



Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

October 26, 2021

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

RE: Notice of Exempt Modification for T-Mobile: CTHA402A
Crown Site ID#800515
49 Wig Hill Road, Chester, CT 06412
Latitude: 41° 24' 13.93" / Longitude: -72° 28' 20.82"

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 150-foot mount level on the existing 150-foot monopole tower, located at 49 Wig Hill Road, Chester, CT. The property is owned by Negrelli Family Trust. Crown Castle is the tower owner. T-Mobile now intends to replace six (6) antennas, and ancillary equipment at the 130-ft level. 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.

Panned Modification:

Tower:

Installed New:

- (3) Ericsson – AIR 6449 B41 Antenna
- (3) RFS – APXVAALL24_43-U-NA20 Antenna
- (3) Ericsson-Radio 4460 B25+B66
- (3) Ericsson-Radio 4480 B71+B85
- (3) RFS/Cellwave – HYBRID

Remove:

- (3) Commscope- NNW-65B-R4 Antenna
- (3) RFS/Cellwave – APXVTM14-ALU-120
- (9) Sprint RRU
- (4) Hybrid Cables 1/2"

Ground:

Install New:

- (1) 6160 Cabinet
- (1.) B160 Battery Cabinet
- (2.) BB 6648
- (1) DUG20 In 6601 Cabinet
- (1) PSU 4813
- (1.) CSR IXR V2 (Gen 2) Transport System

The Foundation for a Wireless World.

CrownCastle.com

Remove:

(2) Sprint Cabinets

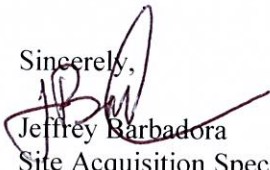
The facility was approved by the Connecticut Siting Council on May 13, 1998. T-Mobiles proposed modification complies with the conditions and approval.

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 Ms. Lauren Gister, First Selectwoman, Town of Chester, CT, Zoning Enforcement Officer, Town of Chester, CT and Negrelli Family Trust, Property Owner. Crown Castle is the tower 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). Please send approval/rejection letter to Attn: Jeffrey Barbadora.

Sincerely,



Jeffrey Barbadora

Site Acquisition Specialist

1800 W. Park Drive

Westborough, MA 01581

(781) 970-0053

Jeff.Barbadora@crowncastle.com

Melanie A. Bachman

Page 3

Attachments

cc:

Lauren Gister, First Selectwoman
Town of Chester
203 Middlesex Avenue
Chester, CT 06412
860-526-0013 Ext 202

Zoning Enforcement Officer
Town of Chester
203 Middlesex Avenue
Chester, CT 06412
860-526-0013xt 208

Negrelli Family Trust, Property Owner
ATT: Richard & Beth Wood
PO Box 1175
Truro, MA 02666

Crown Castle Tower Owner



CONNECTICUT SITING COUNCIL

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Melanie Bachman,
Executive Director

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DOCKET NO. 181 - Cellco Partnership d/b/a Bell Atlantic Mobile application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a cellular telecommunications tower and associated equipment located at 8 Inspiration Lane, or 49 Wig Hill Road in the Town of Chester, Connecticut

Connecticut Siting Council

May 13, 1998

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 Chester, 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 Bell Atlantic Mobile (BAM) for the construction, operation, and maintenance of a telecommunications tower, associated equipment, and buildings at the proposed alternate site, on an approximately 18 acre site at 49 Wig Hill Road in the Town of Chester, Connecticut. We deny certification of the proposed prime site, without prejudice, due to the potential effects to the environment associated with the construction of additional future towers that would be required to provide adequate coverage for all carriers along Route 9, with a tower configuration using the proposed prime site.

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 BAM, Springwich Cellular Limited Partnership (Springwich), Sprint Spectrum L. P. (Sprint), Nextel Communications of the Mid-Atlantic, Inc. (Nextel); and other entities, both public and private, but such tower shall not exceed a height of 150 feet above ground level (AGL).
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 foundation, antennas, equipment buildings, emergency generator and fuel tank, security fence, access road, and utility line; construction plans for site clearing, tree trimming, water drainage, and erosion and sedimentation controls consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended; provisions for the tower finish that may include painting; and provisions for the prevention and containment of spills and/or other discharge into surface water and groundwater bodies.
3. 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.
4. The Certificate Holder shall provide the Council a recalculated report of electromagnetic radio frequency power density if and when circumstances in operation cause a change in power density above the levels originally calculated and provided in the application.
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.

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

The parties and intervenors to this proceeding are:

APPLICANT ITS REPRESENTATIVE

Bell Atlantic Mobile

Kenneth C. Baldwin, Esq.

Brian C. S. Freeman, Esq.

Robinson & Cole

One Commercial Plaza

Hartford, CT 06103-3597

Mr. David S. Malko, P.E.

Jennifer Young Gaudet

Bell Atlantic Mobile

20 Alexander Drive

Wallingford, CT 06492

INTERVENORS ITS REPRESENTATIVE

Springwich Cellular Limited Partnership

Peter J. Tyrrell, Esq.

General Counsel

500 Enterprise Drive

Rocky Hill, CT 06067-3900

Nextel Communications of the Mid-Atlantic, Inc. d/b/a Nextel Communications

Christopher B. Fisher, Esq.

Cuddy, Feder & Worby, Esq.

90 Maple Avenue

White Plains, NY 10601

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

Elias A. Alexiades

Julie M. Cashin

Hurwitz and Sagarin, P.C.

147 North Broad Street

Milford, CT 06460

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Ten Franklin Square New Britain, CT 06051 / 860- 827-2935

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The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2018.



Information on the Property Records for the Municipality of Chester was last updated on 10/23/2021.



Parcel Information

Location:	0 WIG HILL RD	Property Use:	Vacant Land	Primary Use:	Residential
Unique ID:	00112810	Map Lot:	8/104A	Acres:	14.14
490 Acres:		Zone:	R-2	Volume / Page:	81/45
Developers Map / Lot:		Census:			

Value Information

	Appraised Value	Assessed Value
Land	153,105	107,170
Buildings	0	0
Detached Outbuildings	0	0
Total	153,105	107,170

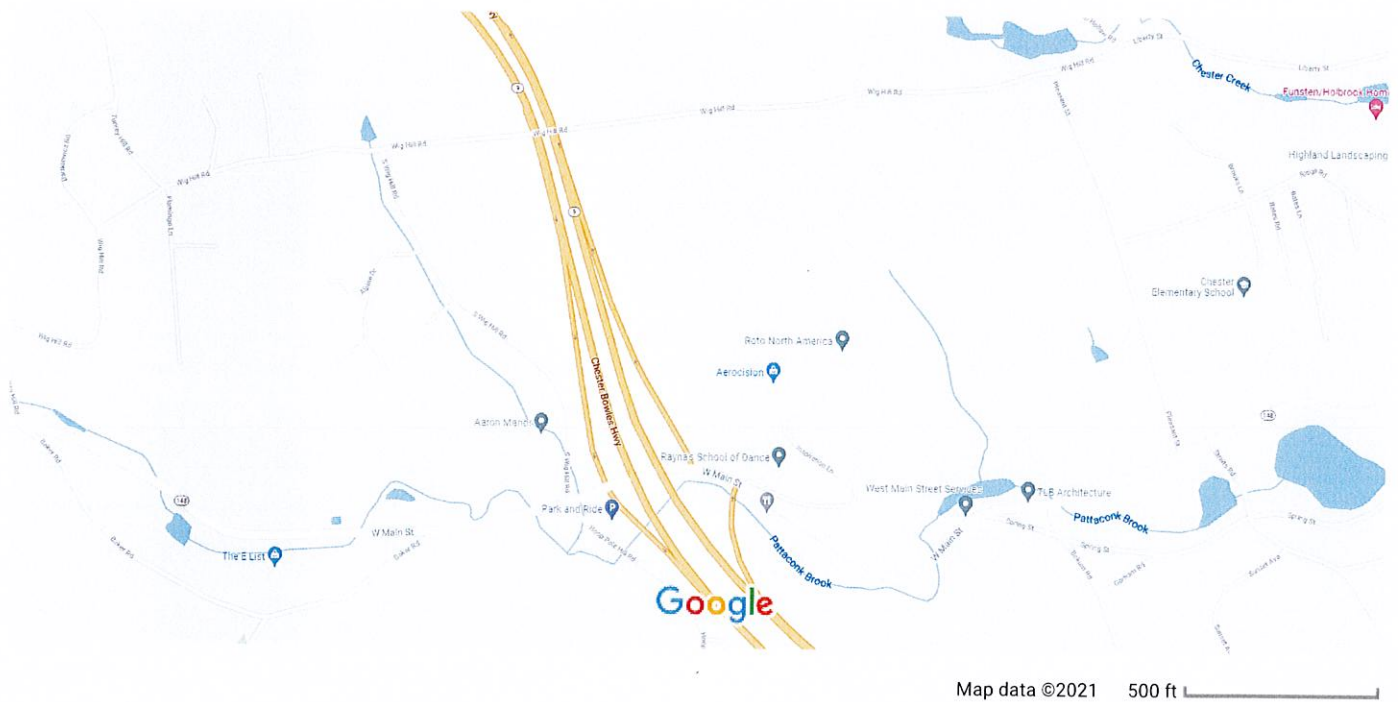
Owner's Information

Owner's Data

NEGRELLI BERNARD J TR & HAZEL C TR
RICHARD & BETH WOOD
PO BOX 1175
TRURO, MA 02666

Information Published With Permission From The Assessor

Google Maps



DoubleTree by Hilton Hotel Boston - Downtown Washi...

University of Massachusetts Club Beacon Street 32nd ...

View COVID-19 info

See case data on the map



Home
Set location



Work
Set location



Light traffic in this area
Typical conditions

Search this area

67° A small yellow and orange weather icon.

Date: **September 03, 2021**



Black & Veatch Corp.
6800 W. 115th St., Suite 2292
Overland Park, KS 66211
(913) 458-6909

Subject: **Structural Analysis Report**

Carrier Designation: **Site Number:** CTHA402A
Site Name: CT03XC163

Crown Castle Designation: **BU Number:** 800515
Site Name: CT CHESTER CAC 800515
JDE Job Number: 650684
Work Order Number: 2014884
Order Number: 557901 Rev. 1

Engineering Firm Designation: **Black & Veatch Corp. Project Number:** 406642

Site Data: **49 Wig Hill Road, Chester, Middlesex County, CT**
Latitude 41° 24' 13.93", Longitude -72° 28' 20.82"
150 Foot - Monopole Tower

Black & Veatch Corp. 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 - 61.8%

This analysis utilizes an ultimate 3-second gust wind speed of 130 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: Nattakorn Rattanamusik / Thana Wonghemrut

Respectfully submitted by:

Ping Jiang, P.E.
Professional Engineer

Digitally signed by
Jiang, Ping
DN: cn=Jiang, Ping,
ou=Professionals,
o=Jiang - NA,
ou=Jiang, DC=na,
DC=ibvcorp, DC=net
Date: 2021.09.02
22:47:57-0500



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1) INTRODUCTION

This tower is a 150 ft Monopole tower designed by Engineered Endeavors, Inc.

The tower has been modified per reinforcement drawings prepared by GPD Associates, in February of 2005. Reinforcement consists of additional of base plate stiffeners at base. Refer to Post Installation Observation Report by GPD Associates in October of 2006. This modification has been considered effective in this analysis.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	130 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
150.0	150.0	1	cci tower mounts (v2.1)	Platform Mount [10.5' LP 713-1]	3	1-5/8
		3	ericsson	AIR6449 B41_T-MOBILE w/ Mount Pipe		
		3	ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	ericsson	Radio 4480_TMOV2		
		3	rfs celwave	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe		
75.0	75.0	1	cci tower mounts (v2.1)	Side Arm Mount [SO 701-1]	1	1/2
		1	gps	GPS_A		

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)
148.0	163.0	1	kreco	CO-40A	4	7/8
	162.0	1	telewave	ANT450F6		
	159.0	1	kreco	CO-40A		
		1	telewave	ANT450F6		
	148.0	4	cci tower mounts (v2.1)	Side Arm Mount [SO 102-1]		
		4	cci tower mounts (v2.1)	Side Arm Mount [SO 701-1]		
141.0	141.0	1	cci tower mounts (v2.1)	Platform Mount [LP 713-1]	6	1-5/8
		6	jma wireless	MX06FRO660-03 w/ Mount Pipe	2	1-1/4

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		2	rfs celwave	DB-B1-6C-12AB-0Z		
		3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		
		3	vzw	Sub6 Antenna - VZS01 w/ Mount Pipe		
	140.0	6	antel	LPA-80080-4CF-EDIN-0 w/ Mount Pipe		
132.0	134.0	3	cci antennas	DMP65R-BU6D w/ Mount Pipe	6 3 4 2	1-1/4 3/8 3/4 7/16
		3	cci antennas	TPA65R-BU6D w/ Mount Pipe		
		3	powerwave technologies	7770.00 w/ Mount Pipe		
	132.0	1	cci tower mounts (v2.1)	Platform Mount [LP 713-1]		
		3	ericsson	RRUS 4449 B5/B12		
		3	ericsson	RRUS 4478 B14		
		3	ericsson	RRUS 8843 B2/B66A		
		2	raycap	DC6-48-60-18-8F		
116.0	118.0	1	rad data communications	AIRMUX-400 w/ Mount Pipe	1 2	1/4 1-1/4
		1	telewave	ANT450F6		
		1	telewave	ANT450Y7-WR		
	116.0	1	cci tower mounts (v2.1)	Platform Mount [LP 602-1]		
106.0	108.0	3	ericsson	KRY 112 144/1	13	1-5/8
		3	ericsson	KRY 112 489/2		
		3	ericsson	RADIO 4449 B12/B71		
		3	rfs celwave	APXV18-206516S-C-A20 w/ Mount Pipe		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
	106.0	1	cci tower mounts (v2.1)	Platform Mount [LP 713-1]		
93.0	93.0	3	fujitsu	TA08025-B604	1	1-1/2
		3	fujitsu	TA08025-B605		
		3	jma wireless	MX08FRO665-20 w/ Mount Pipe		
		1	raycap	RDIDC-9181-PF-48		
		1	tower mounts	Commscope MC-PK8-DSH		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	2301672	CCISITES
4-POST-MODIFICATION INSPECTION	1285403	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	671930	CCISITES
4-TOWER MANUFACTURER DRAWINGS	671925	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	1037702	CCISITES

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) 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. Black & Veatch Corp. should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary) (Monopole Tower)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	150 - 122.92	Pole	TP28.83x21x0.1875	1	-13.34	1002.97	49.7	Pass
L2	122.92 - 84.26	Pole	TP39.51x27.2493x0.375	2	-29.72	2746.10	47.9	Pass
L3	84.26 - 41.55	Pole	TP50.99x37.1855x0.4375	3	-43.58	4143.17	53.6	Pass
L4	41.55 - 0	Pole	TP62x48.1364x0.5	4	-65.85	5995.11	51.2	Pass
							Summary	
						Pole (L3)	53.6	Pass
						Rating =	53.6	Pass

Table 5 - Tower Component Stresses vs. Capacity (Monopole Tower) - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	48.2	Pass
	Base Plate		35.2	Pass
1	Base Foundation (Structure)	0	61.8	Pass
	Base Foundation (Soil Interaction)		56.2	Pass
Structure Rating (max from all components) =				61.8%

Notes:

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

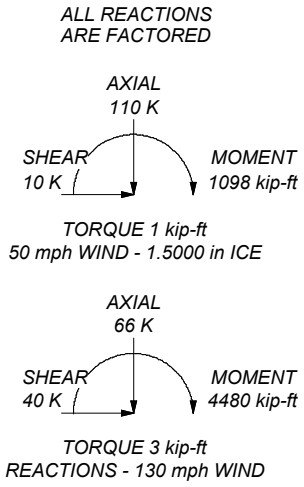
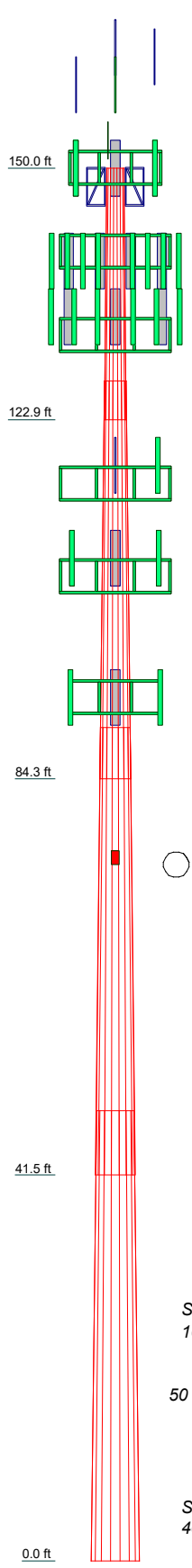
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Section	1	2	3	4	
Length (ft)	27.08	42.83	48.21	48.46	
Number of Sides	18	18	18	18	
Thickness (in)	0.1875	0.3750	0.4375	0.5000	
Socket Length (ft)	4.17	5.50	6.91	48.1364	
Top Dia (in)	21.0000	27.2493	37.1855	62.0000	
Bot Dia (in)	28.8300	39.5100	50.9900		
Grade	A572-65				
Weight (K)	1.4	5.7	9.9	14.3	31.3



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 130 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 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 0.00 ft
8. TOWER RATING: 53.6%



BLACK & VEATCH
 Building a world of difference.®

Black & Veatch Corp.
 6800 W. 115th St., Suite 2292
 Overland Park, KS 66211
 Phone: (913) 458-9650
 FAX: (913) 458-7471

Job: **CT CHESTER CAC 800515 (BU# 800515)**
 Project: **406642 (800515.2014884)**
 Client: Crown Castle
 Code: TIA-222-H
 Path: C:\Users\w9494\Documents\hand\Sa\2021\1\800515\800515 2014884 - TSAIV 800515 2014884 Structural Analysis.m

Drawn by: Thana Wonghemrut
 Date: 09/03/21
 Scale: NTS
 Dwg No. E-1

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 Middlesex County, Connecticut.
- Tower base elevation above sea level: 356.00 ft.
- Basic wind speed of 130 mph.
- Risk Category II.
- Exposure Category B.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Nominal ice thickness of 1.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in 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

Consider Moments - Legs	Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Horizontals	Assume Legs Pinned	Calculate Redundant Bracing Forces
Consider Moments - Diagonals	✓ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Use Moment Magnification	✓ Use Clear Spans For Wind Area	SR Leg Bolts Resist Compression
✓ Use Code Stress Ratios	Use Clear Spans For KL/r	All Leg Panels Have Same Allowable
✓ Use Code Safety Factors - Guys	Retension Guys To Initial Tension	Offset Girt At Foundation
Escalate Ice	✓ Bypass Mast Stability Checks	✓ Consider Feed Line Torque
Always Use Max Kz	✓ Use Azimuth Dish Coefficients	Include Angle Block Shear Check
Use Special Wind Profile	✓ Project Wind Area of Appurt.	Use TIA-222-H Bracing Resist.
Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Exemption
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Use TIA-222-H Tension Splice
Secondary Horizontal Braces Leg	Sort Capacity Reports By Component	Exemption
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	
SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	
SR Members Are Concentric	Ignore KL/ry For 60 Deg. Angle Legs	

Poles

- ✓ Include Shear-Torsion Interaction
- Always Use Sub-Critical Flow
- Use Top Mounted Sockets
- Pole Without Linear Attachments
- Pole With Shroud Or No
- Appurtenances
- Outside and Inside Corner Radii Are Known

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	150.00-122.92	27.08	4.17	18	21.0000	28.8300	0.1875	0.7500	A572-65 (65 ksi)
L2	122.92-84.26	42.83	5.50	18	27.2493	39.5100	0.3750	1.5000	A572-65 (65 ksi)
L3	84.26-41.55	48.21	6.91	18	37.1855	50.9900	0.4375	1.7500	A572-65 (65 ksi)
L4	41.55-0.00	48.46		18	48.1364	62.0000	0.5000	2.0000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	It/Q in ²	w in	w/t
L1	21.2950	12.3860	677.8263	7.3884	10.6680	63.5383	1356.5444	6.1942	3.3660	17.952
	29.2458	17.0459	1766.7635	10.1681	14.6456	120.6341	3535.8517	8.5246	4.7441	25.302
L2	28.8239	31.9871	2918.6755	9.5404	13.8426	210.8469	5841.1915	15.9966	4.1359	11.029
	40.0617	46.5804	9013.0474	13.8929	20.0711	449.0564	18037.954	23.2946	6.2938	16.783
L3	39.2909	51.0293	8706.1286	13.0456	18.8903	460.8793	17423.712	25.5195	5.7747	13.199
	51.7091	70.1985	22664.719	17.9461	25.9029	874.9870	45359.261	35.1059	8.2042	18.753
L4	50.8092	75.5990	21673.592	16.9109	24.4533	886.3264	43375.703	37.8067	7.5920	15.184
	62.8793	97.6005	46637.979	21.8325	31.4960	1480.7588	93337.325	48.8095	10.0320	20.064

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontal in	Double Angle Stitch Bolt Spacing Redundants in
L1 150.00- 122.92				1	1	1			
L2 122.92- 84.26				1	1	1			
L3 84.26- 41.55				1	1	1			
L4 41.55-0.00				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 plf
Safety Line 3/8	C	No	Surface Ar (CaAa)	150.00 - 8.00	1	1	-0.460 -0.452	0.3750		0.22
HJ5-50(7/8)	A	No	Surface Ar (CaAa)	148.00 - 6.00	1	1	-0.060 -0.034	1.1100		0.54

CAT5E(1/4)	B	No	Surface Ar (CaAa)	116.00 - 0.00	1	1	-0.110 -0.105	0.2600		0.04
CR 1480 PE(1-1/4)	B	No	Surface Ar (CaAa)	116.00 - 0.00	2	2	-0.120 -0.055	1.5700		0.55

FLC 12-50J(1/2)	B	No	Surface Ar	75.00 -	1	1	0.250	0.6400		0.17

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 plf
***			(CaAa)	2.50			0.262			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		CAAA ft ² /ft	Weight plf

HB158-21U6S24-xxM_TMO(1-5/8)	C	No	No	Inside Pole	150.00 - 0.00	3	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	2.50 2.50 2.50 2.50

HJ5-50(7/8)	A	No	No	Inside Pole	148.00 - 0.00	3	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.54 0.54 0.54 0.54

HJ7-50A(1-5/8)	B	No	No	Inside Pole	141.00 - 0.00	6	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.04 1.04 1.04 1.04
HB114-U6S12-XXX-LI(1-1/4)	B	No	No	Inside Pole	141.00 - 0.00	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	1.70 1.70 1.70 1.70

LCF114-50J(1-1/4)	A	No	No	Inside Pole	132.00 - 0.00	6	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.70 0.70 0.70 0.70
FB-L98B-002-75000(3/8)	A	No	No	Inside Pole	132.00 - 0.00	3	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.06 0.06 0.06 0.06
WR-VG122ST-BRDA(7/16)	A	No	No	Inside Pole	132.00 - 0.00	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.14 0.14 0.14 0.14
WR-VG86ST-BRD(3/4)	A	No	No	Inside Pole	132.00 - 0.00	4	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.58 0.58 0.58 0.58

AVA7-50(1-5/8)	B	No	No	Inside Pole	106.00 - 6.00	6	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.70 0.70 0.70 0.70
LDF7-50A(1-5/8)	B	No	No	Inside Pole	106.00 - 6.00	6	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.82 0.82 0.82 0.82
HCS 6X12 4AWG(1-5/8)	B	No	No	Inside Pole	106.00 - 6.00	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	2.40 2.40 2.40 2.40

CU12PSM9P6XXX(1-1/2)	A	No	No	Inside Pole	93.00 - 0.00	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	2.35 2.35 2.35 2.35

Feed Line/Linear Appurtenances Section Areas

Tower Section n	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
L1	150.00-122.92	A	0.000	0.000	2.784	0.000	0.12
		B	0.000	0.000	0.000	0.000	0.17
		C	0.000	0.000	1.016	0.000	0.21
L2	122.92-84.26	A	0.000	0.000	4.291	0.000	0.37
		B	0.000	0.000	10.792	0.000	0.66
		C	0.000	0.000	1.450	0.000	0.30
L3	84.26-41.55	A	0.000	0.000	4.741	0.000	0.49
		B	0.000	0.000	16.662	0.000	0.96
		C	0.000	0.000	1.602	0.000	0.33
L4	41.55-0.00	A	0.000	0.000	3.946	0.000	0.47
		B	0.000	0.000	16.626	0.000	0.86
		C	0.000	0.000	1.258	0.000	0.32

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section n	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
L1	150.00-122.92	A	1.469	0.000	0.000	10.151	0.000	0.23
		B		0.000	0.000	0.000	0.000	0.17
		C		0.000	0.000	8.970	0.000	0.30
L2	122.92-84.26	A	1.428	0.000	0.000	15.647	0.000	0.55
		B		0.000	0.000	34.261	0.000	0.99
		C		0.000	0.000	12.806	0.000	0.43
L3	84.26-41.55	A	1.359	0.000	0.000	16.942	0.000	0.68
		B		0.000	0.000	57.025	0.000	1.51
		C		0.000	0.000	13.803	0.000	0.46
L4	41.55-0.00	A	1.213	0.000	0.000	13.608	0.000	0.62
		B		0.000	0.000	55.911	0.000	1.38
		C		0.000	0.000	10.377	0.000	0.42

Feed Line Center of Pressure

Section	Elevation ft	CP_x in	CP_z in	CP_x Ice in	CP_z Ice in
L1	150.00-122.92	-0.5038	-0.1692	-0.3045	0.1093
L2	122.92-84.26	1.0339	-1.4846	1.7590	-1.7520
L3	84.26-41.55	1.6682	-1.7187	3.0235	-2.0927
L4	41.55-0.00	1.8471	-1.7503	3.3763	-2.2791

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_a No Ice	K_a Ice
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Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L1	1	Safety Line 3/8	122.92 - 150.00	1.0000	1.0000
L1	8	HJ5-50(7/8)	122.92 - 148.00	1.0000	1.0000
L2	1	Safety Line 3/8	84.26 - 122.92	1.0000	1.0000
L2	8	HJ5-50(7/8)	84.26 - 122.92	1.0000	1.0000
L2	20	CAT5E(1/4)	84.26 - 116.00	1.0000	1.0000
L2	21	CR 1480 PE(1-1/4)	84.26 - 116.00	1.0000	1.0000
L3	1	Safety Line 3/8	41.55 - 84.26	1.0000	1.0000
L3	8	HJ5-50(7/8)	41.55 - 84.26	1.0000	1.0000
L3	20	CAT5E(1/4)	41.55 - 84.26	1.0000	1.0000
L3	21	CR 1480 PE(1-1/4)	41.55 - 84.26	1.0000	1.0000
L3	30	FLC 12-50J(1/2)	41.55 - 75.00	1.0000	1.0000
L4	1	Safety Line 3/8	8.00 - 41.55	1.0000	1.0000
L4	8	HJ5-50(7/8)	6.00 - 41.55	1.0000	1.0000
L4	20	CAT5E(1/4)	0.00 - 41.55	1.0000	1.0000
L4	21	CR 1480 PE(1-1/4)	0.00 - 41.55	1.0000	1.0000
L4	30	FLC 12-50J(1/2)	2.50 - 41.55	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Lightning Rod 5/8" x 6'	C	From Leg	0.00 0.00 3.00	0.00	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.38 0.99 1.62 2.46	0.38 0.99 1.62 2.46	0.01 0.01 0.02 0.05
*** Platform Mount [10.5' LP 713-1]	C	None		0.00	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	27.63 30.04 32.56 38.02	27.63 30.04 32.56 38.02	1.27 1.87 2.54 4.09
(2) 7"x2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.66 2.39 2.83 3.71	1.66 2.39 2.83 3.71	0.03 0.04 0.06 0.10
(2) 7"x2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.00	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.66 2.39 2.83 3.71	1.66 2.39 2.83 3.71	0.03 0.04 0.06 0.10
(2) 7"x2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.00	150.00	No Ice 1/2" Ice 1" Ice	1.66 2.39 2.83 3.71	1.66 2.39 2.83 3.71	0.03 0.04 0.06 0.10

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
(2) 4'x2" Mount Pipe	A	From Leg	3.50 0.00 2.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	0.87 1.11 1.36 1.90	0.87 1.11 1.36 1.90	0.01 0.02 0.03 0.06
(2) 4'x2" Mount Pipe	B	From Leg	3.50 0.00 2.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	0.87 1.11 1.36 1.90	0.87 1.11 1.36 1.90	0.01 0.02 0.03 0.06
(2) 4'x2" Mount Pipe	C	From Leg	3.50 0.00 2.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	0.87 1.11 1.36 1.90	0.87 1.11 1.36 1.90	0.01 0.02 0.03 0.06
L1.75xL1.75x.25 Face Reinforcement	A	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
L1.75xL1.75x.25 Face Reinforcement	B	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
L1.75xL1.75x.25 Face Reinforcement	C	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
Transition Ladder	C	From Leg	2.00 0.00 -2.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	6.00 8.00 10.00 14.00	6.00 8.00 10.00 14.00	0.16 0.24 0.32 0.48
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	5.19 5.59 6.02 6.90	2.71 3.04 3.38 4.12	0.13 0.17 0.23 0.35
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	5.19 5.59 6.02 6.90	2.71 3.04 3.38 4.12	0.13 0.17 0.23 0.35
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	5.19 5.59 6.02 6.90	2.71 3.04 3.38 4.12	0.13 0.17 0.23 0.35
APXVAALL24_43-U- NA20_TMO w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67	0.18 0.31 0.45 0.78
APXVAALL24_43-U- NA20_TMO w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67	0.18 0.31 0.45 0.78
APXVAALL24_43-U- NA20_TMO w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67	0.18 0.31 0.45 0.78

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Radio 4480_TMOV2	A	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.88 3.09 3.31 3.78	1.40 1.56 1.73 2.09	0.08 0.10 0.13 0.19
Radio 4480_TMOV2	B	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.88 3.09 3.31 3.78	1.40 1.56 1.73 2.09	0.08 0.10 0.13 0.19
Radio 4480_TMOV2	C	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.88 3.09 3.31 3.78	1.40 1.56 1.73 2.09	0.08 0.10 0.13 0.19
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.14 2.32 2.51 2.91	1.69 1.85 2.02 2.39	0.11 0.13 0.16 0.22
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.14 2.32 2.51 2.91	1.69 1.85 2.02 2.39	0.11 0.13 0.16 0.22
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.00 0.00 0.00	0.00	150.00	2" Ice No Ice 1/2" Ice 1" Ice	2.14 2.32 2.51 2.91	1.69 1.85 2.02 2.39	0.11 0.13 0.16 0.22

Side Arm Mount [SO 701- 1]	A	From Leg	1.50 0.00 0.00	0.00	148.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.85 1.14 1.43 2.01	1.67 2.34 3.01 4.35	0.07 0.08 0.09 0.12
Side Arm Mount [SO 701- 1]	A	From Face	1.50 0.00 0.00	-30.00	148.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.85 1.14 1.43 2.01	1.67 2.34 3.01 4.35	0.07 0.08 0.09 0.12
Side Arm Mount [SO 701- 1]	B	From Face	1.50 0.00 0.00	30.00	148.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.85 1.14 1.43 2.01	1.67 2.34 3.01 4.35	0.07 0.08 0.09 0.12
Side Arm Mount [SO 701- 1]	C	From Face	1.50 0.00 0.00	0.00	148.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.85 1.14 1.43 2.01	1.67 2.34 3.01 4.35	0.07 0.08 0.09 0.12
Side Arm Mount [SO 102- 1]	A	From Leg	0.00 0.00 0.00	0.00	148.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.50 1.74 1.98 2.46	1.50 1.74 1.98 2.46	0.03 0.04 0.04 0.07
Side Arm Mount [SO 102- 1]	A	From Face	0.00 0.00 0.00	-30.00	148.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.50 1.74 1.98 2.46	1.50 1.74 1.98 2.46	0.03 0.04 0.04 0.07
Side Arm Mount [SO 102- 1]	B	From Face	0.00 0.00 0.00	30.00	148.00	No Ice 1/2" Ice	1.50 1.74 1.98	1.50 1.74 1.98	0.03 0.04 0.04

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
						1" Ice	2.46	2.46	0.07
						2" Ice			
Side Arm Mount [SO 102-1]	C	From Face	0.00	0.00	148.00	No Ice	1.50	1.50	0.03
			0.00			1/2"	1.74	1.74	0.04
			0.00			Ice	1.98	1.98	0.04
						1" Ice	2.46	2.46	0.07
						2" Ice			
8'x2" Mount Pipe	A	From Leg	4.00	0.00	148.00	No Ice	1.90	1.90	0.03
			0.00			1/2"	2.73	2.73	0.04
			4.00			Ice	3.40	3.40	0.06
						1" Ice	4.40	4.40	0.12
						2" Ice			
8'x2" Mount Pipe	A	From Leg	4.00	0.00	148.00	No Ice	1.90	1.90	0.03
			0.00			1/2"	2.73	2.73	0.04
			12.00			Ice	3.40	3.40	0.06
						1" Ice	4.40	4.40	0.12
						2" Ice			
10'6"x2" Mount Pipe	A	From Face	4.00	-30.00	148.00	No Ice	2.49	2.49	0.04
			0.00			1/2"	3.57	3.57	0.06
			5.00			Ice	4.67	4.67	0.08
						1" Ice	6.32	6.32	0.15
						2" Ice			
10'6"x2.5" Mount Pipe	A	From Face	4.00	-30.00	148.00	No Ice	3.02	3.02	0.07
			0.00			1/2"	4.10	4.10	0.09
			15.00			Ice	5.20	5.20	0.12
						1" Ice	6.61	6.61	0.20
						2" Ice			
14' x 2" Pipe Mount	B	From Face	4.00	30.00	148.00	No Ice	3.33	3.33	0.05
			0.00			1/2"	4.75	4.75	0.08
			7.00			Ice	6.20	6.20	0.11
						1" Ice	9.14	9.14	0.20
						2" Ice			
10'6"x2.5" Mount Pipe	B	From Face	4.00	30.00	148.00	No Ice	3.02	3.02	0.07
			0.00			1/2"	4.10	4.10	0.09
			19.00			Ice	5.20	5.20	0.12
						1" Ice	6.61	6.61	0.20
						2" Ice			
10'6"x2" Mount Pipe	C	From Face	4.00	0.00	148.00	No Ice	2.49	2.49	0.04
			0.00			1/2"	3.57	3.57	0.06
			5.00			Ice	4.67	4.67	0.08
						1" Ice	6.32	6.32	0.15
						2" Ice			
8'x2" Mount Pipe	C	From Face	4.00	0.00	148.00	No Ice	1.90	1.90	0.03
			0.00			1/2"	2.73	2.73	0.04
			14.00			Ice	3.40	3.40	0.06
						1" Ice	4.40	4.40	0.12
						2" Ice			
CO-40A	A	From Leg	4.00	0.00	148.00	No Ice	2.76	2.76	0.01
			0.00			1/2"	3.84	3.84	0.03
			15.00			Ice	4.93	4.93	0.05
						1" Ice	6.46	6.46	0.13
						2" Ice			
ANT450F6	A	From Face	4.00	-30.00	148.00	No Ice	1.90	1.90	0.01
			0.00			1/2"	2.73	2.73	0.02
			11.00			Ice	3.40	3.40	0.04
						1" Ice	4.40	4.40	0.10
						2" Ice			
ANT450F6	B	From Face	4.00	30.00	148.00	No Ice	1.90	1.90	0.01
			0.00			1/2"	2.73	2.73	0.02
			14.00			Ice	3.40	3.40	0.04
						1" Ice	4.40	4.40	0.10
						2" Ice			
CO-40A	C	From Face	4.00	0.00	148.00	No Ice	2.76	2.76	0.01
			0.00			1/2"	3.84	3.84	0.03
			11.00			Ice	4.93	4.93	0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
						1" Ice	6.46	6.46	0.13
						2" Ice			

Platform Mount [LP 713-1]	C	None		0.00	141.00	No Ice	32.89	32.89	1.51
						1/2"	35.76	35.76	2.23
						Ice	38.76	38.76	3.03
						1" Ice	45.26	45.26	4.86
						2" Ice			
L 1.75xL 1.75x.25 Face Reinforcement	A	From Leg	4.00 0.00 0.00	0.00	141.00	No Ice	2.65	0.00	0.04
						1/2"	3.68	0.02	0.05
						Ice	4.72	0.04	0.08
						1" Ice	6.81	0.11	0.16
						2" Ice			
L 1.75xL 1.75x.25 Face Reinforcement	B	From Leg	4.00 0.00 0.00	0.00	141.00	No Ice	2.65	0.00	0.04
						1/2"	3.68	0.02	0.05
						Ice	4.72	0.04	0.08
						1" Ice	6.81	0.11	0.16
						2" Ice			
L 1.75xL 1.75x.25 Face Reinforcement	C	From Leg	4.00 0.00 0.00	0.00	141.00	No Ice	2.65	0.00	0.04
						1/2"	3.68	0.02	0.05
						Ice	4.72	0.04	0.08
						1" Ice	6.81	0.11	0.16
						2" Ice			
Transition Ladder	C	From Leg	2.00 0.00 -2.00	0.00	141.00	No Ice	6.00	6.00	0.16
						1/2"	8.00	8.00	0.24
						Ice	10.00	10.00	0.32
						1" Ice	14.00	14.00	0.48
						2" Ice			
(2) LPA-80080-4CF-EDIN- 0 w/ Mount Pipe	A	From Leg	4.00 0.00 -1.00	0.00	141.00	No Ice	2.86	6.57	0.03
						1/2"	3.22	7.19	0.08
						Ice	3.59	7.84	0.13
						1" Ice	4.34	9.17	0.25
						2" Ice			
(2) LPA-80080-4CF-EDIN- 0 w/ Mount Pipe	B	From Leg	4.00 0.00 -1.00	0.00	141.00	No Ice	2.86	6.57	0.03
						1/2"	3.22	7.19	0.08
						Ice	3.59	7.84	0.13
						1" Ice	4.34	9.17	0.25
						2" Ice			
(2) LPA-80080-4CF-EDIN- 0 w/ Mount Pipe	C	From Leg	4.00 0.00 -1.00	0.00	141.00	No Ice	2.86	6.57	0.03
						1/2"	3.22	7.19	0.08
						Ice	3.59	7.84	0.13
						1" Ice	4.34	9.17	0.25
						2" Ice			
Sub6 Antenna - VZS01 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	141.00	No Ice	5.91	3.74	0.12
						1/2"	6.72	4.79	0.17
						Ice	7.44	5.70	0.22
						1" Ice	8.68	7.17	0.36
						2" Ice			
Sub6 Antenna - VZS01 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.00	141.00	No Ice	5.91	3.74	0.12
						1/2"	6.72	4.79	0.17
						Ice	7.44	5.70	0.22
						1" Ice	8.68	7.17	0.36
						2" Ice			
Sub6 Antenna - VZS01 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.00	141.00	No Ice	5.91	3.74	0.12
						1/2"	6.72	4.79	0.17
						Ice	7.44	5.70	0.22
						1" Ice	8.68	7.17	0.36
						2" Ice			
(2) MX06FRO660-03 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	141.00	No Ice	6.54	5.55	0.10
						1/2"	7.06	6.05	0.18
						Ice	7.60	6.57	0.28
						1" Ice	8.70	7.65	0.50
						2" Ice			
(2) MX06FRO660-03 w/ Mount Pipe	B	From Leg	4.00 0.00	0.00	141.00	No Ice	6.54	5.55	0.10
						1/2"	7.06	6.05	0.18

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
			0.00			Ice	7.60	6.57	0.28
						1" Ice	8.70	7.65	0.50
						2" Ice			
(2) MX06FRO660-03 w/ Mount Pipe	C	From Leg	4.00	0.00	141.00	No Ice	6.54	5.55	0.10
			0.00			1/2"	7.06	6.05	0.18
			0.00			Ice	7.60	6.57	0.28
						1" Ice	8.70	7.65	0.50
						2" Ice			
DB-B1-6C-12AB-0Z	A	From Leg	4.00	0.00	141.00	No Ice	3.36	2.19	0.02
			0.00			1/2"	3.60	2.39	0.05
			0.00			Ice	3.84	2.61	0.08
						1" Ice	4.34	3.05	0.16
						2" Ice			
DB-B1-6C-12AB-0Z	B	From Leg	4.00	0.00	141.00	No Ice	3.36	2.19	0.02
			0.00			1/2"	3.60	2.39	0.05
			0.00			Ice	3.84	2.61	0.08
						1" Ice	4.34	3.05	0.16
						2" Ice			
RFV01U-D2A	A	From Leg	4.00	0.00	141.00	No Ice	1.88	1.01	0.07
			0.00			1/2"	2.05	1.14	0.09
			0.00			Ice	2.22	1.28	0.11
						1" Ice	2.60	1.59	0.15
						2" Ice			
RFV01U-D2A	B	From Leg	4.00	0.00	141.00	No Ice	1.88	1.01	0.07
			0.00			1/2"	2.05	1.14	0.09
			0.00			Ice	2.22	1.28	0.11
						1" Ice	2.60	1.59	0.15
						2" Ice			
RFV01U-D2A	C	From Leg	4.00	0.00	141.00	No Ice	1.88	1.01	0.07
			0.00			1/2"	2.05	1.14	0.09
			0.00			Ice	2.22	1.28	0.11
						1" Ice	2.60	1.59	0.15
						2" Ice			
RFV01U-D1A	A	From Leg	4.00	0.00	141.00	No Ice	1.88	1.25	0.08
			0.00			1/2"	2.05	1.39	0.10
			0.00			Ice	2.22	1.54	0.12
						1" Ice	2.60	1.86	0.18
						2" Ice			
RFV01U-D1A	B	From Leg	4.00	0.00	141.00	No Ice	1.88	1.25	0.08
			0.00			1/2"	2.05	1.39	0.10
			0.00			Ice	2.22	1.54	0.12
						1" Ice	2.60	1.86	0.18
						2" Ice			
RFV01U-D1A	C	From Leg	4.00	0.00	141.00	No Ice	1.88	1.25	0.08
			0.00			1/2"	2.05	1.39	0.10
			0.00			Ice	2.22	1.54	0.12
						1" Ice	2.60	1.86	0.18
						2" Ice			

Platform Mount [LP 713-1]	C	None		0.00	132.00	No Ice	32.89	32.89	1.51
						1/2"	35.76	35.76	2.23
						Ice	38.76	38.76	3.03
						1" Ice	45.26	45.26	4.86
						2" Ice			
6'x2" Mount Pipe	A	From Leg	4.00	0.00	132.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
6'x2" Mount Pipe	B	From Leg	4.00	0.00	132.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
6'x2" Mount Pipe	C	From Leg	4.00	0.00	132.00	No Ice	1.43	1.43	0.02

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
Transition Ladder	C	From Leg	2.00	0.00	132.00	No Ice	6.00	6.00	0.16
			0.00			1/2"	8.00	8.00	0.24
			-2.00			Ice	10.00	10.00	0.32
						1" Ice	14.00	14.00	0.48
						2" Ice			
L1.75xL1.75x.25 Face Reinforcement	A	From Leg	4.00	0.00	132.00	No Ice	2.65	0.00	0.04
			0.00			1/2"	3.68	0.02	0.05
			0.00			Ice	4.72	0.04	0.08
						1" Ice	6.81	0.11	0.16
						2" Ice			
L1.75xL1.75x.25 Face Reinforcement	B	From Leg	4.00	0.00	132.00	No Ice	2.65	0.00	0.04
			0.00			1/2"	3.68	0.02	0.05
			0.00			Ice	4.72	0.04	0.08
						1" Ice	6.81	0.11	0.16
						2" Ice			
L1.75xL1.75x.25 Face Reinforcement	C	From Leg	4.00	0.00	132.00	No Ice	2.65	0.00	0.04
			0.00			1/2"	3.68	0.02	0.05
			0.00			Ice	4.72	0.04	0.08
						1" Ice	6.81	0.11	0.16
						2" Ice			
7770.00 w/ Mount Pipe	A	From Leg	4.00	0.00	132.00	No Ice	5.75	4.25	0.06
			0.00			1/2"	6.18	5.01	0.10
			2.00			Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
7770.00 w/ Mount Pipe	B	From Leg	4.00	0.00	132.00	No Ice	5.75	4.25	0.06
			0.00			1/2"	6.18	5.01	0.10
			2.00			Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
7770.00 w/ Mount Pipe	C	From Leg	4.00	0.00	132.00	No Ice	5.75	4.25	0.06
			0.00			1/2"	6.18	5.01	0.10
			2.00			Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
TPA65R-BU6D w/ Mount Pipe	A	From Leg	4.00	0.00	132.00	No Ice	12.25	6.05	0.10
			0.00			1/2"	13.00	6.71	0.19
			2.00			Ice	13.76	7.39	0.28
						1" Ice	15.34	8.79	0.52
						2" Ice			
TPA65R-BU6D w/ Mount Pipe	B	From Leg	4.00	0.00	132.00	No Ice	12.25	6.05	0.10
			0.00			1/2"	13.00	6.71	0.19
			2.00			Ice	13.76	7.39	0.28
						1" Ice	15.34	8.79	0.52
						2" Ice			
TPA65R-BU6D w/ Mount Pipe	C	From Leg	4.00	0.00	132.00	No Ice	12.25	6.05	0.10
			0.00			1/2"	13.00	6.71	0.19
			2.00			Ice	13.76	7.39	0.28
						1" Ice	15.34	8.79	0.52
						2" Ice			
DMP65R-BU6D w/ Mount Pipe	A	From Leg	4.00	0.00	132.00	No Ice	11.96	5.97	0.11
			0.00			1/2"	12.70	6.63	0.20
			2.00			Ice	13.46	7.30	0.30
						1" Ice	15.02	8.69	0.53
						2" Ice			
DMP65R-BU6D w/ Mount Pipe	B	From Leg	4.00	0.00	132.00	No Ice	11.96	5.97	0.11
			0.00			1/2"	12.70	6.63	0.20
			2.00			Ice	13.46	7.30	0.30
						1" Ice	15.02	8.69	0.53
						2" Ice			
DMP65R-BU6D w/ Mount	C	From Leg	4.00	0.00	132.00	No Ice	11.96	5.97	0.11

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Pipe			0.00 2.00			1/2" Ice 1" Ice 2" Ice	12.70 13.46 15.02	6.63 7.30 8.69	0.20 0.30 0.53
RRUS 4478 B14	A	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.84 2.01 2.19 2.57	1.06 1.20 1.34 1.66	0.06 0.08 0.09 0.14
RRUS 4478 B14	B	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.84 2.01 2.19 2.57	1.06 1.20 1.34 1.66	0.06 0.08 0.09 0.14
RRUS 4478 B14	C	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.84 2.01 2.19 2.57	1.06 1.20 1.34 1.66	0.06 0.08 0.09 0.14
RRUS 8843 B2/B66A	A	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.64 1.80 1.97 2.32	1.35 1.50 1.65 1.99	0.07 0.09 0.11 0.16
RRUS 8843 B2/B66A	B	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.64 1.80 1.97 2.32	1.35 1.50 1.65 1.99	0.07 0.09 0.11 0.16
RRUS 8843 B2/B66A	C	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.64 1.80 1.97 2.32	1.35 1.50 1.65 1.99	0.07 0.09 0.11 0.16
DC6-48-60-18-8F	A	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.92 1.46 1.64 2.04	0.92 1.46 1.64 2.04	0.02 0.04 0.06 0.11
DC6-48-60-18-8F	B	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.92 1.46 1.64 2.04	0.92 1.46 1.64 2.04	0.02 0.04 0.06 0.11
RRUS 4449 B5/B12	A	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.97 2.14 2.33 2.72	1.41 1.56 1.73 2.07	0.07 0.09 0.11 0.16
RRUS 4449 B5/B12	B	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.97 2.14 2.33 2.72	1.41 1.56 1.73 2.07	0.07 0.09 0.11 0.16
RRUS 4449 B5/B12	C	From Leg	4.00 0.00 0.00	0.00	132.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.97 2.14 2.33 2.72	1.41 1.56 1.73 2.07	0.07 0.09 0.11 0.16

Platform Mount [LP 602-1]	C	None		0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	31.07 34.82 38.48 45.60	31.07 34.82 38.48 45.60	1.34 1.97 2.67 4.31

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
(4) 6' x 2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09
(3) 6' x 2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09
(4) 6' x 2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09
L1.75xL1.75x.25 Face Reinforcement	A	From Leg	4.00 0.00 0.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
L1.75xL1.75x.25 Face Reinforcement	B	From Leg	4.00 0.00 0.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
L1.75xL1.75x.25 Face Reinforcement	C	From Leg	4.00 0.00 0.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
Transition Ladder	C	From Leg	2.00 0.00 -2.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.00 8.00 10.00 14.00	6.00 8.00 10.00 14.00	0.16 0.24 0.32 0.48
ANT450F6	A	From Leg	4.00 0.00 2.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	0.01 0.02 0.04 0.10
ANT450Y7-WR	A	From Leg	4.00 0.00 2.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.42 0.51 0.61 0.80	0.42 0.51 0.61 0.80	0.01 0.01 0.03 0.05
AIRMUX-400 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.00	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.00 2.23 2.48 3.00	0.87 1.11 1.37 1.95	0.02 0.03 0.05 0.11
*** Platform Mount [LP 713-1]	C	None		0.00	106.00	No Ice 1/2" Ice 1" Ice 2" Ice	32.89 35.76 38.76 45.26	32.89 35.76 38.76 45.26	1.51 2.23 3.03 4.86
(2) 6' x 2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	106.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09
(2) 6' x 2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.00	106.00	No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
(2) 6' x 2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09
L1.75xL1.75x.25 Face Reinforcement	A	From Leg	4.00 0.00 0.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
L1.75xL1.75x.25 Face Reinforcement	B	From Leg	4.00 0.00 0.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
L1.75xL1.75x.25 Face Reinforcement	C	From Leg	4.00 0.00 0.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	2.65 3.68 4.72 6.81	0.00 0.02 0.04 0.11	0.04 0.05 0.08 0.16
Transition Ladder	C	From Leg	2.00 0.00 -2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	6.00 8.00 10.00 14.00	6.00 8.00 10.00 14.00	0.16 0.24 0.32 0.48
APXV18-206516S-C-A20 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	2.55 2.96 3.38 4.26	2.15 2.55 2.96 3.83	0.04 0.07 0.11 0.21
APXV18-206516S-C-A20 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	2.55 2.96 3.38 4.26	2.15 2.55 2.96 3.83	0.04 0.07 0.11 0.21
APXV18-206516S-C-A20 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	2.55 2.96 3.38 4.26	2.15 2.55 2.96 3.83	0.04 0.07 0.11 0.21
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67	0.19 0.31 0.46 0.79
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67	0.19 0.31 0.46 0.79
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23 17.82	6.87 7.55 8.25 9.67	0.19 0.31 0.46 0.79
KRY 112 489/2	A	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	0.56 0.66 0.76 1.00	0.37 0.45 0.54 0.75	0.02 0.02 0.03 0.05
KRY 112 489/2	B	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	0.56 0.66 0.76 1.00	0.37 0.45 0.54 0.75	0.02 0.02 0.03 0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
KRY 112 489/2	C	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	0.56 0.66 0.76 1.00	0.37 0.45 0.54 0.75	0.02 0.02 0.03 0.05
KRY 112 144/1	A	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	0.35 0.43 0.51 0.70	0.17 0.23 0.30 0.46	0.01 0.01 0.02 0.03
KRY 112 144/1	B	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	0.35 0.43 0.51 0.70	0.17 0.23 0.30 0.46	0.01 0.01 0.02 0.03
KRY 112 144/1	C	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	0.35 0.43 0.51 0.70	0.17 0.23 0.30 0.46	0.01 0.01 0.02 0.03
RADIO 4449 B12/B71	A	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	1.65 1.81 1.98 2.34	1.30 1.44 1.60 1.92	0.08 0.09 0.11 0.16
RADIO 4449 B12/B71	B	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	1.65 1.81 1.98 2.34	1.30 1.44 1.60 1.92	0.08 0.09 0.11 0.16
RADIO 4449 B12/B71	C	From Leg	4.00 0.00 2.00	0.00	106.00	2" Ice No Ice 1/2" Ice 1" Ice	1.65 1.81 1.98 2.34	1.30 1.44 1.60 1.92	0.08 0.09 0.11 0.16
*** ***									
Commscope MC-PK8-DSH	C	None		0.00	93.00	No Ice 1/2" Ice 1" Ice 2" Ice	34.24 62.95 91.66 149.08	34.24 62.95 91.66 149.08	1.75 2.10 2.45 3.15
(2) 8'x2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	93.00	2" Ice No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	0.03 0.04 0.06 0.12
(2) 8'x2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.00	93.00	2" Ice No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	0.03 0.04 0.06 0.12
(2) 8'x2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.00	93.00	2" Ice No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40 4.40	1.90 2.73 3.40 4.40	0.03 0.04 0.06 0.12
MX08FRO665-20 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.00	93.00	2" Ice No Ice 1/2" Ice 1" Ice	8.01 8.52 9.04 10.11	4.23 4.69 5.16 6.12	0.10 0.18 0.28 0.51
MX08FRO665-20 w/ Mount Pipe	B	From Leg	4.00 0.00	0.00	93.00	2" Ice No Ice 1/2"	8.01 8.52	4.23 4.69	0.10 0.18

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
			0.00			Ice	9.04	5.16	0.28
						1" Ice	10.11	6.12	0.51
						2" Ice			
MX08FRO665-20 w/ Mount Pipe	C	From Leg	4.00	0.00	93.00	No Ice	8.01	4.23	0.10
			0.00			1/2"	8.52	4.69	0.18
			0.00			Ice	9.04	5.16	0.28
						1" Ice	10.11	6.12	0.51
						2" Ice			
TA08025-B604	A	From Leg	4.00	0.00	93.00	No Ice	1.96	0.98	0.06
			0.00			1/2"	2.14	1.11	0.08
			0.00			Ice	2.32	1.25	0.10
						1" Ice	2.71	1.55	0.15
						2" Ice			
TA08025-B604	B	From Leg	4.00	0.00	93.00	No Ice	1.96	0.98	0.06
			0.00			1/2"	2.14	1.11	0.08
			0.00			Ice	2.32	1.25	0.10
						1" Ice	2.71	1.55	0.15
						2" Ice			
TA08025-B604	C	From Leg	4.00	0.00	93.00	No Ice	1.96	0.98	0.06
			0.00			1/2"	2.14	1.11	0.08
			0.00			Ice	2.32	1.25	0.10
						1" Ice	2.71	1.55	0.15
						2" Ice			
TA08025-B605	A	From Leg	4.00	0.00	93.00	No Ice	1.96	1.13	0.08
			0.00			1/2"	2.14	1.27	0.09
			0.00			Ice	2.32	1.41	0.11
						1" Ice	2.71	1.72	0.16
						2" Ice			
TA08025-B605	B	From Leg	4.00	0.00	93.00	No Ice	1.96	1.13	0.08
			0.00			1/2"	2.14	1.27	0.09
			0.00			Ice	2.32	1.41	0.11
						1" Ice	2.71	1.72	0.16
						2" Ice			
TA08025-B605	C	From Leg	4.00	0.00	93.00	No Ice	1.96	1.13	0.08
			0.00			1/2"	2.14	1.27	0.09
			0.00			Ice	2.32	1.41	0.11
						1" Ice	2.71	1.72	0.16
						2" Ice			
RDIDC-9181-PF-48	A	From Leg	4.00	0.00	93.00	No Ice	2.01	1.17	0.02
			0.00			1/2"	2.19	1.31	0.04
			0.00			Ice	2.37	1.46	0.06
						1" Ice	2.76	1.78	0.11
						2" Ice			

Side Arm Mount [SO 701- 1]	C	From Face	1.00	0.00	75.00	No Ice	0.85	1.67	0.07
			0.00			1/2"	1.14	2.34	0.08
			0.00			Ice	1.43	3.01	0.09
						1" Ice	2.01	4.35	0.12
						2" Ice			
GPS_A	C	From Face	2.00	0.00	75.00	No Ice	0.26	0.26	0.00
			0.00			1/2"	0.32	0.32	0.00
			0.00			Ice	0.39	0.39	0.01
						1" Ice	0.56	0.56	0.02
						2" Ice			

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

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	150 - 122.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-34.92	2.52	0.70
			Max. Mx	20	-13.34	300.37	0.36
			Max. My	2	-13.35	1.51	299.54
			Max. Vy	20	-19.70	300.37	0.36
			Max. Vx	14	19.72	0.95	-299.27
			Max. Torque	4			1.52
			Max Tension	1	0.00	0.00	0.00
L2	122.92 - 84.26	Pole	Max. Compression	26	-65.17	4.99	0.53
			Max. Mx	20	-29.72	1236.81	1.25

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L3	84.26 - 41.55	Pole	Max. My	14	-29.72	0.85	-1235.30
			Max. Vy	20	-32.14	1236.81	1.25
			Max. Vx	14	32.16	0.85	-1235.30
			Max. Torque	4			2.62
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-82.71	4.39	0.63
			Max. Mx	20	-43.58	2642.12	2.67
			Max. My	14	-43.58	-0.68	-2641.18
			Max. Vy	20	-35.84	2642.12	2.67
			Max. Vx	14	35.83	-0.68	-2641.18
L4	41.55 - 0	Pole	Max. Torque	4			2.62
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-109.72	3.42	1.37
			Max. Mx	20	-65.85	4476.00	4.54
			Max. My	14	-65.85	-2.54	-4474.94
			Max. Vy	20	-39.80	4476.00	4.54
			Max. Vx	14	39.79	-2.54	-4474.94
			Max. Torque	4			2.51

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	37	109.72	8.29	4.79
	Max. H _x	20	65.87	39.76	0.04
	Max. H _z	2	65.87	0.04	39.76
	Max. M _x	2	4474.31	0.04	39.76
	Max. M _z	8	4471.34	-39.76	-0.04
	Max. Torsion	4	2.51	-19.85	34.41
	Min. Vert	7	49.40	-34.42	19.85
	Min. H _x	8	65.87	-39.76	-0.04
	Min. H _z	14	65.87	-0.04	-39.76
	Min. M _x	14	-4474.94	-0.04	-39.76
	Min. M _z	20	-4476.00	39.76	0.04
	Min. Torsion	16	-2.51	19.85	-34.41

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	54.89	0.00	0.00	0.24	1.84	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	65.87	-0.04	-39.76	-4474.31	7.19	-2.43
0.9 Dead+1.0 Wind 0 deg - No Ice	49.40	-0.04	-39.76	-4433.52	6.53	-2.42
1.2 Dead+1.0 Wind 30 deg - No Ice	65.87	19.85	-34.41	-3872.41	-2230.31	-2.51
0.9 Dead+1.0 Wind 30 deg - No Ice	49.40	19.85	-34.41	-3837.11	-2210.53	-2.51
1.2 Dead+1.0 Wind 60 deg - No Ice	65.87	34.42	-19.85	-2232.79	-3869.57	-1.92
0.9 Dead+1.0 Wind 60 deg - No Ice	49.40	34.42	-19.85	-2212.48	-3834.82	-1.92
1.2 Dead+1.0 Wind 90 deg - No Ice	65.87	39.76	0.04	5.18	-4471.34	-0.81
0.9 Dead+1.0 Wind 90 deg - No Ice	49.40	39.76	0.04	5.05	-4431.10	-0.83
1.2 Dead+1.0 Wind 120 deg	65.87	34.45	19.91	2241.85	-3874.41	0.51

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
- No Ice						
0.9 Dead+1.0 Wind 120 deg	49.40	34.45	19.91	2221.28	-3839.62	0.49
- No Ice						
1.2 Dead+1.0 Wind 150 deg	65.87	19.91	34.45	3877.89	-2238.72	1.69
- No Ice						
0.9 Dead+1.0 Wind 150 deg	49.40	19.91	34.45	3842.38	-2218.86	1.68
- No Ice						
1.2 Dead+1.0 Wind 180 deg	65.87	0.04	39.76	4474.94	-2.54	2.43
- No Ice						
0.9 Dead+1.0 Wind 180 deg	49.40	0.04	39.76	4433.99	-3.10	2.42
- No Ice						
1.2 Dead+1.0 Wind 210 deg	65.87	-19.85	34.41	3873.05	2234.96	2.51
- No Ice						
0.9 Dead+1.0 Wind 210 deg	49.40	-19.85	34.41	3837.58	2213.95	2.51
- No Ice						
1.2 Dead+1.0 Wind 240 deg	65.87	-34.42	19.85	2233.44	3874.22	1.92
- No Ice						
0.9 Dead+1.0 Wind 240 deg	49.40	-34.42	19.85	2212.95	3838.24	1.92
- No Ice						
1.2 Dead+1.0 Wind 270 deg	65.87	-39.76	-0.04	-4.54	4476.00	0.81
- No Ice						
0.9 Dead+1.0 Wind 270 deg	49.40	-39.76	-0.04	-4.58	4434.53	0.83
- No Ice						
1.2 Dead+1.0 Wind 300 deg	65.87	-34.45	-19.91	-2241.21	3879.08	-0.51
- No Ice						
0.9 Dead+1.0 Wind 300 deg	49.40	-34.45	-19.91	-2220.81	3843.05	-0.49
- No Ice						
1.2 Dead+1.0 Wind 330 deg	65.87	-19.91	-34.45	-3877.26	2243.38	-1.69
- No Ice						
0.9 Dead+1.0 Wind 330 deg	49.40	-19.91	-34.45	-3841.92	2222.29	-1.68
- No Ice						
1.2 Dead+1.0 Ice+1.0 Temp	109.72	-0.00	-0.00	-1.37	3.42	-0.00
1.2 Dead+1.0 Wind 0	109.72	-0.01	-9.57	-1095.02	4.45	-0.75
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 30	109.72	4.78	-8.28	-948.12	-542.57	-0.75
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 60	109.72	8.29	-4.78	-547.55	-943.21	-0.54
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 90	109.72	9.57	0.01	-0.65	-1090.14	-0.19
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 120	109.72	8.29	4.79	546.05	-943.98	0.21
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 150	109.72	4.79	8.29	946.06	-543.90	0.55
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 180	109.72	0.01	9.57	1092.19	2.91	0.75
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 210	109.72	-4.78	8.28	945.29	549.92	0.74
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240	109.72	-8.29	4.78	544.72	950.57	0.54
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270	109.72	-9.57	-0.01	-2.19	1097.50	0.19
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	109.72	-8.29	-4.79	-548.89	951.34	-0.21
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	109.72	-4.79	-8.29	-948.89	551.25	-0.56
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	54.89	-0.01	-7.98	-893.09	2.90	-0.48
Dead+Wind 30 deg - Service	54.89	3.98	-6.91	-772.91	-443.81	-0.50
Dead+Wind 60 deg - Service	54.89	6.91	-3.98	-445.57	-771.08	-0.39
Dead+Wind 90 deg - Service	54.89	7.98	0.01	1.23	-891.22	-0.17
Dead+Wind 120 deg - Service	54.89	6.91	4.00	447.77	-772.05	0.09
Dead+Wind 150 deg - Service	54.89	4.00	6.91	774.40	-445.49	0.33
Dead+Wind 180 deg - Service	54.89	0.01	7.98	893.60	0.96	0.48
Dead+Wind 210 deg - Service	54.89	-3.98	6.91	773.43	447.67	0.50
Dead+Wind 240 deg -	54.89	-6.91	3.98	446.09	774.94	0.39

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Service						
Dead+Wind 270 deg -	54.89	-7.98	-0.01	-0.71	895.08	0.17
Service						
Dead+Wind 300 deg -	54.89	-6.91	-4.00	-447.25	775.91	-0.09
Service						
Dead+Wind 330 deg -	54.89	-4.00	-6.91	-773.88	449.35	-0.33
Service						

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-54.89	0.00	0.00	54.89	0.00	0.000%
2	-0.04	-65.87	-39.76	0.04	65.87	39.76	0.000%
3	-0.04	-49.40	-39.76	0.04	49.40	39.76	0.000%
4	19.85	-65.87	-34.41	-19.85	65.87	34.41	0.000%
5	19.85	-49.40	-34.41	-19.85	49.40	34.41	0.000%
6	34.42	-65.87	-19.85	-34.42	65.87	19.85	0.000%
7	34.42	-49.40	-19.85	-34.42	49.40	19.85	0.000%
8	39.76	-65.87	0.04	-39.76	65.87	-0.04	0.000%
9	39.76	-49.40	0.04	-39.76	49.40	-0.04	0.000%
10	34.45	-65.87	19.91	-34.45	65.87	-19.91	0.000%
11	34.45	-49.40	19.91	-34.45	49.40	-19.91	0.000%
12	19.91	-65.87	34.45	-19.91	65.87	-34.45	0.000%
13	19.91	-49.40	34.45	-19.91	49.40	-34.45	0.000%
14	0.04	-65.87	39.76	-0.04	65.87	-39.76	0.000%
15	0.04	-49.40	39.76	-0.04	49.40	-39.76	0.000%
16	-19.85	-65.87	34.41	19.85	65.87	-34.41	0.000%
17	-19.85	-49.40	34.41	19.85	49.40	-34.41	0.000%
18	-34.42	-65.87	19.85	34.42	65.87	-19.85	0.000%
19	-34.42	-49.40	19.85	34.42	49.40	-19.85	0.000%
20	-39.76	-65.87	-0.04	39.76	65.87	0.04	0.000%
21	-39.76	-49.40	-0.04	39.76	49.40	0.04	0.000%
22	-34.45	-65.87	-19.91	34.45	65.87	19.91	0.000%
23	-34.45	-49.40	-19.91	34.45	49.40	19.91	0.000%
24	-19.91	-65.87	-34.45	19.91	65.87	34.45	0.000%
25	-19.91	-49.40	-34.45	19.91	49.40	34.45	0.000%
26	0.00	-109.72	0.00	0.00	109.72	0.00	0.000%
27	-0.01	-109.72	-9.57	0.01	109.72	9.57	0.000%
28	4.78	-109.72	-8.28	-4.78	109.72	8.28	0.000%
29	8.29	-109.72	-4.78	-8.29	109.72	4.78	0.000%
30	9.57	-109.72	0.01	-9.57	109.72	-0.01	0.000%
31	8.29	-109.72	4.79	-8.29	109.72	-4.79	0.000%
32	4.79	-109.72	8.29	-4.79	109.72	-8.29	0.000%
33	0.01	-109.72	9.57	-0.01	109.72	-9.57	0.000%
34	-4.78	-109.72	8.28	4.78	109.72	-8.28	0.000%
35	-8.29	-109.72	4.78	8.29	109.72	-4.78	0.000%
36	-9.57	-109.72	-0.01	9.57	109.72	0.01	0.000%
37	-8.29	-109.72	-4.79	8.29	109.72	4.79	0.000%
38	-4.79	-109.72	-8.29	4.79	109.72	8.29	0.000%
39	-0.01	-54.89	-7.98	0.01	54.89	7.98	0.000%
40	3.98	-54.89	-6.91	-3.98	54.89	6.91	0.000%
41	6.91	-54.89	-3.98	-6.91	54.89	3.98	0.000%
42	7.98	-54.89	0.01	-7.98	54.89	-0.01	0.000%
43	6.91	-54.89	4.00	-6.91	54.89	-4.00	0.000%
44	4.00	-54.89	6.91	-4.00	54.89	-6.91	0.000%
45	0.01	-54.89	7.98	-0.01	54.89	-7.98	0.000%
46	-3.98	-54.89	6.91	3.98	54.89	-6.91	0.000%
47	-6.91	-54.89	3.98	6.91	54.89	-3.98	0.000%
48	-7.98	-54.89	-0.01	7.98	54.89	0.01	0.000%
49	-6.91	-54.89	-4.00	6.91	54.89	4.00	0.000%
50	-4.00	-54.89	-6.91	4.00	54.89	6.91	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00093100
3	Yes	4	0.00000001	0.00058985
4	Yes	5	0.00000001	0.00052107
5	Yes	5	0.00000001	0.00023417
6	Yes	5	0.00000001	0.00056332
7	Yes	5	0.00000001	0.00025497
8	Yes	4	0.00000001	0.00049072
9	Yes	4	0.00000001	0.00031267
10	Yes	5	0.00000001	0.00054647
11	Yes	5	0.00000001	0.00024620
12	Yes	5	0.00000001	0.00053428
13	Yes	5	0.00000001	0.00024038
14	Yes	4	0.00000001	0.00086262
15	Yes	4	0.00000001	0.00054606
16	Yes	5	0.00000001	0.00057043
17	Yes	5	0.00000001	0.00025787
18	Yes	5	0.00000001	0.00052716
19	Yes	5	0.00000001	0.00023657
20	Yes	4	0.00000001	0.00055275
21	Yes	4	0.00000001	0.00035310
22	Yes	5	0.00000001	0.00054776
23	Yes	5	0.00000001	0.00024654
24	Yes	5	0.00000001	0.00056089
25	Yes	5	0.00000001	0.00025282
26	Yes	4	0.00000001	0.00001810
27	Yes	5	0.00000001	0.00023726
28	Yes	5	0.00000001	0.00027750
29	Yes	5	0.00000001	0.00028146
30	Yes	5	0.00000001	0.00023356
31	Yes	5	0.00000001	0.00027880
32	Yes	5	0.00000001	0.00027753
33	Yes	5	0.00000001	0.00023643
34	Yes	5	0.00000001	0.00028713
35	Yes	5	0.00000001	0.00028248
36	Yes	5	0.00000001	0.00023840
37	Yes	5	0.00000001	0.00028527
38	Yes	5	0.00000001	0.00028717
39	Yes	4	0.00000001	0.00004871
40	Yes	4	0.00000001	0.00012338
41	Yes	4	0.00000001	0.00015587
42	Yes	4	0.00000001	0.00003605
43	Yes	4	0.00000001	0.00013749
44	Yes	4	0.00000001	0.00012885
45	Yes	4	0.00000001	0.00004822
46	Yes	4	0.00000001	0.00016311
47	Yes	4	0.00000001	0.00012788
48	Yes	4	0.00000001	0.00003679
49	Yes	4	0.00000001	0.00014002
50	Yes	4	0.00000001	0.00015106

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	150 - 122.92	15.5787	49	1.00	0.00
L2	127.09 - 84.26	10.9951	49	0.87	0.00
L3	89.76 - 41.55	5.2264	49	0.58	0.00
L4	48.46 - 0	1.4441	49	0.28	0.00

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
150.00	Lightning Rod 5/8" x 6'	49	15.5787	1.00	0.00	30643
148.00	Side Arm Mount [SO 701-1]	49	15.1650	0.99	0.00	30643
141.00	Platform Mount [LP 713-1]	49	13.7259	0.95	0.00	17024
132.00	Platform Mount [LP 713-1]	49	11.9303	0.90	0.00	8512
116.00	Platform Mount [LP 602-1]	49	9.0372	0.79	0.00	6999
106.00	Platform Mount [LP 713-1]	49	7.4527	0.71	0.00	7305
93.00	Commscope MC-PK8-DSH	49	5.6375	0.61	0.00	7740
75.00	Side Arm Mount [SO 701-1]	49	3.5592	0.47	0.00	7531

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	150 - 122.92	77.7804	22	5.01	0.02
L2	127.09 - 84.26	54.9547	22	4.33	0.01
L3	89.76 - 41.55	26.1464	22	2.92	0.00
L4	48.46 - 0	7.2260	22	1.39	0.00

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
150.00	Lightning Rod 5/8" x 6'	22	77.7804	5.01	0.02	6290
148.00	Side Arm Mount [SO 701-1]	22	75.7209	4.95	0.02	6290
141.00	Platform Mount [LP 713-1]	22	68.5570	4.75	0.01	3494
132.00	Platform Mount [LP 713-1]	22	59.6145	4.49	0.01	1745
116.00	Platform Mount [LP 602-1]	22	45.1882	3.94	0.01	1426
106.00	Platform Mount [LP 713-1]	22	37.2757	3.56	0.01	1481
93.00	Commscope MC-PK8-DSH	22	28.2019	3.05	0.00	1560
75.00	Side Arm Mount [SO 701-1]	22	17.8076	2.34	0.00	1512

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
L1	150 - 122.92 (1)	TP28.83x21x0.1875	27.08	0.00	0.0	16.328 3	-13.34	955.21	0.014
L2	122.92 - 84.26 (2)	TP39.51x27.2493x0.375	42.83	0.00	0.0	44.706 4	-29.72	2615.33	0.011
L3	84.26 - 41.55 (3)	TP50.99x37.1855x0.4375	48.21	0.00	0.0	67.450 9	-43.58	3945.88	0.011
L4	41.55 - 0 (4)	TP62x48.1364x0.5	48.46	0.00	0.0	97.600 5	-65.85	5709.63	0.012

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
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Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M _{uy} kip-ft	φM _{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	150 - 122.92 (1)	TP28.83x21x0.1875	300.58	597.04	0.503	0.00	597.04	0.000
L2	122.92 - 84.26 (2)	TP39.51x27.2493x0.375	1237.85	2527.26	0.490	0.00	2527.26	0.000
L3	84.26 - 41.55 (3)	TP50.99x37.1855x0.4375	2644.53	4799.61	0.551	0.00	4799.61	0.000
L4	41.55 - 0 (4)	TP62x48.1364x0.5	4479.98	8525.50	0.525	0.00	8525.50	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V _u K	φV _n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T _u kip-ft	φT _n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	150 - 122.92 (1)	TP28.83x21x0.1875	19.72	286.56	0.069	0.30	688.54	0.000
L2	122.92 - 84.26 (2)	TP39.51x27.2493x0.375	32.18	784.60	0.041	0.33	2580.82	0.000
L3	84.26 - 41.55 (3)	TP50.99x37.1855x0.4375	35.87	1183.76	0.030	0.51	5035.56	0.000
L4	41.55 - 0 (4)	TP62x48.1364x0.5	39.83	1712.89	0.023	0.51	9225.42	0.000

Pole Interaction Design Data

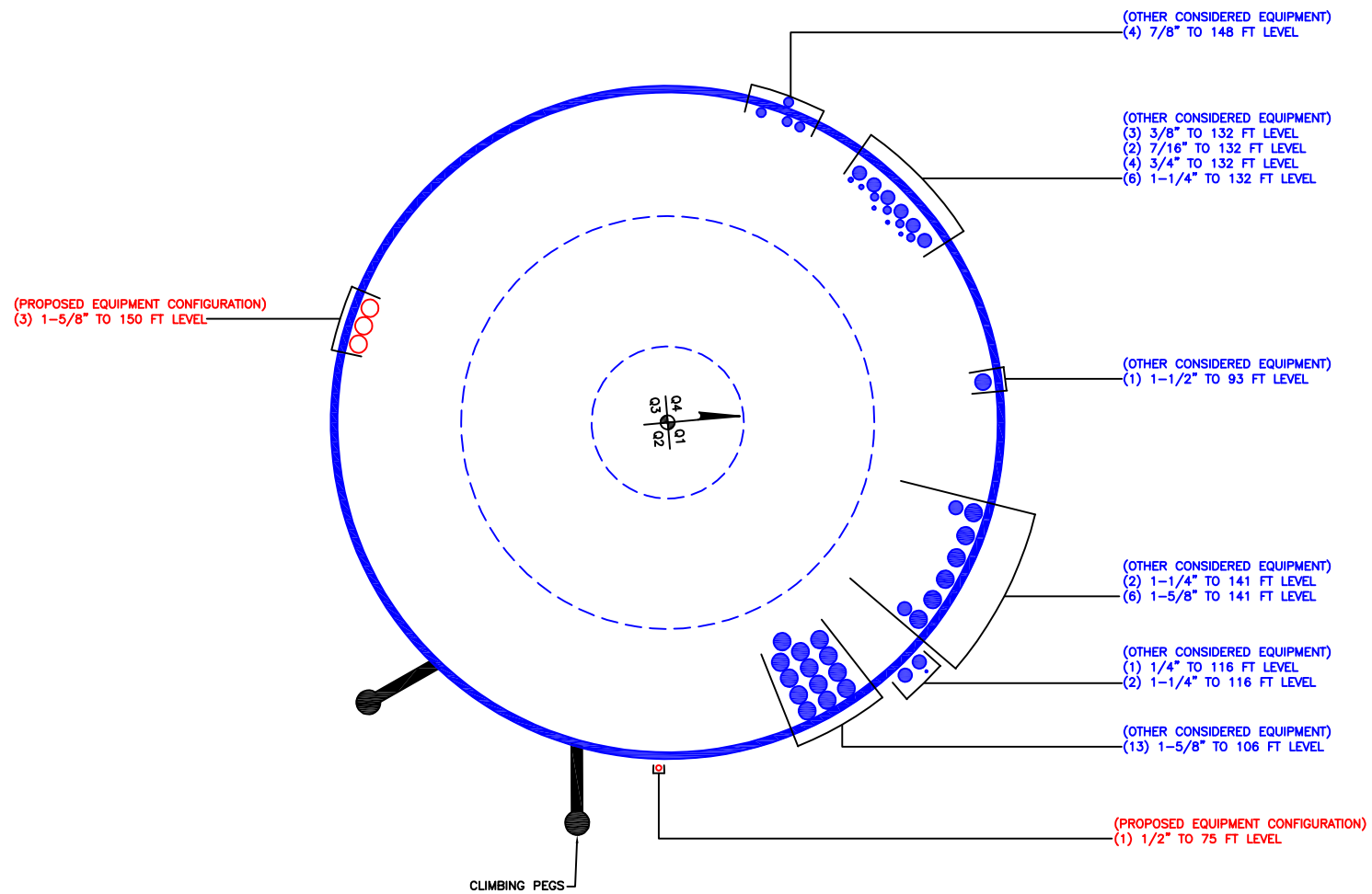
Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	150 - 122.92 (1)	0.014	0.503	0.000	0.069	0.000	0.522	1.050	4.8.2
L2	122.92 - 84.26 (2)	0.011	0.490	0.000	0.041	0.000	0.503	1.050	4.8.2
L3	84.26 - 41.55 (3)	0.011	0.551	0.000	0.030	0.000	0.563	1.050	4.8.2
L4	41.55 - 0 (4)	0.012	0.525	0.000	0.023	0.000	0.538	1.050	4.8.2

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP _{allow} K	% Capacity	Pass Fail
L1	150 - 122.92	Pole	TP28.83x21x0.1875	1	-13.34	1002.97	49.7	Pass
L2	122.92 - 84.26	Pole	TP39.51x27.2493x0.375	2	-29.72	2746.10	47.9	Pass
L3	84.26 - 41.55	Pole	TP50.99x37.1855x0.4375	3	-43.58	4143.17	53.6	Pass
L4	41.55 - 0	Pole	TP62x48.1364x0.5	4	-65.85	5995.11	51.2	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
							Summary	
							Pole (L3)	Pass
							RATING = 53.6	Pass

APPENDIX B
BASE LEVEL DRAWING



APPENDIX C

ADDITIONAL CALCULATIONS

Monopole Base Plate Connection

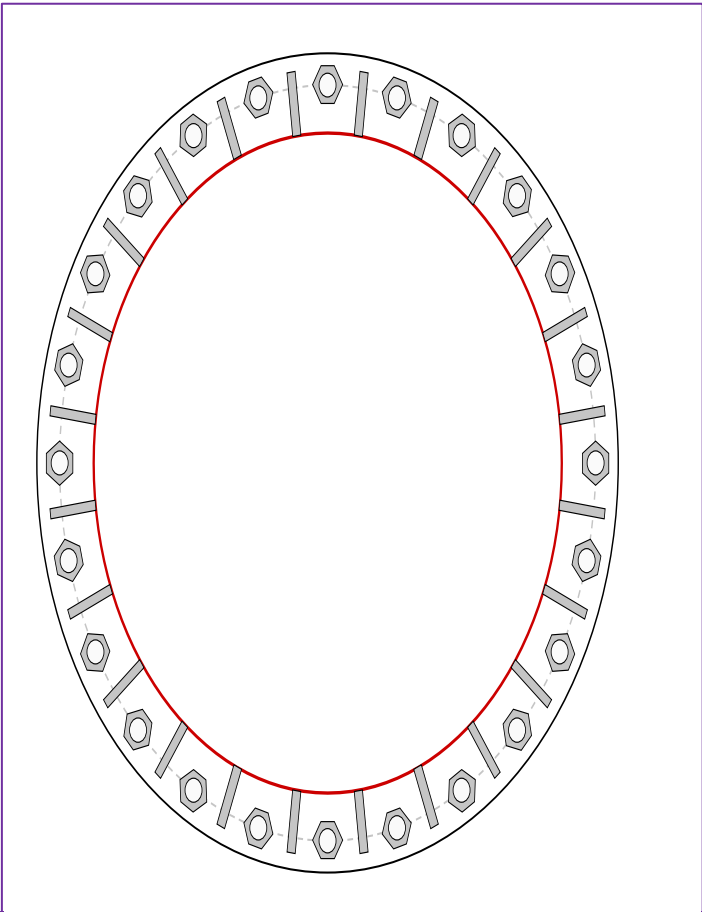


Site Info	
BU #	800515
Site Name	T CHESTER CAC 80051
Order #	557901 Rev.1

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
I_{ar} (in)	0.8125

Applied Loads	
Moment (kip-ft)	4479.99
Axial Force (kips)	65.85
Shear Force (kips)	39.83

*TIA-222-H Section 15.5 Applied



Connection Properties		Analysis Results	
Anchor Rod Data		Anchor Rod Summary <i>(units of kips, kip-in)</i>	
(24) 2-1/4" $\varnothing$ bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 71" BC		P_{u_t} = 123.4	ϕP_{n_t} = 243.75 Stress Rating
Base Plate Data		V_u = 1.66	ϕV_n = 149.1 48.2%
77" OD x 2.25" Plate (A572-60; Fy=60 ksi, Fu=75 ksi)		M_u = n/a	ϕM_n = n/a Pass
Stiffener Data		Base Plate Summary	
(24) 16"H x 6"W x 1"T, Notch: 1"		Max Stress (ksi):	19.96 (Roark's Flexural)
plate: Fy= 65 ksi ; weld: Fy= 70 ksi		Allowable Stress (ksi):	54
horiz. weld: 0.5" groove, 45° dbl bevelFALSE		Stress Rating:	35.2% Pass
vert. weld: 0.5" fillet		Stiffener Summary	
Pole Data		Horizontal Weld:	28.7% Pass
62" x 0.5" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)		Vertical Weld:	26.8% Pass
		Plate Flexure+Shear:	7.1% Pass
		Plate Tension+Shear:	27.8% Pass
		Plate Compression:	29.7% Pass
		Pole Summary	
		Punching Shear:	8.0% Pass

Pier and Pad Foundation



BU # : 800515
 Site Name: CT Chester CAC 80
 App. Number: 557901 Rev.1

TIA-222 Revision: H
 Tower Type: Monopole

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

Superstructure Analysis Reactions		
Compression, P_{comp} :	65.87	kips
Base Shear, Vu_{comp} :	39.79	kips
Moment, M_u :	4479.99	ft-kips
Tower Height, H :	150	ft
BP Dist. Above Fdn, bp_{dist} :	5.25	in

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, $dpier$:	7.5	ft
Ext. Above Grade, E :	0.5	ft
Pier Rebar Size, Sc :	8	
Pier Rebar Quantity, mc :	51	
Pier Tie/Spiral Size, St :	4	
Pier Tie/Spiral Quantity, mt :	8	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier} :	3	in

Pad Properties		
Depth, D :	5.17	ft
Pad Width, W_1 :	28	ft
Pad Thickness, T :	3	ft
Pad Rebar Size (Top dir.2), Sp_{top2} :	8	
Pad Rebar Quantity (Top dir. 2), mp_{top2} :	24	
Pad Rebar Size (Bottom dir. 2), Sp_2 :	8	
Pad Rebar Quantity (Bottom dir. 2), mp_2 :	49	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, F_y :	60	ksi
Concrete Compressive Strength, F'_c :	4	ksi
Dry Concrete Density, δ_c :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	165	pcf
Ultimate Gross Bearing, Q_{ult} :	40.000	ksf
Cohesion, C_u :	0.000	ksf
Friction Angle, ϕ :	30	degrees
SPT Blow Count, N_{blows} :		
Base Friction, μ :		
Neglected Depth, N :	3.75	ft
Foundation Bearing on Rock?	Yes	
Groundwater Depth, gw :	N/A	ft

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	235.42	39.79	16.1%	Pass
Bearing Pressure (ksf)	30.00	3.00	10.0%	Pass
Overturning (kip*ft)	8411.26	4723.01	56.2%	Pass
Pier Flexure (Comp.) (kip*ft)	7070.03	4586.23	61.8%	Pass
Pier Compression (kip)	28118.83	87.10	0.3%	Pass
Pad Flexure (kip*ft)	5310.07	1725.68	31.0%	Pass
Pad Shear - 1-way (kips)	1004.09	240.31	22.8%	Pass
Pad Shear - 2-way (Comp) (ksi)	0.190	0.041	20.7%	Pass
Flexural 2-way (Comp) (kip*ft)	4656.54	2751.74	56.3%	Pass

*Rating per TIA-222-H Section 15.5

Structural Rating*:	61.8%
Soil Rating*:	56.2%

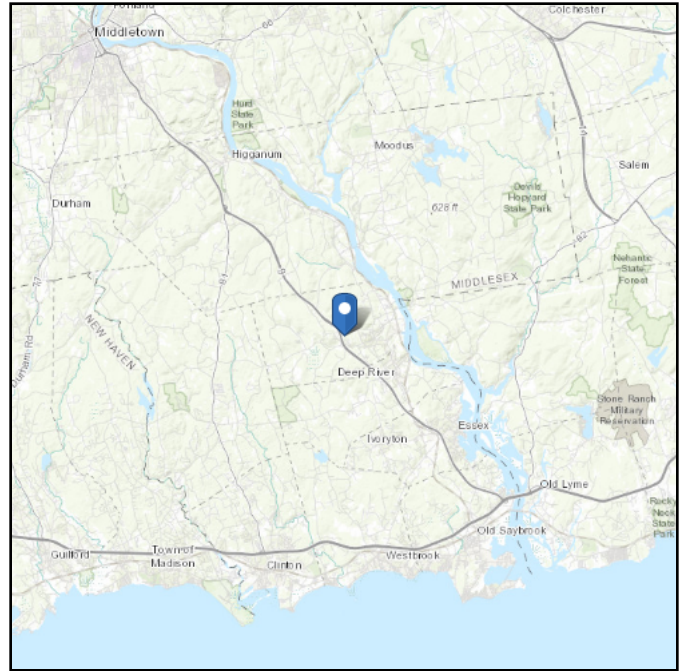
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ASCE 7 Hazards Report

Address:
No Address at This
Location

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

Elevation: 356.21 ft (NAVD 88)
Latitude: 41.403869
Longitude: -72.47245



Wind

Results:

Wind Speed:	129 Vmph
10-year MRI	78 Vmph
25-year MRI	88 Vmph
50-year MRI	96 Vmph
100-year MRI	105 Vmph

130 mph from "Appendix N Municipality - Specific Structural Design Parameters" of the 2018 Connecticut State Building Code

Data Sources: ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, and Section 26.5.2, incorporating errata of March 12, 2014

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).

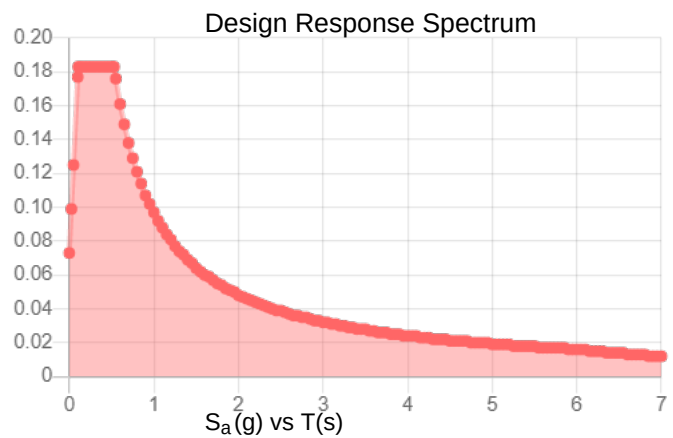
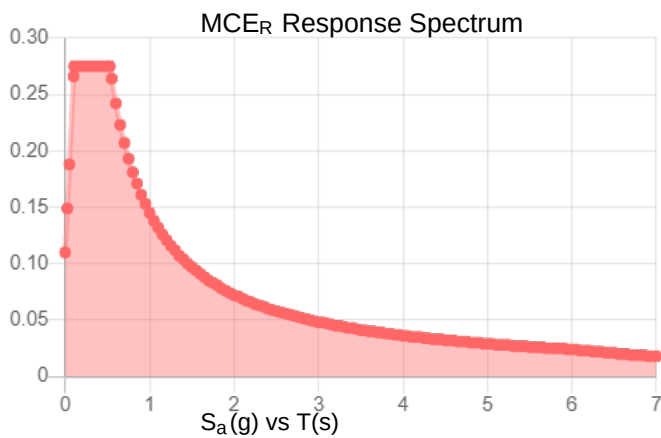
Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class: D - Stiff Soil

Results:

S_S :	0.172	S_{DS} :	0.183
S_1 :	0.06	S_{D1} :	0.097
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.087
S_{MS} :	0.275	PGA_M :	0.139
S_{M1} :	0.145	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Tue Aug 31 2021

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: Tue Aug 31 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 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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Date: August 26, 2021



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

Subject:	Mount Analysis Report	
Carrier Designation:	T-Mobile Equipment Change-Out	
	Carrier Site Number:	CTHA402A
	Carrier Site Name:	CT03XC163
Crown Castle Designation:	Crown Castle BU Number:	800515
	Crown Castle Site Name:	CT Chester CAC 800515
	Crown Castle JDE Job Number:	650684
	Crown Castle Order Number:	557901, Rev.1
Engineering Firm Designation:	B+T Group Report Designation:	136092.006.01
Site Data:	49 Wig Hill Road, Chester, CT, Middlesex, 06412 Latitude 41° 24' 13.93" Longitude -72° 28' 20.82"	
Structure Information:	Tower Height & Type:	150 ft. Monopole
	Mount Elevation:	150 ft.
	Mount Type:	10.5 ft. Platform Mount

Dear Ms. Tarr,

B+T Group is pleased to submit this **"Mount Analysis Report"** to determine the structural integrity of T-Mobile's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned 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's stress level. Based on our analysis we have determined the stress level to be:

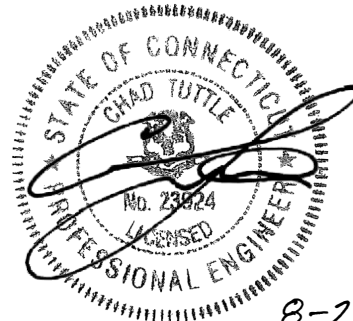
Platform Mount

Sufficient

This analysis utilizes an ultimate 3-second gust wind speed of 130 mph as required by the 2018 Connecticut State Building Code (2015 IBC). Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount structural analysis prepared by: Erik Perez

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



8-26-21

Chad E. Tuttle, P.E.

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8) APPENDIX D

Additional Calculations

1) INTRODUCTION

This is an existing 3- Sector 10.5' Platform Mount mapped by B+T Group.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	130 mph
Exposure Category:	B
Topographic Factor at Base:	1
Topographic Factor at Mount:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.172
Seismic S_1:	0.06
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb
Man Live Load at Mount Pipes:	500 lb

Table 1 - Proposed and Existing Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Qty.	Manufacturer	Model / Type	Mount / Modification Details
150	150	3	Ericsson	AIR6449 B41 T-MOBILE	10.5 ft. Platform Mount
		3	RFS	APXVAALL24 43-UNA20 TMO	
		3	Ericsson	RADIO 4460 B2/B25 B66 TMO	
		3	Ericsson	Radio 4480 TMOV2	
75	75	1	GPS	GPS_A	-

Table 2 - Documents Provided

Document	Remarks	Reference	Source
CCI Order	Existing Loading Proposed Loading	Date: 04/21/2021	Crown Castle
RFDS		Date: 07/09/2021	
Mount Mapping	B+T Group	Date: 05/04/2021	On File
Previous MA		Date: 05/18/2021	

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 19.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed by B+T Group, was used to calculate wind loading on all appurtenances, dishes and mount members for various loading cases. Selected output from the analysis is included in Appendix B "Software Input Calculations".

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis* (Revision D). In addition, this analysis is in accordance with NSTD-445 Antenna Mounting System Classification Standard.

3.2) Assumptions

1. The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design, TIA Standards, and/or manufacturer's specifications.
2. The configuration of antennas, mounts, and other appurtenances are as specified in Table-1.
3. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected members unless otherwise specified in this report.
4. Mount areas and weights are determined from field measurements, standard material properties, and/or manufacturer product data.

The following assumptions have been included in the analysis of the mount

Component	Section	Length	Note
Antenna Mounting Pipes	2" Std. Pipe	9'-0"	Positions 1, All Sector
Omni Pipe Support Tube	HSS5X5X4	3.96', 4.6', 4.52', 4.18'	-

5. Serviceability with respect to antenna twist, tilt, roll or lateral translation is not checked and is left to the carrier or tower owner to ensure conformance.
6. All prior structural modifications, if any are assumed to be correctly installed and fully effective.
7. The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
8. The following material grades were assumed (Unless Noted Otherwise):
 - (a) Connection Bolts : ASTM A325
 - (b) Steel Pipe : ASTM A53 (GR. 35)
 - (c) HSS (Round) : ASTM 500 (GR. B-42)
 - (d) HSS (Rectangular) : ASTM 500 (GR. B-46)
 - (e) Channel : ASTM A36 (GR. 36)
 - (f) Steel Solid Rod : ASTM A36 (GR. 36)
 - (g) Steel Plate : ASTM A36 (GR. 36)
 - (h) Steel Angle : ASTM A36 (GR. 36)
 - (i) UNISTRUT : ASTM A570 (GR. 33)

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 antenna mounting system.

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Platform Mount)

Notes	Component	Centerline (ft)	Critical Member	% Capacity	Pass / Fail
1,2	Main Horizontals	150	118	65.4	Pass
	Support Rails	150	22	66.4	Pass
	Verticals	150	38	98.7	Pass
	Diagonals	150	111	57.2	Pass
	Horizontal Angles	150	39	15.5	Pass
	Support Channels	150	1	71.8	Pass
	Mount Pipes	150	43	96.2	Pass
3	Connection Bolts	150	--	73.1	Pass

Structure Rating (max from all components) =	98.7%
---	--------------

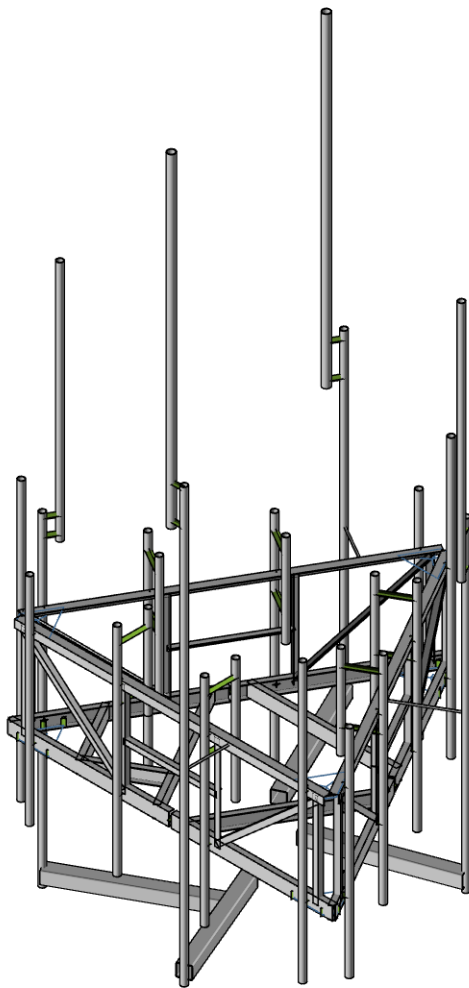
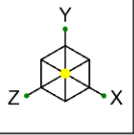
Notes:

- 1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) All sectors are typical
- 3) See additional documentation in "Appendix D - Additional Calculations" for calculations supporting the % capacity reported.

4.1) Recommendations

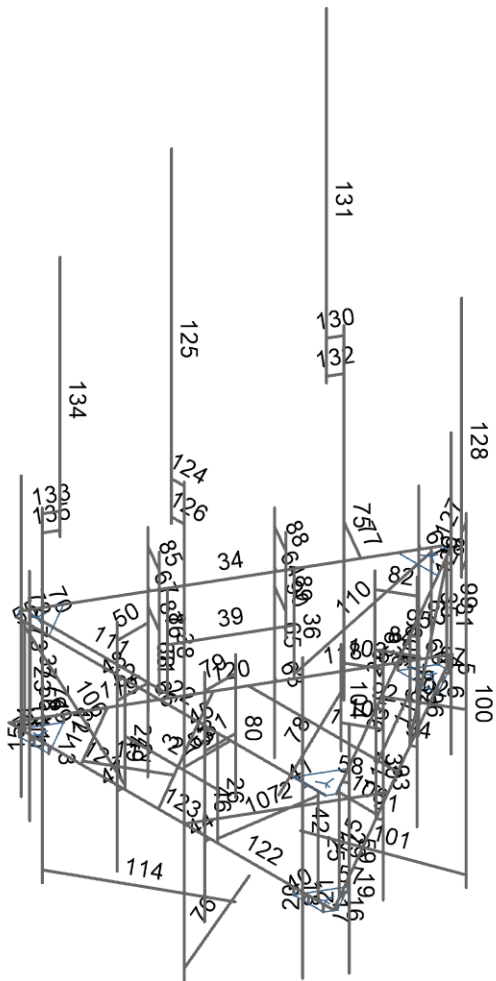
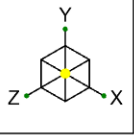
The mount has sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

B+T Group	800515 - CT Chester CAC 800515	AK1
AK		Aug 26, 2021
136092.006.01		136092_006_01_CT Chester CAC...

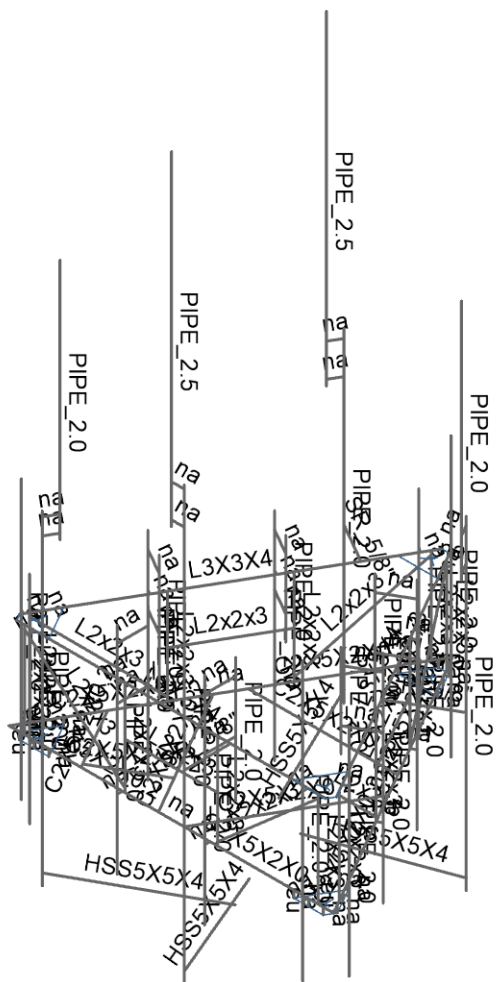


Envelope Only Solution

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AK
136092.006.01

800515 - CT Chester CAC 800515

AK2
Aug 26, 2021
136092_006_01_CT Chester CAC...



Envelope Only Solution

B+T Group

AK

136092.006.01

800515 - CT Chester CAC 800515

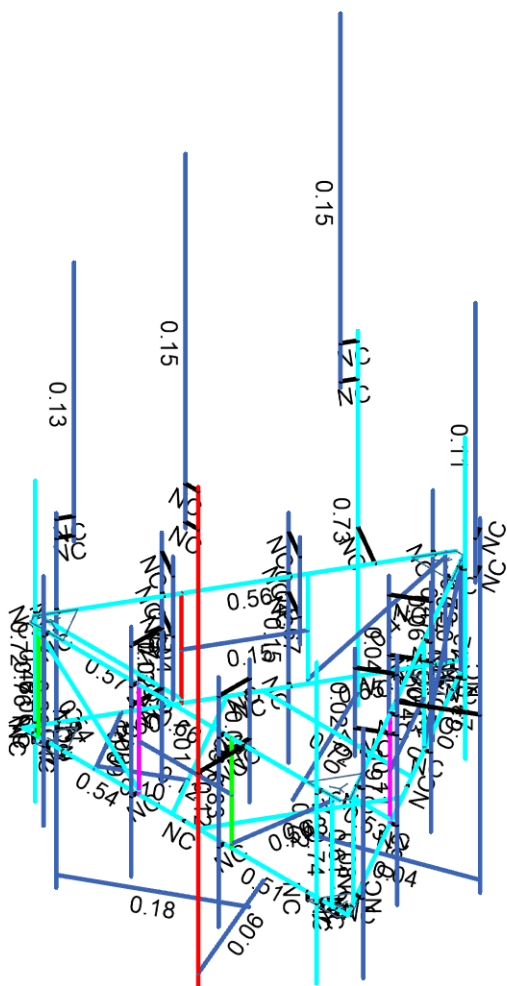
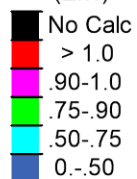
AK3

Aug 26, 2021

136092_006_01_CT Chester CAC...



Code Check
(Env)



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group

AK

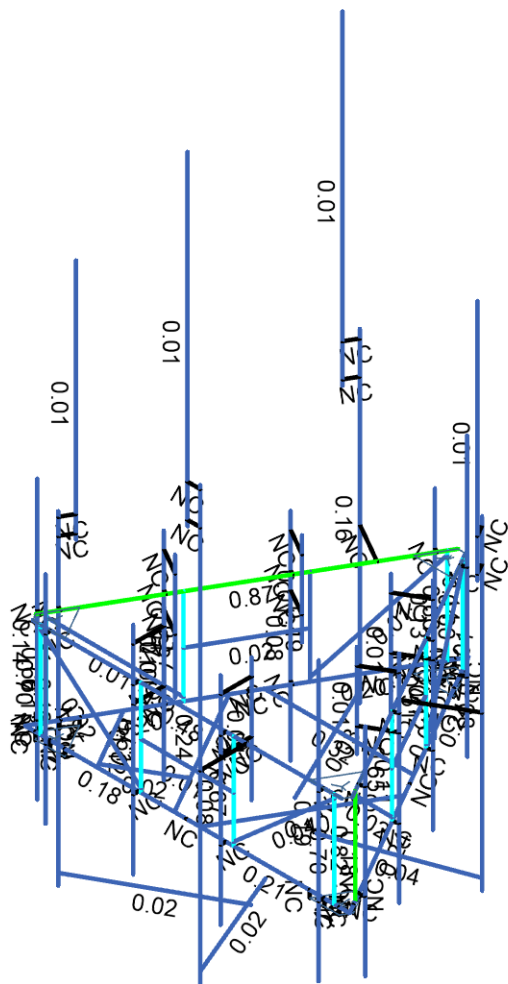
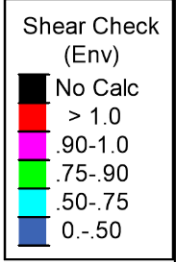
136092.006.01

800515 - CT Chester CAC 800515

AK4

Aug 26, 2021

136092_006_01_CT Chester CAC...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	800515 - CT Chester CAC 800515	AK5
AK		Aug 26, 2021
136092.006.01		136092_006_01_CT Chester CAC...

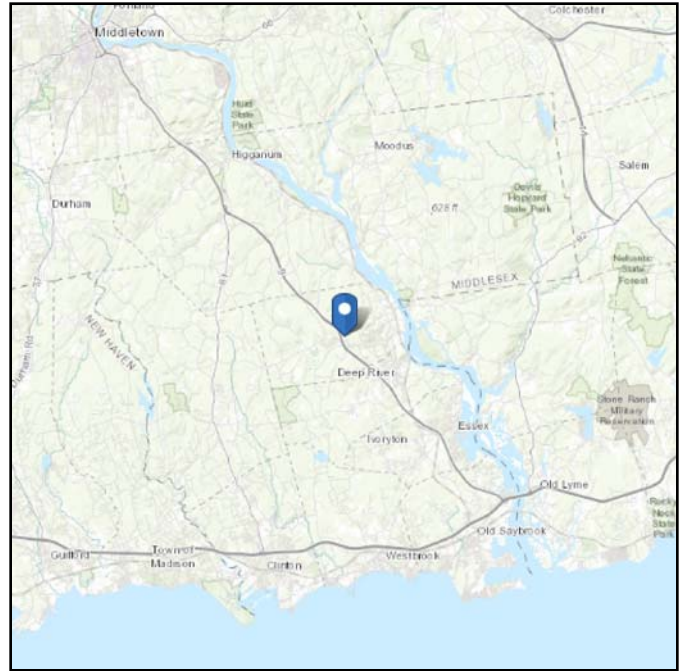
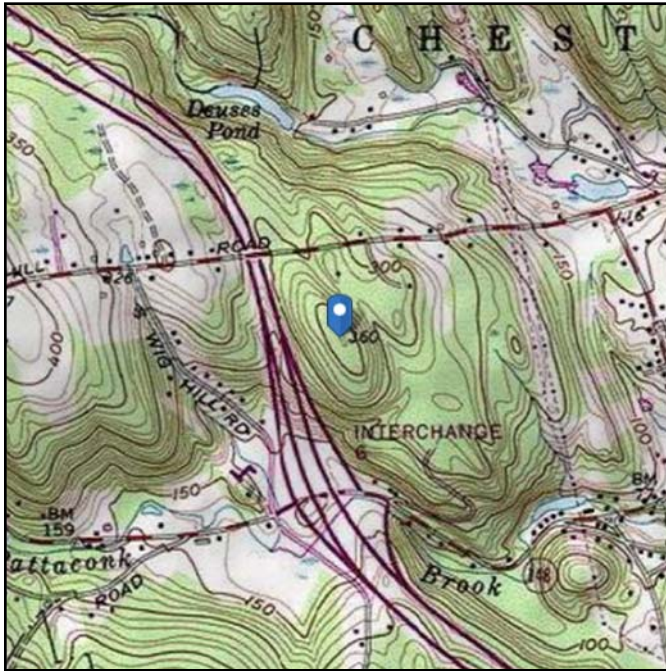
APPENDIX B
SOFTWARE INPUT CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This
Location

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

Elevation: 356.21 ft (NAVD 88)
Latitude: 41.403869
Longitude: -72.47245

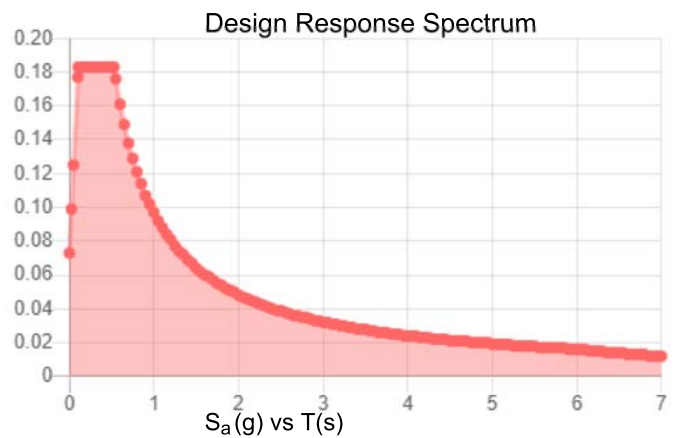
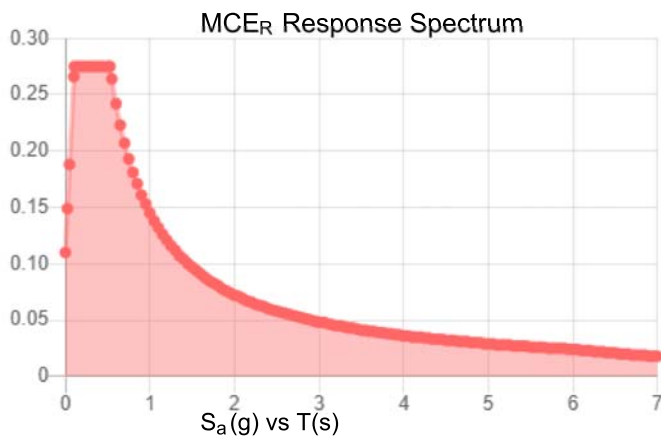


Site Soil Class: D - Stiff Soil

Results:

S_s :	0.172	S_{DS} :	0.183
S_1 :	0.06	S_{D1} :	0.097
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.087
S_{MS} :	0.275	PGA _M :	0.139
S_{M1} :	0.145	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Thu Aug 26 2021

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: Thu Aug 26 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 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.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

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.

PROJECT	136092.006.01 - CT Chester C		KSC
SUBJECT	Platform Mount Analysis		
DATE	08/26/21	PAGE	OF



B+T GRP
 1717 S. Boulder, Suite 300
 Tulsa, OK 74159
 (918) 587-4630

Tower Type	:	Monopole	
Ground Elevation	Z_s	356	ft [ASCE7 Hazard Tool]
Tower Height	:	150.00	ft
Mount Elevation	:	150.00	ft
Antenna Elevation	:	150.00	ft
Crest Height	:	0	ft
Risk Category	:	II	[Table 2-1]
Exposure Category	:	B	[Sec. 2.6.5.1.2]
Topography Category	:	1.00	[Sec. 2.6.6.2]
Wind Velocity	V	130	mph [ASCE7 Hazard Tool]
Ice wind Velocity	V_i	50	mph [ASCE7 Hazard Tool]
Service Velocity	V_s	30	mph [ASCE7 Hazard Tool]
Base Ice thickness	t_i	1.50	in [ASCE7 Hazard Tool]
Seismic Design Cat.	:	B	[ASCE7 Hazard Tool]
	S_S	0.17	
	S_1	0.06	
	S_{DS}	0.18	
	S_{D1}	0.10	
Gust Factor	G_h	1.00	[Sec. 16.6]
Pressure Coefficient	K_z	1.11	[Sec. 2.6.5.2]
Topography Factor	K_{zt}	1.00	[Sec. 2.6.6]
Elevation Factor	K_e	0.99	[Sec. 2.6.8]
Directionality Factor	K_d	0.95	[Sec. 16.6]
Shielding Factor	K_a	0.90	[Sec. 16.6]
Design Ice Thickness	t_{iz}	1.75	in [Sec. 2.6.10]
Importance Factor	I_e	1	[Table 2-3]
Response Coefficient	C_s	0.092	[Sec. 2.7.7.1]
Amplification	A_s	3	[Sec. 16.7]
	q_z	45.02	psf

PROJECT	136092.006.01 - CT Chester C		KSC
SUBJECT	Platform Mount Analysis		
DATE	08/26/21	PAGE	OF



Manufacturer	Model	Qty	Aspect Ratio	C _a flat/round	EPA _N (ft ²)	EPA _T (ft ²)	EPA _{N-Ice} (ft ²)	EPA _{T-Ice} (ft ²)	F _A No Ice (N)	F _A No Ice (T)	F _A Ice (N)	F _A Ice (T)
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	0.5	4.00	1.27	7.34	2.66	8.51	3.69	0.33	0.12	0.06	0.02
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	0.5	4.00	1.27	7.34	2.66	8.51	3.69	0.33	0.12	0.06	0.02
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.64	1.02	3.30	1.53	0.12	0.05	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.64	1.02	3.30	1.53	0.12	0.05	0.02	0.01
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	0.5	4.00	1.27	7.34	2.66	8.51	3.69	0.33	0.12	0.06	0.02
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	0.5	4.00	1.27	7.34	2.66	8.51	3.69	0.33	0.12	0.06	0.02
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.64	1.02	3.30	1.53	0.12	0.05	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.64	1.02	3.30	1.53	0.12	0.05	0.02	0.01
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	0.5	4.00	1.27	7.34	2.66	8.51	3.69	0.33	0.12	0.06	0.02
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	0.5	4.00	1.27	7.34	2.66	8.51	3.69	0.33	0.12	0.06	0.02
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.64	1.02	3.30	1.53	0.12	0.05	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.64	1.02	3.30	1.53	0.12	0.05	0.02	0.01

PROJECT	136092.006.01 - CT Chester C			KSC
SUBJECT	Platform Mount Analysis			
DATE	08/26/21	PAGE	3	OF



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[illegible]

APPENDIX C
SOFTWARE ANALYSIS OUTPUT

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	1	0	0	0	
2	2	-2.416667	0	-1.876388	
3	3	2.416667	0	-1.876388	
4	4	2.833333	0	-1.154701	
5	5	0.416667	0	3.031089	
6	6	-0.416667	0	3.031089	
7	7	-2.833333	0	-1.154701	
8	8	-0.166667	0	-5.773503	
9	9	0.166667	0	-5.773503	
10	10	0.645833	0	-4.943562	
11	11	-0.645833	0	-4.943562	
12	12	0.166667	-0.224166	-5.773503	
13	13	0.645833	-0.224166	-4.943562	
14	14	-0.166667	-0.224166	-5.773503	
15	15	-0.645833	-0.224166	-4.943562	
16	16	0.40625	-0.224166	-5.358532	
17	17	0.40625	0	-5.358532	
18	18	-0.40625	-0.224166	-5.358532	
19	19	-0.40625	0	-5.358532	
20	20	-4.916667	0	3.031089	
21	21	-4.604167	0	1.912473	
22	22	-3.958334	0	3.031089	
23	23	-5.083333	-0.224166	2.742414	
24	24	-4.604167	-0.224166	1.912473	
25	25	-4.916667	-0.224166	3.031089	
26	26	-3.958334	-0.224166	3.031089	
27	27	-4.84375	-0.224166	2.327444	
28	28	-4.84375	0	2.327444	
29	29	-4.4375	-0.224166	3.031089	
30	30	-4.4375	0	3.031089	
31	31	5.083333	0	2.742414	
32	32	4.916667	0	3.031089	
33	33	3.958334	0	3.031089	
34	34	4.604167	0	1.912473	
35	35	4.916667	-0.224166	3.031089	
36	36	3.958334	-0.224166	3.031089	
37	37	5.083333	-0.224166	2.742414	
38	38	4.604167	-0.224166	1.912473	
39	39	4.4375	-0.224166	3.031089	
40	40	4.4375	0	3.031089	
41	41	4.84375	-0.224166	2.327444	
42	42	4.84375	0	2.327444	
43	43	-4.75	3.083333	3.031089	
44	44	-4.75	0	3.031089	
45	45	-1.5	3.083333	3.031089	
46	46	-1.5	0	3.031089	
47	47	4.75	3.083333	3.031089	
48	48	4.75	0	3.031089	
49	49	1.5	3.083333	3.031089	
50	50	1.5	0	3.031089	
51	51	-1.5	1.5	3.031089	
52	52	1.5	1.5	3.031089	
53	53	5	3.083333	2.598076	
54	54	5	0	2.598076	
55	55	0.25	3.083333	-5.629165	
56	56	0.25	0	-5.629165	
57	57	3.375	1.5	-0.216506	
58	58	1.875	1.5	-2.814583	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
59	59	-0.25	3.083333	-5.629165	
60	60	-0.25	-0.	-5.629165	
61	61	-1.875	3.083333	-2.814583	
62	62	-1.875	-0.	-2.814583	
63	63	-5	3.083333	2.598076	
64	64	-5	-0.	2.598076	
65	65	-3.375	3.083333	-0.216506	
66	66	-3.375	-0.	-0.216506	
67	67	-1.875	1.5	-2.814583	
68	68	-3.375	1.5	-0.216506	
69	69	-0.645833	3.083333	-4.943562	
70	70	0.645833	3.083333	-4.943562	
71	71	-0.125	3.083333	-5.845671	
72	72	0.125	3.083333	-5.845671	
73	73	-4.273905	3.083333	3.031089	
74	74	-4.761952	3.083333	2.185766	
75	75	-5	3.083333	3.031089	
76	76	-5.125	3.083333	2.814583	
77	77	4.761952	3.083333	2.185766	
78	78	4.273905	3.083333	3.031089	
79	79	5.125	3.083333	2.814583	
80	80	5	3.083333	3.031089	
81	81	4.416667	0	3.031089	
82	82	4.416667	0	3.200455	
83	83	4.416667	3.083333	3.031089	
84	84	4.416667	3.083333	3.200455	
85	85	4.416667	6.75	3.200455	
86	86	4.416667	-2.25	3.200455	
87	87	1.916667	11.083333	4.531089	
88	88	1.916667	-2.916667	4.531089	
89	89	1.25	0	3.031089	
90	90	1.25	0	3.200455	
91	91	1.25	3.083333	3.031089	
92	92	1.25	3.083333	3.200455	
93	93	1.25	4.75	3.200455	
94	94	1.25	-2.25	3.200455	
95	95	-1.583333	0	3.031089	
96	96	-1.583333	0	3.200455	
97	97	-1.583333	3.083333	3.031089	
98	98	-1.583333	3.083333	3.200455	
99	99	-1.583333	4.75	3.200455	
100	100	-1.583333	-2.25	3.200455	
101	101	-1.583333	4.223486	3.200455	
102	102	-1.583333	4.223486	2.200455	
103	103	-1.583333	4.75	2.200455	
104	104	-1.583333	1.75	2.200455	
105	105	-1.583333	2.536604	3.200455	
106	106	-1.583333	2.536604	2.200455	
107	107	1.916667	3.083333	3.031089	
108	108	1.916667	3.083333	4.531089	
109	109	-4.416667	0	3.031089	
110	110	-4.416667	0	3.200455	
111	111	-4.416667	3.083333	3.031089	
112	112	-4.416667	3.083333	3.200455	
113	113	-4.416667	4.75	3.200455	
114	114	-4.416667	-2.25	3.200455	
115	115	4.875	0	2.38157	
116	116	5.021675	0	2.296887	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
117	117	4.875	3.083333	2.38157	
118	118	5.021675	3.083333	2.296887	
119	119	5.021675	4.75	2.296887	
120	120	5.021675	-2.25	2.296887	
121	121	-0.375	-0.	-5.412659	
122	122	-0.521675	-0.	-5.497342	
123	123	-0.375	3.083333	-5.412659	
124	124	-0.521675	3.083333	-5.497342	
125	125	-0.521675	4.75	-5.497342	
126	126	-0.521675	-2.25	-5.497342	
127	127	-2.083333	-0.	-2.453739	
128	128	-2.230009	-0.	-2.538422	
129	129	-2.083333	3.083333	-2.453739	
130	130	-2.230009	3.083333	-2.538422	
131	131	-2.230009	4.75	-2.538422	
132	132	-2.230009	-2.25	-2.538422	
133	133	-3.583333	0.	0.144338	
134	134	-3.730009	0.	0.059655	
135	135	-3.583333	3.083333	0.144338	
136	136	-3.730009	3.083333	0.059655	
137	137	-3.730009	4.75	0.059655	
138	138	-3.730009	-2.25	0.059655	
139	139	-4.833333	0.	2.309401	
140	140	-4.980009	0.	2.224718	
141	141	-4.833333	3.083333	2.309401	
142	142	-4.980009	3.083333	2.224718	
143	143	-5.083333	0.	2.742414	
144	144	-5.230009	0.	2.657731	
145	145	-5.083333	3.083333	2.742414	
146	146	-5.230009	3.083333	2.657731	
147	147	-5.230009	6.75	2.657731	
148	148	-5.230009	-2.25	2.657731	
149	149	-4.980009	5.75	2.224718	
150	150	-4.980009	-4.75	2.224718	
151	151	-2.382371	8.583333	-4.935789	
152	152	-2.382371	-1.916667	-4.935789	
153	153	1.916667	-2.553104	4.531089	
154	154	0.37335	-2.553104	0.882617	
155	155	-1.083333	3.083333	-4.185789	
156	156	-2.382371	3.083333	-4.935789	
157	157	-2.382371	-1.553104	-4.935789	
158	158	1.916667	10.969974	4.531089	
159	159	1.916667	9.901313	4.531089	
160	160	4.857051	8.325448	-1.649519	
161	161	4.857051	7.256786	-1.649519	
162	162	-2.382371	8.307964	-4.935789	
163	163	-2.382371	7.239303	-4.935789	
164	164	1.25	4.223486	3.200455	
165	165	1.25	4.223486	2.200455	
166	166	1.25	4.75	2.200455	
167	167	1.25	0.75	2.200455	
168	168	1.25	2.536604	3.200455	
169	169	1.25	2.536604	2.200455	
170	170	2.021675	4.223486	-2.899266	
171	171	1.15565	4.223486	-2.399266	
172	172	1.15565	4.75	-2.399266	
173	173	1.15565	0.75	-2.399266	
174	174	2.021675	2.536604	-2.899266	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
175	175	1.15565	2.536604	-2.399266	
176	176	-3.730009	4.223486	0.059655	
177	177	-2.863983	4.223486	0.559655	
178	178	-2.863983	4.75	0.559655	
179	179	-2.863983	0.75	0.559655	
180	180	-3.730009	2.536604	0.059655	
181	181	-2.863983	2.536604	0.559655	
182	182	-2.230009	4.223486	-2.538422	
183	183	-1.363983	4.223486	-2.038422	
184	184	-1.363983	4.75	-2.038422	
185	185	-1.363983	1.75	-2.038422	
186	186	-2.230009	2.536604	-2.538422	
187	187	-1.363983	2.536604	-2.038422	
188	188	-4.980009	5.590426	2.224718	
189	189	-4.980009	5.053559	2.224718	
190	190	3.375	0	-0.216506	
191	191	3.521675	0	-0.301189	
192	192	3.375	3.083333	-0.216506	
193	193	3.521675	3.083333	-0.301189	
194	194	3.521675	4.75	-0.301189	
195	195	3.521675	-2.25	-0.301189	
196	196	1.875	0.	-2.814583	
197	197	2.021675	0.	-2.899266	
198	198	1.875	3.083333	-2.814583	
199	199	2.021675	3.083333	-2.899266	
200	200	2.021675	4.75	-2.899266	
201	201	2.021675	-2.25	-2.899266	
202	202	0.375	0.	-5.412659	
203	203	0.521675	0.	-5.497342	
204	204	0.375	3.083333	-5.412659	
205	205	0.521675	3.083333	-5.497342	
206	206	0.521675	6.75	-5.497342	
207	207	0.521675	-2.25	-5.497342	
208	208	4.857051	8.583333	-1.649519	
209	209	4.857051	-1.916667	-1.649519	
210	210	4.857051	-1.553104	-1.649519	
211	211	0.935077	-1.553104	-0.209842	
212	212	3.125	3.083333	-0.649519	
213	213	4.857051	3.083333	-1.649519	
214	214	3.521675	4.223486	-0.301189	
215	215	2.65565	4.223486	0.198811	
216	216	2.65565	4.75	0.198811	
217	217	2.65565	1.75	0.198811	
218	218	3.521675	2.536604	-0.301189	
219	219	2.65565	2.536604	0.198811	
220	220	-4.75	2.958333	3.031089	
221	221	-1.5	0.125	3.031089	
222	222	4.75	2.958333	3.031089	
223	223	1.5	0.125	3.031089	
224	224	5	2.958333	2.598076	
225	225	3.375	0.125	-0.216506	
226	226	0.25	2.958333	-5.629165	
227	227	1.875	0.125	-2.814583	
228	228	-0.25	2.958333	-5.629165	
229	229	-1.875	0.125	-2.814583	
230	230	-5	2.958333	2.598076	
231	231	-3.375	0.125	-0.216506	
232	232	-1.109207	0.	1.831573	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
233	233	-2.985596	0.	2.914907	
234	234	-2.918518	0.	3.031089	
235	235	-4.084259	0.	1.011966	
236	236	-0.416574	-1.553104	-0.863058	
237	237	-0.958333	-4.393104	0.	
238	238	-4.980009	-4.393104	2.224718	
239	239	2.645834	0	-1.47946	
240	240	2.604169	0	-1.551626	
241	241	-0.	0	-6.062178	
242	242	-2.604167	0	-1.551629	
243	243	-2.645832	0	-1.479463	
244	244	-5.25	0	3.031089	
245	245	5.25	0	3.031089	
246	246	-0.041667	0	3.031089	
247	247	0.041663	0	3.031089	
248	248	3.375	2.536604	-0.216506	
249	249	1.875	2.536604	-2.814583	
250	250	-1.141667	0	1.775352	
251	251	-0.966667	0	-1.876388	
252	252	2.108333	0	0.101036	
253	253	-2.108333	0	0.101036	
254	254	0.966667	0	-1.876388	
255	255	1.141667	0	1.775352	
256	256	-3.384814	0.	2.22344	
257	257	-1.508137	0.	1.13994	
258	258	-0.	0	-1.876388	
259	259	-1.625	0	0.938194	
260	260	1.625	0	0.938194	
261	261	-3.958334	3.083333	3.031089	
262	262	-4.604167	3.083333	1.912473	
263	263	4.604167	3.083333	1.912473	
264	264	3.958334	3.083333	3.031089	
265	265	-0.4167	0	-1.876388	
266	266	0.4166	0	-1.876388	
267	267	-1.41665	0	1.299067	
268	268	-1.8333	0	0.577408	
269	269	1.83335	0	0.577321	
270	270	1.4167	0	1.29898	
271	272	1.500067	10.969974	4.531089	
272	273	1.500067	20.217594	4.531089	
273	274	1.500067	9.717594	4.531089	
274	276	1.500067	9.901313	4.531089	
275	278	5.065351	8.325448	-1.288733	
276	279	5.065351	14.906397	-1.288733	
277	280	5.065351	7.073067	-1.288733	
278	282	5.065351	7.256786	-1.288733	
279	283	-2.590671	8.307964	-4.575003	
280	285	-2.590671	17.555584	-4.575003	
281	286	-2.590671	7.055584	-4.575003	
282	287	-2.590671	7.239303	-4.575003	
283	290	-4.771709	5.590426	1.863932	
284	291	-4.771709	12.704022	1.863932	
285	292	-4.771709	4.870738	1.863932	
286	294	-4.771709	5.053559	1.863932	

Node Boundary Conditions

	Y [k/in]	X Rot [k-ft/rad]	X [k/in]	Z Rot [k-ft/rad]	Z [k/in]	Node Label	Y Rot [k-ft/rad]
1	Reaction	Reaction	Reaction	Reaction	Reaction	237	Reaction
2	Reaction	Reaction	Reaction	Reaction	Reaction	154	Reaction
3	Reaction	Reaction	Reaction	Reaction	Reaction	211	Reaction
4	Reaction	Reaction	Reaction	Reaction	Reaction	236	Reaction
5	Reaction		Reaction		Reaction	258	
6	Reaction		Reaction		Reaction	259	
7	Reaction		Reaction		Reaction	260	
8	Reaction		Reaction		Reaction	265	
9	Reaction		Reaction		Reaction	266	
10	Reaction		Reaction		Reaction	267	
11	Reaction		Reaction		Reaction	268	
12	Reaction		Reaction		Reaction	269	
13	Reaction		Reaction		Reaction	270	

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e°F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	MF-H1	C2X5X2X0.2	Beam	Channel	A36 Gr.36	Typical	1.72	0.616	6.233	0.022
2	MF-H2	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	0.031
3	F1-V1	L2x2x3	Column	Single Angle	A36 Gr.36	Typical	0.722	0.271	0.271	0.009
4	F1-D1	L2x2x3	VBrace	Single Angle	A36 Gr.36	Typical	0.722	0.271	0.271	0.009
5	F1-H1	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	0.722	0.271	0.271	0.009
6	F1-S1	C2X5X2X0.2	Beam	Channel	A36 Gr.36	Typical	1.72	0.616	6.233	0.022
7	MF-P1	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
8	F1-ST1	HSS5X5X4	Beam	Tube	A500 Gr.B Rect	Typical	4.3	16	16	25.8
9	MF-P2	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
10	SR-C1	SR 5/8"	Beam	RECT	A36 Gr.36	Typical	0.307	0.007	0.007	0.015

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	1	2	3	180	F1-S1	Beam	Channel	A36 Gr.36	Typical
2	2	4	5	180	F1-S1	Beam	Channel	A36 Gr.36	Typical
3	3	6	7	180	F1-S1	Beam	Channel	A36 Gr.36	Typical
4	4	8	14		RIGID	None	None	RIGID	Typical
5	5	9	12		RIGID	None	None	RIGID	Typical
6	6	10	13		RIGID	None	None	RIGID	Typical
7	7	11	15		RIGID	None	None	RIGID	Typical
8	8	16	17		RIGID	None	None	RIGID	Typical
9	9	18	19		RIGID	None	None	RIGID	Typical
10	10	20	25		RIGID	None	None	RIGID	Typical
11	11	143	23		RIGID	None	None	RIGID	Typical
12	12	21	24		RIGID	None	None	RIGID	Typical
13	13	22	26		RIGID	None	None	RIGID	Typical
14	14	27	28		RIGID	None	None	RIGID	Typical
15	15	29	30		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
16	16	31	37		RIGID	None	None	RIGID	Typical
17	17	32	35		RIGID	None	None	RIGID	Typical
18	18	33	36		RIGID	None	None	RIGID	Typical
19	19	34	38		RIGID	None	None	RIGID	Typical
20	20	39	40		RIGID	None	None	RIGID	Typical
21	21	41	42		RIGID	None	None	RIGID	Typical
22	22	75	80	180	MF-H2	Beam	Single Angle	A36 Gr.36	Typical
23	23	43	44	90	F1-V1	Column	Single Angle	A36 Gr.36	Typical
24	24	45	46		F1-V1	Column	Single Angle	A36 Gr.36	Typical
25	25	47	48		F1-V1	Column	Single Angle	A36 Gr.36	Typical
26	26	49	50	90	F1-V1	Column	Single Angle	A36 Gr.36	Typical
27	27	51	52	180	F1-H1	Beam	Single Angle	A36 Gr.36	Typical
28	28	79	72	180	MF-H2	Beam	Single Angle	A36 Gr.36	Typical
29	29	53	54	330	F1-V1	Column	Single Angle	A36 Gr.36	Typical
30	30	192	190	240	F1-V1	Column	Single Angle	A36 Gr.36	Typical
31	31	55	56	240	F1-V1	Column	Single Angle	A36 Gr.36	Typical
32	32	198	196	330	F1-V1	Column	Single Angle	A36 Gr.36	Typical
33	33	57	58	180	F1-H1	Beam	Single Angle	A36 Gr.36	Typical
34	34	71	76	180	MF-H2	Beam	Single Angle	A36 Gr.36	Typical
35	35	59	60	210	F1-V1	Column	Single Angle	A36 Gr.36	Typical
36	36	61	62	120	F1-V1	Column	Single Angle	A36 Gr.36	Typical
37	37	63	64	120	F1-V1	Column	Single Angle	A36 Gr.36	Typical
38	38	65	66	210	F1-V1	Column	Single Angle	A36 Gr.36	Typical
39	39	67	68	180	F1-H1	Beam	Single Angle	A36 Gr.36	Typical
40	40	81	82		RIGID	None	None	RIGID	Typical
41	41	83	84		RIGID	None	None	RIGID	Typical
42	42	85	86		MF-P1	Column	Pipe	A53 Gr.B	Typical
43	43	87	88		MF-P1	Column	Pipe	A53 Gr.B	Typical
44	44	89	90		RIGID	None	None	RIGID	Typical
45	45	91	92		RIGID	None	None	RIGID	Typical
46	46	93	94		MF-P1	Column	Pipe	A53 Gr.B	Typical
47	47	95	96		RIGID	None	None	RIGID	Typical
48	48	97	98		RIGID	None	None	RIGID	Typical
49	49	99	100		MF-P1	Column	Pipe	A53 Gr.B	Typical
50	50	101	102		RIGID	None	None	RIGID	Typical
51	51	103	104		MF-P1	Column	Pipe	A53 Gr.B	Typical
52	52	105	106		RIGID	None	None	RIGID	Typical
53	53	107	108		SR-C1	Beam	RECT	A36 Gr.36	Typical
54	54	109	110		RIGID	None	None	RIGID	Typical
55	55	111	112		RIGID	None	None	RIGID	Typical
56	56	113	114		MF-P1	Column	Pipe	A53 Gr.B	Typical
57	57	115	116		RIGID	None	None	RIGID	Typical
58	58	117	118		RIGID	None	None	RIGID	Typical
59	59	119	120		MF-P1	Column	Pipe	A53 Gr.B	Typical
60	60	121	122		RIGID	None	None	RIGID	Typical
61	61	123	124		RIGID	None	None	RIGID	Typical
62	62	125	126		MF-P1	Column	Pipe	A53 Gr.B	Typical
63	63	127	128		RIGID	None	None	RIGID	Typical
64	64	129	130		RIGID	None	None	RIGID	Typical
65	65	131	132		MF-P1	Column	Pipe	A53 Gr.B	Typical
66	66	133	134		RIGID	None	None	RIGID	Typical
67	67	135	136		RIGID	None	None	RIGID	Typical
68	68	137	138		MF-P1	Column	Pipe	A53 Gr.B	Typical
69	69	139	140		RIGID	None	None	RIGID	Typical
70	70	141	142		RIGID	None	None	RIGID	Typical
71	71	143	144		RIGID	None	None	RIGID	Typical
72	72	145	146		RIGID	None	None	RIGID	Typical
73	73	147	148		MF-P1	Column	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
74	74	149	150		MF-P1	Column	Pipe	A53 Gr.B	Typical
75	75	151	152		MF-P1	Column	Pipe	A53 Gr.B	Typical
76	76	153	154		F1-ST1	Beam	Tube	A500 Gr.B Rect	Typical
77	77	155	156		SR-C1	Beam	RECT	A36 Gr.36	Typical
78	78	157	236		F1-ST1	Beam	Tube	A500 Gr.B Rect	Typical
79	79	164	165		RIGID	None	None	RIGID	Typical
80	80	166	167		MF-P1	Column	Pipe	A53 Gr.B	Typical
81	81	168	169		RIGID	None	None	RIGID	Typical
82	82	170	171		RIGID	None	None	RIGID	Typical
83	83	172	173		MF-P1	Column	Pipe	A53 Gr.B	Typical
84	84	174	175		RIGID	None	None	RIGID	Typical
85	85	176	177		RIGID	None	None	RIGID	Typical
86	86	178	179		MF-P1	Column	Pipe	A53 Gr.B	Typical
87	87	180	181		RIGID	None	None	RIGID	Typical
88	88	182	183		RIGID	None	None	RIGID	Typical
89	89	184	185		MF-P1	Column	Pipe	A53 Gr.B	Typical
90	90	186	187		RIGID	None	None	RIGID	Typical
91	91	190	191		RIGID	None	None	RIGID	Typical
92	92	192	193		RIGID	None	None	RIGID	Typical
93	93	194	195		MF-P1	Column	Pipe	A53 Gr.B	Typical
94	94	196	197		RIGID	None	None	RIGID	Typical
95	95	198	199		RIGID	None	None	RIGID	Typical
96	96	200	201		MF-P1	Column	Pipe	A53 Gr.B	Typical
97	97	202	203		RIGID	None	None	RIGID	Typical
98	98	204	205		RIGID	None	None	RIGID	Typical
99	99	206	207		MF-P1	Column	Pipe	A53 Gr.B	Typical
100	100	208	209		MF-P1	Column	Pipe	A53 Gr.B	Typical
101	101	210	211		F1-ST1	Beam	Tube	A500 Gr.B Rect	Typical
102	102	212	213		SR-C1	Beam	RECT	A36 Gr.36	Typical
103	103	214	215		RIGID	None	None	RIGID	Typical
104	104	216	217		MF-P1	Column	Pipe	A53 Gr.B	Typical
105	105	218	219		RIGID	None	None	RIGID	Typical
106	106	220	221	180	F1-D1	VBrace	Single Angle	A36 Gr.36	Typical
107	107	222	223	90	F1-D1	VBrace	Single Angle	A36 Gr.36	Typical
108	108	224	225	180	F1-D1	VBrace	Single Angle	A36 Gr.36	Typical
109	109	226	227	90	F1-D1	VBrace	Single Angle	A36 Gr.36	Typical
110	110	228	229	180	F1-D1	VBrace	Single Angle	A36 Gr.36	Typical
111	111	230	231	90	F1-D1	VBrace	Single Angle	A36 Gr.36	Typical
112	112	232	233	180	F1-S1	Beam	Channel	A36 Gr.36	Typical
113	113	234	235	180	F1-S1	Beam	Channel	A36 Gr.36	Typical
114	114	237	238		F1-ST1	Beam	Tube	A500 Gr.B Rect	Typical
115	115	245	239	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
116	116	240	241	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
117	117	239	240		RIGID	None	None	RIGID	Typical
118	118	241	242	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
119	119	243	244	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
120	120	242	243		RIGID	None	None	RIGID	Typical
121	121	244	246	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
122	122	247	245	180	MF-H1	Beam	Channel	A36 Gr.36	Typical
123	123	246	247		RIGID	None	None	RIGID	Typical
124	124	158	272		RIGID	None	None	RIGID	Typical
125	125	273	274		MF-P2	Column	Pipe	A53 Gr.B	Typical
126	126	159	276		RIGID	None	None	RIGID	Typical
127	127	160	278		RIGID	None	None	RIGID	Typical
128	128	279	280		MF-P1	Column	Pipe	A53 Gr.B	Typical
129	129	161	282		RIGID	None	None	RIGID	Typical
130	130	283	162		RIGID	None	None	RIGID	Typical
131	131	285	286		MF-P2	Column	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
132	132	287	163		RIGID	None	None	RIGID	Typical
133	133	188	290		RIGID	None	None	RIGID	Typical
134	134	291	292		MF-P1	Column	Pipe	A53 Gr.B	Typical
135	135	189	294		RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	Physical	Deflection Ratio Options	Activation	Seismic DR
1	1	Yes	Default		None
2	2	Yes	Default		None
3	3	Yes	Default		None
4	4	Yes	** NA **		None
5	5	Yes	** NA **		None
6	6	Yes	** NA **		None
7	7	Yes	** NA **		None
8	8	Yes	** NA **		None
9	9	Yes	** NA **		None
10	10	Yes	** NA **		None
11	11	Yes	** NA **		None
12	12	Yes	** NA **		None
13	13	Yes	** NA **		None
14	14	Yes	** NA **		None
15	15	Yes	** NA **		None
16	16	Yes	** NA **		None
17	17	Yes	** NA **		None
18	18	Yes	** NA **		None
19	19	Yes	** NA **		None
20	20	Yes	** NA **		None
21	21	Yes	** NA **		None
22	22	Yes	Default		None
23	23	Yes	** NA **		None
24	24	Yes	** NA **		None
25	25	Yes	** NA **		None
26	26	Yes	** NA **		None
27	27	Yes	Default		None
28	28	Yes	Default		None
29	29	Yes	** NA **		None
30	30	Yes	** NA **		None
31	31	Yes	** NA **		None
32	32	Yes	** NA **		None
33	33	Yes	Default		None
34	34	Yes	Default		None
35	35	Yes	** NA **		None
36	36	Yes	** NA **		None
37	37	Yes	** NA **		None
38	38	Yes	** NA **		None
39	39	Yes	Default		None
40	40	Yes	** NA **		None
41	41	Yes	** NA **		None
42	42	Yes	** NA **		None
43	43	Yes	** NA **		None
44	44	Yes	** NA **		None
45	45	Yes	** NA **		None
46	46	Yes	** NA **		None
47	47	Yes	** NA **		None
48	48	Yes	** NA **		None
49	49	Yes	** NA **		None
50	50	Yes	** NA **		None
51	51	Yes	** NA **		None

Member Advanced Data (Continued)

	Label	Physical	Deflection Ratio Options	Activation	Seismic DR
52	52	Yes	** NA **		None
53	53	Yes	Default	Exclude	None
54	54	Yes	** NA **		None
55	55	Yes	** NA **		None
56	56	Yes	** NA **		None
57	57	Yes	** NA **		None
58	58	Yes	** NA **		None
59	59	Yes	** NA **		None
60	60	Yes	** NA **		None
61	61	Yes	** NA **		None
62	62	Yes	** NA **		None
63	63	Yes	** NA **		None
64	64	Yes	** NA **		None
65	65	Yes	** NA **		None
66	66	Yes	** NA **		None
67	67	Yes	** NA **		None
68	68	Yes	** NA **		None
69	69	Yes	** NA **		None
70	70	Yes	** NA **	Exclude	None
71	71	Yes	** NA **		None
72	72	Yes	** NA **		None
73	73	Yes	** NA **		None
74	74	Yes	** NA **		None
75	75	Yes	** NA **		None
76	76	Yes	Default		None
77	77	Yes	Default	Exclude	None
78	78	Yes	Default		None
79	79	Yes	** NA **		None
80	80	Yes	** NA **		None
81	81	Yes	** NA **		None
82	82	Yes	** NA **		None
83	83	Yes	** NA **		None
84	84	Yes	** NA **		None
85	85	Yes	** NA **		None
86	86	Yes	** NA **		None
87	87	Yes	** NA **		None
88	88	Yes	** NA **		None
89	89	Yes	** NA **		None
90	90	Yes	** NA **		None
91	91	Yes	** NA **		None
92	92	Yes	** NA **		None
93	93	Yes	** NA **		None
94	94	Yes	** NA **		None
95	95	Yes	** NA **		None
96	96	Yes	** NA **		None
97	97	Yes	** NA **		None
98	98	Yes	** NA **		None
99	99	Yes	** NA **		None
100	100	Yes	** NA **		None
101	101	Yes	Default		None
102	102	Yes	Default	Exclude	None
103	103	Yes	** NA **		None
104	104	Yes	** NA **		None
105	105	Yes	** NA **		None
106	106	Yes	** NA **		None
107	107	Yes	** NA **		None
108	108	Yes	** NA **		None
109	109	Yes	** NA **		None

Member Advanced Data (Continued)

	Label	Physical	Deflection Ratio Options	Activation	Seismic DR
110	110	Yes	** NA **		None
111	111	Yes	** NA **		None
112	112	Yes	Default		None
113	113	Yes	Default		None
114	114	Yes	Default		None
115	115	Yes	Default		None
116	116	Yes	Default		None
117	117	Yes	** NA **		None
118	118	Yes	Default		None
119	119	Yes	Default		None
120	120	Yes	** NA **		None
121	121	Yes	Default		None
122	122	Yes	Default		None
123	123	Yes	** NA **		None
124	124	Yes	** NA **		None
125	125	Yes	** NA **		None
126	126	Yes	** NA **		None
127	127	Yes	** NA **		None
128	128	Yes	** NA **		None
129	129	Yes	** NA **		None
130	130	Yes	** NA **		None
131	131	Yes	** NA **		None
132	132	Yes	** NA **		None
133	133	Yes	** NA **		None
134	134	Yes	** NA **		None
135	135	Yes	** NA **		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
1	1	F1-S1	4.833	Lbyy	Lateral
2	2	F1-S1	4.833	Lbyy	Lateral
3	3	F1-S1	4.833	Lbyy	Lateral
4	22	MF-H2	10	Lbyy	Lateral
5	23	F1-V1	3.083	Lbyy	Lateral
6	24	F1-V1	3.083	Lbyy	Lateral
7	25	F1-V1	3.083	Lbyy	Lateral
8	26	F1-V1	3.083	Lbyy	Lateral
9	27	F1-H1	3	Lbyy	Lateral
10	28	MF-H2	10	Lbyy	Lateral
11	29	F1-V1	3.083	Lbyy	Lateral
12	30	F1-V1	3.083	Lbyy	Lateral
13	31	F1-V1	3.083	Lbyy	Lateral
14	32	F1-V1	3.083	Lbyy	Lateral
15	33	F1-H1	3	Lbyy	Lateral
16	34	MF-H2	10	Lbyy	Lateral
17	35	F1-V1	3.083	Lbyy	Lateral
18	36	F1-V1	3.083	Lbyy	Lateral
19	37	F1-V1	3.083	Lbyy	Lateral
20	38	F1-V1	3.083	Lbyy	Lateral
21	39	F1-H1	3	Lbyy	Lateral
22	42	MF-P1	9	Lbyy	Lateral
23	43	MF-P1	14	Lbyy	Lateral
24	46	MF-P1	7	Lbyy	Lateral
25	49	MF-P1	7	Lbyy	Lateral
26	51	MF-P1	3	Lbyy	Lateral
27	53	SR-C1	1.5	Lbyy	Lateral
28	56	MF-P1	7	Lbyy	Lateral
29	59	MF-P1	7	Lbyy	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
30	62	MF-P1	7	Lbyy	Lateral
31	65	MF-P1	7	Lbyy	Lateral
32	68	MF-P1	7	Lbyy	Lateral
33	73	MF-P1	9	Lbyy	Lateral
34	74	MF-P1	10.5	Lbyy	Lateral
35	75	MF-P1	10.5	Lbyy	Lateral
36	76	F1-ST1	3.961	Lbyy	Lateral
37	77	SR-C1	1.5	Lbyy	Lateral
38	78	F1-ST1	4.522	Lbyy	Lateral
39	80	MF-P1	4	Lbyy	Lateral
40	83	MF-P1	4	Lbyy	Lateral
41	86	MF-P1	4	Lbyy	Lateral
42	89	MF-P1	3	Lbyy	Lateral
43	93	MF-P1	7	Lbyy	Lateral
44	96	MF-P1	7	Lbyy	Lateral
45	99	MF-P1	9	Lbyy	Lateral
46	100	MF-P1	10.5	Lbyy	Lateral
47	101	F1-ST1	4.178	Lbyy	Lateral
48	102	SR-C1	2	Lbyy	Lateral
49	104	MF-P1	3	Lbyy	Lateral
50	106	F1-D1	4.312	Lbyy	Lateral
51	107	F1-D1	4.312	Lbyy	Lateral
52	108	F1-D1	4.312	Lbyy	Lateral
53	109	F1-D1	4.312	Lbyy	Lateral
54	110	F1-D1	4.312	Lbyy	Lateral
55	111	F1-D1	4.312	Lbyy	Lateral
56	112	F1-S1	2.167	Lbyy	Lateral
57	113	F1-S1	2.331	Lbyy	Lateral
58	114	F1-ST1	4.596	Lbyy	Lateral
59	115	MF-H1	5.208	Lbyy	Lateral
60	116	MF-H1	5.208	Lbyy	Lateral
61	118	MF-H1	5.208	Lbyy	Lateral
62	119	MF-H1	5.208	Lbyy	Lateral
63	121	MF-H1	5.208	Lbyy	Lateral
64	122	MF-H1	5.208	Lbyy	Lateral
65	125	MF-P2	10.5	Lbyy	Lateral
66	128	MF-P1	7.833	Lbyy	Lateral
67	131	MF-P2	10.5	Lbyy	Lateral
68	134	MF-P1	7.833	Lbyy	Lateral

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	Y	-0.075	%5
2	42	Y	-0.075	%90
3	42	Y	0	0
4	42	Y	0	0
5	42	Y	0	0
6	56	Y	-0.057	%30
7	56	Y	-0.057	%65
8	56	Y	0	0
9	56	Y	0	0
10	56	Y	0	0
11	73	Y	-0.075	%5
12	73	Y	-0.075	%90
13	73	Y	0	0
14	73	Y	0	0
15	73	Y	0	0
16	62	Y	-0.057	%30

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
17	62	Y	-0.057	%65
18	62	Y	0	0
19	62	Y	0	0
20	62	Y	0	0
21	99	Y	-0.075	%5
22	99	Y	-0.075	%90
23	99	Y	0	0
24	99	Y	0	0
25	99	Y	0	0
26	59	Y	-0.057	%30
27	59	Y	-0.057	%65
28	59	Y	0	0
29	59	Y	0	0
30	59	Y	0	0
31	42	Y	-0.109	%15
32	42	Y	-0.081	%50
33	42	Y	0	0
34	42	Y	0	0
35	42	Y	0	0
36	73	Y	-0.109	%15
37	73	Y	-0.081	%50
38	73	Y	0	0
39	73	Y	0	0
40	73	Y	0	0
41	99	Y	-0.109	%15
42	99	Y	-0.081	%50
43	99	Y	0	0
44	99	Y	0	0
45	99	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	Z	-0.33	%5
2	42	Z	-0.33	%90
3	42	Z	0	0
4	42	Z	0	0
5	42	Z	0	0
6	56	Z	-0.119	%30
7	56	Z	-0.119	%65
8	56	Z	0	0
9	56	Z	0	0
10	56	Z	0	0
11	73	Z	-0.33	%5
12	73	Z	-0.33	%90
13	73	Z	0	0
14	73	Z	0	0
15	73	Z	0	0
16	62	Z	-0.119	%30
17	62	Z	-0.119	%65
18	62	Z	0	0
19	62	Z	0	0
20	62	Z	0	0
21	99	Z	-0.33	%5
22	99	Z	-0.33	%90
23	99	Z	0	0
24	99	Z	0	0
25	99	Z	0	0
26	59	Z	-0.119	%30

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
27	59	Z	-0.119	%65
28	59	Z	0	0
29	59	Z	0	0
30	59	Z	0	0
31	42	Z	-0.087	%15
32	42	Z	-0.117	%50
33	42	Z	0	0
34	42	Z	0	0
35	42	Z	0	0
36	73	Z	-0.087	%15
37	73	Z	-0.117	%50
38	73	Z	0	0
39	73	Z	0	0
40	73	Z	0	0
41	99	Z	-0.087	%15
42	99	Z	-0.117	%50
43	99	Z	0	0
44	99	Z	0	0
45	99	Z	0	0

Member Point Loads (BLC 3 : 90 Wind - No Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	X	-0.12	%5
2	42	X	-0.12	%90
3	42	X	0	0
4	42	X	0	0
5	42	X	0	0
6	56	X	-0.046	%30
7	56	X	-0.046	%65
8	56	X	0	0
9	56	X	0	0
10	56	X	0	0
11	73	X	-0.12	%5
12	73	X	-0.12	%90
13	73	X	0	0
14	73	X	0	0
15	73	X	0	0
16	62	X	-0.046	%30
17	62	X	-0.046	%65
18	62	X	0	0
19	62	X	0	0
20	62	X	0	0
21	99	X	-0.12	%5
22	99	X	-0.12	%90
23	99	X	0	0
24	99	X	0	0
25	99	X	0	0
26	59	X	-0.046	%30
27	59	X	-0.046	%65
28	59	X	0	0
29	59	X	0	0
30	59	X	0	0
31	42	X	-0.068	%15
32	42	X	-0.056	%50
33	42	X	0	0
34	42	X	0	0
35	42	X	0	0
36	73	X	-0.068	%15

Member Point Loads (BLC 3 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
37	73	X	-0.056	%50
38	73	X	0	0
39	73	X	0	0
40	73	X	0	0
41	99	X	-0.068	%15
42	99	X	-0.056	%50
43	99	X	0	0
44	99	X	0	0
45	99	X	0	0

Member Point Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	Z	-0.057	%5
2	42	Z	-0.057	%90
3	42	Z	0	0
4	42	Z	0	0
5	42	Z	0	0
6	56	Z	-0.022	%30
7	56	Z	-0.022	%65
8	56	Z	0	0
9	56	Z	0	0
10	56	Z	0	0
11	73	Z	-0.057	%5
12	73	Z	-0.057	%90
13	73	Z	0	0
14	73	Z	0	0
15	73	Z	0	0
16	62	Z	-0.022	%30
17	62	Z	-0.022	%65
18	62	Z	0	0
19	62	Z	0	0
20	62	Z	0	0
21	99	Z	-0.057	%5
22	99	Z	-0.057	%90
23	99	Z	0	0
24	99	Z	0	0
25	99	Z	0	0
26	59	Z	-0.022	%30
27	59	Z	-0.022	%65
28	59	Z	0	0
29	59	Z	0	0
30	59	Z	0	0
31	42	Z	-0.013	%15
32	42	Z	-0.017	%50
33	42	Z	0	0
34	42	Z	0	0
35	42	Z	0	0
36	73	Z	-0.013	%15
37	73	Z	-0.017	%50
38	73	Z	0	0
39	73	Z	0	0
40	73	Z	0	0
41	99	Z	-0.013	%15
42	99	Z	-0.017	%50
43	99	Z	0	0
44	99	Z	0	0
45	99	Z	0	0

Member Point Loads (BLC 5 : 90 Wind - Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	X	-0.025	%5
2	42	X	-0.025	%90
3	42	X	0	0
4	42	X	0	0
5	42	X	0	0
6	56	X	-0.01	%30
7	56	X	-0.01	%65
8	56	X	0	0
9	56	X	0	0
10	56	X	0	0
11	73	X	-0.025	%5
12	73	X	-0.025	%90
13	73	X	0	0
14	73	X	0	0
15	73	X	0	0
16	62	X	-0.01	%30
17	62	X	-0.01	%65
18	62	X	0	0
19	62	X	0	0
20	62	X	0	0
21	99	X	-0.025	%5
22	99	X	-0.025	%90
23	99	X	0	0
24	99	X	0	0
25	99	X	0	0
26	59	X	-0.01	%30
27	59	X	-0.01	%65
28	59	X	0	0
29	59	X	0	0
30	59	X	0	0
31	42	X	-0.01	%15
32	42	X	-0.008	%50
33	42	X	0	0
34	42	X	0	0
35	42	X	0	0
36	73	X	-0.01	%15
37	73	X	-0.008	%50
38	73	X	0	0
39	73	X	0	0
40	73	X	0	0
41	99	X	-0.01	%15
42	99	X	-0.008	%50
43	99	X	0	0
44	99	X	0	0
45	99	X	0	0

Member Point Loads (BLC 6 : 0 Wind - Service)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	Z	-0.018	%5
2	42	Z	-0.018	%90
3	42	Z	0	0
4	42	Z	0	0
5	42	Z	0	0
6	56	Z	-0.006	%30
7	56	Z	-0.006	%65
8	56	Z	0	0
9	56	Z	0	0

Member Point Loads (BLC 6 : 0 Wind - Service) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
10	56	Z	0	0
11	73	Z	-0.018	%5
12	73	Z	-0.018	%90
13	73	Z	0	0
14	73	Z	0	0
15	73	Z	0	0
16	62	Z	-0.006	%30
17	62	Z	-0.006	%65
18	62	Z	0	0
19	62	Z	0	0
20	62	Z	0	0
21	99	Z	-0.018	%5
22	99	Z	-0.018	%90
23	99	Z	0	0
24	99	Z	0	0
25	99	Z	0	0
26	59	Z	-0.006	%30
27	59	Z	-0.006	%65
28	59	Z	0	0
29	59	Z	0	0
30	59	Z	0	0
31	42	Z	-0.005	%15
32	42	Z	-0.006	%50
33	42	Z	0	0
34	42	Z	0	0
35	42	Z	0	0
36	73	Z	-0.005	%15
37	73	Z	-0.006	%50
38	73	Z	0	0
39	73	Z	0	0
40	73	Z	0	0
41	99	Z	-0.005	%15
42	99	Z	-0.006	%50
43	99	Z	0	0
44	99	Z	0	0
45	99	Z	0	0

Member Point Loads (BLC 7 : 90 Wind - Service)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	X	-0.006	%5
2	42	X	-0.006	%90
3	42	X	0	0
4	42	X	0	0
5	42	X	0	0
6	56	X	-0.002	%30
7	56	X	-0.002	%65
8	56	X	0	0
9	56	X	0	0
10	56	X	0	0
11	73	X	-0.006	%5
12	73	X	-0.006	%90
13	73	X	0	0
14	73	X	0	0
15	73	X	0	0
16	62	X	-0.002	%30
17	62	X	-0.002	%65
18	62	X	0	0
19	62	X	0	0

Member Point Loads (BLC 7 : 90 Wind - Service) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
20	62	X	0	0
21	99	X	-0.006	%5
22	99	X	-0.006	%90
23	99	X	0	0
24	99	X	0	0
25	99	X	0	0
26	59	X	-0.002	%30
27	59	X	-0.002	%65
28	59	X	0	0
29	59	X	0	0
30	59	X	0	0
31	42	X	-0.004	%15
32	42	X	-0.003	%50
33	42	X	0	0
34	42	X	0	0
35	42	X	0	0
36	73	X	-0.004	%15
37	73	X	-0.003	%50
38	73	X	0	0
39	73	X	0	0
40	73	X	0	0
41	99	X	-0.004	%15
42	99	X	-0.003	%50
43	99	X	0	0
44	99	X	0	0
45	99	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	Y	-0.258	%5
2	42	Y	-0.258	%90
3	42	Y	0	0
4	42	Y	0	0
5	42	Y	0	0
6	56	Y	-0.123	%30
7	56	Y	-0.123	%65
8	56	Y	0	0
9	56	Y	0	0
10	56	Y	0	0
11	73	Y	-0.258	%5
12	73	Y	-0.258	%90
13	73	Y	0	0
14	73	Y	0	0
15	73	Y	0	0
16	62	Y	-0.123	%30
17	62	Y	-0.123	%65
18	62	Y	0	0
19	62	Y	0	0
20	62	Y	0	0
21	99	Y	-0.258	%5
22	99	Y	-0.258	%90
23	99	Y	0	0
24	99	Y	0	0
25	99	Y	0	0
26	59	Y	-0.123	%30
27	59	Y	-0.123	%65
28	59	Y	0	0
29	59	Y	0	0

Member Point Loads (BLC 8 : Ice) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
30	59	Y	0	0
31	42	Y	-0.063	%15
32	42	Y	-0.075	%50
33	42	Y	0	0
34	42	Y	0	0
35	42	Y	0	0
36	73	Y	-0.063	%15
37	73	Y	-0.075	%50
38	73	Y	0	0
39	73	Y	0	0
40	73	Y	0	0
41	99	Y	-0.063	%15
42	99	Y	-0.075	%50
43	99	Y	0	0
44	99	Y	0	0
45	99	Y	0	0
46	125	Y	-0.098	%90
47	125	Y	0	0
48	125	Y	0	0
49	125	Y	0	0
50	125	Y	0	0
51	134	Y	-0.069	%90
52	134	Y	0	0
53	134	Y	0	0
54	134	Y	0	0
55	134	Y	0	0
56	131	Y	-0.098	%90
57	131	Y	0	0
58	131	Y	0	0
59	131	Y	0	0
60	131	Y	0	0
61	128	Y	-0.069	%90
62	128	Y	0	0
63	128	Y	0	0
64	128	Y	0	0
65	128	Y	0	0

Member Point Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	Z	-0.041	%5
2	42	Z	-0.041	%90
3	42	Z	0	0
4	42	Z	0	0
5	42	Z	0	0
6	56	Z	-0.032	%30
7	56	Z	-0.032	%65
8	56	Z	0	0
9	56	Z	0	0
10	56	Z	0	0
11	73	Z	-0.041	%5
12	73	Z	-0.041	%90
13	73	Z	0	0
14	73	Z	0	0
15	73	Z	0	0
16	62	Z	-0.032	%30
17	62	Z	-0.032	%65
18	62	Z	0	0
19	62	Z	0	0

Member Point Loads (BLC 9 : 0 Seismic) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
20	62	Z	0	0
21	99	Z	-0.041	%5
22	99	Z	-0.041	%90
23	99	Z	0	0
24	99	Z	0	0
25	99	Z	0	0
26	59	Z	-0.032	%30
27	59	Z	-0.032	%65
28	59	Z	0	0
29	59	Z	0	0
30	59	Z	0	0
31	42	Z	-0.03	%15
32	42	Z	-0.022	%50
33	42	Z	0	0
34	42	Z	0	0
35	42	Z	0	0
36	73	Z	-0.03	%15
37	73	Z	-0.022	%50
38	73	Z	0	0
39	73	Z	0	0
40	73	Z	0	0
41	99	Z	-0.03	%15
42	99	Z	-0.022	%50
43	99	Z	0	0
44	99	Z	0	0
45	99	Z	0	0

Member Point Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	42	X	-0.041	%5
2	42	X	-0.041	%90
3	42	X	0	0
4	42	X	0	0
5	42	X	0	0
6	56	X	-0.032	%30
7	56	X	-0.032	%65
8	56	X	0	0
9	56	X	0	0
10	56	X	0	0
11	73	X	-0.041	%5
12	73	X	-0.041	%90
13	73	X	0	0
14	73	X	0	0
15	73	X	0	0
16	62	X	-0.032	%30
17	62	X	-0.032	%65
18	62	X	0	0
19	62	X	0	0
20	62	X	0	0
21	99	X	-0.041	%5
22	99	X	-0.041	%90
23	99	X	0	0
24	99	X	0	0
25	99	X	0	0
26	59	X	-0.032	%30
27	59	X	-0.032	%65
28	59	X	0	0
29	59	X	0	0

Member Point Loads (BLC 10 : 90 Seismic) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
30	59	X	0	0
31	42	X	-0.03	%15
32	42	X	-0.022	%50
33	42	X	0	0
34	42	X	0	0
35	42	X	0	0
36	73	X	-0.03	%15
37	73	X	-0.022	%50
38	73	X	0	0
39	73	X	0	0
40	73	X	0	0
41	99	X	-0.03	%15
42	99	X	-0.022	%50
43	99	X	0	0
44	99	X	0	0
45	99	X	0	0

Member Point Loads (BLC 15 : Maint LL 1)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	121	Y	-0.25	%5

Member Point Loads (BLC 16 : Maint LL 2)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	118	Y	-0.25	%5

Member Point Loads (BLC 17 : Maint LL 3)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	115	Y	-0.25	%5

Member Point Loads (BLC 18 : Maint LL 4)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	22	Y	-0.25	%5

Member Point Loads (BLC 19 : Maint LL 5)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	34	Y	-0.25	%5

Member Point Loads (BLC 20 : Maint LL 6)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	28	Y	-0.25	%5

Member Point Loads (BLC 21 : Maint LL 7)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	122	Y	-0.25	%95

Member Point Loads (BLC 22 : Maint LL 8)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	119	Y	-0.25	%95

Member Point Loads (BLC 23 : Maint LL 9)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	116	Y	-0.25	%95

Member Point Loads (BLC 24 : Maint LL 10)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	22	Y	-0.25	%95

Member Point Loads (BLC 25 : Maint LL 11)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	34	Y	-0.25	%95

Member Point Loads (BLC 26 : Maint LL 12)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	28	Y	-0.25	%95

Member Point Loads (BLC 27 : Maint LL 13)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	3	Y	-0.25	%45

Member Point Loads (BLC 28 : Maint LL 14)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	1	Y	-0.25	%45

Member Point Loads (BLC 29 : Maint LL 15)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	2	Y	-0.25	%45

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.026	-0.026	0	%100
2	2	Z	-0.026	-0.026	0	%100
3	3	Z	-0.026	-0.026	0	%100
4	22	Z	-0.02	-0.02	0	%100
5	23	Z	-0.012	-0.012	0	%100
6	24	Z	-0.012	-0.012	0	%100
7	25	Z	-0.012	-0.012	0	%100
8	26	Z	-0.012	-0.012	0	%100
9	27	Z	-0.012	-0.012	0	%100
10	28	Z	-0.02	-0.02	0	%100
11	29	Z	-0.012	-0.012	0	%100
12	30	Z	-0.012	-0.012	0	%100
13	31	Z	-0.012	-0.012	0	%100
14	32	Z	-0.012	-0.012	0	%100

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

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
15	33	Z	-0.012	-0.012	0	%100
16	34	Z	-0.02	-0.02	0	%100
17	35	Z	-0.012	-0.012	0	%100
18	36	Z	-0.012	-0.012	0	%100
19	37	Z	-0.012	-0.012	0	%100
20	38	Z	-0.012	-0.012	0	%100
21	39	Z	-0.012	-0.012	0	%100
22	42	Z	-0.01	-0.01	0	%100
23	43	Z	-0.01	-0.01	0	%100
24	46	Z	-0.01	-0.01	0	%100
25	49	Z	-0.01	-0.01	0	%100
26	51	Z	-0.008	-0.008	0	%100
27	53	Z	-0.003	-0.003	0	%100
28	56	Z	-0.01	-0.01	0	%100
29	59	Z	-0.01	-0.01	0	%100
30	62	Z	-0.01	-0.01	0	%100
31	65	Z	-0.01	-0.01	0	%100
32	68	Z	-0.01	-0.01	0	%100
33	73	Z	-0.01	-0.01	0	%100
34	74	Z	-0.01	-0.01	0	%100
35	75	Z	-0.01	-0.01	0	%100
36	76	Z	-0.025	-0.025	0	%100
37	77	Z	-0.003	-0.003	0	%100
38	78	Z	-0.025	-0.025	0	%100
39	80	Z	-0.009	-0.009	0	%100
40	83	Z	-0.009	-0.009	0	%100
41	86	Z	-0.009	-0.009	0	%100
42	89	Z	-0.008	-0.008	0	%100
43	93	Z	-0.01	-0.01	0	%100
44	96	Z	-0.01	-0.01	0	%100
45	99	Z	-0.01	-0.01	0	%100
46	100	Z	-0.01	-0.01	0	%100
47	101	Z	-0.025	-0.025	0	%100
48	102	Z	-0.003	-0.003	0	%100
49	104	Z	-0.008	-0.008	0	%100
50	106	Z	-0.014	-0.014	0	%100
51	107	Z	-0.014	-0.014	0	%100
52	108	Z	-0.014	-0.014	0	%100
53	109	Z	-0.014	-0.014	0	%100
54	110	Z	-0.014	-0.014	0	%100
55	111	Z	-0.014	-0.014	0	%100
56	112	Z	-0.022	-0.022	0	%100
57	113	Z	-0.022	-0.022	0	%100
58	114	Z	-0.025	-0.025	0	%100
59	115	Z	-0.026	-0.026	0	%100
60	116	Z	-0.026	-0.026	0	%100
61	118	Z	-0.026	-0.026	0	%100
62	119	Z	-0.026	-0.026	0	%100
63	121	Z	-0.026	-0.026	0	%100
64	122	Z	-0.026	-0.026	0	%100
65	125	Z	-0.012	-0.012	0	%100
66	128	Z	-0.01	-0.01	0	%100
67	131	Z	-0.012	-0.012	0	%100
68	134	Z	-0.01	-0.01	0	%100

Member Distributed Loads (BLC 3 : 90 Wind - No Ice)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.026	-0.026	0	%100
2	2	X	-0.026	-0.026	0	%100
3	3	X	-0.026	-0.026	0	%100
4	22	X	-0.02	-0.02	0	%100
5	23	X	-0.012	-0.012	0	%100
6	24	X	-0.012	-0.012	0	%100
7	25	X	-0.012	-0.012	0	%100
8	26	X	-0.012	-0.012	0	%100
9	27	X	-0.012	-0.012	0	%100
10	28	X	-0.02	-0.02	0	%100
11	29	X	-0.012	-0.012	0	%100
12	30	X	-0.012	-0.012	0	%100
13	31	X	-0.012	-0.012	0	%100
14	32	X	-0.012	-0.012	0	%100
15	33	X	-0.012	-0.012	0	%100
16	34	X	-0.02	-0.02	0	%100
17	35	X	-0.012	-0.012	0	%100
18	36	X	-0.012	-0.012	0	%100
19	37	X	-0.012	-0.012	0	%100
20	38	X	-0.012	-0.012	0	%100
21	39	X	-0.012	-0.012	0	%100
22	42	X	-0.01	-0.01	0	%100
23	43	X	-0.01	-0.01	0	%100
24	46	X	-0.01	-0.01	0	%100
25	49	X	-0.01	-0.01	0	%100
26	51	X	-0.008	-0.008	0	%100
27	53	X	-0.003	-0.003	0	%100
28	56	X	-0.01	-0.01	0	%100
29	59	X	-0.01	-0.01	0	%100
30	62	X	-0.01	-0.01	0	%100
31	65	X	-0.01	-0.01	0	%100
32	68	X	-0.01	-0.01	0	%100
33	73	X	-0.01	-0.01	0	%100
34	74	X	-0.01	-0.01	0	%100
35	75	X	-0.01	-0.01	0	%100
36	76	X	-0.025	-0.025	0	%100
37	77	X	-0.003	-0.003	0	%100
38	78	X	-0.025	-0.025	0	%100
39	80	X	-0.009	-0.009	0	%100
40	83	X	-0.009	-0.009	0	%100
41	86	X	-0.009	-0.009	0	%100
42	89	X	-0.008	-0.008	0	%100
43	93	X	-0.01	-0.01	0	%100
44	96	X	-0.01	-0.01	0	%100
45	99	X	-0.01	-0.01	0	%100
46	100	X	-0.01	-0.01	0	%100
47	101	X	-0.025	-0.025	0	%100
48	102	X	-0.003	-0.003	0	%100
49	104	X	-0.008	-0.008	0	%100
50	106	X	-0.014	-0.014	0	%100
51	107	X	-0.014	-0.014	0	%100
52	108	X	-0.014	-0.014	0	%100
53	109	X	-0.014	-0.014	0	%100
54	110	X	-0.014	-0.014	0	%100
55	111	X	-0.014	-0.014	0	%100
56	112	X	-0.022	-0.022	0	%100
57	113	X	-0.022	-0.022	0	%100
58	114	X	-0.025	-0.025	0	%100

Member Distributed Loads (BLC 3 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
59	115	X	-0.026	-0.026	0	%100
60	116	X	-0.026	-0.026	0	%100
61	118	X	-0.026	-0.026	0	%100
62	119	X	-0.026	-0.026	0	%100
63	121	X	-0.026	-0.026	0	%100
64	122	X	-0.026	-0.026	0	%100
65	125	X	-0.012	-0.012	0	%100
66	128	X	-0.01	-0.01	0	%100
67	131	X	-0.012	-0.012	0	%100
68	134	X	-0.01	-0.01	0	%100

Member Distributed Loads (BLC 4 : 0 Wind - Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.007	-0.007	0	%100
2	2	Z	-0.007	-0.007	0	%100
3	3	Z	-0.007	-0.007	0	%100
4	22	Z	-0.007	-0.007	0	%100
5	23	Z	-0.005	-0.005	0	%100
6	24	Z	-0.005	-0.005	0	%100
7	25	Z	-0.005	-0.005	0	%100
8	26	Z	-0.005	-0.005	0	%100
9	27	Z	-0.005	-0.005	0	%100
10	28	Z	-0.007	-0.007	0	%100
11	29	Z	-0.005	-0.005	0	%100
12	30	Z	-0.005	-0.005	0	%100
13	31	Z	-0.005	-0.005	0	%100
14	32	Z	-0.005	-0.005	0	%100
15	33	Z	-0.005	-0.005	0	%100
16	34	Z	-0.007	-0.007	0	%100
17	35	Z	-0.005	-0.005	0	%100
18	36	Z	-0.005	-0.005	0	%100
19	37	Z	-0.005	-0.005	0	%100
20	38	Z	-0.005	-0.005	0	%100
21	39	Z	-0.005	-0.005	0	%100
22	42	Z	-0.002	-0.002	0	%100
23	43	Z	-0.002	-0.002	0	%100
24	46	Z	-0.002	-0.002	0	%100
25	49	Z	-0.002	-0.002	0	%100
26	51	Z	-0.002	-0.002	0	%100
27	53	Z	-0.003	-0.003	0	%100
28	56	Z	-0.002	-0.002	0	%100
29	59	Z	-0.002	-0.002	0	%100
30	62	Z	-0.002	-0.002	0	%100
31	65	Z	-0.002	-0.002	0	%100
32	68	Z	-0.002	-0.002	0	%100
33	73	Z	-0.002	-0.002	0	%100
34	74	Z	-0.002	-0.002	0	%100
35	75	Z	-0.002	-0.002	0	%100
36	76	Z	-0.007	-0.007	0	%100
37	77	Z	-0.003	-0.003	0	%100
38	78	Z	-0.007	-0.007	0	%100
39	80	Z	-0.002	-0.002	0	%100
40	83	Z	-0.002	-0.002	0	%100
41	86	Z	-0.002	-0.002	0	%100
42	89	Z	-0.002	-0.002	0	%100
43	93	Z	-0.002	-0.002	0	%100
44	96	Z	-0.002	-0.002	0	%100
45	99	Z	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 4 : 0 Wind - Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
46	100	Z	-0.002	-0.002	0	%100
47	101	Z	-0.007	-0.007	0	%100
48	102	Z	-0.003	-0.003	0	%100
49	104	Z	-0.002	-0.002	0	%100
50	106	Z	-0.006	-0.006	0	%100
51	107	Z	-0.006	-0.006	0	%100
52	108	Z	-0.006	-0.006	0	%100
53	109	Z	-0.006	-0.006	0	%100
54	110	Z	-0.006	-0.006	0	%100
55	111	Z	-0.006	-0.006	0	%100
56	112	Z	-0.006	-0.006	0	%100
57	113	Z	-0.006	-0.006	0	%100
58	114	Z	-0.007	-0.007	0	%100
59	115	Z	-0.007	-0.007	0	%100
60	116	Z	-0.007	-0.007	0	%100
61	118	Z	-0.007	-0.007	0	%100
62	119	Z	-0.007	-0.007	0	%100
63	121	Z	-0.007	-0.007	0	%100
64	122	Z	-0.007	-0.007	0	%100
65	125	Z	-0.002	-0.002	0	%100
66	128	Z	-0.002	-0.002	0	%100
67	131	Z	-0.002	-0.002	0	%100
68	134	Z	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 5 : 90 Wind - Ice)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.007	-0.007	0	%100
2	2	X	-0.007	-0.007	0	%100
3	3	X	-0.007	-0.007	0	%100
4	22	X	-0.007	-0.007	0	%100
5	23	X	-0.005	-0.005	0	%100
6	24	X	-0.005	-0.005	0	%100
7	25	X	-0.005	-0.005	0	%100
8	26	X	-0.005	-0.005	0	%100
9	27	X	-0.005	-0.005	0	%100
10	28	X	-0.007	-0.007	0	%100
11	29	X	-0.005	-0.005	0	%100
12	30	X	-0.005	-0.005	0	%100
13	31	X	-0.005	-0.005	0	%100
14	32	X	-0.005	-0.005	0	%100
15	33	X	-0.005	-0.005	0	%100
16	34	X	-0.007	-0.007	0	%100
17	35	X	-0.005	-0.005	0	%100
18	36	X	-0.005	-0.005	0	%100
19	37	X	-0.005	-0.005	0	%100
20	38	X	-0.005	-0.005	0	%100
21	39	X	-0.005	-0.005	0	%100
22	42	X	-0.002	-0.002	0	%100
23	43	X	-0.002	-0.002	0	%100
24	46	X	-0.002	-0.002	0	%100
25	49	X	-0.002	-0.002	0	%100
26	51	X	-0.002	-0.002	0	%100
27	53	X	-0.003	-0.003	0	%100
28	56	X	-0.002	-0.002	0	%100
29	59	X	-0.002	-0.002	0	%100
30	62	X	-0.002	-0.002	0	%100
31	65	X	-0.002	-0.002	0	%100
32	68	X	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 5 : 90 Wind - Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
33	73	X	-0.002	-0.002	0	%100
34	74	X	-0.002	-0.002	0	%100
35	75	X	-0.002	-0.002	0	%100
36	76	X	-0.007	-0.007	0	%100
37	77	X	-0.003	-0.003	0	%100
38	78	X	-0.007	-0.007	0	%100
39	80	X	-0.002	-0.002	0	%100
40	83	X	-0.002	-0.002	0	%100
41	86	X	-0.002	-0.002	0	%100
42	89	X	-0.002	-0.002	0	%100
43	93	X	-0.002	-0.002	0	%100
44	96	X	-0.002	-0.002	0	%100
45	99	X	-0.002	-0.002	0	%100
46	100	X	-0.002	-0.002	0	%100
47	101	X	-0.007	-0.007	0	%100
48	102	X	-0.003	-0.003	0	%100
49	104	X	-0.002	-0.002	0	%100
50	106	X	-0.006	-0.006	0	%100
51	107	X	-0.006	-0.006	0	%100
52	108	X	-0.006	-0.006	0	%100
53	109	X	-0.006	-0.006	0	%100
54	110	X	-0.006	-0.006	0	%100
55	111	X	-0.006	-0.006	0	%100
56	112	X	-0.006	-0.006	0	%100
57	113	X	-0.006	-0.006	0	%100
58	114	X	-0.007	-0.007	0	%100
59	115	X	-0.007	-0.007	0	%100
60	116	X	-0.007	-0.007	0	%100
61	118	X	-0.007	-0.007	0	%100
62	119	X	-0.007	-0.007	0	%100
63	121	X	-0.007	-0.007	0	%100
64	122	X	-0.007	-0.007	0	%100
65	125	X	-0.002	-0.002	0	%100
66	128	X	-0.002	-0.002	0	%100
67	131	X	-0.002	-0.002	0	%100
68	134	X	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 6 : 0 Wind - Service)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.001	-0.001	0	%100
2	2	Z	-0.001	-0.001	0	%100
3	3	Z	-0.001	-0.001	0	%100
4	22	Z	-0.001	-0.001	0	%100
5	23	Z	-0.0006	-0.0006	0	%100
6	24	Z	-0.0006	-0.0006	0	%100
7	25	Z	-0.0006	-0.0006	0	%100
8	26	Z	-0.0006	-0.0006	0	%100
9	27	Z	-0.0006	-0.0006	0	%100
10	28	Z	-0.001	-0.001	0	%100
11	29	Z	-0.0006	-0.0006	0	%100
12	30	Z	-0.0006	-0.0006	0	%100
13	31	Z	-0.0006	-0.0006	0	%100
14	32	Z	-0.0006	-0.0006	0	%100
15	33	Z	-0.0006	-0.0006	0	%100
16	34	Z	-0.001	-0.001	0	%100
17	35	Z	-0.0006	-0.0006	0	%100
18	36	Z	-0.0006	-0.0006	0	%100
19	37	Z	-0.0006	-0.0006	0	%100

Member Distributed Loads (BLC 6 : 0 Wind - Service) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
20	38	Z	-0.0006	-0.0006	0	%100
21	39	Z	-0.0006	-0.0006	0	%100
22	42	Z	-0.0003	-0.0003	0	%100
23	43	Z	-0.0003	-0.0003	0	%100
24	46	Z	-0.0003	-0.0003	0	%100
25	49	Z	-0.0003	-0.0003	0	%100
26	51	Z	-0.0003	-0.0003	0	%100
27	53	Z	-1e-04	-1e-04	0	%100
28	56	Z	-0.0003	-0.0003	0	%100
29	59	Z	-0.0003	-0.0003	0	%100
30	62	Z	-0.0003	-0.0003	0	%100
31	65	Z	-0.0003	-0.0003	0	%100
32	68	Z	-0.0003	-0.0003	0	%100
33	73	Z	-0.0003	-0.0003	0	%100
34	74	Z	-0.0003	-0.0003	0	%100
35	75	Z	-0.0003	-0.0003	0	%100
36	76	Z	-0.001	-0.001	0	%100
37	77	Z	-1e-04	-1e-04	0	%100
38	78	Z	-0.001	-0.001	0	%100
39	80	Z	-0.0003	-0.0003	0	%100
40	83	Z	-0.0003	-0.0003	0	%100
41	86	Z	-0.0003	-0.0003	0	%100
42	89	Z	-0.0003	-0.0003	0	%100
43	93	Z	-0.0003	-0.0003	0	%100
44	96	Z	-0.0003	-0.0003	0	%100
45	99	Z	-0.0003	-0.0003	0	%100
46	100	Z	-0.0003	-0.0003	0	%100
47	101	Z	-0.001	-0.001	0	%100
48	102	Z	-1e-04	-1e-04	0	%100
49	104	Z	-0.0003	-0.0003	0	%100
50	106	Z	-0.0007	-0.0007	0	%100
51	107	Z	-0.0007	-0.0007	0	%100
52	108	Z	-0.0007	-0.0007	0	%100
53	109	Z	-0.0007	-0.0007	0	%100
54	110	Z	-0.0007	-0.0007	0	%100
55	111	Z	-0.0007	-0.0007	0	%100
56	112	Z	-0.001	-0.001	0	%100
57	113	Z	-0.001	-0.001	0	%100
58	114	Z	-0.001	-0.001	0	%100
59	115	Z	-0.001	-0.001	0	%100
60	116	Z	-0.001	-0.001	0	%100
61	118	Z	-0.001	-0.001	0	%100
62	119	Z	-0.001	-0.001	0	%100
63	121	Z	-0.001	-0.001	0	%100
64	122	Z	-0.001	-0.001	0	%100
65	125	Z	-0.0003	-0.0003	0	%100
66	128	Z	-0.0003	-0.0003	0	%100
67	131	Z	-0.0003	-0.0003	0	%100
68	134	Z	-0.0003	-0.0003	0	%100

Member Distributed Loads (BLC 7 : 90 Wind - Service)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.001	-0.001	0	%100
2	2	X	-0.001	-0.001	0	%100
3	3	X	-0.001	-0.001	0	%100
4	22	X	-0.001	-0.001	0	%100
5	23	X	-0.0006	-0.0006	0	%100
6	24	X	-0.0006	-0.0006	0	%100

Member Distributed Loads (BLC 7 : 90 Wind - Service) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
7	25	X	-0.0006	-0.0006	0	%100
8	26	X	-0.0006	-0.0006	0	%100
9	27	X	-0.0006	-0.0006	0	%100
10	28	X	-0.001	-0.001	0	%100
11	29	X	-0.0006	-0.0006	0	%100
12	30	X	-0.0006	-0.0006	0	%100
13	31	X	-0.0006	-0.0006	0	%100
14	32	X	-0.0006	-0.0006	0	%100
15	33	X	-0.0006	-0.0006	0	%100
16	34	X	-0.001	-0.001	0	%100
17	35	X	-0.0006	-0.0006	0	%100
18	36	X	-0.0006	-0.0006	0	%100
19	37	X	-0.0006	-0.0006	0	%100
20	38	X	-0.0006	-0.0006	0	%100
21	39	X	-0.0006	-0.0006	0	%100
22	42	X	-0.0003	-0.0003	0	%100
23	43	X	-0.0003	-0.0003	0	%100
24	46	X	-0.0003	-0.0003	0	%100
25	49	X	-0.0003	-0.0003	0	%100
26	51	X	-0.0003	-0.0003	0	%100
27	53	X	-1e-04	-1e-04	0	%100
28	56	X	-0.0003	-0.0003	0	%100
29	59	X	-0.0003	-0.0003	0	%100
30	62	X	-0.0003	-0.0003	0	%100
31	65	X	-0.0003	-0.0003	0	%100
32	68	X	-0.0003	-0.0003	0	%100
33	73	X	-0.0003	-0.0003	0	%100
34	74	X	-0.0003	-0.0003	0	%100
35	75	X	-0.0003	-0.0003	0	%100
36	76	X	-0.001	-0.001	0	%100
37	77	X	-1e-04	-1e-04	0	%100
38	78	X	-0.001	-0.001	0	%100
39	80	X	-0.0003	-0.0003	0	%100
40	83	X	-0.0003	-0.0003	0	%100
41	86	X	-0.0003	-0.0003	0	%100
42	89	X	-0.0003	-0.0003	0	%100
43	93	X	-0.0003	-0.0003	0	%100
44	96	X	-0.0003	-0.0003	0	%100
45	99	X	-0.0003	-0.0003	0	%100
46	100	X	-0.0003	-0.0003	0	%100
47	101	X	-0.001	-0.001	0	%100
48	102	X	-1e-04	-1e-04	0	%100
49	104	X	-0.0003	-0.0003	0	%100
50	106	X	-0.0007	-0.0007	0	%100
51	107	X	-0.0007	-0.0007	0	%100
52	108	X	-0.0007	-0.0007	0	%100
53	109	X	-0.0007	-0.0007	0	%100
54	110	X	-0.0007	-0.0007	0	%100
55	111	X	-0.0007	-0.0007	0	%100
56	112	X	-0.001	-0.001	0	%100
57	113	X	-0.001	-0.001	0	%100
58	114	X	-0.001	-0.001	0	%100
59	115	X	-0.001	-0.001	0	%100
60	116	X	-0.001	-0.001	0	%100
61	118	X	-0.001	-0.001	0	%100
62	119	X	-0.001	-0.001	0	%100
63	121	X	-0.001	-0.001	0	%100
64	122	X	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 7 : 90 Wind - Service) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
65	125	X	-0.0003	-0.0003	0	%100
66	128	X	-0.0003	-0.0003	0	%100
67	131	X	-0.0003	-0.0003	0	%100
68	134	X	-0.0003	-0.0003	0	%100

Member Distributed Loads (BLC 8 : Ice)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Y	-0.015	-0.015	0	%100
2	2	Y	-0.015	-0.015	0	%100
3	3	Y	-0.015	-0.015	0	%100
4	22	Y	-0.013	-0.013	0	%100
5	23	Y	-0.01	-0.01	0	%100
6	24	Y	-0.01	-0.01	0	%100
7	25	Y	-0.01	-0.01	0	%100
8	26	Y	-0.01	-0.01	0	%100
9	27	Y	-0.01	-0.01	0	%100
10	28	Y	-0.013	-0.013	0	%100
11	29	Y	-0.01	-0.01	0	%100
12	30	Y	-0.01	-0.01	0	%100
13	31	Y	-0.01	-0.01	0	%100
14	32	Y	-0.01	-0.01	0	%100
15	33	Y	-0.01	-0.01	0	%100
16	34	Y	-0.013	-0.013	0	%100
17	35	Y	-0.01	-0.01	0	%100
18	36	Y	-0.01	-0.01	0	%100
19	37	Y	-0.01	-0.01	0	%100
20	38	Y	-0.01	-0.01	0	%100
21	39	Y	-0.01	-0.01	0	%100
22	42	Y	-0.009	-0.009	0	%100
23	43	Y	-0.009	-0.009	0	%100
24	46	Y	-0.009	-0.009	0	%100
25	49	Y	-0.009	-0.009	0	%100
26	51	Y	-0.009	-0.009	0	%100
27	53	Y	-0.005	-0.005	0	%100
28	56	Y	-0.009	-0.009	0	%100
29	59	Y	-0.009	-0.009	0	%100
30	62	Y	-0.009	-0.009	0	%100
31	65	Y	-0.009	-0.009	0	%100
32	68	Y	-0.009	-0.009	0	%100
33	73	Y	-0.009	-0.009	0	%100
34	74	Y	-0.009	-0.009	0	%100
35	75	Y	-0.009	-0.009	0	%100
36	76	Y	-0.019	-0.019	0	%100
37	77	Y	-0.005	-0.005	0	%100
38	78	Y	-0.019	-0.019	0	%100
39	80	Y	-0.009	-0.009	0	%100
40	83	Y	-0.009	-0.009	0	%100
41	86	Y	-0.009	-0.009	0	%100
42	89	Y	-0.009	-0.009	0	%100
43	93	Y	-0.009	-0.009	0	%100
44	96	Y	-0.009	-0.009	0	%100
45	99	Y	-0.009	-0.009	0	%100
46	100	Y	-0.009	-0.009	0	%100
47	101	Y	-0.019	-0.019	0	%100
48	102	Y	-0.005	-0.005	0	%100
49	104	Y	-0.009	-0.009	0	%100
50	106	Y	-0.01	-0.01	0	%100
51	107	Y	-0.01	-0.01	0	%100

Member Distributed Loads (BLC 8 : Ice) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
52	108	Y	-0.01	-0.01	0	%100
53	109	Y	-0.01	-0.01	0	%100
54	110	Y	-0.01	-0.01	0	%100
55	111	Y	-0.01	-0.01	0	%100
56	112	Y	-0.015	-0.015	0	%100
57	113	Y	-0.015	-0.015	0	%100
58	114	Y	-0.019	-0.019	0	%100
59	115	Y	-0.015	-0.015	0	%100
60	116	Y	-0.015	-0.015	0	%100
61	118	Y	-0.015	-0.015	0	%100
62	119	Y	-0.015	-0.015	0	%100
63	121	Y	-0.015	-0.015	0	%100
64	122	Y	-0.015	-0.015	0	%100
65	125	Y	-0.01	-0.01	0	%100
66	128	Y	-0.009	-0.009	0	%100
67	131	Y	-0.01	-0.01	0	%100
68	134	Y	-0.009	-0.009	0	%100

Member Distributed Loads (BLC 9 : 0 Seismic)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.002	-0.002	0	%100
2	2	Z	-0.002	-0.002	0	%100
3	3	Z	-0.002	-0.002	0	%100
4	22	Z	-0.001	-0.001	0	%100
5	23	Z	-0.0007	-0.0007	0	%100
6	24	Z	-0.0007	-0.0007	0	%100
7	25	Z	-0.0007	-0.0007	0	%100
8	26	Z	-0.0007	-0.0007	0	%100
9	27	Z	-0.0007	-0.0007	0	%100
10	28	Z	-0.001	-0.001	0	%100
11	29	Z	-0.0007	-0.0007	0	%100
12	30	Z	-0.0007	-0.0007	0	%100
13	31	Z	-0.0007	-0.0007	0	%100
14	32	Z	-0.0007	-0.0007	0	%100
15	33	Z	-0.0007	-0.0007	0	%100
16	34	Z	-0.001	-0.001	0	%100
17	35	Z	-0.0007	-0.0007	0	%100
18	36	Z	-0.0007	-0.0007	0	%100
19	37	Z	-0.0007	-0.0007	0	%100
20	38	Z	-0.0007	-0.0007	0	%100
21	39	Z	-0.0007	-0.0007	0	%100
22	42	Z	-0.001	-0.001	0	%100
23	43	Z	-0.001	-0.001	0	%100
24	46	Z	-0.001	-0.001	0	%100
25	49	Z	-0.001	-0.001	0	%100
26	51	Z	-0.001	-0.001	0	%100
27	53	Z	-0.0003	-0.0003	0	%100
28	56	Z	-0.001	-0.001	0	%100
29	59	Z	-0.001	-0.001	0	%100
30	62	Z	-0.001	-0.001	0	%100
31	65	Z	-0.001	-0.001	0	%100
32	68	Z	-0.001	-0.001	0	%100
33	73	Z	-0.001	-0.001	0	%100
34	74	Z	-0.001	-0.001	0	%100
35	75	Z	-0.001	-0.001	0	%100
36	76	Z	-0.004	-0.004	0	%100
37	77	Z	-0.0003	-0.0003	0	%100
38	78	Z	-0.004	-0.004	0	%100

Member Distributed Loads (BLC 9 : 0 Seismic) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
39	80	Z	-0.001	-0.001	0	%100
40	83	Z	-0.001	-0.001	0	%100
41	86	Z	-0.001	-0.001	0	%100
42	89	Z	-0.001	-0.001	0	%100
43	93	Z	-0.001	-0.001	0	%100
44	96	Z	-0.001	-0.001	0	%100
45	99	Z	-0.001	-0.001	0	%100
46	100	Z	-0.001	-0.001	0	%100
47	101	Z	-0.004	-0.004	0	%100
48	102	Z	-0.0003	-0.0003	0	%100
49	104	Z	-0.001	-0.001	0	%100
50	106	Z	-0.0007	-0.0007	0	%100
51	107	Z	-0.0007	-0.0007	0	%100
52	108	Z	-0.0007	-0.0007	0	%100
53	109	Z	-0.0007	-0.0007	0	%100
54	110	Z	-0.0007	-0.0007	0	%100
55	111	Z	-0.0007	-0.0007	0	%100
56	112	Z	-0.002	-0.002	0	%100
57	113	Z	-0.002	-0.002	0	%100
58	114	Z	-0.004	-0.004	0	%100
59	115	Z	-0.002	-0.002	0	%100
60	116	Z	-0.002	-0.002	0	%100
61	118	Z	-0.002	-0.002	0	%100
62	119	Z	-0.002	-0.002	0	%100
63	121	Z	-0.002	-0.002	0	%100
64	122	Z	-0.002	-0.002	0	%100
65	125	Z	-0.002	-0.002	0	%100
66	128	Z	-0.001	-0.001	0	%100
67	131	Z	-0.002	-0.002	0	%100
68	134	Z	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.002	-0.002	0	%100
2	2	X	-0.002	-0.002	0	%100
3	3	X	-0.002	-0.002	0	%100
4	22	X	-0.001	-0.001	0	%100
5	23	X	-0.0007	-0.0007	0	%100
6	24	X	-0.0007	-0.0007	0	%100
7	25	X	-0.0007	-0.0007	0	%100
8	26	X	-0.0007	-0.0007	0	%100
9	27	X	-0.0007	-0.0007	0	%100
10	28	X	-0.001	-0.001	0	%100
11	29	X	-0.0007	-0.0007	0	%100
12	30	X	-0.0007	-0.0007	0	%100
13	31	X	-0.0007	-0.0007	0	%100
14	32	X	-0.0007	-0.0007	0	%100
15	33	X	-0.0007	-0.0007	0	%100
16	34	X	-0.001	-0.001	0	%100
17	35	X	-0.0007	-0.0007	0	%100
18	36	X	-0.0007	-0.0007	0	%100
19	37	X	-0.0007	-0.0007	0	%100
20	38	X	-0.0007	-0.0007	0	%100
21	39	X	-0.0007	-0.0007	0	%100
22	42	X	-0.001	-0.001	0	%100
23	43	X	-0.001	-0.001	0	%100
24	46	X	-0.001	-0.001	0	%100
25	49	X	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
26	51	X	-0.001	-0.001	0	%100
27	53	X	-0.0003	-0.0003	0	%100
28	56	X	-0.001	-0.001	0	%100
29	59	X	-0.001	-0.001	0	%100
30	62	X	-0.001	-0.001	0	%100
31	65	X	-0.001	-0.001	0	%100
32	68	X	-0.001	-0.001	0	%100
33	73	X	-0.001	-0.001	0	%100
34	74	X	-0.001	-0.001	0	%100
35	75	X	-0.001	-0.001	0	%100
36	76	X	-0.004	-0.004	0	%100
37	77	X	-0.0003	-0.0003	0	%100
38	78	X	-0.004	-0.004	0	%100
39	80	X	-0.001	-0.001	0	%100
40	83	X	-0.001	-0.001	0	%100
41	86	X	-0.001	-0.001	0	%100
42	89	X	-0.001	-0.001	0	%100
43	93	X	-0.001	-0.001	0	%100
44	96	X	-0.001	-0.001	0	%100
45	99	X	-0.001	-0.001	0	%100
46	100	X	-0.001	-0.001	0	%100
47	101	X	-0.004	-0.004	0	%100
48	102	X	-0.0003	-0.0003	0	%100
49	104	X	-0.001	-0.001	0	%100
50	106	X	-0.0007	-0.0007	0	%100
51	107	X	-0.0007	-0.0007	0	%100
52	108	X	-0.0007	-0.0007	0	%100
53	109	X	-0.0007	-0.0007	0	%100
54	110	X	-0.0007	-0.0007	0	%100
55	111	X	-0.0007	-0.0007	0	%100
56	112	X	-0.002	-0.002	0	%100
57	113	X	-0.002	-0.002	0	%100
58	114	X	-0.004	-0.004	0	%100
59	115	X	-0.002	-0.002	0	%100
60	116	X	-0.002	-0.002	0	%100
61	118	X	-0.002	-0.002	0	%100
62	119	X	-0.002	-0.002	0	%100
63	121	X	-0.002	-0.002	0	%100
64	122	X	-0.002	-0.002	0	%100
65	125	X	-0.002	-0.002	0	%100
66	128	X	-0.001	-0.001	0	%100
67	131	X	-0.002	-0.002	0	%100
68	134	X	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	3	Y	-0.004	-0.004	0.119	1.394
2	112	Y	-2.333e-05	-0.003	0	0.433
3	112	Y	-0.003	-0.005	0.433	0.867
4	112	Y	-0.005	-0.003	0.867	1.3
5	112	Y	-0.003	-0.002	1.3	1.733
6	112	Y	-0.002	-0.001	1.733	2.167
7	113	Y	-0.0007725	-0.0007725	0	0.134
8	121	Y	-3.237e-05	-0.0004843	1.562	2.187
9	121	Y	-0.0004843	-0.002	2.187	2.812
10	121	Y	-0.002	-0.003	2.812	3.437
11	121	Y	-0.003	-0.003	3.437	4.062
12	121	Y	-0.003	-0.003	4.062	4.687

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
13	113	Y	-0.005	-0.004	0	1.166
14	113	Y	-0.004	-0.002	1.166	2.331
15	119	Y	-0.007	-0.007	3.424	4.132
16	121	Y	-0.003	-0.003	0.895	1.895
17	1	Y	-0.006	-0.009	0	2.417
18	1	Y	-0.009	-0.012	2.417	4.833
19	116	Y	-0.002	-0.006	1.042	2.865
20	116	Y	-0.006	-0.011	2.865	4.688
21	118	Y	-0.001	-0.01	0.521	1.736
22	118	Y	-0.01	-0.011	1.736	2.951
23	118	Y	-0.011	-0.003	2.951	4.167
24	2	Y	-0.006	-0.009	0	2.417
25	2	Y	-0.009	-0.012	2.417	4.833
26	115	Y	-0.001	-0.01	0.521	1.736
27	115	Y	-0.01	-0.011	1.736	2.951
28	115	Y	-0.011	-0.003	2.951	4.167
29	122	Y	-0.002	-0.006	1.042	2.865
30	122	Y	-0.006	-0.011	2.865	4.688
31	2	Y	-0.0001756	-0.001	2.9	3.287
32	2	Y	-0.001	-0.006	3.287	3.673
33	2	Y	-0.006	-0.008	3.673	4.06
34	2	Y	-0.008	-0.005	4.06	4.447
35	2	Y	-0.005	-0.002	4.447	4.833
36	3	Y	-0.0005293	-0.005	0	0.387
37	3	Y	-0.005	-0.009	0.387	0.773
38	3	Y	-0.009	-0.006	0.773	1.16
39	3	Y	-0.006	-0.001	1.16	1.547
40	3	Y	-0.001	-0.0002374	1.547	1.933
41	121	Y	0.0003025	0.0003025	4.167	4.375
42	121	Y	0.0003025	0.0003025	4.375	4.583
43	121	Y	0.0003025	-0.0001808	4.583	4.792
44	121	Y	-0.0001808	-0.004	4.792	5
45	121	Y	-0.004	-0.01	5	5.208
46	122	Y	-0.007	-0.003	0	0.208
47	122	Y	-0.003	-0.0003278	0.208	0.417
48	122	Y	-0.0003278	0.0001986	0.417	0.625
49	122	Y	0.0001986	0.0001986	0.625	0.833
50	122	Y	0.0001986	0.0001986	0.833	1.042
51	123	Y	-0.004	-0.003	0	0.083
52	1	Y	-0.0005293	-0.005	0	0.387
53	1	Y	-0.005	-0.009	0.387	0.773
54	1	Y	-0.009	-0.006	0.773	1.16
55	1	Y	-0.006	-0.001	1.16	1.547
56	1	Y	-0.001	-0.0002374	1.547	1.933
57	3	Y	-0.0001756	-0.001	2.9	3.287
58	3	Y	-0.001	-0.006	3.287	3.673
59	3	Y	-0.006	-0.008	3.673	4.06
60	3	Y	-0.008	-0.005	4.06	4.447
61	3	Y	-0.005	-0.002	4.447	4.833
62	118	Y	0.0003025	0.0003025	4.167	4.375
63	118	Y	0.0003025	0.0003025	4.375	4.583
64	118	Y	0.0003025	-0.0001808	4.583	4.792
65	118	Y	-0.0001808	-0.004	4.792	5
66	118	Y	-0.004	-0.01	5	5.208
67	119	Y	-0.007	-0.003	0	0.208
68	119	Y	-0.003	-0.0003278	0.208	0.417
69	119	Y	-0.0003278	0.0001986	0.417	0.625
70	119	Y	0.0001986	0.0001986	0.625	0.833

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads) (Continued)

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
71	119	Y	0.0001986	0.0001986	0.833	1.042
72	120	Y	-0.004	-0.003	0	0.083
73	1	Y	-0.0001756	-0.001	2.9	3.287
74	1	Y	-0.001	-0.006	3.287	3.673
75	1	Y	-0.006	-0.008	3.673	4.06
76	1	Y	-0.008	-0.005	4.06	4.447
77	1	Y	-0.005	-0.002	4.447	4.833
78	2	Y	-0.0005293	-0.005	0	0.387
79	2	Y	-0.005	-0.009	0.387	0.773
80	2	Y	-0.009	-0.006	0.773	1.16
81	2	Y	-0.006	-0.001	1.16	1.547
82	2	Y	-0.001	-0.0002374	1.547	1.933
83	115	Y	0.0003025	0.0003025	4.167	4.375
84	115	Y	0.0003025	0.0003025	4.375	4.583
85	115	Y	0.0003025	-0.0001808	4.583	4.792
86	115	Y	-0.0001808	-0.004	4.792	5
87	115	Y	-0.004	-0.01	5	5.208
88	116	Y	-0.007	-0.003	0	0.208
89	116	Y	-0.003	-0.0003278	0.208	0.417
90	116	Y	-0.0003278	0.0001986	0.417	0.625
91	116	Y	0.0001986	0.0001986	0.625	0.833
92	116	Y	0.0001986	0.0001986	0.833	1.042
93	117	Y	-0.004	-0.003	0	0.083
94	3	Y	-0.013	-0.013	2.266	3.266
95	113	Y	-0.009	-0.009	0.858	1.858
96	119	Y	-0.009	-0.009	0.745	3.091

Member Area Loads (BLC 1 : Dead)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	6	234	233	232	Y	Two Way	-0.01
2	234	22	21	235	Y	Two Way	-0.01
3	2	11	10	3	Y	Two Way	-0.01
4	5	4	34	33	Y	Two Way	-0.01
5	6	250	255	5	Y	Two Way	-0.01
6	253	7	2	251	Y	Two Way	-0.01
7	254	3	4	252	Y	Two Way	-0.01
8	256	235	7	257	Y	Two Way	-0.01

Member Area Loads (BLC 8 : Ice)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	6	234	233	232	Y	Two Way	-0.008
2	234	22	21	235	Y	Two Way	-0.008
3	2	11	10	3	Y	Two Way	-0.008
4	5	4	34	33	Y	Two Way	-0.008
5	6	250	255	5	Y	Two Way	-0.008
6	253	7	2	251	Y	Two Way	-0.008
7	254	3	4	252	Y	Two Way	-0.008
8	256	235	7	257	Y	Two Way	-0.008

Node Loads and Enforced Displacements (BLC 11 : Live Load a)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	109	L	Y	-0.5
2	121	L	Y	-0.5
3	115	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 12 : Live Load b)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1	95	L	Y	-0.5
2	127	L	Y	-0.5
3	190	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 13 : Live Load c)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1	133	L	Y	-0.5
2	89	L	Y	-0.5
3	196	L	Y	-0.5

Node Loads and Enforced Displacements (BLC 14 : Live Load d)

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)]
1	143	L	Y	-0.5
2	202	L	Y	-0.5
3	81	L	Y	-0.5

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
1	Dead	DL	-1		45		8
2	0 Wind - No Ice	WLZ			45	68	
3	90 Wind - No Ice	WLX			45	68	
4	0 Wind - Ice	WLZ			45	68	
5	90 Wind - Ice	WLX			45	68	
6	0 Wind - Service	WLZ			45	68	
7	90 Wind - Service	WLX			45	68	
8	Ice	OL1			65	68	8
9	0 Seismic	ELZ			45	68	
10	90 Seismic	ELX			45	68	
11	Live Load a	LL		3			
12	Live Load b	LL		3			
13	Live Load c	LL		3			
14	Live Load d	LL		3			
15	Maint LL 1	LL			1		
16	Maint LL 2	LL			1		
17	Maint LL 3	LL			1		
18	Maint LL 4	LL			1		
19	Maint LL 5	LL			1		
20	Maint LL 6	LL			1		
21	Maint LL 7	LL			1		
22	Maint LL 8	LL			1		
23	Maint LL 9	LL			1		
24	Maint LL 10	LL			1		
25	Maint LL 11	LL			1		
26	Maint LL 12	LL			1		
27	Maint LL 13	LL			1		
28	Maint LL 14	LL			1		
29	Maint LL 15	LL			1		
30	BLC 1 Transient Area Loads	None				96	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC
1	1.4 Dead	Yes	Y	1	1.4					
2	1.2 D + 1.0 - 0 W	Yes	Y	1	1.2	2	1			
3	1.2 D + 1.0 - 30 W	Yes	Y	1	1.2	2	0.87	3	0.5	
4	1.2 D + 1.0 - 60 W	Yes	Y	1	1.2	3	0.87	2	0.5	
5	1.2 D + 1.0 - 90 W	Yes	Y	1	1.2	3	1			
6	1.2 D + 1.0 - 120 W	Yes	Y	1	1.2	3	0.87	2	-0.5	
7	1.2 D + 1.0 - 150 W	Yes	Y	1	1.2	2	-0.87	3	0.5	
8	1.2 D + 1.0 - 180 W	Yes	Y	1	1.2	2	-1			
9	1.2 D + 1.0 - 210 W	Yes	Y	1	1.2	2	-0.87	3	-0.5	
10	1.2 D + 1.0 - 240 W	Yes	Y	1	1.2	3	-0.87	2	-0.5	
11	1.2 D + 1.0 - 270 W	Yes	Y	1	1.2	3	-1			
12	1.2 D + 1.0 - 300 W	Yes	Y	1	1.2	3	-0.87	2	0.5	
13	1.2 D + 1.0 - 330 W	Yes	Y	1	1.2	2	0.87	3	-0.5	
14	1.2 D + 1.0 - 0 W/Ice	Yes	Y	1	1.2	4	1			8
15	1.2 D + 1.0 - 30 W/Ice	Yes	Y	1	1.2	4	0.87	5	0.5	8
16	1.2 D + 1.0 - 60 W/Ice	Yes	Y	1	1.2	5	0.87	4	0.5	8
17	1.2 D + 1.0 - 90 W/Ice	Yes	Y	1	1.2	5	1			8
18	1.2 D + 1.0 - 120 W/Ice	Yes	Y	1	1.2	5	0.87	4	-0.5	8
19	1.2 D + 1.0 - 150 W/Ice	Yes	Y	1	1.2	4	-0.87	5	0.5	8
20	1.2 D + 1.0 - 180 W/Ice	Yes	Y	1	1.2	4	-1			8
21	1.2 D + 1.0 - 210 W/Ice	Yes	Y	1	1.2	4	-0.87	5	-0.5	8
22	1.2 D + 1.0 - 240 W/Ice	Yes	Y	1	1.2	5	-0.87	4	-0.5	8
23	1.2 D + 1.0 - 270 W/Ice	Yes	Y	1	1.2	5	-1			8
24	1.2 D + 1.0 - 300 W/Ice	Yes	Y	1	1.2	5	-0.87	4	0.5	8
25	1.2 D + 1.0 - 330 W/Ice	Yes	Y	1	1.2	4	0.87	5	-0.5	8
26	1.2 D + 1.0 E - 0	Yes	Y	1	1.2	9	1			
27	1.2 D + 1.0 E - 30	Yes	Y	1	1.2	9	0.87	10	0.5	
28	1.2 D + 1.0 E - 60	Yes	Y	1	1.2	10	0.87	9	0.5	
29	1.2 D + 1.0 E - 90	Yes	Y	1	1.2	10	1			
30	1.2 D + 1.0 E - 120	Yes	Y	1	1.2	10	0.87	9	-0.5	
31	1.2 D + 1.0 E - 150	Yes	Y	1	1.2	9	-0.87	10	0.5	
32	1.2 D + 1.0 E - 180	Yes	Y	1	1.2	9	-1			
33	1.2 D + 1.0 E - 210	Yes	Y	1	1.2	9	-0.87	10	-0.5	
34	1.2 D + 1.0 E - 240	Yes	Y	1	1.2	10	-0.87	9	-0.5	
35	1.2 D + 1.0 E - 270	Yes	Y	1	1.2	10	-1			
36	1.2 D + 1.0 E - 300	Yes	Y	1	1.2	10	-0.87	9	0.5	
37	1.2 D + 1.0 E - 330	Yes	Y	1	1.2	9	0.87	10	-0.5	
38	1.2 D + 1.5 LL a + Service - 0 W	Yes	Y	1	1.2	6	1			11
39	1.2 D + 1.5 LL a + Service - 30 W	Yes	Y	1	1.2	6	0.87	7	0.5	11
40	1.2 D + 1.5 LL a + Service - 60 W	Yes	Y	1	1.2	7	0.87	6	0.5	11
41	1.2 D + 1.5 LL a + Service - 90 W	Yes	Y	1	1.2	7	1			11
42	1.2 D + 1.5 LL a + Service - 120 W	Yes	Y	1	1.2	7	0.87	6	-0.5	11
43	1.2 D + 1.5 LL a + Service - 150 W	Yes	Y	1	1.2	6	-0.87	7	0.5	11
44	1.2 D + 1.5 LL a + Service - 180 W	Yes	Y	1	1.2	6	-1			11
45	1.2 D + 1.5 LL a + Service - 210 W	Yes	Y	1	1.2	6	-0.87	7	-0.5	11
46	1.2 D + 1.5 LL a + Service - 240 W	Yes	Y	1	1.2	7	-0.87	6	-0.5	11
47	1.2 D + 1.5 LL a + Service - 270 W	Yes	Y	1	1.2	7	-1			11
48	1.2 D + 1.5 LL a + Service - 300 W	Yes	Y	1	1.2	7	-0.87	6	0.5	11
49	1.2 D + 1.5 LL a + Service - 330 W	Yes	Y	1	1.2	6	0.87	7	-0.5	11
50	1.2 D + 1.5 LL b + Service - 0 W	Yes	Y	1	1.2	6	1			12
51	1.2 D + 1.5 LL b + Service - 30 W	Yes	Y	1	1.2	6	0.87	7	0.5	12
52	1.2 D + 1.5 LL b + Service - 60 W	Yes	Y	1	1.2	7	0.87	6	0.5	12
53	1.2 D + 1.5 LL b + Service - 90 W	Yes	Y	1	1.2	7	1			12
54	1.2 D + 1.5 LL b + Service - 120 W	Yes	Y	1	1.2	7	0.87	6	-0.5	12
55	1.2 D + 1.5 LL b + Service - 150 W	Yes	Y	1	1.2	6	-0.87	7	0.5	12
56	1.2 D + 1.5 LL b + Service - 180 W	Yes	Y	1	1.2	6	-1			12
57	1.2 D + 1.5 LL b + Service - 210 W	Yes	Y	1	1.2	6	-0.87	7	-0.5	12
58	1.2 D + 1.5 LL b + Service - 240 W	Yes	Y	1	1.2	7	-0.87	6	-0.5	12

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC
59	1.2 D + 1.5 LL b + Service - 270 W	Yes	Y	1	1.2	7	-1			12
60	1.2 D + 1.5 LL b + Service - 300 W	Yes	Y	1	1.2	7	-0.87	6	0.5	12
61	1.2 D + 1.5 LL b + Service - 330 W	Yes	Y	1	1.2	6	0.87	7	-0.5	12
62	1.2 D + 1.5 LL c + Service - 0 W	Yes	Y	1	1.2	6	1			13
63	1.2 D + 1.5 LL c + Service - 30 W	Yes	Y	1	1.2	6	0.87	7	0.5	13
64	1.2 D + 1.5 LL c + Service - 60 W	Yes	Y	1	1.2	7	0.87	6	0.5	13
65	1.2 D + 1.5 LL c + Service - 90 W	Yes	Y	1	1.2	7	1			13
66	1.2 D + 1.5 LL c + Service - 120 W	Yes	Y	1	1.2	7	0.87	6	-0.5	13
67	1.2 D + 1.5 LL c + Service - 150 W	Yes	Y	1	1.2	6	-0.87	7	0.5	13
68	1.2 D + 1.5 LL c + Service - 180 W	Yes	Y	1	1.2	6	-1			13
69	1.2 D + 1.5 LL c + Service - 210 W	Yes	Y	1	1.2	6	-0.87	7	-0.5	13
70	1.2 D + 1.5 LL c + Service - 240 W	Yes	Y	1	1.2	7	-0.87	6	-0.5	13
71	1.2 D + 1.5 LL c + Service - 270 W	Yes	Y	1	1.2	7	-1			13
72	1.2 D + 1.5 LL c + Service - 300 W	Yes	Y	1	1.2	7	-0.87	6	0.5	13
73	1.2 D + 1.5 LL c + Service - 330 W	Yes	Y	1	1.2	6	0.87	7	-0.5	13
74	1.2 D + 1.5 LL d + Service - 0 W	Yes	Y	1	1.2	6	1			14
75	1.2 D + 1.5 LL d + Service - 30 W	Yes	Y	1	1.2	6	0.87	7	0.5	14
76	1.2 D + 1.5 LL d + Service - 60 W	Yes	Y	1	1.2	7	0.87	6	0.5	14
77	1.2 D + 1.5 LL d + Service - 90 W	Yes	Y	1	1.2	7	1			14
78	1.2 D + 1.5 LL d + Service - 120 W	Yes	Y	1	1.2	7	0.87	6	-0.5	14
79	1.2 D + 1.5 LL d + Service - 150 W	Yes	Y	1	1.2	6	-0.87	7	0.5	14
80	1.2 D + 1.5 LL d + Service - 180 W	Yes	Y	1	1.2	6	-1			14
81	1.2 D + 1.5 LL d + Service - 210 W	Yes	Y	1	1.2	6	-0.87	7	-0.5	14
82	1.2 D + 1.5 LL d + Service - 240 W	Yes	Y	1	1.2	7	-0.87	6	-0.5	14
83	1.2 D + 1.5 LL d + Service - 270 W	Yes	Y	1	1.2	7	-1			14
84	1.2 D + 1.5 LL d + Service - 300 W	Yes	Y	1	1.2	7	-0.87	6	0.5	14
85	1.2 D + 1.5 LL d + Service - 330 W	Yes	Y	1	1.2	6	0.87	7	-0.5	14
86	1.2 D + 1.5 LL Maint (1)	Yes	Y	1	1.2					15
87	1.2 D + 1.5 LL Maint (2)	Yes	Y	1	1.2					16
88	1.2 D + 1.5 LL Maint (3)	Yes	Y	1	1.2					17
89	1.2 D + 1.5 LL Maint (4)	Yes	Y	1	1.2					18
90	1.2 D + 1.5 LL Maint (5)	Yes	Y	1	1.2					19
91	1.2 D + 1.5 LL Maint (6)	Yes	Y	1	1.2					20
92	1.2 D + 1.5 LL Maint (7)	Yes	Y	1	1.2					21
93	1.2 D + 1.5 LL Maint (8)	Yes	Y	1	1.2					22
94	1.2 D + 1.5 LL Maint (9)	Yes	Y	1	1.2					23
95	1.2 D + 1.5 LL Maint (10)	Yes	Y	1	1.2					24
96	1.2 D + 1.5 LL Maint (11)	Yes	Y	1	1.2					25
97	1.2 D + 1.5 LL Maint (12)	Yes	Y	1	1.2					26
98	1.2 D + 1.5 LL Maint (13)	Yes	Y	1	1.2					27
99	1.2 D + 1.5 LL Maint (14)	Yes	Y	1	1.2					28
100	1.2 D + 1.5 LL Maint (15)	Yes	Y	1	1.2					29

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	237	max	0.038	5	1.092	6	0.077	4	1.242	12	0.195	6	2.354	12
2		min	-0.07	11	-0.576	12	-0.053	10	-2.129	6	-0.168	12	-3.974	6
3	154	max	0.122	11	0.356	8	0.248	8	-0.447	2	0.539	13	0.736	10
4		min	-0.128	5	0.062	2	-0.239	2	-0.765	8	-0.648	7	-0.286	4
5	211	max	0.062	4	0.21	12	0.148	3	0.981	3	0.565	9	0.92	11
6		min	-0.055	9	0.108	6	-0.147	9	-0.651	9	-0.578	3	-0.014	5
7	236	max	0.141	10	0.295	3	0.071	10	1.367	2	0.674	4	0.027	13
8		min	-0.154	4	0.113	9	-0.073	4	-0.15	8	-0.628	10	-0.618	7
9	258	max	0.011	5	3.246	8	2.773	8	0	100	0	100	0	100
10		min	-0.011	11	-8.345	2	-2.762	2	0	1	0	1	0	1
11	259	max	2.311	12	0.095	12	1.342	6	0	100	0	100	0	100
12		min	-2.324	6	-4.916	6	-1.335	12	0	1	0	1	0	1
13	260	max	1.973	10	1.996	4	1.139	10	0	100	0	100	0	100

Envelope Node Reactions (Continued)

Node Label			X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
14		min	-1.974	4	-7.19	10	-1.14	4	0	1	0	1	0	1
15	265	max	3.225	7	8.067	3	1.99	13	0	100	0	100	0	100
16		min	-3.174	13	-4.789	9	-2.017	7	0	1	0	1	0	1
17	266	max	3.381	3	7.589	12	2.083	3	0	100	0	100	0	100
18		min	-3.391	9	-3.716	6	-2.103	9	0	1	0	1	0	1
19	267	max	3.392	5	10.038	8	1.548	3	0	100	0	100	0	100
20		min	-3.401	11	-6.556	2	-1.476	9	0	1	0	1	0	1
21	268	max	0.513	5	8.822	3	3.747	13	0	100	0	100	0	100
22		min	-0.518	11	-5.477	9	-3.783	7	0	1	0	1	0	1
23	269	max	0.394	6	7.573	12	4.001	3	0	100	0	100	0	100
24		min	-0.39	12	-3.821	6	-3.992	9	0	1	0	1	0	1
25	270	max	2.563	5	9.783	8	1.42	11	0	100	0	100	0	100
26		min	-2.528	11	-6.262	2	-1.436	5	0	1	0	1	0	1
27	Totals:	max	6.479	5	4.7	1	8.417	2						
28		min	-6.479	11	4.028	3	-8.417	8						

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

Member	Shape	Code	Check	Loc[ft]	LC	Shear	Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	1	C2X5X2X0.2	0.718	1.964	2	0.319	2.014	y	4	33.997	55.728	1.797	8.041	1.608	H1-1b	
2	2	C2X5X2X0.2	0.681	2.87	9	0.399	2.819	y	8	33.997	55.728	1.797	8.041	2.037	H1-1b	
3	3	C2X5X2X0.2	0.624	1.964	7	0.419	2.266	y	8	33.997	55.728	1.797	8.041	2.259	H1-1b	
4	22	L3X3X4	0.664	6.979	13	0.482	0.208	y	9	7.731	46.656	1.688	2.981	1.5	H2-1	
5	23	L2x2x3	0.763	0	9	0.703	0.096	z	9	14.529	23.393	0.558	1.202	1.5	H2-1	
6	24	L2x2x3	1.004	3.083	9	0.612	3.083	y	9	14.529	23.393	0.558	1.202	1.5	H2-1	
7	25	L2x2x3	0.743	0	8	0.702	0.096	y	7	14.529	23.393	0.558	1.202	1.5	H2-1	
8	26	L2x2x3	0.829	3.083	7	0.669	3.083	z	8	14.529	23.393	0.558	1.202	1.5	H2-1	
9	27	L2x2x3	0.116	0	4	0.013	0	y	6	14.903	23.393	0.558	1.208	1.5	H2-1	
10	28	L3X3X4	0.608	1.042	9	0.244	10	y	4	7.731	46.656	1.688	2.981	1.5	H2-1	
11	29	L2x2x3	0.613	0	2	0.821	0.096	z	13	14.529	23.393	0.558	1.202	1.5	H2-1	
12	30	L2x2x3	0.965	3.083	2	0.652	3.083	y	13	14.529	23.393	0.558	1.202	1.5	H2-1	
13	31	L2x2x3	0.501	0	12	0.605	0.096	y	10	14.529	23.393	0.558	1.202	1.5	H2-1	
14	32	L2x2x3	0.744	3.083	11	0.507	3.083	z	11	14.529	23.393	0.558	1.202	1.5	H2-1	
15	33	L2x2x3	0.134	3	9	0.017	0	y	9	14.903	23.393	0.558	1.208	1.5	H2-1	
16	34	L3X3X4	0.563	9.896	2	0.871	10	y	9	7.731	46.656	1.688	2.981	1.5	H2-1	
17	35	L2x2x3	0.467	0	5	0.6	0.096	z	5	14.529	23.393	0.558	1.202	1.5	H2-1	
18	36	L2x2x3	0.673	3.083	5	0.489	3.083	y	5	14.529	23.393	0.558	1.202	1.5	H2-1	
19	37	L2x2x3	0.476	0	3	0.66	0.096	y	2	14.529	23.393	0.558	1.202	1.5	H2-1	
20	38	L2x2x3	1.037	3.083	2	0.565	3.083	z	3	14.529	23.393	0.558	1.202	1.5	H2-1	
21	39	L2x2x3	0.155	3	7	0.017	3	y	7	14.903	23.393	0.558	1.208	1.5	H2-1	
22	42	PIPE 2.0	0.723	3.656	8	0.194	3.75		8	12.144	32.13	1.872	1.872	2.015	H1-1b	
23	43	PIPE 2.0	1.011	7.875	5	0.238	8.021		5	5.019	32.13	1.872	1.872	1.288	H1-1b	
24	46	PIPE 2.0	0.121	4.74	5	0.084	4.74		3	17.855	32.13	1.872	1.872	2.389	H1-1b	
25	49	PIPE 2.0	0.094	4.74	10	0.116	4.74		8	17.855	32.13	1.872	1.872	2.311	H1-1b	
26	51	PIPE 2.0	0.019	2.188	13	0.013	2.188		9	28.843	32.13	1.872	1.872	2.38	H1-1b	
27	56	PIPE 2.0	0.058	4.74	4	0.126	4.74		3	17.855	32.13	1.872	1.872	2.054	H1-1b	
28	59	PIPE 2.0	0.076	4.74	8	0.18	4.74		7	17.855	32.13	1.872	1.872	1.739	H1-1b	
29	62	PIPE 2.0	0.058	4.74	12	0.133	4.74		11	17.855	32.13	1.872	1.872	2.809	H1-1b	
30	65	PIPE 2.0	0.145	4.74	7	0.084	4.74		8	17.855	32.13	1.872	1.872	2.339	H1-1b	
31	68	PIPE 2.0	0.127	4.74	13	0.095	4.74		11	17.855	32.13	1.872	1.872	2.234	H1-1b	
32	73	PIPE 2.0	0.722	3.656	2	0.135	6.75		9	12.144	32.13	1.872	1.872	2.188	H1-1b	
33	74	PIPE 2.0	0.257	2.625	13	0.117	2.734		9	8.922	32.13	1.872	1.872	1.958	H1-1b	
34	75	PIPE 2.0	0.726	5.469	7	0.162	5.578		8	8.922	32.13	1.872	1.872	1.183	H1-1b	
35	76	HSS5X5X4	0.056	3.961	8	0.024	3.961	y	10	170.894	178.02	26.255	26.255	2.217	H1-1b	
36	78	HSS5X5X4	0.068	4.522	3	0.032	4.522	y	13	168.79	178.02	26.255	26.255	1.716	H1-1b	
37	80	PIPE 2.0	0.031	2.208	4	0.009	0.542		5	26.521	32.13	1.872	1.872	1.957	H1-1b	
38	83	PIPE 2.0	0.041	2.208	8	0.013	0.542		9	26.521	32.13	1.872	1.872	2.078	H1-1b	
39	86	PIPE 2.0	0.032	2.208	12	0.013	0.542		2	26.521	32.13	1.872	1.872	1.751	H1-1b	
40	89	PIPE 2.0	0.036	2.188	8	0.013	0.531		7	28.843	32.13	1.872	1.872	2.698	H1-1b	

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

Member	Shape	Code	Check	Loc[ft]	LC	Shear	Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
41	93	PIPE 2.0	0.111	4.74	3	0.106	4.74	11	17.855	32.13	1.872	1.872	2.19	H1-1b		
42	96	PIPE 2.0	0.129	4.74	9	0.12	4.74	7	17.855	32.13	1.872	1.872	2.413	H1-1b		
43	99	PIPE 2.0	0.722	3.656	8	0.143	3.75	12	12.144	32.13	1.872	1.872	1.704	H1-1b		
44	100	PIPE 2.0	0.472	10.062	9	0.081	10.062	9	8.922	32.13	1.872	1.872	1.163	H1-1b		
45	101	HSS5X5X4	0.045	4.178	10	0.043	4.178	z	9	170.112	178.02	26.255	26.255	1.597	H1-1b	
46	104	PIPE 2.0	0.016	2.188	4	0.01	2.188	12	28.843	32.13	1.872	1.872	2.065	H1-1b		
47	106	L2x2x3	0.537	2.156	9	0.017	4.312	z	8	9.217	23.393	0.558	1.05	1.077	H2-1	
48	107	L2x2x3	0.496	1.976	7	0.012	0	y	8	9.217	23.393	0.558	1.042	1.044	H2-1	
49	108	L2x2x3	0.53	2.066	13	0.016	4.312	z	12	9.217	23.393	0.558	1.057	1.103	H2-1	
50	109	L2x2x3	0.416	2.066	11	0.011	4.312	y	11	9.217	23.393	0.558	1.043	1.046	H2-1	
51	110	L2x2x3	0.41	2.111	5	0.014	4.312	z	4	9.217	23.393	0.558	1.049	1.071	H2-1	
52	111	L2x2x3	0.572	0	2	0.01	0	z	8	9.217	23.393	0.558	1.132	1.5	H2-1	
53	112	C2X5X2X0.2	0.102	0	6	0.016	1.128	z	5	49.933	55.728	1.797	8.041	1.576	H1-1b	
54	113	C2X5X2X0.2	0.486	0	9	0.134	0.121	z	8	49.251	55.728	1.797	8.041	2.061	H1-1b	
55	114	HSS5X5X4	0.179	0	6	0.025	0	y	6	168.495	178.02	26.255	26.255	1.77	H1-1b	
56	115	C2X5X2X0.2	0.62	4.883	2	0.236	5.208	z	3	31.394	55.728	1.797	8.041	1.898	H1-1b	
57	116	C2X5X2X0.2	0.625	0.326	3	0.236	0	z	3	31.393	55.728	1.797	8.041	1.731	H1-1b	
58	118	C2X5X2X0.2	0.654	4.883	13	0.201	5.208	z	7	31.394	55.728	1.797	8.041	2.237	H1-1b	
59	119	C2X5X2X0.2	0.597	0.326	2	0.201	0	z	7	31.393	55.728	1.797	8.041	1.939	H1-1b	
60	121	C2X5X2X0.2	0.539	4.883	10	0.183	4.829	y	9	31.394	55.728	1.797	8.041	2.013	H1-1b	
61	122	C2X5X2X0.2	0.513	0.326	10	0.215	0.38	y	8	31.393	55.728	1.797	8.041	2.834	H1-1b	
62	125	PIPE 2.5	0.15	9.188	4	0.014	10.281	7	20.573	50.715	3.596	3.596	1.948	H1-1b		
63	128	PIPE 2.0	0.114	6.528	9	0.009	7.589	7	15.396	32.13	1.872	1.872	1.869	H1-1b		
64	131	PIPE 2.5	0.145	9.188	7	0.011	10.281	5	20.573	50.715	3.596	3.596	1.966	H1-1b		
65	134	PIPE 2.0	0.132	7.099	10	0.008	7.588	10	15.396	32.13	1.872	1.872	2.077	H1-1b		

APPENDIX D
ADDITIONAL CALCULATIONS

PROJECT	136092.006.01 - CT Chester CAC 8005 KSC			
SUBJECT	Platform Mount Analysis			
DATE	08/26/21	PAGE	1	OF 1



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

[REF: AISC 360-05]

Reactions at Bolted Connection

Tension	:	2.147	k
Vertical Shear	:	7.7	k
Horizontal Shear	:	3.065	k
Torsion	:	0	k.ft
Moment from Horizontal Forces	:	0	k.ft
Moment from Vertical Forces	:	0	k.ft

Bolt Parameters

Bolt Grade	:	A325	
Bolt Diameter	:	0.75	in
Nominal Bolt Area	:	0.44	in ²
Bolt spacing, Horizontal	:	6	in
Bolt spacing, Vertical	:	6	in
Bolt edge distance, plate height	:	1.5	in
Bolt edge distance, plate width	:	1.5	in
Total Number of Bolts	:	1	bolts

Summary of Forces

Shear Resultant Force	:	8.29	k
Force from Horz. Moment	:	0.00	k
Force from Vert. Moment	:	0.00	k
Shear Load / Bolt	:	8.29	k
Tension Load / Bolt	:	2.15	k
Resultant from Moments / Bolt	:	0.00	k

Bolt Checks

Nominal Tensile Stress, F_{nt}	:	90.00	ksi	[AISC Table J3.2]
Available Tensile Stress, ΦR_{nt}	:	29.70	k/bolt	[Eq. J3-1]
Unity Check, Bolt Tension	:	7.23%		OKAY
Nominal Shear Stress, F_{nv}	:	48.00	ksi	[AISC Table J3.2]
Available Shear Stress, ΦR_{nv}	:	15.84	k/bolt	[Eq. J3-1]
Unity Check, Bolt Shear	:	65.87%		OKAY
Unity Check, Combined	:	73.10%		OKAY
Available Bearing Strength, ΦR_n	:	32.63	k/bolt	
Unity Check, Bolt Bearing	:	25.40%		OKAY



EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CTHA402A

800515

45 Wig Hill Road

Chester, Connecticut 06412

October 18, 2021

EBI Project Number: 6221006098

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	35.30%



October 18, 2021

T-Mobile

Attn: Jason Overbey, RF Manager

35 Griffin Road South

Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTHA402A - 800515

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **45 Wig Hill Road in Chester, 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 45 Wig Hill Road in Chester, 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 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.



- 6) 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.
- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
- 11) 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.
- 12) 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.
- 13) The antennas used in this modeling are the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 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.

- 14) The antenna mounting height centerline of the proposed antennas is 150 feet above ground level (AGL).
- 15) 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.
- 16) 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 #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXVAALL24_43- U-NA20	Make / Model:	RFS APXVAALL24_43- U-NA20	Make / Model:	RFS APXVAALL24_43- U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd
Height (AGL):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 feet
Channel Count:	13	Channel Count:	13	Channel Count:	13
Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts
ERP (W):	17,868.72	ERP (W):	17,868.72	ERP (W):	17,868.72
Antenna A1 MPE %:	4.09%	Antenna B1 MPE %:	4.09%	Antenna C1 MPE %:	4.09%
Antenna #:	2	Antenna #:	2	Antenna #:	2
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 / 2500 MHz	Frequency Bands:	2500 MHz / 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):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 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 A2 MPE %:	6.30%	Antenna B2 MPE %:	6.30%	Antenna C2 MPE %:	6.30%



Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	10.39%
AT&T	5.53%
T-Mobile (Existing)	4.18%
Verizon	14.79%
VSECI	0.41%
Site Total MPE % :	35.30%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	10.39%
T-Mobile Sector B Total:	10.39%
T-Mobile Sector C Total:	10.39%
Site Total MPE % :	35.30%

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 600 MHz LTE	2	591.73	150.0	2.05	600 MHz LTE	400	0.51%
T-Mobile 600 MHz NR	1	1577.94	150.0	2.74	600 MHz NR	400	0.68%
T-Mobile 700 MHz LTE	2	695.22	150.0	2.41	700 MHz LTE	467	0.52%
T-Mobile 1900 MHz GSM	4	1052.26	150.0	7.30	1900 MHz GSM	1000	0.73%
T-Mobile 1900 MHz LTE	2	2104.51	150.0	7.30	1900 MHz LTE	1000	0.73%
T-Mobile 2100 MHz LTE	2	2649.42	150.0	9.19	2100 MHz LTE	1000	0.92%
T-Mobile 2500 MHz LTE 1C & 2C Traffic	1	11044.63	150.0	19.15	2500 MHz LTE 1C & 2C Traffic	1000	1.91%
T-Mobile 2500 MHz LTE 1C & 2C Broadcast	1	1074.06	150.0	1.86	2500 MHz LTE 1C & 2C Broadcast	1000	0.19%
T-Mobile 2500 MHz NR Traffic	1	22089.26	150.0	38.30	2500 MHz NR Traffic	1000	3.83%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	150.0	3.72	2500 MHz NR Broadcast	1000	0.37%
Total:							10.39%

• 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:	10.39%
Sector B:	10.39%
Sector C:	10.39%
T-Mobile Maximum MPE % (Sector A):	10.39%
Site Total:	35.30%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **35.30%** 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.



T-MOBILE SITE NUMBER:CTHA402A

T-MOBILE SITE NAME:CTHA402A

SITE TYPE:MONOPOLE

TOWER HEIGHT:150'-0"

BUSINESS UNIT #:800515

SITE ADDRESS:49 WIG HILL ROAD
CHESTER, CT 06412

COUNTY:MIDDLESEX

JURISDICTION:MIDDLESEX COUNTY

T-MOBILE SPRINT RETAIN SITE CONFIGURATION: 67E5998E_1XAIR+10P



35 GRIFFIN ROAD
BLOOMFIELD, CT 06002



1500 CORPORATE DRIVE
CANONSBURG, PA 15317



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Phone: 518-690-0790 | Fax: 518-690-0793
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T-MOBILE SITE NUMBER:
CTHA402A

BU #: 800515
CT CHESTER CAC 800515

49 WIG HILL ROAD
CHESTER, CT 06412

EXISTING 150'-0" MONOPOLE

SITE INFORMATION

CROWN CASTLE USA INC. CT CHESTER CAC 800515
SITE NAME:
SITE ADDRESS: 49 WIG HILL ROAD
CHESTER, CT 06412

COUNTY: MIDDLESEX
MAP/PARCEL #: 8-127-1
AREA OF CONSTRUCTION: EXISTING
LATITUDE: 41.40388889° (41° 24' 13.93")
LONGITUDE: -72.47247222° (-72° 28' 20.82")
LAT/LONG TYPE: NAD83
GROUND ELEVATION: 370.74 FT
CURRENT ZONING: C-COMMERCIAL DISTRICT
JURISDICTION: MIDDLESEX COUNTY
OCCUPANCY CLASSIFICATION: U
TYPE OF CONSTRUCTION: IIB
A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR
HUMAN HABITATION

PROPERTY OWNER: NEGRELLI HAZEL C TRUSTEE
PO BOX 1175
TRURO, MA 02666

TOWER OWNER: CROWN CASTLE
2000 CORPORATE DRIVE
CANONSBURG, PA 15317

CARRIER/APPLICANT: T-MOBILE
35 GRIFFIN ROAD
BLOOMFIELD, CT 06002

ELECTRIC PROVIDER: TBD

TELCO PROVIDER: TBD

PROJECT TEAM

A&E FIRM: INFINIGY
1033 WATERVLIET SHAKER RD.
ALBANY, NY 12205

CROWN CASTLE 1500 CORPORATE DRIVE
USA INC. DISTRICT CANONSBURG, PA 15317
CONTACTS:

TRICIA PELON - PROJECT MANAGER
TRICIA.PELON@CROWNCastle.COM

JASON D'AMICO - CONSTRUCTION MANAGER
JASON.DAMICO@CROWNCastle.COM

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1	SITE PLAN & ENLARGED SITE PLAN
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	ANTENNA & CABLE SCHEDULE
C-4	PLUMBING DIAGRAM
C-5	EQUIPMENT SPECS
C-6	EQUIPMENT SPECS
E-1	AC PANEL SCHEDULES & ONE LINE DIAGRAM
G-1	ANTENNA GROUNDING DIAGRAM
G-2	GROUNDING DETAILS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR
----. 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 DESCRIPTION

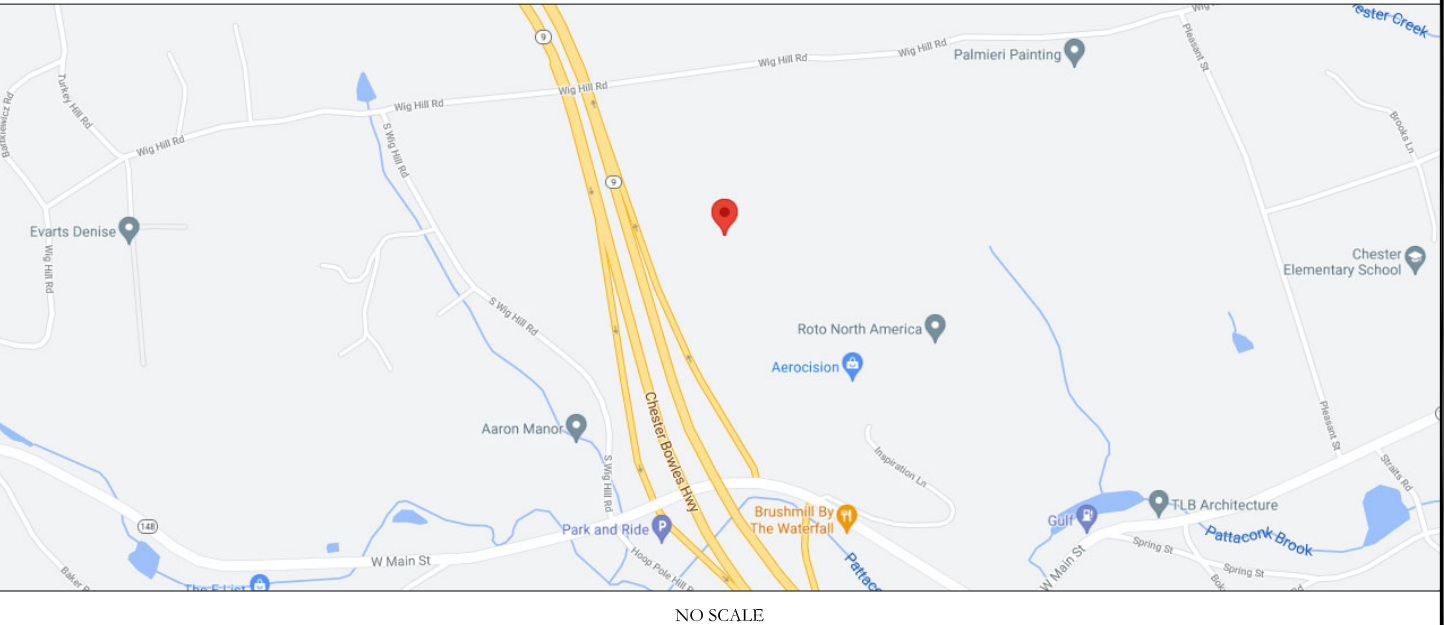
THE PURPOSE OF THIS PROJECT IS TO ENHANCE
BROADBAND CONNECTIVITY AND CAPACITY TO THE
EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:
• REMOVE (6) ANTENNAS
• REMOVE (9) RRHs
• REMOVE (4) HYBRID CABLES
• INSTALL (6) ANTENNAS
• INSTALL (6) RRHs
• INSTALL (3) HYBRID CABLES

GROUND SCOPE OF WORK:
• REMOVE (2) EQUIPMENT CABINET
• INSTALL (1) 6160 & (1) B160 BATTERY CABINETS
• INSTALL (3) BB 6648
• INSTALL (1) DUG20 W/ RBS 6601 UNIT
• INSTALL (1) PSU 4813
• INSTALL (1) CSR IXRe V2 (GEN2)
• UPGRADE SERVICE TO 200AMP.

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

LOCATION MAP



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	2018 CT STATE BUILDING CODE
MECHANICAL	2015 IMC
ELECTRICAL	2017 NEC

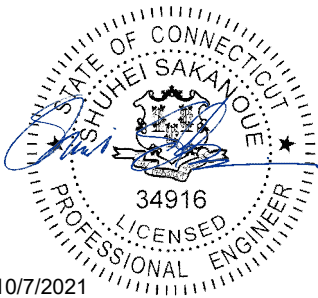
REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	BLACK & VEATCH
DATED:	09/03/2021
MOUNT ANALYSIS:	B&T GRP
DATED:	08/26/2021
RFDS REVISION:	REV1 - DRAFT
DATED:	07/09/2021
ORDER ID:	557901
REVISION:	0

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.



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.

SHEET NUMBER:

T-1

REVISION:

2

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- 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.
- "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.
- 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.
- 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–STD–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).
- ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–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."
- 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.
- 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.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 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.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- 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.
- 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.
- 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.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- 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:

- 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.
- 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.
- 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.
- METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- 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.
- 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.
- 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.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINIUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
- 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.
- 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 WELDING MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL.)
- 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:

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CARRIER: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
T-MOBILE
TOWER OWNER: CROWN CASTLE USA INC.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- 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.
- UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) 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.
- 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.
- 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
- 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"
- 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:

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
 - ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
 - 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.
- 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.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOD 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)
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 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.
- 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.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- 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.
- 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).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECIMATE WIREWAY).
- SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- 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 LOCKNUT ON OUTSIDE AND INSIDE.
- 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.
- 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.
- 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.
- 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.
- 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.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "T–MOBILE".
- 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
277/480V, 3Ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
DC VOLTAGE	GROUND	GREEN
	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
TYF	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

T . . Mobile . . .

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CC

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T-MOBILE SITE NUMBER:
CTHA402A

BU #: 800515
CT CHESTER CAC 800515

49 WIG HILL ROAD
CHESTER, CT 06412

EXISTING 150'-0" MONOPOLE

ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/01/2021	RCD	FINAL	SS
1	09/10/2021	HL	RFDS UPDATE	SS
1	10/07/2021	TJ	SA REFERENCE ADD	SS

STATE OF CONNECTICUT
SHUHEI SAKANoue
34916
LICENSED
PROFESSIONAL ENGINEER

10/7/2021

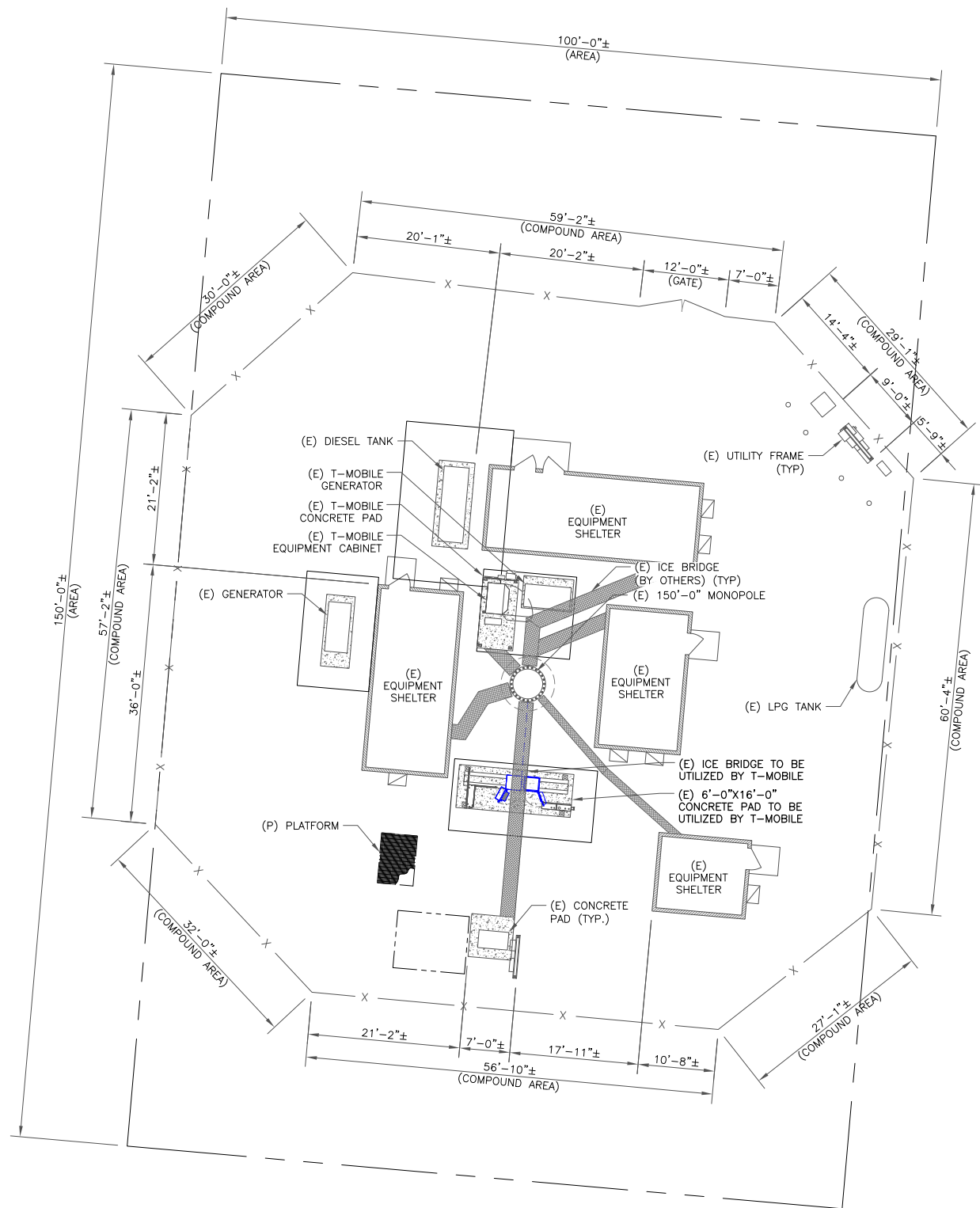
IT IS A VIOLATION OF LAW FOR ANY PERSON,
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OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

SHEET NUMBER:
T-2

REVISION:
2

NOTE:

1. PLANS BASED ON SITE PLAN PROVIDED BY TOWER OWNER AND SITE VISIT PERFORMED BY INFINIGY. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING T-MOBILE EQUIPMENT.

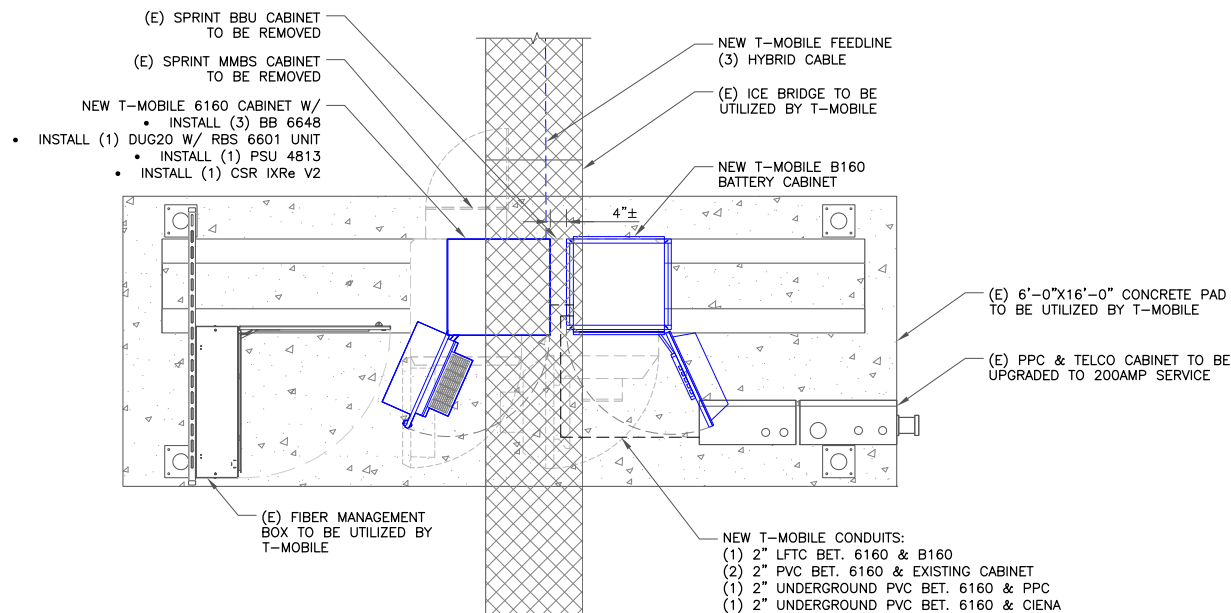


1 SITE PLAN

SCALE: 3/32"=1'-0" (FULL SIZE)
3/64"=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.



2 ENLARGED SITE PLAN

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

T-Mobile

35 GRIFFIN ROAD
BLOOMFIELD, CT 06002CROWN
CASTLE1500 CORPORATE DRIVE
CANONSBURG, PA 15317

INFINIGY

FROM ZERO TO INFINIGY

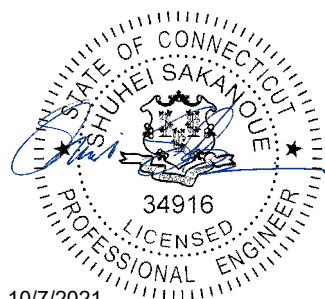
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Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.comT-MOBILE SITE NUMBER:
CTHA402ABU #: 800515
CT CHESTER CAC 80051549 WIG HILL ROAD
CHESTER, CT 06412

EXISTING 150'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/01/2021	RCD	FINAL	SS
1	09/10/2021	HL	RFDS UPDATE	SS
1	10/07/2021	TJ	SA REFERENCE ADD	SS



10/7/2021

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TO ALTER THIS DOCUMENT.

SHEET NUMBER:

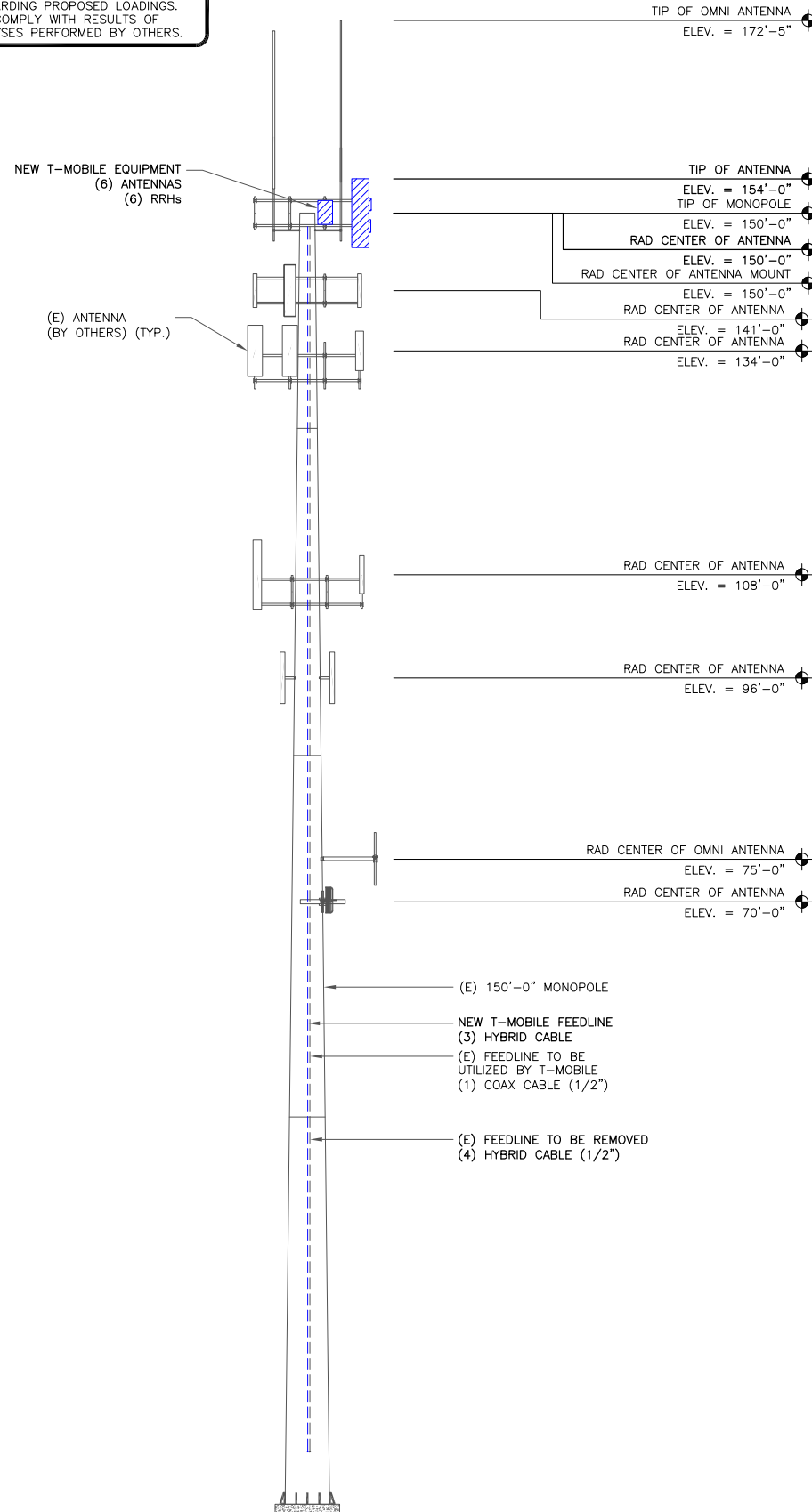
C-1

REVISION:

2

NOTES:

1. ELEVATION BASED ON DRAWING PROVIDED BY TOWER OWNER. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING EQUIPMENT.
2. INFINIGY HAS NOT EVALUATED THE TOWER OR MOUNT STRUCTURE AND ASSUMES NO RESPONSIBILITY FOR THEIR STRUCTURAL INTEGRITY REGARDING PROPOSED LOADINGS. FINAL INSTALLATION SHALL COMPLY WITH RESULTS OF PASSING STRUCTURAL ANALYSES PERFORMED BY OTHERS.

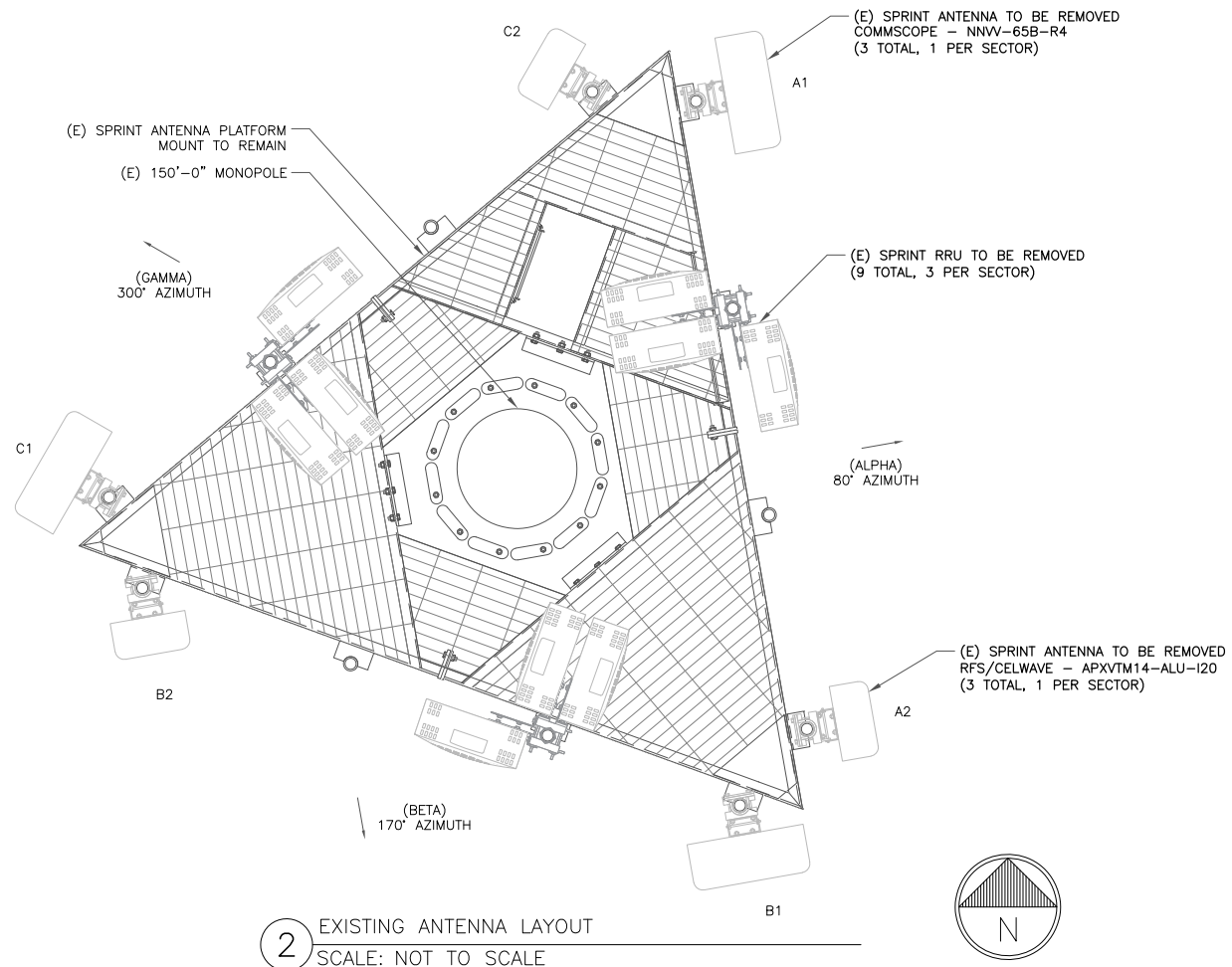


T-MOBILE EQUIPMENT

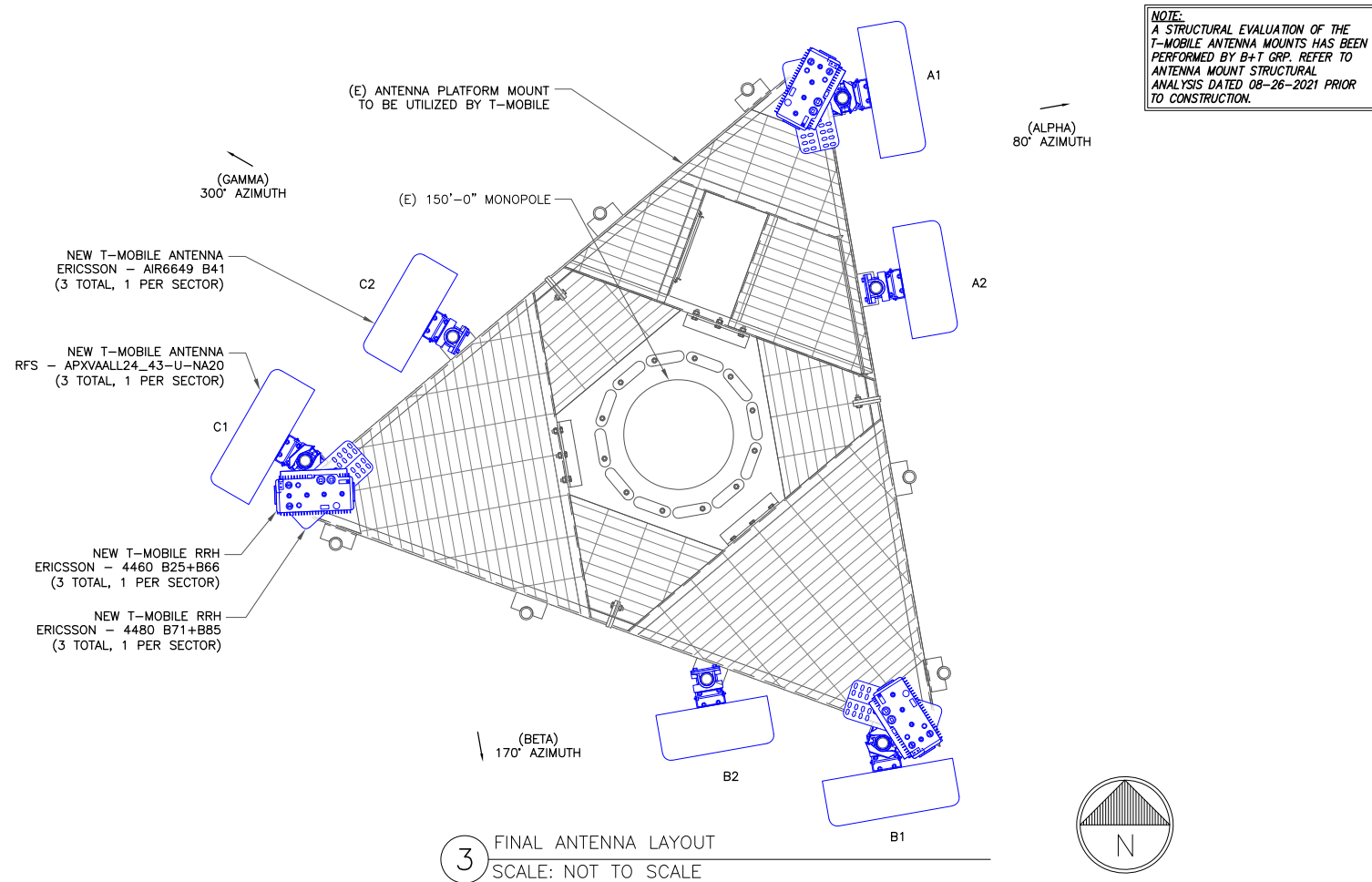
ANTENNA CL: 150'-0"
MOUNT CL: 150'-0"

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

T-Mobile

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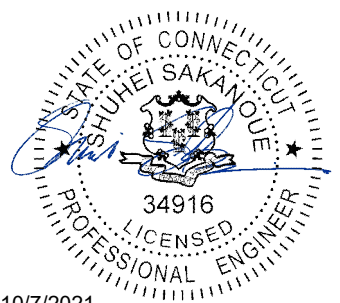
BU #: 800515
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CHESTER, CT 06412

EXISTING 150'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/01/2021	RCD	FINAL	SS
1	09/10/2021	HL	RFDS UPDATE	SS
1	10/07/2021	TJ	SA REFERENCE ADD	SS



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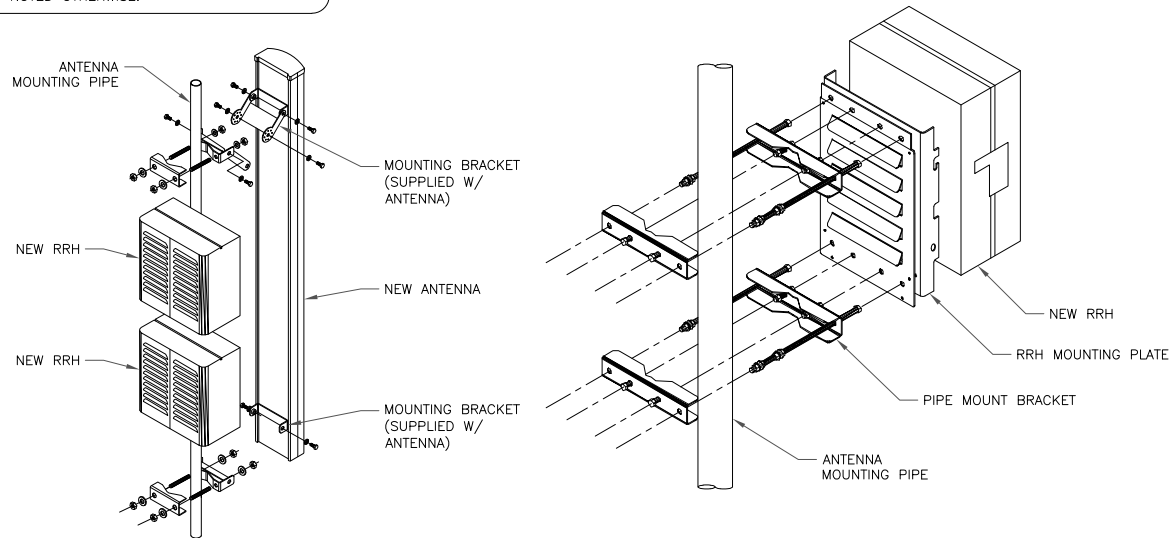
2

ANTENNA SCHEDULE										
SECTOR	POS.	TECHNOLOGY	RAD CENTER	AZIMUTH	ANTENNA MANUFACTURER	ANTENNA MODEL	MECH. TILT	ELECT. TILT	TOWER MOUNTED EQUIPMENT	FEEDLINE TYPE
ALPHA	A1	L600/L700/N600 L2100/L1900/G1900	150'-0"	80°	RFS	APXVAALL24_43-U-NA20	0°	2°/2°/2°/2°	(1) ERICSSON — RRUS 4480 B71+B85 (1) ERICSSON — RRUS 4460 B25+B66	(1) 6X24 HCS HYBRID
ALPHA	A2	L2500/N2500	150'-0"	80°	ERICSSON	AIR6649 B41	0°	2°/2°	--	
BETA	B1	L600/L700/N600 L2100/L1900/G1900	150'-0"	170°	ERICSSON	APXVAALL24_43-U-NA20	0°	2°/2°/2°/2°	(1) ERICSSON — RRUS 4480 B71+B85 (1) ERICSSON — RRUS 4460 B25+B66	(1) 6X24 HCS HYBRID
BETA	B2	L2500/N2500	150'-0"	170°	RFS	AIR6649 B41	0°	2°/2°	--	
GAMMA	G1	L600/L700/N600 L2100/L1900/G1900	150'-0"	300°	ERICSSON	APXVAALL24_43-U-NA20	0°	2°/2°/2°/2°	(1) ERICSSON — RRUS 4480 B71+B85 (1) ERICSSON — RRUS 4460 B25+B66	(1) 6X24 HCS HYBRID
GAMMA	G2	L2500/N2500	150'-0"	300°	RFS	AIR6649 B41	0°	2°/2°	--	

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.



NOTE:

1. CONTRACTOR SHALL INSTALL 3RD DUAL RRH MOUNT TO ACCOMMODATE ALL RRH BRACKETS HOLES IF NECESSARY.

2 ANTENNA WITH RRHs MOUNTING DETAIL
SCALE: NOT TO SCALE

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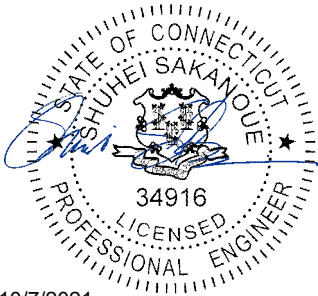
BU #: 800515
CT CHESTER CAC 800515

49 WIG HILL ROAD
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EXISTING 150'-0" MONOPOLE

ISSUED FOR:

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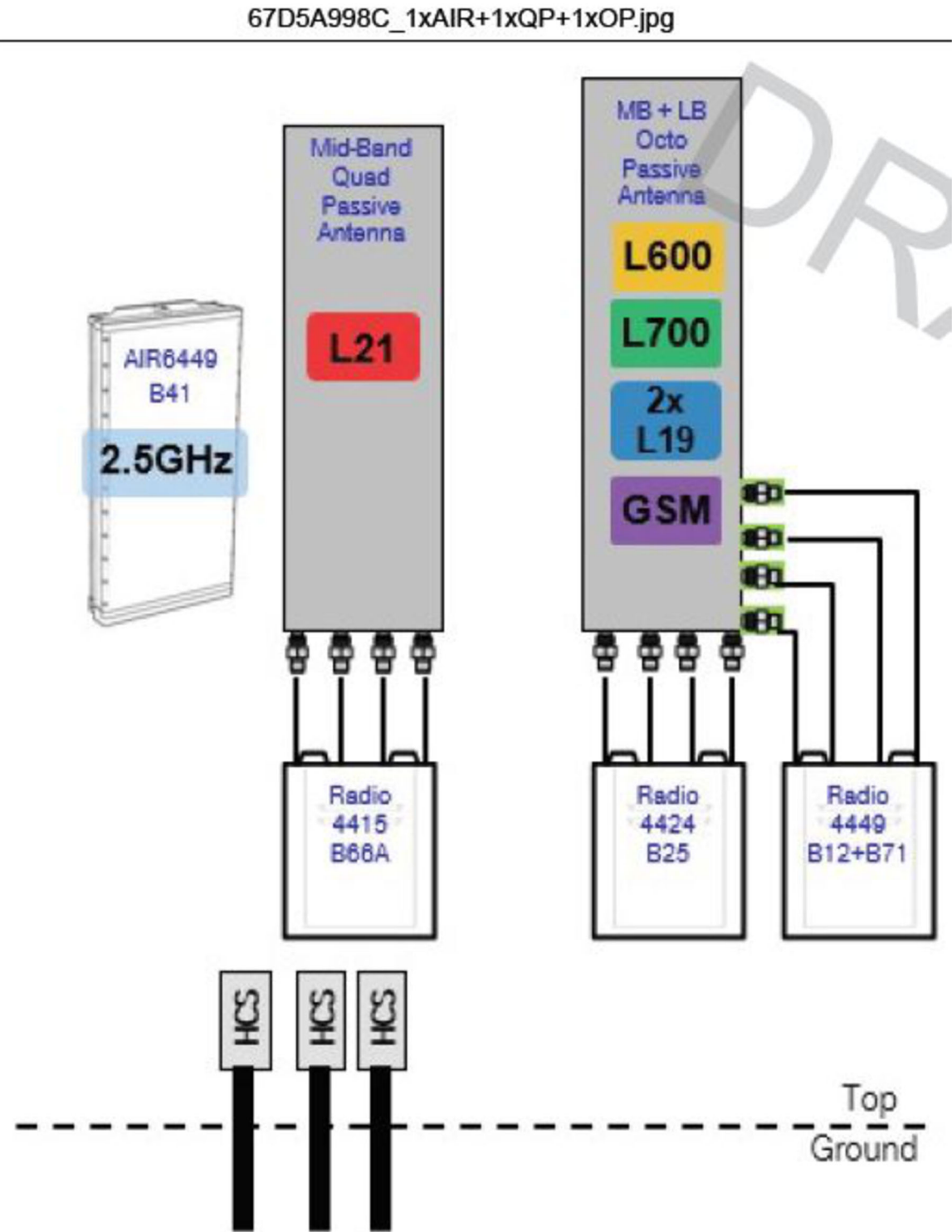
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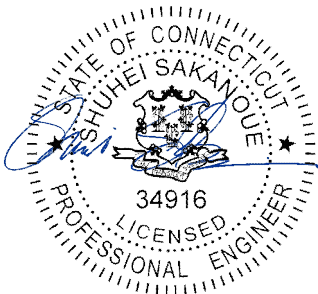
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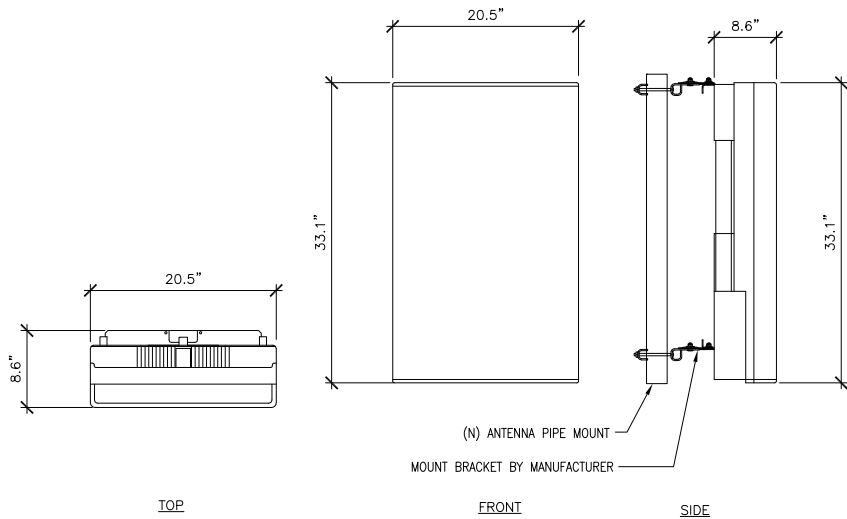
SHEET NUMBER:

C-4

REVISION:

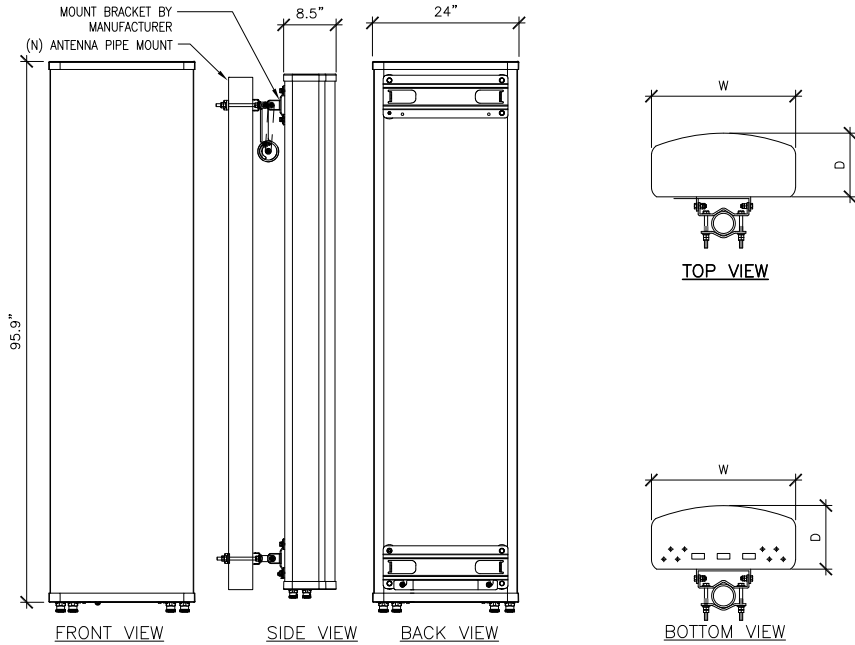
2

MANUFACTURER: ERICSSON
MODEL: AIR6449 B41
WEIGHT: 104 LBS (W/ MOUNT BRACKET 113)
DIMENSIONS: 33.1"H. X 20.5"W. X 8.6"D.
FREQUENCY: REFER TO RF DATA SHEET

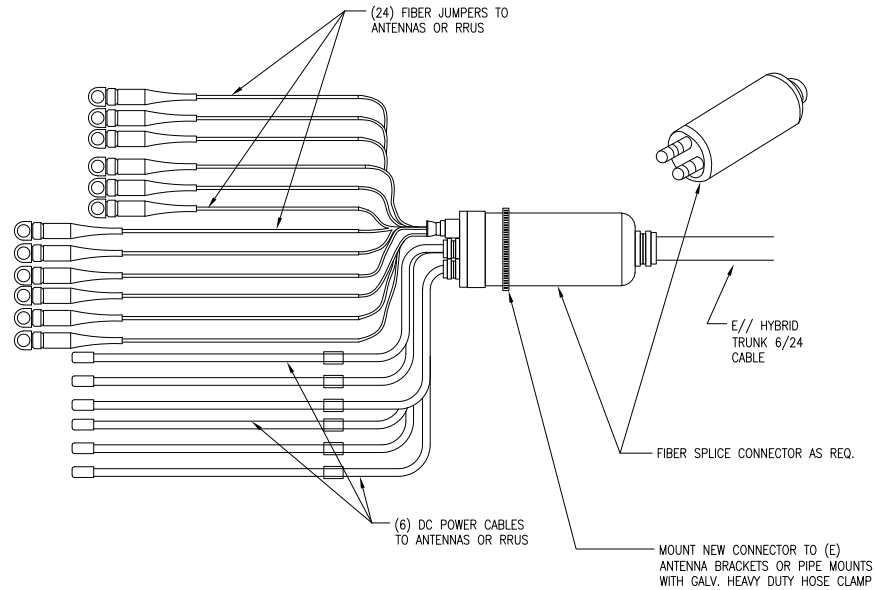


1 (N) AIR6449 B41 ANTENNA SPEC
SCALE: NOT TO SCALE

RFS ANTENNAS	
MODEL	WEIGHT (lb)
(8') APXVAALL24_43-U-NA20	122.8
WEIGHT W/ MOUNTING BRACKET (lb):	149.9

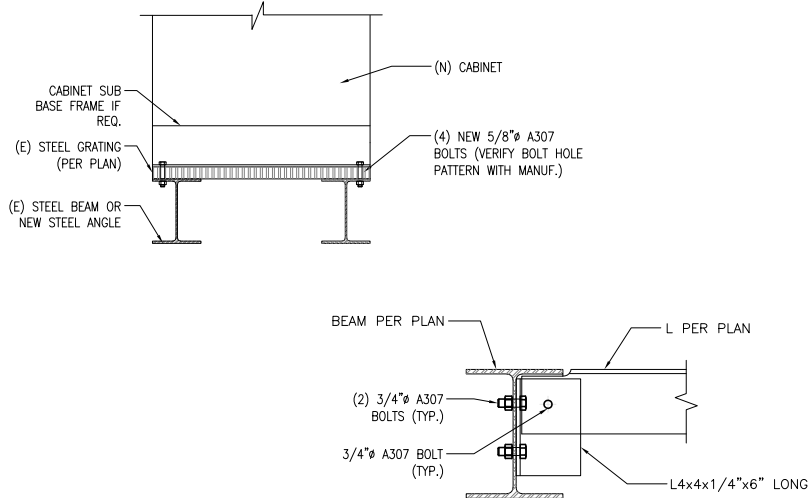


2 (N) APXVAAL24_43-UNA20 ANTENNA SPEC
SCALE: NOT TO SCALE

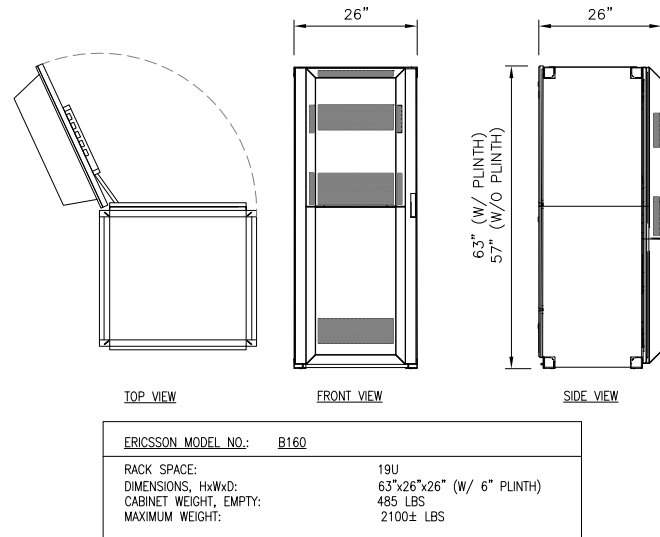


NOTE:
NUMBER OF LINES SHOWN FOR REFERENCE ONLY.
ACTUAL # OF DC AND FIBER LINES SPECIFIC TO
MODEL OF HCS CABLES

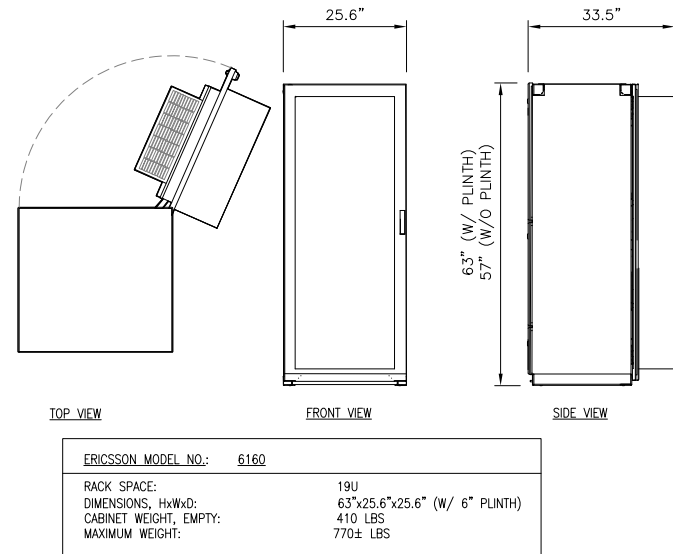
3 (N) 6X24 HCS CABLE DETAIL
SCALE: NOT TO SCALE



4 (N) EQUIPMENT CABINET MOUNTING DETAIL
SCALE: NOT TO SCALE



5 (N) B160 BATTERY CABINET DETAIL
SCALE: NOT TO SCALE



6 (N) 6160 EQUIPMENT CABINET DETAIL
SCALE: NOT TO SCALE

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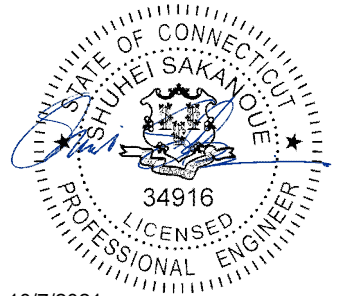
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EXISTING 150'-0" MONOPOLE

ISSUED FOR:

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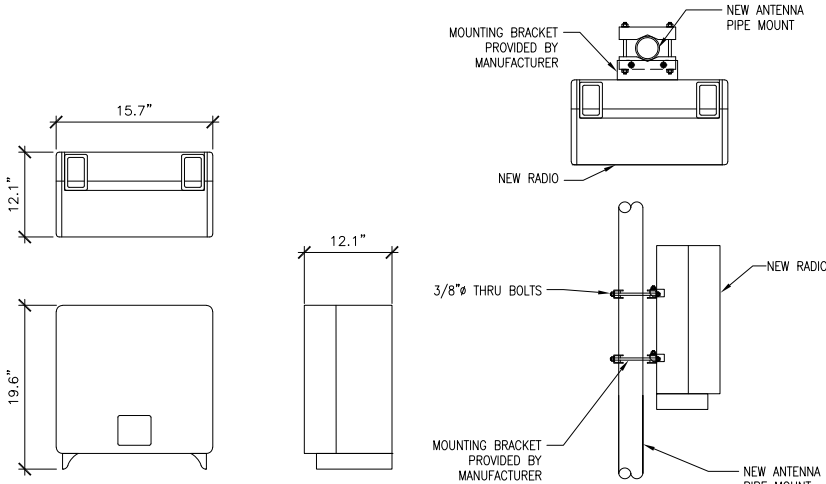
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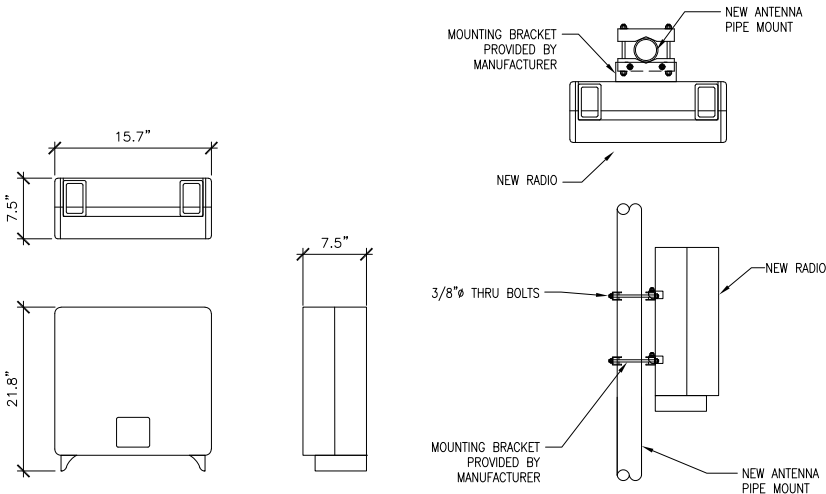
2

DIMENSIONS, WxDxH:	15.7"x12.1"x19.6"
TOTAL WEIGHT:	109 lbs
TEMPERATURE:	-40° TO 55° C



1 (N) RADIO 4460 B25+B66 SPEC
SCALE: NOT TO SCALE

DIMENSIONS, WxDxH:	15.2"x7.5"x19.2"
TOTAL WEIGHT:	92.5 lbs
TEMPERATURE:	-40° TO 55° C

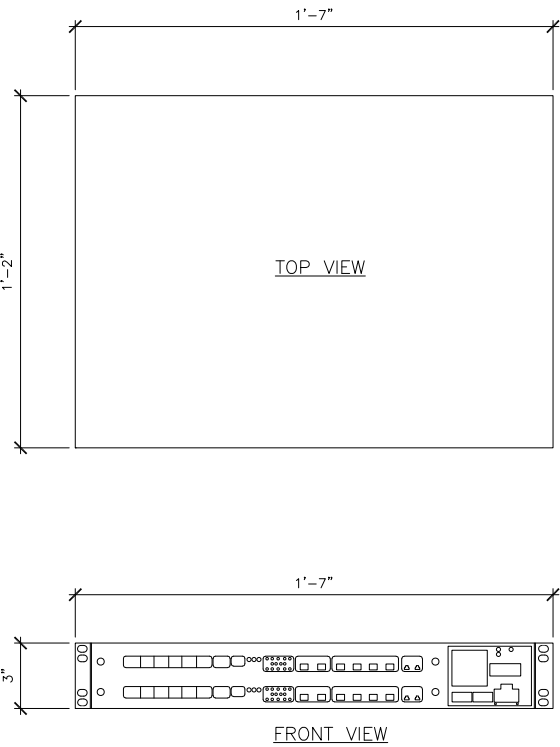


2 (N) RADIO 4480 B71+B85 SPEC
SCALE: NOT TO SCALE

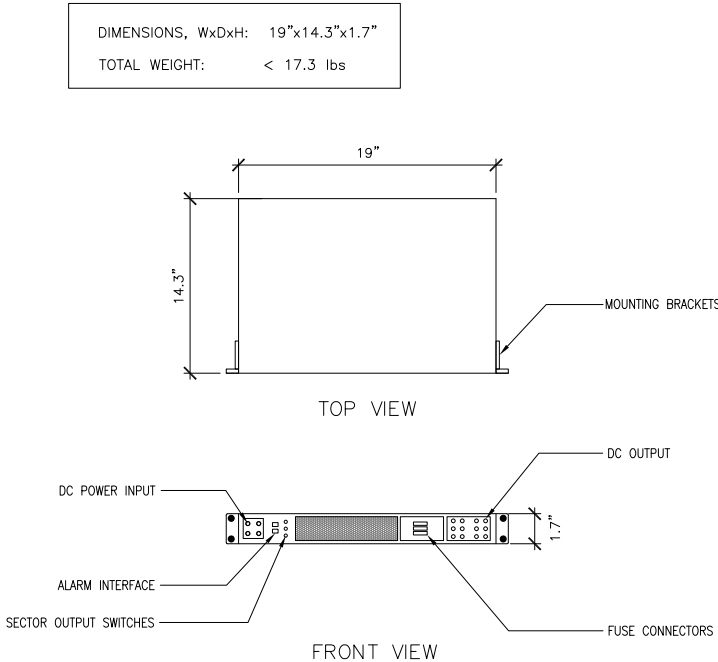
DIGITAL UNIT FOR GSM
THE DIGITAL UNIT GSM, DUG 20 CAN CONTROL UP TO 12 GSM CARRIERS. IF MORE THAN 12 TRXS ARE REQUIRED, THEN AN ADDITIONAL DUG CAN BE INSTALLED IN THE RBS 6601 MAIN UNIT AND SYNCHRONIZED WITH THE OTHER DUG IN THE MAIN UNIT. THE DUG SUPPORTS THE CROSS-CONNECTION OF INDIVIDUAL TIME SLOTS TO SPECIFIC TRXS AND EXTRACTS THE SYNCHRONIZATION INFORMATION FROM THE PULSE-CODE MODULATION (PCM) LINK TO GENERATE A TIMING REFERENCE FOR THE RBS. THE DUG 20 SUPPORTS:

- E1/T1 transmission interface
- Baseband processing
- Link Access Procedures on D-Channel (LAPD) concentration / multiplexing
- Abis optimization
- Multi-drop (cascading)
- Synchronized radio network, through an external GPS receiver
- Transceiver Group (TG) synchronization
- Site LAN

3 (N) DUG20 SPEC
SCALE: NOT TO SCALE

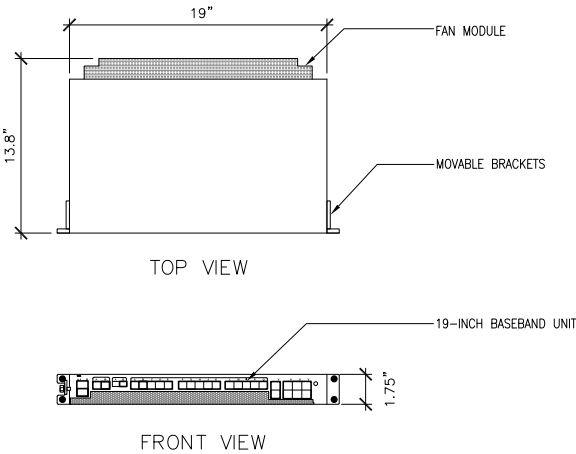


4 (N) RBS 6601 MAIN UNIT SPEC
SCALE: NOT TO SCALE



5 (N) PSU 4813 SPEC
SCALE: NOT TO SCALE

DIMENSIONS, WxDxH:	(19"x13.78"x1.75")
MAX POWER CONSUMPTION:	180 W
BREAKER SIZE:	MIN 10 A, MAX 30 A
TOTAL WEIGHT:	± 14.33 lbs



6 (N) BASEBAND 6648 SPEC
SCALE: NOT TO SCALE

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BU #: 800515
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EXISTING 150'-0" MONOPOLE

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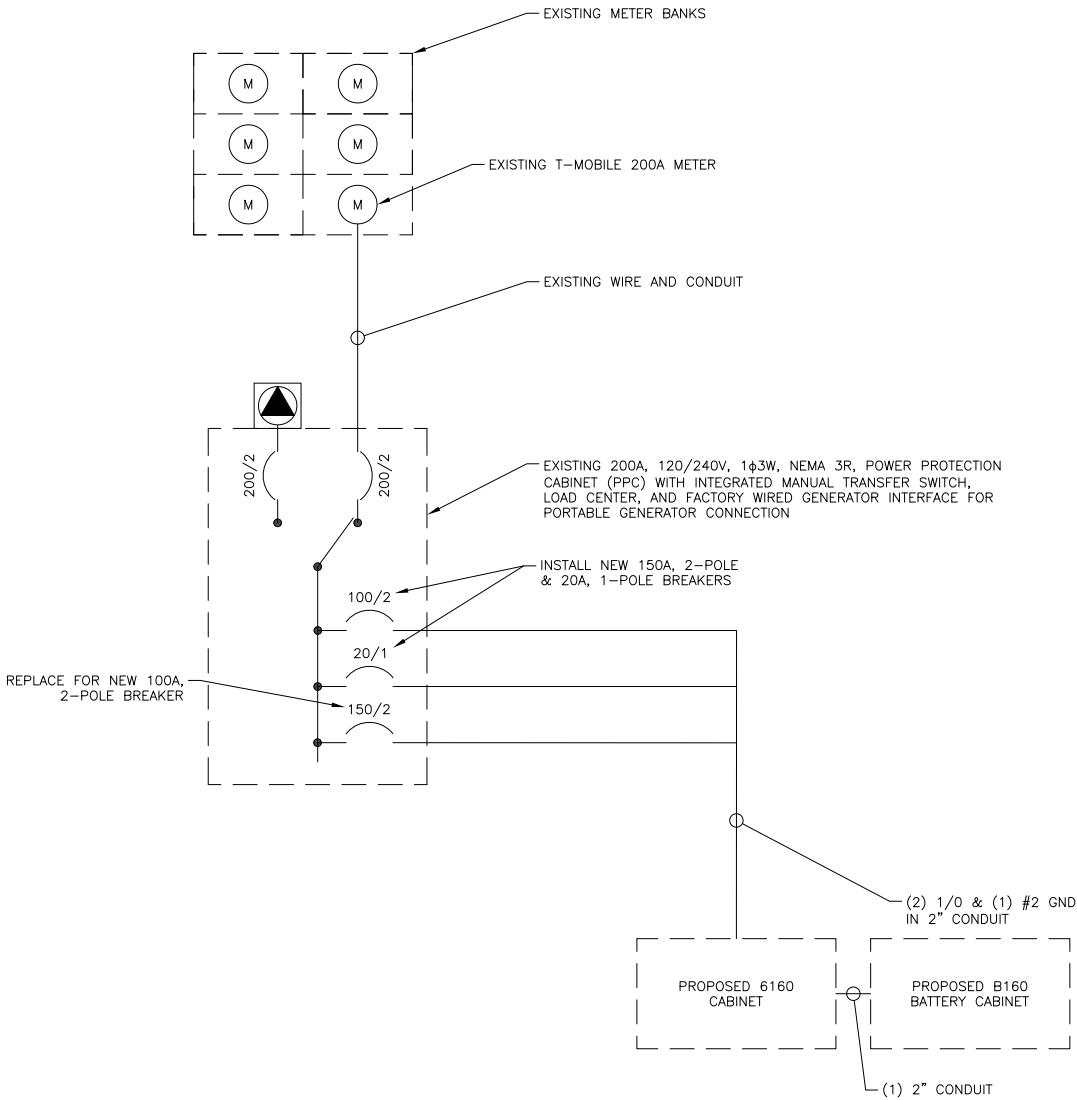
REVISION:

2

T-MOBILE PANEL SCHEDULE											
MAIN: 200A MAIN BREAKER				VOTAGE/PHASE: 120/240V, 1-PHASE, 3-WIRE					SHORT CIRCUIT CURRENT RATING: --		
MOUNTING: INSIDE PPC ENCLOSURE				ENCLOSURE: NEMA 3R					SURGE PROTECTION DEVICE: YES		
DESCRIPTION	LOAD (VA)	C or NC	C/B	CIR No.	PHASE LOADS (VA)		CIR No.	C/B	C or NC	LOAD (VA)	DESCRIPTION
					A	B					
RBS 6601	1000	C	100	1	1000		2	30	NC	0	GENERATOR
	1000	C		3		1000	4		NC	0	
6160	7000	C	100	5	7200		6	20	NC	200	TOWER LIGHTS
	7000	C		7		7200	8		NC	200	
6160 GFI	180	NC	20	9	360		10	20	NC	180	TELCO GFCI
BLANK				11		0	12				BLANK
				13	0		14				
				15		0	16				
				17	0		18				
				19		0	20				
				21	0		22				
				23		0	24				
BASE LOAD (VA) =					8560	8200	*INDICATES NEW LOAD. ALL OTHER LOADS ARE EXISTING. NEW BREAKER TO BE SAME TYPE AND HAVE SAME AIC RATING AS EXISTING. CUSTOMER HAS NOT PROVIDED LOADS FOR EQUIPMENT CABINETS THEREFORE THE CABINET LOADS SHOWN ARE ESTIMATED VALUES.				
25% OF CONTINUOUS LOAD (VA) =					2050	2050					
TOTAL LOAD (VA) =					11610	10250					
TOTAL LOAD (A) =					89	86					

NOTES:

1. ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER.
ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, OR XHHW-2 UNLESS NOTED OTHERWISE.
2. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. ALL GROUNDING AND BONDING PER THE NEC.



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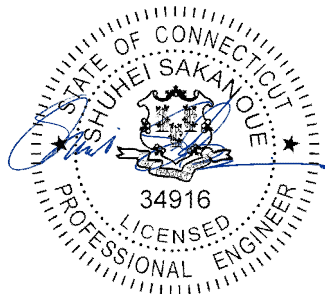
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EXISTING 150'-0" MONOPOLE

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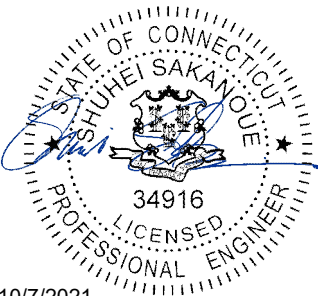
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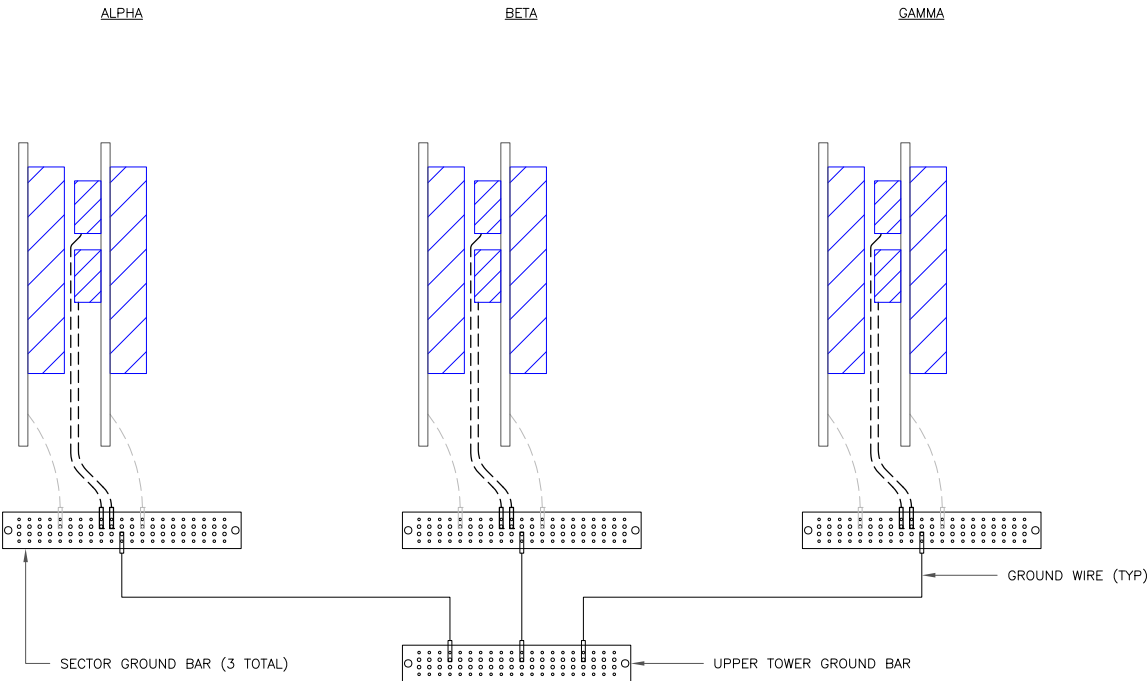
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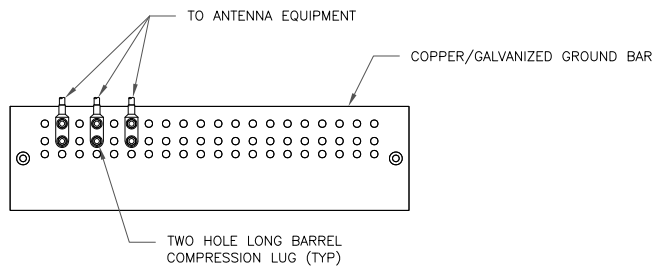
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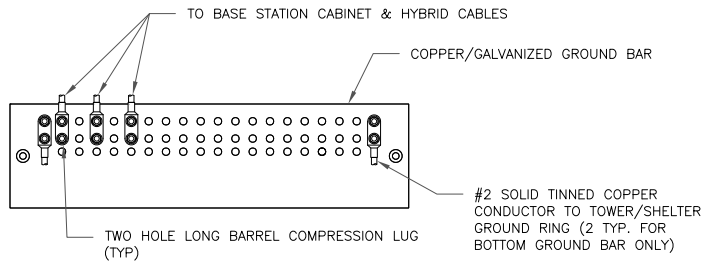
NOTE:

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

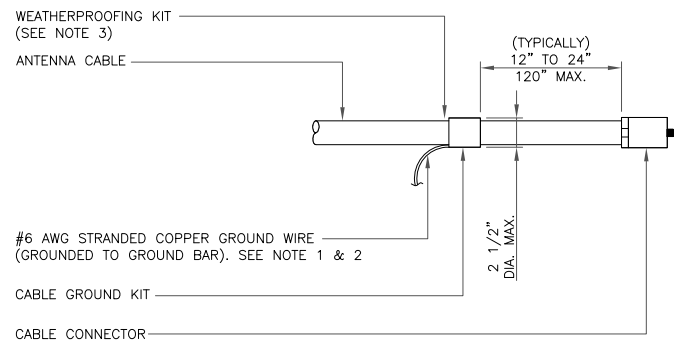
1 ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE



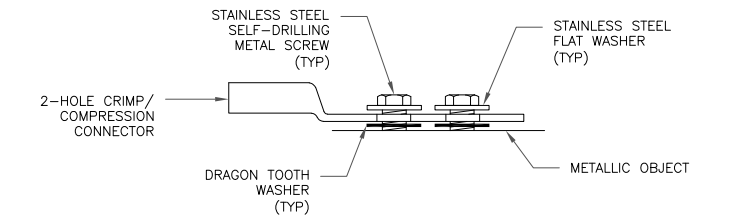
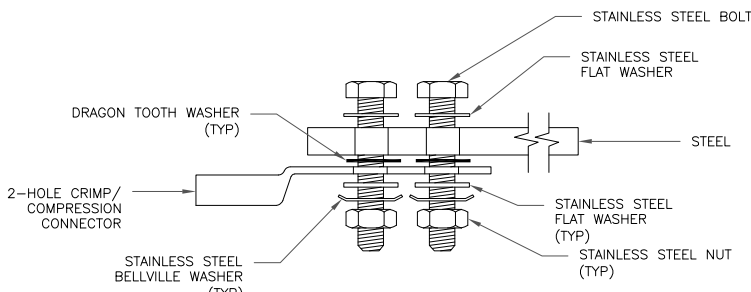
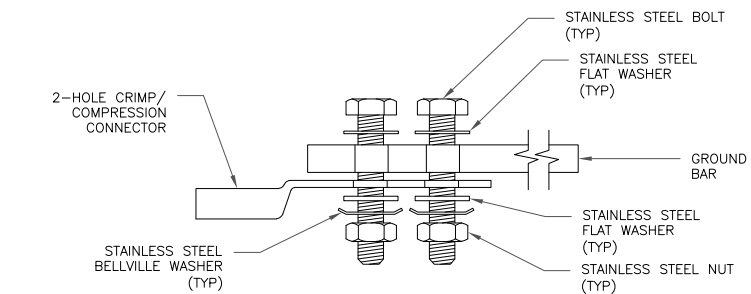
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



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



3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



4 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

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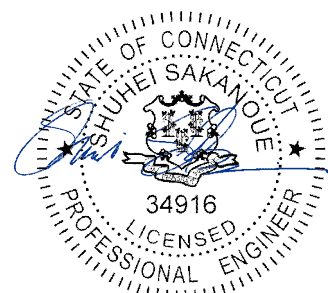
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Scheduled Delivery by

WEDNESDAY**27** OCTOBER
2021 ⓘ by
6:00pm ⓘ**✓ Delivered, PO Box**October 27, 2021 at 11:22 am
TRURO, MA 02666[Get Updates ✓](#)

Text & Email Updates

Proof of Delivery

Tracking History

October 27, 2021, 11:22 am

Delivered, PO Box

TRURO, MA 02666

Your item has been delivered and is available at a PO Box at 11:22 am on October 27, 2021 in TRURO, MA 02666. Waiver of signature was exercised at time of delivery.

Feedback

October 27, 2021, 11:21 am

Arrived at Post Office

TRURO, MA 02666

October 27, 2021, 2:15 am

Arrived at USPS Facility

WAREHAM, MA 02571

October 26, 2021, 8:26 pm

Arrived at USPS Regional Facility

BOSTON MA DISTRIBUTION CENTER

October 26, 2021, 5:00 pm

Departed Post Office

NATICK, MA 01760

October 26, 2021, 4:11 pm

USPS in possession of item

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Sent: Wednesday, October 27, 2021 11:43 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 775027534315: Your package has been delivered

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Hi. Your package was
delivered Wed, 10/27/2021 at
11:42am.

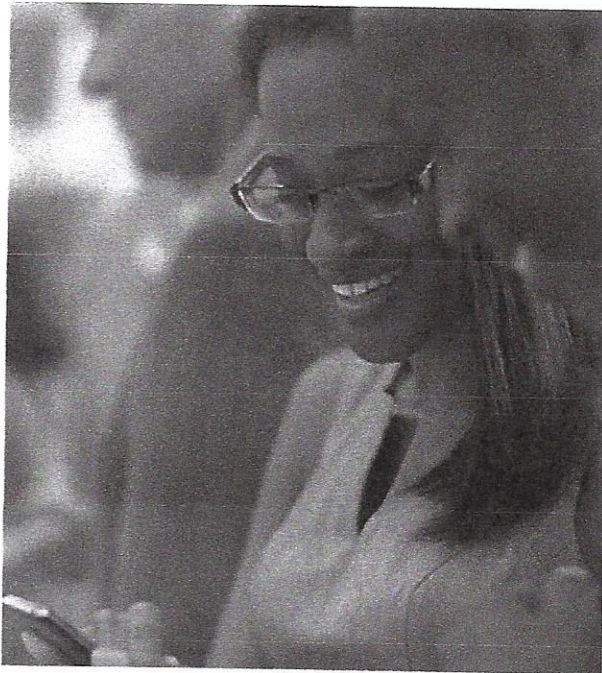


Delivered to 203 MIDDLESEX AVE, CHESTER, CT 06412

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER 775027534315
FROM Jeff Barbadora
1800 W. Park Drive
WESTBOROUGH, MA, US, 01581

TO	Town of Chester Lauren Gister, First Selectwoman 203 Middlesex Ave CHESTER, CT, US, 06412
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Tue 10/26/2021 06:02 PM
DELIVERED TO	Residence
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	CHESTER, CT, US, 06412
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	1.00 LB
SERVICE TYPE	FedEx Priority Overnight



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Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Wednesday, October 27, 2021 11:43 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 775027573448: Your package has been delivered

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.



Hi. Your package was
delivered Wed, 10/27/2021 at
11:42am.



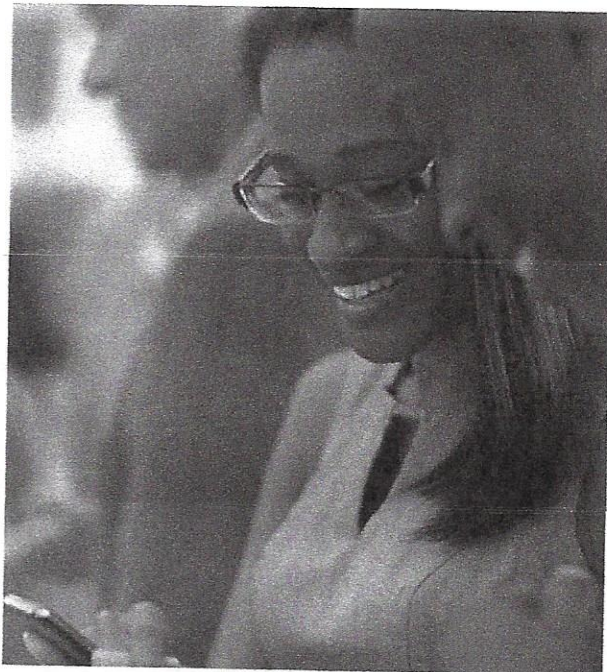
Delivered to 203 MIDDLESEX AVE, CHESTER, CT 06412

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER [775027573448](#)

FROM Jeff Barbadora
1800 W. Park Drive
WESTBOROUGH, MA, US, 01581

TO	Town of Chester Zoning Enforcement Officer 203 Middlesex Ave CHESTER, CT, US, 06412
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Tue 10/26/2021 06:02 PM
DELIVERED TO	Residence
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	CHESTER, CT, US, 06412
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	1.00 LB
SERVICE TYPE	FedEx Priority Overnight



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