BLC 20 : 30 Wind - Ice)**

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.037	1
2	MP-4	X	-.014	1
3	MP-5	X	-.019	1
4	MP-8	X	-.008	1
5	MP-9	X	-.037	1
6	MP-12	X	-.014	1
7	MP-1	X	-.014	2
8	MP-1	X	-.014	2
9	MP-5	X	-.016	2
10	MP-5	X	-.02	2
11	MP-9	X	-.014	2
12	MP-9	X	-.014	2
13	MP-1	X	-.037	7.2
14	MP-4	X	-.014	3.5
15	MP-5	X	-.019	7.2
16	MP-8	X	-.008	3.5
17	MP-9	X	-.037	7.2
18	MP-12	X	-.014	3.5
19	MP-1	Z	-.021	1
20	MP-4	Z	-.008	1



**Member Point Loads (BLC 20 : 30 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
21	MP-5	Z	-0.11	1
22	MP-8	Z	-0.04	1
23	MP-9	Z	-0.021	1
24	MP-12	Z	-0.008	1
25	MP-1	Z	-0.008	2
26	MP-1	Z	-0.008	2
27	MP-5	Z	-0.009	2
28	MP-5	Z	-0.012	2
29	MP-9	Z	-0.008	2
30	MP-9	Z	-0.008	2
31	MP-1	Z	-0.021	7.2
32	MP-4	Z	-0.008	3.5
33	MP-5	Z	-0.011	7.2
34	MP-8	Z	-0.004	3.5
35	MP-9	Z	-0.021	7.2
36	MP-12	Z	-0.008	3.5

**Member Point Loads (BLC 21 : 45 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-0.025	1
2	MP-4	X	-0.01	1
3	MP-5	X	-0.016	1
4	MP-8	X	-0.007	1
5	MP-9	X	-0.034	1
6	MP-12	X	-0.013	1
7	MP-1	X	-0.012	2
8	MP-1	X	-0.013	2
9	MP-5	X	-0.013	2
10	MP-5	X	-0.016	2
11	MP-9	X	-0.011	2
12	MP-9	X	-0.01	2
13	MP-1	X	-0.025	7.2
14	MP-4	X	-0.01	3.5
15	MP-5	X	-0.016	7.2
16	MP-8	X	-0.007	3.5
17	MP-9	X	-0.034	7.2
18	MP-12	X	-0.013	3.5
19	MP-1	Z	-0.025	1
20	MP-4	Z	-0.01	1
21	MP-5	Z	-0.016	1
22	MP-8	Z	-0.007	1
23	MP-9	Z	-0.034	1
24	MP-12	Z	-0.013	1
25	MP-1	Z	-0.012	2
26	MP-1	Z	-0.013	2
27	MP-5	Z	-0.013	2
28	MP-5	Z	-0.016	2
29	MP-9	Z	-0.011	2
30	MP-9	Z	-0.01	2
31	MP-1	Z	-0.025	7.2
32	MP-4	Z	-0.01	3.5
33	MP-5	Z	-0.016	7.2
34	MP-8	Z	-0.007	3.5
35	MP-9	Z	-0.034	7.2
36	MP-12	Z	-0.013	3.5

**Member Point Loads (BLC 22 : 60 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	-0.014	1
2	MP-4	X	-0.006	1
3	MP-5	X	-0.014	1
4	MP-8	X	-0.006	1



**Member Point Loads (BLC 22 : 60 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
5	MP-9	X	-0.025	1
6	MP-12	X	-0.01	1
7	MP-1	X	-0.009	2
8	MP-1	X	-0.011	2
9	MP-5	X	-0.009	2
10	MP-5	X	-0.011	2
11	MP-9	X	-0.008	2
12	MP-9	X	-0.007	2
13	MP-1	X	-0.014	7.2
14	MP-4	X	-0.006	3.5
15	MP-5	X	-0.014	7.2
16	MP-8	X	-0.006	3.5
17	MP-9	X	-0.025	7.2
18	MP-12	X	-0.01	3.5
19	MP-1	Z	-0.025	1
20	MP-4	Z	-0.01	1
21	MP-5	Z	-0.025	1
22	MP-8	Z	-0.01	1
23	MP-9	Z	-0.043	1
24	MP-12	Z	-0.017	1
25	MP-1	Z	-0.015	2
26	MP-1	Z	-0.018	2
27	MP-5	Z	-0.015	2
28	MP-5	Z	-0.018	2
29	MP-9	Z	-0.013	2
30	MP-9	Z	-0.012	2
31	MP-1	Z	-0.025	7.2
32	MP-4	Z	-0.01	3.5
33	MP-5	Z	-0.025	7.2
34	MP-8	Z	-0.01	3.5
35	MP-9	Z	-0.043	7.2
36	MP-12	Z	-0.017	3.5

**Member Point Loads (BLC 23 : 90 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	Z	-0.021	1
2	MP-4	Z	-0.009	1
3	MP-5	Z	-0.021	1
4	MP-8	Z	-0.009	1
5	MP-9	Z	-0.021	1
6	MP-12	Z	-0.009	1
7	MP-1	Z	-0.015	2
8	MP-1	Z	-0.013	2
9	MP-5	Z	-0.015	2
10	MP-5	Z	-0.013	2
11	MP-9	Z	-0.015	2
12	MP-9	Z	-0.013	2
13	MP-1	Z	-0.021	7.2
14	MP-4	Z	-0.009	3.5
15	MP-5	Z	-0.021	7.2
16	MP-8	Z	-0.009	3.5
17	MP-9	Z	-0.021	7.2
18	MP-12	Z	-0.009	3.5

**Member Point Loads (BLC 24 : 120 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.014	1
2	MP-4	X	.006	1
3	MP-5	X	.025	1
4	MP-8	X	.01	1
5	MP-9	X	.014	1
6	MP-12	X	.006	1





**Member Point Loads (BLC 24 : 120 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k, k-ft]	Location[ft, %]
7	MP-1	.009	2
8	MP-1	.011	2
9	MP-5	.008	2
10	MP-5	.007	2
11	MP-9	.009	2
12	MP-9	.011	2
13	MP-1	.014	7.2
14	MP-4	.006	3.5
15	MP-5	.025	7.2
16	MP-8	.01	3.5
17	MP-9	.014	7.2
18	MP-12	.006	3.5
19	MP-1	Z	-0.25
20	MP-4	Z	-0.01
21	MP-5	Z	-0.043
22	MP-8	Z	-0.017
23	MP-9	Z	-0.025
24	MP-12	Z	-0.01
25	MP-1	Z	-0.015
26	MP-1	Z	-0.018
27	MP-5	Z	-0.013
28	MP-5	Z	-0.012
29	MP-9	Z	-0.015
30	MP-9	Z	-0.018
31	MP-1	Z	-0.025
32	MP-4	Z	-0.01
33	MP-5	Z	-0.043
34	MP-8	Z	-0.017
35	MP-9	Z	-0.025
36	MP-12	Z	-0.01

**Member Point Loads (BLC 25 : 135 Wind - Ice)**

Member Label	Direction	Magnitude[k, k-ft]	Location[ft, %]
1	MP-1	.025	1
2	MP-4	.01	1
3	MP-5	.034	1
4	MP-8	.013	1
5	MP-9	.016	1
6	MP-12	.007	1
7	MP-1	.012	2
8	MP-1	.013	2
9	MP-5	.011	2
10	MP-5	.01	2
11	MP-9	.013	2
12	MP-9	.016	2
13	MP-1	.025	7.2
14	MP-4	.01	3.5
15	MP-5	.034	7.2
16	MP-8	.013	3.5
17	MP-9	.016	7.2
18	MP-12	.007	3.5
19	MP-1	Z	-0.025
20	MP-4	Z	-0.01
21	MP-5	Z	-0.034
22	MP-8	Z	-0.013
23	MP-9	Z	-0.016
24	MP-12	Z	-0.007
25	MP-1	Z	-0.012
26	MP-1	Z	-0.013
27	MP-5	Z	-0.011
28	MP-5	Z	-0.01
29	MP-9	Z	-0.013



**Member Point Loads (BLC 25 : 135 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k, k-ft]	Location[ft, %]
30	MP-9	Z	-0.016
31	MP-1	Z	-0.025
32	MP-4	Z	-0.01
33	MP-5	Z	-0.034
34	MP-8	Z	-0.013
35	MP-9	Z	-0.016
36	MP-12	Z	-0.007

**Member Point Loads (BLC 26 : 150 Wind - Ice)**

Member Label	Direction	Magnitude[k, k-ft]	Location[ft, %]
1	MP-1	.037	1
2	MP-4	.014	1
3	MP-5	.037	1
4	MP-8	.014	1
5	MP-9	.019	1
6	MP-12	.008	1
7	MP-1	.014	2
8	MP-1	.014	2
9	MP-5	.014	2
10	MP-5	.014	2
11	MP-9	.016	2
12	MP-9	.02	2
13	MP-1	.037	7.2
14	MP-4	.014	3.5
15	MP-5	.037	7.2
16	MP-8	.014	3.5
17	MP-9	.019	7.2
18	MP-12	.008	3.5
19	MP-1	Z	-0.021
20	MP-4	Z	-0.008
21	MP-5	Z	-0.021
22	MP-8	Z	-0.008
23	MP-9	Z	-0.011
24	MP-12	Z	-0.004
25	MP-1	Z	-0.008
26	MP-1	Z	-0.008
27	MP-5	Z	-0.008
28	MP-5	Z	-0.008
29	MP-9	Z	-0.009
30	MP-9	Z	-0.012
31	MP-1	Z	-0.021
32	MP-4	Z	-0.008
33	MP-5	Z	-0.021
34	MP-8	Z	-0.008
35	MP-9	Z	-0.011
36	MP-12	Z	-0.004

**Member Point Loads (BLC 27 : 180 Wind - Ice)**

Member Label	Direction	Magnitude[k, k-ft]	Location[ft, %]
1	MP-1	.049	1
2	MP-4	.019	1
3	MP-5	.049	1
4	MP-8	.019	1
5	MP-9	.049	1
6	MP-12	.019	1
7	MP-1	.018	2
8	MP-1	.024	2
9	MP-5	.018	2
10	MP-5	.024	2
11	MP-9	.018	2
12	MP-9	.024	2
13	MP-1	.049	7.2



**Member Point Loads (BLC 27 : 180 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
14	MP-4	X	.019	3.5
15	MP-5	X	.049	7.2
16	MP-8	X	.019	3.5
17	MP-9	X	.049	7.2
18	MP-12	X	.019	3.5

**Member Point Loads (BLC 28 : 210 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.037	1
2	MP-4	X	.014	1
3	MP-5	X	.019	1
4	MP-8	X	.008	1
5	MP-9	X	.037	1
6	MP-12	X	.014	1
7	MP-1	X	.014	2
8	MP-1	X	.014	2
9	MP-5	X	.016	2
10	MP-5	X	.02	2
11	MP-9	X	.014	2
12	MP-9	X	.014	2
13	MP-1	X	.037	7.2
14	MP-4	X	.014	3.5
15	MP-5	X	.019	7.2
16	MP-8	X	.008	3.5
17	MP-9	X	.037	7.2
18	MP-12	X	.014	3.5
19	MP-1	Z	.021	1
20	MP-4	Z	.008	1
21	MP-5	Z	.011	1
22	MP-8	Z	.004	1
23	MP-9	Z	.021	1
24	MP-12	Z	.008	1
25	MP-1	Z	.008	2
26	MP-1	Z	.008	2
27	MP-5	Z	.009	2
28	MP-5	Z	.012	2
29	MP-9	Z	.008	2
30	MP-9	Z	.008	2
31	MP-1	Z	.021	7.2
32	MP-4	Z	.008	3.5
33	MP-5	Z	.011	7.2
34	MP-8	Z	.004	3.5
35	MP-9	Z	.021	7.2
36	MP-12	Z	.008	3.5

**Member Point Loads (BLC 29 : 225 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.025	1
2	MP-4	X	.01	1
3	MP-5	X	.016	1
4	MP-8	X	.007	1
5	MP-9	X	.034	1
6	MP-12	X	.013	1
7	MP-1	X	.012	2
8	MP-1	X	.013	2
9	MP-5	X	.013	2
10	MP-5	X	.016	2
11	MP-9	X	.011	2
12	MP-9	X	.01	2
13	MP-1	X	.025	7.2
14	MP-4	X	.01	3.5
15	MP-5	X	.016	7.2



**Member Point Loads (BLC 29 : 225 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
16	MP-8	X	.007	3.5
17	MP-9	X	.034	7.2
18	MP-12	X	.013	3.5
19	MP-1	Z	.025	1
20	MP-4	Z	.01	1
21	MP-5	Z	.016	1
22	MP-8	Z	.007	1
23	MP-9	Z	.034	1
24	MP-12	Z	.013	1
25	MP-1	Z	.012	2
26	MP-1	Z	.013	2
27	MP-5	Z	.013	2
28	MP-5	Z	.016	2
29	MP-9	Z	.011	2
30	MP-9	Z	.01	2
31	MP-1	Z	.025	7.2
32	MP-4	Z	.01	3.5
33	MP-5	Z	.016	7.2
34	MP-8	Z	.007	3.5
35	MP-9	Z	.034	7.2
36	MP-12	Z	.013	3.5

**Member Point Loads (BLC 30 : 240 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]	
1	MP-1	X	.014	1
2	MP-4	X	.006	1
3	MP-5	X	.014	1
4	MP-8	X	.006	1
5	MP-9	X	.025	1
6	MP-12	X	.01	1
7	MP-1	X	.009	2
8	MP-1	X	.011	2
9	MP-5	X	.009	2
10	MP-5	X	.011	2
11	MP-9	X	.008	2
12	MP-9	X	.007	2
13	MP-1	X	.014	7.2
14	MP-4	X	.006	3.5
15	MP-5	X	.014	7.2
16	MP-8	X	.006	3.5
17	MP-9	X	.025	7.2
18	MP-12	X	.01	3.5
19	MP-1	Z	.025	1
20	MP-4	Z	.01	1
21	MP-5	Z	.025	1
22	MP-8	Z	.01	1
23	MP-9	Z	.043	1
24	MP-12	Z	.017	1
25	MP-1	Z	.015	2
26	MP-1	Z	.018	2
27	MP-5	Z	.015	2
28	MP-5	Z	.018	2
29	MP-9	Z	.013	2
30	MP-9	Z	.012	2
31	MP-1	Z	.025	7.2
32	MP-4	Z	.01	3.5
33	MP-5	Z	.025	7.2
34	MP-8	Z	.01	3.5
35	MP-9	Z	.043	7.2
36	MP-12	Z	.017	3.5



**Member Point Loads (BLC 31 : 270 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	.021	1
2	MP-4	.009	1
3	MP-5	.021	1
4	MP-8	.009	1
5	MP-9	.021	1
6	MP-12	.009	1
7	MP-1	.015	2
8	MP-1	.013	2
9	MP-5	.015	2
10	MP-5	.013	2
11	MP-9	.015	2
12	MP-9	.013	2
13	MP-1	.021	7.2
14	MP-4	.009	3.5
15	MP-5	.021	7.2
16	MP-8	.009	3.5
17	MP-9	.021	7.2
18	MP-12	.009	3.5

**Member Point Loads (BLC 32 : 300 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-.014	1
2	MP-4	-.006	1
3	MP-5	-.025	1
4	MP-8	-.01	1
5	MP-9	-.014	1
6	MP-12	-.006	1
7	MP-1	-.009	2
8	MP-1	-.011	2
9	MP-5	-.008	2
10	MP-5	-.007	2
11	MP-9	-.009	2
12	MP-9	-.011	2
13	MP-1	-.014	7.2
14	MP-4	-.006	3.5
15	MP-5	-.025	7.2
16	MP-8	-.01	3.5
17	MP-9	-.014	7.2
18	MP-12	-.006	3.5
19	MP-1	.025	1
20	MP-4	.01	1
21	MP-5	.043	1
22	MP-8	.017	1
23	MP-9	.025	1
24	MP-12	.01	1
25	MP-1	.015	2
26	MP-1	.018	2
27	MP-5	.013	2
28	MP-5	.012	2
29	MP-9	.015	2
30	MP-9	.018	2
31	MP-1	.025	7.2
32	MP-4	.01	3.5
33	MP-5	.043	7.2
34	MP-8	.017	3.5
35	MP-9	.025	7.2
36	MP-12	.01	3.5

**Member Point Loads (BLC 33 : 315 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-.025	1
2	MP-4	-.01	1



**Member Point Loads (BLC 33 : 315 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
3	MP-5	-.034	1
4	MP-8	-.013	1
5	MP-9	-.016	1
6	MP-12	-.007	1
7	MP-1	-.012	2
8	MP-1	-.013	2
9	MP-5	-.011	2
10	MP-5	-.01	2
11	MP-9	-.013	2
12	MP-9	-.016	2
13	MP-1	-.025	7.2
14	MP-4	-.01	3.5
15	MP-5	-.034	7.2
16	MP-8	-.013	3.5
17	MP-9	-.016	7.2
18	MP-12	-.007	3.5
19	MP-1	.025	1
20	MP-4	.01	1
21	MP-5	.034	1
22	MP-8	.013	1
23	MP-9	.016	1
24	MP-12	.007	1
25	MP-1	.012	2
26	MP-1	.013	2
27	MP-5	.011	2
28	MP-5	.01	2
29	MP-9	.013	2
30	MP-9	.016	2
31	MP-1	.025	7.2
32	MP-4	.01	3.5
33	MP-5	.034	7.2
34	MP-8	.013	3.5
35	MP-9	.016	7.2
36	MP-12	.007	3.5

**Member Point Loads (BLC 34 : 330 Wind - Ice)**

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	-.037	1
2	MP-4	-.014	1
3	MP-5	-.037	1
4	MP-8	-.014	1
5	MP-9	-.019	1
6	MP-12	-.008	1
7	MP-1	-.014	2
8	MP-1	-.014	2
9	MP-5	-.014	2
10	MP-5	-.014	2
11	MP-9	-.016	2
12	MP-9	-.02	2
13	MP-1	-.037	7.2
14	MP-4	-.014	3.5
15	MP-5	-.037	7.2
16	MP-8	-.014	3.5
17	MP-9	-.019	7.2
18	MP-12	-.008	3.5
19	MP-1	.021	1
20	MP-4	.008	1
21	MP-5	.021	1
22	MP-8	.008	1
23	MP-9	.011	1
24	MP-12	.004	1
25	MP-1	.008	2



**Member Point Loads (BLC 34 : 330 Wind - Ice) (Continued)**

Member Label	Direction	Magnitude[k, k-ft]	Location[ft, %]
26	MP-1	.008	2
27	MP-5	.008	2
28	MP-5	.008	2
29	MP-9	.009	2
30	MP-9	.012	2
31	MP-1	.021	7.2
32	MP-4	.008	3.5
33	MP-5	.021	7.2
34	MP-8	.008	3.5
35	MP-9	.011	7.2
36	MP-12	.004	3.5

**Member Point Loads (BLC 37 : Seismic Load X)**

Member Label	Direction	Magnitude[k, k-ft]	Location[ft, %]
1	MP-1	-0.064	1
2	MP-4	-0.057	1
3	MP-5	-0.064	1
4	MP-8	-0.057	1
5	MP-9	-0.064	1
6	MP-12	-0.057	1
7	MP-1	-0.109	2
8	MP-1	-0.081	2
9	MP-5	-0.109	2
10	MP-5	-0.081	2
11	MP-9	-0.109	2
12	MP-9	-0.081	2
13	MP-1	-0.064	7.2
14	MP-4	-0.057	3.5
15	MP-5	-0.064	7.2
16	MP-8	-0.057	3.5
17	MP-9	-0.064	7.2
18	MP-12	-0.057	3.5

**Member Point Loads (BLC 38 : Seismic Load Z)**

Member Label	Direction	Magnitude[k, k-ft]	Location[ft, %]
1	MP-1	-0.064	1
2	MP-4	-0.057	1
3	MP-5	-0.064	1
4	MP-8	-0.057	1
5	MP-9	-0.064	1
6	MP-12	-0.057	1
7	MP-1	-0.109	2
8	MP-1	-0.081	2
9	MP-5	-0.109	2
10	MP-5	-0.081	2
11	MP-9	-0.109	2
12	MP-9	-0.081	2
13	MP-1	-0.064	7.2
14	MP-4	-0.057	3.5
15	MP-5	-0.064	7.2
16	MP-8	-0.057	3.5
17	MP-9	-0.064	7.2
18	MP-12	-0.057	3.5

**Member Distributed Loads (BLC 2 : 0 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft, F, ksf]	End Magnitude[k/ft, F, ksf]	Start Location[ft, %]	End Location[ft, %]
1	FFTH-1	X	-0.018	0	%100
2	FFTH-2	X	-0.009	0	%100
3	FFTH-3	X	-0.009	0	%100
4	GSI-1	X	-0.013	0	%100



**Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft, F, ksf]	End Magnitude[k/ft, F, ksf]	Start Location[ft, %]	End Location[ft, %]	
5	GSI-2	X	0	0	%100	
6	GSI-3	X	-0.013	-0.013	0	%100
7	GSIP-1	X	-0.018	-0.018	0	%100
8	GSIP-2	X	-0.007	-0.007	0	%100
9	GSIP-3	X	-0.007	-0.007	0	%100
10	K-1	X	-0.015	-0.015	0	%100
11	K-2	X	-0.015	-0.015	0	%100
12	K-3	X	-0.015	-0.015	0	%100
13	MP-1	X	-0.01	-0.01	0	%100
14	MP-2	X	-0.009	-0.009	0	%100
15	MP-3	X	-0.008	-0.008	0	%100
16	MP-4	X	-0.009	-0.009	0	%100
17	MP-5	X	-0.01	-0.01	0	%100
18	MP-6	X	-0.009	-0.009	0	%100
19	MP-7	X	-0.008	-0.008	0	%100
20	MP-8	X	-0.009	-0.009	0	%100
21	MP-9	X	-0.01	-0.01	0	%100
22	MP-10	X	-0.009	-0.009	0	%100
23	MP-11	X	-0.008	-0.008	0	%100
24	MP-12	X	-0.009	-0.009	0	%100
25	SA-1A	X	0	0	0	%100
26	SA-1B	X	0	0	0	%100
27	SA-2A	X	-0.012	-0.012	0	%100
28	SA-2B	X	-0.016	-0.016	0	%100
29	SA-3A	X	-0.012	-0.012	0	%100
30	SA-3C	X	-0.016	-0.016	0	%100
31	SR-1	X	-0.009	-0.009	0	%100
32	SR-2	X	-0.004	-0.004	0	%100
33	SR-3	X	-0.004	-0.004	0	%100
34	SRC-1	X	-0.005	-0.005	0	%100
35	SRC-2	X	-0.01	-0.01	0	%100
36	SRC-3	X	-0.005	-0.005	0	%100

**Member Distributed Loads (BLC 3 : 30 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft, F, ksf]	End Magnitude[k/ft, F, ksf]	Start Location[ft, %]	End Location[ft, %]	
1	FFTH-1	X	-0.014	-0.014	0	%100
2	FFTH-2	X	0	0	0	%100
3	FFTH-3	X	-0.014	-0.014	0	%100
4	GSI-1	X	-0.006	-0.006	0	%100
5	GSI-2	X	-0.005	-0.005	0	%100
6	GSI-3	X	-0.013	-0.013	0	%100
7	GSIP-1	X	-0.014	-0.014	0	%100
8	GSIP-2	X	0	0	0	%100
9	GSIP-3	X	-0.011	-0.011	0	%100
10	K-1	X	-0.013	-0.013	0	%100
11	K-2	X	-0.013	-0.013	0	%100
12	K-3	X	-0.013	-0.013	0	%100
13	MP-1	X	-0.009	-0.009	0	%100
14	MP-2	X	-0.007	-0.007	0	%100
15	MP-3	X	-0.007	-0.007	0	%100
16	MP-4	X	-0.007	-0.007	0	%100
17	MP-5	X	-0.009	-0.009	0	%100
18	MP-6	X	-0.007	-0.007	0	%100
19	MP-7	X	-0.007	-0.007	0	%100
20	MP-8	X	-0.007	-0.007	0	%100
21	MP-9	X	-0.009	-0.009	0	%100
22	MP-10	X	-0.007	-0.007	0	%100
23	MP-11	X	-0.007	-0.007	0	%100
24	MP-12	X	-0.007	-0.007	0	%100
25	SA-1A	X	-0.006	-0.006	0	%100
26	SA-1B	X	-0.007	-0.007	0	%100
27	SA-2A	X	-0.013	-0.013	0	%100



**Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
28	SA-2B	X	-0.16	0	%100
29	SA-3A	X	-0.06	0	%100
30	SA-3C	X	-0.08	0	%100
31	SR-1	X	-0.06	0	%100
32	SR-2	X	0	0	%100
33	SR-3	X	-0.06	0	%100
34	SRC-1	X	-0.07	0	%100
35	SRC-2	X	-0.08	0	%100
36	SRC-3	X	0	0	%100
37	FFTH-1	Z	-0.08	0	%100
38	FFTH-2	Z	0	0	%100
39	FFTH-3	Z	-0.08	0	%100
40	GSI-1	Z	-0.03	0	%100
41	GSI-2	Z	-0.04	0	%100
42	GSI-3	Z	-0.06	0	%100
43	GSIP-1	Z	-0.08	0	%100
44	GSIP-2	Z	0	0	%100
45	GSIP-3	Z	-0.08	0	%100
46	K-1	Z	-0.08	0	%100
47	K-2	Z	-0.08	0	%100
48	K-3	Z	-0.08	0	%100
49	MP-1	Z	-0.05	0	%100
50	MP-2	Z	-0.04	0	%100
51	MP-3	Z	-0.04	0	%100
52	MP-4	Z	-0.04	0	%100
53	MP-5	Z	-0.05	0	%100
54	MP-6	Z	-0.04	0	%100
55	MP-7	Z	-0.04	0	%100
56	MP-8	Z	-0.04	0	%100
57	MP-9	Z	-0.05	0	%100
58	MP-10	Z	-0.04	0	%100
59	MP-11	Z	-0.04	0	%100
60	MP-12	Z	-0.04	0	%100
61	SA-1A	Z	-0.04	0	%100
62	SA-1B	Z	-0.05	0	%100
63	SA-2A	Z	-0.07	0	%100
64	SA-2B	Z	-0.08	0	%100
65	SA-3A	Z	-0.04	0	%100
66	SA-3C	Z	-0.04	0	%100
67	SR-1	Z	-0.04	0	%100
68	SR-2	Z	0	0	%100
69	SR-3	Z	-0.04	0	%100
70	SRC-1	Z	-0.04	0	%100
71	SRC-2	Z	-0.04	0	%100
72	SRC-3	Z	0	0	%100

**Member Distributed Loads (BLC 4 : 45 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	X	-0.09	0	%100
2	FFTH-2	X	-0.03	0	%100
3	FFTH-3	X	-0.12	0	%100
4	GSI-1	X	-0.03	0	%100
5	GSI-2	X	-0.05	0	%100
6	GSI-3	X	-0.1	0	%100
7	GSIP-1	X	-0.09	0	%100
8	GSIP-2	X	-0.03	0	%100
9	GSIP-3	X	-0.1	0	%100
10	K-1	X	-0.11	0	%100
11	K-2	X	-0.11	0	%100
12	K-3	X	-0.11	0	%100
13	MP-1	X	-0.07	0	%100
14	MP-2	X	-0.06	0	%100



**Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
15	MP-3	X	-0.06	0	%100
16	MP-4	X	-0.06	0	%100
17	MP-5	X	-0.07	0	%100
18	MP-6	X	-0.06	0	%100
19	MP-7	X	-0.06	0	%100
20	MP-8	X	-0.06	0	%100
21	MP-9	X	-0.07	0	%100
22	MP-10	X	-0.06	0	%100
23	MP-11	X	-0.06	0	%100
24	MP-12	X	-0.06	0	%100
25	SA-1A	X	-0.07	0	%100
26	SA-1B	X	-0.08	0	%100
27	SA-2A	X	-0.1	0	%100
28	SA-2B	X	-0.12	0	%100
29	SA-3A	X	-0.02	0	%100
30	SA-3C	X	-0.03	0	%100
31	SR-1	X	-0.04	0	%100
32	SR-2	X	-0.02	0	%100
33	SR-3	X	-0.06	0	%100
34	SRC-1	X	-0.06	0	%100
35	SRC-2	X	-0.05	0	%100
36	SRC-3	X	-0.02	0	%100
37	FFTH-1	Z	-0.09	0	%100
38	FFTH-2	Z	-0.03	0	%100
39	FFTH-3	Z	-0.12	0	%100
40	GSI-1	Z	-0.02	0	%100
41	GSI-2	Z	-0.08	0	%100
42	GSI-3	Z	-0.09	0	%100
43	GSIP-1	Z	-0.09	0	%100
44	GSIP-2	Z	-0.03	0	%100
45	GSIP-3	Z	-0.12	0	%100
46	K-1	Z	-0.11	0	%100
47	K-2	Z	-0.11	0	%100
48	K-3	Z	-0.11	0	%100
49	MP-1	Z	-0.07	0	%100
50	MP-2	Z	-0.06	0	%100
51	MP-3	Z	-0.06	0	%100
52	MP-4	Z	-0.06	0	%100
53	MP-5	Z	-0.07	0	%100
54	MP-6	Z	-0.06	0	%100
55	MP-7	Z	-0.06	0	%100
56	MP-8	Z	-0.06	0	%100
57	MP-9	Z	-0.07	0	%100
58	MP-10	Z	-0.06	0	%100
59	MP-11	Z	-0.06	0	%100
60	MP-12	Z	-0.06	0	%100
61	SA-1A	Z	-0.07	0	%100
62	SA-1B	Z	-0.09	0	%100
63	SA-2A	Z	-0.1	0	%100
64	SA-2B	Z	-0.12	0	%100
65	SA-3A	Z	-0.02	0	%100
66	SA-3C	Z	-0.03	0	%100
67	SR-1	Z	-0.04	0	%100
68	SR-2	Z	-0.02	0	%100
69	SR-3	Z	-0.06	0	%100
70	SRC-1	Z	-0.07	0	%100
71	SRC-2	Z	-0.05	0	%100
72	SRC-3	Z	-0.02	0	%100

**Member Distributed Loads (BLC 5 : 60 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	X	-0.05	0	%100



**Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
2	FFTH-2	X	-0.05	-0.05	0	%100
3	FFTH-3	X	-0.09	-0.09	0	%100
4	GSI-1	X	0	0	0	%100
5	GSI-2	X	-0.05	-0.05	0	%100
6	GSI-3	X	-0.06	-0.06	0	%100
7	GSIP-1	X	-0.05	-0.05	0	%100
8	GSIP-2	X	-0.04	-0.04	0	%100
9	GSIP-3	X	-0.07	-0.07	0	%100
10	K-1	X	-0.08	-0.08	0	%100
11	K-2	X	-0.08	-0.08	0	%100
12	K-3	X	-0.08	-0.08	0	%100
13	MP-1	X	-0.05	-0.05	0	%100
14	MP-2	X	-0.04	-0.04	0	%100
15	MP-3	X	-0.04	-0.04	0	%100
16	MP-4	X	-0.04	-0.04	0	%100
17	MP-5	X	-0.05	-0.05	0	%100
18	MP-6	X	-0.04	-0.04	0	%100
19	MP-7	X	-0.04	-0.04	0	%100
20	MP-8	X	-0.04	-0.04	0	%100
21	MP-9	X	-0.05	-0.05	0	%100
22	MP-10	X	-0.04	-0.04	0	%100
23	MP-11	X	-0.04	-0.04	0	%100
24	MP-12	X	-0.04	-0.04	0	%100
25	SA-1A	X	-0.06	-0.06	0	%100
26	SA-1B	X	-0.07	-0.07	0	%100
27	SA-2A	X	-0.06	-0.06	0	%100
28	SA-2B	X	-0.08	-0.08	0	%100
29	SA-3A	X	-0.0013	-0.0013	0	%100
30	SA-3C	X	-0.00164	-0.00164	0	%100
31	SR-1	X	-0.02	-0.02	0	%100
32	SR-2	X	-0.02	-0.02	0	%100
33	SR-3	X	-0.04	-0.04	0	%100
34	SRC-1	X	-0.05	-0.05	0	%100
35	SRC-2	X	-0.03	-0.03	0	%100
36	SRC-3	X	-0.02	-0.02	0	%100
37	FFTH-1	Z	-0.08	-0.08	0	%100
38	FFTH-2	Z	-0.08	-0.08	0	%100
39	FFTH-3	Z	-0.16	-0.16	0	%100
40	GSI-1	Z	0	0	0	%100
41	GSI-2	Z	-0.11	-0.11	0	%100
42	GSI-3	Z	-0.1	-0.1	0	%100
43	GSIP-1	Z	-0.08	-0.08	0	%100
44	GSIP-2	Z	-0.08	-0.08	0	%100
45	GSIP-3	Z	-0.16	-0.16	0	%100
46	K-1	Z	-0.13	-0.13	0	%100
47	K-2	Z	-0.13	-0.13	0	%100
48	K-3	Z	-0.13	-0.13	0	%100
49	MP-1	Z	-0.09	-0.09	0	%100
50	MP-2	Z	-0.07	-0.07	0	%100
51	MP-3	Z	-0.07	-0.07	0	%100
52	MP-4	Z	-0.07	-0.07	0	%100
53	MP-5	Z	-0.09	-0.09	0	%100
54	MP-6	Z	-0.07	-0.07	0	%100
55	MP-7	Z	-0.07	-0.07	0	%100
56	MP-8	Z	-0.07	-0.07	0	%100
57	MP-9	Z	-0.09	-0.09	0	%100
58	MP-10	Z	-0.07	-0.07	0	%100
59	MP-11	Z	-0.07	-0.07	0	%100
60	MP-12	Z	-0.07	-0.07	0	%100
61	SA-1A	Z	-0.11	-0.11	0	%100
62	SA-1B	Z	-0.14	-0.14	0	%100
63	SA-2A	Z	-0.11	-0.11	0	%100
64	SA-2B	Z	-0.13	-0.13	0	%100



**Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
65	SA-3A	Z	-0.00226	-0.00226	0	%100
66	SA-3C	Z	-0.00262	-0.00262	0	%100
67	SR-1	Z	-0.04	-0.04	0	%100
68	SR-2	Z	-0.04	-0.04	0	%100
69	SR-3	Z	-0.07	-0.07	0	%100
70	SRC-1	Z	-0.09	-0.09	0	%100
71	SRC-2	Z	-0.04	-0.04	0	%100
72	SRC-3	Z	-0.04	-0.04	0	%100

**Member Distributed Loads (BLC 6 : 90 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	Z	0	0	0	%100
2	FFTH-2	Z	-0.16	-0.16	0	%100
3	FFTH-3	Z	-0.16	-0.16	0	%100
4	GSI-1	Z	-0.06	-0.06	0	%100
5	GSI-2	Z	-0.15	-0.15	0	%100
6	GSI-3	Z	-0.06	-0.06	0	%100
7	GSIP-1	Z	0	0	0	%100
8	GSIP-2	Z	-0.16	-0.16	0	%100
9	GSIP-3	Z	-0.16	-0.16	0	%100
10	K-1	Z	-0.15	-0.15	0	%100
11	K-2	Z	-0.15	-0.15	0	%100
12	K-3	Z	-0.15	-0.15	0	%100
13	MP-1	Z	-0.1	-0.1	0	%100
14	MP-2	Z	-0.09	-0.09	0	%100
15	MP-3	Z	-0.08	-0.08	0	%100
16	MP-4	Z	-0.09	-0.09	0	%100
17	MP-5	Z	-0.1	-0.1	0	%100
18	MP-6	Z	-0.09	-0.09	0	%100
19	MP-7	Z	-0.08	-0.08	0	%100
20	MP-8	Z	-0.09	-0.09	0	%100
21	MP-9	Z	-0.1	-0.1	0	%100
22	MP-10	Z	-0.09	-0.09	0	%100
23	MP-11	Z	-0.08	-0.08	0	%100
24	MP-12	Z	-0.09	-0.09	0	%100
25	SA-1A	Z	-0.15	-0.15	0	%100
26	SA-1B	Z	-0.19	-0.19	0	%100
27	SA-2A	Z	-0.07	-0.07	0	%100
28	SA-2B	Z	-0.09	-0.09	0	%100
29	SA-3A	Z	-0.07	-0.07	0	%100
30	SA-3C	Z	-0.09	-0.09	0	%100
31	SR-1	Z	0	0	0	%100
32	SR-2	Z	-0.07	-0.07	0	%100
33	SR-3	Z	-0.07	-0.07	0	%100
34	SRC-1	Z	-0.09	-0.09	0	%100
35	SRC-2	Z	0	0	0	%100
36	SRC-3	Z	-0.09	-0.09	0	%100

**Member Distributed Loads (BLC 7 : 120 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.005	.005	0	%100
2	FFTH-2	X	.009	.009	0	%100
3	FFTH-3	X	.005	.005	0	%100
4	GSI-1	X	.006	.006	0	%100
5	GSI-2	X	.005	.005	0	%100
6	GSI-3	X	0	0	0	%100
7	GSIP-1	X	.005	.005	0	%100
8	GSIP-2	X	.007	.007	0	%100
9	GSIP-3	X	.004	.004	0	%100
10	K-1	X	.008	.008	0	%100
11	K-2	X	.008	.008	0	%100
12	K-3	X	.008	.008	0	%100

**Member Distributed Loads (BLC 7 : 120 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...]	Start Location[ft.%]	End Location[ft.%]
13	MP-1	X	.005	.005	0 %100
14	MP-2	X	.004	.004	0 %100
15	MP-3	X	.004	.004	0 %100
16	MP-4	X	.004	.004	0 %100
17	MP-5	X	.005	.005	0 %100
18	MP-6	X	.004	.004	0 %100
19	MP-7	X	.004	.004	0 %100
20	MP-8	X	.004	.004	0 %100
21	MP-9	X	.005	.005	0 %100
22	MP-10	X	.004	.004	0 %100
23	MP-11	X	.004	.004	0 %100
24	MP-12	X	.004	.004	0 %100
25	SA-1A	X	.006	.006	0 %100
26	SA-1B	X	.007	.007	0 %100
27	SA-2A	X	.00013	.00013	0 %100
28	SA-2B	X	.000164	.000164	0 %100
29	SA-3A	X	.006	.006	0 %100
30	SA-3C	X	.008	.008	0 %100
31	SR-1	X	.002	.002	0 %100
32	SR-2	X	.004	.004	0 %100
33	SR-3	X	.002	.002	0 %100
34	SRC-1	X	.002	.002	0 %100
35	SRC-2	X	.003	.003	0 %100
36	SRC-3	X	.005	.005	0 %100
37	FFTH-1	Z	-.008	-.008	0 %100
38	FFTH-2	Z	-.016	-.016	0 %100
39	FFTH-3	Z	-.008	-.008	0 %100
40	GSI-1	Z	-.01	-.01	0 %100
41	GSI-2	Z	-.011	-.011	0 %100
42	GSI-3	Z	0	0	0 %100
43	GSIP-1	Z	-.008	-.008	0 %100
44	GSIP-2	Z	-.016	-.016	0 %100
45	GSIP-3	Z	-.008	-.008	0 %100
46	K-1	Z	-.013	-.013	0 %100
47	K-2	Z	-.013	-.013	0 %100
48	K-3	Z	-.013	-.013	0 %100
49	MP-1	Z	-.009	-.009	0 %100
50	MP-2	Z	-.007	-.007	0 %100
51	MP-3	Z	-.007	-.007	0 %100
52	MP-4	Z	-.007	-.007	0 %100
53	MP-5	Z	-.009	-.009	0 %100
54	MP-6	Z	-.007	-.007	0 %100
55	MP-7	Z	-.007	-.007	0 %100
56	MP-8	Z	-.007	-.007	0 %100
57	MP-9	Z	-.009	-.009	0 %100
58	MP-10	Z	-.007	-.007	0 %100
59	MP-11	Z	-.007	-.007	0 %100
60	MP-12	Z	-.007	-.007	0 %100
61	SA-1A	Z	-.011	-.011	0 %100
62	SA-1B	Z	-.014	-.014	0 %100
63	SA-2A	Z	-.000226	-.000226	0 %100
64	SA-2B	Z	-.000262	-.000262	0 %100
65	SA-3A	Z	-.011	-.011	0 %100
66	SA-3C	Z	-.013	-.013	0 %100
67	SR-1	Z	-.004	-.004	0 %100
68	SR-2	Z	-.007	-.007	0 %100
69	SR-3	Z	-.004	-.004	0 %100
70	SRC-1	Z	-.004	-.004	0 %100
71	SRC-2	Z	-.004	-.004	0 %100
72	SRC-3	Z	-.009	-.009	0 %100

**Member Distributed Loads (BLC 8 : 135 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...]	Start Location[ft.%]	End Location[ft.%]
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**Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...]	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	X	.009	.009	0 %100
2	FFTH-2	X	.012	.012	0 %100
3	FFTH-3	X	.003	.003	0 %100
4	GSI-1	X	.01	.01	0 %100
5	GSI-2	X	.005	.005	0 %100
6	GSI-3	X	.003	.003	0 %100
7	GSIP-1	X	.009	.009	0 %100
8	GSIP-2	X	.01	.01	0 %100
9	GSIP-3	X	.003	.003	0 %100
10	K-1	X	.011	.011	0 %100
11	K-2	X	.011	.011	0 %100
12	K-3	X	.011	.011	0 %100
13	MP-1	X	.007	.007	0 %100
14	MP-2	X	.006	.006	0 %100
15	MP-3	X	.006	.006	0 %100
16	MP-4	X	.006	.006	0 %100
17	MP-5	X	.007	.007	0 %100
18	MP-6	X	.006	.006	0 %100
19	MP-7	X	.006	.006	0 %100
20	MP-8	X	.006	.006	0 %100
21	MP-9	X	.007	.007	0 %100
22	MP-10	X	.006	.006	0 %100
23	MP-11	X	.006	.006	0 %100
24	MP-12	X	.006	.006	0 %100
25	SA-1A	X	.007	.007	0 %100
26	SA-1B	X	.008	.008	0 %100
27	SA-2A	X	.002	.002	0 %100
28	SA-2B	X	.003	.003	0 %100
29	SA-3A	X	.01	.01	0 %100
30	SA-3C	X	.012	.012	0 %100
31	SR-1	X	.004	.004	0 %100
32	SR-2	X	.006	.006	0 %100
33	SR-3	X	.002	.002	0 %100
34	SRC-1	X	.002	.002	0 %100
35	SRC-2	X	.005	.005	0 %100
36	SRC-3	X	.006	.006	0 %100
37	FFTH-1	Z	-.009	-.009	0 %100
38	FFTH-2	Z	-.012	-.012	0 %100
39	FFTH-3	Z	-.003	-.003	0 %100
40	GSI-1	Z	-.009	-.009	0 %100
41	GSI-2	Z	-.008	-.008	0 %100
42	GSI-3	Z	-.002	-.002	0 %100
43	GSIP-1	Z	-.009	-.009	0 %100
44	GSIP-2	Z	-.012	-.012	0 %100
45	GSIP-3	Z	-.003	-.003	0 %100
46	K-1	Z	-.011	-.011	0 %100
47	K-2	Z	-.011	-.011	0 %100
48	K-3	Z	-.011	-.011	0 %100
49	MP-1	Z	-.007	-.007	0 %100
50	MP-2	Z	-.006	-.006	0 %100
51	MP-3	Z	-.006	-.006	0 %100
52	MP-4	Z	-.006	-.006	0 %100
53	MP-5	Z	-.007	-.007	0 %100
54	MP-6	Z	-.006	-.006	0 %100
55	MP-7	Z	-.006	-.006	0 %100
56	MP-8	Z	-.006	-.006	0 %100
57	MP-9	Z	-.007	-.007	0 %100
58	MP-10	Z	-.006	-.006	0 %100
59	MP-11	Z	-.006	-.006	0 %100
60	MP-12	Z	-.006	-.006	0 %100
61	SA-1A	Z	-.007	-.007	0 %100
62	SA-1B	Z	-.009	-.009	0 %100
63	SA-2A	Z	-.002	-.002	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : DJM  
 Job Number : TEP#25630.610605  
 Model Name : BU 801367

Oct 14, 2021  
 2:09 PM  
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**Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
64	SA-2B	Z	-0.03	-0.03	0	%100
65	SA-3A	Z	-.01	-.01	0	%100
66	SA-3C	Z	-.012	-.012	0	%100
67	SR-1	Z	-.004	-.004	0	%100
68	SR-2	Z	-.006	-.006	0	%100
69	SR-3	Z	-.002	-.002	0	%100
70	SRC-1	Z	-.002	-.002	0	%100
71	SRC-2	Z	-.005	-.005	0	%100
72	SRC-3	Z	-.007	-.007	0	%100

**Member Distributed Loads (BLC 9 : 150 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.014	.014	0	%100
2	FFTH-2	X	.014	.014	0	%100
3	FFTH-3	X	0	0	0	%100
4	GSI-1	X	.013	.013	0	%100
5	GSI-2	X	.005	.005	0	%100
6	GSI-3	X	.006	.006	0	%100
7	GSIP-1	X	.014	.014	0	%100
8	GSIP-2	X	.011	.011	0	%100
9	GSIP-3	X	0	0	0	%100
10	K-1	X	.013	.013	0	%100
11	K-2	X	.013	.013	0	%100
12	K-3	X	.013	.013	0	%100
13	MP-1	X	.009	.009	0	%100
14	MP-2	X	.007	.007	0	%100
15	MP-3	X	.007	.007	0	%100
16	MP-4	X	.007	.007	0	%100
17	MP-5	X	.009	.009	0	%100
18	MP-6	X	.007	.007	0	%100
19	MP-7	X	.007	.007	0	%100
20	MP-8	X	.007	.007	0	%100
21	MP-9	X	.009	.009	0	%100
22	MP-10	X	.007	.007	0	%100
23	MP-11	X	.007	.007	0	%100
24	MP-12	X	.007	.007	0	%100
25	SA-1A	X	.006	.006	0	%100
26	SA-1B	X	.007	.007	0	%100
27	SA-2A	X	.006	.006	0	%100
28	SA-2B	X	.008	.008	0	%100
29	SA-3A	X	.013	.013	0	%100
30	SA-3C	X	.016	.016	0	%100
31	SR-1	X	.006	.006	0	%100
32	SR-2	X	.006	.006	0	%100
33	SR-3	X	0	0	0	%100
34	SRC-1	X	0	0	0	%100
35	SRC-2	X	.008	.008	0	%100
36	SRC-3	X	.007	.007	0	%100
37	FFTH-1	Z	-.008	-.008	0	%100
38	FFTH-2	Z	-.008	-.008	0	%100
39	FFTH-3	Z	0	0	0	%100
40	GSI-1	Z	-.006	-.006	0	%100
41	GSI-2	Z	-.004	-.004	0	%100
42	GSI-3	Z	-.003	-.003	0	%100
43	GSIP-1	Z	-.008	-.008	0	%100
44	GSIP-2	Z	-.008	-.008	0	%100
45	GSIP-3	Z	0	0	0	%100
46	K-1	Z	-.008	-.008	0	%100
47	K-2	Z	-.008	-.008	0	%100
48	K-3	Z	-.008	-.008	0	%100
49	MP-1	Z	-.005	-.005	0	%100
50	MP-2	Z	-.004	-.004	0	%100



Company : Tower Engineering Professionals, Inc.  
 Designer : DJM  
 Job Number : TEP#25630.610605  
 Model Name : BU 801367

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**Member Distributed Loads (BLC 9 : 150 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
51	MP-3	Z	-.004	-.004	0	%100
52	MP-4	Z	-.004	-.004	0	%100
53	MP-5	Z	-.005	-.005	0	%100
54	MP-6	Z	-.004	-.004	0	%100
55	MP-7	Z	-.004	-.004	0	%100
56	MP-8	Z	-.004	-.004	0	%100
57	MP-9	Z	-.005	-.005	0	%100
58	MP-10	Z	-.004	-.004	0	%100
59	MP-11	Z	-.004	-.004	0	%100
60	MP-12	Z	-.004	-.004	0	%100
61	SA-1A	Z	-.004	-.004	0	%100
62	SA-1B	Z	-.005	-.005	0	%100
63	SA-2A	Z	-.004	-.004	0	%100
64	SA-2B	Z	-.004	-.004	0	%100
65	SA-3A	Z	-.007	-.007	0	%100
66	SA-3C	Z	-.008	-.008	0	%100
67	SR-1	Z	-.004	-.004	0	%100
68	SR-2	Z	-.004	-.004	0	%100
69	SR-3	Z	0	0	0	%100
70	SRC-1	Z	0	0	0	%100
71	SRC-2	Z	-.004	-.004	0	%100
72	SRC-3	Z	-.004	-.004	0	%100

**Member Distributed Loads (BLC 10 : 180 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.018	.018	0	%100
2	FFTH-2	X	.009	.009	0	%100
3	FFTH-3	X	.009	.009	0	%100
4	GSI-1	X	.013	.013	0	%100
5	GSI-2	X	0	0	0	%100
6	GSI-3	X	.013	.013	0	%100
7	GSIP-1	X	.018	.018	0	%100
8	GSIP-2	X	.007	.007	0	%100
9	GSIP-3	X	.007	.007	0	%100
10	K-1	X	.015	.015	0	%100
11	K-2	X	.015	.015	0	%100
12	K-3	X	.015	.015	0	%100
13	MP-1	X	.01	.01	0	%100
14	MP-2	X	.009	.009	0	%100
15	MP-3	X	.008	.008	0	%100
16	MP-4	X	.009	.009	0	%100
17	MP-5	X	.01	.01	0	%100
18	MP-6	X	.009	.009	0	%100
19	MP-7	X	.008	.008	0	%100
20	MP-8	X	.009	.009	0	%100
21	MP-9	X	.01	.01	0	%100
22	MP-10	X	.009	.009	0	%100
23	MP-11	X	.008	.008	0	%100
24	MP-12	X	.009	.009	0	%100
25	SA-1A	X	0	0	0	%100
26	SA-1B	X	0	0	0	%100
27	SA-2A	X	.012	.012	0	%100
28	SA-2B	X	.016	.016	0	%100
29	SA-3A	X	.012	.012	0	%100
30	SA-3C	X	.016	.016	0	%100
31	SR-1	X	.009	.009	0	%100
32	SR-2	X	.004	.004	0	%100
33	SR-3	X	.004	.004	0	%100
34	SRC-1	X	.005	.005	0	%100
35	SRC-2	X	.01	.01	0	%100
36	SRC-3	X	.005	.005	0	%100



**Member Distributed Loads (BLC 11 : 210 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.014	.014	0	%100
2	FFTH-2	X	0	0	0	%100
3	FFTH-3	X	.014	.014	0	%100
4	GSI-1	X	.006	.006	0	%100
5	GSI-2	X	.005	.005	0	%100
6	GSI-3	X	.013	.013	0	%100
7	GSIP-1	X	.014	.014	0	%100
8	GSIP-2	X	0	0	0	%100
9	GSIP-3	X	.011	.011	0	%100
10	K-1	X	.013	.013	0	%100
11	K-2	X	.013	.013	0	%100
12	K-3	X	.013	.013	0	%100
13	MP-1	X	.009	.009	0	%100
14	MP-2	X	.007	.007	0	%100
15	MP-3	X	.007	.007	0	%100
16	MP-4	X	.007	.007	0	%100
17	MP-5	X	.009	.009	0	%100
18	MP-6	X	.007	.007	0	%100
19	MP-7	X	.007	.007	0	%100
20	MP-8	X	.007	.007	0	%100
21	MP-9	X	.009	.009	0	%100
22	MP-10	X	.007	.007	0	%100
23	MP-11	X	.007	.007	0	%100
24	MP-12	X	.007	.007	0	%100
25	SA-1A	X	.006	.006	0	%100
26	SA-1B	X	.007	.007	0	%100
27	SA-2A	X	.013	.013	0	%100
28	SA-2B	X	.016	.016	0	%100
29	SA-3A	X	.006	.006	0	%100
30	SA-3C	X	.008	.008	0	%100
31	SR-1	X	.006	.006	0	%100
32	SR-2	X	0	0	0	%100
33	SR-3	X	.006	.006	0	%100
34	SRC-1	X	.007	.007	0	%100
35	SRC-2	X	.008	.008	0	%100
36	SRC-3	X	0	0	0	%100
37	FFTH-1	Z	.008	.008	0	%100
38	FFTH-2	Z	0	0	0	%100
39	FFTH-3	Z	.008	.008	0	%100
40	GSI-1	Z	.003	.003	0	%100
41	GSI-2	Z	.004	.004	0	%100
42	GSI-3	Z	.006	.006	0	%100
43	GSIP-1	Z	.008	.008	0	%100
44	GSIP-2	Z	0	0	0	%100
45	GSIP-3	Z	.008	.008	0	%100
46	K-1	Z	.008	.008	0	%100
47	K-2	Z	.008	.008	0	%100
48	K-3	Z	.008	.008	0	%100
49	MP-1	Z	.005	.005	0	%100
50	MP-2	Z	.004	.004	0	%100
51	MP-3	Z	.004	.004	0	%100
52	MP-4	Z	.004	.004	0	%100
53	MP-5	Z	.005	.005	0	%100
54	MP-6	Z	.004	.004	0	%100
55	MP-7	Z	.004	.004	0	%100
56	MP-8	Z	.004	.004	0	%100
57	MP-9	Z	.005	.005	0	%100
58	MP-10	Z	.004	.004	0	%100
59	MP-11	Z	.004	.004	0	%100
60	MP-12	Z	.004	.004	0	%100
61	SA-1A	Z	.004	.004	0	%100
62	SA-1B	Z	.005	.005	0	%100
63	SA-2A	Z	.007	.007	0	%100

**Member Distributed Loads (BLC 11 : 210 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
64	SA-2B	Z	.008	.008	0	%100
65	SA-3A	Z	.004	.004	0	%100
66	SA-3C	Z	.004	.004	0	%100
67	SR-1	Z	.004	.004	0	%100
68	SR-2	Z	0	0	0	%100
69	SR-3	Z	.004	.004	0	%100
70	SRC-1	Z	.004	.004	0	%100
71	SRC-2	Z	.004	.004	0	%100
72	SRC-3	Z	0	0	0	%100

**Member Distributed Loads (BLC 12 : 225 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.009	.009	0	%100
2	FFTH-2	X	.003	.003	0	%100
3	FFTH-3	X	.012	.012	0	%100
4	GSI-1	X	.003	.003	0	%100
5	GSI-2	X	.005	.005	0	%100
6	GSI-3	X	.01	.01	0	%100
7	GSIP-1	X	.009	.009	0	%100
8	GSIP-2	X	.003	.003	0	%100
9	GSIP-3	X	.01	.01	0	%100
10	K-1	X	.011	.011	0	%100
11	K-2	X	.011	.011	0	%100
12	K-3	X	.011	.011	0	%100
13	MP-1	X	.007	.007	0	%100
14	MP-2	X	.006	.006	0	%100
15	MP-3	X	.006	.006	0	%100
16	MP-4	X	.006	.006	0	%100
17	MP-5	X	.007	.007	0	%100
18	MP-6	X	.006	.006	0	%100
19	MP-7	X	.006	.006	0	%100
20	MP-8	X	.006	.006	0	%100
21	MP-9	X	.007	.007	0	%100
22	MP-10	X	.006	.006	0	%100
23	MP-11	X	.006	.006	0	%100
24	MP-12	X	.006	.006	0	%100
25	SA-1A	X	.007	.007	0	%100
26	SA-1B	X	.008	.008	0	%100
27	SA-2A	X	.01	.01	0	%100
28	SA-2B	X	.012	.012	0	%100
29	SA-3A	X	.002	.002	0	%100
30	SA-3C	X	.003	.003	0	%100
31	SR-1	X	.004	.004	0	%100
32	SR-2	X	.002	.002	0	%100
33	SR-3	X	.006	.006	0	%100
34	SRC-1	X	.006	.006	0	%100
35	SRC-2	X	.005	.005	0	%100
36	SRC-3	X	.002	.002	0	%100
37	FFTH-1	Z	.009	.009	0	%100
38	FFTH-2	Z	.003	.003	0	%100
39	FFTH-3	Z	.012	.012	0	%100
40	GSI-1	Z	.002	.002	0	%100
41	GSI-2	Z	.008	.008	0	%100
42	GSI-3	Z	.009	.009	0	%100
43	GSIP-1	Z	.009	.009	0	%100
44	GSIP-2	Z	.003	.003	0	%100
45	GSIP-3	Z	.012	.012	0	%100
46	K-1	Z	.011	.011	0	%100
47	K-2	Z	.011	.011	0	%100
48	K-3	Z	.011	.011	0	%100
49	MP-1	Z	.007	.007	0	%100
50	MP-2	Z	.006	.006	0	%100



Company : Tower Engineering Professionals, Inc.  
 Designer : DJM  
 Job Number : TEP#25630.610605  
 Model Name : BU 801367

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**Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
51	MP-3	Z	.006	.006	0 %100
52	MP-4	Z	.006	.006	0 %100
53	MP-5	Z	.007	.007	0 %100
54	MP-6	Z	.006	.006	0 %100
55	MP-7	Z	.006	.006	0 %100
56	MP-8	Z	.006	.006	0 %100
57	MP-9	Z	.007	.007	0 %100
58	MP-10	Z	.006	.006	0 %100
59	MP-11	Z	.006	.006	0 %100
60	MP-12	Z	.006	.006	0 %100
61	SA-1A	Z	.007	.007	0 %100
62	SA-1B	Z	.009	.009	0 %100
63	SA-2A	Z	.01	.01	0 %100
64	SA-2B	Z	.012	.012	0 %100
65	SA-3A	Z	.002	.002	0 %100
66	SA-3C	Z	.003	.003	0 %100
67	SR-1	Z	.004	.004	0 %100
68	SR-2	Z	.002	.002	0 %100
69	SR-3	Z	.006	.006	0 %100
70	SRC-1	Z	.007	.007	0 %100
71	SRC-2	Z	.005	.005	0 %100
72	SRC-3	Z	.002	.002	0 %100

**Member Distributed Loads (BLC 13 : 240 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	X	.005	.005	0 %100
2	FFTH-2	X	.005	.005	0 %100
3	FFTH-3	X	.009	.009	0 %100
4	GSI-1	X	0	0	0 %100
5	GSI-2	X	.005	.005	0 %100
6	GSI-3	X	.006	.006	0 %100
7	GSIP-1	X	.005	.005	0 %100
8	GSIP-2	X	.004	.004	0 %100
9	GSIP-3	X	.007	.007	0 %100
10	K-1	X	.008	.008	0 %100
11	K-2	X	.008	.008	0 %100
12	K-3	X	.008	.008	0 %100
13	MP-1	X	.005	.005	0 %100
14	MP-2	X	.004	.004	0 %100
15	MP-3	X	.004	.004	0 %100
16	MP-4	X	.004	.004	0 %100
17	MP-5	X	.005	.005	0 %100
18	MP-6	X	.004	.004	0 %100
19	MP-7	X	.004	.004	0 %100
20	MP-8	X	.004	.004	0 %100
21	MP-9	X	.005	.005	0 %100
22	MP-10	X	.004	.004	0 %100
23	MP-11	X	.004	.004	0 %100
24	MP-12	X	.004	.004	0 %100
25	SA-1A	X	.006	.006	0 %100
26	SA-1B	X	.007	.007	0 %100
27	SA-2A	X	.006	.006	0 %100
28	SA-2B	X	.008	.008	0 %100
29	SA-3A	X	.00013	.00013	0 %100
30	SA-3C	X	.000164	.000164	0 %100
31	SR-1	X	.002	.002	0 %100
32	SR-2	X	.002	.002	0 %100
33	SR-3	X	.004	.004	0 %100
34	SRC-1	X	.005	.005	0 %100
35	SRC-2	X	.003	.003	0 %100
36	SRC-3	X	.002	.002	0 %100
37	FFTH-1	Z	.008	.008	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : DJM  
 Job Number : TEP#25630.610605  
 Model Name : BU 801367

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**Member Distributed Loads (BLC 13 : 240 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
38	FFTH-2	Z	.008	.008	0 %100
39	FFTH-3	Z	.016	.016	0 %100
40	GSI-1	Z	0	0	0 %100
41	GSI-2	Z	.011	.011	0 %100
42	GSI-3	Z	.01	.01	0 %100
43	GSIP-1	Z	.008	.008	0 %100
44	GSIP-2	Z	.008	.008	0 %100
45	GSIP-3	Z	.016	.016	0 %100
46	K-1	Z	.013	.013	0 %100
47	K-2	Z	.013	.013	0 %100
48	K-3	Z	.013	.013	0 %100
49	MP-1	Z	.009	.009	0 %100
50	MP-2	Z	.007	.007	0 %100
51	MP-3	Z	.007	.007	0 %100
52	MP-4	Z	.007	.007	0 %100
53	MP-5	Z	.009	.009	0 %100
54	MP-6	Z	.007	.007	0 %100
55	MP-7	Z	.007	.007	0 %100
56	MP-8	Z	.007	.007	0 %100
57	MP-9	Z	.009	.009	0 %100
58	MP-10	Z	.007	.007	0 %100
59	MP-11	Z	.007	.007	0 %100
60	MP-12	Z	.007	.007	0 %100
61	SA-1A	Z	.011	.011	0 %100
62	SA-1B	Z	.014	.014	0 %100
63	SA-2A	Z	.011	.011	0 %100
64	SA-2B	Z	.013	.013	0 %100
65	SA-3A	Z	.000226	.000226	0 %100
66	SA-3C	Z	.000262	.000262	0 %100
67	SR-1	Z	.004	.004	0 %100
68	SR-2	Z	.004	.004	0 %100
69	SR-3	Z	.007	.007	0 %100
70	SRC-1	Z	.009	.009	0 %100
71	SRC-2	Z	.004	.004	0 %100
72	SRC-3	Z	.004	.004	0 %100

**Member Distributed Loads (BLC 14 : 270 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	Z	0	0	0 %100
2	FFTH-2	Z	.016	.016	0 %100
3	FFTH-3	Z	.016	.016	0 %100
4	GSI-1	Z	.006	.006	0 %100
5	GSI-2	Z	.015	.015	0 %100
6	GSI-3	Z	.006	.006	0 %100
7	GSIP-1	Z	0	0	0 %100
8	GSIP-2	Z	.016	.016	0 %100
9	GSIP-3	Z	.016	.016	0 %100
10	K-1	Z	.015	.015	0 %100
11	K-2	Z	.015	.015	0 %100
12	K-3	Z	.015	.015	0 %100
13	MP-1	Z	.01	.01	0 %100
14	MP-2	Z	.009	.009	0 %100
15	MP-3	Z	.008	.008	0 %100
16	MP-4	Z	.009	.009	0 %100
17	MP-5	Z	.01	.01	0 %100
18	MP-6	Z	.009	.009	0 %100
19	MP-7	Z	.008	.008	0 %100
20	MP-8	Z	.009	.009	0 %100
21	MP-9	Z	.01	.01	0 %100
22	MP-10	Z	.009	.009	0 %100
23	MP-11	Z	.008	.008	0 %100
24	MP-12	Z	.009	.009	0 %100



**Member Distributed Loads (BLC 14 : 270 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
25	SA-1A	Z	.015	.015	0	%100
26	SA-1B	Z	.019	.019	0	%100
27	SA-2A	Z	.007	.007	0	%100
28	SA-2B	Z	.009	.009	0	%100
29	SA-3A	Z	.007	.007	0	%100
30	SA-3C	Z	.009	.009	0	%100
31	SR-1	Z	0	0	0	%100
32	SR-2	Z	.007	.007	0	%100
33	SR-3	Z	.007	.007	0	%100
34	SRC-1	Z	.009	.009	0	%100
35	SRC-2	Z	0	0	0	%100
36	SRC-3	Z	.009	.009	0	%100

**Member Distributed Loads (BLC 15 : 300 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	-.005	-.005	0	%100
2	FFTH-2	X	-.009	-.009	0	%100
3	FFTH-3	X	-.005	-.005	0	%100
4	GSI-1	X	-.006	-.006	0	%100
5	GSI-2	X	-.005	-.005	0	%100
6	GSI-3	X	0	0	0	%100
7	GSIP-1	X	-.005	-.005	0	%100
8	GSIP-2	X	-.007	-.007	0	%100
9	GSIP-3	X	-.004	-.004	0	%100
10	K-1	X	-.008	-.008	0	%100
11	K-2	X	-.008	-.008	0	%100
12	K-3	X	-.008	-.008	0	%100
13	MP-1	X	-.005	-.005	0	%100
14	MP-2	X	-.004	-.004	0	%100
15	MP-3	X	-.004	-.004	0	%100
16	MP-4	X	-.004	-.004	0	%100
17	MP-5	X	-.005	-.005	0	%100
18	MP-6	X	-.004	-.004	0	%100
19	MP-7	X	-.004	-.004	0	%100
20	MP-8	X	-.004	-.004	0	%100
21	MP-9	X	-.005	-.005	0	%100
22	MP-10	X	-.004	-.004	0	%100
23	MP-11	X	-.004	-.004	0	%100
24	MP-12	X	-.004	-.004	0	%100
25	SA-1A	X	-.006	-.006	0	%100
26	SA-1B	X	-.007	-.007	0	%100
27	SA-2A	X	-.00013	-.00013	0	%100
28	SA-2B	X	-.000164	-.000164	0	%100
29	SA-3A	X	-.006	-.006	0	%100
30	SA-3C	X	-.008	-.008	0	%100
31	SR-1	X	-.002	-.002	0	%100
32	SR-2	X	-.004	-.004	0	%100
33	SR-3	X	-.002	-.002	0	%100
34	SRC-1	X	-.002	-.002	0	%100
35	SRC-2	X	-.003	-.003	0	%100
36	SRC-3	X	-.005	-.005	0	%100
37	FFTH-1	Z	.008	.008	0	%100
38	FFTH-2	Z	.016	.016	0	%100
39	FFTH-3	Z	.008	.008	0	%100
40	GSI-1	Z	.01	.01	0	%100
41	GSI-2	Z	.011	.011	0	%100
42	GSI-3	Z	0	0	0	%100
43	GSIP-1	Z	.008	.008	0	%100
44	GSIP-2	Z	.016	.016	0	%100
45	GSIP-3	Z	.008	.008	0	%100
46	K-1	Z	.013	.013	0	%100
47	K-2	Z	.013	.013	0	%100



**Member Distributed Loads (BLC 15 : 300 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
48	K-3	Z	.013	.013	0	%100
49	MP-1	Z	.009	.009	0	%100
50	MP-2	Z	.007	.007	0	%100
51	MP-3	Z	.007	.007	0	%100
52	MP-4	Z	.007	.007	0	%100
53	MP-5	Z	.009	.009	0	%100
54	MP-6	Z	.007	.007	0	%100
55	MP-7	Z	.007	.007	0	%100
56	MP-8	Z	.007	.007	0	%100
57	MP-9	Z	.009	.009	0	%100
58	MP-10	Z	.007	.007	0	%100
59	MP-11	Z	.007	.007	0	%100
60	MP-12	Z	.007	.007	0	%100
61	SA-1A	Z	.011	.011	0	%100
62	SA-1B	Z	.014	.014	0	%100
63	SA-2A	Z	.000226	.000226	0	%100
64	SA-2B	Z	.000262	.000262	0	%100
65	SA-3A	Z	.011	.011	0	%100
66	SA-3C	Z	.013	.013	0	%100
67	SR-1	Z	.004	.004	0	%100
68	SR-2	Z	.007	.007	0	%100
69	SR-3	Z	.004	.004	0	%100
70	SRC-1	Z	.004	.004	0	%100
71	SRC-2	Z	.004	.004	0	%100
72	SRC-3	Z	.009	.009	0	%100

**Member Distributed Loads (BLC 16 : 315 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	-.009	-.009	0	%100
2	FFTH-2	X	-.012	-.012	0	%100
3	FFTH-3	X	-.003	-.003	0	%100
4	GSI-1	X	-.01	-.01	0	%100
5	GSI-2	X	-.005	-.005	0	%100
6	GSI-3	X	-.003	-.003	0	%100
7	GSIP-1	X	-.009	-.009	0	%100
8	GSIP-2	X	-.01	-.01	0	%100
9	GSIP-3	X	-.003	-.003	0	%100
10	K-1	X	-.011	-.011	0	%100
11	K-2	X	-.011	-.011	0	%100
12	K-3	X	-.011	-.011	0	%100
13	MP-1	X	-.007	-.007	0	%100
14	MP-2	X	-.006	-.006	0	%100
15	MP-3	X	-.006	-.006	0	%100
16	MP-4	X	-.006	-.006	0	%100
17	MP-5	X	-.007	-.007	0	%100
18	MP-6	X	-.006	-.006	0	%100
19	MP-7	X	-.006	-.006	0	%100
20	MP-8	X	-.006	-.006	0	%100
21	MP-9	X	-.007	-.007	0	%100
22	MP-10	X	-.006	-.006	0	%100
23	MP-11	X	-.006	-.006	0	%100
24	MP-12	X	-.006	-.006	0	%100
25	SA-1A	X	-.007	-.007	0	%100
26	SA-1B	X	-.008	-.008	0	%100
27	SA-2A	X	-.002	-.002	0	%100
28	SA-2B	X	-.003	-.003	0	%100
29	SA-3A	X	-.01	-.01	0	%100
30	SA-3C	X	-.012	-.012	0	%100
31	SR-1	X	-.004	-.004	0	%100
32	SR-2	X	-.006	-.006	0	%100
33	SR-3	X	-.002	-.002	0	%100
34	SRC-1	X	-.002	-.002	0	%100

**Member Distributed Loads (BLC 16 : 315 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft.F,ksf]	Start Location[ft.%]	End Location[ft.%]
35 SRC-2	X	-0.05	-0.05	0	%100
36 SRC-3	X	-0.06	-0.06	0	%100
37 FFTH-1	Z	.009	.009	0	%100
38 FFTH-2	Z	.012	.012	0	%100
39 FFTH-3	Z	.003	.003	0	%100
40 GSI-1	Z	.009	.009	0	%100
41 GSI-2	Z	.008	.008	0	%100
42 GSI-3	Z	.002	.002	0	%100
43 GSIP-1	Z	.009	.009	0	%100
44 GSIP-2	Z	.012	.012	0	%100
45 GSIP-3	Z	.003	.003	0	%100
46 K-1	Z	.011	.011	0	%100
47 K-2	Z	.011	.011	0	%100
48 K-3	Z	.011	.011	0	%100
49 MP-1	Z	.007	.007	0	%100
50 MP-2	Z	.006	.006	0	%100
51 MP-3	Z	.006	.006	0	%100
52 MP-4	Z	.006	.006	0	%100
53 MP-5	Z	.007	.007	0	%100
54 MP-6	Z	.006	.006	0	%100
55 MP-7	Z	.006	.006	0	%100
56 MP-8	Z	.006	.006	0	%100
57 MP-9	Z	.007	.007	0	%100
58 MP-10	Z	.006	.006	0	%100
59 MP-11	Z	.006	.006	0	%100
60 MP-12	Z	.006	.006	0	%100
61 SA-1A	Z	.007	.007	0	%100
62 SA-1B	Z	.009	.009	0	%100
63 SA-2A	Z	.002	.002	0	%100
64 SA-2B	Z	.003	.003	0	%100
65 SA-3A	Z	.01	.01	0	%100
66 SA-3C	Z	.012	.012	0	%100
67 SR-1	Z	.004	.004	0	%100
68 SR-2	Z	.006	.006	0	%100
69 SR-3	Z	.002	.002	0	%100
70 SRC-1	Z	.002	.002	0	%100
71 SRC-2	Z	.005	.005	0	%100
72 SRC-3	Z	.007	.007	0	%100

**Member Distributed Loads (BLC 17 : 330 Wind - No Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft.F,ksf]	Start Location[ft.%]	End Location[ft.%]
1 FFTH-1	X	-0.014	-0.014	0	%100
2 FFTH-2	X	-0.014	-0.014	0	%100
3 FFTH-3	X	0	0	0	%100
4 GSI-1	X	-0.013	-0.013	0	%100
5 GSI-2	X	-0.005	-0.005	0	%100
6 GSI-3	X	-0.006	-0.006	0	%100
7 GSIP-1	X	-0.014	-0.014	0	%100
8 GSIP-2	X	-0.011	-0.011	0	%100
9 GSIP-3	X	0	0	0	%100
10 K-1	X	-0.013	-0.013	0	%100
11 K-2	X	-0.013	-0.013	0	%100
12 K-3	X	-0.013	-0.013	0	%100
13 MP-1	X	-0.009	-0.009	0	%100
14 MP-2	X	-0.007	-0.007	0	%100
15 MP-3	X	-0.007	-0.007	0	%100
16 MP-4	X	-0.007	-0.007	0	%100
17 MP-5	X	-0.009	-0.009	0	%100
18 MP-6	X	-0.007	-0.007	0	%100
19 MP-7	X	-0.007	-0.007	0	%100
20 MP-8	X	-0.007	-0.007	0	%100
21 MP-9	X	-0.009	-0.009	0	%100

**Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft.F,ksf]	Start Location[ft.%]	End Location[ft.%]
22 MP-10	X	-0.007	-0.007	0	%100
23 MP-11	X	-0.007	-0.007	0	%100
24 MP-12	X	-0.007	-0.007	0	%100
25 SA-1A	X	-0.006	-0.006	0	%100
26 SA-1B	X	-0.007	-0.007	0	%100
27 SA-2A	X	-0.006	-0.006	0	%100
28 SA-2B	X	-0.008	-0.008	0	%100
29 SA-3A	X	-0.013	-0.013	0	%100
30 SA-3C	X	-0.016	-0.016	0	%100
31 SR-1	X	-0.006	-0.006	0	%100
32 SR-2	X	-0.006	-0.006	0	%100
33 SR-3	X	0	0	0	%100
34 SRC-1	X	0	0	0	%100
35 SRC-2	X	-0.008	-0.008	0	%100
36 SRC-3	X	-0.007	-0.007	0	%100
37 FFTH-1	Z	.008	.008	0	%100
38 FFTH-2	Z	.008	.008	0	%100
39 FFTH-3	Z	0	0	0	%100
40 GSI-1	Z	.006	.006	0	%100
41 GSI-2	Z	.004	.004	0	%100
42 GSI-3	Z	.003	.003	0	%100
43 GSIP-1	Z	.008	.008	0	%100
44 GSIP-2	Z	.008	.008	0	%100
45 GSIP-3	Z	0	0	0	%100
46 K-1	Z	.008	.008	0	%100
47 K-2	Z	.008	.008	0	%100
48 K-3	Z	.008	.008	0	%100
49 MP-1	Z	.005	.005	0	%100
50 MP-2	Z	.004	.004	0	%100
51 MP-3	Z	.004	.004	0	%100
52 MP-4	Z	.004	.004	0	%100
53 MP-5	Z	.005	.005	0	%100
54 MP-6	Z	.004	.004	0	%100
55 MP-7	Z	.004	.004	0	%100
56 MP-8	Z	.004	.004	0	%100
57 MP-9	Z	.005	.005	0	%100
58 MP-10	Z	.004	.004	0	%100
59 MP-11	Z	.004	.004	0	%100
60 MP-12	Z	.004	.004	0	%100
61 SA-1A	Z	.004	.004	0	%100
62 SA-1B	Z	.005	.005	0	%100
63 SA-2A	Z	.004	.004	0	%100
64 SA-2B	Z	.004	.004	0	%100
65 SA-3A	Z	.007	.007	0	%100
66 SA-3C	Z	.008	.008	0	%100
67 SR-1	Z	.004	.004	0	%100
68 SR-2	Z	.004	.004	0	%100
69 SR-3	Z	0	0	0	%100
70 SRC-1	Z	0	0	0	%100
71 SRC-2	Z	.004	.004	0	%100
72 SRC-3	Z	.004	.004	0	%100

**Member Distributed Loads (BLC 18 : Ice Weight)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft.F,ksf]	Start Location[ft.%]	End Location[ft.%]
1 FFTH-1	Y	-0.008	-0.008	0	%100
2 FFTH-2	Y	-0.008	-0.008	0	%100
3 FFTH-3	Y	-0.008	-0.008	0	%100
4 GSI-1	Y	-0.013	-0.013	0	%100
5 GSI-2	Y	-0.013	-0.013	0	%100
6 GSI-3	Y	-0.013	-0.013	0	%100
7 GSIP-1	Y	-0.008	-0.008	0	%100
8 GSIP-2	Y	-0.008	-0.008	0	%100

**Member Distributed Loads (BLC 18 : Ice Weight) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
9	GSIP-3	-008	-008	0	%100
10	K-1	-011	-011	0	%100
11	K-2	-011	-011	0	%100
12	K-3	-011	-011	0	%100
13	MP-1	-01	-01	0	%100
14	MP-2	-009	-009	0	%100
15	MP-3	-009	-009	0	%100
16	MP-4	-009	-009	0	%100
17	MP-5	-01	-01	0	%100
18	MP-6	-009	-009	0	%100
19	MP-7	-009	-009	0	%100
20	MP-8	-009	-009	0	%100
21	MP-9	-01	-01	0	%100
22	MP-10	-009	-009	0	%100
23	MP-11	-009	-009	0	%100
24	MP-12	-009	-009	0	%100
25	SA-1A	-014	-014	0	%100
26	SA-1B	-014	-014	0	%100
27	SA-2A	-014	-014	0	%100
28	SA-2B	-014	-014	0	%100
29	SA-3A	-014	-014	0	%100
30	SA-3C	-014	-014	0	%100
31	SR-1	-009	-009	0	%100
32	SR-2	-009	-009	0	%100
33	SR-3	-009	-009	0	%100
34	SRC-1	-008	-008	0	%100
35	SRC-2	-008	-008	0	%100
36	SRC-3	-008	-008	0	%100

**Member Distributed Loads (BLC 19 : 0 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	-006	-006	0	%100
2	FFTH-2	-005	-005	0	%100
3	FFTH-3	-005	-005	0	%100
4	GSI-1	-005	-005	0	%100
5	GSI-2	-004	-004	0	%100
6	GSI-3	-005	-005	0	%100
7	GSIP-1	-005	-005	0	%100
8	GSIP-2	-005	-005	0	%100
9	GSIP-3	-005	-005	0	%100
10	K-1	-004	-004	0	%100
11	K-2	-004	-004	0	%100
12	K-3	-004	-004	0	%100
13	MP-1	-003	-003	0	%100
14	MP-2	-002	-002	0	%100
15	MP-3	-002	-002	0	%100
16	MP-4	-003	-003	0	%100
17	MP-5	-003	-003	0	%100
18	MP-6	-002	-002	0	%100
19	MP-7	-002	-002	0	%100
20	MP-8	-003	-003	0	%100
21	MP-9	-003	-003	0	%100
22	MP-10	-002	-002	0	%100
23	MP-11	-002	-002	0	%100
24	MP-12	-003	-003	0	%100
25	SA-1A	-006	-006	0	%100
26	SA-1B	-005	-005	0	%100
27	SA-2A	-006	-006	0	%100
28	SA-2B	-005	-005	0	%100
29	SA-3A	-006	-006	0	%100
30	SA-3C	-005	-005	0	%100
31	SR-1	-003	-003	0	%100

**Member Distributed Loads (BLC 19 : 0 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
32	SR-2	-003	-003	0	%100
33	SR-3	-003	-003	0	%100
34	SRC-1	-004	-004	0	%100
35	SRC-2	-004	-004	0	%100
36	SRC-3	-004	-004	0	%100

**Member Distributed Loads (BLC 20 : 30 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	-005	-005	0	%100
2	FFTH-2	0	0	0	%100
3	FFTH-3	-004	-004	0	%100
4	GSI-1	-002	-002	0	%100
5	GSI-2	-002	-002	0	%100
6	GSI-3	-004	-004	0	%100
7	GSIP-1	-004	-004	0	%100
8	GSIP-2	0	0	0	%100
9	GSIP-3	-003	-003	0	%100
10	K-1	-004	-004	0	%100
11	K-2	-004	-004	0	%100
12	K-3	-004	-004	0	%100
13	MP-1	-003	-003	0	%100
14	MP-2	-002	-002	0	%100
15	MP-3	-002	-002	0	%100
16	MP-4	-002	-002	0	%100
17	MP-5	-003	-003	0	%100
18	MP-6	-002	-002	0	%100
19	MP-7	-002	-002	0	%100
20	MP-8	-002	-002	0	%100
21	MP-9	-003	-003	0	%100
22	MP-10	-002	-002	0	%100
23	MP-11	-002	-002	0	%100
24	MP-12	-002	-002	0	%100
25	SA-1A	-002	-002	0	%100
26	SA-1B	-002	-002	0	%100
27	SA-2A	-005	-005	0	%100
28	SA-2B	-005	-005	0	%100
29	SA-3A	-002	-002	0	%100
30	SA-3C	-002	-002	0	%100
31	SR-1	-003	-003	0	%100
32	SR-2	0	0	0	%100
33	SR-3	-002	-002	0	%100
34	SRC-1	-003	-003	0	%100
35	SRC-2	-003	-003	0	%100
36	SRC-3	0	0	0	%100
37	FFTH-1	-002	-002	0	%100
38	FFTH-2	0	0	0	%100
39	FFTH-3	-003	-003	0	%100
40	GSI-1	-001	-001	0	%100
41	GSI-2	-001	-001	0	%100
42	GSI-3	-002	-002	0	%100
43	GSIP-1	-002	-002	0	%100
44	GSIP-2	0	0	0	%100
45	GSIP-3	-002	-002	0	%100
46	K-1	-002	-002	0	%100
47	K-2	-002	-002	0	%100
48	K-3	-002	-002	0	%100
49	MP-1	-002	-002	0	%100
50	MP-2	-001	-001	0	%100
51	MP-3	-001	-001	0	%100
52	MP-4	-001	-001	0	%100
53	MP-5	-002	-002	0	%100
54	MP-6	-001	-001	0	%100

**Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
55	MP-7	Z	-0.001	-0.001	0	%100
56	MP-8	Z	-0.001	-0.001	0	%100
57	MP-9	Z	-0.002	-0.002	0	%100
58	MP-10	Z	-0.001	-0.001	0	%100
59	MP-11	Z	-0.001	-0.001	0	%100
60	MP-12	Z	-0.001	-0.001	0	%100
61	SA-1A	Z	-0.001	-0.001	0	%100
62	SA-1B	Z	-0.001	-0.001	0	%100
63	SA-2A	Z	-0.003	-0.003	0	%100
64	SA-2B	Z	-0.003	-0.003	0	%100
65	SA-3A	Z	-0.001	-0.001	0	%100
66	SA-3C	Z	-0.001	-0.001	0	%100
67	SR-1	Z	-0.001	-0.001	0	%100
68	SR-2	Z	0	0	0	%100
69	SR-3	Z	-0.001	-0.001	0	%100
70	SRC-1	Z	-0.002	-0.002	0	%100
71	SRC-2	Z	-0.002	-0.002	0	%100
72	SRC-3	Z	0	0	0	%100

**Member Distributed Loads (BLC 21 : 45 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	-0.003	-0.003	0	%100
2	FFTH-2	X	-0.000943	-0.000943	0	%100
3	FFTH-3	X	-0.004	-0.004	0	%100
4	GSI-1	X	-0.000855	-0.000855	0	%100
5	GSI-2	X	-0.002	-0.002	0	%100
6	GSI-3	X	-0.003	-0.003	0	%100
7	GSIP-1	X	-0.003	-0.003	0	%100
8	GSIP-2	X	-0.000836	-0.000836	0	%100
9	GSIP-3	X	-0.003	-0.003	0	%100
10	K-1	X	-0.003	-0.003	0	%100
11	K-2	X	-0.003	-0.003	0	%100
12	K-3	X	-0.003	-0.003	0	%100
13	MP-1	X	-0.002	-0.002	0	%100
14	MP-2	X	-0.002	-0.002	0	%100
15	MP-3	X	-0.002	-0.002	0	%100
16	MP-4	X	-0.002	-0.002	0	%100
17	MP-5	X	-0.002	-0.002	0	%100
18	MP-6	X	-0.002	-0.002	0	%100
19	MP-7	X	-0.002	-0.002	0	%100
20	MP-8	X	-0.002	-0.002	0	%100
21	MP-9	X	-0.002	-0.002	0	%100
22	MP-10	X	-0.002	-0.002	0	%100
23	MP-11	X	-0.002	-0.002	0	%100
24	MP-12	X	-0.002	-0.002	0	%100
25	SA-1A	X	-0.003	-0.003	0	%100
26	SA-1B	X	-0.003	-0.003	0	%100
27	SA-2A	X	-0.004	-0.004	0	%100
28	SA-2B	X	-0.004	-0.004	0	%100
29	SA-3A	X	-0.000971	-0.000971	0	%100
30	SA-3C	X	-0.000917	-0.000917	0	%100
31	SR-1	X	-0.002	-0.002	0	%100
32	SR-2	X	-0.000509	-0.000509	0	%100
33	SR-3	X	-0.002	-0.002	0	%100
34	SRC-1	X	-0.003	-0.003	0	%100
35	SRC-2	X	-0.002	-0.002	0	%100
36	SRC-3	X	-0.000779	-0.000779	0	%100
37	FFTH-1	Z	-0.003	-0.003	0	%100
38	FFTH-2	Z	-0.001	-0.001	0	%100
39	FFTH-3	Z	-0.004	-0.004	0	%100
40	GSI-1	Z	-0.000782	-0.000782	0	%100
41	GSI-2	Z	-0.002	-0.002	0	%100

**Member Distributed Loads (BLC 21 : 45 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
42	GSI-3	Z	-0.003	-0.003	0	%100
43	GSIP-1	Z	-0.002	-0.002	0	%100
44	GSIP-2	Z	-0.000932	-0.000932	0	%100
45	GSIP-3	Z	-0.003	-0.003	0	%100
46	K-1	Z	-0.003	-0.003	0	%100
47	K-2	Z	-0.003	-0.003	0	%100
48	K-3	Z	-0.003	-0.003	0	%100
49	MP-1	Z	-0.002	-0.002	0	%100
50	MP-2	Z	-0.002	-0.002	0	%100
51	MP-3	Z	-0.002	-0.002	0	%100
52	MP-4	Z	-0.002	-0.002	0	%100
53	MP-5	Z	-0.002	-0.002	0	%100
54	MP-6	Z	-0.002	-0.002	0	%100
55	MP-7	Z	-0.002	-0.002	0	%100
56	MP-8	Z	-0.002	-0.002	0	%100
57	MP-9	Z	-0.002	-0.002	0	%100
58	MP-10	Z	-0.002	-0.002	0	%100
59	MP-11	Z	-0.002	-0.002	0	%100
60	MP-12	Z	-0.002	-0.002	0	%100
61	SA-1A	Z	-0.003	-0.003	0	%100
62	SA-1B	Z	-0.003	-0.003	0	%100
63	SA-2A	Z	-0.004	-0.004	0	%100
64	SA-2B	Z	-0.004	-0.004	0	%100
65	SA-3A	Z	-0.000971	-0.000971	0	%100
66	SA-3C	Z	-0.000881	-0.000881	0	%100
67	SR-1	Z	-0.002	-0.002	0	%100
68	SR-2	Z	-0.000628	-0.000628	0	%100
69	SR-3	Z	-0.002	-0.002	0	%100
70	SRC-1	Z	-0.003	-0.003	0	%100
71	SRC-2	Z	-0.002	-0.002	0	%100
72	SRC-3	Z	-0.000786	-0.000786	0	%100

**Member Distributed Loads (BLC 22 : 60 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	-0.002	-0.002	0	%100
2	FFTH-2	X	-0.001	-0.001	0	%100
3	FFTH-3	X	-0.003	-0.003	0	%100
4	GSI-1	X	0	0	0	%100
5	GSI-2	X	-0.002	-0.002	0	%100
6	GSI-3	X	-0.002	-0.002	0	%100
7	GSIP-1	X	-0.001	-0.001	0	%100
8	GSIP-2	X	-0.001	-0.001	0	%100
9	GSIP-3	X	-0.002	-0.002	0	%100
10	K-1	X	-0.002	-0.002	0	%100
11	K-2	X	-0.002	-0.002	0	%100
12	K-3	X	-0.002	-0.002	0	%100
13	MP-1	X	-0.001	-0.001	0	%100
14	MP-2	X	-0.001	-0.001	0	%100
15	MP-3	X	-0.001	-0.001	0	%100
16	MP-4	X	-0.001	-0.001	0	%100
17	MP-5	X	-0.001	-0.001	0	%100
18	MP-6	X	-0.001	-0.001	0	%100
19	MP-7	X	-0.001	-0.001	0	%100
20	MP-8	X	-0.001	-0.001	0	%100
21	MP-9	X	-0.001	-0.001	0	%100
22	MP-10	X	-0.001	-0.001	0	%100
23	MP-11	X	-0.001	-0.001	0	%100
24	MP-12	X	-0.001	-0.001	0	%100
25	SA-1A	X	-0.002	-0.002	0	%100
26	SA-1B	X	-0.002	-0.002	0	%100
27	SA-2A	X	-0.002	-0.002	0	%100
28	SA-2B	X	-0.002	-0.002	0	%100



Company : Tower Engineering Professionals, Inc.  
 Designer : DJM  
 Job Number : TEP#25630.610605  
 Model Name : BU 801367

Oct 14, 2021  
 2:09 PM  
 Checked By: SEB

**Member Distributed Loads (BLC 22 : 60 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
29	SA-3A	X	-5.1e-5	-5.1e-5	0	%100
30	SA-3C	X	-4.8e-5	-4.8e-5	0	%100
31	SR-1	X	-0.00864	-0.00864	0	%100
32	SR-2	X	-0.00696	-0.00696	0	%100
33	SR-3	X	-0.001	-0.001	0	%100
34	SRC-1	X	-0.002	-0.002	0	%100
35	SRC-2	X	-0.001	-0.001	0	%100
36	SRC-3	X	-0.001	-0.001	0	%100
37	FFTH-1	Z	-0.002	-0.002	0	%100
38	FFTH-2	Z	-0.003	-0.003	0	%100
39	FFTH-3	Z	-0.005	-0.005	0	%100
40	GSI-1	Z	0	0	0	%100
41	GSI-2	Z	-0.004	-0.004	0	%100
42	GSI-3	Z	-0.003	-0.003	0	%100
43	GSIP-1	Z	-0.002	-0.002	0	%100
44	GSIP-2	Z	-0.002	-0.002	0	%100
45	GSIP-3	Z	-0.004	-0.004	0	%100
46	K-1	Z	-0.004	-0.004	0	%100
47	K-2	Z	-0.004	-0.004	0	%100
48	K-3	Z	-0.004	-0.004	0	%100
49	MP-1	Z	-0.003	-0.003	0	%100
50	MP-2	Z	-0.002	-0.002	0	%100
51	MP-3	Z	-0.002	-0.002	0	%100
52	MP-4	Z	-0.002	-0.002	0	%100
53	MP-5	Z	-0.003	-0.003	0	%100
54	MP-6	Z	-0.002	-0.002	0	%100
55	MP-7	Z	-0.002	-0.002	0	%100
56	MP-8	Z	-0.002	-0.002	0	%100
57	MP-9	Z	-0.003	-0.003	0	%100
58	MP-10	Z	-0.002	-0.002	0	%100
59	MP-11	Z	-0.002	-0.002	0	%100
60	MP-12	Z	-0.002	-0.002	0	%100
61	SA-1A	Z	-0.004	-0.004	0	%100
62	SA-1B	Z	-0.004	-0.004	0	%100
63	SA-2A	Z	-0.004	-0.004	0	%100
64	SA-2B	Z	-0.004	-0.004	0	%100
65	SA-3A	Z	-8.9e-5	-8.9e-5	0	%100
66	SA-3C	Z	-8e-5	-8e-5	0	%100
67	SR-1	Z	-0.001	-0.001	0	%100
68	SR-2	Z	-0.001	-0.001	0	%100
69	SR-3	Z	-0.003	-0.003	0	%100
70	SRC-1	Z	-0.004	-0.004	0	%100
71	SRC-2	Z	-0.002	-0.002	0	%100
72	SRC-3	Z	-0.002	-0.002	0	%100

**Member Distributed Loads (BLC 23 : 90 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	Z	0	0	0	%100
2	FFTH-2	Z	-0.005	-0.005	0	%100
3	FFTH-3	Z	-0.005	-0.005	0	%100
4	GSI-1	Z	-0.002	-0.002	0	%100
5	GSI-2	Z	-0.005	-0.005	0	%100
6	GSI-3	Z	-0.002	-0.002	0	%100
7	GSIP-1	Z	0	0	0	%100
8	GSIP-2	Z	-0.004	-0.004	0	%100
9	GSIP-3	Z	-0.004	-0.004	0	%100
10	K-1	Z	-0.005	-0.005	0	%100
11	K-2	Z	-0.005	-0.005	0	%100
12	K-3	Z	-0.005	-0.005	0	%100
13	MP-1	Z	-0.003	-0.003	0	%100
14	MP-2	Z	-0.003	-0.003	0	%100
15	MP-3	Z	-0.003	-0.003	0	%100



Company : Tower Engineering Professionals, Inc.  
 Designer : DJM  
 Job Number : TEP#25630.610605  
 Model Name : BU 801367

Oct 14, 2021  
 2:09 PM  
 Checked By: SEB

**Member Distributed Loads (BLC 23 : 90 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
16	MP-4	Z	-0.003	-0.003	0	%100
17	MP-5	Z	-0.003	-0.003	0	%100
18	MP-6	Z	-0.003	-0.003	0	%100
19	MP-7	Z	-0.003	-0.003	0	%100
20	MP-8	Z	-0.003	-0.003	0	%100
21	MP-9	Z	-0.003	-0.003	0	%100
22	MP-10	Z	-0.003	-0.003	0	%100
23	MP-11	Z	-0.003	-0.003	0	%100
24	MP-12	Z	-0.003	-0.003	0	%100
25	SA-1A	Z	-0.006	-0.006	0	%100
26	SA-1B	Z	-0.005	-0.005	0	%100
27	SA-2A	Z	-0.003	-0.003	0	%100
28	SA-2B	Z	-0.003	-0.003	0	%100
29	SA-3A	Z	-0.003	-0.003	0	%100
30	SA-3C	Z	-0.003	-0.003	0	%100
31	SR-1	Z	0	0	0	%100
32	SR-2	Z	-0.003	-0.003	0	%100
33	SR-3	Z	-0.003	-0.003	0	%100
34	SRC-1	Z	-0.004	-0.004	0	%100
35	SRC-2	Z	0	0	0	%100
36	SRC-3	Z	-0.004	-0.004	0	%100

**Member Distributed Loads (BLC 24 : 120 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.002	.002	0	%100
2	FFTH-2	X	.003	.003	0	%100
3	FFTH-3	X	.001	.001	0	%100
4	GSI-1	X	.002	.002	0	%100
5	GSI-2	X	.002	.002	0	%100
6	GSI-3	X	0	0	0	%100
7	GSIP-1	X	.001	.001	0	%100
8	GSIP-2	X	.002	.002	0	%100
9	GSIP-3	X	.001	.001	0	%100
10	K-1	X	.002	.002	0	%100
11	K-2	X	.002	.002	0	%100
12	K-3	X	.002	.002	0	%100
13	MP-1	X	.001	.001	0	%100
14	MP-2	X	.001	.001	0	%100
15	MP-3	X	.001	.001	0	%100
16	MP-4	X	.001	.001	0	%100
17	MP-5	X	.001	.001	0	%100
18	MP-6	X	.001	.001	0	%100
19	MP-7	X	.001	.001	0	%100
20	MP-8	X	.001	.001	0	%100
21	MP-9	X	.001	.001	0	%100
22	MP-10	X	.001	.001	0	%100
23	MP-11	X	.001	.001	0	%100
24	MP-12	X	.001	.001	0	%100
25	SA-1A	X	.002	.002	0	%100
26	SA-1B	X	.002	.002	0	%100
27	SA-2A	X	5.1e-5	5.1e-5	0	%100
28	SA-2B	X	4.8e-5	4.8e-5	0	%100
29	SA-3A	X	.002	.002	0	%100
30	SA-3C	X	.002	.002	0	%100
31	SR-1	X	.000864	.000864	0	%100
32	SR-2	X	.001	.001	0	%100
33	SR-3	X	.000696	.000696	0	%100
34	SRC-1	X	.001	.001	0	%100
35	SRC-2	X	.001	.001	0	%100
36	SRC-3	X	.002	.002	0	%100
37	FFTH-1	Z	-0.002	-0.002	0	%100
38	FFTH-2	Z	-0.005	-0.005	0	%100



**Member Distributed Loads (BLC 24 : 120 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
39	FFTH-3	Z	-0.03	-0.03	0	%100
40	GSI-1	Z	-0.03	-0.03	0	%100
41	GSI-2	Z	-0.04	-0.04	0	%100
42	GSI-3	Z	0	0	0	%100
43	GSIP-1	Z	-0.02	-0.02	0	%100
44	GSIP-2	Z	-0.04	-0.04	0	%100
45	GSIP-3	Z	-0.02	-0.02	0	%100
46	K-1	Z	-0.04	-0.04	0	%100
47	K-2	Z	-0.04	-0.04	0	%100
48	K-3	Z	-0.04	-0.04	0	%100
49	MP-1	Z	-0.03	-0.03	0	%100
50	MP-2	Z	-0.02	-0.02	0	%100
51	MP-3	Z	-0.02	-0.02	0	%100
52	MP-4	Z	-0.02	-0.02	0	%100
53	MP-5	Z	-0.03	-0.03	0	%100
54	MP-6	Z	-0.02	-0.02	0	%100
55	MP-7	Z	-0.02	-0.02	0	%100
56	MP-8	Z	-0.02	-0.02	0	%100
57	MP-9	Z	-0.03	-0.03	0	%100
58	MP-10	Z	-0.02	-0.02	0	%100
59	MP-11	Z	-0.02	-0.02	0	%100
60	MP-12	Z	-0.02	-0.02	0	%100
61	SA-1A	Z	-0.04	-0.04	0	%100
62	SA-1B	Z	-0.04	-0.04	0	%100
63	SA-2A	Z	-8.9e-5	-8.9e-5	0	%100
64	SA-2B	Z	-8e-5	-8e-5	0	%100
65	SA-3A	Z	-0.04	-0.04	0	%100
66	SA-3C	Z	-0.04	-0.04	0	%100
67	SR-1	Z	-0.01	-0.01	0	%100
68	SR-2	Z	-0.03	-0.03	0	%100
69	SR-3	Z	-0.01	-0.01	0	%100
70	SRC-1	Z	-0.02	-0.02	0	%100
71	SRC-2	Z	-0.02	-0.02	0	%100
72	SRC-3	Z	-0.04	-0.04	0	%100

**Member Distributed Loads (BLC 25 : 135 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.003	.003	0	%100
2	FFTH-2	X	.004	.004	0	%100
3	FFTH-3	X	.000943	.000943	0	%100
4	GSI-1	X	.003	.003	0	%100
5	GSI-2	X	.002	.002	0	%100
6	GSI-3	X	.000855	.000855	0	%100
7	GSIP-1	X	.003	.003	0	%100
8	GSIP-2	X	.003	.003	0	%100
9	GSIP-3	X	.000836	.000836	0	%100
10	K-1	X	.003	.003	0	%100
11	K-2	X	.003	.003	0	%100
12	K-3	X	.003	.003	0	%100
13	MP-1	X	.002	.002	0	%100
14	MP-2	X	.002	.002	0	%100
15	MP-3	X	.002	.002	0	%100
16	MP-4	X	.002	.002	0	%100
17	MP-5	X	.002	.002	0	%100
18	MP-6	X	.002	.002	0	%100
19	MP-7	X	.002	.002	0	%100
20	MP-8	X	.002	.002	0	%100
21	MP-9	X	.002	.002	0	%100
22	MP-10	X	.002	.002	0	%100
23	MP-11	X	.002	.002	0	%100
24	MP-12	X	.002	.002	0	%100
25	SA-1A	X	.003	.003	0	%100



**Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
26	SA-1B	X	.003	.003	0	%100
27	SA-2A	X	.000971	.000971	0	%100
28	SA-2B	X	.000917	.000917	0	%100
29	SA-3A	X	.004	.004	0	%100
30	SA-3C	X	.004	.004	0	%100
31	SR-1	X	.002	.002	0	%100
32	SR-2	X	.002	.002	0	%100
33	SR-3	X	.000509	.000509	0	%100
34	SRC-1	X	.000779	.000779	0	%100
35	SRC-2	X	.002	.002	0	%100
36	SRC-3	X	.003	.003	0	%100
37	FFTH-1	Z	-0.03	-0.03	0	%100
38	FFTH-2	Z	-0.04	-0.04	0	%100
39	FFTH-3	Z	-0.01	-0.01	0	%100
40	GSI-1	Z	-0.03	-0.03	0	%100
41	GSI-2	Z	-0.02	-0.02	0	%100
42	GSI-3	Z	-0.00782	-0.00782	0	%100
43	GSIP-1	Z	-0.02	-0.02	0	%100
44	GSIP-2	Z	-0.03	-0.03	0	%100
45	GSIP-3	Z	-0.00932	-0.00932	0	%100
46	K-1	Z	-0.03	-0.03	0	%100
47	K-2	Z	-0.03	-0.03	0	%100
48	K-3	Z	-0.03	-0.03	0	%100
49	MP-1	Z	-0.02	-0.02	0	%100
50	MP-2	Z	-0.02	-0.02	0	%100
51	MP-3	Z	-0.02	-0.02	0	%100
52	MP-4	Z	-0.02	-0.02	0	%100
53	MP-5	Z	-0.02	-0.02	0	%100
54	MP-6	Z	-0.02	-0.02	0	%100
55	MP-7	Z	-0.02	-0.02	0	%100
56	MP-8	Z	-0.02	-0.02	0	%100
57	MP-9	Z	-0.02	-0.02	0	%100
58	MP-10	Z	-0.02	-0.02	0	%100
59	MP-11	Z	-0.02	-0.02	0	%100
60	MP-12	Z	-0.02	-0.02	0	%100
61	SA-1A	Z	-0.03	-0.03	0	%100
62	SA-1B	Z	-0.03	-0.03	0	%100
63	SA-2A	Z	-0.00971	-0.00971	0	%100
64	SA-2B	Z	-0.00881	-0.00881	0	%100
65	SA-3A	Z	-0.04	-0.04	0	%100
66	SA-3C	Z	-0.04	-0.04	0	%100
67	SR-1	Z	-0.02	-0.02	0	%100
68	SR-2	Z	-0.02	-0.02	0	%100
69	SR-3	Z	-0.00628	-0.00628	0	%100
70	SRC-1	Z	-0.00786	-0.00786	0	%100
71	SRC-2	Z	-0.02	-0.02	0	%100
72	SRC-3	Z	-0.03	-0.03	0	%100

**Member Distributed Loads (BLC 26 : 150 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.005	.005	0	%100
2	FFTH-2	X	.004	.004	0	%100
3	FFTH-3	X	0	0	0	%100
4	GSI-1	X	.004	.004	0	%100
5	GSI-2	X	.002	.002	0	%100
6	GSI-3	X	.002	.002	0	%100
7	GSIP-1	X	.004	.004	0	%100
8	GSIP-2	X	.003	.003	0	%100
9	GSIP-3	X	0	0	0	%100
10	K-1	X	.004	.004	0	%100
11	K-2	X	.004	.004	0	%100
12	K-3	X	.004	.004	0	%100



**Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
13	MP-1	X	.003	.003	0	%100
14	MP-2	X	.002	.002	0	%100
15	MP-3	X	.002	.002	0	%100
16	MP-4	X	.002	.002	0	%100
17	MP-5	X	.003	.003	0	%100
18	MP-6	X	.002	.002	0	%100
19	MP-7	X	.002	.002	0	%100
20	MP-8	X	.002	.002	0	%100
21	MP-9	X	.003	.003	0	%100
22	MP-10	X	.002	.002	0	%100
23	MP-11	X	.002	.002	0	%100
24	MP-12	X	.002	.002	0	%100
25	SA-1A	X	.002	.002	0	%100
26	SA-1B	X	.002	.002	0	%100
27	SA-2A	X	.002	.002	0	%100
28	SA-2B	X	.002	.002	0	%100
29	SA-3A	X	.005	.005	0	%100
30	SA-3C	X	.005	.005	0	%100
31	SR-1	X	.003	.003	0	%100
32	SR-2	X	.002	.002	0	%100
33	SR-3	X	0	0	0	%100
34	SRC-1	X	0	0	0	%100
35	SRC-2	X	.003	.003	0	%100
36	SRC-3	X	.003	.003	0	%100
37	FFTH-1	Z	-.002	-.002	0	%100
38	FFTH-2	Z	-.003	-.003	0	%100
39	FFTH-3	Z	0	0	0	%100
40	GSI-1	Z	-.002	-.002	0	%100
41	GSI-2	Z	-.001	-.001	0	%100
42	GSI-3	Z	-.001	-.001	0	%100
43	GSIP-1	Z	-.002	-.002	0	%100
44	GSIP-2	Z	-.002	-.002	0	%100
45	GSIP-3	Z	0	0	0	%100
46	K-1	Z	-.002	-.002	0	%100
47	K-2	Z	-.002	-.002	0	%100
48	K-3	Z	-.002	-.002	0	%100
49	MP-1	Z	-.002	-.002	0	%100
50	MP-2	Z	-.001	-.001	0	%100
51	MP-3	Z	-.001	-.001	0	%100
52	MP-4	Z	-.001	-.001	0	%100
53	MP-5	Z	-.002	-.002	0	%100
54	MP-6	Z	-.001	-.001	0	%100
55	MP-7	Z	-.001	-.001	0	%100
56	MP-8	Z	-.001	-.001	0	%100
57	MP-9	Z	-.002	-.002	0	%100
58	MP-10	Z	-.001	-.001	0	%100
59	MP-11	Z	-.001	-.001	0	%100
60	MP-12	Z	-.001	-.001	0	%100
61	SA-1A	Z	-.001	-.001	0	%100
62	SA-1B	Z	-.001	-.001	0	%100
63	SA-2A	Z	-.001	-.001	0	%100
64	SA-2B	Z	-.001	-.001	0	%100
65	SA-3A	Z	-.003	-.003	0	%100
66	SA-3C	Z	-.003	-.003	0	%100
67	SR-1	Z	-.001	-.001	0	%100
68	SR-2	Z	-.001	-.001	0	%100
69	SR-3	Z	0	0	0	%100
70	SRC-1	Z	0	0	0	%100
71	SRC-2	Z	-.002	-.002	0	%100
72	SRC-3	Z	-.002	-.002	0	%100

**Member Distributed Loads (BLC 27 : 180 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
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**Member Distributed Loads (BLC 27 : 180 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.006	.006	0	%100
2	FFTH-2	X	.005	.005	0	%100
3	FFTH-3	X	.005	.005	0	%100
4	GSI-1	X	.005	.005	0	%100
5	GSI-2	X	.004	.004	0	%100
6	GSI-3	X	.005	.005	0	%100
7	GSIP-1	X	.005	.005	0	%100
8	GSIP-2	X	.005	.005	0	%100
9	GSIP-3	X	.005	.005	0	%100
10	K-1	X	.004	.004	0	%100
11	K-2	X	.004	.004	0	%100
12	K-3	X	.004	.004	0	%100
13	MP-1	X	.003	.003	0	%100
14	MP-2	X	.002	.002	0	%100
15	MP-3	X	.002	.002	0	%100
16	MP-4	X	.003	.003	0	%100
17	MP-5	X	.003	.003	0	%100
18	MP-6	X	.002	.002	0	%100
19	MP-7	X	.002	.002	0	%100
20	MP-8	X	.003	.003	0	%100
21	MP-9	X	.003	.003	0	%100
22	MP-10	X	.002	.002	0	%100
23	MP-11	X	.002	.002	0	%100
24	MP-12	X	.003	.003	0	%100
25	SA-1A	X	.006	.006	0	%100
26	SA-1B	X	.005	.005	0	%100
27	SA-2A	X	.006	.006	0	%100
28	SA-2B	X	.005	.005	0	%100
29	SA-3A	X	.006	.006	0	%100
30	SA-3C	X	.005	.005	0	%100
31	SR-1	X	.003	.003	0	%100
32	SR-2	X	.003	.003	0	%100
33	SR-3	X	.003	.003	0	%100
34	SRC-1	X	.004	.004	0	%100
35	SRC-2	X	.004	.004	0	%100
36	SRC-3	X	.004	.004	0	%100

**Member Distributed Loads (BLC 28 : 210 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.005	.005	0	%100
2	FFTH-2	X	0	0	0	%100
3	FFTH-3	X	.004	.004	0	%100
4	GSI-1	X	.002	.002	0	%100
5	GSI-2	X	.002	.002	0	%100
6	GSI-3	X	.004	.004	0	%100
7	GSIP-1	X	.004	.004	0	%100
8	GSIP-2	X	0	0	0	%100
9	GSIP-3	X	.003	.003	0	%100
10	K-1	X	.004	.004	0	%100
11	K-2	X	.004	.004	0	%100
12	K-3	X	.004	.004	0	%100
13	MP-1	X	.003	.003	0	%100
14	MP-2	X	.002	.002	0	%100
15	MP-3	X	.002	.002	0	%100
16	MP-4	X	.002	.002	0	%100
17	MP-5	X	.003	.003	0	%100
18	MP-6	X	.002	.002	0	%100
19	MP-7	X	.002	.002	0	%100
20	MP-8	X	.002	.002	0	%100
21	MP-9	X	.003	.003	0	%100
22	MP-10	X	.002	.002	0	%100
23	MP-11	X	.002	.002	0	%100

**Member Distributed Loads (BLC 28 : 210 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location(ft.%)	End Location(ft.%)
24	MP-12	X	.002	.002	0 %100
25	SA-1A	X	.002	.002	0 %100
26	SA-1B	X	.002	.002	0 %100
27	SA-2A	X	.005	.005	0 %100
28	SA-2B	X	.005	.005	0 %100
29	SA-3A	X	.002	.002	0 %100
30	SA-3C	X	.002	.002	0 %100
31	SR-1	X	.003	.003	0 %100
32	SR-2	X	0	0	0 %100
33	SR-3	X	.002	.002	0 %100
34	SRC-1	X	.003	.003	0 %100
35	SRC-2	X	.003	.003	0 %100
36	SRC-3	X	0	0	0 %100
37	FFTH-1	Z	.002	.002	0 %100
38	FFTH-2	Z	0	0	0 %100
39	FFTH-3	Z	.003	.003	0 %100
40	GSI-1	Z	.001	.001	0 %100
41	GSI-2	Z	.001	.001	0 %100
42	GSI-3	Z	.002	.002	0 %100
43	GSIP-1	Z	.002	.002	0 %100
44	GSIP-2	Z	0	0	0 %100
45	GSIP-3	Z	.002	.002	0 %100
46	K-1	Z	.002	.002	0 %100
47	K-2	Z	.002	.002	0 %100
48	K-3	Z	.002	.002	0 %100
49	MP-1	Z	.002	.002	0 %100
50	MP-2	Z	.001	.001	0 %100
51	MP-3	Z	.001	.001	0 %100
52	MP-4	Z	.001	.001	0 %100
53	MP-5	Z	.002	.002	0 %100
54	MP-6	Z	.001	.001	0 %100
55	MP-7	Z	.001	.001	0 %100
56	MP-8	Z	.001	.001	0 %100
57	MP-9	Z	.002	.002	0 %100
58	MP-10	Z	.001	.001	0 %100
59	MP-11	Z	.001	.001	0 %100
60	MP-12	Z	.001	.001	0 %100
61	SA-1A	Z	.001	.001	0 %100
62	SA-1B	Z	.001	.001	0 %100
63	SA-2A	Z	.003	.003	0 %100
64	SA-2B	Z	.003	.003	0 %100
65	SA-3A	Z	.001	.001	0 %100
66	SA-3C	Z	.001	.001	0 %100
67	SR-1	Z	.001	.001	0 %100
68	SR-2	Z	0	0	0 %100
69	SR-3	Z	.001	.001	0 %100
70	SRC-1	Z	.002	.002	0 %100
71	SRC-2	Z	.002	.002	0 %100
72	SRC-3	Z	0	0	0 %100

**Member Distributed Loads (BLC 29 : 225 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location(ft.%)	End Location(ft.%)
1	FFTH-1	X	.003	.003	0 %100
2	FFTH-2	X	.000943	.000943	0 %100
3	FFTH-3	X	.004	.004	0 %100
4	GSI-1	X	.000855	.000855	0 %100
5	GSI-2	X	.002	.002	0 %100
6	GSI-3	X	.003	.003	0 %100
7	GSIP-1	X	.003	.003	0 %100
8	GSIP-2	X	.000836	.000836	0 %100
9	GSIP-3	X	.003	.003	0 %100
10	K-1	X	.003	.003	0 %100

**Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location(ft.%)	End Location(ft.%)
11	K-2	X	.003	.003	0 %100
12	K-3	X	.003	.003	0 %100
13	MP-1	X	.002	.002	0 %100
14	MP-2	X	.002	.002	0 %100
15	MP-3	X	.002	.002	0 %100
16	MP-4	X	.002	.002	0 %100
17	MP-5	X	.002	.002	0 %100
18	MP-6	X	.002	.002	0 %100
19	MP-7	X	.002	.002	0 %100
20	MP-8	X	.002	.002	0 %100
21	MP-9	X	.002	.002	0 %100
22	MP-10	X	.002	.002	0 %100
23	MP-11	X	.002	.002	0 %100
24	MP-12	X	.002	.002	0 %100
25	SA-1A	X	.003	.003	0 %100
26	SA-1B	X	.003	.003	0 %100
27	SA-2A	X	.004	.004	0 %100
28	SA-2B	X	.004	.004	0 %100
29	SA-3A	X	.000971	.000971	0 %100
30	SA-3C	X	.000917	.000917	0 %100
31	SR-1	X	.002	.002	0 %100
32	SR-2	X	.000509	.000509	0 %100
33	SR-3	X	.002	.002	0 %100
34	SRC-1	X	.003	.003	0 %100
35	SRC-2	X	.002	.002	0 %100
36	SRC-3	X	.000779	.000779	0 %100
37	FFTH-1	Z	.003	.003	0 %100
38	FFTH-2	Z	.001	.001	0 %100
39	FFTH-3	Z	.004	.004	0 %100
40	GSI-1	Z	.000782	.000782	0 %100
41	GSI-2	Z	.002	.002	0 %100
42	GSI-3	Z	.003	.003	0 %100
43	GSIP-1	Z	.002	.002	0 %100
44	GSIP-2	Z	.000932	.000932	0 %100
45	GSIP-3	Z	.003	.003	0 %100
46	K-1	Z	.003	.003	0 %100
47	K-2	Z	.003	.003	0 %100
48	K-3	Z	.003	.003	0 %100
49	MP-1	Z	.002	.002	0 %100
50	MP-2	Z	.002	.002	0 %100
51	MP-3	Z	.002	.002	0 %100
52	MP-4	Z	.002	.002	0 %100
53	MP-5	Z	.002	.002	0 %100
54	MP-6	Z	.002	.002	0 %100
55	MP-7	Z	.002	.002	0 %100
56	MP-8	Z	.002	.002	0 %100
57	MP-9	Z	.002	.002	0 %100
58	MP-10	Z	.002	.002	0 %100
59	MP-11	Z	.002	.002	0 %100
60	MP-12	Z	.002	.002	0 %100
61	SA-1A	Z	.003	.003	0 %100
62	SA-1B	Z	.003	.003	0 %100
63	SA-2A	Z	.004	.004	0 %100
64	SA-2B	Z	.004	.004	0 %100
65	SA-3A	Z	.000971	.000971	0 %100
66	SA-3C	Z	.000881	.000881	0 %100
67	SR-1	Z	.002	.002	0 %100
68	SR-2	Z	.000628	.000628	0 %100
69	SR-3	Z	.002	.002	0 %100
70	SRC-1	Z	.003	.003	0 %100
71	SRC-2	Z	.002	.002	0 %100
72	SRC-3	Z	.000786	.000786	0 %100

**Member Distributed Loads (BLC 30 : 240 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	.002	.002	0	%100
2	FFTH-2	X	.001	.001	0	%100
3	FFTH-3	X	.003	.003	0	%100
4	GSI-1	X	0	0	0	%100
5	GSI-2	X	.002	.002	0	%100
6	GSI-3	X	.002	.002	0	%100
7	GSIP-1	X	.001	.001	0	%100
8	GSIP-2	X	.001	.001	0	%100
9	GSIP-3	X	.002	.002	0	%100
10	K-1	X	.002	.002	0	%100
11	K-2	X	.002	.002	0	%100
12	K-3	X	.002	.002	0	%100
13	MP-1	X	.001	.001	0	%100
14	MP-2	X	.001	.001	0	%100
15	MP-3	X	.001	.001	0	%100
16	MP-4	X	.001	.001	0	%100
17	MP-5	X	.001	.001	0	%100
18	MP-6	X	.001	.001	0	%100
19	MP-7	X	.001	.001	0	%100
20	MP-8	X	.001	.001	0	%100
21	MP-9	X	.001	.001	0	%100
22	MP-10	X	.001	.001	0	%100
23	MP-11	X	.001	.001	0	%100
24	MP-12	X	.001	.001	0	%100
25	SA-1A	X	.002	.002	0	%100
26	SA-1B	X	.002	.002	0	%100
27	SA-2A	X	.002	.002	0	%100
28	SA-2B	X	.002	.002	0	%100
29	SA-3A	X	5.1e-5	5.1e-5	0	%100
30	SA-3C	X	4.8e-5	4.8e-5	0	%100
31	SR-1	X	.000864	.000864	0	%100
32	SR-2	X	.000696	.000696	0	%100
33	SR-3	X	.001	.001	0	%100
34	SRC-1	X	.002	.002	0	%100
35	SRC-2	X	.001	.001	0	%100
36	SRC-3	X	.001	.001	0	%100
37	FFTH-1	Z	.002	.002	0	%100
38	FFTH-2	Z	.003	.003	0	%100
39	FFTH-3	Z	.005	.005	0	%100
40	GSI-1	Z	0	0	0	%100
41	GSI-2	Z	.004	.004	0	%100
42	GSI-3	Z	.003	.003	0	%100
43	GSIP-1	Z	.002	.002	0	%100
44	GSIP-2	Z	.002	.002	0	%100
45	GSIP-3	Z	.004	.004	0	%100
46	K-1	Z	.004	.004	0	%100
47	K-2	Z	.004	.004	0	%100
48	K-3	Z	.004	.004	0	%100
49	MP-1	Z	.003	.003	0	%100
50	MP-2	Z	.002	.002	0	%100
51	MP-3	Z	.002	.002	0	%100
52	MP-4	Z	.002	.002	0	%100
53	MP-5	Z	.003	.003	0	%100
54	MP-6	Z	.002	.002	0	%100
55	MP-7	Z	.002	.002	0	%100
56	MP-8	Z	.002	.002	0	%100
57	MP-9	Z	.003	.003	0	%100
58	MP-10	Z	.002	.002	0	%100
59	MP-11	Z	.002	.002	0	%100
60	MP-12	Z	.002	.002	0	%100
61	SA-1A	Z	.004	.004	0	%100
62	SA-1B	Z	.004	.004	0	%100
63	SA-2A	Z	.004	.004	0	%100

**Member Distributed Loads (BLC 30 : 240 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
64	SA-2B	Z	.004	.004	0	%100
65	SA-3A	Z	8.9e-5	8.9e-5	0	%100
66	SA-3C	Z	8e-5	8e-5	0	%100
67	SR-1	Z	.001	.001	0	%100
68	SR-2	Z	.001	.001	0	%100
69	SR-3	Z	.003	.003	0	%100
70	SRC-1	Z	.004	.004	0	%100
71	SRC-2	Z	.002	.002	0	%100
72	SRC-3	Z	.002	.002	0	%100

**Member Distributed Loads (BLC 31 : 270 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	Z	0	0	0	%100
2	FFTH-2	Z	.005	.005	0	%100
3	FFTH-3	Z	.005	.005	0	%100
4	GSI-1	Z	.002	.002	0	%100
5	GSI-2	Z	.005	.005	0	%100
6	GSI-3	Z	.002	.002	0	%100
7	GSIP-1	Z	0	0	0	%100
8	GSIP-2	Z	.004	.004	0	%100
9	GSIP-3	Z	.004	.004	0	%100
10	K-1	Z	.005	.005	0	%100
11	K-2	Z	.005	.005	0	%100
12	K-3	Z	.005	.005	0	%100
13	MP-1	Z	.003	.003	0	%100
14	MP-2	Z	.003	.003	0	%100
15	MP-3	Z	.003	.003	0	%100
16	MP-4	Z	.003	.003	0	%100
17	MP-5	Z	.003	.003	0	%100
18	MP-6	Z	.003	.003	0	%100
19	MP-7	Z	.003	.003	0	%100
20	MP-8	Z	.003	.003	0	%100
21	MP-9	Z	.003	.003	0	%100
22	MP-10	Z	.003	.003	0	%100
23	MP-11	Z	.003	.003	0	%100
24	MP-12	Z	.003	.003	0	%100
25	SA-1A	Z	.006	.006	0	%100
26	SA-1B	Z	.005	.005	0	%100
27	SA-2A	Z	.003	.003	0	%100
28	SA-2B	Z	.003	.003	0	%100
29	SA-3A	Z	.003	.003	0	%100
30	SA-3C	Z	.003	.003	0	%100
31	SR-1	Z	0	0	0	%100
32	SR-2	Z	.003	.003	0	%100
33	SR-3	Z	.003	.003	0	%100
34	SRC-1	Z	.004	.004	0	%100
35	SRC-2	Z	0	0	0	%100
36	SRC-3	Z	.004	.004	0	%100

**Member Distributed Loads (BLC 32 : 300 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]	
1	FFTH-1	X	-.002	-.002	0	%100
2	FFTH-2	X	-.003	-.003	0	%100
3	FFTH-3	X	-.001	-.001	0	%100
4	GSI-1	X	-.002	-.002	0	%100
5	GSI-2	X	-.002	-.002	0	%100
6	GSI-3	X	0	0	0	%100
7	GSIP-1	X	-.001	-.001	0	%100
8	GSIP-2	X	-.002	-.002	0	%100
9	GSIP-3	X	-.001	-.001	0	%100
10	K-1	X	-.002	-.002	0	%100
11	K-2	X	-.002	-.002	0	%100



Company : Tower Engineering Professionals, Inc.  
 Designer : DJM  
 Job Number : TEP#25630.610605  
 Model Name : BU 801367

Oct 14, 2021  
 2:09 PM  
 Checked By: SEB

**Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
12	K-3	X	-0.02	-0.02	0 %100
13	MP-1	X	-0.001	-0.001	0 %100
14	MP-2	X	-0.001	-0.001	0 %100
15	MP-3	X	-0.001	-0.001	0 %100
16	MP-4	X	-0.001	-0.001	0 %100
17	MP-5	X	-0.001	-0.001	0 %100
18	MP-6	X	-0.001	-0.001	0 %100
19	MP-7	X	-0.001	-0.001	0 %100
20	MP-8	X	-0.001	-0.001	0 %100
21	MP-9	X	-0.001	-0.001	0 %100
22	MP-10	X	-0.001	-0.001	0 %100
23	MP-11	X	-0.001	-0.001	0 %100
24	MP-12	X	-0.001	-0.001	0 %100
25	SA-1A	X	-0.002	-0.002	0 %100
26	SA-1B	X	-0.002	-0.002	0 %100
27	SA-2A	X	-5.1e-5	-5.1e-5	0 %100
28	SA-2B	X	-4.8e-5	-4.8e-5	0 %100
29	SA-3A	X	-0.002	-0.002	0 %100
30	SA-3C	X	-0.002	-0.002	0 %100
31	SR-1	X	-0.000864	-0.000864	0 %100
32	SR-2	X	-0.001	-0.001	0 %100
33	SR-3	X	-0.000696	-0.000696	0 %100
34	SRC-1	X	-0.001	-0.001	0 %100
35	SRC-2	X	-0.001	-0.001	0 %100
36	SRC-3	X	-0.002	-0.002	0 %100
37	FFTH-1	Z	.002	.002	0 %100
38	FFTH-2	Z	.005	.005	0 %100
39	FFTH-3	Z	.003	.003	0 %100
40	GSI-1	Z	.003	.003	0 %100
41	GSI-2	Z	.004	.004	0 %100
42	GSI-3	Z	0	0	0 %100
43	GSIP-1	Z	.002	.002	0 %100
44	GSIP-2	Z	.004	.004	0 %100
45	GSIP-3	Z	.002	.002	0 %100
46	K-1	Z	.004	.004	0 %100
47	K-2	Z	.004	.004	0 %100
48	K-3	Z	.004	.004	0 %100
49	MP-1	Z	.003	.003	0 %100
50	MP-2	Z	.002	.002	0 %100
51	MP-3	Z	.002	.002	0 %100
52	MP-4	Z	.002	.002	0 %100
53	MP-5	Z	.003	.003	0 %100
54	MP-6	Z	.002	.002	0 %100
55	MP-7	Z	.002	.002	0 %100
56	MP-8	Z	.002	.002	0 %100
57	MP-9	Z	.003	.003	0 %100
58	MP-10	Z	.002	.002	0 %100
59	MP-11	Z	.002	.002	0 %100
60	MP-12	Z	.002	.002	0 %100
61	SA-1A	Z	.004	.004	0 %100
62	SA-1B	Z	.004	.004	0 %100
63	SA-2A	Z	8.9e-5	8.9e-5	0 %100
64	SA-2B	Z	8e-5	8e-5	0 %100
65	SA-3A	Z	.004	.004	0 %100
66	SA-3C	Z	.004	.004	0 %100
67	SR-1	Z	.001	.001	0 %100
68	SR-2	Z	.003	.003	0 %100
69	SR-3	Z	.001	.001	0 %100
70	SRC-1	Z	.002	.002	0 %100
71	SRC-2	Z	.002	.002	0 %100
72	SRC-3	Z	.004	.004	0 %100



Company : Tower Engineering Professionals, Inc.  
 Designer : DJM  
 Job Number : TEP#25630.610605  
 Model Name : BU 801367

Oct 14, 2021  
 2:09 PM  
 Checked By: SEB

**Member Distributed Loads (BLC 33 : 315 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	X	-0.03	-0.03	0 %100
2	FFTH-2	X	-0.004	-0.004	0 %100
3	FFTH-3	X	-0.000943	-0.000943	0 %100
4	GSI-1	X	-0.003	-0.003	0 %100
5	GSI-2	X	-0.002	-0.002	0 %100
6	GSI-3	X	-0.000855	-0.000855	0 %100
7	GSIP-1	X	-0.003	-0.003	0 %100
8	GSIP-2	X	-0.003	-0.003	0 %100
9	GSIP-3	X	-0.000836	-0.000836	0 %100
10	K-1	X	-0.003	-0.003	0 %100
11	K-2	X	-0.003	-0.003	0 %100
12	K-3	X	-0.003	-0.003	0 %100
13	MP-1	X	-0.002	-0.002	0 %100
14	MP-2	X	-0.002	-0.002	0 %100
15	MP-3	X	-0.002	-0.002	0 %100
16	MP-4	X	-0.002	-0.002	0 %100
17	MP-5	X	-0.002	-0.002	0 %100
18	MP-6	X	-0.002	-0.002	0 %100
19	MP-7	X	-0.002	-0.002	0 %100
20	MP-8	X	-0.002	-0.002	0 %100
21	MP-9	X	-0.002	-0.002	0 %100
22	MP-10	X	-0.002	-0.002	0 %100
23	MP-11	X	-0.002	-0.002	0 %100
24	MP-12	X	-0.002	-0.002	0 %100
25	SA-1A	X	-0.003	-0.003	0 %100
26	SA-1B	X	-0.003	-0.003	0 %100
27	SA-2A	X	-0.000971	-0.000971	0 %100
28	SA-2B	X	-0.000917	-0.000917	0 %100
29	SA-3A	X	-0.004	-0.004	0 %100
30	SA-3C	X	-0.004	-0.004	0 %100
31	SR-1	X	-0.002	-0.002	0 %100
32	SR-2	X	-0.002	-0.002	0 %100
33	SR-3	X	-0.000509	-0.000509	0 %100
34	SRC-1	X	-0.000779	-0.000779	0 %100
35	SRC-2	X	-0.002	-0.002	0 %100
36	SRC-3	X	-0.003	-0.003	0 %100
37	FFTH-1	Z	.003	.003	0 %100
38	FFTH-2	Z	.004	.004	0 %100
39	FFTH-3	Z	.001	.001	0 %100
40	GSI-1	Z	.003	.003	0 %100
41	GSI-2	Z	.002	.002	0 %100
42	GSI-3	Z	.000782	.000782	0 %100
43	GSIP-1	Z	.002	.002	0 %100
44	GSIP-2	Z	.003	.003	0 %100
45	GSIP-3	Z	.000932	.000932	0 %100
46	K-1	Z	.003	.003	0 %100
47	K-2	Z	.003	.003	0 %100
48	K-3	Z	.003	.003	0 %100
49	MP-1	Z	.002	.002	0 %100
50	MP-2	Z	.002	.002	0 %100
51	MP-3	Z	.002	.002	0 %100
52	MP-4	Z	.002	.002	0 %100
53	MP-5	Z	.002	.002	0 %100
54	MP-6	Z	.002	.002	0 %100
55	MP-7	Z	.002	.002	0 %100
56	MP-8	Z	.002	.002	0 %100
57	MP-9	Z	.002	.002	0 %100
58	MP-10	Z	.002	.002	0 %100
59	MP-11	Z	.002	.002	0 %100
60	MP-12	Z	.002	.002	0 %100
61	SA-1A	Z	.003	.003	0 %100
62	SA-1B	Z	.003	.003	0 %100
63	SA-2A	Z	.000971	.000971	0 %100

**Member Distributed Loads (BLC 33 : 315 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...]	Start Location[ft.%]	End Location[ft.%]
64	SA-2B	Z	.000881	.000881	0 %100
65	SA-3A	Z	.004	.004	0 %100
66	SA-3C	Z	.004	.004	0 %100
67	SR-1	Z	.002	.002	0 %100
68	SR-2	Z	.002	.002	0 %100
69	SR-3	Z	.000628	.000628	0 %100
70	SRC-1	Z	.000786	.000786	0 %100
71	SRC-2	Z	.002	.002	0 %100
72	SRC-3	Z	.003	.003	0 %100

**Member Distributed Loads (BLC 34 : 330 Wind - Ice)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...]	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	X	-.005	-.005	0 %100
2	FFTH-2	X	-.004	-.004	0 %100
3	FFTH-3	X	0	0	0 %100
4	GSI-1	X	-.004	-.004	0 %100
5	GSI-2	X	-.002	-.002	0 %100
6	GSI-3	X	-.002	-.002	0 %100
7	GSIP-1	X	-.004	-.004	0 %100
8	GSIP-2	X	-.003	-.003	0 %100
9	GSIP-3	X	0	0	0 %100
10	K-1	X	-.004	-.004	0 %100
11	K-2	X	-.004	-.004	0 %100
12	K-3	X	-.004	-.004	0 %100
13	MP-1	X	-.003	-.003	0 %100
14	MP-2	X	-.002	-.002	0 %100
15	MP-3	X	-.002	-.002	0 %100
16	MP-4	X	-.002	-.002	0 %100
17	MP-5	X	-.003	-.003	0 %100
18	MP-6	X	-.002	-.002	0 %100
19	MP-7	X	-.002	-.002	0 %100
20	MP-8	X	-.002	-.002	0 %100
21	MP-9	X	-.003	-.003	0 %100
22	MP-10	X	-.002	-.002	0 %100
23	MP-11	X	-.002	-.002	0 %100
24	MP-12	X	-.002	-.002	0 %100
25	SA-1A	X	-.002	-.002	0 %100
26	SA-1B	X	-.002	-.002	0 %100
27	SA-2A	X	-.002	-.002	0 %100
28	SA-2B	X	-.002	-.002	0 %100
29	SA-3A	X	-.005	-.005	0 %100
30	SA-3C	X	-.005	-.005	0 %100
31	SR-1	X	-.003	-.003	0 %100
32	SR-2	X	-.002	-.002	0 %100
33	SR-3	X	0	0	0 %100
34	SRC-1	X	0	0	0 %100
35	SRC-2	X	-.003	-.003	0 %100
36	SRC-3	X	-.003	-.003	0 %100
37	FFTH-1	Z	.002	.002	0 %100
38	FFTH-2	Z	.003	.003	0 %100
39	FFTH-3	Z	0	0	0 %100
40	GSI-1	Z	.002	.002	0 %100
41	GSI-2	Z	.001	.001	0 %100
42	GSI-3	Z	.001	.001	0 %100
43	GSIP-1	Z	.002	.002	0 %100
44	GSIP-2	Z	.002	.002	0 %100
45	GSIP-3	Z	0	0	0 %100
46	K-1	Z	.002	.002	0 %100
47	K-2	Z	.002	.002	0 %100
48	K-3	Z	.002	.002	0 %100
49	MP-1	Z	.002	.002	0 %100
50	MP-2	Z	.001	.001	0 %100

**Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...]	Start Location[ft.%]	End Location[ft.%]
51	MP-3	Z	.001	.001	0 %100
52	MP-4	Z	.001	.001	0 %100
53	MP-5	Z	.002	.002	0 %100
54	MP-6	Z	.001	.001	0 %100
55	MP-7	Z	.001	.001	0 %100
56	MP-8	Z	.001	.001	0 %100
57	MP-9	Z	.002	.002	0 %100
58	MP-10	Z	.001	.001	0 %100
59	MP-11	Z	.001	.001	0 %100
60	MP-12	Z	.001	.001	0 %100
61	SA-1A	Z	.001	.001	0 %100
62	SA-1B	Z	.001	.001	0 %100
63	SA-2A	Z	.001	.001	0 %100
64	SA-2B	Z	.001	.001	0 %100
65	SA-3A	Z	.003	.003	0 %100
66	SA-3C	Z	.003	.003	0 %100
67	SR-1	Z	.001	.001	0 %100
68	SR-2	Z	.001	.001	0 %100
69	SR-3	Z	0	0	0 %100
70	SRC-1	Z	0	0	0 %100
71	SRC-2	Z	.002	.002	0 %100
72	SRC-3	Z	.002	.002	0 %100

**Member Distributed Loads (BLC 39 : BLC 1 Transient Area Loads)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...]	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	Y	-.003	-.006	0 2.333
2	FFTH-1	Y	-.006	-.009	2.333 4.667
3	FFTH-1	Y	-.009	-.009	4.667 7
4	FFTH-1	Y	-.009	-.009	7 9.333
5	FFTH-1	Y	-.009	-.006	9.333 11.667
6	FFTH-1	Y	-.006	-.003	11.667 14
7	GSI-1	Y	-.021	-.011	0 1.972
8	GSI-1	Y	-.011	-.002	1.972 3.944
9	GSI-3	Y	-.021	-.011	0 1.972
10	GSI-3	Y	-.011	-.002	1.972 3.944
11	GSIP-1	Y	-.009	-.009	.007 7.162
12	SA-1B	Y	-.022	-.022	.445 2.417
13	FFTH-2	Y	-.003	-.006	0 2.333
14	FFTH-2	Y	-.006	-.009	2.333 4.667
15	FFTH-2	Y	-.009	-.009	4.667 7
16	FFTH-2	Y	-.009	-.009	7 9.333
17	FFTH-2	Y	-.009	-.006	9.333 11.667
18	FFTH-2	Y	-.006	-.003	11.667 14
19	GSI-2	Y	-.021	-.011	0 1.972
20	GSI-2	Y	-.011	-.002	1.972 3.944
21	GSIP-2	Y	-.009	-.009	.014 7.162
22	SA-2B	Y	-.019	-.019	.245 1.349
23	SA-2B	Y	-.019	-.019	1.349 2.452
24	FFTH-3	Y	-.003	-.006	0 2.333
25	FFTH-3	Y	-.006	-.009	2.333 4.667
26	FFTH-3	Y	-.009	-.009	4.667 7
27	FFTH-3	Y	-.009	-.009	7 9.333
28	FFTH-3	Y	-.009	-.006	9.333 11.667
29	FFTH-3	Y	-.006	-.003	11.667 14
30	GSIP-3	Y	-.009	-.006	.006 7.155
31	SA-3C	Y	-.019	-.019	.245 1.349
32	SA-3C	Y	-.019	-.019	1.349 2.452

**Member Distributed Loads (BLC 40 : BLC 18 Transient Area Loads)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft...]	Start Location[ft.%]	End Location[ft.%]
1	FFTH-1	Y	-.002	-.004	0 2.333
2	FFTH-1	Y	-.004	-.006	2.333 4.667

**Member Distributed Loads (BLC 40 : BLC 18 Transient Area Loads) (Continued)**

Member Label	Direction	Start Magnitude[k/ft.F,ksf]	End Magnitude[k/ft... Start Location[ft.%]	End Location[ft.%]
3 FFTH-1	Y	-0.06	-0.06	4.667 7
4 FFTH-1	Y	-0.06	-0.06	7 9.333
5 FFTH-1	Y	-0.06	-0.04	9.333 11.667
6 FFTH-1	Y	-0.04	-0.02	11.667 14
7 GSI-1	Y	-0.14	-0.08	0 1.972
8 GSI-1	Y	-0.08	-0.02	1.972 3.944
9 GSI-3	Y	-0.14	-0.08	0 1.972
10 GSI-3	Y	-0.08	-0.02	1.972 3.944
11 GSIP-1	Y	-0.06	-0.06	.007 7.162
12 SA-1B	Y	-0.14	-0.14	.445 2.417
13 FFTH-2	Y	-0.06	-0.04	0 2.333
14 FFTH-2	Y	-0.04	-0.06	2.333 4.667
15 FFTH-2	Y	-0.06	-0.06	4.667 7
16 FFTH-2	Y	-0.06	-0.06	7 9.333
17 FFTH-2	Y	-0.06	-0.04	9.333 11.667
18 FFTH-2	Y	-0.04	-0.02	11.667 14
19 GSI-2	Y	-0.14	-0.08	0 1.972
20 GSI-2	Y	-0.08	-0.02	1.972 3.944
21 GSIP-2	Y	-0.06	-0.06	.014 7.162
22 SA-2B	Y	-0.13	-0.13	.245 1.349
23 SA-2B	Y	-0.13	-0.13	1.349 2.452
24 FFTH-3	Y	-0.06	-0.04	0 2.333
25 FFTH-3	Y	-0.04	-0.06	2.333 4.667
26 FFTH-3	Y	-0.06	-0.06	4.667 7
27 FFTH-3	Y	-0.06	-0.06	7 9.333
28 FFTH-3	Y	-0.06	-0.04	9.333 11.667
29 FFTH-3	Y	-0.04	-0.02	11.667 14
30 GSIP-3	Y	-0.06	-0.06	.006 7.155
31 SA-3C	Y	-0.13	-0.13	.245 1.349
32 SA-3C	Y	-0.13	-0.13	1.349 2.452

**Member Area Loads (BLC 1 : Dead)**

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1 FF-1	GSIP2	GSIP1	SF1-1	Y	Two Way	-0.12
2 SF1-1	GSIP1	GSIP3	SF2-1	Y	Two Way	-0.12
3 SF2-1	GSIP3	GSIP2	FF-1	Y	Two Way	-0.12

**Member Area Loads (BLC 18 : Ice Weight)**

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1 FF-1	GSIP2	GSIP1	SF1-1	Y	Two Way	-0.08
2 SF1-1	GSIP1	GSIP3	SF2-1	Y	Two Way	-0.08
3 SF2-1	GSIP3	GSIP2	FF-1	Y	Two Way	-0.08

**Envelope Joint Reactions**

Joint	X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1 SA1-A	max	.514	18	.651	42	2.591	7	.097	30	2.485	31	2.327	42
2	min	-399	10	-.159	2	-2.634	31	-.059	6	-2.452	7	-.412	2
3 SA3-A	max	2.36	2	.638	37	1.291	7	1.937	37	2.526	10	-2.46	13
4	min	-2.396	26	.16	13	-1.404	31	.337	13	-2.557	18	-1.232	37
5 SA2-A	max	2.168	4	.64	48	1.553	21	-.347	7	2.545	21	-.214	8
6	min	-2.216	28	-.157	8	-1.449	13	-2.007	47	-2.538	29	-1.125	48
7 N19	max	1.589	39	2.41	39	-.312	15	0	2	0	2	0	26
8	min	.18	15	.246	15	-2.75	39	0	26	0	26	0	2
9 N20	max	1.567	45	2.409	45	2.784	45	0	7	0	7	0	7
10	min	.18	5	.249	5	-.318	5	0	31	0	31	0	31
11 N21	max	-.364	10	2.44	34	.065	22	0	21	0	13	0	13
12	min	-3.239	34	.248	10	-.04	14	0	13	0	21	0	21
13 Totals:	max	4.133	18	8.757	34	4.046	22						
14	min	-4.133	10	2.871	9	-4.046	14						

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

Member	Shape	Code Ch...	Loc...	LC	Shea...	Loc[ft]	Dir	phi^Pn...	phi^Pn...	phi^Mn...	phi^Mn...	Cb	Eqn	
1 SR-2	PIPE 2.0	.830	12....	13	.338	1.125	24	1.224	32.13	1.872	1.872	3.638	H1-1a	
2 SR-1	PIPE 2.0	.829	12....	7	.326	1.125	18	1.224	32.13	1.872	1.872	3.638	H1-1a	
3 SR-3	PIPE 2.0	.828	12....	2	.325	1.125	29	1.224	32.13	1.872	1.872	3.642	H1-1a	
4 FFTH-3	L3X3X4	.611	0	34	.085	0	v	36	15.778	46.656	1.688	3.327	3.196	H2-1
5 FFTH-1	L3X3X4	.604	0	40	.085	0	v	41	15.778	46.656	1.688	3.324	3.184	H2-1
6 FFTH-2	L3X3X4	.602	0	45	.085	0	v	47	15.778	46.656	1.688	3.321	3.169	H2-1
7 GSI-3	LL3x3x4x0	.434	3.944	42	.067	2.013	v	42	76.346	93.312	6.48	4.36	1.576	H1-1b
8 GSI-2	LL3x3x4x0	.433	3.944	36	.067	2.013	v	34	76.346	93.312	6.48	4.36	1.878	H1-1b
9 GSI-1	LL3x3x4x0	.432	3.944	42	.066	2.013	v	45	76.346	93.312	6.48	4.36	2.157	H1-1b
10 SRC-2	L2.5x2.5x4	.418	0	20	.117	0	z	21	37.734	38.556	1.114	2.537	2.265	H2-1
11 SRC-1	L2.5x2.5x4	.405	0	31	.117	0	z	31	37.734	38.556	1.114	2.537	2.255	H2-1
12 SRC-3	L2.5x2.5x4	.405	0	26	.117	0	z	26	37.734	38.556	1.114	2.537	2.255	H2-1
13 MP-2	PIPE 2.0	.345	3.75	29	.096	3.75		27	28.526	32.13	1.872	1.872	2.227	H1-1b
14 MP-6	PIPE 2.0	.344	3.75	18	.096	3.75		20	28.526	32.13	1.872	1.872	4.277	H1-1b
15 MP-10	PIPE 2.0	.343	3.75	23	.095	3.75		22	28.526	32.13	1.872	1.872	3.995	H1-1b
16 MP-9	PIPE 2.5	.341	4.219	21	.154	4.313		20	26.426	50.715	3.596	3.596	1.648	H1-1b
17 MP-5	PIPE 2.5	.341	4.219	31	.151	4.313		31	26.426	50.715	3.596	3.596	2.6	H1-1b
18 MP-1	PIPE 2.5	.341	4.219	26	.150	4.313		26	26.426	50.715	3.596	3.596	1.93	H1-1b
19 MP-7	PIPE 2.0	.298	3.5	28	.110	3.5		30	28.526	32.13	1.872	1.872	1.966	H1-1b
20 MP-3	PIPE 2.0	.295	3.5	23	.110	3.5		25	28.526	32.13	1.872	1.872	1.609	H1-1b
21 MP-11	PIPE 2.0	.294	3.5	18	.110	3.5		19	28.526	32.13	1.872	1.872	1.824	H1-1b
22 SA-3A	HSS4X4X4	.229	0	18	.073	0	z	26	139.028	139.518	16.181	16.181	1.121	H1-1b
23 SA-2A	HSS4X4X4	.228	0	29	.073	0	z	20	139.028	139.518	16.181	16.181	1.121	H1-1b
24 SA-1A	HSS4X4X4	.225	0	24	.073	0	z	31	139.028	139.518	16.181	16.181	1.119	H1-1b
25 GSIP-3	L3X3X4	.208	7.168	34	.019	0	v	39	35.106	46.656	1.688	3.48	2.036	H2-1
26 GSIP-2	L3X3X4	.208	0	34	.019	7.168	v	45	35.106	46.656	1.688	3.507	2.12	H2-1
27 GSIP-1	L3X3X4	.204	0	45	.019	7.168	v	40	35.106	46.656	1.688	3.387	1.777	H2-1
28 MP-4	PIPE 2.0	.158	2.014	23	.129	3.472		31	28.526	32.13	1.872	1.872	1.733	H1-1b
29 MP-12	PIPE 2.0	.158	2.014	18	.129	3.472		26	28.526	32.13	1.872	1.872	2.986	H1-1b
30 MP-8	PIPE 2.0	.156	2.014	29	.129	3.472		21	28.526	32.13	1.872	1.872	2.984	H1-1b
31 K-2	LL2.5x2.5x3x3	.125	0	34	.005	6.773	z	22	32.489	58.32	3.954	2.118	1.136	H1-1b
32 SA-1B	HSS4.5X4.5X3	.124	4.28	30	.081	0	z	31	119.093	121.302	16.25	16.25	1.701	H1-1b
33 K-1	LL2.5x2.5x3x3	.123	0	45	.005	0	z	32	32.489	58.32	3.954	2.118	1.136	H1-1b
34 SA-2B	HSS4.5X4.5X3	.122	.46	19	.081	0	z	20	119.028	121.302	16.25	16.25	1.697	H1-1b
35 SA-3C	HSS4.5X4.5X3	.122	.46	24	.081	0	z	26	119.028	121.302	16.25	16.25	1.686	H1-1b
36 K-3	LL2.5x2.5x3x3	.122	0	39	.005	6.745	z	27	32.649	58.32	3.954	2.119	1.136	H1-1b

**Envelope None Cold Formed Steel Code Checks**

Member	Shape	Code Check	Loc[ft]	LC	Shea...	Loc[ft]	Dir	Pn[k]	Tn[k]	Mnyy[k...	Mnzz[k...	Cb	Cmyy	Cmzz	Eqn
No Data to Print ...															

# Exhibit F

## **Power Density/RF Emissions Report**

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT  
EVALUATION OF HUMAN EXPOSURE POTENTIAL  
TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11352C

801367 app 586785  
1121 Summit Road  
Cheshire, Connecticut 06410

**November 17, 2021**

**EBI Project Number: 6221007049**

Site Compliance Summary	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general population allowable limit:	<b>17.01%</b>



November 17, 2021

T-Mobile

Attn: Jason Overbey, RF Manager  
35 Griffin Road South  
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CT11352C - 801367 app 586785

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **1121 Summit Road in Cheshire, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The number of  $\mu\text{W}/\text{cm}^2$  calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately  $400 \mu\text{W}/\text{cm}^2$  and  $467 \mu\text{W}/\text{cm}^2$ , respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is  $1000 \mu\text{W}/\text{cm}^2$ . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

## **CALCULATIONS**

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 1121 Summit Road in Cheshire, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

- 6) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 7) 2 UMTS channels (AWS Band - 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 8) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 9) 1 LTE Traffic channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.
- 10) 1 LTE Broadcast channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.
- 11) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.
- 12) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 40 Watts.
- 13) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 14) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 15) The antennas used in this modeling are the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s) in Sector A, the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s) in Sector B, the Ericsson

AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the RFS APXVAARR24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 16) The antenna mounting height centerline of the proposed antennas is 138 feet above ground level (AGL).
- 17) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 18) All calculations were done with respect to uncontrolled / general population threshold limits.

## T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	I	Antenna #:	I	Antenna #:	I
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd
Height (AGL):	138 feet	Height (AGL):	138 feet	Height (AGL):	138 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	36,356.09	ERP (W):	36,356.09	ERP (W):	36,356.09
Antenna AI MPE %:	<b>7.50%</b>	Antenna BI MPE %:	<b>7.50%</b>	Antenna CI MPE %:	<b>7.50%</b>
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd / 16.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd / 16.35 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd / 15.65 dBd / 15.65 dBd / 16.35 dBd / 16.35 dBd
Height (AGL):	138 feet	Height (AGL):	138 feet	Height (AGL):	138 feet
Channel Count:	17	Channel Count:	17	Channel Count:	17
Total TX Power (W):	680 Watts	Total TX Power (W):	680 Watts	Total TX Power (W):	680 Watts
ERP (W):	22,844.84	ERP (W):	22,844.84	ERP (W):	22,844.84
Antenna A2 MPE %:	<b>5.87%</b>	Antenna B2 MPE %:	<b>5.87%</b>	Antenna C2 MPE %:	<b>5.87%</b>

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	13.38%
Verizon	1.41%
Sprint	0.77%
AT&T	1.45%
<b>Site Total MPE % :</b>	<b>17.01%</b>

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	13.38%
T-Mobile Sector B Total:	13.38%
T-Mobile Sector C Total:	13.38%
Site Total MPE % :	17.01%

T-Mobile Maximum MPE Power Values (Sector A)							
T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
T-Mobile 2500 MHz LTE IC & 2C Traffic	1	11044.63	138.0	22.79	2500 MHz LTE IC & 2C Traffic	1000	2.28%
T-Mobile 2500 MHz LTE IC & 2C Broadcast	1	1074.06	138.0	2.22	2500 MHz LTE IC & 2C Broadcast	1000	0.22%
T-Mobile 2500 MHz NR Traffic	1	22089.26	138.0	45.58	2500 MHz NR Traffic	1000	4.56%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	138.0	4.43	2500 MHz NR Broadcast	1000	0.44%
T-Mobile 600 MHz LTE	2	591.73	138.0	2.44	600 MHz LTE	400	0.61%
T-Mobile 600 MHz NR	1	1577.94	138.0	3.26	600 MHz NR	400	0.81%
T-Mobile 700 MHz LTE	2	648.82	138.0	2.68	700 MHz LTE	467	0.57%
T-Mobile 1900 MHz GSM	4	1101.85	138.0	9.09	1900 MHz GSM	1000	0.91%
T-Mobile 1900 MHz UMTS	2	1101.85	138.0	4.55	1900 MHz UMTS	1000	0.45%
T-Mobile 1900 MHz LTE	2	2203.69	138.0	9.09	1900 MHz LTE	1000	0.91%
T-Mobile 2100 MHz UMTS	2	1294.56	138.0	5.34	2100 MHz UMTS	1000	0.53%
T-Mobile 2100 MHz LTE	2	2589.11	138.0	10.68	2100 MHz LTE	1000	1.07%
						<b>Total:</b>	<b>13.38%</b>

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

## Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	13.38%
Sector B:	13.38%
Sector C:	13.38%
T-Mobile Maximum MPE % (Sector A):	13.38%
Site Total:	17.01%
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **17.01%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

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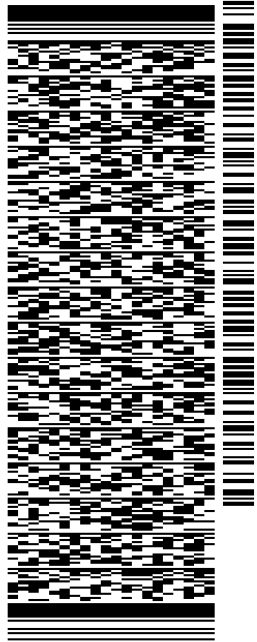
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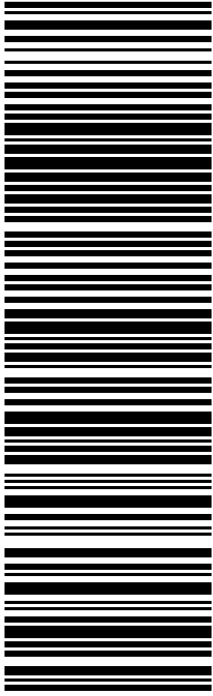


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