



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

January 12, 2022

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

RE: **Notice of Exempt Modification for T-Mobile: CTFF072A**  
**Crown Site ID#806953**  
**69 Guinea Road, Stamford, CT 06903**  
**Latitude: 41° 6' 6.30" / Longitude: -73° 35' 40.00"**

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 158-foot mount level on the existing 160-foot monopole tower, located at 69 Guinea Road, Stamford, CT. The property is owned by the Girl Scouts of Connecticut Inc. The tower is owned by Crown Castle. T-Mobile now intends to replace nine (9) antennas and ancillary equipment at the 160-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) CommScope – W-65A-R1 Antenna
- (3) Ericsson – AIR6449 B41 Antenna
- (3) RFS- APXVAALL24\_43-U-NA20 Antenna
- (3) Ericsson Radio 4460 B25+B66
- (3) Ericsson Radio 4480 B71+B85
- (3) HYBRID Cables (1-5/8")

Remove:

- (3) RFS/Celwave APXVTM14-ALU-120 – Antennas
- (3) Argus Tech – LLPX310R-V1 Antennas
- (3) RFS/Celwave- APXVSPP18-C-A20 Antenna
- (3) Alcatel Lucent- TD-RRH8X20-25 Radio
- (9) RFS/Celwave- ACU-A20-N TMA
- (6) Alcatel Lucent-800 RRH
- (3) Alcatel Lucent- 1900MHZ RRH
- (12) Coaxial Cables (1-5/8")
- (1) Hybrid Cables 9x18 (1-1/4")

Melanie A. Bachman

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Ground:

Install New:

- (1) 6160 Equipment Cabinet
- (1.) B160 Battery Cabinet
- (2.) BB 6648 IN (P) Cabinet
- (1.) PSU 4813 Voltage Booster
- (1.) CSR IXRe Router IN 6160

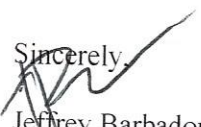
The facility was approved by the Connecticut Siting Council on April 2, 1998 in Docket No. 180. The approval was given with conditions which this proposed exempt modification complies with.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Caroline Simmons, Mayor, City of Stamford, James Lunney, III, Chief Zoning Enforcement Officer, City of Stamford Girl Scouts of Connecticut Inc, 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

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Attachments

cc:

Caroline Simmons, Mayor  
City of Stamford  
Stamford Government Center  
888 Washington Boulevard, 10<sup>th</sup> Floor  
Stamford, CT 06901  
(203) 977-4150

James Lunney, III, Chief Zoning Enforcement Officer  
City of Stamford  
Stamford Government Center  
888 Washington Boulevard, 7<sup>th</sup> Floor  
Stamford, CT 06901  
(203) 977-5944

Girl Scouts of Connecticut Inc, Property Owner  
340 Washington Street  
Hartford, CT 06106  
(860) 522-0163

Crown Castle, Tower Owner.



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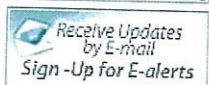
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Melanie Bachman,  
Executive Director

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**DOCKET NO. 180** - 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 immediately north of the Merritt Parkway off Guinea Road (prime and alternate one sites), or 141 Den Road (alternate two site) in Stamford, Connecticut.

## Connecticut Siting Council

April 2, 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 tower and equipment buildings at the proposed prime site in Stamford, 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 prime site, located within a 28-acre parcel at Guinea Road, Stamford, Connecticut. We find the effects on scenic resources and adjacent land uses of the first alternate site and second alternate site to be significant, and therefore deny certification of these sites.

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, Springwiche Cellular Limited Partnership (Springwiche), Sprint PCS (Sprint), and Nextel Communications of the Mid-Atlantic, Inc. (Nextel); and such tower shall not exceed a height of 160 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: adjustment of the tower location within the leased parcel to protect a nearby stream and minimize grade; 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 ground water 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 reapplication for any continued or new use shall be made 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 cease 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 and Stamford Advocate.

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**

Bell Atlantic Mobile

**ITS REPRESENTATIVE**

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**

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

**ITS REPRESENTATIVE**

Elias A. Alexiades  
John W. Knuff  
Harris, Beach & Wilcox, LLP  
147 North Broad Street  
Milford, CT 06460

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

Springwich Cellular Limited Partnership

Peter J. Tyrrell, Esq.  
General Counsel  
500 Enterprise Drive  
Rocky Hill, CT 06067-3900

**PARTIES**

Charles H. Nobs, Maurice Lucas, and  
Ben and Myrna Raphan

**ITS REPRESENTATIVE**

Jeffrey J. Mirman, Esq.  
Levy & Droney, P.C.  
P.O. Box 887  
Farmington, CT 06034

Content Last Modified on 8/9/2002 1:30:07 PM

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

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## 69 GUINEA ROAD

Location 69 GUINEA ROAD

Mblu 002/ 6848/ / /

Acct# 002-6848

Owner GIRL SCOUTS OF  
CONNECTICUT INC

Assessment \$1,028,420

Appraisal \$1,469,120

PID 24323

Building Count 1

### Current Value

| Appraisal      |              |             |             |
|----------------|--------------|-------------|-------------|
| Valuation Year | Improvements | Land        | Total       |
| 2020           | \$461,570    | \$1,007,550 | \$1,469,120 |
| Assessment     |              |             |             |
| Valuation Year | Improvements | Land        | Total       |
| 2020           | \$323,130    | \$705,290   | \$1,028,420 |

### Owner of Record

Owner GIRL SCOUTS OF CONNECTICUT INC  
Co-Owner  
Address 340 WASHINGTON STREET  
HARTFORD, CT 06106-3317

Sale Price \$0  
Book & Page 9322/0308  
Sale Date 04/16/2008  
Instrument 25

### Ownership History

| Ownership History              |            |             |            |            |
|--------------------------------|------------|-------------|------------|------------|
| Owner                          | Sale Price | Book & Page | Instrument | Sale Date  |
| GIRL SCOUTS OF CONNECTICUT INC | \$0        | 9322/0308   | 25         | 04/16/2008 |
| GIRL SCOUT COUNCIL SW CT INC   | \$0        | 4405/0321   |            | 05/12/1995 |
| SOUTHWESTERN CT GIRL SCT       | \$0        | 1035/0131   | 25         | 12/29/1964 |

### Building Information

#### Building 1 : Section 1

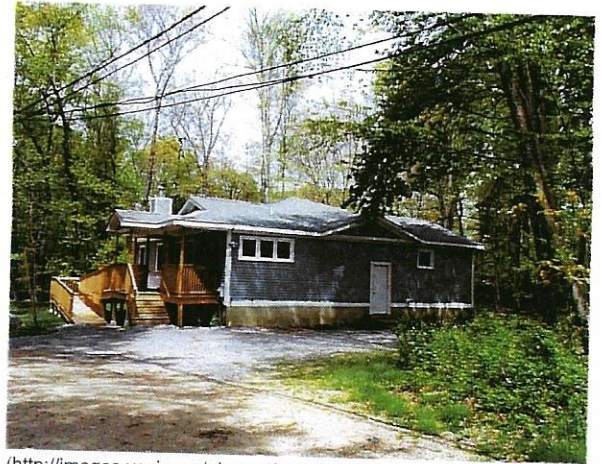
Year Built: 1963

Living Area: 1,960

Building Attributes

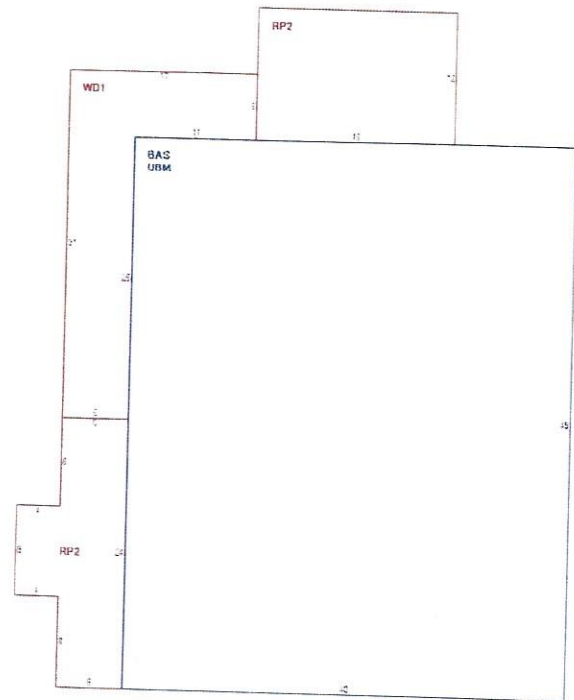
| Field              | Description    |
|--------------------|----------------|
| Style:             | Ranch          |
| Model              | Residential    |
| Grade:             | C+             |
| Stories:           | 1 Story        |
| Occupancy          | 1              |
| Exterior Wall 1    | Cement fiberbd |
| Exterior Wall 2    |                |
| Roof Structure:    | Gable/Hip      |
| Roof Cover         | Asph/F Gls/Cmp |
| Interior Wall 1    | Drywall        |
| Interior Wall 2    |                |
| Interior Flr 1     | Hardwood       |
| Interior Flr 2     |                |
| Heat Fuel          | Electric       |
| Heat Type:         | Electr Basebrd |
| AC Type:           | Central        |
| Total Bedrooms:    | 00             |
| Total Bthrms:      | 1              |
| Total Half Baths:  | 0              |
| Total Xtra Fixtrs: | 3              |
| Total Rooms:       | 4              |
| Bath Style:        | Average        |
| Kitchen Style:     | Typical        |
| Fireplace Msnry.   |                |
| Fpl. Gas/Prefab    | 1              |
| Fpl. Outdoor       |                |
| Fpl. Addnl. Open   |                |
| Bsmt. Garage       |                |
| Num Park           |                |
| Fireplaces         |                |
| Fndtn Cndtn        |                |
| Basement           |                |

## Building Photo



(<http://images.vgsi.com/photos/StamfordCTPhotos/0001119479.jpg>)

## Building Layout



(ParcelSketch.ashx?pid=24323&bid=24323)

| Building Sub-Areas (sq ft) |                      |            | Legend      |
|----------------------------|----------------------|------------|-------------|
| Code                       | Description          | Gross Area | Living Area |
| BAS                        | First Floor          | 1,960      | 1,960       |
| RP2                        | Porch Covered        | 392        | 0           |
| UBM                        | Basement, Unfinished | 1,960      | 0           |
| WD1                        | Deck, Wood           | 252        | 0           |
|                            |                      | 4,564      | 1,960       |

## Extra Features

## Extra Features

## Legend

| Code | Description  | Size        | Value    | Bldg # |
|------|--------------|-------------|----------|--------|
| RP2  | Porch Coverd | 1056.00 S.F | \$28,050 | 1      |
| RP2  | Porch Coverd | 756.00 S.F  | \$20,080 | 1      |
| RP2  | Porch Coverd | 672.00 S.F  | \$17,850 | 1      |
| RP2  | Porch Coverd | 216.00 S.F  | \$5,740  | 1      |
| RP2  | Porch Coverd | 176.00 S.F  | \$4,670  | 1      |

## Land

### Land Use

**Use Code** 901  
**Description** Exmpt Res MDL-01  
**Zone** RA3  
**Neighborhood** 1100  
**Alt Land Appr** No  
**Category**

### Land Line Valuation

**Size (Acres)** 16.86  
**Depth**  
**Assessed Value** \$705,290  
**Appraised Value** \$1,007,550

## Outbuildings

| Outbuildings |                |          |                 |             |           | Legend |
|--------------|----------------|----------|-----------------|-------------|-----------|--------|
| Code         | Description    | Sub Code | Sub Description | Size        | Value     | Bldg # |
| FC1          | Shed Wood      |          |                 | 240.00 S.F. | \$2,880   | 1      |
| MS1          | Misc Structure |          |                 | 528.00 S.F. | \$3,170   | 1      |
| WD1          | Wood Deck      |          |                 | 252.00 S.F. | \$5,480   | 1      |
| CEL1         | Cell Tower     |          |                 | 1.00 SITES  | \$146,250 | 1      |

## Valuation History

| Appraisal      |              |             |             |
|----------------|--------------|-------------|-------------|
| Valuation Year | Improvements | Land        | Total       |
| 2019           | \$461,570    | \$1,007,550 | \$1,469,120 |
| 2018           | \$461,570    | \$1,007,550 | \$1,469,120 |
| 2017           | \$461,570    | \$1,007,550 | \$1,469,120 |

| Assessment     |              |           |             |
|----------------|--------------|-----------|-------------|
| Valuation Year | Improvements | Land      | Total       |
| 2019           | \$323,130    | \$705,290 | \$1,028,420 |
| 2018           | \$323,130    | \$705,290 | \$1,028,420 |
| 2017           | \$323,130    | \$705,290 | \$1,028,420 |

69 Guinea Rd



69 Guinea Rd

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69 Guinea Rd, Stamford, CT 06903

**Barbadora, Jeff**

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**From:** TrackingUpdates@fedex.com  
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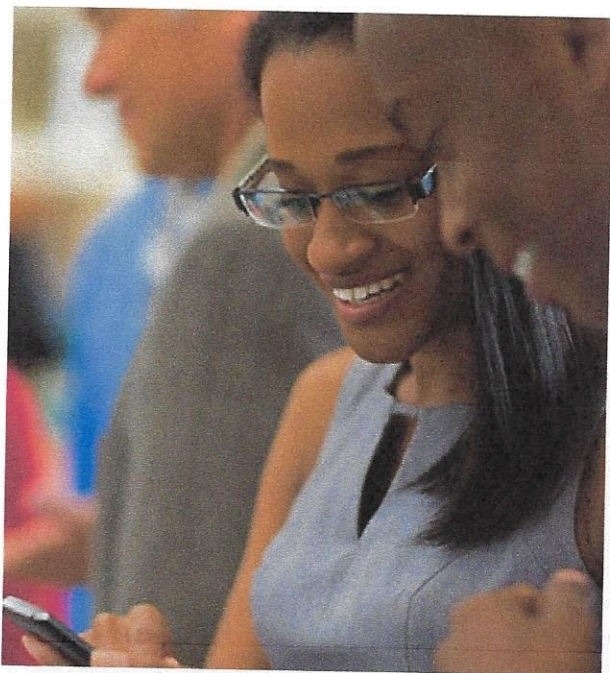


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|                              |                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>FROM</b>                  | Jeff Barbadora<br>1800 W. Park Drive<br>WESTBOROUGH, MA, US, 01581                                              |
| <b>TO</b>                    | City of Stamford<br>Caroline Simmons, Mayor<br>888 Washington Boulevard<br>7th Floor<br>STAMFORD, CT, US, 06901 |
| <b>REFERENCE</b>             | 799001.7680                                                                                                     |
| <b>SHIPPER REFERENCE</b>     | 799001.7680                                                                                                     |
| <b>SHIP DATE</b>             | Wed 1/12/2022 06:21 PM                                                                                          |
| <b>DELIVERED TO</b>          | Mailroom                                                                                                        |
| <b>PACKAGING TYPE</b>        | FedEx Envelope                                                                                                  |
| <b>ORIGIN</b>                | WESTBOROUGH, MA, US, 01581                                                                                      |
| <b>DESTINATION</b>           | STAMFORD, CT, US, 06901                                                                                         |
| <b>SPECIAL HANDLING</b>      | Deliver Weekday                                                                                                 |
| <b>NUMBER OF PIECES</b>      | 1                                                                                                               |
| <b>TOTAL SHIPMENT WEIGHT</b> | 1.00 LB                                                                                                         |
| <b>SERVICE TYPE</b>          | FedEx Priority Overnight                                                                                        |



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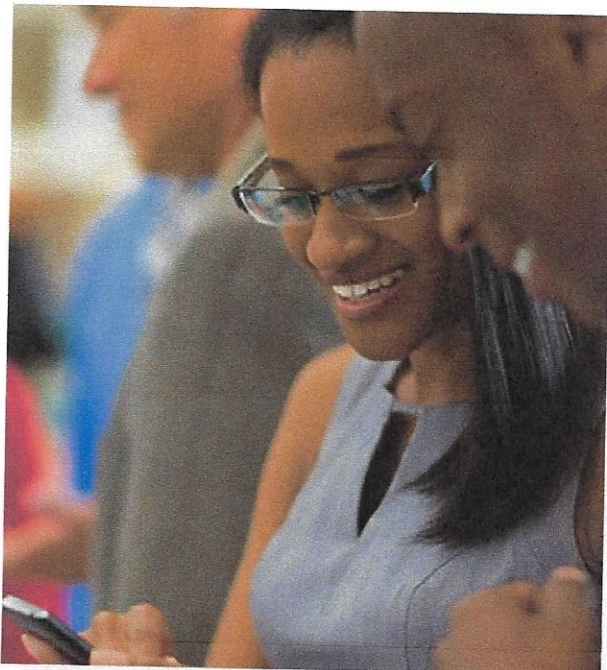


Delivered to 888 WASHINGTON BLVD, STAMFORD, CT 06901  
Received by T.BRISCOE

**OBTAIN PROOF OF DELIVERY**

TRACKING NUMBER [775735545294](#)

|                              |                                                                                                                            |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>FROM</b>                  | Jeff Barbadora<br>1800 W. Park Drive<br>WESTBOROUGH, MA, US, 01581                                                         |
| <b>TO</b>                    | City of Stamford<br>James Lunny, III, Chief Zoning Off<br>888 Washington Boulevard<br>7th Floor<br>STAMFORD, CT, US, 06901 |
| <b>REFERENCE</b>             | 799001.7680                                                                                                                |
| <b>SHIPPER REFERENCE</b>     | 799001.7680                                                                                                                |
| <b>SHIP DATE</b>             | Wed 1/12/2022 06:21 PM                                                                                                     |
| <b>DELIVERED TO</b>          | Receptionist/Front Desk                                                                                                    |
| <b>PACKAGING TYPE</b>        | FedEx Envelope                                                                                                             |
| <b>ORIGIN</b>                | WESTBOROUGH, MA, US, 01581                                                                                                 |
| <b>DESTINATION</b>           | STAMFORD, CT, US, 06901                                                                                                    |
| <b>SPECIAL HANDLING</b>      | Deliver Weekday                                                                                                            |
| <b>NUMBER OF PIECES</b>      | 1                                                                                                                          |
| <b>TOTAL SHIPMENT WEIGHT</b> | 1.00 LB                                                                                                                    |
| <b>SERVICE TYPE</b>          | FedEx Priority Overnight                                                                                                   |



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Scheduled delivery:  
Thursday, 1/13/2022 by end of day



## IN TRANSIT

At FedEx destination facility  
WINDSOR LOCKS, CT

GET STATUS UPDATES

## FROM

Jeff Barbadora  
1800 W. Park Drive  
WESTBOROUGH, MA US 01581  
781-970-0053

## TO

Property Owner  
Girl Scouts of Connecticut Inc  
340 Washington Street  
HARTFORD, CT US 06106  
860-522-0163

MANAGE DELIVERY

## Travel History

## TIME ZONE

Local Scan Time



Thursday, January 13,  
2022

|          |                   |                                                     |
|----------|-------------------|-----------------------------------------------------|
| 12:16 PM | WINDSOR LOCKS, CT | At local FedEx facility                             |
| 10:47 AM | WINDSOR LOCKS, CT | Delay<br>Customer not available or business closed. |
| 9:08 AM  | WINDSOR LOCKS, CT | On FedEx vehicle for delivery                       |
| 8:43 AM  | WINDSOR LOCKS, CT | At local FedEx facility                             |
| 5:20 AM  | EAST GRANBY, CT   | At destination sort facility                        |

Date: **November 15, 2021**



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

**Carrier Designation:** **Site Number:** CTFF072A  
**Site Name:** CT03XC344

**Crown Castle Designation:** **BU Number:** 806953  
**Site Name:** BRG 2044 (A) 943097  
**JDE Job Number:** 689446  
**Work Order Number:** 2041716  
**Order Number:** 589868 Rev. 0

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

**Site Data:** **69 Guinea Rd. (Camp Rocky Craig), Stamford, Fairfield County, CT**  
**Latitude 41° 6' 6.3", Longitude -73° 35' 40"**  
**160 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 - 69.8%**

This analysis has been performed in accordance with the 2018 Connecticut Building Code. based upon an ultimate 3-second gust wind speed of 120 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Nitish J / Aditya Kulkarni

Respectfully submitted by:

Ping Jiang, P.E.  
Professional Engineer

Digitally signed by  
Jiang, Ping  
DN: CN="Jiang,  
Ping", O=Black  
Veatch, C=US  
Date: 2021.11.15  
15:48:38-06'00'



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tnxTower Output

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Additional Calculations

## 1) INTRODUCTION

This tower is a 160 ft Monopole tower designed by Valmont Microflect.

The tower has been modified multiple times in the past to accommodate additional loading.

The tower has been modified per reinforcement drawings prepared by Aero Solutions LLC, in August of 2009. Reinforcement consists of addition of base plate stiffeners. This modification has not been considered due to a lack of a post modification inspection report.

The tower was later modified per reinforcement drawings prepared by Paul J. Ford & Company in October of 2012. Reinforcement consisted of addition of flat plate reinforcement from 1.75' to 16.75' and 77' to 82'. It also consists of the installation of transition stiffeners. Refer to Modification Inspection report by Tower Engineering Professionals, Inc. in August of 2013. These modifications were found to be ineffective.

The tower was later modified per reinforcement drawings prepared by Paul J. Ford & Company in April of 2014. Reinforcement consisted of addition of flat plate reinforcement from 12.25' to 32.25', 32.33' to 52.33', and 78.5' to 88.5'. Refer to Modification Inspection Report by Sinnott Gering and Schmitt Towers, Inc. in August of 2014. The 78.5' to 88.5' reinforcements were found to be effective and all others were found to be ineffective.

## 2) ANALYSIS CRITERIA

|                             |                                            |
|-----------------------------|--------------------------------------------|
| <b>TIA-222 Revision:</b>    | TIA-222-H                                  |
| <b>Risk Category:</b>       | II                                         |
| <b>Wind Speed:</b>          | 120 mph                                    |
| <b>Exposure Category:</b>   | B                                          |
| <b>Topographic Factor:</b>  | 1                                          |
| <b>Ice Thickness:</b>       | 1.5 in                                     |
| <b>Wind Speed with Ice:</b> | 50 mph                                     |
| <b>Seismic Ss:</b>          | 0.253                                      |
| <b>Seismic S1:</b>          | 0.07                                       |
| <b>Service Wind Speed:</b>  | 60 mph                                     |
| <b>Seismic Loading:</b>     | Does not control per engineering judgement |

**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) |
|---------------------|----------------------------|--------------------|-------------------------|----------------------------------------|----------------------|---------------------|
| 157.0               | 158.0                      | 3                  | commscope               | VV-65A-R1_TMO w/ Mount Pipe            | 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 |                      |                     |
|                     | 157.0                      | 1                  | cci tower mounts (v2.1) | Platform Mount [13' LP 713-1]          |                      |                     |
| 40.0                | 40.0                       | 1                  | andrew                  | GPS-QBW-20N                            | -                    | -                   |
|                     |                            | 1                  | cci tower mounts (v2.1) | Pipe Mount [PM 601-1]                  |                      |                     |

**Table 2 - Other Considered Equipment**

| Mounting Level (ft) | Center Line Elevation (ft) | Number of Antennas | Antenna Manufacturer    | Antenna Model                         | Number of Feed Lines  | Feed Line Size (in)                     |
|---------------------|----------------------------|--------------------|-------------------------|---------------------------------------|-----------------------|-----------------------------------------|
| 149.0               | 151.0                      | 3                  | cci antennas            | HPA-65R-BUU-H6 w/ Mount Pipe          | 2<br>4<br>2<br>6<br>1 | 3/8<br>5/8<br>3/4<br>1 5/8<br>2 Conduit |
|                     |                            | 3                  | ericsson                | RRUS 32 B30                           |                       |                                         |
|                     |                            | 3                  | ericsson                | RRUS 4449 B5/B12                      |                       |                                         |
|                     |                            | 3                  | ericsson                | RRUS 8843 B2/B66A                     |                       |                                         |
|                     |                            | 3                  | kmw communications      | EPBQ-654L8H6-L2 w/ Mount Pipe         |                       |                                         |
|                     |                            | 3                  | powerwave technologies  | 7770.00 w/ Mount Pipe                 |                       |                                         |
|                     | 149.0                      | 1                  | cci tower mounts (v2.1) | Platform Mount [13' LP 713-1]         |                       |                                         |
|                     |                            | 3                  | ericsson                | RRUS 11 B12                           |                       |                                         |
|                     |                            | 6                  | powerwave technologies  | LGP21401                              |                       |                                         |
|                     |                            | 3                  | raycap                  | DC6-48-60-18-8F                       |                       |                                         |
| 139.0               | 142.0                      | 3                  | alcatel lucent          | B13 RRH 4X30                          | 13                    | 1 5/8                                   |
|                     |                            | 3                  | alcatel lucent          | B66A RRH4X45                          |                       |                                         |
|                     |                            | 6                  | andrew                  | DB846F65ZAXY w/ Mount Pipe            |                       |                                         |
|                     |                            | 3                  | commscope               | JAHH-65B-R3B                          |                       |                                         |
|                     |                            | 3                  | commscope               | JAHH-65B-R3B w/ Mount Pipe            |                       |                                         |
|                     |                            | 1                  | rfs celwave             | DB-T1-6Z-8AB-0Z                       |                       |                                         |
|                     | 139.0                      | 1                  | cci tower mounts (v2.1) | Platform Mount [LP 713-1]             |                       |                                         |
| 129.0               | 129.0                      | 3                  | fujitsu                 | TA08025-B604                          | 1                     | 1 1/2                                   |
|                     |                            | 3                  | fujitsu                 | TA08025-B605                          |                       |                                         |
|                     |                            | 3                  | jma wireless            | MX08FRO665-21 w/ Mount Pipe           |                       |                                         |
|                     |                            | 1                  | raycap                  | RDIDC-9181-PF-48                      |                       |                                         |
|                     |                            | 1                  | tower mounts            | Commscope MC-PK8-DSH                  |                       |                                         |
| 116.0               | 118.0                      | 3                  | ericsson                | AIR 32 B2A/B66AA w/ Mount Pipe        | 10                    | 1 5/8                                   |
|                     |                            | 3                  | ericsson                | Ericsson Air 21 B2A B4P w/ Mount Pipe |                       |                                         |
|                     |                            | 3                  | ericsson                | KRY 112 144/1                         |                       |                                         |
|                     |                            | 3                  | ericsson                | Radio 4449 B12/B71                    |                       |                                         |
|                     |                            | 3                  | rfs celwave             | APXVAARR24_43-U-NA20 w/ Mount Pipe    |                       |                                         |
|                     | 116.0                      | 1                  | cci tower mounts (v2.1) | Miscellaneous [NA 507-1]              |                       |                                         |
|                     |                            | 1                  | cci tower mounts (v2.1) | Platform Mount [LP 712-1]             |                       |                                         |
| 84.0                | 84.0                       | 1                  | cci tower mounts (v2.1) | Side Arm Mount [4' SO 702-1]          | -                     | -                                       |
|                     |                            | 1                  | gps                     | GPS_A                                 |                       |                                         |

### 3) ANALYSIS PROCEDURE

**Table 3 - Documents Provided**

| Document                                   | Reference | Source   |
|--------------------------------------------|-----------|----------|
| 4-GEOTECHNICAL REPORTS                     | 5749621   | CCISITES |
| 4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS   | 1104113   | CCISITES |
| 4-TOWER MANUFACTURER DRAWINGS              | 823122    | CCISITES |
| 4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA | 1251715   | CCISITES |
| 4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA | 3332716   | CCISITES |
| 4-POST-MODIFICATION INSPECTION             | 4015064   | CCISITES |
| 4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA | 4837035   | CCISITES |
| 4-POST-MODIFICATION INSPECTION             | 5577141   | 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.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C.

#### 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)**

| Elevation (ft) | Component Type | Size                   | Critical Element | % Capacity | Pass / Fail |
|----------------|----------------|------------------------|------------------|------------|-------------|
| 160 - 155      | Pole           | TP20.801x19.6x0.25     | Pole             | 2.7%       | Pass        |
| 155 - 150      | Pole           | TP22.002x20.801x0.25   | Pole             | 6.7%       | Pass        |
| 150 - 145      | Pole           | TP23.203x22.002x0.25   | Pole             | 14.6%      | Pass        |
| 145 - 140      | Pole           | TP24.404x23.203x0.25   | Pole             | 21.1%      | Pass        |
| 140 - 135      | Pole           | TP25.605x24.404x0.25   | Pole             | 30.7%      | Pass        |
| 135 - 130      | Pole           | TP26.806x25.605x0.25   | Pole             | 38.4%      | Pass        |
| 130 - 125      | Pole           | TP28.007x26.806x0.25   | Pole             | 46.9%      | Pass        |
| 125 - 120      | Pole           | TP29.208x28.007x0.25   | Pole             | 54.6%      | Pass        |
| 120 - 116      | Pole           | TP31.29x29.208x0.25    | Pole             | 60.3%      | Pass        |
| 116 - 111      | Pole           | TP30.867x29.669x0.3438 | Pole             | 45.6%      | Pass        |
| 111 - 106      | Pole           | TP32.065x30.867x0.3438 | Pole             | 50.1%      | Pass        |

| Elevation (ft) | Component Type | Size                   | Critical Element         | % Capacity     | Pass / Fail |
|----------------|----------------|------------------------|--------------------------|----------------|-------------|
| 106 - 101      | Pole           | TP33.263x32.065x0.3438 | Pole                     | 54.1%          | Pass        |
| 101 - 96       | Pole           | TP34.461x33.263x0.3438 | Pole                     | 57.7%          | Pass        |
| 96 - 91        | Pole           | TP35.659x34.461x0.3438 | Pole                     | 61.0%          | Pass        |
| 91 - 86        | Pole           | TP36.857x35.659x0.3438 | Pole                     | 64.1%          | Pass        |
| 86 - 85.75     | Pole + Reinf.  | TP36.917x36.857x0.5125 | Reinf. 5 Tension Rupture | 61.0%          | Pass        |
| 85.75 - 81     | Pole + Reinf.  | TP38.055x36.917x0.5063 | Reinf. 5 Tension Rupture | 63.4%          | Pass        |
| 81 - 80.75     | Pole           | TP38.115x38.055x0.3438 | Pole                     | 67.1%          | Pass        |
| 80.75 - 80.5   | Pole           | TP38.175x38.115x0.3438 | Pole                     | 67.2%          | Pass        |
| 80.5 - 79      | Pole           | TP39.912x38.175x0.3438 | Pole                     | 68.0%          | Pass        |
| 79 - 72.25     | Pole           | TP39.467x37.847x0.4063 | Pole                     | 58.4%          | Pass        |
| 72.25 - 67.25  | Pole           | TP40.667x39.467x0.4063 | Pole                     | 60.1%          | Pass        |
| 67.25 - 62.25  | Pole           | TP41.867x40.667x0.4063 | Pole                     | 61.7%          | Pass        |
| 62.25 - 57.25  | Pole           | TP43.067x41.867x0.4063 | Pole                     | 63.2%          | Pass        |
| 57.25 - 52.25  | Pole           | TP44.268x43.067x0.4063 | Pole                     | 64.6%          | Pass        |
| 52.25 - 49.83  | Pole           | TP44.848x44.268x0.4063 | Pole                     | 65.3%          | Pass        |
| 49.83 - 49.58  | Pole           | TP44.908x44.848x0.4063 | Pole                     | 65.3%          | Pass        |
| 49.58 - 44.58  | Pole           | TP46.109x44.908x0.4063 | Pole                     | 66.6%          | Pass        |
| 44.58 - 43     | Pole           | TP48.088x46.109x0.4063 | Pole                     | 67.1%          | Pass        |
| 43 - 35.33     | Pole           | TP47.516x45.675x0.4375 | Pole                     | 63.8%          | Pass        |
| 35.33 - 32.25  | Pole           | TP48.256x47.516x0.4375 | Pole                     | 64.4%          | Pass        |
| 32.25 - 32     | Pole           | TP48.317x48.256x0.4375 | Pole                     | 64.4%          | Pass        |
| 32 - 27        | Pole           | TP49.517x48.317x0.4375 | Pole                     | 65.3%          | Pass        |
| 27 - 22        | Pole           | TP50.718x49.517x0.4375 | Pole                     | 66.2%          | Pass        |
| 22 - 17        | Pole           | TP51.918x50.718x0.4375 | Pole                     | 67.1%          | Pass        |
| 17 - 15.5      | Pole           | TP52.278x51.918x0.4375 | Pole                     | 67.3%          | Pass        |
| 15.5 - 15.25   | Pole           | TP52.338x52.278x0.4375 | Pole                     | 67.4%          | Pass        |
| 15.25 - 14.75  | Pole           | TP52.458x52.338x0.4375 | Pole                     | 67.5%          | Pass        |
| 14.75 - 14.5   | Pole           | TP52.518x52.458x0.4375 | Pole                     | 67.5%          | Pass        |
| 14.5 - 9.5     | Pole           | TP53.719x52.518x0.4375 | Pole                     | 68.3%          | Pass        |
| 9.5 - 4.5      | Pole           | TP54.92x53.719x0.4375  | Pole                     | 69.1%          | Pass        |
| 4.5 - 0        | Pole           | TP56x54.92x0.4375      | Pole                     | 69.8%          | Pass        |
|                |                |                        |                          | <b>Summary</b> |             |
|                |                |                        | Pole                     | 69.8%          | Pass        |
|                |                |                        | Reinforcement            | 63.4%          | Pass        |
|                |                |                        | <b>Overall</b>           | <b>69.8%</b>   | <b>Pass</b> |

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

| Notes | Component                          | Elevation (ft) | % Capacity | Pass / Fail |
|-------|------------------------------------|----------------|------------|-------------|
| 1     | Anchor Rods                        | 0              | 56.2       | Pass        |
|       | Base Plate                         |                | 40.8       | Pass        |
| 1     | Base Foundation (Structure)        | 0              | 22.5       | Pass        |
|       | Base Foundation (Soil Interaction) |                | 64.7       | Pass        |

|                                                     |              |
|-----------------------------------------------------|--------------|
| <b>Structure Rating (max from all components) =</b> | <b>69.8%</b> |
|-----------------------------------------------------|--------------|

Note:

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

|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    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| Section         | 42   | 41   | 40   | 39   | 38   | 37   | 36   | 35   | 34   | 33   | 32   | 31   | 30   | 29   | 28   | 27   | 26   | 25   | 24   | 23   | 22   | 21   | 20   | 19   | 18   | 17   | 16   | 15   | 14   | 13   | 12   | 11   | 10   | 9    | 8    | 7    | 6    | 5    | 4    | 3    | 2    | 1    |      |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    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| Length (ft)     | 4.50 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    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| 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |  |

## 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 Fairfield County, Connecticut.
- Tower base elevation above sea level: 247.00 ft.
- Basic wind speed of 120 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.       |
|                                     |                                     | Exemption                           |
| Include Bolts In Member Capacity    | Autocalc Torque Arm Areas           | Use TIA-222-H Tension Splice        |
|                                     |                                     | Exemption                           |
| Leg Bolts Are At Top Of Section     | Add IBC .6D+W Combination           | Poles                               |
| Secondary Horizontal Braces Leg     | Sort Capacity Reports By Component  | √ Include Shear-Torsion Interaction |
| Use Diamond Inner Bracing (4 Sided) | Triangulate Diamond Inner Bracing   | Always Use Sub-Critical Flow        |
| SR Members Have Cut Ends            | Treat Feed Line Bundles As Cylinder | Use Top Mounted Sockets             |
| SR Members Are Concentric           | Ignore KL/ry For 60 Deg. Angle Legs | Pole Without Linear Attachments     |
|                                     |                                     | Pole With Shroud Or No              |
|                                     |                                     | Appurtenances                       |
|                                     |                                     | Outside and Inside Corner Radii Are |
|                                     |                                     | Known                               |

## Tapered Pole Section Geometry

| Section | Elevation<br>ft | Section<br>Length<br>ft | Splice<br>Length<br>ft | Number<br>of<br>Sides | Top<br>Diameter<br>in | Bottom<br>Diameter<br>in | Wall<br>Thickness<br>in | Bend<br>Radius<br>in | Pole Grade          |
|---------|-----------------|-------------------------|------------------------|-----------------------|-----------------------|--------------------------|-------------------------|----------------------|---------------------|
| L1      | 160.00-155.00   | 5.00                    | 0.00                   | 12                    | 19.6000               | 20.8010                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L2      | 155.00-150.00   | 5.00                    | 0.00                   | 12                    | 20.8010               | 22.0021                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L3      | 150.00-145.00   | 5.00                    | 0.00                   | 12                    | 22.0021               | 23.2031                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L4      | 145.00-140.00   | 5.00                    | 0.00                   | 12                    | 23.2031               | 24.4041                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L5      | 140.00-135.00   | 5.00                    | 0.00                   | 12                    | 24.4041               | 25.6051                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L6      | 135.00-130.00   | 5.00                    | 0.00                   | 12                    | 25.6051               | 26.8062                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L7      | 130.00-125.00   | 5.00                    | 0.00                   | 12                    | 26.8062               | 28.0072                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L8      | 125.00-120.00   | 5.00                    | 0.00                   | 12                    | 28.0072               | 29.2082                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L9      | 120.00-111.33   | 8.67                    | 4.67                   | 12                    | 29.2082               | 31.2900                  | 0.2500                  | 1.0000               | A572-65<br>(65 ksi) |
| L10     | 111.33-111.00   | 5.00                    | 0.00                   | 12                    | 29.6690               | 30.8670                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L11     | 111.00-106.00   | 5.00                    | 0.00                   | 12                    | 30.8670               | 32.0650                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L12     | 106.00-101.00   | 5.00                    | 0.00                   | 12                    | 32.0650               | 33.2631                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L13     | 101.00-96.00    | 5.00                    | 0.00                   | 12                    | 33.2631               | 34.4611                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L14     | 96.00-91.00     | 5.00                    | 0.00                   | 12                    | 34.4611               | 35.6591                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L15     | 91.00-86.00     | 5.00                    | 0.00                   | 12                    | 35.6591               | 36.8571                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L16     | 86.00-85.75     | 0.25                    | 0.00                   | 12                    | 36.8571               | 36.9170                  | 0.5125                  | 2.0500               | A572-65<br>(65 ksi) |
| L17     | 85.75-81.00     | 4.75                    | 0.00                   | 12                    | 36.9170               | 38.0551                  | 0.5062                  | 2.0250               | A572-65<br>(65 ksi) |
| L18     | 81.00-80.75     | 0.25                    | 0.00                   | 12                    | 38.0551               | 38.1150                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L19     | 80.75-80.50     | 0.25                    | 0.00                   | 12                    | 38.1150               | 38.1749                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L20     | 80.50-73.25     | 7.25                    | 5.75                   | 12                    | 38.1749               | 39.9120                  | 0.3438                  | 1.3750               | A572-65<br>(65 ksi) |
| L21     | 73.25-72.25     | 6.75                    | 0.00                   | 12                    | 37.8468               | 39.4670                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L22     | 72.25-67.25     | 5.00                    | 0.00                   | 12                    | 39.4670               | 40.6671                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L23     | 67.25-62.25     | 5.00                    | 0.00                   | 12                    | 40.6671               | 41.8673                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L24     | 62.25-57.25     | 5.00                    | 0.00                   | 12                    | 41.8673               | 43.0674                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L25     | 57.25-52.25     | 5.00                    | 0.00                   | 12                    | 43.0674               | 44.2675                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L26     | 52.25-49.83     | 2.42                    | 0.00                   | 12                    | 44.2675               | 44.8484                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L27     | 49.83-49.58     | 0.25                    | 0.00                   | 12                    | 44.8484               | 44.9084                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L28     | 49.58-44.58     | 5.00                    | 0.00                   | 12                    | 44.9084               | 46.1086                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L29     | 44.58-36.33     | 8.25                    | 6.67                   | 12                    | 46.1086               | 48.0880                  | 0.4063                  | 1.6250               | A572-65<br>(65 ksi) |
| L30     | 36.33-35.33     | 7.67                    | 0.00                   | 12                    | 45.6753               | 47.5161                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L31     | 35.33-32.25     | 3.08                    | 0.00                   | 12                    | 47.5161               | 48.2565                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L32     | 32.25-32.00     | 0.25                    | 0.00                   | 12                    | 48.2565               | 48.3165                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L33     | 32.00-27.00     | 5.00                    | 0.00                   | 12                    | 48.3165               | 49.5171                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |

| Section | Elevation<br>ft | Section<br>Length<br>ft | Splice<br>Length<br>ft | Number<br>of<br>Sides | Top<br>Diameter<br>in | Bottom<br>Diameter<br>in | Wall<br>Thickness<br>in | Bend<br>Radius<br>in | Pole Grade          |
|---------|-----------------|-------------------------|------------------------|-----------------------|-----------------------|--------------------------|-------------------------|----------------------|---------------------|
| L34     | 27.00-22.00     | 5.00                    | 0.00                   | 12                    | 49.5171               | 50.7176                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L35     | 22.00-17.00     | 5.00                    | 0.00                   | 12                    | 50.7176               | 51.9181                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L36     | 17.00-15.50     | 1.50                    | 0.00                   | 12                    | 51.9181               | 52.2783                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L37     | 15.50-15.25     | 0.25                    | 0.00                   | 12                    | 52.2783               | 52.3383                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L38     | 15.25-14.75     | 0.50                    | 0.00                   | 12                    | 52.3383               | 52.4584                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L39     | 14.75-14.50     | 0.25                    | 0.00                   | 12                    | 52.4584               | 52.5184                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L40     | 14.50-9.50      | 5.00                    | 0.00                   | 12                    | 52.5184               | 53.7190                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L41     | 9.50-4.50       | 5.00                    | 0.00                   | 12                    | 53.7190               | 54.9195                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |
| L42     | 4.50-0.00       | 4.50                    |                        | 12                    | 54.9195               | 56.0000                  | 0.4375                  | 1.7500               | A572-65<br>(65 ksi) |

### Tapered Pole Properties

| Section | Tip Dia.<br>in | Area<br>in <sup>2</sup> | I<br>in <sup>4</sup> | r<br>in | C<br>in | I/C<br>in <sup>3</sup> | J<br>in <sup>4</sup> | It/Q<br>in <sup>2</sup> | w<br>in | w/t    |
|---------|----------------|-------------------------|----------------------|---------|---------|------------------------|----------------------|-------------------------|---------|--------|
| L1      | 20.2032        | 15.5768                 | 744.4315             | 6.9273  | 10.1528 | 73.3228                | 1508.4200            | 7.6664                  | 4.5828  | 18.331 |
|         | 21.4466        | 16.5436                 | 891.8306             | 7.3573  | 10.7749 | 82.7690                | 1807.0907            | 8.1422                  | 4.9047  | 19.619 |
| L2      | 21.4466        | 16.5436                 | 891.8306             | 7.3573  | 10.7749 | 82.7690                | 1807.0907            | 8.1422                  | 4.9047  | 19.619 |
|         | 22.6900        | 17.5104                 | 1057.5054            | 7.7872  | 11.3971 | 92.7875                | 2142.7927            | 8.6181                  | 5.2266  | 20.906 |
| L3      | 22.6900        | 17.5104                 | 1057.5054            | 7.7872  | 11.3971 | 92.7875                | 2142.7927            | 8.6181                  | 5.2266  | 20.906 |
|         | 23.9334        | 18.4772                 | 1242.5238            | 8.2172  | 12.0192 | 103.3783               | 2517.6901            | 9.0939                  | 5.5484  | 22.194 |
| L4      | 23.9334        | 18.4772                 | 1242.5238            | 8.2172  | 12.0192 | 103.3783               | 2517.6901            | 9.0939                  | 5.5484  | 22.194 |
|         | 25.1768        | 19.4441                 | 1447.9540            | 8.6472  | 12.6413 | 114.5413               | 2933.9473            | 9.5698                  | 5.8703  | 23.481 |
| L5      | 25.1768        | 19.4441                 | 1447.9540            | 8.6472  | 12.6413 | 114.5413               | 2933.9473            | 9.5698                  | 5.8703  | 23.481 |
|         | 26.4202        | 20.4109                 | 1674.8638            | 9.0771  | 13.2635 | 126.2766               | 3393.7282            | 10.0456                 | 6.1922  | 24.769 |
| L6      | 26.4202        | 20.4109                 | 1674.8638            | 9.0771  | 13.2635 | 126.2766               | 3393.7282            | 10.0456                 | 6.1922  | 24.769 |
|         | 27.6636        | 21.3777                 | 1924.3215            | 9.5071  | 13.8856 | 138.5841               | 3899.1971            | 10.5215                 | 6.5141  | 26.056 |
| L7      | 27.6636        | 21.3777                 | 1924.3215            | 9.5071  | 13.8856 | 138.5841               | 3899.1971            | 10.5215                 | 6.5141  | 26.056 |
|         | 28.9070        | 22.3445                 | 2197.3950            | 9.9371  | 14.5077 | 151.4638               | 4452.5181            | 10.9973                 | 6.8359  | 27.344 |
| L8      | 28.9070        | 22.3445                 | 2197.3950            | 9.9371  | 14.5077 | 151.4638               | 4452.5181            | 10.9973                 | 6.8359  | 27.344 |
|         | 30.1504        | 23.3114                 | 2495.1525            | 10.3670 | 15.1299 | 164.9158               | 5055.8554            | 11.4731                 | 7.1578  | 28.631 |
| L9      | 30.1504        | 23.3114                 | 2495.1525            | 10.3670 | 15.1299 | 164.9158               | 5055.8554            | 11.4731                 | 7.1578  | 28.631 |
|         | 32.3056        | 24.9872                 | 3072.8897            | 11.1123 | 16.2082 | 189.5883               | 6226.5076            | 12.2979                 | 7.7157  | 30.863 |
| L10     | 31.7520        | 32.4594                 | 3562.9621            | 10.4985 | 15.3686 | 231.8345               | 7219.5272            | 15.9755                 | 7.0301  | 20.451 |
|         | 31.8347        | 33.7855                 | 4017.7104            | 10.9273 | 15.9891 | 251.2776               | 8140.9705            | 16.6282                 | 7.3511  | 21.385 |
| L11     | 31.8347        | 33.7855                 | 4017.7104            | 10.9273 | 15.9891 | 251.2776               | 8140.9705            | 16.6282                 | 7.3511  | 21.385 |
|         | 33.0749        | 35.1115                 | 4509.5939            | 11.3562 | 16.6097 | 271.5037               | 9137.6598            | 17.2808                 | 7.6722  | 22.319 |
| L12     | 33.0749        | 35.1115                 | 4509.5939            | 11.3562 | 16.6097 | 271.5037               | 9137.6598            | 17.2808                 | 7.6722  | 22.319 |
|         | 34.3152        | 36.4376                 | 5040.0702            | 11.7851 | 17.2303 | 292.5127               | 10212.548            | 17.9335                 | 7.9932  | 23.253 |
| L13     | 34.3152        | 36.4376                 | 5040.0702            | 11.7851 | 17.2303 | 292.5127               | 10212.548            | 17.9335                 | 7.9932  | 23.253 |
|         | 35.5555        | 37.7636                 | 5610.5968            | 12.2140 | 17.8508 | 314.3045               | 11368.590            | 18.5861                 | 8.3143  | 24.187 |
| L14     | 35.5555        | 37.7636                 | 5610.5968            | 12.2140 | 17.8508 | 314.3045               | 11368.590            | 18.5861                 | 8.3143  | 24.187 |
|         | 36.7957        | 39.0896                 | 6222.6312            | 12.6429 | 18.4714 | 336.8792               | 12608.737            | 19.2387                 | 8.6354  | 25.121 |
| L15     | 36.7957        | 39.0896                 | 6222.6312            | 12.6429 | 18.4714 | 336.8792               | 12608.737            | 19.2387                 | 8.6354  | 25.121 |
|         | 38.0360        | 40.4157                 | 6877.6309            | 13.0718 | 19.0920 | 360.2369               | 13935.944            | 19.8914                 | 8.9564  | 26.055 |
| L16     | 37.9765        | 59.9776                 | 10112.409            | 13.0114 | 19.0920 | 529.6683               | 20490.484            | 29.5192                 | 8.5042  | 16.594 |
|         | 38.0385        | 60.0765                 | 10162.491            | 13.0328 | 19.1230 | 531.4278               | 20591.963            | 29.5678                 | 8.5203  | 16.625 |
| L17     | 38.0407        | 59.3540                 | 10043.730            | 13.0350 | 19.1230 | 525.2174               | 20351.320            | 29.2123                 | 8.5370  | 16.863 |

| Section | Tip Dia.<br>in | Area<br>in <sup>2</sup> | I<br>in <sup>4</sup> | r<br>in | C<br>in | I/C<br>in <sup>3</sup> | J<br>in <sup>4</sup> | It/Q<br>in <sup>2</sup> | w<br>in | w/t    |
|---------|----------------|-------------------------|----------------------|---------|---------|------------------------|----------------------|-------------------------|---------|--------|
|         | 39.2189        | 61.2093                 | 11015.3009           | 13.4425 | 19.7125 | 558.7968               | 22319.9859           | 30.1254                 | 8.8420  | 17.466 |
| L18     | 39.2763        | 41.7417                 | 7577.0535            | 13.5007 | 19.7125 | 384.3774               | 15353.1646           | 20.5440                 | 9.2775  | 26.989 |
|         | 39.3383        | 41.8080                 | 7613.2169            | 13.5221 | 19.7436 | 385.6050               | 15426.4414           | 20.5766                 | 9.2936  | 27.036 |
| L19     | 39.3383        | 41.8080                 | 7613.2169            | 13.5221 | 19.7436 | 385.6050               | 15426.4414           | 20.5766                 | 9.2936  | 27.036 |
|         | 39.4003        | 41.8743                 | 7649.4951            | 13.5435 | 19.7746 | 386.8345               | 15499.9510           | 20.6093                 | 9.3096  | 27.083 |
| L20     | 39.4003        | 41.8743                 | 7649.4951            | 13.5435 | 19.7746 | 386.8345               | 15499.9510           | 20.6093                 | 9.3096  | 27.083 |
|         | 41.1987        | 43.7971                 | 8752.3577            | 14.1654 | 20.6744 | 423.3424               | 17734.6495           | 21.5556                 | 9.7752  | 28.437 |
| L21     | 40.4674        | 48.9769                 | 8763.1762            | 13.4037 | 19.6046 | 446.9951               | 17756.5709           | 24.1049                 | 9.0542  | 22.287 |
|         | 40.7159        | 51.0963                 | 9950.7611            | 13.9837 | 20.4439 | 486.7351               | 20162.9397           | 25.1481                 | 9.4884  | 23.356 |
| L22     | 40.7159        | 51.0963                 | 9950.7611            | 13.9837 | 20.4439 | 486.7351               | 20162.9397           | 25.1481                 | 9.4884  | 23.356 |
|         | 41.9584        | 52.6663                 | 10896.4422           | 14.4134 | 21.0656 | 517.2631               | 22079.1461           | 25.9207                 | 9.8100  | 24.148 |
| L23     | 41.9584        | 52.6663                 | 10896.4422           | 14.4134 | 21.0656 | 517.2631               | 22079.1461           | 25.9207                 | 9.8100  | 24.148 |
|         | 43.2009        | 54.2362                 | 11900.2177           | 14.8430 | 21.6872 | 548.7197               | 24113.0675           | 26.6934                 | 10.1317 | 24.94  |
| L24     | 43.2009        | 54.2362                 | 11900.2177           | 14.8430 | 21.6872 | 548.7197               | 24113.0675           | 26.6934                 | 10.1317 | 24.94  |
|         | 44.4433        | 55.8061                 | 12963.8194           | 15.2727 | 22.3089 | 581.1049               | 26268.2127           | 27.4661                 | 10.4533 | 25.731 |
| L25     | 44.4433        | 55.8061                 | 12963.8194           | 15.2727 | 22.3089 | 581.1049               | 26268.2127           | 27.4661                 | 10.4533 | 25.731 |
|         | 45.6858        | 57.3761                 | 14088.9788           | 15.7023 | 22.9306 | 614.4186               | 28548.0908           | 28.2387                 | 10.7750 | 26.523 |
| L26     | 45.6858        | 57.3761                 | 14088.9788           | 15.7023 | 22.9306 | 614.4186               | 28548.0908           | 28.2387                 | 10.7750 | 26.523 |
|         | 46.2872        | 58.1359                 | 14656.1781           | 15.9103 | 23.2315 | 630.8758               | 29697.3903           | 28.6127                 | 10.9306 | 26.906 |
| L27     | 46.2872        | 58.1359                 | 14656.1781           | 15.9103 | 23.2315 | 630.8758               | 29697.3903           | 28.6127                 | 10.9306 | 26.906 |
|         | 46.3493        | 58.2144                 | 14715.6258           | 15.9318 | 23.2626 | 632.5884               | 29817.8475           | 28.6514                 | 10.9467 | 26.946 |
| L28     | 46.3493        | 58.2144                 | 14715.6258           | 15.9318 | 23.2626 | 632.5884               | 29817.8475           | 28.6514                 | 10.9467 | 26.946 |
|         | 47.5918        | 59.7843                 | 15938.5808           | 16.3614 | 23.8842 | 667.3264               | 32295.8858           | 29.4240                 | 11.2683 | 27.737 |
| L29     | 47.5918        | 59.7843                 | 15938.5808           | 16.3614 | 23.8842 | 667.3264               | 32295.8858           | 29.4240                 | 11.2683 | 27.737 |
|         | 49.6411        | 62.3737                 | 18100.5493           | 17.0701 | 24.9096 | 726.6500               | 36676.6202           | 30.6984                 | 11.7988 | 29.043 |
| L30     | 48.7894        | 63.7288                 | 16646.5574           | 16.1951 | 23.6598 | 703.5796               | 33730.4385           | 31.3654                 | 11.0685 | 25.299 |
|         | 49.0380        | 66.3220                 | 18762.5503           | 16.8542 | 24.6134 | 762.2911               | 38018.0137           | 32.6417                 | 11.5618 | 26.427 |
| L31     | 49.0380        | 66.3220                 | 18762.5503           | 16.8542 | 24.6134 | 762.2911               | 38018.0137           | 32.6417                 | 11.5618 | 26.427 |
|         | 49.8044        | 67.3650                 | 19661.6860           | 17.1192 | 24.9969 | 786.5664               | 39839.9064           | 33.1550                 | 11.7602 | 26.881 |
| L32     | 49.8044        | 67.3650                 | 19661.6860           | 17.1192 | 24.9969 | 786.5664               | 39839.9064           | 33.1550                 | 11.7602 | 26.881 |
|         | 49.8666        | 67.4495                 | 19735.8231           | 17.1407 | 25.0279 | 788.5513               | 39990.1283           | 33.1966                 | 11.7763 | 26.917 |
| L33     | 49.8666        | 67.4495                 | 19735.8231           | 17.1407 | 25.0279 | 788.5513               | 39990.1283           | 33.1966                 | 11.7763 | 26.917 |
|         | 51.1095        | 69.1408                 | 21257.9625           | 17.5705 | 25.6498 | 828.7759               | 43074.3954           | 34.0290                 | 12.0981 | 27.653 |
| L34     | 51.1095        | 69.1408                 | 21257.9625           | 17.5705 | 25.6498 | 828.7759               | 43074.3954           | 34.0290                 | 12.0981 | 27.653 |
|         | 52.3524        | 70.8321                 | 22856.4204           | 18.0003 | 26.2717 | 870.0011               | 46313.3043           | 34.8614                 | 12.4198 | 28.388 |

| Section | Tip Dia.<br>in | Area<br>in <sup>2</sup> | I<br>in <sup>4</sup> | r<br>in | C<br>in | I/C<br>in <sup>3</sup> | J<br>in <sup>4</sup> | It/Q<br>in <sup>2</sup> | w<br>in | w/t    |
|---------|----------------|-------------------------|----------------------|---------|---------|------------------------|----------------------|-------------------------|---------|--------|
| L35     | 52.3524        | 70.8321                 | 22856.420<br>4       | 18.0003 | 26.2717 | 870.0011               | 46313.304<br>3       | 34.8614                 | 12.4198 | 28.388 |
|         | 53.5953        | 72.5234                 | 24533.063<br>4       | 18.4301 | 26.8936 | 912.2269               | 49710.637<br>8       | 35.6938                 | 12.7416 | 29.124 |
| L36     | 53.5953        | 72.5234                 | 24533.063<br>4       | 18.4301 | 26.8936 | 912.2269               | 49710.637<br>8       | 35.6938                 | 12.7416 | 29.124 |
|         | 53.9682        | 73.0307                 | 25051.581<br>6       | 18.5590 | 27.0802 | 925.0898               | 50761.296<br>1       | 35.9435                 | 12.8381 | 29.344 |
| L37     | 53.9682        | 73.0307                 | 25051.581<br>6       | 18.5590 | 27.0802 | 925.0898               | 50761.296<br>1       | 35.9435                 | 12.8381 | 29.344 |
|         | 54.0303        | 73.1153                 | 25138.705<br>3       | 18.5805 | 27.1113 | 927.2423               | 50937.832<br>3       | 35.9851                 | 12.8542 | 29.381 |
| L38     | 54.0303        | 73.1153                 | 25138.705<br>3       | 18.5805 | 27.1113 | 927.2423               | 50937.832<br>3       | 35.9851                 | 12.8542 | 29.381 |
|         | 54.1546        | 73.2844                 | 25313.558<br>2       | 18.6235 | 27.1734 | 931.5550               | 51292.131<br>7       | 36.0684                 | 12.8863 | 29.455 |
| L39     | 54.1546        | 73.2844                 | 25313.558<br>2       | 18.6235 | 27.1734 | 931.5550               | 51292.131<br>7       | 36.0684                 | 12.8863 | 29.455 |
|         | 54.2167        | 73.3690                 | 25401.287<br>8       | 18.6450 | 27.2045 | 933.7150               | 51469.895<br>8       | 36.1100                 | 12.9024 | 29.491 |
| L40     | 54.2167        | 73.3690                 | 25401.287<br>8       | 18.6450 | 27.2045 | 933.7150               | 51469.895<br>8       | 36.1100                 | 12.9024 | 29.491 |
|         | 55.4596        | 75.0603                 | 27198.709<br>1       | 19.0748 | 27.8264 | 977.4418               | 55111.958<br>7       | 36.9424                 | 13.2242 | 30.227 |
| L41     | 55.4596        | 75.0603                 | 27198.709<br>1       | 19.0748 | 27.8264 | 977.4418               | 55111.958<br>7       | 36.9424                 | 13.2242 | 30.227 |
|         | 56.7025        | 76.7515                 | 29078.982<br>8       | 19.5046 | 28.4483 | 1022.1692              | 58921.902<br>8       | 37.7748                 | 13.5459 | 30.962 |
| L42     | 56.7025        | 76.7515                 | 29078.982<br>8       | 19.5046 | 28.4483 | 1022.1692              | 58921.902<br>8       | 37.7748                 | 13.5459 | 30.962 |
|         | 57.8211        | 78.2737                 | 30843.610<br>8       | 19.8914 | 29.0080 | 1063.2795              | 62497.517<br>6       | 38.5239                 | 13.8355 | 31.624 |

| Tower<br>Elevation    | Gusset<br>Area<br>(per face) | Gusset<br>Thickness | Gusset Grade | Adjust. Factor<br>A <sub>r</sub> | Adjust.<br>Factor<br>A <sub>r</sub> | Weight Mult. | Double Angle<br>Stitch Bolt<br>Spacing<br>Diagonals<br>in | Double Angle<br>Stitch Bolt<br>Spacing<br>Horizontal<br>in | Double Angle<br>Stitch Bolt<br>Spacing<br>Redundants<br>in |
|-----------------------|------------------------------|---------------------|--------------|----------------------------------|-------------------------------------|--------------|-----------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| ft                    | ft <sup>2</sup>              | in                  |              |                                  |                                     |              |                                                           |                                                            |                                                            |
| L1 160.00-<br>155.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L2 155.00-<br>150.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L3 150.00-<br>145.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L4 145.00-<br>140.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L5 140.00-<br>135.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L6 135.00-<br>130.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L7 130.00-<br>125.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L8 125.00-<br>120.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L9 120.00-<br>111.33  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L10 111.33-<br>111.00 |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L11 111.00-<br>106.00 |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L12 106.00-<br>101.00 |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L13 101.00-<br>96.00  |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L14 96.00-<br>91.00   |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L15 91.00-<br>86.00   |                              |                     |              | 1                                | 1                                   | 1            |                                                           |                                                            |                                                            |
| L16 86.00-            |                              |                     |              | 1                                | 1                                   | 0.973888     |                                                           |                                                            |                                                            |

| Tower<br>Elevation | Gusset<br>Area<br>(per face) | Gusset<br>Thickness | Gusset Grade | Adjust. Factor<br>$A_r$ | Adjust.<br>Factor<br>$A_r$ | Weight Mult. | Double Angle<br>Stitch Bolt<br>Spacing<br>Diagonals<br>in | Double Angle<br>Stitch Bolt<br>Spacing<br>Horizontals<br>in | Double Angle<br>Stitch Bolt<br>Spacing<br>Redundants<br>in |
|--------------------|------------------------------|---------------------|--------------|-------------------------|----------------------------|--------------|-----------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------|
| ft                 | ft <sup>2</sup>              | in                  |              |                         |                            |              |                                                           |                                                             |                                                            |
| 85.75              |                              |                     |              |                         |                            |              |                                                           |                                                             |                                                            |
| L17 85.75-81.00    |                              |                     |              | 1                       | 1                          | 0.976445     |                                                           |                                                             |                                                            |
| L18 81.00-80.75    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L19 80.75-80.50    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L20 80.50-73.25    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L21 73.25-72.25    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L22 72.25-67.25    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L23 67.25-62.25    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L24 62.25-57.25    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L25 57.25-52.25    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L26 52.25-49.83    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L27 49.83-49.58    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L28 49.58-44.58    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L29 44.58-36.33    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L30 36.33-35.33    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L31 35.33-32.25    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L32 32.25-32.00    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L33 32.00-27.00    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L34 27.00-22.00    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L35 22.00-17.00    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L36 17.00-15.50    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L37 15.50-15.25    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L38 15.25-14.75    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L39 14.75-14.50    |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L40 14.50-9.50     |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L41 9.50-4.50      |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |
| L42 4.50-0.00      |                              |                     |              | 1                       | 1                          | 1            |                                                           |                                                             |                                                            |

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

| Description     | Sector | Exclude<br>From<br>Torque<br>Calculation | Component<br>Type    | Placement<br>ft   | Total<br>Number | Number<br>Per Row | Start/End<br>Position | Width or<br>Diameter<br>in | Perimeter<br>in | Weight<br>plf |
|-----------------|--------|------------------------------------------|----------------------|-------------------|-----------------|-------------------|-----------------------|----------------------------|-----------------|---------------|
| Safety Line 3/8 | C      | No                                       | Surface Ar<br>(CaAa) | 160.00 -<br>10.00 | 1               | 1                 | -0.390<br>-0.380      | 0.3750                     |                 | 0.22          |
| ***             |        |                                          |                      |                   |                 |                   |                       |                            |                 |               |
| MK SR 1         | A      | No                                       | Surface Af<br>(CaAa) | 16.75 -<br>1.75   | 1               | 1                 | 0.000<br>0.000        | 4.0000                     | 9.5000          | 10.21         |

| 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 |
|----------------|--------|---------------------------------|-------------------|---------------|--------------|----------------|--------------------|----------------------|--------------|------------|
| MK SR 1        | B      | No                              | Surface Af (CaAa) | 16.75 - 1.75  | 1            | 1              | 0.000              | 4.0000               | 9.5000       | 10.21      |
| MK SR 1        | C      | No                              | Surface Af (CaAa) | 16.75 - 1.75  | 1            | 1              | 0.000              | 4.0000               | 9.5000       | 10.21      |
| MK SR 2        | A      | No                              | Surface Af (CaAa) | 82.00 - 77.00 | 1            | 1              | 0.000              | 4.0000               | 9.5000       | 10.21      |
| MK SR 2        | B      | No                              | Surface Af (CaAa) | 82.00 - 77.00 | 1            | 1              | 0.000              | 4.0000               | 9.5000       | 10.21      |
| MK SR 2        | C      | No                              | Surface Af (CaAa) | 82.00 - 77.00 | 1            | 1              | 0.000              | 4.0000               | 9.5000       | 10.21      |
| CCI-AFP-060100 | A      | No                              | Surface Af (CaAa) | 32.25 - 12.25 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 20.42      |
| CCI-AFP-060100 | B      | No                              | Surface Af (CaAa) | 32.25 - 12.25 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 20.42      |
| CCI-AFP-060100 | C      | No                              | Surface Af (CaAa) | 32.25 - 12.25 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 20.42      |
| CCI-AFP-060100 | A      | No                              | Surface Af (CaAa) | 52.33 - 32.33 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 20.42      |
| CCI-AFP-060100 | B      | No                              | Surface Af (CaAa) | 52.33 - 32.33 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 20.42      |
| CCI-AFP-060100 | C      | No                              | Surface Af (CaAa) | 52.33 - 32.33 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 20.42      |
| CCI-AFP-060100 | A      | No                              | Surface Af (CaAa) | 88.50 - 78.50 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 0.00       |
| CCI-AFP-060100 | B      | No                              | Surface Af (CaAa) | 88.50 - 78.50 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 0.00       |
| CCI-AFP-060100 | C      | No                              | Surface Af (CaAa) | 88.50 - 78.50 | 1            | 1              | 0.000              | 6.0000               | 14.0000      | 0.00       |
| ****           |        |                                 |                   |               |              |                |                    |                      |              |            |
| ****           |        |                                 |                   |               |              |                |                    |                      |              |            |
| ****           |        |                                 |                   |               |              |                |                    |                      |              |            |

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

| Description                  | Face or Leg | Allow Shield | Exclude From Torque Calculation | Component Type | Placement ft  | Total Number |                                        | C <sub>A</sub> A <sub>A</sub> ft <sup>2</sup> /ft | Weight plf                   |
|------------------------------|-------------|--------------|---------------------------------|----------------|---------------|--------------|----------------------------------------|---------------------------------------------------|------------------------------|
| ***157***                    |             |              |                                 |                |               |              |                                        |                                                   |                              |
| HB158-21U6S24-xxM_TMO(1-5/8) | C           | No           | No                              | Inside Pole    | 157.00 - 0.00 | 3            | No Ice<br>1/2" Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                      | 2.50<br>2.50<br>2.50<br>2.50 |
| ***149***                    |             |              |                                 |                |               |              |                                        |                                                   |                              |
| FB-L98B-002-75000(3/8)       | C           | No           | No                              | Inside Pole    | 149.00 - 0.00 | 1            | No Ice<br>1/2" Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                      | 0.06<br>0.06<br>0.06<br>0.06 |
| WR-VG82ST-BRDA(5/8)          | C           | No           | No                              | Inside Pole    | 149.00 - 0.00 | 2            | No Ice<br>1/2" Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                      | 0.31<br>0.31<br>0.31<br>0.31 |
| FB-L98B-002-75000(3/8)       | C           | No           | No                              | Inside Pole    | 149.00 - 0.00 | 1            | No Ice<br>1/2" Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                      | 0.06<br>0.06<br>0.06<br>0.06 |
| WR-VG82ST-BRDA(5/8)          | C           | No           | No                              | Inside Pole    | 149.00 - 0.00 | 2            | No Ice<br>1/2" Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                      | 0.31<br>0.31<br>0.31<br>0.31 |
| 2" innerduct conduit         | C           | No           | No                              | Inside Pole    | 149.00 - 0.00 | 1            | No Ice<br>1/2" Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                      | 0.20<br>0.20<br>0.20<br>0.20 |
| LCF158-50JA-                 | C           | No           | No                              | Inside Pole    | 149.00 - 0.00 | 6            | No Ice                                 | 0.00                                              | 0.80                         |

| Description                                 | Face<br>or<br>Leg | Allow<br>Shield | Exclude<br>From<br>Torque<br>Calculation | Component<br>Type | Placement<br>ft | Total<br>Number |          | C <sub>A</sub> A <sub>A</sub><br>ft <sup>2</sup> /ft | Weight<br>plf |
|---------------------------------------------|-------------------|-----------------|------------------------------------------|-------------------|-----------------|-----------------|----------|------------------------------------------------------|---------------|
| A0(1-5/8)                                   |                   |                 |                                          |                   |                 |                 | 1/2" Ice | 0.00                                                 | 0.80          |
|                                             |                   |                 |                                          |                   |                 |                 | 1" Ice   | 0.00                                                 | 0.80          |
|                                             |                   |                 |                                          |                   |                 |                 | 2" Ice   | 0.00                                                 | 0.80          |
| WR-VG86ST-<br>BRD(3/4)                      | C                 | No              | No                                       | Inside Pole       | 149.00 - 0.00   | 2               | No Ice   | 0.00                                                 | 0.58          |
|                                             |                   |                 |                                          |                   |                 |                 | 1/2" Ice | 0.00                                                 | 0.58          |
|                                             |                   |                 |                                          |                   |                 |                 | 1" Ice   | 0.00                                                 | 0.58          |
|                                             |                   |                 |                                          |                   |                 |                 | 2" Ice   | 0.00                                                 | 0.58          |
| ***139***<br>561(1-5/8)                     | C                 | No              | No                                       | Inside Pole       | 139.00 - 0.00   | 12              | No Ice   | 0.00                                                 | 1.35          |
|                                             |                   |                 |                                          |                   |                 |                 | 1/2" Ice | 0.00                                                 | 1.35          |
|                                             |                   |                 |                                          |                   |                 |                 | 1" Ice   | 0.00                                                 | 1.35          |
|                                             |                   |                 |                                          |                   |                 |                 | 2" Ice   | 0.00                                                 | 1.35          |
| HB158-1-08U8-<br>S8J18(1-5/8)               | C                 | No              | No                                       | Inside Pole       | 139.00 - 0.00   | 1               | No Ice   | 0.00                                                 | 1.30          |
|                                             |                   |                 |                                          |                   |                 |                 | 1/2" Ice | 0.00                                                 | 1.30          |
|                                             |                   |                 |                                          |                   |                 |                 | 1" Ice   | 0.00                                                 | 1.30          |
|                                             |                   |                 |                                          |                   |                 |                 | 2" Ice   | 0.00                                                 | 1.30          |
| ***129***<br>CU12PSM9P6XXX<br>(1-1/2)       | C                 | No              | No                                       | Inside Pole       | 129.00 - 0.00   | 1               | No Ice   | 0.00                                                 | 2.35          |
|                                             |                   |                 |                                          |                   |                 |                 | 1/2" Ice | 0.00                                                 | 2.35          |
|                                             |                   |                 |                                          |                   |                 |                 | 1" Ice   | 0.00                                                 | 2.35          |
|                                             |                   |                 |                                          |                   |                 |                 | 2" Ice   | 0.00                                                 | 2.35          |
| ***116***<br>LDF7-50A(1-5/8)                | C                 | No              | No                                       | Inside Pole       | 116.00 - 0.00   | 6               | No Ice   | 0.00                                                 | 0.82          |
|                                             |                   |                 |                                          |                   |                 |                 | 1/2" Ice | 0.00                                                 | 0.82          |
|                                             |                   |                 |                                          |                   |                 |                 | 1" Ice   | 0.00                                                 | 0.82          |
|                                             |                   |                 |                                          |                   |                 |                 | 2" Ice   | 0.00                                                 | 0.82          |
| MLE Hybrid<br>9Power/18Fiber<br>RL 2(1-5/8) | C                 | No              | No                                       | Inside Pole       | 116.00 - 0.00   | 1               | No Ice   | 0.00                                                 | 1.07          |
|                                             |                   |                 |                                          |                   |                 |                 | 1/2" Ice | 0.00                                                 | 1.07          |
|                                             |                   |                 |                                          |                   |                 |                 | 1" Ice   | 0.00                                                 | 1.07          |
|                                             |                   |                 |                                          |                   |                 |                 | 2" Ice   | 0.00                                                 | 1.07          |
| HCS 6X12<br>4AWG(1-5/8)                     | C                 | No              | No                                       | Inside Pole       | 116.00 - 0.00   | 3               | No Ice   | 0.00                                                 | 2.40          |
|                                             |                   |                 |                                          |                   |                 |                 | 1/2" Ice | 0.00                                                 | 2.40          |
|                                             |                   |                 |                                          |                   |                 |                 | 1" Ice   | 0.00                                                 | 2.40          |
|                                             |                   |                 |                                          |                   |                 |                 | 2" Ice   | 0.00                                                 | 2.40          |
| ****                                        |                   |                 |                                          |                   |                 |                 |          |                                                      |               |
| ****                                        |                   |                 |                                          |                   |                 |                 |          |                                                      |               |
| ****                                        |                   |                 |                                          |                   |                 |                 |          |                                                      |               |

## Feed Line/Linear Appurtenances Section Areas

| Tower<br>Section<br>n | Tower<br>Elevation<br>ft | Face | A <sub>R</sub><br>ft <sup>2</sup> | A <sub>F</sub><br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>In Face<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Out Face<br>ft <sup>2</sup> | Weight<br>K |
|-----------------------|--------------------------|------|-----------------------------------|-----------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|-------------|
| L1                    | 160.00-155.00            | A    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | B    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | C    | 0.000                             | 0.000                             | 0.188                                                       | 0.000                                                        | 0.02        |
| L2                    | 155.00-150.00            | A    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | B    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | C    | 0.000                             | 0.000                             | 0.188                                                       | 0.000                                                        | 0.04        |
| L3                    | 150.00-145.00            | A    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | B    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | C    | 0.000                             | 0.000                             | 0.188                                                       | 0.000                                                        | 0.07        |
| L4                    | 145.00-140.00            | A    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | B    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | C    | 0.000                             | 0.000                             | 0.188                                                       | 0.000                                                        | 0.08        |
| L5                    | 140.00-135.00            | A    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | B    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | C    | 0.000                             | 0.000                             | 0.188                                                       | 0.000                                                        | 0.15        |
| L6                    | 135.00-130.00            | A    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | B    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | C    | 0.000                             | 0.000                             | 0.188                                                       | 0.000                                                        | 0.16        |
| L7                    | 130.00-125.00            | A    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | B    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |
|                       |                          | C    | 0.000                             | 0.000                             | 0.188                                                       | 0.000                                                        | 0.17        |
| L8                    | 125.00-120.00            | A    | 0.000                             | 0.000                             | 0.000                                                       | 0.000                                                        | 0.00        |

| Tower<br>Sectio<br>n | Tower<br>Elevation<br>ft | Face | $A_R$<br>ft <sup>2</sup> | $A_F$<br>ft <sup>2</sup> | $C_A A_A$<br>In Face<br>ft <sup>2</sup> | $C_A A_A$<br>Out Face<br>ft <sup>2</sup> | Weight<br>K |
|----------------------|--------------------------|------|--------------------------|--------------------------|-----------------------------------------|------------------------------------------|-------------|
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.188                                   | 0.000                                    | 0.18        |
| L9                   | 120.00-111.33            | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.325                                   | 0.000                                    | 0.37        |
| L10                  | 111.33-111.00            | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.012                                   | 0.000                                    | 0.02        |
| L11                  | 111.00-106.00            | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.188                                   | 0.000                                    | 0.24        |
| L12                  | 106.00-101.00            | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.188                                   | 0.000                                    | 0.24        |
| L13                  | 101.00-96.00             | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.188                                   | 0.000                                    | 0.24        |
| L14                  | 96.00-91.00              | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.188                                   | 0.000                                    | 0.24        |
| L15                  | 91.00-86.00              | A    | 0.000                    | 0.000                    | 2.280                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 2.280                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 2.468                                   | 0.000                                    | 0.24        |
| L16                  | 86.00-85.75              | A    | 0.000                    | 0.000                    | 0.228                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.228                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.237                                   | 0.000                                    | 0.01        |
| L17                  | 85.75-81.00              | A    | 0.000                    | 0.000                    | 4.885                                   | 0.000                                    | 0.01        |
|                      |                          | B    | 0.000                    | 0.000                    | 4.885                                   | 0.000                                    | 0.01        |
|                      |                          | C    | 0.000                    | 0.000                    | 5.063                                   | 0.000                                    | 0.24        |
| L18                  | 81.00-80.75              | A    | 0.000                    | 0.000                    | 0.366                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.366                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.376                                   | 0.000                                    | 0.01        |
| L19                  | 80.75-80.50              | A    | 0.000                    | 0.000                    | 0.366                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.366                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.376                                   | 0.000                                    | 0.01        |
| L20                  | 80.50-73.25              | A    | 0.000                    | 0.000                    | 3.759                                   | 0.000                                    | 0.04        |
|                      |                          | B    | 0.000                    | 0.000                    | 3.759                                   | 0.000                                    | 0.04        |
|                      |                          | C    | 0.000                    | 0.000                    | 4.031                                   | 0.000                                    | 0.39        |
| L21                  | 73.25-72.25              | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.037                                   | 0.000                                    | 0.05        |
| L22                  | 72.25-67.25              | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.188                                   | 0.000                                    | 0.24        |
| L23                  | 67.25-62.25              | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.188                                   | 0.000                                    | 0.24        |
| L24                  | 62.25-57.25              | A    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.188                                   | 0.000                                    | 0.24        |
| L25                  | 57.25-52.25              | A    | 0.000                    | 0.000                    | 0.080                                   | 0.000                                    | 0.00        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.080                                   | 0.000                                    | 0.00        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.268                                   | 0.000                                    | 0.24        |
| L26                  | 52.25-49.83              | A    | 0.000                    | 0.000                    | 2.420                                   | 0.000                                    | 0.05        |
|                      |                          | B    | 0.000                    | 0.000                    | 2.420                                   | 0.000                                    | 0.05        |
|                      |                          | C    | 0.000                    | 0.000                    | 2.511                                   | 0.000                                    | 0.17        |
| L27                  | 49.83-49.58              | A    | 0.000                    | 0.000                    | 0.250                                   | 0.000                                    | 0.01        |
|                      |                          | B    | 0.000                    | 0.000                    | 0.250                                   | 0.000                                    | 0.01        |
|                      |                          | C    | 0.000                    | 0.000                    | 0.259                                   | 0.000                                    | 0.02        |
| L28                  | 49.58-44.58              | A    | 0.000                    | 0.000                    | 5.000                                   | 0.000                                    | 0.10        |
|                      |                          | B    | 0.000                    | 0.000                    | 5.000                                   | 0.000                                    | 0.10        |
|                      |                          | C    | 0.000                    | 0.000                    | 5.188                                   | 0.000                                    | 0.34        |
| L29                  | 44.58-36.33              | A    | 0.000                    | 0.000                    | 8.247                                   | 0.000                                    | 0.17        |
|                      |                          | B    | 0.000                    | 0.000                    | 8.247                                   | 0.000                                    | 0.17        |
|                      |                          | C    | 0.000                    | 0.000                    | 8.556                                   | 0.000                                    | 0.57        |
| L30                  | 36.33-35.33              | A    | 0.000                    | 0.000                    | 1.000                                   | 0.000                                    | 0.02        |
|                      |                          | B    | 0.000                    | 0.000                    | 1.000                                   | 0.000                                    | 0.02        |
|                      |                          | C    | 0.000                    | 0.000                    | 1.038                                   | 0.000                                    | 0.07        |
| L31                  | 35.33-32.25              | A    | 0.000                    | 0.000                    | 3.003                                   | 0.000                                    | 0.06        |

| Tower<br>Section<br>n | Tower<br>Elevation<br>ft | Face | $A_R$<br>ft <sup>2</sup> | $A_F$<br>ft <sup>2</sup> | $C_A A_A$<br>In Face<br>ft <sup>2</sup> | $C_A A_A$<br>Out Face<br>ft <sup>2</sup> | Weight<br>K |
|-----------------------|--------------------------|------|--------------------------|--------------------------|-----------------------------------------|------------------------------------------|-------------|
| L32                   | 32.25-32.00              | B    | 0.000                    | 0.000                    | 3.003                                   | 0.000                                    | 0.06        |
|                       |                          | C    | 0.000                    | 0.000                    | 3.119                                   | 0.000                                    | 0.21        |
|                       |                          | A    | 0.000                    | 0.000                    | 0.250                                   | 0.000                                    | 0.01        |
| L33                   | 32.00-27.00              | B    | 0.000                    | 0.000                    | 0.250                                   | 0.000                                    | 0.01        |
|                       |                          | C    | 0.000                    | 0.000                    | 0.259                                   | 0.000                                    | 0.02        |
|                       |                          | A    | 0.000                    | 0.000                    | 5.000                                   | 0.000                                    | 0.10        |
| L34                   | 27.00-22.00              | B    | 0.000                    | 0.000                    | 5.000                                   | 0.000                                    | 0.10        |
|                       |                          | C    | 0.000                    | 0.000                    | 5.188                                   | 0.000                                    | 0.34        |
|                       |                          | A    | 0.000                    | 0.000                    | 5.000                                   | 0.000                                    | 0.10        |
| L35                   | 22.00-17.00              | B    | 0.000                    | 0.000                    | 5.000                                   | 0.000                                    | 0.10        |
|                       |                          | C    | 0.000                    | 0.000                    | 5.188                                   | 0.000                                    | 0.34        |
|                       |                          | A    | 0.000                    | 0.000                    | 5.000                                   | 0.000                                    | 0.10        |
| L36                   | 17.00-15.50              | B    | 0.000                    | 0.000                    | 5.000                                   | 0.000                                    | 0.10        |
|                       |                          | C    | 0.000                    | 0.000                    | 5.188                                   | 0.000                                    | 0.34        |
|                       |                          | A    | 0.000                    | 0.000                    | 2.333                                   | 0.000                                    | 0.04        |
| L37                   | 15.50-15.25              | B    | 0.000                    | 0.000                    | 2.333                                   | 0.000                                    | 0.04        |
|                       |                          | C    | 0.000                    | 0.000                    | 2.390                                   | 0.000                                    | 0.12        |
|                       |                          | A    | 0.000                    | 0.000                    | 0.417                                   | 0.000                                    | 0.01        |
| L38                   | 15.25-14.75              | B    | 0.000                    | 0.000                    | 0.417                                   | 0.000                                    | 0.01        |
|                       |                          | C    | 0.000                    | 0.000                    | 0.426                                   | 0.000                                    | 0.02        |
|                       |                          | A    | 0.000                    | 0.000                    | 0.833                                   | 0.000                                    | 0.02        |
| L39                   | 14.75-14.50              | B    | 0.000                    | 0.000                    | 0.833                                   | 0.000                                    | 0.02        |
|                       |                          | C    | 0.000                    | 0.000                    | 0.852                                   | 0.000                                    | 0.04        |
|                       |                          | A    | 0.000                    | 0.000                    | 0.417                                   | 0.000                                    | 0.01        |
| L40                   | 14.50-9.50               | B    | 0.000                    | 0.000                    | 0.417                                   | 0.000                                    | 0.01        |
|                       |                          | C    | 0.000                    | 0.000                    | 0.426                                   | 0.000                                    | 0.02        |
|                       |                          | A    | 0.000                    | 0.000                    | 5.583                                   | 0.000                                    | 0.10        |
| L41                   | 9.50-4.50                | B    | 0.000                    | 0.000                    | 5.583                                   | 0.000                                    | 0.10        |
|                       |                          | C    | 0.000                    | 0.000                    | 5.752                                   | 0.000                                    | 0.34        |
|                       |                          | A    | 0.000                    | 0.000                    | 3.333                                   | 0.000                                    | 0.05        |
| L42                   | 4.50-0.00                | B    | 0.000                    | 0.000                    | 3.333                                   | 0.000                                    | 0.05        |
|                       |                          | C    | 0.000                    | 0.000                    | 3.333                                   | 0.000                                    | 0.29        |
|                       |                          | A    | 0.000                    | 0.000                    | 1.833                                   | 0.000                                    | 0.03        |
|                       |                          | B    | 0.000                    | 0.000                    | 1.833                                   | 0.000                                    | 0.03        |
|                       |                          | C    | 0.000                    | 0.000                    | 1.833                                   | 0.000                                    | 0.24        |

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

| Tower<br>Section<br>n | Tower<br>Elevation<br>ft | Face<br>or<br>Leg | Ice<br>Thickness<br>in | $A_R$<br>ft <sup>2</sup> | $A_F$<br>ft <sup>2</sup> | $C_A A_A$<br>In Face<br>ft <sup>2</sup> | $C_A A_A$<br>Out Face<br>ft <sup>2</sup> | Weight<br>K |
|-----------------------|--------------------------|-------------------|------------------------|--------------------------|--------------------------|-----------------------------------------|------------------------------------------|-------------|
| L1                    | 160.00-155.00            | A                 | 1.491                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | C                 |                        | 0.000                    | 0.000                    | 1.678                                   | 0.000                                    | 0.03        |
| L2                    | 155.00-150.00            | A                 | 1.486                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | C                 |                        | 0.000                    | 0.000                    | 1.673                                   | 0.000                                    | 0.06        |
| L3                    | 150.00-145.00            | A                 | 1.481                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | C                 |                        | 0.000                    | 0.000                    | 1.668                                   | 0.000                                    | 0.09        |
| L4                    | 145.00-140.00            | A                 | 1.476                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | C                 |                        | 0.000                    | 0.000                    | 1.663                                   | 0.000                                    | 0.09        |
| L5                    | 140.00-135.00            | A                 | 1.471                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | C                 |                        | 0.000                    | 0.000                    | 1.658                                   | 0.000                                    | 0.16        |
| L6                    | 135.00-130.00            | A                 | 1.465                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | C                 |                        | 0.000                    | 0.000                    | 1.653                                   | 0.000                                    | 0.18        |
| L7                    | 130.00-125.00            | A                 | 1.459                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | C                 |                        | 0.000                    | 0.000                    | 1.647                                   | 0.000                                    | 0.19        |
| L8                    | 125.00-120.00            | A                 | 1.454                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                       |                          | C                 |                        | 0.000                    | 0.000                    | 1.641                                   | 0.000                                    | 0.19        |
| L9                    | 120.00-111.33            | A                 | 1.445                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |

| Tower<br>Section | Tower<br>Elevation<br>ft | Face<br>or<br>Leg | Ice<br>Thickness<br>in | $A_R$<br>ft <sup>2</sup> | $A_F$<br>ft <sup>2</sup> | $C_A A_A$<br>In Face<br>ft <sup>2</sup> | $C_A A_A$<br>Out Face<br>ft <sup>2</sup> | Weight<br>K |
|------------------|--------------------------|-------------------|------------------------|--------------------------|--------------------------|-----------------------------------------|------------------------------------------|-------------|
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 2.830                                   | 0.000                                    | 0.39        |
| L10              | 111.33-111.00            | A                 | 1.440                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.109                                   | 0.000                                    | 0.02        |
| L11              | 111.00-106.00            | A                 | 1.436                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.624                                   | 0.000                                    | 0.26        |
| L12              | 106.00-101.00            | A                 | 1.429                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.617                                   | 0.000                                    | 0.26        |
| L13              | 101.00-96.00             | A                 | 1.422                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.610                                   | 0.000                                    | 0.26        |
| L14              | 96.00-91.00              | A                 | 1.415                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.602                                   | 0.000                                    | 0.26        |
| L15              | 91.00-86.00              | A                 | 1.407                  | 0.000                    | 0.000                    | 2.654                                   | 0.000                                    | 0.03        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 2.654                                   | 0.000                                    | 0.03        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 4.249                                   | 0.000                                    | 0.28        |
| L16              | 86.00-85.75              | A                 | 1.403                  | 0.000                    | 0.000                    | 0.265                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.265                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.345                                   | 0.000                                    | 0.02        |
| L17              | 85.75-81.00              | A                 | 1.399                  | 0.000                    | 0.000                    | 5.741                                   | 0.000                                    | 0.07        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 5.741                                   | 0.000                                    | 0.07        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 7.248                                   | 0.000                                    | 0.31        |
| L18              | 81.00-80.75              | A                 | 1.395                  | 0.000                    | 0.000                    | 0.441                                   | 0.000                                    | 0.01        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.441                                   | 0.000                                    | 0.01        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.520                                   | 0.000                                    | 0.02        |
| L19              | 80.75-80.50              | A                 | 1.394                  | 0.000                    | 0.000                    | 0.441                                   | 0.000                                    | 0.01        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.441                                   | 0.000                                    | 0.01        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.520                                   | 0.000                                    | 0.02        |
| L20              | 80.50-73.25              | A                 | 1.387                  | 0.000                    | 0.000                    | 4.573                                   | 0.000                                    | 0.08        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 4.573                                   | 0.000                                    | 0.08        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 6.857                                   | 0.000                                    | 0.46        |
| L21              | 73.25-72.25              | A                 | 1.380                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.315                                   | 0.000                                    | 0.05        |
| L22              | 72.25-67.25              | A                 | 1.374                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.562                                   | 0.000                                    | 0.26        |
| L23              | 67.25-62.25              | A                 | 1.364                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.551                                   | 0.000                                    | 0.26        |
| L24              | 62.25-57.25              | A                 | 1.353                  | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.000                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.540                                   | 0.000                                    | 0.26        |
| L25              | 57.25-52.25              | A                 | 1.341                  | 0.000                    | 0.000                    | 0.101                                   | 0.000                                    | 0.00        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.101                                   | 0.000                                    | 0.00        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.630                                   | 0.000                                    | 0.26        |
| L26              | 52.25-49.83              | A                 | 1.332                  | 0.000                    | 0.000                    | 3.065                                   | 0.000                                    | 0.07        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 3.065                                   | 0.000                                    | 0.07        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 3.800                                   | 0.000                                    | 0.20        |
| L27              | 49.83-49.58              | A                 | 1.328                  | 0.000                    | 0.000                    | 0.316                                   | 0.000                                    | 0.01        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 0.316                                   | 0.000                                    | 0.01        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.392                                   | 0.000                                    | 0.02        |
| L28              | 49.58-44.58              | A                 | 1.321                  | 0.000                    | 0.000                    | 6.321                                   | 0.000                                    | 0.15        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 6.321                                   | 0.000                                    | 0.15        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 7.830                                   | 0.000                                    | 0.41        |
| L29              | 44.58-36.33              | A                 | 1.301                  | 0.000                    | 0.000                    | 10.393                                  | 0.000                                    | 0.25        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 10.393                                  | 0.000                                    | 0.25        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 12.848                                  | 0.000                                    | 0.67        |
| L30              | 36.33-35.33              | A                 | 1.286                  | 0.000                    | 0.000                    | 1.260                                   | 0.000                                    | 0.03        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 1.260                                   | 0.000                                    | 0.03        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.558                                   | 0.000                                    | 0.08        |
| L31              | 35.33-32.25              | A                 | 1.278                  | 0.000                    | 0.000                    | 3.771                                   | 0.000                                    | 0.09        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 3.771                                   | 0.000                                    | 0.09        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 4.675                                   | 0.000                                    | 0.25        |
| L32              | 32.25-32.00              | A                 | 1.272                  | 0.000                    | 0.000                    | 0.314                                   | 0.000                                    | 0.01        |

| Tower<br>Section | Tower<br>Elevation<br>ft | Face<br>or<br>Leg | Ice<br>Thickness<br>in | $A_R$<br>ft <sup>2</sup> | $A_F$<br>ft <sup>2</sup> | $C_A A_A$<br>In Face<br>ft <sup>2</sup> | $C_A A_A$<br>Out Face<br>ft <sup>2</sup> | Weight<br>K |
|------------------|--------------------------|-------------------|------------------------|--------------------------|--------------------------|-----------------------------------------|------------------------------------------|-------------|
| L33              | 32.00-27.00              | B                 | 1.261                  | 0.000                    | 0.000                    | 0.314                                   | 0.000                                    | 0.01        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.387                                   | 0.000                                    | 0.02        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 6.261                                   | 0.000                                    | 0.15        |
| L34              | 27.00-22.00              | B                 | 1.238                  | 0.000                    | 0.000                    | 6.261                                   | 0.000                                    | 0.15        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 7.709                                   | 0.000                                    | 0.40        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 6.238                                   | 0.000                                    | 0.15        |
| L35              | 22.00-17.00              | B                 | 1.210                  | 0.000                    | 0.000                    | 6.238                                   | 0.000                                    | 0.15        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 7.663                                   | 0.000                                    | 0.40        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 6.210                                   | 0.000                                    | 0.15        |
| L36              | 17.00-15.50              | B                 | 1.188                  | 0.000                    | 0.000                    | 6.210                                   | 0.000                                    | 0.15        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 7.607                                   | 0.000                                    | 0.40        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 2.987                                   | 0.000                                    | 0.06        |
| L37              | 15.50-15.25              | B                 | 1.181                  | 0.000                    | 0.000                    | 2.987                                   | 0.000                                    | 0.06        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 3.399                                   | 0.000                                    | 0.14        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 0.535                                   | 0.000                                    | 0.01        |
| L38              | 15.25-14.75              | B                 | 1.178                  | 0.000                    | 0.000                    | 0.535                                   | 0.000                                    | 0.01        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.603                                   | 0.000                                    | 0.02        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 1.069                                   | 0.000                                    | 0.02        |
| L39              | 14.75-14.50              | B                 | 1.175                  | 0.000                    | 0.000                    | 1.069                                   | 0.000                                    | 0.02        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 1.206                                   | 0.000                                    | 0.05        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 0.534                                   | 0.000                                    | 0.01        |
| L40              | 14.50-9.50               | B                 | 1.152                  | 0.000                    | 0.000                    | 0.534                                   | 0.000                                    | 0.01        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 0.602                                   | 0.000                                    | 0.02        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 7.254                                   | 0.000                                    | 0.15        |
| L41              | 9.50-4.50                | B                 | 1.092                  | 0.000                    | 0.000                    | 7.254                                   | 0.000                                    | 0.15        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 8.460                                   | 0.000                                    | 0.40        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 4.425                                   | 0.000                                    | 0.08        |
| L42              | 4.50-0.00                | B                 | 0.974                  | 0.000                    | 0.000                    | 4.425                                   | 0.000                                    | 0.08        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 4.425                                   | 0.000                                    | 0.32        |
|                  |                          | A                 |                        | 0.000                    | 0.000                    | 2.369                                   | 0.000                                    | 0.04        |
|                  |                          | B                 |                        | 0.000                    | 0.000                    | 2.369                                   | 0.000                                    | 0.04        |
|                  |                          | C                 |                        | 0.000                    | 0.000                    | 2.369                                   | 0.000                                    | 0.26        |

### Feed Line Center of Pressure

| Section | Elevation     | $CP_x$ | $CP_z$ | $CP_x$    | $CP_z$    |
|---------|---------------|--------|--------|-----------|-----------|
|         | ft            | in     | in     | Ice<br>in | Ice<br>in |
| L1      | 160.00-155.00 | 0.1651 | 0.1584 | 0.9175    | 0.8799    |
| L2      | 155.00-150.00 | 0.1651 | 0.1584 | 0.9265    | 0.8885    |
| L3      | 150.00-145.00 | 0.1651 | 0.1584 | 0.9345    | 0.8961    |
| L4      | 145.00-140.00 | 0.1651 | 0.1584 | 0.9414    | 0.9028    |
| L5      | 140.00-135.00 | 0.1651 | 0.1584 | 0.9475    | 0.9086    |
| L6      | 135.00-130.00 | 0.1651 | 0.1584 | 0.9528    | 0.9137    |
| L7      | 130.00-125.00 | 0.1651 | 0.1584 | 0.9573    | 0.9180    |
| L8      | 125.00-120.00 | 0.1651 | 0.1584 | 0.9612    | 0.9217    |
| L9      | 120.00-111.33 | 0.1651 | 0.1584 | 0.9654    | 0.9258    |
| L10     | 111.33-111.00 | 0.1653 | 0.1585 | 0.9692    | 0.9295    |
| L11     | 111.00-106.00 | 0.1653 | 0.1585 | 0.9673    | 0.9276    |
| L12     | 106.00-101.00 | 0.1653 | 0.1585 | 0.9691    | 0.9293    |
| L13     | 101.00-96.00  | 0.1653 | 0.1585 | 0.9703    | 0.9304    |
| L14     | 96.00-91.00   | 0.1653 | 0.1585 | 0.9709    | 0.9311    |
| L15     | 91.00-86.00   | 0.1135 | 0.1088 | 0.7105    | 0.6813    |
| L16     | 86.00-85.75   | 0.0872 | 0.0836 | 0.5641    | 0.5409    |
| L17     | 85.75-81.00   | 0.0829 | 0.0795 | 0.5361    | 0.5141    |
| L18     | 81.00-80.75   | 0.0690 | 0.0662 | 0.4475    | 0.4292    |
| L19     | 80.75-80.50   | 0.0691 | 0.0662 | 0.4479    | 0.4295    |
| L20     | 80.50-73.25   | 0.1115 | 0.1069 | 0.6878    | 0.6596    |
| L21     | 73.25-72.25   | 0.1654 | 0.1586 | 0.9710    | 0.9312    |
| L22     | 72.25-67.25   | 0.1653 | 0.1586 | 0.9655    | 0.9259    |
| L23     | 67.25-62.25   | 0.1653 | 0.1586 | 0.9632    | 0.9237    |
| L24     | 62.25-57.25   | 0.1653 | 0.1585 | 0.9602    | 0.9208    |
| L25     | 57.25-52.25   | 0.1632 | 0.1565 | 0.9452    | 0.9064    |
| L26     | 52.25-49.83   | 0.0911 | 0.0873 | 0.5494    | 0.5269    |
| L27     | 49.83-49.58   | 0.0913 | 0.0876 | 0.5503    | 0.5277    |
| L28     | 49.58-44.58   | 0.0919 | 0.0881 | 0.5517    | 0.5291    |

| Section | Elevation   | CP <sub>x</sub> | CP <sub>z</sub> | CP <sub>x</sub><br>Ice | CP <sub>z</sub><br>Ice |
|---------|-------------|-----------------|-----------------|------------------------|------------------------|
|         | ft          | in              | in              | in                     | in                     |
| L29     | 44.58-36.33 | 0.0933          | 0.0895          | 0.5544                 | 0.5317                 |
| L30     | 36.33-35.33 | 0.0936          | 0.0897          | 0.5563                 | 0.5335                 |
| L31     | 35.33-32.25 | 0.0950          | 0.0911          | 0.5573                 | 0.5344                 |
| L32     | 32.25-32.00 | 0.0943          | 0.0904          | 0.5515                 | 0.5288                 |
| L33     | 32.00-27.00 | 0.0948          | 0.0909          | 0.5512                 | 0.5286                 |
| L34     | 27.00-22.00 | 0.0958          | 0.0919          | 0.5497                 | 0.5271                 |
| L35     | 22.00-17.00 | 0.0967          | 0.0928          | 0.5461                 | 0.5237                 |
| L36     | 17.00-15.50 | 0.0792          | 0.0760          | 0.4390                 | 0.4210                 |
| L37     | 15.50-15.25 | 0.0766          | 0.0734          | 0.4222                 | 0.4049                 |
| L38     | 15.25-14.75 | 0.0766          | 0.0735          | 0.4219                 | 0.4045                 |
| L39     | 14.75-14.50 | 0.0767          | 0.0736          | 0.4215                 | 0.4042                 |
| L40     | 14.50-9.50  | 0.0842          | 0.0808          | 0.4511                 | 0.4326                 |
| L41     | 9.50-4.50   | 0.0000          | 0.0000          | 0.0000                 | 0.0000                 |
| L42     | 4.50-0.00   | 0.0000          | 0.0000          | 0.0000                 | 0.0000                 |

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

## Shielding Factor Ka

| Tower Section | Feed Line Record No. | Description     | Feed Line Segment Elev. | K <sub>a</sub><br>No Ice | K <sub>a</sub><br>Ice |
|---------------|----------------------|-----------------|-------------------------|--------------------------|-----------------------|
| L1            | 1                    | Safety Line 3/8 | 155.00 - 160.00         | 1.0000                   | 1.0000                |
| L2            | 1                    | Safety Line 3/8 | 150.00 - 155.00         | 1.0000                   | 1.0000                |
| L3            | 1                    | Safety Line 3/8 | 145.00 - 150.00         | 1.0000                   | 1.0000                |
| L4            | 1                    | Safety Line 3/8 | 140.00 - 145.00         | 1.0000                   | 1.0000                |
| L5            | 1                    | Safety Line 3/8 | 135.00 - 140.00         | 1.0000                   | 1.0000                |
| L6            | 1                    | Safety Line 3/8 | 130.00 - 135.00         | 1.0000                   | 1.0000                |
| L7            | 1                    | Safety Line 3/8 | 125.00 - 130.00         | 1.0000                   | 1.0000                |
| L8            | 1                    | Safety Line 3/8 | 120.00 - 125.00         | 1.0000                   | 1.0000                |
| L9            | 1                    | Safety Line 3/8 | 111.33 - 120.00         | 1.0000                   | 1.0000                |
| L10           | 1                    | Safety Line 3/8 | 111.00 - 111.33         | 1.0000                   | 1.0000                |
| L11           | 1                    | Safety Line 3/8 | 106.00 - 111.00         | 1.0000                   | 1.0000                |
| L12           | 1                    | Safety Line 3/8 | 101.00 - 106.00         | 1.0000                   | 1.0000                |
| L13           | 1                    | Safety Line 3/8 | 96.00 - 101.00          | 1.0000                   | 1.0000                |
| L14           | 1                    | Safety Line 3/8 | 91.00 - 96.00           | 1.0000                   | 1.0000                |
| L15           | 1                    | Safety Line 3/8 | 86.00 - 91.00           | 1.0000                   | 1.0000                |
| L15           | 44                   | CCI-AFP-060100  | 86.00 - 88.50           | 1.0000                   | 1.0000                |
| L15           | 45                   | CCI-AFP-060100  | 86.00 - 88.50           | 1.0000                   | 1.0000                |
| L15           | 46                   | CCI-AFP-060100  | 86.00 - 88.50           | 1.0000                   | 1.0000                |
| L16           | 1                    | Safety Line 3/8 | 85.75 - 86.00           | 1.0000                   | 1.0000                |
| L16           | 44                   | CCI-AFP-060100  | 85.75 - 86.00           | 1.0000                   | 1.0000                |
| L16           | 45                   | CCI-AFP-060100  | 85.75 - 86.00           | 1.0000                   | 1.0000                |
| L16           | 46                   | CCI-AFP-060100  | 85.75 - 86.00           | 1.0000                   | 1.0000                |
| L17           | 1                    | Safety Line 3/8 | 81.00 -                 | 1.0000                   | 1.0000                |

| Tower Section | Feed Line Record No. | Description     | Feed Line Segment Elev.   | K <sub>a</sub> No Ice | K <sub>a</sub> Ice |
|---------------|----------------------|-----------------|---------------------------|-----------------------|--------------------|
| L17           | 35                   | MK SR 2         | 85.75<br>81.00 -<br>82.00 | 1.0000                | 1.0000             |
| L17           | 36                   | MK SR 2         | 81.00 -<br>82.00          | 1.0000                | 1.0000             |
| L17           | 37                   | MK SR 2         | 81.00 -<br>82.00          | 1.0000                | 1.0000             |
| L17           | 44                   | CCI-AFP-060100  | 81.00 -<br>85.75          | 1.0000                | 1.0000             |
| L17           | 45                   | CCI-AFP-060100  | 81.00 -<br>85.75          | 1.0000                | 1.0000             |
| L17           | 46                   | CCI-AFP-060100  | 81.00 -<br>85.75          | 1.0000                | 1.0000             |
| L18           | 1                    | Safety Line 3/8 | 80.75 -<br>81.00          | 1.0000                | 1.0000             |
| L18           | 35                   | MK SR 2         | 80.75 -<br>81.00          | 1.0000                | 1.0000             |
| L18           | 36                   | MK SR 2         | 80.75 -<br>81.00          | 1.0000                | 1.0000             |
| L18           | 37                   | MK SR 2         | 80.75 -<br>81.00          | 1.0000                | 1.0000             |
| L18           | 44                   | CCI-AFP-060100  | 80.75 -<br>81.00          | 1.0000                | 1.0000             |
| L18           | 45                   | CCI-AFP-060100  | 80.75 -<br>81.00          | 1.0000                | 1.0000             |
| L18           | 46                   | CCI-AFP-060100  | 80.75 -<br>81.00          | 1.0000                | 1.0000             |
| L19           | 1                    | Safety Line 3/8 | 80.50 -<br>80.75          | 1.0000                | 1.0000             |
| L19           | 35                   | MK SR 2         | 80.50 -<br>80.75          | 1.0000                | 1.0000             |
| L19           | 36                   | MK SR 2         | 80.50 -<br>80.75          | 1.0000                | 1.0000             |
| L19           | 37                   | MK SR 2         | 80.50 -<br>80.75          | 1.0000                | 1.0000             |
| L19           | 44                   | CCI-AFP-060100  | 80.50 -<br>80.75          | 1.0000                | 1.0000             |
| L19           | 45                   | CCI-AFP-060100  | 80.50 -<br>80.75          | 1.0000                | 1.0000             |
| L19           | 46                   | CCI-AFP-060100  | 80.50 -<br>80.75          | 1.0000                | 1.0000             |
| L20           | 1                    | Safety Line 3/8 | 73.25 -<br>80.50          | 1.0000                | 1.0000             |
| L20           | 35                   | MK SR 2         | 77.00 -<br>80.50          | 1.0000                | 1.0000             |
| L20           | 36                   | MK SR 2         | 77.00 -<br>80.50          | 1.0000                | 1.0000             |
| L20           | 37                   | MK SR 2         | 77.00 -<br>80.50          | 1.0000                | 1.0000             |
| L20           | 44                   | CCI-AFP-060100  | 78.50 -<br>80.50          | 1.0000                | 1.0000             |
| L20           | 45                   | CCI-AFP-060100  | 78.50 -<br>80.50          | 1.0000                | 1.0000             |
| L20           | 46                   | CCI-AFP-060100  | 78.50 -<br>80.50          | 1.0000                | 1.0000             |
| L21           | 1                    | Safety Line 3/8 | 72.25 -<br>73.25          | 1.0000                | 1.0000             |
| L22           | 1                    | Safety Line 3/8 | 67.25 -<br>72.25          | 1.0000                | 1.0000             |
| L23           | 1                    | Safety Line 3/8 | 62.25 -<br>67.25          | 1.0000                | 1.0000             |
| L24           | 1                    | Safety Line 3/8 | 57.25 -<br>62.25          | 1.0000                | 1.0000             |
| L25           | 1                    | Safety Line 3/8 | 52.25 -<br>57.25          | 1.0000                | 1.0000             |
| L25           | 41                   | CCI-AFP-060100  | 52.25 -<br>52.33          | 1.0000                | 1.0000             |
| L25           | 42                   | CCI-AFP-060100  | 52.25 -<br>52.33          | 1.0000                | 1.0000             |

| Tower Section | Feed Line Record No. | Description     | Feed Line Segment Elev. | K <sub>a</sub> No Ice | K <sub>a</sub> Ice |
|---------------|----------------------|-----------------|-------------------------|-----------------------|--------------------|
| L25           | 43                   | CCI-AFP-060100  | 52.25 - 52.33           | 1.0000                | 1.0000             |
| L26           | 1                    | Safety Line 3/8 | 49.83 - 52.25           | 1.0000                | 1.0000             |
| L26           | 41                   | CCI-AFP-060100  | 49.83 - 52.25           | 1.0000                | 1.0000             |
| L26           | 42                   | CCI-AFP-060100  | 49.83 - 52.25           | 1.0000                | 1.0000             |
| L26           | 43                   | CCI-AFP-060100  | 49.83 - 52.25           | 1.0000                | 1.0000             |
| L27           | 1                    | Safety Line 3/8 | 49.58 - 49.83           | 1.0000                | 1.0000             |
| L27           | 41                   | CCI-AFP-060100  | 49.58 - 49.83           | 1.0000                | 1.0000             |
| L27           | 42                   | CCI-AFP-060100  | 49.58 - 49.83           | 1.0000                | 1.0000             |
| L27           | 43                   | CCI-AFP-060100  | 49.58 - 49.83           | 1.0000                | 1.0000             |
| L28           | 1                    | Safety Line 3/8 | 44.58 - 49.58           | 1.0000                | 1.0000             |
| L28           | 41                   | CCI-AFP-060100  | 44.58 - 49.58           | 1.0000                | 1.0000             |
| L28           | 42                   | CCI-AFP-060100  | 44.58 - 49.58           | 1.0000                | 1.0000             |
| L28           | 43                   | CCI-AFP-060100  | 44.58 - 49.58           | 1.0000                | 1.0000             |
| L29           | 1                    | Safety Line 3/8 | 36.33 - 44.58           | 1.0000                | 1.0000             |
| L29           | 41                   | CCI-AFP-060100  | 36.33 - 44.58           | 1.0000                | 1.0000             |
| L29           | 42                   | CCI-AFP-060100  | 36.33 - 44.58           | 1.0000                | 1.0000             |
| L29           | 43                   | CCI-AFP-060100  | 36.33 - 44.58           | 1.0000                | 1.0000             |
| L30           | 1                    | Safety Line 3/8 | 35.33 - 36.33           | 1.0000                | 1.0000             |
| L30           | 41                   | CCI-AFP-060100  | 35.33 - 36.33           | 1.0000                | 1.0000             |
| L30           | 42                   | CCI-AFP-060100  | 35.33 - 36.33           | 1.0000                | 1.0000             |
| L30           | 43                   | CCI-AFP-060100  | 35.33 - 36.33           | 1.0000                | 1.0000             |
| L31           | 1                    | Safety Line 3/8 | 32.25 - 35.33           | 1.0000                | 1.0000             |
| L31           | 41                   | CCI-AFP-060100  | 32.33 - 35.33           | 1.0000                | 1.0000             |
| L31           | 42                   | CCI-AFP-060100  | 32.33 - 35.33           | 1.0000                | 1.0000             |
| L31           | 43                   | CCI-AFP-060100  | 32.33 - 35.33           | 1.0000                | 1.0000             |
| L32           | 1                    | Safety Line 3/8 | 32.00 - 32.25           | 1.0000                | 1.0000             |
| L32           | 38                   | CCI-AFP-060100  | 32.00 - 32.25           | 1.0000                | 1.0000             |
| L32           | 39                   | CCI-AFP-060100  | 32.00 - 32.25           | 1.0000                | 1.0000             |
| L32           | 40                   | CCI-AFP-060100  | 32.00 - 32.25           | 1.0000                | 1.0000             |
| L33           | 1                    | Safety Line 3/8 | 27.00 - 32.00           | 1.0000                | 1.0000             |
| L33           | 38                   | CCI-AFP-060100  | 27.00 - 32.00           | 1.0000                | 1.0000             |
| L33           | 39                   | CCI-AFP-060100  | 27.00 - 32.00           | 1.0000                | 1.0000             |
| L33           | 40                   | CCI-AFP-060100  | 27.00 - 32.00           | 1.0000                | 1.0000             |
| L34           | 1                    | Safety Line 3/8 | 22.00 - 27.00           | 1.0000                | 1.0000             |
| L34           | 38                   | CCI-AFP-060100  | 22.00 -                 | 1.0000                | 1.0000             |

| Tower Section | Feed Line Record No. | Description     | Feed Line Segment Elev. | K <sub>a</sub> No Ice | K <sub>a</sub> Ice |
|---------------|----------------------|-----------------|-------------------------|-----------------------|--------------------|
| L34           | 39                   | CCI-AFP-060100  | 27.00<br>22.00 -        | 1.0000                | 1.0000             |
| L34           | 40                   | CCI-AFP-060100  | 27.00<br>22.00 -        | 1.0000                | 1.0000             |
| L35           | 1                    | Safety Line 3/8 | 27.00<br>17.00 -        | 1.0000                | 1.0000             |
| L35           | 38                   | CCI-AFP-060100  | 22.00<br>17.00 -        | 1.0000                | 1.0000             |
| L35           | 39                   | CCI-AFP-060100  | 22.00<br>17.00 -        | 1.0000                | 1.0000             |
| L35           | 40                   | CCI-AFP-060100  | 22.00<br>17.00 -        | 1.0000                | 1.0000             |
| L36           | 1                    | Safety Line 3/8 | 22.00<br>15.50 -        | 1.0000                | 1.0000             |
| L36           | 32                   | MK SR 1         | 17.00<br>15.50 -        | 1.0000                | 1.0000             |
| L36           | 33                   | MK SR 1         | 16.75<br>15.50 -        | 1.0000                | 1.0000             |
| L36           | 34                   | MK SR 1         | 16.75<br>15.50 -        | 1.0000                | 1.0000             |
| L36           | 38                   | CCI-AFP-060100  | 16.75<br>15.50 -        | 1.0000                | 1.0000             |
| L36           | 39                   | CCI-AFP-060100  | 17.00<br>15.50 -        | 1.0000                | 1.0000             |
| L36           | 40                   | CCI-AFP-060100  | 17.00<br>15.50 -        | 1.0000                | 1.0000             |
| L37           | 1                    | Safety Line 3/8 | 17.00<br>15.25 -        | 1.0000                | 1.0000             |
| L37           | 32                   | MK SR 1         | 15.50<br>15.25 -        | 1.0000                | 1.0000             |
| L37           | 33                   | MK SR 1         | 15.50<br>15.25 -        | 1.0000                | 1.0000             |
| L37           | 34                   | MK SR 1         | 15.50<br>15.25 -        | 1.0000                | 1.0000             |
| L37           | 38                   | CCI-AFP-060100  | 15.50<br>15.25 -        | 1.0000                | 1.0000             |
| L37           | 39                   | CCI-AFP-060100  | 15.50<br>15.25 -        | 1.0000                | 1.0000             |
| L37           | 40                   | CCI-AFP-060100  | 15.50<br>15.25 -        | 1.0000                | 1.0000             |
| L38           | 1                    | Safety Line 3/8 | 15.50<br>14.75 -        | 1.0000                | 1.0000             |
| L38           | 32                   | MK SR 1         | 15.25<br>14.75 -        | 1.0000                | 1.0000             |
| L38           | 33                   | MK SR 1         | 15.25<br>14.75 -        | 1.0000                | 1.0000             |
| L38           | 34                   | MK SR 1         | 15.25<br>14.75 -        | 1.0000                | 1.0000             |
| L38           | 38                   | CCI-AFP-060100  | 15.25<br>14.75 -        | 1.0000                | 1.0000             |
| L38           | 39                   | CCI-AFP-060100  | 15.25<br>14.75 -        | 1.0000                | 1.0000             |
| L38           | 40                   | CCI-AFP-060100  | 15.25<br>14.75 -        | 1.0000                | 1.0000             |
| L39           | 1                    | Safety Line 3/8 | 15.25<br>14.50 -        | 1.0000                | 1.0000             |
| L39           | 32                   | MK SR 1         | 14.75<br>14.50 -        | 1.0000                | 1.0000             |
| L39           | 33                   | MK SR 1         | 14.75<br>14.50 -        | 1.0000                | 1.0000             |
| L39           | 34                   | MK SR 1         | 14.75<br>14.50 -        | 1.0000                | 1.0000             |
| L39           | 38                   | CCI-AFP-060100  | 14.75<br>14.50 -        | 1.0000                | 1.0000             |
| L39           | 39                   | CCI-AFP-060100  | 14.75<br>14.50 -        | 1.0000                | 1.0000             |
| L39           | 40                   | CCI-AFP-060100  | 14.75<br>14.50 -        | 1.0000                | 1.0000             |

| Tower Section | Feed Line Record No. | Description     | Feed Line Segment Elev. | $K_a$ No Ice | $K_a$ Ice |
|---------------|----------------------|-----------------|-------------------------|--------------|-----------|
| L40           | 1                    | Safety Line 3/8 | 10.00 - 14.50           | 1.0000       | 1.0000    |
| L40           | 32                   | MK SR 1         | 9.50 - 14.50            | 1.0000       | 1.0000    |
| L40           | 33                   | MK SR 1         | 9.50 - 14.50            | 1.0000       | 1.0000    |
| L40           | 34                   | MK SR 1         | 9.50 - 14.50            | 1.0000       | 1.0000    |
| L40           | 38                   | CCI-AFP-060100  | 12.25 - 14.50           | 1.0000       | 1.0000    |
| L40           | 39                   | CCI-AFP-060100  | 12.25 - 14.50           | 1.0000       | 1.0000    |
| L40           | 40                   | CCI-AFP-060100  | 12.25 - 14.50           | 1.0000       | 1.0000    |
| L41           | 32                   | MK SR 1         | 4.50 - 9.50             | 1.0000       | 1.0000    |
| L41           | 33                   | MK SR 1         | 4.50 - 9.50             | 1.0000       | 1.0000    |
| L41           | 34                   | MK SR 1         | 4.50 - 9.50             | 1.0000       | 1.0000    |
| L42           | 32                   | MK SR 1         | 1.75 - 4.50             | 1.0000       | 1.0000    |
| L42           | 33                   | MK SR 1         | 1.75 - 4.50             | 1.0000       | 1.0000    |
| L42           | 34                   | MK SR 1         | 1.75 - 4.50             | 1.0000       | 1.0000    |

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

| Tower Section | Attachment Record No. | Description    | Attachment Segment Elev. | Ratio Calculation Method | Effective Width Ratio |
|---------------|-----------------------|----------------|--------------------------|--------------------------|-----------------------|
| L15           | 44                    | CCI-AFP-060100 | 86.00 - 88.50            | Auto                     | 0.0000                |
| L15           | 45                    | CCI-AFP-060100 | 86.00 - 88.50            | Auto                     | 0.0000                |
| L15           | 46                    | CCI-AFP-060100 | 86.00 - 88.50            | Auto                     | 0.0000                |
| L16           | 44                    | CCI-AFP-060100 | 85.75 - 86.00            | Auto                     | 0.0000                |
| L16           | 45                    | CCI-AFP-060100 | 85.75 - 86.00            | Auto                     | 0.0000                |
| L16           | 46                    | CCI-AFP-060100 | 85.75 - 86.00            | Auto                     | 0.0000                |
| L17           | 35                    | MK SR 2        | 81.00 - 82.00            | Manual                   | 1.0000                |
| L17           | 36                    | MK SR 2        | 81.00 - 82.00            | Manual                   | 1.0000                |
| L17           | 37                    | MK SR 2        | 81.00 - 82.00            | Manual                   | 1.0000                |
| L17           | 44                    | CCI-AFP-060100 | 81.00 - 85.75            | Auto                     | 0.0000                |
| L17           | 45                    | CCI-AFP-060100 | 81.00 - 85.75            | Auto                     | 0.0000                |
| L17           | 46                    | CCI-AFP-060100 | 81.00 - 85.75            | Auto                     | 0.0000                |
| L18           | 35                    | MK SR 2        | 80.75 - 81.00            | Manual                   | 1.0000                |
| L18           | 36                    | MK SR 2        | 80.75 - 81.00            | Manual                   | 1.0000                |
| L18           | 37                    | MK SR 2        | 80.75 - 81.00            | Manual                   | 1.0000                |
| L18           | 44                    | CCI-AFP-060100 | 80.75 - 81.00            | Auto                     | 0.0000                |
| L18           | 45                    | CCI-AFP-060100 | 80.75 - 81.00            | Auto                     | 0.0000                |
| L18           | 46                    | CCI-AFP-060100 | 80.75 - 81.00            | Auto                     | 0.0000                |
| L19           | 35                    | MK SR 2        | 80.50 - 80.75            | Manual                   | 1.0000                |
| L19           | 36                    | MK SR 2        | 80.50 - 80.75            | Manual                   | 1.0000                |
| L19           | 37                    | MK SR 2        | 80.50 - 80.75            | Manual                   | 1.0000                |

| Tower Section | Attachment Record No. | Description    | Attachment Segment Elev. | Ratio Calculation Method | Effective Width Ratio |
|---------------|-----------------------|----------------|--------------------------|--------------------------|-----------------------|
| L19           | 44                    | CCI-AFP-060100 | 80.50 - 80.75            | Auto                     | 0.0000                |
| L19           | 45                    | CCI-AFP-060100 | 80.50 - 80.75            | Auto                     | 0.0000                |
| L19           | 46                    | CCI-AFP-060100 | 80.50 - 80.75            | Auto                     | 0.0000                |
| L20           | 35                    | MK SR 2        | 77.00 - 80.50            | Manual                   | 1.0000                |
| L20           | 36                    | MK SR 2        | 77.00 - 80.50            | Manual                   | 1.0000                |
| L20           | 37                    | MK SR 2        | 77.00 - 80.50            | Manual                   | 1.0000                |
| L20           | 44                    | CCI-AFP-060100 | 78.50 - 80.50            | Auto                     | 0.0000                |
| L20           | 45                    | CCI-AFP-060100 | 78.50 - 80.50            | Auto                     | 0.0000                |
| L20           | 46                    | CCI-AFP-060100 | 78.50 - 80.50            | Auto                     | 0.0000                |
| L25           | 41                    | CCI-AFP-060100 | 52.25 - 52.33            | Auto                     | 0.0000                |
| L25           | 42                    | CCI-AFP-060100 | 52.25 - 52.33            | Auto                     | 0.0000                |
| L25           | 43                    | CCI-AFP-060100 | 52.25 - 52.33            | Auto                     | 0.0000                |
| L26           | 41                    | CCI-AFP-060100 | 49.83 - 52.25            | Auto                     | 0.0000                |
| L26           | 42                    | CCI-AFP-060100 | 49.83 - 52.25            | Auto                     | 0.0000                |
| L26           | 43                    | CCI-AFP-060100 | 49.83 - 52.25            | Auto                     | 0.0000                |
| L27           | 41                    | CCI-AFP-060100 | 49.58 - 49.83            | Auto                     | 0.0000                |
| L27           | 42                    | CCI-AFP-060100 | 49.58 - 49.83            | Auto                     | 0.0000                |
| L27           | 43                    | CCI-AFP-060100 | 49.58 - 49.83            | Auto                     | 0.0000                |
| L28           | 41                    | CCI-AFP-060100 | 44.58 - 49.58            | Auto                     | 0.0000                |
| L28           | 42                    | CCI-AFP-060100 | 44.58 - 49.58            | Auto                     | 0.0000                |
| L28           | 43                    | CCI-AFP-060100 | 44.58 - 49.58            | Auto                     | 0.0000                |
| L29           | 41                    | CCI-AFP-060100 | 36.33 - 44.58            | Auto                     | 0.0000                |
| L29           | 42                    | CCI-AFP-060100 | 36.33 - 44.58            | Auto                     | 0.0000                |
| L29           | 43                    | CCI-AFP-060100 | 36.33 - 44.58            | Auto                     | 0.0000                |
| L30           | 41                    | CCI-AFP-060100 | 35.33 - 36.33            | Auto                     | 0.0000                |
| L30           | 42                    | CCI-AFP-060100 | 35.33 - 36.33            | Auto                     | 0.0000                |
| L30           | 43                    | CCI-AFP-060100 | 35.33 - 36.33            | Auto                     | 0.0000                |
| L31           | 41                    | CCI-AFP-060100 | 32.33 - 35.33            | Auto                     | 0.0000                |
| L31           | 42                    | CCI-AFP-060100 | 32.33 - 35.33            | Auto                     | 0.0000                |
| L31           | 43                    | CCI-AFP-060100 | 32.33 - 35.33            | Auto                     | 0.0000                |
| L32           | 38                    | CCI-AFP-060100 | 32.00 - 32.25            | Auto                     | 0.0000                |
| L32           | 39                    | CCI-AFP-060100 | 32.00 - 32.25            | Auto                     | 0.0000                |
| L32           | 40                    | CCI-AFP-060100 | 32.00 - 32.25            | Auto                     | 0.0000                |
| L33           | 38                    | CCI-AFP-060100 | 27.00 - 32.00            | Auto                     | 0.0000                |

| Tower Section | Attachment Record No. | Description    | Attachment Segment Elev. | Ratio Calculation Method | Effective Width Ratio |
|---------------|-----------------------|----------------|--------------------------|--------------------------|-----------------------|
| L33           | 39                    | CCI-AFP-060100 | 27.00 - 32.00            | Auto                     | 0.0000                |
| L33           | 40                    | CCI-AFP-060100 | 27.00 - 32.00            | Auto                     | 0.0000                |
| L34           | 38                    | CCI-AFP-060100 | 22.00 - 27.00            | Auto                     | 0.0000                |
| L34           | 39                    | CCI-AFP-060100 | 22.00 - 27.00            | Auto                     | 0.0000                |
| L34           | 40                    | CCI-AFP-060100 | 22.00 - 27.00            | Auto                     | 0.0000                |
| L35           | 38                    | CCI-AFP-060100 | 17.00 - 22.00            | Auto                     | 0.0000                |
| L35           | 39                    | CCI-AFP-060100 | 17.00 - 22.00            | Auto                     | 0.0000                |
| L35           | 40                    | CCI-AFP-060100 | 17.00 - 22.00            | Auto                     | 0.0000                |
| L36           | 32                    | MK SR 1        | 15.50 - 16.75            | Manual                   | 1.0000                |
| L36           | 33                    | MK SR 1        | 15.50 - 16.75            | Manual                   | 1.0000                |
| L36           | 34                    | MK SR 1        | 15.50 - 16.75            | Manual                   | 1.0000                |
| L36           | 38                    | CCI-AFP-060100 | 15.50 - 17.00            | Auto                     | 0.0000                |
| L36           | 39                    | CCI-AFP-060100 | 15.50 - 17.00            | Auto                     | 0.0000                |
| L36           | 40                    | CCI-AFP-060100 | 15.50 - 17.00            | Auto                     | 0.0000                |
| L37           | 32                    | MK SR 1        | 15.25 - 15.50            | Manual                   | 1.0000                |
| L37           | 33                    | MK SR 1        | 15.25 - 15.50            | Manual                   | 1.0000                |
| L37           | 34                    | MK SR 1        | 15.25 - 15.50            | Manual                   | 1.0000                |
| L37           | 38                    | CCI-AFP-060100 | 15.25 - 15.50            | Auto                     | 0.0000                |
| L37           | 39                    | CCI-AFP-060100 | 15.25 - 15.50            | Auto                     | 0.0000                |
| L37           | 40                    | CCI-AFP-060100 | 15.25 - 15.50            | Auto                     | 0.0000                |
| L38           | 32                    | MK SR 1        | 14.75 - 15.25            | Manual                   | 1.0000                |
| L38           | 33                    | MK SR 1        | 14.75 - 15.25            | Manual                   | 1.0000                |
| L38           | 34                    | MK SR 1        | 14.75 - 15.25            | Manual                   | 1.0000                |
| L38           | 38                    | CCI-AFP-060100 | 14.75 - 15.25            | Auto                     | 0.0000                |
| L38           | 39                    | CCI-AFP-060100 | 14.75 - 15.25            | Auto                     | 0.0000                |
| L38           | 40                    | CCI-AFP-060100 | 14.75 - 15.25            | Auto                     | 0.0000                |
| L39           | 32                    | MK SR 1        | 14.50 - 14.75            | Manual                   | 1.0000                |
| L39           | 33                    | MK SR 1        | 14.50 - 14.75            | Manual                   | 1.0000                |
| L39           | 34                    | MK SR 1        | 14.50 - 14.75            | Manual                   | 1.0000                |
| L39           | 38                    | CCI-AFP-060100 | 14.50 - 14.75            | Auto                     | 0.0000                |
| L39           | 39                    | CCI-AFP-060100 | 14.50 - 14.75            | Auto                     | 0.0000                |
| L39           | 40                    | CCI-AFP-060100 | 14.50 - 14.75            | Auto                     | 0.0000                |
| L40           | 32                    | MK SR 1        | 9.50 - 14.50             | Manual                   | 1.0000                |
| L40           | 33                    | MK SR 1        | 9.50 - 14.50             | Manual                   | 1.0000                |
| L40           | 34                    | MK SR 1        | 9.50 - 14.50             | Manual                   | 1.0000                |
| L40           | 38                    | CCI-AFP-060100 | 12.25 -                  | Auto                     | 0.0000                |

| Tower Section | Attachment Record No. | Description    | Attachment Segment Elev. | Ratio Calculation Method | Effective Width Ratio |
|---------------|-----------------------|----------------|--------------------------|--------------------------|-----------------------|
| L40           | 39                    | CCI-AFP-060100 | 14.50<br>12.25 - 14.50   | Auto                     | 0.0000                |
| L40           | 40                    | CCI-AFP-060100 | 12.25 - 14.50            | Auto                     | 0.0000                |
| L41           | 32                    | MK SR 1        | 4.50 - 9.50              | Manual                   | 1.0000                |
| L41           | 33                    | MK SR 1        | 4.50 - 9.50              | Manual                   | 1.0000                |
| L41           | 34                    | MK SR 1        | 4.50 - 9.50              | Manual                   | 1.0000                |
| L42           | 32                    | MK SR 1        | 1.75 - 4.50              | Manual                   | 1.0000                |
| L42           | 33                    | MK SR 1        | 1.75 - 4.50              | Manual                   | 1.0000                |
| L42           | 34                    | MK SR 1        | 1.75 - 4.50              | Manual                   | 1.0000                |

## Discrete Tower Loads

| Description                        | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br><br>° | Placement<br><br>ft |          | C <sub>A</sub> A <sub>A</sub><br>Front<br><br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br><br>ft <sup>2</sup> | Weight<br><br>K |
|------------------------------------|-------------------|----------------|-------------------------------------------------------|------------------------------------|---------------------|----------|---------------------------------------------------------------|--------------------------------------------------------------|-----------------|
| ***157***                          |                   |                |                                                       |                                    |                     |          |                                                               |                                                              |                 |
| Platform Mount [13' LP 713-1]      | C                 | None           |                                                       | 0.0000                             | 157.00              | No Ice   | 35.63                                                         | 35.63                                                        | 1.64            |
|                                    |                   |                |                                                       |                                    |                     | 1/2" Ice | 38.74                                                         | 38.74                                                        | 2.41            |
|                                    |                   |                |                                                       |                                    |                     | 1" Ice   | 41.99                                                         | 41.99                                                        | 3.28            |
|                                    |                   |                |                                                       |                                    |                     | 2" Ice   | 49.03                                                         | 49.03                                                        | 5.27            |
| 3'x3"x3"x1/4" Horizontal Angle     | A                 | From Leg       | 3.00                                                  | 0.0000                             | 157.00              | No Ice   | 0.90                                                          | 0.07                                                         | 0.01            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1/2" Ice | 1.12                                                          | 0.11                                                         | 0.02            |
|                                    |                   |                | 2.00                                                  |                                    |                     | 1" Ice   | 1.35                                                          | 0.16                                                         | 0.03            |
|                                    |                   |                |                                                       |                                    |                     | 2" Ice   | 1.83                                                          | 0.27                                                         | 0.07            |
| 3'x3"x3"x1/4" Horizontal Angle     | B                 | From Leg       | 3.00                                                  | 0.0000                             | 157.00              | No Ice   | 0.90                                                          | 0.07                                                         | 0.01            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1/2" Ice | 1.12                                                          | 0.11                                                         | 0.02            |
|                                    |                   |                | 2.00                                                  |                                    |                     | 1" Ice   | 1.35                                                          | 0.16                                                         | 0.03            |
|                                    |                   |                |                                                       |                                    |                     | 2" Ice   | 1.83                                                          | 0.27                                                         | 0.07            |
| 3'x3"x3"x1/4" Horizontal Angle     | C                 | From Leg       | 3.00                                                  | 0.0000                             | 157.00              | No Ice   | 0.90                                                          | 0.07                                                         | 0.01            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1/2" Ice | 1.12                                                          | 0.11                                                         | 0.02            |
|                                    |                   |                | 2.00                                                  |                                    |                     | 1" Ice   | 1.35                                                          | 0.16                                                         | 0.03            |
|                                    |                   |                |                                                       |                                    |                     | 2" Ice   | 1.83                                                          | 0.27                                                         | 0.07            |
| 5'x2" Mount Pipe                   | A                 | From Face      | 4.00                                                  | 0.0000                             | 157.00              | No Ice   | 1.19                                                          | 1.19                                                         | 0.02            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1/2" Ice | 1.50                                                          | 1.50                                                         | 0.03            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1" Ice   | 1.81                                                          | 1.81                                                         | 0.04            |
|                                    |                   |                |                                                       |                                    |                     | 2" Ice   | 2.46                                                          | 2.46                                                         | 0.08            |
| 5'x2" Mount Pipe                   | B                 | From Face      | 4.00                                                  | 0.0000                             | 157.00              | No Ice   | 1.19                                                          | 1.19                                                         | 0.02            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1/2" Ice | 1.50                                                          | 1.50                                                         | 0.03            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1" Ice   | 1.81                                                          | 1.81                                                         | 0.04            |
|                                    |                   |                |                                                       |                                    |                     | 2" Ice   | 2.46                                                          | 2.46                                                         | 0.08            |
| 5'x2" Mount Pipe                   | C                 | From Face      | 4.00                                                  | 0.0000                             | 157.00              | No Ice   | 1.19                                                          | 1.19                                                         | 0.02            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1/2" Ice | 1.50                                                          | 1.50                                                         | 0.03            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1" Ice   | 1.81                                                          | 1.81                                                         | 0.04            |
|                                    |                   |                |                                                       |                                    |                     | 2" Ice   | 2.46                                                          | 2.46                                                         | 0.08            |
| AIR6449 B41_T-MOBILE w/ Mount Pipe | A                 | From Face      | 4.00                                                  | 0.0000                             | 157.00              | No Ice   | 5.19                                                          | 2.71                                                         | 0.13            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1/2" Ice | 5.59                                                          | 3.04                                                         | 0.17            |
|                                    |                   |                | 1.00                                                  |                                    |                     | 1" Ice   | 6.02                                                          | 3.38                                                         | 0.23            |
|                                    |                   |                |                                                       |                                    |                     | 2" Ice   | 6.90                                                          | 4.12                                                         | 0.35            |
| AIR6449 B41_T-MOBILE w/ Mount Pipe | B                 | From Face      | 4.00                                                  | 0.0000                             | 157.00              | No Ice   | 5.19                                                          | 2.71                                                         | 0.13            |
|                                    |                   |                | 0.00                                                  |                                    |                     | 1/2" Ice | 5.59                                                          | 3.04                                                         | 0.17            |

| Description                                | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br>ft |                       | C <sub>A</sub> A <sub>A</sub><br>Front<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br>ft <sup>2</sup> | Weight<br>K          |
|--------------------------------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|-----------------|-----------------------|-----------------------------------------------------------|----------------------------------------------------------|----------------------|
|                                            |                   |                | 1.00                                                  |                                |                 | Ice                   | 6.02                                                      | 3.38                                                     | 0.23                 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 6.90                                                      | 4.12                                                     | 0.35                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| AIR6449 B41_T-MOBILE<br>w/ Mount Pipe      | C                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 5.19<br>5.59<br>6.02                                      | 2.71<br>3.04<br>3.38                                     | 0.13<br>0.17<br>0.23 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 6.90                                                      | 4.12                                                     | 0.35                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| VV-65A-R1_TMO w/<br>Mount Pipe             | A                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 4.46<br>4.91<br>5.36                                      | 2.69<br>3.10<br>3.52                                     | 0.05<br>0.10<br>0.15 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 6.32                                                      | 4.41                                                     | 0.28                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| VV-65A-R1_TMO w/<br>Mount Pipe             | B                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 4.46<br>4.91<br>5.36                                      | 2.69<br>3.10<br>3.52                                     | 0.05<br>0.10<br>0.15 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 6.32                                                      | 4.41                                                     | 0.28                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| VV-65A-R1_TMO w/<br>Mount Pipe             | C                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 4.46<br>4.91<br>5.36                                      | 2.69<br>3.10<br>3.52                                     | 0.05<br>0.10<br>0.15 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 6.32                                                      | 4.41                                                     | 0.28                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| APXVAALL24_43-U-<br>NA20_TMO w/ Mount Pipe | A                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 14.69<br>15.46<br>16.23                                   | 6.87<br>7.55<br>8.25                                     | 0.18<br>0.31<br>0.45 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 17.82                                                     | 9.67                                                     | 0.78                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| APXVAALL24_43-U-<br>NA20_TMO w/ Mount Pipe | B                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 14.69<br>15.46<br>16.23                                   | 6.87<br>7.55<br>8.25                                     | 0.18<br>0.31<br>0.45 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 17.82                                                     | 9.67                                                     | 0.78                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| APXVAALL24_43-U-<br>NA20_TMO w/ Mount Pipe | C                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 14.69<br>15.46<br>16.23                                   | 6.87<br>7.55<br>8.25                                     | 0.18<br>0.31<br>0.45 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 17.82                                                     | 9.67                                                     | 0.78                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| RADIO 4460 B2/B25<br>B66_TMO               | A                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 2.14<br>2.32<br>2.51                                      | 1.69<br>1.85<br>2.02                                     | 0.11<br>0.13<br>0.16 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 2.91                                                      | 2.39                                                     | 0.22                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| RADIO 4460 B2/B25<br>B66_TMO               | B                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 2.14<br>2.32<br>2.51                                      | 1.69<br>1.85<br>2.02                                     | 0.11<br>0.13<br>0.16 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 2.91                                                      | 2.39                                                     | 0.22                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| RADIO 4460 B2/B25<br>B66_TMO               | C                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 2.14<br>2.32<br>2.51                                      | 1.69<br>1.85<br>2.02                                     | 0.11<br>0.13<br>0.16 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 2.91                                                      | 2.39                                                     | 0.22                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| Radio 4480_TMOV2                           | A                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 2.88<br>3.09<br>3.31                                      | 1.40<br>1.56<br>1.73                                     | 0.08<br>0.10<br>0.13 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 3.78                                                      | 2.09                                                     | 0.19                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| Radio 4480_TMOV2                           | B                 | From Face      | 4.00<br>0.00<br>1.00                                  | 0.0000                         | 157.00          | No Ice<br>1/2"<br>Ice | 2.88<br>3.09<br>3.31                                      | 1.40<br>1.56<br>1.73                                     | 0.08<br>0.10<br>0.13 |
|                                            |                   |                |                                                       |                                |                 | 1" Ice                | 3.78                                                      | 2.09                                                     | 0.19                 |
|                                            |                   |                |                                                       |                                |                 | 2" Ice                |                                                           |                                                          |                      |
| Radio 4480_TMOV2                           | C                 | From Face      | 4.00<br>0.00                                          | 0.0000                         | 157.00          | No Ice<br>1/2"        | 2.88<br>3.09                                              | 1.40<br>1.56                                             | 0.08<br>0.10         |

| Description                      | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br>ft |        | C <sub>A</sub> A <sub>A</sub><br>Front<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br>ft <sup>2</sup> | Weight<br>K |
|----------------------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|-----------------|--------|-----------------------------------------------------------|----------------------------------------------------------|-------------|
|                                  |                   |                | 1.00                                                  |                                |                 | Ice    | 3.31                                                      | 1.73                                                     | 0.13        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 3.78                                                      | 2.09                                                     | 0.19        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| ****<br>***149***                |                   |                |                                                       |                                |                 |        |                                                           |                                                          |             |
| Platform Mount [13' LP<br>713-1] | C                 | None           |                                                       | 0.0000                         | 149.00          | No Ice | 35.63                                                     | 35.63                                                    | 1.64        |
|                                  |                   |                |                                                       |                                |                 | 1/2"   | 38.74                                                     | 38.74                                                    | 2.41        |
|                                  |                   |                |                                                       |                                |                 | Ice    | 41.99                                                     | 41.99                                                    | 3.28        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 49.03                                                     | 49.03                                                    | 5.27        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| (2) 4'x2" Mount Pipe             | A                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | No Ice | 0.87                                                      | 0.87                                                     | 0.01        |
|                                  |                   |                | 0.00                                                  |                                |                 | 1/2"   | 1.11                                                      | 1.11                                                     | 0.02        |
|                                  |                   |                | 0.00                                                  |                                |                 | Ice    | 1.36                                                      | 1.36                                                     | 0.03        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 1.90                                                      | 1.90                                                     | 0.06        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| (2) 4'x2" Mount Pipe             | B                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | No Ice | 0.87                                                      | 0.87                                                     | 0.01        |
|                                  |                   |                | 0.00                                                  |                                |                 | 1/2"   | 1.11                                                      | 1.11                                                     | 0.02        |
|                                  |                   |                | 0.00                                                  |                                |                 | Ice    | 1.36                                                      | 1.36                                                     | 0.03        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 1.90                                                      | 1.90                                                     | 0.06        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| (2) 4'x2" Mount Pipe             | C                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | No Ice | 0.87                                                      | 0.87                                                     | 0.01        |
|                                  |                   |                | 0.00                                                  |                                |                 | 1/2"   | 1.11                                                      | 1.11                                                     | 0.02        |
|                                  |                   |                | 0.00                                                  |                                |                 | Ice    | 1.36                                                      | 1.36                                                     | 0.03        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 1.90                                                      | 1.90                                                     | 0.06        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| 7770.00 w/ Mount Pipe            | A                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | 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 Face      | 4.00                                                  | 0.0000                         | 149.00          | 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 Face      | 4.00                                                  | 0.0000                         | 149.00          | 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 |                                                           |                                                          |             |
| EPBQ-654L8H6-L2 w/<br>Mount Pipe | A                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | No Ice | 11.09                                                     | 4.69                                                     | 0.11        |
|                                  |                   |                | 0.00                                                  |                                |                 | 1/2"   | 11.77                                                     | 5.28                                                     | 0.19        |
|                                  |                   |                | 2.00                                                  |                                |                 | Ice    | 12.46                                                     | 5.89                                                     | 0.29        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 13.88                                                     | 7.13                                                     | 0.52        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| EPBQ-654L8H6-L2 w/<br>Mount Pipe | B                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | No Ice | 11.09                                                     | 4.69                                                     | 0.11        |
|                                  |                   |                | 0.00                                                  |                                |                 | 1/2"   | 11.77                                                     | 5.28                                                     | 0.19        |
|                                  |                   |                | 2.00                                                  |                                |                 | Ice    | 12.46                                                     | 5.89                                                     | 0.29        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 13.88                                                     | 7.13                                                     | 0.52        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| EPBQ-654L8H6-L2 w/<br>Mount Pipe | C                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | No Ice | 11.09                                                     | 4.69                                                     | 0.11        |
|                                  |                   |                | 0.00                                                  |                                |                 | 1/2"   | 11.77                                                     | 5.28                                                     | 0.19        |
|                                  |                   |                | 2.00                                                  |                                |                 | Ice    | 12.46                                                     | 5.89                                                     | 0.29        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 13.88                                                     | 7.13                                                     | 0.52        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| HPA-65R-BUU-H6 w/<br>Mount Pipe  | A                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | No Ice | 9.22                                                      | 6.25                                                     | 0.07        |
|                                  |                   |                | 0.00                                                  |                                |                 | 1/2"   | 9.98                                                      | 6.96                                                     | 0.14        |
|                                  |                   |                | 2.00                                                  |                                |                 | Ice    | 10.76                                                     | 7.70                                                     | 0.22        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 12.36                                                     | 9.22                                                     | 0.42        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| HPA-65R-BUU-H6 w/<br>Mount Pipe  | B                 | From Face      | 4.00                                                  | 0.0000                         | 149.00          | No Ice | 9.22                                                      | 6.25                                                     | 0.07        |
|                                  |                   |                | 0.00                                                  |                                |                 | 1/2"   | 9.98                                                      | 6.96                                                     | 0.14        |
|                                  |                   |                | 2.00                                                  |                                |                 | Ice    | 10.76                                                     | 7.70                                                     | 0.22        |
|                                  |                   |                |                                                       |                                |                 | 1" Ice | 12.36                                                     | 9.22                                                     | 0.42        |
|                                  |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |

| Description                     | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br>ft |                                           | C <sub>A</sub> A <sub>A</sub><br>Front<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br>ft <sup>2</sup> | Weight<br>K                  |
|---------------------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|-----------------|-------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------|------------------------------|
| HPA-65R-BUU-H6 w/<br>Mount Pipe | C                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 9.22<br>9.98<br>10.76<br>12.36                            | 6.25<br>6.96<br>7.70<br>9.22                             | 0.07<br>0.14<br>0.22<br>0.42 |
| (2) LGP21401                    | A                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.10<br>1.24<br>1.38<br>1.69                              | 0.35<br>0.44<br>0.54<br>0.77                             | 0.01<br>0.02<br>0.03<br>0.05 |
| (2) LGP21401                    | B                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.10<br>1.24<br>1.38<br>1.69                              | 0.35<br>0.44<br>0.54<br>0.77                             | 0.01<br>0.02<br>0.03<br>0.05 |
| (2) LGP21401                    | C                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.10<br>1.24<br>1.38<br>1.69                              | 0.35<br>0.44<br>0.54<br>0.77                             | 0.01<br>0.02<br>0.03<br>0.05 |
| RRUS 11 B12                     | A                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 2.83<br>3.04<br>3.26<br>3.71                              | 1.18<br>1.33<br>1.48<br>1.83                             | 0.05<br>0.07<br>0.10<br>0.15 |
| RRUS 11 B12                     | B                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 2.83<br>3.04<br>3.26<br>3.71                              | 1.18<br>1.33<br>1.48<br>1.83                             | 0.05<br>0.07<br>0.10<br>0.15 |
| RRUS 11 B12                     | C                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 2.83<br>3.04<br>3.26<br>3.71                              | 1.18<br>1.33<br>1.48<br>1.83                             | 0.05<br>0.07<br>0.10<br>0.15 |
| RRUS 32 B30                     | A                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 2.69<br>2.91<br>3.14<br>3.61                              | 1.57<br>1.76<br>1.95<br>2.35                             | 0.06<br>0.08<br>0.10<br>0.16 |
| RRUS 32 B30                     | B                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 2.69<br>2.91<br>3.14<br>3.61                              | 1.57<br>1.76<br>1.95<br>2.35                             | 0.06<br>0.08<br>0.10<br>0.16 |
| RRUS 32 B30                     | C                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 2.69<br>2.91<br>3.14<br>3.61                              | 1.57<br>1.76<br>1.95<br>2.35                             | 0.06<br>0.08<br>0.10<br>0.16 |
| DC6-48-60-18-8F                 | A                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 0.92<br>1.46<br>1.64<br>2.04                              | 0.92<br>1.46<br>1.64<br>2.04                             | 0.02<br>0.04<br>0.06<br>0.11 |
| DC6-48-60-18-8F                 | B                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 0.92<br>1.46<br>1.64<br>2.04                              | 0.92<br>1.46<br>1.64<br>2.04                             | 0.02<br>0.04<br>0.06<br>0.11 |
| DC6-48-60-18-8F                 | C                 | From Face      | 4.00<br>0.00<br>0.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 0.92<br>1.46<br>1.64<br>2.04                              | 0.92<br>1.46<br>1.64<br>2.04                             | 0.02<br>0.04<br>0.06<br>0.11 |

| Description                            | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br>ft |                                           | C <sub>A</sub> A <sub>A</sub><br>Front<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br>ft <sup>2</sup> | Weight<br>K                  |
|----------------------------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|-----------------|-------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------|------------------------------|
| RRUS 4449 B5/B12                       | A                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.97<br>2.14<br>2.33<br>2.72                              | 1.41<br>1.56<br>1.73<br>2.07                             | 0.07<br>0.09<br>0.11<br>0.16 |
| RRUS 4449 B5/B12                       | B                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.97<br>2.14<br>2.33<br>2.72                              | 1.41<br>1.56<br>1.73<br>2.07                             | 0.07<br>0.09<br>0.11<br>0.16 |
| RRUS 4449 B5/B12                       | C                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.97<br>2.14<br>2.33<br>2.72                              | 1.41<br>1.56<br>1.73<br>2.07                             | 0.07<br>0.09<br>0.11<br>0.16 |
| RRUS 8843 B2/B66A                      | A                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.64<br>1.80<br>1.97<br>2.32                              | 1.35<br>1.50<br>1.65<br>1.99                             | 0.07<br>0.09<br>0.11<br>0.16 |
| RRUS 8843 B2/B66A                      | B                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.64<br>1.80<br>1.97<br>2.32                              | 1.35<br>1.50<br>1.65<br>1.99                             | 0.07<br>0.09<br>0.11<br>0.16 |
| RRUS 8843 B2/B66A                      | C                 | From Face      | 4.00<br>0.00<br>2.00                                  | 0.0000                         | 149.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.64<br>1.80<br>1.97<br>2.32                              | 1.35<br>1.50<br>1.65<br>1.99                             | 0.07<br>0.09<br>0.11<br>0.16 |
| ***139***<br>Platform Mount [LP 713-1] | C                 | None           |                                                       | 0.0000                         | 139.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 32.89<br>35.76<br>38.76<br>45.26                          | 32.89<br>35.76<br>38.76<br>45.26                         | 1.51<br>2.23<br>3.03<br>4.86 |
| BSAMNT-SBS-2-2 Side By<br>Side Bracket | A                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 139.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                              | 0.00<br>0.00<br>0.00<br>0.00                             | 0.07<br>0.09<br>0.11<br>0.15 |
| BSAMNT-SBS-2-2 Side By<br>Side Bracket | B                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 139.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                              | 0.00<br>0.00<br>0.00<br>0.00                             | 0.07<br>0.09<br>0.11<br>0.15 |
| BSAMNT-SBS-2-2 Side By<br>Side Bracket | C                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 139.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 0.00<br>0.00<br>0.00<br>0.00                              | 0.00<br>0.00<br>0.00<br>0.00                             | 0.07<br>0.09<br>0.11<br>0.15 |
| (4) 4"x2" Mount Pipe                   | A                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 139.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 0.87<br>1.11<br>1.36<br>1.90                              | 0.87<br>1.11<br>1.36<br>1.90                             | 0.01<br>0.02<br>0.03<br>0.06 |
| (4) 4"x2" Mount Pipe                   | B                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 139.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 0.87<br>1.11<br>1.36<br>1.90                              | 0.87<br>1.11<br>1.36<br>1.90                             | 0.01<br>0.02<br>0.03<br>0.06 |
| (4) 4"x2" Mount Pipe                   | C                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 139.00          | No Ice<br>1/2"<br>Ice<br>1" Ice           | 0.87<br>1.11<br>1.36<br>1.90                              | 0.87<br>1.11<br>1.36<br>1.90                             | 0.01<br>0.02<br>0.03<br>0.06 |

| Description                       | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br>ft |                                           | C <sub>A</sub> A <sub>A</sub><br>Front<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br>ft <sup>2</sup> | Weight<br>K                  |
|-----------------------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|-----------------|-------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------|------------------------------|
| (2) DB846F65ZAXY w/<br>Mount Pipe | A                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 6.10<br>6.80<br>7.51<br>8.98                              | 6.81<br>7.52<br>8.24<br>9.73                             | 0.06<br>0.12<br>0.19<br>0.37 |
| (2) DB846F65ZAXY w/<br>Mount Pipe | B                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 6.10<br>6.80<br>7.51<br>8.98                              | 6.81<br>7.52<br>8.24<br>9.73                             | 0.06<br>0.12<br>0.19<br>0.37 |
| (2) DB846F65ZAXY w/<br>Mount Pipe | C                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 6.10<br>6.80<br>7.51<br>8.98                              | 6.81<br>7.52<br>8.24<br>9.73                             | 0.06<br>0.12<br>0.19<br>0.37 |
| JAHH-65B-R3B w/ Mount<br>Pipe     | A                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 5.50<br>5.97<br>6.45<br>7.44                              | 4.38<br>4.84<br>5.30<br>6.26                             | 0.10<br>0.17<br>0.25<br>0.46 |
| JAHH-65B-R3B w/ Mount<br>Pipe     | B                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 5.50<br>5.97<br>6.45<br>7.44                              | 4.38<br>4.84<br>5.30<br>6.26                             | 0.10<br>0.17<br>0.25<br>0.46 |
| JAHH-65B-R3B w/ Mount<br>Pipe     | C                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 5.50<br>5.97<br>6.45<br>7.44                              | 4.38<br>4.84<br>5.30<br>6.26                             | 0.10<br>0.17<br>0.25<br>0.46 |
| JAHH-65B-R3B                      | A                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 5.29<br>5.75<br>6.22<br>7.20                              | 3.05<br>3.48<br>3.93<br>4.84                             | 0.06<br>0.12<br>0.19<br>0.33 |
| JAHH-65B-R3B                      | B                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 5.29<br>5.75<br>6.22<br>7.20                              | 3.05<br>3.48<br>3.93<br>4.84                             | 0.06<br>0.12<br>0.19<br>0.33 |
| JAHH-65B-R3B                      | C                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 5.29<br>5.75<br>6.22<br>7.20                              | 3.05<br>3.48<br>3.93<br>4.84                             | 0.06<br>0.12<br>0.19<br>0.33 |
| B66A RRH4X45                      | A                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 2.58<br>2.79<br>3.01<br>3.48                              | 1.63<br>1.81<br>2.00<br>2.40                             | 0.06<br>0.08<br>0.10<br>0.16 |
| B66A RRH4X45                      | B                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 2.58<br>2.79<br>3.01<br>3.48                              | 1.63<br>1.81<br>2.00<br>2.40                             | 0.06<br>0.08<br>0.10<br>0.16 |
| B66A RRH4X45                      | C                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 2.58<br>2.79<br>3.01<br>3.48                              | 1.63<br>1.81<br>2.00<br>2.40                             | 0.06<br>0.08<br>0.10<br>0.16 |
| B13 RRH 4X30                      | A                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice | 2.06<br>2.24<br>2.43<br>2.84                              | 1.32<br>1.48<br>1.64<br>2.00                             | 0.06<br>0.07<br>0.09<br>0.14 |

| Description                       | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br>ft |                                                     | C <sub>A</sub> A <sub>A</sub><br>Front<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br>ft <sup>2</sup> | Weight<br>K                  |
|-----------------------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|-----------------|-----------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------|------------------------------|
| B13 RRH 4X30                      | B                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 2.06<br>2.24<br>2.43<br>2.84                              | 1.32<br>1.48<br>1.64<br>2.00                             | 0.06<br>0.07<br>0.09<br>0.14 |
| B13 RRH 4X30                      | C                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 2.06<br>2.24<br>2.43<br>2.84                              | 1.32<br>1.48<br>1.64<br>2.00                             | 0.06<br>0.07<br>0.09<br>0.14 |
| DB-T1-6Z-8AB-0Z                   | C                 | From Face      | 3.00<br>0.00<br>3.00                                  | 0.0000                         | 139.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 4.80<br>5.07<br>5.35<br>5.93                              | 2.00<br>2.19<br>2.39<br>2.81                             | 0.04<br>0.08<br>0.12<br>0.21 |
| ***129***<br>Commscope MC-PK8-DSH | C                 | None           |                                                       | 0.0000                         | 129.00          | No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice           | 34.24<br>62.95<br>91.66<br>149.08                         | 34.24<br>62.95<br>91.66<br>149.08                        | 1.75<br>2.10<br>2.45<br>3.15 |
| (2) 8'x2" Mount Pipe              | A                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.90<br>2.73<br>3.40<br>4.40                              | 1.90<br>2.73<br>3.40<br>4.40                             | 0.03<br>0.04<br>0.06<br>0.12 |
| (2) 8'x2" Mount Pipe              | B                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.90<br>2.73<br>3.40<br>4.40                              | 1.90<br>2.73<br>3.40<br>4.40                             | 0.03<br>0.04<br>0.06<br>0.12 |
| (2) 8'x2" Mount Pipe              | C                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.90<br>2.73<br>3.40<br>4.40                              | 1.90<br>2.73<br>3.40<br>4.40                             | 0.03<br>0.04<br>0.06<br>0.12 |
| MX08FRO665-21 w/<br>Mount Pipe    | A                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 8.01<br>8.52<br>9.04<br>10.11                             | 4.23<br>4.69<br>5.16<br>6.12                             | 0.11<br>0.19<br>0.29<br>0.52 |
| MX08FRO665-21 w/<br>Mount Pipe    | B                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 8.01<br>8.52<br>9.04<br>10.11                             | 4.23<br>4.69<br>5.16<br>6.12                             | 0.11<br>0.19<br>0.29<br>0.52 |
| MX08FRO665-21 w/<br>Mount Pipe    | C                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 8.01<br>8.52<br>9.04<br>10.11                             | 4.23<br>4.69<br>5.16<br>6.12                             | 0.11<br>0.19<br>0.29<br>0.52 |
| TA08025-B604                      | A                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.96<br>2.14<br>2.32<br>2.71                              | 0.98<br>1.11<br>1.25<br>1.55                             | 0.06<br>0.08<br>0.10<br>0.15 |
| TA08025-B604                      | B                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice<br>1" Ice<br>2" Ice | 1.96<br>2.14<br>2.32<br>2.71                              | 0.98<br>1.11<br>1.25<br>1.55                             | 0.06<br>0.08<br>0.10<br>0.15 |
| TA08025-B604                      | C                 | From Face      | 3.00<br>0.00<br>0.00                                  | 0.0000                         | 129.00          | 2" Ice<br>No Ice<br>1/2"<br>Ice                     | 1.96<br>2.14<br>2.32                                      | 0.98<br>1.11<br>1.25                                     | 0.06<br>0.08<br>0.10         |

| Description                           | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br>ft |        | C <sub>A</sub> A <sub>A</sub><br>Front<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br>ft <sup>2</sup> | Weight<br>K |
|---------------------------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|-----------------|--------|-----------------------------------------------------------|----------------------------------------------------------|-------------|
|                                       |                   |                |                                                       |                                |                 | 1" Ice | 2.71                                                      | 1.55                                                     | 0.15        |
|                                       |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| TA08025-B605                          | A                 | From Face      | 3.00                                                  | 0.0000                         | 129.00          | 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 Face      | 3.00                                                  | 0.0000                         | 129.00          | 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 Face      | 3.00                                                  | 0.0000                         | 129.00          | 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 Face      | 3.00                                                  | 0.0000                         | 129.00          | 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 |                                                           |                                                          |             |
| ***116***                             |                   |                |                                                       |                                |                 |        |                                                           |                                                          |             |
| Platform Mount [LP 712-1]             | C                 | None           |                                                       | 0.0000                         | 116.00          | No Ice | 24.56                                                     | 24.56                                                    | 1.34        |
|                                       |                   |                |                                                       |                                |                 | 1/2"   | 27.92                                                     | 27.92                                                    | 1.91        |
|                                       |                   |                |                                                       |                                |                 | Ice    | 31.27                                                     | 31.27                                                    | 2.55        |
|                                       |                   |                |                                                       |                                |                 | 1" Ice | 37.98                                                     | 37.98                                                    | 3.97        |
|                                       |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| Miscellaneous [NA 507-1]              | C                 | None           |                                                       | 0.0000                         | 116.00          | No Ice | 4.56                                                      | 4.56                                                     | 0.25        |
|                                       |                   |                |                                                       |                                |                 | 1/2"   | 6.39                                                      | 6.39                                                     | 0.31        |
|                                       |                   |                |                                                       |                                |                 | Ice    | 8.18                                                      | 8.18                                                     | 0.40        |
|                                       |                   |                |                                                       |                                |                 | 1" Ice | 11.66                                                     | 11.66                                                    | 0.66        |
|                                       |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| 6'x2" Mount Pipe                      | A                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | 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 Face      | 3.00                                                  | 0.0000                         | 116.00          | 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 Face      | 3.00                                                  | 0.0000                         | 116.00          | 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 |                                                           |                                                          |             |
| APXVAARR24_43-U-NA20<br>w/ Mount Pipe | A                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 14.69                                                     | 6.87                                                     | 0.19        |
|                                       |                   |                | 0.00                                                  |                                |                 | 1/2"   | 15.46                                                     | 7.55                                                     | 0.31        |
|                                       |                   |                | 2.00                                                  |                                |                 | Ice    | 16.23                                                     | 8.25                                                     | 0.46        |
|                                       |                   |                |                                                       |                                |                 | 1" Ice | 17.82                                                     | 9.67                                                     | 0.79        |
|                                       |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| APXVAARR24_43-U-NA20<br>w/ Mount Pipe | B                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 14.69                                                     | 6.87                                                     | 0.19        |
|                                       |                   |                | 0.00                                                  |                                |                 | 1/2"   | 15.46                                                     | 7.55                                                     | 0.31        |
|                                       |                   |                | 2.00                                                  |                                |                 | Ice    | 16.23                                                     | 8.25                                                     | 0.46        |
|                                       |                   |                |                                                       |                                |                 | 1" Ice | 17.82                                                     | 9.67                                                     | 0.79        |
|                                       |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| APXVAARR24_43-U-NA20<br>w/ Mount Pipe | C                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 14.69                                                     | 6.87                                                     | 0.19        |
|                                       |                   |                | 0.00                                                  |                                |                 | 1/2"   | 15.46                                                     | 7.55                                                     | 0.31        |
|                                       |                   |                | 2.00                                                  |                                |                 | Ice    | 16.23                                                     | 8.25                                                     | 0.46        |
|                                       |                   |                |                                                       |                                |                 | 1" Ice | 17.82                                                     | 9.67                                                     | 0.79        |
|                                       |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| AIR 32 B2A/B66AA w/<br>Mount Pipe     | A                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 3.76                                                      | 3.15                                                     | 0.19        |
|                                       |                   |                | 0.00                                                  |                                |                 | 1/2"   | 4.12                                                      | 3.49                                                     | 0.25        |

| Description                                 | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br>ft |        | C <sub>A</sub> A <sub>A</sub><br>Front<br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br>ft <sup>2</sup> | Weight<br>K |
|---------------------------------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|-----------------|--------|-----------------------------------------------------------|----------------------------------------------------------|-------------|
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 4.48                                                      | 3.84                                                     | 0.32        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 5.24                                                      | 4.58                                                     | 0.48        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| AIR 32 B2A/B66AA w/<br>Mount Pipe           | B                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 3.76                                                      | 3.15                                                     | 0.19        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 4.12                                                      | 3.49                                                     | 0.25        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 4.48                                                      | 3.84                                                     | 0.32        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 5.24                                                      | 4.58                                                     | 0.48        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| AIR 32 B2A/B66AA w/<br>Mount Pipe           | C                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 3.76                                                      | 3.15                                                     | 0.19        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 4.12                                                      | 3.49                                                     | 0.25        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 4.48                                                      | 3.84                                                     | 0.32        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 5.24                                                      | 4.58                                                     | 0.48        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| ERICSSON AIR 21 B2A<br>B4P w/ Mount Pipe    | A                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 3.14                                                      | 2.59                                                     | 0.11        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 3.45                                                      | 2.88                                                     | 0.16        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 3.77                                                      | 3.19                                                     | 0.23        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 4.43                                                      | 3.84                                                     | 0.38        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| ERICSSON AIR 21 B2A<br>B4P w/ Mount Pipe    | B                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 3.14                                                      | 2.59                                                     | 0.11        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 3.45                                                      | 2.88                                                     | 0.16        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 3.77                                                      | 3.19                                                     | 0.23        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 4.43                                                      | 3.84                                                     | 0.38        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| ERICSSON AIR 21 B2A<br>B4P w/ Mount Pipe    | C                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 3.14                                                      | 2.59                                                     | 0.11        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 3.45                                                      | 2.88                                                     | 0.16        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 3.77                                                      | 3.19                                                     | 0.23        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 4.43                                                      | 3.84                                                     | 0.38        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| RADIO 4449 B12/B71                          | A                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 1.65                                                      | 1.30                                                     | 0.08        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 1.81                                                      | 1.44                                                     | 0.09        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 1.98                                                      | 1.60                                                     | 0.11        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 2.34                                                      | 1.92                                                     | 0.16        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| RADIO 4449 B12/B71                          | B                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 1.65                                                      | 1.30                                                     | 0.08        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 1.81                                                      | 1.44                                                     | 0.09        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 1.98                                                      | 1.60                                                     | 0.11        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 2.34                                                      | 1.92                                                     | 0.16        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| RADIO 4449 B12/B71                          | C                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 1.65                                                      | 1.30                                                     | 0.08        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 1.81                                                      | 1.44                                                     | 0.09        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 1.98                                                      | 1.60                                                     | 0.11        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 2.34                                                      | 1.92                                                     | 0.16        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| KRY 112 144/1                               | A                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 0.35                                                      | 0.17                                                     | 0.01        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 0.43                                                      | 0.23                                                     | 0.01        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 0.51                                                      | 0.30                                                     | 0.02        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 0.70                                                      | 0.46                                                     | 0.03        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| KRY 112 144/1                               | B                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 0.35                                                      | 0.17                                                     | 0.01        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 0.43                                                      | 0.23                                                     | 0.01        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 0.51                                                      | 0.30                                                     | 0.02        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 0.70                                                      | 0.46                                                     | 0.03        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| KRY 112 144/1                               | C                 | From Face      | 3.00                                                  | 0.0000                         | 116.00          | No Ice | 0.35                                                      | 0.17                                                     | 0.01        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 0.43                                                      | 0.23                                                     | 0.01        |
|                                             |                   |                | 2.00                                                  |                                |                 | Ice    | 0.51                                                      | 0.30                                                     | 0.02        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 0.70                                                      | 0.46                                                     | 0.03        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| ***84***<br>Side Arm Mount [4' SO<br>702-1] | C                 | From Face      | 1.50                                                  | 0.0000                         | 84.00           | No Ice | 0.41                                                      | 0.99                                                     | 0.02        |
|                                             |                   |                | 0.00                                                  |                                |                 | 1/2"   | 0.49                                                      | 1.38                                                     | 0.03        |
|                                             |                   |                | 0.00                                                  |                                |                 | Ice    | 0.59                                                      | 1.69                                                     | 0.04        |
|                                             |                   |                |                                                       |                                |                 | 1" Ice | 0.83                                                      | 2.37                                                     | 0.08        |
|                                             |                   |                |                                                       |                                |                 | 2" Ice |                                                           |                                                          |             |
| GPS_A                                       | C                 | From Face      | 3.00                                                  | 0.0000                         | 84.00           | No Ice | 0.26                                                      | 0.26                                                     | 0.00        |

| Description           | Face<br>or<br>Leg | Offset<br>Type | Offsets:<br>Horz<br>Lateral<br>Vert<br>ft<br>ft<br>ft | Azimuth<br>Adjustmen<br>t<br>° | Placement<br><br>ft | C <sub>A</sub> A <sub>A</sub><br>Front<br><br>ft <sup>2</sup> | C <sub>A</sub> A <sub>A</sub><br>Side<br><br>ft <sup>2</sup> | Weight<br><br>K |
|-----------------------|-------------------|----------------|-------------------------------------------------------|--------------------------------|---------------------|---------------------------------------------------------------|--------------------------------------------------------------|-----------------|
|                       |                   |                | 0.00                                                  |                                |                     | 1/2"                                                          | 0.32                                                         | 0.00            |
|                       |                   |                | 0.00                                                  |                                |                     | Ice                                                           | 0.39                                                         | 0.01            |
|                       |                   |                |                                                       |                                |                     | 1" Ice                                                        | 0.56                                                         | 0.02            |
|                       |                   |                |                                                       |                                |                     | 2" Ice                                                        |                                                              |                 |
| ***40***              |                   |                |                                                       |                                |                     |                                                               |                                                              |                 |
| Pipe Mount [PM 601-1] | A                 | From Face      | 1.00                                                  | 0.0000                         | 40.00               | No Ice                                                        | 1.32                                                         | 0.07            |
|                       |                   |                | 0.00                                                  |                                |                     | 1/2"                                                          | 1.58                                                         | 0.08            |
|                       |                   |                | 0.00                                                  |                                |                     | Ice                                                           | 1.84                                                         | 0.09            |
|                       |                   |                |                                                       |                                |                     | 1" Ice                                                        | 2.40                                                         | 0.13            |
|                       |                   |                |                                                       |                                |                     | 2" Ice                                                        |                                                              |                 |
| GPS-QBW-20N           | A                 | From Face      | 1.00                                                  | 0.0000                         | 40.00               | No Ice                                                        | 0.13                                                         | 0.00            |
|                       |                   |                | 0.00                                                  |                                |                     | 1/2"                                                          | 0.18                                                         | 0.00            |
|                       |                   |                | 0.00                                                  |                                |                     | Ice                                                           | 0.23                                                         | 0.00            |
|                       |                   |                |                                                       |                                |                     | 1" Ice                                                        | 0.37                                                         | 0.01            |
|                       |                   |                |                                                       |                                |                     | 2" Ice                                                        |                                                              |                 |
| ***                   |                   |                |                                                       |                                |                     |                                                               |                                                              |                 |

## Load Combinations

| Comb.<br>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                  |

| Comb. No. | Description                 |
|-----------|-----------------------------|
| 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          | 160 - 155    | Pole           | Max Tension      | 2               | 0.00    | -0.00                    | -0.00                    |
|             |              |                | Max. Compression | 26              | -10.21  | 0.00                     | -0.02                    |
|             |              |                | Max. Mx          | 20              | -3.92   | 12.20                    | -0.00                    |
|             |              |                | Max. My          | 14              | -3.92   | -0.00                    | -12.20                   |
|             |              |                | Max. Vy          | 20              | -4.78   | 12.20                    | -0.00                    |
|             |              |                | Max. Vx          | 14              | 4.78    | -0.00                    | -12.20                   |
|             |              |                | Max. Torque      | 10              |         |                          | 0.00                     |
| L2          | 155 - 150    | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |              |                | Max. Compression | 26              | -10.83  | 0.00                     | -0.03                    |
|             |              |                | Max. Mx          | 20              | -4.27   | 37.05                    | -0.00                    |
|             |              |                | Max. My          | 14              | -4.27   | -0.00                    | -37.07                   |
|             |              |                | Max. Vy          | 20              | -5.17   | 37.05                    | -0.00                    |
|             |              |                | Max. Vx          | 14              | 5.17    | -0.00                    | -37.07                   |
|             |              |                | Max. Torque      | 10              |         |                          | 0.00                     |
| L3          | 150 - 145    | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |              |                | Max. Compression | 26              | -21.58  | 0.00                     | -0.05                    |
|             |              |                | Max. Mx          | 20              | -8.13   | 88.66                    | -0.01                    |
|             |              |                | Max. My          | 14              | -8.13   | -0.00                    | -88.69                   |
|             |              |                | Max. Vy          | 20              | -10.51  | 88.66                    | -0.01                    |
|             |              |                | Max. Vx          | 14              | 10.51   | -0.00                    | -88.69                   |
|             |              |                | Max. Torque      | 10              |         |                          | 0.00                     |
| L4          | 145 - 140    | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |              |                | Max. Compression | 26              | -22.31  | 0.00                     | -0.07                    |
|             |              |                | Max. Mx          | 20              | -8.59   | 142.23                   | -0.01                    |
|             |              |                | Max. My          | 14              | -8.58   | -0.00                    | -142.28                  |
|             |              |                | Max. Vy          | 20              | -10.93  | 142.23                   | -0.01                    |
|             |              |                | Max. Vx          | 14              | 10.93   | -0.00                    | -142.28                  |
|             |              |                | Max. Torque      | 10              |         |                          | 0.00                     |
| L5          | 140 - 135    | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |              |                | Max. Compression | 26              | -32.97  | 0.00                     | -0.78                    |
|             |              |                | Max. Mx          | 20              | -12.39  | 223.48                   | -0.18                    |
|             |              |                | Max. My          | 14              | -12.37  | -0.00                    | -224.36                  |
|             |              |                | Max. Vy          | 20              | -15.86  | 223.48                   | -0.18                    |
|             |              |                | Max. Vx          | 14              | 15.95   | -0.00                    | -224.36                  |
|             |              |                | Max. Torque      | 20              |         |                          | 0.27                     |
| L6          | 135 - 130    | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |              |                | Max. Compression | 26              | -33.86  | 0.00                     | -0.80                    |
|             |              |                | Max. Mx          | 20              | -13.02  | 303.81                   | -0.18                    |
|             |              |                | Max. My          | 14              | -13.01  | -0.00                    | -305.15                  |
|             |              |                | Max. Vy          | 20              | -16.29  | 303.81                   | -0.18                    |
|             |              |                | Max. Vx          | 14              | 16.38   | -0.00                    | -305.15                  |
|             |              |                | Max. Torque      | 20              |         |                          | 0.27                     |
| L7          | 130 - 125    | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |              |                | Max. Compression | 26              | -40.70  | 0.31                     | -0.64                    |
|             |              |                | Max. Mx          | 20              | -16.67  | 397.88                   | -0.09                    |
|             |              |                | Max. My          | 14              | -16.66  | 0.02                     | -399.50                  |
|             |              |                | Max. Vy          | 20              | -19.59  | 397.88                   | -0.09                    |
|             |              |                | Max. Vx          | 14              | 19.67   | 0.02                     | -399.50                  |
|             |              |                | Max. Torque      | 20              |         |                          | 0.27                     |
| L8          | 125 - 120    | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |

| Section No. | Elevation ft  | Component Type | Condition        | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|---------------|----------------|------------------|-----------------|---------|--------------------------|--------------------------|
| L9          | 120 - 111.333 | Pole           | Max. Compression | 26              | -41.66  | 0.31                     | -0.66                    |
|             |               |                | Max. Mx          | 20              | -17.40  | 496.85                   | -0.04                    |
|             |               |                | Max. My          | 14              | -17.39  | -0.03                    | -498.88                  |
|             |               |                | Max. Vy          | 20              | -20.02  | 496.85                   | -0.04                    |
|             |               |                | Max. Vx          | 14              | 20.10   | -0.03                    | -498.88                  |
|             |               |                | Max. Torque      | 10              |         |                          | -0.25                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L10         | 111.333 - 111 | Pole           | Max. Compression | 26              | -42.50  | 0.31                     | -0.68                    |
|             |               |                | Max. Mx          | 20              | -18.04  | 577.56                   | 0.01                     |
|             |               |                | Max. My          | 14              | -18.02  | -0.08                    | -579.91                  |
|             |               |                | Max. Vy          | 20              | -20.36  | 577.56                   | 0.01                     |
|             |               |                | Max. Vx          | 14              | 20.44   | -0.08                    | -579.91                  |
|             |               |                | Max. Torque      | 10              |         |                          | -0.25                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L11         | 111 - 106     | Pole           | Max. Compression | 26              | -53.40  | 0.31                     | -0.70                    |
|             |               |                | Max. Mx          | 20              | -23.26  | 700.31                   | 0.06                     |
|             |               |                | Max. My          | 14              | -23.24  | -0.14                    | -703.07                  |
|             |               |                | Max. Vy          | 20              | -24.14  | 700.31                   | 0.06                     |
|             |               |                | Max. Vx          | 14              | 24.22   | -0.14                    | -703.07                  |
|             |               |                | Max. Torque      | 10              |         |                          | -0.25                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L12         | 106 - 101     | Pole           | Max. Compression | 26              | -54.70  | 0.31                     | -0.73                    |
|             |               |                | Max. Mx          | 20              | -24.31  | 822.07                   | 0.12                     |
|             |               |                | Max. My          | 14              | -24.30  | -0.20                    | -825.24                  |
|             |               |                | Max. Vy          | 20              | -24.59  | 822.07                   | 0.12                     |
|             |               |                | Max. Vx          | 14              | 24.67   | -0.20                    | -825.24                  |
|             |               |                | Max. Torque      | 10              |         |                          | -0.25                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L13         | 101 - 96      | Pole           | Max. Compression | 26              | -56.04  | 0.31                     | -0.75                    |
|             |               |                | Max. Mx          | 20              | -25.40  | 946.06                   | 0.18                     |
|             |               |                | Max. My          | 14              | -25.39  | -0.26                    | -949.64                  |
|             |               |                | Max. Vy          | 20              | -25.03  | 946.06                   | 0.18                     |
|             |               |                | Max. Vx          | 14              | 25.11   | -0.26                    | -949.64                  |
|             |               |                | Max. Torque      | 10              |         |                          | -0.25                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L14         | 96 - 91       | Pole           | Max. Compression | 26              | -57.42  | 0.31                     | -0.77                    |
|             |               |                | Max. Mx          | 20              | -26.53  | 1072.27                  | 0.23                     |
|             |               |                | Max. My          | 14              | -26.52  | -0.32                    | -1076.26                 |
|             |               |                | Max. Vy          | 20              | -25.48  | 1072.27                  | 0.23                     |
|             |               |                | Max. Vx          | 14              | 25.56   | -0.32                    | -1076.26                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.25                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L15         | 91 - 86       | Pole           | Max. Compression | 26              | -58.83  | 0.31                     | -0.80                    |
|             |               |                | Max. Mx          | 20              | -27.69  | 1200.71                  | 0.29                     |
|             |               |                | Max. My          | 14              | -27.68  | -0.37                    | -1205.11                 |
|             |               |                | Max. Vy          | 20              | -25.92  | 1200.71                  | 0.29                     |
|             |               |                | Max. Vx          | 14              | 26.01   | -0.37                    | -1205.11                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.25                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L16         | 86 - 85.75    | Pole           | Max. Compression | 26              | -60.36  | 0.31                     | -0.82                    |
|             |               |                | Max. Mx          | 20              | -28.88  | 1331.38                  | 0.34                     |
|             |               |                | Max. My          | 14              | -28.87  | -0.43                    | -1336.18                 |
|             |               |                | Max. Vy          | 20              | -26.37  | 1331.38                  | 0.34                     |
|             |               |                | Max. Vx          | 14              | 26.45   | -0.43                    | -1336.18                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.24                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L17         | 85.75 - 81    | Pole           | Max. Compression | 26              | -60.46  | 0.31                     | -0.82                    |
|             |               |                | Max. Mx          | 20              | -28.97  | 1337.97                  | 0.35                     |
|             |               |                | Max. My          | 14              | -28.96  | -0.44                    | -1342.79                 |
|             |               |                | Max. Vy          | 20              | -26.39  | 1337.97                  | 0.35                     |
|             |               |                | Max. Vx          | 14              | 26.47   | -0.44                    | -1342.79                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.24                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -62.50  | 0.31                     | -1.11                    |
|             |               |                | Max. Mx          | 20              | -30.49  | 1464.56                  | 0.34                     |
|             |               |                | Max. My          | 14              | -30.48  | -0.49                    | -1469.78                 |
|             |               |                | Max. Vy          | 20              | -26.92  | 1464.56                  | 0.34                     |

| Section No. | Elevation ft  | Component Type | Condition        | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|---------------|----------------|------------------|-----------------|---------|--------------------------|--------------------------|
| L18         | 81 - 80.75    | Pole           | Max. Vx          | 14              | 26.98   | -0.49                    | -1469.78                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -62.60  | 0.31                     | -1.11                    |
|             |               |                | Max. Mx          | 20              | -30.57  | 1471.29                  | 0.34                     |
|             |               |                | Max. My          | 14              | -30.56  | -0.49                    | -1476.52                 |
|             |               |                | Max. Vy          | 20              | -26.94  | 1471.29                  | 0.34                     |
| L19         | 80.75 - 80.5  | Pole           | Max. Vx          | 14              | 27.00   | -0.49                    | -1476.52                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -62.70  | 0.31                     | -1.11                    |
|             |               |                | Max. Mx          | 20              | -30.64  | 1478.02                  | 0.34                     |
|             |               |                | Max. My          | 14              | -30.63  | -0.50                    | -1483.27                 |
|             |               |                | Max. Vy          | 20              | -26.97  | 1478.02                  | 0.34                     |
| L20         | 80.5 - 73.25  | Pole           | Max. Vx          | 14              | 27.03   | -0.50                    | -1483.27                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -63.21  | 0.31                     | -1.12                    |
|             |               |                | Max. Mx          | 20              | -31.02  | 1518.55                  | 0.36                     |
|             |               |                | Max. My          | 14              | -31.01  | -0.52                    | -1523.89                 |
|             |               |                | Max. Vy          | 20              | -27.11  | 1518.55                  | 0.36                     |
| L21         | 73.25 - 72.25 | Pole           | Max. Vx          | 14              | 27.17   | -0.52                    | -1523.89                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -67.11  | 0.31                     | -1.15                    |
|             |               |                | Max. Mx          | 20              | -33.96  | 1704.02                  | 0.44                     |
|             |               |                | Max. My          | 14              | -33.96  | -0.59                    | -1709.78                 |
|             |               |                | Max. Vy          | 20              | -27.86  | 1704.02                  | 0.44                     |
| L22         | 72.25 - 67.25 | Pole           | Max. Vx          | 14              | 27.92   | -0.59                    | -1709.78                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -68.83  | 0.31                     | -1.18                    |
|             |               |                | Max. Mx          | 20              | -35.40  | 1844.36                  | 0.49                     |
|             |               |                | Max. My          | 14              | -35.40  | -0.65                    | -1850.42                 |
|             |               |                | Max. Vy          | 20              | -28.31  | 1844.36                  | 0.49                     |
| L23         | 67.25 - 62.25 | Pole           | Max. Vx          | 14              | 28.37   | -0.65                    | -1850.42                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -70.59  | 0.31                     | -1.21                    |
|             |               |                | Max. Mx          | 20              | -36.88  | 1986.93                  | 0.55                     |
|             |               |                | Max. My          | 14              | -36.87  | -0.71                    | -1993.30                 |
|             |               |                | Max. Vy          | 20              | -28.75  | 1986.93                  | 0.55                     |
| L24         | 62.25 - 57.25 | Pole           | Max. Vx          | 14              | 28.81   | -0.71                    | -1993.30                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -72.38  | 0.31                     | -1.24                    |
|             |               |                | Max. Mx          | 20              | -38.39  | 2131.71                  | 0.60                     |
|             |               |                | Max. My          | 14              | -38.38  | -0.77                    | -2138.38                 |
|             |               |                | Max. Vy          | 20              | -29.19  | 2131.71                  | 0.60                     |
| L25         | 57.25 - 52.25 | Pole           | Max. Vx          | 14              | 29.25   | -0.77                    | -2138.38                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -74.23  | 0.31                     | -1.27                    |
|             |               |                | Max. Mx          | 20              | -39.94  | 2278.67                  | 0.66                     |
|             |               |                | Max. My          | 14              | -39.93  | -0.83                    | -2285.64                 |
|             |               |                | Max. Vy          | 20              | -29.63  | 2278.67                  | 0.66                     |
| L26         | 52.25 - 49.83 | Pole           | Max. Vx          | 14              | 29.69   | -0.83                    | -2285.64                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -75.38  | 0.31                     | -1.28                    |
|             |               |                | Max. Mx          | 20              | -40.87  | 2350.58                  | 0.69                     |
|             |               |                | Max. My          | 14              | -40.87  | -0.86                    | -2357.70                 |
|             |               |                | Max. Vy          | 20              | -29.84  | 2350.58                  | 0.69                     |

| Section No. | Elevation ft      | Component Type | Condition        | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|-------------------|----------------|------------------|-----------------|---------|--------------------------|--------------------------|
| L27         | 49.83 - 49.58     | Pole           | Max. Vx          | 14              | 29.90   | -0.86                    | -2357.70                 |
|             |                   |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |                   |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |                   |                | Max. Compression | 26              | -75.50  | 0.31                     | -1.28                    |
|             |                   |                | Max. Mx          | 20              | -40.98  | 2358.04                  | 0.69                     |
| L28         | 49.58 - 44.58     | Pole           | Max. My          | 14              | -40.98  | -0.86                    | -2365.17                 |
|             |                   |                | Max. Vy          | 20              | -29.85  | 2358.04                  | 0.69                     |
|             |                   |                | Max. Vx          | 14              | 29.91   | -0.86                    | -2365.17                 |
|             |                   |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |                   |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L29         | 44.58 - 36.3333   | Pole           | Max. Compression | 26              | -77.91  | 0.31                     | -1.31                    |
|             |                   |                | Max. Mx          | 20              | -42.93  | 2508.33                  | 0.75                     |
|             |                   |                | Max. My          | 14              | -42.93  | -0.92                    | -2515.76                 |
|             |                   |                | Max. Vy          | 20              | -30.29  | 2508.33                  | 0.75                     |
|             |                   |                | Max. Vx          | 14              | 30.35   | -0.92                    | -2515.76                 |
| L30         | 36.3333 - 35.3333 | Pole           | Max. Torque      | 10              |         |                          | -0.36                    |
|             |                   |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |                   |                | Max. Compression | 26              | -78.68  | 0.31                     | -1.32                    |
|             |                   |                | Max. Mx          | 20              | -43.55  | 2556.26                  | 0.76                     |
|             |                   |                | Max. My          | 14              | -43.55  | -0.94                    | -2563.78                 |
| L31         | 35.3333 - 32.25   | Pole           | Max. Vy          | 20              | -30.43  | 2556.26                  | 0.76                     |
|             |                   |                | Max. Vx          | 14              | 30.49   | -0.94                    | -2563.78                 |
|             |                   |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |                   |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |                   |                | Max. Compression | 26              | -84.89  | 0.63                     | -1.18                    |
| L32         | 32.25 - 32        | Pole           | Max. Mx          | 20              | -48.43  | 2792.85                  | 0.96                     |
|             |                   |                | Max. My          | 14              | -48.43  | -0.83                    | -2800.51                 |
|             |                   |                | Max. Vy          | 20              | -31.25  | 2792.85                  | 0.96                     |
|             |                   |                | Max. Vx          | 14              | 31.31   | -0.83                    | -2800.51                 |
|             |                   |                | Max. Torque      | 10              |         |                          | -0.36                    |
| L33         | 32 - 27           | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |                   |                | Max. Compression | 26              | -86.46  | 0.63                     | -1.19                    |
|             |                   |                | Max. Mx          | 20              | -49.73  | 2889.50                  | 1.00                     |
|             |                   |                | Max. My          | 14              | -49.73  | -0.86                    | -2897.34                 |
|             |                   |                | Max. Vy          | 20              | -31.48  | 2889.50                  | 1.00                     |
| L34         | 27 - 22           | Pole           | Max. Vx          | 14              | 31.54   | -0.86                    | -2897.34                 |
|             |                   |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |                   |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |                   |                | Max. Compression | 26              | -86.59  | 0.63                     | -1.20                    |
|             |                   |                | Max. Mx          | 20              | -49.85  | 2897.37                  | 1.00                     |
| L35         | 22 - 17           | Pole           | Max. My          | 14              | -49.85  | -0.87                    | -2905.23                 |
|             |                   |                | Max. Vy          | 20              | -31.49  | 2897.37                  | 1.00                     |
|             |                   |                | Max. Vx          | 14              | 31.55   | -0.87                    | -2905.23                 |
|             |                   |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |                   |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L36         | 17 - 12           | Pole           | Max. Compression | 26              | -89.19  | 0.63                     | -1.22                    |
|             |                   |                | Max. Mx          | 20              | -52.00  | 3055.69                  | 1.06                     |
|             |                   |                | Max. My          | 14              | -51.99  | -0.92                    | -3063.85                 |
|             |                   |                | Max. Vy          | 20              | -31.87  | 3055.69                  | 1.06                     |
|             |                   |                | Max. Vx          | 14              | 31.92   | -0.92                    | -3063.85                 |
| L37         | 12 - 7            | Pole           | Max. Torque      | 10              |         |                          | -0.36                    |
|             |                   |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |                   |                | Max. Compression | 26              | -91.82  | 0.63                     | -1.25                    |
|             |                   |                | Max. Mx          | 20              | -54.19  | 3215.84                  | 1.11                     |
|             |                   |                | Max. My          | 14              | -54.19  | -0.98                    | -3224.29                 |
| L38         | 7 - 2             | Pole           | Max. Vy          | 20              | -32.23  | 3215.84                  | 1.11                     |
|             |                   |                | Max. Vx          | 14              | 32.29   | -0.98                    | -3224.29                 |
|             |                   |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |                   |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |                   |                | Max. Compression | 26              | -94.48  | 0.63                     | -1.28                    |
| L39         | 2 - 0             | Pole           | Max. Mx          | 20              | -56.41  | 3377.83                  | 1.17                     |
|             |                   |                | Max. My          | 14              | -56.41  | -1.04                    | -3386.57                 |
|             |                   |                | Max. Vy          | 20              | -32.60  | 3377.83                  | 1.17                     |
|             |                   |                | Max. Vx          | 14              | 32.66   | -1.04                    | -3386.57                 |
|             |                   |                | Max. Torque      | 10              |         |                          | -0.36                    |

| Section No. | Elevation ft  | Component Type | Condition        | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|---------------|----------------|------------------|-----------------|---------|--------------------------|--------------------------|
| L36         | 17 - 15.5     | Pole           | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -95.36  | 0.63                     | -1.29                    |
|             |               |                | Max. Mx          | 20              | -57.13  | 3426.79                  | 1.18                     |
|             |               |                | Max. My          | 14              | -57.13  | -1.06                    | -3435.62                 |
|             |               |                | Max. Vy          | 20              | -32.72  | 3426.79                  | 1.18                     |
| L37         | 15.5 - 15.25  | Pole           | Max. Vx          | 14              | 32.78   | -1.06                    | -3435.62                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -95.50  | 0.63                     | -1.29                    |
|             |               |                | Max. Mx          | 20              | -57.26  | 3434.97                  | 1.19                     |
|             |               |                | Max. My          | 14              | -57.26  | -1.06                    | -3443.81                 |
| L38         | 15.25 - 14.75 | Pole           | Max. Vy          | 20              | -32.72  | 3434.97                  | 1.19                     |
|             |               |                | Max. Vx          | 14              | 32.78   | -1.06                    | -3443.81                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -95.80  | 0.63                     | -1.29                    |
|             |               |                | Max. Mx          | 20              | -57.50  | 3451.33                  | 1.19                     |
| L39         | 14.75 - 14.5  | Pole           | Max. My          | 14              | -57.50  | -1.06                    | -3460.20                 |
|             |               |                | Max. Vy          | 20              | -32.76  | 3451.33                  | 1.19                     |
|             |               |                | Max. Vx          | 14              | 32.82   | -1.06                    | -3460.20                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -95.95  | 0.63                     | -1.29                    |
| L40         | 14.5 - 9.5    | Pole           | Max. Mx          | 20              | -57.63  | 3459.52                  | 1.19                     |
|             |               |                | Max. My          | 14              | -57.63  | -1.07                    | -3468.41                 |
|             |               |                | Max. Vy          | 20              | -32.78  | 3459.52                  | 1.19                     |
|             |               |                | Max. Vx          | 14              | 32.84   | -1.07                    | -3468.41                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
| L41         | 9.5 - 4.5     | Pole           | Max. Compression | 26              | -98.65  | 0.63                     | -1.32                    |
|             |               |                | Max. Mx          | 20              | -59.88  | 3624.29                  | 1.25                     |
|             |               |                | Max. My          | 14              | -59.88  | -1.12                    | -3633.47                 |
|             |               |                | Max. Vy          | 20              | -33.16  | 3624.29                  | 1.25                     |
|             |               |                | Max. Vx          | 14              | 33.22   | -1.12                    | -3633.47                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
| L42         | 4.5 - 0       | Pole           | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -101.14 | 0.63                     | -1.32                    |
|             |               |                | Max. Mx          | 20              | -62.01  | 3790.93                  | 1.30                     |
|             |               |                | Max. My          | 14              | -62.01  | -1.18                    | -3800.39                 |
|             |               |                | Max. Vy          | 20              | -33.53  | 3790.93                  | 1.30                     |
|             |               |                | Max. Vx          | 14              | 33.59   | -1.18                    | -3800.39                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |
|             |               |                | Max Tension      | 1               | 0.00    | 0.00                     | 0.00                     |
|             |               |                | Max. Compression | 26              | -103.28 | 0.63                     | -1.32                    |
|             |               |                | Max. Mx          | 20              | -63.89  | 3942.50                  | 1.36                     |
|             |               |                | Max. My          | 14              | -63.89  | -1.23                    | -3952.21                 |
|             |               |                | Max. Vy          | 20              | -33.88  | 3942.50                  | 1.36                     |
|             |               |                | Max. Vx          | 14              | 33.93   | -1.23                    | -3952.21                 |
|             |               |                | Max. Torque      | 10              |         |                          | -0.36                    |

## Maximum Reactions

| Location | Condition           | Gov. Load Comb. | Vertical K | Horizontal, X K | Horizontal, Z K |
|----------|---------------------|-----------------|------------|-----------------|-----------------|
| Pole     | Max. Vert           | 26              | 103.28     | 0.00            | 0.00            |
|          | Max. H <sub>x</sub> | 20              | 63.90      | 33.85           | 0.01            |
|          | Max. H <sub>z</sub> | 2               | 63.90      | 0.01            | 33.91           |
|          | Max. M <sub>x</sub> | 2               | 3951.85    | 0.01            | 33.91           |
|          | Max. M <sub>z</sub> | 8               | 3941.89    | -33.85          | -0.01           |
|          | Max. Torsion        | 22              | 0.34       | 29.32           | 16.96           |
|          | Min. Vert           | 7               | 47.93      | -29.31          | 16.94           |
|          | Min. H <sub>x</sub> | 8               | 63.90      | -33.85          | -0.01           |

| Location | Condition           | Gov.<br>Load<br>Comb. | Vertical<br>K | Horizontal, X<br>K | Horizontal, Z<br>K |
|----------|---------------------|-----------------------|---------------|--------------------|--------------------|
|          | Min. H <sub>z</sub> | 14                    | 63.90         | -0.01              | -33.91             |
|          | Min. M <sub>x</sub> | 14                    | -3952.21      | -0.01              | -33.91             |
|          | Min. M <sub>z</sub> | 20                    | -3942.50      | 33.85              | 0.01               |
|          | Min. Torsion        | 10                    | -0.36         | -29.32             | -16.96             |

## Tower Mast Reaction Summary

| Load<br>Combination                          | Vertical<br>K | Shear <sub>x</sub><br>K | Shear <sub>z</sub><br>K | Overturning<br>Moment, M <sub>x</sub><br>kip-ft | Overturning<br>Moment, M <sub>z</sub><br>kip-ft | Torque<br>kip-ft |
|----------------------------------------------|---------------|-------------------------|-------------------------|-------------------------------------------------|-------------------------------------------------|------------------|
| Dead Only                                    | 53.25         | 0.00                    | 0.00                    | 0.13                                            | 0.24                                            | 0.00             |
| 1.2 Dead+1.0 Wind 0 deg -<br>No Ice          | 63.90         | -0.01                   | -33.91                  | -3951.85                                        | 1.84                                            | -0.23            |
| 0.9 Dead+1.0 Wind 0 deg -<br>No Ice          | 47.93         | -0.01                   | -33.91                  | -3895.95                                        | 1.74                                            | -0.23            |
| 1.2 Dead+1.0 Wind 30 deg -<br>No Ice         | 63.90         | 16.92                   | -29.36                  | -3421.63                                        | -1969.46                                        | -0.07            |
| 0.9 Dead+1.0 Wind 30 deg -<br>No Ice         | 47.93         | 16.92                   | -29.36                  | -3373.23                                        | -1941.66                                        | -0.08            |
| 1.2 Dead+1.0 Wind 60 deg -<br>No Ice         | 63.90         | 29.31                   | -16.94                  | -1974.53                                        | -3412.97                                        | 0.11             |
| 0.9 Dead+1.0 Wind 60 deg -<br>No Ice         | 47.93         | 29.31                   | -16.94                  | -1946.62                                        | -3364.75                                        | 0.11             |
| 1.2 Dead+1.0 Wind 90 deg -<br>No Ice         | 63.90         | 33.85                   | 0.01                    | 1.71                                            | -3941.89                                        | 0.27             |
| 0.9 Dead+1.0 Wind 90 deg -<br>No Ice         | 47.93         | 33.85                   | 0.01                    | 1.64                                            | -3886.19                                        | 0.27             |
| 1.2 Dead+1.0 Wind 120 deg<br>- No Ice        | 63.90         | 29.32                   | 16.96                   | 1977.54                                         | -3414.50                                        | 0.36             |
| 0.9 Dead+1.0 Wind 120 deg<br>- No Ice        | 47.93         | 29.32                   | 16.96                   | 1949.49                                         | -3366.25                                        | 0.36             |
| 1.2 Dead+1.0 Wind 150 deg<br>- No Ice        | 63.90         | 16.94                   | 29.37                   | 3423.51                                         | -1972.11                                        | 0.35             |
| 0.9 Dead+1.0 Wind 150 deg<br>- No Ice        | 47.93         | 16.94                   | 29.37                   | 3375.00                                         | -1944.28                                        | 0.35             |
| 1.2 Dead+1.0 Wind 180 deg<br>- No Ice        | 63.90         | 0.01                    | 33.91                   | 3952.21                                         | -1.23                                           | 0.23             |
| 0.9 Dead+1.0 Wind 180 deg<br>- No Ice        | 47.93         | 0.01                    | 33.91                   | 3896.21                                         | -1.29                                           | 0.23             |
| 1.2 Dead+1.0 Wind 210 deg<br>- No Ice        | 63.90         | -16.92                  | 29.36                   | 3421.99                                         | 1970.06                                         | 0.06             |
| 0.9 Dead+1.0 Wind 210 deg<br>- No Ice        | 47.93         | -16.92                  | 29.36                   | 3373.49                                         | 1942.11                                         | 0.06             |
| 1.2 Dead+1.0 Wind 240 deg<br>- No Ice        | 63.90         | -29.31                  | 16.94                   | 1974.89                                         | 3413.58                                         | -0.13            |
| 0.9 Dead+1.0 Wind 240 deg<br>- No Ice        | 47.93         | -29.31                  | 16.94                   | 1946.88                                         | 3365.20                                         | -0.13            |
| 1.2 Dead+1.0 Wind 270 deg<br>- No Ice        | 63.90         | -33.85                  | -0.01                   | -1.36                                           | 3942.50                                         | -0.27            |
| 0.9 Dead+1.0 Wind 270 deg<br>- No Ice        | 47.93         | -33.85                  | -0.01                   | -1.38                                           | 3886.64                                         | -0.27            |
| 1.2 Dead+1.0 Wind 300 deg<br>- No Ice        | 63.90         | -29.32                  | -16.96                  | -1977.18                                        | 3415.10                                         | -0.34            |
| 0.9 Dead+1.0 Wind 300 deg<br>- No Ice        | 47.93         | -29.32                  | -16.96                  | -1949.23                                        | 3366.70                                         | -0.34            |
| 1.2 Dead+1.0 Wind 330 deg<br>- No Ice        | 63.90         | -16.94                  | -29.37                  | -3423.16                                        | 1972.71                                         | -0.33            |
| 0.9 Dead+1.0 Wind 330 deg<br>- No Ice        | 47.93         | -16.94                  | -29.37                  | -3374.74                                        | 1944.72                                         | -0.33            |
| 1.2 Dead+1.0 Ice+1.0 Temp                    | 103.28        | 0.00                    | 0.00                    | 1.32                                            | 0.63                                            | 0.00             |
| 1.2 Dead+1.0 Wind 0<br>deg+1.0 Ice+1.0 Temp  | 103.28        | -0.00                   | -8.42                   | -1054.40                                        | 1.05                                            | -0.07            |
| 1.2 Dead+1.0 Wind 30<br>deg+1.0 Ice+1.0 Temp | 103.28        | 4.20                    | -7.29                   | -912.76                                         | -526.16                                         | -0.02            |
| 1.2 Dead+1.0 Wind 60                         | 103.28        | 7.28                    | -4.21                   | -526.12                                         | -912.20                                         | 0.04             |

| Load Combination            | Vertical<br>K | Shear <sub>x</sub><br>K | Shear <sub>z</sub><br>K | Overturning<br>Moment, M <sub>x</sub><br>kip-ft | Overturning<br>Moment, M <sub>z</sub><br>kip-ft | Torque<br>kip-ft |
|-----------------------------|---------------|-------------------------|-------------------------|-------------------------------------------------|-------------------------------------------------|------------------|
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 90        | 103.28        | 8.41                    | 0.00                    | 1.92                                            | -1053.62                                        | 0.08             |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 120       | 103.28        | 7.29                    | 4.21                    | 529.87                                          | -912.52                                         | 0.11             |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 150       | 103.28        | 4.21                    | 7.29                    | 916.28                                          | -526.71                                         | 0.10             |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 180       | 103.28        | 0.00                    | 8.42                    | 1057.59                                         | 0.42                                            | 0.07             |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 210       | 103.28        | -4.20                   | 7.29                    | 915.96                                          | 527.64                                          | 0.01             |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 240       | 103.28        | -7.28                   | 4.21                    | 529.32                                          | 913.68                                          | -0.04            |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 270       | 103.28        | -8.41                   | -0.00                   | 1.28                                            | 1055.09                                         | -0.08            |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 300       | 103.28        | -7.29                   | -4.21                   | -526.67                                         | 913.99                                          | -0.10            |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| 1.2 Dead+1.0 Wind 330       | 103.28        | -4.21                   | -7.29                   | -913.08                                         | 528.19                                          | -0.10            |
| deg+1.0 Ice+1.0 Temp        |               |                         |                         |                                                 |                                                 |                  |
| Dead+Wind 0 deg - Service   | 53.25         | -0.00                   | -7.99                   | -923.46                                         | 0.61                                            | -0.06            |
| Dead+Wind 30 deg - Service  | 53.25         | 3.98                    | -6.92                   | -799.54                                         | -460.09                                         | -0.02            |
| Dead+Wind 60 deg - Service  | 53.25         | 6.90                    | -3.99                   | -461.34                                         | -797.44                                         | 0.03             |
| Dead+Wind 90 deg - Service  | 53.25         | 7.97                    | 0.00                    | 0.51                                            | -921.05                                         | 0.06             |
| Dead+Wind 120 deg - Service | 53.25         | 6.91                    | 4.00                    | 462.26                                          | -797.80                                         | 0.08             |
| Dead+Wind 150 deg - Service | 53.25         | 3.99                    | 6.92                    | 800.19                                          | -460.71                                         | 0.08             |
| Dead+Wind 180 deg - Service | 53.25         | 0.00                    | 7.99                    | 923.75                                          | -0.11                                           | 0.06             |
| Dead+Wind 210 deg - Service | 53.25         | -3.98                   | 6.92                    | 799.83                                          | 460.59                                          | 0.02             |
| Dead+Wind 240 deg - Service | 53.25         | -6.90                   | 3.99                    | 461.64                                          | 797.94                                          | -0.03            |
| Dead+Wind 270 deg - Service | 53.25         | -7.97                   | -0.00                   | -0.21                                           | 921.55                                          | -0.06            |
| Dead+Wind 300 deg - Service | 53.25         | -6.91                   | -4.00                   | -461.96                                         | 798.30                                          | -0.08            |
| Dead+Wind 330 deg - Service | 53.25         | -3.99                   | -6.92                   | -799.90                                         | 461.21                                          | -0.08            |

## Solution Summary

| Load Comb. | Sum of Applied Forces |         |         | Sum of Reactions |         |         | % Error |
|------------|-----------------------|---------|---------|------------------|---------|---------|---------|
|            | PX<br>K               | PY<br>K | PZ<br>K | PX<br>K          | PY<br>K | PZ<br>K |         |
| 1          | 0.00                  | -53.25  | 0.00    | 0.00             | 53.25   | 0.00    | 0.000%  |
| 2          | -0.01                 | -63.90  | -33.91  | 0.01             | 63.90   | 33.91   | 0.000%  |
| 3          | -0.01                 | -47.93  | -33.91  | 0.01             | 47.93   | 33.91   | 0.000%  |
| 4          | 16.92                 | -63.90  | -29.36  | -16.92           | 63.90   | 29.36   | 0.000%  |
| 5          | 16.92                 | -47.93  | -29.36  | -16.92           | 47.93   | 29.36   | 0.000%  |
| 6          | 29.31                 | -63.90  | -16.94  | -29.31           | 63.90   | 16.94   | 0.000%  |
| 7          | 29.31                 | -47.93  | -16.94  | -29.31           | 47.93   | 16.94   | 0.000%  |
| 8          | 33.85                 | -63.90  | 0.01    | -33.85           | 63.90   | -0.01   | 0.000%  |
| 9          | 33.85                 | -47.93  | 0.01    | -33.85           | 47.93   | -0.01   | 0.000%  |
| 10         | 29.32                 | -63.90  | 16.96   | -29.32           | 63.90   | -16.96  | 0.000%  |
| 11         | 29.32                 | -47.93  | 16.96   | -29.32           | 47.93   | -16.96  | 0.000%  |
| 12         | 16.94                 | -63.90  | 29.37   | -16.94           | 63.90   | -29.37  | 0.000%  |
| 13         | 16.94                 | -47.93  | 29.37   | -16.94           | 47.93   | -29.37  | 0.000%  |
| 14         | 0.01                  | -63.90  | 33.91   | -0.01            | 63.90   | -33.91  | 0.000%  |
| 15         | 0.01                  | -47.93  | 33.91   | -0.01            | 47.93   | -33.91  | 0.000%  |
| 16         | -16.92                | -63.90  | 29.36   | 16.92            | 63.90   | -29.36  | 0.000%  |
| 17         | -16.92                | -47.93  | 29.36   | 16.92            | 47.93   | -29.36  | 0.000%  |
| 18         | -29.31                | -63.90  | 16.94   | 29.31            | 63.90   | -16.94  | 0.000%  |
| 19         | -29.31                | -47.93  | 16.94   | 29.31            | 47.93   | -16.94  | 0.000%  |
| 20         | -33.85                | -63.90  | -0.01   | 33.85            | 63.90   | 0.01    | 0.000%  |
| 21         | -33.85                | -47.93  | -0.01   | 33.85            | 47.93   | 0.01    | 0.000%  |

| Load Comb. | Sum of Applied Forces |         |         | Sum of Reactions |         |         | % Error |
|------------|-----------------------|---------|---------|------------------|---------|---------|---------|
|            | PX<br>K               | PY<br>K | PZ<br>K | PX<br>K          | PY<br>K | PZ<br>K |         |
| 22         | -29.32                | -63.90  | -16.96  | 29.32            | 63.90   | 16.96   | 0.000%  |
| 23         | -29.32                | -47.93  | -16.96  | 29.32            | 47.93   | 16.96   | 0.000%  |
| 24         | -16.94                | -63.90  | -29.37  | 16.94            | 63.90   | 29.37   | 0.000%  |
| 25         | -16.94                | -47.93  | -29.37  | 16.94            | 47.93   | 29.37   | 0.000%  |
| 26         | 0.00                  | -103.28 | 0.00    | 0.00             | 103.28  | 0.00    | 0.000%  |
| 27         | -0.00                 | -103.28 | -8.42   | 0.00             | 103.28  | 8.42    | 0.000%  |
| 28         | 4.20                  | -103.28 | -7.29   | -4.20            | 103.28  | 7.29    | 0.000%  |
| 29         | 7.28                  | -103.28 | -4.21   | -7.28            | 103.28  | 4.21    | 0.000%  |
| 30         | 8.41                  | -103.28 | 0.00    | -8.41            | 103.28  | -0.00   | 0.000%  |
| 31         | 7.29                  | -103.28 | 4.21    | -7.29            | 103.28  | -4.21   | 0.000%  |
| 32         | 4.21                  | -103.28 | 7.29    | -4.21            | 103.28  | -7.29   | 0.000%  |
| 33         | 0.00                  | -103.28 | 8.42    | -0.00            | 103.28  | -8.42   | 0.000%  |
| 34         | -4.20                 | -103.28 | 7.29    | 4.20             | 103.28  | -7.29   | 0.000%  |
| 35         | -7.28                 | -103.28 | 4.21    | 7.28             | 103.28  | -4.21   | 0.000%  |
| 36         | -8.41                 | -103.28 | -0.00   | 8.41             | 103.28  | 0.00    | 0.000%  |
| 37         | -7.29                 | -103.28 | -4.21   | 7.29             | 103.28  | 4.21    | 0.000%  |
| 38         | -4.21                 | -103.28 | -7.29   | 4.21             | 103.28  | 7.29    | 0.000%  |
| 39         | -0.00                 | -53.25  | -7.99   | 0.00             | 53.25   | 7.99    | 0.000%  |
| 40         | 3.98                  | -53.25  | -6.92   | -3.98            | 53.25   | 6.92    | 0.000%  |
| 41         | 6.90                  | -53.25  | -3.99   | -6.90            | 53.25   | 3.99    | 0.000%  |
| 42         | 7.97                  | -53.25  | 0.00    | -7.97            | 53.25   | -0.00   | 0.000%  |
| 43         | 6.91                  | -53.25  | 4.00    | -6.91            | 53.25   | -4.00   | 0.000%  |
| 44         | 3.99                  | -53.25  | 6.92    | -3.99            | 53.25   | -6.92   | 0.000%  |
| 45         | 0.00                  | -53.25  | 7.99    | -0.00            | 53.25   | -7.99   | 0.000%  |
| 46         | -3.98                 | -53.25  | 6.92    | 3.98             | 53.25   | -6.92   | 0.000%  |
| 47         | -6.90                 | -53.25  | 3.99    | 6.90             | 53.25   | -3.99   | 0.000%  |
| 48         | -7.97                 | -53.25  | -0.00   | 7.97             | 53.25   | 0.00    | 0.000%  |
| 49         | -6.91                 | -53.25  | -4.00   | 6.91             | 53.25   | 4.00    | 0.000%  |
| 50         | -3.99                 | -53.25  | -6.92   | 3.99             | 53.25   | 6.92    | 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        | 5                | 0.00000001             | 0.00051221      |
| 3                | Yes        | 5                | 0.00000001             | 0.00019155      |
| 4                | Yes        | 7                | 0.00000001             | 0.00011923      |
| 5                | Yes        | 6                | 0.00000001             | 0.00061091      |
| 6                | Yes        | 7                | 0.00000001             | 0.00011889      |
| 7                | Yes        | 6                | 0.00000001             | 0.00060922      |
| 8                | Yes        | 5                | 0.00000001             | 0.00053892      |
| 9                | Yes        | 5                | 0.00000001             | 0.00020816      |
| 10               | Yes        | 7                | 0.00000001             | 0.00011993      |
| 11               | Yes        | 6                | 0.00000001             | 0.00061462      |
| 12               | Yes        | 7                | 0.00000001             | 0.00011899      |
| 13               | Yes        | 6                | 0.00000001             | 0.00060951      |
| 14               | Yes        | 5                | 0.00000001             | 0.00050096      |
| 15               | Yes        | 5                | 0.00000001             | 0.00018466      |
| 16               | Yes        | 7                | 0.00000001             | 0.00011929      |
| 17               | Yes        | 6                | 0.00000001             | 0.00061114      |
| 18               | Yes        | 7                | 0.00000001             | 0.00011951      |
| 19               | Yes        | 6                | 0.00000001             | 0.00061240      |
| 20               | Yes        | 5                | 0.00000001             | 0.00052007      |
| 21               | Yes        | 5                | 0.00000001             | 0.00019691      |
| 22               | Yes        | 7                | 0.00000001             | 0.00011884      |
| 23               | Yes        | 6                | 0.00000001             | 0.00060886      |
| 24               | Yes        | 7                | 0.00000001             | 0.00011992      |
| 25               | Yes        | 6                | 0.00000001             | 0.00061442      |
| 26               | Yes        | 4                | 0.00000001             | 0.00000001      |
| 27               | Yes        | 7                | 0.00000001             | 0.00030526      |
| 28               | Yes        | 7                | 0.00000001             | 0.00037063      |
| 29               | Yes        | 7                | 0.00000001             | 0.00037022      |
| 30               | Yes        | 7                | 0.00000001             | 0.00030516      |
| 31               | Yes        | 7                | 0.00000001             | 0.00037282      |

|    |     |   |            |            |
|----|-----|---|------------|------------|
| 32 | Yes | 7 | 0.00000001 | 0.00037262 |
| 33 | Yes | 7 | 0.00000001 | 0.00030689 |
| 34 | Yes | 7 | 0.00000001 | 0.00037321 |
| 35 | Yes | 7 | 0.00000001 | 0.00037307 |
| 36 | Yes | 7 | 0.00000001 | 0.00030574 |
| 37 | Yes | 7 | 0.00000001 | 0.00037108 |
| 38 | Yes | 7 | 0.00000001 | 0.00037183 |
| 39 | Yes | 5 | 0.00000001 | 0.00009560 |
| 40 | Yes | 5 | 0.00000001 | 0.00042742 |
| 41 | Yes | 5 | 0.00000001 | 0.00042457 |
| 42 | Yes | 5 | 0.00000001 | 0.00009571 |
| 43 | Yes | 5 | 0.00000001 | 0.00043334 |
| 44 | Yes | 5 | 0.00000001 | 0.00042494 |
| 45 | Yes | 5 | 0.00000001 | 0.00009564 |
| 46 | Yes | 5 | 0.00000001 | 0.00042843 |
| 47 | Yes | 5 | 0.00000001 | 0.00043044 |
| 48 | Yes | 5 | 0.00000001 | 0.00009569 |
| 49 | Yes | 5 | 0.00000001 | 0.00042370 |
| 50 | Yes | 5 | 0.00000001 | 0.00043294 |

### Maximum Tower Deflections - Service Wind

| Section No. | Elevation<br>ft | Horz.<br>Deflection<br>in | Gov.<br>Load<br>Comb. | Tilt<br>° | Twist<br>° |
|-------------|-----------------|---------------------------|-----------------------|-----------|------------|
| L1          | 160 - 155       | 25.935                    | 45                    | 1.4687    | 0.0005     |
| L2          | 155 - 150       | 24.398                    | 45                    | 1.4675    | 0.0005     |
| L3          | 150 - 145       | 22.865                    | 45                    | 1.4593    | 0.0005     |
| L4          | 145 - 140       | 21.345                    | 45                    | 1.4415    | 0.0005     |
| L5          | 140 - 135       | 19.850                    | 45                    | 1.4131    | 0.0005     |
| L6          | 135 - 130       | 18.389                    | 45                    | 1.3741    | 0.0004     |
| L7          | 130 - 125       | 16.976                    | 45                    | 1.3253    | 0.0004     |
| L8          | 125 - 120       | 15.617                    | 45                    | 1.2688    | 0.0003     |
| L9          | 120 - 111.333   | 14.321                    | 45                    | 1.2053    | 0.0003     |
| L10         | 116 - 111       | 13.334                    | 45                    | 1.1507    | 0.0003     |
| L11         | 111 - 106       | 12.145                    | 45                    | 1.1173    | 0.0002     |
| L12         | 106 - 101       | 11.006                    | 45                    | 1.0578    | 0.0002     |
| L13         | 101 - 96        | 9.931                     | 45                    | 0.9962    | 0.0002     |
| L14         | 96 - 91         | 8.920                     | 45                    | 0.9331    | 0.0002     |
| L15         | 91 - 86         | 7.977                     | 45                    | 0.8692    | 0.0002     |
| L16         | 86 - 85.75      | 7.100                     | 45                    | 0.8049    | 0.0002     |
| L17         | 85.75 - 81      | 7.058                     | 45                    | 0.8027    | 0.0002     |
| L18         | 81 - 80.75      | 6.280                     | 45                    | 0.7606    | 0.0001     |
| L19         | 80.75 - 80.5    | 6.241                     | 45                    | 0.7574    | 0.0001     |
| L20         | 80.5 - 73.25    | 6.201                     | 45                    | 0.7542    | 0.0001     |
| L21         | 79 - 72.25      | 5.967                     | 45                    | 0.7349    | 0.0001     |
| L22         | 72.25 - 67.25   | 4.957                     | 45                    | 0.6887    | 0.0001     |
| L23         | 67.25 - 62.25   | 4.266                     | 45                    | 0.6321    | 0.0001     |
| L24         | 62.25 - 57.25   | 3.633                     | 45                    | 0.5762    | 0.0001     |
| L25         | 57.25 - 52.25   | 3.059                     | 45                    | 0.5210    | 0.0001     |
| L26         | 52.25 - 49.83   | 2.542                     | 45                    | 0.4668    | 0.0001     |
| L27         | 49.83 - 49.58   | 2.312                     | 45                    | 0.4408    | 0.0001     |
| L28         | 49.58 - 44.58   | 2.289                     | 45                    | 0.4382    | 0.0001     |
| L29         | 44.58 - 36.3333 | 1.858                     | 45                    | 0.3853    | 0.0001     |
| L30         | 43 - 35.3333    | 1.733                     | 45                    | 0.3688    | 0.0001     |
| L31         | 35.3333 - 32.25 | 1.172                     | 45                    | 0.3250    | 0.0000     |
| L32         | 32.25 - 32      | 0.972                     | 45                    | 0.2946    | 0.0000     |
| L33         | 32 - 27         | 0.957                     | 45                    | 0.2922    | 0.0000     |
| L34         | 27 - 22         | 0.676                     | 45                    | 0.2438    | 0.0000     |
| L35         | 22 - 17         | 0.446                     | 45                    | 0.1965    | 0.0000     |
| L36         | 17 - 15.5       | 0.264                     | 45                    | 0.1501    | 0.0000     |
| L37         | 15.5 - 15.25    | 0.219                     | 45                    | 0.1366    | 0.0000     |
| L38         | 15.25 - 14.75   | 0.212                     | 45                    | 0.1343    | 0.0000     |
| L39         | 14.75 - 14.5    | 0.198                     | 45                    | 0.1298    | 0.0000     |
| L40         | 14.5 - 9.5      | 0.192                     | 45                    | 0.1275    | 0.0000     |
| L41         | 9.5 - 4.5       | 0.082                     | 45                    | 0.0826    | 0.0000     |
| L42         | 4.5 - 0         | 0.018                     | 45                    | 0.0387    | 0.0000     |

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

| Elevation | Appurtenance                  | Gov. Load Comb. | Deflection | Tilt   | Twist  | Radius of Curvature |
|-----------|-------------------------------|-----------------|------------|--------|--------|---------------------|
| ft        |                               |                 | in         | °      | °      | ft                  |
| 157.00    | Platform Mount [13' LP 713-1] | 45              | 25.012     | 1.4685 | 0.0005 | 63648               |
| 149.00    | Platform Mount [13' LP 713-1] | 45              | 22.559     | 1.4565 | 0.0005 | 19612               |
| 139.00    | Platform Mount [LP 713-1]     | 45              | 19.555     | 1.4061 | 0.0005 | 8070                |
| 129.00    | Commscope MC-PK8-DSH          | 45              | 16.699     | 1.3145 | 0.0004 | 5307                |
| 116.00    | Platform Mount [LP 712-1]     | 45              | 13.334     | 1.1507 | 0.0003 | 5790                |
| 84.00     | Side Arm Mount [4' SO 702-1]  | 45              | 6.767      | 0.7889 | 0.0002 | 5786                |
| 40.00     | Pipe Mount [PM 601-1]         | 45              | 1.504      | 0.3495 | 0.0000 | 9202                |

### Maximum Tower Deflections - Design Wind

| Section No. | Elevation       | Horz. Deflection | Gov. Load Comb. | Tilt   | Twist  |
|-------------|-----------------|------------------|-----------------|--------|--------|
|             | ft              | in               |                 | °      | °      |
| L1          | 160 - 155       | 111.052          | 14              | 6.2966 | 0.0021 |
| L2          | 155 - 150       | 104.472          | 14              | 6.2916 | 0.0021 |
| L3          | 150 - 145       | 97.913           | 14              | 6.2562 | 0.0021 |
| L4          | 145 - 140       | 91.409           | 14              | 6.1798 | 0.0021 |
| L5          | 140 - 135       | 85.011           | 14              | 6.0582 | 0.0021 |
| L6          | 135 - 130       | 78.761           | 14              | 5.8913 | 0.0019 |
| L7          | 130 - 125       | 72.708           | 14              | 5.6823 | 0.0016 |
| L8          | 125 - 120       | 66.890           | 14              | 5.4402 | 0.0014 |
| L9          | 120 - 111.333   | 61.342           | 14              | 5.1680 | 0.0012 |
| L10         | 116 - 111       | 57.115           | 14              | 4.9340 | 0.0011 |
| L11         | 111 - 106       | 52.024           | 14              | 4.7906 | 0.0010 |
| L12         | 106 - 101       | 47.145           | 14              | 4.5356 | 0.0010 |
| L13         | 101 - 96        | 42.538           | 14              | 4.2712 | 0.0009 |
| L14         | 96 - 91         | 38.210           | 14              | 4.0005 | 0.0008 |
| L15         | 91 - 86         | 34.167           | 14              | 3.7262 | 0.0007 |
| L16         | 86 - 85.75      | 30.412           | 14              | 3.4501 | 0.0007 |
| L17         | 85.75 - 81      | 30.232           | 14              | 3.4408 | 0.0007 |
| L18         | 81 - 80.75      | 26.901           | 14              | 3.2602 | 0.0006 |
| L19         | 80.75 - 80.5    | 26.730           | 14              | 3.2464 | 0.0006 |
| L20         | 80.5 - 73.25    | 26.561           | 14              | 3.2327 | 0.0006 |
| L21         | 79 - 72.25      | 25.559           | 14              | 3.1500 | 0.0006 |
| L22         | 72.25 - 67.25   | 21.232           | 14              | 2.9519 | 0.0005 |
| L23         | 67.25 - 62.25   | 18.270           | 14              | 2.7089 | 0.0005 |
| L24         | 62.25 - 57.25   | 15.560           | 14              | 2.4689 | 0.0004 |
| L25         | 57.25 - 52.25   | 13.099           | 14              | 2.2324 | 0.0004 |
| L26         | 52.25 - 49.83   | 10.884           | 14              | 1.9997 | 0.0003 |
| L27         | 49.83 - 49.58   | 9.899            | 14              | 1.8885 | 0.0003 |
| L28         | 49.58 - 44.58   | 9.800            | 14              | 1.8771 | 0.0003 |
| L29         | 44.58 - 36.3333 | 7.954            | 14              | 1.6505 | 0.0002 |
| L30         | 43 - 35.3333    | 7.420            | 14              | 1.5798 | 0.0002 |
| L31         | 35.3333 - 32.25 | 5.018            | 14              | 1.3918 | 0.0002 |
| L32         | 32.25 - 32      | 4.162            | 14              | 1.2617 | 0.0002 |
| L33         | 32 - 27         | 4.096            | 14              | 1.2513 | 0.0002 |
| L34         | 27 - 22         | 2.895            | 14              | 1.0441 | 0.0001 |
| L35         | 22 - 17         | 1.908            | 14              | 0.8412 | 0.0001 |
| L36         | 17 - 15.5       | 1.131            | 14              | 0.6427 | 0.0001 |
| L37         | 15.5 - 15.25    | 0.938            | 14              | 0.5846 | 0.0001 |
| L38         | 15.25 - 14.75   | 0.908            | 14              | 0.5749 | 0.0001 |
| L39         | 14.75 - 14.5    | 0.849            | 14              | 0.5555 | 0.0001 |
| L40         | 14.5 - 9.5      | 0.820            | 14              | 0.5458 | 0.0001 |
| L41         | 9.5 - 4.5       | 0.349            | 14              | 0.3536 | 0.0000 |
| L42         | 4.5 - 0         | 0.078            | 14              | 0.1657 | 0.0000 |

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

| Elevation<br>ft | Appurtenance                  | Gov.<br>Load<br>Comb. | Deflection<br>in | Tilt<br>° | Twist<br>° | Radius of<br>Curvature<br>ft |
|-----------------|-------------------------------|-----------------------|------------------|-----------|------------|------------------------------|
| 157.00          | Platform Mount [13' LP 713-1] | 14                    | 107.103          | 6.2958    | 0.0021     | 15172                        |
| 149.00          | Platform Mount [13' LP 713-1] | 14                    | 96.606           | 6.2444    | 0.0021     | 4671                         |
| 139.00          | Platform Mount [LP 713-1]     | 14                    | 83.747           | 6.0284    | 0.0021     | 1923                         |
| 129.00          | Commscope MC-PK8-DSH          | 14                    | 71.525           | 5.6359    | 0.0016     | 1262                         |
| 116.00          | Platform Mount [LP 712-1]     | 14                    | 57.115           | 4.9340    | 0.0011     | 1370                         |
| 84.00           | Side Arm Mount [4' SO 702-1]  | 14                    | 28.984           | 3.3818    | 0.0006     | 1357                         |
| 40.00           | Pipe Mount [PM 601-1]         | 14                    | 6.441            | 1.4970    | 0.0002     | 2150                         |

### Compression Checks

### Pole Design Data

| Section<br>No. | Elevation<br>ft       | Size                         | L<br>ft | L <sub>u</sub><br>ft | Kl/r | A<br>in <sup>2</sup> | P <sub>u</sub><br>K | φP <sub>n</sub><br>K | Ratio<br>$\frac{P_u}{\phi P_n}$ |
|----------------|-----------------------|------------------------------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| L1             | 160 - 155 (1)         | TP20.801x19.6x0.25           | 5.00    | 0.00                 | 0.0  | 16.543<br>6          | -3.92               | 967.80               | 0.004                           |
| L2             | 155 - 150 (2)         | TP22.0021x20.801x0.25        | 5.00    | 0.00                 | 0.0  | 17.510<br>4          | -4.27               | 1024.36              | 0.004                           |
| L3             | 150 - 145 (3)         | TP23.2031x22.0021x0.25       | 5.00    | 0.00                 | 0.0  | 18.477<br>2          | -8.13               | 1080.92              | 0.008                           |
| L4             | 145 - 140 (4)         | TP24.4041x23.2031x0.25       | 5.00    | 0.00                 | 0.0  | 19.444<br>1          | -8.58               | 1137.48              | 0.008                           |
| L5             | 140 - 135 (5)         | TP25.6051x24.4041x0.25       | 5.00    | 0.00                 | 0.0  | 20.410<br>9          | -12.37              | 1194.04              | 0.010                           |
| L6             | 135 - 130 (6)         | TP26.8062x25.6051x0.25       | 5.00    | 0.00                 | 0.0  | 21.377<br>7          | -13.01              | 1250.60              | 0.010                           |
| L7             | 130 - 125 (7)         | TP28.0072x26.8062x0.25       | 5.00    | 0.00                 | 0.0  | 22.344<br>5          | -16.66              | 1307.16              | 0.013                           |
| L8             | 125 - 120 (8)         | TP29.2082x28.0072x0.25       | 5.00    | 0.00                 | 0.0  | 23.311<br>4          | -17.39              | 1363.71              | 0.013                           |
| L9             | 120 - 111.333<br>(9)  | TP31.29x29.2082x0.25         | 8.67    | 0.00                 | 0.0  | 24.084<br>8          | -18.02              | 1408.96              | 0.013                           |
| L10            | 111.333 - 111<br>(10) | TP30.867x29.669x0.3438       | 5.00    | 0.00                 | 0.0  | 33.785<br>5          | -23.24              | 1976.45              | 0.012                           |
| L11            | 111 - 106 (11)        | TP32.065x30.867x0.3438       | 5.00    | 0.00                 | 0.0  | 35.111<br>5          | -24.30              | 2054.02              | 0.012                           |
| L12            | 106 - 101 (12)        | TP33.2631x32.065x0.343<br>8  | 5.00    | 0.00                 | 0.0  | 36.437<br>6          | -25.39              | 2131.60              | 0.012                           |
| L13            | 101 - 96 (13)         | TP34.4611x33.2631x0.34<br>38 | 5.00    | 0.00                 | 0.0  | 37.763<br>6          | -26.52              | 2209.17              | 0.012                           |
| L14            | 96 - 91 (14)          | TP35.6591x34.4611x0.34<br>38 | 5.00    | 0.00                 | 0.0  | 39.089<br>6          | -27.68              | 2286.74              | 0.012                           |
| L15            | 91 - 86 (15)          | TP36.8571x35.6591x0.34<br>38 | 5.00    | 0.00                 | 0.0  | 40.415<br>7          | -28.87              | 2364.32              | 0.012                           |
| L16            | 86 - 85.75<br>(16)    | TP36.917x36.8571x0.512<br>5  | 0.25    | 0.00                 | 0.0  | 60.076<br>5          | -28.96              | 3514.48              | 0.008                           |
| L17            | 85.75 - 81<br>(17)    | TP38.0551x36.917x0.506<br>3  | 4.75    | 0.00                 | 0.0  | 61.209<br>3          | -30.48              | 3580.74              | 0.009                           |
| L18            | 81 - 80.75<br>(18)    | TP38.115x38.0551x0.343<br>8  | 0.25    | 0.00                 | 0.0  | 41.808<br>0          | -30.56              | 2445.77              | 0.012                           |
| L19            | 80.75 - 80.5<br>(19)  | TP38.1749x38.115x0.343<br>8  | 0.25    | 0.00                 | 0.0  | 41.874<br>3          | -30.63              | 2449.65              | 0.013                           |
| L20            | 80.5 - 73.25<br>(20)  | TP39.912x38.1749x0.343<br>8  | 7.25    | 0.00                 | 0.0  | 42.272<br>2          | -31.01              | 2472.92              | 0.013                           |
| L21            | 73.25 - 72.25<br>(21) | TP39.467x37.8468x0.406<br>3  | 6.75    | 0.00                 | 0.0  | 51.096<br>3          | -33.96              | 2989.13              | 0.011                           |
| L22            | 72.25 - 67.25<br>(22) | TP40.6671x39.467x0.406<br>3  | 5.00    | 0.00                 | 0.0  | 52.666<br>3          | -35.40              | 3080.98              | 0.011                           |

| Section No. | Elevation<br>ft           | Size                         | L<br>ft | L <sub>u</sub><br>ft | Kl/r | A<br>in <sup>2</sup> | P <sub>u</sub><br>K | φP <sub>n</sub><br>K | Ratio<br>$\frac{P_u}{\phi P_n}$ |
|-------------|---------------------------|------------------------------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| L23         | 67.25 - 62.25<br>(23)     | TP41.8673x40.6671x0.40<br>63 | 5.00    | 0.00                 | 0.0  | 54.236<br>2          | -36.87              | 3172.82              | 0.012                           |
| L24         | 62.25 - 57.25<br>(24)     | TP43.0674x41.8673x0.40<br>63 | 5.00    | 0.00                 | 0.0  | 55.806<br>1          | -38.38              | 3264.66              | 0.012                           |
| L25         | 57.25 - 52.25<br>(25)     | TP44.2675x43.0674x0.40<br>63 | 5.00    | 0.00                 | 0.0  | 57.376<br>1          | -39.93              | 3356.50              | 0.012                           |
| L26         | 52.25 - 49.83<br>(26)     | TP44.8484x44.2675x0.40<br>63 | 2.42    | 0.00                 | 0.0  | 58.135<br>9          | -40.87              | 3400.95              | 0.012                           |
| L27         | 49.83 - 49.58<br>(27)     | TP44.9084x44.8484x0.40<br>63 | 0.25    | 0.00                 | 0.0  | 58.214<br>4          | -40.98              | 3405.54              | 0.012                           |
| L28         | 49.58 - 44.58<br>(28)     | TP46.1086x44.9084x0.40<br>63 | 5.00    | 0.00                 | 0.0  | 59.784<br>3          | -42.93              | 3497.38              | 0.012                           |
| L29         | 44.58 -<br>36.3333 (29)   | TP48.088x46.1086x0.406<br>3  | 8.25    | 0.00                 | 0.0  | 60.280<br>4          | -43.55              | 3526.41              | 0.012                           |
| L30         | 36.3333 -<br>35.3333 (30) | TP47.5161x45.6753x0.43<br>75 | 7.67    | 0.00                 | 0.0  | 66.322<br>0          | -48.43              | 3879.84              | 0.012                           |
| L31         | 35.3333 -<br>32.25 (31)   | TP48.2565x47.5161x0.43<br>75 | 3.08    | 0.00                 | 0.0  | 67.365<br>0          | -49.73              | 3940.85              | 0.013                           |
| L32         | 32.25 - 32<br>(32)        | TP48.3165x48.2565x0.43<br>75 | 0.25    | 0.00                 | 0.0  | 67.449<br>5          | -49.85              | 3945.80              | 0.013                           |
| L33         | 32 - 27 (33)              | TP49.5171x48.3165x0.43<br>75 | 5.00    | 0.00                 | 0.0  | 69.140<br>8          | -51.99              | 4044.74              | 0.013                           |
| L34         | 27 - 22 (34)              | TP50.7176x49.5171x0.43<br>75 | 5.00    | 0.00                 | 0.0  | 70.832<br>1          | -54.19              | 4143.68              | 0.013                           |
| L35         | 22 - 17 (35)              | TP51.9181x50.7176x0.43<br>75 | 5.00    | 0.00                 | 0.0  | 72.523<br>4          | -56.41              | 4242.62              | 0.013                           |
| L36         | 17 - 15.5 (36)            | TP52.2783x51.9181x0.43<br>75 | 1.50    | 0.00                 | 0.0  | 73.030<br>7          | -57.13              | 4272.30              | 0.013                           |
| L37         | 15.5 - 15.25<br>(37)      | TP52.3383x52.2783x0.43<br>75 | 0.25    | 0.00                 | 0.0  | 73.115<br>3          | -57.26              | 4277.25              | 0.013                           |
| L38         | 15.25 - 14.75<br>(38)     | TP52.4584x52.3383x0.43<br>75 | 0.50    | 0.00                 | 0.0  | 73.284<br>4          | -57.50              | 4287.14              | 0.013                           |
| L39         | 14.75 - 14.5<br>(39)      | TP52.5184x52.4584x0.43<br>75 | 0.25    | 0.00                 | 0.0  | 73.369<br>0          | -57.63              | 4292.09              | 0.013                           |
| L40         | 14.5 - 9.5 (40)           | TP53.719x52.5184x0.437<br>5  | 5.00    | 0.00                 | 0.0  | 75.060<br>3          | -59.88              | 4391.03              | 0.014                           |
| L41         | 9.5 - 4.5 (41)            | TP54.9195x53.719x0.437<br>5  | 5.00    | 0.00                 | 0.0  | 76.751<br>5          | -62.01              | 4489.96              | 0.014                           |
| L42         | 4.5 - 0 (42)              | TP56x54.9195x0.4375          | 4.50    | 0.00                 | 0.0  | 78.273<br>7          | -63.89              | 4579.01              | 0.014                           |

### Pole Bending Design Data

| Section No. | Elevation<br>ft       | Size                         | M <sub>ux</sub><br>kip-ft | φM <sub>nx</sub><br>kip-ft | Ratio<br>$\frac{M_{ux}}{\phi M_{nx}}$ | M <sub>uy</sub><br>kip-ft | φM <sub>ny</sub><br>kip-ft | Ratio<br>$\frac{M_{uy}}{\phi M_{ny}}$ |
|-------------|-----------------------|------------------------------|---------------------------|----------------------------|---------------------------------------|---------------------------|----------------------------|---------------------------------------|
| L1          | 160 - 155 (1)         | TP20.801x19.6x0.25           | 12.20                     | 508.14                     | 0.024                                 | 0.00                      | 508.14                     | 0.000                                 |
| L2          | 155 - 150 (2)         | TP22.0021x20.801x0.25        | 37.07                     | 559.87                     | 0.066                                 | 0.00                      | 559.87                     | 0.000                                 |
| L3          | 150 - 145 (3)         | TP23.2031x22.0021x0.25       | 88.69                     | 612.89                     | 0.145                                 | 0.00                      | 612.89                     | 0.000                                 |
| L4          | 145 - 140 (4)         | TP24.4041x23.2031x0.25       | 142.28                    | 667.00                     | 0.213                                 | 0.00                      | 667.00                     | 0.000                                 |
| L5          | 140 - 135 (5)         | TP25.6051x24.4041x0.25       | 224.36                    | 722.04                     | 0.311                                 | 0.00                      | 722.04                     | 0.000                                 |
| L6          | 135 - 130 (6)         | TP26.8062x25.6051x0.25       | 305.15                    | 777.82                     | 0.392                                 | 0.00                      | 777.82                     | 0.000                                 |
| L7          | 130 - 125 (7)         | TP28.0072x26.8062x0.25       | 399.50                    | 834.16                     | 0.479                                 | 0.00                      | 834.16                     | 0.000                                 |
| L8          | 125 - 120 (8)         | TP29.2082x28.0072x0.25       | 498.88                    | 890.88                     | 0.560                                 | 0.00                      | 890.88                     | 0.000                                 |
| L9          | 120 - 111.333<br>(9)  | TP31.29x29.2082x0.25         | 579.91                    | 936.40                     | 0.619                                 | 0.00                      | 936.40                     | 0.000                                 |
| L10         | 111.333 - 111<br>(10) | TP30.867x29.669x0.3438       | 703.07                    | 1506.34                    | 0.467                                 | 0.00                      | 1506.34                    | 0.000                                 |
| L11         | 111 - 106 (11)        | TP32.065x30.867x0.3438       | 825.24                    | 1606.85                    | 0.514                                 | 0.00                      | 1606.85                    | 0.000                                 |
| L12         | 106 - 101 (12)        | TP33.2631x32.065x0.343<br>8  | 949.63                    | 1708.83                    | 0.556                                 | 0.00                      | 1708.83                    | 0.000                                 |
| L13         | 101 - 96 (13)         | TP34.4611x33.2631x0.34<br>38 | 1076.26                   | 1812.13                    | 0.594                                 | 0.00                      | 1812.13                    | 0.000                                 |
| L14         | 96 - 91 (14)          | TP35.6591x34.4611x0.34<br>38 | 1205.11                   | 1916.55                    | 0.629                                 | 0.00                      | 1916.55                    | 0.000                                 |

| Section No. | Elevation<br>ft        | Size                     | $M_{ux}$<br>kip-ft | $\phi M_{nx}$<br>kip-ft | Ratio<br>$\frac{M_{ux}}{\phi M_{nx}}$ | $M_{uy}$<br>kip-ft | $\phi M_{ny}$<br>kip-ft | Ratio<br>$\frac{M_{uy}}{\phi M_{ny}}$ |
|-------------|------------------------|--------------------------|--------------------|-------------------------|---------------------------------------|--------------------|-------------------------|---------------------------------------|
| L15         | 91 - 86 (15)           | TP36.8571x35.6591x0.3438 | 1336.18            | 2021.91                 | 0.661                                 | 0.00               | 2021.91                 | 0.000                                 |
| L16         | 86 - 85.75 (16)        | TP36.917x36.8571x0.5125  | 1342.79            | 3264.29                 | 0.411                                 | 0.00               | 3264.29                 | 0.000                                 |
| L17         | 85.75 - 81 (17)        | TP38.0551x36.917x0.5063  | 1469.78            | 3432.41                 | 0.428                                 | 0.00               | 3432.41                 | 0.000                                 |
| L18         | 81 - 80.75 (18)        | TP38.115x38.0551x0.3438  | 1476.53            | 2133.36                 | 0.692                                 | 0.00               | 2133.36                 | 0.000                                 |
| L19         | 80.75 - 80.5 (19)      | TP38.1749x38.115x0.3438  | 1483.28            | 2138.68                 | 0.694                                 | 0.00               | 2138.68                 | 0.000                                 |
| L20         | 80.5 - 73.25 (20)      | TP39.912x38.1749x0.3438  | 1523.89            | 2170.66                 | 0.702                                 | 0.00               | 2170.66                 | 0.000                                 |
| L21         | 73.25 - 72.25 (21)     | TP39.467x37.8468x0.4063  | 1709.78            | 2839.37                 | 0.602                                 | 0.00               | 2839.37                 | 0.000                                 |
| L22         | 72.25 - 67.25 (22)     | TP40.6671x39.467x0.4063  | 1850.43            | 2983.96                 | 0.620                                 | 0.00               | 2983.96                 | 0.000                                 |
| L23         | 67.25 - 62.25 (23)     | TP41.8673x40.6671x0.4063 | 1993.30            | 3129.88                 | 0.637                                 | 0.00               | 3129.88                 | 0.000                                 |
| L24         | 62.25 - 57.25 (24)     | TP43.0674x41.8673x0.4063 | 2138.38            | 3276.97                 | 0.653                                 | 0.00               | 3276.97                 | 0.000                                 |
| L25         | 57.25 - 52.25 (25)     | TP44.2675x43.0674x0.4063 | 2285.64            | 3425.04                 | 0.667                                 | 0.00               | 3425.04                 | 0.000                                 |
| L26         | 52.25 - 49.83 (26)     | TP44.8484x44.2675x0.4063 | 2357.70            | 3497.01                 | 0.674                                 | 0.00               | 3497.01                 | 0.000                                 |
| L27         | 49.83 - 49.58 (27)     | TP44.9084x44.8484x0.4063 | 2365.18            | 3504.46                 | 0.675                                 | 0.00               | 3504.46                 | 0.000                                 |
| L28         | 49.58 - 44.58 (28)     | TP46.1086x44.9084x0.4063 | 2515.76            | 3653.68                 | 0.689                                 | 0.00               | 3653.68                 | 0.000                                 |
| L29         | 44.58 - 36.3333 (29)   | TP48.088x46.1086x0.4063  | 2563.78            | 3700.96                 | 0.693                                 | 0.00               | 3700.96                 | 0.000                                 |
| L30         | 36.3333 - 35.3333 (30) | TP47.5161x45.6753x0.4375 | 2800.51            | 4255.33                 | 0.658                                 | 0.00               | 4255.33                 | 0.000                                 |
| L31         | 35.3333 - 32.25 (31)   | TP48.2565x47.5161x0.4375 | 2897.34            | 4361.67                 | 0.664                                 | 0.00               | 4361.67                 | 0.000                                 |
| L32         | 32.25 - 32 (32)        | TP48.3165x48.2565x0.4375 | 2905.22            | 4370.30                 | 0.665                                 | 0.00               | 4370.30                 | 0.000                                 |
| L33         | 32 - 27 (33)           | TP49.5171x48.3165x0.4375 | 3063.85            | 4543.38                 | 0.674                                 | 0.00               | 4543.38                 | 0.000                                 |
| L34         | 27 - 22 (34)           | TP50.7176x49.5171x0.4375 | 3224.29            | 4717.04                 | 0.684                                 | 0.00               | 4717.04                 | 0.000                                 |
| L35         | 22 - 17 (35)           | TP51.9181x50.7176x0.4375 | 3386.57            | 4891.11                 | 0.692                                 | 0.00               | 4891.11                 | 0.000                                 |
| L36         | 17 - 15.5 (36)         | TP52.2783x51.9181x0.4375 | 3435.62            | 4943.38                 | 0.695                                 | 0.00               | 4943.38                 | 0.000                                 |
| L37         | 15.5 - 15.25 (37)      | TP52.3383x52.2783x0.4375 | 3443.81            | 4952.09                 | 0.695                                 | 0.00               | 4952.09                 | 0.000                                 |
| L38         | 15.25 - 14.75 (38)     | TP52.4584x52.3383x0.4375 | 3460.20            | 4969.52                 | 0.696                                 | 0.00               | 4969.52                 | 0.000                                 |
| L39         | 14.75 - 14.5 (39)      | TP52.5184x52.4584x0.4375 | 3468.41            | 4978.23                 | 0.697                                 | 0.00               | 4978.23                 | 0.000                                 |
| L40         | 14.5 - 9.5 (40)        | TP53.719x52.5184x0.4375  | 3633.47            | 5152.57                 | 0.705                                 | 0.00               | 5152.57                 | 0.000                                 |
| L41         | 9.5 - 4.5 (41)         | TP54.9195x53.719x0.4375  | 3800.38            | 5326.86                 | 0.713                                 | 0.00               | 5326.86                 | 0.000                                 |
| L42         | 4.5 - 0 (42)           | TP56x54.9195x0.4375      | 3952.21            | 5483.53                 | 0.721                                 | 0.00               | 5483.53                 | 0.000                                 |

### Pole Shear Design Data

| Section No. | Elevation<br>ft | Size                   | Actual<br>$V_u$<br>K | $\phi V_n$<br>K | Ratio<br>$\frac{V_u}{\phi V_n}$ | Actual<br>$T_u$<br>kip-ft | $\phi T_n$<br>kip-ft | Ratio<br>$\frac{T_u}{\phi T_n}$ |
|-------------|-----------------|------------------------|----------------------|-----------------|---------------------------------|---------------------------|----------------------|---------------------------------|
| L1          | 160 - 155 (1)   | TP20.801x19.6x0.25     | 4.78                 | 286.95          | 0.017                           | 0.00                      | 524.86               | 0.000                           |
| L2          | 155 - 150 (2)   | TP22.0021x20.801x0.25  | 5.17                 | 303.91          | 0.017                           | 0.00                      | 588.00               | 0.000                           |
| L3          | 150 - 145 (3)   | TP23.2031x22.0021x0.25 | 10.51                | 324.27          | 0.032                           | 0.00                      | 654.72               | 0.000                           |
| L4          | 145 - 140 (4)   | TP24.4041x23.2031x0.25 | 10.93                | 341.24          | 0.032                           | 0.00                      | 725.03               | 0.000                           |

| Section No. | Elevation<br>ft        | Size                     | Actual<br>$V_u$<br>K | $\phi V_n$<br>K | Ratio<br>$V_u$<br>$\phi V_n$ | Actual<br>$T_u$<br>kip-ft | $\phi T_n$<br>kip-ft | Ratio<br>$T_u$<br>$\phi T_n$ |
|-------------|------------------------|--------------------------|----------------------|-----------------|------------------------------|---------------------------|----------------------|------------------------------|
| L5          | 140 - 135 (5)          | TP25.6051x24.4041x0.25   | 15.95                | 358.21          | 0.045                        | 0.00                      | 798.92               | 0.000                        |
| L6          | 135 - 130 (6)          | TP26.8062x25.6051x0.25   | 16.38                | 375.18          | 0.044                        | 0.00                      | 876.40               | 0.000                        |
| L7          | 130 - 125 (7)          | TP28.0072x26.8062x0.25   | 19.67                | 392.15          | 0.050                        | 0.14                      | 957.47               | 0.000                        |
| L8          | 125 - 120 (8)          | TP29.2082x28.0072x0.25   | 20.10                | 409.11          | 0.049                        | 0.14                      | 1042.12              | 0.000                        |
| L9          | 120 - 111.333 (9)      | TP31.29x29.2082x0.25     | 20.44                | 422.69          | 0.048                        | 0.14                      | 1112.42              | 0.000                        |
| L10         | 111.333 - 111 (10)     | TP30.867x29.669x0.3438   | 24.22                | 592.93          | 0.041                        | 0.14                      | 1591.98              | 0.000                        |
| L11         | 111 - 106 (11)         | TP32.065x30.867x0.3438   | 24.67                | 616.21          | 0.040                        | 0.14                      | 1719.40              | 0.000                        |
| L12         | 106 - 101 (12)         | TP33.2631x32.065x0.3438  | 25.11                | 639.48          | 0.039                        | 0.14                      | 1851.72              | 0.000                        |
| L13         | 101 - 96 (13)          | TP34.4611x33.2631x0.3438 | 25.56                | 662.75          | 0.039                        | 0.14                      | 1988.96              | 0.000                        |
| L14         | 96 - 91 (14)           | TP35.6591x34.4611x0.3438 | 26.01                | 686.02          | 0.038                        | 0.14                      | 2131.09              | 0.000                        |
| L15         | 91 - 86 (15)           | TP36.8571x35.6591x0.3438 | 26.45                | 709.29          | 0.037                        | 0.14                      | 2278.13              | 0.000                        |
| L16         | 86 - 85.75 (16)        | TP36.917x36.8571x0.5125  | 26.47                | 1054.34         | 0.025                        | 0.14                      | 3376.27              | 0.000                        |
| L17         | 85.75 - 81 (17)        | TP38.0551x36.917x0.5063  | 26.98                | 1074.22         | 0.025                        | 0.14                      | 3548.06              | 0.000                        |
| L18         | 81 - 80.75 (18)        | TP38.115x38.0551x0.3438  | 27.00                | 733.73          | 0.037                        | 0.14                      | 2437.80              | 0.000                        |
| L19         | 80.75 - 80.5 (19)      | TP38.1749x38.115x0.3438  | 27.03                | 734.89          | 0.037                        | 0.14                      | 2445.54              | 0.000                        |
| L20         | 80.5 - 73.25 (20)      | TP39.912x38.1749x0.3438  | 27.17                | 741.88          | 0.037                        | 0.14                      | 2492.22              | 0.000                        |
| L21         | 73.25 - 72.25 (21)     | TP39.467x37.8468x0.4063  | 27.92                | 896.74          | 0.031                        | 0.14                      | 3081.11              | 0.000                        |
| L22         | 72.25 - 67.25 (22)     | TP40.6671x39.467x0.4063  | 28.37                | 924.29          | 0.031                        | 0.14                      | 3273.35              | 0.000                        |
| L23         | 67.25 - 62.25 (23)     | TP41.8673x40.6671x0.4063 | 28.81                | 951.85          | 0.030                        | 0.14                      | 3471.41              | 0.000                        |
| L24         | 62.25 - 57.25 (24)     | TP43.0674x41.8673x0.4063 | 29.25                | 979.40          | 0.030                        | 0.14                      | 3675.29              | 0.000                        |
| L25         | 57.25 - 52.25 (25)     | TP44.2675x43.0674x0.4063 | 29.69                | 1006.95         | 0.029                        | 0.14                      | 3884.98              | 0.000                        |
| L26         | 52.25 - 49.83 (26)     | TP44.8484x44.2675x0.4063 | 29.90                | 1020.29         | 0.029                        | 0.14                      | 3988.57              | 0.000                        |
| L27         | 49.83 - 49.58 (27)     | TP44.9084x44.8484x0.4063 | 29.91                | 1021.66         | 0.029                        | 0.14                      | 3999.34              | 0.000                        |
| L28         | 49.58 - 44.58 (28)     | TP46.1086x44.9084x0.4063 | 30.35                | 1049.22         | 0.029                        | 0.14                      | 4217.96              | 0.000                        |
| L29         | 44.58 - 36.3333 (29)   | TP48.088x46.1086x0.4063  | 30.49                | 1057.92         | 0.029                        | 0.14                      | 4288.25              | 0.000                        |
| L30         | 36.3333 - 35.3333 (30) | TP47.5161x45.6753x0.4375 | 31.31                | 1163.95         | 0.027                        | 0.23                      | 4820.13              | 0.000                        |
| L31         | 35.3333 - 32.25 (31)   | TP48.2565x47.5161x0.4375 | 31.54                | 1182.26         | 0.027                        | 0.23                      | 4972.92              | 0.000                        |
| L32         | 32.25 - 32 (32)        | TP48.3165x48.2565x0.4375 | 31.55                | 1183.74         | 0.027                        | 0.23                      | 4985.42              | 0.000                        |
| L33         | 32 - 27 (33)           | TP49.5171x48.3165x0.4375 | 31.92                | 1213.42         | 0.026                        | 0.23                      | 5238.56              | 0.000                        |
| L34         | 27 - 22 (34)           | TP50.7176x49.5171x0.4375 | 32.29                | 1243.10         | 0.026                        | 0.23                      | 5497.98              | 0.000                        |
| L35         | 22 - 17 (35)           | TP51.9181x50.7176x0.4375 | 32.66                | 1272.78         | 0.026                        | 0.23                      | 5763.67              | 0.000                        |
| L36         | 17 - 15.5 (36)         | TP52.2783x51.9181x0.4375 | 32.78                | 1281.69         | 0.026                        | 0.23                      | 5844.59              | 0.000                        |
| L37         | 15.5 - 15.25 (37)      | TP52.3383x52.2783x0.4375 | 32.78                | 1283.17         | 0.026                        | 0.23                      | 5858.14              | 0.000                        |
| L38         | 15.25 - 14.75 (38)     | TP52.4584x52.3383x0.4375 | 32.82                | 1286.14         | 0.026                        | 0.23                      | 5885.27              | 0.000                        |
| L39         | 14.75 - 14.5 (39)      | TP52.5184x52.4584x0.4375 | 32.84                | 1287.63         | 0.026                        | 0.23                      | 5898.86              | 0.000                        |
| L40         | 14.5 - 9.5 (40)        | TP53.719x52.5184x0.4375  | 33.22                | 1317.31         | 0.025                        | 0.23                      | 6173.95              | 0.000                        |
| L41         | 9.5 - 4.5 (41)         | TP54.9195x53.719x0.4375  | 33.59                | 1346.99         | 0.025                        | 0.23                      | 6455.31              | 0.000                        |

| Section No. | Elevation<br>ft | Size                | Actual<br>$V_u$<br>K | $\phi V_n$<br>K | Ratio<br>$\frac{V_u}{\phi V_n}$ | Actual<br>$T_u$<br>kip-ft | $\phi T_n$<br>kip-ft | Ratio<br>$\frac{T_u}{\phi T_n}$ |
|-------------|-----------------|---------------------|----------------------|-----------------|---------------------------------|---------------------------|----------------------|---------------------------------|
| L42         | 4.5 - 0 (42)    | TP56x54.9195x0.4375 | 33.93                | 1373.70         | 0.025                           | 0.23                      | 6713.89              | 0.000                           |

### Pole Interaction Design Data

| Section No. | Elevation<br>ft        | Ratio<br>$P_u$<br>$\phi P_n$ | Ratio<br>$M_{ux}$<br>$\phi M_{nx}$ | Ratio<br>$M_{uy}$<br>$\phi M_{ny}$ | Ratio<br>$V_u$<br>$\phi V_n$ | Ratio<br>$T_u$<br>$\phi T_n$ | Comb.<br>Stress<br>Ratio | Allow.<br>Stress<br>Ratio | Criteria |
|-------------|------------------------|------------------------------|------------------------------------|------------------------------------|------------------------------|------------------------------|--------------------------|---------------------------|----------|
| L1          | 160 - 155 (1)          | 0.004                        | 0.024                              | 0.000                              | 0.017                        | 0.000                        | 0.028                    | 1.050                     | 4.8.2    |
| L2          | 155 - 150 (2)          | 0.004                        | 0.066                              | 0.000                              | 0.017                        | 0.000                        | 0.071                    | 1.050                     | 4.8.2    |
| L3          | 150 - 145 (3)          | 0.008                        | 0.145                              | 0.000                              | 0.032                        | 0.000                        | 0.153                    | 1.050                     | 4.8.2    |
| L4          | 145 - 140 (4)          | 0.008                        | 0.213                              | 0.000                              | 0.032                        | 0.000                        | 0.222                    | 1.050                     | 4.8.2    |
| L5          | 140 - 135 (5)          | 0.010                        | 0.311                              | 0.000                              | 0.045                        | 0.000                        | 0.323                    | 1.050                     | 4.8.2    |
| L6          | 135 - 130 (6)          | 0.010                        | 0.392                              | 0.000                              | 0.044                        | 0.000                        | 0.405                    | 1.050                     | 4.8.2    |
| L7          | 130 - 125 (7)          | 0.013                        | 0.479                              | 0.000                              | 0.050                        | 0.000                        | 0.494                    | 1.050                     | 4.8.2    |
| L8          | 125 - 120 (8)          | 0.013                        | 0.560                              | 0.000                              | 0.049                        | 0.000                        | 0.575                    | 1.050                     | 4.8.2    |
| L9          | 120 - 111.333 (9)      | 0.013                        | 0.619                              | 0.000                              | 0.048                        | 0.000                        | 0.634                    | 1.050                     | 4.8.2    |
| L10         | 111.333 - 111 (10)     | 0.012                        | 0.467                              | 0.000                              | 0.041                        | 0.000                        | 0.480                    | 1.050                     | 4.8.2    |
| L11         | 111 - 106 (11)         | 0.012                        | 0.514                              | 0.000                              | 0.040                        | 0.000                        | 0.527                    | 1.050                     | 4.8.2    |
| L12         | 106 - 101 (12)         | 0.012                        | 0.556                              | 0.000                              | 0.039                        | 0.000                        | 0.569                    | 1.050                     | 4.8.2    |
| L13         | 101 - 96 (13)          | 0.012                        | 0.594                              | 0.000                              | 0.039                        | 0.000                        | 0.607                    | 1.050                     | 4.8.2    |
| L14         | 96 - 91 (14)           | 0.012                        | 0.629                              | 0.000                              | 0.038                        | 0.000                        | 0.642                    | 1.050                     | 4.8.2    |
| L15         | 91 - 86 (15)           | 0.012                        | 0.661                              | 0.000                              | 0.037                        | 0.000                        | 0.674                    | 1.050                     | 4.8.2    |
| L16         | 86 - 85.75 (16)        | 0.008                        | 0.411                              | 0.000                              | 0.025                        | 0.000                        | 0.420                    | 1.050                     | 4.8.2    |
| L17         | 85.75 - 81 (17)        | 0.009                        | 0.428                              | 0.000                              | 0.025                        | 0.000                        | 0.437                    | 1.050                     | 4.8.2    |
| L18         | 81 - 80.75 (18)        | 0.012                        | 0.692                              | 0.000                              | 0.037                        | 0.000                        | 0.706                    | 1.050                     | 4.8.2    |
| L19         | 80.75 - 80.5 (19)      | 0.013                        | 0.694                              | 0.000                              | 0.037                        | 0.000                        | 0.707                    | 1.050                     | 4.8.2    |
| L20         | 80.5 - 73.25 (20)      | 0.013                        | 0.702                              | 0.000                              | 0.037                        | 0.000                        | 0.716                    | 1.050                     | 4.8.2    |
| L21         | 73.25 - 72.25 (21)     | 0.011                        | 0.602                              | 0.000                              | 0.031                        | 0.000                        | 0.614                    | 1.050                     | 4.8.2    |
| L22         | 72.25 - 67.25 (22)     | 0.011                        | 0.620                              | 0.000                              | 0.031                        | 0.000                        | 0.633                    | 1.050                     | 4.8.2    |
| L23         | 67.25 - 62.25 (23)     | 0.012                        | 0.637                              | 0.000                              | 0.030                        | 0.000                        | 0.649                    | 1.050                     | 4.8.2    |
| L24         | 62.25 - 57.25 (24)     | 0.012                        | 0.653                              | 0.000                              | 0.030                        | 0.000                        | 0.665                    | 1.050                     | 4.8.2    |
| L25         | 57.25 - 52.25 (25)     | 0.012                        | 0.667                              | 0.000                              | 0.029                        | 0.000                        | 0.680                    | 1.050                     | 4.8.2    |
| L26         | 52.25 - 49.83 (26)     | 0.012                        | 0.674                              | 0.000                              | 0.029                        | 0.000                        | 0.687                    | 1.050                     | 4.8.2    |
| L27         | 49.83 - 49.58 (27)     | 0.012                        | 0.675                              | 0.000                              | 0.029                        | 0.000                        | 0.688                    | 1.050                     | 4.8.2    |
| L28         | 49.58 - 44.58 (28)     | 0.012                        | 0.689                              | 0.000                              | 0.029                        | 0.000                        | 0.702                    | 1.050                     | 4.8.2    |
| L29         | 44.58 - 36.3333 (29)   | 0.012                        | 0.693                              | 0.000                              | 0.029                        | 0.000                        | 0.706                    | 1.050                     | 4.8.2    |
| L30         | 36.3333 - 35.3333 (30) | 0.012                        | 0.658                              | 0.000                              | 0.027                        | 0.000                        | 0.671                    | 1.050                     | 4.8.2    |
| L31         | 35.3333 - 32.25 (31)   | 0.013                        | 0.664                              | 0.000                              | 0.027                        | 0.000                        | 0.678                    | 1.050                     | 4.8.2    |
| L32         | 32.25 - 32 (32)        | 0.013                        | 0.665                              | 0.000                              | 0.027                        | 0.000                        | 0.678                    | 1.050                     | 4.8.2    |
| L33         | 32 - 27 (33)           | 0.013                        | 0.674                              | 0.000                              | 0.026                        | 0.000                        | 0.688                    | 1.050                     | 4.8.2    |
| L34         | 27 - 22 (34)           | 0.013                        | 0.684                              | 0.000                              | 0.026                        | 0.000                        | 0.697                    | 1.050                     | 4.8.2    |
| L35         | 22 - 17 (35)           | 0.013                        | 0.692                              | 0.000                              | 0.026                        | 0.000                        | 0.706                    | 1.050                     | 4.8.2    |
| L36         | 17 - 15.5 (36)         | 0.013                        | 0.695                              | 0.000                              | 0.026                        | 0.000                        | 0.709                    | 1.050                     | 4.8.2    |
| L37         | 15.5 - 15.25           | 0.013                        | 0.695                              | 0.000                              | 0.026                        | 0.000                        | 0.709                    | 1.050                     | 4.8.2    |

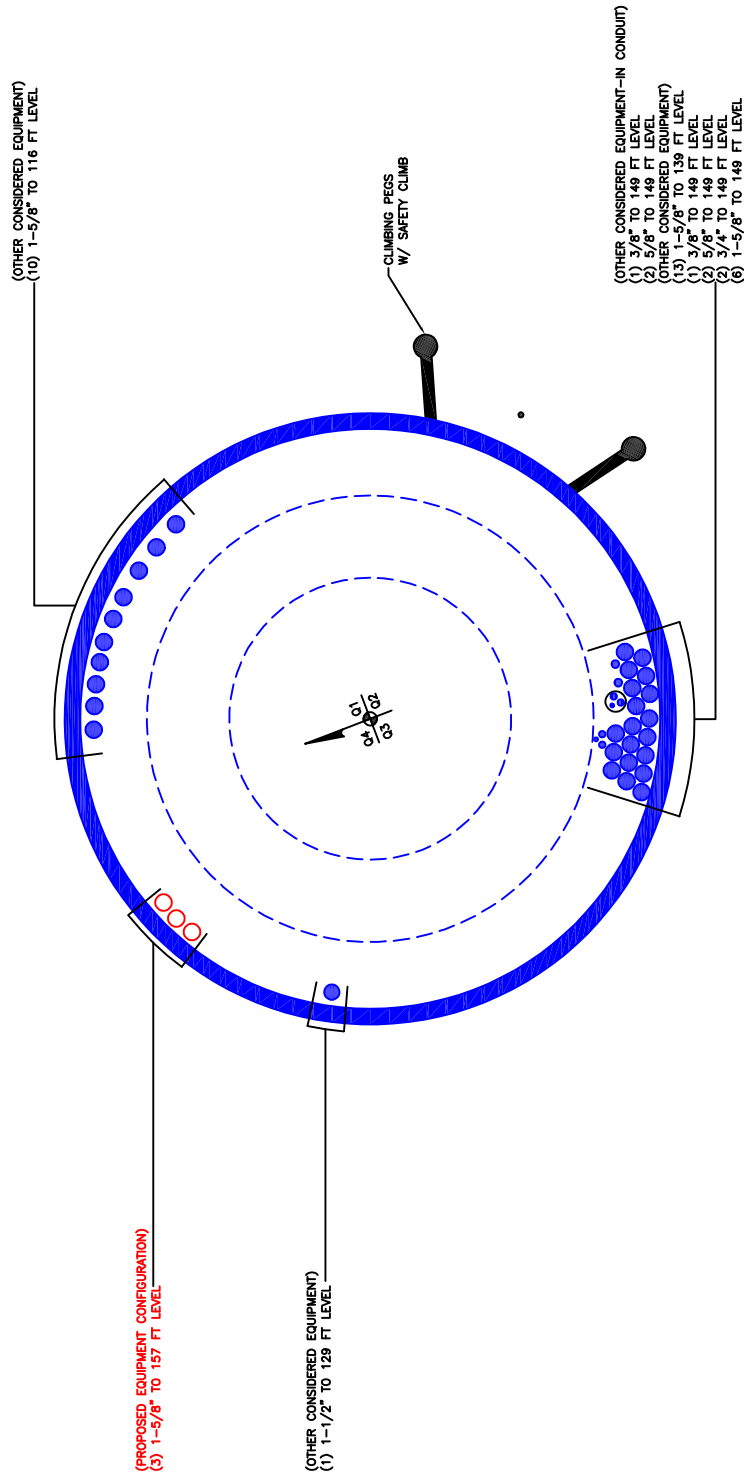
| Section No. | Elevation<br>ft         | Ratio<br>$P_u$<br>$\phi P_n$ | Ratio<br>$M_{ux}$<br>$\phi M_{nx}$ | Ratio<br>$M_{uy}$<br>$\phi M_{ny}$ | Ratio<br>$V_u$<br>$\phi V_n$ | Ratio<br>$T_u$<br>$\phi T_n$ | Comb.<br>Stress<br>Ratio | Allow.<br>Stress<br>Ratio | Criteria |
|-------------|-------------------------|------------------------------|------------------------------------|------------------------------------|------------------------------|------------------------------|--------------------------|---------------------------|----------|
| L38         | (37)<br>15.25 - 14.75   | 0.013                        | 0.696                              | 0.000                              | 0.026                        | 0.000                        | 0.710                    | 1.050                     | 4.8.2    |
| L39         | (38)<br>14.75 - 14.5    | 0.013                        | 0.697                              | 0.000                              | 0.026                        | 0.000                        | 0.711                    | 1.050                     | 4.8.2    |
| L40         | (39)<br>14.5 - 9.5 (40) | 0.014                        | 0.705                              | 0.000                              | 0.025                        | 0.000                        | 0.719                    | 1.050                     | 4.8.2    |
| L41         | 9.5 - 4.5 (41)          | 0.014                        | 0.713                              | 0.000                              | 0.025                        | 0.000                        | 0.728                    | 1.050                     | 4.8.2    |
| L42         | 4.5 - 0 (42)            | 0.014                        | 0.721                              | 0.000                              | 0.025                        | 0.000                        | 0.735                    | 1.050                     | 4.8.2    |

## Section Capacity Table

| Section No. | Elevation<br>ft   | Component<br>Type | Size                     | Critical<br>Element | P<br>K | $\phi P_{allow}$<br>K | %<br>Capacity   | Pass<br>Fail     |
|-------------|-------------------|-------------------|--------------------------|---------------------|--------|-----------------------|-----------------|------------------|
| L1          | 160 - 155         | Pole              | TP20.801x19.6x0.25       | 1                   | -3.92  | 1016.19               | 2.7             | Pass             |
| L2          | 155 - 150         | Pole              | TP22.0021x20.801x0.25    | 2                   | -4.27  | 1075.58               | 6.7             | Pass             |
| L3          | 150 - 145         | Pole              | TP23.2031x22.0021x0.25   | 3                   | -8.13  | 1134.97               | 14.6            | Pass             |
| L4          | 145 - 140         | Pole              | TP24.4041x23.2031x0.25   | 4                   | -8.58  | 1194.35               | 21.1            | Pass             |
| L5          | 140 - 135         | Pole              | TP25.6051x24.4041x0.25   | 5                   | -12.37 | 1253.74               | 30.8            | Pass             |
| L6          | 135 - 130         | Pole              | TP26.8062x25.6051x0.25   | 6                   | -13.01 | 1313.13               | 38.5            | Pass             |
| L7          | 130 - 125         | Pole              | TP28.0072x26.8062x0.25   | 7                   | -16.66 | 1372.52               | 47.1            | Pass             |
| L8          | 125 - 120         | Pole              | TP29.2082x28.0072x0.25   | 8                   | -17.39 | 1431.90               | 54.8            | Pass             |
| L9          | 120 - 111.333     | Pole              | TP31.29x29.2082x0.25     | 9                   | -18.02 | 1479.41               | 60.4            | Pass             |
| L10         | 111.333 - 111     | Pole              | TP30.867x29.669x0.3438   | 10                  | -23.24 | 2075.27               | 45.7            | Pass             |
| L11         | 111 - 106         | Pole              | TP32.065x30.867x0.3438   | 11                  | -24.30 | 2156.72               | 50.2            | Pass             |
| L12         | 106 - 101         | Pole              | TP33.2631x32.065x0.3438  | 12                  | -25.39 | 2238.18               | 54.2            | Pass             |
| L13         | 101 - 96          | Pole              | TP34.4611x33.2631x0.3438 | 13                  | -26.52 | 2319.63               | 57.8            | Pass             |
| L14         | 96 - 91           | Pole              | TP35.6591x34.4611x0.3438 | 14                  | -27.68 | 2401.08               | 61.2            | Pass             |
| L15         | 91 - 86           | Pole              | TP36.8571x35.6591x0.3438 | 15                  | -28.87 | 2482.54               | 64.2            | Pass             |
| L16         | 86 - 85.75        | Pole              | TP36.917x36.8571x0.5125  | 16                  | -28.96 | 3690.20               | 40.0            | Pass             |
| L17         | 85.75 - 81        | Pole              | TP38.0551x36.917x0.5063  | 17                  | -30.48 | 3759.78               | 41.7            | Pass             |
| L18         | 81 - 80.75        | Pole              | TP38.115x38.0551x0.3438  | 18                  | -30.56 | 2568.06               | 67.2            | Pass             |
| L19         | 80.75 - 80.5      | Pole              | TP38.1749x38.115x0.3438  | 19                  | -30.63 | 2572.13               | 67.4            | Pass             |
| L20         | 80.5 - 73.25      | Pole              | TP39.912x38.1749x0.3438  | 20                  | -31.01 | 2596.57               | 68.2            | Pass             |
| L21         | 73.25 - 72.25     | Pole              | TP39.467x37.8468x0.4063  | 21                  | -33.96 | 3138.59               | 58.5            | Pass             |
| L22         | 72.25 - 67.25     | Pole              | TP40.6671x39.467x0.4063  | 22                  | -35.40 | 3235.03               | 60.2            | Pass             |
| L23         | 67.25 - 62.25     | Pole              | TP41.8673x40.6671x0.4063 | 23                  | -36.87 | 3331.46               | 61.8            | Pass             |
| L24         | 62.25 - 57.25     | Pole              | TP43.0674x41.8673x0.4063 | 24                  | -38.38 | 3427.89               | 63.4            | Pass             |
| L25         | 57.25 - 52.25     | Pole              | TP44.2675x43.0674x0.4063 | 25                  | -39.93 | 3524.32               | 64.8            | Pass             |
| L26         | 52.25 - 49.83     | Pole              | TP44.8484x44.2675x0.4063 | 26                  | -40.87 | 3571.00               | 65.4            | Pass             |
| L27         | 49.83 - 49.58     | Pole              | TP44.9084x44.8484x0.4063 | 27                  | -40.98 | 3575.82               | 65.5            | Pass             |
| L28         | 49.58 - 44.58     | Pole              | TP46.1086x44.9084x0.4063 | 28                  | -42.93 | 3672.25               | 66.8            | Pass             |
| L29         | 44.58 - 36.3333   | Pole              | TP48.088x46.1086x0.4063  | 29                  | -43.55 | 3702.73               | 67.2            | Pass             |
| L30         | 36.3333 - 35.3333 | Pole              | TP47.5161x45.6753x0.4375 | 30                  | -48.43 | 4073.83               | 63.9            | Pass             |
| L31         | 35.3333 - 32.25   | Pole              | TP48.2565x47.5161x0.4375 | 31                  | -49.73 | 4137.89               | 64.5            | Pass             |
| L32         | 32.25 - 32        | Pole              | TP48.3165x48.2565x0.4375 | 32                  | -49.85 | 4143.09               | 64.6            | Pass             |
| L33         | 32 - 27           | Pole              | TP49.5171x48.3165x0.4375 | 33                  | -51.99 | 4246.98               | 65.5            | Pass             |
| L34         | 27 - 22           | Pole              | TP50.7176x49.5171x0.4375 | 34                  | -54.19 | 4350.86               | 66.4            | Pass             |
| L35         | 22 - 17           | Pole              | TP51.9181x50.7176x0.4375 | 35                  | -56.41 | 4454.75               | 67.3            | Pass             |
| L36         | 17 - 15.5         | Pole              | TP52.2783x51.9181x0.4375 | 36                  | -57.13 | 4485.91               | 67.5            | Pass             |
| L37         | 15.5 - 15.25      | Pole              | TP52.3383x52.2783x0.4375 | 37                  | -57.26 | 4491.11               | 67.6            | Pass             |
| L38         | 15.25 - 14.75     | Pole              | TP52.4584x52.3383x0.4375 | 38                  | -57.50 | 4501.50               | 67.7            | Pass             |
| L39         | 14.75 - 14.5      | Pole              | TP52.5184x52.4584x0.4375 | 39                  | -57.63 | 4506.69               | 67.7            | Pass             |
| L40         | 14.5 - 9.5        | Pole              | TP53.719x52.5184x0.4375  | 40                  | -59.88 | 4610.58               | 68.5            | Pass             |
| L41         | 9.5 - 4.5         | Pole              | TP54.9195x53.719x0.4375  | 41                  | -62.01 | 4714.46               | 69.3            | Pass             |
| L42         | 4.5 - 0           | Pole              | TP56x54.9195x0.4375      | 42                  | -63.89 | 4807.96               | 70.0            | Pass             |
|             |                   |                   |                          |                     |        |                       | Summary         |                  |
|             |                   |                   |                          |                     |        |                       | Pole (L42)      | Pass             |
|             |                   |                   |                          |                     |        |                       | <b>RATING =</b> | <b>70.0 Pass</b> |

\*Note: Above stress ratio for reinforced sections are approximate. More exact calculations are presented in Appendix C.

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



BUSINESS UNIT-806853 TOWER ID:C\_BASELEVEL

## **APPENDIX C**

### **ADDITIONAL CALCULATIONS**

Site BU: 806953  
Work Order: 2041716

### Pole Geometry

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|   | Pole Height Above Base (ft) | Section Length (ft) | Lap Splice Length (ft) | Number of Sides | Top Diameter (in) | Bottom Diameter (in) | Wall Thickness (in) | Bend Radius (in) | Pole Material |
|---|-----------------------------|---------------------|------------------------|-----------------|-------------------|----------------------|---------------------|------------------|---------------|
| 1 | 160                         | 48.6667             | 4.6667                 | 12              | 19.6              | 31.29                | 0.25                | Auto             | A572-65       |
| 2 | 116                         | 42.75               | 5.75                   | 12              | 29.67             | 39.912               | 0.34375             | Auto             | A572-65       |
| 3 | 79                          | 42.6667             | 6.6667                 | 12              | 37.85             | 48.088               | 0.40625             | Auto             | A572-65       |
| 4 | 43                          | 43                  | 0                      | 12              | 45.68             | 56                   | 0.4375              | Auto             | A572-65       |

### Reinforcement Configuration

|    | Bottom Effective Elevation (ft) | Top Effective Elevation (ft) | Type  | Model          | Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----|---------------------------------|------------------------------|-------|----------------|--------|---|---|---|---|---|---|---|---|---|----|----|----|
| 1  | 0                               | 15.5                         | plate | MK SR 1        |        |   |   |   |   |   |   |   |   |   |    |    |    |
| 2  | 78.25                           | 80.75                        | plate | MK SR 2        |        |   |   |   |   |   |   |   |   |   |    |    |    |
| 3  | 14.75                           | 32.25                        | plate | CCI-AFP-060100 |        |   |   |   |   |   |   |   |   |   |    |    |    |
| 4  | 32.25                           | 49.83                        | plate | CCI-AFP-060100 |        |   |   |   |   |   |   |   |   |   |    |    |    |
| 5  | 81                              | 86                           | plate | CCI-AFP-060100 | 3      |   | E |   |   |   | E |   |   |   | E  |    |    |
| 6  |                                 |                              |       |                |        |   |   |   |   |   |   |   |   |   |    |    |    |
| 7  |                                 |                              |       |                |        |   |   |   |   |   |   |   |   |   |    |    |    |
| 8  |                                 |                              |       |                |        |   |   |   |   |   |   |   |   |   |    |    |    |
| 9  |                                 |                              |       |                |        |   |   |   |   |   |   |   |   |   |    |    |    |
| 10 |                                 |                              |       |                |        |   |   |   |   |   |   |   |   |   |    |    |    |

### Reinforcement Details

|   | B (in) | H (in) | Gross Area (in <sup>2</sup> ) | Pole Face to Centroid (in) | Bottom Termination Type | Bottom Termination Length (in) | Top Termination Type | Top Termination Length (in) | Lu (in) | Net Area (in <sup>2</sup> ) | Bolt Hole Size (in) | Reinforcement Material |
|---|--------|--------|-------------------------------|----------------------------|-------------------------|--------------------------------|----------------------|-----------------------------|---------|-----------------------------|---------------------|------------------------|
| 1 | 4      | 0.75   | 3                             | 0.375                      | PC 8.8 - M20 (100)      | 15                             | PC 8.8 - M20 (100)   | 15.000                      | 15.000  | 2.063                       | 1.1875              | A572-65                |
| 2 | 4      | 0.75   | 3                             | 0.375                      | PC 8.8 - M20 (100)      | 15                             | PC 8.8 - M20 (100)   | 15.000                      | 15.000  | 2.069                       | 1.1788              | A572-65                |
| 3 | 6      | 1      | 6                             | 0.5                        | PC 8.8 - M20 (100)      | 30                             | PC 8.8 - M20 (100)   | 30.000                      | 16.000  | 4.750                       | 1.1875              | A572-65                |
| 4 | 6      | 1      | 6                             | 0.5                        | PC 8.8 - M20 (100)      | 30                             | PC 8.8 - M20 (100)   | 30.000                      | 16.000  | 4.750                       | 1.1875              | A572-65                |
| 5 | 6      | 1      | 6                             | 0.5                        | PC 8.8 - M20 (100)      | 30                             | PC 8.8 - M20 (100)   | 30.000                      | 16.000  | 4.750                       | 1.1875              | A572-65                |

### Connection Details for Custom Reinforcements

| Reinforcement | End    | # Bolts | N or X | Bolt Spacing (in) | Edge Dist (in) | Weld Grade (ksi) | Transverse (Horiz.) Weld Type | Horiz. Weld Length (in) | Horiz. Groove Depth (in) | Horiz. Groove Angle (deg) | Horiz. Fillet Size (in) | Vertical Weld Length (in) | Vertical Fillet Size (in) | Rev H Connection Capacity (kip) |
|---------------|--------|---------|--------|-------------------|----------------|------------------|-------------------------------|-------------------------|--------------------------|---------------------------|-------------------------|---------------------------|---------------------------|---------------------------------|
| MK SR 1       | Top    | 5       | N      | 3                 | 3              | -                | -                             | -                       | -                        | -                         | -                       | -                         | -                         | -                               |
|               | Bottom | 5       | N      | 3                 | 3              | -                | -                             | -                       | -                        | -                         | -                       | -                         | -                         | -                               |
| MK SR 2       | Top    | 5       | N      | 3                 | 3              | -                | -                             | -                       | -                        | -                         | -                       | -                         | -                         | -                               |
|               | Bottom | 5       | N      | 3                 | 3              | -                | -                             | -                       | -                        | -                         | -                       | -                         | -                         | -                               |

# TNX Geometry Input

Increment (ft):  [Export to TNX](#)

|    | Section Height (ft) | Section Length (ft) | Lap Splice Length (ft) | Number of Sides | Top Diameter (in) | Bottom Diameter (in) | Wall Thickness (in) | Tapered Pole Grade | Weight Multiplier |
|----|---------------------|---------------------|------------------------|-----------------|-------------------|----------------------|---------------------|--------------------|-------------------|
| 1  | 160 - 155           | 5                   |                        | 12              | 19.600            | 20.801               | 0.25                | A572-65            | 1.000             |
| 2  | 155 - 150           | 5                   |                        | 12              | 20.801            | 22.002               | 0.25                | A572-65            | 1.000             |
| 3  | 150 - 145           | 5                   |                        | 12              | 22.002            | 23.203               | 0.25                | A572-65            | 1.000             |
| 4  | 145 - 140           | 5                   |                        | 12              | 23.203            | 24.404               | 0.25                | A572-65            | 1.000             |
| 5  | 140 - 135           | 5                   |                        | 12              | 24.404            | 25.605               | 0.25                | A572-65            | 1.000             |
| 6  | 135 - 130           | 5                   |                        | 12              | 25.605            | 26.806               | 0.25                | A572-65            | 1.000             |
| 7  | 130 - 125           | 5                   |                        | 12              | 26.806            | 28.007               | 0.25                | A572-65            | 1.000             |
| 8  | 125 - 120           | 5                   |                        | 12              | 28.007            | 29.208               | 0.25                | A572-65            | 1.000             |
| 9  | 120 - 116           | 8.6667              | 4.6667                 | 12              | 29.208            | 31.290               | 0.25                | A572-65            | 1.000             |
| 10 | 116 - 111           | 5                   |                        | 12              | 29.669            | 30.867               | 0.34375             | A572-65            | 1.000             |
| 11 | 111 - 106           | 5                   |                        | 12              | 30.867            | 32.065               | 0.34375             | A572-65            | 1.000             |
| 12 | 106 - 101           | 5                   |                        | 12              | 32.065            | 33.263               | 0.34375             | A572-65            | 1.000             |
| 13 | 101 - 96            | 5                   |                        | 12              | 33.263            | 34.461               | 0.34375             | A572-65            | 1.000             |
| 14 | 96 - 91             | 5                   |                        | 12              | 34.461            | 35.659               | 0.34375             | A572-65            | 1.000             |
| 15 | 91 - 86             | 5                   |                        | 12              | 35.659            | 36.857               | 0.34375             | A572-65            | 1.000             |
| 16 | 86 - 85.75          | 0.25                |                        | 12              | 36.857            | 36.917               | 0.5125              | A572-65            | 0.974             |
| 17 | 85.75 - 81          | 4.75                |                        | 12              | 36.917            | 38.055               | 0.50625             | A572-65            | 0.976             |
| 18 | 81 - 80.75          | 0.25                |                        | 12              | 38.055            | 38.115               | 0.34375             | A572-65            | 1.000             |
| 19 | 80.75 - 80.5        | 0.25                |                        | 12              | 38.115            | 38.175               | 0.34375             | A572-65            | 1.000             |
| 20 | 80.5 - 79           | 7.25                | 5.75                   | 12              | 38.175            | 39.912               | 0.34375             | A572-65            | 1.000             |
| 21 | 79 - 72.25          | 6.75                |                        | 12              | 37.847            | 39.467               | 0.40625             | A572-65            | 1.000             |
| 22 | 72.25 - 67.25       | 5                   |                        | 12              | 39.467            | 40.667               | 0.40625             | A572-65            | 1.000             |
| 23 | 67.25 - 62.25       | 5                   |                        | 12              | 40.667            | 41.867               | 0.40625             | A572-65            | 1.000             |
| 24 | 62.25 - 57.25       | 5                   |                        | 12              | 41.867            | 43.067               | 0.40625             | A572-65            | 1.000             |
| 25 | 57.25 - 52.25       | 5                   |                        | 12              | 43.067            | 44.268               | 0.40625             | A572-65            | 1.000             |
| 26 | 52.25 - 49.83       | 2.42                |                        | 12              | 44.268            | 44.848               | 0.40625             | A572-65            | 1.000             |
| 27 | 49.83 - 49.58       | 0.25                |                        | 12              | 44.848            | 44.908               | 0.40625             | A572-65            | 1.000             |
| 28 | 49.58 - 44.58       | 5                   |                        | 12              | 44.908            | 46.109               | 0.40625             | A572-65            | 1.000             |
| 29 | 44.58 - 43          | 8.2467              | 6.6667                 | 12              | 46.109            | 48.088               | 0.40625             | A572-65            | 1.000             |
| 30 | 43 - 35.3333        | 7.6667              |                        | 12              | 45.675            | 47.516               | 0.4375              | A572-65            | 1.000             |
| 31 | 35.3333 - 32.25     | 3.0833              |                        | 12              | 47.516            | 48.256               | 0.4375              | A572-65            | 1.000             |
| 32 | 32.25 - 32          | 0.25                |                        | 12              | 48.256            | 48.317               | 0.4375              | A572-65            | 1.000             |
| 33 | 32 - 27             | 5                   |                        | 12              | 48.317            | 49.517               | 0.4375              | A572-65            | 1.000             |
| 34 | 27 - 22             | 5                   |                        | 12              | 49.517            | 50.718               | 0.4375              | A572-65            | 1.000             |
| 35 | 22 - 17             | 5                   |                        | 12              | 50.718            | 51.918               | 0.4375              | A572-65            | 1.000             |
| 36 | 17 - 15.5           | 1.5                 |                        | 12              | 51.918            | 52.278               | 0.4375              | A572-65            | 1.000             |
| 37 | 15.5 - 15.25        | 0.25                |                        | 12              | 52.278            | 52.338               | 0.4375              | A572-65            | 1.000             |
| 38 | 15.25 - 14.75       | 0.5                 |                        | 12              | 52.338            | 52.458               | 0.4375              | A572-65            | 1.000             |
| 39 | 14.75 - 14.5        | 0.25                |                        | 12              | 52.458            | 52.518               | 0.4375              | A572-65            | 1.000             |
| 40 | 14.5 - 9.5          | 5                   |                        | 12              | 52.518            | 53.719               | 0.4375              | A572-65            | 1.000             |
| 41 | 9.5 - 4.5           | 5                   |                        | 12              | 53.719            | 54.920               | 0.4375              | A572-65            | 1.000             |
| 42 | 4.5 - 0             | 4.5                 |                        | 12              | 54.920            | 56.000               | 0.4375              | A572-65            | 1.000             |

## TNX Section Forces

| Increment (ft): |                     | TNX Output         |                          |                    |
|-----------------|---------------------|--------------------|--------------------------|--------------------|
|                 | Section Height (ft) | P <sub>u</sub> (K) | M <sub>ux</sub> (kip-ft) | V <sub>u</sub> (K) |
| 1               | 160 - 155           | 3.92               | 12.20                    | 4.78               |
| 2               | 155 - 150           | 4.27               | 37.07                    | 5.17               |
| 3               | 150 - 145           | 8.13               | 88.69                    | 10.51              |
| 4               | 145 - 140           | 8.58               | 142.28                   | 10.93              |
| 5               | 140 - 135           | 12.37              | 224.36                   | 15.95              |
| 6               | 135 - 130           | 13.01              | 305.15                   | 16.38              |
| 7               | 130 - 125           | 16.66              | 399.50                   | 19.67              |
| 8               | 125 - 120           | 17.39              | 498.88                   | 20.10              |
| 9               | 120 - 116           | 18.02              | 579.91                   | 20.44              |
| 10              | 116 - 111           | 23.24              | 703.07                   | 24.22              |
| 11              | 111 - 106           | 24.30              | 825.24                   | 24.67              |
| 12              | 106 - 101           | 25.39              | 949.64                   | 25.11              |
| 13              | 101 - 96            | 26.52              | 1076.26                  | 25.56              |
| 14              | 96 - 91             | 27.68              | 1205.11                  | 26.01              |
| 15              | 91 - 86             | 28.87              | 1336.18                  | 26.45              |
| 16              | 86 - 85.75          | 28.96              | 1342.79                  | 26.47              |
| 17              | 85.75 - 81          | 30.48              | 1469.78                  | 26.98              |
| 18              | 81 - 80.75          | 30.56              | 1476.52                  | 27.00              |
| 19              | 80.75 - 80.5        | 30.63              | 1483.27                  | 27.03              |
| 20              | 80.5 - 79           | 31.01              | 1523.89                  | 27.17              |
| 21              | 79 - 72.25          | 33.96              | 1709.78                  | 27.92              |
| 22              | 72.25 - 67.25       | 35.40              | 1850.42                  | 28.37              |
| 23              | 67.25 - 62.25       | 36.87              | 1993.30                  | 28.81              |
| 24              | 62.25 - 57.25       | 38.38              | 2138.38                  | 29.25              |
| 25              | 57.25 - 52.25       | 39.93              | 2285.64                  | 29.69              |
| 26              | 52.25 - 49.83       | 40.87              | 2357.70                  | 29.90              |
| 27              | 49.83 - 49.58       | 40.98              | 2365.17                  | 29.91              |
| 28              | 49.58 - 44.58       | 42.93              | 2515.76                  | 30.35              |
| 29              | 44.58 - 43          | 43.55              | 2563.78                  | 30.49              |
| 30              | 43 - 35.3333        | 48.43              | 2800.51                  | 31.31              |
| 31              | 35.3333 - 32.25     | 49.73              | 2897.34                  | 31.54              |
| 32              | 32.25 - 32          | 49.85              | 2905.23                  | 31.55              |
| 33              | 32 - 27             | 51.99              | 3063.85                  | 31.92              |
| 34              | 27 - 22             | 54.19              | 3224.29                  | 32.29              |
| 35              | 22 - 17             | 56.41              | 3386.57                  | 32.66              |
| 36              | 17 - 15.5           | 57.13              | 3435.62                  | 32.78              |
| 37              | 15.5 - 15.25        | 57.26              | 3443.81                  | 32.78              |
| 38              | 15.25 - 14.75       | 57.50              | 3460.20                  | 32.82              |
| 39              | 14.75 - 14.5        | 57.63              | 3468.41                  | 32.84              |
| 40              | 14.5 - 9.5          | 59.88              | 3633.47                  | 33.22              |
| 41              | 9.5 - 4.5           | 62.01              | 3800.39                  | 33.59              |
| 42              | 4.5 - 0             | 63.89              | 3952.21                  | 33.93              |

# Analysis Results

| Elevation (ft) | Component Type | Size                   | Critical Element         | % Capacity | Pass / Fail |
|----------------|----------------|------------------------|--------------------------|------------|-------------|
| 160 - 155      | Pole           | TP20.801x19.6x0.25     | Pole                     | 2.7%       | Pass        |
| 155 - 150      | Pole           | TP22.002x20.801x0.25   | Pole                     | 6.7%       | Pass        |
| 150 - 145      | Pole           | TP23.203x22.002x0.25   | Pole                     | 14.6%      | Pass        |
| 145 - 140      | Pole           | TP24.404x23.203x0.25   | Pole                     | 21.1%      | Pass        |
| 140 - 135      | Pole           | TP25.605x24.404x0.25   | Pole                     | 30.7%      | Pass        |
| 135 - 130      | Pole           | TP26.806x25.605x0.25   | Pole                     | 38.4%      | Pass        |
| 130 - 125      | Pole           | TP28.007x26.806x0.25   | Pole                     | 46.9%      | Pass        |
| 125 - 120      | Pole           | TP29.208x28.007x0.25   | Pole                     | 54.6%      | Pass        |
| 120 - 116      | Pole           | TP31.29x29.208x0.25    | Pole                     | 60.3%      | Pass        |
| 116 - 111      | Pole           | TP30.867x29.669x0.3438 | Pole                     | 45.6%      | Pass        |
| 111 - 106      | Pole           | TP32.065x30.867x0.3438 | Pole                     | 50.1%      | Pass        |
| 106 - 101      | Pole           | TP33.263x32.065x0.3438 | Pole                     | 54.1%      | Pass        |
| 101 - 96       | Pole           | TP34.461x33.263x0.3438 | Pole                     | 57.7%      | Pass        |
| 96 - 91        | Pole           | TP35.659x34.461x0.3438 | Pole                     | 61.0%      | Pass        |
| 91 - 86        | Pole           | TP36.857x35.659x0.3438 | Pole                     | 64.1%      | Pass        |
| 86 - 85.75     | Pole + Reinf.  | TP36.917x36.857x0.5125 | Reinf. 5 Tension Rupture | 61.0%      | Pass        |
| 85.75 - 81     | Pole + Reinf.  | TP38.055x36.917x0.5063 | Reinf. 5 Tension Rupture | 63.4%      | Pass        |
| 81 - 80.75     | Pole           | TP38.115x38.055x0.3438 | Pole                     | 67.1%      | Pass        |
| 80.75 - 80.5   | Pole           | TP38.175x38.115x0.3438 | Pole                     | 67.2%      | Pass        |
| 80.5 - 79      | Pole           | TP39.912x38.175x0.3438 | Pole                     | 68.0%      | Pass        |
| 79 - 72.25     | Pole           | TP39.467x37.847x0.4063 | Pole                     | 58.4%      | Pass        |
| 72.25 - 67.25  | Pole           | TP40.667x39.467x0.4063 | Pole                     | 60.1%      | Pass        |
| 67.25 - 62.25  | Pole           | TP41.867x40.667x0.4063 | Pole                     | 61.7%      | Pass        |
| 62.25 - 57.25  | Pole           | TP43.067x41.867x0.4063 | Pole                     | 63.2%      | Pass        |
| 57.25 - 52.25  | Pole           | TP44.268x43.067x0.4063 | Pole                     | 64.6%      | Pass        |
| 52.25 - 49.83  | Pole           | TP44.848x44.268x0.4063 | Pole                     | 65.3%      | Pass        |
| 49.83 - 49.58  | Pole           | TP44.908x44.848x0.4063 | Pole                     | 65.3%      | Pass        |
| 49.58 - 44.58  | Pole           | TP46.109x44.908x0.4063 | Pole                     | 66.6%      | Pass        |
| 44.58 - 43     | Pole           | TP48.088x46.109x0.4063 | Pole                     | 67.1%      | Pass        |
| 43 - 35.33     | Pole           | TP47.516x45.675x0.4375 | Pole                     | 63.8%      | Pass        |
| 35.33 - 32.25  | Pole           | TP48.256x47.516x0.4375 | Pole                     | 64.4%      | Pass        |
| 32.25 - 32     | Pole           | TP48.317x48.256x0.4375 | Pole                     | 64.4%      | Pass        |
| 32 - 27        | Pole           | TP49.517x48.317x0.4375 | Pole                     | 65.3%      | Pass        |
| 27 - 22        | Pole           | TP50.718x49.517x0.4375 | Pole                     | 66.2%      | Pass        |
| 22 - 17        | Pole           | TP51.918x50.718x0.4375 | Pole                     | 67.1%      | Pass        |
| 17 - 15.5      | Pole           | TP52.278x51.918x0.4375 | Pole                     | 67.3%      | Pass        |
| 15.5 - 15.25   | Pole           | TP52.338x52.278x0.4375 | Pole                     | 67.4%      | Pass        |
| 15.25 - 14.75  | Pole           | TP52.458x52.338x0.4375 | Pole                     | 67.5%      | Pass        |
| 14.75 - 14.5   | Pole           | TP52.518x52.458x0.4375 | Pole                     | 67.5%      | Pass        |
| 14.5 - 9.5     | Pole           | TP53.719x52.518x0.4375 | Pole                     | 68.3%      | Pass        |
| 9.5 - 4.5      | Pole           | TP54.92x53.719x0.4375  | Pole                     | 69.1%      | Pass        |
| 4.5 - 0        | Pole           | TP56x54.92x0.4375      | Pole                     | 69.8%      | Pass        |
|                |                |                        |                          | Summary    |             |
|                |                |                        | Pole                     | 69.8%      | Pass        |
|                |                |                        | Reinforcement            | 63.4%      | Pass        |
|                |                |                        | Overall                  | 69.8%      | Pass        |

# Additional Calculations

| Section<br>Elevation (ft) | Moment of Inertia (in <sup>4</sup> ) |        |       | Area (in <sup>2</sup> ) |        |       | % Capacity* |    |    |    |    |       |
|---------------------------|--------------------------------------|--------|-------|-------------------------|--------|-------|-------------|----|----|----|----|-------|
|                           | Pole                                 | Reinf. | Total | Pole                    | Reinf. | Total | Pole        | R1 | R2 | R3 | R4 | R5    |
| 160 - 155                 | 893                                  | n/a    | 893   | 16.52                   | n/a    | 16.52 | 2.7%        |    |    |    |    |       |
| 155 - 150                 | 1059                                 | n/a    | 1059  | 17.49                   | n/a    | 17.49 | 6.7%        |    |    |    |    |       |
| 150 - 145                 | 1244                                 | n/a    | 1244  | 18.45                   | n/a    | 18.45 | 14.6%       |    |    |    |    |       |
| 145 - 140                 | 1450                                 | n/a    | 1450  | 19.42                   | n/a    | 19.42 | 21.1%       |    |    |    |    |       |
| 140 - 135                 | 1677                                 | n/a    | 1677  | 20.38                   | n/a    | 20.38 | 30.7%       |    |    |    |    |       |
| 135 - 130                 | 1927                                 | n/a    | 1927  | 21.35                   | n/a    | 21.35 | 38.4%       |    |    |    |    |       |
| 130 - 125                 | 2200                                 | n/a    | 2200  | 22.31                   | n/a    | 22.31 | 46.9%       |    |    |    |    |       |
| 125 - 120                 | 2499                                 | n/a    | 2499  | 23.28                   | n/a    | 23.28 | 54.6%       |    |    |    |    |       |
| 120 - 116                 | 2756                                 | n/a    | 2756  | 24.05                   | n/a    | 24.05 | 60.3%       |    |    |    |    |       |
| 116 - 111                 | 4023                                 | n/a    | 4023  | 33.74                   | n/a    | 33.74 | 45.6%       |    |    |    |    |       |
| 111 - 106                 | 4516                                 | n/a    | 4516  | 35.06                   | n/a    | 35.06 | 50.1%       |    |    |    |    |       |
| 106 - 101                 | 5047                                 | n/a    | 5047  | 36.39                   | n/a    | 36.39 | 54.1%       |    |    |    |    |       |
| 101 - 96                  | 5618                                 | n/a    | 5618  | 37.71                   | n/a    | 37.71 | 57.7%       |    |    |    |    |       |
| 96 - 91                   | 6231                                 | n/a    | 6231  | 39.03                   | n/a    | 39.03 | 61.0%       |    |    |    |    |       |
| 91 - 86                   | 6887                                 | n/a    | 6887  | 40.36                   | n/a    | 40.36 | 64.1%       |    |    |    |    |       |
| 86 - 85.75                | 6921                                 | 3263   | 10183 | 40.42                   | 18.00  | 58.42 | 42.2%       |    |    |    |    | 61.0% |
| 85.75 - 81                | 7587                                 | 3460   | 11047 | 41.68                   | 18.00  | 59.68 | 44.5%       |    |    |    |    | 63.4% |
| 81 - 80.75                | 7623                                 | n/a    | 7623  | 41.75                   | n/a    | 41.75 | 67.1%       |    |    |    |    |       |
| 80.75 - 80.5              | 7660                                 | n/a    | 7660  | 41.81                   | n/a    | 41.81 | 67.2%       |    |    |    |    |       |
| 80.5 - 79                 | 7880                                 | n/a    | 7880  | 42.21                   | n/a    | 42.21 | 68.0%       |    |    |    |    |       |
| 79 - 72.25                | 9964                                 | n/a    | 9964  | 51.02                   | n/a    | 51.02 | 58.4%       |    |    |    |    |       |
| 72.25 - 67.25             | 10911                                | n/a    | 10911 | 52.59                   | n/a    | 52.59 | 60.1%       |    |    |    |    |       |
| 67.25 - 62.25             | 11916                                | n/a    | 11916 | 54.16                   | n/a    | 54.16 | 61.7%       |    |    |    |    |       |
| 62.25 - 57.25             | 12981                                | n/a    | 12981 | 55.73                   | n/a    | 55.73 | 63.2%       |    |    |    |    |       |
| 57.25 - 52.25             | 14108                                | n/a    | 14108 | 57.29                   | n/a    | 57.29 | 64.6%       |    |    |    |    |       |
| 52.25 - 49.83             | 14676                                | n/a    | 14676 | 58.05                   | n/a    | 58.05 | 65.3%       |    |    |    |    |       |
| 49.83 - 49.58             | 14735                                | n/a    | 14735 | 58.13                   | n/a    | 58.13 | 65.3%       |    |    |    |    |       |
| 49.58 - 44.58             | 15960                                | n/a    | 15960 | 59.70                   | n/a    | 59.70 | 66.6%       |    |    |    |    |       |
| 44.58 - 43                | 16361                                | n/a    | 16361 | 60.19                   | n/a    | 60.19 | 67.1%       |    |    |    |    |       |
| 43 - 35.33                | 18788                                | n/a    | 18788 | 66.23                   | n/a    | 66.23 | 63.8%       |    |    |    |    |       |
| 35.33 - 32.25             | 19688                                | n/a    | 19688 | 67.27                   | n/a    | 67.27 | 64.4%       |    |    |    |    |       |
| 32.25 - 32                | 19762                                | n/a    | 19762 | 67.35                   | n/a    | 67.35 | 64.4%       |    |    |    |    |       |
| 32 - 27                   | 21287                                | n/a    | 21287 | 69.04                   | n/a    | 69.04 | 65.3%       |    |    |    |    |       |
| 27 - 22                   | 22887                                | n/a    | 22887 | 70.73                   | n/a    | 70.73 | 66.2%       |    |    |    |    |       |
| 22 - 17                   | 24566                                | n/a    | 24566 | 72.42                   | n/a    | 72.42 | 67.1%       |    |    |    |    |       |
| 17 - 15.5                 | 25085                                | n/a    | 25085 | 72.93                   | n/a    | 72.93 | 67.3%       |    |    |    |    |       |
| 15.5 - 15.25              | 25172                                | n/a    | 25172 | 73.01                   | n/a    | 73.01 | 67.4%       |    |    |    |    |       |
| 15.25 - 14.75             | 25348                                | n/a    | 25348 | 73.18                   | n/a    | 73.18 | 67.5%       |    |    |    |    |       |
| 14.75 - 14.5              | 25435                                | n/a    | 25435 | 73.26                   | n/a    | 73.26 | 67.5%       |    |    |    |    |       |
| 14.5 - 9.5                | 27235                                | n/a    | 27235 | 74.95                   | n/a    | 74.95 | 68.3%       |    |    |    |    |       |
| 9.5 - 4.5                 | 29118                                | n/a    | 29118 | 76.64                   | n/a    | 76.64 | 69.1%       |    |    |    |    |       |
| 4.5 - 0                   | 30885                                | n/a    | 30885 | 78.16                   | n/a    | 78.16 | 69.8%       |    |    |    |    |       |

Note: Section capacity checked using 5 degree increments.  
Rating per TIA-222-H Section 15.5.

## Monopole Base Plate Connection

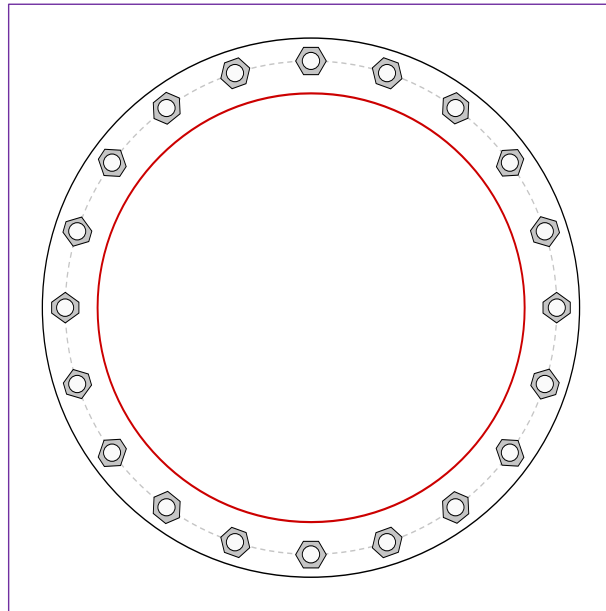


| Site Info |                     |
|-----------|---------------------|
| BU #      | 806953              |
| Site Name | BRG 2044 (A) 943097 |
| Order #   | 589868 Rev. 0       |

| Analysis Considerations |        |
|-------------------------|--------|
| TIA-222 Revision        | H      |
| Grout Considered:       | No     |
| $I_{ar}$ (in)           | 1.0625 |

| Applied Loads      |         |
|--------------------|---------|
| Moment (kip-ft)    | 3952.21 |
| Axial Force (kips) | 63.89   |
| Shear Force (kips) | 33.93   |

\*TIA-222-H Section 15.5 Applied



| Connection Properties                                                          |  | Analysis Results                                                                     |                                            |
|--------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------|--------------------------------------------|
| <b>Anchor Rod Data</b>                                                         |  | <b>Anchor Rod Summary</b> <span style="float: right;">(units of kips, kip-in)</span> |                                            |
| (20) 2-1/4" $\phi$ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 64.48" BC |  | $Pu\_t = 143.84$                                                                     | $\phi Pn\_t = 243.75$ <b>Stress Rating</b> |
| <b>Base Plate Data</b>                                                         |  | $Vu = 1.7$                                                                           | $\phi Vn = 149.1$ <b>56.2%</b>             |
| 70.48" OD x 2.75" Plate (A633-60; $F_y=60$ ksi, $F_u=80$ ksi)                  |  | $Mu = n/a$                                                                           | $\phi Mn = n/a$ <b>Pass</b>                |
| <b>Stiffener Data</b>                                                          |  | <b>Base Plate Summary</b>                                                            |                                            |
| N/A                                                                            |  | Max Stress (ksi):                                                                    | 23.14 (Flexural)                           |
| <b>Pole Data</b>                                                               |  | Allowable Stress (ksi):                                                              | 54                                         |
| 56" x 0.4375" 12-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi)              |  | Stress Rating:                                                                       | <b>40.8%</b> <b>Pass</b>                   |

## Pier and Pad Foundation



BU # : 806953  
 Site Name: BRG 2044 (A) 9430  
 App. Number: 589868 Rev. 0

TIA-222 Revision: H  
 Tower Type: Monopole

|                                  |                                     |
|----------------------------------|-------------------------------------|
| Top & Bot. Pad Rein. Different?: | <input checked="" type="checkbox"/> |
| Block Foundation?:               | <input checked="" type="checkbox"/> |
| Rectangular Pad?:                | <input type="checkbox"/>            |

| Superstructure Analysis Reactions         |         |         |
|-------------------------------------------|---------|---------|
| Compression, $P_{comp}$ :                 | 63.9    | kips    |
| Base Shear, $V_{u\_comp}$ :               | 33.91   | kips    |
|                                           |         |         |
|                                           |         |         |
| Moment, $M_u$ :                           | 3952.21 | ft-kips |
| Tower Height, $H$ :                       | 160     | ft      |
|                                           |         |         |
| BP Dist. Above Fdn, $bp_{dist}$ :         | 6       | in      |
| Bolt Circle / Bearing Plate Width, $BC$ : | 64.48   | in      |

| Foundation Analysis Checks     |          |         |         |       |
|--------------------------------|----------|---------|---------|-------|
|                                | Capacity | Demand  | Rating* | Check |
|                                |          |         |         |       |
| Lateral (Sliding) (kips)       | 195.72   | 33.91   | 16.5%   | Pass  |
| Bearing Pressure (ksf)         | 30.00    | 2.43    | 8.1%    | Pass  |
| Overturning (kip*ft)           | 6392.50  | 4138.72 | 64.7%   | Pass  |
|                                |          |         |         |       |
|                                |          |         |         |       |
|                                |          |         |         |       |
| Pad Flexure (kip*ft)           | 8047.81  | 1905.21 | 22.5%   | Pass  |
| Pad Shear - 1-way (kips)       | 1630.75  | 221.09  | 12.9%   | Pass  |
| Pad Shear - 2-way (Comp) (ksi) | 0.190    | 0.002   | 1.2%    | Pass  |
| Flexural 2-way (Comp) (kip*ft) | 6537.76  | 0.00    | 0.0%    | Pass  |

\*Rating per TIA-222-H Section 15.5

|                     |       |
|---------------------|-------|
| Structural Rating*: | 22.5% |
| Soil Rating*:       | 64.7% |

| Pad Properties                                 |     |    |
|------------------------------------------------|-----|----|
| Depth, $D$ :                                   | 3.5 | ft |
| Pad Width, $W_1$ :                             | 26  | ft |
| Pad Thickness, $T$ :                           | 5   | ft |
| Pad Rebar Size (Top dir.2), $Sp_{top2}$ :      | 8   |    |
| Pad Rebar Quantity (Top dir. 2), $mp_{top2}$ : | 18  |    |
| Pad Rebar Size (Bottom dir. 2), $Sp_2$ :       | 10  |    |
| Pad Rebar Quantity (Bottom dir. 2), $mp_2$ :   | 26  |    |
| 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, $\delta_c$ :      | 150 | pcf |

| Soil Properties                     |        |         |
|-------------------------------------|--------|---------|
| Total Soil Unit Weight, $\gamma$ :  | 130    | pcf     |
| Ultimate Gross Bearing, $Q_{ult}$ : | 40.000 | ksf     |
| Cohesion, $C_u$ :                   | 0.000  | ksf     |
| Friction Angle, $\phi$ :            | 40     | degrees |
| SPT Blow Count, $N_{blows}$ :       |        |         |
| Base Friction, $\mu$ :              | 0.5    |         |
| Neglected Depth, $N$ :              | 3.33   | ft      |
| Foundation Bearing on Rock?         | No     |         |
| Groundwater Depth, $gw$ :           | N/A    | ft      |

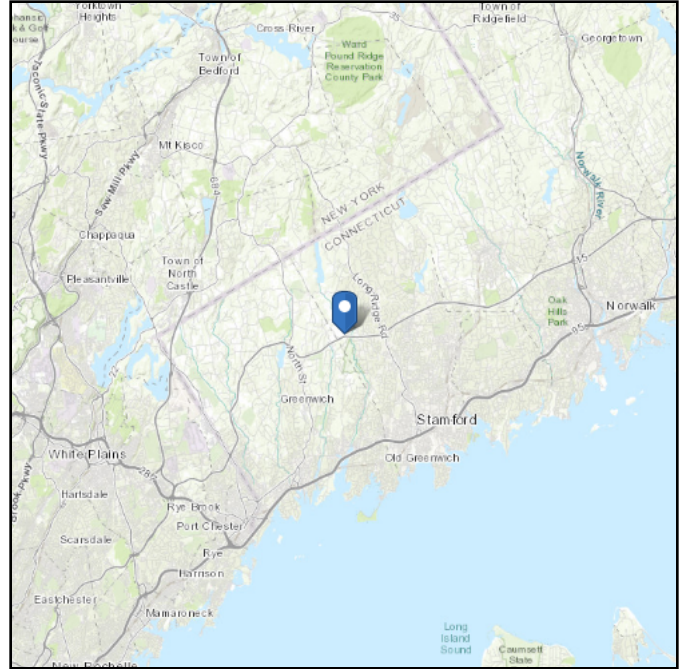
<--Toggle between Gross and Net

# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

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

**Elevation:** 246.84 ft (NAVD 88)  
**Latitude:** 41.10175  
**Longitude:** -73.594444



## Wind

### Results:

|              |                                                                |
|--------------|----------------------------------------------------------------|
| Wind Speed:  | <del>117 Vmph</del> Vu = 120mph per Jurisdictional requirement |
| 10-year MRI  | 76 Vmph                                                        |
| 25-year MRI  | 85 Vmph                                                        |
| 50-year MRI  | 90 Vmph                                                        |
| 100-year MRI | 97 Vmph                                                        |

**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).

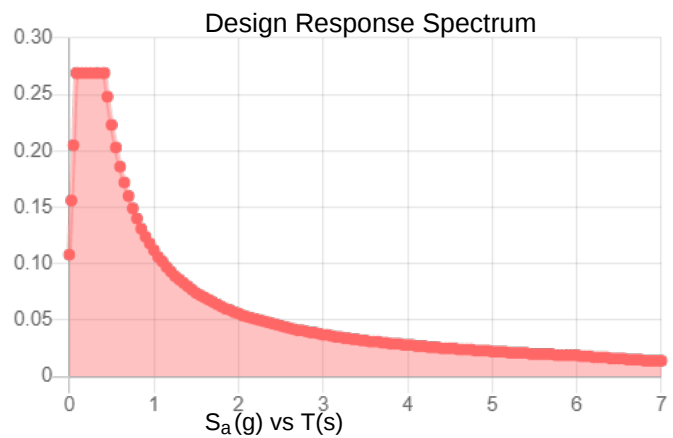
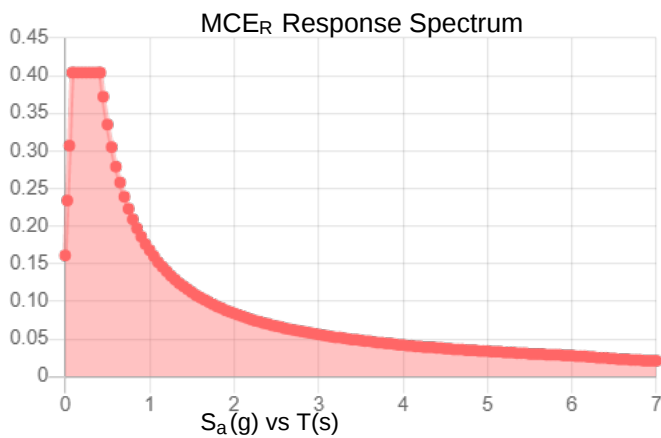
Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

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

**Results:**

|            |       |             |       |
|------------|-------|-------------|-------|
| $S_S$ :    | 0.253 | $S_{DS}$ :  | 0.269 |
| $S_1$ :    | 0.07  | $S_{D1}$ :  | 0.112 |
| $F_a$ :    | 1.598 | $T_L$ :     | 6     |
| $F_v$ :    | 2.4   | PGA :       | 0.148 |
| $S_{MS}$ : | 0.404 | $PGA_M$ :   | 0.222 |
| $S_{M1}$ : | 0.168 | $F_{PGA}$ : | 1.505 |
|            |       | $I_e$ :     | 1     |

**Seismic Design Category** B



**Data Accessed:**

Mon Nov 15 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.

**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:** Mon Nov 15 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.

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Date: **November 11, 2021**

Darcy Tarr  
Crown Castle  
3530 Toringdon Way Suite 300  
Charlotte, NC 28277  
(704) 405-6589

**INFINIGY**  
FROM ZERO TO INFINIGY  
the solutions are endless  
Infinigy Engineering, PLLC  
1033 Watervliet Shaker Road  
Albany, NY 12205  
518-690-0790  
structural@infinigy.com

**Subject:** **Mount Analysis Report**

**Carrier Designation:** **T-Mobile Keep**  
**Carrier Site Number:** CTFF072A  
**Carrier Site Name:** CT03XC344

**Crown Castle Designation:** **Crown Castle BU Number:** 806953  
**Crown Castle Site Name:** BRG 2044 (A) 943097  
**Crown Castle JDE Job Number:** 689446  
**Crown Castle Order Number:** 589868 Rev. 0

**Engineering Firm Designation:** **Infinigy Engineering, PLLC Report Designation:** 1039-Z0001-B

**Site Data:** **69 Guinea Rd (Camp Rocky Craig), Stamford, Fairfield County, CT, 06903**  
**Latitude 41°06'6.30" Longitude -73°35'40.00"**

**Structure Information:** **Tower Height & Type:** **160.0 ft Monopole**  
**Mount Elevation:** **157.0 ft**  
**Mount Type:** **13.0 ft Platform**

Dear Darcy Tarr,

Infinigy Engineering, PLLC 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 stress level. Based on our analysis we have determined the mount stress level to be:

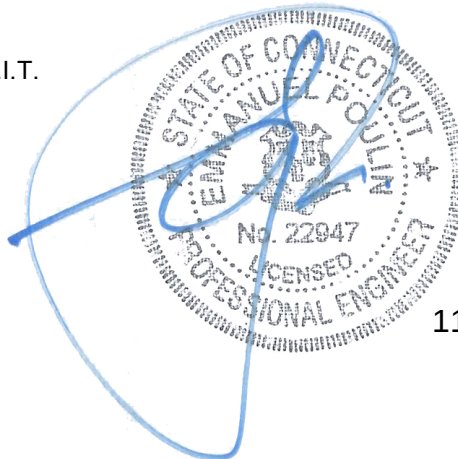
**Platform**

**Sufficient**

This analysis utilizes an ultimate 3-second gust wind speed of 116 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Robert Faber, E.I.T.

Respectfully Submitted by:  
Emmanuel Poulin, P.E.  
518-690-0790  
[structural@infinigy.com](mailto:structural@infinigy.com)  
CT PE License No. 22947



11/12/21

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Additional Calculations

## 1) INTRODUCTION

This is an existing 3 sector 13.0 ft Platform.

## 2) ANALYSIS CRITERIA

|                                         |                                                 |
|-----------------------------------------|-------------------------------------------------|
| <b>Building Code:</b>                   | 2015 IBC / 2018 Connecticut State Building Code |
| <b>TIA-222 Revision:</b>                | TIA-222-H                                       |
| <b>Risk Category:</b>                   | II                                              |
| <b>Ultimate Wind Speed:</b>             | 116 mph                                         |
| <b>Exposure Category:</b>               | B                                               |
| <b>Topographic Factor at Base:</b>      | 1.00                                            |
| <b>Topographic Factor at Mount:</b>     | 1.00                                            |
| <b>Ice Thickness:</b>                   | 1.5 in                                          |
| <b>Wind Speed with Ice:</b>             | 50 mph                                          |
| <b>Seismic <math>S_s</math>:</b>        | 0.253                                           |
| <b>Seismic <math>S_1</math>:</b>        | 0.070                                           |
| <b>Live Loading Wind Speed:</b>         | 30 mph                                          |
| <b>Man Live Load at Mid/End-Points:</b> | 250 lb                                          |
| <b>Man Live Load at Mount Pipes:</b>    | 500 lb                                          |

**Table 1 - Proposed Equipment Configuration**

| Mount Centerline (ft) | Antenna Centerline (ft) | Number of Antennas | Antenna Manufacturer | Antenna Model             | Mount / Modification Details |
|-----------------------|-------------------------|--------------------|----------------------|---------------------------|------------------------------|
| 157.0                 | 158.0                   | 3                  | COMMSCOPE            | VV-65A-R1_TMO             | 13.0 ft Platform             |
|                       |                         | 3                  | ERICSSON             | AIR6449 B41_T-MOBILE      |                              |
|                       |                         | 3                  | RFS/CELWAVE          | APXVAALL24_43-U-NA20      |                              |
|                       |                         | 3                  | ERICSSON             | RADIO 4460 B2/B25 B66_TMO |                              |
|                       |                         | 3                  | ERICSSON             | Radio 4480_TMOV2          |                              |

### 3) ANALYSIS PROCEDURE

**Table 2 - Documents Provided**

| Document                     | Remarks                         | Reference       | Source    |
|------------------------------|---------------------------------|-----------------|-----------|
| Crown Application            | T-Mobile Application            | 589868 Rev. 0   | CCI Sites |
| Loading Document             | T-Mobile                        | RFDS Version: 1 | TSA       |
| Previous AT&T Mount Analysis | Tower Engineering Professionals | 9034228         | CCI Sites |

#### 3.1) Analysis Method

RISA-3D (Version 17.0.4), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

Infinigy Mount Analysis Tool V2.1.7, a tool internally developed by Infinigy, 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 B).

#### 3.2) Assumptions

- 1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.
- 2) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1 and the referenced drawings.
- 3) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
- 4) 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.
- 5) Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
- 6) Steel grades have been assumed as follows, unless noted otherwise:

|                                    |                     |
|------------------------------------|---------------------|
| Channel, Solid Round, Angle, Plate | ASTM A36 (GR 36)    |
| HSS (Rectangular)                  | ASTM A500 (GR B-46) |
| Pipe                               | ASTM A53 (GR 35)    |
| Connection Bolts                   | ASTM A325           |

This analysis may be affected if any assumptions are not valid or have been made in error. Infinigy Engineering, PLLC 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, All Sectors)**

| Notes | Component           | Critical Member | Centerline (ft) | % Capacity | Pass / Fail |
|-------|---------------------|-----------------|-----------------|------------|-------------|
| 1,2,3 | Mount Pipe(s)       | MP9             | 157.0           | 55.7       | Pass        |
|       | Horizontal(s)       | HOR3            |                 | 36.5       | Pass        |
|       | Standoff(s)         | S2              |                 | 96.9       | Pass        |
|       | Handrail(s)         | H3              |                 | 34.1       | Pass        |
|       | Corner Plate(s)     | M62             |                 | 79.6       | Pass        |
|       | Mount Connection(s) | --              |                 | 77.6       | Pass        |

|                                                     |              |
|-----------------------------------------------------|--------------|
| <b>Structure Rating (max from all components) =</b> | <b>96.9%</b> |
|-----------------------------------------------------|--------------|

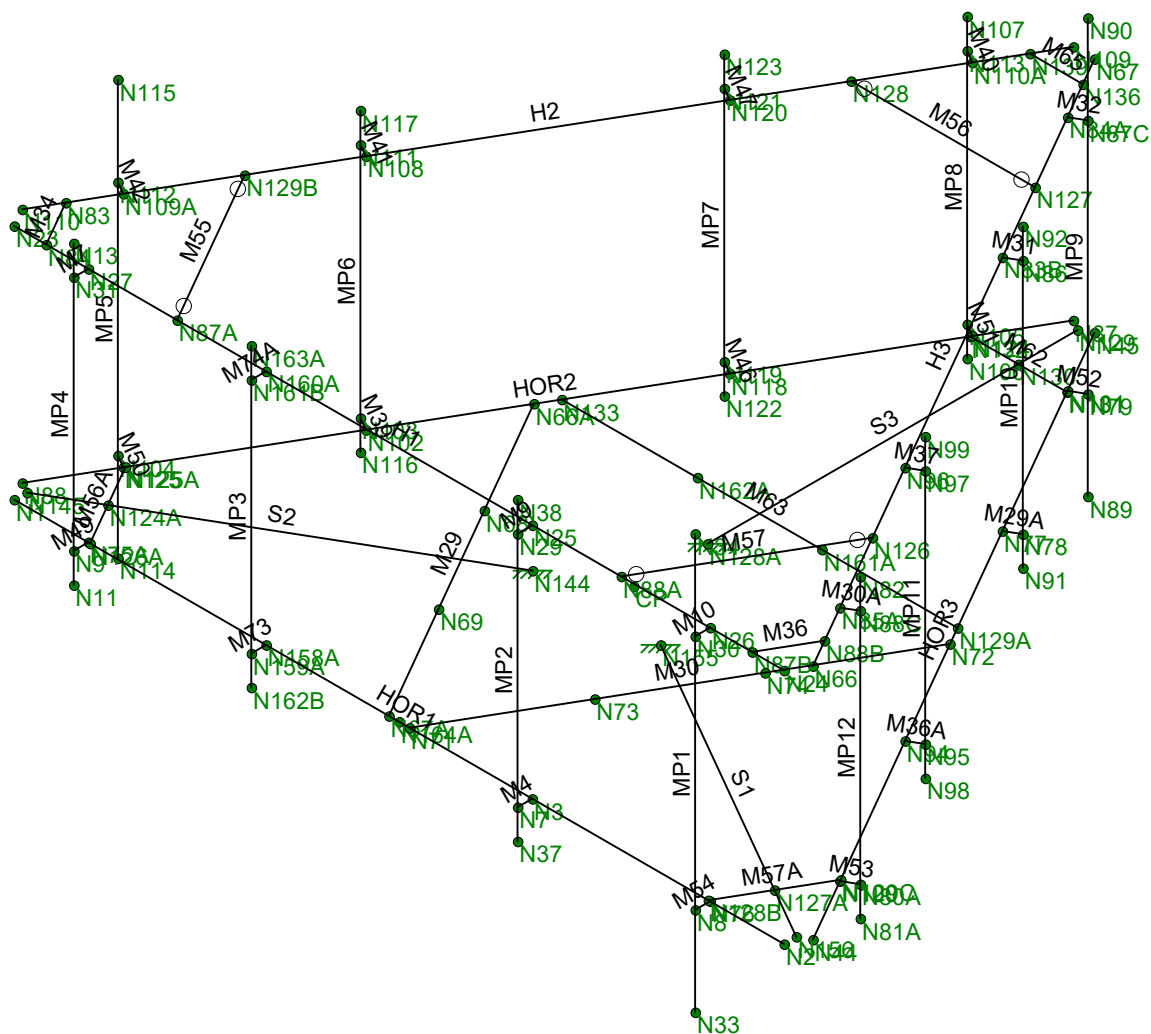
Notes:

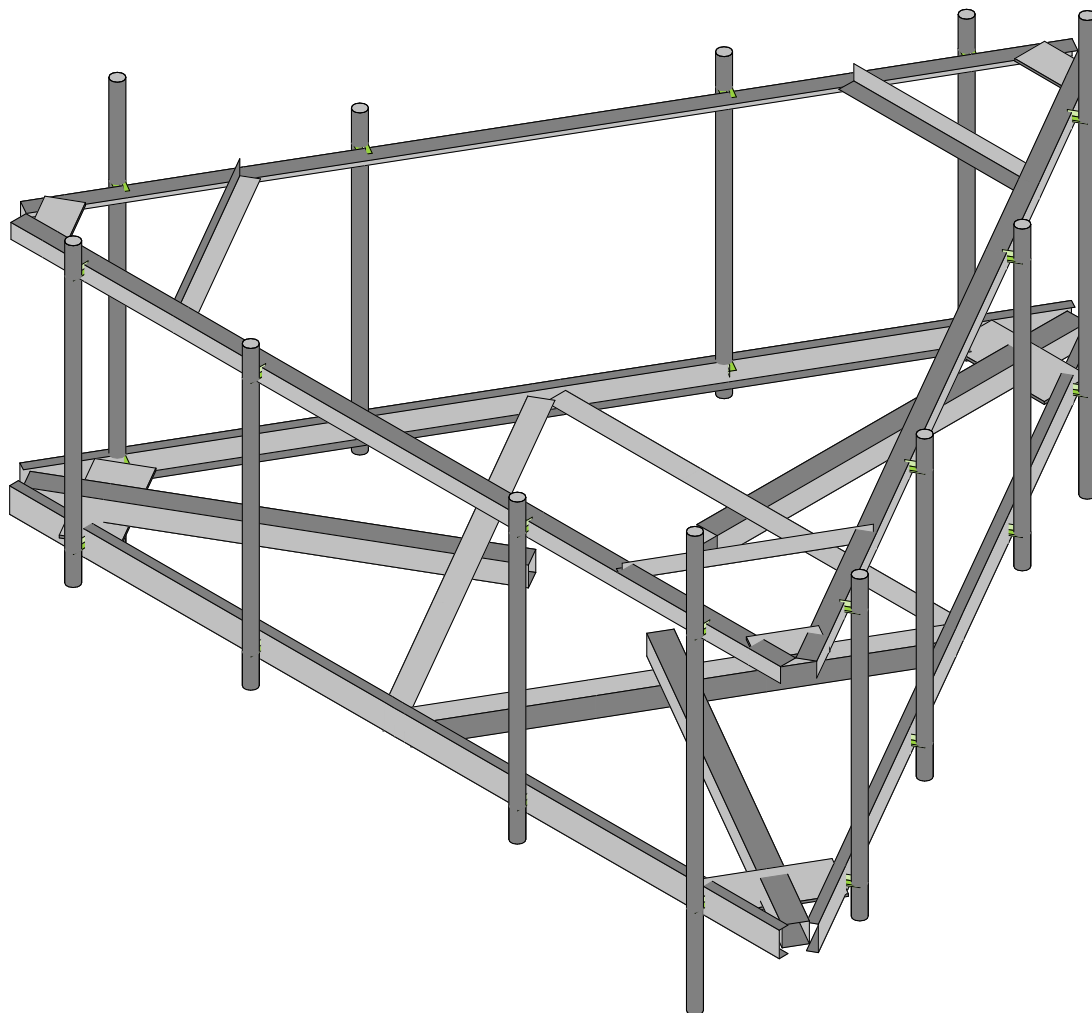
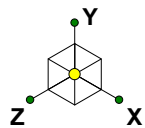
- 1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) See additional documentation in "Appendix D – Additional Calculations" for detailed mount connection calculations.
- 3) Rating per TIA-222-H, Section 15.5

#### 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**





|                            |        |                         |
|----------------------------|--------|-------------------------|
| Infinigy Engineering, PLLC | 806953 | Render                  |
| Robert Faber               |        | Nov 11, 2021 at 2:59 PM |
| 1039-Z0001-B               |        | 806953_loaded.r3d       |

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

## Program Inputs

| PROJECT INFORMATION |              |  |
|---------------------|--------------|--|
| Client:             | Crown Castle |  |
| Carrier:            | T-Mobile     |  |
| Engineer:           | Robert Faber |  |

| SITE INFORMATION       |                          |           |
|------------------------|--------------------------|-----------|
| Risk Category:         | II                       |           |
| Exposure Category:     | B                        |           |
| Topo Factor Procedure: | Method 1, Category 1     |           |
| Site Class:            | D - Stiff Soil (Assumed) |           |
| Ground Elevation:      | 246.84                   | ft *Rev H |

| MOUNT INFORMATION |          |    |
|-------------------|----------|----|
| Mount Type:       | Platform |    |
| Num Sectors:      | 3        |    |
| Centerline AGL:   | 157.00   | ft |
| Tower Height AGL: | 160.00   | ft |

| TOPOGRAPHIC DATA |     |    |
|------------------|-----|----|
| Topo Feature:    | N/A |    |
| Slope Distance:  | N/A | ft |
| Crest Distance:  | N/A | ft |
| Crest Height:    | N/A | ft |

| FACTORS                          |       |             |
|----------------------------------|-------|-------------|
| Directionality Fact. ( $K_d$ ):  | 0.950 |             |
| Ground Ele. Factor ( $K_e$ ):    | 0.991 | *Rev H Only |
| Rooftop Speed-Up ( $K_s$ ):      | 1.000 | *Rev H Only |
| Topographic Factor ( $K_{zt}$ ): | 1.000 |             |
| Gust Effect Factor ( $G_h$ ):    | 1.000 |             |

| CODE STANDARDS |           |  |
|----------------|-----------|--|
| Building Code: | 2015 IBC  |  |
| TIA Standard:  | TIA-222-H |  |
| ASCE Standard: | ASCE 7-10 |  |

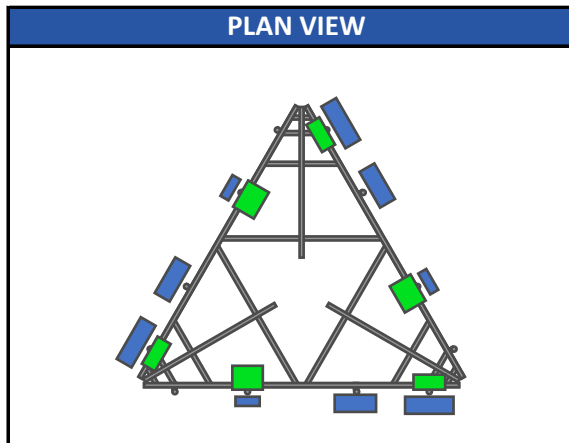
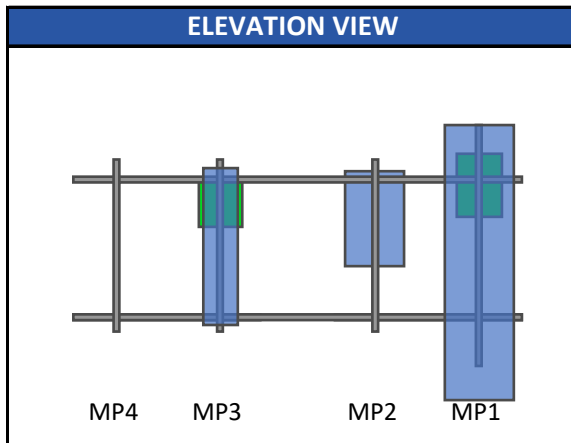
| WIND AND ICE DATA             |        |     |
|-------------------------------|--------|-----|
| Ultimate Wind ( $V_{ult}$ ):  | 116    | mph |
| Design Wind ( $V$ ):          | N/A    | mph |
| Ice Wind ( $V_{ice}$ ):       | 50     | mph |
| Base Ice Thickness ( $t_i$ ): | 1.5    | in  |
| Flat Pressure:                | 72.922 | psf |
| Round Pressure:               | 43.753 | psf |
| Ice Wind Pressure:            | 8.129  | psf |

| SEISMIC DATA                      |       |   |
|-----------------------------------|-------|---|
| Short-Period Accel. ( $S_s$ ):    | 0.253 | g |
| 1-Second Accel. ( $S_1$ ):        | 0.070 | g |
| Short-Period Design ( $S_{DS}$ ): | 0.269 |   |
| 1-Second Design ( $S_{D1}$ ):     | 0.112 |   |
| Short-Period Coeff. ( $F_a$ ):    | 1.598 |   |
| 1-Second Coeff. ( $F_v$ ):        | 2.400 |   |
| Amplification Factor ( $A_s$ ):   | 3.000 |   |
| Response Mod. Coeff. ( $R$ ):     | 2.000 |   |



Infinigy Load Calculator V2.1.7

## Program Inputs

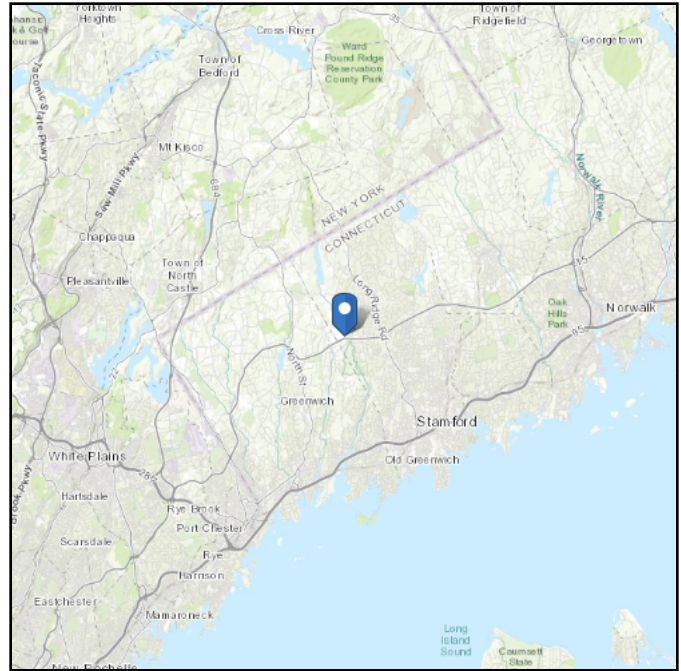
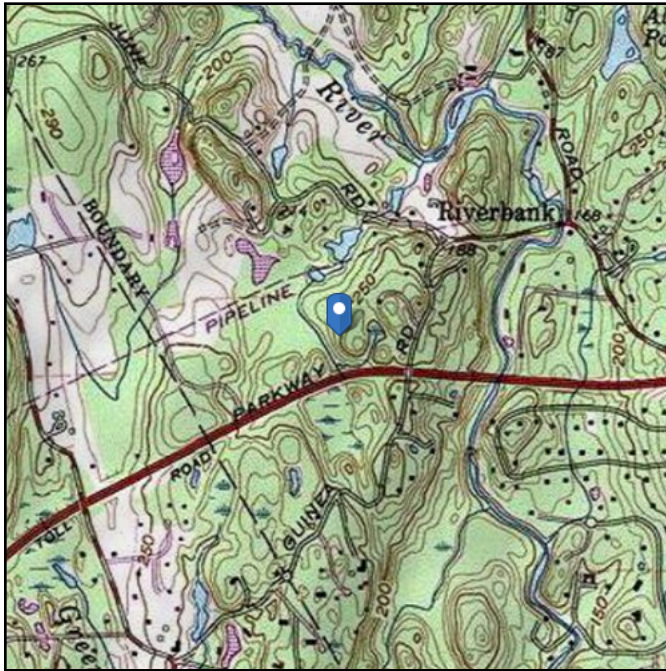
[illegible]

# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

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

**Elevation:** 246.84 ft (NAVD 88)  
**Latitude:** 41.10175  
**Longitude:** -73.594444



## Wind

### Results:

|              |                                                                  |
|--------------|------------------------------------------------------------------|
| Wind Speed:  | 116 Vmph per State of Connecticut allowing ASCE 7-16 wind speeds |
| 10-year MRI  | 76 Vmph                                                          |
| 25-year MRI  | 85 Vmph                                                          |
| 50-year MRI  | 90 Vmph                                                          |
| 100-year MRI | 97 Vmph                                                          |

**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).

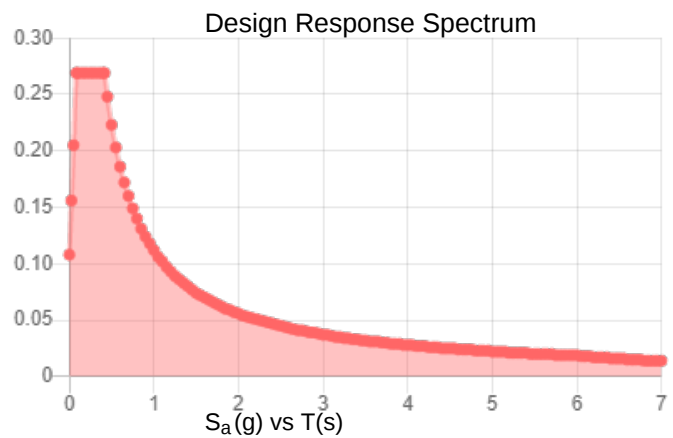
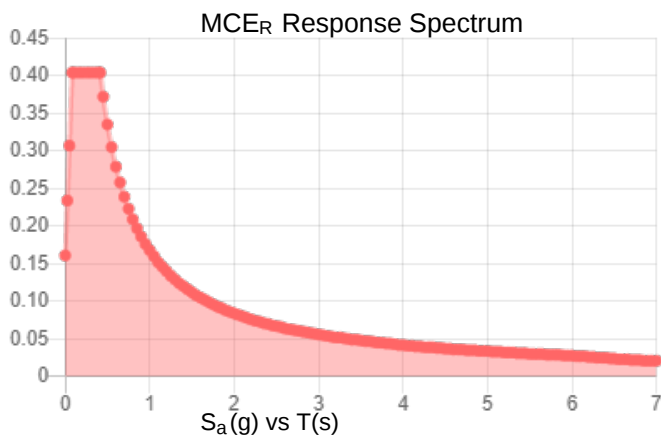
Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

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

**Results:**

|            |       |             |       |
|------------|-------|-------------|-------|
| $S_S$ :    | 0.253 | $S_{DS}$ :  | 0.269 |
| $S_1$ :    | 0.07  | $S_{D1}$ :  | 0.112 |
| $F_a$ :    | 1.598 | $T_L$ :     | 6     |
| $F_v$ :    | 2.4   | PGA :       | 0.148 |
| $S_{MS}$ : | 0.404 | $PGA_M$ :   | 0.222 |
| $S_{M1}$ : | 0.168 | $F_{PGA}$ : | 1.505 |
|            |       | $I_e$ :     | 1     |

**Seismic Design Category** B



**Data Accessed:**

Thu Nov 11 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.

**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 Nov 11 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.

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

### Member Primary Data

|    | Label | I Joint | J Joint | K Joint | Rotate(de... | Section/Shape         | Type   | Design List  | Material    | Design Rules |
|----|-------|---------|---------|---------|--------------|-----------------------|--------|--------------|-------------|--------------|
| 1  | HOR1  | N1      | N2      |         | 180          | Horizontal            | Beam   | Channel      | A36 Gr.36   | Typical      |
| 2  | M4    | N3      | N7      |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 3  | H1    | N23     | N24     |         | 180          | Handrail              | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 4  | M7    | N27     | N31     |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 5  | M9    | N25     | N29     |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 6  | M10   | N26     | N30     |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 7  | MP4   | N13     | N11     |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 8  | MP1   | N34     | N33     |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 9  | MP2   | N38     | N37     |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 10 | HOR3  | N44     | N45     |         | 180          | Horizontal            | Beam   | Channel      | A36 Gr.36   | Typical      |
| 11 | H3    | N66     | N67     |         | 180          | Handrail              | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 12 | HOR2  | N87     | N88     |         | 180          | Horizontal            | Beam   | Channel      | A36 Gr.36   | Typical      |
| 13 | H2    | N109    | N110    |         | 180          | Handrail              | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 14 | S3    | N129    | N128A   |         |              | Standoff              | Beam   | SquareTube   | A500 Gr.... | Typical      |
| 15 | M62   | N132    | N131    |         | 90           | Corner Plate          | Beam   | RECT         | A36 Gr.36   | Typical      |
| 16 | M63   | N133    | N129A   |         | 90           | Platform Brace        | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 17 | M65   | N139    | N136    |         | 90           | Handrail Corner Plate | Beam   | RECT         | A36 Gr.36   | Typical      |
| 18 | S2    | N145    | N144    |         |              | Standoff              | Beam   | SquareTube   | A500 Gr.... | Typical      |
| 19 | S1    | N156    | N155    |         |              | Standoff              | Beam   | SquareTube   | A500 Gr.... | Typical      |
| 20 | M73   | N158A   | N159A   |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 21 | M74A  | N160A   | N161B   |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 22 | MP3   | N163A   | N162B   |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 23 | M34   | N84     | N83     |         | 90           | Handrail Corner Plate | Beam   | RECT         | A36 Gr.36   | Typical      |
| 24 | M36   | N88B    | N87B    |         | 90           | Handrail Corner Plate | Beam   | RECT         | A36 Gr.36   | Typical      |
| 25 | M29   | N67A    | N66A    |         | 90           | Platform Brace        | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 26 | M30   | N72     | N71     |         | 90           | Platform Brace        | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 27 | M29A  | N77     | N78     |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 28 | M30A  | N85A    | N88C    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 29 | M31   | N83B    | N86     |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 30 | M32   | N84A    | N87C    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 31 | MP12  | N82     | N81A    |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 32 | MP9   | N90     | N89     |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 33 | MP10  | N92     | N91     |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 34 | M36A  | N94     | N95     |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 35 | M37   | N96     | N97     |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 36 | MP11  | N99     | N98     |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 37 | M39   | N102    | N103    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 38 | M40   | N110A   | N113    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 39 | M41   | N108    | N111    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 40 | M42   | N109A   | N112    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 41 | MP8   | N107    | N106    |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 42 | MP5   | N115    | N114    |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 43 | MP6   | N117    | N116    |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 44 | M46   | N118    | N119    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 45 | M47   | N120    | N121    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 46 | MP7   | N123    | N122    |         |              | Mount Pipe            | Column | Pipe         | A53 Gr.B    | Typical      |
| 47 | M49   | N75A    | N9      |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 48 | M50   | N104    | N125    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 49 | M51   | N105    | N124    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 50 | M52   | N101    | N79     |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 51 | M53   | N100    | N80A    |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 52 | M54   | N76     | N8      |         |              | RIGID                 | None   | None         | RIGID       | Typical      |
| 53 | M55   | N129B   | N87A    |         | 270          | Handrail Brace        | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 54 | M56   | N128    | N127    |         |              | Handrail Brace        | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 55 | M57   | N126    | N88A    |         |              | Handrail Brace        | Beam   | Single Angle | A36 Gr.36   | Typical      |
| 56 | M56A  | N126A   | N125A   |         | 90           | Corner Plate          | Beam   | RECT         | A36 Gr.36   | Typical      |

### Member Primary Data (Continued)

|    | Label | I Joint | J Joint | K Joint | Rotate(de...) | Section/Shape | Type | Design List | Material  | Design Rules |
|----|-------|---------|---------|---------|---------------|---------------|------|-------------|-----------|--------------|
| 57 | M57A  | N129C   | N128B   |         | 90            | Corner Plate  | Beam | RECT        | A36 Gr.36 | Typical      |

### Hot Rolled Steel Design Parameters

|    | Label | Shape          | Length[in] | Lbyy[in] | Lbzz[in] | Lcomp top[in] | Lcomp bot[in] | L-torqu... | Kyy | Kzz | Cb | Function |
|----|-------|----------------|------------|----------|----------|---------------|---------------|------------|-----|-----|----|----------|
| 1  | HOR1  | Horizontal     | 156        |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 2  | H1    | Handrail       | 156        | Segment  | Segment  | Segment       | Segment       | Segme...   |     |     |    | Lateral  |
| 3  | MP4   | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 4  | MP1   | Mount Pipe     | 84         |          |          |               |               |            |     |     |    | Lateral  |
| 5  | MP2   | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 6  | HOR3  | Horizontal     | 156        |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 7  | H3    | Handrail       | 156        | Segment  | Segment  | Segment       | Segment       | Segme...   |     |     |    | Lateral  |
| 8  | HOR2  | Horizontal     | 156        |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 9  | H2    | Handrail       | 156        | Segment  | Segment  | Segment       | Segment       | Segme...   |     |     |    | Lateral  |
| 10 | S3    | Standoff       | 75         |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 11 | M62   | Corner Plate   | 19.63      |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 12 | M63   | Platform Br... | 80.201     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 13 | M65   | Handrail Co... | 10.737     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 14 | S2    | Standoff       | 75         |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 15 | S1    | Standoff       | 75         |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 16 | MP3   | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 17 | M34   | Handrail Co... | 10.737     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 18 | M36   | Handrail Co... | 10.737     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 19 | M29   | Platform Br... | 80.201     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 20 | M30   | Platform Br... | 80.201     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 21 | MP12  | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 22 | MP9   | Mount Pipe     | 84         |          |          |               |               |            |     |     |    | Lateral  |
| 23 | MP10  | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 24 | MP11  | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 25 | MP8   | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 26 | MP5   | Mount Pipe     | 84         |          |          |               |               |            |     |     |    | Lateral  |
| 27 | MP6   | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 28 | MP7   | Mount Pipe     | 60         |          |          |               |               |            |     |     |    | Lateral  |
| 29 | M55   | Handrail Br... | 37.272     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 30 | M56   | Handrail Br... | 37.272     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 31 | M57   | Handrail Br... | 37.272     |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 32 | M56A  | Corner Plate   | 19.63      |          |          | Lbyy          |               |            |     |     |    | Lateral  |
| 33 | M57A  | Corner Plate   | 19.63      |          |          | Lbyy          |               |            |     |     |    | Lateral  |

### Hot Rolled Steel Section Sets

|   | Label               | Shape        | Type   | Design List  | Material       | Design R... | A [in <sup>2</sup> ] | Iyy [in <sup>4</sup> ] | Izz [in <sup>4</sup> ] | J [in <sup>4</sup> ] |
|---|---------------------|--------------|--------|--------------|----------------|-------------|----------------------|------------------------|------------------------|----------------------|
| 1 | Horizontal          | C5X6.7       | Beam   | Channel      | A36 Gr.36      | Typical     | 1.97                 | .47                    | 7.48                   | .055                 |
| 2 | Standoff            | HSS4X4X4     | Beam   | SquareTube   | A500 Gr.B RECT | Typical     | 3.37                 | 7.8                    | 7.8                    | 12.8                 |
| 3 | Handrail            | L3X3X4       | Beam   | Single Angle | A36 Gr.36      | Typical     | 1.44                 | 1.23                   | 1.23                   | .031                 |
| 4 | Mount Pipe          | PIPE 2.0     | Column | Pipe         | A53 Gr.B       | Typical     | 1.02                 | .627                   | .627                   | 1.25                 |
| 5 | Platform Brace      | L4X4X4       | Beam   | Single Angle | A36 Gr.36      | Typical     | 1.93                 | 3                      | 3                      | .044                 |
| 6 | Handrail Brace      | L3X3X4       | Beam   | Single Angle | A36 Gr.36      | Typical     | 1.44                 | 1.23                   | 1.23                   | .031                 |
| 7 | Corner Plate        | PL0.5X9_H... | Beam   | RECT         | A36 Gr.36      | Typical     | 3.5                  | .073                   | 14.292                 | .279                 |
| 8 | Handrail Corner ... | PL6x.5       | Beam   | RECT         | A36 Gr.36      | Typical     | 3                    | .063                   | 9                      | .237                 |

### Material Takeoff

|    | Material         | Size        | Pieces | Length[in] | Weight[K] |
|----|------------------|-------------|--------|------------|-----------|
| 1  | General          |             |        |            |           |
| 2  | RIGID            |             | 24     | 72         | 0         |
| 3  | Total General    |             | 24     | 72         | 0         |
| 4  |                  |             |        |            |           |
| 5  | Hot Rolled Steel |             |        |            |           |
| 6  | A36 Gr.36        | C5X6.7      | 3      | 468        | .261      |
| 7  | A36 Gr.36        | L3X3X4      | 6      | 579.8      | .237      |
| 8  | A36 Gr.36        | L4X4X4      | 3      | 240.6      | .132      |
| 9  | A36 Gr.36        | PL0.5X9 HRA | 3      | 58.9       | .058      |
| 10 | A36 Gr.36        | PL6x.5      | 3      | 32.2       | .027      |
| 11 | A500 Gr.B RECT   | HSS4X4X4    | 3      | 225        | .231      |
| 12 | A53 Gr.B         | PIPE 2.0    | 12     | 792        | .229      |
| 13 | Total HR Steel   |             | 33     | 2396.5     | 1.176     |

### Basic Load Cases

|    | BLC Description        | Category | X Gravity | Y Gravity | Z Gravity | Joint | Point | Distributed Area(Me... Surface(... |   |
|----|------------------------|----------|-----------|-----------|-----------|-------|-------|------------------------------------|---|
| 1  | Self Weight            | DL       |           | -1        |           |       | 24    | 6                                  |   |
| 2  | Wind Load AZI 0        | WLZ      |           |           |           |       | 48    |                                    |   |
| 3  | Wind Load AZI 30       | None     |           |           |           |       | 48    |                                    |   |
| 4  | Wind Load AZI 60       | None     |           |           |           |       | 48    |                                    |   |
| 5  | Wind Load AZI 90       | WLX      |           |           |           |       | 48    |                                    |   |
| 6  | Wind Load AZI 120      | None     |           |           |           |       | 48    |                                    |   |
| 7  | Wind Load AZI 150      | None     |           |           |           |       | 48    |                                    |   |
| 8  | Wind Load AZI 180      | None     |           |           |           |       | 48    |                                    |   |
| 9  | Wind Load AZI 210      | None     |           |           |           |       | 48    |                                    |   |
| 10 | Wind Load AZI 240      | None     |           |           |           |       | 48    |                                    |   |
| 11 | Wind Load AZI 270      | None     |           |           |           |       | 48    |                                    |   |
| 12 | Wind Load AZI 300      | None     |           |           |           |       | 48    |                                    |   |
| 13 | Wind Load AZI 330      | None     |           |           |           |       | 48    |                                    |   |
| 14 | Distr. Wind Load Z     | WLZ      |           |           |           |       |       | 57                                 |   |
| 15 | Distr. Wind Load X     | WLX      |           |           |           |       |       | 57                                 |   |
| 16 | Ice Weight             | OL1      |           |           |           |       | 24    | 57                                 | 6 |
| 17 | Ice Wind Load AZI 0    | OL2      |           |           |           |       | 48    |                                    |   |
| 18 | Ice Wind Load AZI 30   | None     |           |           |           |       | 48    |                                    |   |
| 19 | Ice Wind Load AZI 60   | None     |           |           |           |       | 48    |                                    |   |
| 20 | Ice Wind Load AZI 90   | OL3      |           |           |           |       | 48    |                                    |   |
| 21 | Ice Wind Load AZI 120  | None     |           |           |           |       | 48    |                                    |   |
| 22 | Ice Wind Load AZI 150  | None     |           |           |           |       | 48    |                                    |   |
| 23 | Ice Wind Load AZI 180  | None     |           |           |           |       | 48    |                                    |   |
| 24 | Ice Wind Load AZI 210  | None     |           |           |           |       | 48    |                                    |   |
| 25 | Ice Wind Load AZI 240  | None     |           |           |           |       | 48    |                                    |   |
| 26 | Ice Wind Load AZI 270  | None     |           |           |           |       | 48    |                                    |   |
| 27 | Ice Wind Load AZI 300  | None     |           |           |           |       | 48    |                                    |   |
| 28 | Ice Wind Load AZI 330  | None     |           |           |           |       | 48    |                                    |   |
| 29 | Distr. Ice Wind Load Z | OL2      |           |           |           |       |       | 57                                 |   |
| 30 | Distr. Ice Wind Load X | OL3      |           |           |           |       |       | 57                                 |   |
| 31 | Seismic Load Z         | ELZ      |           |           | -404      |       | 24    |                                    |   |
| 32 | Seismic Load X         | ELX      | -404      |           |           |       | 24    |                                    |   |
| 33 | Service Live Loads     | LL       |           |           |           | 1     |       |                                    |   |
| 34 | Maintenance Load 1     | LL       |           |           |           | 1     |       |                                    |   |
| 35 | Maintenance Load 2     | LL       |           |           |           | 1     |       |                                    |   |
| 36 | Maintenance Load 3     | LL       |           |           |           | 1     |       |                                    |   |
| 37 | Maintenance Load 4     | LL       |           |           |           | 1     |       |                                    |   |
| 38 | Maintenance Load 5     | LL       |           |           |           | 1     |       |                                    |   |
| 39 | Maintenance Load 6     | LL       |           |           |           | 1     |       |                                    |   |

### Basic Load Cases (Continued)

|    | BLC Description             | Category | X Gravity | Y Gravity | Z Gravity | Joint | Point | Distributed Area(Me... | Surface(... |
|----|-----------------------------|----------|-----------|-----------|-----------|-------|-------|------------------------|-------------|
| 40 | Maintenance Load 7          | LL       |           |           |           | 1     |       |                        |             |
| 41 | Maintenance Load 8          | LL       |           |           |           | 1     |       |                        |             |
| 42 | Maintenance Load 9          | LL       |           |           |           | 1     |       |                        |             |
| 43 | Maintenance Load 10         | LL       |           |           |           | 1     |       |                        |             |
| 44 | Maintenance Load 11         | LL       |           |           |           | 1     |       |                        |             |
| 45 | Maintenance Load 12         | LL       |           |           |           | 1     |       |                        |             |
| 46 | BLC 1 Transient Area Loads  | None     |           |           |           |       |       | 96                     |             |
| 47 | BLC 16 Transient Area Loads | None     |           |           |           |       |       | 96                     |             |

### Member Point Loads (BLC 1 : Self Weight)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in, %] |
|----|--------------|-----------|---------------------|-----------------|
| 1  | MP3          | Y         | -16.65              | 3               |
| 2  | MP3          | Y         | -16.65              | 57.7            |
| 3  | MP2          | Y         | -57.315             | 6               |
| 4  | MP2          | Y         | -57.315             | 39.11           |
| 5  | MP1          | Y         | -74.95              | 0               |
| 6  | MP1          | Y         | -74.95              | %100            |
| 7  | MP3          | Y         | -109                | %25             |
| 8  | MP1          | Y         | -81                 | %25             |
| 9  | MP7          | Y         | -16.65              | 3               |
| 10 | MP7          | Y         | -16.65              | 57.7            |
| 11 | MP6          | Y         | -57.315             | 6               |
| 12 | MP6          | Y         | -57.315             | 39.11           |
| 13 | MP5          | Y         | -74.95              | 0               |
| 14 | MP5          | Y         | -74.95              | %100            |
| 15 | MP7          | Y         | -109                | %25             |
| 16 | MP5          | Y         | -81                 | %25             |
| 17 | MP11         | Y         | -16.65              | 3               |
| 18 | MP11         | Y         | -16.65              | 57.7            |
| 19 | MP10         | Y         | -57.315             | 6               |
| 20 | MP10         | Y         | -57.315             | 39.11           |
| 21 | MP9          | Y         | -74.95              | 0               |
| 22 | MP9          | Y         | -74.95              | %100            |
| 23 | MP11         | Y         | -109                | %25             |
| 24 | MP9          | Y         | -81                 | %25             |

### Member Point Loads (BLC 2 : Wind Load AZI 0)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in, %] |
|----|--------------|-----------|---------------------|-----------------|
| 1  | MP3          | X         | 0                   | 3               |
| 2  | MP3          | Z         | -73.64              | 3               |
| 3  | MP3          | X         | 0                   | 57.7            |
| 4  | MP3          | Z         | -73.64              | 57.7            |
| 5  | MP2          | X         | 0                   | 6               |
| 6  | MP2          | Z         | -86.62              | 6               |
| 7  | MP2          | X         | 0                   | 39.11           |
| 8  | MP2          | Z         | -86.62              | 39.11           |
| 9  | MP1          | X         | 0                   | 0               |
| 10 | MP1          | Z         | -241.13             | 0               |
| 11 | MP1          | X         | 0                   | %100            |
| 12 | MP1          | Z         | -241.13             | %100            |
| 13 | MP3          | X         | 0                   | %25             |
| 14 | MP3          | Z         | -70.32              | %25             |
| 15 | MP1          | X         | 0                   | %25             |
| 16 | MP1          | Z         | -94.62              | %25             |
| 17 | MP7          | X         | 0                   | 3               |

### Member Point Loads (BLC 2 : Wind Load AZI 0) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 18 | MP7          | Z         | -39.86              | 3              |
| 19 | MP7          | X         | 0                   | 57.7           |
| 20 | MP7          | Z         | -39.86              | 57.7           |
| 21 | MP6          | X         | 0                   | 6              |
| 22 | MP6          | Z         | -46.68              | 6              |
| 23 | MP6          | X         | 0                   | 39.11          |
| 24 | MP6          | Z         | -46.68              | 39.11          |
| 25 | MP5          | X         | 0                   | 0              |
| 26 | MP5          | Z         | -125.87             | 0              |
| 27 | MP5          | X         | 0                   | %100           |
| 28 | MP5          | Z         | -125.87             | %100           |
| 29 | MP7          | X         | 0                   | %25            |
| 30 | MP7          | Z         | -59.15              | %25            |
| 31 | MP5          | X         | 0                   | %25            |
| 32 | MP5          | Z         | -58.1               | %25            |
| 33 | MP11         | X         | 0                   | 3              |
| 34 | MP11         | Z         | -39.86              | 3              |
| 35 | MP11         | X         | 0                   | 57.7           |
| 36 | MP11         | Z         | -39.86              | 57.7           |
| 37 | MP10         | X         | 0                   | 6              |
| 38 | MP10         | Z         | -46.68              | 6              |
| 39 | MP10         | X         | 0                   | 39.11          |
| 40 | MP10         | Z         | -46.68              | 39.11          |
| 41 | MP9          | X         | 0                   | 0              |
| 42 | MP9          | Z         | -125.87             | 0              |
| 43 | MP9          | X         | 0                   | %100           |
| 44 | MP9          | Z         | -125.87             | %100           |
| 45 | MP11         | X         | 0                   | %25            |
| 46 | MP11         | Z         | -59.15              | %25            |
| 47 | MP9          | X         | 0                   | %25            |
| 48 | MP9          | Z         | -58.1               | %25            |

### Member Point Loads (BLC 3 : Wind Load AZI 30)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | -31.19              | 3              |
| 2  | MP3          | Z         | -54.02              | 3              |
| 3  | MP3          | X         | -31.19              | 57.7           |
| 4  | MP3          | Z         | -54.02              | 57.7           |
| 5  | MP2          | X         | -36.66              | 6              |
| 6  | MP2          | Z         | -63.49              | 6              |
| 7  | MP2          | X         | -36.66              | 39.11          |
| 8  | MP2          | Z         | -63.49              | 39.11          |
| 9  | MP1          | X         | -101.36             | 0              |
| 10 | MP1          | Z         | -175.55             | 0              |
| 11 | MP1          | X         | -101.36             | %100           |
| 12 | MP1          | Z         | -175.55             | %100           |
| 13 | MP3          | X         | -33.3               | %25            |
| 14 | MP3          | Z         | -57.68              | %25            |
| 15 | MP1          | X         | -41.22              | %25            |
| 16 | MP1          | Z         | -71.4               | %25            |
| 17 | MP7          | X         | -31.19              | 3              |
| 18 | MP7          | Z         | -54.02              | 3              |
| 19 | MP7          | X         | -31.19              | 57.7           |
| 20 | MP7          | Z         | -54.02              | 57.7           |
| 21 | MP6          | X         | -36.66              | 6              |
| 22 | MP6          | Z         | -63.49              | 6              |

### Member Point Loads (BLC 3 : Wind Load AZI 30) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 23 | MP6          | X         | -36.66              | 39.11          |
| 24 | MP6          | Z         | -63.49              | 39.11          |
| 25 | MP5          | X         | -101.36             | 0              |
| 26 | MP5          | Z         | -175.55             | 0              |
| 27 | MP5          | X         | -101.36             | %100           |
| 28 | MP5          | Z         | -175.55             | %100           |
| 29 | MP7          | X         | -33.3               | %25            |
| 30 | MP7          | Z         | -57.68              | %25            |
| 31 | MP5          | X         | -41.22              | %25            |
| 32 | MP5          | Z         | -71.4               | %25            |
| 33 | MP11         | X         | -14.3               | 3              |
| 34 | MP11         | Z         | -24.77              | 3              |
| 35 | MP11         | X         | -14.3               | 57.7           |
| 36 | MP11         | Z         | -24.77              | 57.7           |
| 37 | MP10         | X         | -16.68              | 6              |
| 38 | MP10         | Z         | -28.9               | 6              |
| 39 | MP10         | X         | -16.68              | 39.11          |
| 40 | MP10         | Z         | -28.9               | 39.11          |
| 41 | MP9          | X         | -43.72              | 0              |
| 42 | MP9          | Z         | -75.73              | 0              |
| 43 | MP9          | X         | -43.72              | %100           |
| 44 | MP9          | Z         | -75.73              | %100           |
| 45 | MP11         | X         | -27.71              | %25            |
| 46 | MP11         | Z         | -48                 | %25            |
| 47 | MP9          | X         | -22.96              | %25            |
| 48 | MP9          | Z         | -39.77              | %25            |

### Member Point Loads (BLC 4 : Wind Load AZI 60)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | -34.52              | 3              |
| 2  | MP3          | Z         | -19.93              | 3              |
| 3  | MP3          | X         | -34.52              | 57.7           |
| 4  | MP3          | Z         | -19.93              | 57.7           |
| 5  | MP2          | X         | -40.43              | 6              |
| 6  | MP2          | Z         | -23.34              | 6              |
| 7  | MP2          | X         | -40.43              | 39.11          |
| 8  | MP2          | Z         | -23.34              | 39.11          |
| 9  | MP1          | X         | -109.01             | 0              |
| 10 | MP1          | Z         | -62.93              | 0              |
| 11 | MP1          | X         | -109.01             | %100           |
| 12 | MP1          | Z         | -62.93              | %100           |
| 13 | MP3          | X         | -51.22              | %25            |
| 14 | MP3          | Z         | -29.57              | %25            |
| 15 | MP1          | X         | -50.32              | %25            |
| 16 | MP1          | Z         | -29.05              | %25            |
| 17 | MP7          | X         | -63.77              | 3              |
| 18 | MP7          | Z         | -36.82              | 3              |
| 19 | MP7          | X         | -63.77              | 57.7           |
| 20 | MP7          | Z         | -36.82              | 57.7           |
| 21 | MP6          | X         | -75.02              | 6              |
| 22 | MP6          | Z         | -43.31              | 6              |
| 23 | MP6          | X         | -75.02              | 39.11          |
| 24 | MP6          | Z         | -43.31              | 39.11          |
| 25 | MP5          | X         | -208.83             | 0              |
| 26 | MP5          | Z         | -120.57             | 0              |
| 27 | MP5          | X         | -208.83             | %100           |

### Member Point Loads (BLC 4 : Wind Load AZI 60) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in, %] |
|----|--------------|-----------|---------------------|-----------------|
| 28 | MP5          | Z         | -120.57             | %100            |
| 29 | MP7          | X         | -60.9               | %25             |
| 30 | MP7          | Z         | -35.16              | %25             |
| 31 | MP5          | X         | -81.95              | %25             |
| 32 | MP5          | Z         | -47.31              | %25             |
| 33 | MP11         | X         | -34.52              | 3               |
| 34 | MP11         | Z         | -19.93              | 3               |
| 35 | MP11         | X         | -34.52              | 57.7            |
| 36 | MP11         | Z         | -19.93              | 57.7            |
| 37 | MP10         | X         | -40.43              | 6               |
| 38 | MP10         | Z         | -23.34              | 6               |
| 39 | MP10         | X         | -40.43              | 39.11           |
| 40 | MP10         | Z         | -23.34              | 39.11           |
| 41 | MP9          | X         | -109.01             | 0               |
| 42 | MP9          | Z         | -62.93              | 0               |
| 43 | MP9          | X         | -109.01             | %100            |
| 44 | MP9          | Z         | -62.93              | %100            |
| 45 | MP11         | X         | -51.22              | %25             |
| 46 | MP11         | Z         | -29.57              | %25             |
| 47 | MP9          | X         | -50.32              | %25             |
| 48 | MP9          | Z         | -29.05              | %25             |

### Member Point Loads (BLC 5 : Wind Load AZI 90)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in, %] |
|----|--------------|-----------|---------------------|-----------------|
| 1  | MP3          | X         | -28.6               | 3               |
| 2  | MP3          | Z         | 0                   | 3               |
| 3  | MP3          | X         | -28.6               | 57.7            |
| 4  | MP3          | Z         | 0                   | 57.7            |
| 5  | MP2          | X         | -33.37              | 6               |
| 6  | MP2          | Z         | 0                   | 6               |
| 7  | MP2          | X         | -33.37              | 39.11           |
| 8  | MP2          | Z         | 0                   | 39.11           |
| 9  | MP1          | X         | -87.45              | 0               |
| 10 | MP1          | Z         | 0                   | 0               |
| 11 | MP1          | X         | -87.45              | %100            |
| 12 | MP1          | Z         | 0                   | %100            |
| 13 | MP3          | X         | -55.42              | %25             |
| 14 | MP3          | Z         | 0                   | %25             |
| 15 | MP1          | X         | -45.93              | %25             |
| 16 | MP1          | Z         | 0                   | %25             |
| 17 | MP7          | X         | -62.38              | 3               |
| 18 | MP7          | Z         | 0                   | 3               |
| 19 | MP7          | X         | -62.38              | 57.7            |
| 20 | MP7          | Z         | 0                   | 57.7            |
| 21 | MP6          | X         | -73.31              | 6               |
| 22 | MP6          | Z         | 0                   | 6               |
| 23 | MP6          | X         | -73.31              | 39.11           |
| 24 | MP6          | Z         | 0                   | 39.11           |
| 25 | MP5          | X         | -202.71             | 0               |
| 26 | MP5          | Z         | 0                   | 0               |
| 27 | MP5          | X         | -202.71             | %100            |
| 28 | MP5          | Z         | 0                   | %100            |
| 29 | MP7          | X         | -66.6               | %25             |
| 30 | MP7          | Z         | 0                   | %25             |
| 31 | MP5          | X         | -82.45              | %25             |
| 32 | MP5          | Z         | 0                   | %25             |

### Member Point Loads (BLC 5 : Wind Load AZI 90) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 33 | MP11         | X         | -62.38              | 3              |
| 34 | MP11         | Z         | 0                   | 3              |
| 35 | MP11         | X         | -62.38              | 57.7           |
| 36 | MP11         | Z         | 0                   | 57.7           |
| 37 | MP10         | X         | -73.31              | 6              |
| 38 | MP10         | Z         | 0                   | 6              |
| 39 | MP10         | X         | -73.31              | 39.11          |
| 40 | MP10         | Z         | 0                   | 39.11          |
| 41 | MP9          | X         | -202.71             | 0              |
| 42 | MP9          | Z         | 0                   | 0              |
| 43 | MP9          | X         | -202.71             | %100           |
| 44 | MP9          | Z         | 0                   | %100           |
| 45 | MP11         | X         | -66.6               | %25            |
| 46 | MP11         | Z         | 0                   | %25            |
| 47 | MP9          | X         | -82.45              | %25            |
| 48 | MP9          | Z         | 0                   | %25            |

### Member Point Loads (BLC 6 : Wind Load AZI 120)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | -34.52              | 3              |
| 2  | MP3          | Z         | 19.93               | 3              |
| 3  | MP3          | X         | -34.52              | 57.7           |
| 4  | MP3          | Z         | 19.93               | 57.7           |
| 5  | MP2          | X         | -40.43              | 6              |
| 6  | MP2          | Z         | 23.34               | 6              |
| 7  | MP2          | X         | -40.43              | 39.11          |
| 8  | MP2          | Z         | 23.34               | 39.11          |
| 9  | MP1          | X         | -109.01             | 0              |
| 10 | MP1          | Z         | 62.93               | 0              |
| 11 | MP1          | X         | -109.01             | %100           |
| 12 | MP1          | Z         | 62.93               | %100           |
| 13 | MP3          | X         | -51.22              | %25            |
| 14 | MP3          | Z         | 29.57               | %25            |
| 15 | MP1          | X         | -50.32              | %25            |
| 16 | MP1          | Z         | 29.05               | %25            |
| 17 | MP7          | X         | -34.52              | 3              |
| 18 | MP7          | Z         | 19.93               | 3              |
| 19 | MP7          | X         | -34.52              | 57.7           |
| 20 | MP7          | Z         | 19.93               | 57.7           |
| 21 | MP6          | X         | -40.43              | 6              |
| 22 | MP6          | Z         | 23.34               | 6              |
| 23 | MP6          | X         | -40.43              | 39.11          |
| 24 | MP6          | Z         | 23.34               | 39.11          |
| 25 | MP5          | X         | -109.01             | 0              |
| 26 | MP5          | Z         | 62.93               | 0              |
| 27 | MP5          | X         | -109.01             | %100           |
| 28 | MP5          | Z         | 62.93               | %100           |
| 29 | MP7          | X         | -51.22              | %25            |
| 30 | MP7          | Z         | 29.57               | %25            |
| 31 | MP5          | X         | -50.32              | %25            |
| 32 | MP5          | Z         | 29.05               | %25            |
| 33 | MP11         | X         | -63.77              | 3              |
| 34 | MP11         | Z         | 36.82               | 3              |
| 35 | MP11         | X         | -63.77              | 57.7           |
| 36 | MP11         | Z         | 36.82               | 57.7           |
| 37 | MP10         | X         | -75.02              | 6              |

### Member Point Loads (BLC 6 : Wind Load AZI 120) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 38 | MP10         | Z         | 43.31               | 6              |
| 39 | MP10         | X         | -75.02              | 39.11          |
| 40 | MP10         | Z         | 43.31               | 39.11          |
| 41 | MP9          | X         | -208.83             | 0              |
| 42 | MP9          | Z         | 120.57              | 0              |
| 43 | MP9          | X         | -208.83             | %100           |
| 44 | MP9          | Z         | 120.57              | %100           |
| 45 | MP11         | X         | -60.9               | %25            |
| 46 | MP11         | Z         | 35.16               | %25            |
| 47 | MP9          | X         | -81.95              | %25            |
| 48 | MP9          | Z         | 47.31               | %25            |

### Member Point Loads (BLC 7 : Wind Load AZI 150)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | -31.19              | 3              |
| 2  | MP3          | Z         | 54.02               | 3              |
| 3  | MP3          | X         | -31.19              | 57.7           |
| 4  | MP3          | Z         | 54.02               | 57.7           |
| 5  | MP2          | X         | -36.66              | 6              |
| 6  | MP2          | Z         | 63.49               | 6              |
| 7  | MP2          | X         | -36.66              | 39.11          |
| 8  | MP2          | Z         | 63.49               | 39.11          |
| 9  | MP1          | X         | -101.36             | 0              |
| 10 | MP1          | Z         | 175.55              | 0              |
| 11 | MP1          | X         | -101.36             | %100           |
| 12 | MP1          | Z         | 175.55              | %100           |
| 13 | MP3          | X         | -33.3               | %25            |
| 14 | MP3          | Z         | 57.68               | %25            |
| 15 | MP1          | X         | -41.22              | %25            |
| 16 | MP1          | Z         | 71.4                | %25            |
| 17 | MP7          | X         | -14.3               | 3              |
| 18 | MP7          | Z         | 24.77               | 3              |
| 19 | MP7          | X         | -14.3               | 57.7           |
| 20 | MP7          | Z         | 24.77               | 57.7           |
| 21 | MP6          | X         | -16.68              | 6              |
| 22 | MP6          | Z         | 28.9                | 6              |
| 23 | MP6          | X         | -16.68              | 39.11          |
| 24 | MP6          | Z         | 28.9                | 39.11          |
| 25 | MP5          | X         | -43.72              | 0              |
| 26 | MP5          | Z         | 75.73               | 0              |
| 27 | MP5          | X         | -43.72              | %100           |
| 28 | MP5          | Z         | 75.73               | %100           |
| 29 | MP7          | X         | -27.71              | %25            |
| 30 | MP7          | Z         | 48                  | %25            |
| 31 | MP5          | X         | -22.96              | %25            |
| 32 | MP5          | Z         | 39.77               | %25            |
| 33 | MP11         | X         | -31.19              | 3              |
| 34 | MP11         | Z         | 54.02               | 3              |
| 35 | MP11         | X         | -31.19              | 57.7           |
| 36 | MP11         | Z         | 54.02               | 57.7           |
| 37 | MP10         | X         | -36.66              | 6              |
| 38 | MP10         | Z         | 63.49               | 6              |
| 39 | MP10         | X         | -36.66              | 39.11          |
| 40 | MP10         | Z         | 63.49               | 39.11          |
| 41 | MP9          | X         | -101.36             | 0              |
| 42 | MP9          | Z         | 175.55              | 0              |

### Member Point Loads (BLC 7 : Wind Load AZI 150) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 43 | MP9          | X         | -101.36             | %100           |
| 44 | MP9          | Z         | 175.55              | %100           |
| 45 | MP11         | X         | -33.3               | %25            |
| 46 | MP11         | Z         | 57.68               | %25            |
| 47 | MP9          | X         | -41.22              | %25            |
| 48 | MP9          | Z         | 71.4                | %25            |

### Member Point Loads (BLC 8 : Wind Load AZI 180)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 0                   | 3              |
| 2  | MP3          | Z         | 73.64               | 3              |
| 3  | MP3          | X         | 0                   | 57.7           |
| 4  | MP3          | Z         | 73.64               | 57.7           |
| 5  | MP2          | X         | 0                   | 6              |
| 6  | MP2          | Z         | 86.62               | 6              |
| 7  | MP2          | X         | 0                   | 39.11          |
| 8  | MP2          | Z         | 86.62               | 39.11          |
| 9  | MP1          | X         | 0                   | 0              |
| 10 | MP1          | Z         | 241.13              | 0              |
| 11 | MP1          | X         | 0                   | %100           |
| 12 | MP1          | Z         | 241.13              | %100           |
| 13 | MP3          | X         | 0                   | %25            |
| 14 | MP3          | Z         | 70.32               | %25            |
| 15 | MP1          | X         | 0                   | %25            |
| 16 | MP1          | Z         | 94.62               | %25            |
| 17 | MP7          | X         | 0                   | 3              |
| 18 | MP7          | Z         | 39.86               | 3              |
| 19 | MP7          | X         | 0                   | 57.7           |
| 20 | MP7          | Z         | 39.86               | 57.7           |
| 21 | MP6          | X         | 0                   | 6              |
| 22 | MP6          | Z         | 46.68               | 6              |
| 23 | MP6          | X         | 0                   | 39.11          |
| 24 | MP6          | Z         | 46.68               | 39.11          |
| 25 | MP5          | X         | 0                   | 0              |
| 26 | MP5          | Z         | 125.87              | 0              |
| 27 | MP5          | X         | 0                   | %100           |
| 28 | MP5          | Z         | 125.87              | %100           |
| 29 | MP7          | X         | 0                   | %25            |
| 30 | MP7          | Z         | 59.15               | %25            |
| 31 | MP5          | X         | 0                   | %25            |
| 32 | MP5          | Z         | 58.1                | %25            |
| 33 | MP11         | X         | 0                   | 3              |
| 34 | MP11         | Z         | 39.86               | 3              |
| 35 | MP11         | X         | 0                   | 57.7           |
| 36 | MP11         | Z         | 39.86               | 57.7           |
| 37 | MP10         | X         | 0                   | 6              |
| 38 | MP10         | Z         | 46.68               | 6              |
| 39 | MP10         | X         | 0                   | 39.11          |
| 40 | MP10         | Z         | 46.68               | 39.11          |
| 41 | MP9          | X         | 0                   | 0              |
| 42 | MP9          | Z         | 125.87              | 0              |
| 43 | MP9          | X         | 0                   | %100           |
| 44 | MP9          | Z         | 125.87              | %100           |
| 45 | MP11         | X         | 0                   | %25            |
| 46 | MP11         | Z         | 59.15               | %25            |
| 47 | MP9          | X         | 0                   | %25            |

### Member Point Loads (BLC 8 : Wind Load AZI 180) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 48 | MP9          | Z         | 58.1                | %25            |

### Member Point Loads (BLC 9 : Wind Load AZI 210)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 31.19               | 3              |
| 2  | MP3          | Z         | 54.02               | 3              |
| 3  | MP3          | X         | 31.19               | 57.7           |
| 4  | MP3          | Z         | 54.02               | 57.7           |
| 5  | MP2          | X         | 36.66               | 6              |
| 6  | MP2          | Z         | 63.49               | 6              |
| 7  | MP2          | X         | 36.66               | 39.11          |
| 8  | MP2          | Z         | 63.49               | 39.11          |
| 9  | MP1          | X         | 101.36              | 0              |
| 10 | MP1          | Z         | 175.55              | 0              |
| 11 | MP1          | X         | 101.36              | %100           |
| 12 | MP1          | Z         | 175.55              | %100           |
| 13 | MP3          | X         | 33.3                | %25            |
| 14 | MP3          | Z         | 57.68               | %25            |
| 15 | MP1          | X         | 41.22               | %25            |
| 16 | MP1          | Z         | 71.4                | %25            |
| 17 | MP7          | X         | 31.19               | 3              |
| 18 | MP7          | Z         | 54.02               | 3              |
| 19 | MP7          | X         | 31.19               | 57.7           |
| 20 | MP7          | Z         | 54.02               | 57.7           |
| 21 | MP6          | X         | 36.66               | 6              |
| 22 | MP6          | Z         | 63.49               | 6              |
| 23 | MP6          | X         | 36.66               | 39.11          |
| 24 | MP6          | Z         | 63.49               | 39.11          |
| 25 | MP5          | X         | 101.36              | 0              |
| 26 | MP5          | Z         | 175.55              | 0              |
| 27 | MP5          | X         | 101.36              | %100           |
| 28 | MP5          | Z         | 175.55              | %100           |
| 29 | MP7          | X         | 33.3                | %25            |
| 30 | MP7          | Z         | 57.68               | %25            |
| 31 | MP5          | X         | 41.22               | %25            |
| 32 | MP5          | Z         | 71.4                | %25            |
| 33 | MP11         | X         | 14.3                | 3              |
| 34 | MP11         | Z         | 24.77               | 3              |
| 35 | MP11         | X         | 14.3                | 57.7           |
| 36 | MP11         | Z         | 24.77               | 57.7           |
| 37 | MP10         | X         | 16.68               | 6              |
| 38 | MP10         | Z         | 28.9                | 6              |
| 39 | MP10         | X         | 16.68               | 39.11          |
| 40 | MP10         | Z         | 28.9                | 39.11          |
| 41 | MP9          | X         | 43.72               | 0              |
| 42 | MP9          | Z         | 75.73               | 0              |
| 43 | MP9          | X         | 43.72               | %100           |
| 44 | MP9          | Z         | 75.73               | %100           |
| 45 | MP11         | X         | 27.71               | %25            |
| 46 | MP11         | Z         | 48                  | %25            |
| 47 | MP9          | X         | 22.96               | %25            |
| 48 | MP9          | Z         | 39.77               | %25            |

### Member Point Loads (BLC 10 : Wind Load AZI 240)

|   | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|---|--------------|-----------|---------------------|----------------|
| 1 | MP3          | X         | 34.52               | 3              |

### Member Point Loads (BLC 10 : Wind Load AZI 240) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 2  | MP3          | Z         | 19.93               | 3              |
| 3  | MP3          | X         | 34.52               | 57.7           |
| 4  | MP3          | Z         | 19.93               | 57.7           |
| 5  | MP2          | X         | 40.43               | 6              |
| 6  | MP2          | Z         | 23.34               | 6              |
| 7  | MP2          | X         | 40.43               | 39.11          |
| 8  | MP2          | Z         | 23.34               | 39.11          |
| 9  | MP1          | X         | 109.01              | 0              |
| 10 | MP1          | Z         | 62.93               | 0              |
| 11 | MP1          | X         | 109.01              | %100           |
| 12 | MP1          | Z         | 62.93               | %100           |
| 13 | MP3          | X         | 51.22               | %25            |
| 14 | MP3          | Z         | 29.57               | %25            |
| 15 | MP1          | X         | 50.32               | %25            |
| 16 | MP1          | Z         | 29.05               | %25            |
| 17 | MP7          | X         | 63.77               | 3              |
| 18 | MP7          | Z         | 36.82               | 3              |
| 19 | MP7          | X         | 63.77               | 57.7           |
| 20 | MP7          | Z         | 36.82               | 57.7           |
| 21 | MP6          | X         | 75.02               | 6              |
| 22 | MP6          | Z         | 43.31               | 6              |
| 23 | MP6          | X         | 75.02               | 39.11          |
| 24 | MP6          | Z         | 43.31               | 39.11          |
| 25 | MP5          | X         | 208.83              | 0              |
| 26 | MP5          | Z         | 120.57              | 0              |
| 27 | MP5          | X         | 208.83              | %100           |
| 28 | MP5          | Z         | 120.57              | %100           |
| 29 | MP7          | X         | 60.9                | %25            |
| 30 | MP7          | Z         | 35.16               | %25            |
| 31 | MP5          | X         | 81.95               | %25            |
| 32 | MP5          | Z         | 47.31               | %25            |
| 33 | MP11         | X         | 34.52               | 3              |
| 34 | MP11         | Z         | 19.93               | 3              |
| 35 | MP11         | X         | 34.52               | 57.7           |
| 36 | MP11         | Z         | 19.93               | 57.7           |
| 37 | MP10         | X         | 40.43               | 6              |
| 38 | MP10         | Z         | 23.34               | 6              |
| 39 | MP10         | X         | 40.43               | 39.11          |
| 40 | MP10         | Z         | 23.34               | 39.11          |
| 41 | MP9          | X         | 109.01              | 0              |
| 42 | MP9          | Z         | 62.93               | 0              |
| 43 | MP9          | X         | 109.01              | %100           |
| 44 | MP9          | Z         | 62.93               | %100           |
| 45 | MP11         | X         | 51.22               | %25            |
| 46 | MP11         | Z         | 29.57               | %25            |
| 47 | MP9          | X         | 50.32               | %25            |
| 48 | MP9          | Z         | 29.05               | %25            |

### Member Point Loads (BLC 11 : Wind Load AZI 270)

|   | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|---|--------------|-----------|---------------------|----------------|
| 1 | MP3          | X         | 28.6                | 3              |
| 2 | MP3          | Z         | 0                   | 3              |
| 3 | MP3          | X         | 28.6                | 57.7           |
| 4 | MP3          | Z         | 0                   | 57.7           |
| 5 | MP2          | X         | 33.37               | 6              |
| 6 | MP2          | Z         | 0                   | 6              |

### Member Point Loads (BLC 11 : Wind Load AZI 270) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 7  | MP2          | X         | 33.37               | 39.11          |
| 8  | MP2          | Z         | 0                   | 39.11          |
| 9  | MP1          | X         | 87.45               | 0              |
| 10 | MP1          | Z         | 0                   | 0              |
| 11 | MP1          | X         | 87.45               | %100           |
| 12 | MP1          | Z         | 0                   | %100           |
| 13 | MP3          | X         | 55.42               | %25            |
| 14 | MP3          | Z         | 0                   | %25            |
| 15 | MP1          | X         | 45.93               | %25            |
| 16 | MP1          | Z         | 0                   | %25            |
| 17 | MP7          | X         | 62.38               | 3              |
| 18 | MP7          | Z         | 0                   | 3              |
| 19 | MP7          | X         | 62.38               | 57.7           |
| 20 | MP7          | Z         | 0                   | 57.7           |
| 21 | MP6          | X         | 73.31               | 6              |
| 22 | MP6          | Z         | 0                   | 6              |
| 23 | MP6          | X         | 73.31               | 39.11          |
| 24 | MP6          | Z         | 0                   | 39.11          |
| 25 | MP5          | X         | 202.71              | 0              |
| 26 | MP5          | Z         | 0                   | 0              |
| 27 | MP5          | X         | 202.71              | %100           |
| 28 | MP5          | Z         | 0                   | %100           |
| 29 | MP7          | X         | 66.6                | %25            |
| 30 | MP7          | Z         | 0                   | %25            |
| 31 | MP5          | X         | 82.45               | %25            |
| 32 | MP5          | Z         | 0                   | %25            |
| 33 | MP11         | X         | 62.38               | 3              |
| 34 | MP11         | Z         | 0                   | 3              |
| 35 | MP11         | X         | 62.38               | 57.7           |
| 36 | MP11         | Z         | 0                   | 57.7           |
| 37 | MP10         | X         | 73.31               | 6              |
| 38 | MP10         | Z         | 0                   | 6              |
| 39 | MP10         | X         | 73.31               | 39.11          |
| 40 | MP10         | Z         | 0                   | 39.11          |
| 41 | MP9          | X         | 202.71              | 0              |
| 42 | MP9          | Z         | 0                   | 0              |
| 43 | MP9          | X         | 202.71              | %100           |
| 44 | MP9          | Z         | 0                   | %100           |
| 45 | MP11         | X         | 66.6                | %25            |
| 46 | MP11         | Z         | 0                   | %25            |
| 47 | MP9          | X         | 82.45               | %25            |
| 48 | MP9          | Z         | 0                   | %25            |

### Member Point Loads (BLC 12 : Wind Load AZI 300)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 34.52               | 3              |
| 2  | MP3          | Z         | -19.93              | 3              |
| 3  | MP3          | X         | 34.52               | 57.7           |
| 4  | MP3          | Z         | -19.93              | 57.7           |
| 5  | MP2          | X         | 40.43               | 6              |
| 6  | MP2          | Z         | -23.34              | 6              |
| 7  | MP2          | X         | 40.43               | 39.11          |
| 8  | MP2          | Z         | -23.34              | 39.11          |
| 9  | MP1          | X         | 109.01              | 0              |
| 10 | MP1          | Z         | -62.93              | 0              |
| 11 | MP1          | X         | 109.01              | %100           |

### Member Point Loads (BLC 12 : Wind Load AZI 300) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 12 | MP1          | Z         | -62.93              | %100           |
| 13 | MP3          | X         | 51.22               | %25            |
| 14 | MP3          | Z         | -29.57              | %25            |
| 15 | MP1          | X         | 50.32               | %25            |
| 16 | MP1          | Z         | -29.05              | %25            |
| 17 | MP7          | X         | 34.52               | 3              |
| 18 | MP7          | Z         | -19.93              | 3              |
| 19 | MP7          | X         | 34.52               | 57.7           |
| 20 | MP7          | Z         | -19.93              | 57.7           |
| 21 | MP6          | X         | 40.43               | 6              |
| 22 | MP6          | Z         | -23.34              | 6              |
| 23 | MP6          | X         | 40.43               | 39.11          |
| 24 | MP6          | Z         | -23.34              | 39.11          |
| 25 | MP5          | X         | 109.01              | 0              |
| 26 | MP5          | Z         | -62.93              | 0              |
| 27 | MP5          | X         | 109.01              | %100           |
| 28 | MP5          | Z         | -62.93              | %100           |
| 29 | MP7          | X         | 51.22               | %25            |
| 30 | MP7          | Z         | -29.57              | %25            |
| 31 | MP5          | X         | 50.32               | %25            |
| 32 | MP5          | Z         | -29.05              | %25            |
| 33 | MP11         | X         | 63.77               | 3              |
| 34 | MP11         | Z         | -36.82              | 3              |
| 35 | MP11         | X         | 63.77               | 57.7           |
| 36 | MP11         | Z         | -36.82              | 57.7           |
| 37 | MP10         | X         | 75.02               | 6              |
| 38 | MP10         | Z         | -43.31              | 6              |
| 39 | MP10         | X         | 75.02               | 39.11          |
| 40 | MP10         | Z         | -43.31              | 39.11          |
| 41 | MP9          | X         | 208.83              | 0              |
| 42 | MP9          | Z         | -120.57             | 0              |
| 43 | MP9          | X         | 208.83              | %100           |
| 44 | MP9          | Z         | -120.57             | %100           |
| 45 | MP11         | X         | 60.9                | %25            |
| 46 | MP11         | Z         | -35.16              | %25            |
| 47 | MP9          | X         | 81.95               | %25            |
| 48 | MP9          | Z         | -47.31              | %25            |

### Member Point Loads (BLC 13 : Wind Load AZI 330)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 31.19               | 3              |
| 2  | MP3          | Z         | -54.02              | 3              |
| 3  | MP3          | X         | 31.19               | 57.7           |
| 4  | MP3          | Z         | -54.02              | 57.7           |
| 5  | MP2          | X         | 36.66               | 6              |
| 6  | MP2          | Z         | -63.49              | 6              |
| 7  | MP2          | X         | 36.66               | 39.11          |
| 8  | MP2          | Z         | -63.49              | 39.11          |
| 9  | MP1          | X         | 101.36              | 0              |
| 10 | MP1          | Z         | -175.55             | 0              |
| 11 | MP1          | X         | 101.36              | %100           |
| 12 | MP1          | Z         | -175.55             | %100           |
| 13 | MP3          | X         | 33.3                | %25            |
| 14 | MP3          | Z         | -57.68              | %25            |
| 15 | MP1          | X         | 41.22               | %25            |
| 16 | MP1          | Z         | -71.4               | %25            |

### Member Point Loads (BLC 13 : Wind Load AZI 330) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 17 | MP7          | X         | 14.3                | 3              |
| 18 | MP7          | Z         | -24.77              | 3              |
| 19 | MP7          | X         | 14.3                | 57.7           |
| 20 | MP7          | Z         | -24.77              | 57.7           |
| 21 | MP6          | X         | 16.68               | 6              |
| 22 | MP6          | Z         | -28.9               | 6              |
| 23 | MP6          | X         | 16.68               | 39.11          |
| 24 | MP6          | Z         | -28.9               | 39.11          |
| 25 | MP5          | X         | 43.72               | 0              |
| 26 | MP5          | Z         | -75.73              | 0              |
| 27 | MP5          | X         | 43.72               | %100           |
| 28 | MP5          | Z         | -75.73              | %100           |
| 29 | MP7          | X         | 27.71               | %25            |
| 30 | MP7          | Z         | -48                 | %25            |
| 31 | MP5          | X         | 22.96               | %25            |
| 32 | MP5          | Z         | -39.77              | %25            |
| 33 | MP11         | X         | 31.19               | 3              |
| 34 | MP11         | Z         | -54.02              | 3              |
| 35 | MP11         | X         | 31.19               | 57.7           |
| 36 | MP11         | Z         | -54.02              | 57.7           |
| 37 | MP10         | X         | 36.66               | 6              |
| 38 | MP10         | Z         | -63.49              | 6              |
| 39 | MP10         | X         | 36.66               | 39.11          |
| 40 | MP10         | Z         | -63.49              | 39.11          |
| 41 | MP9          | X         | 101.36              | 0              |
| 42 | MP9          | Z         | -175.55             | 0              |
| 43 | MP9          | X         | 101.36              | %100           |
| 44 | MP9          | Z         | -175.55             | %100           |
| 45 | MP11         | X         | 33.3                | %25            |
| 46 | MP11         | Z         | -57.68              | %25            |
| 47 | MP9          | X         | 41.22               | %25            |
| 48 | MP9          | Z         | -71.4               | %25            |

### Member Point Loads (BLC 16 : Ice Weight)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | Y         | -69.684             | 3              |
| 2  | MP3          | Y         | -69.684             | 57.7           |
| 3  | MP2          | Y         | -77.741             | 6              |
| 4  | MP2          | Y         | -77.741             | 39.11          |
| 5  | MP1          | Y         | -215.105            | 0              |
| 6  | MP1          | Y         | -215.105            | %100           |
| 7  | MP3          | Y         | -91.576             | %25            |
| 8  | MP1          | Y         | -90.856             | %25            |
| 9  | MP7          | Y         | -69.684             | 3              |
| 10 | MP7          | Y         | -69.684             | 57.7           |
| 11 | MP6          | Y         | -77.741             | 6              |
| 12 | MP6          | Y         | -77.741             | 39.11          |
| 13 | MP5          | Y         | -215.105            | 0              |
| 14 | MP5          | Y         | -215.105            | %100           |
| 15 | MP7          | Y         | -91.576             | %25            |
| 16 | MP5          | Y         | -90.856             | %25            |
| 17 | MP11         | Y         | -69.684             | 3              |
| 18 | MP11         | Y         | -69.684             | 57.7           |
| 19 | MP10         | Y         | -77.741             | 6              |
| 20 | MP10         | Y         | -77.741             | 39.11          |
| 21 | MP9          | Y         | -215.105            | 0              |

### Member Point Loads (BLC 16 : Ice Weight) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 22 | MP9          | Y         | -215.105            | %100           |
| 23 | MP11         | Y         | -91.576             | %25            |
| 24 | MP9          | Y         | -90.856             | %25            |

### Member Point Loads (BLC 17 : Ice Wind Load AZI 0)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 0                   | 3              |
| 2  | MP3          | Z         | -10.76              | 3              |
| 3  | MP3          | X         | 0                   | 57.7           |
| 4  | MP3          | Z         | -10.76              | 57.7           |
| 5  | MP2          | X         | 0                   | 6              |
| 6  | MP2          | Z         | -9.33               | 6              |
| 7  | MP2          | X         | 0                   | 39.11          |
| 8  | MP2          | Z         | -9.33               | 39.11          |
| 9  | MP1          | X         | 0                   | 0              |
| 10 | MP1          | Z         | -30.43              | 0              |
| 11 | MP1          | X         | 0                   | %100           |
| 12 | MP1          | Z         | -30.43              | %100           |
| 13 | MP3          | X         | 0                   | %25            |
| 14 | MP3          | Z         | -8.09               | %25            |
| 15 | MP1          | X         | 0                   | %25            |
| 16 | MP1          | Z         | -10.39              | %25            |
| 17 | MP7          | X         | 0                   | 3              |
| 18 | MP7          | Z         | -8.72               | 3              |
| 19 | MP7          | X         | 0                   | 57.7           |
| 20 | MP7          | Z         | -8.72               | 57.7           |
| 21 | MP6          | X         | 0                   | 6              |
| 22 | MP6          | Z         | -6.65               | 6              |
| 23 | MP6          | X         | 0                   | 39.11          |
| 24 | MP6          | Z         | -6.65               | 39.11          |
| 25 | MP5          | X         | 0                   | 0              |
| 26 | MP5          | Z         | -21.24              | 0              |
| 27 | MP5          | X         | 0                   | %100           |
| 28 | MP5          | Z         | -21.24              | %100           |
| 29 | MP7          | X         | 0                   | %25            |
| 30 | MP7          | Z         | -7.41               | %25            |
| 31 | MP5          | X         | 0                   | %25            |
| 32 | MP5          | Z         | -8.23               | %25            |
| 33 | MP11         | X         | 0                   | 3              |
| 34 | MP11         | Z         | -8.72               | 3              |
| 35 | MP11         | X         | 0                   | 57.7           |
| 36 | MP11         | Z         | -8.72               | 57.7           |
| 37 | MP10         | X         | 0                   | 6              |
| 38 | MP10         | Z         | -6.65               | 6              |
| 39 | MP10         | X         | 0                   | 39.11          |
| 40 | MP10         | Z         | -6.65               | 39.11          |
| 41 | MP9          | X         | 0                   | 0              |
| 42 | MP9          | Z         | -21.24              | 0              |
| 43 | MP9          | X         | 0                   | %100           |
| 44 | MP9          | Z         | -21.24              | %100           |
| 45 | MP11         | X         | 0                   | %25            |
| 46 | MP11         | Z         | -7.41               | %25            |
| 47 | MP9          | X         | 0                   | %25            |
| 48 | MP9          | Z         | -8.23               | %25            |

### Member Point Loads (BLC 18 : Ice Wind Load AZI 30)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | -5.04               | 3              |
| 2  | MP3          | Z         | -8.73               | 3              |
| 3  | MP3          | X         | -5.04               | 57.7           |
| 4  | MP3          | Z         | -8.73               | 57.7           |
| 5  | MP2          | X         | -4.22               | 6              |
| 6  | MP2          | Z         | -7.3                | 6              |
| 7  | MP2          | X         | -4.22               | 39.11          |
| 8  | MP2          | Z         | -7.3                | 39.11          |
| 9  | MP1          | X         | -13.68              | 0              |
| 10 | MP1          | Z         | -23.7               | 0              |
| 11 | MP1          | X         | -13.68              | %100           |
| 12 | MP1          | Z         | -23.7               | %100           |
| 13 | MP3          | X         | -3.93               | %25            |
| 14 | MP3          | Z         | -6.81               | %25            |
| 15 | MP1          | X         | -4.84               | %25            |
| 16 | MP1          | Z         | -8.37               | %25            |
| 17 | MP7          | X         | -5.04               | 3              |
| 18 | MP7          | Z         | -8.73               | 3              |
| 19 | MP7          | X         | -5.04               | 57.7           |
| 20 | MP7          | Z         | -8.73               | 57.7           |
| 21 | MP6          | X         | -4.22               | 6              |
| 22 | MP6          | Z         | -7.3                | 6              |
| 23 | MP6          | X         | -4.22               | 39.11          |
| 24 | MP6          | Z         | -7.3                | 39.11          |
| 25 | MP5          | X         | -13.68              | 0              |
| 26 | MP5          | Z         | -23.7               | 0              |
| 27 | MP5          | X         | -13.68              | %100           |
| 28 | MP5          | Z         | -23.7               | %100           |
| 29 | MP7          | X         | -3.93               | %25            |
| 30 | MP7          | Z         | -6.81               | %25            |
| 31 | MP5          | X         | -4.84               | %25            |
| 32 | MP5          | Z         | -8.37               | %25            |
| 33 | MP11         | X         | -4.02               | 3              |
| 34 | MP11         | Z         | -6.97               | 3              |
| 35 | MP11         | X         | -4.02               | 57.7           |
| 36 | MP11         | Z         | -6.97               | 57.7           |
| 37 | MP10         | X         | -2.88               | 6              |
| 38 | MP10         | Z         | -4.99               | 6              |
| 39 | MP10         | X         | -2.88               | 39.11          |
| 40 | MP10         | Z         | -4.99               | 39.11          |
| 41 | MP9          | X         | -9.09               | 0              |
| 42 | MP9          | Z         | -15.74              | 0              |
| 43 | MP9          | X         | -9.09               | %100           |
| 44 | MP9          | Z         | -15.74              | %100           |
| 45 | MP11         | X         | -3.59               | %25            |
| 46 | MP11         | Z         | -6.22               | %25            |
| 47 | MP9          | X         | -3.75               | %25            |
| 48 | MP9          | Z         | -6.5                | %25            |

### Member Point Loads (BLC 19 : Ice Wind Load AZI 60)

|   | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|---|--------------|-----------|---------------------|----------------|
| 1 | MP3          | X         | -7.56               | 3              |
| 2 | MP3          | Z         | -4.36               | 3              |
| 3 | MP3          | X         | -7.56               | 57.7           |
| 4 | MP3          | Z         | -4.36               | 57.7           |
| 5 | MP2          | X         | -5.76               | 6              |

### Member Point Loads (BLC 19 : Ice Wind Load AZI 60) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in, %] |
|----|--------------|-----------|---------------------|-----------------|
| 6  | MP2          | Z         | -3.33               | 6               |
| 7  | MP2          | X         | -5.76               | 39.11           |
| 8  | MP2          | Z         | -3.33               | 39.11           |
| 9  | MP1          | X         | -18.4               | 0               |
| 10 | MP1          | Z         | -10.62              | 0               |
| 11 | MP1          | X         | -18.4               | %100            |
| 12 | MP1          | Z         | -10.62              | %100            |
| 13 | MP3          | X         | -6.41               | %25             |
| 14 | MP3          | Z         | -3.7                | %25             |
| 15 | MP1          | X         | -7.13               | %25             |
| 16 | MP1          | Z         | -4.11               | %25             |
| 17 | MP7          | X         | -9.31               | 3               |
| 18 | MP7          | Z         | -5.38               | 3               |
| 19 | MP7          | X         | -9.31               | 57.7            |
| 20 | MP7          | Z         | -5.38               | 57.7            |
| 21 | MP6          | X         | -8.08               | 6               |
| 22 | MP6          | Z         | -4.66               | 6               |
| 23 | MP6          | X         | -8.08               | 39.11           |
| 24 | MP6          | Z         | -4.66               | 39.11           |
| 25 | MP5          | X         | -26.36              | 0               |
| 26 | MP5          | Z         | -15.22              | 0               |
| 27 | MP5          | X         | -26.36              | %100            |
| 28 | MP5          | Z         | -15.22              | %100            |
| 29 | MP7          | X         | -7.01               | %25             |
| 30 | MP7          | Z         | -4.05               | %25             |
| 31 | MP5          | X         | -9                  | %25             |
| 32 | MP5          | Z         | -5.2                | %25             |
| 33 | MP11         | X         | -7.56               | 3               |
| 34 | MP11         | Z         | -4.36               | 3               |
| 35 | MP11         | X         | -7.56               | 57.7            |
| 36 | MP11         | Z         | -4.36               | 57.7            |
| 37 | MP10         | X         | -5.76               | 6               |
| 38 | MP10         | Z         | -3.33               | 6               |
| 39 | MP10         | X         | -5.76               | 39.11           |
| 40 | MP10         | Z         | -3.33               | 39.11           |
| 41 | MP9          | X         | -18.4               | 0               |
| 42 | MP9          | Z         | -10.62              | 0               |
| 43 | MP9          | X         | -18.4               | %100            |
| 44 | MP9          | Z         | -10.62              | %100            |
| 45 | MP11         | X         | -6.41               | %25             |
| 46 | MP11         | Z         | -3.7                | %25             |
| 47 | MP9          | X         | -7.13               | %25             |
| 48 | MP9          | Z         | -4.11               | %25             |

### Member Point Loads (BLC 20 : Ice Wind Load AZI 90)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in, %] |
|----|--------------|-----------|---------------------|-----------------|
| 1  | MP3          | X         | -8.05               | 3               |
| 2  | MP3          | Z         | 0                   | 3               |
| 3  | MP3          | X         | -8.05               | 57.7            |
| 4  | MP3          | Z         | 0                   | 57.7            |
| 5  | MP2          | X         | -5.76               | 6               |
| 6  | MP2          | Z         | 0                   | 6               |
| 7  | MP2          | X         | -5.76               | 39.11           |
| 8  | MP2          | Z         | 0                   | 39.11           |
| 9  | MP1          | X         | -18.18              | 0               |
| 10 | MP1          | Z         | 0                   | 0               |

### Member Point Loads (BLC 20 : Ice Wind Load AZI 90) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 11 | MP1          | X         | -18.18              | %100           |
| 12 | MP1          | Z         | 0                   | %100           |
| 13 | MP3          | X         | -7.18               | %25            |
| 14 | MP3          | Z         | 0                   | %25            |
| 15 | MP1          | X         | -7.51               | %25            |
| 16 | MP1          | Z         | 0                   | %25            |
| 17 | MP7          | X         | -10.08              | 3              |
| 18 | MP7          | Z         | 0                   | 3              |
| 19 | MP7          | X         | -10.08              | 57.7           |
| 20 | MP7          | Z         | 0                   | 57.7           |
| 21 | MP6          | X         | -8.43               | 6              |
| 22 | MP6          | Z         | 0                   | 6              |
| 23 | MP6          | X         | -8.43               | 39.11          |
| 24 | MP6          | Z         | 0                   | 39.11          |
| 25 | MP5          | X         | -27.37              | 0              |
| 26 | MP5          | Z         | 0                   | 0              |
| 27 | MP5          | X         | -27.37              | %100           |
| 28 | MP5          | Z         | 0                   | %100           |
| 29 | MP7          | X         | -7.86               | %25            |
| 30 | MP7          | Z         | 0                   | %25            |
| 31 | MP5          | X         | -9.67               | %25            |
| 32 | MP5          | Z         | 0                   | %25            |
| 33 | MP11         | X         | -10.08              | 3              |
| 34 | MP11         | Z         | 0                   | 3              |
| 35 | MP11         | X         | -10.08              | 57.7           |
| 36 | MP11         | Z         | 0                   | 57.7           |
| 37 | MP10         | X         | -8.43               | 6              |
| 38 | MP10         | Z         | 0                   | 6              |
| 39 | MP10         | X         | -8.43               | 39.11          |
| 40 | MP10         | Z         | 0                   | 39.11          |
| 41 | MP9          | X         | -27.37              | 0              |
| 42 | MP9          | Z         | 0                   | 0              |
| 43 | MP9          | X         | -27.37              | %100           |
| 44 | MP9          | Z         | 0                   | %100           |
| 45 | MP11         | X         | -7.86               | %25            |
| 46 | MP11         | Z         | 0                   | %25            |
| 47 | MP9          | X         | -9.67               | %25            |
| 48 | MP9          | Z         | 0                   | %25            |

### Member Point Loads (BLC 21 : Ice Wind Load AZI 120)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | -7.56               | 3              |
| 2  | MP3          | Z         | 4.36                | 3              |
| 3  | MP3          | X         | -7.56               | 57.7           |
| 4  | MP3          | Z         | 4.36                | 57.7           |
| 5  | MP2          | X         | -5.76               | 6              |
| 6  | MP2          | Z         | 3.33                | 6              |
| 7  | MP2          | X         | -5.76               | 39.11          |
| 8  | MP2          | Z         | 3.33                | 39.11          |
| 9  | MP1          | X         | -18.4               | 0              |
| 10 | MP1          | Z         | 10.62               | 0              |
| 11 | MP1          | X         | -18.4               | %100           |
| 12 | MP1          | Z         | 10.62               | %100           |
| 13 | MP3          | X         | -6.41               | %25            |
| 14 | MP3          | Z         | 3.7                 | %25            |
| 15 | MP1          | X         | -7.13               | %25            |

### Member Point Loads (BLC 21 : Ice Wind Load AZI 120) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 16 | MP1          | Z         | 4.11                | %25            |
| 17 | MP7          | X         | -7.56               | 3              |
| 18 | MP7          | Z         | 4.36                | 3              |
| 19 | MP7          | X         | -7.56               | 57.7           |
| 20 | MP7          | Z         | 4.36                | 57.7           |
| 21 | MP6          | X         | -5.76               | 6              |
| 22 | MP6          | Z         | 3.33                | 6              |
| 23 | MP6          | X         | -5.76               | 39.11          |
| 24 | MP6          | Z         | 3.33                | 39.11          |
| 25 | MP5          | X         | -18.4               | 0              |
| 26 | MP5          | Z         | 10.62               | 0              |
| 27 | MP5          | X         | -18.4               | %100           |
| 28 | MP5          | Z         | 10.62               | %100           |
| 29 | MP7          | X         | -6.41               | %25            |
| 30 | MP7          | Z         | 3.7                 | %25            |
| 31 | MP5          | X         | -7.13               | %25            |
| 32 | MP5          | Z         | 4.11                | %25            |
| 33 | MP11         | X         | -9.31               | 3              |
| 34 | MP11         | Z         | 5.38                | 3              |
| 35 | MP11         | X         | -9.31               | 57.7           |
| 36 | MP11         | Z         | 5.38                | 57.7           |
| 37 | MP10         | X         | -8.08               | 6              |
| 38 | MP10         | Z         | 4.66                | 6              |
| 39 | MP10         | X         | -8.08               | 39.11          |
| 40 | MP10         | Z         | 4.66                | 39.11          |
| 41 | MP9          | X         | -26.36              | 0              |
| 42 | MP9          | Z         | 15.22               | 0              |
| 43 | MP9          | X         | -26.36              | %100           |
| 44 | MP9          | Z         | 15.22               | %100           |
| 45 | MP11         | X         | -7.01               | %25            |
| 46 | MP11         | Z         | 4.05                | %25            |
| 47 | MP9          | X         | -9                  | %25            |
| 48 | MP9          | Z         | 5.2                 | %25            |

### Member Point Loads (BLC 22 : Ice Wind Load AZI 150)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | -5.04               | 3              |
| 2  | MP3          | Z         | 8.73                | 3              |
| 3  | MP3          | X         | -5.04               | 57.7           |
| 4  | MP3          | Z         | 8.73                | 57.7           |
| 5  | MP2          | X         | -4.22               | 6              |
| 6  | MP2          | Z         | 7.3                 | 6              |
| 7  | MP2          | X         | -4.22               | 39.11          |
| 8  | MP2          | Z         | 7.3                 | 39.11          |
| 9  | MP1          | X         | -13.68              | 0              |
| 10 | MP1          | Z         | 23.7                | 0              |
| 11 | MP1          | X         | -13.68              | %100           |
| 12 | MP1          | Z         | 23.7                | %100           |
| 13 | MP3          | X         | -3.93               | %25            |
| 14 | MP3          | Z         | 6.81                | %25            |
| 15 | MP1          | X         | -4.84               | %25            |
| 16 | MP1          | Z         | 8.37                | %25            |
| 17 | MP7          | X         | -4.02               | 3              |
| 18 | MP7          | Z         | 6.97                | 3              |
| 19 | MP7          | X         | -4.02               | 57.7           |
| 20 | MP7          | Z         | 6.97                | 57.7           |

### Member Point Loads (BLC 22 : Ice Wind Load AZI 150) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 21 | MP6          | X         | -2.88               | 6              |
| 22 | MP6          | Z         | 4.99                | 6              |
| 23 | MP6          | X         | -2.88               | 39.11          |
| 24 | MP6          | Z         | 4.99                | 39.11          |
| 25 | MP5          | X         | -9.09               | 0              |
| 26 | MP5          | Z         | 15.74               | 0              |
| 27 | MP5          | X         | -9.09               | %100           |
| 28 | MP5          | Z         | 15.74               | %100           |
| 29 | MP7          | X         | -3.59               | %25            |
| 30 | MP7          | Z         | 6.22                | %25            |
| 31 | MP5          | X         | -3.75               | %25            |
| 32 | MP5          | Z         | 6.5                 | %25            |
| 33 | MP11         | X         | -5.04               | 3              |
| 34 | MP11         | Z         | 8.73                | 3              |
| 35 | MP11         | X         | -5.04               | 57.7           |
| 36 | MP11         | Z         | 8.73                | 57.7           |
| 37 | MP10         | X         | -4.22               | 6              |
| 38 | MP10         | Z         | 7.3                 | 6              |
| 39 | MP10         | X         | -4.22               | 39.11          |
| 40 | MP10         | Z         | 7.3                 | 39.11          |
| 41 | MP9          | X         | -13.68              | 0              |
| 42 | MP9          | Z         | 23.7                | 0              |
| 43 | MP9          | X         | -13.68              | %100           |
| 44 | MP9          | Z         | 23.7                | %100           |
| 45 | MP11         | X         | -3.93               | %25            |
| 46 | MP11         | Z         | 6.81                | %25            |
| 47 | MP9          | X         | -4.84               | %25            |
| 48 | MP9          | Z         | 8.37                | %25            |

### Member Point Loads (BLC 23 : Ice Wind Load AZI 180)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 0                   | 3              |
| 2  | MP3          | Z         | 10.76               | 3              |
| 3  | MP3          | X         | 0                   | 57.7           |
| 4  | MP3          | Z         | 10.76               | 57.7           |
| 5  | MP2          | X         | 0                   | 6              |
| 6  | MP2          | Z         | 9.33                | 6              |
| 7  | MP2          | X         | 0                   | 39.11          |
| 8  | MP2          | Z         | 9.33                | 39.11          |
| 9  | MP1          | X         | 0                   | 0              |
| 10 | MP1          | Z         | 30.43               | 0              |
| 11 | MP1          | X         | 0                   | %100           |
| 12 | MP1          | Z         | 30.43               | %100           |
| 13 | MP3          | X         | 0                   | %25            |
| 14 | MP3          | Z         | 8.09                | %25            |
| 15 | MP1          | X         | 0                   | %25            |
| 16 | MP1          | Z         | 10.39               | %25            |
| 17 | MP7          | X         | 0                   | 3              |
| 18 | MP7          | Z         | 8.72                | 3              |
| 19 | MP7          | X         | 0                   | 57.7           |
| 20 | MP7          | Z         | 8.72                | 57.7           |
| 21 | MP6          | X         | 0                   | 6              |
| 22 | MP6          | Z         | 6.65                | 6              |
| 23 | MP6          | X         | 0                   | 39.11          |
| 24 | MP6          | Z         | 6.65                | 39.11          |
| 25 | MP5          | X         | 0                   | 0              |

### Member Point Loads (BLC 23 : Ice Wind Load AZI 180) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 26 | MP5          | Z         | 21.24               | 0              |
| 27 | MP5          | X         | 0                   | %100           |
| 28 | MP5          | Z         | 21.24               | %100           |
| 29 | MP7          | X         | 0                   | %25            |
| 30 | MP7          | Z         | 7.41                | %25            |
| 31 | MP5          | X         | 0                   | %25            |
| 32 | MP5          | Z         | 8.23                | %25            |
| 33 | MP11         | X         | 0                   | 3              |
| 34 | MP11         | Z         | 8.72                | 3              |
| 35 | MP11         | X         | 0                   | 57.7           |
| 36 | MP11         | Z         | 8.72                | 57.7           |
| 37 | MP10         | X         | 0                   | 6              |
| 38 | MP10         | Z         | 6.65                | 6              |
| 39 | MP10         | X         | 0                   | 39.11          |
| 40 | MP10         | Z         | 6.65                | 39.11          |
| 41 | MP9          | X         | 0                   | 0              |
| 42 | MP9          | Z         | 21.24               | 0              |
| 43 | MP9          | X         | 0                   | %100           |
| 44 | MP9          | Z         | 21.24               | %100           |
| 45 | MP11         | X         | 0                   | %25            |
| 46 | MP11         | Z         | 7.41                | %25            |
| 47 | MP9          | X         | 0                   | %25            |
| 48 | MP9          | Z         | 8.23                | %25            |

### Member Point Loads (BLC 24 : Ice Wind Load AZI 210)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 5.04                | 3              |
| 2  | MP3          | Z         | 8.73                | 3              |
| 3  | MP3          | X         | 5.04                | 57.7           |
| 4  | MP3          | Z         | 8.73                | 57.7           |
| 5  | MP2          | X         | 4.22                | 6              |
| 6  | MP2          | Z         | 7.3                 | 6              |
| 7  | MP2          | X         | 4.22                | 39.11          |
| 8  | MP2          | Z         | 7.3                 | 39.11          |
| 9  | MP1          | X         | 13.68               | 0              |
| 10 | MP1          | Z         | 23.7                | 0              |
| 11 | MP1          | X         | 13.68               | %100           |
| 12 | MP1          | Z         | 23.7                | %100           |
| 13 | MP3          | X         | 3.93                | %25            |
| 14 | MP3          | Z         | 6.81                | %25            |
| 15 | MP1          | X         | 4.84                | %25            |
| 16 | MP1          | Z         | 8.37                | %25            |
| 17 | MP7          | X         | 5.04                | 3              |
| 18 | MP7          | Z         | 8.73                | 3              |
| 19 | MP7          | X         | 5.04                | 57.7           |
| 20 | MP7          | Z         | 8.73                | 57.7           |
| 21 | MP6          | X         | 4.22                | 6              |
| 22 | MP6          | Z         | 7.3                 | 6              |
| 23 | MP6          | X         | 4.22                | 39.11          |
| 24 | MP6          | Z         | 7.3                 | 39.11          |
| 25 | MP5          | X         | 13.68               | 0              |
| 26 | MP5          | Z         | 23.7                | 0              |
| 27 | MP5          | X         | 13.68               | %100           |
| 28 | MP5          | Z         | 23.7                | %100           |
| 29 | MP7          | X         | 3.93                | %25            |
| 30 | MP7          | Z         | 6.81                | %25            |

### Member Point Loads (BLC 24 : Ice Wind Load AZI 210) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 31 | MP5          | X         | 4.84                | %25            |
| 32 | MP5          | Z         | 8.37                | %25            |
| 33 | MP11         | X         | 4.02                | 3              |
| 34 | MP11         | Z         | 6.97                | 3              |
| 35 | MP11         | X         | 4.02                | 57.7           |
| 36 | MP11         | Z         | 6.97                | 57.7           |
| 37 | MP10         | X         | 2.88                | 6              |
| 38 | MP10         | Z         | 4.99                | 6              |
| 39 | MP10         | X         | 2.88                | 39.11          |
| 40 | MP10         | Z         | 4.99                | 39.11          |
| 41 | MP9          | X         | 9.09                | 0              |
| 42 | MP9          | Z         | 15.74               | 0              |
| 43 | MP9          | X         | 9.09                | %100           |
| 44 | MP9          | Z         | 15.74               | %100           |
| 45 | MP11         | X         | 3.59                | %25            |
| 46 | MP11         | Z         | 6.22                | %25            |
| 47 | MP9          | X         | 3.75                | %25            |
| 48 | MP9          | Z         | 6.5                 | %25            |

### Member Point Loads (BLC 25 : Ice Wind Load AZI 240)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 7.56                | 3              |
| 2  | MP3          | Z         | 4.36                | 3              |
| 3  | MP3          | X         | 7.56                | 57.7           |
| 4  | MP3          | Z         | 4.36                | 57.7           |
| 5  | MP2          | X         | 5.76                | 6              |
| 6  | MP2          | Z         | 3.33                | 6              |
| 7  | MP2          | X         | 5.76                | 39.11          |
| 8  | MP2          | Z         | 3.33                | 39.11          |
| 9  | MP1          | X         | 18.4                | 0              |
| 10 | MP1          | Z         | 10.62               | 0              |
| 11 | MP1          | X         | 18.4                | %100           |
| 12 | MP1          | Z         | 10.62               | %100           |
| 13 | MP3          | X         | 6.41                | %25            |
| 14 | MP3          | Z         | 3.7                 | %25            |
| 15 | MP1          | X         | 7.13                | %25            |
| 16 | MP1          | Z         | 4.11                | %25            |
| 17 | MP7          | X         | 9.31                | 3              |
| 18 | MP7          | Z         | 5.38                | 3              |
| 19 | MP7          | X         | 9.31                | 57.7           |
| 20 | MP7          | Z         | 5.38                | 57.7           |
| 21 | MP6          | X         | 8.08                | 6              |
| 22 | MP6          | Z         | 4.66                | 6              |
| 23 | MP6          | X         | 8.08                | 39.11          |
| 24 | MP6          | Z         | 4.66                | 39.11          |
| 25 | MP5          | X         | 26.36               | 0              |
| 26 | MP5          | Z         | 15.22               | 0              |
| 27 | MP5          | X         | 26.36               | %100           |
| 28 | MP5          | Z         | 15.22               | %100           |
| 29 | MP7          | X         | 7.01                | %25            |
| 30 | MP7          | Z         | 4.05                | %25            |
| 31 | MP5          | X         | 9                   | %25            |
| 32 | MP5          | Z         | 5.2                 | %25            |
| 33 | MP11         | X         | 7.56                | 3              |
| 34 | MP11         | Z         | 4.36                | 3              |
| 35 | MP11         | X         | 7.56                | 57.7           |

### Member Point Loads (BLC 25 : Ice Wind Load AZI 240) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 36 | MP11         | Z         | 4.36                | 57.7           |
| 37 | MP10         | X         | 5.76                | 6              |
| 38 | MP10         | Z         | 3.33                | 6              |
| 39 | MP10         | X         | 5.76                | 39.11          |
| 40 | MP10         | Z         | 3.33                | 39.11          |
| 41 | MP9          | X         | 18.4                | 0              |
| 42 | MP9          | Z         | 10.62               | 0              |
| 43 | MP9          | X         | 18.4                | %100           |
| 44 | MP9          | Z         | 10.62               | %100           |
| 45 | MP11         | X         | 6.41                | %25            |
| 46 | MP11         | Z         | 3.7                 | %25            |
| 47 | MP9          | X         | 7.13                | %25            |
| 48 | MP9          | Z         | 4.11                | %25            |

### Member Point Loads (BLC 26 : Ice Wind Load AZI 270)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 8.05                | 3              |
| 2  | MP3          | Z         | 0                   | 3              |
| 3  | MP3          | X         | 8.05                | 57.7           |
| 4  | MP3          | Z         | 0                   | 57.7           |
| 5  | MP2          | X         | 5.76                | 6              |
| 6  | MP2          | Z         | 0                   | 6              |
| 7  | MP2          | X         | 5.76                | 39.11          |
| 8  | MP2          | Z         | 0                   | 39.11          |
| 9  | MP1          | X         | 18.18               | 0              |
| 10 | MP1          | Z         | 0                   | 0              |
| 11 | MP1          | X         | 18.18               | %100           |
| 12 | MP1          | Z         | 0                   | %100           |
| 13 | MP3          | X         | 7.18                | %25            |
| 14 | MP3          | Z         | 0                   | %25            |
| 15 | MP1          | X         | 7.51                | %25            |
| 16 | MP1          | Z         | 0                   | %25            |
| 17 | MP7          | X         | 10.08               | 3              |
| 18 | MP7          | Z         | 0                   | 3              |
| 19 | MP7          | X         | 10.08               | 57.7           |
| 20 | MP7          | Z         | 0                   | 57.7           |
| 21 | MP6          | X         | 8.43                | 6              |
| 22 | MP6          | Z         | 0                   | 6              |
| 23 | MP6          | X         | 8.43                | 39.11          |
| 24 | MP6          | Z         | 0                   | 39.11          |
| 25 | MP5          | X         | 27.37               | 0              |
| 26 | MP5          | Z         | 0                   | 0              |
| 27 | MP5          | X         | 27.37               | %100           |
| 28 | MP5          | Z         | 0                   | %100           |
| 29 | MP7          | X         | 7.86                | %25            |
| 30 | MP7          | Z         | 0                   | %25            |
| 31 | MP5          | X         | 9.67                | %25            |
| 32 | MP5          | Z         | 0                   | %25            |
| 33 | MP11         | X         | 10.08               | 3              |
| 34 | MP11         | Z         | 0                   | 3              |
| 35 | MP11         | X         | 10.08               | 57.7           |
| 36 | MP11         | Z         | 0                   | 57.7           |
| 37 | MP10         | X         | 8.43                | 6              |
| 38 | MP10         | Z         | 0                   | 6              |
| 39 | MP10         | X         | 8.43                | 39.11          |
| 40 | MP10         | Z         | 0                   | 39.11          |

### Member Point Loads (BLC 26 : Ice Wind Load AZI 270) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 41 | MP9          | X         | 27.37               | 0              |
| 42 | MP9          | Z         | 0                   | 0              |
| 43 | MP9          | X         | 27.37               | %100           |
| 44 | MP9          | Z         | 0                   | %100           |
| 45 | MP11         | X         | 7.86                | %25            |
| 46 | MP11         | Z         | 0                   | %25            |
| 47 | MP9          | X         | 9.67                | %25            |
| 48 | MP9          | Z         | 0                   | %25            |

### Member Point Loads (BLC 27 : Ice Wind Load AZI 300)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 7.56                | 3              |
| 2  | MP3          | Z         | -4.36               | 3              |
| 3  | MP3          | X         | 7.56                | 57.7           |
| 4  | MP3          | Z         | -4.36               | 57.7           |
| 5  | MP2          | X         | 5.76                | 6              |
| 6  | MP2          | Z         | -3.33               | 6              |
| 7  | MP2          | X         | 5.76                | 39.11          |
| 8  | MP2          | Z         | -3.33               | 39.11          |
| 9  | MP1          | X         | 18.4                | 0              |
| 10 | MP1          | Z         | -10.62              | 0              |
| 11 | MP1          | X         | 18.4                | %100           |
| 12 | MP1          | Z         | -10.62              | %100           |
| 13 | MP3          | X         | 6.41                | %25            |
| 14 | MP3          | Z         | -3.7                | %25            |
| 15 | MP1          | X         | 7.13                | %25            |
| 16 | MP1          | Z         | -4.11               | %25            |
| 17 | MP7          | X         | 7.56                | 3              |
| 18 | MP7          | Z         | -4.36               | 3              |
| 19 | MP7          | X         | 7.56                | 57.7           |
| 20 | MP7          | Z         | -4.36               | 57.7           |
| 21 | MP6          | X         | 5.76                | 6              |
| 22 | MP6          | Z         | -3.33               | 6              |
| 23 | MP6          | X         | 5.76                | 39.11          |
| 24 | MP6          | Z         | -3.33               | 39.11          |
| 25 | MP5          | X         | 18.4                | 0              |
| 26 | MP5          | Z         | -10.62              | 0              |
| 27 | MP5          | X         | 18.4                | %100           |
| 28 | MP5          | Z         | -10.62              | %100           |
| 29 | MP7          | X         | 6.41                | %25            |
| 30 | MP7          | Z         | -3.7                | %25            |
| 31 | MP5          | X         | 7.13                | %25            |
| 32 | MP5          | Z         | -4.11               | %25            |
| 33 | MP11         | X         | 9.31                | 3              |
| 34 | MP11         | Z         | -5.38               | 3              |
| 35 | MP11         | X         | 9.31                | 57.7           |
| 36 | MP11         | Z         | -5.38               | 57.7           |
| 37 | MP10         | X         | 8.08                | 6              |
| 38 | MP10         | Z         | -4.66               | 6              |
| 39 | MP10         | X         | 8.08                | 39.11          |
| 40 | MP10         | Z         | -4.66               | 39.11          |
| 41 | MP9          | X         | 26.36               | 0              |
| 42 | MP9          | Z         | -15.22              | 0              |
| 43 | MP9          | X         | 26.36               | %100           |
| 44 | MP9          | Z         | -15.22              | %100           |
| 45 | MP11         | X         | 7.01                | %25            |

### Member Point Loads (BLC 27 : Ice Wind Load AZI 300) (Continued)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 46 | MP11         | Z         | -4.05               | %25            |
| 47 | MP9          | X         | 9                   | %25            |
| 48 | MP9          | Z         | -5.2                | %25            |

### Member Point Loads (BLC 28 : Ice Wind Load AZI 330)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in,%] |
|----|--------------|-----------|---------------------|----------------|
| 1  | MP3          | X         | 5.04                | 3              |
| 2  | MP3          | Z         | -8.73               | 3              |
| 3  | MP3          | X         | 5.04                | 57.7           |
| 4  | MP3          | Z         | -8.73               | 57.7           |
| 5  | MP2          | X         | 4.22                | 6              |
| 6  | MP2          | Z         | -7.3                | 6              |
| 7  | MP2          | X         | 4.22                | 39.11          |
| 8  | MP2          | Z         | -7.3                | 39.11          |
| 9  | MP1          | X         | 13.68               | 0              |
| 10 | MP1          | Z         | -23.7               | 0              |
| 11 | MP1          | X         | 13.68               | %100           |
| 12 | MP1          | Z         | -23.7               | %100           |
| 13 | MP3          | X         | 3.93                | %25            |
| 14 | MP3          | Z         | -6.81               | %25            |
| 15 | MP1          | X         | 4.84                | %25            |
| 16 | MP1          | Z         | -8.37               | %25            |
| 17 | MP7          | X         | 4.02                | 3              |
| 18 | MP7          | Z         | -6.97               | 3              |
| 19 | MP7          | X         | 4.02                | 57.7           |
| 20 | MP7          | Z         | -6.97               | 57.7           |
| 21 | MP6          | X         | 2.88                | 6              |
| 22 | MP6          | Z         | -4.99               | 6              |
| 23 | MP6          | X         | 2.88                | 39.11          |
| 24 | MP6          | Z         | -4.99               | 39.11          |
| 25 | MP5          | X         | 9.09                | 0              |
| 26 | MP5          | Z         | -15.74              | 0              |
| 27 | MP5          | X         | 9.09                | %100           |
| 28 | MP5          | Z         | -15.74              | %100           |
| 29 | MP7          | X         | 3.59                | %25            |
| 30 | MP7          | Z         | -6.22               | %25            |
| 31 | MP5          | X         | 3.75                | %25            |
| 32 | MP5          | Z         | -6.5                | %25            |
| 33 | MP11         | X         | 5.04                | 3              |
| 34 | MP11         | Z         | -8.73               | 3              |
| 35 | MP11         | X         | 5.04                | 57.7           |
| 36 | MP11         | Z         | -8.73               | 57.7           |
| 37 | MP10         | X         | 4.22                | 6              |
| 38 | MP10         | Z         | -7.3                | 6              |
| 39 | MP10         | X         | 4.22                | 39.11          |
| 40 | MP10         | Z         | -7.3                | 39.11          |
| 41 | MP9          | X         | 13.68               | 0              |
| 42 | MP9          | Z         | -23.7               | 0              |
| 43 | MP9          | X         | 13.68               | %100           |
| 44 | MP9          | Z         | -23.7               | %100           |
| 45 | MP11         | X         | 3.93                | %25            |
| 46 | MP11         | Z         | -6.81               | %25            |
| 47 | MP9          | X         | 4.84                | %25            |
| 48 | MP9          | Z         | -8.37               | %25            |

### Member Point Loads (BLC 31 : Seismic Load Z)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in, %] |
|----|--------------|-----------|---------------------|-----------------|
| 1  | MP3          | Z         | -6.73               | 3               |
| 2  | MP3          | Z         | -6.73               | 57.7            |
| 3  | MP2          | Z         | -23.166             | 6               |
| 4  | MP2          | Z         | -23.166             | 39.11           |
| 5  | MP1          | Z         | -30.294             | 0               |
| 6  | MP1          | Z         | -30.294             | %100            |
| 7  | MP3          | Z         | -44.057             | %25             |
| 8  | MP1          | Z         | -32.74              | %25             |
| 9  | MP7          | Z         | -6.73               | 3               |
| 10 | MP7          | Z         | -6.73               | 57.7            |
| 11 | MP6          | Z         | -23.166             | 6               |
| 12 | MP6          | Z         | -23.166             | 39.11           |
| 13 | MP5          | Z         | -30.294             | 0               |
| 14 | MP5          | Z         | -30.294             | %100            |
| 15 | MP7          | Z         | -44.057             | %25             |
| 16 | MP5          | Z         | -32.74              | %25             |
| 17 | MP11         | Z         | -6.73               | 3               |
| 18 | MP11         | Z         | -6.73               | 57.7            |
| 19 | MP10         | Z         | -23.166             | 6               |
| 20 | MP10         | Z         | -23.166             | 39.11           |
| 21 | MP9          | Z         | -30.294             | 0               |
| 22 | MP9          | Z         | -30.294             | %100            |
| 23 | MP11         | Z         | -44.057             | %25             |
| 24 | MP9          | Z         | -32.74              | %25             |

### Member Point Loads (BLC 32 : Seismic Load X)

|    | Member Label | Direction | Magnitude[lb,lb-ft] | Location[in, %] |
|----|--------------|-----------|---------------------|-----------------|
| 1  | MP3          | X         | -6.73               | 3               |
| 2  | MP3          | X         | -6.73               | 57.7            |
| 3  | MP2          | X         | -23.166             | 6               |
| 4  | MP2          | X         | -23.166             | 39.11           |
| 5  | MP1          | X         | -30.294             | 0               |
| 6  | MP1          | X         | -30.294             | %100            |
| 7  | MP3          | X         | -44.057             | %25             |
| 8  | MP1          | X         | -32.74              | %25             |
| 9  | MP7          | X         | -6.73               | 3               |
| 10 | MP7          | X         | -6.73               | 57.7            |
| 11 | MP6          | X         | -23.166             | 6               |
| 12 | MP6          | X         | -23.166             | 39.11           |
| 13 | MP5          | X         | -30.294             | 0               |
| 14 | MP5          | X         | -30.294             | %100            |
| 15 | MP7          | X         | -44.057             | %25             |
| 16 | MP5          | X         | -32.74              | %25             |
| 17 | MP11         | X         | -6.73               | 3               |
| 18 | MP11         | X         | -6.73               | 57.7            |
| 19 | MP10         | X         | -23.166             | 6               |
| 20 | MP10         | X         | -23.166             | 39.11           |
| 21 | MP9          | X         | -30.294             | 0               |
| 22 | MP9          | X         | -30.294             | %100            |
| 23 | MP11         | X         | -44.057             | %25             |
| 24 | MP9          | X         | -32.74              | %25             |

### Member Distributed Loads (BLC 14 : Distr. Wind Load Z)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 1  | HOR1         | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 2  | M4           | SZ        | 0                         | 0                        | 0                     | %100                |
| 3  | H1           | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 4  | M7           | SZ        | 0                         | 0                        | 0                     | %100                |
| 5  | M9           | SZ        | 0                         | 0                        | 0                     | %100                |
| 6  | M10          | SZ        | 0                         | 0                        | 0                     | %100                |
| 7  | MP4          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 8  | MP1          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 9  | MP2          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 10 | HOR3         | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 11 | H3           | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 12 | HOR2         | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 13 | H2           | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 14 | S3           | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 15 | M62          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 16 | M63          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 17 | M65          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 18 | S2           | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 19 | S1           | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 20 | M73          | SZ        | 0                         | 0                        | 0                     | %100                |
| 21 | M74A         | SZ        | 0                         | 0                        | 0                     | %100                |
| 22 | MP3          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 23 | M34          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 24 | M36          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 25 | M29          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 26 | M30          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 27 | M29A         | SZ        | 0                         | 0                        | 0                     | %100                |
| 28 | M30A         | SZ        | 0                         | 0                        | 0                     | %100                |
| 29 | M31          | SZ        | 0                         | 0                        | 0                     | %100                |
| 30 | M32          | SZ        | 0                         | 0                        | 0                     | %100                |
| 31 | MP12         | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 32 | MP9          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 33 | MP10         | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 34 | M36A         | SZ        | 0                         | 0                        | 0                     | %100                |
| 35 | M37          | SZ        | 0                         | 0                        | 0                     | %100                |
| 36 | MP11         | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 37 | M39          | SZ        | 0                         | 0                        | 0                     | %100                |
| 38 | M40          | SZ        | 0                         | 0                        | 0                     | %100                |
| 39 | M41          | SZ        | 0                         | 0                        | 0                     | %100                |
| 40 | M42          | SZ        | 0                         | 0                        | 0                     | %100                |
| 41 | MP8          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 42 | MP5          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 43 | MP6          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 44 | M46          | SZ        | 0                         | 0                        | 0                     | %100                |
| 45 | M47          | SZ        | 0                         | 0                        | 0                     | %100                |
| 46 | MP7          | SZ        | -43.753                   | -43.753                  | 0                     | %100                |
| 47 | M49          | SZ        | 0                         | 0                        | 0                     | %100                |
| 48 | M50          | SZ        | 0                         | 0                        | 0                     | %100                |
| 49 | M51          | SZ        | 0                         | 0                        | 0                     | %100                |
| 50 | M52          | SZ        | 0                         | 0                        | 0                     | %100                |
| 51 | M53          | SZ        | 0                         | 0                        | 0                     | %100                |
| 52 | M54          | SZ        | 0                         | 0                        | 0                     | %100                |
| 53 | M55          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 54 | M56          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 55 | M57          | SZ        | -72.922                   | -72.922                  | 0                     | %100                |
| 56 | M56A         | SZ        | -72.922                   | -72.922                  | 0                     | %100                |

### Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

|    | Member Label | Direction | Start Magnitude[lb/ft.... | End Magnitude[lb/ft.F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 57 | M57A         | SZ        | -72.922                   | -72.922                  | 0                     | %100                |

### Member Distributed Loads (BLC 15 : Distr. Wind Load X)

|    | Member Label | Direction | Start Magnitude[lb/ft.... | End Magnitude[lb/ft.F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 1  | HOR1         | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 2  | M4           | SX        | 0                         | 0                        | 0                     | %100                |
| 3  | H1           | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 4  | M7           | SX        | 0                         | 0                        | 0                     | %100                |
| 5  | M9           | SX        | 0                         | 0                        | 0                     | %100                |
| 6  | M10          | SX        | 0                         | 0                        | 0                     | %100                |
| 7  | MP4          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 8  | MP1          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 9  | MP2          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 10 | HOR3         | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 11 | H3           | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 12 | HOR2         | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 13 | H2           | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 14 | S3           | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 15 | M62          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 16 | M63          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 17 | M65          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 18 | S2           | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 19 | S1           | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 20 | M73          | SX        | 0                         | 0                        | 0                     | %100                |
| 21 | M74A         | SX        | 0                         | 0                        | 0                     | %100                |
| 22 | MP3          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 23 | M34          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 24 | M36          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 25 | M29          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 26 | M30          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 27 | M29A         | SX        | 0                         | 0                        | 0                     | %100                |
| 28 | M30A         | SX        | 0                         | 0                        | 0                     | %100                |
| 29 | M31          | SX        | 0                         | 0                        | 0                     | %100                |
| 30 | M32          | SX        | 0                         | 0                        | 0                     | %100                |
| 31 | MP12         | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 32 | MP9          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 33 | MP10         | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 34 | M36A         | SX        | 0                         | 0                        | 0                     | %100                |
| 35 | M37          | SX        | 0                         | 0                        | 0                     | %100                |
| 36 | MP11         | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 37 | M39          | SX        | 0                         | 0                        | 0                     | %100                |
| 38 | M40          | SX        | 0                         | 0                        | 0                     | %100                |
| 39 | M41          | SX        | 0                         | 0                        | 0                     | %100                |
| 40 | M42          | SX        | 0                         | 0                        | 0                     | %100                |
| 41 | MP8          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 42 | MP5          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 43 | MP6          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 44 | M46          | SX        | 0                         | 0                        | 0                     | %100                |
| 45 | M47          | SX        | 0                         | 0                        | 0                     | %100                |
| 46 | MP7          | SX        | -43.753                   | -43.753                  | 0                     | %100                |
| 47 | M49          | SX        | 0                         | 0                        | 0                     | %100                |
| 48 | M50          | SX        | 0                         | 0                        | 0                     | %100                |
| 49 | M51          | SX        | 0                         | 0                        | 0                     | %100                |
| 50 | M52          | SX        | 0                         | 0                        | 0                     | %100                |
| 51 | M53          | SX        | 0                         | 0                        | 0                     | %100                |
| 52 | M54          | SX        | 0                         | 0                        | 0                     | %100                |

### Member Distributed Loads (BLC 15 : Distr. Wind Load X) (Continued)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 53 | M55          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 54 | M56          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 55 | M57          | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 56 | M56A         | SX        | -72.922                   | -72.922                  | 0                     | %100                |
| 57 | M57A         | SX        | -72.922                   | -72.922                  | 0                     | %100                |

### Member Distributed Loads (BLC 16 : Ice Weight)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 1  | HOR1         | Y         | -15.102                   | -15.102                  | 0                     | %100                |
| 2  | M4           | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 3  | H1           | Y         | -12.843                   | -12.843                  | 0                     | %100                |
| 4  | M7           | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 5  | M9           | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 6  | M10          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 7  | MP4          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 8  | MP1          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 9  | MP2          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 10 | HOR3         | Y         | -15.102                   | -15.102                  | 0                     | %100                |
| 11 | H3           | Y         | -12.843                   | -12.843                  | 0                     | %100                |
| 12 | HOR2         | Y         | -15.102                   | -15.102                  | 0                     | %100                |
| 13 | H2           | Y         | -12.843                   | -12.843                  | 0                     | %100                |
| 14 | S3           | Y         | -15.872                   | -15.872                  | 0                     | %100                |
| 15 | M62          | Y         | -23.062                   | -23.062                  | 0                     | %100                |
| 16 | M63          | Y         | -15.872                   | -15.872                  | 0                     | %100                |
| 17 | M65          | Y         | -16.651                   | -16.651                  | 0                     | %100                |
| 18 | S2           | Y         | -15.872                   | -15.872                  | 0                     | %100                |
| 19 | S1           | Y         | -15.872                   | -15.872                  | 0                     | %100                |
| 20 | M73          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 21 | M74A         | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 22 | MP3          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 23 | M34          | Y         | -16.651                   | -16.651                  | 0                     | %100                |
| 24 | M36          | Y         | -16.651                   | -16.651                  | 0                     | %100                |
| 25 | M29          | Y         | -15.872                   | -15.872                  | 0                     | %100                |
| 26 | M30          | Y         | -15.872                   | -15.872                  | 0                     | %100                |
| 27 | M29A         | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 28 | M30A         | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 29 | M31          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 30 | M32          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 31 | MP12         | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 32 | MP9          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 33 | MP10         | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 34 | M36A         | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 35 | M37          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 36 | MP11         | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 37 | M39          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 38 | M40          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 39 | M41          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 40 | M42          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 41 | MP8          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 42 | MP5          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 43 | MP6          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 44 | M46          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 45 | M47          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 46 | MP7          | Y         | -8.842                    | -8.842                   | 0                     | %100                |
| 47 | M49          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 48 | M50          | Y         | -3.755                    | -3.755                   | 0                     | %100                |

### Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

|    | Member Label | Direction | Start Magnitude[lb/ft.... | End Magnitude[lb/ft.F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 49 | M51          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 50 | M52          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 51 | M53          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 52 | M54          | Y         | -3.755                    | -3.755                   | 0                     | %100                |
| 53 | M55          | Y         | -12.843                   | -12.843                  | 0                     | %100                |
| 54 | M56          | Y         | -12.843                   | -12.843                  | 0                     | %100                |
| 55 | M57          | Y         | -12.843                   | -12.843                  | 0                     | %100                |
| 56 | M56A         | Y         | -23.062                   | -23.062                  | 0                     | %100                |
| 57 | M57A         | Y         | -23.062                   | -23.062                  | 0                     | %100                |

### Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z)

|    | Member Label | Direction | Start Magnitude[lb/ft.... | End Magnitude[lb/ft.F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 1  | HOR1         | SZ        | -13.51                    | -13.51                   | 0                     | %100                |
| 2  | M4           | SZ        | 0                         | 0                        | 0                     | %100                |
| 3  | H1           | SZ        | -14.847                   | -14.847                  | 0                     | %100                |
| 4  | M7           | SZ        | 0                         | 0                        | 0                     | %100                |
| 5  | M9           | SZ        | 0                         | 0                        | 0                     | %100                |
| 6  | M10          | SZ        | 0                         | 0                        | 0                     | %100                |
| 7  | MP4          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 8  | MP1          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 9  | MP2          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 10 | HOR3         | SZ        | -13.51                    | -13.51                   | 0                     | %100                |
| 11 | H3           | SZ        | -14.847                   | -14.847                  | 0                     | %100                |
| 12 | HOR2         | SZ        | -13.51                    | -13.51                   | 0                     | %100                |
| 13 | H2           | SZ        | -14.847                   | -14.847                  | 0                     | %100                |
| 14 | S3           | SZ        | -13.168                   | -13.168                  | 0                     | %100                |
| 15 | M62          | SZ        | -11.291                   | -11.291                  | 0                     | %100                |
| 16 | M63          | SZ        | -13.168                   | -13.168                  | 0                     | %100                |
| 17 | M65          | SZ        | -12.863                   | -12.863                  | 0                     | %100                |
| 18 | S2           | SZ        | -13.168                   | -13.168                  | 0                     | %100                |
| 19 | S1           | SZ        | -13.168                   | -13.168                  | 0                     | %100                |
| 20 | M73          | SZ        | 0                         | 0                        | 0                     | %100                |
| 21 | M74A         | SZ        | 0                         | 0                        | 0                     | %100                |
| 22 | MP3          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 23 | M34          | SZ        | -12.863                   | -12.863                  | 0                     | %100                |
| 24 | M36          | SZ        | -12.863                   | -12.863                  | 0                     | %100                |
| 25 | M29          | SZ        | -13.168                   | -13.168                  | 0                     | %100                |
| 26 | M30          | SZ        | -13.168                   | -13.168                  | 0                     | %100                |
| 27 | M29A         | SZ        | 0                         | 0                        | 0                     | %100                |
| 28 | M30A         | SZ        | 0                         | 0                        | 0                     | %100                |
| 29 | M31          | SZ        | 0                         | 0                        | 0                     | %100                |
| 30 | M32          | SZ        | 0                         | 0                        | 0                     | %100                |
| 31 | MP12         | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 32 | MP9          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 33 | MP10         | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 34 | M36A         | SZ        | 0                         | 0                        | 0                     | %100                |
| 35 | M37          | SZ        | 0                         | 0                        | 0                     | %100                |
| 36 | MP11         | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 37 | M39          | SZ        | 0                         | 0                        | 0                     | %100                |
| 38 | M40          | SZ        | 0                         | 0                        | 0                     | %100                |
| 39 | M41          | SZ        | 0                         | 0                        | 0                     | %100                |
| 40 | M42          | SZ        | 0                         | 0                        | 0                     | %100                |
| 41 | MP8          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 42 | MP5          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 43 | MP6          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 44 | M46          | SZ        | 0                         | 0                        | 0                     | %100                |

### Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 45 | M47          | SZ        | 0                         | 0                        | 0                     | %100                |
| 46 | MP7          | SZ        | -20.13                    | -20.13                   | 0                     | %100                |
| 47 | M49          | SZ        | 0                         | 0                        | 0                     | %100                |
| 48 | M50          | SZ        | 0                         | 0                        | 0                     | %100                |
| 49 | M51          | SZ        | 0                         | 0                        | 0                     | %100                |
| 50 | M52          | SZ        | 0                         | 0                        | 0                     | %100                |
| 51 | M53          | SZ        | 0                         | 0                        | 0                     | %100                |
| 52 | M54          | SZ        | 0                         | 0                        | 0                     | %100                |
| 53 | M55          | SZ        | -14.847                   | -14.847                  | 0                     | %100                |
| 54 | M56          | SZ        | -14.847                   | -14.847                  | 0                     | %100                |
| 55 | M57          | SZ        | -14.847                   | -14.847                  | 0                     | %100                |
| 56 | M56A         | SZ        | -11.291                   | -11.291                  | 0                     | %100                |
| 57 | M57A         | SZ        | -11.291                   | -11.291                  | 0                     | %100                |

### Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 1  | HOR1         | SX        | -13.51                    | -13.51                   | 0                     | %100                |
| 2  | M4           | SX        | 0                         | 0                        | 0                     | %100                |
| 3  | H1           | SX        | -14.847                   | -14.847                  | 0                     | %100                |
| 4  | M7           | SX        | 0                         | 0                        | 0                     | %100                |
| 5  | M9           | SX        | 0                         | 0                        | 0                     | %100                |
| 6  | M10          | SX        | 0                         | 0                        | 0                     | %100                |
| 7  | MP4          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 8  | MP1          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 9  | MP2          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 10 | HOR3         | SX        | -13.51                    | -13.51                   | 0                     | %100                |
| 11 | H3           | SX        | -14.847                   | -14.847                  | 0                     | %100                |
| 12 | HOR2         | SX        | -13.51                    | -13.51                   | 0                     | %100                |
| 13 | H2           | SX        | -14.847                   | -14.847                  | 0                     | %100                |
| 14 | S3           | SX        | -13.168                   | -13.168                  | 0                     | %100                |
| 15 | M62          | SX        | -11.291                   | -11.291                  | 0                     | %100                |
| 16 | M63          | SX        | -13.168                   | -13.168                  | 0                     | %100                |
| 17 | M65          | SX        | -12.863                   | -12.863                  | 0                     | %100                |
| 18 | S2           | SX        | -13.168                   | -13.168                  | 0                     | %100                |
| 19 | S1           | SX        | -13.168                   | -13.168                  | 0                     | %100                |
| 20 | M73          | SX        | 0                         | 0                        | 0                     | %100                |
| 21 | M74A         | SX        | 0                         | 0                        | 0                     | %100                |
| 22 | MP3          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 23 | M34          | SX        | -12.863                   | -12.863                  | 0                     | %100                |
| 24 | M36          | SX        | -12.863                   | -12.863                  | 0                     | %100                |
| 25 | M29          | SX        | -13.168                   | -13.168                  | 0                     | %100                |
| 26 | M30          | SX        | -13.168                   | -13.168                  | 0                     | %100                |
| 27 | M29A         | SX        | 0                         | 0                        | 0                     | %100                |
| 28 | M30A         | SX        | 0                         | 0                        | 0                     | %100                |
| 29 | M31          | SX        | 0                         | 0                        | 0                     | %100                |
| 30 | M32          | SX        | 0                         | 0                        | 0                     | %100                |
| 31 | MP12         | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 32 | MP9          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 33 | MP10         | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 34 | M36A         | SX        | 0                         | 0                        | 0                     | %100                |
| 35 | M37          | SX        | 0                         | 0                        | 0                     | %100                |
| 36 | MP11         | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 37 | M39          | SX        | 0                         | 0                        | 0                     | %100                |
| 38 | M40          | SX        | 0                         | 0                        | 0                     | %100                |
| 39 | M41          | SX        | 0                         | 0                        | 0                     | %100                |
| 40 | M42          | SX        | 0                         | 0                        | 0                     | %100                |

### Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 41 | MP8          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 42 | MP5          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 43 | MP6          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 44 | M46          | SX        | 0                         | 0                        | 0                     | %100                |
| 45 | M47          | SX        | 0                         | 0                        | 0                     | %100                |
| 46 | MP7          | SX        | -20.13                    | -20.13                   | 0                     | %100                |
| 47 | M49          | SX        | 0                         | 0                        | 0                     | %100                |
| 48 | M50          | SX        | 0                         | 0                        | 0                     | %100                |
| 49 | M51          | SX        | 0                         | 0                        | 0                     | %100                |
| 50 | M52          | SX        | 0                         | 0                        | 0                     | %100                |
| 51 | M53          | SX        | 0                         | 0                        | 0                     | %100                |
| 52 | M54          | SX        | 0                         | 0                        | 0                     | %100                |
| 53 | M55          | SX        | -14.847                   | -14.847                  | 0                     | %100                |
| 54 | M56          | SX        | -14.847                   | -14.847                  | 0                     | %100                |
| 55 | M57          | SX        | -14.847                   | -14.847                  | 0                     | %100                |
| 56 | M56A         | SX        | -11.291                   | -11.291                  | 0                     | %100                |
| 57 | M57A         | SX        | -11.291                   | -11.291                  | 0                     | %100                |

### Member Distributed Loads (BLC 46 : BLC 1 Transient Area Loads)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 1  | HOR3         | Y         | -.35                      | -5.152                   | 78                    | 93.6                |
| 2  | HOR3         | Y         | -5.152                    | -7.167                   | 93.6                  | 109.2               |
| 3  | HOR3         | Y         | -7.167                    | -5.521                   | 109.2                 | 124.8               |
| 4  | HOR3         | Y         | -5.521                    | -2.913                   | 124.8                 | 140.4               |
| 5  | HOR3         | Y         | -2.913                    | -.35                     | 140.4                 | 156                 |
| 6  | HOR2         | Y         | -.351                     | -2.926                   | 0                     | 15.6                |
| 7  | HOR2         | Y         | -2.926                    | -5.528                   | 15.6                  | 31.2                |
| 8  | HOR2         | Y         | -5.528                    | -7.17                    | 31.2                  | 46.8                |
| 9  | HOR2         | Y         | -7.17                     | -5.153                   | 46.8                  | 62.4                |
| 10 | HOR2         | Y         | -5.153                    | -.351                    | 62.4                  | 78                  |
| 11 | S3           | Y         | -.229                     | -5.182                   | 0                     | 13.5                |
| 12 | S3           | Y         | -5.182                    | -10.51                   | 13.5                  | 27                  |
| 13 | S3           | Y         | -10.51                    | -10.935                  | 27                    | 40.5                |
| 14 | S3           | Y         | -10.935                   | -8.694                   | 40.5                  | 54                  |
| 15 | S3           | Y         | -8.694                    | -8.938                   | 54                    | 67.5                |
| 16 | M62          | Y         | -1.56                     | -1.515                   | 0                     | 4.907               |
| 17 | M62          | Y         | -1.515                    | -1.493                   | 4.907                 | 9.815               |
| 18 | M62          | Y         | -1.493                    | -1.516                   | 9.815                 | 14.722              |
| 19 | M62          | Y         | -1.516                    | -1.559                   | 14.722                | 19.63               |
| 20 | M63          | Y         | -2.514                    | -2.514                   | 8.02                  | 40.1                |
| 21 | M63          | Y         | -2.514                    | -2.513                   | 40.1                  | 72.181              |
| 22 | HOR1         | Y         | -.35                      | -5.152                   | 78                    | 93.6                |
| 23 | HOR1         | Y         | -5.152                    | -7.169                   | 93.6                  | 109.2               |
| 24 | HOR1         | Y         | -7.169                    | -5.527                   | 109.2                 | 124.8               |
| 25 | HOR1         | Y         | -5.527                    | -2.92                    | 124.8                 | 140.4               |
| 26 | HOR1         | Y         | -2.92                     | -.35                     | 140.4                 | 156                 |
| 27 | HOR3         | Y         | -.349                     | -2.907                   | 0                     | 15.6                |
| 28 | HOR3         | Y         | -2.907                    | -5.52                    | 15.6                  | 31.2                |
| 29 | HOR3         | Y         | -5.52                     | -7.166                   | 31.2                  | 46.8                |
| 30 | HOR3         | Y         | -7.166                    | -5.151                   | 46.8                  | 62.4                |
| 31 | HOR3         | Y         | -5.151                    | -.349                    | 62.4                  | 78                  |
| 32 | S1           | Y         | -.231                     | -5.196                   | 0                     | 13.5                |
| 33 | S1           | Y         | -5.196                    | -10.512                  | 13.5                  | 27                  |
| 34 | S1           | Y         | -10.512                   | -10.937                  | 27                    | 40.5                |
| 35 | S1           | Y         | -10.937                   | -8.696                   | 40.5                  | 54                  |
| 36 | S1           | Y         | -8.696                    | -8.94                    | 54                    | 67.5                |

### Member Distributed Loads (BLC 46 : BLC 1 Transient Area Loads) (Continued)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 37 | M30          | Y         | -2.513                    | -2.514                   | 8.02                  | 40.1                |
| 38 | M30          | Y         | -2.514                    | -2.514                   | 40.1                  | 72.181              |
| 39 | M57A         | Y         | -1.559                    | -1.516                   | 0                     | 4.907               |
| 40 | M57A         | Y         | -1.516                    | -1.493                   | 4.907                 | 9.815               |
| 41 | M57A         | Y         | -1.493                    | -1.515                   | 9.815                 | 14.722              |
| 42 | M57A         | Y         | -1.515                    | -1.56                    | 14.722                | 19.63               |
| 43 | HOR1         | Y         | -.35                      | -2.919                   | 0                     | 15.6                |
| 44 | HOR1         | Y         | -2.919                    | -5.527                   | 15.6                  | 31.2                |
| 45 | HOR1         | Y         | -5.527                    | -7.169                   | 31.2                  | 46.8                |
| 46 | HOR1         | Y         | -7.169                    | -5.152                   | 46.8                  | 62.4                |
| 47 | HOR1         | Y         | -5.152                    | -.35                     | 62.4                  | 78                  |
| 48 | HOR2         | Y         | -.35                      | -5.152                   | 78                    | 93.6                |
| 49 | HOR2         | Y         | -5.152                    | -7.167                   | 93.6                  | 109.2               |
| 50 | HOR2         | Y         | -7.167                    | -5.521                   | 109.2                 | 124.8               |
| 51 | HOR2         | Y         | -5.521                    | -2.916                   | 124.8                 | 140.4               |
| 52 | HOR2         | Y         | -2.916                    | -.35                     | 140.4                 | 156                 |
| 53 | S2           | Y         | -.23                      | -5.187                   | 0                     | 13.5                |
| 54 | S2           | Y         | -5.187                    | -10.511                  | 13.5                  | 27                  |
| 55 | S2           | Y         | -10.511                   | -10.936                  | 27                    | 40.5                |
| 56 | S2           | Y         | -10.936                   | -8.695                   | 40.5                  | 54                  |
| 57 | S2           | Y         | -8.695                    | -8.939                   | 54                    | 67.5                |
| 58 | M29          | Y         | -2.514                    | -2.514                   | 8.02                  | 40.1                |
| 59 | M29          | Y         | -2.514                    | -2.513                   | 40.1                  | 72.181              |
| 60 | M56A         | Y         | -1.56                     | -1.515                   | 0                     | 4.907               |
| 61 | M56A         | Y         | -1.515                    | -1.493                   | 4.907                 | 9.815               |
| 62 | M56A         | Y         | -1.493                    | -1.516                   | 9.815                 | 14.722              |
| 63 | M56A         | Y         | -1.516                    | -1.559                   | 14.722                | 19.63               |
| 64 | HOR1         | Y         | -.29                      | -.29                     | 71.52                 | 83.52               |
| 65 | M29          | Y         | -.118                     | -2.894                   | 0                     | 6.416               |
| 66 | M29          | Y         | -2.894                    | -5.828                   | 6.416                 | 12.832              |
| 67 | M29          | Y         | -5.828                    | -5.247                   | 12.832                | 19.248              |
| 68 | M29          | Y         | -5.247                    | -1.722                   | 19.248                | 25.664              |
| 69 | M29          | Y         | -1.722                    | -.118                    | 25.664                | 32.08               |
| 70 | M30          | Y         | -.149                     | -1.76                    | 48.12                 | 54.536              |
| 71 | M30          | Y         | -1.76                     | -5.324                   | 54.536                | 60.952              |
| 72 | M30          | Y         | -5.324                    | -6.065                   | 60.952                | 67.369              |
| 73 | M30          | Y         | -6.065                    | -3.364                   | 67.369                | 73.785              |
| 74 | M30          | Y         | -3.364                    | -.387                    | 73.785                | 80.201              |
| 75 | HOR2         | Y         | -.29                      | -.29                     | 71.52                 | 83.52               |
| 76 | M63          | Y         | -.118                     | -2.894                   | 0                     | 6.416               |
| 77 | M63          | Y         | -2.894                    | -5.828                   | 6.416                 | 12.832              |
| 78 | M63          | Y         | -5.828                    | -5.247                   | 12.832                | 19.248              |
| 79 | M63          | Y         | -5.247                    | -1.722                   | 19.248                | 25.664              |
| 80 | M63          | Y         | -1.722                    | -.118                    | 25.664                | 32.08               |
| 81 | M29          | Y         | -.149                     | -1.76                    | 48.12                 | 54.536              |
| 82 | M29          | Y         | -1.76                     | -5.324                   | 54.536                | 60.952              |
| 83 | M29          | Y         | -5.324                    | -6.065                   | 60.952                | 67.369              |
| 84 | M29          | Y         | -6.065                    | -3.364                   | 67.369                | 73.785              |
| 85 | M29          | Y         | -3.364                    | -.387                    | 73.785                | 80.201              |
| 86 | HOR3         | Y         | -.29                      | -.29                     | 71.52                 | 83.52               |
| 87 | M63          | Y         | -.149                     | -1.76                    | 48.12                 | 54.536              |
| 88 | M63          | Y         | -1.76                     | -5.324                   | 54.536                | 60.952              |
| 89 | M63          | Y         | -5.324                    | -6.065                   | 60.952                | 67.369              |
| 90 | M63          | Y         | -6.065                    | -3.364                   | 67.369                | 73.785              |
| 91 | M63          | Y         | -3.364                    | -.387                    | 73.785                | 80.201              |
| 92 | M30          | Y         | -.118                     | -2.894                   | 0                     | 6.416               |
| 93 | M30          | Y         | -2.894                    | -5.828                   | 6.416                 | 12.832              |

### Member Distributed Loads (BLC 46 : BLC 1 Transient Area Loads) (Continued)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 94 | M30          | Y         | -5.828                    | -5.247                   | 12.832                | 19.248              |
| 95 | M30          | Y         | -5.247                    | -1.722                   | 19.248                | 25.664              |
| 96 | M30          | Y         | -1.722                    | -.118                    | 25.664                | 32.08               |

### Member Distributed Loads (BLC 47 : BLC 16 Transient Area Loads)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 1  | HOR3         | Y         | -.956                     | -14.082                  | 78                    | 93.6                |
| 2  | HOR3         | Y         | -14.082                   | -19.589                  | 93.6                  | 109.2               |
| 3  | HOR3         | Y         | -19.589                   | -15.089                  | 109.2                 | 124.8               |
| 4  | HOR3         | Y         | -15.089                   | -7.962                   | 124.8                 | 140.4               |
| 5  | HOR3         | Y         | -7.962                    | -.956                    | 140.4                 | 156                 |
| 6  | HOR2         | Y         | -.96                      | -7.997                   | 0                     | 15.6                |
| 7  | HOR2         | Y         | -7.997                    | -15.11                   | 15.6                  | 31.2                |
| 8  | HOR2         | Y         | -15.11                    | -19.599                  | 31.2                  | 46.8                |
| 9  | HOR2         | Y         | -19.599                   | -14.084                  | 46.8                  | 62.4                |
| 10 | HOR2         | Y         | -14.084                   | -.96                     | 62.4                  | 78                  |
| 11 | S3           | Y         | -.626                     | -14.165                  | 0                     | 13.5                |
| 12 | S3           | Y         | -14.165                   | -28.728                  | 13.5                  | 27                  |
| 13 | S3           | Y         | -28.728                   | -29.889                  | 27                    | 40.5                |
| 14 | S3           | Y         | -29.889                   | -23.764                  | 40.5                  | 54                  |
| 15 | S3           | Y         | -23.764                   | -24.431                  | 54                    | 67.5                |
| 16 | M62          | Y         | -4.264                    | -4.141                   | 0                     | 4.907               |
| 17 | M62          | Y         | -4.141                    | -4.082                   | 4.907                 | 9.815               |
| 18 | M62          | Y         | -4.082                    | -4.143                   | 9.815                 | 14.722              |
| 19 | M62          | Y         | -4.143                    | -4.261                   | 14.722                | 19.63               |
| 20 | M63          | Y         | -6.872                    | -6.871                   | 8.02                  | 40.1                |
| 21 | M63          | Y         | -6.871                    | -6.87                    | 40.1                  | 72.181              |
| 22 | HOR1         | Y         | -.958                     | -14.082                  | 78                    | 93.6                |
| 23 | HOR1         | Y         | -14.082                   | -19.597                  | 93.6                  | 109.2               |
| 24 | HOR1         | Y         | -19.597                   | -15.107                  | 109.2                 | 124.8               |
| 25 | HOR1         | Y         | -15.107                   | -7.981                   | 124.8                 | 140.4               |
| 26 | HOR1         | Y         | -7.981                    | -.958                    | 140.4                 | 156                 |
| 27 | HOR3         | Y         | -.954                     | -7.947                   | 0                     | 15.6                |
| 28 | HOR3         | Y         | -7.947                    | -15.087                  | 15.6                  | 31.2                |
| 29 | HOR3         | Y         | -15.087                   | -19.586                  | 31.2                  | 46.8                |
| 30 | HOR3         | Y         | -19.586                   | -14.079                  | 46.8                  | 62.4                |
| 31 | HOR3         | Y         | -14.079                   | -.954                    | 62.4                  | 78                  |
| 32 | S1           | Y         | -.632                     | -14.202                  | 0                     | 13.5                |
| 33 | S1           | Y         | -14.202                   | -28.734                  | 13.5                  | 27                  |
| 34 | S1           | Y         | -28.734                   | -29.895                  | 27                    | 40.5                |
| 35 | S1           | Y         | -29.895                   | -23.77                   | 40.5                  | 54                  |
| 36 | S1           | Y         | -23.77                    | -24.437                  | 54                    | 67.5                |
| 37 | M30          | Y         | -6.87                     | -6.871                   | 8.02                  | 40.1                |
| 38 | M30          | Y         | -6.871                    | -6.872                   | 40.1                  | 72.181              |
| 39 | M57A         | Y         | -4.261                    | -4.143                   | 0                     | 4.907               |
| 40 | M57A         | Y         | -4.143                    | -4.082                   | 4.907                 | 9.815               |
| 41 | M57A         | Y         | -4.082                    | -4.141                   | 9.815                 | 14.722              |
| 42 | M57A         | Y         | -4.141                    | -4.264                   | 14.722                | 19.63               |
| 43 | HOR1         | Y         | -.957                     | -7.979                   | 0                     | 15.6                |
| 44 | HOR1         | Y         | -7.979                    | -15.107                  | 15.6                  | 31.2                |
| 45 | HOR1         | Y         | -15.107                   | -19.596                  | 31.2                  | 46.8                |
| 46 | HOR1         | Y         | -19.596                   | -14.081                  | 46.8                  | 62.4                |
| 47 | HOR1         | Y         | -14.081                   | -.957                    | 62.4                  | 78                  |
| 48 | HOR2         | Y         | -.957                     | -14.083                  | 78                    | 93.6                |
| 49 | HOR2         | Y         | -14.083                   | -19.59                   | 93.6                  | 109.2               |
| 50 | HOR2         | Y         | -19.59                    | -15.091                  | 109.2                 | 124.8               |

### Member Distributed Loads (BLC 47 : BLC 16 Transient Area Loads) (Continued)

|    | Member Label | Direction | Start Magnitude[lb/ft,... | End Magnitude[lb/ft,F... | Start Location[in, %] | End Location[in, %] |
|----|--------------|-----------|---------------------------|--------------------------|-----------------------|---------------------|
| 51 | HOR2         | Y         | -15.091                   | -7.969                   | 124.8                 | 140.4               |
| 52 | HOR2         | Y         | -7.969                    | -.957                    | 140.4                 | 156                 |
| 53 | S2           | Y         | -.628                     | -14.178                  | 0                     | 13.5                |
| 54 | S2           | Y         | -14.178                   | -28.73                   | 13.5                  | 27                  |
| 55 | S2           | Y         | -28.73                    | -29.891                  | 27                    | 40.5                |
| 56 | S2           | Y         | -29.891                   | -23.766                  | 40.5                  | 54                  |
| 57 | S2           | Y         | -23.766                   | -24.433                  | 54                    | 67.5                |
| 58 | M29          | Y         | -6.872                    | -6.871                   | 8.02                  | 40.1                |
| 59 | M29          | Y         | -6.871                    | -6.87                    | 40.1                  | 72.181              |
| 60 | M56A         | Y         | -4.264                    | -4.141                   | 0                     | 4.907               |
| 61 | M56A         | Y         | -4.141                    | -4.082                   | 4.907                 | 9.815               |
| 62 | M56A         | Y         | -4.082                    | -4.143                   | 9.815                 | 14.722              |
| 63 | M56A         | Y         | -4.143                    | -4.261                   | 14.722                | 19.63               |
| 64 | HOR1         | Y         | -.793                     | -.793                    | 71.52                 | 83.52               |
| 65 | M29          | Y         | -.323                     | -7.911                   | 0                     | 6.416               |
| 66 | M29          | Y         | -7.911                    | -15.931                  | 6.416                 | 12.832              |
| 67 | M29          | Y         | -15.931                   | -14.343                  | 12.832                | 19.248              |
| 68 | M29          | Y         | -14.343                   | -4.706                   | 19.248                | 25.664              |
| 69 | M29          | Y         | -4.706                    | -.323                    | 25.664                | 32.08               |
| 70 | M30          | Y         | -.407                     | -4.81                    | 48.12                 | 54.536              |
| 71 | M30          | Y         | -4.81                     | -14.553                  | 54.536                | 60.952              |
| 72 | M30          | Y         | -14.553                   | -16.576                  | 60.952                | 67.369              |
| 73 | M30          | Y         | -16.576                   | -9.194                   | 67.369                | 73.785              |
| 74 | M30          | Y         | -9.194                    | -1.058                   | 73.785                | 80.201              |
| 75 | HOR2         | Y         | -.793                     | -.793                    | 71.52                 | 83.52               |
| 76 | M63          | Y         | -.323                     | -7.911                   | 0                     | 6.416               |
| 77 | M63          | Y         | -7.911                    | -15.931                  | 6.416                 | 12.832              |
| 78 | M63          | Y         | -15.931                   | -14.343                  | 12.832                | 19.248              |
| 79 | M63          | Y         | -14.343                   | -4.706                   | 19.248                | 25.664              |
| 80 | M63          | Y         | -4.706                    | -.323                    | 25.664                | 32.08               |
| 81 | M29          | Y         | -.407                     | -4.81                    | 48.12                 | 54.536              |
| 82 | M29          | Y         | -4.81                     | -14.553                  | 54.536                | 60.952              |
| 83 | M29          | Y         | -14.553                   | -16.576                  | 60.952                | 67.369              |
| 84 | M29          | Y         | -16.576                   | -9.194                   | 67.369                | 73.785              |
| 85 | M29          | Y         | -9.194                    | -1.058                   | 73.785                | 80.201              |
| 86 | HOR3         | Y         | -.793                     | -.793                    | 71.52                 | 83.52               |
| 87 | M63          | Y         | -.407                     | -4.81                    | 48.12                 | 54.536              |
| 88 | M63          | Y         | -4.81                     | -14.553                  | 54.536                | 60.952              |
| 89 | M63          | Y         | -14.553                   | -16.576                  | 60.952                | 67.369              |
| 90 | M63          | Y         | -16.576                   | -9.194                   | 67.369                | 73.785              |
| 91 | M63          | Y         | -9.194                    | -1.058                   | 73.785                | 80.201              |
| 92 | M30          | Y         | -.323                     | -7.911                   | 0                     | 6.416               |
| 93 | M30          | Y         | -7.911                    | -15.931                  | 6.416                 | 12.832              |
| 94 | M30          | Y         | -15.931                   | -14.343                  | 12.832                | 19.248              |
| 95 | M30          | Y         | -14.343                   | -4.706                   | 19.248                | 25.664              |
| 96 | M30          | Y         | -4.706                    | -.323                    | 25.664                | 32.08               |

### Load Combinations

|   | Description         | So... | P... | S... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... |
|---|---------------------|-------|------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | 1.4DL               | Yes   | Y    |      | 1        | 1.4      |          |          |          |          |          |          |          |          |          |          |          |
| 2 | 1.2DL + 1WL AZI 0   | Yes   | Y    |      | 1        | 1.2      | 2        | 1        | 14       | 1        | 15       |          |          |          |          |          |          |
| 3 | 1.2DL + 1WL AZI 30  | Yes   | Y    |      | 1        | 1.2      | 3        | 1        | 14       | .866     | 15       | .5       |          |          |          |          |          |
| 4 | 1.2DL + 1WL AZI 60  | Yes   | Y    |      | 1        | 1.2      | 4        | 1        | 14       | .5       | 15       | .866     |          |          |          |          |          |
| 5 | 1.2DL + 1WL AZI 90  | Yes   | Y    |      | 1        | 1.2      | 5        | 1        | 14       |          | 15       | 1        |          |          |          |          |          |
| 6 | 1.2DL + 1WL AZI 120 | Yes   | Y    |      | 1        | 1.2      | 6        | 1        | 14       | -.5      | 15       | .866     |          |          |          |          |          |

### Load Combinations (Continued)

|    | Description                  | So... | P... | S... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... |
|----|------------------------------|-------|------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 7  | 1.2DL + 1WL AZI 150          | Yes   | Y    |      | 1        | 1.2      | 7        | 1        | 14       | -.866    | 15       | .5       |          |          |          |
| 8  | 1.2DL + 1WL AZI 180          | Yes   | Y    |      | 1        | 1.2      | 8        | 1        | 14       | -1       | 15       |          |          |          |          |
| 9  | 1.2DL + 1WL AZI 210          | Yes   | Y    |      | 1        | 1.2      | 9        | 1        | 14       | -.866    | 15       | -.5      |          |          |          |
| 10 | 1.2DL + 1WL AZI 240          | Yes   | Y    |      | 1        | 1.2      | 10       | 1        | 14       | -.5      | 15       | -.866    |          |          |          |
| 11 | 1.2DL + 1WL AZI 270          | Yes   | Y    |      | 1        | 1.2      | 11       | 1        | 14       |          | 15       | -1       |          |          |          |
| 12 | 1.2DL + 1WL AZI 300          | Yes   | Y    |      | 1        | 1.2      | 12       | 1        | 14       | .5       | 15       | -.866    |          |          |          |
| 13 | 1.2DL + 1WL AZI 330          | Yes   | Y    |      | 1        | 1.2      | 13       | 1        | 14       | .866     | 15       | -.5      |          |          |          |
| 14 | 0.9DL + 1WL AZI 0            | Yes   | Y    |      | 1        | .9       | 2        | 1        | 14       | 1        | 15       |          |          |          |          |
| 15 | 0.9DL + 1WL AZI 30           | Yes   | Y    |      | 1        | .9       | 3        | 1        | 14       | .866     | 15       | .5       |          |          |          |
| 16 | 0.9DL + 1WL AZI 60           | Yes   | Y    |      | 1        | .9       | 4        | 1        | 14       | .5       | 15       | .866     |          |          |          |
| 17 | 0.9DL + 1WL AZI 90           | Yes   | Y    |      | 1        | .9       | 5        | 1        | 14       |          | 15       | 1        |          |          |          |
| 18 | 0.9DL + 1WL AZI 120          | Yes   | Y    |      | 1        | .9       | 6        | 1        | 14       | -.5      | 15       | .866     |          |          |          |
| 19 | 0.9DL + 1WL AZI 150          | Yes   | Y    |      | 1        | .9       | 7        | 1        | 14       | -.866    | 15       | .5       |          |          |          |
| 20 | 0.9DL + 1WL AZI 180          | Yes   | Y    |      | 1        | .9       | 8        | 1        | 14       | -1       | 15       |          |          |          |          |
| 21 | 0.9DL + 1WL AZI 210          | Yes   | Y    |      | 1        | .9       | 9        | 1        | 14       | -.866    | 15       | -.5      |          |          |          |
| 22 | 0.9DL + 1WL AZI 240          | Yes   | Y    |      | 1        | .9       | 10       | 1        | 14       | -.5      | 15       | -.866    |          |          |          |
| 23 | 0.9DL + 1WL AZI 270          | Yes   | Y    |      | 1        | .9       | 11       | 1        | 14       |          | 15       | -1       |          |          |          |
| 24 | 0.9DL + 1WL AZI 300          | Yes   | Y    |      | 1        | .9       | 12       | 1        | 14       | .5       | 15       | -.866    |          |          |          |
| 25 | 0.9DL + 1WL AZI 330          | Yes   | Y    |      | 1        | .9       | 13       | 1        | 14       | .866     | 15       | -.5      |          |          |          |
| 26 | 1.2D + 1.0Di                 | Yes   | Y    |      | 1        | 1.2      | 16       | 1        |          |          |          |          |          |          |          |
| 27 | 1.2D + 1.0Di + 1.0Wi AZI 0   | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 17       | 1        | 29       | 1        | 30       |          |          |
| 28 | 1.2D + 1.0Di + 1.0Wi AZI 30  | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 18       | 1        | 29       | .866     | 30       | .5       |          |
| 29 | 1.2D + 1.0Di + 1.0Wi AZI 60  | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 19       | 1        | 29       | .5       | 30       | .866     |          |
| 30 | 1.2D + 1.0Di + 1.0Wi AZI 90  | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 20       | 1        | 29       |          | 30       | 1        |          |
| 31 | 1.2D + 1.0Di + 1.0Wi AZI ... | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 21       | 1        | 29       | -.5      | 30       | .866     |          |
| 32 | 1.2D + 1.0Di + 1.0Wi AZI ... | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 22       | 1        | 29       | -.866    | 30       | .5       |          |
| 33 | 1.2D + 1.0Di + 1.0Wi AZI ... | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 23       | 1        | 29       | -1       | 30       |          |          |
| 34 | 1.2D + 1.0Di + 1.0Wi AZI ... | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 24       | 1        | 29       | -.866    | 30       | -.5      |          |
| 35 | 1.2D + 1.0Di + 1.0Wi AZI ... | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 25       | 1        | 29       | -.5      | 30       | -.866    |          |
| 36 | 1.2D + 1.0Di + 1.0Wi AZI ... | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 26       | 1        | 29       |          | 30       | -1       |          |
| 37 | 1.2D + 1.0Di + 1.0Wi AZI ... | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 27       | 1        | 29       | .5       | 30       | -.866    |          |
| 38 | 1.2D + 1.0Di + 1.0Wi AZI ... | Yes   | Y    |      | 1        | 1.2      | 16       | 1        | 28       | 1        | 29       | .866     | 30       | -.5      |          |
| 39 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | 1        | 32       |          |          |          |          |          |          |
| 40 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | .866     | 32       | .5       |          |          |          |          |          |
| 41 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | .5       | 32       | .866     |          |          |          |          |          |
| 42 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       |          | 32       | 1        |          |          |          |          |          |
| 43 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | -.5      | 32       | .866     |          |          |          |          |          |
| 44 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | -.866    | 32       | .5       |          |          |          |          |          |
| 45 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | -1       | 32       |          |          |          |          |          |          |
| 46 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | -.866    | 32       | -.5      |          |          |          |          |          |
| 47 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | -.5      | 32       | -.866    |          |          |          |          |          |
| 48 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       |          | 32       | -1       |          |          |          |          |          |
| 49 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | .5       | 32       | -.866    |          |          |          |          |          |
| 50 | (1.2 + 0.2Sds)DL + 1.0E ...  | Yes   | Y    |      | 1        | 1.2...   | 31       | .866     | 32       | -.5      |          |          |          |          |          |
| 51 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | 1        | 32       |          |          |          |          |          |          |
| 52 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | .866     | 32       | .5       |          |          |          |          |          |
| 53 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | .5       | 32       | .866     |          |          |          |          |          |
| 54 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       |          | 32       | 1        |          |          |          |          |          |
| 55 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | -.5      | 32       | .866     |          |          |          |          |          |
| 56 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | -.866    | 32       | .5       |          |          |          |          |          |
| 57 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | -1       | 32       |          |          |          |          |          |          |
| 58 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | -.866    | 32       | -.5      |          |          |          |          |          |
| 59 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | -.5      | 32       | -.866    |          |          |          |          |          |
| 60 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       |          | 32       | -1       |          |          |          |          |          |
| 61 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | .5       | 32       | -.866    |          |          |          |          |          |
| 62 | (0.9 - 0.2Sds)DL + 1.0E A... | Yes   | Y    |      | 1        | .846     | 31       | .866     | 32       | -.5      |          |          |          |          |          |
| 63 | 1.0DL + 1.5LL + 1.0SWL ...   | Yes   | Y    |      | 1        | 1        | 2        | .268     | 14       | .268     | 15       |          | 33       | 1.5      |          |

### Load Combinations (Continued)

|     | Description                | So... | P... | S... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... |
|-----|----------------------------|-------|------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 64  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 3        | .268     | 14       | .232     | 15       | .134     | 33       | 1.5      |          |
| 65  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 4        | .268     | 14       | .134     | 15       | .232     | 33       | 1.5      |          |
| 66  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 5        | .268     | 14       |          | 15       | .268     | 33       | 1.5      |          |
| 67  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 6        | .268     | 14       | -.134    | 15       | .232     | 33       | 1.5      |          |
| 68  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 7        | .268     | 14       | -.232    | 15       | .134     | 33       | 1.5      |          |
| 69  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 8        | .268     | 14       | -.268    | 15       |          | 33       | 1.5      |          |
| 70  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 9        | .268     | 14       | -.232    | 15       | -.134    | 33       | 1.5      |          |
| 71  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 10       | .268     | 14       | -.134    | 15       | -.232    | 33       | 1.5      |          |
| 72  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 11       | .268     | 14       |          | 15       | -.268    | 33       | 1.5      |          |
| 73  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 12       | .268     | 14       | .134     | 15       | -.232    | 33       | 1.5      |          |
| 74  | 1.0DL + 1.5LL + 1.0SWL ... | Yes   | Y    |      | 1        | 1        | 13       | .268     | 14       | .232     | 15       | -.134    | 33       | 1.5      |          |
| 75  | 1.2DL + 1.5LL              | Yes   | Y    |      | 1        | 1.2      | 33       | 1.5      |          |          |          |          |          |          |          |
| 76  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 77  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 78  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 79  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 80  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 81  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 82  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 83  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 84  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 85  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 86  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 87  | 1.2DL + 1.5LM-MP1 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 34       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 88  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 89  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 90  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 91  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 92  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 93  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 94  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 95  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 96  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 97  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 98  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 99  | 1.2DL + 1.5LM-MP2 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 35       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 100 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 101 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 102 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 103 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 104 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 105 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 106 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 107 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 108 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 109 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 110 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 111 | 1.2DL + 1.5LM-MP3 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 36       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 112 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 113 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 114 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 115 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 116 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 117 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 118 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 119 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 120 | 1.2DL + 1.5LM-MP4 + 1S...  | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |

### Load Combinations (Continued)

|     | Description               | So... | P... | S... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... |
|-----|---------------------------|-------|------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 121 | 1.2DL + 1.5LM-MP4 + 1S... | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 122 | 1.2DL + 1.5LM-MP4 + 1S... | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 123 | 1.2DL + 1.5LM-MP4 + 1S... | Yes   | Y    |      | 1        | 1.2      | 37       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 124 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 125 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 126 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 127 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 128 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 129 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 130 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 131 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 132 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 133 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 134 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 135 | 1.2DL + 1.5LM-MP5 + 1S... | Yes   | Y    |      | 1        | 1.2      | 38       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 136 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 137 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 138 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 139 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 140 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 141 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 142 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 143 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 144 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 145 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 146 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 147 | 1.2DL + 1.5LM-MP6 + 1S... | Yes   | Y    |      | 1        | 1.2      | 39       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 148 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 149 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 150 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 151 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 152 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 153 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 154 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 155 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 156 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 157 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 158 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 159 | 1.2DL + 1.5LM-MP7 + 1S... | Yes   | Y    |      | 1        | 1.2      | 40       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 160 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 161 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 162 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 163 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 164 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 165 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 166 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 167 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 168 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 169 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 170 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 171 | 1.2DL + 1.5LM-MP8 + 1S... | Yes   | Y    |      | 1        | 1.2      | 41       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 172 | 1.2DL + 1.5LM-MP9 + 1S... | Yes   | Y    |      | 1        | 1.2      | 42       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 173 | 1.2DL + 1.5LM-MP9 + 1S... | Yes   | Y    |      | 1        | 1.2      | 42       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 174 | 1.2DL + 1.5LM-MP9 + 1S... | Yes   | Y    |      | 1        | 1.2      | 42       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 175 | 1.2DL + 1.5LM-MP9 + 1S... | Yes   | Y    |      | 1        | 1.2      | 42       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 176 | 1.2DL + 1.5LM-MP9 + 1S... | Yes   | Y    |      | 1        | 1.2      | 42       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 177 | 1.2DL + 1.5LM-MP9 + 1S... | Yes   | Y    |      | 1        | 1.2      | 42       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |

### Load Combinations (Continued)

|     | Description               | So..P... | S... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... | BLCFa... |
|-----|---------------------------|----------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 178 | 1.2DL + 1.5LM-MP9 + 1S... | Yes      | Y    | 1        | 1.2      | 42       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 179 | 1.2DL + 1.5LM-MP9 + 1S... | Yes      | Y    | 1        | 1.2      | 42       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 180 | 1.2DL + 1.5LM-MP9 + 1S... | Yes      | Y    | 1        | 1.2      | 42       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 181 | 1.2DL + 1.5LM-MP9 + 1S... | Yes      | Y    | 1        | 1.2      | 42       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 182 | 1.2DL + 1.5LM-MP9 + 1S... | Yes      | Y    | 1        | 1.2      | 42       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 183 | 1.2DL + 1.5LM-MP9 + 1S... | Yes      | Y    | 1        | 1.2      | 42       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 184 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 185 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 186 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 187 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 188 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 189 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 190 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 191 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 192 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 193 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 194 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 195 | 1.2DL + 1.5LM-MP10 + 1... | Yes      | Y    | 1        | 1.2      | 43       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 196 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 197 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 198 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 199 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 200 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 201 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 202 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 203 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 204 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 205 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 206 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |
| 207 | 1.2DL + 1.5LM-MP11 + 1... | Yes      | Y    | 1        | 1.2      | 44       | 1.5      | 13       | .067     | 14       | .058     | 15       | -.033    |          |
| 208 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 2        | .067     | 14       | .067     | 15       |          |          |
| 209 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 3        | .067     | 14       | .058     | 15       | .033     |          |
| 210 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 4        | .067     | 14       | .033     | 15       | .058     |          |
| 211 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 5        | .067     | 14       |          | 15       | .067     |          |
| 212 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 6        | .067     | 14       | -.033    | 15       | .058     |          |
| 213 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 7        | .067     | 14       | -.058    | 15       | .033     |          |
| 214 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 8        | .067     | 14       | -.067    | 15       |          |          |
| 215 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 9        | .067     | 14       | -.058    | 15       | -.033    |          |
| 216 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 10       | .067     | 14       | -.033    | 15       | -.058    |          |
| 217 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 11       | .067     | 14       |          | 15       | -.067    |          |
| 218 | 1.2DL + 1.5LM-MP12 + 1... | Yes      | Y    | 1        | 1.2      | 45       | 1.5      | 12       | .067     | 14       | .033     | 15       | -.058    |          |

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

| Member | Shape | Code Check | Loc[in] | LC     | Shear Check | Loc[in] | LC     | phi* | phi*   | phi*   | phi*   | Cb     | Eqn         |
|--------|-------|------------|---------|--------|-------------|---------|--------|------|--------|--------|--------|--------|-------------|
| 1      | S2    | HSS4X...   | 1.017   | 75     | 31          | .106    | 75     | y 30 | 118... | 139... | 161... | 161... | 2.0...H1... |
| 2      | S1    | HSS4X...   | 1.017   | 75     | 35          | .106    | 75     | y 34 | 118... | 139... | 161... | 161... | 2.0...H1... |
| 3      | S3    | HSS4X...   | 1.014   | 75     | 27          | .106    | 75     | y 38 | 118... | 139... | 161... | 161... | 2.0...H1... |
| 4      | M62   | PL0.5X...  | .836    | 9.815  | 27          | .581    | 9.61   | y 37 | 427... | 113... | 118... | 137... | 1.3...H1... |
| 5      | M57A  | PL0.5X...  | .834    | 9.815  | 35          | .581    | 9.815  | y 33 | 427... | 113... | 118... | 137... | 1.3...H1... |
| 6      | M56A  | PL0.5X...  | .834    | 9.815  | 31          | .581    | 9.815  | y 29 | 427... | 113... | 118... | 137... | 1.3...H1... |
| 7      | MP9   | PIPE 2...  | .585    | 65.625 | 29          | .109    | 65.625 | 5    | 178... | 32130  | 187... | 187... | 1.7...H1... |
| 8      | MP5   | PIPE 2...  | .584    | 65.625 | 33          | .108    | 65.625 | 9    | 178... | 32130  | 187... | 187... | 1.4...H1... |
| 9      | MP1   | PIPE 2...  | .582    | 65.625 | 37          | .107    | 65.625 | 13   | 178... | 32130  | 187... | 187... | 1.6...H1... |
| 10     | MP12  | PIPE 2...  | .485    | 53.75  | 9           | .119    | 53.75  | 8    | 238... | 32130  | 187... | 187... | 1.6...H1... |
| 11     | MP8   | PIPE 2...  | .484    | 53.75  | 13          | .120    | 53.75  | 12   | 238... | 32130  | 187... | 187... | 1.9...H1... |

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

|    | Member | Shape     | Code Check | Loc[in] | LC | Shear Check | Loc[in] | LC    | phi*   | phi*  | phi*   | phi*   | Cb     | Eqn   |
|----|--------|-----------|------------|---------|----|-------------|---------|-------|--------|-------|--------|--------|--------|-------|
| 12 | MP4    | PIPE_2... | .480       | 53.75   | 30 | .116        | 53.75   | 4     | 238... | 32130 | 187... | 187... | 1.9... | H1... |
| 13 | MP7    | PIPE_2... | .458       | 53.75   | 13 | .092        | 53.75   | 3     | 238... | 32130 | 187... | 187... | 2.0... | H1... |
| 14 | MP11   | PIPE_2... | .458       | 53.75   | 9  | .100        | 53.75   | 11    | 238... | 32130 | 187... | 187... | 1.9... | H1... |
| 15 | MP10   | PIPE_2... | .442       | 53.75   | 3  | .097        | 53.75   | 2     | 238... | 32130 | 187... | 187... | 2.0... | H1... |
| 16 | MP6    | PIPE_2... | .441       | 53.75   | 7  | .103        | 53.75   | 6     | 238... | 32130 | 187... | 187... | 2.0... | H1... |
| 17 | MP3    | PIPE_2... | .428       | 53.75   | 5  | .093        | 53.75   | 7     | 238... | 32130 | 187... | 187... | 2.01   | H1... |
| 18 | MP2    | PIPE_2... | .412       | 53.75   | 11 | .093        | 53.75   | 10    | 238... | 32130 | 187... | 187... | 2.0... | H1... |
| 19 | HOR3   | C5X6.7    | .383       | 16.25   | 11 | .131        | 117     | y 30  | 436... | 63828 | 160... | 9585   | 2.1... | H1... |
| 20 | HOR2   | C5X6.7    | .366       | 139.75  | 6  | .131        | 117     | y 34  | 436... | 63828 | 160... | 873... | 1.9... | H1... |
| 21 | H3     | L3X3X4    | .358       | 139.75  | 2  | .284        | 149.5   | z 6   | 443... | 46656 | 168... | 375... | 1.0... | H2-1  |
| 22 | H2     | L3X3X4    | .358       | 139.75  | 6  | .279        | 149.5   | z 10  | 443... | 46656 | 168... | 375... | 1.0... | H2-1  |
| 23 | HOR1   | C5X6.7    | .349       | 16.25   | 6  | .131        | 117     | y 38  | 436... | 63828 | 160... | 957... | 2.1... | H1... |
| 24 | H1     | L3X3X4    | .347       | 139.75  | 10 | .284        | 149.5   | z 2   | 443... | 46656 | 168... | 375... | 1.0... | H2-1  |
| 25 | M65    | PL6x.5    | .116       | 10.737  | 5  | .077        | 0       | y 5   | 726... | 97200 | 101... | 12150  | 2.2... | H1... |
| 26 | M36    | PL6x.5    | .114       | 10.737  | 13 | .076        | 0       | y 99  | 726... | 97200 | 101... | 12150  | 2.2... | H1... |
| 27 | M34    | PL6x.5    | .114       | 10.737  | 9  | .076        | 10.737  | y 191 | 726... | 97200 | 101... | 12150  | 2.2... | H1... |
| 28 | M63    | L4X4X4    | .075       | 40.936  | 33 | .009        | 0       | z 31  | 359... | 62532 | 313... | 555... | 1.0... | H2-1  |
| 29 | M29    | L4X4X4    | .075       | 40.936  | 37 | .009        | 0       | z 35  | 359... | 62532 | 313... | 556... | 1.0... | H2-1  |
| 30 | M30    | L4X4X4    | .075       | 40.936  | 29 | .009        | 0       | z 27  | 359... | 62532 | 313... | 556... | 1.0... | H2-1  |
| 31 | M56    | L3X3X4    | .032       | 18.636  | 2  | .033        | 0       | y 11  | 376... | 46656 | 168... | 363... | 1.1... | H2-1  |
| 32 | M57    | L3X3X4    | .029       | 18.636  | 10 | .032        | 37.272  | y 7   | 376... | 46656 | 168... | 363... | 1.1... | H2-1  |
| 33 | M55    | L3X3X4    | .029       | 18.636  | 6  | .032        | 37.272  | z 3   | 376... | 46656 | 168... | 363... | 1.1... | H2-1  |

**APPENDIX D**  
**ADDITIONAL CALCUATIONS**

**Bolt Calculation Tool, V1.5.1**

| PROJECT DATA            |                     |
|-------------------------|---------------------|
| Site Name:              | BRG 2044 (A) 943097 |
| Site Number:            | 806953              |
| Connection Description: | Standoff to Collar  |

| MAXIMUM BOLT LOADS |          |     |
|--------------------|----------|-----|
| Bolt Tension:      | 16572.06 | lbs |
| Bolt Shear:        | 981.00   | lbs |

| WORST CASE BOLT LOADS <sup>1</sup> |          |     |
|------------------------------------|----------|-----|
| Bolt Tension:                      | 16572.06 | lbs |
| Bolt Shear:                        | 788.96   | lbs |

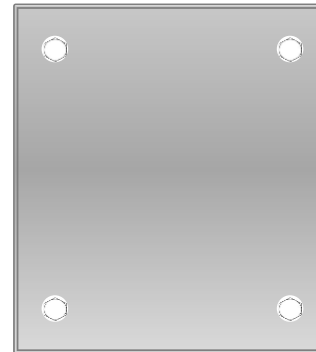
| BOLT PROPERTIES   |       |    |
|-------------------|-------|----|
| Bolt Type:        | Bolt  | -  |
| Bolt Diameter:    | 0.625 | in |
| Bolt Grade:       | A325  | -  |
| # of Bolts:       | 4     | -  |
| Threads Excluded? | No    | -  |

<sup>1</sup> Worst case bolt loads correspond to Load combination #31 on member S2 in RISA-3D, which causes the maximum demand on the bolts.

| Member Information    |  |
|-----------------------|--|
| J nodes of S3, S2, S1 |  |

| BOLT CHECK                      |          |      |
|---------------------------------|----------|------|
| Tensile Strength                | 20340.15 |      |
| Shear Strength                  | 13805.83 |      |
| Max Tensile Usage*              | 77.6%    |      |
| Max Shear Usage*                | 7.1%     |      |
| Interaction Check (Worst Case)* | 0.64     | ≤1.0 |
| Result                          | Pass     |      |

\*Usage per TIA-222-H Section 15.5





# 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: CTFF072A

806953

69 Guinea Road

Stamford, Connecticut 06903

**January 6, 2022**

**EBI Project Number: 6222000087**

| Site Compliance Summary                                             |                  |
|---------------------------------------------------------------------|------------------|
| Compliance Status:                                                  | <b>COMPLIANT</b> |
| Site total MPE% of<br>FCC general<br>population<br>allowable limit: | <b>21.98%</b>    |



January 6, 2022

T-Mobile

Attn: Jason Overbey, RF Manager

35 Griffin Road South

Bloomfield, Connecticut 06002

## Emissions Analysis for Site: CTFF072A - 806953

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **69 Guinea Road in Stamford, 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 1.1 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 69 Guinea Road in Stamford, 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 channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the Commscope VV-65A-RI for the 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector A, the RFS APXVAALL24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the Commscope VV-65A-RI for the 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the RFS APXVAALL24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s), the Commscope VV-65A-RI for the 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in



the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 14) The antenna mounting height centerline of the proposed antennas is 158 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<br>APXVAALL24_43-<br>U-NA20                   | Make / Model:       | RFS<br>APXVAALL24_43-<br>U-NA20                   | Make / Model:       | RFS<br>APXVAALL24_43-<br>U-NA20                   |
| Frequency Bands:    | 600 MHz / 600 MHz<br>/ 700 MHz                    | Frequency Bands:    | 600 MHz / 600 MHz<br>/ 700 MHz                    | Frequency Bands:    | 600 MHz / 600 MHz<br>/ 700 MHz                    |
| Gain:               | 12.95 dBd / 12.95<br>dBd / 13.65 dBd              | Gain:               | 12.95 dBd / 12.95<br>dBd / 13.65 dBd              | Gain:               | 12.95 dBd / 12.95<br>dBd / 13.65 dBd              |
| Height (AGL):       | 158 feet                                          | Height (AGL):       | 158 feet                                          | Height (AGL):       | 158 feet                                          |
| Channel Count:      | 5                                                 | Channel Count:      | 5                                                 | Channel Count:      | 5                                                 |
| Total TX Power (W): | 200 Watts                                         | Total TX Power (W): | 200 Watts                                         | Total TX Power (W): | 200 Watts                                         |
| ERP (W):            | 4,151.83                                          | ERP (W):            | 4,151.83                                          | ERP (W):            | 4,151.83                                          |
| Antenna A1 MPE %:   | 1.54%                                             | Antenna B1 MPE %:   | 1.54%                                             | Antenna C1 MPE %:   | 1.54%                                             |
| 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<br>MHz / 2500 MHz /<br>2500 MHz   | Frequency Bands:    | 2500 MHz / 2500<br>MHz / 2500 MHz /<br>2500 MHz   | Frequency Bands:    | 2500 MHz / 2500<br>MHz / 2500 MHz /<br>2500 MHz   |
| Gain:               | 22.65 dBd / 17.3 dBd<br>/ 22.65 dBd / 17.3<br>dBd | Gain:               | 22.65 dBd / 17.3 dBd<br>/ 22.65 dBd / 17.3<br>dBd | Gain:               | 22.65 dBd / 17.3 dBd<br>/ 22.65 dBd / 17.3<br>dBd |
| Height (AGL):       | 158 feet                                          | Height (AGL):       | 158 feet                                          | Height (AGL):       | 158 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 %:   | 5.66%                                             | Antenna B2 MPE %:   | 5.66%                                             | Antenna C2 MPE %:   | 5.66%                                             |
| Antenna #:          | 3                                                 | Antenna #:          | 3                                                 | Antenna #:          | 3                                                 |
| Make / Model:       | Commscope VV-65A-<br>RI                           | Make / Model:       | Commscope VV-65A-<br>RI                           | Make / Model:       | Commscope VV-65A-<br>RI                           |
| Frequency Bands:    | 1900 MHz / 1900<br>MHz / 2100 MHz                 | Frequency Bands:    | 1900 MHz / 1900<br>MHz / 2100 MHz                 | Frequency Bands:    | 1900 MHz / 1900<br>MHz / 2100 MHz                 |
| Gain:               | 15.55 dBd / 15.55 dBd<br>/ 16.05 dBd              | Gain:               | 15.55 dBd / 15.55 dBd<br>/ 16.05 dBd              | Gain:               | 15.55 dBd / 15.55 dBd<br>/ 16.05 dBd              |
| Height (AGL):       | 158 feet                                          | Height (AGL):       | 158 feet                                          | Height (AGL):       | 158 feet                                          |
| Channel Count:      | 8                                                 | Channel Count:      | 8                                                 | Channel Count:      | 8                                                 |
| Total TX Power (W): | 360 Watts                                         | Total TX Power (W): | 360 Watts                                         | Total TX Power (W): | 360 Watts                                         |
| ERP (W):            | 13,446.73                                         | ERP (W):            | 13,446.73                                         | ERP (W):            | 13,446.73                                         |
| Antenna A3 MPE %:   | 2.09%                                             | Antenna B3 MPE %:   | 2.09%                                             | Antenna C3 MPE %:   | 2.09%                                             |



| Site Composite MPE %        |        |
|-----------------------------|--------|
| Carrier                     | MPE %  |
| T-Mobile (Max at Sector A): | 9.29%  |
| T-Mobile (Existing)         | 5.23%  |
| AT&T                        | 4.46%  |
| Verizon                     | 2.81%  |
| Metricom                    | 0%     |
| Nextel                      | 0.19%  |
| Site Total MPE % :          | 21.98% |

| T-Mobile MPE % Per Sector |        |
|---------------------------|--------|
| T-Mobile Sector A Total:  | 9.29%  |
| T-Mobile Sector B Total:  | 9.29%  |
| T-Mobile Sector C Total:  | 9.29%  |
|                           |        |
| Site Total MPE % :        | 21.98% |

## 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                  | 158.0         | 1.84                                              | 600 MHz LTE                    | 400                                         | 0.46%            |
| T-Mobile 600 MHz NR                             | 1          | 1577.94                 | 158.0         | 2.46                                              | 600 MHz NR                     | 400                                         | 0.61%            |
| T-Mobile 700 MHz LTE                            | 2          | 695.22                  | 158.0         | 2.16                                              | 700 MHz LTE                    | 467                                         | 0.46%            |
| T-Mobile 2500 MHz LTE IC & 2C Traffic           | 1          | 11044.63                | 158.0         | 17.19                                             | 2500 MHz LTE IC & 2C Traffic   | 1000                                        | 1.72%            |
| T-Mobile 2500 MHz LTE IC & 2C Broadcast         | 1          | 1074.06                 | 158.0         | 1.67                                              | 2500 MHz LTE IC & 2C Broadcast | 1000                                        | 0.17%            |
| T-Mobile 2500 MHz NR Traffic                    | 1          | 22089.26                | 158.0         | 34.37                                             | 2500 MHz NR Traffic            | 1000                                        | 3.44%            |
| T-Mobile 2500 MHz NR Broadcast                  | 1          | 2148.13                 | 158.0         | 3.34                                              | 2500 MHz NR Broadcast          | 1000                                        | 0.33%            |
| T-Mobile 1900 MHz GSM                           | 4          | 1076.77                 | 158.0         | 6.70                                              | 1900 MHz GSM                   | 1000                                        | 0.67%            |
| T-Mobile 1900 MHz LTE                           | 2          | 2153.53                 | 158.0         | 6.70                                              | 1900 MHz LTE                   | 1000                                        | 0.67%            |
| T-Mobile 2100 MHz LTE                           | 2          | 2416.30                 | 158.0         | 7.52                                              | 2100 MHz LTE                   | 1000                                        | 0.75%            |
|                                                 |            |                         |               |                                                   |                                | <b>Total:</b>                               | <b>9.29%</b>     |

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

## Summary

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

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

| T-Mobile Sector                    | Power Density Value (%) |
|------------------------------------|-------------------------|
| Sector A:                          | 9.29%                   |
| Sector B:                          | 9.29%                   |
| Sector C:                          | 9.29%                   |
| T-Mobile Maximum MPE % (Sector A): | 9.29%                   |
|                                    |                         |
| Site Total:                        | 21.98%                  |
|                                    |                         |
| Site Compliance Status:            | <b>COMPLIANT</b>        |

The anticipated composite MPE value for this site assuming all carriers present is **21.98%** 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:CTFF072A

T-MOBILE SITE NAME: CT03XC344

SITE TYPE: MONOPOLE

TOWER HEIGHT: 157'-0"

T-MOBILE SPRINT RETAIN SITE CONFIGURATION: 67E5998E\_1xAIR+1OP+1QP

BUSINESS UNIT #:806953

SITE ADDRESS: 69 GUINEA RD  
STAMFORD, CT 06903

COUNTY: FAIRFIELD

JURISDICTION: FAIRFIELD COUNTY



35 GRIFFIN ROAD  
BLOOMFIELD, CT 06002



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



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T-MOBILE SITE NUMBER:  
CTFF072A

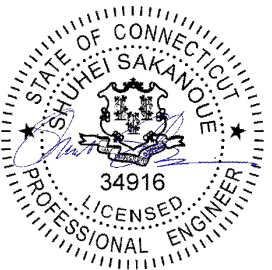
BU #: 806953  
BRG 2044 (A) 943097

69 GUINEA RD  
STAMFORD, CT 06903

EXISTING 157'-0" MONOPOLE

ISSUED FOR:

| REV | DATE       | DRWN | DESCRIPTION | DES./QA |
|-----|------------|------|-------------|---------|
| 0   | 12/08/2021 | TJ   | FINAL       | SS      |
|     |            |      |             |         |
|     |            |      |             |         |
|     |            |      |             |         |



12/08/2021

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:

0

SITE INFORMATION

CROWN CASTLE USA INC.  
SITE NAME: BRG 2044 (A) 943097  
SITE ADDRESS: 69 GUINEA RD  
STAMFORD, CT 06903  
COUNTY: FAIRFIELD  
MAP/PARCEL #: N 005 3576  
AREA OF CONSTRUCTION: EXISTING  
LATITUDE: 41.10175833° (41° 6' 6.30")  
LONGITUDE: -73.59445555° (73° 35' 40.00")  
LAT/LONG TYPE: NAD83  
GROUND ELEVATION: 259.34 FT  
CURRENT ZONING: RA3  
JURISDICTION: FAIRFIELD COUNTY  
OCCUPANCY CLASSIFICATION: U  
TYPE OF CONSTRUCTION: IIB  
A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR  
HUMAN HABITATION  
PROPERTY OWNER: GIRL SCOUTS OF CONNECTICUT INC  
340 WASHINGTON STREET  
HARTFORD, CT  
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  
USA INC. DISTRICT  
CONTACTS: 3 CORPORATE PARK DRIVE, SUITE 101  
CLIFTON PARK, NY 12065  
TRICIA PELON - PROJECT MANAGER  
TRICAIS.PELON@CROWNCastle.COM  
CHRISTOPHER P MILLER - CONSTRUCTION MANAGER  
CHRISP.MILLER@CROWNCastle.COM  
CONTACT : 585-739-1780

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  
11X17. 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

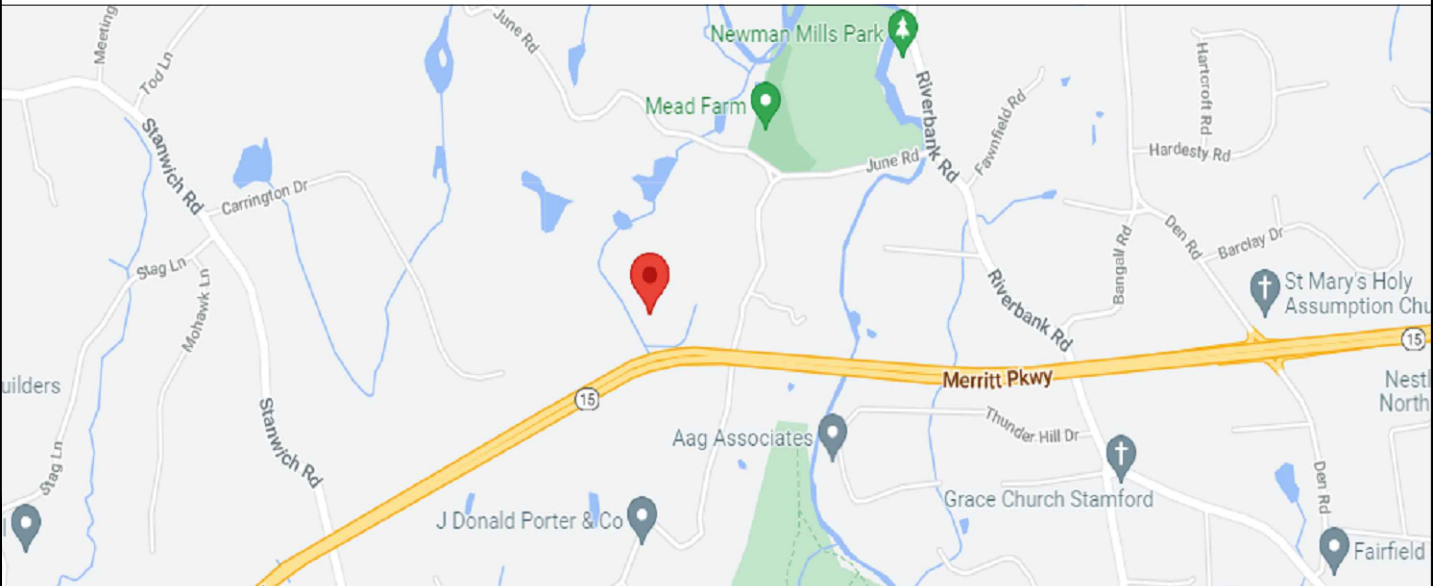
THE PURPOSE OF THIS PROJECT IS TO ENHANCE  
BROADBAND CONNECTIVITY AND CAPACITY TO THE  
EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:  
• REMOVE (9) ANTENNAS  
• REMOVE (12) COAX CABLE  
• REMOVE (9) TMAS  
• REMOVE (9) RRHS  
• REMOVE (1) HYBRID CABLE  
• INSTALL (9) ANTENNAS  
• INSTALL (6) RRHS  
• INSTALL (3) HYBRID CABLES INSIDE MONOPOLE

GROUND SCOPE OF WORK:  
• REMOVE ALL EXISTING EQUIPMENT  
• INSTALL (1) 6160 & (1) B160 BATTERY CABINET  
• INSTALL (1) PSU4813 VOLTAGE BOOSTER IN (P) CABINET  
• INSTALL (1) CSR 1XR Router IN (P) CABINET  
• INSTALL (2) BB6648 IN (P) CABINET

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

LOCATION MAP



NO SCALE

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 CORP.       |
| DATED:               | 11/15/2021                 |
| MOUNT ANALYSIS:      | INFINIGY ENGINEERING, PLLC |
| DATED:               | 11/10/2021                 |
| RFDS REVISION:       | 1                          |
| DATED:               | 10/15/2021                 |
| ORDER ID:            | 589868                     |
| REVISION:            | 0                          |



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APPROVALS

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

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

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

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

GREENFIELD GROUNDING NOTES:

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

GENERAL NOTES:

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

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (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.
4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:  
#4 BARS AND SMALLER.....40 ksi  
#5 BARS AND LARGER.....60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:  
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"  
CONCRETE EXPOSED TO EARTH OR WEATHER:  
#6 BARS AND LARGER.....2"  
#5 BARS AND SMALLER.....1-1/2"  
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:  
SLAB AND WALLS.....3/4"  
BEAMS AND COLUMNS.....1-1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

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

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

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

ABBREVIATIONS:

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

APWA UNIFORM COLOR CODE:

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

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T-MOBILE SITE NUMBER:  
CTFF072A

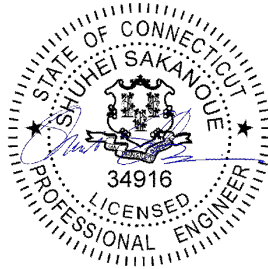
BU #: 806953  
BRG 2044 (A) 943097

69 GUINEA RD  
STAMFORD, CT 06903

EXISTING 157'-0" MONOPOLE

ISSUED FOR:

| REV | DATE       | DRWN | DESCRIPTION | DES./QA |
|-----|------------|------|-------------|---------|
| 0   | 12/08/2021 | TJ   | FINAL       | SS      |
|     |            |      |             |         |
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|     |            |      |             |         |
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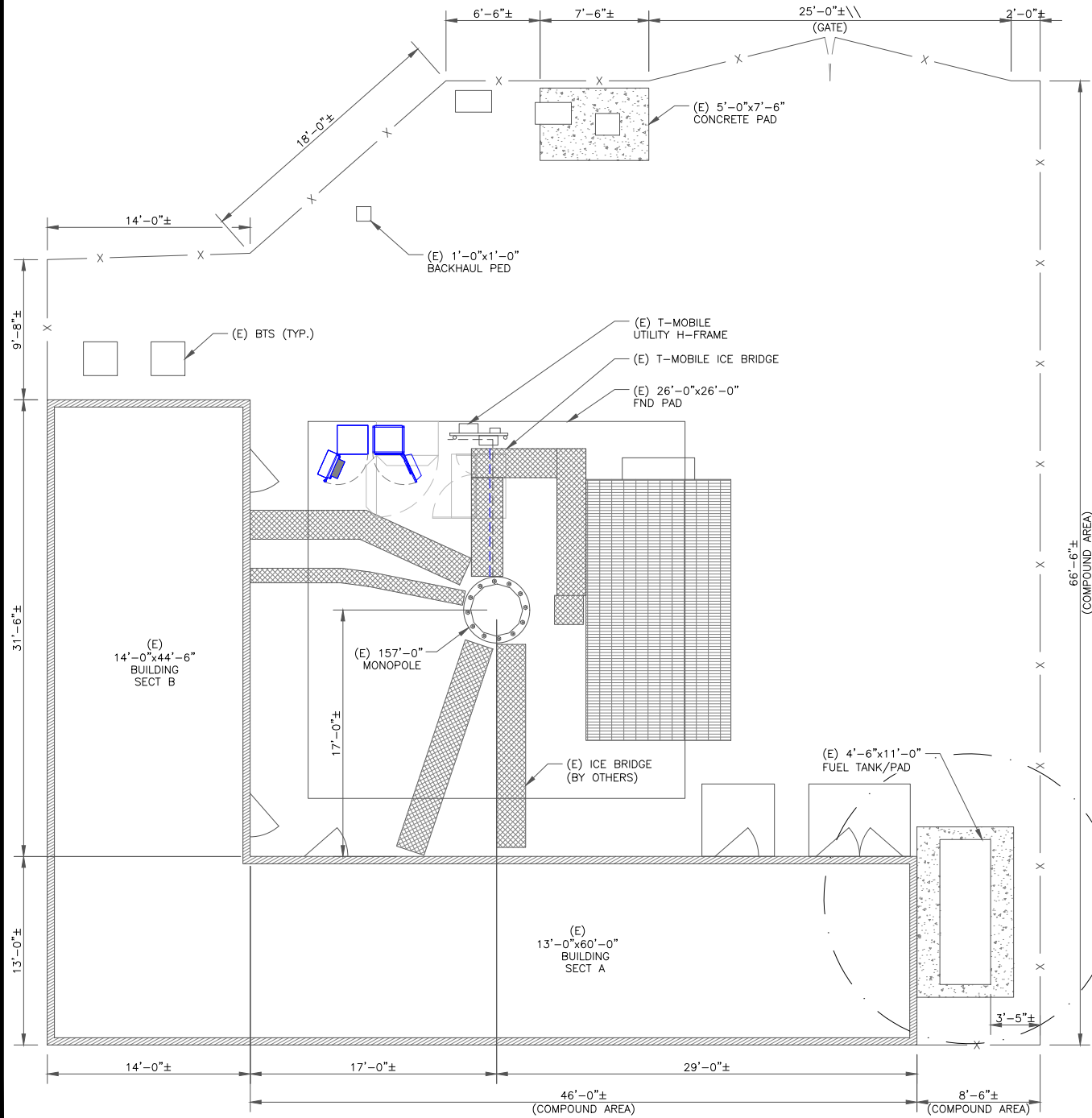
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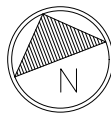
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NOTE:

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.

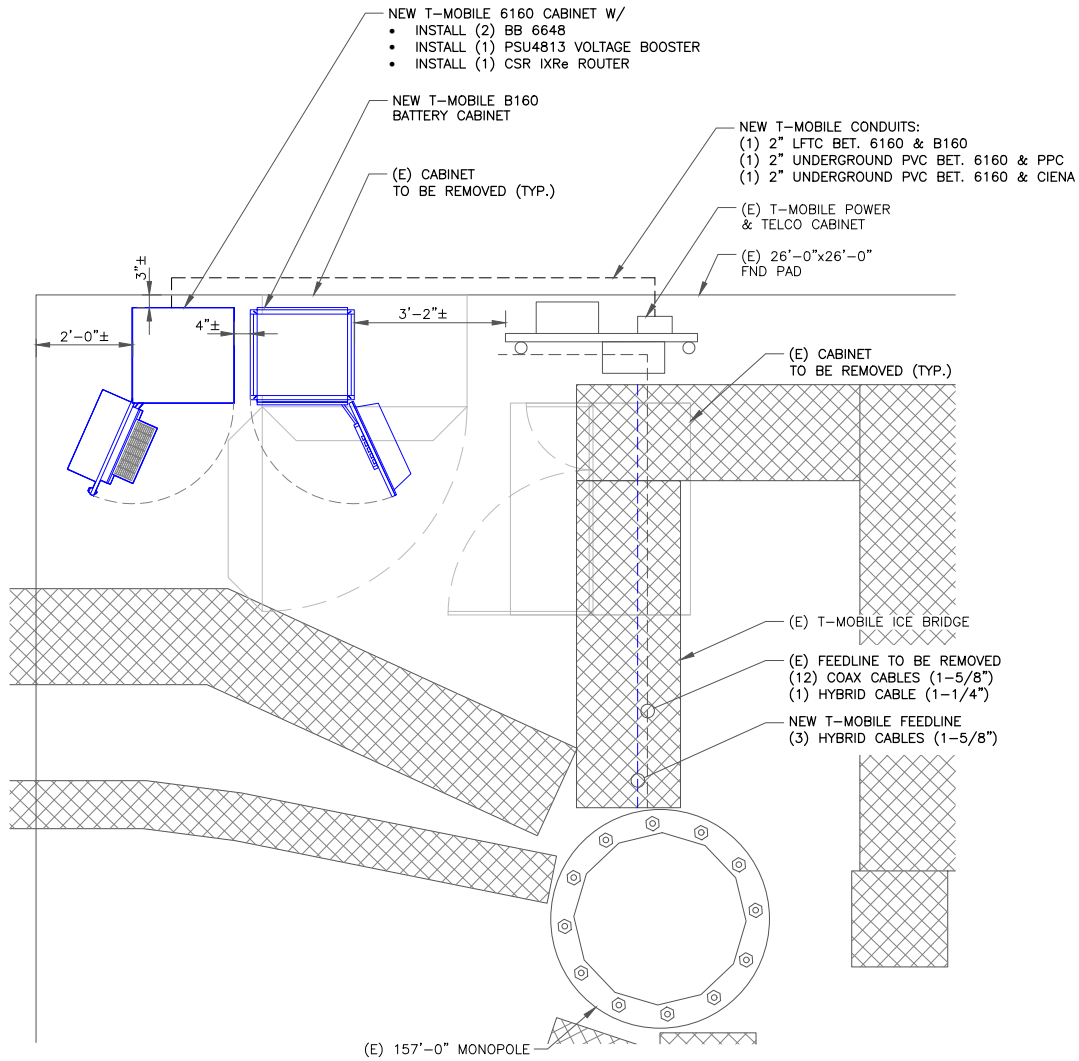


1 SITE PLAN  
SCALE: 3/8"=1'-0" (FULL SIZE)  
3/16"=1'-0" (11x17)

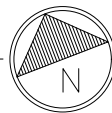


NOTES:

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



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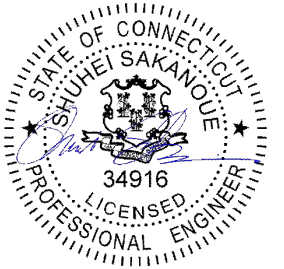
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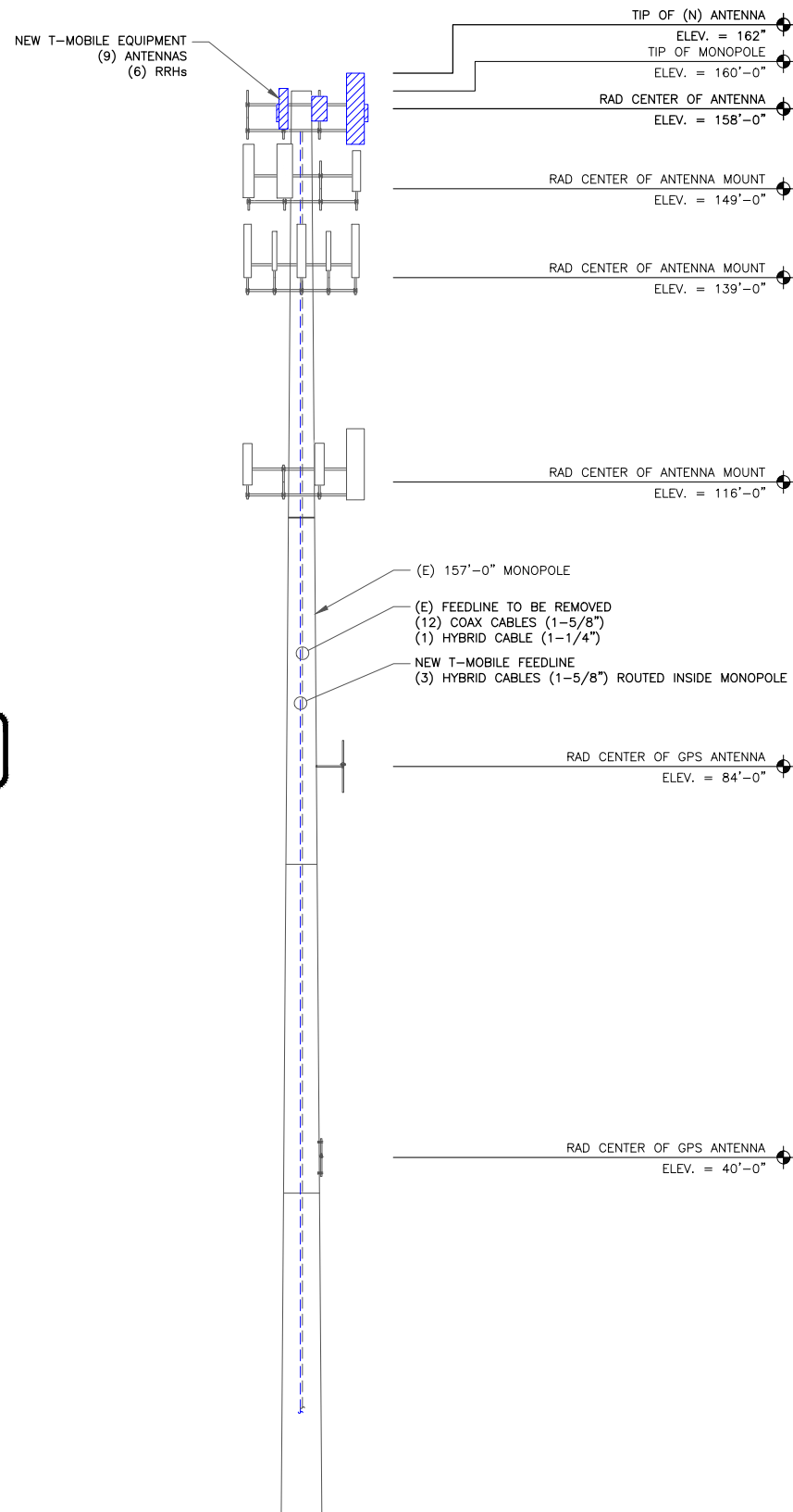
**C-1**

REVISION:

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## NOTES:

- ELEVATION BASED ON DRAWING PROVIDED BY TOWER OWNER. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING EQUIPMENT.
- 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.

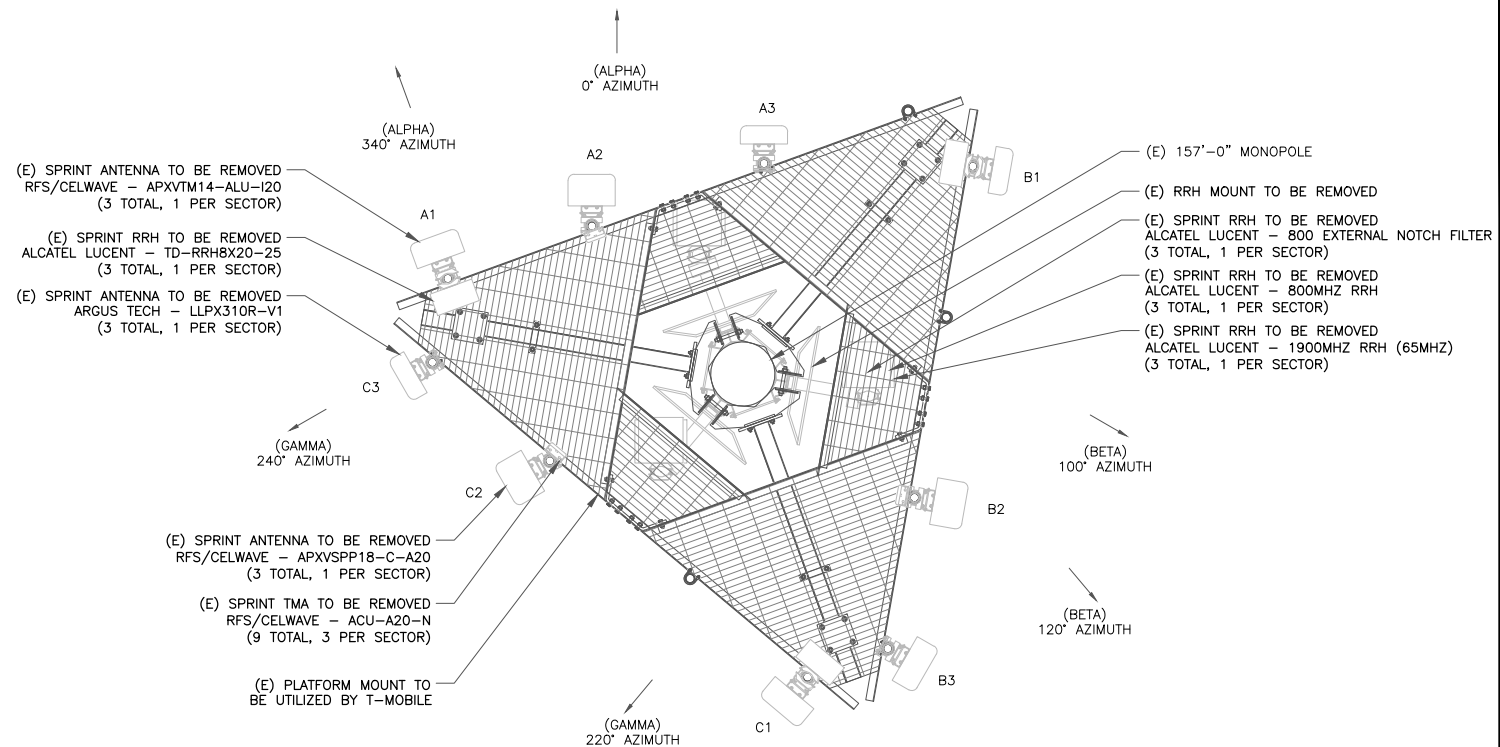


## T-MOBILE EQUIPMENT

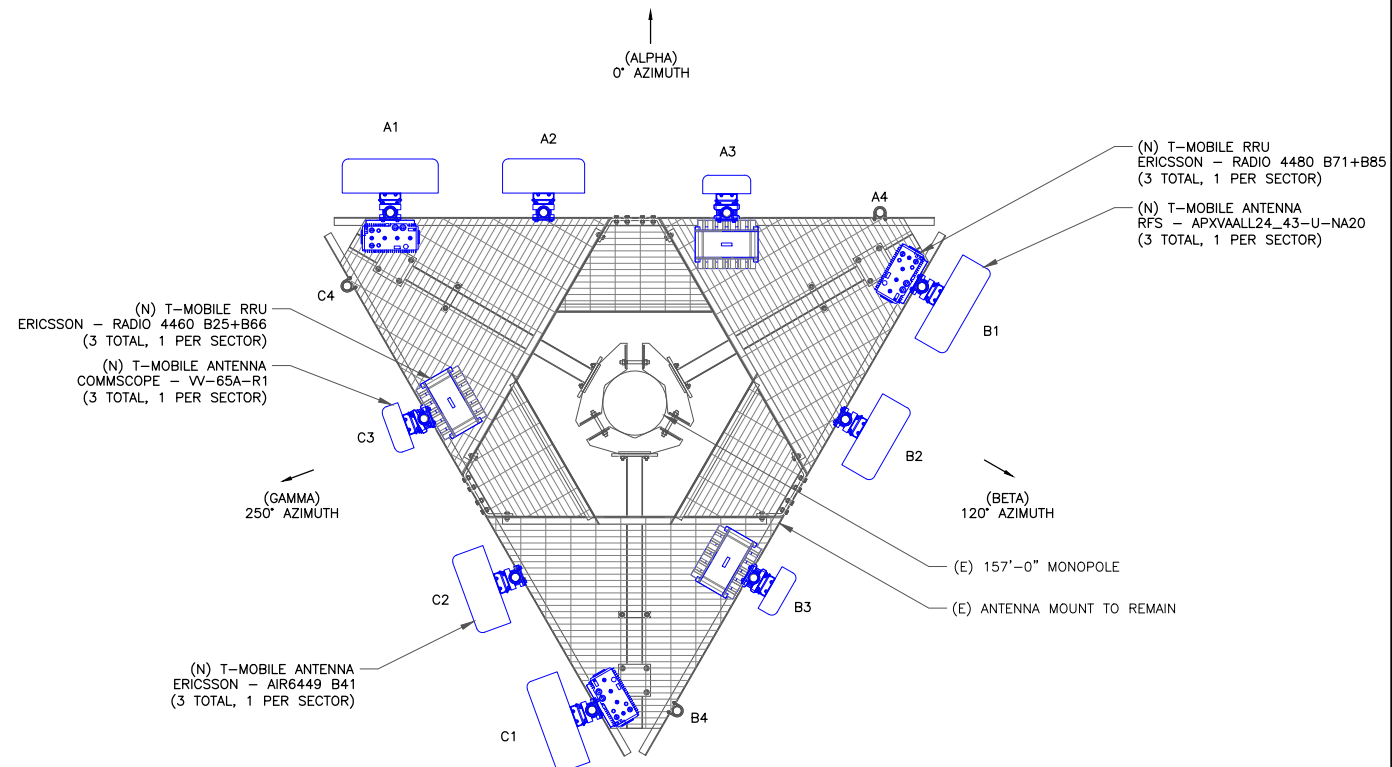
ANTENNA CL: 158'-0"  
MOUNT CL: 157'-0"

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

1 FINAL ELEVATION  
SCALE: NOT TO SCALE



2 EXISTING ANTENNA LAYOUT  
SCALE: NOT TO SCALE



3 FINAL ANTENNA LAYOUT  
SCALE: NOT TO SCALE

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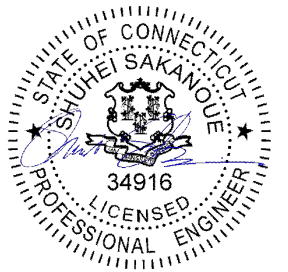
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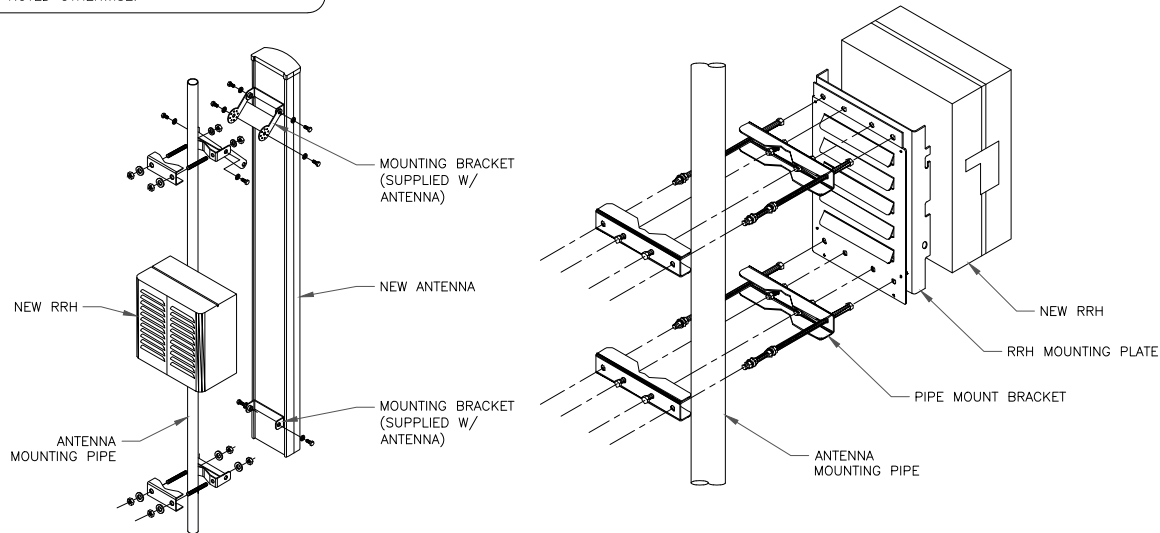
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| ANTENNA SCHEDULE |      |                      |            |         |                      |                      |            |             |                                  |                   |
|------------------|------|----------------------|------------|---------|----------------------|----------------------|------------|-------------|----------------------------------|-------------------|
| SECTOR           | POS. | TECHNOLOGY           | RAD CENTER | AZIMUTH | ANTENNA MANUFACTURER | ANTENNA MODEL        | MECH. TILT | ELECT. TILT | TOWER MOUNTED EQUIPMENT          | FEEDLINE TYPE     |
| ALPHA            | A1   | LTE 600/700/N600     | 158'-0"    | 0°      | RFS                  | APXVAALL24_43-U-NA20 | —          | —           | (1) ERICSSON — RRUS 4480 B71+B85 | (1) 1-5/8" HYBRID |
| ALPHA            | A2   | LTE 2500, N2500      | 158'-0"    | 0°      | ERICSSON             | AIR6449 B41          | —          | —           | —                                |                   |
| ALPHA            | A3   | LTE 2100/1900, G1900 | 158'-0"    | 0°      | COMMSCOPE            | VV-65A-R1            | —          | —           | (1) ERICSSON — RRUS 4460 B25+B66 |                   |
| ALPHA            | A4   | —                    | —          | —       | —                    | —                    | —          | —           | —                                |                   |
|                  |      |                      |            |         |                      |                      |            |             |                                  |                   |
| BETA             | B1   | LTE 600/700/N600     | 158'-0"    | 120°    | RFS                  | APXVAALL24_43-U-NA20 | —          | —           | (1) ERICSSON — RRUS 4480 B71+B85 | (1) 1-5/8" HYBRID |
| BETA             | B2   | LTE 2500, N2500      | 158'-0"    | 120°    | ERICSSON             | AIR6449 B41          | —          | —           | —                                |                   |
| BETA             | B3   | LTE 2100/1900, G1900 | 158'-0"    | 120°    | COMMSCOPE            | VV-65A-R1            | —          | —           | (1) ERICSSON — RRUS 4460 B25+B66 |                   |
| BETA             | B4   | —                    | —          | —       | —                    | —                    | —          | —           | —                                |                   |
|                  |      |                      |            |         |                      |                      |            |             |                                  |                   |
| GAMMA            | C1   | LTE 600/700/N600     | 158'-0"    | 250°    | RFS                  | APXVAALL24_43-U-NA20 | —          | —           | (1) ERICSSON — RRUS 4480 B71+B85 | (1) 1-5/8" HYBRID |
| GAMMA            | C2   | LTE 2500, N2500      | 158'-0"    | 250°    | ERICSSON             | AIR6449 B41          | —          | —           | —                                |                   |
| GAMMA            | C3   | LTE 2100/1900, G1900 | 158'-0"    | 250°    | COMMSCOPE            | VV-65A-R1            | —          | —           | (1) ERICSSON — RRUS 4460 B25+B66 |                   |
| GAMMA            | C4   | —                    | —          | —       | —                    | —                    | —          | —           | —                                |                   |

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 RRH MOUNTING DETAIL  
SCALE: NOT TO SCALE

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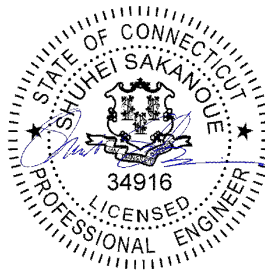
BU #: 806953  
BRG 2044 (A) 943097

69 GUINEA RD  
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EXISTING 157'-0" MONOPOLE

ISSUED FOR:

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|-----|------------|------|-------------|---------|
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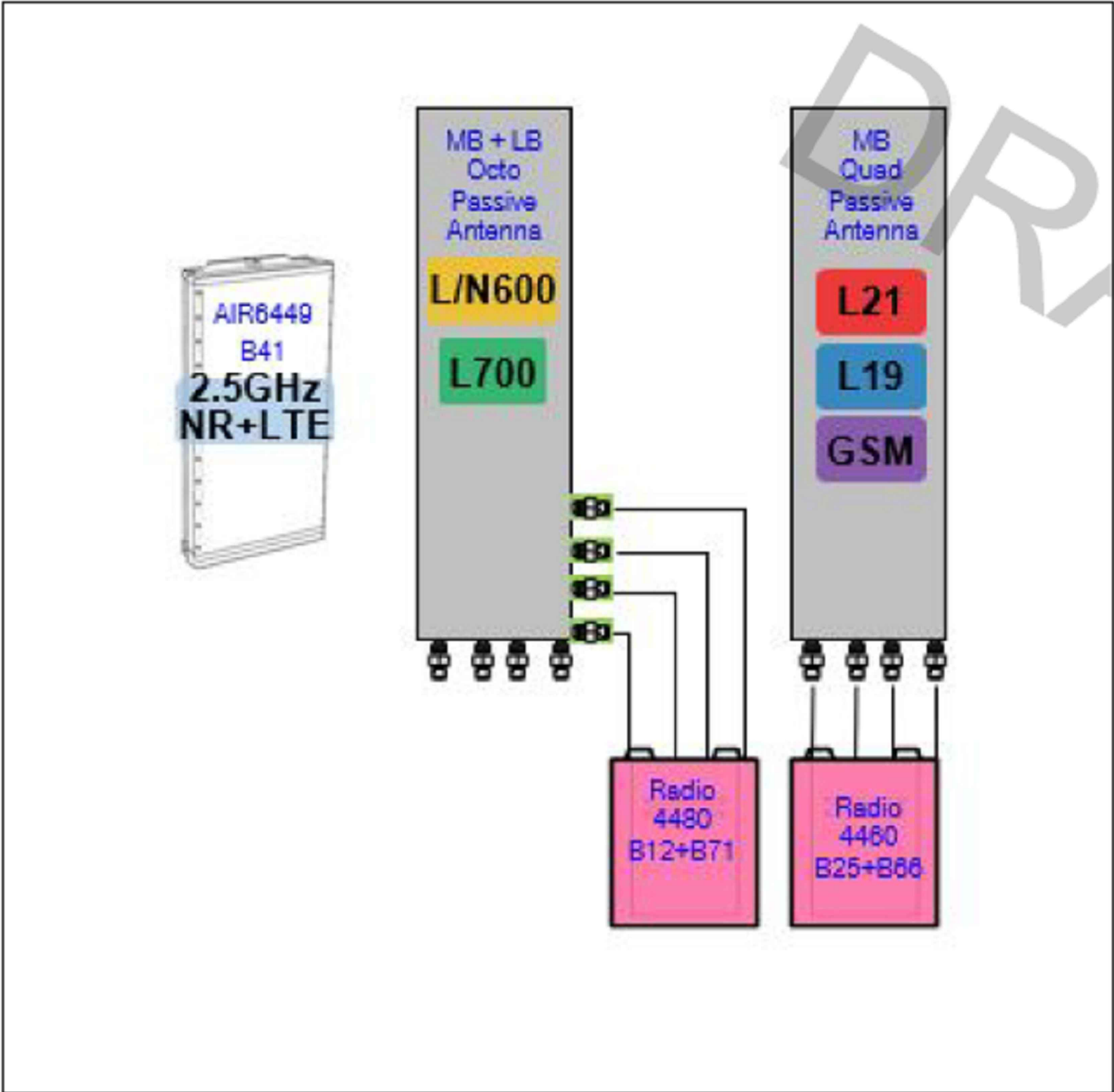
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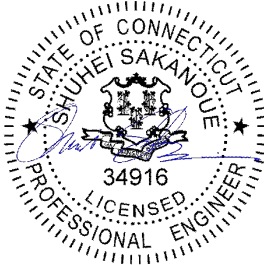
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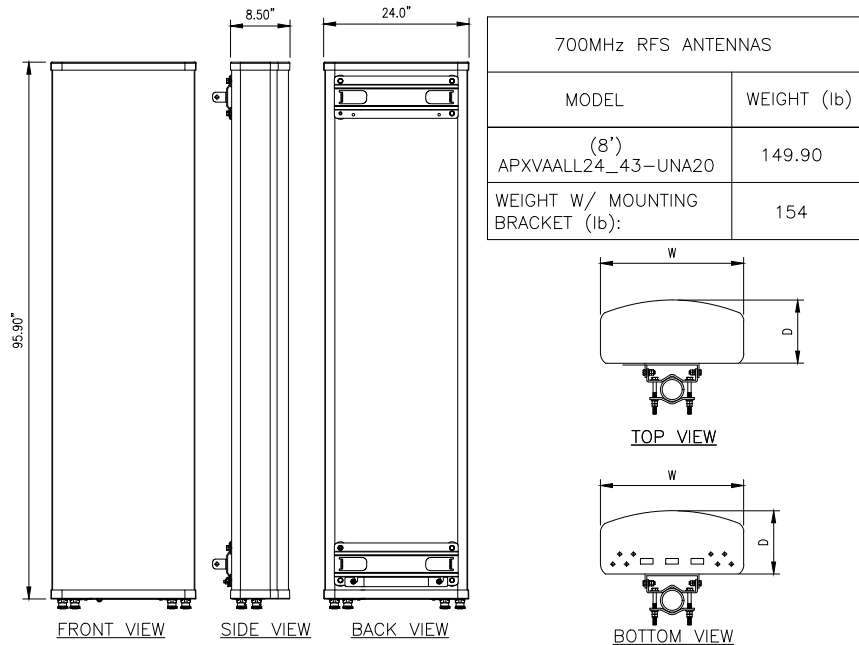
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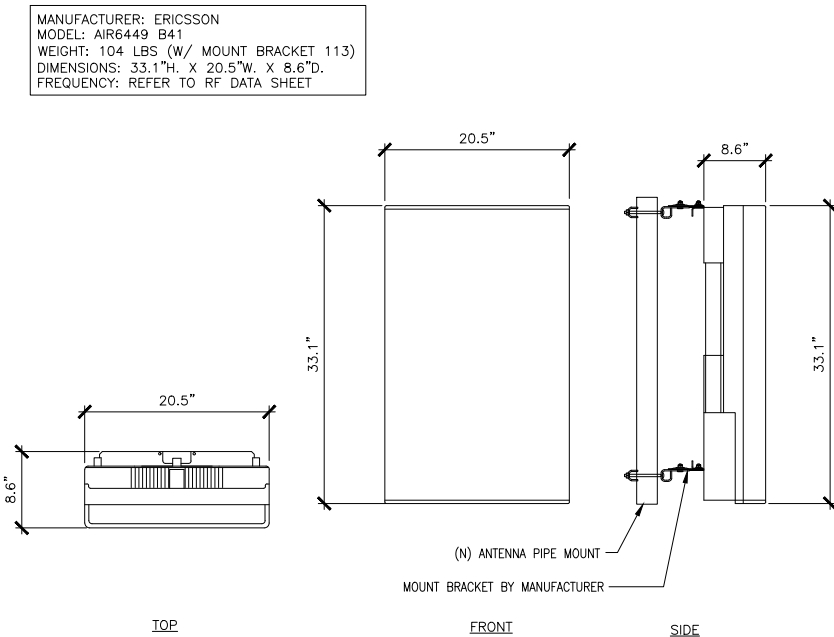
C-4

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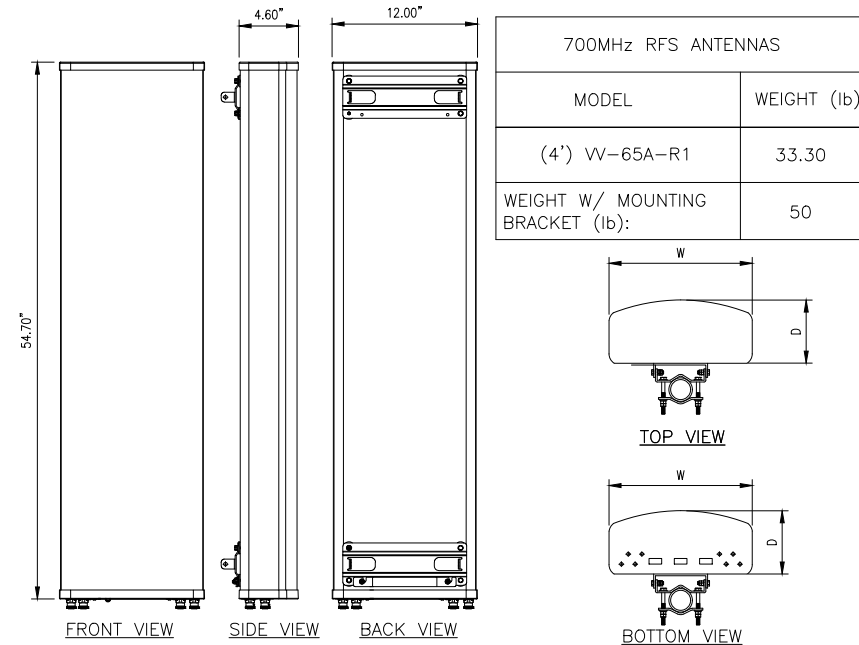
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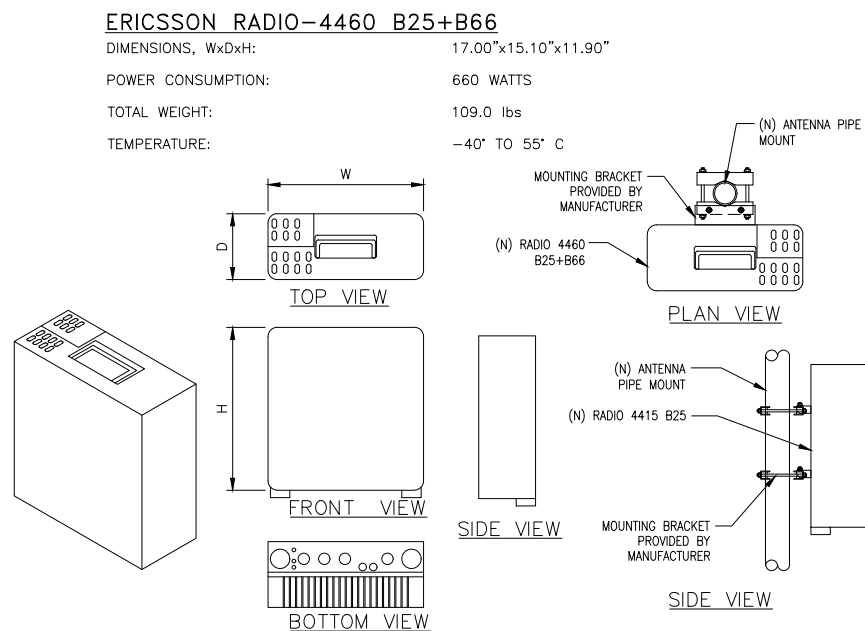
1 (N) APXVAALL24\_43-UNA20 ANTENNA SPEC  
SCALE: NOT TO SCALE



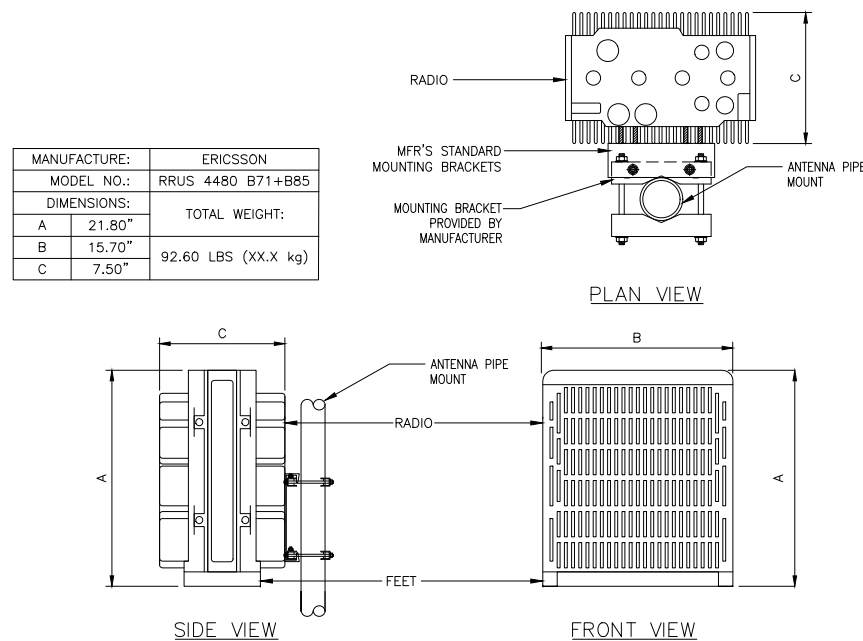
2 (N) AIR6449 B41 ANTENNA SPEC  
SCALE: NOT TO SCALE



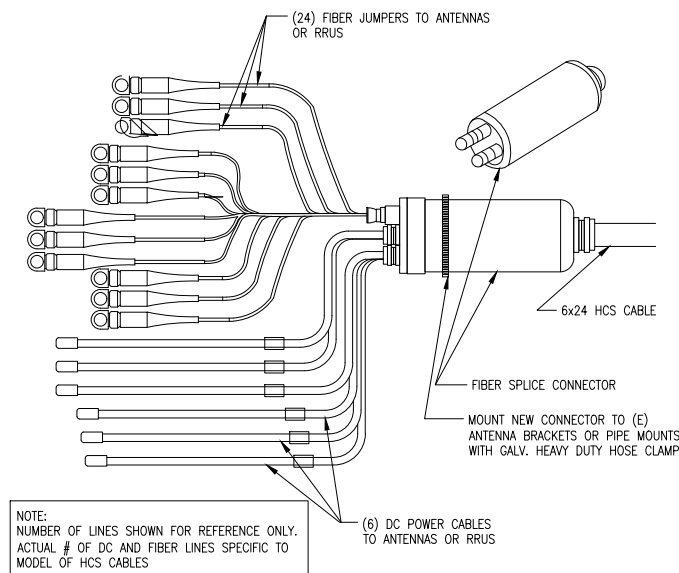
3 (N) VV-65A-R1 ANTENNA SPEC  
SCALE: NOT TO SCALE



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



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



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

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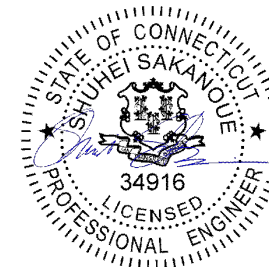
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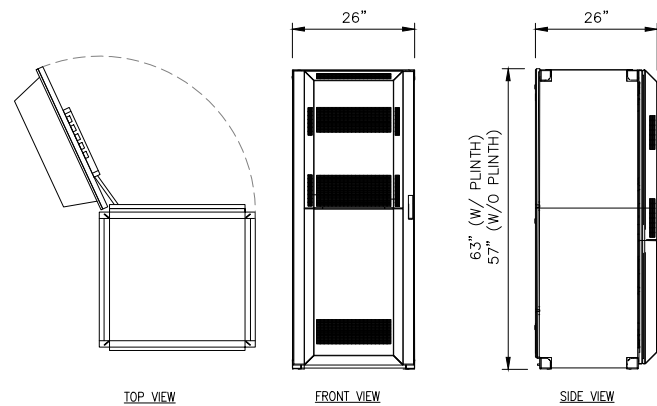
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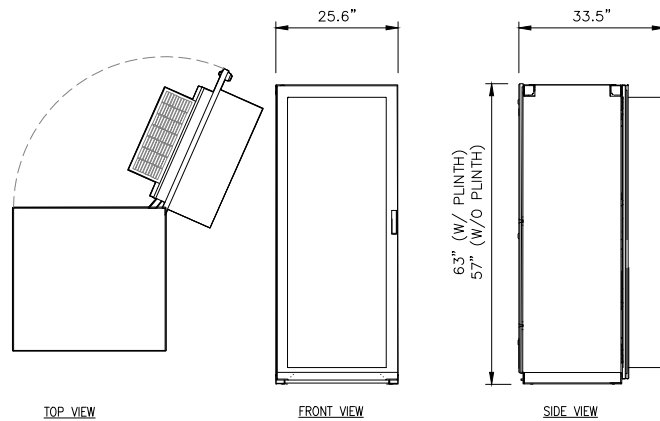
REVISION:

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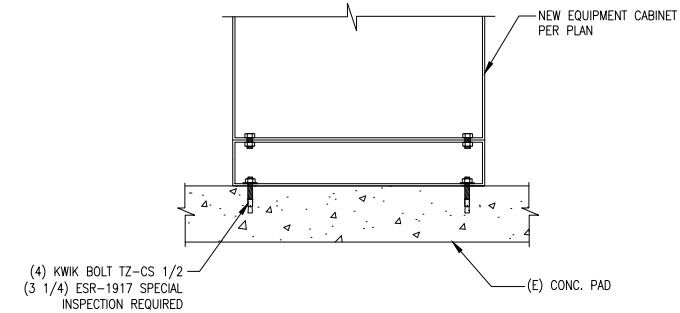
|                        |                            |
|------------------------|----------------------------|
| ERICSSON MODEL NO.:    | B160                       |
| RACK SPACE:            | 19U                        |
| DIMENSIONS, HxWxD:     | 63"x26"x26" (W/ 6" PLINTH) |
| CABINET WEIGHT, EMPTY: | 485 LBS                    |
| MAXIMUM WEIGHT:        | 2100± LBS                  |

1 (N) B160 CABINET DETAIL  
SCALE: NOT TO SCALE

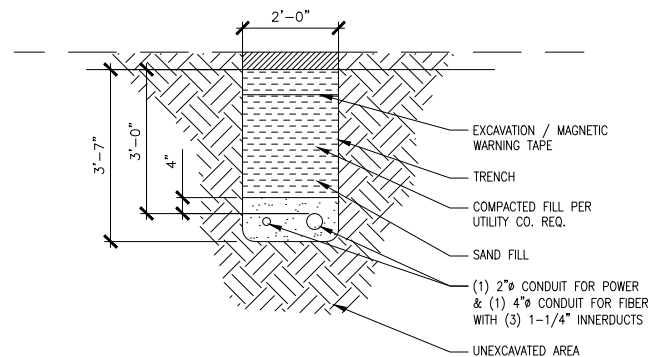


|                        |                                |
|------------------------|--------------------------------|
| ERICSSON MODEL NO.:    | 6160                           |
| RACK SPACE:            | 19U                            |
| DIMENSIONS, HxWxD:     | 63"x25.6"x25.6" (W/ 6" PLINTH) |
| CABINET WEIGHT, EMPTY: | 410 LBS                        |
| MAXIMUM WEIGHT:        | 770± LBS                       |

2 (N) 6160 CABINET DETAIL  
SCALE: NOT TO SCALE



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



4 (N) CONDUIT TRENCH DETAIL  
SCALE: NOT TO SCALE

5 NOT USED  
SCALE: NOT TO SCALE

6 NOT USED  
SCALE: NOT TO SCALE

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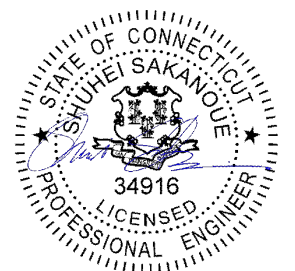
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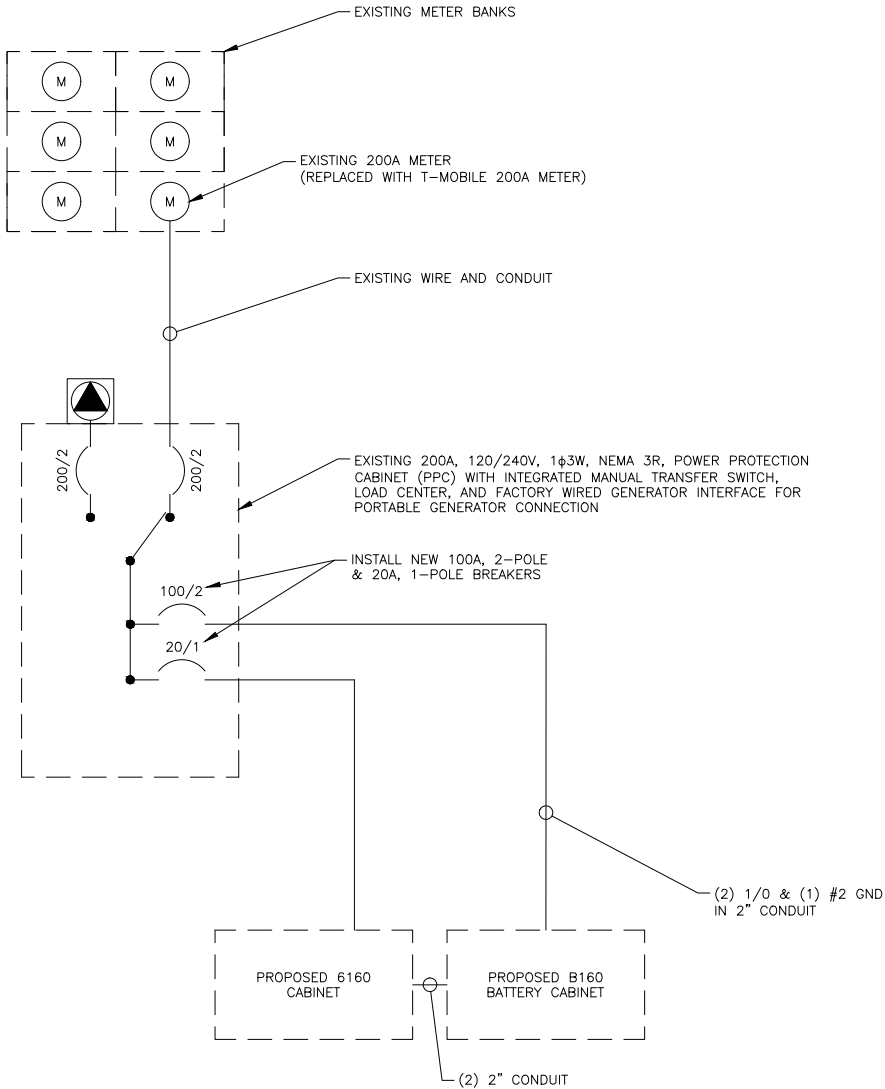
NOTES:

1. EXISTING DISTRIBUTION PANEL WAS NOT ACCESSIBLE DURING SITE VISIT PERFORMED BY INFINIGY. CONTRACTOR SHALL INFORM ENGINEER IF THERE ARE ANY DISCREPANCIES IN PANEL SCHEDULE.

| 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    |                                                                                                                                                                                                                                             |     |                                  |           |             |  |
| TRANSIENT VOLTAGE SURGE SUPPRESSOR (TVSS) | 1         | C       | 60                                      | 1       | 901              |      | 2                                                                                                                                                                                                                                           | 10  | NC                               | 900       | FAN         |  |
|                                           | 1         | C       |                                         | 3       |                  | 101  | 4                                                                                                                                                                                                                                           | 15  | NC                               | 100       | OUTLET      |  |
| 6160                                      | 7000      | C       | 100                                     | 5       | 7200             |      | 6                                                                                                                                                                                                                                           | 60  | NC                               | 200       | TOWER LIGHS |  |
|                                           | 7000      | C       |                                         | 7       |                  | 7200 | 8                                                                                                                                                                                                                                           |     | NC                               | 200       |             |  |
| 6160 GFI                                  | 180       | C       | 20                                      | 9       | 180              |      | 10                                                                                                                                                                                                                                          |     |                                  |           |             |  |
| BLANK                                     |           |         |                                         | 11      |                  | 0    | 12                                                                                                                                                                                                                                          |     |                                  |           | BLANK       |  |
|                                           |           |         |                                         | 13      | 0                |      | 14                                                                                                                                                                                                                                          |     |                                  |           |             |  |
|                                           |           |         |                                         | 15      |                  | 0    | 16                                                                                                                                                                                                                                          |     |                                  |           |             |  |
|                                           |           |         |                                         | 17      | 0                |      | 18                                                                                                                                                                                                                                          |     |                                  |           |             |  |
|                                           |           |         |                                         | 19      |                  | 0    | 20                                                                                                                                                                                                                                          |     |                                  |           |             |  |
|                                           |           |         |                                         | 21      | 0                |      | 22                                                                                                                                                                                                                                          | 50  | NC                               | 0         | SPARE       |  |
|                                           |           |         | 23                                      |         | 0                | 24   | NC                                                                                                                                                                                                                                          |     | 0                                |           |             |  |
| BASE LOAD (VA) =                          |           |         |                                         |         | 8281             | 7301 | C = CONTINUOUS LOAD; NC = NON-CONTINUOUS LOAD<br><br>NEW BREAKER TO BE SAME TYPE AND HAVE SAME AIC RATING AS EXISTING.<br>CUSTOMER HAS NOT PROVIDED LOADS FOR EQUIPMENT CABINETS<br>THEREFORE THE CABINET LOADS SHOWN ARE ESTIMATED VALUES. |     |                                  |           |             |  |
| 25% OF CONTINUOUS LOAD (VA) =             |           |         |                                         |         | 1750             | 1750 |                                                                                                                                                                                                                                             |     |                                  |           |             |  |
| TOTAL LOAD (VA) =                         |           |         |                                         |         | 10031            | 9051 |                                                                                                                                                                                                                                             |     |                                  |           |             |  |
| TOTAL LOAD (A) =                          |           |         |                                         |         | 84               | 75   |                                                                                                                                                                                                                                             |     |                                  |           |             |  |

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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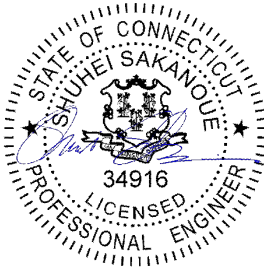
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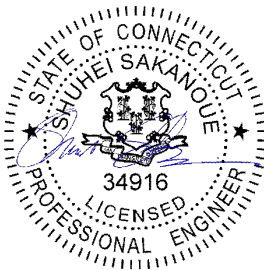
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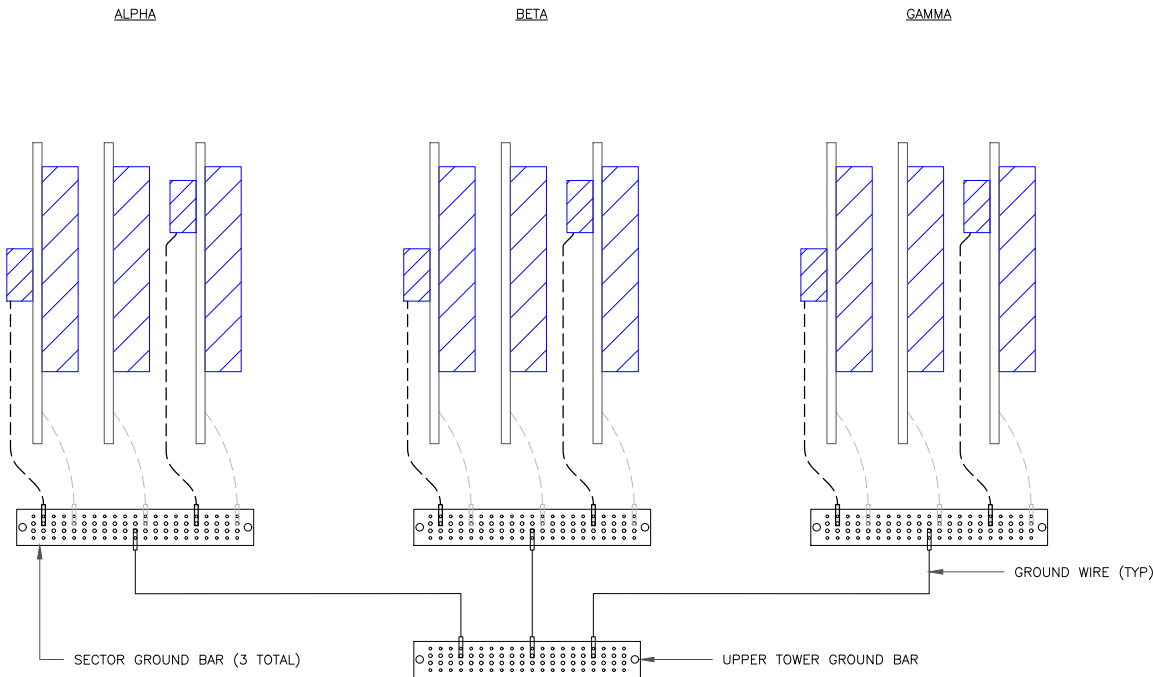
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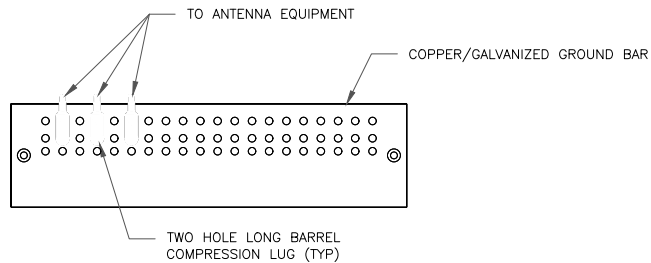
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NOTE:

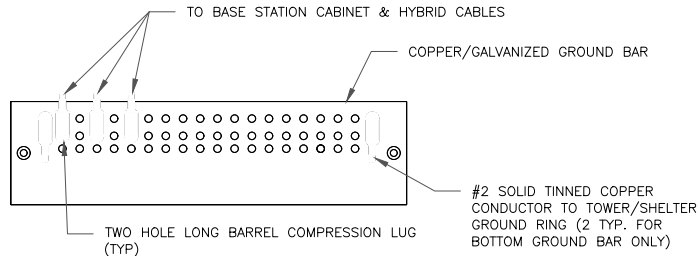
ALL NEW GROUNDS TO BE #6 STRANDED  
COPPER WITH GREEN INSULATION UNLESS  
NOTED OTHERWISE.

1 ANTENNA GROUNDING DIAGRAM  
SCALE: NOT TO SCALE



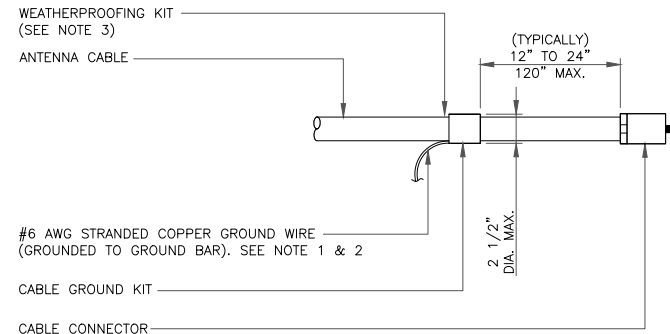
- NOTES:
- DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
  - EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
  - GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

1 ANTENNA SECTOR GROUND BAR DETAIL  
SCALE: NOT TO SCALE



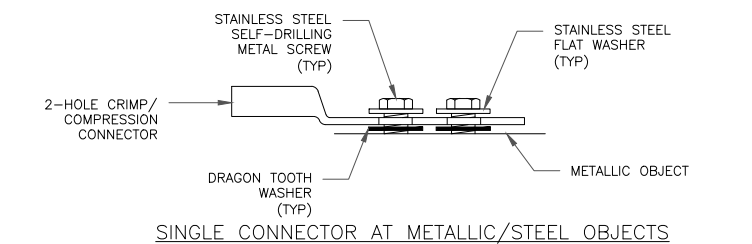
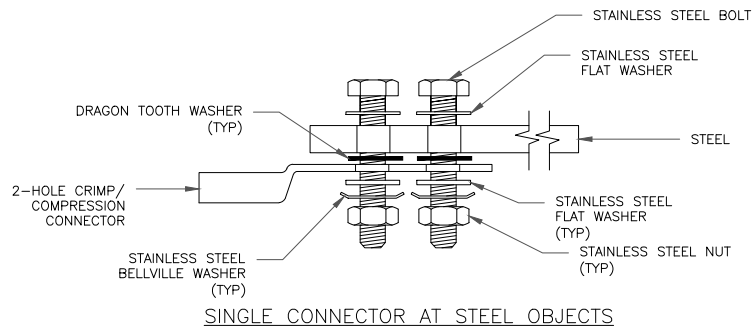
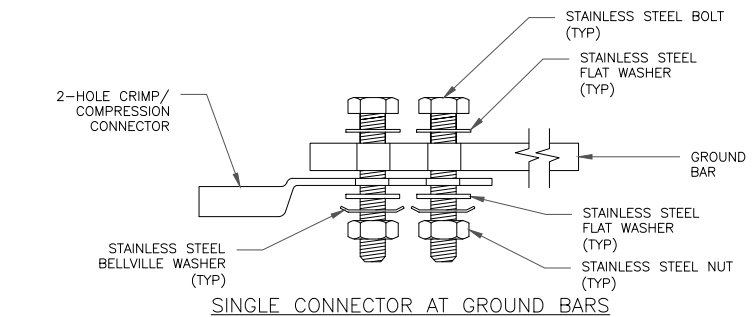
- NOTES:
- EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
  - GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
  - GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

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



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

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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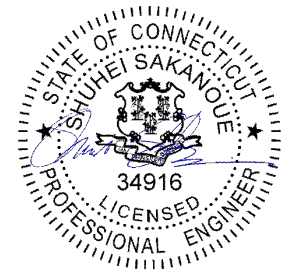
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