



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

August 1, 2023

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

RE: **Notice of Exempt Modification for Verizon
Crown #876317_Crown_VZW
150 Mattatuck Heights, Waterbury, CT 06705
Latitude: 41.321630 / Longitude: -72.59610**

Dear Ms. Bachman:

Verizon Wireless is requesting to file an exempt modification for an existing tower located at 150 Mattatuck Heights, Waterbury, CT 06705. The property is owned by Waterbury Twin LLC & 150 MH LLC and the tower is owned by Crown Castle. Verizon now intends to add two (2) interference mitigation filters to be installed at the 114-foot level of the tower of the 144-foot monopole. This modification may include B2, B5, B17, B14, B29, B30, B66 & n77 hardware that is 4G(LTE) and/or 5GNR capable through remote software configuration and either or both services may be turned on or off at various times.

Panned Modification:

Tower:

Installed New:

(2) Kaelus BSF0020F3V1-1 Twin Bandstop 900MHZ Interference Mitigation Filters

The facility was approved by the City of Waterbury Planning Commission and was constructed by Sprint in 1999.

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-SOj-73, a copy of this letter is being sent to Mayor Neil O'Leary and City Planner Robert Nerney for the municipality. A copy is also being sent to Waterbury Twin LLC & 150 MH LLC as the property owner and Crown Castle is the tower owner. The proposed modifications will not result in an increase in the height of the existing tower.

1. The proposed modifications will not require the extension of the site boundary.
2. 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.
3. 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.

The Foundation for a Wireless World.
CrownCastle.com

Melanie A. Bachman

Page 2

4. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
5. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, Verizon 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: Domenica Tatasciore.

Sincerely,



Domenica Tatasciore
Site Acquisition Specialist
1800 W. Park Drive
Westborough, MA 01581
(508) 621-9161/ Domenica.Tatasciore@crowncastle.com

Attachments

cc:

Mayor Neil O'Leary
City of Waterbury
235 Grand Street
Waterbury, CT 06702
203-574-6712

City Planner Robert Nerney
City of Waterbury
235 Grand Street
Waterbury, CT 06702
203-574-6817

Waterbury Twin LLC & 150 MH LLC
c/o Leonard Linsker
12 Iselin Terrace
Larchmont, NY 10538
718-451-0843

Crown Castle, Tower Owner

From: TrackingUpdates@fedex.com
To: [Tatasciore, Domenica](#)
Subject: FedEx Shipment 772865980433: Your package has been delivered
Date: Tuesday, August 1, 2023 9:36:20 AM

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FedEx



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9:28am.



Delivered to 235 GRAND ST, WATERBURY, CT 06702
Received by M.CHOZAK

[OBTAIN PROOF OF DELIVERY](#)

How was your delivery ?



TRACKING NUMBER [772865980433](#)

FROM Crown Castle
1800 West Park Drive
Suite 200
WESTBOROUGH, MA, US, 01581

TO City of Waterbury
Mayor Neil O'Leary
235 Grand Street
WATERBURY, CT, US, 06702

REFERENCE 799001.7680

SHIPPER REFERENCE 799001.7680

SHIP DATE Mon 7/31/2023 05:28 PM

DELIVERED TO Receptionist/Front Desk

PACKAGING TYPE FedEx Envelope

ORIGIN WESTBOROUGH, MA, US, 01581

DESTINATION WATERBURY, CT, US, 06702

NUMBER OF PIECES 1

TOTAL SHIPMENT WEIGHT 0.50 LB

SERVICE TYPE FedEx Priority Overnight

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Received by M.CHOZAK

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TRACKING NUMBER	772865996190
FROM	Crown Castle 1800 West Park Drive Suite 200 WESTBOROUGH, MA, US, 01581
TO	City of Waterbury City Planner Robert Nerney 235 Grand Street WATERBURY, CT, US, 06702
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Mon 7/31/2023 05:28 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	WATERBURY, CT, US, 06702
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Priority Overnight

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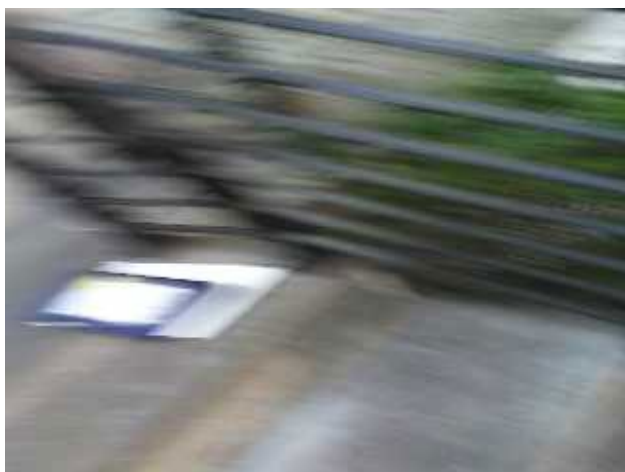


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11:19am.



Delivered to 12 ISELIN TER, LARCHMONT, NY 10538

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TRACKING NUMBER	772866019480
FROM	Crown Castle 1800 West Park Drive Suite 200 WESTBOROUGH, MA, US, 01581
TO	Waterbury Twin LLC & 150 MH LLC c/o Leonard Linsker 12 Iselin Terrace LARCHMONT, NY, US, 10538
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Mon 7/31/2023 05:28 PM
DELIVERED TO	Residence
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581

DESTINATION	LARCHMONT, NY, US, 10538
SPECIAL HANDLING	Residential Delivery
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Priority Overnight



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Myl, Kimberly

From: Myl, Kimberly
Sent: Tuesday, May 17, 2016 3:38 PM
To: 'siting.council@ct.gov'
Subject: 150 Mattatuck Heights - Existing Telecommunications Tower Original Zoning Approval

To Whom It May Concern:

Please be advised both the township (email below) and Crown Castle as the tower owner, do not have the original zoning resolution on file. Please use this email as notification to waive this requirement as we will include this and the email from the township within our submission.

Please let me know if you have any questions or need additional information. Thank you in advance.

KIMBERLY MYL
Real Estate Specialist
T: (201) 238-9069 | M: (201) 993-3697

CROWN CASTLE
1200 MacArthur Blvd, Suite 200
Mahwah, NJ 07430

From: Margaret Rice [<mailto:mrice@waterburyct.org>]
Sent: Tuesday, May 17, 2016 1:03 PM
To: Myl, Kimberly
Subject: RE: 150 Mattatuck Heights - Existing Telecommunications Tower Original Zoning Approval

Hi Kimberly,

I checked our records and City Clerk's office and could not find anything. I then contacted the Town Clerk and I was told that there might be something on the Land Records and that you would need to contact the Town Clerk for them to do a Title Search. They're phone number is (203) 574-6806.

Cissie
Administrative Support Specialist III
203)574-6817 Ext.7296

VOL 2149 PAGE 142

Site Plan Decision for recording in the office of the Town Clerk, Land Records, in accordance with Chapter 126, Municipal Planning Commission, Section 8-26e, of the General Statutes of the State of Connecticut:-

15485

OWNER & DEVELOPER

Owner - Waterbury Renewal and Economic Development Agency
29 Leavenworth Street
Waterbury, CT 06702

Developer - R R & P Realty
Mattatuck Heights
Waterbury, CT 06705

NAME OF SITE PLAN

Site Plan of Parcel #14, Captain Neville Drive Industrial Park Prepared for R.R. & P Realty, Mattatuck Heights, Waterbury, Connecticut, Owner, Applicant: W.R.E.D.A., 29 Leavenworth St., Waterbury, Connecticut, Developer: R.R. & P. Realty, P.O. Box 214, Middlebury, CT, Dated: August 29, 1986, Revised to Sept. 16, 1986, DeCarlo & Doll, Inc., Hamden, CT, Meyers Associates, Waterbury, CT and Joseph Calabrese, Waterbury, CT.

LOCATION: Parcel #14, Captain Neville Drive Industrial Park

At a regular meeting of the City Plan Commission held November 10, 1986, the following vote was unanimously passed to wit:-

VOTED: That the City Plan Commission approves the Site Plan of Parcel #14, Captain Neville Drive Industrial Park, prepared for R.R. & P. Realty, Mattatuck Heights, Waterbury, Connecticut, Owner, Applicant: W.R.E.D.A., 29 Leavenworth St., Waterbury, Connecticut, Developer: R.R. & P. Realty, P.O. Box 214, Middlebury, CT, Dated: August 29, 1986, Revised to September 16, 1986, DeCarlo & Doll, Inc., Hamden, CT, Meyers Associates, Waterbury, CT and Joseph Calabrese, Waterbury, CT, as being in conformance with Article V, Section 5.14-7, Public Housing, Urban Renewal & Redevelopment Projects, of the Zoning Ordinance of the City of Waterbury, Connecticut. This approval is given because the character and appearance of the proposed use and buildings will be in the general harmony with the character and appearance surrounding neighborhood and will not adversely affect the general welfare of the neighborhood. This site plan meets all the requirements of the Bureau of Engineering as attested by the City Engineer, William D. Spallone. This site plan has been approved by the Fire Marshal's Office, Daniel Aybar, Inspector, and Acting Traffic Engineer, Danial Cashman.

DATES OF REQUIRED APPROVALS

Approved by the Zoning Administrator	September 23, 1986
Approved by the Fire Marshal	September 23, 1986
Approved by the Acting Traffic Engineer	September 24, 1986
Approved by the City Engineer	April 22, 1987
Approved by the City Plan Commission	May 13, 1987

ATTEST: *John J. Buckley*
JOHN J. BUCKLEY
CITY CLERK

RECEIVED FOR RECORD
1987 SEP -3 AM 10:37

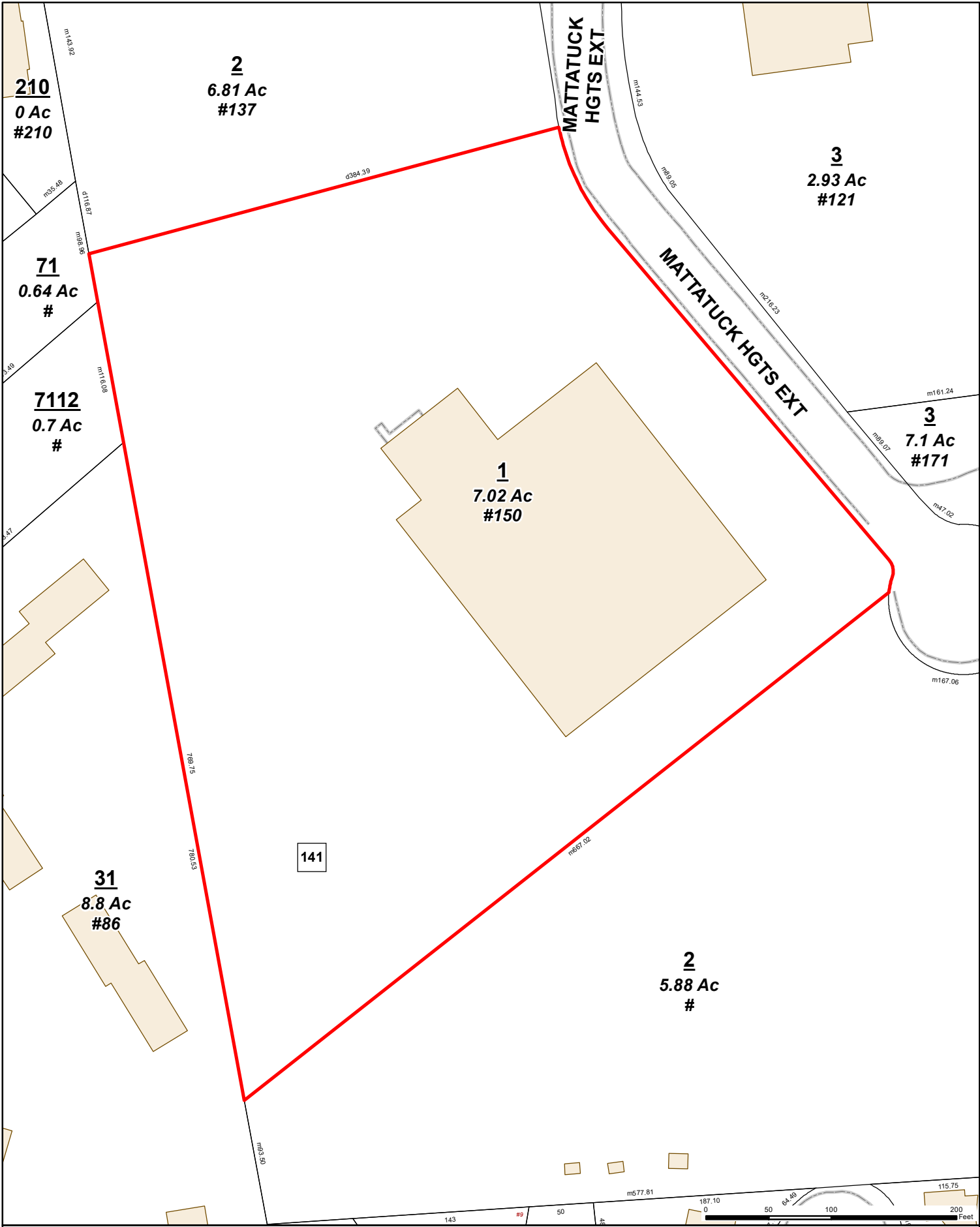
TOWN CLERK
WATERBURY, CT.

36274

Location: 150 MATTATUCK HEIGHTS **Owner:** WATERBURY TWIN LLC & 150 MH LLC

Property Information:			
Map Block Lot:	0424-0141-0001	Acres:	7.02
Primary Use:	Industrial - Flex	Zone:	IP
Neighborhood:	85000-Industrial Park	Vol/Page:	4647
Mailing Address:	WATERBURY TWIN LLC & 150 MH LLC 12 ISELIN TERRACE LARCHMONT NY 10538		
Property Values:			
	Appraised Value	Assessed Value (70%)	
Building	2502900	1752030	
Land	287000	200900	
OutBuilding	84900	59430	
Total	2874800	2012360	
Sales Information:			
Sale Date	Sale Price	Sale Type	Valid sale
2003-05-15 00:00:00.000	2315000	Warranty Sale	Yes
Building Information:			
Bldg Style:		Living Area:	48248sq.ft
Construction:	Average	Year Built:	1988
Exterior Wall:	Brick Solid	Stories:	1
Roof Cover:		Heating:	Space Heater
Condition:	Average	Heat Fuel:	
Rooms:	0	Bedrooms:	0
Full Baths:	0	Half Baths:	0
Outbuilding Information:			
Type	Area (sq.ft)	Year Built	Condition
Tanks Tanks	1sq.ft	1996	Average
Concrete Paving	390sq.ft	1996	Average
Concrete Paving	40sq.ft	1988	Average
Asphalt Paving	46096sq.ft	1988	Average
Concrete Paving	40sq.ft	1988	Average
Special Features:			
Feature:	Sprinklers		

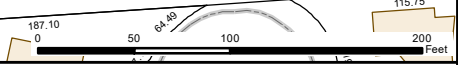
[Close](#)



City of Waterbury
Public Works Department

MBL: **0424-0141-0001**
ADDRESS: **150 MATTATUCK HEIGHTS**

This map is for informational purposes only and has not been prepared for, or suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to verify the usability of the information. The City of Waterbury makes no warranties, express or implied, as to the use of the information obtained herein.



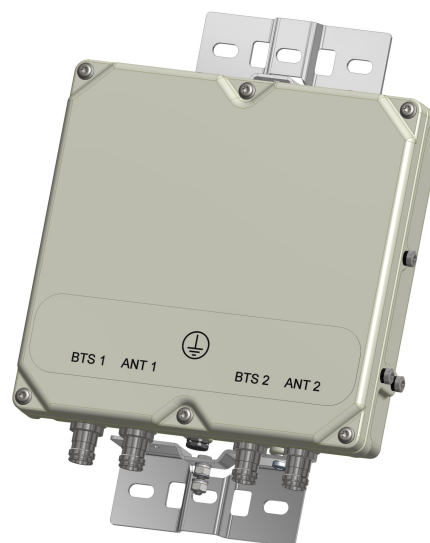
BSF0020F3V1-1

TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

The BSF0020 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the BSF0020 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the BSF0020 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.

FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available



TECHNICAL SPECIFICATIONS

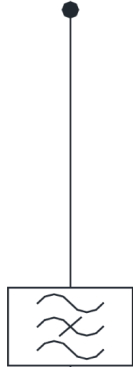
BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	
ELECTRICAL		
Impedance	50Ohms	
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm	
DC / AISG		
Passband	0 - 13MHz	
Insertion loss	0.3dB maximum	
Return loss	15dB minimum	
Input voltage range	± 33V	
DC current rating	2A continuous, 4A peak	
Compliance	3GPP TS 25.461	
ENVIRONMENTAL		
For further details of environmental compliance, please contact Kaelus.		
Temperature range	-20°C to +60°C -4°F to +140°F	
Ingress protection	IP67	
Altitude	2600m 8530ft	
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.	
MTBF	>1,000,000 hours	
Compliance	ETSI EN 300 019 class 4.1H, RoHS, NEBS GR-487-CORE	
MECHANICAL		
Dimensions H x D x W	269 x 277 x 80mm 10.60 x 10.90 x 3.15in (Excluding brackets and connectors)	
Weight	8.0 kg 17.6 lbs (no bracket)	
Finish	Powder coated, light grey (RAL7035)	
Connectors	RF: 4.3-10 (F) x 4	
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.	

ORDERING INFORMATION

PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
BSF0020F3V1	TWIN, 2 in / 2 out	DC/AISG PASS NO BRACKET	4.3-10 (F)
BSF0020F3V1-1	TWIN, 2 in / 2 out	DC/AISG PASS	4.3-10 (F)
BSF0020F3V1-2	QUAD, 4 in / 4 out	DC/AISG PASS	4.3-10 (F)

ELECTRICAL BLOCK DIAGRAM

ANT1



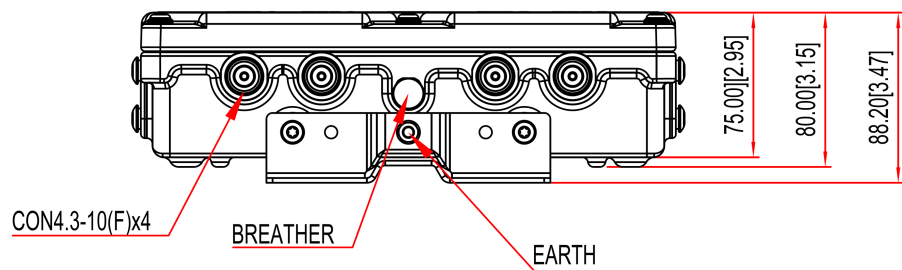
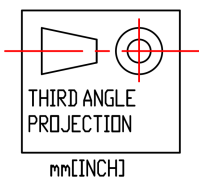
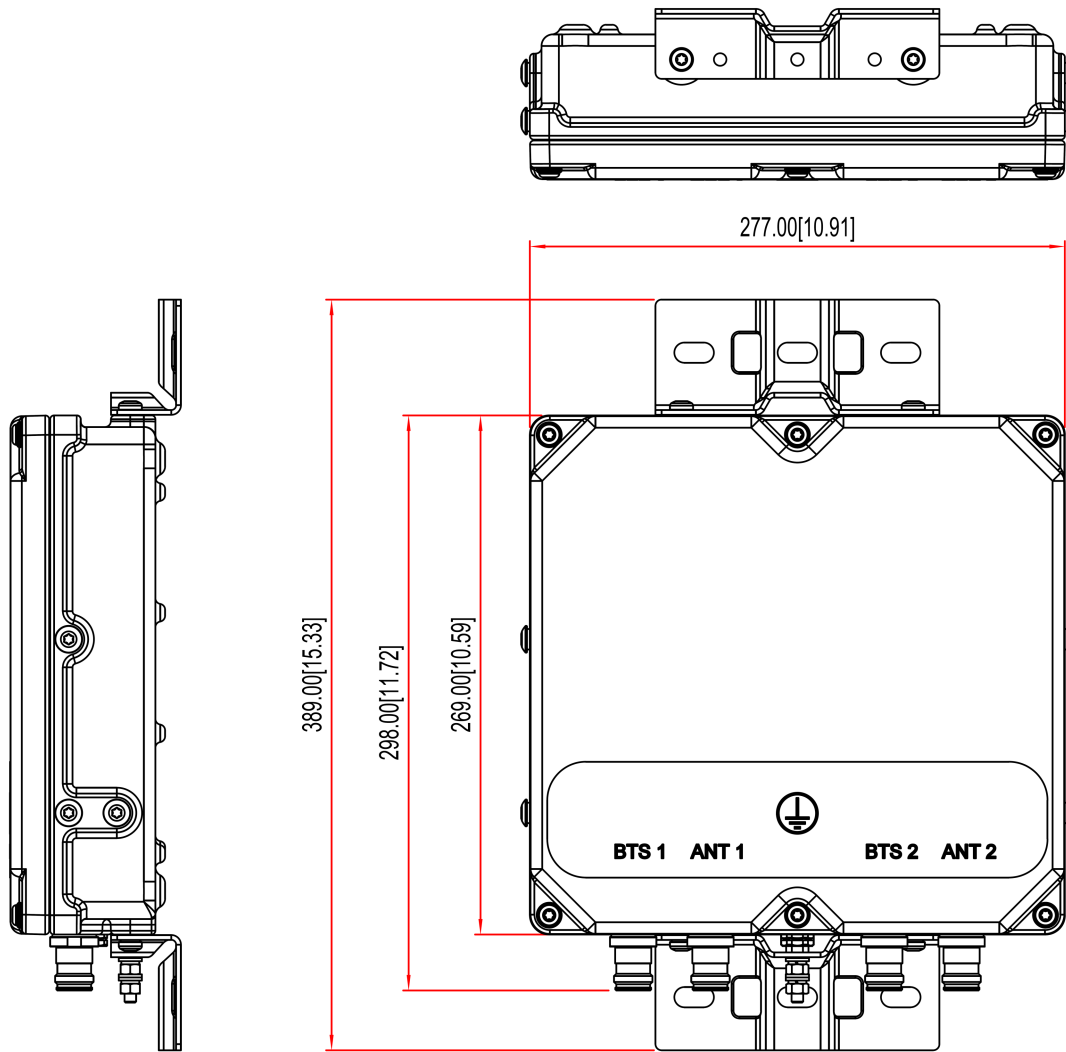
BTS1

ANT2



BTS2

MECHANICAL BLOCK DIAGRAM



Colliers Engineering & Design CT, P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10206432
Colliers Engineering & Design Project #: 23777079 (Rev. 1)

July 10, 2023

Site Information

Site ID: 5000382560-VZW / WATERBURY S CT
Site Name: WATERBURY S CT
Carrier Name: Verizon Wireless
Address: 150 Mattatuck Heights
Waterbury, Connecticut 06705
New Haven County
Latitude: 41.53786111°
Longitude: -72.98502778°

Structure Information

Tower Type: 130-Ft Monopole
Mount Type: 12.83-Ft Platform

FUZE ID # 17041978

Analysis Results

Platform: 59.3% Pass*

***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

***Contractor PMI Requirements:

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

*For additional questions and support, please reach out to:
pmisupport@colliersengineering.com*

Report Prepared By: Frank Centone



Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
<i>Radio Frequency Data Sheet</i>	<i>Verizon RFDS Site ID: 325071 dated December 7, 2021</i>
<i>Mount Mapping Report</i>	<i>Hudson Design Group LLC, Site ID: 467706 dated March 24, 2021</i>
<i>Post Modification Inspection Report</i>	<i>NB+C, Project #: 100820, Dated July 27, 2022</i>
<i>Final Loading Guidance</i>	<i>Filter Add Scope Provided by Verizon Wireless</i>

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 120 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.50 in Risk Category: II Exposure Category: B Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.977
Seismic Parameters:	S_s : 0.193 g S_1 : 0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Load, L_v : 250 lbs. Maintenance Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V17)

Final Loading Configuration:

The following equipment has been considered for the analysis of the mount:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
112.00	115.00	4	KAelus	BSF0020F3V1-1	Added
		3	Samsung	MT6407-77A	Retained
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		6	Andrew	SBNHH-1D65B	
		3	Antel	BXA-80063/4	
		1	Raycap	RHSDC-6627-PF-48	

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

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
 - Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - HSS (Rectangular) ASTM 500 (Gr. B-46)
 - Pipe ASTM A53 (Gr. B-35)
 - Threaded Rod F1554 (Gr. 36)
 - Bolts ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design.

Analysis Results:

Component	Utilization %	Pass/Fail
HSS Tube	27.7%	Pass
Face Horizontal Angle	27.0%	Pass
Support Rail	17.6%	Pass
Mount Pipe	32.4%	Pass
Angle Connection	59.3%	Pass
Platform Angle	56.6%	Pass
Horizontal connection	48.5%	Pass
Kicker	12.9%	Pass
Support Rail Angle	29.7%	Pass
Mount Connection	12.4%	Pass

Structure Rating – (Controlling Utilization of all Components)	59.3%
---	--------------

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	41.6	41.6	57.3	57.3
0.5	49.6	49.6	72.1	72.1
1	56.8	56.8	86.0	86.0

Notes:

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mount is **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

If required, ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other. Separate review fees will apply.

Attachments:

1. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Photos
4. Mount Mapping Report (for reference only)
5. Analysis Calculations

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

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

Passing Mount Analysis requires a PMI due to a modification in loading.

Electronic pdf version of this can be downloaded at <https://pmi.vzsmart.com>.

For additional questions and support, please reach out to pmisupport@colliersengineering.com

MDG #: 5000382560

SMART Project #: 10206432

Fuze Project ID: 17041978

Purpose – to provide SMART Tool structural vendor the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- If installation will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide “as built mount drawings” showing contractor’s name, contact information, preparer’s signature, and date. Any deviations from the drawings (Proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo should be time and date stamped
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: <https://pmi.vzsmart.com>

Photo Requirements:

- Photos taken at ground level
 - Photo of Gate Signs showing the tower owner, site name, and number.
 - Overall tower structure after installation.
 - Photos of the mount after installation; if the mounts are at different rad elevations, pictures must be provided for all elevations that equipment was installed.
- Photos taken at Mount Elevation
 - Photos showing the safety climb wire rope above and below the mount prior to installation.
 - Photos showing the climbing facility and safety climb if present.

- Photos showing each individual sector after installation. Each entire sector shall be in one photo to show the interconnection of members.
 - These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.

Antenna & equipment placement and Geometry Confirmation:

- The contractor shall certify that the antenna & equipment placement and geometry is in accordance with the sketch and table as included in the mount analysis and noted below.
 - The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

- The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

Special Instructions / Validation as required from the MA or any other information the contractor deems necessary to share that was identified:

Issue:

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is rubbing against the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

Response:

Special Instruction Confirmation:

- The contractor has read and acknowledges the above special instructions.
- All hardware listed in the Special Instructions above (if applicable) has been properly installed, and the existing hardware was inspected.
- The material utilized was as specified in the SMART Tool engineering vendor Special Instructions above (if applicable) and included in the material certification folder is a packing list or invoice for these materials.

OR

The material utilized was approved by a SMART Tool engineering vendor as an “equivalent” and this approval is included as part of the contractor submission.

Comments:

--

Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:

Yes No

Contractor certifies no new damage created during the current installation:

Yes No

Contractor to certify the condition of the safety climb and verify no damage when leaving the site:

Safety Climb in Good Condition Safety Climb Damaged

Certifying Individual:

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

v A
0 v
0 v cceFSS

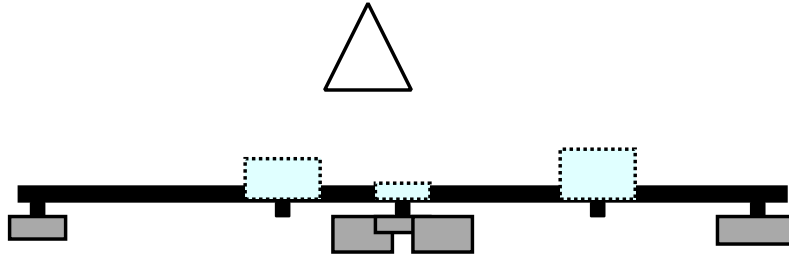
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olcSleSeg

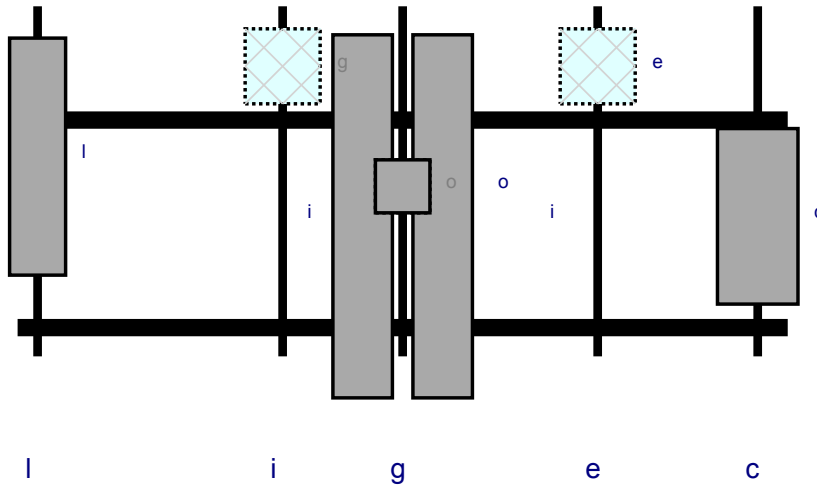


v

Plan View



Front View - 0 0



3	: A	: A	0 F 3	0	0 F 0	
c ni SoEo	gl E	cnE	ci p	c	i e S	SolculeSee
e el nn 0 E Si u0 Sc E c A	cl	cl	ccn	e	ce S	SolculeSee
i E nl	oefn	ccFu	oo	g	i e p	SolculeSee
i E nl	oefn	ccFu	oo	g	i e p	SolculeSee
o SSeS g cE	cSfn	cSfu	oo	g	gn S	
o SSeS g cE	cSfn	cSfu	oo	g	gn S	
g ll cg0 E Si 0 Sc E e A	cl	cl	lg	i	ce S	SolculeSee
l pSSngli	i of	ccE	i	l	gSfn S	SolculeSee
oS EneoE E p	euff	cnf				SolculeSee

v B
0 v
0 v cceFSS

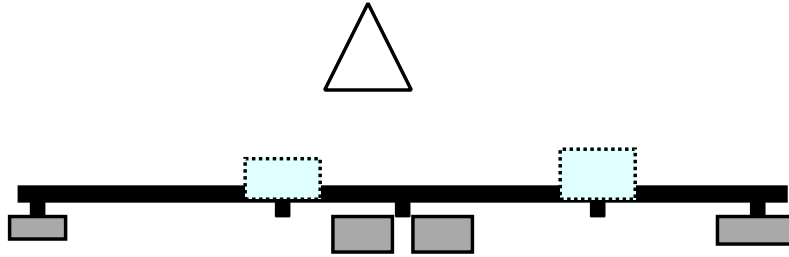
cSeSni ge

olcSleSeg

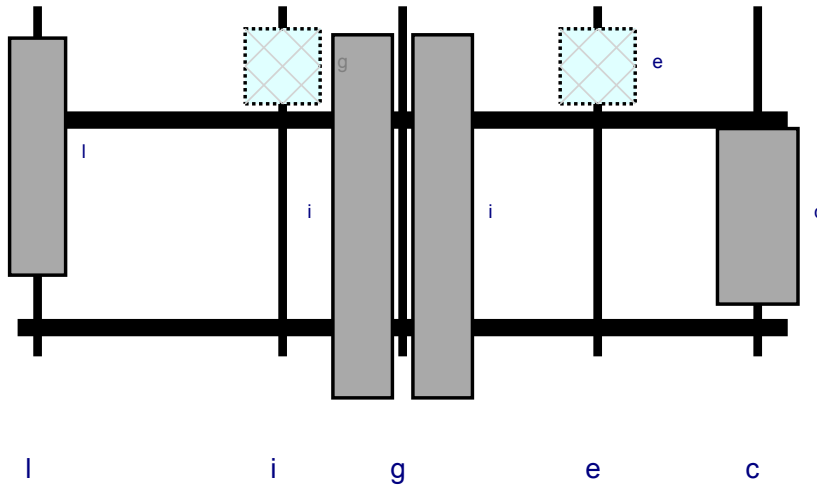


væ

Plan View



Front View - 0 0



3	: A	: A	0 F 3	0	0 F 0	
c ni SoBo	gl fe	cnfe	ci p	c	i e S	SolculeSee
e el nn 0 E Si u0 Sc E c A	cl	cl	ccn	e	ce S	SolculeSee
i fe nl	oefn	ccfu	oo	g	i e p	SolculeSee
i fe nl	oefn	ccfu	oo	g	i e p	SolculeSee
g ll cg0 E Si 0 Sc E e A	cl	cl	lg	i	ce S	SolculeSee
l pSSngli	i of	ccfe	i	l	gSfSn S	SolculeSee

v C
0 v
0 v cceFSS

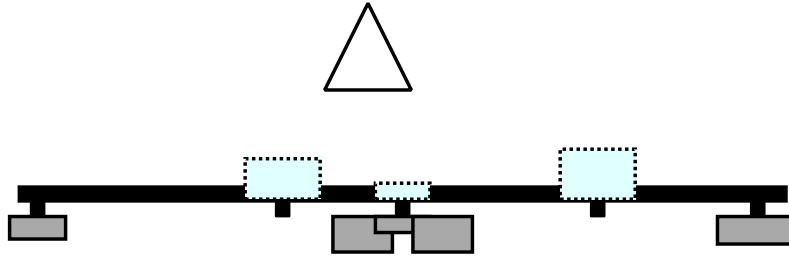
cSeSni ge

olcSleSeg

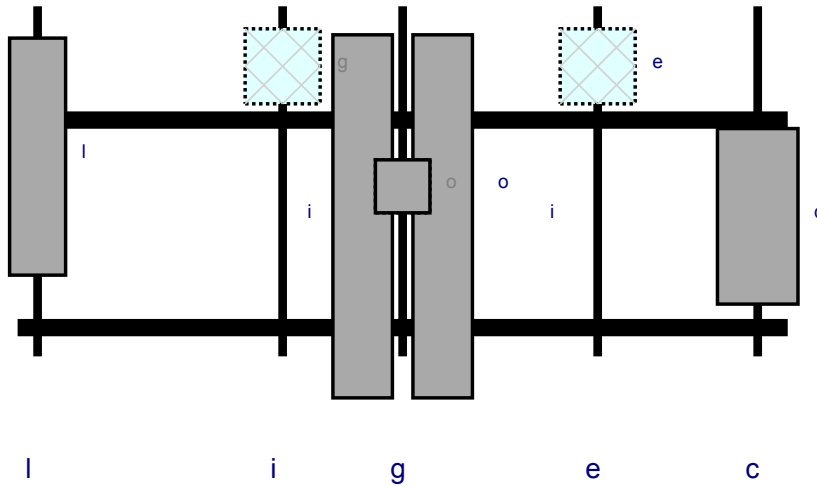


vq

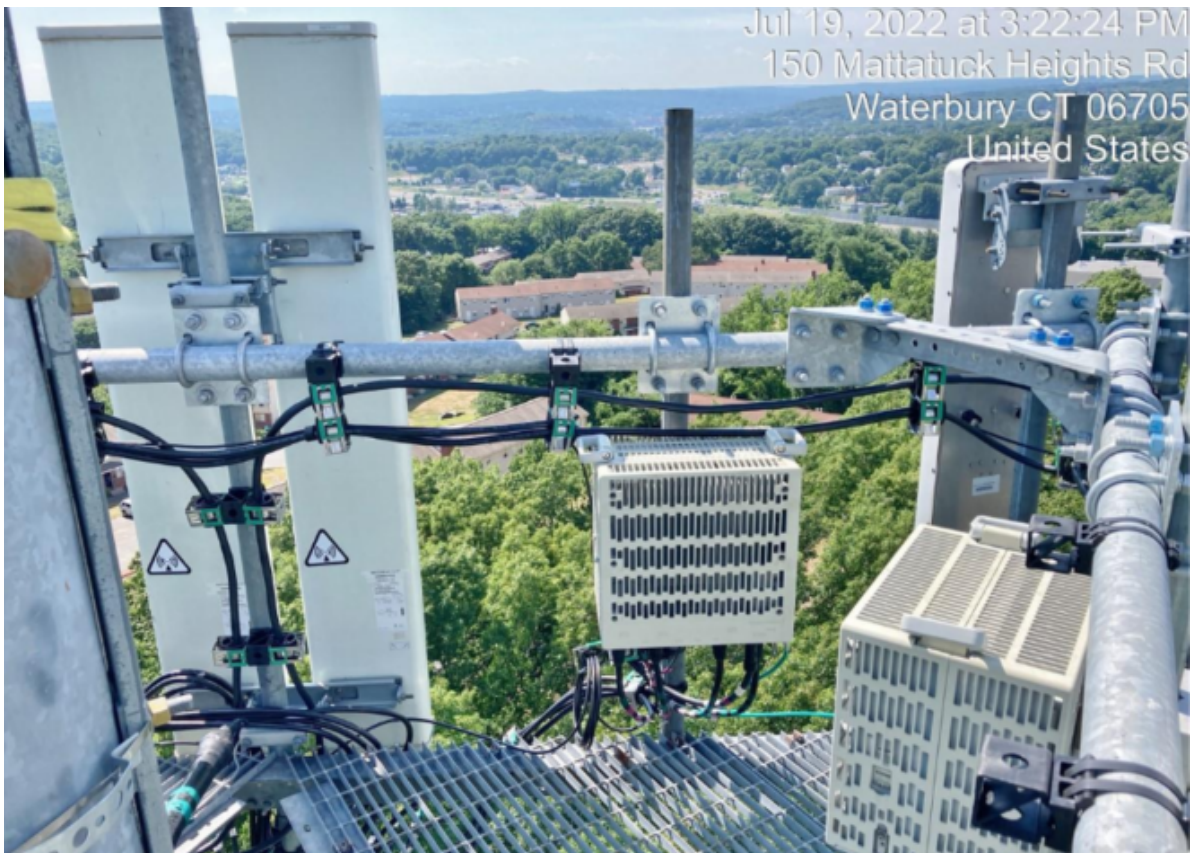
Plan View



Front View - 0 0

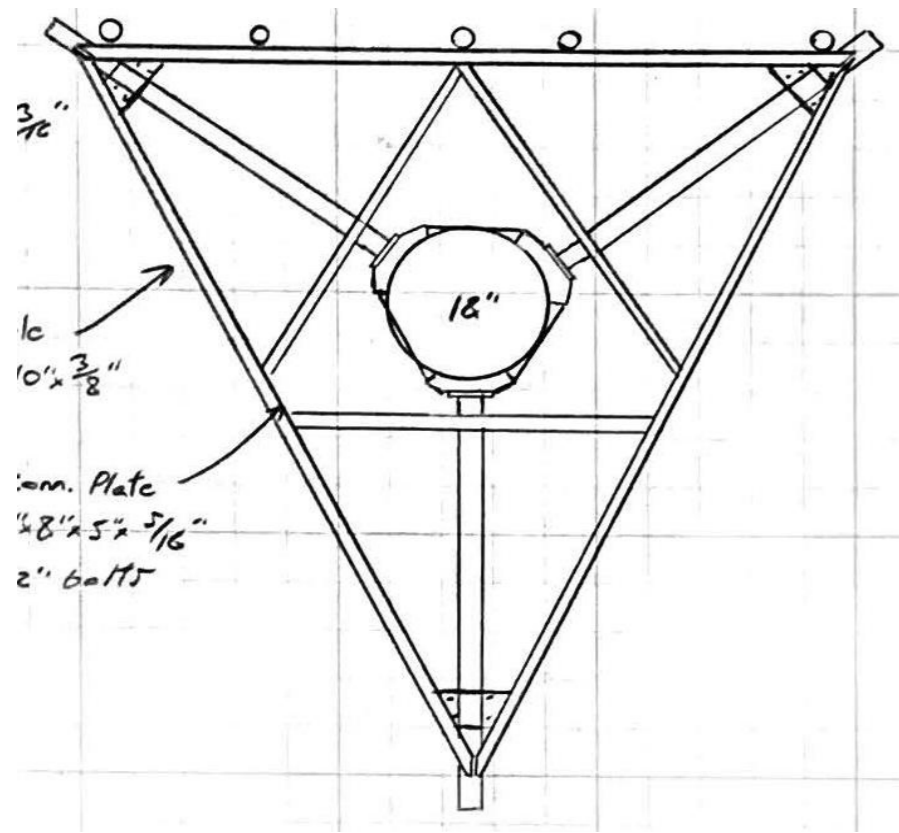


3	: A	: A	0 F 3	0	0 F 0	
c ni SoEo	gl E	cnE	ci p	c	i e S	SolculeSee
e el nn 0 E Si u0 Sc E c A	cl	cl	ccn	e	ce S	SolculeSee
i E nl	oefn	ccFu	oo	g	i e p	SolculeSee
i E nl	oefn	ccFu	oo	g	i e p	SolculeSee
o SSeS g cE	cSfn	cSfu	oo	g	gn S	
o SSeS g cE	cSfn	cSfu	oo	g	gn S	
g ll cg0 E Si 0 Sc E e A	cl	cl	lg	i	ce S	SolculeSee
l pSSngli	i of	ccE	i	l	gSfn S	SolculeSee

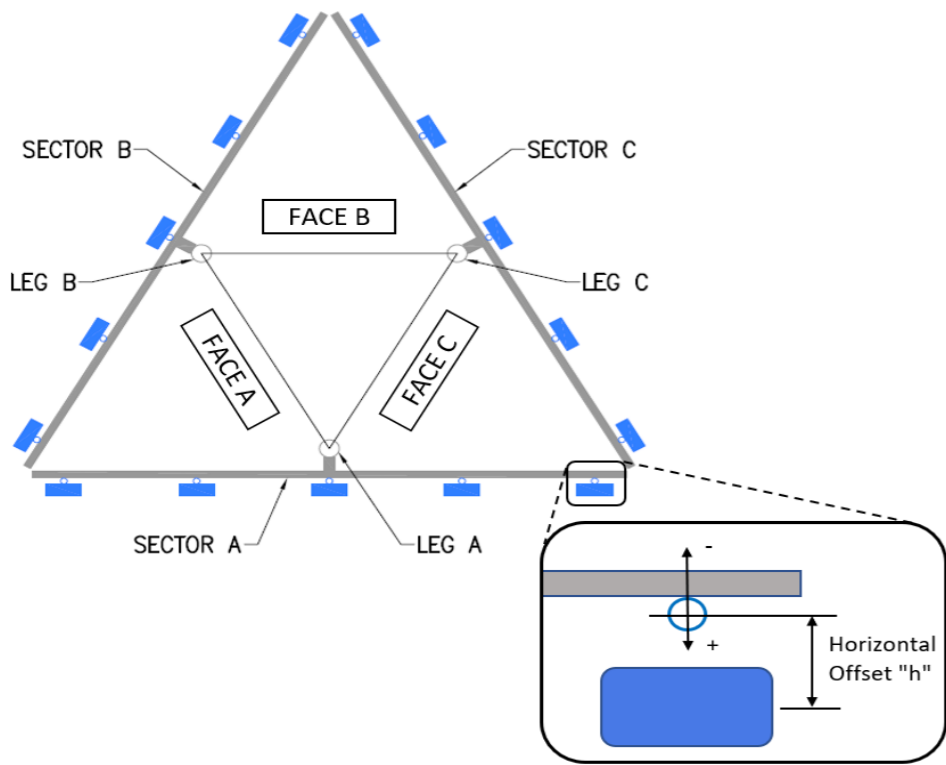


	Antenna Mount Mapping Form (PATENT PENDING)		FCC #	
	Tower Owner:	CROWN CASTLE	Mapping Date:	3/24/2021
	Site Name:	WATERBURY S CT	Tower Type:	Monopole
	Site Number or ID:	467706	Tower Height (Ft.):	
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (Ft.):	111.75	

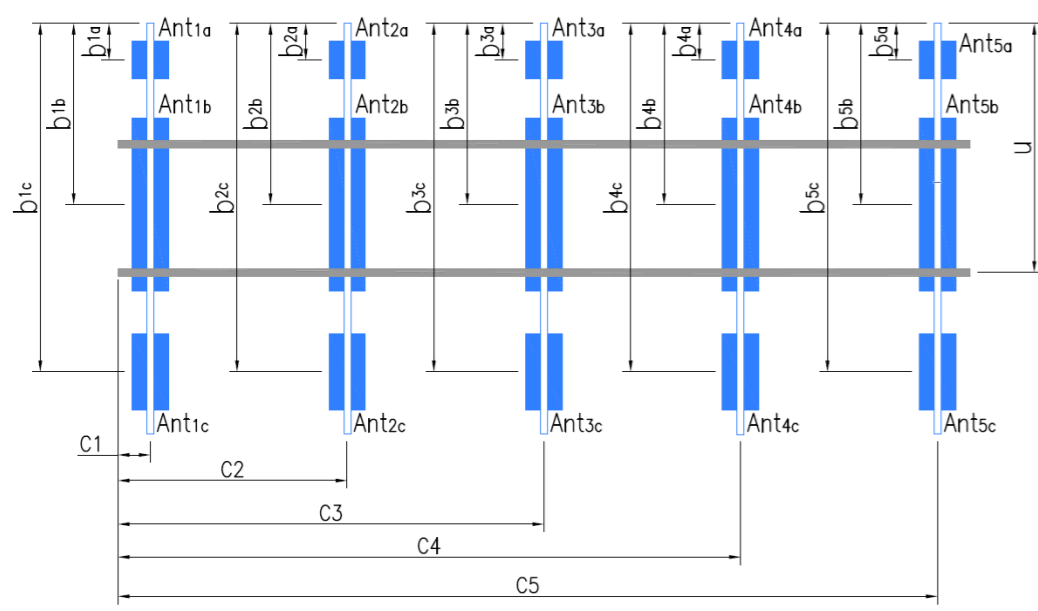
This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is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



Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2" STD. PIPE X 96" LONG	80.00	6.00	C1	2" STD. PIPE X 96" LONG	80.00	6.00
A2	2" STD. PIPE X 48" LONG	42.00	38.00	C2	2" STD. PIPE X 48" LONG	42.00	38.00
A3	2" STD. PIPE X 96" LONG	75.00	77.00	C3	2" STD. PIPE X 96" LONG	75.00	77.00
A4	2" STD. PIPE X 48" LONG	42.00	101.00	C4	2" STD. PIPE X 48" LONG	42.00	101.00
A5	2" STD. PIPE X 66" LONG	60.00	150.00	C5	2" STD. PIPE X 66" LONG	60.00	150.00
A6				C6			
B1	2" STD. PIPE X 96" LONG	80.00	6.00	D1			
B2	2" STD. PIPE X 66" LONG	60.00	38.00	D2			
B3	2" STD. PIPE X 96" LONG	75.00	77.00	D3			
B4	2" STD. PIPE X 48" LONG	42.00	101.00	D4			
B5	2" STD. PIPE X 66" LONG	60.00	150.00	D5			
B6				D6			
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							6.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :							3.46
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :							
Please enter additional information or comments below.							
MONOPOLE WALL THICKNESS: 0.250"							
Tower Face Width at Mount Elev. (ft.):							
Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):							18

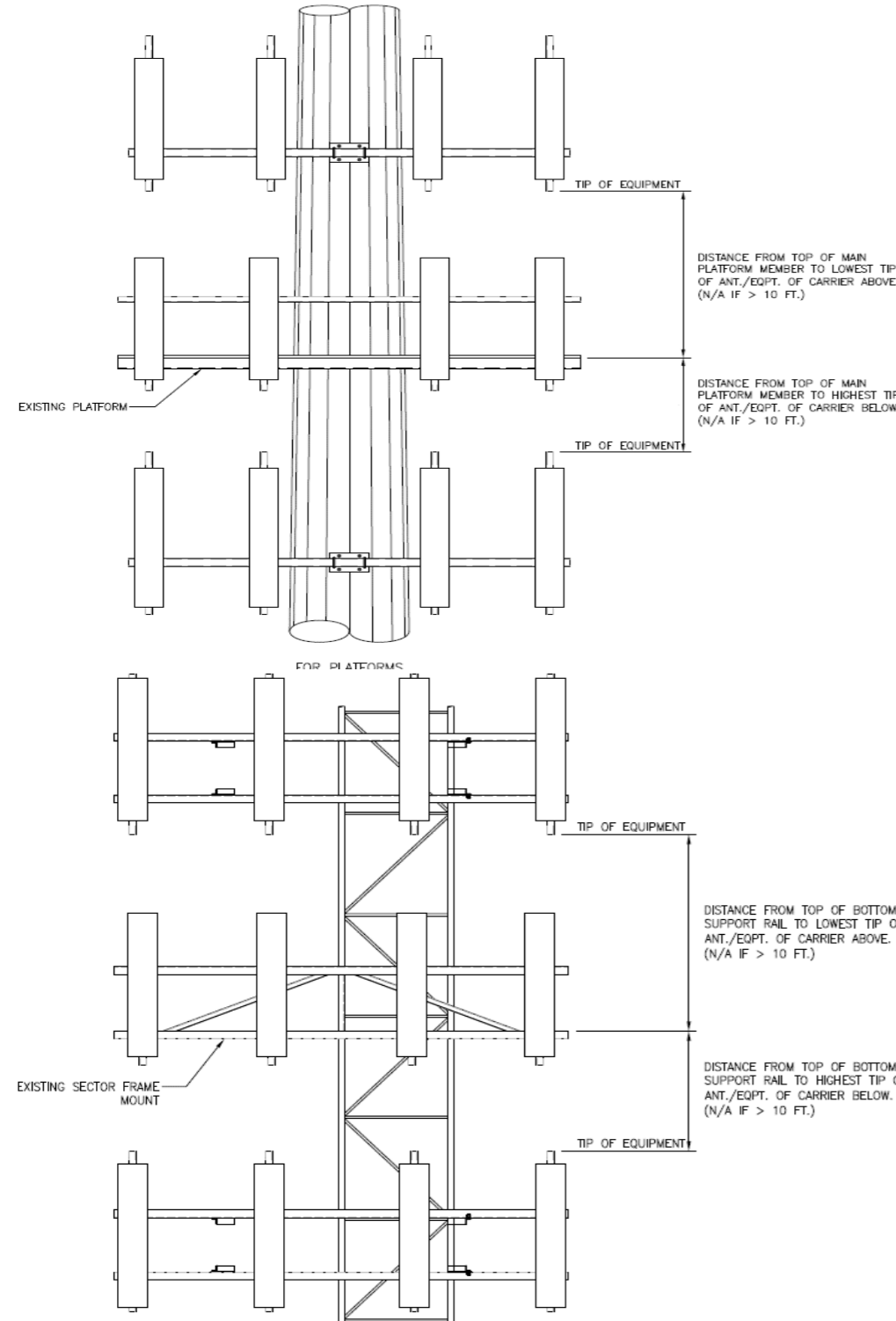


Ants. Items	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b _{1a} , b _{2a} , b _{3a} , b _{1b} ..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	
Sector A										
Ant _{1a}										
Ant _{1b}										
Ant _{1c}	FD9R6004/2C-3C	6.50	0.75	5.00		112.833	61.00	-3.00		48,70
Ant _{2a}										
Ant _{2b}	RFV01U-D1A	16.00	12.00	16.00		113.75	12.00	-9.00		51,70
Ant _{2c}										
Ant _{3a}										
Ant _{3b}	(2) SBNHH-1D65B	12.00	7.00	73.00		113.583	47.00	10.00	40.00	54,70
Ant _{3c}										
Ant _{4a}										
Ant _{4b}	RFV01U-D2A	16.00	10.00	16.00		113.75	12.00	-8.00		56,71
Ant _{4c}										
Ant _{5a}										
Ant _{5b}	BXA80063/4CF	11.00	5.00	47.50		113.75	30.00	9.00	40.00	60,71
Ant _{5c}	FD9R6004/2C-3C	6.50	0.75	5.00		113	39.00	-3.00		48,61,71
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										



Antenna Layout (Looking Out From Tower)

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector		Sector B															
Sector A:	50.00	Deg	Leg A:		Deg	Ant _{1a}															
Sector B:	170.00	Deg	Leg B:		Deg	Ant _{1b}															
Sector C:	290.00	Deg	Leg C:		Deg	Ant _{1c}	FD9R6004/2C-3C	6.50	0.75	5.00	112.833	61.00	-3.00							48,61,72	
Sector D:		Deg	Leg D:		Deg	Ant _{2a}															
Climbing Facility Information						Ant _{2b}	RFV01U-D1A	16.00	12.00	16.00	113.75	30.00	-9.00							51,72	
Location:	5.00	Deg	N/A			Ant _{2c}															
Climbing Facility	Corrosion Type:		Good condition.			Ant _{3a}															
	Access:		Climbing path was unobstructed.			Ant _{3b}	(2) SBNHH-1D65B	12.00	7.00	73.00	113.583	47.00	10.00	160.00						54,73	
	Condition:		Good condition.			Ant _{3c}															
						Ant _{4a}															
						Ant _{4b}	RFV01U-D2A	16.00	10.00	16.00	113.75	12.00	-8.00							56,73	
						Ant _{4c}															
						Ant _{5a}	GPS				116.25								73		
						Ant _{5b}	BXA80063/4CF	11.00	5.00	47.50	113.75	30.00	9.00	160.00						60,73	
						Ant _{5c}	FD9R6004/2C-3C	6.50	0.75	5.00	113	39.00	-3.00							48,73	
						Ant on Standoff	RHSDC-6627-PF-48	15.00	10.00	28.00										62,63,73,74	
						Ant on Standoff															
						Ant on Tower															
						Ant on Tower															
												Sector C									
						Ant _{1a}															
						Ant _{1b}															
						Ant _{1c}	FD9R6004/2C-3C	6.50	0.75	5.00	112.833	61.00	-3.00							48,74	
						Ant _{2a}															
						Ant _{2b}	RFV01U-D1A	16.00	12.00	16.00	113.75	12.00	-9.00							51,74	
						Ant _{2c}															
						Ant _{3a}															
						Ant _{3b}	(2) SBNHH-1D65B	12.00	7.00	73.00	113.583	47.00	10.00	290.00						54,74	
						Ant _{3c}															
						Ant _{4a}															
						Ant _{4b}	RFV01U-D2A	16.00	10.00	16.00	113.75	12.00	-8.00							56,74	
						Ant _{4c}															
						Ant _{5a}															
						Ant _{5b}	BXA80063/4CF	11.00	5.00	47.50	113.75	30.00	9.00	290.00						60,75	
						Ant _{5c}	FD9R6004/2C-3C	6.50	0.75	5.00	113	39.00	-3.00							48,75	
						Ant on Standoff															
						Ant on Standoff															
						Ant on Tower															
						Ant on Tower															
												Sector D									
						Ant _{1a}															
						Ant _{1b}															
						Ant _{1c}															
						Ant _{2a}															
						Ant _{2b}															
						Ant _{2c}															
						Ant _{3a}															
						Ant _{3b}															
						Ant _{3c}															
						Ant _{4a}															
						Ant _{4b}															
						Ant _{4c}															
						Ant _{5a}															
						Ant _{5b}															
						Ant _{5c}															
						Ant on Standoff															
						Ant on Standoff															
						Ant on Tower															
						Ant on Tower															



Observed Safety and Structural Issues During the Mount Mapping

Issue #	Description of Issue	Photo #
---------	----------------------	---------

1		
2	(12) 1-5/8"Ø COAX, (2) 1-1/4"Ø HYBRID, (1) 1/2"Ø COAX	84-88
3		
4		
5		
6		
7		
8		

Mapping Notes

1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions

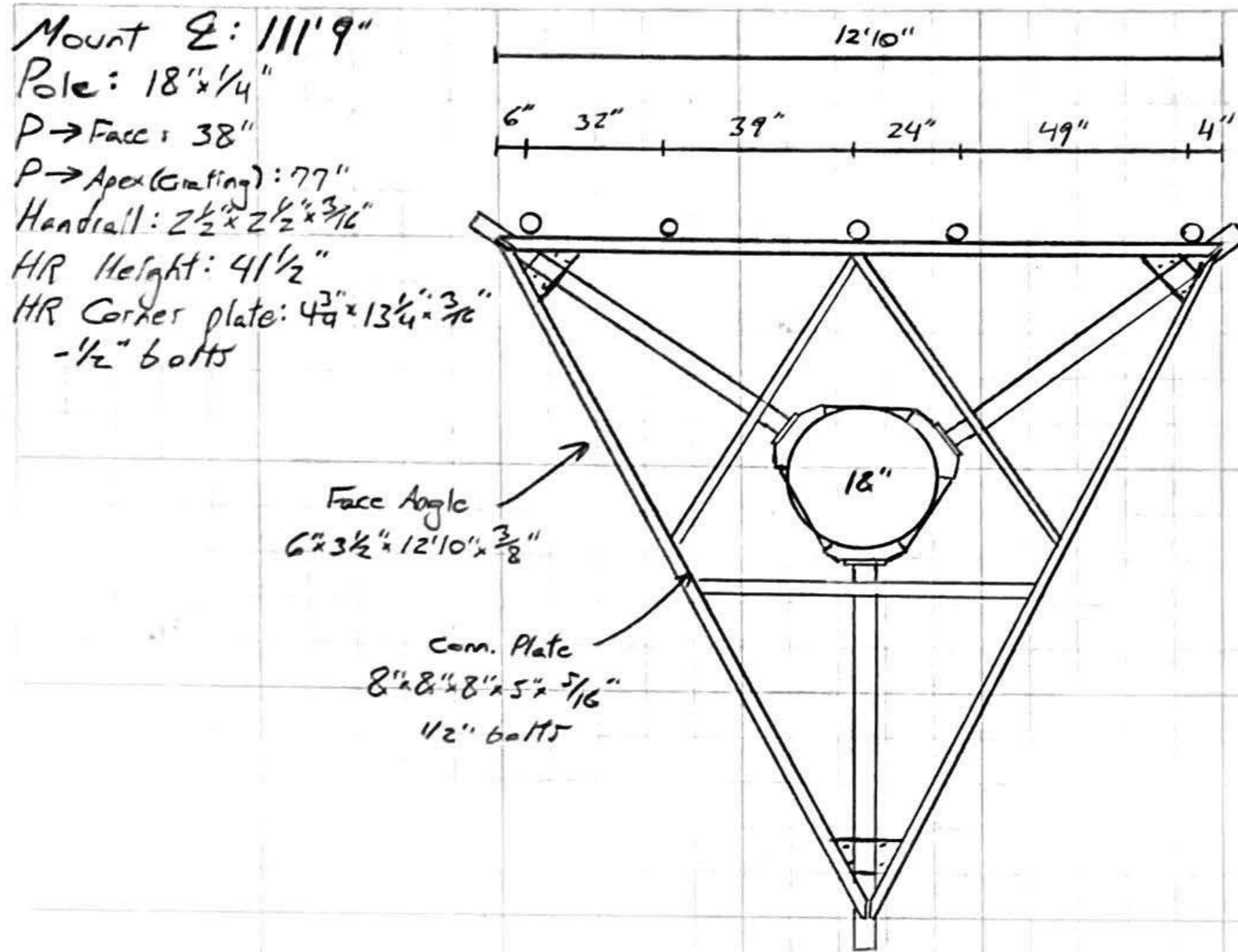
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

Antenna Mount Mapping Form (PATENT PENDING)			FCC #
Tower Owner:	CROWN CASTLE	Mapping Date:	3/24/2021
Site Name:	WATERBURY S CT	Tower Type:	Monopole
Site Number or ID:	467706	Tower Height (Ft.):	
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	Mount Elevation (Ft.):	111.75

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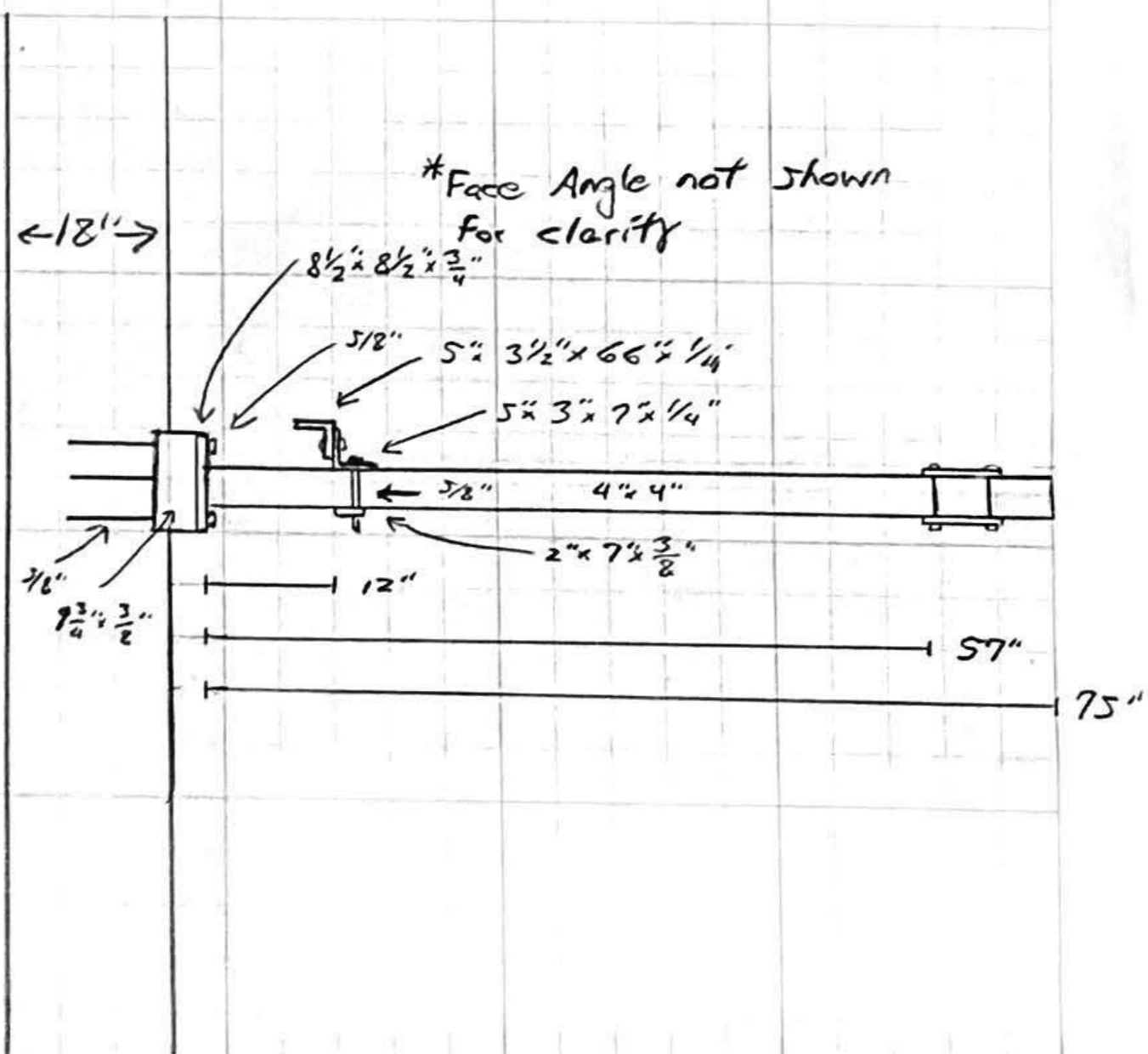
Please Insert Sketches of the Antenna Mount

DATE: 3-24-21
 Project Name: Waterbury S CT
 Project No.: _____
 Design By: Josh Chk'd By: _____ Page ____ of ____



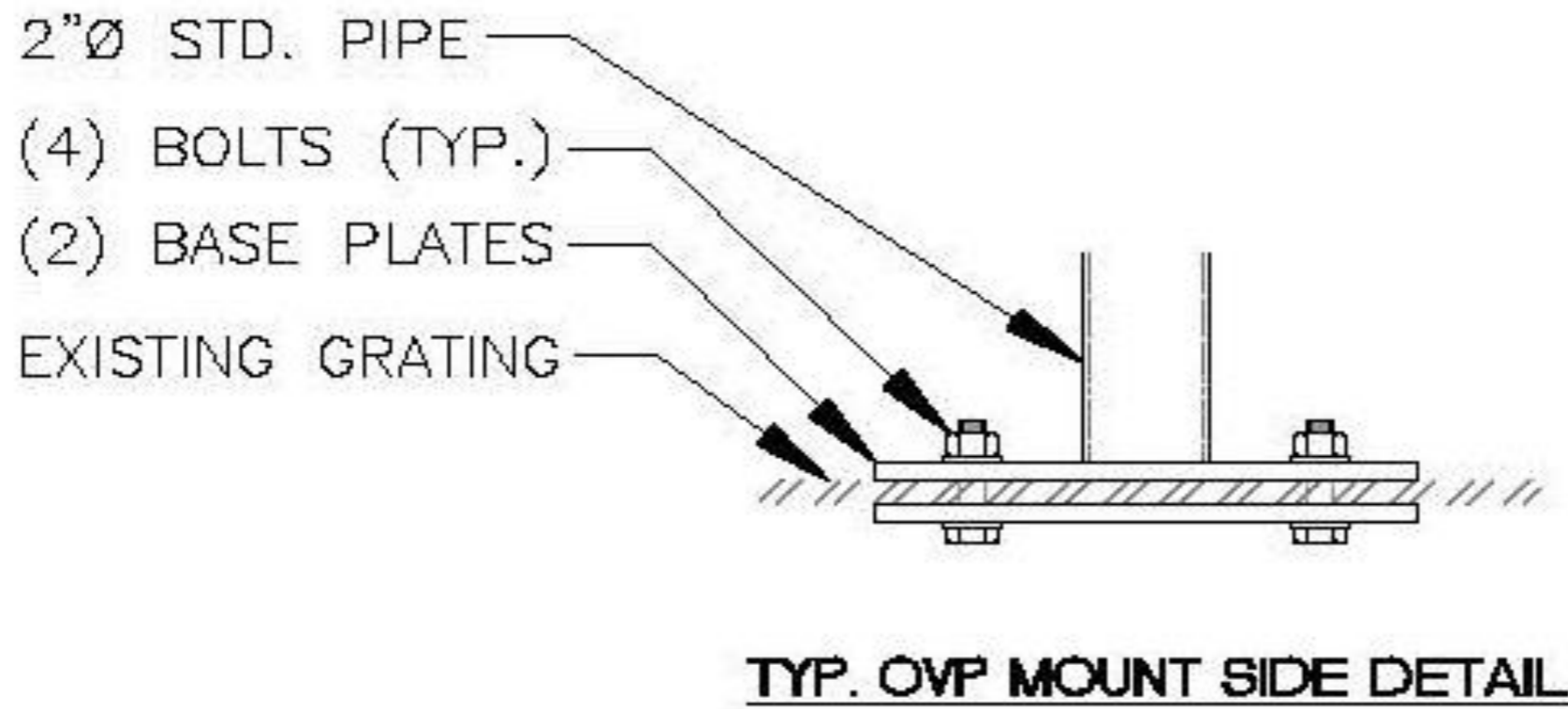
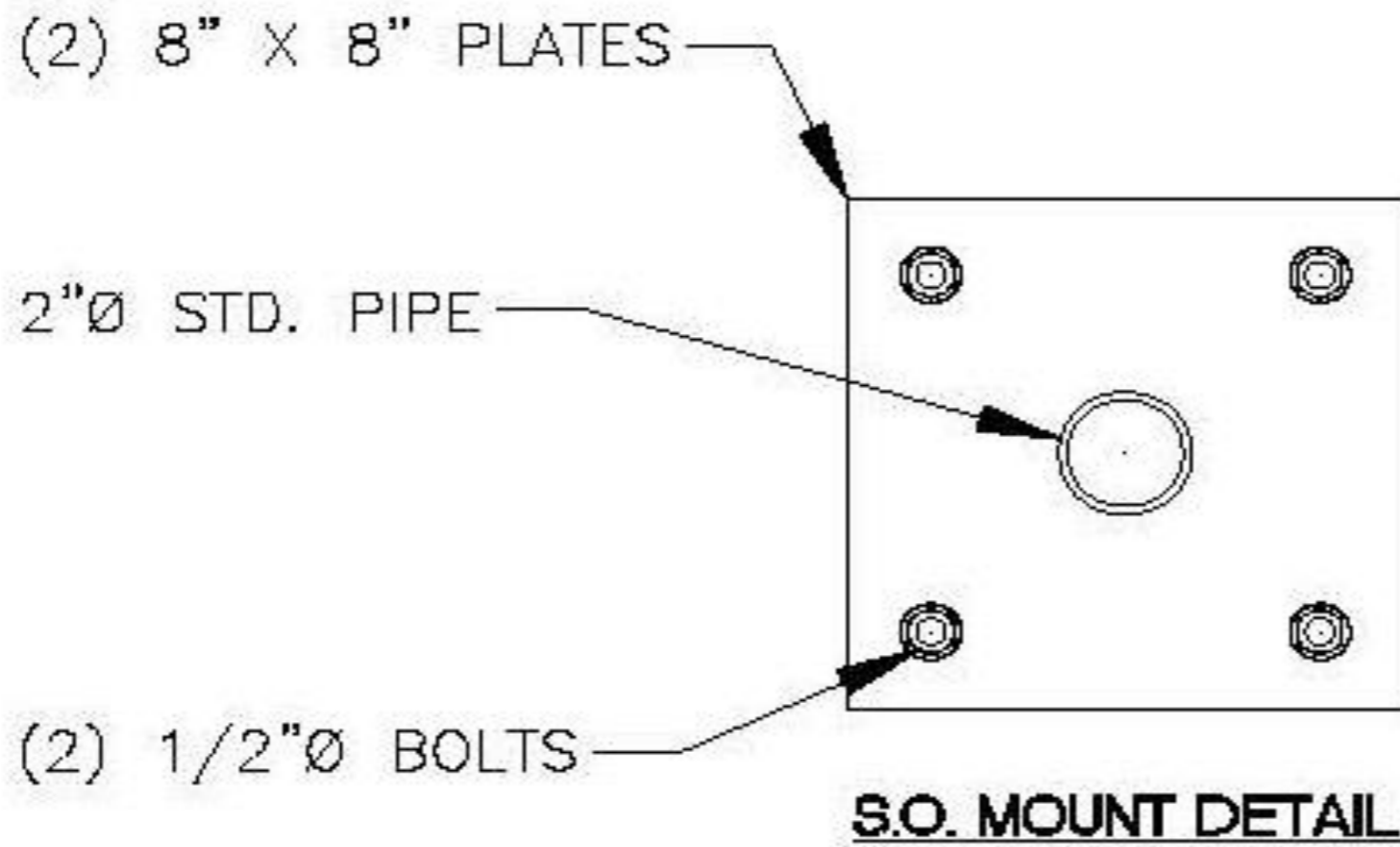
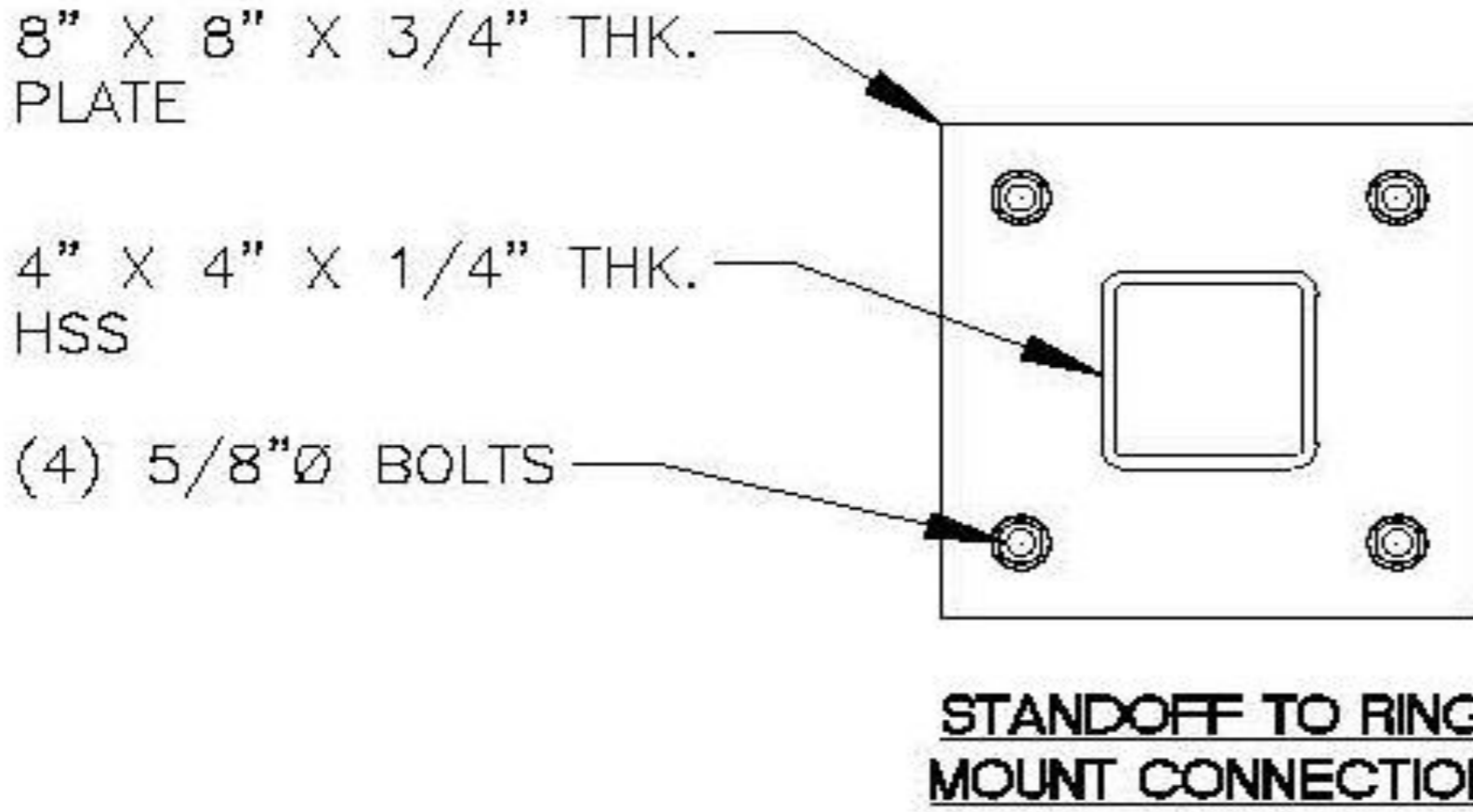
Inventory

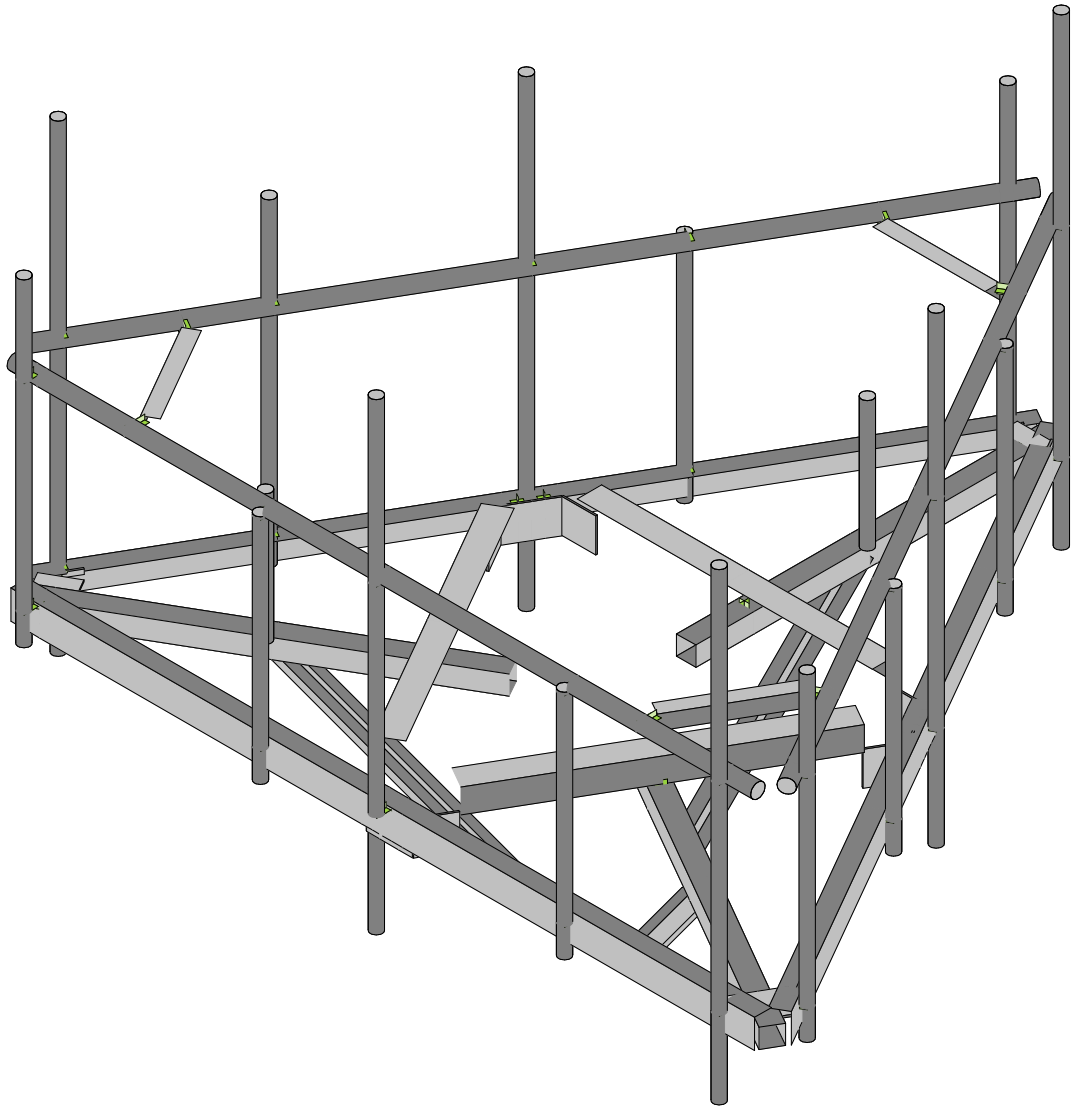
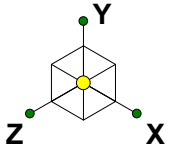
- P1 (1) RFS Diplexers
- P2 RFV01U-D1A
- P3 (2) JBNHH-1065B
- P4 RFV01U-D2A
- P5 BXA8006314CF
(1) RFS Diplexer

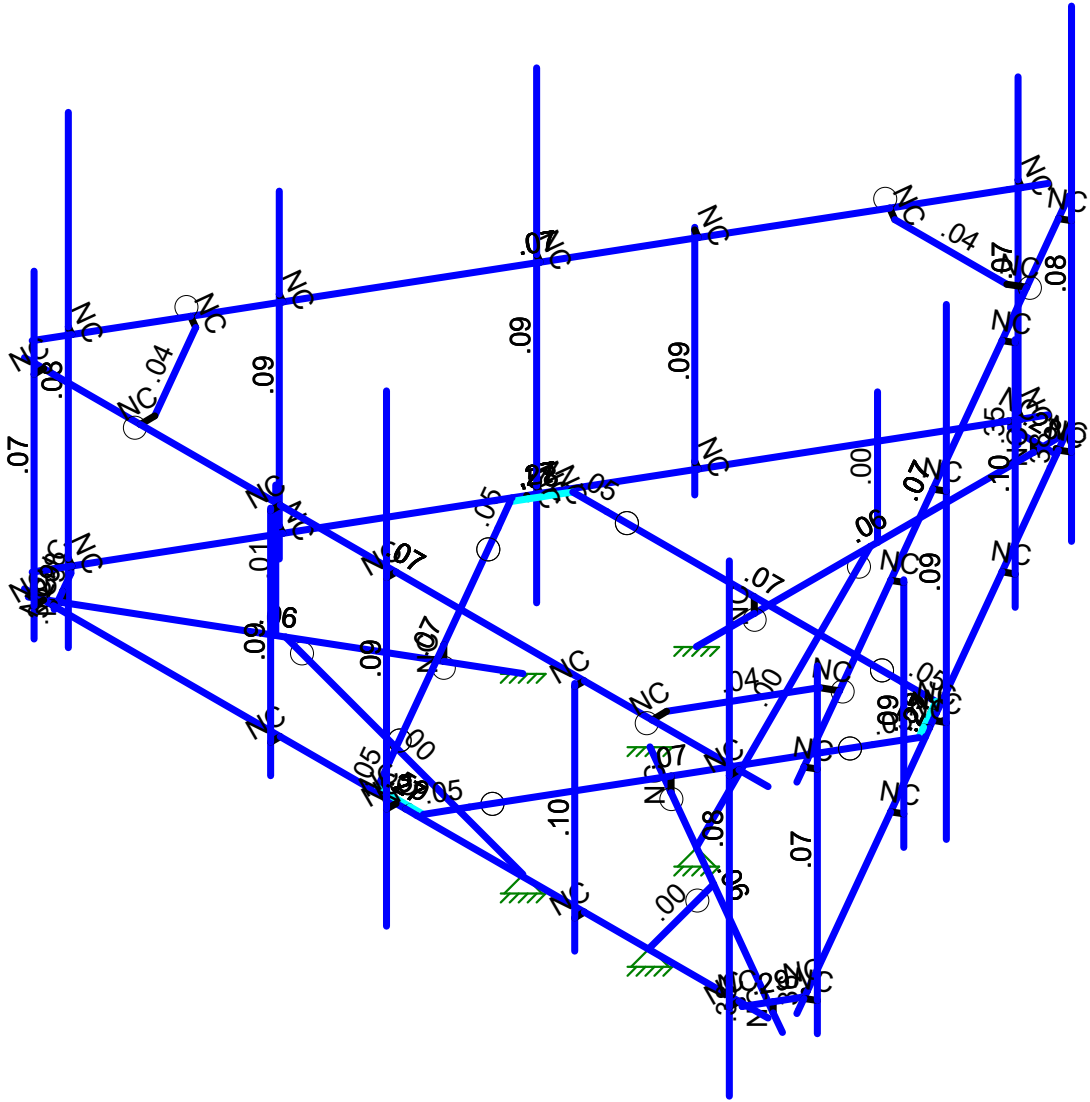
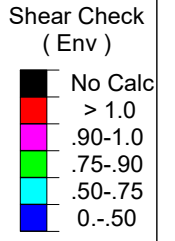
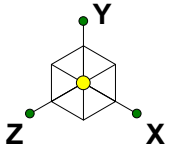


(2) OVPs mounted to grating

Please Insert Sketches of the Antenna Mount, cont'd







Member Shear Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Colliers Engineering & De...

Mount Analysis

SK - 6

July 6, 2023 at 12:16 PM

5000382560-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(Member)	Surface(Plate/Wall)
1	Antenna D	None					90			
2	Antenna Di	None					90			
3	Antenna Wo (0...	None					90			
4	Antenna Wo (3...	None					90			
5	Antenna Wo (6...	None					90			
6	Antenna Wo (9...	None					90			
7	Antenna Wo (1...	None					90			
8	Antenna Wo (1...	None					90			
9	Antenna Wo (1...	None					90			
10	Antenna Wo (2...	None					90			
11	Antenna Wo (2...	None					90			
12	Antenna Wo (2...	None					90			
13	Antenna Wo (3...	None					90			
14	Antenna Wo (3...	None					90			
15	Antenna Wi (0 ...	None					90			
16	Antenna Wi (30...	None					90			
17	Antenna Wi (60...	None					90			
18	Antenna Wi (90...	None					90			
19	Antenna Wi (12...	None					90			
20	Antenna Wi (15...	None					90			
21	Antenna Wi (18...	None					90			
22	Antenna Wi (21...	None					90			
23	Antenna Wi (24...	None					90			
24	Antenna Wi (27...	None					90			
25	Antenna Wi (30...	None					90			
26	Antenna Wi (33...	None					90			
27	Antenna Wm (...	None					90			
28	Antenna Wm (...	None					90			
29	Antenna Wm (...	None					90			
30	Antenna Wm (...	None					90			
31	Antenna Wm (...	None					90			
32	Antenna Wm (...	None					90			
33	Antenna Wm (...	None					90			
34	Antenna Wm (...	None					90			
35	Antenna Wm (...	None					90			
36	Antenna Wm (...	None					90			
37	Antenna Wm (...	None					90			
38	Antenna Wm (...	None					90			
39	Structure D	None		-1					3	
40	Structure Di	None						53	3	
41	Structure Wo (...	None						106		
42	Structure Wo (...	None						106		
43	Structure Wo (...	None						106		
44	Structure Wo (...	None						106		
45	Structure Wo (...	None						106		
46	Structure Wo (...	None						106		
47	Structure Wo (...	None						106		
48	Structure Wo (...	None						106		
49	Structure Wo (...	None						106		
50	Structure Wo (...	None						106		
51	Structure Wo (...	None						106		
52	Structure Wo (...	None						106		
53	Structure Wi (...	None						106		
54	Structure Wi (...	None						106		
55	Structure Wi (...	None						106		
56	Structure Wi (...	None						106		
57	Structure Wi (...	None						106		
58	Structure Wi (...	None						106		

Basic Load Cases (Continued)

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(Member)	Surface(Plate/Wall)
59	Structure Wi (...)	None						106		
60	Structure Wi (...)	None						106		
61	Structure Wi (...)	None						106		
62	Structure Wi (...)	None						106		
63	Structure Wi (...)	None						106		
64	Structure Wi (...)	None						106		
65	Structure Wm ...	None						106		
66	Structure Wm ...	None						106		
67	Structure Wm ...	None						106		
68	Structure Wm ...	None						106		
69	Structure Wm ...	None						106		
70	Structure Wm ...	None						106		
71	Structure Wm ...	None						106		
72	Structure Wm ...	None						106		
73	Structure Wm ...	None						106		
74	Structure Wm ...	None						106		
75	Structure Wm ...	None						106		
76	Structure Wm ...	None						106		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					90			
82	Antenna Eh (0 ...	None					60			
83	Antenna Eh (90...	None					60			
84	Structure Ev	ELY		-042					3	
85	Structure Eh (0...	ELZ			-104				3	
86	Structure Eh (9...	ELX	.104						3	
87	BLC 39 Transie...	None						83		
88	BLC 40 Transie...	None						83		
89	BLC 84 Transie...	None						83		
90	BLC 85 Transie...	None						83		
91	BLC 86 Transie...	None						83		

Load Combinations

	Description	So...	P...	S...	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1					
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1					
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1					
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1					
5	1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1					
6	1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1					
7	1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1					
8	1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1					
9	1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1					
10	1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1					
11	1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1					
12	1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1					
13	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1	
14	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1	
15	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1	
16	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1	
17	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1	
18	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1	
19	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1	
20	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1	
21	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1	

Load Combinations (Continued)

Description	So.	P...	S...	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..
22	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y	1	1.2	39	1.2	2	1	40	1	24	1	62	1
23	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y	1	1.2	39	1.2	2	1	40	1	25	1	63	1
24	1.2D + 1.0Di + 1.0Wi (...)	Yes	Y	1	1.2	39	1.2	2	1	40	1	26	1	64	1
25	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	27	1	65	1		
26	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	28	1	66	1		
27	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	29	1	67	1		
28	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	30	1	68	1		
29	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1		
30	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1		
31	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1		
32	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1		
33	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1		
34	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1		
35	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1		
36	1.2D + 1.5Lm1 + 1.0W...	Yes	Y	1	1.2	39	1.2	77	1.5	38	1	76	1		
37	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	27	1	65	1		
38	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	28	1	66	1		
39	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	29	1	67	1		
40	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	30	1	68	1		
41	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1		
42	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1		
43	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1		
44	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1		
45	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1		
46	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1		
47	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1		
48	1.2D + 1.5Lm2 + 1.0W...	Yes	Y	1	1.2	39	1.2	78	1.5	38	1	76	1		
49	1.2D + 1.5Lv1	Yes	Y	1	1.2	39	1.2	79	1.5						
50	1.2D + 1.5Lv2	Yes	Y	1	1.2	39	1.2	80	1.5						
51	1.4D	Yes	Y	1	1.4	39	1.4								
52	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	1	83	ELZ 1 ELX
53	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	.866	83	.5 ELZ .866 ELX .5
54	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	.5	83	.866 ELZ .5 ELX .866
55	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	1 ELZ ELX 1
56	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	.866 ELZ -.5 ELX .866
57	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	.5 ELZ -.866 ELX .5
58	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-1	83	ELZ -1 ELX
59	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-.866	83	-.5 ELZ -.866 ELX -.5
60	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-.5	83	-.866 ELZ -.5 ELX -.866
61	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	-1 ELZ ELX -1
62	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	.5	83	-.866 ELZ .5 ELX -.866
63	1.2D + 1.0Ev + 1.0Eh ...	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	.866	83	-.5 ELZ .866 ELX -.5
64	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	1	83	ELZ 1 ELX
65	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	.866	83	.5 ELZ .866 ELX .5
66	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	.5	83	.866 ELZ .5 ELX .866
67	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82		83	1 ELZ ELX 1
68	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	.866 ELZ -.5 ELX .866
69	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	.5 ELZ -.866 ELX .5
70	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	-1	83	ELZ -1 ELX
71	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	-.866	83	-.5 ELZ -.866 ELX -.5
72	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	-.5	83	-.866 ELZ -.5 ELX -.866
73	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82		83	-1 ELZ ELX -1
74	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	.5	83	-.866 ELZ .5 ELX -.866
75	0.9D - 1.0Ev + 1.0Eh (...)	Yes	Y	1	.9	39	.9	81	-1	ELY	-1	82	.866	83	-.5 ELZ .866 ELX -.5

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	2.820603	-.25	7.049479	0	
2	N2	-2.5918	-.25	10.174332	0	
3	N3	5.01273	-.25	7.049479	0	
4	N4	10.425133	-.25	10.174332	0	
5	N5	3.916667	-.25	5.151042	0	
6	N6	3.916667	-.25	-1.098663	0	
7	N8	-2.5	0	10.333333	0	
8	N9	10.333333	0	10.333333	0	
9	N10	-2.5	3.458333	10.333333	0	
10	N11	10.333333	3.458333	10.333333	0	
11	N12	-2.166667	3.458333	10.333333	0	
12	N13	-2.166667	3.458333	10.5	0	
13	N14	-2.166667	0	10.333333	0	
14	N15	-2.166667	0	10.5	0	
15	N16	1.916667	3.458333	10.333333	0	
16	N17	1.916667	3.458333	10.5	0	
17	N18	1.916667	0	10.333333	0	
18	N19	1.916667	0	10.5	0	
19	N20	3.916667	3.458333	10.333333	0	
20	N21	3.916667	3.458333	10.5	0	
21	N22	3.916667	0	10.333333	0	
22	N23	3.916667	0	10.5	0	
23	N24	7.166667	3.458333	10.333333	0	
24	N25	7.166667	3.458333	10.5	0	
25	N26	7.166667	0	10.333333	0	
26	N27	7.166667	0	10.5	0	
27	N28	9.833333	3.458333	10.5	0	
28	N29	9.833333	0	10.5	0	
29	N30	-2.166667	-.5	10.5	0	
30	N31	-2.166667	5	10.5	0	
31	N32	1.916667	-.5	10.5	0	
32	N33	1.916667	3.5	10.5	0	
33	N34	3.916667	-1.75	10.5	0	
34	N35	3.916667	6.25	10.5	0	
35	N36	7.166667	-.5	10.5	0	
36	N37	7.166667	3.5	10.5	0	
37	N38	9.833333	-1.333333	10.5	0	
38	N39	9.833333	6.666667	10.5	0	
39	N40	10.516933	0	10.01533	0	
40	N41	4.100266	0	-1.098663	0	
41	N42	10.516933	3.458333	10.01533	0	
42	N43	4.100266	3.458333	-1.098663	0	
43	N44	10.350266	3.458333	9.726655	0	
44	N45	10.494604	3.458333	9.643321	0	
45	N46	10.350266	0	9.726655	0	
46	N47	10.494604	0	9.643321	0	
47	N48	8.308599	3.458333	6.190384	0	
48	N49	8.452937	3.458333	6.107051	0	
49	N50	8.308599	0	6.190384	0	
50	N51	8.452937	0	6.107051	0	
51	N52	7.308599	3.458333	4.458333	0	
52	N53	7.452937	3.458333	4.375	0	
53	N54	7.308599	0	4.458333	0	
54	N55	7.452937	0	4.375	0	
55	N56	5.683599	3.458333	1.643751	0	
56	N57	5.827937	3.458333	1.560417	0	
57	N58	5.683599	0	1.643751	0	
58	N59	5.827937	0	1.560417	0	



Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
59	N60	4.494604	3.458333	-0.748984	0	
60	N62	4.494604	0	-0.748984	0	
61	N63	10.494604	-.5	9.643321	0	
62	N64	10.494604	5	9.643321	0	
63	N65	8.452937	-.5	6.107051	0	
64	N66	8.452937	3.5	6.107051	0	
65	N67	7.452937	-1.75	4.375	0	
66	N68	7.452937	6.25	4.375	0	
67	N69	5.827937	-.5	1.560417	0	
68	N70	5.827937	3.5	1.560417	0	
69	N71	4.494604	-1.333333	-0.748984	0	
70	N72	4.494604	6.666667	-0.748984	0	
71	N73	3.733067	0	-1.098663	0	
72	N74	-2.683599	0	10.01533	0	
73	N75	3.733067	3.458333	-1.098663	0	
74	N76	-2.683599	3.458333	10.01533	0	
75	N77	3.566401	3.458333	-0.809988	0	
76	N78	3.422063	3.458333	-0.893321	0	
77	N79	3.566401	0	-0.809988	0	
78	N80	3.422063	0	-0.893321	0	
79	N81	1.524734	3.458333	2.726283	0	
80	N82	1.380396	3.458333	2.642949	0	
81	N83	1.524734	0	2.726283	0	
82	N84	1.380396	0	2.642949	0	
83	N85	0.524734	3.458333	4.458333	0	
84	N86	0.380396	3.458333	4.375	0	
85	N87	0.524734	0	4.458333	0	
86	N88	0.380396	0	4.375	0	
87	N89	-1.100266	3.458333	7.272916	0	
88	N90	-1.244604	3.458333	7.189583	0	
89	N91	-1.100266	0	7.272916	0	
90	N92	-1.244604	0	7.189583	0	
91	N93	-2.577937	3.458333	9.498984	0	
92	N94	-2.577937	0	9.498984	0	
93	N95	3.422063	-.5	-0.893321	0	
94	N96	3.422063	5	-0.893321	0	
95	N97	1.380396	-.5	2.642949	0	
96	N98	1.380396	3.5	2.642949	0	
97	N99	0.380396	-1.75	4.375	0	
98	N100	0.380396	6.25	4.375	0	
99	N101	-2.577937	-1.333333	9.498984	0	
100	N102	-2.577937	6.666667	9.498984	0	
101	N103	-2	0	10.333333	0	
102	N104	-2.433599	0	9.582317	0	
103	N105	10.266933	0	9.582317	0	
104	N106	9.833333	0	10.333333	0	
105	N107	7.486014	0	4.765625	0	
106	N108	4.271497	0	10.333333	0	
107	N109	0.702149	0	4.151042	0	
108	N110	7.131185	0	4.151042	0	
109	N111	3.561837	0	10.333333	0	
110	N112	0.347319	0	4.765625	0	
111	N113	4.350266	3.458333	-0.66565	0	
112	N114	3.483067	3.458333	-0.66565	0	
113	N115	-2	3.458333	10.333333	0	
114	N116	-2.433599	3.458333	9.582317	0	
115	N117	10.266933	3.458333	9.582317	0	
116	N118	9.833333	3.458333	10.333333	0	
117	N119	-1.244604	-.5	7.189583	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
118	N120	-1.244604	5	7.189583	0	
119	N136	3.916667	0	6.416667	0	
120	N134	0.114402	-25	8.611905	0	
121	N135	0.114402	2	8.611905	0	
122	N137	1.954578	0	7.549479	0	
123	N139	5.878755	0	7.549479	0	
124	N140	3.916667	-0.083333	-0.66565	0	
125	N141	3.916667	0	4.151042	0	
126	N142	3.916667	-25	2.026189	0	
127	N143	3.916668	2	2.026189	0	
128	N144	-2.2168	-25	9.957825	0	
129	N145	1.954578	-25	7.549479	0	
130	N146	10.050133	-25	9.957825	0	
131	N147	5.878755	-25	7.549479	0	
132	N148	3.916667	-25	-0.66565	0	
133	N149	3.916667	-25	4.151042	0	
134	N156	0.680652	0	5.342975	0	
135	N157	3.228503	0	9.755983	0	
136	N161	4.60483	0	9.755983	0	
137	N162	7.152681	0	5.342975	0	
138	N166	6.464518	0	4.151042	0	
139	N167	1.368815	0	4.151042	0	
140	N150A	0.388986	0	4.837794	0	
141	N151A	0.785482	0	4.151042	0	
142	N152A	0.587234	0	4.494418	0	
143	N154A	4.313163	0	10.261165	0	
144	N155A	3.52017	0	10.261165	0	
145	N158	7.047851	0	4.151042	0	
146	N159	7.444348	0	4.837794	0	
147	N160	7.246099	0	4.494418	0	
148	N161A	4.350266	0	-0.66565	0	
149	N162A	4.308599	-0.083333	-0.66565	0	
150	N163	3.525266	-0.083333	-0.66565	0	
151	N164	4.308599	0	-0.66565	0	
152	N165	3.525266	0	-0.66565	0	
153	N166A	3.483067	0	-0.66565	0	
154	N166B	-2.2168	-0.083333	9.957825	0	
155	N169	-2.412766	-0.083333	9.618401	0	
156	N170	-2.021099	-0.083333	10.296788	0	
157	N171	-2.412766	0	9.618401	0	
158	N172	-2.021099	0	10.296788	0	
159	N175	10.050133	-0.083333	9.957825	0	
160	N178	9.854167	-0.083333	10.297249	0	
161	N179	10.245833	-0.083333	9.618862	0	
162	N180	9.854167	0	10.297249	0	
163	N181	10.245833	0	9.618862	0	
164	N175A	4.083333	0	10.333333	0	
165	N176	4.083333	0	10.261165	0	
166	N177	3.75	0	10.333333	0	
167	N178A	3.75	0	10.261165	0	
168	N178B	7.225266	0	4.313996	0	
169	N179A	7.162766	0	4.35008	0	
170	N180A	7.391933	0	4.602671	0	
171	N181A	7.329433	0	4.638755	0	
172	N182	0.441401	0	4.602671	0	
173	N183	0.503901	0	4.638755	0	
174	N184	0.608067	0	4.313996	0	
175	N185	0.670567	0	4.35008	0	
176	N186	3.916667	-3.25	5.151042	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
177	N187	3.916667	-25	2.151042	0	
178	N188	-5	3.458333	10.333333	0	
179	N189	8.333333	3.458333	10.333333	0	
180	N195A	2.820603	-3.25	7.049479	0	
181	N198	5.01273	-3.25	7.049479	0	
182	N189A	0.222527	-25	8.549479	0	
183	N191A	7.610806	-25	8.549479	0	
184	N184A	-5	3.458333	10.083333	0	
185	N185A	8.333333	3.458333	10.083333	0	
186	N187A	9.516933	3.458333	8.283279	0	
187	N188A	5.100266	3.458333	0.633388	0	
188	N189B	9.300426	3.458333	8.408279	0	
189	N190	4.88376	3.458333	0.758388	0	
190	N192	2.733067	3.458333	0.633388	0	
191	N193	-1.683599	3.458333	8.283279	0	
192	N194	2.949574	3.458333	0.758388	0	
193	N195	-1.467093	3.458333	8.408279	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in ²]	I _{yy} [in ⁴]	I _{zz} [in ⁴]	J [in ⁴]
1	Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	Support Rail	PIPE 2.5	Beam	Single A...	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
3	HSS Tube	HSS4X4X4	Beam	SquareT...	A500 Gr...	Typical	3.37	7.8	7.8	12.8
4	Face Horizontal A...	L6X3.5X6	Beam	Single A...	A36 Gr.36	Typical	3.44	3.33	12.9	.168
5	Platform Angle	L5X3.5X4	Beam	Single A...	A36 Gr.36	Typical	2.07	2.2	5.36	.046
6	Plate Corner	PL5x3/16	Beam	RECT	A36 Gr.36	Typical	.938	.003	1.953	.011
7	Angle Connection	PL3/8x7	Beam	RECT	A36 Gr.36	Typical	2.625	.031	10.719	.119
8	Horizontal connec...	PL3/8x7	Beam	RECT	A36 Gr.36	Typical	2.625	.031	10.719	.119
9	Kicker	LL3x3x3x3	Beam	Double A...	A36 Gr.36	Typical	2.18	4.09	1.9	.027
10	Support Rail Angle	L3X3X4	Beam	Single A...	A36 Gr.36	Typical	1.44	1.23	1.23	.031

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
8	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			HSS Tube	Beam	SquareTube	A500 Gr.B...	Typical
2	M2	N3	N4			HSS Tube	Beam	SquareTube	A500 Gr.B...	Typical
3	M3	N5	N6			HSS Tube	Beam	SquareTube	A500 Gr.B...	Typical
4	FACE	N8	N9		180	Face Horizont...	Beam	Single Angle	A36 Gr.36	Typical
5	M6	N10	N11		180	Support Rail	Beam	Single Angle	A53 Gr.B	Typical
6	M7	N12	N13			RIGID	None	None	RIGID	Typical
7	LIVE1	N14	N15			RIGID	None	None	RIGID	Typical
8	M9	N16	N17			RIGID	None	None	RIGID	Typical
9	M10	N18	N19			RIGID	None	None	RIGID	Typical
10	M11	N20	N21			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
11	LIVE2	N22	N23			RIGID	None	None	RIGID	Typical
12	M13	N24	N25			RIGID	None	None	RIGID	Typical
13	M14	N26	N27			RIGID	None	None	RIGID	Typical
14	M15	N118	N28			RIGID	None	None	RIGID	Typical
15	M16	N106	N29			RIGID	None	None	RIGID	Typical
16	MP5A	N31	N30		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
17	MP4A	N33	N32		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
18	MP3A	N35	N34		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
19	MP2A	N37	N36		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
20	MP1A	N39	N38		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
21	M22	N40	N41		180	Face Horizont...	Beam	Single Angle	A36 Gr.36	Typical
22	M23	N42	N43		180	Support Rail	Beam	Single Angle	A53 Gr.B	Typical
23	M24	N44	N45			RIGID	None	None	RIGID	Typical
24	M25	N46	N47			RIGID	None	None	RIGID	Typical
25	M26	N48	N49			RIGID	None	None	RIGID	Typical
26	M27	N50	N51			RIGID	None	None	RIGID	Typical
27	M28	N52	N53			RIGID	None	None	RIGID	Typical
28	M29	N54	N55			RIGID	None	None	RIGID	Typical
29	M30	N56	N57			RIGID	None	None	RIGID	Typical
30	M31	N58	N59			RIGID	None	None	RIGID	Typical
31	M32	N113	N60			RIGID	None	None	RIGID	Typical
32	M33	N161A	N62			RIGID	None	None	RIGID	Typical
33	MP5C	N64	N63		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
34	MP4C	N66	N65		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
35	MP3C	N68	N67		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
36	MP2C	N70	N69		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
37	MP1C	N72	N71		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
38	M39	N73	N74		180	Face Horizont...	Beam	Single Angle	A36 Gr.36	Typical
39	M40	N76	N75		90	Support Rail	Beam	Single Angle	A53 Gr.B	Typical
40	M41	N77	N78			RIGID	None	None	RIGID	Typical
41	M42	N79	N80			RIGID	None	None	RIGID	Typical
42	M43	N81	N82			RIGID	None	None	RIGID	Typical
43	M44	N83	N84			RIGID	None	None	RIGID	Typical
44	M45	N85	N86			RIGID	None	None	RIGID	Typical
45	M46	N87	N88			RIGID	None	None	RIGID	Typical
46	M47	N89	N90			RIGID	None	None	RIGID	Typical
47	M48	N91	N92			RIGID	None	None	RIGID	Typical
48	M49	N116	N93			RIGID	None	None	RIGID	Typical
49	M50	N104	N94			RIGID	None	None	RIGID	Typical
50	MP5B	N96	N95		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
51	MP4B	N98	N97		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
52	MP3B	N100	N99		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
53	MP1B	N102	N101		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
54	M59	N150A	N151A		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical
55	MP2B	N120	N119		90	Mount Pipe	Column	Pipe	A53 Gr.B	Typical
56	M70	N135	N134			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
57	M71	N143	N142			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
58	M73	N137	N145	N1		RIGID	None	None	RIGID	Typical
59	M74	N139	N147	N3		RIGID	None	None	RIGID	Typical
60	M76	N141	N149			RIGID	None	None	RIGID	Typical
61	M77	N140	N148			RIGID	None	None	RIGID	Typical
62	M84	N155A	N157		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical
63	M85	N157	N156		90	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
64	M84A	N154A	N161		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical
65	M85A	N159	N162		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical
66	M86	N162	N161		90	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
67	M87	N158	N166		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical
68	M89	N167	N166		90	Platform Angle	Beam	Single Angle	A36 Gr.36	Typical
69	M84B	N150A	N156		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
70	M85B	N151A	N167		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical
71	M86A	N154A	N155A		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical
72	M88	N158	N159		180	Angle Connect...	Beam	RECT	A36 Gr.36	Typical
73	M92	N162A	N163		270	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
74	M94	N163	N165		60	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
75	M95	N162A	N164		300	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
76	M96	N161A	N164		270	RIGID	None	None	RIGID	Typical
77	M97	N165	N166A		270	RIGID	None	None	RIGID	Typical
78	M90	N166B	N144			RIGID	None	None	RIGID	Typical
79	M91	N169	N170		270	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
80	M92A	N170	N172		180	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
81	M93	N169	N171		60	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
82	M94A	N104	N171		270	RIGID	None	None	RIGID	Typical
83	M95A	N172	N103		270	RIGID	None	None	RIGID	Typical
84	M96A	N175	N146			RIGID	None	None	RIGID	Typical
85	M97A	N178	N179		270	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
86	M98	N179	N181		300	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
87	M99	N178	N180		180	Horizontal con...	Beam	RECT	A36 Gr.36	Typical
88	M100	N106	N180		270	RIGID	None	None	RIGID	Typical
89	M101	N181	N105		270	RIGID	None	None	RIGID	Typical
90	M102	N175A	N176			RIGID	None	None	RIGID	Typical
91	M103	N177	N178A			RIGID	None	None	RIGID	Typical
92	M101A	N178B	N179A			RIGID	None	None	RIGID	Typical
93	M102A	N180A	N181A			RIGID	None	None	RIGID	Typical
94	M103A	N182	N183			RIGID	None	None	RIGID	Typical
95	M104	N184	N185			RIGID	None	None	RIGID	Typical
96	M105	N186	N187			Kicker	Beam	Double Angle (...)	A36 Gr.36	Typical
97	M100A	N195A	N189A			Kicker	Beam	Double Angle (...)	A36 Gr.36	Typical
98	M101B	N198	N191A			Kicker	Beam	Double Angle (...)	A36 Gr.36	Typical
99	M99A	N188	N184A			RIGID	None	None	RIGID	Typical
100	M100B	N189	N185A			RIGID	None	None	RIGID	Typical
101	M101C	N187A	N189B			RIGID	None	None	RIGID	Typical
102	M102B	N188A	N190			RIGID	None	None	RIGID	Typical
103	M103B	N192	N194			RIGID	None	None	RIGID	Typical
104	M104A	N193	N195			RIGID	None	None	RIGID	Typical
105	M105A	N184A	N195		90	Support Rail A...	Beam	Single Angle	A36 Gr.36	Typical
106	M106	N189B	N185A		90	Support Rail A...	Beam	Single Angle	A36 Gr.36	Typical
107	M107	N194	N190		90	Support Rail A...	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes	Default			None
2	M2						Yes				None
3	M3						Yes				None
4	FACE						Yes				None
5	M6						Yes				None
6	M7						Yes	** NA **			None
7	LIVE1						Yes	** NA **			None
8	M9						Yes	** NA **			None
9	M10						Yes	** NA **			None
10	M11						Yes	** NA **			None
11	LIVE2						Yes	** NA **			None
12	M13						Yes	** NA **			None
13	M14						Yes	** NA **			None
14	M15						Yes	** NA **			None
15	M16						Yes	** NA **			None
16	MP5A						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
17	MP4A						Yes	** NA **			None
18	MP3A						Yes	** NA **			None
19	MP2A						Yes	** NA **			None
20	MP1A						Yes	** NA **			None
21	M22						Yes	Default			None
22	M23						Yes	Default			None
23	M24						Yes	** NA **			None
24	M25						Yes	** NA **			None
25	M26						Yes	** NA **			None
26	M27						Yes	** NA **			None
27	M28						Yes	** NA **			None
28	M29						Yes	** NA **			None
29	M30						Yes	** NA **			None
30	M31						Yes	** NA **			None
31	M32						Yes	** NA **			None
32	M33						Yes	** NA **			None
33	MP5C						Yes	** NA **			None
34	MP4C						Yes	** NA **			None
35	MP3C						Yes	** NA **			None
36	MP2C						Yes	** NA **			None
37	MP1C						Yes	** NA **			None
38	M39						Yes				None
39	M40						Yes	Default			None
40	M41						Yes	** NA **			None
41	M42						Yes	** NA **			None
42	M43						Yes	** NA **			None
43	M44						Yes	** NA **			None
44	M45						Yes	** NA **			None
45	M46						Yes	** NA **			None
46	M47						Yes	** NA **			None
47	M48						Yes	** NA **			None
48	M49						Yes	** NA **			None
49	M50						Yes	** NA **			None
50	MP5B						Yes	** NA **			None
51	MP4B						Yes	** NA **			None
52	MP3B						Yes	** NA **			None
53	MP1B						Yes	** NA **			None
54	M59						Yes	Default	+y		None
55	MP2B						Yes	** NA **			None
56	M70						Yes	** NA **			None
57	M71						Yes	** NA **			None
58	M73	OOOOOX					Yes	** NA **			None
59	M74	OOOOOX					Yes	** NA **			None
60	M76	OOOOXO					Yes	** NA **			None
61	M77						Yes	** NA **			None
62	M84						Yes	Default	+y		None
63	M85	BenPIN	BenPIN				Yes	Default	-z		None
64	M84A						Yes	Default	+y		None
65	M85A						Yes	Default	+y		None
66	M86	BenPIN	BenPIN				Yes	Default	-z		None
67	M87						Yes	Default	+y		None
68	M89	BenPIN	BenPIN				Yes	Default	-z		None
69	M84B						Yes		+y		None
70	M85B						Yes		+y		None
71	M86A						Yes	Default	+y		None
72	M88						Yes	Default	+y		None
73	M92						Yes				None
74	M94						Yes				None
75	M95						Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
76	M96						Yes	** NA **			None
77	M97						Yes	** NA **			None
78	M90						Yes	** NA **			None
79	M91						Yes				None
80	M92A						Yes				None
81	M93						Yes				None
82	M94A						Yes	** NA **			None
83	M95A						Yes	** NA **			None
84	M96A						Yes	** NA **			None
85	M97A						Yes	Default			None
86	M98						Yes				None
87	M99						Yes				None
88	M100						Yes	** NA **			None
89	M101						Yes	** NA **			None
90	M102						Yes	** NA **			None
91	M103						Yes	** NA **			None
92	M101A						Yes	** NA **			None
93	M102A						Yes	** NA **			None
94	M103A						Yes	** NA **			None
95	M104						Yes	** NA **			None
96	M105		BenPIN				Yes				None
97	M100A		BenPIN				Yes				None
98	M101B		BenPIN				Yes				None
99	M99A		OOOOOO				Yes	** NA **			None
100	M100B		OOOOOO				Yes	** NA **			None
101	M101C		OOOOOO				Yes	** NA **			None
102	M102B		OOOOOO				Yes	** NA **			None
103	M103B		OOOOOO				Yes	** NA **			None
104	M104A		OOOOOO				Yes	** NA **			None
105	M105A						Yes	Default			None
106	M106						Yes	Default			None
107	M107						Yes	Default			None

Member Area Loads (BLC 39 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N74	N112	N111	Y	Two Way	-0.005
2	N108	N107	N40	N9	Y	Two Way	-0.005
3	N109	N73	N41	N110	Y	Two Way	-0.005

Member Area Loads (BLC 40 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N74	N112	N111	Y	Two Way	-0.013
2	N108	N107	N40	N9	Y	Two Way	-0.013
3	N109	N73	N41	N110	Y	Two Way	-0.013

Member Area Loads (BLC 84 : Structure Ev)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N74	N112	N111	Y	Two Way	-0.000216
2	N108	N107	N40	N9	Y	Two Way	-0.000216
3	N109	N73	N41	N110	Y	Two Way	-0.000216

Member Area Loads (BLC 85 : Structure Eh (0 Deg))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N74	N112	N111	Z	Two Way	-0.000541
2	N108	N107	N40	N9	Z	Two Way	-0.000541
3	N109	N73	N41	N110	Z	Two Way	-0.000541

Member Area Loads (BLC 86 : Structure Eh (90 Deg))

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N8	N74	N112	N111	X	Two Way	.000541
2	N108	N107	N40	N9	X	Two Way	.000541
3	N109	N73	N41	N110	X	Two Way	.000541

Envelope Joint Reactions

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC		
1	N1	max	2343.078	9	740.562	3	1988.725	3	.517	8	1.34	12	.975	9
2		min	-3282.433	3	-1191.119	9	-1438.883	9	-.224	2	-1.344	6	-.515	3
3	N5	max	1013.293	10	708.125	7	2673.762	1	.504	7	1.157	4	.257	4
4		min	-1014.781	4	-1152.121	1	-3847.295	7	-1.05	1	-1.167	10	-.216	10
5	N3	max	3352.867	11	692.491	11	1804.39	11	.6	5	1.155	8	.364	11
6		min	-2348.1	5	-1149.349	5	-1231.259	5	-.35	11	-1.16	2	-.88	17
7	N186	max	28.194	10	4193.128	13	250.55	7	0	75	0	75	0	75
8		min	-28.234	4	-257.069	7	-4133.675	13	0	1	0	1	0	1
9	N195A	max	202.894	3	4394.112	21	2167.467	21	0	75	0	75	0	75
10		min	-3753.978	21	-240.79	3	-117.122	3	0	1	0	1	0	1
11	N198	max	3583.49	17	4197.239	17	2068.792	17	0	75	0	75	0	75
12		min	-199.619	11	-237.03	11	-115.277	11	0	1	0	1	0	1
13	Totals:	max	3614.101	10	9311.161	16	3652.425	1						
14		min	-3614.08	4	2463.569	73	-3652.434	7						

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

Member	Shape	Code	Ch...	Lo...	LC	She...	Lo.....	LC	phi*...	phi*...	phi*...	phi*Mn z...	Cb	Eqn	
1	M1	HSS4X...	.277	3.06	21	.059	2...	y	21	1184...	1395...	16.181	16.181	1.603	H1-1b
2	M2	HSS4X...	.276	3.06	17	.059	2...	y	17	1184...	1395...	16.181	16.181	1.598	H1-1b
3	M3	HSS4X...	.274	3.06	13	.059	2...	y	13	1184...	1395...	16.181	16.181	1.599	H1-1b
4	FACE	L6X3.5...	.189	4...	22	.270	6...	y	24	1907...	1114...	4.002	11.838	1.452	H2-1
5	M6	PIPE_2...	.176	6...	7	.073	9...		12	1381...	50715	3.596	3.596	1.565	H1-1b
6	MP5A	PIPE_2...	.278	4...	10	.069	1...		6	2235...	32130	1.872	1.872	2.142	H1-1b
7	MP4A	PIPE_2...	.281	3.5	10	.092	3.5		8	2652...	32130	1.872	1.872	1.984	H1-1b
8	MP3A	PIPE_2...	.324	6.25	23	.090	6.25		11	1491...	32130	1.872	1.872	2.001	H1-1b
9	MP2A	PIPE_2...	.271	3.5	4	.099	3.5		6	2652...	32130	1.872	1.872	2.052	H1-1b
10	MP1A	PIPE_2...	.270	6...	4	.077	3.25		7	1491...	32130	1.872	1.872	2.41	H1-1b
11	M22	L6X3.5...	.189	4...	18	.269	6...	y	20	1907...	1114...	4.002	11.83	1.448	H2-1
12	M23	PIPE_2...	.175	6...	3	.072	9...		8	1381...	50715	3.596	3.596	1.589	H1-1b
13	MP5C	PIPE_2...	.278	4...	6	.068	1...		2	2235...	32130	1.872	1.872	2.657	H1-1b
14	MP4C	PIPE_2...	.280	3.5	6	.091	3.5		4	2652...	32130	1.872	1.872	1.923	H1-1b
15	MP3C	PIPE_2...	.322	6.25	19	.089	6.25		7	1491...	32130	1.872	1.872	2.146	H1-1b
16	MP2C	PIPE_2...	.269	3.5	12	.098	3.5		2	2652...	32130	1.872	1.872	1.967	H1-1b
17	MP1C	PIPE_2...	.268	6...	12	.076	3.25		3	1491...	32130	1.872	1.872	1.815	H1-1b
18	M39	L6X3.5...	.185	4...	14	.268	6...	y	16	1907...	1114...	4.002	11.807	1.438	H2-1
19	M40	PIPE_2...	.168	6...	11	.073	2...		10	1381...	50715	3.596	3.596	1.647	H1-1b
20	MP5B	PIPE_2...	.277	4...	2	.067	1...		10	2235...	32130	1.872	1.872	2.4	H1-1b
21	MP4B	PIPE_2...	.279	3.5	2	.092	3.5		12	2652...	32130	1.872	1.872	1.916	H1-1b
22	MP3B	PIPE_2...	.317	6.25	15	.089	6.25		3	1491...	32130	1.872	1.872	1.425	H1-1b
23	MP1B	PIPE_2...	.270	6...	8	.077	3.25		12	1491...	32130	1.872	1.872	2.121	H1-1b
24	M59	PL3/8x7	.131	.223	12	.582	.793	y	16	6836...	85050	.664	12.404	1.793	H1-1b
25	MP2B	PIPE_2...	.259	4...	8	.094	4...		10	2235...	32130	1.872	1.872	2.362	H1-1b
26	M70	PIPE_2...	.074	2.25	12	.012	2.25		12	3023...	32130	1.872	1.872	2.695	H1-1b
27	M71	PIPE_2...	.008	2.25	1	.001	2.25		1	3023...	32130	1.872	1.872	1	H1-1b
28	M84	PL3/8x7	.081	0	24	.050	.583	y	16	6836...	85050	.664	12.404	1.442	H1-1b
29	M85	L5X3.5...	.566	2...	23	.075	2...	z	21	5194...	67068	2.629	7.364	1.341	H2-1
30	M84A	PL3/8x7	.080	0	14	.051	.583	y	22	6836...	85050	.664	12.404	1.449	H1-1b
31	M85A	PL3/8x7	.080	0	20	.051	.583	y	24	6836...	85050	.664	12.404	1.448	H1-1b
32	M86	L5X3.5...	.565	2...	19	.075	2...	z	18	5194...	67068	2.629	7.362	1.339	H2-1
33	M87	PL3/8x7	.079	0	22	.052	.583	y	18	6836...	85050	.664	12.404	1.448	H1-1b

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

Member	Shape	Code	Ch...	Lo...	LC	She...	Lo...	LC	phi*	phi*	phi*	phi*Mn z...	Cb	Eqn
34	M89	L5X3.5...	.560	2...	15	.074	2...	z 14	5194..	67068	2.629	7.362	1.338	H2-1
35	M84B	PL3/8x7	.079	0	18	.051	.583	y 14	6836..	85050	.664	12.404	1.444	H1-1b
36	M85B	PL3/8x7	.079	0	16	.049	.583	y 20	6836..	85050	.664	12.404	1.447	H1-1b
37	M86A	PL3/8x7	.131	.57	12	.593	.793	y 24	5680..	85050	.664	12.404	1.719	H1-1b
38	M88	PL3/8x7	.127	.223	4	.588	.793	y 20	5680..	85050	.664	12.404	1.752	H1-1b
39	M92	PL3/8x7	.480	.392	13	.284	0	y 23	5736..	85050	.664	12.404	1.274	H1-1b
40	M94	PL3/8x7	.215	.083	15	.354	.083	y 17	8467..	85050	.664	12.404	1.937	H1-1b
41	M95	PL3/8x7	.252	.083	23	.380	0	y 20	8467..	85050	.664	12.404	1.838	H1-1b
42	M91	PL3/8x7	.478	.392	21	.286	0	y 19	5736..	85050	.664	12.404	1.274	H1-1b
43	M92A	PL3/8x7	.217	.083	23	.353	0	y 13	8467..	85050	.664	12.404	1.934	H1-1b
44	M93	PL3/8x7	.251	.083	19	.377	0	y 16	8467..	85050	.664	12.404	1.849	H1-1b
45	M97A	PL3/8x7	.485	.392	17	.285	0	y 15	7770..	85050	.664	11.939	1	H1-1b
46	M98	PL3/8x7	.218	.083	19	.355	0	y 21	8467..	85050	.664	12.404	1.933	H1-1b
47	M99	PL3/8x7	.252	.083	15	.380	0	y 24	8467..	85050	.664	12.404	1.845	H1-1b
48	M105	LL3x3x...	.123	0	13	.002	0	y 13	4790..	70632	5.543	3.751	1	H1-1b*
49	M100A	LL3x3x...	.129	0	21	.002	4....	y 21	4790..	70632	5.543	3.751	1	H1-1b*
50	M101B	LL3x3x...	.123	0	17	.002	0	y 17	4790..	70632	5.543	3.751	1	H1-1b*
51	M105A	L3X3X4	.297	0	11	.037	0	y 6	4294..	46656	1.688	3.756	2.222	H2-1
52	M106	L3X3X4	.294	0	7	.037	1....	y 2	4294..	46656	1.688	3.756	2.216	H2-1
53	M107	L3X3X4	.293	0	3	.036	.04	y 10	4294..	46656	1.688	3.756	2.217	H2-1

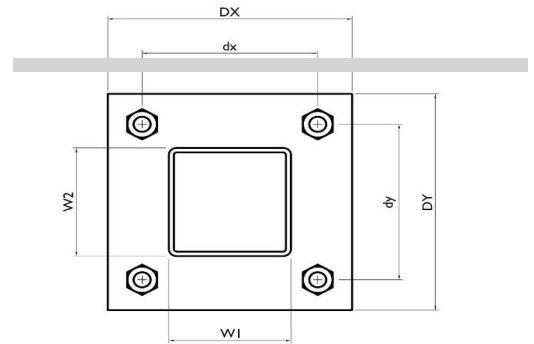
I. Mount-to-Tower Connection Check

Custom Orientation Required No

Tower Connection Bolt Checks Yes

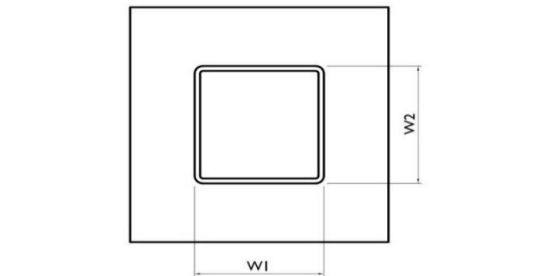
Bolt Orientation Parallel

Bolt Quantity per Reaction:	4
d_x (in) (Delta X of typ. bolt config. sketch):	6
d_y (in) (Delta Y of typ. bolt config. sketch):	6
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	0.0
Required Shear Strength / bolt (kips):	1.5
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	12.4%



Tower Connection Baseplate Checks Yes

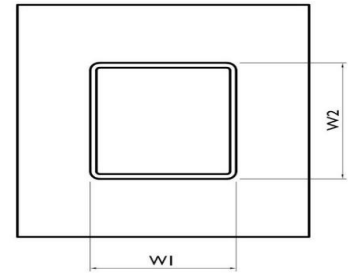
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, D_x (in):	8.5
Plate Height, D_y (in):	8.5
W_1 (in):	4
W_2 (in):	4
Member Thickness (in):	0.25
Stiffener location a_1 (in):	
Stiffener location b_1 (in):	
Stiffener location a_2 (in):	
Stiffener location b_2 (in):	
F_y (ksi, plate):	36
Plate Thickness (in):	0.75
Length of Yield Line, L_y (in):	6.34
Bolt Eccentricity, e (in):	1.65
M_u (kip-in):	3.10
$\Phi * M_n$ (kip-in):	28.86
Plate Bending Utilization:	10.7%



Tower Connection Weld Checks

Weld Shape:
Weld Stiffener Configuration:
Stiffener Notch Length, n (in):
Weld Size (1/16 in):
W1 (in):
W2 (in):
Weld Total Length (in):
 Z_x (in³/in):
 Z_y (in³/in):
 J_p (in⁴/in):
 c_x (in)
 c_y (in)
Required combined strength (kip/in):
Weld Capacity (kip/in):
Weld Utilization:

Yes
Rectangle
None
4
4
4
16.00
21.33
21.33
85.33
2.25
2.25
0.68
5.57
12.3%



Date: **May 05, 2023**



Crown Castle
2000 Corporate Dr.
Canonsburg, PA 15317
(724) 416-2000

Subject: **Structural Analysis Report**

Carrier Designation: **Verizon Wireless Co-Locate**
Site Number: 5000382560
Site Name: WATERBURY S CT

Crown Castle Designation: **BU Number:** 876317
Site Name: WATERBURY
JDE Job Number: 746891
Work Order Number: 2226222
Order Number: 650397 Rev. 0

Engineering Firm Designation: **Crown Castle Project Number:** 2226222

Site Data: **150 Mattatuck Heights, WATERBURY, NEW HAVEN County, CT**
Latitude 41° 32' 16.3", Longitude -72° 59' 6.1"
144.25 Foot - Monopole Tower

Crown Castle 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 – 99.4%

This analysis has been performed in accordance with the 2022 Connecticut State Building Code (2021 IBC) based upon an ultimate 3-second gust wind speed of 118 mph. Applicable Standard references and design criteria are listed in Section 2 - "Analysis Criteria".

Structural analysis prepared by: Patrick Himes

Respectfully submitted by:

Maribel Dentinger
Maribel Dentinger, P.E.
Senior Project Engineer

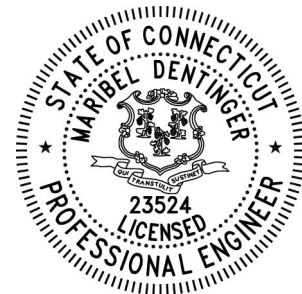


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1) INTRODUCTION

This tower is a 144.25 ft Monopole tower designed by VALMONT. The tower has been modified multiple times in the past to accommodate additional loading.

2) ANALYSIS CRITERIA

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

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
113.0	115.0	3	samsung telecommunications	MT6407-77A w/ Mount Pipe	6 2 1	1-5/8 1-1/4 1/2
		1	trimble	BULLET III		
	114.0	3	andrew	SBNHH-1D65B		
		3	andrew	SBNHH-1D65B w/ Mount Pipe		
		3	antel	BXA-80063/4CF w/ Mount Pipe		
		2	kaelus	BSF0020F3V1		
		1	raycap	RVZDC-6627-PF-48		
		3	samsung telecommunications	RFV01U-D1A		
	3	samsung telecommunications	RFV01U-D2A			
	113.0	1	tower mounts	Platform Mount [LP 713-1_KCKR]		

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)
144.0	145.0	3	ericsson	AIR 6419 B77G_CCIV3 w/ Mount Pipe	1 6 3	7/8 13/16 3/8
	144.0	1	site pro 1	F3P-12W		
		1	tower mounts	Mount Modifications		
	143.0	3	ericsson	2012 B29		
		3	ericsson	RADIO 4415 B30		
		3	ericsson	RRUS 4449 B5/B12		
		3	ericsson	RRUS 4478 B14		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		3	ericsson	RRUS 8843 B2/B66A		
		3	kmw communications	EPBQ-654L8H8-L2 w/ Mount Pipe		
		3	quintel technology	QD8616-7 w/ Mount Pipe		
		2	raycap	DC6-48-60-18-8F		
		1	raycap	DC9-48-60-24-8C-EV		
	141.0	3	ericsson	AIR 6449 B77D_CCVI2 w/ Mount Pipe		
130.0	133.0	1	andrew	VHLP2-18	3 1 3	Elliptical 1-1/2 1-1/4
		2	andrew	VHLP2-23		
	130.0	6	alcatel lucent	1900MHZ RRH (65MHZ)		
		3	alcatel lucent	800 EXTERNAL NOTCH FILTER		
		3	alcatel lucent	800MHZ RRH		
		3	nokia	AAHC w/ Mount Pipe		
		4	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe		
		4	rfs celwave	IBC1900HB-2		
		2	rfs celwave	PD2DE-700/2700		
		1	tower mounts	Pipe Mount [PM 601-3]		
1	tower mounts	Platform Mount [LP 602-1]				
120.0	120.0	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		
100.0	101.0	3	ericsson	AIR -32 B2A/B66AA w/ Mount Pipe	1 2	1-5/8 1-1/2
		3	ericsson	AIR 6419 B41_TMO w/ Mount Pipe		
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
	100.0	1	tower mounts	Platform Mount [LP 303-1_HR-1]		
50.0	51.0	1	lucent	KS24019-L112A	1	1/2
	50.0	1	tower mounts	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	1529737	CCISITES
4-POST-MODIFICATION INSPECTION	8624542	CCISITES
4-POST-MODIFICATION INSPECTION	3770745	CCISITES
4-POST-MODIFICATION INSPECTION	2381112	CCISITES
4-POST-MODIFICATION INSPECTION	1956508	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	1630930	CCISITES
4-TOWER MANUFACTURER DRAWINGS	1530953	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	8142142	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3315244	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	2381113	CCISITES

3.1) Analysis Method

tnxTower (version 8.1.4.0), 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 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. Crown Castle should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L1	144.25 - 139.25	Pole	TP12.75x12.75x0.375	Pole	13.6%	Pass
L2	139.25 - 134.75	Pole	TP12.75x12.75x0.375	Pole	27.9%	Pass
L3	134.75 - 134.25	Pole	TP13.48x13.48x0.375	Pole	26.3%	Pass
L4	134.25 - 129.25	Pole	TP14.466x13.48x0.1875	Pole	52.9%	Pass
L5	129.25 - 124.25	Pole	TP15.452x14.466x0.1875	Pole	71.6%	Pass
L6	124.25 - 123.42	Pole	TP15.616x15.452x0.1875	Pole	74.3%	Pass
L7	123.42 - 123.17	Pole + Reinf.	TP15.665x15.616x0.5375	Reinf. 25 Tension Rupture	48.4%	Pass
L8	123.17 - 118.17	Pole + Reinf.	TP16.651x15.665x0.5125	Reinf. 25 Tension Rupture	61.6%	Pass
L9	118.17 - 113.17	Pole + Reinf.	TP17.637x16.651x0.4875	Reinf. 25 Tension Rupture	75.0%	Pass
L10	113.17 - 109.5	Pole + Reinf.	TP18.36x17.637x0.475	Reinf. 25 Tension Rupture	87.8%	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L11	109.5 - 109.25	Pole + Reinf.	TP18.409x18.36x0.5875	Reinf. 25 Tension Rupture	74.0%	Pass
L12	109.25 - 104.75	Pole + Reinf.	TP19.296x18.409x0.5625	Reinf. 25 Tension Rupture	85.3%	Pass
L13	104.75 - 104.5	Pole + Reinf.	TP19.346x19.296x0.775	Reinf. 11 Tension Rupture	68.8%	Pass
L14	104.5 - 102.42	Pole + Reinf.	TP19.756x19.346x0.7625	Reinf. 11 Tension Rupture	72.8%	Pass
L15	102.42 - 102.17	Pole + Reinf.	TP19.806x19.756x0.5625	Reinf. 11 Tension Rupture	90.8%	Pass
L16	102.17 - 98.75	Pole + Reinf.	TP20.479x19.806x0.55	Reinf. 11 Tension Rupture	99.4%	Pass
L17	98.75 - 98.5	Pole + Reinf.	TP20.528x20.479x0.8375	Reinf. 6 Bolt-Shaft Bearing	86.9%	Pass
L18	98.5 - 97.5	Pole + Reinf.	TP20.726x20.528x0.8375	Reinf. 6 Tension Rupture	75.5%	Pass
L19	97.5 - 97.25	Pole + Reinf.	TP20.775x20.726x0.75	Reinf. 6 Tension Rupture	88.0%	Pass
L20	97.25 - 95.55	Pole + Reinf.	TP21.81x20.775x0.7375	Reinf. 6 Tension Rupture	91.7%	Pass
L21	95.55 - 90.55	Pole + Reinf.	TP21.73x20.735x0.8	Reinf. 6 Tension Rupture	95.0%	Pass
L22	90.55 - 89.25	Pole + Reinf.	TP21.989x21.73x0.775	Reinf. 6 Tension Rupture	97.2%	Pass
L23	89.25 - 89	Pole + Reinf.	TP22.039x21.989x1	Reinf. 5 Bolt-Shaft Bearing	84.0%	Pass
L24	89 - 88.25	Pole + Reinf.	TP22.189x22.039x0.975	Reinf. 11 Tension Rupture	70.2%	Pass
L25	88.25 - 88	Pole + Reinf.	TP22.238x22.189x0.7625	Reinf. 5 Tension Rupture	80.3%	Pass
L26	88 - 87.83	Pole + Reinf.	TP22.272x22.238x0.7625	Reinf. 5 Tension Rupture	80.6%	Pass
L27	87.83 - 87.58	Pole + Reinf.	TP22.321x22.272x0.675	Reinf. 5 Tension Rupture	85.4%	Pass
L28	87.58 - 82.58	Pole + Reinf.	TP23.317x22.321x0.65	Reinf. 5 Tension Rupture	91.9%	Pass
L29	82.58 - 77.58	Pole + Reinf.	TP24.312x23.317x0.625	Reinf. 5 Tension Rupture	97.7%	Pass
L30	77.58 - 77	Pole + Reinf.	TP24.428x24.312x0.625	Reinf. 5 Tension Rupture	98.3%	Pass
L31	77 - 76.75	Pole + Reinf.	TP24.478x24.428x0.825	Reinf. 10 Tension Rupture	92.2%	Pass
L32	76.75 - 76.33	Pole + Reinf.	TP24.561x24.478x0.825	Reinf. 10 Tension Rupture	92.7%	Pass
L33	76.33 - 76.08	Pole + Reinf.	TP24.611x24.561x0.825	Reinf. 10 Tension Rupture	93.8%	Pass
L34	76.08 - 74.25	Pole + Reinf.	TP24.976x24.611x0.8	Reinf. 10 Tension Rupture	95.7%	Pass
L35	74.25 - 74	Pole + Reinf.	TP25.026x24.976x0.8875	Reinf. 10 Tension Rupture	84.5%	Pass
L36	74 - 73.75	Pole + Reinf.	TP25.076x25.026x0.8875	Reinf. 10 Tension Rupture	84.7%	Pass
L37	73.75 - 73.5	Pole + Reinf.	TP25.125x25.076x0.9125	Reinf. 21 Tension Rupture	84.0%	Pass
L38	73.5 - 68.5	Pole + Reinf.	TP26.121x25.125x0.875	Reinf. 21 Tension Rupture	88.4%	Pass
L39	68.5 - 63.5	Pole + Reinf.	TP27.116x26.121x0.85	Reinf. 21 Tension Rupture	92.4%	Pass
L40	63.5 - 60.5	Pole + Reinf.	TP27.714x27.116x0.825	Reinf. 21 Tension Rupture	94.7%	Pass
L41	60.5 - 60.25	Pole + Reinf.	TP27.763x27.714x0.825	Reinf. 21 Tension Rupture	94.9%	Pass
L42	60.25 - 59.5	Pole + Reinf.	TP27.913x27.763x0.825	Reinf. 21 Tension Rupture	95.4%	Pass
L43	59.5 - 59.25	Pole + Reinf.	TP27.962x27.913x0.8875	Reinf. 21 Tension Rupture	89.3%	Pass
L44	59.25 - 54.25	Pole + Reinf.	TP28.958x27.962x0.85	Reinf. 21 Tension Rupture	92.7%	Pass
L45	54.25 - 50	Pole + Reinf.	TP30.64x28.958x0.8375	Reinf. 21 Tension Rupture	95.3%	Pass
L46	50 - 44.8	Pole + Reinf.	TP30.333x29.304x0.8375	Reinf. 9 Tension Rupture	97.1%	Pass
L47	44.8 - 43.58	Pole + Reinf.	TP30.574x30.333x0.8375	Reinf. 9 Tension Rupture	97.7%	Pass
L48	43.58 - 43.33	Pole + Reinf.	TP30.624x30.574x0.85	Reinf. 9 Tension Rupture	96.7%	Pass
L49	43.33 - 43.17	Pole + Reinf.	TP30.657x30.624x0.85	Reinf. 9 Tension Rupture	96.8%	Pass
L50	43.17 - 42.92	Pole + Reinf.	TP30.706x30.657x0.9375	Reinf. 9 Tension Rupture	91.7%	Pass
L51	42.92 - 39	Pole + Reinf.	TP31.481x30.706x0.9125	Reinf. 9 Tension Rupture	93.5%	Pass
L52	39 - 38.75	Pole + Reinf.	TP31.531x31.481x0.95	Reinf. 9 Tension Rupture	88.3%	Pass
L53	38.75 - 37.17	Pole + Reinf.	TP31.844x31.531x0.9375	Reinf. 9 Tension Rupture	89.0%	Pass
L54	37.17 - 36.92	Pole + Reinf.	TP31.894x31.844x0.8875	Reinf. 9 Tension Rupture	92.5%	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L55	36.92 - 34	Pole + Reinf.	TP32.471x31.894x0.8875	Reinf. 9 Tension Rupture	93.8%	Pass
L56	34 - 33.75	Pole + Reinf.	TP32.52x32.471x0.875	Reinf. 8 Tension Rupture	93.8%	Pass
L57	33.75 - 29.75	Pole + Reinf.	TP33.312x32.52x0.8625	Reinf. 8 Tension Rupture	95.3%	Pass
L58	29.75 - 29.5	Pole + Reinf.	TP33.361x33.312x0.8625	Reinf. 8 Tension Rupture	94.3%	Pass
L59	29.5 - 24.5	Pole + Reinf.	TP34.351x33.361x0.85	Reinf. 8 Tension Rupture	96.1%	Pass
L60	24.5 - 23	Pole + Reinf.	TP34.648x34.351x0.8375	Reinf. 8 Tension Rupture	96.6%	Pass
L61	23 - 22.75	Pole + Reinf.	TP34.697x34.648x0.9625	Reinf. 8 Tension Rupture	89.6%	Pass
L62	22.75 - 21.58	Pole + Reinf.	TP34.928x34.697x0.9625	Reinf. 8 Tension Rupture	89.9%	Pass
L63	21.58 - 21.33	Pole + Reinf.	TP34.978x34.928x0.85	Reinf. 8 Tension Rupture	94.9%	Pass
L64	21.33 - 16.33	Pole + Reinf.	TP35.967x34.978x0.8375	Reinf. 8 Tension Rupture	96.5%	Pass
L65	16.33 - 12.92	Pole + Reinf.	TP36.644x35.967x0.825	Reinf. 8 Tension Rupture	97.4%	Pass
L66	12.92 - 12.67	Pole + Reinf.	TP36.693x36.644x0.9125	Reinf. 7 Tension Rupture	88.3%	Pass
L67	12.67 - 12.5	Pole + Reinf.	TP36.726x36.693x0.9125	Reinf. 7 Tension Rupture	88.3%	Pass
L68	12.5 - 12.25	Pole + Reinf.	TP36.776x36.726x0.7625	Reinf. 14 Tension Rupture	91.6%	Pass
L69	12.25 - 12	Pole + Reinf.	TP36.825x36.776x0.7625	Reinf. 14 Tension Rupture	91.7%	Pass
L70	12 - 11.75	Pole + Reinf.	TP36.874x36.825x0.6625	Reinf. 2 Tension Rupture	93.7%	Pass
L71	11.75 - 8.5	Pole + Reinf.	TP37.518x36.874x0.65	Reinf. 2 Tension Rupture	94.5%	Pass
L72	8.5 - 8.25	Pole + Reinf.	TP37.567x37.518x0.925	Reinf. 1 Tension Rupture	77.5%	Pass
L73	8.25 - 7	Pole + Reinf.	TP37.815x37.567x0.9125	Reinf. 1 Tension Rupture	77.7%	Pass
L74	7 - 6.75	Pole + Reinf.	TP37.864x37.815x0.8125	Reinf. 1 Tension Rupture	90.0%	Pass
L75	6.75 - 1.75	Pole + Reinf.	TP38.854x37.864x0.7875	Reinf. 1 Tension Rupture	91.2%	Pass
L76	1.75 - 0	Pole + Reinf.	TP39.2x38.854x0.7875	Reinf. 1 Tension Rupture	91.6%	Pass
					Summary	
				Pole	83.9%	Pass
				Reinforcement	99.4%	Pass
				Overall	99.4%	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Flange Bolts	134.25	23.5	Pass
1	Flange Plate		33.5	Pass
1	Anchor Rods	0	91.1	Pass
1	Base Plate	0	63.3	Pass
1	Base Foundation (Structure)	0	21.3	Pass
1	Base Foundation (Soil Interaction)	0	88.8	Pass
Structure Rating (max from all components) =				99.4%

Notes:

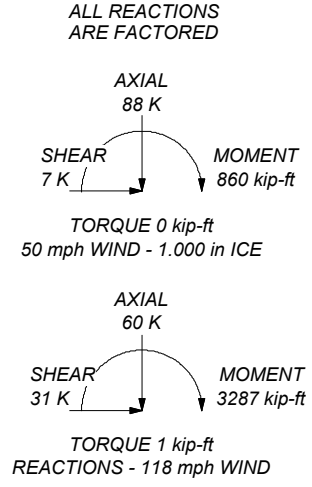
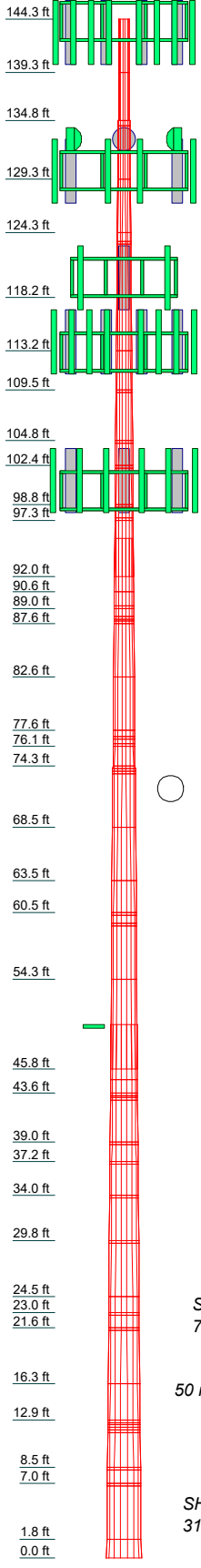
- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed. Rating per TIA-222-H Section 15.5.

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

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
2	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
3	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
4	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
5	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
6	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
7	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
8	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
9	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
10	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
11	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
12	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
13	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
14	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
15	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
16	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
17	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
18	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
19	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
20	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
21	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
22	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
23	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
24	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
25	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
26	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
27	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
28	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
29	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
30	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
31	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
32	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
33	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
34	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
35	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
36	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
37	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
38	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
39	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
40	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
41	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
42	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
43	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
44	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
45	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
46	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
47	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
48	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
49	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
50	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
51	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
52	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
53	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
54	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
55	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
56	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
57	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
58	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
59	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
60	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
61	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
62	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
63	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
64	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
65	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
66	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
67	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
68	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
69	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
70	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
71	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
72	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
73	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
74	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
75	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2
76	5.000	0	0.375	3.552	13.483	12.750	A500-46	0.2



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A500-46	46 ksi	62 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 99.4%

<p>CROWN CASTLE The Pathway to Possible</p>	<p>Crown Castle 2000 Corporate Dr. Canonsburg, PA 15317 Phone: (724) 416-2000 FAX:</p>		<p>Job: BU# 876317</p>
	<p>Project:</p>		
	<p>Client: Crown Castle</p>	<p>Drawn by: PHimes</p>	<p>App'd:</p>
	<p>Code: TIA-222-H</p>	<p>Date: 05/05/23</p>	<p>Scale: NTS</p>
	<p>Path:</p>	<p>Dwg No. E-1</p>	

Tower Input Data

The tower is a monopole.
 This tower is designed using the TIA-222-H standard.
 The following design criteria apply:

- Tower is located in New Haven County, Connecticut.
- Tower base elevation above sea level: 660.000 ft.
- Basic wind speed of 118 mph.
- Risk Category II.
- Exposure Category B.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.000 ft.
- Nominal ice thickness of 1.000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56.000 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50.000 °F.
- Deflections calculated using a wind speed of 60 mph.
- TIA-222-H Annex S.
- TOWER RATING: 99.4%.
- 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 Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification ✓ Use Code Stress Ratios ✓ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric	Distribute Leg Loads As Uniform Assume Legs Pinned ✓ Assume Rigid Index Plate ✓ Use Clear Spans For Wind Area Use Clear Spans For KL/r Retension Guys To Initial Tension ✓ Bypass Mast Stability Checks ✓ Use Azimuth Dish Coefficients ✓ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination ✓ Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs	Use ASCE 10 X-Brace Ly Rules Calculate Forces in Supporting Bracing Members Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation ✓ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <div style="background-color: #e0e0e0; text-align: center; padding: 2px;">Poles</div> ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known
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Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	144.250-139.250	5.000	0.000	Round	12.750	12.750	0.375		A500-46 (46 ksi)
L2	139.250-134.750	4.500	0.000	Round	12.750	12.750	0.375		A500-46 (46 ksi)
L3	134.750-134.250	0.500	0.000	Round	13.480	13.480	0.375		A500-46 (46 ksi)
L4	134.250-129.250	5.000	0.000	12	13.480	14.466	0.188	0.750	A572-65 (65 ksi)
L5	129.250-124.250	5.000	0.000	12	14.466	15.452	0.188	0.750	A572-65 (65 ksi)
L6	124.250-123.416	0.834	0.000	12	15.452	15.616	0.188	0.750	A572-65 (65 ksi)
L7	123.416-123.166	0.250	0.000	12	15.616	15.665	0.537	2.150	A572-65 (65 ksi)
L8	123.166-118.166	5.000	0.000	12	15.665	16.651	0.512	2.050	A572-65 (65 ksi)
L9	118.166-113.166	5.000	0.000	12	16.651	17.637	0.487	1.950	A572-65 (65 ksi)
L10	113.166-109.500	3.666	0.000	12	17.637	18.360	0.475	1.900	A572-65 (65 ksi)
L11	109.500-109.250	0.250	0.000	12	18.360	18.409	0.588	2.350	A572-65 (65 ksi)
L12	109.250-104.750	4.500	0.000	12	18.409	19.296	0.563	2.250	A572-65 (65 ksi)
L13	104.750-104.500	0.250	0.000	12	19.296	19.346	0.775	3.100	A572-65 (65 ksi)
L14	104.500-102.416	2.084	0.000	12	19.346	19.756	0.762	3.050	A572-65 (65 ksi)
L15	102.416-102.166	0.250	0.000	12	19.756	19.806	0.563	2.250	A572-65 (65 ksi)
L16	102.166-98.750	3.416	0.000	12	19.806	20.479	0.550	2.200	A572-65 (65 ksi)
L17	98.750-98.500	0.250	0.000	12	20.479	20.528	0.838	3.350	A572-65 (65 ksi)
L18	98.500-97.500	1.000	0.000	12	20.528	20.726	0.838	3.350	A572-65 (65 ksi)
L19	97.500-97.250	0.250	0.000	12	20.726	20.775	0.750	3.000	A572-65 (65 ksi)
L20	97.250-92.000	5.250	3.552	12	20.775	21.810	0.738	2.950	A572-65 (65 ksi)
L21	92.000-90.552	5.000	0.000	12	20.735	21.730	0.800	3.200	A572-65 (65 ksi)
L22	90.552-89.250	1.302	0.000	12	21.730	21.989	0.775	3.100	A572-65 (65 ksi)
L23	89.250-89.000	0.250	0.000	12	21.989	22.039	1.000	4.000	A572-65 (65 ksi)
L24	89.000-88.250	0.750	0.000	12	22.039	22.189	0.975	3.900	A572-65 (65 ksi)
L25	88.250-88.000	0.250	0.000	12	22.189	22.238	0.762	3.050	A572-65 (65 ksi)
L26	88.000-87.833	0.167	0.000	12	22.238	22.272	0.762	3.050	A572-65 (65 ksi)
L27	87.833-87.583	0.250	0.000	12	22.272	22.321	0.675	2.700	A572-65 (65 ksi)
L28	87.583-82.583	5.000	0.000	12	22.321	23.317	0.650	2.600	A572-65 (65 ksi)
L29	82.583-77.583	5.000	0.000	12	23.317	24.312	0.625	2.500	A572-65 (65 ksi)
L30	77.583-77.000	0.583	0.000	12	24.312	24.428	0.625	2.500	A572-65 (65 ksi)
L31	77.000-76.750	0.250	0.000	12	24.428	24.478	0.825	3.300	A572-65 (65 ksi)
L32	76.750-76.333	0.417	0.000	12	24.478	24.561	0.825	3.300	A572-65 (65 ksi)
L33	76.333-76.083	0.250	0.000	12	24.561	24.611	0.825	3.300	A572-65 (65 ksi)
L34	76.083-74.250	1.833	0.000	12	24.611	24.976	0.800	3.200	A572-65 (65 ksi)
L35	74.250-74.000	0.250	0.000	12	24.976	25.026	0.887	3.550	A572-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L36	74.000-73.750	0.250	0.000	12	25.026	25.076	0.887	3.550	(65 ksi) A572-65
L37	73.750-73.500	0.250	0.000	12	25.076	25.125	0.912	3.650	(65 ksi) A572-65
L38	73.500-68.500	5.000	0.000	12	25.125	26.121	0.875	3.500	(65 ksi) A572-65
L39	68.500-63.500	5.000	0.000	12	26.121	27.116	0.850	3.400	(65 ksi) A572-65
L40	63.500-60.500	3.000	0.000	12	27.116	27.714	0.825	3.300	(65 ksi) A572-65
L41	60.500-60.250	0.250	0.000	12	27.714	27.763	0.825	3.300	(65 ksi) A572-65
L42	60.250-59.500	0.750	0.000	12	27.763	27.913	0.825	3.300	(65 ksi) A572-65
L43	59.500-59.250	0.250	0.000	12	27.913	27.962	0.887	3.550	(65 ksi) A572-65
L44	59.250-54.250	5.000	0.000	12	27.962	28.958	0.850	3.400	(65 ksi) A572-65
L45	54.250-45.802	8.448	4.198	12	28.958	30.640	0.838	3.350	(65 ksi) A572-65
L46	45.802-44.802	5.198	0.000	12	29.304	30.333	0.838	3.350	(65 ksi) A572-65
L47	44.802-43.583	1.219	0.000	12	30.333	30.574	0.838	3.350	(65 ksi) A572-65
L48	43.583-43.333	0.250	0.000	12	30.574	30.624	0.850	3.400	(65 ksi) A572-65
L49	43.333-43.166	0.167	0.000	12	30.624	30.657	0.850	3.400	(65 ksi) A572-65
L50	43.166-42.916	0.250	0.000	12	30.657	30.706	0.938	3.750	(65 ksi) A572-65
L51	42.916-39.000	3.916	0.000	12	30.706	31.481	0.912	3.650	(65 ksi) A572-65
L52	39.000-38.750	0.250	0.000	12	31.481	31.531	0.950	3.800	(65 ksi) A572-65
L53	38.750-37.166	1.584	0.000	12	31.531	31.844	0.938	3.750	(65 ksi) A572-65
L54	37.166-36.916	0.250	0.000	12	31.844	31.894	0.887	3.550	(65 ksi) A572-65
L55	36.916-34.000	2.916	0.000	12	31.894	32.471	0.887	3.550	(65 ksi) A572-65
L56	34.000-33.750	0.250	0.000	12	32.471	32.520	0.875	3.500	(65 ksi) A572-65
L57	33.750-29.750	4.000	0.000	12	32.520	33.312	0.863	3.450	(65 ksi) A572-65
L58	29.750-29.500	0.250	0.000	12	33.312	33.361	0.863	3.450	(65 ksi) A572-65
L59	29.500-24.500	5.000	0.000	12	33.361	34.351	0.850	3.400	(65 ksi) A572-65
L60	24.500-23.000	1.500	0.000	12	34.351	34.648	0.838	3.350	(65 ksi) A572-65
L61	23.000-22.750	0.250	0.000	12	34.648	34.697	0.963	3.850	(65 ksi) A572-65
L62	22.750-21.583	1.167	0.000	12	34.697	34.928	0.963	3.850	(65 ksi) A572-65
L63	21.583-21.333	0.250	0.000	12	34.928	34.978	0.850	3.400	(65 ksi) A572-65
L64	21.333-16.333	5.000	0.000	12	34.978	35.967	0.838	3.350	(65 ksi) A572-65
L65	16.333-12.917	3.416	0.000	12	35.967	36.644	0.825	3.300	(65 ksi) A572-65
L66	12.917-12.667	0.250	0.000	12	36.644	36.693	0.912	3.650	(65 ksi) A572-65
L67	12.667-12.500	0.167	0.000	12	36.693	36.726	0.912	3.650	(65 ksi) A572-65
L68	12.500-12.250	0.250	0.000	12	36.726	36.776	0.762	3.050	(65 ksi) A572-65
L69	12.250-12.000	0.250	0.000	12	36.776	36.825	0.762	3.050	(65 ksi) A572-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L70	12.000-11.750	0.250	0.000	12	36.825	36.874	0.662	2.650	A572-65 (65 ksi)
L71	11.750-8.500	3.250	0.000	12	36.874	37.518	0.650	2.600	A572-65 (65 ksi)
L72	8.500-8.250	0.250	0.000	12	37.518	37.567	0.925	3.700	A572-65 (65 ksi)
L73	8.250-7.000	1.250	0.000	12	37.567	37.815	0.912	3.650	A572-65 (65 ksi)
L74	7.000-6.750	0.250	0.000	12	37.815	37.864	0.813	3.250	A572-65 (65 ksi)
L75	6.750-1.750	5.000	0.000	12	37.864	38.854	0.787	3.150	A572-65 (65 ksi)
L76	1.750-0.000	1.750		12	38.854	39.200	0.787	3.150	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	It/Q in ²	w in	w/t
L1	12.750	14.579	279.335	4.377	6.375	43.817	558.670	7.285	0.000	0
	12.750	14.579	279.335	4.377	6.375	43.817	558.670	7.285	0.000	0
L2	12.750	14.579	279.335	4.377	6.375	43.817	558.670	7.285	0.000	0
	12.750	14.579	279.335	4.377	6.375	43.817	558.670	7.285	0.000	0
L3	13.480	15.439	331.709	4.635	6.740	49.215	663.419	7.715	0.000	0
	13.480	15.439	331.709	4.635	6.740	49.215	663.419	7.715	0.000	0
L4	13.889	8.025	180.994	4.759	6.983	25.921	366.742	3.950	3.110	16.587
	14.910	8.621	224.322	5.112	7.493	29.936	454.538	4.243	3.374	17.996
L5	14.910	8.621	224.322	5.112	7.493	29.936	454.538	4.243	3.374	17.996
	15.931	9.216	274.067	5.465	8.004	34.242	555.334	4.536	3.639	19.405
L6	15.931	9.216	274.067	5.465	8.004	34.242	555.334	4.536	3.639	19.405
	16.101	9.315	283.020	5.523	8.089	34.988	573.475	4.585	3.683	19.641
L7	15.977	26.097	757.351	5.398	8.089	93.626	1534.599	12.844	2.745	5.106
	16.028	26.182	764.802	5.416	8.115	94.250	1549.697	12.886	2.758	5.131
L8	16.037	25.006	732.852	5.425	8.115	90.312	1484.956	12.307	2.825	5.512
	17.058	26.633	885.390	5.778	8.625	102.651	1794.041	13.108	3.089	6.027
L9	17.067	25.373	846.120	5.787	8.625	98.098	1714.469	12.488	3.156	6.474
	18.087	26.920	1010.565	6.139	9.136	110.614	2047.680	13.249	3.420	7.016
L10	18.092	26.249	986.808	6.144	9.136	108.014	1999.541	12.919	3.454	7.271
	18.840	27.355	1116.814	6.403	9.510	117.432	2262.967	13.463	3.647	7.679
L11	18.800	33.621	1355.419	6.362	9.510	142.521	2746.446	16.547	3.346	5.695
	18.851	33.714	1366.728	6.380	9.536	143.325	2769.361	16.593	3.359	5.718
L12	18.860	32.324	1314.084	6.389	9.536	137.804	2662.690	15.909	3.426	6.091
	19.778	33.931	1519.973	6.707	9.995	152.067	3079.878	16.700	3.664	6.514
L13	19.704	46.220	2023.726	6.631	9.995	202.465	4100.618	22.748	3.094	3.993
	19.755	46.343	2039.927	6.648	10.021	203.566	4133.444	22.808	3.108	4.01
L14	19.759	45.626	2011.080	6.653	10.021	200.687	4074.993	22.456	3.141	4.119
	20.184	46.635	2147.450	6.800	10.234	209.839	4351.315	22.952	3.251	4.264
L15	20.255	34.765	1634.756	6.871	10.234	159.741	3312.459	17.110	3.787	6.733
	20.306	34.854	1647.383	6.889	10.259	160.574	3338.044	17.154	3.800	6.756
L16	20.310	34.102	1613.915	6.894	10.259	157.312	3270.230	16.784	3.834	6.971
	21.008	35.295	1789.255	7.135	10.608	168.667	3625.516	17.371	4.014	7.299
L17	20.906	52.969	2608.327	7.032	10.608	245.878	5285.177	26.070	3.244	3.873
	20.957	53.102	2628.012	7.049	10.634	247.139	5325.065	26.135	3.257	3.889
L18	20.957	53.102	2628.012	7.049	10.634	247.139	5325.065	26.135	3.257	3.889
	21.161	53.633	2707.746	7.120	10.736	252.215	5486.627	26.397	3.310	3.952
L19	21.192	48.241	2456.993	7.151	10.736	228.858	4978.534	23.743	3.544	4.726
	21.243	48.360	2475.226	7.169	10.761	230.010	5015.479	23.801	3.558	4.744
L20	21.248	47.584	2438.533	7.173	10.761	226.600	4941.129	23.419	3.591	4.869
	22.319	50.042	2836.299	7.544	11.298	251.054	5747.111	24.629	3.869	5.246
L21	21.916	51.352	2604.715	7.137	10.741	242.512	5277.859	25.274	3.413	4.266
	22.215	53.916	3014.753	7.493	11.256	267.829	6108.707	26.536	3.680	4.6
L22	22.223	52.294	2931.020	7.502	11.256	260.391	5939.041	25.737	3.747	4.834
	22.492	52.941	3041.148	7.595	11.391	266.989	6162.190	26.056	3.816	4.924
L23	22.412	67.586	3800.525	7.514	11.391	333.657	7700.895	33.264	3.213	3.213
	22.464	67.746	3827.628	7.532	11.416	335.277	7755.811	33.343	3.227	3.227

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	It/Q in ²	w in	w/t
L24	22.473	66.131	3745.256	7.541	11.416	328.062	7588.904	32.548	3.294	3.378
	22.627	66.600	3825.474	7.594	11.494	332.833	7751.447	32.778	3.334	3.419
L25	22.702	52.606	3082.526	7.671	11.494	268.194	6246.033	25.891	3.903	5.119
	22.754	52.728	3104.059	7.688	11.519	269.463	6289.666	25.951	3.916	5.136
L26	22.754	52.728	3104.059	7.688	11.519	269.463	6289.666	25.951	3.916	5.136
	22.788	52.810	3118.499	7.700	11.537	270.312	6318.925	25.992	3.925	5.148
L27	22.819	46.940	2794.467	7.732	11.537	242.225	5662.348	23.102	4.160	6.163
	22.871	47.048	2813.834	7.749	11.562	243.360	5701.590	23.156	4.173	6.182
L28	22.879	45.358	2719.017	7.758	11.562	235.159	5509.465	22.324	4.240	6.523
	23.910	47.442	3111.201	8.115	12.078	257.590	6304.137	23.349	4.507	6.934
L29	23.919	45.667	3001.449	8.124	12.078	248.503	6081.749	22.476	4.574	7.318
	24.950	47.671	3414.060	8.480	12.594	271.091	6917.811	23.462	4.841	7.745
L30	24.950	47.671	3414.060	8.480	12.594	271.091	6917.811	23.462	4.841	7.745
	25.070	47.904	3464.497	8.522	12.654	273.788	7020.009	23.577	4.872	7.795
L31	24.999	62.702	4458.829	8.450	12.654	352.367	9034.796	30.860	4.336	5.256
	25.051	62.835	4487.097	8.468	12.680	353.880	9092.074	30.925	4.349	5.272
L32	25.051	62.835	4487.097	8.468	12.680	353.880	9092.074	30.925	4.349	5.272
	25.137	63.055	4534.514	8.498	12.723	356.411	9188.154	31.034	4.371	5.299
L33	25.137	63.055	4534.514	8.498	12.723	356.411	9188.154	31.034	4.371	5.299
	25.188	63.188	4563.100	8.515	12.748	357.932	9246.078	31.099	4.385	5.315
L34	25.197	61.337	4438.791	8.524	12.748	348.182	8994.194	30.188	4.452	5.565
	25.575	62.277	4646.037	8.655	12.938	359.113	9414.131	30.651	4.550	5.687
L35	25.544	68.839	5098.436	8.624	12.938	394.081	10330.813	33.880	4.315	4.862
	25.595	68.981	5130.107	8.641	12.963	395.740	10394.987	33.950	4.328	4.877
L36	25.595	68.981	5130.107	8.641	12.963	395.740	10394.987	33.950	4.328	4.877
	25.647	69.123	5161.909	8.659	12.989	397.403	10459.427	34.020	4.342	4.892
L37	25.638	70.997	5290.875	8.650	12.989	407.332	10720.748	34.943	4.275	4.685
	25.690	71.143	5323.640	8.668	13.015	409.042	10787.138	35.015	4.288	4.699
L38	25.703	68.325	5128.616	8.682	13.015	394.057	10391.966	33.628	4.389	5.016
	26.734	71.130	5786.510	9.038	13.531	427.662	11725.038	35.008	4.655	5.32
L39	26.742	69.166	5637.897	9.047	13.531	416.679	11423.908	34.041	4.722	5.556
	27.773	71.891	6330.781	9.403	14.046	450.710	12827.879	35.382	4.989	5.87
L40	27.782	69.843	6162.143	9.412	14.046	438.704	12486.173	34.375	5.056	6.129
	28.400	71.430	6591.746	9.626	14.356	459.174	13356.665	35.155	5.216	6.323
L41	28.400	71.430	6591.746	9.626	14.356	459.174	13356.665	35.155	5.216	6.323
	28.452	71.562	6628.421	9.644	14.381	460.901	13430.978	35.221	5.230	6.339
L42	28.452	71.562	6628.421	9.644	14.381	460.901	13430.978	35.221	5.230	6.339
	28.606	71.958	6739.262	9.697	14.459	466.102	13655.572	35.416	5.270	6.387
L43	28.584	77.231	7199.745	9.675	14.459	497.950	14588.636	38.011	5.102	5.749
	28.636	77.374	7239.601	9.693	14.485	499.815	14669.394	38.081	5.115	5.764
L44	28.649	74.207	6962.552	9.706	14.485	480.688	14108.019	36.522	5.216	6.136
	29.680	76.932	7758.004	10.063	15.000	517.192	15719.820	37.863	5.483	6.45
L45	29.684	75.834	7654.119	10.067	15.000	510.266	15509.320	37.323	5.516	6.587
	31.425	80.370	9111.392	10.669	15.872	574.072	18462.150	39.556	5.967	7.125
L46	30.903	76.767	7940.296	10.191	15.180	523.091	16089.192	37.783	5.609	6.697
	31.108	79.542	8832.656	10.559	15.712	562.143	17897.356	39.148	5.885	7.027
L47	31.108	79.542	8832.656	10.559	15.712	562.143	17897.356	39.148	5.885	7.027
	31.357	80.192	9051.177	10.646	15.837	571.505	18340.138	39.468	5.949	7.104
L48	31.353	81.355	9174.689	10.641	15.837	579.304	18590.408	40.041	5.916	6.96
	31.404	81.491	9220.582	10.659	15.863	581.261	18683.399	40.107	5.929	6.975
L49	31.404	81.491	9220.582	10.659	15.863	581.261	18683.399	40.107	5.929	6.975
	31.438	81.581	9251.324	10.671	15.880	582.570	18745.690	40.152	5.938	6.986
L50	31.407	89.715	10114.068	10.639	15.880	636.899	20493.845	44.155	5.704	6.084
	31.459	89.864	10164.669	10.657	15.906	639.054	20596.375	44.228	5.717	6.098
L51	31.468	87.541	9918.558	10.666	15.906	623.581	20097.688	43.085	5.784	6.338
	32.270	89.819	10712.920	10.944	16.307	656.941	21707.280	44.206	5.991	6.566
L52	32.257	93.395	11112.181	10.930	16.307	681.424	22516.292	45.966	5.891	6.201
	32.308	93.546	11166.294	10.948	16.333	683.668	22625.939	46.041	5.904	6.215
L53	32.312	92.353	11032.887	10.952	16.333	675.500	22355.621	45.453	5.938	6.334
	32.637	93.300	11375.549	11.065	16.495	689.623	23049.946	45.919	6.022	6.423
L54	32.654	88.467	10821.202	11.083	16.495	656.017	21926.689	43.541	6.156	6.936
	32.706	88.608	10873.172	11.100	16.521	658.145	22031.995	43.610	6.169	6.951
L55	32.706	88.608	10873.172	11.100	16.521	658.145	22031.995	43.610	6.169	6.951
	33.303	90.257	11491.697	11.307	16.820	683.221	23285.295	44.422	6.324	7.125
L56	33.308	89.021	11343.300	11.311	16.820	674.398	22984.602	43.814	6.357	7.265
	33.359	89.161	11396.674	11.329	16.846	676.540	23092.752	43.882	6.370	7.281
L57	33.363	87.922	11247.182	11.333	16.846	667.666	22789.841	43.272	6.404	7.425
	34.183	90.120	12112.233	11.617	17.256	701.930	24542.669	44.354	6.616	7.671
L58	34.183	90.120	12112.233	11.617	17.256	701.930	24542.669	44.354	6.616	7.671
	34.234	90.258	12167.724	11.635	17.281	704.100	24655.108	44.422	6.629	7.686

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	It/Q in ²	w in	w/t
L59	34.238	88.984	12005.222	11.639	17.281	694.697	24325.835	43.795	6.663	7.839
	35.263	91.692	13135.172	11.993	17.794	738.186	26615.420	45.128	6.928	8.151
L60	35.267	90.378	12956.500	11.998	17.794	728.145	26253.382	44.481	6.962	8.312
	35.575	91.178	13303.879	12.104	17.948	741.261	26957.266	44.875	7.041	8.407
L61	35.531	104.400	15120.579	12.059	17.948	842.484	30638.392	51.382	6.706	6.967
	35.582	104.553	15187.307	12.077	17.973	844.995	30773.601	51.458	6.719	6.981
L62	35.582	104.553	15187.307	12.077	17.973	844.995	30773.601	51.458	6.719	6.981
	35.821	105.269	15501.390	12.160	18.093	856.767	31410.018	51.810	6.781	7.046
L63	35.861	93.272	13826.015	12.200	18.093	764.168	28015.256	45.906	7.083	8.333
	35.912	93.408	13886.327	12.218	18.119	766.416	28137.463	45.973	7.096	8.348
L64	35.916	92.068	13697.156	12.222	18.119	755.975	27754.151	45.313	7.130	8.513
	36.941	94.737	14923.078	12.577	18.631	800.976	30238.202	46.626	7.395	8.83
L65	36.945	93.356	14716.043	12.581	18.631	789.863	29818.694	45.947	7.428	9.004
	37.645	95.152	15581.827	12.823	18.981	820.902	31573.007	46.831	7.609	9.224
L66	37.614	104.987	17108.449	12.792	18.981	901.330	34666.356	51.671	7.375	8.082
	37.665	105.132	17179.621	12.809	19.007	903.859	34810.570	51.743	7.388	8.097
L67	37.665	105.132	17179.621	12.809	19.007	903.859	34810.570	51.743	7.388	8.097
	37.700	105.229	17227.274	12.821	19.024	905.550	34907.127	51.791	7.397	8.106
L68	37.753	88.299	14577.031	12.875	19.024	766.241	29537.017	43.458	7.799	10.228
	37.804	88.421	14637.280	12.893	19.050	768.372	29659.097	43.518	7.812	10.246
L69	37.804	88.421	14637.280	12.893	19.050	768.372	29659.097	43.518	7.812	10.246
	37.855	88.542	14697.694	12.910	19.075	770.507	29781.513	43.578	7.826	10.263
L70	37.890	77.144	12876.656	12.946	19.075	675.042	26091.595	37.968	8.094	12.217
	37.942	77.249	12929.583	12.964	19.101	676.907	26198.841	38.020	8.107	12.237
L71	37.946	75.818	12698.770	12.968	19.101	664.823	25731.151	37.315	8.140	12.524
	38.612	77.164	13387.320	13.199	19.434	688.855	27126.339	37.978	8.313	12.789
L72	38.515	108.991	18628.043	13.100	19.434	958.520	37745.466	53.642	7.576	8.19
	38.566	109.139	18703.710	13.118	19.460	961.146	37898.786	53.715	7.589	8.204
L73	38.571	107.701	18469.846	13.122	19.460	949.128	37424.916	53.007	7.623	8.353
	38.827	108.428	18846.355	13.211	19.588	962.140	38187.825	53.365	7.689	8.426
L74	38.862	96.807	16917.795	13.247	19.588	863.684	34280.038	47.645	7.957	9.793
	38.913	96.936	16985.752	13.264	19.614	866.020	34417.740	47.709	7.970	9.809
L75	38.922	94.017	16496.461	13.273	19.614	841.073	33426.303	46.272	8.037	10.206
	39.946	96.526	17852.914	13.628	20.126	887.049	36174.844	47.507	8.302	10.543
L76	39.946	96.526	17852.914	13.628	20.126	887.049	36174.844	47.507	8.302	10.543
	40.305	97.404	18344.678	13.752	20.306	903.430	37171.292	47.940	8.395	10.66

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft ²	in					in	in	in
L1 144.250-139.250				1	1	1			
L2 139.250-134.750				1	1	1			
L3 134.750-134.250				1	1	1			
L4 134.250-129.250				1	1	1			
L5 129.250-124.250				1	1	1			
L6 124.250-123.416				1	1	1			
L7 123.416-123.166				1	1	0.873259			
L8 123.166-118.166				1	1	0.880843			
L9 118.166-113.166				1	1	0.893543			
L10 113.166-109.500				1	1	0.895307			
L11 109.500-109.250				1	1	0.905539			
L12 109.250-104.750				1	1	0.915518			
L13 104.750-104.500				1	1	0.930283			
L14 104.500-				1	1	0.929776			

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_r	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
ft	ft ²	in							
102.416									
L15 102.416-102.166				1	1	1.12278			
L16 102.166-98.750				1	1	1.12029			
L17 98.750-98.500				1	1	1.00154			
L18 98.500-97.500				1	1	0.993827			
L19 97.500-97.250				1	1	1.04068			
L20 97.250-92.000				1	1	1.04446			
L21 92.000-90.552				1	1	1.02362			
L22 90.552-89.250				1	1	1.04642			
L23 89.250-89.000				1	1	0.966606			
L24 89.000-88.250				1	1	0.985049			
L25 88.250-88.000				1	1	1.01704			
L26 88.000-87.833				1	1	1.01598			
L27 87.833-87.583				1	1	1.00822			
L28 87.583-82.583				1	1	1.01675			
L29 82.583-77.583				1	1	1.02867			
L30 77.583-77.000				1	1	1.02561			
L31 77.000-76.750				1	1	0.973799			
L32 76.750-76.333				1	1	0.971453			
L33 76.333-76.083				1	1	0.922508			
L34 76.083-74.250				1	1	0.940709			
L35 74.250-74.000				1	1	0.893422			
L36 74.000-73.750				1	1	0.892163			
L37 73.750-73.500				1	1	0.909624			
L38 73.500-68.500				1	1	0.921059			
L39 68.500-63.500				1	1	0.922459			
L40 63.500-60.500				1	1	0.935147			
L41 60.500-60.250				1	1	0.933979			
L42 60.250-59.500				1	1	0.930501			
L43 59.500-59.250				1	1	0.9205			
L44 59.250-54.250				1	1	0.936205			
L45 54.250-45.802				1	1	0.930731			
L46 45.802-44.802				1	1	0.938065			
L47 44.802-43.583				1	1	0.933481			

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_r	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
ft	ft ²	in							
L48 43.583-43.333				1	1	0.974523			
L49 43.333-43.166				1	1	0.97385			
L50 43.166-42.916				1	1	0.934786			
L51 42.916-39.000				1	1	0.943944			
L52 39.000-38.750				1	1	0.949681			
L53 38.750-37.166				1	1	0.955574			
L54 37.166-36.916				1	1	0.972827			
L55 36.916-34.000				1	1	0.961485			
L56 34.000-33.750				1	1	0.928941			
L57 33.750-29.750				1	1	0.927889			
L58 29.750-29.500				1	1	0.93743			
L59 29.500-24.500				1	1	0.933623			
L60 24.500-23.000				1	1	0.942163			
L61 23.000-22.750				1	1	0.90832			
L62 22.750-21.583				1	1	0.904351			
L63 21.583-21.333				1	1	0.971473			
L64 21.333-16.333				1	1	0.968358			
L65 16.333-12.917				1	1	0.971282			
L66 12.917-12.667				1	1	0.961412			
L67 12.667-12.500				1	1	0.96084			
L68 12.500-12.250				1	1	1.00814			
L69 12.250-12.000				1	1	1.00732			
L70 12.000-11.750				1	1	1.07745			
L71 11.750-8.500				1	1	1.08702			
L72 8.500-8.250				1	1	0.961703			
L73 8.250-7.000				1	1	0.970307			
L74 7.000-6.750				1	1	0.961877			
L75 6.750-1.750				1	1	0.976278			
L76 1.750-0.000				1	1	0.971053			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
FB-L98B-034-XXX(3/8)	B	No	Surface Ar (CaAa)	144.000 - 0.000	2	2	0.000 0.030	0.394		0.000
PWRT-608-S(13/16)	B	No	Surface Ar (CaAa)	144.000 - 0.000	6	3	0.000 0.150	0.820		0.001
PWRT-606-S(7/8)	B	No	Surface Ar (CaAa)	144.000 - 0.000	1	1	0.150 0.160	0.920		0.001
RFFT-48SM-001-XXX(3/8)	B	No	Surface Ar (CaAa)	144.000 - 0.000	1	1	0.160 0.170	0.400		0.000
7983A(ELLIPTICAL)	B	No	Surface Ar (CaAa)	130.000 - 0.000	3	1	-0.380 -0.300	0.573		0.000
CU12PSM9P6XXX(1-1/2)	B	No	Surface Ar (CaAa)	120.000 - 0.000	1	1	-0.100 -0.080	1.600		0.002
MLC HYBRID 6X12 6AWGX6(1-1/2)	C	No	Surface Ar (CaAa)	100.000 - 0.000	2	2	0.370 0.400	1.530		0.001
Safety Line 3/8	B	No	Surface Ar (CaAa)	144.250 - 0.000	1	1	-0.400 -0.370	0.375		0.000
PL1.25x6.875 Reinforcement	A	No	Surface Af (CaAa)	29.750 - 0.000	1	1	0.250 0.250	6.875	16.250	0.000
PL1.25x6.875 Reinforcement	B	No	Surface Af (CaAa)	29.750 - 0.000	1	1	0.250 0.250	6.875	16.250	0.000
PL1.25x6.875 Reinforcement	C	No	Surface Af (CaAa)	29.750 - 9.170	1	1	0.250 0.250	6.875	16.250	0.000
PL1.25x6.875 Reinforcement	C	No	Surface Af (CaAa)	16.420 - 0.000	1	1	0.000 0.000	6.875	16.250	0.000
PL1.25x6.875 Reinforcement	C	No	Surface Af (CaAa)	16.420 - 0.000	1	1	0.500 0.500	6.875	16.250	0.000
PL1.25x6.625 Reinforcement	A	No	Surface Af (CaAa)	59.500 - 29.750	1	1	0.250 0.250	6.625	15.750	0.000
PL1.25x6.625 Reinforcement	B	No	Surface Af (CaAa)	59.500 - 29.750	1	1	0.250 0.250	6.625	15.750	0.000
PL1.25x6.625 Reinforcement	C	No	Surface Af (CaAa)	59.500 - 29.750	1	1	0.250 0.250	6.625	15.750	0.000
PL1.25x5.5 Reinforcement	A	No	Surface Af (CaAa)	89.250 - 59.500	1	1	0.250 0.250	5.500	13.500	0.000
PL1.25x5.5 Reinforcement	B	No	Surface Af (CaAa)	89.250 - 59.500	1	1	0.250 0.250	5.500	13.500	0.000
PL1.25x5.5 Reinforcement	C	No	Surface Af (CaAa)	89.250 - 59.500	1	1	0.250 0.250	5.500	13.500	0.000
PL1.25x3.625 Reinforcement	A	No	Surface Af (CaAa)	100.000 - 89.250	1	1	0.250 0.250	3.625	9.750	0.000
PL1.25x3.625 Reinforcement	B	No	Surface Af (CaAa)	100.000 - 89.250	1	1	0.250 0.250	3.625	9.750	0.000
PL1.25x3.625 Reinforcement	C	No	Surface Af (CaAa)	100.000 - 89.250	1	1	0.250 0.250	3.625	9.750	0.000
PL1x4 Reinforcement	A	No	Surface Af (CaAa)	35.750 - 10.750	1	1	0.000 0.000	4.000	10.000	0.000
PL1x4 Reinforcement	B	No	Surface Af (CaAa)	35.750 - 10.750	1	1	-0.250 -0.250	4.000	10.000	0.000
PL1x4 Reinforcement	C	No	Surface Af (CaAa)	40.750 - 10.750	1	1	-0.250 -0.250	4.000	10.000	0.000
PL1x4 Reinforcement	A	No	Surface Af (CaAa)	62.250 - 32.250	1	1	0.500 0.500	4.000	10.000	0.000
PL1x4 Reinforcement	B	No	Surface Af (CaAa)	62.250 - 32.250	1	1	0.500 0.500	4.000	10.000	0.000
PL1x4 Reinforcement	C	No	Surface Af (CaAa)	62.250 - 32.250	1	1	0.500 0.500	4.000	10.000	0.000
PL1x4 Reinforcement	A	No	Surface Af (CaAa)	78.750 - 58.750	1	1	-0.250 -0.250	4.000	10.000	0.000

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
PL1x4 Reinforcement	B	No	Surface Af (CaAa)	78.750 - 58.750	1	1	-0.250 -0.250	4.000	10.000	0.000
PL1x4 Reinforcement	C	No	Surface Af (CaAa)	78.750 - 58.750	1	1	-0.250 -0.250	4.000	10.000	0.000

PL1x4 Reinforcement	A	No	Surface Af (CaAa)	106.500 - 86.500	1	1	-0.250 -0.250	4.000	10.000	0.000
PL1x4 Reinforcement	B	No	Surface Af (CaAa)	106.500 - 86.500	1	1	-0.250 -0.250	4.000	10.000	0.000
PL1x4 Reinforcement	C	No	Surface Af (CaAa)	106.500 - 86.500	1	1	-0.250 -0.250	4.000	10.000	0.000

Transition Stiffener 1x7	A	No	Surface Af (CaAa)	10.500 - 0.000	1	1	-0.500 -0.500	1.000	16.000	0.000
Transition Stiffener 1x7	B	No	Surface Af (CaAa)	10.500 - 0.000	1	1	-0.250 -0.250	1.000	16.000	0.000
Transition Stiffener 1x7	C	No	Surface Af (CaAa)	10.500 - 0.000	1	1	-0.250 -0.250	1.000	16.000	0.000
*										
CCI-SFP-060100	B	No	Surface Af (CaAa)	25.000 - 5.000	1	1	-0.500 -0.500	6.000	14.000	0.000
CCI-SFP-060100	C	No	Surface Af (CaAa)	25.000 - 5.000	1	1	0.000 0.000	6.000	14.000	0.000
*										
CCI-SFP-060100	C	No	Surface Af (CaAa)	25.000 - 10.000	1	1	-0.250 -0.250	6.000	14.000	0.000
*										
CCI-SFP-045100	B	No	Surface Af (CaAa)	35.083 - 20.083	1	1	0.000 0.000	4.500	11.000	0.000
*										
CCI-SFP-045100	C	No	Surface Af (CaAa)	35.083 - 25.083	1	1	0.000 0.000	4.500	11.000	0.000
*										
CCI-SFP-045100	A	No	Surface Af (CaAa)	45.080 - 25.083	1	1	-0.250 -0.250	4.500	11.000	0.000
*										
CCI-SFP-060100	B	No	Surface Af (CaAa)	45.167 - 35.167	1	1	0.000 0.000	6.000	14.000	0.000
CCI-SFP-060100	C	No	Surface Af (CaAa)	45.167 - 35.167	1	1	0.000 0.000	6.000	14.000	0.000
*										
CCI-SFP-045100	A	No	Surface Af (CaAa)	75.250 - 45.250	1	1	0.000 0.000	4.500	11.000	0.000
CCI-SFP-045100	B	No	Surface Af (CaAa)	75.250 - 45.250	1	1	0.000 0.000	4.500	11.000	0.000
*										
CCI-SFP-040075	B	No	Surface Af (CaAa)	75.250 - 45.250	1	1	0.000 0.000	4.000	9.500	0.000
*										
CCI-SFP-040075	B	No	Surface Af (CaAa)	100.330 - 75.330	1	1	0.000 0.000	4.000	9.500	0.000
CCI-SFP-040075	C	No	Surface Af (CaAa)	100.330 - 75.330	1	1	0.000 0.000	4.000	9.500	0.000
*										
CCI-SFP-040075	A	No	Surface Af (CaAa)	90.333 - 75.333	1	1	-0.500 -0.500	4.000	9.500	0.000
*										
CCI-AFP-05012520	C	No	Surface Af (CaAa)	105.330 - 85.330	1	1	0.000 0.000	5.000	12.500	0.000
*										
CCI-AFP-045100	A	No	Surface Af (CaAa)	125.416 - 100.416	1	1	0.000 0.000	4.500	11.000	0.000
CCI-AFP-045100	B	No	Surface Af (CaAa)	125.416 - 100.416	1	1	0.000 0.000	4.500	11.000	0.000
CCI-AFP-045100	C	No	Surface Af (CaAa)	125.416 - 100.416	1	1	0.000 0.000	4.500	11.000	0.000
*										
CCI-AFP-040075	A	No	Surface Af	111.000 -	1	1	-0.500	4.000	9.500	0.000

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
*			(CaAa)	96.000			-0.500			
CCI-AFP-040075	B	No	Surface Af (CaAa)	111.000 - 101.000	1	1	-0.500 -0.500	4.000	9.500	0.000
*										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		CAAA ft ² /ft	Weight klf
MLC6C-06C-008R-008R(1-1/2)	B	No	No	Inside Pole	130.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.002 0.002 0.002
HB114-1-0813U4-M5J(1-1/4)	B	No	No	Inside Pole	130.000 - 0.000	3	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
*									
LDF7-50A(1-5/8)	B	No	No	Inside Pole	113.000 - 0.000	6	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.001 0.001 0.001
HB114-U6S12-XXX-LI(1-1/4)	B	No	No	Inside Pole	113.000 - 0.000	2	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.002 0.002 0.002
LDF4-50A(1/2)	B	No	No	Inside Pole	113.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.000 0.000 0.000
*									
HB158-21U6S24-xxM_TMO(1-5/8)	C	No	No	Inside Pole	100.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.003 0.003 0.003
*									
LDF4-50A(1/2)	B	No	No	Inside Pole	50.000 - 0.000	1	No Ice 1/2" Ice 1" Ice	0.000 0.000 0.000	0.000 0.000 0.000
*									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	CAAA In Face ft ²	CAAA Out Face ft ²	Weight K
L1	144.250-139.250	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	2.357	0.000	0.024
		C	0.000	0.000	0.000	0.000	0.000
L2	139.250-134.750	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	2.224	0.000	0.023
		C	0.000	0.000	0.000	0.000	0.000
L3	134.750-134.250	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.247	0.000	0.003
		C	0.000	0.000	0.000	0.000	0.000
L4	134.250-129.250	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	2.514	0.000	0.029
		C	0.000	0.000	0.000	0.000	0.000
L5	129.250-124.250	A	0.000	0.000	0.875	0.000	0.000
		B	0.000	0.000	3.632	0.000	0.052
		C	0.000	0.000	0.875	0.000	0.000
L6	124.250-123.416	A	0.000	0.000	0.625	0.000	0.000
		B	0.000	0.000	1.085	0.000	0.009

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L7	123.416-123.166	C	0.000	0.000	0.625	0.000	0.000
		A	0.000	0.000	0.188	0.000	0.000
		B	0.000	0.000	0.325	0.000	0.003
L8	123.166-118.166	C	0.000	0.000	0.188	0.000	0.000
		A	0.000	0.000	3.750	0.000	0.000
		B	0.000	0.000	6.801	0.000	0.056
L9	118.166-113.166	C	0.000	0.000	3.750	0.000	0.000
		A	0.000	0.000	3.750	0.000	0.000
		B	0.000	0.000	7.308	0.000	0.064
L10	113.166-109.500	C	0.000	0.000	3.750	0.000	0.000
		A	0.000	0.000	3.749	0.000	0.000
		B	0.000	0.000	6.358	0.000	0.076
L11	109.500-109.250	C	0.000	0.000	2.749	0.000	0.000
		A	0.000	0.000	0.354	0.000	0.000
		B	0.000	0.000	0.532	0.000	0.005
L12	109.250-104.750	C	0.000	0.000	0.188	0.000	0.000
		A	0.000	0.000	7.542	0.000	0.000
		B	0.000	0.000	10.744	0.000	0.095
L13	104.750-104.500	C	0.000	0.000	5.025	0.000	0.000
		A	0.000	0.000	0.521	0.000	0.000
		B	0.000	0.000	0.699	0.000	0.005
L14	104.500-102.416	C	0.000	0.000	0.563	0.000	0.000
		A	0.000	0.000	4.342	0.000	0.000
		B	0.000	0.000	5.825	0.000	0.044
L15	102.416-102.166	C	0.000	0.000	4.689	0.000	0.000
		A	0.000	0.000	0.521	0.000	0.000
		B	0.000	0.000	0.699	0.000	0.005
L16	102.166-98.750	C	0.000	0.000	0.563	0.000	0.000
		A	0.000	0.000	6.622	0.000	0.000
		B	0.000	0.000	8.606	0.000	0.072
L17	98.750-98.500	C	0.000	0.000	8.628	0.000	0.005
		A	0.000	0.000	0.484	0.000	0.000
		B	0.000	0.000	0.662	0.000	0.005
L18	98.500-97.500	C	0.000	0.000	0.769	0.000	0.001
		A	0.000	0.000	1.938	0.000	0.000
		B	0.000	0.000	2.649	0.000	0.021
L19	97.500-97.250	C	0.000	0.000	3.077	0.000	0.004
		A	0.000	0.000	0.484	0.000	0.000
		B	0.000	0.000	0.662	0.000	0.005
L20	97.250-92.000	C	0.000	0.000	0.769	0.000	0.001
		A	0.000	0.000	7.505	0.000	0.000
		B	0.000	0.000	13.907	0.000	0.111
L21	92.000-90.552	C	0.000	0.000	16.153	0.000	0.019
		A	0.000	0.000	1.840	0.000	0.000
		B	0.000	0.000	3.836	0.000	0.031
L22	90.552-89.250	C	0.000	0.000	4.455	0.000	0.005
		A	0.000	0.000	2.377	0.000	0.000
		B	0.000	0.000	3.449	0.000	0.028
L23	89.250-89.000	C	0.000	0.000	4.006	0.000	0.005
		A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.740	0.000	0.005
L24	89.000-88.250	C	0.000	0.000	0.847	0.000	0.001
		A	0.000	0.000	1.688	0.000	0.000
		B	0.000	0.000	2.221	0.000	0.016
L25	88.250-88.000	C	0.000	0.000	2.542	0.000	0.003
		A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.740	0.000	0.005
L26	88.000-87.833	C	0.000	0.000	0.847	0.000	0.001
		A	0.000	0.000	0.376	0.000	0.000
		B	0.000	0.000	0.495	0.000	0.004
L27	87.833-87.583	C	0.000	0.000	0.566	0.000	0.001
		A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.740	0.000	0.005
L28	87.583-82.583	C	0.000	0.000	0.847	0.000	0.001
		A	0.000	0.000	8.639	0.000	0.000
		B	0.000	0.000	12.196	0.000	0.106
L29	82.583-77.583	C	0.000	0.000	12.046	0.000	0.018
		A	0.000	0.000	8.695	0.000	0.000
		B	0.000	0.000	12.252	0.000	0.106

Tower Sectio n	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L30	77.583-77.000	C	0.000	0.000	10.225	0.000	0.018
		A	0.000	0.000	1.312	0.000	0.000
		B	0.000	0.000	1.727	0.000	0.012
L31	77.000-76.750	C	0.000	0.000	1.490	0.000	0.002
		A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.740	0.000	0.005
L32	76.750-76.333	C	0.000	0.000	0.639	0.000	0.001
		A	0.000	0.000	0.938	0.000	0.000
		B	0.000	0.000	1.235	0.000	0.009
L33	76.333-76.083	C	0.000	0.000	1.066	0.000	0.002
		A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.740	0.000	0.005
L34	76.083-74.250	C	0.000	0.000	0.639	0.000	0.001
		A	0.000	0.000	4.152	0.000	0.000
		B	0.000	0.000	6.125	0.000	0.039
L35	74.250-74.000	C	0.000	0.000	3.965	0.000	0.007
		A	0.000	0.000	0.583	0.000	0.000
		B	0.000	0.000	0.928	0.000	0.005
L36	74.000-73.750	C	0.000	0.000	0.472	0.000	0.001
		A	0.000	0.000	0.583	0.000	0.000
		B	0.000	0.000	0.928	0.000	0.005
L37	73.750-73.500	C	0.000	0.000	0.472	0.000	0.001
		A	0.000	0.000	0.583	0.000	0.000
		B	0.000	0.000	0.928	0.000	0.005
L38	73.500-68.500	C	0.000	0.000	0.472	0.000	0.001
		A	0.000	0.000	11.667	0.000	0.000
		B	0.000	0.000	18.558	0.000	0.106
L39	68.500-63.500	C	0.000	0.000	9.447	0.000	0.018
		A	0.000	0.000	11.667	0.000	0.000
		B	0.000	0.000	18.558	0.000	0.106
L40	63.500-60.500	C	0.000	0.000	9.447	0.000	0.018
		A	0.000	0.000	8.167	0.000	0.000
		B	0.000	0.000	12.301	0.000	0.064
L41	60.500-60.250	C	0.000	0.000	6.835	0.000	0.011
		A	0.000	0.000	0.750	0.000	0.000
		B	0.000	0.000	1.095	0.000	0.005
L42	60.250-59.500	C	0.000	0.000	0.639	0.000	0.001
		A	0.000	0.000	2.250	0.000	0.000
		B	0.000	0.000	3.284	0.000	0.016
L43	59.500-59.250	C	0.000	0.000	1.917	0.000	0.003
		A	0.000	0.000	0.797	0.000	0.000
		B	0.000	0.000	1.141	0.000	0.005
L44	59.250-54.250	C	0.000	0.000	0.686	0.000	0.001
		A	0.000	0.000	12.938	0.000	0.000
		B	0.000	0.000	19.829	0.000	0.106
L45	54.250-45.802	C	0.000	0.000	10.717	0.000	0.018
		A	0.000	0.000	21.296	0.000	0.000
		B	0.000	0.000	32.939	0.000	0.180
L46	45.802-44.802	C	0.000	0.000	17.545	0.000	0.031
		A	0.000	0.000	2.393	0.000	0.000
		B	0.000	0.000	3.597	0.000	0.021
L47	44.802-43.583	C	0.000	0.000	2.410	0.000	0.004
		A	0.000	0.000	3.073	0.000	0.000
		B	0.000	0.000	4.138	0.000	0.026
L48	43.583-43.333	C	0.000	0.000	3.644	0.000	0.004
		A	0.000	0.000	0.630	0.000	0.000
		B	0.000	0.000	0.849	0.000	0.005
L49	43.333-43.166	C	0.000	0.000	0.747	0.000	0.001
		A	0.000	0.000	0.421	0.000	0.000
		B	0.000	0.000	0.567	0.000	0.004
L50	43.166-42.916	C	0.000	0.000	0.499	0.000	0.001
		A	0.000	0.000	0.630	0.000	0.000
		B	0.000	0.000	0.849	0.000	0.005
L51	42.916-39.000	C	0.000	0.000	0.747	0.000	0.001
		A	0.000	0.000	9.872	0.000	0.000
		B	0.000	0.000	13.293	0.000	0.084
L52	39.000-38.750	C	0.000	0.000	12.871	0.000	0.014
		A	0.000	0.000	0.630	0.000	0.000
		B	0.000	0.000	0.849	0.000	0.005

Tower Sectio n	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L53	38.750-37.166	C	0.000	0.000	0.914	0.000	0.001
		A	0.000	0.000	3.993	0.000	0.000
		B	0.000	0.000	5.377	0.000	0.034
L54	37.166-36.916	C	0.000	0.000	5.791	0.000	0.006
		A	0.000	0.000	0.630	0.000	0.000
		B	0.000	0.000	0.849	0.000	0.005
L55	36.916-34.000	C	0.000	0.000	0.914	0.000	0.001
		A	0.000	0.000	8.517	0.000	0.000
		B	0.000	0.000	10.813	0.000	0.062
L56	34.000-33.750	C	0.000	0.000	10.408	0.000	0.011
		A	0.000	0.000	0.797	0.000	0.000
		B	0.000	0.000	0.975	0.000	0.005
L57	33.750-29.750	C	0.000	0.000	0.873	0.000	0.001
		A	0.000	0.000	11.083	0.000	0.000
		B	0.000	0.000	13.929	0.000	0.085
L58	29.750-29.500	C	0.000	0.000	12.307	0.000	0.015
		A	0.000	0.000	0.641	0.000	0.000
		B	0.000	0.000	0.819	0.000	0.005
L59	29.500-24.500	C	0.000	0.000	0.717	0.000	0.001
		A	0.000	0.000	12.375	0.000	0.000
		B	0.000	0.000	16.870	0.000	0.107
L60	24.500-23.000	C	0.000	0.000	14.905	0.000	0.018
		A	0.000	0.000	2.719	0.000	0.000
		B	0.000	0.000	6.411	0.000	0.032
L61	23.000-22.750	C	0.000	0.000	6.178	0.000	0.006
		A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	1.069	0.000	0.005
L62	22.750-21.583	C	0.000	0.000	1.030	0.000	0.001
		A	0.000	0.000	2.115	0.000	0.000
		B	0.000	0.000	4.988	0.000	0.025
L63	21.583-21.333	C	0.000	0.000	4.806	0.000	0.004
		A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	1.069	0.000	0.005
L64	21.333-16.333	C	0.000	0.000	1.030	0.000	0.001
		A	0.000	0.000	9.063	0.000	0.000
		B	0.000	0.000	18.558	0.000	0.107
L65	16.333-12.917	C	0.000	0.000	20.792	0.000	0.018
		A	0.000	0.000	6.191	0.000	0.000
		B	0.000	0.000	12.038	0.000	0.073
L66	12.917-12.667	C	0.000	0.000	21.897	0.000	0.013
		A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	0.881	0.000	0.005
L67	12.667-12.500	C	0.000	0.000	1.603	0.000	0.001
		A	0.000	0.000	0.303	0.000	0.000
		B	0.000	0.000	0.589	0.000	0.004
L68	12.500-12.250	C	0.000	0.000	1.070	0.000	0.001
		A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	0.881	0.000	0.005
L69	12.250-12.000	C	0.000	0.000	1.603	0.000	0.001
		A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	0.881	0.000	0.005
L70	12.000-11.750	C	0.000	0.000	1.603	0.000	0.001
		A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	0.881	0.000	0.005
L71	11.750-8.500	C	0.000	0.000	1.603	0.000	0.001
		A	0.000	0.000	4.684	0.000	0.000
		B	0.000	0.000	10.247	0.000	0.069
L72	8.500-8.250	C	0.000	0.000	17.359	0.000	0.012
		A	0.000	0.000	0.323	0.000	0.000
		B	0.000	0.000	0.751	0.000	0.005
L73	8.250-7.000	C	0.000	0.000	0.936	0.000	0.001
		A	0.000	0.000	1.616	0.000	0.000
		B	0.000	0.000	3.755	0.000	0.027
L74	7.000-6.750	C	0.000	0.000	4.680	0.000	0.005
		A	0.000	0.000	0.323	0.000	0.000
		B	0.000	0.000	0.751	0.000	0.005
L75	6.750-1.750	C	0.000	0.000	0.936	0.000	0.001
		A	0.000	0.000	6.463	0.000	0.000
		B	0.000	0.000	11.770	0.000	0.107

Tower Section	Tower Elevation	Face	A _R	A _F	C _{AA} _A In Face	C _{AA} _A Out Face	Weight
n	ft		ft ²	ft ²	ft ²	ft ²	K
L76	1.750-0.000	C	0.000	0.000	15.472	0.000	0.018
		A	0.000	0.000	2.262	0.000	0.000
		B	0.000	0.000	3.507	0.000	0.037
		C	0.000	0.000	4.803	0.000	0.006

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation	Face or Leg	Ice Thickness	A _R	A _F	C _{AA} _A In Face	C _{AA} _A Out Face	Weight
n	ft		in	ft ²	ft ²	ft ²	ft ²	K
L1	144.250-139.250	A	0.983	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.930	0.000	0.081
		C		0.000	0.000	0.000	0.000	0.000
L2	139.250-134.750	A	0.980	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	7.441	0.000	0.076
		C		0.000	0.000	0.000	0.000	0.000
L3	134.750-134.250	A	0.978	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.826	0.000	0.008
		C		0.000	0.000	0.000	0.000	0.000
L4	134.250-129.250	A	0.976	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	8.436	0.000	0.092
		C		0.000	0.000	0.000	0.000	0.000
L5	129.250-124.250	A	0.972	0.000	0.000	1.101	0.000	0.006
		B		0.000	0.000	10.586	0.000	0.144
		C		0.000	0.000	1.101	0.000	0.006
L6	124.250-123.416	A	0.970	0.000	0.000	0.787	0.000	0.005
		B		0.000	0.000	2.367	0.000	0.028
		C		0.000	0.000	0.787	0.000	0.005
L7	123.416-123.166	A	0.970	0.000	0.000	0.236	0.000	0.001
		B		0.000	0.000	0.709	0.000	0.008
		C		0.000	0.000	0.236	0.000	0.001
L8	123.166-118.166	A	0.968	0.000	0.000	4.718	0.000	0.028
		B		0.000	0.000	14.819	0.000	0.175
		C		0.000	0.000	4.718	0.000	0.028
L9	118.166-113.166	A	0.964	0.000	0.000	4.714	0.000	0.027
		B		0.000	0.000	15.904	0.000	0.191
		C		0.000	0.000	4.714	0.000	0.027
L10	113.166-109.500	A	0.960	0.000	0.000	4.741	0.000	0.027
		B		0.000	0.000	12.862	0.000	0.176
		C		0.000	0.000	3.453	0.000	0.020
L11	109.500-109.250	A	0.958	0.000	0.000	0.450	0.000	0.003
		B		0.000	0.000	0.997	0.000	0.013
		C		0.000	0.000	0.235	0.000	0.001
L12	109.250-104.750	A	0.956	0.000	0.000	9.597	0.000	0.055
		B		0.000	0.000	19.429	0.000	0.239
		C		0.000	0.000	6.331	0.000	0.037
L13	104.750-104.500	A	0.954	0.000	0.000	0.664	0.000	0.004
		B		0.000	0.000	1.209	0.000	0.014
		C		0.000	0.000	0.706	0.000	0.004
L14	104.500-102.416	A	0.953	0.000	0.000	5.533	0.000	0.032
		B		0.000	0.000	10.077	0.000	0.117
		C		0.000	0.000	5.880	0.000	0.034
L15	102.416-102.166	A	0.952	0.000	0.000	0.664	0.000	0.004
		B		0.000	0.000	1.208	0.000	0.014
		C		0.000	0.000	0.705	0.000	0.004
L16	102.166-98.750	A	0.950	0.000	0.000	8.481	0.000	0.049
		B		0.000	0.000	15.435	0.000	0.185
		C		0.000	0.000	11.179	0.000	0.071
L17	98.750-98.500	A	0.948	0.000	0.000	0.625	0.000	0.004
		B		0.000	0.000	1.179	0.000	0.014
		C		0.000	0.000	1.035	0.000	0.007
L18	98.500-97.500	A	0.948	0.000	0.000	2.499	0.000	0.015
		B		0.000	0.000	4.713	0.000	0.055
		C		0.000	0.000	4.141	0.000	0.029
L19	97.500-97.250	A	0.947	0.000	0.000	0.625	0.000	0.004
		B		0.000	0.000	1.178	0.000	0.014

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L20	97.250-92.000	C		0.000	0.000	1.035	0.000	0.007
		A	0.944	0.000	0.000	9.685	0.000	0.058
		B		0.000	0.000	24.707	0.000	0.290
L21	92.000-90.552	C		0.000	0.000	21.722	0.000	0.149
		A	0.941	0.000	0.000	2.377	0.000	0.014
		B		0.000	0.000	6.814	0.000	0.080
L22	90.552-89.250	C		0.000	0.000	5.991	0.000	0.041
		A	0.940	0.000	0.000	3.060	0.000	0.018
		B		0.000	0.000	6.114	0.000	0.072
L23	89.250-89.000	C		0.000	0.000	5.381	0.000	0.037
		A	0.939	0.000	0.000	0.703	0.000	0.004
		B		0.000	0.000	1.254	0.000	0.014
L24	89.000-88.250	C		0.000	0.000	1.113	0.000	0.007
		A	0.938	0.000	0.000	2.110	0.000	0.012
		B		0.000	0.000	3.760	0.000	0.042
L25	88.250-88.000	C		0.000	0.000	3.338	0.000	0.022
		A	0.938	0.000	0.000	0.703	0.000	0.004
		B		0.000	0.000	1.253	0.000	0.014
L26	88.000-87.833	C		0.000	0.000	1.113	0.000	0.007
		A	0.938	0.000	0.000	0.470	0.000	0.003
		B		0.000	0.000	0.837	0.000	0.009
L27	87.833-87.583	C		0.000	0.000	0.743	0.000	0.005
		A	0.937	0.000	0.000	0.703	0.000	0.004
		B		0.000	0.000	1.253	0.000	0.014
L28	87.583-82.583	C		0.000	0.000	1.112	0.000	0.007
		A	0.934	0.000	0.000	10.710	0.000	0.060
		B		0.000	0.000	21.682	0.000	0.261
L29	82.583-77.583	C		0.000	0.000	16.089	0.000	0.112
		A	0.929	0.000	0.000	10.769	0.000	0.060
		B		0.000	0.000	21.698	0.000	0.260
L30	77.583-77.000	C		0.000	0.000	13.842	0.000	0.099
		A	0.926	0.000	0.000	1.635	0.000	0.009
		B		0.000	0.000	2.907	0.000	0.032
L31	77.000-76.750	C		0.000	0.000	1.993	0.000	0.014
		A	0.925	0.000	0.000	0.701	0.000	0.004
		B		0.000	0.000	1.246	0.000	0.014
L32	76.750-76.333	C		0.000	0.000	0.855	0.000	0.006
		A	0.925	0.000	0.000	1.170	0.000	0.007
		B		0.000	0.000	2.078	0.000	0.023
L33	76.333-76.083	C		0.000	0.000	1.425	0.000	0.010
		A	0.924	0.000	0.000	0.701	0.000	0.004
		B		0.000	0.000	1.246	0.000	0.014
L34	76.083-74.250	C		0.000	0.000	0.855	0.000	0.006
		A	0.923	0.000	0.000	5.152	0.000	0.029
		B		0.000	0.000	9.996	0.000	0.107
L35	74.250-74.000	C		0.000	0.000	5.344	0.000	0.038
		A	0.922	0.000	0.000	0.722	0.000	0.004
		B		0.000	0.000	1.478	0.000	0.015
L36	74.000-73.750	C		0.000	0.000	0.641	0.000	0.005
		A	0.921	0.000	0.000	0.722	0.000	0.004
		B		0.000	0.000	1.478	0.000	0.015
L37	73.750-73.500	C		0.000	0.000	0.641	0.000	0.005
		A	0.921	0.000	0.000	0.721	0.000	0.004
		B		0.000	0.000	1.478	0.000	0.015
L38	73.500-68.500	C		0.000	0.000	0.641	0.000	0.005
		A	0.918	0.000	0.000	14.420	0.000	0.080
		B		0.000	0.000	29.517	0.000	0.302
L39	68.500-63.500	C		0.000	0.000	12.812	0.000	0.093
		A	0.911	0.000	0.000	14.400	0.000	0.079
		B		0.000	0.000	29.440	0.000	0.300
L40	63.500-60.500	C		0.000	0.000	12.790	0.000	0.092
		A	0.905	0.000	0.000	10.113	0.000	0.056
		B		0.000	0.000	19.108	0.000	0.187
L41	60.500-60.250	C		0.000	0.000	9.146	0.000	0.063
		A	0.903	0.000	0.000	0.931	0.000	0.005
		B		0.000	0.000	1.679	0.000	0.016
L42	60.250-59.500	C		0.000	0.000	0.850	0.000	0.006
		A	0.902	0.000	0.000	2.791	0.000	0.015
		B		0.000	0.000	5.036	0.000	0.048

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L43	59.500-59.250	C	0.901	0.000	0.000	2.550	0.000	0.017
		A		0.000	0.000	0.977	0.000	0.005
		B		0.000	0.000	1.725	0.000	0.016
L44	59.250-54.250	C	0.897	0.000	0.000	0.897	0.000	0.006
		A		0.000	0.000	15.719	0.000	0.084
		B		0.000	0.000	30.644	0.000	0.303
L45	54.250-45.802	C	0.886	0.000	0.000	14.106	0.000	0.097
		A		0.000	0.000	25.787	0.000	0.136
		B		0.000	0.000	50.841	0.000	0.502
L46	45.802-44.802	C	0.877	0.000	0.000	23.057	0.000	0.158
		A		0.000	0.000	2.895	0.000	0.015
		B		0.000	0.000	5.593	0.000	0.058
L47	44.802-43.583	C	0.875	0.000	0.000	3.097	0.000	0.021
		A		0.000	0.000	3.713	0.000	0.019
		B		0.000	0.000	6.379	0.000	0.068
L48	43.583-43.333	C	0.874	0.000	0.000	4.545	0.000	0.030
		A		0.000	0.000	0.761	0.000	0.004
		B		0.000	0.000	1.307	0.000	0.014
L49	43.333-43.166	C	0.873	0.000	0.000	0.932	0.000	0.006
		A		0.000	0.000	0.508	0.000	0.003
		B		0.000	0.000	0.873	0.000	0.009
L50	43.166-42.916	C	0.873	0.000	0.000	0.622	0.000	0.004
		A		0.000	0.000	0.761	0.000	0.004
		B		0.000	0.000	1.307	0.000	0.014
L51	42.916-39.000	C	0.869	0.000	0.000	0.932	0.000	0.006
		A		0.000	0.000	11.912	0.000	0.062
		B		0.000	0.000	20.439	0.000	0.216
L52	39.000-38.750	C	0.864	0.000	0.000	16.052	0.000	0.103
		A		0.000	0.000	0.760	0.000	0.004
		B		0.000	0.000	1.303	0.000	0.014
L53	38.750-37.166	C	0.862	0.000	0.000	1.140	0.000	0.007
		A		0.000	0.000	4.812	0.000	0.025
		B		0.000	0.000	8.247	0.000	0.087
L54	37.166-36.916	C	0.860	0.000	0.000	7.219	0.000	0.045
		A		0.000	0.000	0.759	0.000	0.004
		B		0.000	0.000	1.300	0.000	0.014
L55	36.916-34.000	C	0.856	0.000	0.000	1.139	0.000	0.007
		A		0.000	0.000	10.315	0.000	0.053
		B		0.000	0.000	16.439	0.000	0.165
L56	34.000-33.750	C	0.852	0.000	0.000	13.026	0.000	0.081
		A		0.000	0.000	0.967	0.000	0.005
		B		0.000	0.000	1.485	0.000	0.014
L57	33.750-29.750	C	0.847	0.000	0.000	1.099	0.000	0.007
		A		0.000	0.000	13.369	0.000	0.068
		B		0.000	0.000	21.621	0.000	0.219
L58	29.750-29.500	C	0.841	0.000	0.000	15.480	0.000	0.097
		A		0.000	0.000	0.767	0.000	0.004
		B		0.000	0.000	1.280	0.000	0.013
L59	29.500-24.500	C	0.833	0.000	0.000	0.898	0.000	0.006
		A		0.000	0.000	14.777	0.000	0.073
		B		0.000	0.000	26.107	0.000	0.266
L60	24.500-23.000	C	0.822	0.000	0.000	18.607	0.000	0.115
		A		0.000	0.000	3.212	0.000	0.016
		B		0.000	0.000	9.370	0.000	0.086
L61	23.000-22.750	C	0.819	0.000	0.000	7.581	0.000	0.043
		A		0.000	0.000	0.535	0.000	0.003
		B		0.000	0.000	1.560	0.000	0.014
L62	22.750-21.583	C	0.817	0.000	0.000	1.263	0.000	0.007
		A		0.000	0.000	2.496	0.000	0.012
		B		0.000	0.000	7.275	0.000	0.067
L63	21.583-21.333	C	0.814	0.000	0.000	5.891	0.000	0.033
		A		0.000	0.000	0.535	0.000	0.003
		B		0.000	0.000	1.557	0.000	0.014
L64	21.333-16.333	C	0.804	0.000	0.000	1.261	0.000	0.007
		A		0.000	0.000	10.670	0.000	0.051
		B		0.000	0.000	27.602	0.000	0.266
L65	16.333-12.917	C	0.784	0.000	0.000	25.398	0.000	0.140
		A		0.000	0.000	7.262	0.000	0.033
		B		0.000	0.000	17.936	0.000	0.174

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L66	12.917-12.667	C		0.000	0.000	25.947	0.000	0.133
		A	0.773	0.000	0.000	0.530	0.000	0.002
		B		0.000	0.000	1.307	0.000	0.013
L67	12.667-12.500	C		0.000	0.000	1.896	0.000	0.010
		A	0.772	0.000	0.000	0.354	0.000	0.002
		B		0.000	0.000	0.873	0.000	0.008
		C		0.000	0.000	1.266	0.000	0.006
L68	12.500-12.250	A	0.771	0.000	0.000	0.530	0.000	0.002
		B		0.000	0.000	1.306	0.000	0.013
		C		0.000	0.000	1.895	0.000	0.010
L69	12.250-12.000	A	0.769	0.000	0.000	0.530	0.000	0.002
		B		0.000	0.000	1.305	0.000	0.013
		C		0.000	0.000	1.894	0.000	0.010
L70	12.000-11.750	A	0.767	0.000	0.000	0.530	0.000	0.002
		B		0.000	0.000	1.304	0.000	0.013
		C		0.000	0.000	1.894	0.000	0.010
L71	11.750-8.500	A	0.755	0.000	0.000	5.560	0.000	0.033
		B		0.000	0.000	15.559	0.000	0.164
		C		0.000	0.000	20.669	0.000	0.113
L72	8.500-8.250	A	0.741	0.000	0.000	0.389	0.000	0.003
		B		0.000	0.000	1.152	0.000	0.013
		C		0.000	0.000	1.138	0.000	0.007
L73	8.250-7.000	A	0.734	0.000	0.000	1.941	0.000	0.013
		B		0.000	0.000	5.742	0.000	0.063
		C		0.000	0.000	5.681	0.000	0.035
L74	7.000-6.750	A	0.727	0.000	0.000	0.388	0.000	0.003
		B		0.000	0.000	1.145	0.000	0.012
		C		0.000	0.000	1.135	0.000	0.007
L75	6.750-1.750	A	0.692	0.000	0.000	7.693	0.000	0.050
		B		0.000	0.000	18.841	0.000	0.227
		C		0.000	0.000	18.851	0.000	0.117
L76	1.750-0.000	A	0.591	0.000	0.000	2.631	0.000	0.015
		B		0.000	0.000	5.570	0.000	0.070
		C		0.000	0.000	5.765	0.000	0.033

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
L1	144.250-139.250	2.344	-1.002	2.476	-1.225
L2	139.250-134.750	2.389	-1.012	2.528	-1.233
L3	134.750-134.250	2.465	-1.044	2.612	-1.274
L4	134.250-129.250	1.823	-0.803	2.637	-1.347
L5	129.250-124.250	1.498	-0.792	2.371	-1.491
L6	124.250-123.416	0.905	-0.478	1.690	-1.063
L7	123.416-123.166	0.910	-0.481	1.701	-1.070
L8	123.166-118.166	1.012	-0.566	1.830	-1.179
L9	118.166-113.166	1.191	-0.715	2.055	-1.368
L10	113.166-109.500	0.412	-0.490	1.437	-1.148
L11	109.500-109.250	-0.497	-0.219	0.643	-0.848
L12	109.250-104.750	-0.435	-0.031	0.582	-0.643
L13	104.750-104.500	-0.336	0.793	0.479	0.167
L14	104.500-102.416	-0.340	0.801	0.483	0.169
L15	102.416-102.166	-0.349	0.821	0.487	0.171
L16	102.166-98.750	0.352	1.624	1.034	0.883
L17	98.750-98.500	0.745	2.115	1.218	1.381
L18	98.500-97.500	0.749	2.124	1.224	1.389
L19	97.500-97.250	0.752	2.133	1.229	1.395
L20	97.250-92.000	1.039	1.486	1.509	0.808
L21	92.000-90.552	1.140	1.274	1.609	0.615
L22	90.552-89.250	0.840	2.070	1.335	1.327
L23	89.250-89.000	0.715	2.028	1.205	1.376
L24	89.000-88.250	0.719	2.038	1.211	1.382
L25	88.250-88.000	0.723	2.050	1.217	1.390

Section	Elevation	CP _x	CP _z	CP _x	CP _z
	ft	in	in	Ice in	Ice in
L26	88.000-87.833	0.724	2.053	1.219	1.393
L27	87.833-87.583	0.725	2.055	1.221	1.395
L28	87.583-82.583	0.922	1.980	1.483	1.185
L29	82.583-77.583	0.993	1.583	1.581	0.828
L30	77.583-77.000	0.842	1.342	1.397	0.735
L31	77.000-76.750	0.845	1.347	1.401	0.737
L32	76.750-76.333	0.847	1.350	1.404	0.739
L33	76.333-76.083	0.849	1.353	1.407	0.741
L34	76.083-74.250	1.011	-0.289	1.554	-0.686
L35	74.250-74.000	1.161	-1.515	1.685	-1.752
L36	74.000-73.750	1.163	-1.518	1.687	-1.755
L37	73.750-73.500	1.165	-1.520	1.690	-1.758
L38	73.500-68.500	1.185	-1.546	1.716	-1.785
L39	68.500-63.500	1.223	-1.596	1.765	-1.838
L40	63.500-60.500	1.128	-1.472	1.644	-1.713
L41	60.500-60.250	1.063	-1.388	1.561	-1.626
L42	60.250-59.500	1.067	-1.392	1.565	-1.631
L43	59.500-59.250	1.024	-1.337	1.521	-1.585
L44	59.250-54.250	1.228	-1.603	1.760	-1.835
L45	54.250-45.802	1.301	-1.698	1.847	-1.928
L46	45.802-44.802	1.069	-0.655	1.634	-1.078
L47	44.802-43.583	0.535	0.922	1.095	0.284
L48	43.583-43.333	0.537	0.925	1.099	0.286
L49	43.333-43.166	0.538	0.926	1.100	0.287
L50	43.166-42.916	0.538	0.927	1.101	0.287
L51	42.916-39.000	0.898	1.164	1.419	0.513
L52	39.000-38.750	1.323	1.441	1.794	0.779
L53	38.750-37.166	1.329	1.448	1.801	0.783
L54	37.166-36.916	1.335	1.455	1.808	0.788
L55	36.916-34.000	0.786	0.523	1.322	-0.036
L56	34.000-33.750	0.430	-0.064	1.036	-0.562
L57	33.750-29.750	0.479	-0.071	1.139	-0.616
L58	29.750-29.500	0.510	-0.076	1.204	-0.650
L59	29.500-24.500	0.636	-0.178	1.310	-0.732
L60	24.500-23.000	1.427	-0.741	1.941	-1.154
L61	23.000-22.750	1.432	-0.744	1.947	-1.157
L62	22.750-21.583	1.436	-0.746	1.952	-1.160
L63	21.583-21.333	1.440	-0.748	1.956	-1.162
L64	21.333-16.333	0.767	-0.360	1.392	-0.840
L65	16.333-12.917	-1.474	0.756	-0.568	0.158
L66	12.917-12.667	-1.486	0.761	-0.581	0.165
L67	12.667-12.500	-1.487	0.762	-0.583	0.166
L68	12.500-12.250	-1.488	0.762	-0.585	0.167
L69	12.250-12.000	-1.489	0.763	-0.587	0.168
L70	12.000-11.750	-1.491	0.763	-0.589	0.169
L71	11.750-8.500	-1.958	0.995	-0.902	0.426
L72	8.500-8.250	-1.660	0.076	-0.539	-0.351
L73	8.250-7.000	-1.665	0.076	-0.549	-0.348
L74	7.000-6.750	-1.670	0.076	-0.560	-0.345
L75	6.750-1.750	-0.713	0.086	0.345	-0.364
L76	1.750-0.000	-0.091	0.092	0.828	-0.327

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L1	2	FB-L98B-034-XXX(3/8)	139.25 - 144.00	1.0000	1.0000
L1	3	PWRT-608-S(13/16)	139.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L1	4	PWRT-606-S(7/8)	144.00 139.25 - 144.00	1.0000	1.0000
L1	5	RFFT-48SM-001-XXX(3/8)	139.25 - 144.00	1.0000	1.0000
L1	25	Safety Line 3/8	139.25 - 144.25	1.0000	1.0000
L2	2	FB-L98B-034-XXX(3/8)	134.75 - 139.25	1.0000	1.0000
L2	3	PWRT-608-S(13/16)	134.75 - 139.25	1.0000	1.0000
L2	4	PWRT-606-S(7/8)	134.75 - 139.25	1.0000	1.0000
L2	5	RFFT-48SM-001-XXX(3/8)	134.75 - 139.25	1.0000	1.0000
L2	25	Safety Line 3/8	134.75 - 139.25	1.0000	1.0000
L3	2	FB-L98B-034-XXX(3/8)	134.25 - 134.75	1.0000	1.0000
L3	3	PWRT-608-S(13/16)	134.25 - 134.75	1.0000	1.0000
L3	4	PWRT-606-S(7/8)	134.25 - 134.75	1.0000	1.0000
L3	5	RFFT-48SM-001-XXX(3/8)	134.25 - 134.75	1.0000	1.0000
L3	25	Safety Line 3/8	134.25 - 134.75	1.0000	1.0000
L4	2	FB-L98B-034-XXX(3/8)	129.25 - 134.25	1.0000	1.0000
L4	3	PWRT-608-S(13/16)	129.25 - 134.25	1.0000	1.0000
L4	4	PWRT-606-S(7/8)	129.25 - 134.25	1.0000	1.0000
L4	5	RFFT-48SM-001-XXX(3/8)	129.25 - 134.25	1.0000	1.0000
L4	7	7983A(ELLIPTICAL)	129.25 - 130.00	1.0000	1.0000
L4	25	Safety Line 3/8	129.25 - 134.25	1.0000	1.0000
L5	2	FB-L98B-034-XXX(3/8)	124.25 - 129.25	1.0000	1.0000
L5	3	PWRT-608-S(13/16)	124.25 - 129.25	1.0000	1.0000
L5	4	PWRT-606-S(7/8)	124.25 - 129.25	1.0000	1.0000
L5	5	RFFT-48SM-001-XXX(3/8)	124.25 - 129.25	1.0000	1.0000
L5	7	7983A(ELLIPTICAL)	124.25 - 129.25	1.0000	1.0000
L5	25	Safety Line 3/8	124.25 - 129.25	1.0000	1.0000
L5	91	CCI-AFP-045100	124.25 - 125.42	1.0000	1.0000
L5	92	CCI-AFP-045100	124.25 - 125.42	1.0000	1.0000
L5	93	CCI-AFP-045100	124.25 - 125.42	1.0000	1.0000
L6	2	FB-L98B-034-XXX(3/8)	123.42 - 124.25	1.0000	1.0000
L6	3	PWRT-608-S(13/16)	123.42 - 124.25	1.0000	1.0000
L6	4	PWRT-606-S(7/8)	123.42 - 124.25	1.0000	1.0000
L6	5	RFFT-48SM-001-XXX(3/8)	123.42 - 124.25	1.0000	1.0000
L6	7	7983A(ELLIPTICAL)	123.42 - 124.25	1.0000	1.0000
L6	25	Safety Line 3/8	123.42 - 124.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L6	91	CCI-AFP-045100	123.42 - 124.25	1.0000	1.0000
L6	92	CCI-AFP-045100	123.42 - 124.25	1.0000	1.0000
L6	93	CCI-AFP-045100	123.42 - 124.25	1.0000	1.0000
L7	2	FB-L98B-034-XXX(3/8)	123.17 - 123.42	1.0000	1.0000
L7	3	PWRT-608-S(13/16)	123.17 - 123.42	1.0000	1.0000
L7	4	PWRT-606-S(7/8)	123.17 - 123.42	1.0000	1.0000
L7	5	RFFT-48SM-001-XXX(3/8)	123.17 - 123.42	1.0000	1.0000
L7	7	7983A(ELLIPTICAL)	123.17 - 123.42	1.0000	1.0000
L7	25	Safety Line 3/8	123.17 - 123.42	1.0000	1.0000
L7	91	CCI-AFP-045100	123.17 - 123.42	1.0000	1.0000
L7	92	CCI-AFP-045100	123.17 - 123.42	1.0000	1.0000
L7	93	CCI-AFP-045100	123.17 - 123.42	1.0000	1.0000
L8	2	FB-L98B-034-XXX(3/8)	118.17 - 123.17	1.0000	1.0000
L8	3	PWRT-608-S(13/16)	118.17 - 123.17	1.0000	1.0000
L8	4	PWRT-606-S(7/8)	118.17 - 123.17	1.0000	1.0000
L8	5	RFFT-48SM-001-XXX(3/8)	118.17 - 123.17	1.0000	1.0000
L8	7	7983A(ELLIPTICAL)	118.17 - 123.17	1.0000	1.0000
L8	11	CU12PSM9P6XXX(1-1/2)	118.17 - 120.00	1.0000	1.0000
L8	25	Safety Line 3/8	118.17 - 123.17	1.0000	1.0000
L8	91	CCI-AFP-045100	118.17 - 123.17	1.0000	1.0000
L8	92	CCI-AFP-045100	118.17 - 123.17	1.0000	1.0000
L8	93	CCI-AFP-045100	118.17 - 123.17	1.0000	1.0000
L9	2	FB-L98B-034-XXX(3/8)	113.17 - 118.17	1.0000	1.0000
L9	3	PWRT-608-S(13/16)	113.17 - 118.17	1.0000	1.0000
L9	4	PWRT-606-S(7/8)	113.17 - 118.17	1.0000	1.0000
L9	5	RFFT-48SM-001-XXX(3/8)	113.17 - 118.17	1.0000	1.0000
L9	7	7983A(ELLIPTICAL)	113.17 - 118.17	1.0000	1.0000
L9	11	CU12PSM9P6XXX(1-1/2)	113.17 - 118.17	1.0000	1.0000
L9	25	Safety Line 3/8	113.17 - 118.17	1.0000	1.0000
L9	91	CCI-AFP-045100	113.17 - 118.17	1.0000	1.0000
L9	92	CCI-AFP-045100	113.17 - 118.17	1.0000	1.0000
L9	93	CCI-AFP-045100	113.17 - 118.17	1.0000	1.0000
L10	2	FB-L98B-034-XXX(3/8)	109.50 - 113.17	1.0000	1.0000
L10	3	PWRT-608-S(13/16)	109.50 - 113.17	1.0000	1.0000
L10	4	PWRT-606-S(7/8)	109.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L10	5	RFFT-48SM-001-XXX(3/8)	113.17 109.50 - 113.17	1.0000	1.0000
L10	7	7983A(ELLIPTICAL)	109.50 - 113.17	1.0000	1.0000
L10	11	CU12PSM9P6XXX(1-1/2)	109.50 - 113.17	1.0000	1.0000
L10	25	Safety Line 3/8	109.50 - 113.17	1.0000	1.0000
L10	91	CCI-AFP-045100	109.50 - 113.17	1.0000	1.0000
L10	92	CCI-AFP-045100	109.50 - 113.17	1.0000	1.0000
L10	93	CCI-AFP-045100	109.50 - 113.17	1.0000	1.0000
L10	95	CCI-AFP-040075	109.50 - 111.00	1.0000	1.0000
L10	97	CCI-AFP-040075	109.50 - 111.00	1.0000	1.0000
L11	2	FB-L98B-034-XXX(3/8)	109.25 - 109.50	1.0000	1.0000
L11	3	PWRT-608-S(13/16)	109.25 - 109.50	1.0000	1.0000
L11	4	PWRT-606-S(7/8)	109.25 - 109.50	1.0000	1.0000
L11	5	RFFT-48SM-001-XXX(3/8)	109.25 - 109.50	1.0000	1.0000
L11	7	7983A(ELLIPTICAL)	109.25 - 109.50	1.0000	1.0000
L11	11	CU12PSM9P6XXX(1-1/2)	109.25 - 109.50	1.0000	1.0000
L11	25	Safety Line 3/8	109.25 - 109.50	1.0000	1.0000
L11	91	CCI-AFP-045100	109.25 - 109.50	1.0000	1.0000
L11	92	CCI-AFP-045100	109.25 - 109.50	1.0000	1.0000
L11	93	CCI-AFP-045100	109.25 - 109.50	1.0000	1.0000
L11	95	CCI-AFP-040075	109.25 - 109.50	1.0000	1.0000
L11	97	CCI-AFP-040075	109.25 - 109.50	1.0000	1.0000
L12	2	FB-L98B-034-XXX(3/8)	104.75 - 109.25	1.0000	1.0000
L12	3	PWRT-608-S(13/16)	104.75 - 109.25	1.0000	1.0000
L12	4	PWRT-606-S(7/8)	104.75 - 109.25	1.0000	1.0000
L12	5	RFFT-48SM-001-XXX(3/8)	104.75 - 109.25	1.0000	1.0000
L12	7	7983A(ELLIPTICAL)	104.75 - 109.25	1.0000	1.0000
L12	11	CU12PSM9P6XXX(1-1/2)	104.75 - 109.25	1.0000	1.0000
L12	25	Safety Line 3/8	104.75 - 109.25	1.0000	1.0000
L12	57	PL1x4 Reinforcement	104.75 - 106.50	1.0000	1.0000
L12	58	PL1x4 Reinforcement	104.75 - 106.50	1.0000	1.0000
L12	59	PL1x4 Reinforcement	104.75 - 106.50	1.0000	1.0000
L12	89	CCI-AFP-05012520	104.75 - 105.33	1.0000	1.0000
L12	91	CCI-AFP-045100	104.75 - 109.25	1.0000	1.0000
L12	92	CCI-AFP-045100	104.75 - 109.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L12	93	CCI-AFP-045100	104.75 - 109.25	1.0000	1.0000
L12	95	CCI-AFP-040075	104.75 - 109.25	1.0000	1.0000
L12	97	CCI-AFP-040075	104.75 - 109.25	1.0000	1.0000
L13	2	FB-L98B-034-XXX(3/8)	104.50 - 104.75	1.0000	1.0000
L13	3	PWRT-608-S(13/16)	104.50 - 104.75	1.0000	1.0000
L13	4	PWRT-606-S(7/8)	104.50 - 104.75	1.0000	1.0000
L13	5	RFFT-48SM-001-XXX(3/8)	104.50 - 104.75	1.0000	1.0000
L13	7	7983A(ELLIPTICAL)	104.50 - 104.75	1.0000	1.0000
L13	11	CU12PSM9P6XXX(1-1/2)	104.50 - 104.75	1.0000	1.0000
L13	25	Safety Line 3/8	104.50 - 104.75	1.0000	1.0000
L13	57	PL1x4 Reinforcement	104.50 - 104.75	1.0000	1.0000
L13	58	PL1x4 Reinforcement	104.50 - 104.75	1.0000	1.0000
L13	59	PL1x4 Reinforcement	104.50 - 104.75	1.0000	1.0000
L13	89	CCI-AFP-05012520	104.50 - 104.75	1.0000	1.0000
L13	91	CCI-AFP-045100	104.50 - 104.75	1.0000	1.0000
L13	92	CCI-AFP-045100	104.50 - 104.75	1.0000	1.0000
L13	93	CCI-AFP-045100	104.50 - 104.75	1.0000	1.0000
L13	95	CCI-AFP-040075	104.50 - 104.75	1.0000	1.0000
L13	97	CCI-AFP-040075	104.50 - 104.75	1.0000	1.0000
L14	2	FB-L98B-034-XXX(3/8)	102.42 - 104.50	1.0000	1.0000
L14	3	PWRT-608-S(13/16)	102.42 - 104.50	1.0000	1.0000
L14	4	PWRT-606-S(7/8)	102.42 - 104.50	1.0000	1.0000
L14	5	RFFT-48SM-001-XXX(3/8)	102.42 - 104.50	1.0000	1.0000
L14	7	7983A(ELLIPTICAL)	102.42 - 104.50	1.0000	1.0000
L14	11	CU12PSM9P6XXX(1-1/2)	102.42 - 104.50	1.0000	1.0000
L14	25	Safety Line 3/8	102.42 - 104.50	1.0000	1.0000
L14	57	PL1x4 Reinforcement	102.42 - 104.50	1.0000	1.0000
L14	58	PL1x4 Reinforcement	102.42 - 104.50	1.0000	1.0000
L14	59	PL1x4 Reinforcement	102.42 - 104.50	1.0000	1.0000
L14	89	CCI-AFP-05012520	102.42 - 104.50	1.0000	1.0000
L14	91	CCI-AFP-045100	102.42 - 104.50	1.0000	1.0000
L14	92	CCI-AFP-045100	102.42 - 104.50	1.0000	1.0000
L14	93	CCI-AFP-045100	102.42 - 104.50	1.0000	1.0000
L14	95	CCI-AFP-040075	102.42 - 104.50	1.0000	1.0000
L14	97	CCI-AFP-040075	102.42 - 104.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L15	2	FB-L98B-034-XXX(3/8)	104.50 102.17 - 102.42	1.0000	1.0000
L15	3	PWRT-608-S(13/16)	102.17 - 102.42	1.0000	1.0000
L15	4	PWRT-606-S(7/8)	102.17 - 102.42	1.0000	1.0000
L15	5	RFFT-48SM-001-XXX(3/8)	102.17 - 102.42	1.0000	1.0000
L15	7	7983A(ELLIPTICAL)	102.17 - 102.42	1.0000	1.0000
L15	11	CU12PSM9P6XXX(1-1/2)	102.17 - 102.42	1.0000	1.0000
L15	25	Safety Line 3/8	102.17 - 102.42	1.0000	1.0000
L15	57	PL1x4 Reinforcement	102.17 - 102.42	1.0000	1.0000
L15	58	PL1x4 Reinforcement	102.17 - 102.42	1.0000	1.0000
L15	59	PL1x4 Reinforcement	102.17 - 102.42	1.0000	1.0000
L15	89	CCI-AFP-05012520	102.17 - 102.42	1.0000	1.0000
L15	91	CCI-AFP-045100	102.17 - 102.42	1.0000	1.0000
L15	92	CCI-AFP-045100	102.17 - 102.42	1.0000	1.0000
L15	93	CCI-AFP-045100	102.17 - 102.42	1.0000	1.0000
L15	95	CCI-AFP-040075	102.17 - 102.42	1.0000	1.0000
L15	97	CCI-AFP-040075	102.17 - 102.42	1.0000	1.0000
L16	2	FB-L98B-034-XXX(3/8)	98.75 - 102.17	1.0000	1.0000
L16	3	PWRT-608-S(13/16)	98.75 - 102.17	1.0000	1.0000
L16	4	PWRT-606-S(7/8)	98.75 - 102.17	1.0000	1.0000
L16	5	RFFT-48SM-001-XXX(3/8)	98.75 - 102.17	1.0000	1.0000
L16	7	7983A(ELLIPTICAL)	98.75 - 102.17	1.0000	1.0000
L16	11	CU12PSM9P6XXX(1-1/2)	98.75 - 102.17	1.0000	1.0000
L16	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	98.75 - 100.00	1.0000	1.0000
L16	25	Safety Line 3/8	98.75 - 102.17	1.0000	1.0000
L16	41	PL1.25x3.625 Reinforcement	98.75 - 100.00	1.0000	1.0000
L16	42	PL1.25x3.625 Reinforcement	98.75 - 100.00	1.0000	1.0000
L16	43	PL1.25x3.625 Reinforcement	98.75 - 100.00	1.0000	1.0000
L16	57	PL1x4 Reinforcement	98.75 - 102.17	1.0000	1.0000
L16	58	PL1x4 Reinforcement	98.75 - 102.17	1.0000	1.0000
L16	59	PL1x4 Reinforcement	98.75 - 102.17	1.0000	1.0000
L16	84	CCI-SFP-040075	98.75 - 100.33	1.0000	1.0000
L16	85	CCI-SFP-040075	98.75 - 100.33	1.0000	1.0000
L16	89	CCI-AFP-05012520	98.75 - 102.17	1.0000	1.0000
L16	91	CCI-AFP-045100	100.42 - 102.17	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L16	92	CCI-AFP-045100	100.42 - 102.17	1.0000	1.0000
L16	93	CCI-AFP-045100	100.42 - 102.17	1.0000	1.0000
L16	95	CCI-AFP-040075	98.75 - 102.17	1.0000	1.0000
L16	97	CCI-AFP-040075	101.00 - 102.17	1.0000	1.0000
L17	2	FB-L98B-034-XXX(3/8)	98.50 - 98.75	1.0000	1.0000
L17	3	PWRT-608-S(13/16)	98.50 - 98.75	1.0000	1.0000
L17	4	PWRT-606-S(7/8)	98.50 - 98.75	1.0000	1.0000
L17	5	RFFT-48SM-001-XXX(3/8)	98.50 - 98.75	1.0000	1.0000
L17	7	7983A(ELLIPTICAL)	98.50 - 98.75	1.0000	1.0000
L17	11	CU12PSM9P6XXX(1-1/2)	98.50 - 98.75	1.0000	1.0000
L17	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	98.50 - 98.75	1.0000	1.0000
L17	25	Safety Line 3/8	98.50 - 98.75	1.0000	1.0000
L17	41	PL1.25x3.625 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	42	PL1.25x3.625 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	43	PL1.25x3.625 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	57	PL1x4 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	58	PL1x4 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	59	PL1x4 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	84	CCI-SFP-040075	98.50 - 98.75	1.0000	1.0000
L17	85	CCI-SFP-040075	98.50 - 98.75	1.0000	1.0000
L17	89	CCI-AFP-05012520	98.50 - 98.75	1.0000	1.0000
L17	95	CCI-AFP-040075	98.50 - 98.75	1.0000	1.0000
L18	2	FB-L98B-034-XXX(3/8)	97.50 - 98.50	1.0000	1.0000
L18	3	PWRT-608-S(13/16)	97.50 - 98.50	1.0000	1.0000
L18	4	PWRT-606-S(7/8)	97.50 - 98.50	1.0000	1.0000
L18	5	RFFT-48SM-001-XXX(3/8)	97.50 - 98.50	1.0000	1.0000
L18	7	7983A(ELLIPTICAL)	97.50 - 98.50	1.0000	1.0000
L18	11	CU12PSM9P6XXX(1-1/2)	97.50 - 98.50	1.0000	1.0000
L18	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	97.50 - 98.50	1.0000	1.0000
L18	25	Safety Line 3/8	97.50 - 98.50	1.0000	1.0000
L18	41	PL1.25x3.625 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	42	PL1.25x3.625 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	43	PL1.25x3.625 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	57	PL1x4 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	58	PL1x4 Reinforcement	97.50 - 98.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L18	59	PL1x4 Reinforcement	98.50 97.50 -	1.0000	1.0000
L18	84	CCI-SFP-040075	98.50 97.50 -	1.0000	1.0000
L18	85	CCI-SFP-040075	98.50 97.50 -	1.0000	1.0000
L18	89	CCI-AFP-05012520	98.50 97.50 -	1.0000	1.0000
L18	95	CCI-AFP-040075	98.50 97.50 -	1.0000	1.0000
L19	2	FB-L98B-034-XXX(3/8)	98.50 97.25 -	1.0000	1.0000
L19	3	PWRT-608-S(13/16)	97.50 97.25 -	1.0000	1.0000
L19	4	PWRT-606-S(7/8)	97.50 97.25 -	1.0000	1.0000
L19	5	RFFT-48SM-001-XXX(3/8)	97.50 97.25 -	1.0000	1.0000
L19	7	7983A(ELLIPTICAL)	97.50 97.25 -	1.0000	1.0000
L19	11	CU12PSM9P6XXX(1-1/2)	97.50 97.25 -	1.0000	1.0000
L19	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	97.50 97.25 -	1.0000	1.0000
L19	25	Safety Line 3/8	97.50 97.25 -	1.0000	1.0000
L19	41	PL1.25x3.625 Reinforcement	97.50 97.25 -	1.0000	1.0000
L19	42	PL1.25x3.625 Reinforcement	97.50 97.25 -	1.0000	1.0000
L19	43	PL1.25x3.625 Reinforcement	97.50 97.25 -	1.0000	1.0000
L19	57	PL1x4 Reinforcement	97.50 97.25 -	1.0000	1.0000
L19	58	PL1x4 Reinforcement	97.50 97.25 -	1.0000	1.0000
L19	59	PL1x4 Reinforcement	97.50 97.25 -	1.0000	1.0000
L19	84	CCI-SFP-040075	97.50 97.25 -	1.0000	1.0000
L19	85	CCI-SFP-040075	97.50 97.25 -	1.0000	1.0000
L19	89	CCI-AFP-05012520	97.50 97.25 -	1.0000	1.0000
L19	95	CCI-AFP-040075	97.50 97.25 -	1.0000	1.0000
L20	2	FB-L98B-034-XXX(3/8)	97.50 92.00 -	1.0000	1.0000
L20	3	PWRT-608-S(13/16)	97.25 92.00 -	1.0000	1.0000
L20	4	PWRT-606-S(7/8)	97.25 92.00 -	1.0000	1.0000
L20	5	RFFT-48SM-001-XXX(3/8)	97.25 92.00 -	1.0000	1.0000
L20	7	7983A(ELLIPTICAL)	97.25 92.00 -	1.0000	1.0000
L20	11	CU12PSM9P6XXX(1-1/2)	97.25 92.00 -	1.0000	1.0000
L20	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	97.25 92.00 -	1.0000	1.0000
L20	25	Safety Line 3/8	97.25 92.00 -	1.0000	1.0000
L20	41	PL1.25x3.625 Reinforcement	97.25 92.00 -	1.0000	1.0000
L20	42	PL1.25x3.625 Reinforcement	97.25 92.00 -	1.0000	1.0000
L20	43	PL1.25x3.625 Reinforcement	97.25 92.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L20	57	PL1x4 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	58	PL1x4 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	59	PL1x4 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	84	CCI-SFP-040075	92.00 - 97.25	1.0000	1.0000
L20	85	CCI-SFP-040075	92.00 - 97.25	1.0000	1.0000
L20	89	CCI-AFP-05012520	92.00 - 97.25	1.0000	1.0000
L20	95	CCI-AFP-040075	96.00 - 97.25	1.0000	1.0000
L21	2	FB-L98B-034-XXX(3/8)	90.55 - 92.00	1.0000	1.0000
L21	3	PWRT-608-S(13/16)	90.55 - 92.00	1.0000	1.0000
L21	4	PWRT-606-S(7/8)	90.55 - 92.00	1.0000	1.0000
L21	5	RFFT-48SM-001-XXX(3/8)	90.55 - 92.00	1.0000	1.0000
L21	7	7983A(ELLIPTICAL)	90.55 - 92.00	1.0000	1.0000
L21	11	CU12PSM9P6XXX(1-1/2)	90.55 - 92.00	1.0000	1.0000
L21	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	90.55 - 92.00	1.0000	1.0000
L21	25	Safety Line 3/8	90.55 - 92.00	1.0000	1.0000
L21	41	PL1.25x3.625 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	42	PL1.25x3.625 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	43	PL1.25x3.625 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	57	PL1x4 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	58	PL1x4 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	59	PL1x4 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	84	CCI-SFP-040075	90.55 - 92.00	1.0000	1.0000
L21	85	CCI-SFP-040075	90.55 - 92.00	1.0000	1.0000
L21	89	CCI-AFP-05012520	90.55 - 92.00	1.0000	1.0000
L22	2	FB-L98B-034-XXX(3/8)	89.25 - 90.55	1.0000	1.0000
L22	3	PWRT-608-S(13/16)	89.25 - 90.55	1.0000	1.0000
L22	4	PWRT-606-S(7/8)	89.25 - 90.55	1.0000	1.0000
L22	5	RFFT-48SM-001-XXX(3/8)	89.25 - 90.55	1.0000	1.0000
L22	7	7983A(ELLIPTICAL)	89.25 - 90.55	1.0000	1.0000
L22	11	CU12PSM9P6XXX(1-1/2)	89.25 - 90.55	1.0000	1.0000
L22	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	89.25 - 90.55	1.0000	1.0000
L22	25	Safety Line 3/8	89.25 - 90.55	1.0000	1.0000
L22	41	PL1.25x3.625 Reinforcement	89.25 - 90.55	1.0000	1.0000
L22	42	PL1.25x3.625 Reinforcement	89.25 - 90.55	1.0000	1.0000
L22	43	PL1.25x3.625	89.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L22	57	Reinforcement PL1x4 Reinforcement	90.55 89.25 -	1.0000	1.0000
L22	58	PL1x4 Reinforcement	90.55 89.25 -	1.0000	1.0000
L22	59	PL1x4 Reinforcement	90.55 89.25 -	1.0000	1.0000
L22	84	CCI-SFP-040075	90.55 89.25 -	1.0000	1.0000
L22	85	CCI-SFP-040075	90.55 89.25 -	1.0000	1.0000
L22	87	CCI-SFP-040075	90.55 89.25 -	1.0000	1.0000
L22	89	CCI-AFP-05012520	90.33 89.25 -	1.0000	1.0000
L23	2	FB-L98B-034-XXX(3/8)	90.55 89.00 -	1.0000	1.0000
L23	3	PWRT-608-S(13/16)	89.25 89.00 -	1.0000	1.0000
L23	4	PWRT-606-S(7/8)	89.25 89.00 -	1.0000	1.0000
L23	5	RFFT-48SM-001-XXX(3/8)	89.25 89.00 -	1.0000	1.0000
L23	7	7983A(ELLIPTICAL)	89.25 89.00 -	1.0000	1.0000
L23	11	CU12PSM9P6XXX(1-1/2)	89.25 89.00 -	1.0000	1.0000
L23	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	89.25 89.00 -	1.0000	1.0000
L23	25	Safety Line 3/8	89.25 89.00 -	1.0000	1.0000
L23	37	PL1.25x5.5 Reinforcement	89.25 89.00 -	1.0000	1.0000
L23	38	PL1.25x5.5 Reinforcement	89.25 89.00 -	1.0000	1.0000
L23	39	PL1.25x5.5 Reinforcement	89.25 89.00 -	1.0000	1.0000
L23	57	PL1x4 Reinforcement	89.25 89.00 -	1.0000	1.0000
L23	58	PL1x4 Reinforcement	89.25 89.00 -	1.0000	1.0000
L23	59	PL1x4 Reinforcement	89.25 89.00 -	1.0000	1.0000
L23	84	CCI-SFP-040075	89.25 89.00 -	1.0000	1.0000
L23	85	CCI-SFP-040075	89.25 89.00 -	1.0000	1.0000
L23	87	CCI-SFP-040075	89.25 89.00 -	1.0000	1.0000
L23	89	CCI-AFP-05012520	89.25 89.00 -	1.0000	1.0000
L24	2	FB-L98B-034-XXX(3/8)	89.25 88.25 -	1.0000	1.0000
L24	3	PWRT-608-S(13/16)	89.00 88.25 -	1.0000	1.0000
L24	4	PWRT-606-S(7/8)	89.00 88.25 -	1.0000	1.0000
L24	5	RFFT-48SM-001-XXX(3/8)	89.00 88.25 -	1.0000	1.0000
L24	7	7983A(ELLIPTICAL)	89.00 88.25 -	1.0000	1.0000
L24	11	CU12PSM9P6XXX(1-1/2)	89.00 88.25 -	1.0000	1.0000
L24	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	89.00 88.25 -	1.0000	1.0000
L24	25	Safety Line 3/8	89.00 88.25 -	1.0000	1.0000
L24	37	PL1.25x5.5 Reinforcement	89.00 88.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L24	38	PL1.25x5.5 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	39	PL1.25x5.5 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	57	PL1x4 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	58	PL1x4 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	59	PL1x4 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	84	CCI-SFP-040075	88.25 - 89.00	1.0000	1.0000
L24	85	CCI-SFP-040075	88.25 - 89.00	1.0000	1.0000
L24	87	CCI-SFP-040075	88.25 - 89.00	1.0000	1.0000
L24	89	CCI-AFP-05012520	88.25 - 89.00	1.0000	1.0000
L25	2	FB-L98B-034-XXX(3/8)	88.00 - 88.25	1.0000	1.0000
L25	3	PWRT-608-S(13/16)	88.00 - 88.25	1.0000	1.0000
L25	4	PWRT-606-S(7/8)	88.00 - 88.25	1.0000	1.0000
L25	5	RFFT-48SM-001-XXX(3/8)	88.00 - 88.25	1.0000	1.0000
L25	7	7983A(ELLIPTICAL)	88.00 - 88.25	1.0000	1.0000
L25	11	CU12PSM9P6XXX(1-1/2)	88.00 - 88.25	1.0000	1.0000
L25	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	88.00 - 88.25	1.0000	1.0000
L25	25	Safety Line 3/8	88.00 - 88.25	1.0000	1.0000
L25	37	PL1.25x5.5 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	38	PL1.25x5.5 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	39	PL1.25x5.5 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	57	PL1x4 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	58	PL1x4 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	59	PL1x4 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	84	CCI-SFP-040075	88.00 - 88.25	1.0000	1.0000
L25	85	CCI-SFP-040075	88.00 - 88.25	1.0000	1.0000
L25	87	CCI-SFP-040075	88.00 - 88.25	1.0000	1.0000
L25	89	CCI-AFP-05012520	88.00 - 88.25	1.0000	1.0000
L26	2	FB-L98B-034-XXX(3/8)	87.83 - 88.00	1.0000	1.0000
L26	3	PWRT-608-S(13/16)	87.83 - 88.00	1.0000	1.0000
L26	4	PWRT-606-S(7/8)	87.83 - 88.00	1.0000	1.0000
L26	5	RFFT-48SM-001-XXX(3/8)	87.83 - 88.00	1.0000	1.0000
L26	7	7983A(ELLIPTICAL)	87.83 - 88.00	1.0000	1.0000
L26	11	CU12PSM9P6XXX(1-1/2)	87.83 - 88.00	1.0000	1.0000
L26	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	87.83 - 88.00	1.0000	1.0000
L26	25	Safety Line 3/8	87.83 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
			88.00		
L26	37	PL1.25x5.5 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	38	PL1.25x5.5 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	39	PL1.25x5.5 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	57	PL1x4 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	58	PL1x4 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	59	PL1x4 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	84	CCI-SFP-040075	87.83 - 88.00	1.0000	1.0000
L26	85	CCI-SFP-040075	87.83 - 88.00	1.0000	1.0000
L26	87	CCI-SFP-040075	87.83 - 88.00	1.0000	1.0000
L26	89	CCI-AFP-05012520	87.83 - 88.00	1.0000	1.0000
L27	2	FB-L98B-034-XXX(3/8)	87.58 - 87.83	1.0000	1.0000
L27	3	PWRT-608-S(13/16)	87.58 - 87.83	1.0000	1.0000
L27	4	PWRT-606-S(7/8)	87.58 - 87.83	1.0000	1.0000
L27	5	RFFT-48SM-001-XXX(3/8)	87.58 - 87.83	1.0000	1.0000
L27	7	7983A(ELLIPTICAL)	87.58 - 87.83	1.0000	1.0000
L27	11	CU12PSM9P6XXX(1-1/2)	87.58 - 87.83	1.0000	1.0000
L27	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	87.58 - 87.83	1.0000	1.0000
L27	25	Safety Line 3/8	87.58 - 87.83	1.0000	1.0000
L27	37	PL1.25x5.5 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	38	PL1.25x5.5 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	39	PL1.25x5.5 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	57	PL1x4 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	58	PL1x4 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	59	PL1x4 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	84	CCI-SFP-040075	87.58 - 87.83	1.0000	1.0000
L27	85	CCI-SFP-040075	87.58 - 87.83	1.0000	1.0000
L27	87	CCI-SFP-040075	87.58 - 87.83	1.0000	1.0000
L27	89	CCI-AFP-05012520	87.58 - 87.83	1.0000	1.0000
L28	2	FB-L98B-034-XXX(3/8)	82.58 - 87.58	1.0000	1.0000
L28	3	PWRT-608-S(13/16)	82.58 - 87.58	1.0000	1.0000
L28	4	PWRT-606-S(7/8)	82.58 - 87.58	1.0000	1.0000
L28	5	RFFT-48SM-001-XXX(3/8)	82.58 - 87.58	1.0000	1.0000
L28	7	7983A(ELLIPTICAL)	82.58 - 87.58	1.0000	1.0000
L28	11	CU12PSM9P6XXX(1-1/2)	82.58 - 87.58	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L28	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	82.58 - 87.58	1.0000	1.0000
L28	25	Safety Line 3/8	82.58 - 87.58	1.0000	1.0000
L28	37	PL1.25x5.5 Reinforcement	82.58 - 87.58	1.0000	1.0000
L28	38	PL1.25x5.5 Reinforcement	82.58 - 87.58	1.0000	1.0000
L28	39	PL1.25x5.5 Reinforcement	82.58 - 87.58	1.0000	1.0000
L28	57	PL1x4 Reinforcement	86.50 - 87.58	1.0000	1.0000
L28	58	PL1x4 Reinforcement	86.50 - 87.58	1.0000	1.0000
L28	59	PL1x4 Reinforcement	86.50 - 87.58	1.0000	1.0000
L28	84	CCI-SFP-040075	82.58 - 87.58	1.0000	1.0000
L28	85	CCI-SFP-040075	82.58 - 87.58	1.0000	1.0000
L28	87	CCI-SFP-040075	82.58 - 87.58	1.0000	1.0000
L28	89	CCI-AFP-05012520	85.33 - 87.58	1.0000	1.0000
L29	2	FB-L98B-034-XXX(3/8)	77.58 - 82.58	1.0000	1.0000
L29	3	PWRT-608-S(13/16)	77.58 - 82.58	1.0000	1.0000
L29	4	PWRT-606-S(7/8)	77.58 - 82.58	1.0000	1.0000
L29	5	RFFT-48SM-001-XXX(3/8)	77.58 - 82.58	1.0000	1.0000
L29	7	7983A(ELLIPTICAL)	77.58 - 82.58	1.0000	1.0000
L29	11	CU12PSM9P6XXX(1-1/2)	77.58 - 82.58	1.0000	1.0000
L29	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	77.58 - 82.58	1.0000	1.0000
L29	25	Safety Line 3/8	77.58 - 82.58	1.0000	1.0000
L29	37	PL1.25x5.5 Reinforcement	77.58 - 82.58	1.0000	1.0000
L29	38	PL1.25x5.5 Reinforcement	77.58 - 82.58	1.0000	1.0000
L29	39	PL1.25x5.5 Reinforcement	77.58 - 82.58	1.0000	1.0000
L29	53	PL1x4 Reinforcement	77.58 - 78.75	1.0000	1.0000
L29	54	PL1x4 Reinforcement	77.58 - 78.75	1.0000	1.0000
L29	55	PL1x4 Reinforcement	77.58 - 78.75	1.0000	1.0000
L29	84	CCI-SFP-040075	77.58 - 82.58	1.0000	1.0000
L29	85	CCI-SFP-040075	77.58 - 82.58	1.0000	1.0000
L29	87	CCI-SFP-040075	77.58 - 82.58	1.0000	1.0000
L30	2	FB-L98B-034-XXX(3/8)	77.00 - 77.58	1.0000	1.0000
L30	3	PWRT-608-S(13/16)	77.00 - 77.58	1.0000	1.0000
L30	4	PWRT-606-S(7/8)	77.00 - 77.58	1.0000	1.0000
L30	5	RFFT-48SM-001-XXX(3/8)	77.00 - 77.58	1.0000	1.0000
L30	7	7983A(ELLIPTICAL)	77.00 - 77.58	1.0000	1.0000
L30	11	CU12PSM9P6XXX(1-1/2)	77.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
			77.58		
L30	19	MLC HYBRID 6X12	77.00 -	1.0000	1.0000
		6AWGX6(1-1/2)	77.58		
L30	25	Safety Line 3/8	77.00 -	1.0000	1.0000
			77.58		
L30	37	PL1.25x5.5 Reinforcement	77.00 -	1.0000	1.0000
			77.58		
L30	38	PL1.25x5.5 Reinforcement	77.00 -	1.0000	1.0000
			77.58		
L30	39	PL1.25x5.5 Reinforcement	77.00 -	1.0000	1.0000
			77.58		
L30	53	PL1x4 Reinforcement	77.00 -	1.0000	1.0000
			77.58		
L30	54	PL1x4 Reinforcement	77.00 -	1.0000	1.0000
			77.58		
L30	55	PL1x4 Reinforcement	77.00 -	1.0000	1.0000
			77.58		
L30	84	CCI-SFP-040075	77.00 -	1.0000	1.0000
			77.58		
L30	85	CCI-SFP-040075	77.00 -	1.0000	1.0000
			77.58		
L30	87	CCI-SFP-040075	77.00 -	1.0000	1.0000
			77.58		
L31	2	FB-L98B-034-XXX(3/8)	76.75 -	1.0000	1.0000
			77.00		
L31	3	PWRT-608-S(13/16)	76.75 -	1.0000	1.0000
			77.00		
L31	4	PWRT-606-S(7/8)	76.75 -	1.0000	1.0000
			77.00		
L31	5	RFFT-48SM-001-XXX(3/8)	76.75 -	1.0000	1.0000
			77.00		
L31	7	7983A(ELLIPTICAL)	76.75 -	1.0000	1.0000
			77.00		
L31	11	CU12PSM9P6XXX(1-1/2)	76.75 -	1.0000	1.0000
			77.00		
L31	19	MLC HYBRID 6X12	76.75 -	1.0000	1.0000
		6AWGX6(1-1/2)	77.00		
L31	25	Safety Line 3/8	76.75 -	1.0000	1.0000
			77.00		
L31	37	PL1.25x5.5 Reinforcement	76.75 -	1.0000	1.0000
			77.00		
L31	38	PL1.25x5.5 Reinforcement	76.75 -	1.0000	1.0000
			77.00		
L31	39	PL1.25x5.5 Reinforcement	76.75 -	1.0000	1.0000
			77.00		
L31	53	PL1x4 Reinforcement	76.75 -	1.0000	1.0000
			77.00		
L31	54	PL1x4 Reinforcement	76.75 -	1.0000	1.0000
			77.00		
L31	55	PL1x4 Reinforcement	76.75 -	1.0000	1.0000
			77.00		
L31	84	CCI-SFP-040075	76.75 -	1.0000	1.0000
			77.00		
L31	85	CCI-SFP-040075	76.75 -	1.0000	1.0000
			77.00		
L31	87	CCI-SFP-040075	76.75 -	1.0000	1.0000
			77.00		
L32	2	FB-L98B-034-XXX(3/8)	76.33 -	1.0000	1.0000
			76.75		
L32	3	PWRT-608-S(13/16)	76.33 -	1.0000	1.0000
			76.75		
L32	4	PWRT-606-S(7/8)	76.33 -	1.0000	1.0000
			76.75		
L32	5	RFFT-48SM-001-XXX(3/8)	76.33 -	1.0000	1.0000
			76.75		
L32	7	7983A(ELLIPTICAL)	76.33 -	1.0000	1.0000
			76.75		
L32	11	CU12PSM9P6XXX(1-1/2)	76.33 -	1.0000	1.0000
			76.75		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L32	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	76.33 - 76.75	1.0000	1.0000
L32	25	Safety Line 3/8	76.33 - 76.75	1.0000	1.0000
L32	37	PL1.25x5.5 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	38	PL1.25x5.5 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	39	PL1.25x5.5 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	53	PL1x4 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	54	PL1x4 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	55	PL1x4 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	84	CCI-SFP-040075	76.33 - 76.75	1.0000	1.0000
L32	85	CCI-SFP-040075	76.33 - 76.75	1.0000	1.0000
L32	87	CCI-SFP-040075	76.33 - 76.75	1.0000	1.0000
L33	2	FB-L98B-034-XXX(3/8)	76.08 - 76.33	1.0000	1.0000
L33	3	PWRT-608-S(13/16)	76.08 - 76.33	1.0000	1.0000
L33	4	PWRT-606-S(7/8)	76.08 - 76.33	1.0000	1.0000
L33	5	RFFT-48SM-001-XXX(3/8)	76.08 - 76.33	1.0000	1.0000
L33	7	7983A(ELLIPTICAL)	76.08 - 76.33	1.0000	1.0000
L33	11	CU12PSM9P6XXX(1-1/2)	76.08 - 76.33	1.0000	1.0000
L33	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	76.08 - 76.33	1.0000	1.0000
L33	25	Safety Line 3/8	76.08 - 76.33	1.0000	1.0000
L33	37	PL1.25x5.5 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	38	PL1.25x5.5 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	39	PL1.25x5.5 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	53	PL1x4 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	54	PL1x4 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	55	PL1x4 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	84	CCI-SFP-040075	76.08 - 76.33	1.0000	1.0000
L33	85	CCI-SFP-040075	76.08 - 76.33	1.0000	1.0000
L33	87	CCI-SFP-040075	76.08 - 76.33	1.0000	1.0000
L34	2	FB-L98B-034-XXX(3/8)	74.25 - 76.08	1.0000	1.0000
L34	3	PWRT-608-S(13/16)	74.25 - 76.08	1.0000	1.0000
L34	4	PWRT-606-S(7/8)	74.25 - 76.08	1.0000	1.0000
L34	5	RFFT-48SM-001-XXX(3/8)	74.25 - 76.08	1.0000	1.0000
L34	7	7983A(ELLIPTICAL)	74.25 - 76.08	1.0000	1.0000
L34	11	CU12PSM9P6XXX(1-1/2)	74.25 - 76.08	1.0000	1.0000
L34	19	MLC HYBRID 6X12	74.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L34	25	6AWGX6(1-1/2) Safety Line 3/8	76.08 74.25 - 76.08	1.0000	1.0000
L34	37	PL1.25x5.5 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	38	PL1.25x5.5 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	39	PL1.25x5.5 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	53	PL1x4 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	54	PL1x4 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	55	PL1x4 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	79	CCI-SFP-045100	74.25 - 75.25	1.0000	1.0000
L34	80	CCI-SFP-045100	74.25 - 75.25	1.0000	1.0000
L34	82	CCI-SFP-040075	74.25 - 75.25	1.0000	1.0000
L34	84	CCI-SFP-040075	75.33 - 76.08	1.0000	1.0000
L34	85	CCI-SFP-040075	75.33 - 76.08	1.0000	1.0000
L34	87	CCI-SFP-040075	75.33 - 76.08	1.0000	1.0000
L35	2	FB-L98B-034-XXX(3/8)	74.00 - 74.25	1.0000	1.0000
L35	3	PWRT-608-S(13/16)	74.00 - 74.25	1.0000	1.0000
L35	4	PWRT-606-S(7/8)	74.00 - 74.25	1.0000	1.0000
L35	5	RFFT-48SM-001-XXX(3/8)	74.00 - 74.25	1.0000	1.0000
L35	7	7983A(ELLIPTICAL)	74.00 - 74.25	1.0000	1.0000
L35	11	CU12PSM9P6XXX(1-1/2)	74.00 - 74.25	1.0000	1.0000
L35	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	74.00 - 74.25	1.0000	1.0000
L35	25	Safety Line 3/8	74.00 - 74.25	1.0000	1.0000
L35	37	PL1.25x5.5 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	38	PL1.25x5.5 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	39	PL1.25x5.5 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	53	PL1x4 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	54	PL1x4 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	55	PL1x4 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	79	CCI-SFP-045100	74.00 - 74.25	1.0000	1.0000
L35	80	CCI-SFP-045100	74.00 - 74.25	1.0000	1.0000
L35	82	CCI-SFP-040075	74.00 - 74.25	1.0000	1.0000
L36	2	FB-L98B-034-XXX(3/8)	73.75 - 74.00	1.0000	1.0000
L36	3	PWRT-608-S(13/16)	73.75 - 74.00	1.0000	1.0000
L36	4	PWRT-606-S(7/8)	73.75 - 74.00	1.0000	1.0000
L36	5	RFFT-48SM-001-XXX(3/8)	73.75 - 74.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L36	7	7983A(ELLIPTICAL)	73.75 - 74.00	1.0000	1.0000
L36	11	CU12PSM9P6XXX(1-1/2)	73.75 - 74.00	1.0000	1.0000
L36	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	73.75 - 74.00	1.0000	1.0000
L36	25	Safety Line 3/8	73.75 - 74.00	1.0000	1.0000
L36	37	PL1.25x5.5 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	38	PL1.25x5.5 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	39	PL1.25x5.5 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	53	PL1x4 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	54	PL1x4 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	55	PL1x4 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	79	CCI-SFP-045100	73.75 - 74.00	1.0000	1.0000
L36	80	CCI-SFP-045100	73.75 - 74.00	1.0000	1.0000
L36	82	CCI-SFP-040075	73.75 - 74.00	1.0000	1.0000
L37	2	FB-L98B-034-XXX(3/8)	73.50 - 73.75	1.0000	1.0000
L37	3	PWRT-608-S(13/16)	73.50 - 73.75	1.0000	1.0000
L37	4	PWRT-606-S(7/8)	73.50 - 73.75	1.0000	1.0000
L37	5	RFFT-48SM-001-XXX(3/8)	73.50 - 73.75	1.0000	1.0000
L37	7	7983A(ELLIPTICAL)	73.50 - 73.75	1.0000	1.0000
L37	11	CU12PSM9P6XXX(1-1/2)	73.50 - 73.75	1.0000	1.0000
L37	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	73.50 - 73.75	1.0000	1.0000
L37	25	Safety Line 3/8	73.50 - 73.75	1.0000	1.0000
L37	37	PL1.25x5.5 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	38	PL1.25x5.5 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	39	PL1.25x5.5 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	53	PL1x4 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	54	PL1x4 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	55	PL1x4 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	79	CCI-SFP-045100	73.50 - 73.75	1.0000	1.0000
L37	80	CCI-SFP-045100	73.50 - 73.75	1.0000	1.0000
L37	82	CCI-SFP-040075	73.50 - 73.75	1.0000	1.0000
L38	2	FB-L98B-034-XXX(3/8)	68.50 - 73.50	1.0000	1.0000
L38	3	PWRT-608-S(13/16)	68.50 - 73.50	1.0000	1.0000
L38	4	PWRT-606-S(7/8)	68.50 - 73.50	1.0000	1.0000
L38	5	RFFT-48SM-001-XXX(3/8)	68.50 - 73.50	1.0000	1.0000
L38	7	7983A(ELLIPTICAL)	68.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L38	11	CU12PSM9P6XXX(1-1/2)	73.50 68.50 -	1.0000	1.0000
L38	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	73.50 68.50 -	1.0000	1.0000
L38	25	Safety Line 3/8	73.50 68.50 -	1.0000	1.0000
L38	37	PL1.25x5.5 Reinforcement	73.50 68.50 -	1.0000	1.0000
L38	38	PL1.25x5.5 Reinforcement	73.50 68.50 -	1.0000	1.0000
L38	39	PL1.25x5.5 Reinforcement	73.50 68.50 -	1.0000	1.0000
L38	53	PL1x4 Reinforcement	73.50 68.50 -	1.0000	1.0000
L38	54	PL1x4 Reinforcement	73.50 68.50 -	1.0000	1.0000
L38	55	PL1x4 Reinforcement	73.50 68.50 -	1.0000	1.0000
L38	79	CCI-SFP-045100	73.50 68.50 -	1.0000	1.0000
L38	80	CCI-SFP-045100	73.50 68.50 -	1.0000	1.0000
L38	82	CCI-SFP-040075	73.50 68.50 -	1.0000	1.0000
L39	2	FB-L98B-034-XXX(3/8)	63.50 - 68.50	1.0000	1.0000
L39	3	PWRT-608-S(13/16)	63.50 - 68.50	1.0000	1.0000
L39	4	PWRT-606-S(7/8)	63.50 - 68.50	1.0000	1.0000
L39	5	RFFT-48SM-001-XXX(3/8)	63.50 - 68.50	1.0000	1.0000
L39	7	7983A(ELLIPTICAL)	63.50 - 68.50	1.0000	1.0000
L39	11	CU12PSM9P6XXX(1-1/2)	63.50 - 68.50	1.0000	1.0000
L39	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	63.50 - 68.50	1.0000	1.0000
L39	25	Safety Line 3/8	63.50 - 68.50	1.0000	1.0000
L39	37	PL1.25x5.5 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	38	PL1.25x5.5 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	39	PL1.25x5.5 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	53	PL1x4 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	54	PL1x4 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	55	PL1x4 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	79	CCI-SFP-045100	63.50 - 68.50	1.0000	1.0000
L39	80	CCI-SFP-045100	63.50 - 68.50	1.0000	1.0000
L39	82	CCI-SFP-040075	63.50 - 68.50	1.0000	1.0000
L40	2	FB-L98B-034-XXX(3/8)	60.50 - 63.50	1.0000	1.0000
L40	3	PWRT-608-S(13/16)	60.50 - 63.50	1.0000	1.0000
L40	4	PWRT-606-S(7/8)	60.50 - 63.50	1.0000	1.0000
L40	5	RFFT-48SM-001-XXX(3/8)	60.50 - 63.50	1.0000	1.0000
L40	7	7983A(ELLIPTICAL)	60.50 - 63.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L40	11	CU12PSM9P6XXX(1-1/2)	60.50 - 63.50	1.0000	1.0000
L40	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	60.50 - 63.50	1.0000	1.0000
L40	25	Safety Line 3/8	60.50 - 63.50	1.0000	1.0000
L40	37	PL1.25x5.5 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	38	PL1.25x5.5 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	39	PL1.25x5.5 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	49	PL1x4 Reinforcement	60.50 - 62.25	1.0000	1.0000
L40	50	PL1x4 Reinforcement	60.50 - 62.25	1.0000	1.0000
L40	51	PL1x4 Reinforcement	60.50 - 62.25	1.0000	1.0000
L40	53	PL1x4 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	54	PL1x4 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	55	PL1x4 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	79	CCI-SFP-045100	60.50 - 63.50	1.0000	1.0000
L40	80	CCI-SFP-045100	60.50 - 63.50	1.0000	1.0000
L40	82	CCI-SFP-040075	60.50 - 63.50	1.0000	1.0000
L41	2	FB-L98B-034-XXX(3/8)	60.25 - 60.50	1.0000	1.0000
L41	3	PWRT-608-S(13/16)	60.25 - 60.50	1.0000	1.0000
L41	4	PWRT-606-S(7/8)	60.25 - 60.50	1.0000	1.0000
L41	5	RFFT-48SM-001-XXX(3/8)	60.25 - 60.50	1.0000	1.0000
L41	7	7983A(ELLIPTICAL)	60.25 - 60.50	1.0000	1.0000
L41	11	CU12PSM9P6XXX(1-1/2)	60.25 - 60.50	1.0000	1.0000
L41	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	60.25 - 60.50	1.0000	1.0000
L41	25	Safety Line 3/8	60.25 - 60.50	1.0000	1.0000
L41	37	PL1.25x5.5 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	38	PL1.25x5.5 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	39	PL1.25x5.5 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	49	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	50	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	51	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	53	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	54	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	55	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	79	CCI-SFP-045100	60.25 - 60.50	1.0000	1.0000
L41	80	CCI-SFP-045100	60.25 - 60.50	1.0000	1.0000
L41	82	CCI-SFP-040075	60.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L42	2	FB-L98B-034-XXX(3/8)	60.50 59.50 -	1.0000	1.0000
L42	3	PWRT-608-S(13/16)	60.25 59.50 -	1.0000	1.0000
L42	4	PWRT-606-S(7/8)	60.25 59.50 -	1.0000	1.0000
L42	5	RFFT-48SM-001-XXX(3/8)	60.25 59.50 -	1.0000	1.0000
L42	7	7983A(ELLIPTICAL)	60.25 59.50 -	1.0000	1.0000
L42	11	CU12PSM9P6XXX(1-1/2)	60.25 59.50 -	1.0000	1.0000
L42	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	60.25 59.50 -	1.0000	1.0000
L42	25	Safety Line 3/8	60.25 59.50 -	1.0000	1.0000
L42	37	PL1.25x5.5 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	38	PL1.25x5.5 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	39	PL1.25x5.5 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	49	PL1x4 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	50	PL1x4 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	51	PL1x4 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	53	PL1x4 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	54	PL1x4 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	55	PL1x4 Reinforcement	60.25 59.50 -	1.0000	1.0000
L42	79	CCI-SFP-045100	60.25 59.50 -	1.0000	1.0000
L42	80	CCI-SFP-045100	60.25 59.50 -	1.0000	1.0000
L42	82	CCI-SFP-040075	60.25 59.50 -	1.0000	1.0000
L43	2	FB-L98B-034-XXX(3/8)	60.25 59.25 - 59.50	1.0000	1.0000
L43	3	PWRT-608-S(13/16)	59.25 - 59.50	1.0000	1.0000
L43	4	PWRT-606-S(7/8)	59.25 - 59.50	1.0000	1.0000
L43	5	RFFT-48SM-001-XXX(3/8)	59.25 - 59.50	1.0000	1.0000
L43	7	7983A(ELLIPTICAL)	59.25 - 59.50	1.0000	1.0000
L43	11	CU12PSM9P6XXX(1-1/2)	59.25 - 59.50	1.0000	1.0000
L43	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	59.25 - 59.50	1.0000	1.0000
L43	25	Safety Line 3/8	59.25 - 59.50	1.0000	1.0000
L43	33	PL1.25x6.625 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	34	PL1.25x6.625 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	35	PL1.25x6.625 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	49	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	50	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	51	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L43	53	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	54	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	55	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	79	CCI-SFP-045100	59.25 - 59.50	1.0000	1.0000
L43	80	CCI-SFP-045100	59.25 - 59.50	1.0000	1.0000
L43	82	CCI-SFP-040075	59.25 - 59.50	1.0000	1.0000
L44	2	FB-L98B-034-XXX(3/8)	54.25 - 59.25	1.0000	1.0000
L44	3	PWRT-608-S(13/16)	54.25 - 59.25	1.0000	1.0000
L44	4	PWRT-606-S(7/8)	54.25 - 59.25	1.0000	1.0000
L44	5	RFFT-48SM-001-XXX(3/8)	54.25 - 59.25	1.0000	1.0000
L44	7	7983A(ELLIPTICAL)	54.25 - 59.25	1.0000	1.0000
L44	11	CU12PSM9P6XXX(1-1/2)	54.25 - 59.25	1.0000	1.0000
L44	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	54.25 - 59.25	1.0000	1.0000
L44	25	Safety Line 3/8	54.25 - 59.25	1.0000	1.0000
L44	33	PL 1.25x6.625 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	34	PL 1.25x6.625 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	35	PL 1.25x6.625 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	49	PL1x4 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	50	PL1x4 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	51	PL1x4 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	53	PL1x4 Reinforcement	58.75 - 59.25	1.0000	1.0000
L44	54	PL1x4 Reinforcement	58.75 - 59.25	1.0000	1.0000
L44	55	PL1x4 Reinforcement	58.75 - 59.25	1.0000	1.0000
L44	79	CCI-SFP-045100	54.25 - 59.25	1.0000	1.0000
L44	80	CCI-SFP-045100	54.25 - 59.25	1.0000	1.0000
L44	82	CCI-SFP-040075	54.25 - 59.25	1.0000	1.0000
L45	2	FB-L98B-034-XXX(3/8)	45.80 - 54.25	1.0000	1.0000
L45	3	PWRT-608-S(13/16)	45.80 - 54.25	1.0000	1.0000
L45	4	PWRT-606-S(7/8)	45.80 - 54.25	1.0000	1.0000
L45	5	RFFT-48SM-001-XXX(3/8)	45.80 - 54.25	1.0000	1.0000
L45	7	7983A(ELLIPTICAL)	45.80 - 54.25	1.0000	1.0000
L45	11	CU12PSM9P6XXX(1-1/2)	45.80 - 54.25	1.0000	1.0000
L45	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	45.80 - 54.25	1.0000	1.0000
L45	25	Safety Line 3/8	45.80 - 54.25	1.0000	1.0000
L45	33	PL 1.25x6.625	45.80 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L45	34	Reinforcement PL1.25x6.625	54.25 45.80 -	1.0000	1.0000
L45	35	Reinforcement PL1.25x6.625	54.25 45.80 -	1.0000	1.0000
L45	49	Reinforcement PL1x4 Reinforcement	54.25 45.80 -	1.0000	1.0000
L45	50	PL1x4 Reinforcement	54.25 45.80 -	1.0000	1.0000
L45	51	PL1x4 Reinforcement	54.25 45.80 -	1.0000	1.0000
L45	79	CCI-SFP-045100	54.25 45.80 -	1.0000	1.0000
L45	80	CCI-SFP-045100	54.25 45.80 -	1.0000	1.0000
L45	82	CCI-SFP-040075	54.25 45.80 -	1.0000	1.0000
L46	2	FB-L98B-034-XXX(3/8)	54.25 44.80 -	1.0000	1.0000
L46	3	PWRT-608-S(13/16)	45.80 44.80 -	1.0000	1.0000
L46	4	PWRT-606-S(7/8)	45.80 44.80 -	1.0000	1.0000
L46	5	RFFT-48SM-001-XXX(3/8)	45.80 44.80 -	1.0000	1.0000
L46	7	7983A(ELLIPTICAL)	45.80 44.80 -	1.0000	1.0000
L46	11	CU12PSM9P6XXX(1-1/2)	45.80 44.80 -	1.0000	1.0000
L46	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	45.80 44.80 -	1.0000	1.0000
L46	25	Safety Line 3/8	45.80 44.80 -	1.0000	1.0000
L46	33	PL1.25x6.625 Reinforcement	45.80 44.80 -	1.0000	1.0000
L46	34	PL1.25x6.625 Reinforcement	45.80 44.80 -	1.0000	1.0000
L46	35	PL1.25x6.625 Reinforcement	45.80 44.80 -	1.0000	1.0000
L46	49	PL1x4 Reinforcement	45.80 44.80 -	1.0000	1.0000
L46	50	PL1x4 Reinforcement	45.80 44.80 -	1.0000	1.0000
L46	51	PL1x4 Reinforcement	45.80 44.80 -	1.0000	1.0000
L46	74	CCI-SFP-045100	45.80 44.80 -	1.0000	1.0000
L46	76	CCI-SFP-060100	45.08 44.80 -	1.0000	1.0000
L46	77	CCI-SFP-060100	45.17 44.80 -	1.0000	1.0000
L46	79	CCI-SFP-045100	45.17 45.25 -	1.0000	1.0000
L46	80	CCI-SFP-045100	45.80 45.25 -	1.0000	1.0000
L46	82	CCI-SFP-040075	45.80 45.25 -	1.0000	1.0000
L47	2	FB-L98B-034-XXX(3/8)	45.80 43.58 -	1.0000	1.0000
L47	3	PWRT-608-S(13/16)	44.80 43.58 -	1.0000	1.0000
L47	4	PWRT-606-S(7/8)	44.80 43.58 -	1.0000	1.0000
L47	5	RFFT-48SM-001-XXX(3/8)	44.80 43.58 -	1.0000	1.0000
L47	7	7983A(ELLIPTICAL)	44.80 43.58 -	1.0000	1.0000
L47	11	CU12PSM9P6XXX(1-1/2)	44.80 43.58 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L47	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	43.58 - 44.80	1.0000	1.0000
L47	25	Safety Line 3/8	43.58 - 44.80	1.0000	1.0000
L47	33	PL1.25x6.625 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	34	PL1.25x6.625 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	35	PL1.25x6.625 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	49	PL1x4 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	50	PL1x4 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	51	PL1x4 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	74	CCI-SFP-045100	43.58 - 44.80	1.0000	1.0000
L47	76	CCI-SFP-060100	43.58 - 44.80	1.0000	1.0000
L47	77	CCI-SFP-060100	43.58 - 44.80	1.0000	1.0000
L48	2	FB-L98B-034-XXX(3/8)	43.33 - 43.58	1.0000	1.0000
L48	3	PWRT-608-S(13/16)	43.33 - 43.58	1.0000	1.0000
L48	4	PWRT-606-S(7/8)	43.33 - 43.58	1.0000	1.0000
L48	5	RFFT-48SM-001-XXX(3/8)	43.33 - 43.58	1.0000	1.0000
L48	7	7983A(ELLIPTICAL)	43.33 - 43.58	1.0000	1.0000
L48	11	CU12PSM9P6XXX(1-1/2)	43.33 - 43.58	1.0000	1.0000
L48	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	43.33 - 43.58	1.0000	1.0000
L48	25	Safety Line 3/8	43.33 - 43.58	1.0000	1.0000
L48	33	PL1.25x6.625 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	34	PL1.25x6.625 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	35	PL1.25x6.625 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	49	PL1x4 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	50	PL1x4 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	51	PL1x4 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	74	CCI-SFP-045100	43.33 - 43.58	1.0000	1.0000
L48	76	CCI-SFP-060100	43.33 - 43.58	1.0000	1.0000
L48	77	CCI-SFP-060100	43.33 - 43.58	1.0000	1.0000
L49	2	FB-L98B-034-XXX(3/8)	43.17 - 43.33	1.0000	1.0000
L49	3	PWRT-608-S(13/16)	43.17 - 43.33	1.0000	1.0000
L49	4	PWRT-606-S(7/8)	43.17 - 43.33	1.0000	1.0000
L49	5	RFFT-48SM-001-XXX(3/8)	43.17 - 43.33	1.0000	1.0000
L49	7	7983A(ELLIPTICAL)	43.17 - 43.33	1.0000	1.0000
L49	11	CU12PSM9P6XXX(1-1/2)	43.17 - 43.33	1.0000	1.0000
L49	19	MLC HYBRID 6X12	43.17 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L49	25	6AWGX6(1-1/2) Safety Line 3/8	43.33 43.17 - 43.33	1.0000	1.0000
L49	33	PL1.25x6.625 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	34	PL1.25x6.625 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	35	PL1.25x6.625 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	49	PL1x4 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	50	PL1x4 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	51	PL1x4 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	74	CCI-SFP-045100	43.17 - 43.33	1.0000	1.0000
L49	76	CCI-SFP-060100	43.17 - 43.33	1.0000	1.0000
L49	77	CCI-SFP-060100	43.17 - 43.33	1.0000	1.0000
L50	2	FB-L98B-034-XXX(3/8)	42.92 - 43.17	1.0000	1.0000
L50	3	PWRT-608-S(13/16)	42.92 - 43.17	1.0000	1.0000
L50	4	PWRT-606-S(7/8)	42.92 - 43.17	1.0000	1.0000
L50	5	RFFT-48SM-001-XXX(3/8)	42.92 - 43.17	1.0000	1.0000
L50	7	7983A(ELLIPTICAL)	42.92 - 43.17	1.0000	1.0000
L50	11	CU12PSM9P6XXX(1-1/2)	42.92 - 43.17	1.0000	1.0000
L50	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	42.92 - 43.17	1.0000	1.0000
L50	25	Safety Line 3/8	42.92 - 43.17	1.0000	1.0000
L50	33	PL1.25x6.625 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	34	PL1.25x6.625 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	35	PL1.25x6.625 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	49	PL1x4 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	50	PL1x4 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	51	PL1x4 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	74	CCI-SFP-045100	42.92 - 43.17	1.0000	1.0000
L50	76	CCI-SFP-060100	42.92 - 43.17	1.0000	1.0000
L50	77	CCI-SFP-060100	42.92 - 43.17	1.0000	1.0000
L51	2	FB-L98B-034-XXX(3/8)	39.00 - 42.92	1.0000	1.0000
L51	3	PWRT-608-S(13/16)	39.00 - 42.92	1.0000	1.0000
L51	4	PWRT-606-S(7/8)	39.00 - 42.92	1.0000	1.0000
L51	5	RFFT-48SM-001-XXX(3/8)	39.00 - 42.92	1.0000	1.0000
L51	7	7983A(ELLIPTICAL)	39.00 - 42.92	1.0000	1.0000
L51	11	CU12PSM9P6XXX(1-1/2)	39.00 - 42.92	1.0000	1.0000
L51	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	39.00 - 42.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L51	25	Safety Line 3/8	39.00 - 42.92	1.0000	1.0000
L51	33	PL1.25x6.625 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	34	PL1.25x6.625 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	35	PL1.25x6.625 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	47	PL1x4 Reinforcement	39.00 - 40.75	1.0000	1.0000
L51	49	PL1x4 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	50	PL1x4 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	51	PL1x4 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	74	CCI-SFP-045100	39.00 - 42.92	1.0000	1.0000
L51	76	CCI-SFP-060100	39.00 - 42.92	1.0000	1.0000
L51	77	CCI-SFP-060100	39.00 - 42.92	1.0000	1.0000
L52	2	FB-L98B-034-XXX(3/8)	38.75 - 39.00	1.0000	1.0000
L52	3	PWRT-608-S(13/16)	38.75 - 39.00	1.0000	1.0000
L52	4	PWRT-606-S(7/8)	38.75 - 39.00	1.0000	1.0000
L52	5	RFFT-48SM-001-XXX(3/8)	38.75 - 39.00	1.0000	1.0000
L52	7	7983A(ELLIPTICAL)	38.75 - 39.00	1.0000	1.0000
L52	11	CU12PSM9P6XXX(1-1/2)	38.75 - 39.00	1.0000	1.0000
L52	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	38.75 - 39.00	1.0000	1.0000
L52	25	Safety Line 3/8	38.75 - 39.00	1.0000	1.0000
L52	33	PL1.25x6.625 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	34	PL1.25x6.625 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	35	PL1.25x6.625 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	47	PL1x4 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	49	PL1x4 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	50	PL1x4 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	51	PL1x4 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	74	CCI-SFP-045100	38.75 - 39.00	1.0000	1.0000
L52	76	CCI-SFP-060100	38.75 - 39.00	1.0000	1.0000
L52	77	CCI-SFP-060100	38.75 - 39.00	1.0000	1.0000
L53	2	FB-L98B-034-XXX(3/8)	37.17 - 38.75	1.0000	1.0000
L53	3	PWRT-608-S(13/16)	37.17 - 38.75	1.0000	1.0000
L53	4	PWRT-606-S(7/8)	37.17 - 38.75	1.0000	1.0000
L53	5	RFFT-48SM-001-XXX(3/8)	37.17 - 38.75	1.0000	1.0000
L53	7	7983A(ELLIPTICAL)	37.17 - 38.75	1.0000	1.0000
L53	11	CU12PSM9P6XXX(1-1/2)	37.17 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
			38.75		
L53	19	MLC HYBRID 6X12	37.17 -	1.0000	1.0000
		6AWGX6(1-1/2)	38.75		
L53	25	Safety Line 3/8	37.17 -	1.0000	1.0000
			38.75		
L53	33	PL1.25x6.625	37.17 -	1.0000	1.0000
		Reinforcement	38.75		
L53	34	PL1.25x6.625	37.17 -	1.0000	1.0000
		Reinforcement	38.75		
L53	35	PL1.25x6.625	37.17 -	1.0000	1.0000
		Reinforcement	38.75		
L53	47	PL1x4 Reinforcement	37.17 -	1.0000	1.0000
			38.75		
L53	49	PL1x4 Reinforcement	37.17 -	1.0000	1.0000
			38.75		
L53	50	PL1x4 Reinforcement	37.17 -	1.0000	1.0000
			38.75		
L53	51	PL1x4 Reinforcement	37.17 -	1.0000	1.0000
			38.75		
L53	74	CCI-SFP-045100	37.17 -	1.0000	1.0000
			38.75		
L53	76	CCI-SFP-060100	37.17 -	1.0000	1.0000
			38.75		
L53	77	CCI-SFP-060100	37.17 -	1.0000	1.0000
			38.75		
L54	2	FB-L98B-034-XXX(3/8)	36.92 -	1.0000	1.0000
			37.17		
L54	3	PWRT-608-S(13/16)	36.92 -	1.0000	1.0000
			37.17		
L54	4	PWRT-606-S(7/8)	36.92 -	1.0000	1.0000
			37.17		
L54	5	RFFT-48SM-001-XXX(3/8)	36.92 -	1.0000	1.0000
			37.17		
L54	7	7983A(ELLIPTICAL)	36.92 -	1.0000	1.0000
			37.17		
L54	11	CU12PSM9P6XXX(1-1/2)	36.92 -	1.0000	1.0000
			37.17		
L54	19	MLC HYBRID 6X12	36.92 -	1.0000	1.0000
		6AWGX6(1-1/2)	37.17		
L54	25	Safety Line 3/8	36.92 -	1.0000	1.0000
			37.17		
L54	33	PL1.25x6.625	36.92 -	1.0000	1.0000
		Reinforcement	37.17		
L54	34	PL1.25x6.625	36.92 -	1.0000	1.0000
		Reinforcement	37.17		
L54	35	PL1.25x6.625	36.92 -	1.0000	1.0000
		Reinforcement	37.17		
L54	47	PL1x4 Reinforcement	36.92 -	1.0000	1.0000
			37.17		
L54	49	PL1x4 Reinforcement	36.92 -	1.0000	1.0000
			37.17		
L54	50	PL1x4 Reinforcement	36.92 -	1.0000	1.0000
			37.17		
L54	51	PL1x4 Reinforcement	36.92 -	1.0000	1.0000
			37.17		
L54	74	CCI-SFP-045100	36.92 -	1.0000	1.0000
			37.17		
L54	76	CCI-SFP-060100	36.92 -	1.0000	1.0000
			37.17		
L54	77	CCI-SFP-060100	36.92 -	1.0000	1.0000
			37.17		
L55	2	FB-L98B-034-XXX(3/8)	34.00 -	1.0000	1.0000
			36.92		
L55	3	PWRT-608-S(13/16)	34.00 -	1.0000	1.0000
			36.92		
L55	4	PWRT-606-S(7/8)	34.00 -	1.0000	1.0000
			36.92		
L55	5	RFFT-48SM-001-XXX(3/8)	34.00 -	1.0000	1.0000
			36.92		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L55	7	7983A(ELLIPTICAL)	34.00 - 36.92	1.0000	1.0000
L55	11	CU12PSM9P6XXX(1-1/2)	34.00 - 36.92	1.0000	1.0000
L55	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	34.00 - 36.92	1.0000	1.0000
L55	25	Safety Line 3/8	34.00 - 36.92	1.0000	1.0000
L55	33	PL1.25x6.625 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	34	PL1.25x6.625 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	35	PL1.25x6.625 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	45	PL1x4 Reinforcement	34.00 - 35.75	1.0000	1.0000
L55	46	PL1x4 Reinforcement	34.00 - 35.75	1.0000	1.0000
L55	47	PL1x4 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	49	PL1x4 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	50	PL1x4 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	51	PL1x4 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	70	CCI-SFP-045100	34.00 - 35.08	1.0000	1.0000
L55	72	CCI-SFP-045100	34.00 - 35.08	1.0000	1.0000
L55	74	CCI-SFP-045100	34.00 - 36.92	1.0000	1.0000
L55	76	CCI-SFP-060100	35.17 - 36.92	1.0000	1.0000
L55	77	CCI-SFP-060100	35.17 - 36.92	1.0000	1.0000
L56	2	FB-L98B-034-XXX(3/8)	33.75 - 34.00	1.0000	1.0000
L56	3	PWRT-608-S(13/16)	33.75 - 34.00	1.0000	1.0000
L56	4	PWRT-606-S(7/8)	33.75 - 34.00	1.0000	1.0000
L56	5	RFFT-48SM-001-XXX(3/8)	33.75 - 34.00	1.0000	1.0000
L56	7	7983A(ELLIPTICAL)	33.75 - 34.00	1.0000	1.0000
L56	11	CU12PSM9P6XXX(1-1/2)	33.75 - 34.00	1.0000	1.0000
L56	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	33.75 - 34.00	1.0000	1.0000
L56	25	Safety Line 3/8	33.75 - 34.00	1.0000	1.0000
L56	33	PL1.25x6.625 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	34	PL1.25x6.625 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	35	PL1.25x6.625 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	45	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	46	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	47	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	49	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	50	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	51	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L56	70	CCI-SFP-045100	34.00 33.75 -	1.0000	1.0000
L56	72	CCI-SFP-045100	34.00 33.75 -	1.0000	1.0000
L56	74	CCI-SFP-045100	34.00 33.75 -	1.0000	1.0000
L57	2	FB-L98B-034-XXX(3/8)	34.00 29.75 -	1.0000	1.0000
L57	3	PWRT-608-S(13/16)	33.75 29.75 -	1.0000	1.0000
L57	4	PWRT-606-S(7/8)	33.75 29.75 -	1.0000	1.0000
L57	5	RFFT-48SM-001-XXX(3/8)	33.75 29.75 -	1.0000	1.0000
L57	7	7983A(ELLIPTICAL)	33.75 29.75 -	1.0000	1.0000
L57	11	CU12PSM9P6XXX(1-1/2)	33.75 29.75 -	1.0000	1.0000
L57	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	33.75 29.75 -	1.0000	1.0000
L57	25	Safety Line 3/8	33.75 29.75 -	1.0000	1.0000
L57	33	PL1.25x6.625 Reinforcement	33.75 29.75 -	1.0000	1.0000
L57	34	PL1.25x6.625 Reinforcement	33.75 29.75 -	1.0000	1.0000
L57	35	PL1.25x6.625 Reinforcement	33.75 29.75 -	1.0000	1.0000
L57	45	PL1x4 Reinforcement	33.75 29.75 -	1.0000	1.0000
L57	46	PL1x4 Reinforcement	33.75 29.75 -	1.0000	1.0000
L57	47	PL1x4 Reinforcement	33.75 29.75 -	1.0000	1.0000
L57	49	PL1x4 Reinforcement	33.75 32.25 -	1.0000	1.0000
L57	50	PL1x4 Reinforcement	33.75 32.25 -	1.0000	1.0000
L57	51	PL1x4 Reinforcement	33.75 32.25 -	1.0000	1.0000
L57	70	CCI-SFP-045100	33.75 29.75 -	1.0000	1.0000
L57	72	CCI-SFP-045100	33.75 29.75 -	1.0000	1.0000
L57	74	CCI-SFP-045100	33.75 29.75 -	1.0000	1.0000
L58	2	FB-L98B-034-XXX(3/8)	33.75 29.50 -	1.0000	1.0000
L58	3	PWRT-608-S(13/16)	29.75 29.50 -	1.0000	1.0000
L58	4	PWRT-606-S(7/8)	29.75 29.50 -	1.0000	1.0000
L58	5	RFFT-48SM-001-XXX(3/8)	29.75 29.50 -	1.0000	1.0000
L58	7	7983A(ELLIPTICAL)	29.75 29.50 -	1.0000	1.0000
L58	11	CU12PSM9P6XXX(1-1/2)	29.75 29.50 -	1.0000	1.0000
L58	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	29.75 29.50 -	1.0000	1.0000
L58	25	Safety Line 3/8	29.75 29.50 -	1.0000	1.0000
L58	27	PL1.25x6.875 Reinforcement	29.75 29.50 -	1.0000	1.0000
L58	28	PL1.25x6.875 Reinforcement	29.75 29.50 -	1.0000	1.0000
L58	29	PL1.25x6.875 Reinforcement	29.75 29.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L58	45	PL1x4 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	46	PL1x4 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	47	PL1x4 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	70	CCI-SFP-045100	29.50 - 29.75	1.0000	1.0000
L58	72	CCI-SFP-045100	29.50 - 29.75	1.0000	1.0000
L58	74	CCI-SFP-045100	29.50 - 29.75	1.0000	1.0000
L59	2	FB-L98B-034-XXX(3/8)	24.50 - 29.50	1.0000	1.0000
L59	3	PWRT-608-S(13/16)	24.50 - 29.50	1.0000	1.0000
L59	4	PWRT-606-S(7/8)	24.50 - 29.50	1.0000	1.0000
L59	5	RFFT-48SM-001-XXX(3/8)	24.50 - 29.50	1.0000	1.0000
L59	7	7983A(ELLIPTICAL)	24.50 - 29.50	1.0000	1.0000
L59	11	CU12PSM9P6XXX(1-1/2)	24.50 - 29.50	1.0000	1.0000
L59	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	24.50 - 29.50	1.0000	1.0000
L59	25	Safety Line 3/8	24.50 - 29.50	1.0000	1.0000
L59	27	PL 1.25x6.875 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	28	PL 1.25x6.875 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	29	PL 1.25x6.875 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	45	PL1x4 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	46	PL1x4 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	47	PL1x4 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	65	CCI-SFP-060100	24.50 - 25.00	1.0000	1.0000
L59	66	CCI-SFP-060100	24.50 - 25.00	1.0000	1.0000
L59	68	CCI-SFP-060100	24.50 - 25.00	1.0000	1.0000
L59	70	CCI-SFP-045100	24.50 - 29.50	1.0000	1.0000
L59	72	CCI-SFP-045100	25.08 - 29.50	1.0000	1.0000
L59	74	CCI-SFP-045100	25.08 - 29.50	1.0000	1.0000
L60	2	FB-L98B-034-XXX(3/8)	23.00 - 24.50	1.0000	1.0000
L60	3	PWRT-608-S(13/16)	23.00 - 24.50	1.0000	1.0000
L60	4	PWRT-606-S(7/8)	23.00 - 24.50	1.0000	1.0000
L60	5	RFFT-48SM-001-XXX(3/8)	23.00 - 24.50	1.0000	1.0000
L60	7	7983A(ELLIPTICAL)	23.00 - 24.50	1.0000	1.0000
L60	11	CU12PSM9P6XXX(1-1/2)	23.00 - 24.50	1.0000	1.0000
L60	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	23.00 - 24.50	1.0000	1.0000
L60	25	Safety Line 3/8	23.00 - 24.50	1.0000	1.0000
L60	27	PL 1.25x6.875	23.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L60	28	Reinforcement PL1.25x6.875	24.50 23.00 -	1.0000	1.0000
L60	29	Reinforcement PL1.25x6.875	24.50 23.00 -	1.0000	1.0000
L60	45	Reinforcement PL1x4 Reinforcement	24.50 23.00 -	1.0000	1.0000
L60	46	PL1x4 Reinforcement	24.50 23.00 -	1.0000	1.0000
L60	47	PL1x4 Reinforcement	24.50 23.00 -	1.0000	1.0000
L60	65	CCI-SFP-060100	24.50 23.00 -	1.0000	1.0000
L60	66	CCI-SFP-060100	24.50 23.00 -	1.0000	1.0000
L60	68	CCI-SFP-060100	24.50 23.00 -	1.0000	1.0000
L60	70	CCI-SFP-045100	24.50 23.00 -	1.0000	1.0000
L61	2	FB-L98B-034-XXX(3/8)	22.75 - 23.00	1.0000	1.0000
L61	3	PWRT-608-S(13/16)	22.75 - 23.00	1.0000	1.0000
L61	4	PWRT-606-S(7/8)	22.75 - 23.00	1.0000	1.0000
L61	5	RFFT-48SM-001-XXX(3/8)	22.75 - 23.00	1.0000	1.0000
L61	7	7983A(ELLIPTICAL)	22.75 - 23.00	1.0000	1.0000
L61	11	CU12PSM9P6XXX(1-1/2)	22.75 - 23.00	1.0000	1.0000
L61	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	22.75 - 23.00	1.0000	1.0000
L61	25	Safety Line 3/8	22.75 - 23.00	1.0000	1.0000
L61	27	PL1.25x6.875 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	28	PL1.25x6.875 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	29	PL1.25x6.875 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	45	PL1x4 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	46	PL1x4 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	47	PL1x4 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	65	CCI-SFP-060100	22.75 - 23.00	1.0000	1.0000
L61	66	CCI-SFP-060100	22.75 - 23.00	1.0000	1.0000
L61	68	CCI-SFP-060100	22.75 - 23.00	1.0000	1.0000
L61	70	CCI-SFP-045100	22.75 - 23.00	1.0000	1.0000
L62	2	FB-L98B-034-XXX(3/8)	21.58 - 22.75	1.0000	1.0000
L62	3	PWRT-608-S(13/16)	21.58 - 22.75	1.0000	1.0000
L62	4	PWRT-606-S(7/8)	21.58 - 22.75	1.0000	1.0000
L62	5	RFFT-48SM-001-XXX(3/8)	21.58 - 22.75	1.0000	1.0000
L62	7	7983A(ELLIPTICAL)	21.58 - 22.75	1.0000	1.0000
L62	11	CU12PSM9P6XXX(1-1/2)	21.58 - 22.75	1.0000	1.0000
L62	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	21.58 - 22.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L62	25	Safety Line 3/8	21.58 - 22.75	1.0000	1.0000
L62	27	PL1.25x6.875 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	28	PL1.25x6.875 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	29	PL1.25x6.875 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	45	PL1x4 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	46	PL1x4 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	47	PL1x4 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	65	CCI-SFP-060100	21.58 - 22.75	1.0000	1.0000
L62	66	CCI-SFP-060100	21.58 - 22.75	1.0000	1.0000
L62	68	CCI-SFP-060100	21.58 - 22.75	1.0000	1.0000
L62	70	CCI-SFP-045100	21.58 - 22.75	1.0000	1.0000
L63	2	FB-L98B-034-XXX(3/8)	21.33 - 21.58	1.0000	1.0000
L63	3	PWRT-608-S(13/16)	21.33 - 21.58	1.0000	1.0000
L63	4	PWRT-606-S(7/8)	21.33 - 21.58	1.0000	1.0000
L63	5	RFFT-48SM-001-XXX(3/8)	21.33 - 21.58	1.0000	1.0000
L63	7	7983A(ELLIPTICAL)	21.33 - 21.58	1.0000	1.0000
L63	11	CU12PSM9P6XXX(1-1/2)	21.33 - 21.58	1.0000	1.0000
L63	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	21.33 - 21.58	1.0000	1.0000
L63	25	Safety Line 3/8	21.33 - 21.58	1.0000	1.0000
L63	27	PL1.25x6.875 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	28	PL1.25x6.875 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	29	PL1.25x6.875 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	45	PL1x4 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	46	PL1x4 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	47	PL1x4 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	65	CCI-SFP-060100	21.33 - 21.58	1.0000	1.0000
L63	66	CCI-SFP-060100	21.33 - 21.58	1.0000	1.0000
L63	68	CCI-SFP-060100	21.33 - 21.58	1.0000	1.0000
L63	70	CCI-SFP-045100	21.33 - 21.58	1.0000	1.0000
L64	2	FB-L98B-034-XXX(3/8)	16.33 - 21.33	1.0000	1.0000
L64	3	PWRT-608-S(13/16)	16.33 - 21.33	1.0000	1.0000
L64	4	PWRT-606-S(7/8)	16.33 - 21.33	1.0000	1.0000
L64	5	RFFT-48SM-001-XXX(3/8)	16.33 - 21.33	1.0000	1.0000
L64	7	7983A(ELLIPTICAL)	16.33 - 21.33	1.0000	1.0000
L64	11	CU12PSM9P6XXX(1-1/2)	16.33 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L64	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	21.33 16.33 - 21.33	1.0000	1.0000
L64	25	Safety Line 3/8	16.33 - 21.33	1.0000	1.0000
L64	27	PL1.25x6.875 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	28	PL1.25x6.875 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	29	PL1.25x6.875 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	30	PL1.25x6.875 Reinforcement	16.33 - 16.42	1.0000	1.0000
L64	31	PL1.25x6.875 Reinforcement	16.33 - 16.42	1.0000	1.0000
L64	45	PL1x4 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	46	PL1x4 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	47	PL1x4 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	65	CCI-SFP-060100	16.33 - 21.33	1.0000	1.0000
L64	66	CCI-SFP-060100	16.33 - 21.33	1.0000	1.0000
L64	68	CCI-SFP-060100	16.33 - 21.33	1.0000	1.0000
L64	70	CCI-SFP-045100	20.08 - 21.33	1.0000	1.0000
L65	2	FB-L98B-034-XXX(3/8)	12.92 - 16.33	1.0000	1.0000
L65	3	PWRT-608-S(13/16)	12.92 - 16.33	1.0000	1.0000
L65	4	PWRT-606-S(7/8)	12.92 - 16.33	1.0000	1.0000
L65	5	RFFT-48SM-001-XXX(3/8)	12.92 - 16.33	1.0000	1.0000
L65	7	7983A(ELLIPTICAL)	12.92 - 16.33	1.0000	1.0000
L65	11	CU12PSM9P6XXX(1-1/2)	12.92 - 16.33	1.0000	1.0000
L65	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.92 - 16.33	1.0000	1.0000
L65	25	Safety Line 3/8	12.92 - 16.33	1.0000	1.0000
L65	27	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	28	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	29	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	30	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	31	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	45	PL1x4 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	46	PL1x4 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	47	PL1x4 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	65	CCI-SFP-060100	12.92 - 16.33	1.0000	1.0000
L65	66	CCI-SFP-060100	12.92 - 16.33	1.0000	1.0000
L65	68	CCI-SFP-060100	12.92 - 16.33	1.0000	1.0000
L66	2	FB-L98B-034-XXX(3/8)	12.67 - 12.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L66	3	PWRT-608-S(13/16)	12.67 - 12.92	1.0000	1.0000
L66	4	PWRT-606-S(7/8)	12.67 - 12.92	1.0000	1.0000
L66	5	RFFT-48SM-001-XXX(3/8)	12.67 - 12.92	1.0000	1.0000
L66	7	7983A(ELLIPTICAL)	12.67 - 12.92	1.0000	1.0000
L66	11	CU12PSM9P6XXX(1-1/2)	12.67 - 12.92	1.0000	1.0000
L66	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.67 - 12.92	1.0000	1.0000
L66	25	Safety Line 3/8	12.67 - 12.92	1.0000	1.0000
L66	27	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	28	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	29	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	30	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	31	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	45	PL1x4 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	46	PL1x4 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	47	PL1x4 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	65	CCI-SFP-060100	12.67 - 12.92	1.0000	1.0000
L66	66	CCI-SFP-060100	12.67 - 12.92	1.0000	1.0000
L66	68	CCI-SFP-060100	12.67 - 12.92	1.0000	1.0000
L67	2	FB-L98B-034-XXX(3/8)	12.50 - 12.67	1.0000	1.0000
L67	3	PWRT-608-S(13/16)	12.50 - 12.67	1.0000	1.0000
L67	4	PWRT-606-S(7/8)	12.50 - 12.67	1.0000	1.0000
L67	5	RFFT-48SM-001-XXX(3/8)	12.50 - 12.67	1.0000	1.0000
L67	7	7983A(ELLIPTICAL)	12.50 - 12.67	1.0000	1.0000
L67	11	CU12PSM9P6XXX(1-1/2)	12.50 - 12.67	1.0000	1.0000
L67	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.50 - 12.67	1.0000	1.0000
L67	25	Safety Line 3/8	12.50 - 12.67	1.0000	1.0000
L67	27	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	28	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	29	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	30	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	31	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	45	PL1x4 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	46	PL1x4 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	47	PL1x4 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	65	CCI-SFP-060100	12.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L67	66	CCI-SFP-060100	12.67 12.50 -	1.0000	1.0000
L67	68	CCI-SFP-060100	12.67 12.50 -	1.0000	1.0000
L68	2	FB-L98B-034-XXX(3/8)	12.67 12.25 -	1.0000	1.0000
L68	3	PWRT-608-S(13/16)	12.50 12.25 -	1.0000	1.0000
L68	4	PWRT-606-S(7/8)	12.50 12.25 -	1.0000	1.0000
L68	5	RFFT-48SM-001-XXX(3/8)	12.50 12.25 -	1.0000	1.0000
L68	7	7983A(ELLIPTICAL)	12.50 12.25 -	1.0000	1.0000
L68	11	CU12PSM9P6XXX(1-1/2)	12.50 12.25 -	1.0000	1.0000
L68	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.50 12.25 -	1.0000	1.0000
L68	25	Safety Line 3/8	12.50 12.25 -	1.0000	1.0000
L68	27	PL1.25x6.875 Reinforcement	12.50 12.25 -	1.0000	1.0000
L68	28	PL1.25x6.875 Reinforcement	12.50 12.25 -	1.0000	1.0000
L68	29	PL1.25x6.875 Reinforcement	12.50 12.25 -	1.0000	1.0000
L68	30	PL1.25x6.875 Reinforcement	12.50 12.25 -	1.0000	1.0000
L68	31	PL1.25x6.875 Reinforcement	12.50 12.25 -	1.0000	1.0000
L68	45	PL1x4 Reinforcement	12.50 12.25 -	1.0000	1.0000
L68	46	PL1x4 Reinforcement	12.50 12.25 -	1.0000	1.0000
L68	47	PL1x4 Reinforcement	12.50 12.25 -	1.0000	1.0000
L68	65	CCI-SFP-060100	12.50 12.25 -	1.0000	1.0000
L68	66	CCI-SFP-060100	12.50 12.25 -	1.0000	1.0000
L68	68	CCI-SFP-060100	12.50 12.25 -	1.0000	1.0000
L69	2	FB-L98B-034-XXX(3/8)	12.50 12.00 -	1.0000	1.0000
L69	3	PWRT-608-S(13/16)	12.25 12.00 -	1.0000	1.0000
L69	4	PWRT-606-S(7/8)	12.25 12.00 -	1.0000	1.0000
L69	5	RFFT-48SM-001-XXX(3/8)	12.25 12.00 -	1.0000	1.0000
L69	7	7983A(ELLIPTICAL)	12.25 12.00 -	1.0000	1.0000
L69	11	CU12PSM9P6XXX(1-1/2)	12.25 12.00 -	1.0000	1.0000
L69	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.25 12.00 -	1.0000	1.0000
L69	25	Safety Line 3/8	12.25 12.00 -	1.0000	1.0000
L69	27	PL1.25x6.875 Reinforcement	12.25 12.00 -	1.0000	1.0000
L69	28	PL1.25x6.875 Reinforcement	12.25 12.00 -	1.0000	1.0000
L69	29	PL1.25x6.875 Reinforcement	12.25 12.00 -	1.0000	1.0000
L69	30	PL1.25x6.875 Reinforcement	12.25 12.00 -	1.0000	1.0000
L69	31	PL1.25x6.875 Reinforcement	12.25 12.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L69	45	PL1x4 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	46	PL1x4 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	47	PL1x4 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	65	CCI-SFP-060100	12.00 - 12.25	1.0000	1.0000
L69	66	CCI-SFP-060100	12.00 - 12.25	1.0000	1.0000
L69	68	CCI-SFP-060100	12.00 - 12.25	1.0000	1.0000
L70	2	FB-L98B-034-XXX(3/8)	11.75 - 12.00	1.0000	1.0000
L70	3	PWRT-608-S(13/16)	11.75 - 12.00	1.0000	1.0000
L70	4	PWRT-606-S(7/8)	11.75 - 12.00	1.0000	1.0000
L70	5	RFFT-48SM-001-XXX(3/8)	11.75 - 12.00	1.0000	1.0000
L70	7	7983A(ELLIPTICAL)	11.75 - 12.00	1.0000	1.0000
L70	11	CU12PSM9P6XXX(1-1/2)	11.75 - 12.00	1.0000	1.0000
L70	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	11.75 - 12.00	1.0000	1.0000
L70	25	Safety Line 3/8	11.75 - 12.00	1.0000	1.0000
L70	27	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	28	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	29	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	30	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	31	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	45	PL1x4 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	46	PL1x4 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	47	PL1x4 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	65	CCI-SFP-060100	11.75 - 12.00	1.0000	1.0000
L70	66	CCI-SFP-060100	11.75 - 12.00	1.0000	1.0000
L70	68	CCI-SFP-060100	11.75 - 12.00	1.0000	1.0000
L71	2	FB-L98B-034-XXX(3/8)	8.50 - 11.75	1.0000	1.0000
L71	3	PWRT-608-S(13/16)	8.50 - 11.75	1.0000	1.0000
L71	4	PWRT-606-S(7/8)	8.50 - 11.75	1.0000	1.0000
L71	5	RFFT-48SM-001-XXX(3/8)	8.50 - 11.75	1.0000	1.0000
L71	7	7983A(ELLIPTICAL)	8.50 - 11.75	1.0000	1.0000
L71	11	CU12PSM9P6XXX(1-1/2)	8.50 - 11.75	1.0000	1.0000
L71	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	8.50 - 11.75	1.0000	1.0000
L71	25	Safety Line 3/8	8.50 - 11.75	1.0000	1.0000
L71	27	PL1.25x6.875 Reinforcement	8.50 - 11.75	1.0000	1.0000
L71	28	PL1.25x6.875 Reinforcement	8.50 - 11.75	1.0000	1.0000
L71	29	PL1.25x6.875 Reinforcement	9.17 - 11.75	1.0000	1.0000
L71	30	PL1.25x6.875 Reinforcement	8.50 - 11.75	1.0000	1.0000
L71	31	PL1.25x6.875 Reinforcement	8.50 - 11.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L71	45	PL1x4 Reinforcement	10.75 - 11.75	1.0000	1.0000
L71	46	PL1x4 Reinforcement	10.75 - 11.75	1.0000	1.0000
L71	47	PL1x4 Reinforcement	10.75 - 11.75	1.0000	1.0000
L71	61	Transition Stiffener 1x7	8.50 - 10.50	1.0000	1.0000
L71	62	Transition Stiffener 1x7	8.50 - 10.50	1.0000	1.0000
L71	63	Transition Stiffener 1x7	8.50 - 10.50	1.0000	1.0000
L71	65	CCI-SFP-060100	8.50 - 11.75	1.0000	1.0000
L71	66	CCI-SFP-060100	8.50 - 11.75	1.0000	1.0000
L71	68	CCI-SFP-060100	10.00 - 11.75	1.0000	1.0000
L72	2	FB-L98B-034-XXX(3/8)	8.25 - 8.50	1.0000	1.0000
L72	3	PWRT-608-S(13/16)	8.25 - 8.50	1.0000	1.0000
L72	4	PWRT-606-S(7/8)	8.25 - 8.50	1.0000	1.0000
L72	5	RFFT-48SM-001-XXX(3/8)	8.25 - 8.50	1.0000	1.0000
L72	7	7983A(ELLIPTICAL)	8.25 - 8.50	1.0000	1.0000
L72	11	CU12PSM9P6XXX(1-1/2)	8.25 - 8.50	1.0000	1.0000
L72	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	8.25 - 8.50	1.0000	1.0000
L72	25	Safety Line 3/8	8.25 - 8.50	1.0000	1.0000
L72	27	PL1.25x6.875 Reinforcement	8.25 - 8.50	1.0000	1.0000
L72	28	PL1.25x6.875 Reinforcement	8.25 - 8.50	1.0000	1.0000
L72	30	PL1.25x6.875 Reinforcement	8.25 - 8.50	1.0000	1.0000
L72	31	PL1.25x6.875 Reinforcement	8.25 - 8.50	1.0000	1.0000
L72	61	Transition Stiffener 1x7	8.25 - 8.50	1.0000	1.0000
L72	62	Transition Stiffener 1x7	8.25 - 8.50	1.0000	1.0000
L72	63	Transition Stiffener 1x7	8.25 - 8.50	1.0000	1.0000
L72	65	CCI-SFP-060100	8.25 - 8.50	1.0000	1.0000
L72	66	CCI-SFP-060100	8.25 - 8.50	1.0000	1.0000
L73	2	FB-L98B-034-XXX(3/8)	7.00 - 8.25	1.0000	1.0000
L73	3	PWRT-608-S(13/16)	7.00 - 8.25	1.0000	1.0000
L73	4	PWRT-606-S(7/8)	7.00 - 8.25	1.0000	1.0000
L73	5	RFFT-48SM-001-XXX(3/8)	7.00 - 8.25	1.0000	1.0000
L73	7	7983A(ELLIPTICAL)	7.00 - 8.25	1.0000	1.0000
L73	11	CU12PSM9P6XXX(1-1/2)	7.00 - 8.25	1.0000	1.0000
L73	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	7.00 - 8.25	1.0000	1.0000
L73	25	Safety Line 3/8	7.00 - 8.25	1.0000	1.0000
L73	27	PL1.25x6.875 Reinforcement	7.00 - 8.25	1.0000	1.0000
L73	28	PL1.25x6.875 Reinforcement	7.00 - 8.25	1.0000	1.0000
L73	30	PL1.25x6.875 Reinforcement	7.00 - 8.25	1.0000	1.0000
L73	31	PL1.25x6.875 Reinforcement	7.00 - 8.25	1.0000	1.0000
L73	61	Transition Stiffener 1x7	7.00 - 8.25	1.0000	1.0000
L73	62	Transition Stiffener 1x7	7.00 - 8.25	1.0000	1.0000
L73	63	Transition Stiffener 1x7	7.00 - 8.25	1.0000	1.0000
L73	65	CCI-SFP-060100	7.00 - 8.25	1.0000	1.0000
L73	66	CCI-SFP-060100	7.00 - 8.25	1.0000	1.0000
L74	2	FB-L98B-034-XXX(3/8)	6.75 - 7.00	1.0000	1.0000
L74	3	PWRT-608-S(13/16)	6.75 - 7.00	1.0000	1.0000
L74	4	PWRT-606-S(7/8)	6.75 - 7.00	1.0000	1.0000
L74	5	RFFT-48SM-001-XXX(3/8)	6.75 - 7.00	1.0000	1.0000
L74	7	7983A(ELLIPTICAL)	6.75 - 7.00	1.0000	1.0000
L74	11	CU12PSM9P6XXX(1-1/2)	6.75 - 7.00	1.0000	1.0000
L74	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	6.75 - 7.00	1.0000	1.0000
L74	25	Safety Line 3/8	6.75 - 7.00	1.0000	1.0000
L74	27	PL1.25x6.875 Reinforcement	6.75 - 7.00	1.0000	1.0000
L74	28	PL1.25x6.875 Reinforcement	6.75 - 7.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
L74	30	Reinforcement PL1.25x6.875	6.75 - 7.00	1.0000	1.0000
L74	31	Reinforcement PL1.25x6.875	6.75 - 7.00	1.0000	1.0000
L74	61	Transition Stiffener 1x7	6.75 - 7.00	1.0000	1.0000
L74	62	Transition Stiffener 1x7	6.75 - 7.00	1.0000	1.0000
L74	63	Transition Stiffener 1x7	6.75 - 7.00	1.0000	1.0000
L74	65	CCI-SFP-060100	6.75 - 7.00	1.0000	1.0000
L74	66	CCI-SFP-060100	6.75 - 7.00	1.0000	1.0000
L75	2	FB-L98B-034-XXX(3/8)	1.75 - 6.75	1.0000	1.0000
L75	3	PWRT-608-S(13/16)	1.75 - 6.75	1.0000	1.0000
L75	4	PWRT-606-S(7/8)	1.75 - 6.75	1.0000	1.0000
L75	5	RFFT-48SM-001-XXX(3/8)	1.75 - 6.75	1.0000	1.0000
L75	7	7983A(ELLIPTICAL)	1.75 - 6.75	1.0000	1.0000
L75	11	CU12PSM9P6XXX(1-1/2)	1.75 - 6.75	1.0000	1.0000
L75	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	1.75 - 6.75	1.0000	1.0000
L75	25	Safety Line 3/8	1.75 - 6.75	1.0000	1.0000
L75	27	PL1.25x6.875 Reinforcement	1.75 - 6.75	1.0000	1.0000
L75	28	PL1.25x6.875 Reinforcement	1.75 - 6.75	1.0000	1.0000
L75	30	PL1.25x6.875 Reinforcement	1.75 - 6.75	1.0000	1.0000
L75	31	PL1.25x6.875 Reinforcement	1.75 - 6.75	1.0000	1.0000
L75	61	Transition Stiffener 1x7	1.75 - 6.75	1.0000	1.0000
L75	62	Transition Stiffener 1x7	1.75 - 6.75	1.0000	1.0000
L75	63	Transition Stiffener 1x7	1.75 - 6.75	1.0000	1.0000
L75	65	CCI-SFP-060100	5.00 - 6.75	1.0000	1.0000
L75	66	CCI-SFP-060100	5.00 - 6.75	1.0000	1.0000
L76	2	FB-L98B-034-XXX(3/8)	0.00 - 1.75	1.0000	1.0000
L76	3	PWRT-608-S(13/16)	0.00 - 1.75	1.0000	1.0000
L76	4	PWRT-606-S(7/8)	0.00 - 1.75	1.0000	1.0000
L76	5	RFFT-48SM-001-XXX(3/8)	0.00 - 1.75	1.0000	1.0000
L76	7	7983A(ELLIPTICAL)	0.00 - 1.75	1.0000	1.0000
L76	11	CU12PSM9P6XXX(1-1/2)	0.00 - 1.75	1.0000	1.0000
L76	19	MLC HYBRID 6X12 6AWGX6(1-1/2)	0.00 - 1.75	1.0000	1.0000
L76	25	Safety Line 3/8	0.00 - 1.75	1.0000	1.0000
L76	27	PL1.25x6.875 Reinforcement	0.00 - 1.75	1.0000	1.0000
L76	28	PL1.25x6.875 Reinforcement	0.00 - 1.75	1.0000	1.0000
L76	30	PL1.25x6.875 Reinforcement	0.00 - 1.75	1.0000	1.0000
L76	31	PL1.25x6.875 Reinforcement	0.00 - 1.75	1.0000	1.0000
L76	61	Transition Stiffener 1x7	0.00 - 1.75	1.0000	1.0000
L76	62	Transition Stiffener 1x7	0.00 - 1.75	1.0000	1.0000
L76	63	Transition Stiffener 1x7	0.00 - 1.75	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
L5	91	CCI-AFP-045100	124.25 - 125.42	Auto	0.1983

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L5	92	CCI-AFP-045100	124.25 - 125.42	Auto	0.1983
L5	93	CCI-AFP-045100	124.25 - 125.42	Auto	0.1983
L6	91	CCI-AFP-045100	123.42 - 124.25	Auto	0.1865
L6	92	CCI-AFP-045100	123.42 - 124.25	Auto	0.1865
L6	93	CCI-AFP-045100	123.42 - 124.25	Auto	0.1865
L7	91	CCI-AFP-045100	123.17 - 123.42	Auto	0.3886
L7	92	CCI-AFP-045100	123.17 - 123.42	Auto	0.3886
L7	93	CCI-AFP-045100	123.17 - 123.42	Auto	0.3886
L8	91	CCI-AFP-045100	118.17 - 123.17	Auto	0.3429
L8	92	CCI-AFP-045100	118.17 - 123.17	Auto	0.3429
L8	93	CCI-AFP-045100	118.17 - 123.17	Auto	0.3429
L9	91	CCI-AFP-045100	113.17 - 118.17	Auto	0.2693
L9	92	CCI-AFP-045100	113.17 - 118.17	Auto	0.2693
L9	93	CCI-AFP-045100	113.17 - 118.17	Auto	0.2693
L10	91	CCI-AFP-045100	109.50 - 113.17	Auto	0.2110
L10	92	CCI-AFP-045100	109.50 - 113.17	Auto	0.2110
L10	93	CCI-AFP-045100	109.50 - 113.17	Auto	0.2110
L10	95	CCI-AFP-040075	109.50 - 111.00	Auto	0.0981
L10	97	CCI-AFP-040075	109.50 - 111.00	Auto	0.0981
L11	91	CCI-AFP-045100	109.25 - 109.50	Auto	0.2550
L11	92	CCI-AFP-045100	109.25 - 109.50	Auto	0.2550
L11	93	CCI-AFP-045100	109.25 - 109.50	Auto	0.2550
L11	95	CCI-AFP-040075	109.25 - 109.50	Auto	0.1619
L11	97	CCI-AFP-040075	109.25 - 109.50	Auto	0.1619
L12	57	PL1x4 Reinforcement	104.75 - 106.50	Auto	0.0956
L12	58	PL1x4 Reinforcement	104.75 - 106.50	Auto	0.0956
L12	59	PL1x4 Reinforcement	104.75 - 106.50	Auto	0.0956
L12	89	CCI-AFP-05012520	104.75 - 105.33	Auto	0.2703
L12	91	CCI-AFP-045100	104.75 - 109.25	Auto	0.2122
L12	92	CCI-AFP-045100	104.75 - 109.25	Auto	0.2122
L12	93	CCI-AFP-045100	104.75 - 109.25	Auto	0.2122
L12	95	CCI-AFP-040075	104.75 - 109.25	Auto	0.1138
L12	97	CCI-AFP-040075	104.75 - 109.25	Auto	0.1138
L13	57	PL1x4 Reinforcement	104.50 - 104.75	Auto	0.2248

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L13	58	PL1x4 Reinforcement	104.50 - 104.75	Auto	0.2248
L13	59	PL1x4 Reinforcement	104.50 - 104.75	Auto	0.2248
L13	89	CCI-AFP-05012520	104.50 - 104.75	Auto	0.3798
L13	91	CCI-AFP-045100	104.50 - 104.75	Auto	0.3109
L13	92	CCI-AFP-045100	104.50 - 104.75	Auto	0.3109
L13	93	CCI-AFP-045100	104.50 - 104.75	Auto	0.3109
L13	95	CCI-AFP-040075	104.50 - 104.75	Auto	0.2248
L13	97	CCI-AFP-040075	104.50 - 104.75	Auto	0.2248
L14	57	PL1x4 Reinforcement	102.42 - 104.50	Auto	0.2010
L14	58	PL1x4 Reinforcement	102.42 - 104.50	Auto	0.2010
L14	59	PL1x4 Reinforcement	102.42 - 104.50	Auto	0.2010
L14	89	CCI-AFP-05012520	102.42 - 104.50	Auto	0.3608
L14	91	CCI-AFP-045100	102.42 - 104.50	Auto	0.2897
L14	92	CCI-AFP-045100	102.42 - 104.50	Auto	0.2897
L14	93	CCI-AFP-045100	102.42 - 104.50	Auto	0.2897
L14	95	CCI-AFP-040075	102.42 - 104.50	Auto	0.2010
L14	97	CCI-AFP-040075	102.42 - 104.50	Auto	0.2010
L15	57	PL1x4 Reinforcement	102.17 - 102.42	Auto	0.0515
L15	58	PL1x4 Reinforcement	102.17 - 102.42	Auto	0.0515
L15	59	PL1x4 Reinforcement	102.17 - 102.42	Auto	0.0515
L15	89	CCI-AFP-05012520	102.17 - 102.42	Auto	0.2412
L15	91	CCI-AFP-045100	102.17 - 102.42	Auto	0.1569
L15	92	CCI-AFP-045100	102.17 - 102.42	Auto	0.1569
L15	93	CCI-AFP-045100	102.17 - 102.42	Auto	0.1569
L15	95	CCI-AFP-040075	102.17 - 102.42	Auto	0.0515
L15	97	CCI-AFP-040075	102.17 - 102.42	Auto	0.0515
L16	41	PL1.25x3.625 Reinforcement	98.75 - 100.00	Auto	0.0000
L16	42	PL1.25x3.625 Reinforcement	98.75 - 100.00	Auto	0.0000
L16	43	PL1.25x3.625 Reinforcement	98.75 - 100.00	Auto	0.0000
L16	57	PL1x4 Reinforcement	98.75 - 102.17	Auto	0.0191
L16	58	PL1x4 Reinforcement	98.75 - 102.17	Auto	0.0191
L16	59	PL1x4 Reinforcement	98.75 - 102.17	Auto	0.0191
L16	84	CCI-SFP-040075	98.75 - 100.33	Auto	0.0071
L16	85	CCI-SFP-040075	98.75 - 100.33	Auto	0.0071

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L16	89	CCI-AFP-05012520	98.75 - 102.17	Auto	0.2152
L16	91	CCI-AFP-045100	100.42 - 102.17	Auto	0.1377
L16	92	CCI-AFP-045100	100.42 - 102.17	Auto	0.1377
L16	93	CCI-AFP-045100	100.42 - 102.17	Auto	0.1377
L16	95	CCI-AFP-040075	98.75 - 102.17	Auto	0.0191
L16	97	CCI-AFP-040075	101.00 - 102.17	Auto	0.0338
L17	41	PL1.25x3.625 Reinforcement	98.50 - 98.75	Auto	0.1033
L17	42	PL1.25x3.625 Reinforcement	98.50 - 98.75	Auto	0.1033
L17	43	PL1.25x3.625 Reinforcement	98.50 - 98.75	Auto	0.1033
L17	57	PL1x4 Reinforcement	98.50 - 98.75	Auto	0.1874
L17	58	PL1x4 Reinforcement	98.50 - 98.75	Auto	0.1874
L17	59	PL1x4 Reinforcement	98.50 - 98.75	Auto	0.1874
L17	84	CCI-SFP-040075	98.50 - 98.75	Auto	0.1874
L17	85	CCI-SFP-040075	98.50 - 98.75	Auto	0.1874
L17	89	CCI-AFP-05012520	98.50 - 98.75	Auto	0.3499
L17	95	CCI-AFP-040075	98.50 - 98.75	Auto	0.1874
L18	41	PL1.25x3.625 Reinforcement	97.50 - 98.50	Auto	0.0942
L18	42	PL1.25x3.625 Reinforcement	97.50 - 98.50	Auto	0.0942
L18	43	PL1.25x3.625 Reinforcement	97.50 - 98.50	Auto	0.0942
L18	57	PL1x4 Reinforcement	97.50 - 98.50	Auto	0.1791
L18	58	PL1x4 Reinforcement	97.50 - 98.50	Auto	0.1791
L18	59	PL1x4 Reinforcement	97.50 - 98.50	Auto	0.1791
L18	84	CCI-SFP-040075	97.50 - 98.50	Auto	0.1791
L18	85	CCI-SFP-040075	97.50 - 98.50	Auto	0.1791
L18	89	CCI-AFP-05012520	97.50 - 98.50	Auto	0.3433
L18	95	CCI-AFP-040075	97.50 - 98.50	Auto	0.1791
L19	41	PL1.25x3.625 Reinforcement	97.25 - 97.50	Auto	0.0204
L19	42	PL1.25x3.625 Reinforcement	97.25 - 97.50	Auto	0.0204
L19	43	PL1.25x3.625 Reinforcement	97.25 - 97.50	Auto	0.0204
L19	57	PL1x4 Reinforcement	97.25 - 97.50	Auto	0.1122
L19	58	PL1x4 Reinforcement	97.25 - 97.50	Auto	0.1122
L19	59	PL1x4 Reinforcement	97.25 - 97.50	Auto	0.1122
L19	84	CCI-SFP-040075	97.25 - 97.50	Auto	0.1122
L19	85	CCI-SFP-040075	97.25 - 97.50	Auto	0.1122

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L19	89	CCI-AFP-05012520	97.25 - 97.50	Auto	0.2898
L19	95	CCI-AFP-040075	97.25 - 97.50	Auto	0.1122
L20	41	PL1.25x3.625 Reinforcement	92.00 - 97.25	Auto	0.0006
L20	42	PL1.25x3.625 Reinforcement	92.00 - 97.25	Auto	0.0006
L20	43	PL1.25x3.625 Reinforcement	92.00 - 97.25	Auto	0.0006
L20	57	PL1x4 Reinforcement	92.00 - 97.25	Auto	0.0675
L20	58	PL1x4 Reinforcement	92.00 - 97.25	Auto	0.0675
L20	59	PL1x4 Reinforcement	92.00 - 97.25	Auto	0.0675
L20	84	CCI-SFP-040075	92.00 - 97.25	Auto	0.0675
L20	85	CCI-SFP-040075	92.00 - 97.25	Auto	0.0675
L20	89	CCI-AFP-05012520	92.00 - 97.25	Auto	0.2540
L20	95	CCI-AFP-040075	96.00 - 97.25	Auto	0.0939
L21	41	PL1.25x3.625 Reinforcement	90.55 - 92.00	Auto	0.0009
L21	42	PL1.25x3.625 Reinforcement	90.55 - 92.00	Auto	0.0009
L21	43	PL1.25x3.625 Reinforcement	90.55 - 92.00	Auto	0.0009
L21	57	PL1x4 Reinforcement	90.55 - 92.00	Auto	0.0897
L21	58	PL1x4 Reinforcement	90.55 - 92.00	Auto	0.0897
L21	59	PL1x4 Reinforcement	90.55 - 92.00	Auto	0.0897
L21	84	CCI-SFP-040075	90.55 - 92.00	Auto	0.0897
L21	85	CCI-SFP-040075	90.55 - 92.00	Auto	0.0897
L21	89	CCI-AFP-05012520	90.55 - 92.00	Auto	0.2718
L22	41	PL1.25x3.625 Reinforcement	89.25 - 90.55	Auto	0.0000
L22	42	PL1.25x3.625 Reinforcement	89.25 - 90.55	Auto	0.0000
L22	43	PL1.25x3.625 Reinforcement	89.25 - 90.55	Auto	0.0000
L22	57	PL1x4 Reinforcement	89.25 - 90.55	Auto	0.0546
L22	58	PL1x4 Reinforcement	89.25 - 90.55	Auto	0.0546
L22	59	PL1x4 Reinforcement	89.25 - 90.55	Auto	0.0546
L22	84	CCI-SFP-040075	89.25 - 90.55	Auto	0.0546
L22	85	CCI-SFP-040075	89.25 - 90.55	Auto	0.0546
L22	87	CCI-SFP-040075	89.25 - 90.33	Auto	0.0532
L22	89	CCI-AFP-05012520	89.25 - 90.55	Auto	0.2437
L23	37	PL1.25x5.5 Reinforcement	89.00 - 89.25	Auto	0.4146
L23	38	PL1.25x5.5 Reinforcement	89.00 - 89.25	Auto	0.4146
L23	39	PL1.25x5.5 Reinforcement	89.00 - 89.25	Auto	0.4146

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L23	57	PL1x4 Reinforcement	89.00 - 89.25	Auto	0.1950
L23	58	PL1x4 Reinforcement	89.00 - 89.25	Auto	0.1950
L23	59	PL1x4 Reinforcement	89.00 - 89.25	Auto	0.1950
L23	84	CCI-SFP-040075	89.00 - 89.25	Auto	0.1950
L23	85	CCI-SFP-040075	89.00 - 89.25	Auto	0.1950
L23	87	CCI-SFP-040075	89.00 - 89.25	Auto	0.1950
L23	89	CCI-AFP-05012520	89.00 - 89.25	Auto	0.3560
L24	37	PL1.25x5.5 Reinforcement	88.25 - 89.00	Auto	0.3975
L24	38	PL1.25x5.5 Reinforcement	88.25 - 89.00	Auto	0.3975
L24	39	PL1.25x5.5 Reinforcement	88.25 - 89.00	Auto	0.3975
L24	57	PL1x4 Reinforcement	88.25 - 89.00	Auto	0.1716
L24	58	PL1x4 Reinforcement	88.25 - 89.00	Auto	0.1716
L24	59	PL1x4 Reinforcement	88.25 - 89.00	Auto	0.1716
L24	84	CCI-SFP-040075	88.25 - 89.00	Auto	0.1716
L24	85	CCI-SFP-040075	88.25 - 89.00	Auto	0.1716
L24	87	CCI-SFP-040075	88.25 - 89.00	Auto	0.1716
L24	89	CCI-AFP-05012520	88.25 - 89.00	Auto	0.3373
L25	37	PL1.25x5.5 Reinforcement	88.00 - 88.25	Auto	0.2891
L25	38	PL1.25x5.5 Reinforcement	88.00 - 88.25	Auto	0.2891
L25	39	PL1.25x5.5 Reinforcement	88.00 - 88.25	Auto	0.2891
L25	57	PL1x4 Reinforcement	88.00 - 88.25	Auto	0.0226
L25	58	PL1x4 Reinforcement	88.00 - 88.25	Auto	0.0226
L25	59	PL1x4 Reinforcement	88.00 - 88.25	Auto	0.0226
L25	84	CCI-SFP-040075	88.00 - 88.25	Auto	0.0226
L25	85	CCI-SFP-040075	88.00 - 88.25	Auto	0.0226
L25	87	CCI-SFP-040075	88.00 - 88.25	Auto	0.0226
L25	89	CCI-AFP-05012520	88.00 - 88.25	Auto	0.2181
L26	37	PL1.25x5.5 Reinforcement	87.83 - 88.00	Auto	0.2871
L26	38	PL1.25x5.5 Reinforcement	87.83 - 88.00	Auto	0.2871
L26	39	PL1.25x5.5 Reinforcement	87.83 - 88.00	Auto	0.2871
L26	57	PL1x4 Reinforcement	87.83 - 88.00	Auto	0.0198
L26	58	PL1x4 Reinforcement	87.83 - 88.00	Auto	0.0198
L26	59	PL1x4 Reinforcement	87.83 - 88.00	Auto	0.0198
L26	84	CCI-SFP-040075	87.83 - 88.00	Auto	0.0198

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L26	85	CCI-SFP-040075	87.83 - 88.00	Auto	0.0198
L26	87	CCI-SFP-040075	87.83 - 88.00	Auto	0.0198
L26	89	CCI-AFP-05012520	87.83 - 88.00	Auto	0.2158
L27	37	PL1.25x5.5 Reinforcement	87.58 - 87.83	Auto	0.2425
L27	38	PL1.25x5.5 Reinforcement	87.58 - 87.83	Auto	0.2425
L27	39	PL1.25x5.5 Reinforcement	87.58 - 87.83	Auto	0.2425
L27	57	PL1x4 Reinforcement	87.58 - 87.83	Auto	0.0000
L27	58	PL1x4 Reinforcement	87.58 - 87.83	Auto	0.0000
L27	59	PL1x4 Reinforcement	87.58 - 87.83	Auto	0.0000
L27	84	CCI-SFP-040075	87.58 - 87.83	Auto	0.0000
L27	85	CCI-SFP-040075	87.58 - 87.83	Auto	0.0000
L27	87	CCI-SFP-040075	87.58 - 87.83	Auto	0.0000
L27	89	CCI-AFP-05012520	87.58 - 87.83	Auto	0.1667
L28	37	PL1.25x5.5 Reinforcement	82.58 - 87.58	Auto	0.2048
L28	38	PL1.25x5.5 Reinforcement	82.58 - 87.58	Auto	0.2048
L28	39	PL1.25x5.5 Reinforcement	82.58 - 87.58	Auto	0.2048
L28	57	PL1x4 Reinforcement	86.50 - 87.58	Auto	0.0000
L28	58	PL1x4 Reinforcement	86.50 - 87.58	Auto	0.0000
L28	59	PL1x4 Reinforcement	86.50 - 87.58	Auto	0.0000
L28	84	CCI-SFP-040075	82.58 - 87.58	Auto	0.0000
L28	85	CCI-SFP-040075	82.58 - 87.58	Auto	0.0000
L28	87	CCI-SFP-040075	82.58 - 87.58	Auto	0.0000
L28	89	CCI-AFP-05012520	85.33 - 87.58	Auto	0.1400
L29	37	PL1.25x5.5 Reinforcement	77.58 - 82.58	Auto	0.1441
L29	38	PL1.25x5.5 Reinforcement	77.58 - 82.58	Auto	0.1441
L29	39	PL1.25x5.5 Reinforcement	77.58 - 82.58	Auto	0.1441
L29	53	PL1x4 Reinforcement	77.58 - 78.75	Auto	0.0000
L29	54	PL1x4 Reinforcement	77.58 - 78.75	Auto	0.0000
L29	55	PL1x4 Reinforcement	77.58 - 78.75	Auto	0.0000
L29	84	CCI-SFP-040075	77.58 - 82.58	Auto	0.0000
L29	85	CCI-SFP-040075	77.58 - 82.58	Auto	0.0000
L29	87	CCI-SFP-040075	77.58 - 82.58	Auto	0.0000
L30	37	PL1.25x5.5 Reinforcement	77.00 - 77.58	Auto	0.1170
L30	38	PL1.25x5.5 Reinforcement	77.00 - 77.58	Auto	0.1170

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L30	39	PL1.25x5.5 Reinforcement	77.00 - 77.58	Auto	0.1170
L30	53	PL1x4 Reinforcement	77.00 - 77.58	Auto	0.0000
L30	54	PL1x4 Reinforcement	77.00 - 77.58	Auto	0.0000
L30	55	PL1x4 Reinforcement	77.00 - 77.58	Auto	0.0000
L30	84	CCI-SFP-040075	77.00 - 77.58	Auto	0.0000
L30	85	CCI-SFP-040075	77.00 - 77.58	Auto	0.0000
L30	87	CCI-SFP-040075	77.00 - 77.58	Auto	0.0000
L31	37	PL1.25x5.5 Reinforcement	76.75 - 77.00	Auto	0.2105
L31	38	PL1.25x5.5 Reinforcement	76.75 - 77.00	Auto	0.2105
L31	39	PL1.25x5.5 Reinforcement	76.75 - 77.00	Auto	0.2105
L31	53	PL1x4 Reinforcement	76.75 - 77.00	Auto	0.0000
L31	54	PL1x4 Reinforcement	76.75 - 77.00	Auto	0.0000
L31	55	PL1x4 Reinforcement	76.75 - 77.00	Auto	0.0000
L31	84	CCI-SFP-040075	76.75 - 77.00	Auto	0.0000
L31	85	CCI-SFP-040075	76.75 - 77.00	Auto	0.0000
L31	87	CCI-SFP-040075	76.75 - 77.00	Auto	0.0000
L32	37	PL1.25x5.5 Reinforcement	76.33 - 76.75	Auto	0.2072
L32	38	PL1.25x5.5 Reinforcement	76.33 - 76.75	Auto	0.2072
L32	39	PL1.25x5.5 Reinforcement	76.33 - 76.75	Auto	0.2072
L32	53	PL1x4 Reinforcement	76.33 - 76.75	Auto	0.0000
L32	54	PL1x4 Reinforcement	76.33 - 76.75	Auto	0.0000
L32	55	PL1x4 Reinforcement	76.33 - 76.75	Auto	0.0000
L32	84	CCI-SFP-040075	76.33 - 76.75	Auto	0.0000
L32	85	CCI-SFP-040075	76.33 - 76.75	Auto	0.0000
L32	87	CCI-SFP-040075	76.33 - 76.75	Auto	0.0000
L33	37	PL1.25x5.5 Reinforcement	76.08 - 76.33	Auto	0.2040
L33	38	PL1.25x5.5 Reinforcement	76.08 - 76.33	Auto	0.2040
L33	39	PL1.25x5.5 Reinforcement	76.08 - 76.33	Auto	0.2040
L33	53	PL1x4 Reinforcement	76.08 - 76.33	Auto	0.0000
L33	54	PL1x4 Reinforcement	76.08 - 76.33	Auto	0.0000
L33	55	PL1x4 Reinforcement	76.08 - 76.33	Auto	0.0000
L33	84	CCI-SFP-040075	76.08 - 76.33	Auto	0.0000
L33	85	CCI-SFP-040075	76.08 - 76.33	Auto	0.0000
L33	87	CCI-SFP-040075	76.08 - 76.33	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L34	37	PL1.25x5.5 Reinforcement	74.25 - 76.08	Auto	0.1817
L34	38	PL1.25x5.5 Reinforcement	74.25 - 76.08	Auto	0.1817
L34	39	PL1.25x5.5 Reinforcement	74.25 - 76.08	Auto	0.1817
L34	53	PL1x4 Reinforcement	74.25 - 76.08	Auto	0.0000
L34	54	PL1x4 Reinforcement	74.25 - 76.08	Auto	0.0000
L34	55	PL1x4 Reinforcement	74.25 - 76.08	Auto	0.0000
L34	79	CCI-SFP-045100	74.25 - 75.25	Auto	0.0000
L34	80	CCI-SFP-045100	74.25 - 75.25	Auto	0.0000
L34	82	CCI-SFP-040075	74.25 - 75.25	Auto	0.0000
L34	84	CCI-SFP-040075	75.33 - 76.08	Auto	0.0000
L34	85	CCI-SFP-040075	75.33 - 76.08	Auto	0.0000
L34	87	CCI-SFP-040075	75.33 - 76.08	Auto	0.0000
L35	37	PL1.25x5.5 Reinforcement	74.00 - 74.25	Auto	0.2142
L35	38	PL1.25x5.5 Reinforcement	74.00 - 74.25	Auto	0.2142
L35	39	PL1.25x5.5 Reinforcement	74.00 - 74.25	Auto	0.2142
L35	53	PL1x4 Reinforcement	74.00 - 74.25	Auto	0.0000
L35	54	PL1x4 Reinforcement	74.00 - 74.25	Auto	0.0000
L35	55	PL1x4 Reinforcement	74.00 - 74.25	Auto	0.0000
L35	79	CCI-SFP-045100	74.00 - 74.25	Auto	0.0396
L35	80	CCI-SFP-045100	74.00 - 74.25	Auto	0.0396
L35	82	CCI-SFP-040075	74.00 - 74.25	Auto	0.0000
L36	37	PL1.25x5.5 Reinforcement	73.75 - 74.00	Auto	0.2118
L36	38	PL1.25x5.5 Reinforcement	73.75 - 74.00	Auto	0.2118
L36	39	PL1.25x5.5 Reinforcement	73.75 - 74.00	Auto	0.2118
L36	53	PL1x4 Reinforcement	73.75 - 74.00	Auto	0.0000
L36	54	PL1x4 Reinforcement	73.75 - 74.00	Auto	0.0000
L36	55	PL1x4 Reinforcement	73.75 - 74.00	Auto	0.0000
L36	79	CCI-SFP-045100	73.75 - 74.00	Auto	0.0367
L36	80	CCI-SFP-045100	73.75 - 74.00	Auto	0.0367
L36	82	CCI-SFP-040075	73.75 - 74.00	Auto	0.0000
L37	37	PL1.25x5.5 Reinforcement	73.50 - 73.75	Auto	0.2216
L37	38	PL1.25x5.5 Reinforcement	73.50 - 73.75	Auto	0.2216
L37	39	PL1.25x5.5 Reinforcement	73.50 - 73.75	Auto	0.2216
L37	53	PL1x4 Reinforcement	73.50 - 73.75	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L37	54	PL1x4 Reinforcement	73.50 - 73.75	Auto	0.0000
L37	55	PL1x4 Reinforcement	73.50 - 73.75	Auto	0.0000
L37	79	CCI-SFP-045100	73.50 - 73.75	Auto	0.0486
L37	80	CCI-SFP-045100	73.50 - 73.75	Auto	0.0486
L37	82	CCI-SFP-040075	73.50 - 73.75	Auto	0.0000
L38	37	PL1.25x5.5 Reinforcement	68.50 - 73.50	Auto	0.1778
L38	38	PL1.25x5.5 Reinforcement	68.50 - 73.50	Auto	0.1778
L38	39	PL1.25x5.5 Reinforcement	68.50 - 73.50	Auto	0.1778
L38	53	PL1x4 Reinforcement	68.50 - 73.50	Auto	0.0000
L38	54	PL1x4 Reinforcement	68.50 - 73.50	Auto	0.0000
L38	55	PL1x4 Reinforcement	68.50 - 73.50	Auto	0.0000
L38	79	CCI-SFP-045100	68.50 - 73.50	Auto	0.0052
L38	80	CCI-SFP-045100	68.50 - 73.50	Auto	0.0052
L38	82	CCI-SFP-040075	68.50 - 73.50	Auto	0.0000
L39	37	PL1.25x5.5 Reinforcement	63.50 - 68.50	Auto	0.1171
L39	38	PL1.25x5.5 Reinforcement	63.50 - 68.50	Auto	0.1171
L39	39	PL1.25x5.5 Reinforcement	63.50 - 68.50	Auto	0.1171
L39	53	PL1x4 Reinforcement	63.50 - 68.50	Auto	0.0000
L39	54	PL1x4 Reinforcement	63.50 - 68.50	Auto	0.0000
L39	55	PL1x4 Reinforcement	63.50 - 68.50	Auto	0.0000
L39	79	CCI-SFP-045100	63.50 - 68.50	Auto	0.0000
L39	80	CCI-SFP-045100	63.50 - 68.50	Auto	0.0000
L39	82	CCI-SFP-040075	63.50 - 68.50	Auto	0.0000
L40	37	PL1.25x5.5 Reinforcement	60.50 - 63.50	Auto	0.0661
L40	38	PL1.25x5.5 Reinforcement	60.50 - 63.50	Auto	0.0661
L40	39	PL1.25x5.5 Reinforcement	60.50 - 63.50	Auto	0.0661
L40	49	PL1x4 Reinforcement	60.50 - 62.25	Auto	0.0000
L40	50	PL1x4 Reinforcement	60.50 - 62.25	Auto	0.0000
L40	51	PL1x4 Reinforcement	60.50 - 62.25	Auto	0.0000
L40	53	PL1x4 Reinforcement	60.50 - 63.50	Auto	0.0000
L40	54	PL1x4 Reinforcement	60.50 - 63.50	Auto	0.0000
L40	55	PL1x4 Reinforcement	60.50 - 63.50	Auto	0.0000
L40	79	CCI-SFP-045100	60.50 - 63.50	Auto	0.0000
L40	80	CCI-SFP-045100	60.50 - 63.50	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L40	82	CCI-SFP-040075	60.50 - 63.50	Auto	0.0000
L41	37	PL1.25x5.5 Reinforcement	60.25 - 60.50	Auto	0.0504
L41	38	PL1.25x5.5 Reinforcement	60.25 - 60.50	Auto	0.0504
L41	39	PL1.25x5.5 Reinforcement	60.25 - 60.50	Auto	0.0504
L41	49	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	50	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	51	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	53	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	54	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	55	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	79	CCI-SFP-045100	60.25 - 60.50	Auto	0.0000
L41	80	CCI-SFP-045100	60.25 - 60.50	Auto	0.0000
L41	82	CCI-SFP-040075	60.25 - 60.50	Auto	0.0000
L42	37	PL1.25x5.5 Reinforcement	59.50 - 60.25	Auto	0.0455
L42	38	PL1.25x5.5 Reinforcement	59.50 - 60.25	Auto	0.0455
L42	39	PL1.25x5.5 Reinforcement	59.50 - 60.25	Auto	0.0455
L42	49	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	50	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	51	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	53	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	54	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	55	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	79	CCI-SFP-045100	59.50 - 60.25	Auto	0.0000
L42	80	CCI-SFP-045100	59.50 - 60.25	Auto	0.0000
L42	82	CCI-SFP-040075	59.50 - 60.25	Auto	0.0000
L43	33	PL1.25x6.625 Reinforcement	59.25 - 59.50	Auto	0.2289
L43	34	PL1.25x6.625 Reinforcement	59.25 - 59.50	Auto	0.2289
L43	35	PL1.25x6.625 Reinforcement	59.25 - 59.50	Auto	0.2289
L43	49	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	50	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	51	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	53	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	54	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	55	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L43	79	CCI-SFP-045100	59.25 - 59.50	Auto	0.0000
L43	80	CCI-SFP-045100	59.25 - 59.50	Auto	0.0000
L43	82	CCI-SFP-040075	59.25 - 59.50	Auto	0.0000
L44	33	PL1.25x6.625 Reinforcement	54.25 - 59.25	Auto	0.1926
L44	34	PL1.25x6.625 Reinforcement	54.25 - 59.25	Auto	0.1926
L44	35	PL1.25x6.625 Reinforcement	54.25 - 59.25	Auto	0.1926
L44	49	PL1x4 Reinforcement	54.25 - 59.25	Auto	0.0000
L44	50	PL1x4 Reinforcement	54.25 - 59.25	Auto	0.0000
L44	51	PL1x4 Reinforcement	54.25 - 59.25	Auto	0.0000
L44	53	PL1x4 Reinforcement	58.75 - 59.25	Auto	0.0000
L44	54	PL1x4 Reinforcement	58.75 - 59.25	Auto	0.0000
L44	55	PL1x4 Reinforcement	58.75 - 59.25	Auto	0.0000
L44	79	CCI-SFP-045100	54.25 - 59.25	Auto	0.0000
L44	80	CCI-SFP-045100	54.25 - 59.25	Auto	0.0000
L44	82	CCI-SFP-040075	54.25 - 59.25	Auto	0.0000
L45	33	PL1.25x6.625 Reinforcement	45.80 - 54.25	Auto	0.1333
L45	34	PL1.25x6.625 Reinforcement	45.80 - 54.25	Auto	0.1333
L45	35	PL1.25x6.625 Reinforcement	45.80 - 54.25	Auto	0.1333
L45	49	PL1x4 Reinforcement	45.80 - 54.25	Auto	0.0000
L45	50	PL1x4 Reinforcement	45.80 - 54.25	Auto	0.0000
L45	51	PL1x4 Reinforcement	45.80 - 54.25	Auto	0.0000
L45	79	CCI-SFP-045100	45.80 - 54.25	Auto	0.0000
L45	80	CCI-SFP-045100	45.80 - 54.25	Auto	0.0000
L45	82	CCI-SFP-040075	45.80 - 54.25	Auto	0.0000
L46	33	PL1.25x6.625 Reinforcement	44.80 - 45.80	Auto	0.1157
L46	34	PL1.25x6.625 Reinforcement	44.80 - 45.80	Auto	0.1157
L46	35	PL1.25x6.625 Reinforcement	44.80 - 45.80	Auto	0.1157
L46	49	PL1x4 Reinforcement	44.80 - 45.80	Auto	0.0000
L46	50	PL1x4 Reinforcement	44.80 - 45.80	Auto	0.0000
L46	51	PL1x4 Reinforcement	44.80 - 45.80	Auto	0.0000
L46	74	CCI-SFP-045100	44.80 - 45.08	Auto	0.0000
L46	76	CCI-SFP-060100	44.80 - 45.17	Auto	0.0208
L46	77	CCI-SFP-060100	44.80 - 45.17	Auto	0.0208
L46	79	CCI-SFP-045100	45.25 - 45.80	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L46	80	CCI-SFP-045100	45.25 - 45.80	Auto	0.0000
L46	82	CCI-SFP-040075	45.25 - 45.80	Auto	0.0000
L47	33	PL1.25x6.625 Reinforcement	43.58 - 44.80	Auto	0.1069
L47	34	PL1.25x6.625 Reinforcement	43.58 - 44.80	Auto	0.1069
L47	35	PL1.25x6.625 Reinforcement	43.58 - 44.80	Auto	0.1069
L47	49	PL1x4 Reinforcement	43.58 - 44.80	Auto	0.0000
L47	50	PL1x4 Reinforcement	43.58 - 44.80	Auto	0.0000
L47	51	PL1x4 Reinforcement	43.58 - 44.80	Auto	0.0000
L47	74	CCI-SFP-045100	43.58 - 44.80	Auto	0.0000
L47	76	CCI-SFP-060100	43.58 - 44.80	Auto	0.0138
L47	77	CCI-SFP-060100	43.58 - 44.80	Auto	0.0138
L48	33	PL1.25x6.625 Reinforcement	43.33 - 43.58	Auto	0.1060
L48	34	PL1.25x6.625 Reinforcement	43.33 - 43.58	Auto	0.1060
L48	35	PL1.25x6.625 Reinforcement	43.33 - 43.58	Auto	0.1060
L48	49	PL1x4 Reinforcement	43.33 - 43.58	Auto	0.0000
L48	50	PL1x4 Reinforcement	43.33 - 43.58	Auto	0.0000
L48	51	PL1x4 Reinforcement	43.33 - 43.58	Auto	0.0000
L48	74	CCI-SFP-045100	43.33 - 43.58	Auto	0.0000
L48	76	CCI-SFP-060100	43.33 - 43.58	Auto	0.0129
L48	77	CCI-SFP-060100	43.33 - 43.58	Auto	0.0129
L49	33	PL1.25x6.625 Reinforcement	43.17 - 43.33	Auto	0.1044
L49	34	PL1.25x6.625 Reinforcement	43.17 - 43.33	Auto	0.1044
L49	35	PL1.25x6.625 Reinforcement	43.17 - 43.33	Auto	0.1044
L49	49	PL1x4 Reinforcement	43.17 - 43.33	Auto	0.0000
L49	50	PL1x4 Reinforcement	43.17 - 43.33	Auto	0.0000
L49	51	PL1x4 Reinforcement	43.17 - 43.33	Auto	0.0000
L49	74	CCI-SFP-045100	43.17 - 43.33	Auto	0.0000
L49	76	CCI-SFP-060100	43.17 - 43.33	Auto	0.0111
L49	77	CCI-SFP-060100	43.17 - 43.33	Auto	0.0111
L50	33	PL1.25x6.625 Reinforcement	42.92 - 43.17	Auto	0.1381
L50	34	PL1.25x6.625 Reinforcement	42.92 - 43.17	Auto	0.1381
L50	35	PL1.25x6.625 Reinforcement	42.92 - 43.17	Auto	0.1381
L50	49	PL1x4 Reinforcement	42.92 - 43.17	Auto	0.0000
L50	50	PL1x4 Reinforcement	42.92 - 43.17	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L50	51	PL1x4 Reinforcement	42.92 - 43.17	Auto	0.0000
L50	74	CCI-SFP-045100	42.92 - 43.17	Auto	0.0000
L50	76	CCI-SFP-060100	42.92 - 43.17	Auto	0.0483
L50	77	CCI-SFP-060100	42.92 - 43.17	Auto	0.0483
L51	33	PL1.25x6.625 Reinforcement	39.00 - 42.92	Auto	0.1113
L51	34	PL1.25x6.625 Reinforcement	39.00 - 42.92	Auto	0.1113
L51	35	PL1.25x6.625 Reinforcement	39.00 - 42.92	Auto	0.1113
L51	47	PL1x4 Reinforcement	39.00 - 40.75	Auto	0.0000
L51	49	PL1x4 Reinforcement	39.00 - 42.92	Auto	0.0000
L51	50	PL1x4 Reinforcement	39.00 - 42.92	Auto	0.0000
L51	51	PL1x4 Reinforcement	39.00 - 42.92	Auto	0.0000
L51	74	CCI-SFP-045100	39.00 - 42.92	Auto	0.0000
L51	76	CCI-SFP-060100	39.00 - 42.92	Auto	0.0187
L51	77	CCI-SFP-060100	39.00 - 42.92	Auto	0.0187
L52	33	PL1.25x6.625 Reinforcement	38.75 - 39.00	Auto	0.1098
L52	34	PL1.25x6.625 Reinforcement	38.75 - 39.00	Auto	0.1098
L52	35	PL1.25x6.625 Reinforcement	38.75 - 39.00	Auto	0.1098
L52	47	PL1x4 Reinforcement	38.75 - 39.00	Auto	0.0000
L52	49	PL1x4 Reinforcement	38.75 - 39.00	Auto	0.0000
L52	50	PL1x4 Reinforcement	38.75 - 39.00	Auto	0.0000
L52	51	PL1x4 Reinforcement	38.75 - 39.00	Auto	0.0000
L52	74	CCI-SFP-045100	38.75 - 39.00	Auto	0.0000
L52	76	CCI-SFP-060100	38.75 - 39.00	Auto	0.0171
L52	77	CCI-SFP-060100	38.75 - 39.00	Auto	0.0171
L53	33	PL1.25x6.625 Reinforcement	37.17 - 38.75	Auto	0.0974
L53	34	PL1.25x6.625 Reinforcement	37.17 - 38.75	Auto	0.0974
L53	35	PL1.25x6.625 Reinforcement	37.17 - 38.75	Auto	0.0974
L53	47	PL1x4 Reinforcement	37.17 - 38.75	Auto	0.0000
L53	49	PL1x4 Reinforcement	37.17 - 38.75	Auto	0.0000
L53	50	PL1x4 Reinforcement	37.17 - 38.75	Auto	0.0000
L53	51	PL1x4 Reinforcement	37.17 - 38.75	Auto	0.0000
L53	74	CCI-SFP-045100	37.17 - 38.75	Auto	0.0000
L53	76	CCI-SFP-060100	37.17 - 38.75	Auto	0.0038
L53	77	CCI-SFP-060100	37.17 - 38.75	Auto	0.0038

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L54	33	PL1.25x6.625 Reinforcement	36.92 - 37.17	Auto	0.0698
L54	34	PL1.25x6.625 Reinforcement	36.92 - 37.17	Auto	0.0698
L54	35	PL1.25x6.625 Reinforcement	36.92 - 37.17	Auto	0.0698
L54	47	PL1x4 Reinforcement	36.92 - 37.17	Auto	0.0000
L54	49	PL1x4 Reinforcement	36.92 - 37.17	Auto	0.0000
L54	50	PL1x4 Reinforcement	36.92 - 37.17	Auto	0.0000
L54	51	PL1x4 Reinforcement	36.92 - 37.17	Auto	0.0000
L54	74	CCI-SFP-045100	36.92 - 37.17	Auto	0.0000
L54	76	CCI-SFP-060100	36.92 - 37.17	Auto	0.0000
L54	77	CCI-SFP-060100	36.92 - 37.17	Auto	0.0000
L55	33	PL1.25x6.625 Reinforcement	34.00 - 36.92	Auto	0.0572
L55	34	PL1.25x6.625 Reinforcement	34.00 - 36.92	Auto	0.0572
L55	35	PL1.25x6.625 Reinforcement	34.00 - 36.92	Auto	0.0572
L55	45	PL1x4 Reinforcement	34.00 - 35.75	Auto	0.0000
L55	46	PL1x4 Reinforcement	34.00 - 35.75	Auto	0.0000
L55	47	PL1x4 Reinforcement	34.00 - 36.92	Auto	0.0000
L55	49	PL1x4 Reinforcement	34.00 - 36.92	Auto	0.0000
L55	50	PL1x4 Reinforcement	34.00 - 36.92	Auto	0.0000
L55	51	PL1x4 Reinforcement	34.00 - 36.92	Auto	0.0000
L55	70	CCI-SFP-045100	34.00 - 35.08	Auto	0.0000
L55	72	CCI-SFP-045100	34.00 - 35.08	Auto	0.0000
L55	74	CCI-SFP-045100	34.00 - 36.92	Auto	0.0000
L55	76	CCI-SFP-060100	35.17 - 36.92	Auto	0.0000
L55	77	CCI-SFP-060100	35.17 - 36.92	Auto	0.0000
L56	33	PL1.25x6.625 Reinforcement	33.75 - 34.00	Auto	0.0394
L56	34	PL1.25x6.625 Reinforcement	33.75 - 34.00	Auto	0.0394
L56	35	PL1.25x6.625 Reinforcement	33.75 - 34.00	Auto	0.0394
L56	45	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	46	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	47	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	49	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	50	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	51	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	70	CCI-SFP-045100	33.75 - 34.00	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L56	72	CCI-SFP-045100	33.75 - 34.00	Auto	0.0000
L56	74	CCI-SFP-045100	33.75 - 34.00	Auto	0.0000
L57	33	PL1.25x6.625 Reinforcement	29.75 - 33.75	Auto	0.0174
L57	34	PL1.25x6.625 Reinforcement	29.75 - 33.75	Auto	0.0174
L57	35	PL1.25x6.625 Reinforcement	29.75 - 33.75	Auto	0.0174
L57	45	PL1x4 Reinforcement	29.75 - 33.75	Auto	0.0000
L57	46	PL1x4 Reinforcement	29.75 - 33.75	Auto	0.0000
L57	47	PL1x4 Reinforcement	29.75 - 33.75	Auto	0.0000
L57	49	PL1x4 Reinforcement	32.25 - 33.75	Auto	0.0000
L57	50	PL1x4 Reinforcement	32.25 - 33.75	Auto	0.0000
L57	51	PL1x4 Reinforcement	32.25 - 33.75	Auto	0.0000
L57	70	CCI-SFP-045100	29.75 - 33.75	Auto	0.0000
L57	72	CCI-SFP-045100	29.75 - 33.75	Auto	0.0000
L57	74	CCI-SFP-045100	29.75 - 33.75	Auto	0.0000
L58	27	PL1.25x6.875 Reinforcement	29.50 - 29.75	Auto	0.0367
L58	28	PL1.25x6.875 Reinforcement	29.50 - 29.75	Auto	0.0367
L58	29	PL1.25x6.875 Reinforcement	29.50 - 29.75	Auto	0.0367
L58	45	PL1x4 Reinforcement	29.50 - 29.75	Auto	0.0000
L58	46	PL1x4 Reinforcement	29.50 - 29.75	Auto	0.0000
L58	47	PL1x4 Reinforcement	29.50 - 29.75	Auto	0.0000
L58	70	CCI-SFP-045100	29.50 - 29.75	Auto	0.0000
L58	72	CCI-SFP-045100	29.50 - 29.75	Auto	0.0000
L58	74	CCI-SFP-045100	29.50 - 29.75	Auto	0.0000
L59	27	PL1.25x6.875 Reinforcement	24.50 - 29.50	Auto	0.0123
L59	28	PL1.25x6.875 Reinforcement	24.50 - 29.50	Auto	0.0123
L59	29	PL1.25x6.875 Reinforcement	24.50 - 29.50	Auto	0.0123
L59	45	PL1x4 Reinforcement	24.50 - 29.50	Auto	0.0000
L59	46	PL1x4 Reinforcement	24.50 - 29.50	Auto	0.0000
L59	47	PL1x4 Reinforcement	24.50 - 29.50	Auto	0.0000
L59	65	CCI-SFP-060100	24.50 - 25.00	Auto	0.0000
L59	66	CCI-SFP-060100	24.50 - 25.00	Auto	0.0000
L59	68	CCI-SFP-060100	24.50 - 25.00	Auto	0.0000
L59	70	CCI-SFP-045100	24.50 - 29.50	Auto	0.0000
L59	72	CCI-SFP-045100	25.08 - 29.50	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L59	74	CCI-SFP-045100	25.08 - 29.50	Auto	0.0000
L60	27	PL1.25x6.875 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	28	PL1.25x6.875 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	29	PL1.25x6.875 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	45	PL1x4 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	46	PL1x4 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	47	PL1x4 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	65	CCI-SFP-060100	23.00 - 24.50	Auto	0.0000
L60	66	CCI-SFP-060100	23.00 - 24.50	Auto	0.0000
L60	68	CCI-SFP-060100	23.00 - 24.50	Auto	0.0000
L60	70	CCI-SFP-045100	23.00 - 24.50	Auto	0.0000
L61	27	PL1.25x6.875 Reinforcement	22.75 - 23.00	Auto	0.0236
L61	28	PL1.25x6.875 Reinforcement	22.75 - 23.00	Auto	0.0236
L61	29	PL1.25x6.875 Reinforcement	22.75 - 23.00	Auto	0.0236
L61	45	PL1x4 Reinforcement	22.75 - 23.00	Auto	0.0000
L61	46	PL1x4 Reinforcement	22.75 - 23.00	Auto	0.0000
L61	47	PL1x4 Reinforcement	22.75 - 23.00	Auto	0.0000
L61	65	CCI-SFP-060100	22.75 - 23.00	Auto	0.0000
L61	66	CCI-SFP-060100	22.75 - 23.00	Auto	0.0000
L61	68	CCI-SFP-060100	22.75 - 23.00	Auto	0.0000
L61	70	CCI-SFP-045100	22.75 - 23.00	Auto	0.0000
L62	27	PL1.25x6.875 Reinforcement	21.58 - 22.75	Auto	0.0181
L62	28	PL1.25x6.875 Reinforcement	21.58 - 22.75	Auto	0.0181
L62	29	PL1.25x6.875 Reinforcement	21.58 - 22.75	Auto	0.0181
L62	45	PL1x4 Reinforcement	21.58 - 22.75	Auto	0.0000
L62	46	PL1x4 Reinforcement	21.58 - 22.75	Auto	0.0000
L62	47	PL1x4 Reinforcement	21.58 - 22.75	Auto	0.0000
L62	65	CCI-SFP-060100	21.58 - 22.75	Auto	0.0000
L62	66	CCI-SFP-060100	21.58 - 22.75	Auto	0.0000
L62	68	CCI-SFP-060100	21.58 - 22.75	Auto	0.0000
L62	70	CCI-SFP-045100	21.58 - 22.75	Auto	0.0000
L63	27	PL1.25x6.875 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	28	PL1.25x6.875 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	29	PL1.25x6.875 Reinforcement	21.33 - 21.58	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L63	45	PL1x4 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	46	PL1x4 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	47	PL1x4 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	65	CCI-SFP-060100	21.33 - 21.58	Auto	0.0000
L63	66	CCI-SFP-060100	21.33 - 21.58	Auto	0.0000
L63	68	CCI-SFP-060100	21.33 - 21.58	Auto	0.0000
L63	70	CCI-SFP-045100	21.33 - 21.58	Auto	0.0000
L64	27	PL1.25x6.875 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	28	PL1.25x6.875 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	29	PL1.25x6.875 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	30	PL1.25x6.875 Reinforcement	16.33 - 16.42	Auto	0.0000
L64	31	PL1.25x6.875 Reinforcement	16.33 - 16.42	Auto	0.0000
L64	45	PL1x4 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	46	PL1x4 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	47	PL1x4 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	65	CCI-SFP-060100	16.33 - 21.33	Auto	0.0000
L64	66	CCI-SFP-060100	16.33 - 21.33	Auto	0.0000
L64	68	CCI-SFP-060100	16.33 - 21.33	Auto	0.0000
L64	70	CCI-SFP-045100	20.08 - 21.33	Auto	0.0000
L65	27	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	28	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	29	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	30	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	31	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	45	PL1x4 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	46	PL1x4 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	47	PL1x4 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	65	CCI-SFP-060100	12.92 - 16.33	Auto	0.0000
L65	66	CCI-SFP-060100	12.92 - 16.33	Auto	0.0000
L65	68	CCI-SFP-060100	12.92 - 16.33	Auto	0.0000
L66	27	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	28	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	29	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	30	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L66	31	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	45	PL1x4 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	46	PL1x4 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	47	PL1x4 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	65	CCI-SFP-060100	12.67 - 12.92	Auto	0.0000
L66	66	CCI-SFP-060100	12.67 - 12.92	Auto	0.0000
L66	68	CCI-SFP-060100	12.67 - 12.92	Auto	0.0000
L67	27	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	28	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	29	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	30	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	31	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	45	PL1x4 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	46	PL1x4 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	47	PL1x4 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	65	CCI-SFP-060100	12.50 - 12.67	Auto	0.0000
L67	66	CCI-SFP-060100	12.50 - 12.67	Auto	0.0000
L67	68	CCI-SFP-060100	12.50 - 12.67	Auto	0.0000
L68	27	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	28	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	29	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	30	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	31	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	45	PL1x4 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	46	PL1x4 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	47	PL1x4 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	65	CCI-SFP-060100	12.25 - 12.50	Auto	0.0000
L68	66	CCI-SFP-060100	12.25 - 12.50	Auto	0.0000
L68	68	CCI-SFP-060100	12.25 - 12.50	Auto	0.0000
L69	27	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	28	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	29	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	30	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	31	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L69	45	PL1x4 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	46	PL1x4 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	47	PL1x4 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	65	CCI-SFP-060100	12.00 - 12.25	Auto	0.0000
L69	66	CCI-SFP-060100	12.00 - 12.25	Auto	0.0000
L69	68	CCI-SFP-060100	12.00 - 12.25	Auto	0.0000
L70	27	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	28	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	29	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	30	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	31	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	45	PL1x4 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	46	PL1x4 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	47	PL1x4 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	65	CCI-SFP-060100	11.75 - 12.00	Auto	0.0000
L70	66	CCI-SFP-060100	11.75 - 12.00	Auto	0.0000
L70	68	CCI-SFP-060100	11.75 - 12.00	Auto	0.0000
L71	27	PL1.25x6.875 Reinforcement	8.50 - 11.75	Auto	0.0000
L71	28	PL1.25x6.875 Reinforcement	8.50 - 11.75	Auto	0.0000
L71	29	PL1.25x6.875 Reinforcement	9.17 - 11.75	Auto	0.0000
L71	30	PL1.25x6.875 Reinforcement	8.50 - 11.75	Auto	0.0000
L71	31	PL1.25x6.875 Reinforcement	8.50 - 11.75	Auto	0.0000
L71	45	PL1x4 Reinforcement	10.75 - 11.75	Auto	0.0000
L71	46	PL1x4 Reinforcement	10.75 - 11.75	Auto	0.0000
L71	47	PL1x4 Reinforcement	10.75 - 11.75	Auto	0.0000
L71	61	Transition Stiffener 1x7	8.50 - 10.50	Auto	0.0000
L71	62	Transition Stiffener 1x7	8.50 - 10.50	Auto	0.0000
L71	63	Transition Stiffener 1x7	8.50 - 10.50	Auto	0.0000
L71	65	CCI-SFP-060100	8.50 - 11.75	Auto	0.0000
L71	66	CCI-SFP-060100	8.50 - 11.75	Auto	0.0000
L71	68	CCI-SFP-060100	10.00 - 11.75	Auto	0.0000
L72	27	PL1.25x6.875 Reinforcement	8.25 - 8.50	Auto	0.0000
L72	28	PL1.25x6.875 Reinforcement	8.25 - 8.50	Auto	0.0000
L72	30	PL1.25x6.875 Reinforcement	8.25 - 8.50	Auto	0.0000
L72	31	PL1.25x6.875 Reinforcement	8.25 - 8.50	Auto	0.0000
L72	61	Transition Stiffener 1x7	8.25 - 8.50	Auto	0.0000
L72	62	Transition Stiffener 1x7	8.25 - 8.50	Auto	0.0000
L72	63	Transition Stiffener 1x7	8.25 - 8.50	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L72	65	CCI-SFP-060100	8.25 - 8.50	Auto	0.0000
L72	66	CCI-SFP-060100	8.25 - 8.50	Auto	0.0000
L73	27	PL1.25x6.875 Reinforcement	7.00 - 8.25	Auto	0.0000
L73	28	PL1.25x6.875 Reinforcement	7.00 - 8.25	Auto	0.0000
L73	30	PL1.25x6.875 Reinforcement	7.00 - 8.25	Auto	0.0000
L73	31	PL1.25x6.875 Reinforcement	7.00 - 8.25	Auto	0.0000
L73	61	Transition Stiffener 1x7	7.00 - 8.25	Auto	0.0000
L73	62	Transition Stiffener 1x7	7.00 - 8.25	Auto	0.0000
L73	63	Transition Stiffener 1x7	7.00 - 8.25	Auto	0.0000
L73	65	CCI-SFP-060100	7.00 - 8.25	Auto	0.0000
L73	66	CCI-SFP-060100	7.00 - 8.25	Auto	0.0000
L74	27	PL1.25x6.875 Reinforcement	6.75 - 7.00	Auto	0.0000
L74	28	PL1.25x6.875 Reinforcement	6.75 - 7.00	Auto	0.0000
L74	30	PL1.25x6.875 Reinforcement	6.75 - 7.00	Auto	0.0000
L74	31	PL1.25x6.875 Reinforcement	6.75 - 7.00	Auto	0.0000
L74	61	Transition Stiffener 1x7	6.75 - 7.00	Auto	0.0000
L74	62	Transition Stiffener 1x7	6.75 - 7.00	Auto	0.0000
L74	63	Transition Stiffener 1x7	6.75 - 7.00	Auto	0.0000
L74	65	CCI-SFP-060100	6.75 - 7.00	Auto	0.0000
L74	66	CCI-SFP-060100	6.75 - 7.00	Auto	0.0000
L75	27	PL1.25x6.875 Reinforcement	1.75 - 6.75	Auto	0.0000
L75	28	PL1.25x6.875 Reinforcement	1.75 - 6.75	Auto	0.0000
L75	30	PL1.25x6.875 Reinforcement	1.75 - 6.75	Auto	0.0000
L75	31	PL1.25x6.875 Reinforcement	1.75 - 6.75	Auto	0.0000
L75	61	Transition Stiffener 1x7	1.75 - 6.75	Auto	0.0000
L75	62	Transition Stiffener 1x7	1.75 - 6.75	Auto	0.0000
L75	63	Transition Stiffener 1x7	1.75 - 6.75	Auto	0.0000
L75	65	CCI-SFP-060100	5.00 - 6.75	Auto	0.0000
L75	66	CCI-SFP-060100	5.00 - 6.75	Auto	0.0000
L76	27	PL1.25x6.875 Reinforcement	0.00 - 1.75	Auto	0.0000
L76	28	PL1.25x6.875 Reinforcement	0.00 - 1.75	Auto	0.0000
L76	30	PL1.25x6.875 Reinforcement	0.00 - 1.75	Auto	0.0000
L76	31	PL1.25x6.875 Reinforcement	0.00 - 1.75	Auto	0.0000
L76	61	Transition Stiffener 1x7	0.00 - 1.75	Auto	0.0000
L76	62	Transition Stiffener 1x7	0.00 - 1.75	Auto	0.0000
L76	63	Transition Stiffener 1x7	0.00 - 1.75	Auto	0.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft
			Horz Lateral ft	Vert ft		
EPBQ-654L8H8-L2 w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
EPBQ-654L8H8-L2 w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
EPBQ-654L8H8-L2 w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 4478 B14	A	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 4478 B14	B	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 4478 B14	C	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RADIO 4415 B30	A	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RADIO 4415 B30	B	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RADIO 4415 B30	C	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 8843 B2/B66A	A	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 8843 B2/B66A	B	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 8843 B2/B66A	C	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 4449 B5/B12	A	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 4449 B5/B12	B	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
RRUS 4449 B5/B12	C	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
DC6-48-60-18-8F	A	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
DC6-48-60-18-8F	C	From Leg	4.000	0.000	0.000	144.000
			0.000	-1.000		
AIR 6419 B77G_CCIV3 w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	144.000
			0.000	1.000		
AIR 6419 B77G_CCIV3 w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	144.000
			0.000	1.000		
AIR 6419 B77G_CCIV3 w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	144.000
			0.000	1.000		
AIR 6449 B77D_CCVI2 w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	144.000
			0.000	-3.000		
AIR 6449 B77D_CCVI2 w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	144.000
			0.000			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
AIR 6449 B77D_CCVI2 w/ Mount Pipe	C	From Leg	-3.000 4.000 0.000	0.000	144.000
QD8616-7 w/ Mount Pipe	A	From Leg	-3.000 4.000 0.000	0.000	144.000
QD8616-7 w/ Mount Pipe	B	From Leg	-1.000 4.000 0.000	0.000	144.000
QD8616-7 w/ Mount Pipe	C	From Leg	-1.000 4.000 0.000	0.000	144.000
2012 B29	A	From Leg	-1.000 4.000 0.000	0.000	144.000
2012 B29	B	From Leg	-1.000 4.000 0.000	0.000	144.000
2012 B29	C	From Leg	-1.000 4.000 0.000	0.000	144.000
DC9-48-60-24-8C-EV	B	From Leg	-1.000 4.000 0.000	0.000	144.000
(2) 10' x 2" Mount Pipe	A	From Leg	-1.000 4.000 0.000	0.000	144.000
(2) 10' x 2" Mount Pipe	B	From Leg	-1.000 4.000 0.000	0.000	144.000
(2) 10' x 2" Mount Pipe	C	From Leg	-1.000 4.000 0.000	0.000	144.000
10' x 2" Mount Pipe	A	From Leg	-1.000 4.000 0.000	0.000	144.000
10' x 2" Mount Pipe	B	From Leg	-1.000 4.000 0.000	0.000	144.000
10' x 2" Mount Pipe	C	From Leg	-1.000 4.000 0.000	0.000	144.000
F3P-12W	C	None		0.000	144.000
Miscellaneous [NA 507-1]	C	None		0.000	144.000
(2) APXVSP18-C-A20 w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	130.000
APXVSP18-C-A20 w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	130.000
APXVSP18-C-A20 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	130.000
AAHC w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	130.000
(2) AAHC w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	130.000
(2) IBC1900HB-2	A	From Leg	4.000 0.000 0.000	0.000	130.000
IBC1900HB-2	B	From Leg	4.000	0.000	130.000

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
			0.000		
IBC1900HB-2	C	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
800 EXTERNAL NOTCH FILTER	A	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
800 EXTERNAL NOTCH FILTER	B	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
800 EXTERNAL NOTCH FILTER	C	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
(2) 1900MHZ RRH (65MHZ)	A	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
(2) 1900MHZ RRH (65MHZ)	B	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
(2) 1900MHZ RRH (65MHZ)	C	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
800MHZ RRH	A	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
800MHZ RRH	B	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
800MHZ RRH	C	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
(2) PD2DE-700/2700	A	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
6' x 2" Mount Pipe	A	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
(2) 6' x 2" Mount Pipe	A	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
(3) 6' x 2" Mount Pipe	B	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
(2) 6' x 2" Mount Pipe	C	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
3' x 2" Pipe Mount	A	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
3' x 2" Pipe Mount	B	From Leg	-1.000		
			4.000	0.000	130.000
			0.000		
3' x 2" Pipe Mount	C	From Leg	-1.000		
			4.000	0.000	130.000
			0.000		
(2) 5' x 2" Pipe Mount	A	From Leg	-1.000		
			4.000	0.000	130.000
			0.000		
5' x 2" Pipe Mount	B	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
5' x 2" Pipe Mount	C	From Leg	0.000		
			4.000	0.000	130.000
			0.000		
			0.000		

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement
			Horz Lateral ft	Vert ft		
Pipe Mount [PM 601-3]	C	None			0.000	130.000
Platform Mount [LP 602-1] *	C	None			0.000	130.000
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.000 0.000 0.000		0.000	120.000
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.000 0.000 0.000		0.000	120.000
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000		0.000	120.000
TA08025-B604	A	From Leg	4.000 0.000 0.000		0.000	120.000
TA08025-B604	B	From Leg	4.000 0.000 0.000		0.000	120.000
TA08025-B604	C	From Leg	4.000 0.000 0.000		0.000	120.000
TA08025-B605	A	From Leg	4.000 0.000 0.000		0.000	120.000
TA08025-B605	B	From Leg	4.000 0.000 0.000		0.000	120.000
TA08025-B605	C	From Leg	4.000 0.000 0.000		0.000	120.000
RDIDC-9181-PF-48	A	From Leg	4.000 0.000 0.000		0.000	120.000
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000		0.000	120.000
(2) 8' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000		0.000	120.000
(2) 8' x 2" Mount Pipe	C	From Leg	4.000 0.000 0.000		0.000	120.000
Commscope MC-PK8-DSH *	C	None			0.000	120.000
SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.000 0.000 1.000		0.000	113.000
SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.000 0.000 1.000		0.000	113.000
SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.000 0.000 1.000		0.000	113.000
SBNHH-1D65B	A	From Leg	4.000 0.000 1.000		0.000	113.000
SBNHH-1D65B	B	From Leg	4.000 0.000 1.000		0.000	113.000
SBNHH-1D65B	C	From Leg	4.000 0.000 1.000		0.000	113.000
BXA-80063/4CF w/ Mount Pipe	A	From Leg	4.000 0.000 1.000		0.000	113.000

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment °	Placement ft
			Horz Lateral ft	Vert ft		
BXA-80063/4CF w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
BXA-80063/4CF w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
MT6407-77A w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	113.000
			0.000			
			2.000			
MT6407-77A w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	113.000
			0.000			
			2.000			
MT6407-77A w/ Mount Pipe	C	From Leg	4.000	0.000	0.000	113.000
			0.000			
			2.000			
BULLET III	C	From Leg	4.000	0.000	0.000	113.000
			0.000			
			2.000			
RFV01U-D1A	A	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
RFV01U-D1A	B	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
RFV01U-D1A	C	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
RFV01U-D2A	A	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
RFV01U-D2A	B	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
RFV01U-D2A	C	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
RVZDC-6627-PF-48	C	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
BSF0020F3V1	A	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
BSF0020F3V1	B	From Leg	4.000	0.000	0.000	113.000
			0.000			
			1.000			
(3) 3' x 2" Pipe Mount	A	From Leg	4.000	0.000	0.000	113.000
			0.000			
			0.000			
(3) 3' x 2" Pipe Mount	B	From Leg	4.000	0.000	0.000	113.000
			0.000			
			0.000			
(2) 3' x 2" Pipe Mount	C	From Leg	4.000	0.000	0.000	113.000
			0.000			
			0.000			
6' x 2" Mount Pipe	A	From Leg	4.000	0.000	0.000	113.000
			0.000			
			0.000			
6' x 2" Mount Pipe	B	From Leg	4.000	0.000	0.000	113.000
			0.000			
			0.000			
(2) 6' x 2" Mount Pipe	C	From Leg	4.000	0.000	0.000	113.000
			0.000			
			0.000			
Side Arm Mount [SO 102-3]	C	None		0.000		113.000
Platform Mount [LP 713-1_KCKR]	C	None		0.000		113.000

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft
*					
AIR -32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	100.000
AIR -32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	100.000
AIR -32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	100.000
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	100.000
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	100.000
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	100.000
AIR 6419 B41_TMO w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	100.000
AIR 6419 B41_TMO w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	100.000
AIR 6419 B41_TMO w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	100.000
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.000 0.000 1.000	0.000	100.000
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.000 0.000 1.000	0.000	100.000
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	4.000 0.000 1.000	0.000	100.000
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.000 0.000 1.000	0.000	100.000
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.000 0.000 1.000	0.000	100.000
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.000 0.000 1.000	0.000	100.000
Platform Mount [LP 303-1_HR-1]	C	None		0.000	100.000
* KS24019-L112A	C	From Leg	4.000 0.000 1.000	0.000	50.000
Side Arm Mount [SO 701-1]	C	From Leg	2.000 0.000 0.000	0.000	50.000
*					
*					
*					
*					

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft
VHLP2-23	A	Paraboloid w/Shroud (HP)	From Leg	4.000 0.000 3.000	0.000		130.000	2.175
VHLP2-23	B	Paraboloid w/Shroud (HP)	From Leg	4.000 0.000 3.000	-50.000		130.000	2.175
VHLP2-18	C	Paraboloid w/Shroud (HP)	From Leg	4.000 0.000 3.000	-60.000		130.000	2.175
*								
*								
*								

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service

Comb. No.	Description
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	144.25 - 139.25	Pole	Max Tension	39	0.000	0.000	-0.000
			Max. Compression	26	-10.797	-0.149	0.030
			Max. Mx	8	-5.242	-26.167	0.008
			Max. My	2	-5.223	-0.053	26.231
			Max. Vy	8	6.429	-26.167	0.008
			Max. Vx	2	-6.464	-0.053	26.231
			Max. Torque	17			0.059
L2	139.25 - 134.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-11.219	-0.235	0.092
			Max. Mx	8	-5.535	-55.417	0.028
			Max. My	2	-5.513	-0.085	55.686
			Max. Vy	8	6.566	-55.417	0.028
			Max. Vx	2	-6.625	-0.085	55.686
			Max. Torque	5			-0.059
L3	134.75 - 134.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-11.268	-0.245	0.100
			Max. Mx	8	-5.572	-58.704	0.031
			Max. My	2	-5.549	-0.088	59.003
			Max. Vy	8	6.580	-58.704	0.031
			Max. Vx	2	-6.642	-0.088	59.003
			Max. Torque	5			-0.059
L4	134.25 - 129.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-18.804	-2.292	1.993
			Max. Mx	8	-9.237	-97.313	0.940
			Max. My	2	-9.194	-1.385	98.055
			Max. Vy	20	-10.957	94.873	0.778
			Max. Vx	2	-11.077	-1.385	98.055
			Max. Torque	13			0.753
L5	129.25 - 124.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-19.250	-2.430	2.092
			Max. Mx	8	-9.580	-152.269	0.888
			Max. My	2	-9.535	-1.440	153.827
			Max. Vy	20	-11.103	149.957	0.842
			Max. Vx	2	-11.248	-1.440	153.827
			Max. Torque	13			0.753
L6	124.25 - 123.416	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-19.337	-2.451	2.108
			Max. Mx	8	-9.643	-161.504	0.878
			Max. My	2	-9.599	-1.449	163.209
			Max. Vy	20	-11.128	159.213	0.852
			Max. Vx	2	-11.272	-1.449	163.209
			Max. Torque	13			0.753
L7	123.416 - 123.166	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-19.377	-2.458	2.113
			Max. Mx	8	-9.682	-164.278	0.876
			Max. My	2	-9.638	-1.452	166.026
			Max. Vy	20	-11.132	161.993	0.855
			Max. Vx	2	-11.276	-1.452	166.026
			Max. Torque	13			0.753

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L8	123.166 - 118.166	Pole	Max. Torque	13			0.754
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-25.071	-2.595	2.503
			Max. Mx	8	-13.126	-225.558	0.924
			Max. My	2	-13.075	-1.506	228.351
			Max. Vy	20	-14.187	223.398	1.020
			Max. Vx	2	-14.356	-1.506	228.351
L9	118.166 - 113.166	Pole	Max. Torque	13			0.845
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-25.915	-2.750	2.609
			Max. Mx	8	-13.739	-296.923	0.872
			Max. My	2	-13.691	-1.568	300.708
			Max. Vy	20	-14.434	294.875	1.087
			Max. Vx	2	-14.598	-1.568	300.708
L10	113.166 - 109.5	Pole	Max. Torque	13			0.862
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-34.005	-2.489	2.480
			Max. Mx	8	-17.711	-366.028	0.822
			Max. My	2	-17.660	-1.570	370.543
			Max. Vy	20	-18.619	364.308	1.058
			Max. Vx	2	-18.768	-1.570	370.543
L11	109.5 - 109.25	Pole	Max. Torque	13			0.862
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-34.060	-2.497	2.488
			Max. Mx	8	-17.768	-370.673	0.822
			Max. My	2	-17.718	-1.575	375.233
			Max. Vy	20	-18.619	368.959	1.060
			Max. Vx	2	-18.766	-1.575	375.233
L12	109.25 - 104.75	Pole	Max. Torque	7			0.688
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-35.075	-2.629	2.602
			Max. Mx	8	-18.513	-454.863	0.809
			Max. My	2	-18.467	-1.668	460.174
			Max. Vy	20	-18.875	453.246	1.087
			Max. Vx	2	-18.998	-1.668	460.174
L13	104.75 - 104.5	Pole	Max. Torque	7			0.688
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-35.148	-2.638	2.609
			Max. Mx	8	-18.579	-459.574	0.809
			Max. My	2	-18.534	-1.673	464.923
			Max. Vy	20	-18.885	457.962	1.089
			Max. Vx	2	-19.003	-1.673	464.923
L14	104.5 - 102.416	Pole	Max. Torque	7			0.687
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-35.756	-2.698	2.651
			Max. Mx	8	-19.011	-499.051	0.803
			Max. My	2	-18.970	-1.716	504.676
			Max. Vy	20	-19.074	497.484	1.102
			Max. Vx	2	-19.155	-1.716	504.676
L15	102.416 - 102.166	Pole	Max. Torque	7			0.687
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-35.825	-2.706	2.657
			Max. Mx	8	-19.070	-503.812	0.803
			Max. My	2	-19.030	-1.721	509.465
			Max. Vy	20	-19.087	502.251	1.104
			Max. Vx	2	-19.162	-1.721	509.465
L16	102.166 - 98.75	Pole	Max. Torque	7			0.687
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-43.488	-2.809	2.706
			Max. Mx	8	-23.712	-574.724	0.791

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L17	98.75 - 98.5	Pole	Max. My	2	-23.668	-1.792	580.749
			Max. Vy	20	-22.180	573.235	1.123
			Max. Vx	2	-22.261	-1.792	580.749
			Max. Torque	7			0.687
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-43.575	-2.819	2.710
			Max. Mx	8	-23.794	-580.259	0.790
			Max. My	2	-23.751	-1.798	586.313
			Max. Vy	20	-22.180	578.775	1.125
			Max. Vx	2	-22.267	-1.798	586.313
L18	98.5 - 97.5	Pole	Max. Torque	7			0.686
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-43.921	-2.851	2.718
			Max. Mx	8	-24.048	-602.438	0.786
			Max. My	2	-24.002	-1.819	608.622
			Max. Vy	20	-22.253	600.975	1.129
			Max. Vx	2	-22.364	-1.819	608.622
			Max. Torque	7			0.686
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-44.005	-2.861	2.721
L19	97.5 - 97.25	Pole	Max. Mx	8	-24.120	-607.993	0.785
			Max. My	2	-24.074	-1.824	614.213
			Max. Vy	20	-22.260	606.535	1.131
			Max. Vx	2	-22.377	-1.824	614.213
			Max. Torque	7			0.686
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-44.566	-2.924	2.736
			Max. Mx	8	-24.532	-645.819	0.778
			Max. My	2	-24.482	-1.860	652.324
			Max. Vy	20	-22.380	644.396	1.139
L20	97.25 - 92	Pole	Max. Vx	2	-22.538	-1.860	652.324
			Max. Torque	7			0.686
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-47.134	-3.116	2.784
			Max. Mx	8	-26.580	-758.599	0.758
			Max. My	2	-26.519	-1.967	766.368
			Max. Vy	20	-22.799	757.279	1.165
			Max. Vx	2	-23.084	-1.967	766.368
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
L21	92 - 90.552	Pole	Max. Compression	26	-47.595	-3.161	2.795
			Max. Mx	8	-26.942	-788.264	0.752
			Max. My	2	-26.880	-1.995	796.449
			Max. Vy	20	-22.871	786.970	1.172
			Max. Vx	2	-23.165	-1.995	796.449
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-47.695	-3.172	2.799
			Max. Mx	8	-27.036	-793.972	0.752
			Max. My	2	-26.975	-2.001	802.238
L22	90.552 - 89.25	Pole	Max. Vy	20	-22.870	792.683	1.174
			Max. Vx	2	-23.166	-2.001	802.238
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-47.996	-3.195	2.804
			Max. Mx	8	-27.264	-811.121	0.748
			Max. My	2	-27.203	-2.017	819.632
			Max. Vy	20	-22.925	809.844	1.177
			Max. Vx	2	-23.227	-2.017	819.632
			Max. Torque	7			0.685
L23	89.25 - 89	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.084	-3.205	2.807
			Max. Mx	8	-27.337	-816.847	0.748
			Max. My	2	-27.277	-2.022	825.439
			Max. Vy	20	-22.934	815.573	1.179
			Max. Vx	2	-23.238	-2.022	825.439
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.084	-3.205	2.807
			Max. Mx	8	-27.337	-816.847	0.748
L24	89 - 88.25	Pole	Max. My	2	-27.203	-2.017	819.632
			Max. Vy	20	-22.925	809.844	1.177
			Max. Vx	2	-23.227	-2.017	819.632
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.084	-3.205	2.807
			Max. Mx	8	-27.337	-816.847	0.748
			Max. My	2	-27.277	-2.022	825.439
			Max. Vy	20	-22.934	815.573	1.179
			Max. Vx	2	-23.238	-2.022	825.439
L25	88.25 - 88	Pole	Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.084	-3.205	2.807
			Max. Mx	8	-27.337	-816.847	0.748
			Max. My	2	-27.277	-2.022	825.439
			Max. Vy	20	-22.934	815.573	1.179
			Max. Vx	2	-23.238	-2.022	825.439
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.084	-3.205	2.807
L26	88 - 87.833	Pole	Max. Mx	8	-27.337	-816.847	0.748
			Max. My	2	-27.277	-2.022	825.439
			Max. Vy	20	-22.934	815.573	1.179
			Max. Vx	2	-23.238	-2.022	825.439
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L27	87.833 - 87.583	Pole	Max. Compression	26	-48.143	-3.211	2.809
			Max. Mx	8	-27.384	-820.673	0.747
			Max. My	2	-27.323	-2.026	829.320
			Max. Vy	20	-22.944	819.401	1.180
			Max. Vx	2	-23.249	-2.026	829.320
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.225	-3.218	2.810
L28	87.583 - 82.583	Pole	Max. Mx	8	-27.444	-826.404	0.746
			Max. My	2	-27.384	-2.031	835.133
			Max. Vy	20	-22.956	825.135	1.181
			Max. Vx	2	-23.262	-2.031	835.133
			Max. Torque	7			0.685
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-49.785	-3.384	2.862
			L29	82.583 - 77.583	Pole	Max. Mx	8
Max. My	2	-28.626				-2.139	952.015
Max. Vy	20	-23.166				940.328	1.205
Max. Vx	2	-23.513				-2.139	952.015
Max. Torque	7						0.685
Max Tension	1	0.000				0.000	0.000
Max. Compression	26	-51.353				-3.551	2.924
L30	77.583 - 77	Pole				Max. Mx	8
			Max. My	2	-29.908	-2.246	1070.027
			Max. Vy	20	-23.337	1056.434	1.229
			Max. Vx	2	-23.731	-2.246	1070.027
			Max. Torque	7			0.684
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-51.545	-3.570	2.931
			L31	77 - 76.75	Pole	Max. Mx	8
Max. My	2	-30.068				-2.259	1083.859
Max. Vy	20	-23.347				1070.026	1.231
Max. Vx	2	-23.749				-2.259	1083.859
Max. Torque	7						0.684
Max Tension	1	0.000				0.000	0.000
Max. Compression	26	-51.640				-3.580	2.935
L32	76.75 - 76.333	Pole				Max. Mx	8
			Max. My	2	-30.150	-2.264	1089.796
			Max. Vy	20	-23.352	1075.859	1.233
			Max. Vx	2	-23.757	-2.264	1089.796
			Max. Torque	7			0.684
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-51.798	-3.593	2.939
			L33	76.333 - 76.083	Pole	Max. Mx	8
Max. My	2	-30.273				-2.273	1099.707
Max. Vy	20	-23.373				1085.595	1.234
Max. Vx	2	-23.785				-2.273	1099.707
Max. Torque	7						0.684
Max Tension	1	0.000				0.000	0.000
Max. Compression	26	-51.889				-3.602	2.943
L34	76.083 - 74.25	Pole				Max. Mx	8
			Max. My	2	-30.348	-2.278	1105.654
			Max. Vy	20	-23.383	1091.435	1.236
			Max. Vx	2	-23.798	-2.278	1105.654
			Max. Torque	7			0.684
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-52.561	-3.668	2.976
			L35	74.25 - 74	Pole	Max. Mx	8
Max. My	2	-30.856				-2.318	1149.371
Max. Vy	20	-23.494				1134.345	1.244
Max. Vx	2	-23.936				-2.318	1149.371
Max. Torque	7						0.683
Max Tension	1	0.000				0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L36	74 - 73.75	Pole	Max. Compression	26	-52.657	-3.680	2.984
			Max. Mx	8	-31.015	-1141.315	0.687
			Max. My	2	-30.955	-2.323	1155.350
			Max. Vy	20	-23.478	1140.210	1.245
			Max. Vx	2	-23.923	-2.323	1155.350
			Max. Torque	7			0.683
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-52.752	-3.690	2.990
			Max. Mx	8	-31.091	-1147.180	0.685
			Max. My	2	-31.031	-2.329	1161.332
L37	73.75 - 73.5	Pole	Max. Vy	20	-23.490	1146.077	1.247
			Max. Vx	2	-23.939	-2.329	1161.332
			Max. Torque	7			0.683
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-52.851	-3.700	2.996
			Max. Mx	8	-31.169	-1153.047	0.684
			Max. My	2	-31.109	-2.334	1167.318
			Max. Vy	20	-23.503	1151.947	1.248
			Max. Vx	2	-23.955	-2.334	1167.318
			Max. Torque	7			0.683
L38	73.5 - 68.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-54.815	-3.898	3.115
			Max. Mx	8	-32.726	-1271.030	0.662
			Max. My	2	-32.665	-2.442	1287.848
			Max. Vy	20	-23.755	1269.986	1.271
			Max. Vx	2	-24.275	-2.442	1287.848
			Max. Torque	7			0.683
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-56.797	-4.100	3.235
			Max. Mx	8	-34.312	-1390.191	0.640
L39	68.5 - 63.5	Pole	Max. My	2	-34.252	-2.550	1409.880
			Max. Vy	20	-23.986	1389.200	1.294
			Max. Vx	2	-24.569	-2.550	1409.880
			Max. Torque	7			0.683
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-58.023	-4.222	3.307
			Max. Mx	8	-35.278	-1462.234	0.626
			Max. My	2	-35.219	-2.615	1483.790
			Max. Vy	20	-24.120	1461.273	1.307
			Max. Vx	2	-24.737	-2.615	1483.790
L40	63.5 - 60.5	Pole	Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-58.128	-4.234	3.315
			Max. Mx	8	-35.370	-1468.256	0.625
			Max. My	2	-35.311	-2.620	1489.972
			Max. Vy	20	-24.118	1467.297	1.308
			Max. Vx	2	-24.737	-2.620	1489.972
			Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-58.441	-4.263	3.331
L41	60.5 - 60.25	Pole	Max. Mx	8	-35.606	-1486.337	0.622
			Max. My	2	-35.548	-2.636	1508.538
			Max. Vy	20	-24.159	1485.386	1.312
			Max. Vx	2	-24.787	-2.636	1508.538
			Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-58.551	-4.275	3.339
			Max. Mx	8	-35.699	-1492.370	0.621
			Max. My	2	-35.640	-2.642	1514.734
			Max. Vy	20	-24.163	1491.421	1.313
L42	60.25 - 59.5	Pole	Max. Vx	2	-24.793	-2.642	1514.734
			Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-60.669	-4.476	3.457
			Max. Mx	8	-37.391	-1613.610	0.599
			Max. My	2	-37.336	-2.751	1639.296
			Max. Vy	20	-24.399	1612.710	1.335
			Max. Vx	2	-25.051	-2.751	1639.296
			Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
L43	59.5 - 59.25	Pole	Max. Compression	26	-58.551	-4.275	3.339
			Max. Mx	8	-35.699	-1492.370	0.621
			Max. My	2	-35.640	-2.642	1514.734
			Max. Vy	20	-24.163	1491.421	1.313
			Max. Vx	2	-24.793	-2.642	1514.734
			Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-58.551	-4.275	3.339
			Max. Mx	8	-35.699	-1492.370	0.621
			Max. My	2	-35.640	-2.642	1514.734
L44	59.25 - 54.25	Pole	Max. Vy	20	-24.399	1612.710	1.335
			Max. Vx	2	-25.051	-2.751	1639.296
			Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-60.669	-4.476	3.457
			Max. Mx	8	-37.391	-1613.610	0.599
			Max. My	2	-37.336	-2.751	1639.296
			Max. Vy	20	-24.399	1612.710	1.335
			Max. Vx	2	-25.051	-2.751	1639.296
			Max. Torque	7			0.682

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L45	54.25 - 45.802	Pole	Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-62.479	-4.652	3.559
			Max. Mx	8	-38.854	-1717.521	0.580
			Max. My	2	-38.803	-2.844	1746.096
			Max. Vy	20	-24.579	1716.658	1.355
			Max. Vx	2	-25.241	-2.844	1746.096
L46	45.802 - 44.802	Pole	Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.247	-4.535	3.488
			Max. Mx	8	-41.975	-1846.008	0.368
			Max. My	2	-41.926	-2.667	1878.349
			Max. Vy	20	-24.965	1845.682	1.292
			Max. Vx	2	-25.655	-2.667	1878.349
L47	44.802 - 43.583	Pole	Max. Torque	7			0.682
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.783	-4.579	3.502
			Max. Mx	8	-42.407	-1876.419	0.350
			Max. My	2	-42.359	-2.682	1909.635
			Max. Vy	20	-25.016	1876.104	1.310
			Max. Vx	2	-25.715	-2.682	1909.635
L48	43.583 - 43.333	Pole	Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.898	-4.590	3.507
			Max. Mx	8	-42.514	-1882.663	0.347
			Max. My	2	-42.466	-2.685	1916.059
			Max. Vy	20	-25.007	1882.350	1.313
			Max. Vx	2	-25.707	-2.685	1916.059
L49	43.333 - 43.166	Pole	Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.974	-4.598	3.510
			Max. Mx	8	-42.578	-1886.835	0.344
			Max. My	2	-42.531	-2.687	1920.352
			Max. Vy	20	-25.014	1886.524	1.316
			Max. Vx	2	-25.715	-2.687	1920.352
L50	43.166 - 42.916	Pole	Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-67.094	-4.606	3.512
			Max. Mx	8	-42.675	-1893.083	0.341
			Max. My	2	-42.628	-2.690	1926.782
			Max. Vy	20	-25.023	1892.774	1.319
			Max. Vx	2	-25.726	-2.690	1926.782
L51	42.916 - 39	Pole	Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-68.969	-4.734	3.532
			Max. Mx	8	-44.200	-1991.285	0.285
			Max. My	2	-44.156	-2.737	2027.877
			Max. Vy	20	-25.202	1991.007	1.376
			Max. Vx	2	-25.931	-2.737	2027.877
L52	39 - 38.75	Pole	Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-69.094	-4.745	3.535
			Max. Mx	8	-44.316	-1997.576	0.282
			Max. My	2	-44.272	-2.741	2034.356
			Max. Vy	20	-25.192	1997.300	1.380
			Max. Vx	2	-25.923	-2.741	2034.356
L53	38.75 - 37.166	Pole	Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-69.888	-4.795	3.535
			Max. Mx	8	-44.953	-2037.491	0.259
			Max. My	2	-44.910	-2.760	2075.473
			Max. Vy	20	-25.282	2037.228	1.403

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L54	37.166 - 36.916	Pole	Max. Vx	2	-26.023	-2.760	2075.473
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-70.011	-4.807	3.537
			Max. Mx	8	-45.069	-2043.801	0.256
			Max. My	2	-45.027	-2.763	2081.974
			Max. Vy	20	-25.267	2043.539	1.406
L55	36.916 - 34	Pole	Max. Vx	2	-26.010	-2.763	2081.974
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-71.451	-4.898	3.555
			Max. Mx	8	-46.228	-2117.558	0.214
			Max. My	2	-46.187	-2.799	2157.991
			Max. Vy	20	-25.396	2117.317	1.449
L56	34 - 33.75	Pole	Max. Vx	2	-26.158	-2.799	2157.991
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-71.572	-4.908	3.560
			Max. Mx	8	-46.339	-2123.896	0.211
			Max. My	2	-46.300	-2.802	2164.525
			Max. Vy	20	-25.381	2123.657	1.452
L57	33.75 - 29.75	Pole	Max. Vx	2	-26.144	-2.802	2164.525
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.468	-5.032	3.601
			Max. Mx	8	-47.886	-2225.575	0.154
			Max. My	2	-47.850	-2.852	2269.395
			Max. Vy	20	-25.525	2225.364	1.511
L58	29.75 - 29.5	Pole	Max. Vx	2	-26.312	-2.852	2269.395
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.587	-5.042	3.606
			Max. Mx	8	-47.994	-2231.948	0.151
			Max. My	2	-47.959	-2.855	2275.970
			Max. Vy	20	-25.518	2231.738	1.514
L59	29.5 - 24.5	Pole	Max. Vx	2	-26.306	-2.855	2275.970
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-75.969	-5.208	3.660
			Max. Mx	8	-49.965	-2359.798	0.081
			Max. My	2	-49.935	-2.917	2407.926
			Max. Vy	20	-25.688	2359.620	1.587
L60	24.5 - 23	Pole	Max. Vx	2	-26.498	-2.917	2407.926
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.700	-5.277	3.677
			Max. Mx	8	-50.560	-2398.304	0.060
			Max. My	2	-50.531	-2.936	2447.680
			Max. Vy	20	-25.745	2398.135	1.609
L61	23 - 22.75	Pole	Max. Vx	2	-26.555	-2.936	2447.680
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-76.831	-5.291	3.682
			Max. Mx	8	-50.684	-2404.729	0.056
			Max. My	2	-50.656	-2.939	2454.312
			Max. Vy	20	-25.727	2404.561	1.612
L62	22.75 - 21.583	Pole	Max. Vx	2	-26.536	-2.939	2454.312
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-77.443	-5.344	3.694
			Max. Mx	8	-51.183	-2434.750	0.040
			Max. My	2	-51.156	-2.954	2485.302
			Max. Vy	20	-25.787	2434.588	1.629
L63	21.583 -	Pole	Max. Vx	2	-26.595	-2.954	2485.302
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
	21.333		Max. Compression	26	-77.570	-5.357	3.698
			Max. Mx	8	-51.297	-2441.188	0.037
			Max. My	2	-51.271	-2.957	2491.947
			Max. Vy	20	-25.779	2441.027	1.633
			Max. Vx	2	-26.586	-2.957	2491.947
			Max. Torque	7			0.681
L64	21.333 - 16.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-80.081	-5.566	3.742
			Max. Mx	8	-53.392	-2570.344	-0.032
			Max. My	2	-53.372	-3.020	2625.242
			Max. Vy	20	-25.949	2570.210	1.705
			Max. Vx	2	-26.752	-3.020	2625.242
			Max. Torque	7			0.681
L65	16.333 - 12.917	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.840	-5.676	3.709
			Max. Mx	8	-54.843	-2659.052	-0.079
			Max. My	2	-54.826	-3.063	2716.737
			Max. Vy	20	-26.072	2658.934	1.755
			Max. Vx	2	-26.856	-3.063	2716.737
			Max. Torque	7			0.681
L66	12.917 - 12.667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.978	-5.685	3.707
			Max. Mx	8	-54.968	-2665.560	-0.083
			Max. My	2	-54.953	-3.067	2723.447
			Max. Vy	20	-26.061	2665.443	1.758
			Max. Vx	2	-26.844	-3.067	2723.447
			Max. Torque	7			0.680
L67	12.667 - 12.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-82.070	-5.691	3.706
			Max. Mx	8	-55.046	-2669.909	-0.085
			Max. My	2	-55.031	-3.069	2727.930
			Max. Vy	20	-26.067	2669.793	1.761
			Max. Vx	2	-26.849	-3.069	2727.930
			Max. Torque	7			0.680
L68	12.5 - 12.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-82.196	-5.698	3.703
			Max. Mx	8	-55.149	-2676.421	-0.088
			Max. My	2	-55.134	-3.072	2734.643
			Max. Vy	20	-26.077	2676.306	1.764
			Max. Vx	2	-26.857	-3.072	2734.643
			Max. Torque	7			0.680
L69	12.25 - 12	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-82.322	-5.706	3.700
			Max. Mx	8	-55.253	-2682.935	-0.092
			Max. My	2	-55.239	-3.075	2741.357
			Max. Vy	20	-26.085	2682.821	1.768
			Max. Vx	2	-26.863	-3.075	2741.357
			Max. Torque	7			0.680
L70	12 - 11.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-82.442	-5.714	3.698
			Max. Mx	8	-55.352	-2689.451	-0.095
			Max. My	2	-55.337	-3.078	2748.073
			Max. Vy	20	-26.091	2689.338	1.771
			Max. Vx	2	-26.869	-3.078	2748.073
			Max. Torque	7			0.680
L71	11.75 - 8.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-83.988	-5.806	3.671
			Max. Mx	8	-56.627	-2774.507	-0.140
			Max. My	2	-56.617	-3.120	2835.531
			Max. Vy	20	-26.324	2774.407	1.818
			Max. Vx	2	-26.982	-3.120	2835.531
			Max. Torque	7			0.680
L72	8.5 - 8.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-84.128	-5.814	3.672

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L73	8.25 - 7	Pole	Max. Mx	8	-56.758	-2781.079	-0.143
			Max. My	2	-56.749	-3.123	2842.271
			Max. Vy	20	-26.321	2780.980	1.822
			Max. Vx	2	-26.969	-3.123	2842.271
			Max. Torque	7			0.681
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-84.825	-5.848	3.673
			Max. Mx	8	-57.344	-2814.022	-0.160
			Max. My	2	-57.337	-3.139	2876.022
			Max. Vy	20	-26.453	2813.928	1.840
L74	7 - 6.75	Pole	Max. Vx	2	-27.055	-3.139	2876.022
			Max. Torque	7			0.684
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-84.952	-5.856	3.674
			Max. Mx	8	-57.462	-2820.627	-0.163
			Max. My	2	-57.455	-3.142	2882.781
			Max. Vy	20	-26.454	2820.534	1.844
			Max. Vx	2	-27.046	-3.142	2882.781
			Max. Torque	7			0.684
			Max Tension	1	0.000	0.000	0.000
L75	6.75 - 1.75	Pole	Max. Compression	26	-87.439	-5.984	3.671
			Max. Mx	8	-59.611	-2953.770	-0.231
			Max. My	2	-59.609	-3.206	3018.557
			Max. Vy	20	-26.868	2953.693	1.916
			Max. Vx	2	-27.286	-3.206	3018.557
			Max. Torque	7			0.689
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-88.289	-6.023	3.670
			Max. Mx	8	-60.366	-3000.837	-0.254
			Max. My	2	-60.366	-3.229	3066.343
L76	1.75 - 0	Pole	Max. Vy	20	-27.022	3000.765	1.941
			Max. Vx	2	-27.383	-3.229	3066.343
			Max. Torque	7			0.689
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-88.289	-6.023	3.670
			Max. Mx	8	-60.366	-3000.837	-0.254
			Max. My	2	-60.366	-3.229	3066.343
			Max. Vy	20	-27.022	3000.765	1.941
			Max. Vx	2	-27.383	-3.229	3066.343
			Max. Torque	7			0.689

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	38	88.289	3.706	6.430
	Max. H _x	20	60.386	26.980	0.009
	Max. H _z	2	60.386	0.001	27.339
	Max. M _x	2	3066.343	0.001	27.339
	Max. M _z	8	3000.837	-26.950	-0.019
	Max. Torsion	7	0.689	-22.839	13.298
	Min. Vert	5	45.289	-12.984	22.594
	Min. H _x	8	60.386	-26.950	-0.019
	Min. H _z	14	60.386	0.019	-27.326
	Min. M _x	14	-3061.802	0.019	-27.326
	Min. M _z	20	-3000.765	26.980	0.009
	Min. Torsion	21	-0.427	26.980	0.009

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overtuning Moment, M _x kip-ft	Overtuning Moment, M _z kip-ft	Torque kip-ft
Dead Only	50.321	0.000	-0.000	-1.213	-1.878	-0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	60.386	-0.001	-27.339	-3066.343	-3.229	0.078
0.9 Dead+1.0 Wind 0 deg -	45.289	-0.001	-27.339	-3001.099	-2.541	0.089

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
No Ice						
1.2 Dead+1.0 Wind 30 deg - No Ice	60.386	12.984	-22.594	-2572.894	-1479.158	-0.313
0.9 Dead+1.0 Wind 30 deg - No Ice	45.289	12.984	-22.594	-2517.670	-1447.037	-0.308
1.2 Dead+1.0 Wind 60 deg - No Ice	60.386	22.839	-13.298	-1493.656	-2558.614	-0.688
0.9 Dead+1.0 Wind 60 deg - No Ice	45.289	22.839	-13.298	-1461.428	-2503.540	-0.689
1.2 Dead+1.0 Wind 90 deg - No Ice	60.386	26.950	0.019	0.254	-3000.837	-0.450
0.9 Dead+1.0 Wind 90 deg - No Ice	45.289	26.950	0.019	0.649	-2936.487	-0.456
1.2 Dead+1.0 Wind 120 deg - No Ice	60.386	25.088	14.588	1576.834	-2711.922	-0.133
0.9 Dead+1.0 Wind 120 deg - No Ice	45.289	25.088	14.588	1544.288	-2654.702	-0.143
1.2 Dead+1.0 Wind 150 deg - No Ice	60.386	15.397	26.735	2847.993	-1641.902	-0.335
0.9 Dead+1.0 Wind 150 deg - No Ice	45.289	15.397	26.735	2789.447	-1607.328	-0.348
1.2 Dead+1.0 Wind 180 deg - No Ice	60.386	-0.019	27.326	3061.802	1.338	-0.222
0.9 Dead+1.0 Wind 180 deg - No Ice	45.289	-0.019	27.326	2997.440	1.900	-0.233
1.2 Dead+1.0 Wind 210 deg - No Ice	60.386	-12.976	22.552	2566.049	1474.614	0.081
0.9 Dead+1.0 Wind 210 deg - No Ice	45.289	-12.976	22.552	2511.726	1443.781	0.075
1.2 Dead+1.0 Wind 240 deg - No Ice	60.386	-22.829	13.285	1489.699	2554.132	0.327
0.9 Dead+1.0 Wind 240 deg - No Ice	45.289	-22.829	13.285	1458.325	2500.332	0.327
1.2 Dead+1.0 Wind 270 deg - No Ice	60.386	-26.980	-0.009	-1.941	3000.765	0.420
0.9 Dead+1.0 Wind 270 deg - No Ice	45.289	-26.980	-0.009	-1.509	2937.606	0.427
1.2 Dead+1.0 Wind 300 deg - No Ice	60.386	-25.118	-14.577	-1578.291	2711.455	-0.009
0.9 Dead+1.0 Wind 300 deg - No Ice	45.289	-25.118	-14.577	-1544.913	2655.448	0.002
1.2 Dead+1.0 Wind 330 deg - No Ice	60.386	-15.388	-26.738	-2851.335	1635.773	0.225
0.9 Dead+1.0 Wind 330 deg - No Ice	45.289	-15.388	-26.738	-2791.922	1602.549	0.238
1.2 Dead+1.0 Ice+1.0 Temp	88.289	0.000	-0.000	-3.670	-6.023	-0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	88.289	-0.001	-6.504	-796.052	-6.337	0.016
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	88.289	3.213	-5.583	-684.735	-398.100	-0.078
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	88.289	5.603	-3.254	-398.607	-684.695	-0.159
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	88.289	6.546	0.005	-3.355	-794.013	-0.113
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	88.289	5.976	3.469	407.278	-713.577	-0.073
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	88.289	3.708	6.430	741.676	-435.781	-0.183
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	88.289	-0.003	6.504	788.475	-5.322	-0.047
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	88.289	-3.218	5.586	677.700	386.607	0.028
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	88.289	-5.609	3.257	391.485	673.461	0.082
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	88.289	-6.553	-0.003	-3.840	782.911	0.107
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	88.289	-5.982	-3.467	-414.414	702.227	0.043
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	88.289	-3.706	-6.430	-749.232	423.180	0.160

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	50.321	-0.000	-6.676	-741.607	-2.164	0.026
Dead+Wind 30 deg - Service	50.321	3.170	-5.516	-622.053	-358.494	-0.073
Dead+Wind 60 deg - Service	50.321	5.575	-3.246	-361.493	-619.103	-0.168
Dead+Wind 90 deg - Service	50.321	6.578	0.005	-0.839	-725.878	-0.112
Dead+Wind 120 deg - Service	50.321	6.123	3.560	379.842	-656.226	-0.036
Dead+Wind 150 deg - Service	50.321	3.758	6.526	687.215	-398.100	-0.089
Dead+Wind 180 deg - Service	50.321	-0.005	6.672	738.709	-1.069	-0.062
Dead+Wind 210 deg - Service	50.321	-3.168	5.505	618.596	354.620	0.014
Dead+Wind 240 deg - Service	50.321	-5.573	3.243	358.733	615.242	0.078
Dead+Wind 270 deg - Service	50.321	-6.585	-0.002	-1.369	723.082	0.104
Dead+Wind 300 deg - Service	50.321	-6.130	-3.558	-381.990	653.337	0.001
Dead+Wind 330 deg - Service	50.321	-3.756	-6.527	-689.819	393.847	0.061

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.000	-50.321	0.000	-0.000	50.321	0.000	0.000%
2	-0.001	-60.386	-27.339	0.001	60.386	27.339	0.000%
3	-0.001	-45.289	-27.339	0.001	45.289	27.339	0.000%
4	12.984	-60.386	-22.594	-12.984	60.386	22.594	0.000%
5	12.984	-45.289	-22.594	-12.984	45.289	22.594	0.000%
6	22.839	-60.386	-13.298	-22.839	60.386	13.298	0.000%
7	22.839	-45.289	-13.298	-22.839	45.289	13.298	0.000%
8	26.950	-60.386	0.019	-26.950	60.386	-0.019	0.000%
9	26.950	-45.289	0.019	-26.950	45.289	-0.019	0.000%
10	25.088	-60.386	14.588	-25.088	60.386	-14.588	0.000%
11	25.088	-45.289	14.588	-25.088	45.289	-14.588	0.000%
12	15.397	-60.386	26.735	-15.397	60.386	-26.735	0.000%
13	15.397	-45.289	26.735	-15.397	45.289	-26.735	0.000%
14	-0.019	-60.386	27.326	0.019	60.386	-27.326	0.000%
15	-0.019	-45.289	27.326	0.019	45.289	-27.326	0.000%
16	-12.976	-60.386	22.552	12.976	60.386	-22.552	0.000%
17	-12.976	-45.289	22.552	12.976	45.289	-22.552	0.000%
18	-22.829	-60.386	13.285	22.829	60.386	-13.285	0.000%
19	-22.829	-45.289	13.285	22.829	45.289	-13.285	0.000%
20	-26.980	-60.386	-0.009	26.980	60.386	0.009	0.000%
21	-26.980	-45.289	-0.009	26.980	45.289	0.009	0.000%
22	-25.118	-60.386	-14.577	25.118	60.386	14.577	0.000%
23	-25.118	-45.289	-14.577	25.118	45.289	14.577	0.000%
24	-15.388	-60.386	-26.738	15.388	60.386	26.738	0.000%
25	-15.388	-45.289	-26.738	15.388	45.289	26.738	0.000%
26	0.000	-88.289	0.000	-0.000	88.289	0.000	0.000%
27	-0.001	-88.289	-6.504	0.001	88.289	6.504	0.000%
28	3.213	-88.289	-5.583	-3.213	88.289	5.583	0.000%
29	5.603	-88.289	-3.254	-5.603	88.289	3.254	0.000%
30	6.546	-88.289	0.005	-6.546	88.289	-0.005	0.000%
31	5.976	-88.289	3.469	-5.976	88.289	-3.469	0.000%
32	3.708	-88.289	6.430	-3.708	88.289	-6.430	0.000%
33	-0.003	-88.289	6.504	0.003	88.289	-6.504	0.000%
34	-3.218	-88.289	5.586	3.218	88.289	-5.586	0.000%
35	-5.609	-88.289	3.257	5.609	88.289	-3.257	0.000%
36	-6.553	-88.289	-0.003	6.553	88.289	0.003	0.000%
37	-5.982	-88.289	-3.467	5.982	88.289	3.467	0.000%
38	-3.706	-88.289	-6.430	3.706	88.289	6.430	0.000%
39	-0.000	-50.321	-6.676	0.000	50.321	6.676	0.000%

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
40	3.170	-50.321	-5.516	-3.170	50.321	5.516	0.000%
41	5.575	-50.321	-3.246	-5.575	50.321	3.246	0.000%
42	6.578	-50.321	0.005	-6.578	50.321	-0.005	0.000%
43	6.123	-50.321	3.560	-6.123	50.321	-3.560	0.000%
44	3.758	-50.321	6.526	-3.758	50.321	-6.526	0.000%
45	-0.005	-50.321	6.672	0.005	50.321	-6.672	0.000%
46	-3.168	-50.321	5.505	3.168	50.321	-5.505	0.000%
47	-5.573	-50.321	3.243	5.573	50.321	-3.243	0.000%
48	-6.585	-50.321	-0.002	6.585	50.321	0.002	0.000%
49	-6.130	-50.321	-3.558	6.130	50.321	3.558	0.000%
50	-3.756	-50.321	-6.527	3.756	50.321	6.527	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00002118
2	Yes	6	0.00000001	0.00027480
3	Yes	6	0.00000001	0.00008520
4	Yes	8	0.00000001	0.00021544
5	Yes	7	0.00000001	0.00054067
6	Yes	8	0.00000001	0.00021898
7	Yes	7	0.00000001	0.00055037
8	Yes	6	0.00000001	0.00037365
9	Yes	6	0.00000001	0.00012704
10	Yes	8	0.00000001	0.00022770
11	Yes	7	0.00000001	0.00056632
12	Yes	8	0.00000001	0.00024212
13	Yes	7	0.00000001	0.00059804
14	Yes	6	0.00000001	0.00025618
15	Yes	6	0.00000001	0.00007984
16	Yes	8	0.00000001	0.00021579
17	Yes	7	0.00000001	0.00054216
18	Yes	8	0.00000001	0.00021494
19	Yes	7	0.00000001	0.00053978
20	Yes	6	0.00000001	0.00038931
21	Yes	6	0.00000001	0.00013245
22	Yes	8	0.00000001	0.00022919
23	Yes	7	0.00000001	0.00057053
24	Yes	8	0.00000001	0.00023907
25	Yes	7	0.00000001	0.00058965
26	Yes	5	0.00000001	0.00052740
27	Yes	8	0.00000001	0.00022057
28	Yes	8	0.00000001	0.00030906
29	Yes	8	0.00000001	0.00031065
30	Yes	8	0.00000001	0.00022011
31	Yes	8	0.00000001	0.00031438
32	Yes	8	0.00000001	0.00033544
33	Yes	8	0.00000001	0.00021613
34	Yes	8	0.00000001	0.00029490
35	Yes	8	0.00000001	0.00029488
36	Yes	8	0.00000001	0.00021507
37	Yes	8	0.00000001	0.00031476
38	Yes	8	0.00000001	0.00033018
39	Yes	5	0.00000001	0.00038623
40	Yes	6	0.00000001	0.00033412
41	Yes	6	0.00000001	0.00034772
42	Yes	5	0.00000001	0.00041479
43	Yes	6	0.00000001	0.00036193
44	Yes	6	0.00000001	0.00041209
45	Yes	5	0.00000001	0.00039420
46	Yes	6	0.00000001	0.00032571
47	Yes	6	0.00000001	0.00032258
48	Yes	5	0.00000001	0.00040851
49	Yes	6	0.00000001	0.00036688

50 Yes 6 0.00000001 0.00039671

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	144.25 - 139.25	32.787	50	2.351	0.002
L2	139.25 - 134.75	30.329	50	2.339	0.003
L3	134.75 - 134.25	28.145	50	2.293	0.003
L4	134.25 - 129.25	27.905	50	2.288	0.003
L5	129.25 - 124.25	25.576	50	2.158	0.003
L6	124.25 - 123.416	23.404	50	1.984	0.002
L7	123.416 - 123.166	23.060	50	1.952	0.002
L8	123.166 - 118.166	22.958	50	1.948	0.002
L9	118.166 - 113.166	20.961	50	1.865	0.001
L10	113.166 - 109.5	19.059	50	1.767	0.001
L11	109.5 - 109.25	17.734	50	1.685	0.001
L12	109.25 - 104.75	17.646	50	1.680	0.001
L13	104.75 - 104.5	16.106	50	1.588	0.001
L14	104.5 - 102.416	16.023	50	1.584	0.001
L15	102.416 - 102.166	15.339	50	1.550	0.001
L16	102.166 - 98.75	15.258	50	1.545	0.001
L17	98.75 - 98.5	14.180	50	1.469	0.001
L18	98.5 - 97.5	14.103	50	1.465	0.001
L19	97.5 - 97.25	13.798	50	1.449	0.001
L20	97.25 - 92	13.722	50	1.445	0.001
L21	95.552 - 90.552	13.214	50	1.415	0.001
L22	90.552 - 89.25	11.757	50	1.357	0.001
L23	89.25 - 89	11.391	50	1.334	0.001
L24	89 - 88.25	11.321	50	1.330	0.001
L25	88.25 - 88	11.113	50	1.319	0.001
L26	88 - 87.833	11.044	50	1.314	0.001
L27	87.833 - 87.583	10.998	50	1.311	0.001
L28	87.583 - 82.583	10.930	50	1.306	0.000
L29	82.583 - 77.583	9.619	50	1.198	0.000
L30	77.583 - 77	8.422	50	1.087	0.000
L31	77 - 76.75	8.291	50	1.074	0.000
L32	76.75 - 76.333	8.234	50	1.070	0.000
L33	76.333 - 76.083	8.141	50	1.063	0.000
L34	76.083 - 74.25	8.086	50	1.058	0.000
L35	74.25 - 74	7.686	50	1.027	0.000
L36	74 - 73.75	7.632	50	1.023	0.000
L37	73.75 - 73.5	7.578	50	1.019	0.000
L38	73.5 - 68.5	7.525	50	1.015	0.000
L39	68.5 - 63.5	6.504	50	0.935	0.000
L40	63.5 - 60.5	5.567	50	0.855	0.000
L41	60.5 - 60.25	5.045	50	0.807	0.000
L42	60.25 - 59.5	5.003	50	0.803	0.000
L43	59.5 - 59.25	4.878	50	0.791	0.000
L44	59.25 - 54.25	4.836	50	0.787	0.000
L45	54.25 - 45.802	4.052	50	0.711	0.000
L46	50 - 44.802	3.448	50	0.646	0.000
L47	44.802 - 43.583	2.767	50	0.599	0.000
L48	43.583 - 43.333	2.616	50	0.581	0.000
L49	43.333 - 43.166	2.586	50	0.577	0.000
L50	43.166 - 42.916	2.566	50	0.575	0.000
L51	42.916 - 39	2.536	50	0.571	0.000
L52	39 - 38.75	2.090	50	0.517	0.000
L53	38.75 - 37.166	2.063	50	0.514	0.000
L54	37.166 - 36.916	1.896	50	0.493	0.000
L55	36.916 - 34	1.870	50	0.490	0.000
L56	34 - 33.75	1.583	50	0.450	0.000
L57	33.75 - 29.75	1.560	50	0.446	0.000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L58	29.75 - 29.5	1.209	50	0.391	0.000
L59	29.5 - 24.5	1.189	50	0.388	0.000
L60	24.5 - 23	0.818	50	0.320	0.000
L61	23 - 22.75	0.721	50	0.300	0.000
L62	22.75 - 21.583	0.705	50	0.297	0.000
L63	21.583 - 21.333	0.634	50	0.284	0.000
L64	21.333 - 16.333	0.620	50	0.280	0.000
L65	16.333 - 12.917	0.360	50	0.215	0.000
L66	12.917 - 12.667	0.222	50	0.171	0.000
L67	12.667 - 12.5	0.213	50	0.168	0.000
L68	12.5 - 12.25	0.208	50	0.166	0.000
L69	12.25 - 12	0.199	50	0.163	0.000
L70	12 - 11.75	0.191	50	0.159	0.000
L71	11.75 - 8.5	0.182	50	0.155	0.000
L72	8.5 - 8.25	0.094	50	0.104	0.000
L73	8.25 - 7	0.089	50	0.102	0.000
L74	7 - 6.75	0.064	50	0.088	0.000
L75	6.75 - 1.75	0.059	50	0.085	0.000
L76	1.75 - 0	0.004	50	0.021	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
144.000	EPBQ-654L8H8-L2 w/ Mount Pipe	50	32.664	2.351	0.003	8886
133.000	VHLP2-23	50	27.311	2.265	0.004	2644
130.000	(2) APXVSPP18-C-A20 w/ Mount Pipe	50	25.916	2.181	0.003	1969
120.000	MX08FRO665-21 w/ Mount Pipe	50	21.684	1.899	0.002	3117
113.000	SBNHH-1D65B w/ Mount Pipe	50	18.998	1.763	0.001	2734
100.000	AIR -32 B2A/B66AA w/ Mount Pipe	50	14.568	1.493	0.001	2912
50.000	KS24019-L112A	50	3.448	0.646	0.000	5046

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	144.25 - 139.25	135.424	24	9.748	0.011
L2	139.25 - 134.75	125.315	24	9.694	0.011
L3	134.75 - 134.25	116.329	24	9.506	0.011
L4	134.25 - 129.25	115.343	24	9.481	0.011
L5	129.25 - 124.25	105.755	24	8.943	0.012
L6	124.25 - 123.416	96.808	24	8.227	0.008
L7	123.416 - 123.166	95.391	24	8.094	0.007
L8	123.166 - 118.166	94.970	24	8.079	0.007
L9	118.166 - 113.166	86.731	24	7.734	0.006
L10	113.166 - 109.5	78.881	24	7.327	0.004
L11	109.5 - 109.25	73.408	24	6.990	0.004
L12	109.25 - 104.75	73.044	24	6.970	0.004
L13	104.75 - 104.5	66.678	24	6.588	0.003
L14	104.5 - 102.416	66.335	24	6.572	0.003
L15	102.416 - 102.166	63.508	24	6.431	0.003
L16	102.166 - 98.75	63.173	24	6.409	0.003

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L17	98.75 - 98.5	58.716	24	6.093	0.003
L18	98.5 - 97.5	58.398	24	6.076	0.003
L19	97.5 - 97.25	57.136	24	6.012	0.003
L20	97.25 - 92	56.823	24	5.994	0.003
L21	95.552 - 90.552	54.720	24	5.869	0.002
L22	90.552 - 89.25	48.695	24	5.631	0.002
L23	89.25 - 89	47.177	24	5.534	0.002
L24	89 - 88.25	46.888	24	5.518	0.002
L25	88.25 - 88	46.027	24	5.472	0.002
L26	88 - 87.833	45.742	24	5.453	0.002
L27	87.833 - 87.583	45.552	24	5.440	0.002
L28	87.583 - 82.583	45.268	24	5.418	0.002
L29	82.583 - 77.583	39.842	24	4.970	0.002
L30	77.583 - 77	34.890	24	4.508	0.001
L31	77 - 76.75	34.343	24	4.455	0.001
L32	76.75 - 76.333	34.111	24	4.437	0.001
L33	76.333 - 76.083	33.725	24	4.408	0.001
L34	76.083 - 74.25	33.495	24	4.390	0.001
L35	74.25 - 74	31.838	24	4.259	0.001
L36	74 - 73.75	31.616	24	4.243	0.001
L37	73.75 - 73.5	31.394	24	4.226	0.001
L38	73.5 - 68.5	31.174	24	4.210	0.001
L39	68.5 - 63.5	26.945	24	3.879	0.001
L40	63.5 - 60.5	23.062	12	3.547	0.001
L41	60.5 - 60.25	20.899	12	3.345	0.001
L42	60.25 - 59.5	20.724	12	3.329	0.001
L43	59.5 - 59.25	20.206	12	3.279	0.001
L44	59.25 - 54.25	20.035	12	3.264	0.001
L45	54.25 - 45.802	16.787	12	2.946	0.001
L46	50 - 44.802	14.285	12	2.679	0.001
L47	44.802 - 43.583	11.462	12	2.484	0.001
L48	43.583 - 43.333	10.838	12	2.407	0.001
L49	43.333 - 43.166	10.712	12	2.392	0.001
L50	43.166 - 42.916	10.629	12	2.382	0.001
L51	42.916 - 39	10.504	12	2.367	0.001
L52	39 - 38.75	8.656	12	2.143	0.000
L53	38.75 - 37.166	8.544	12	2.129	0.000
L54	37.166 - 36.916	7.852	12	2.044	0.000
L55	36.916 - 34	7.746	12	2.029	0.000
L56	34 - 33.75	6.557	12	1.863	0.000
L57	33.75 - 29.75	6.460	12	1.849	0.000
L58	29.75 - 29.5	5.008	12	1.621	0.000
L59	29.5 - 24.5	4.923	12	1.607	0.000
L60	24.5 - 23	3.389	12	1.326	0.000
L61	23 - 22.75	2.985	12	1.243	0.000
L62	22.75 - 21.583	2.921	12	1.231	0.000
L63	21.583 - 21.333	2.627	12	1.175	0.000
L64	21.333 - 16.333	2.565	12	1.161	0.000
L65	16.333 - 12.917	1.492	12	0.890	0.000
L66	12.917 - 12.667	0.920	12	0.708	0.000
L67	12.667 - 12.5	0.884	12	0.696	0.000
L68	12.5 - 12.25	0.859	12	0.688	0.000
L69	12.25 - 12	0.824	12	0.674	0.000
L70	12 - 11.75	0.789	12	0.660	0.000
L71	11.75 - 8.5	0.755	12	0.643	0.000
L72	8.5 - 8.25	0.389	12	0.432	0.000
L73	8.25 - 7	0.367	12	0.421	0.000
L74	7 - 6.75	0.264	12	0.363	0.000
L75	6.75 - 1.75	0.245	12	0.350	0.000
L76	1.75 - 0	0.016	12	0.088	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
144.000	EPBQ-654L8H8-L2 w/ Mount Pipe	24	134.917	9.747	0.014	2257
133.000	VHLP2-23	24	112.896	9.388	0.014	670
130.000	(2) APXVSPP18-C-A20 w/ Mount Pipe	24	107.157	9.039	0.013	503
120.000	MX08FRO665-21 w/ Mount Pipe	24	89.712	7.875	0.008	787
113.000	SBNHH-1D65B w/ Mount Pipe	24	78.628	7.311	0.006	685
100.000	AIR -32 B2A/B66AA w/ Mount Pipe	24	60.321	6.196	0.004	721
50.000	KS24019-L112A	12	14.285	2.679	0.001	1222

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
L1	144.25 - 139.25 (1)	TP12.75x12.75x0.375	5.000	0.000	0.0	14.579	-5.192	603.569	0.009
L2	139.25 - 134.75 (2)	TP12.75x12.75x0.375	4.500	0.000	0.0	14.579	-5.480	603.569	0.009
L3	134.75 - 134.25 (3)	TP13.48x13.48x0.375	0.500	0.000	0.0	15.439	-5.517	639.173	0.009
L4	134.25 - 129.25 (4)	TP14.466x13.48x0.188	5.000	0.000	0.0	8.621	-9.194	504.301	0.018
L5	129.25 - 124.25 (5)	TP15.452x14.466x0.188	5.000	0.000	0.0	9.216	-9.535	539.118	0.018
L6	124.25 - 123.416 (6)	TP15.616x15.452x0.188	0.834	0.000	0.0	9.315	-9.537	544.926	0.018
L7	123.416 - 123.166 (7)	TP15.665x15.616x0.538	0.250	0.000	0.0	26.183	-9.575	1531.670	0.006
L8	123.166 - 118.166 (8)	TP16.651x15.665x0.513	5.000	0.000	0.0	26.633	-12.982	1558.020	0.008
L9	118.166 - 113.166 (9)	TP17.637x16.651x0.488	5.000	0.000	0.0	26.920	-13.579	1574.840	0.009
L10	113.166 - 109.5 (10)	TP18.36x17.637x0.475	3.666	0.000	0.0	27.355	-17.517	1600.250	0.011
L11	109.5 - 109.25 (11)	TP18.409x18.36x0.588	0.250	0.000	0.0	33.714	-17.574	1972.260	0.009
L12	109.25 - 104.75 (12)	TP19.296x18.409x0.563	4.500	0.000	0.0	33.931	-18.310	1984.990	0.009
L13	104.75 - 104.5 (13)	TP19.346x19.296x0.775	0.250	0.000	0.0	46.343	-18.377	2711.050	0.007
L14	104.5 - 102.416 (14)	TP19.756x19.346x0.763	2.084	0.000	0.0	46.635	-18.809	2728.130	0.007
L15	102.416 - 102.166 (15)	TP19.806x19.756x0.563	0.250	0.000	0.0	34.854	-18.869	2038.970	0.009
L16	102.166 - 98.75 (16)	TP20.479x19.806x0.55	3.416	0.000	0.0	35.295	-23.488	2064.730	0.011
L17	98.75 - 98.5 (17)	TP20.528x20.479x0.838	0.250	0.000	0.0	53.102	-23.572	3106.440	0.008
L18	98.5 - 97.5 (18)	TP20.726x20.528x0.838	1.000	0.000	0.0	53.633	-23.822	3137.550	0.008
L19	97.5 - 97.25 (19)	TP20.775x20.726x0.75	0.250	0.000	0.0	48.360	-23.895	2829.070	0.008
L20	97.25 - 92 (20)	TP21.81x20.775x0.738	5.250	0.000	0.0	48.379	-24.303	2830.160	0.009
L21	92 - 90.552 (21)	TP21.73x20.735x0.8	5.000	0.000	0.0	53.916	-26.340	3154.100	0.008
L22	90.552 - 89.25 (22)	TP21.989x21.73x0.775	1.302	0.000	0.0	52.941	-26.700	3097.030	0.009

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
L23	89.25 - 89 (23)	TP22.039x21.989x1	0.250	0.000	0.0	67.746	-26.796	3963.150	0.007
L24	89 - 88.25 (24)	TP22.189x22.039x0.975	0.750	0.000	0.0	66.600	-27.023	3896.090	0.007
L25	88.25 - 88 (25)	TP22.238x22.189x0.763	0.250	0.000	0.0	52.729	-27.096	3084.620	0.009
L26	88 - 87.833 (26)	TP22.272x22.238x0.763	0.167	0.000	0.0	52.810	-27.143	3089.390	0.009
L27	87.833 - 87.583 (27)	TP22.321x22.272x0.675	0.250	0.000	0.0	47.048	-27.203	2752.330	0.010
L28	87.583 - 82.583 (28)	TP23.317x22.321x0.65	5.000	0.000	0.0	47.442	-28.441	2775.340	0.010
L29	82.583 - 77.583 (29)	TP24.312x23.317x0.625	5.000	0.000	0.0	47.671	-29.723	2788.740	0.011
L30	77.583 - 77 (30)	TP24.428x24.312x0.625	0.583	0.000	0.0	47.904	-29.884	2802.410	0.011
L31	77 - 76.75 (31)	TP24.478x24.428x0.825	0.250	0.000	0.0	62.835	-29.967	3675.830	0.008
L32	76.75 - 76.333 (32)	TP24.561x24.478x0.825	0.417	0.000	0.0	63.055	-30.090	3688.730	0.008
L33	76.333 - 76.083 (33)	TP24.611x24.561x0.825	0.250	0.000	0.0	63.188	-30.165	3696.470	0.008
L34	76.083 - 74.25 (34)	TP24.976x24.611x0.8	1.833	0.000	0.0	62.277	-30.671	3643.220	0.008
L35	74.25 - 74 (35)	TP25.026x24.976x0.888	0.250	0.000	0.0	68.981	-30.772	4035.390	0.008
L36	74 - 73.75 (36)	TP25.076x25.026x0.888	0.250	0.000	0.0	69.123	-30.848	4043.710	0.008
L37	73.75 - 73.5 (37)	TP25.125x25.076x0.913	0.250	0.000	0.0	71.143	-30.926	4161.880	0.007
L38	73.5 - 68.5 (38)	TP26.121x25.125x0.875	5.000	0.000	0.0	71.130	-32.482	4161.110	0.008
L39	68.5 - 63.5 (39)	TP27.116x26.121x0.85	5.000	0.000	0.0	71.891	-34.072	4205.620	0.008
L40	63.5 - 60.5 (40)	TP27.714x27.116x0.825	3.000	0.000	0.0	71.430	-35.042	4178.630	0.008
L41	60.5 - 60.25 (41)	TP27.763x27.714x0.825	0.250	0.000	0.0	71.562	-35.135	4186.370	0.008
L42	60.25 - 59.5 (42)	TP27.913x27.763x0.825	0.750	0.000	0.0	71.959	-35.372	4209.570	0.008
L43	59.5 - 59.25 (43)	TP27.962x27.913x0.888	0.250	0.000	0.0	77.373	-35.465	4526.350	0.008
L44	59.25 - 54.25 (44)	TP28.958x27.962x0.85	5.000	0.000	0.0	76.932	-37.164	4500.500	0.008
L45	54.25 - 45.802 (45)	TP30.64x28.958x0.838	8.448	0.000	0.0	78.116	-38.636	4569.780	0.008
L46	45.802 - 44.802 (46)	TP30.333x29.304x0.838	5.198	0.000	0.0	79.542	-41.759	4653.200	0.009
L47	44.802 - 43.583 (47)	TP30.574x30.333x0.838	1.219	0.000	0.0	80.192	-42.195	4691.260	0.009
L48	43.583 - 43.333 (48)	TP30.624x30.574x0.85	0.250	0.000	0.0	81.491	-42.305	4767.200	0.009
L49	43.333 - 43.166 (49)	TP30.657x30.624x0.85	0.167	0.000	0.0	81.581	-42.370	4772.490	0.009
L50	43.166 - 42.916 (50)	TP30.706x30.657x0.938	0.250	0.000	0.0	89.864	-42.468	5257.060	0.008
L51	42.916 - 39 (51)	TP31.481x30.706x0.913	3.916	0.000	0.0	89.819	-44.002	5254.390	0.008
L52	39 - 38.75 (52)	TP31.531x31.481x0.95	0.250	0.000	0.0	93.547	-44.121	5472.470	0.008
L53	38.75 - 37.166 (53)	TP31.844x31.531x0.938	1.584	0.000	0.0	93.300	-44.761	5458.030	0.008
L54	37.166 - 36.916 (54)	TP31.894x31.844x0.888	0.250	0.000	0.0	88.608	-44.880	5183.570	0.009
L55	36.916 - 34 (55)	TP32.471x31.894x0.888	2.916	0.000	0.0	90.257	-46.046	5280.050	0.009
L56	34 - 33.75 (56)	TP32.52x32.471x0.875	0.250	0.000	0.0	89.161	-46.162	5215.900	0.009
L57	33.75 - 29.75	TP33.312x32.52x0.863	4.000	0.000	0.0	87.922	-46.180	5143.420	0.009

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u φP _n
L58	(57) 29.75 - 29.5	TP33.361x33.312x0.863	0.250	0.000	0.0	90.120	-47.743	5272.040	0.009
L59	(58) 29.5 - 24.5	TP34.351x33.361x0.85	5.000	0.000	0.0	88.984	-47.855	5205.560	0.009
L60	(59) 24.5 - 23 (60)	TP34.648x34.351x0.838	1.500	0.000	0.0	90.378	-49.866	5287.090	0.009
L61	23 - 22.75	TP34.697x34.648x0.963	0.250	0.000	0.0	104.40	-50.456	6107.370	0.008
L62	(61) 22.75 -	TP34.928x34.697x0.963	1.167	0.000	0.0	104.55	-50.577	6116.340	0.008
L63	21.583 (62) 21.583 -	TP34.978x34.928x0.85	0.250	0.000	0.0	93.272	-51.080	5456.440	0.009
L64	21.333 (63) 21.333 -	TP35.967x34.978x0.838	5.000	0.000	0.0	92.068	-51.198	5385.980	0.010
L65	16.333 (64) 16.333 -	TP36.644x35.967x0.825	3.416	0.000	0.0	93.356	-53.328	5461.320	0.010
L66	12.917 (65) 12.917 -	TP36.693x36.644x0.913	0.250	0.000	0.0	104.98	-54.786	6141.720	0.009
L67	12.667 (66) 12.667 -	TP36.726x36.693x0.913	0.167	0.000	0.0	105.13	-54.901	6150.220	0.009
L68	(67) 12.5 - 12.25	TP36.776x36.726x0.763	0.250	0.000	0.0	88.299	-54.981	5165.520	0.011
L69	(68) 12.25 - 12	TP36.825x36.776x0.763	0.250	0.000	0.0	88.421	-55.086	5172.630	0.011
L70	(69) 12 - 11.75	TP36.874x36.825x0.663	0.250	0.000	0.0	77.144	-55.192	4512.900	0.012
L71	(70) 11.75 - 8.5	TP37.518x36.874x0.65	3.250	0.000	0.0	75.818	-55.307	4435.340	0.012
L72	(71) 8.5 - 8.25 (72)	TP37.567x37.518x0.925	0.250	0.000	0.0	108.99	-56.599	6376.000	0.009
L73	8.25 - 7 (73)	TP37.815x37.567x0.913	1.250	0.000	0.0	107.70	-56.731	6300.490	0.009
L74	7 - 6.75 (74)	TP37.864x37.815x0.813	0.250	0.000	0.0	96.807	-57.322	5663.190	0.010
L75	6.75 - 1.75	TP38.854x37.864x0.788	5.000	0.000	0.0	94.017	-57.441	5499.990	0.010
L76	(75) 1.75 - 0 (76)	TP39.2x38.854x0.788	1.750	0.000	0.0	96.526	-59.636	5646.780	0.011

Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{nx} kip-ft	Ratio M _{ux} φM _{nx}	M _{uy} kip-ft	φM _{ny} kip-ft	Ratio M _{uy} φM _{ny}
L1	144.25 - 139.25 (1)	TP12.75x12.75x0.375	26.389	198.187	0.133	0.000	198.187	0.000
L2	139.25 - 134.75 (2)	TP12.75x12.75x0.375	55.962	198.187	0.282	0.000	198.187	0.000
L3	134.75 - 134.25 (3)	TP13.48x13.48x0.375	59.293	222.251	0.267	0.000	222.251	0.000
L4	134.25 - 129.25 (4)	TP14.466x13.48x0.188	98.065	183.885	0.533	0.000	183.885	0.000
L5	129.25 - 124.25 (5)	TP15.452x14.466x0.188	153.833	210.328	0.731	0.000	210.328	0.000
L6	124.25 - 123.416 (6)	TP15.616x15.452x0.188	163.243	214.735	0.760	0.000	214.735	0.000
L7	123.416 - 123.166 (7)	TP15.665x15.616x0.538	166.086	578.929	0.287	0.000	578.929	0.000
L8	123.166 - 118.166 (8)	TP16.651x15.665x0.513	229.223	630.532	0.364	0.000	630.532	0.000
L9	118.166 - 113.166 (9)	TP17.637x16.651x0.488	303.119	679.449	0.446	0.000	679.449	0.000
L10	113.166 - 109.5 (10)	TP18.36x17.637x0.475	374.687	721.324	0.519	0.000	721.324	0.000
L11	109.5 - 109.25 (11)	TP18.409x18.36x0.588	379.507	880.375	0.431	0.000	880.375	0.000
L12	109.25 -	TP19.296x18.409x0.563	467.131	934.067	0.500	0.000	934.067	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L13	104.75 (12)							
	104.75 - 104.5 (13)	TP19.346x19.296x0.775	472.048	1250.400	0.378	0.000	1250.400	0.000
L14	104.5 - 102.416 (14)	TP19.756x19.346x0.763	513.258	1288.933	0.398	0.000	1288.933	0.000
L15	102.416 - 102.166 (15)	TP19.806x19.756x0.563	518.229	986.325	0.525	0.000	986.325	0.000
L16	102.166 - 98.75 (16)	TP20.479x19.806x0.55	592.186	1036.033	0.572	0.000	1036.033	0.000
L17	98.75 - 98.5 (17)	TP20.528x20.479x0.838	597.959	1518.050	0.394	0.000	1518.050	0.000
L18	98.5 - 97.5 (18)	TP20.726x20.528x0.838	621.113	1549.233	0.401	0.000	1549.233	0.000
L19	97.5 - 97.25 (19)	TP20.775x20.726x0.75	626.918	1412.833	0.444	0.000	1412.833	0.000
L20	97.25 - 92 (20)	TP21.81x20.775x0.738	666.483	1439.625	0.463	0.000	1439.625	0.000
L21	92 - 90.552 (21)	TP21.73x20.735x0.8	784.923	1645.142	0.477	0.000	1645.142	0.000
L22	90.552 - 89.25 (22)	TP21.989x21.73x0.775	816.191	1639.983	0.498	0.000	1639.983	0.000
L23	89.25 - 89 (23)	TP22.039x21.989x1	822.212	2059.442	0.399	0.000	2059.442	0.000
L24	89 - 88.25 (24)	TP22.189x22.039x0.975	840.317	2044.433	0.411	0.000	2044.433	0.000
L25	88.25 - 88 (25)	TP22.238x22.189x0.763	846.358	1655.175	0.511	0.000	1655.175	0.000
L26	88 - 87.833 (26)	TP22.272x22.238x0.763	850.400	1660.392	0.512	0.000	1660.392	0.000
L27	87.833 - 87.583 (27)	TP22.321x22.272x0.675	856.458	1494.833	0.573	0.000	1494.833	0.000
L28	87.583 - 82.583 (28)	TP23.317x22.321x0.65	978.592	1582.242	0.618	0.000	1582.242	0.000
L29	82.583 - 77.583 (29)	TP24.312x23.317x0.625	1102.642	1665.175	0.662	0.000	1665.175	0.000
L30	77.583 - 77 (30)	TP24.428x24.312x0.625	1117.233	1681.742	0.664	0.000	1681.742	0.000
L31	77 - 76.75 (31)	TP24.478x24.428x0.825	1123.492	2173.708	0.517	0.000	2173.708	0.000
L32	76.75 - 76.333 (32)	TP24.561x24.478x0.825	1133.958	2189.250	0.518	0.000	2189.250	0.000
L33	76.333 - 76.083 (33)	TP24.611x24.561x0.825	1140.233	2198.600	0.519	0.000	2198.600	0.000
L34	76.083 - 74.25 (34)	TP24.976x24.611x0.8	1186.433	2205.850	0.538	0.000	2205.850	0.000
L35	74.25 - 74 (35)	TP25.026x24.976x0.888	1192.750	2430.833	0.491	0.000	2430.833	0.000
L36	74 - 73.75 (36)	TP25.076x25.026x0.888	1199.083	2441.050	0.491	0.000	2441.050	0.000
L37	73.75 - 73.5 (37)	TP25.125x25.076x0.913	1205.417	2512.542	0.480	0.000	2512.542	0.000
L38	73.5 - 68.5 (38)	TP26.121x25.125x0.875	1333.300	2626.917	0.508	0.000	2626.917	0.000
L39	68.5 - 63.5 (39)	TP27.116x26.121x0.85	1463.408	2768.483	0.529	0.000	2768.483	0.000
L40	63.5 - 60.5 (40)	TP27.714x27.116x0.825	1542.533	2820.483	0.547	0.000	2820.483	0.000
L41	60.5 - 60.25 (41)	TP27.763x27.714x0.825	1549.158	2831.083	0.547	0.000	2831.083	0.000
L42	60.25 - 59.5 (42)	TP27.913x27.763x0.825	1569.083	2863.033	0.548	0.000	2863.033	0.000
L43	59.5 - 59.25 (43)	TP27.962x27.913x0.888	1575.733	3070.117	0.513	0.000	3070.117	0.000
L44	59.25 - 54.25 (44)	TP28.958x27.962x0.85	1709.933	3176.850	0.538	0.000	3176.850	0.000
L45	54.25 - 45.802 (45)	TP30.64x28.958x0.838	1825.708	3328.592	0.548	0.000	3328.592	0.000
L46	45.802 - 44.802 (46)	TP30.333x29.304x0.838	1970.142	3452.967	0.571	0.000	3452.967	0.000

Section No.	Elevation ft	Size	M_{ux}	ϕM_{nx}	Ratio	M_{uy} kip-ft	ϕM_{ny}	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{nx}}$		kip-ft	$\frac{M_{uy}}{\phi M_{ny}}$
L47	44.802 - 43.583 (47)	TP30.574x30.333x0.838	2004.400	3510.467	0.571	0.000	3510.467	0.000
L48	43.583 - 43.333 (48)	TP30.624x30.574x0.85	2011.442	3570.392	0.563	0.000	3570.392	0.000
L49	43.333 - 43.166 (49)	TP30.657x30.624x0.85	2016.142	3578.433	0.563	0.000	3578.433	0.000
L50	43.166 - 42.916 (50)	TP30.706x30.657x0.938	2023.192	3925.383	0.515	0.000	3925.383	0.000
L51	42.916 - 39 (51)	TP31.481x30.706x0.913	2134.233	4035.258	0.529	0.000	4035.258	0.000
L52	39 - 38.75 (52)	TP31.531x31.481x0.95	2141.367	4199.433	0.510	0.000	4199.433	0.000
L53	38.75 - 37.166 (53)	TP31.844x31.531x0.938	2186.650	4236.008	0.516	0.000	4236.008	0.000
L54	37.166 - 36.916 (54)	TP31.894x31.844x0.888	2193.817	4042.658	0.543	0.000	4042.658	0.000
L55	36.916 - 34 (55)	TP32.471x31.894x0.888	2277.742	4196.683	0.543	0.000	4196.683	0.000
L56	34 - 33.75 (56)	TP32.52x32.471x0.875	2284.958	4155.650	0.550	0.000	4155.650	0.000
L57	33.75 - 29.75 (57)	TP33.312x32.52x0.863	2284.958	4101.142	0.557	0.000	4101.142	0.000
L58	29.75 - 29.5 (58)	TP33.361x33.312x0.863	2400.942	4311.608	0.557	0.000	4311.608	0.000
L59	29.5 - 24.5 (59)	TP34.351x33.361x0.85	2408.217	4267.175	0.564	0.000	4267.175	0.000
L60	24.5 - 23 (60)	TP34.648x34.351x0.838	2554.242	4472.633	0.571	0.000	4472.633	0.000
L61	23 - 22.75 (61)	TP34.697x34.648x0.963	2598.258	5174.958	0.502	0.000	5174.958	0.000
L62	22.75 - 21.583 (62)	TP34.928x34.697x0.963	2605.608	5190.383	0.502	0.000	5190.383	0.000
L63	21.583 - 21.333 (63)	TP34.978x34.928x0.85	2639.933	4693.900	0.562	0.000	4693.900	0.000
L64	21.333 - 16.333 (64)	TP35.967x34.978x0.838	2647.300	4643.575	0.570	0.000	4643.575	0.000
L65	16.333 - 12.917 (65)	TP36.644x35.967x0.825	2795.025	4851.733	0.576	0.000	4851.733	0.000
L66	12.917 - 12.667 (66)	TP36.693x36.644x0.913	2896.492	5536.417	0.523	0.000	5536.417	0.000
L67	12.667 - 12.5 (67)	TP36.726x36.693x0.913	2903.933	5551.958	0.523	0.000	5551.958	0.000
L68	12.5 - 12.25 (68)	TP36.776x36.726x0.763	2908.908	4706.633	0.618	0.000	4706.633	0.000
L69	12.25 - 12 (69)	TP36.825x36.776x0.763	2916.358	4719.725	0.618	0.000	4719.725	0.000
L70	12 - 11.75 (70)	TP36.874x36.825x0.663	2923.808	4146.442	0.705	0.000	4146.442	0.000
L71	11.75 - 8.5 (71)	TP37.518x36.874x0.65	2931.258	4083.675	0.718	0.000	4083.675	0.000
L72	8.5 - 8.25 (72)	TP37.567x37.518x0.925	3028.533	5887.708	0.514	0.000	5887.708	0.000
L73	8.25 - 7 (73)	TP37.815x37.567x0.913	3036.050	5830.017	0.521	0.000	5830.017	0.000
L74	7 - 6.75 (74)	TP37.864x37.815x0.813	3073.717	5305.175	0.579	0.000	5305.175	0.000
L75	6.75 - 1.75 (75)	TP38.854x37.864x0.788	3081.267	5166.292	0.596	0.000	5166.292	0.000
L76	1.75 - 0 (76)	TP39.2x38.854x0.788	3233.533	5448.700	0.593	0.000	5448.700	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual	ϕV_n	Ratio	Actual	ϕT_n	Ratio
			V_u K	K	$\frac{V_u}{\phi V_n}$	T_u kip-ft	kip-ft	$\frac{T_u}{\phi T_n}$
L1	144.25 - 139.25 (1)	TP12.75x12.75x0.375	6.491	181.071	0.036	0.029	197.003	0.000
L2	139.25 - 134.75 (2)	TP12.75x12.75x0.375	6.655	181.071	0.037	0.029	197.003	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio V_u ϕV_n	Actual T_u kip-ft	ϕT_n kip-ft	Ratio T_u ϕT_n
L3	134.75 - 134.25 (3)	TP13.48x13.48x0.375	6.672	191.752	0.035	0.029	220.931	0.000
L4	134.25 - 129.25 (4)	TP14.466x13.48x0.188	11.077	149.201	0.074	0.583	190.015	0.003
L5	129.25 - 124.25 (5)	TP15.452x14.466x0.188	11.248	161.736	0.070	0.583	217.158	0.003
L6	124.25 - 123.416 (6)	TP15.616x15.452x0.188	11.370	163.478	0.070	0.634	221.863	0.003
L7	123.416 - 123.166 (7)	TP15.665x15.616x0.538	11.382	459.502	0.025	0.634	611.454	0.001
L8	123.166 - 118.166 (8)	TP16.651x15.665x0.513	14.593	467.405	0.031	0.725	663.528	0.001
L9	118.166 - 113.166 (9)	TP17.637x16.651x0.488	14.986	472.451	0.032	0.743	712.699	0.001
L10	113.166 - 109.5 (10)	TP18.36x17.637x0.475	19.287	480.074	0.040	0.328	755.248	0.000
L11	109.5 - 109.25 (11)	TP18.409x18.36x0.588	19.295	591.677	0.033	0.328	927.533	0.000
L12	109.25 - 104.75 (12)	TP19.296x18.409x0.563	19.671	595.497	0.033	0.324	981.300	0.000
L13	104.75 - 104.5 (13)	TP19.346x19.296x0.775	19.684	813.314	0.024	0.323	1328.558	0.000
L14	104.5 - 102.416 (14)	TP19.756x19.346x0.763	19.883	818.440	0.024	0.321	1367.417	0.000
L15	102.416 - 102.166 (15)	TP19.806x19.756x0.563	19.898	611.691	0.033	0.319	1035.400	0.000
L16	102.166 - 98.75 (16)	TP20.479x19.806x0.55	23.105	619.420	0.037	0.315	1085.858	0.000
L17	98.75 - 98.5 (17)	TP20.528x20.479x0.838	23.113	931.933	0.025	0.314	1614.175	0.000
L18	98.5 - 97.5 (18)	TP20.726x20.528x0.838	23.218	941.264	0.025	0.313	1646.667	0.000
L19	97.5 - 97.25 (19)	TP20.775x20.726x0.75	23.234	848.721	0.027	0.312	1494.983	0.000
L20	97.25 - 92 (20)	TP21.81x20.775x0.738	23.405	849.049	0.028	0.312	1521.492	0.000
L21	92 - 90.552 (21)	TP21.73x20.735x0.8	23.983	946.229	0.025	0.315	1742.083	0.000
L22	90.552 - 89.25 (22)	TP21.989x21.73x0.775	24.098	929.108	0.026	0.315	1733.792	0.000
L23	89.25 - 89 (23)	TP22.039x21.989x1	24.107	1188.950	0.020	0.314	2200.350	0.000
L24	89 - 88.25 (24)	TP22.189x22.039x0.975	24.188	1168.830	0.021	0.314	2181.042	0.000
L25	88.25 - 88 (25)	TP22.238x22.189x0.763	24.205	925.385	0.026	0.313	1748.125	0.000
L26	88 - 87.833 (26)	TP22.272x22.238x0.763	24.221	926.817	0.026	0.312	1753.542	0.000
L27	87.833 - 87.583 (27)	TP22.321x22.272x0.675	24.240	825.698	0.029	0.312	1572.192	0.000
L28	87.583 - 82.583 (28)	TP23.317x22.321x0.65	24.647	832.602	0.030	0.310	1660.075	0.000
L29	82.583 - 77.583 (29)	TP24.312x23.317x0.625	25.024	836.622	0.030	0.310	1743.192	0.000
L30	77.583 - 77 (30)	TP24.428x24.312x0.625	25.058	840.722	0.030	0.310	1760.317	0.000
L31	77 - 76.75 (31)	TP24.478x24.428x0.825	25.072	1102.750	0.023	0.310	2294.383	0.000
L32	76.75 - 76.333 (32)	TP24.561x24.478x0.825	25.111	1106.620	0.023	0.310	2310.525	0.000
L33	76.333 - 76.083 (33)	TP24.611x24.561x0.825	25.131	1108.940	0.023	0.310	2320.225	0.000
L34	76.083 - 74.25 (34)	TP24.976x24.611x0.8	25.319	1092.970	0.023	0.315	2324.292	0.000
L35	74.25 - 74 (35)	TP25.026x24.976x0.888	25.313	1210.620	0.021	0.316	2570.467	0.000
L36	74 - 73.75 (36)	TP25.076x25.026x0.888	25.336	1213.110	0.021	0.317	2581.075	0.000
L37	73.75 - 73.5	TP25.125x25.076x0.913	25.359	1248.560	0.020	0.319	2659.225	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L38	(37) 73.5 - 68.5	TP26.121x25.125x0.875	25.823	1248.330	0.021	0.344	2772.167	0.000
L39	(38) 68.5 - 63.5	TP27.116x26.121x0.85	26.264	1261.680	0.021	0.369	2915.075	0.000
L40	(39) 63.5 - 60.5	TP27.714x27.116x0.825	26.528	1253.590	0.021	0.383	2964.992	0.000
L41	(40) 60.5 - 60.25	TP27.763x27.714x0.825	26.535	1255.910	0.021	0.385	2975.975	0.000
L42	(41) 60.25 - 59.5	TP27.913x27.763x0.825	26.611	1262.870	0.021	0.388	3009.058	0.000
L43	(42) 59.5 - 59.25	TP27.962x27.913x0.888	26.625	1357.910	0.020	0.389	3233.983	0.000
L44	(43) 59.25 - 54.25	TP28.958x27.962x0.85	27.085	1350.150	0.020	0.417	3338.192	0.000
L45	(44) 54.25 - 45.802	TP30.64x28.958x0.838	27.447	1370.930	0.020	0.440	3493.133	0.000
L46	(45) 45.802 - 44.802	TP30.333x29.304x0.838	28.083	1395.960	0.020	0.288	3621.825	0.000
L47	(46) 44.802 - 43.583	TP30.574x30.333x0.838	28.181	1407.380	0.020	0.288	3681.317	0.000
L48	(47) 43.583 - 43.333	TP30.624x30.574x0.85	28.178	1430.160	0.020	0.288	3745.558	0.000
L49	(48) 43.333 - 43.166	TP30.657x30.624x0.85	28.189	1431.750	0.020	0.288	3753.883	0.000
L50	(49) 43.166 - 42.916	TP30.706x30.657x0.938	28.211	1577.120	0.018	0.288	4129.758	0.000
L51	(50) 42.916 - 39	TP31.481x30.706x0.913	28.540	1576.320	0.018	0.290	4238.592	0.000
L52	(51) 39 - 38.75	TP31.531x31.481x0.95	28.536	1641.740	0.017	0.290	4416.233	0.000
L53	(52) 38.75 - 37.166	TP31.844x31.531x0.938	28.689	1637.410	0.018	0.292	4451.542	0.000
L54	(53) 37.166 - 36.916	TP31.894x31.844x0.888	28.680	1555.070	0.018	0.292	4241.300	0.000
L55	(54) 36.916 - 34	TP32.471x31.894x0.888	28.920	1584.020	0.018	0.295	4400.650	0.000
L56	(55) 34 - 33.75	TP32.52x32.471x0.875	28.911	1564.770	0.018	0.295	4355.717	0.000
L57	(56) 33.75 - 29.75	TP33.312x32.52x0.863	28.975	1552.670	0.019	0.295	4296.883	0.000
L58	(57) 29.75 - 29.5	TP33.361x33.312x0.863	29.108	1584.020	0.018	0.295	4514.475	0.000
L59	(58) 29.5 - 24.5	TP34.351x33.361x0.85	29.168	1571.170	0.019	0.295	4466.058	0.000
L60	(59) 24.5 - 23	TP34.648x34.351x0.838	29.412	1600.180	0.018	0.404	4675.825	0.000
L61	(60) 23 - 22.75	TP34.697x34.648x0.963	29.393	1834.900	0.016	0.404	5428.967	0.000
L62	(61) 22.75 - 21.583	TP34.928x34.697x0.963	29.468	1847.470	0.016	0.404	5444.933	0.000
L63	(62) 21.583 - 21.333	TP34.978x34.928x0.85	29.459	1639.310	0.018	0.404	4906.925	0.000
L64	(63) 21.333 - 16.333	TP35.967x34.978x0.838	29.514	1625.160	0.018	0.404	4852.367	0.000
L65	(64) 16.333 - 12.917	TP36.644x35.967x0.825	29.707	1648.900	0.018	0.404	5064.658	0.000
L66	(65) 12.917 - 12.667	TP36.693x36.644x0.913	29.787	1845.070	0.016	0.404	5791.033	0.000
L67	(66) 12.667 - 12.5	TP36.726x36.693x0.913	29.793	1846.770	0.016	0.404	5807.083	0.000
L68	(67) 12.5 - 12.25	TP36.776x36.726x0.763	29.804	1551.790	0.019	0.404	4902.275	0.000
L69	(68) 12.25 - 12	TP36.825x36.776x0.763	29.813	1553.920	0.019	0.404	4915.775	0.000
L70	(69) 12 - 11.75	TP36.874x36.825x0.663	29.821	1355.720	0.022	0.404	4306.608	0.000
L71	(70) 11.75 - 8.5	TP37.518x36.874x0.65	29.924	1338.480	0.022	0.404	4239.850	0.000
L72	(71) 8.5 - 8.25	TP37.567x37.518x0.925	30.074	1915.390	0.016	0.374	6156.925	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L73	8.25 - 7 (73)	TP37.815x37.567x0.913	30.223	1902.900	0.016	0.371	6094.317	0.000
L74	7 - 6.75 (74)	TP37.864x37.815x0.813	30.225	1701.230	0.018	0.360	5529.792	0.000
L75	6.75 - 1.75 (75)	TP38.854x37.864x0.788	30.338	1658.800	0.018	0.358	5381.242	0.000
L76	1.75 - 0 (76)	TP39.2x38.854x0.788	30.899	1709.450	0.018	0.336	5672.325	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u ϕP_n	Ratio M_{ux} ϕM_{nx}	Ratio M_{uy} ϕM_{ny}	Ratio V_u ϕV_n	Ratio T_u ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	144.25 - 139.25 (1)	0.009	0.133	0.000	0.036	0.000	0.143	1.050	4.8.2
L2	139.25 - 134.75 (2)	0.009	0.282	0.000	0.037	0.000	0.293	1.050	4.8.2
L3	134.75 - 134.25 (3)	0.009	0.267	0.000	0.035	0.000	0.277	1.050	4.8.2
L4	134.25 - 129.25 (4)	0.018	0.533	0.000	0.074	0.003	0.558	1.050	4.8.2
L5	129.25 - 124.25 (5)	0.018	0.731	0.000	0.070	0.003	0.754	1.050	4.8.2
L6	124.25 - 123.416 (6)	0.018	0.760	0.000	0.070	0.003	0.783	1.050	4.8.2
L7	123.416 - 123.166 (7)	0.006	0.287	0.000	0.025	0.001	0.294	1.050	4.8.2
L8	123.166 - 118.166 (8)	0.008	0.364	0.000	0.031	0.001	0.373	1.050	4.8.2
L9	118.166 - 113.166 (9)	0.009	0.446	0.000	0.032	0.001	0.456	1.050	4.8.2
L10	113.166 - 109.5 (10)	0.011	0.519	0.000	0.040	0.000	0.532	1.050	4.8.2
L11	109.5 - 109.25 (11)	0.009	0.431	0.000	0.033	0.000	0.441	1.050	4.8.2
L12	109.25 - 104.75 (12)	0.009	0.500	0.000	0.033	0.000	0.510	1.050	4.8.2
L13	104.75 - 104.5 (13)	0.007	0.378	0.000	0.024	0.000	0.385	1.050	4.8.2
L14	104.5 - 102.416 (14)	0.007	0.398	0.000	0.024	0.000	0.406	1.050	4.8.2
L15	102.416 - 102.166 (15)	0.009	0.525	0.000	0.033	0.000	0.536	1.050	4.8.2
L16	102.166 - 98.75 (16)	0.011	0.572	0.000	0.037	0.000	0.584	1.050	4.8.2
L17	98.75 - 98.5 (17)	0.008	0.394	0.000	0.025	0.000	0.402	1.050	4.8.2
L18	98.5 - 97.5 (18)	0.008	0.401	0.000	0.025	0.000	0.409	1.050	4.8.2
L19	97.5 - 97.25 (19)	0.008	0.444	0.000	0.027	0.000	0.453	1.050	4.8.2
L20	97.25 - 92 (20)	0.009	0.463	0.000	0.028	0.000	0.472	1.050	4.8.2
L21	92 - 90.552 (21)	0.008	0.477	0.000	0.025	0.000	0.486	1.050	4.8.2
L22	90.552 - 89.25 (22)	0.009	0.498	0.000	0.026	0.000	0.507	1.050	4.8.2
L23	89.25 - 89 (23)	0.007	0.399	0.000	0.020	0.000	0.406	1.050	4.8.2
L24	89 - 88.25 (24)	0.007	0.411	0.000	0.021	0.000	0.418	1.050	4.8.2
L25	88.25 - 88 (25)	0.009	0.511	0.000	0.026	0.000	0.521	1.050	4.8.2
L26	88 - 87.833 (26)	0.009	0.512	0.000	0.026	0.000	0.522	1.050	4.8.2

Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		P_u	M_{ux}	M_{uy}	V_u	T_u			
		ϕP_n	ϕM_{nx}	ϕM_{ny}	ϕV_n	ϕT_n			
L27	87.833 - 87.583 (27)	0.010	0.573	0.000	0.029	0.000	0.584	1.050	4.8.2
L28	87.583 - 82.583 (28)	0.010	0.618	0.000	0.030	0.000	0.630	1.050	4.8.2
L29	82.583 - 77.583 (29)	0.011	0.662	0.000	0.030	0.000	0.674	1.050	4.8.2
L30	77.583 - 77 (30)	0.011	0.664	0.000	0.030	0.000	0.676	1.050	4.8.2
L31	77 - 76.75 (31)	0.008	0.517	0.000	0.023	0.000	0.526	1.050	4.8.2
L32	76.75 - 76.333 (32)	0.008	0.518	0.000	0.023	0.000	0.527	1.050	4.8.2
L33	76.333 - 76.083 (33)	0.008	0.519	0.000	0.023	0.000	0.527	1.050	4.8.2
L34	76.083 - 74.25 (34)	0.008	0.538	0.000	0.023	0.000	0.547	1.050	4.8.2
L35	74.25 - 74 (35)	0.008	0.491	0.000	0.021	0.000	0.499	1.050	4.8.2
L36	74 - 73.75 (36)	0.008	0.491	0.000	0.021	0.000	0.499	1.050	4.8.2
L37	73.75 - 73.5 (37)	0.007	0.480	0.000	0.020	0.000	0.488	1.050	4.8.2
L38	73.5 - 68.5 (38)	0.008	0.508	0.000	0.021	0.000	0.516	1.050	4.8.2
L39	68.5 - 63.5 (39)	0.008	0.529	0.000	0.021	0.000	0.537	1.050	4.8.2
L40	63.5 - 60.5 (40)	0.008	0.547	0.000	0.021	0.000	0.556	1.050	4.8.2
L41	60.5 - 60.25 (41)	0.008	0.547	0.000	0.021	0.000	0.556	1.050	4.8.2
L42	60.25 - 59.5 (42)	0.008	0.548	0.000	0.021	0.000	0.557	1.050	4.8.2
L43	59.5 - 59.25 (43)	0.008	0.513	0.000	0.020	0.000	0.521	1.050	4.8.2
L44	59.25 - 54.25 (44)	0.008	0.538	0.000	0.020	0.000	0.547	1.050	4.8.2
L45	54.25 - 45.802 (45)	0.008	0.548	0.000	0.020	0.000	0.557	1.050	4.8.2
L46	45.802 - 44.802 (46)	0.009	0.571	0.000	0.020	0.000	0.580	1.050	4.8.2
L47	44.802 - 43.583 (47)	0.009	0.571	0.000	0.020	0.000	0.580	1.050	4.8.2
L48	43.583 - 43.333 (48)	0.009	0.563	0.000	0.020	0.000	0.573	1.050	4.8.2
L49	43.333 - 43.166 (49)	0.009	0.563	0.000	0.020	0.000	0.573	1.050	4.8.2
L50	43.166 - 42.916 (50)	0.008	0.515	0.000	0.018	0.000	0.524	1.050	4.8.2
L51	42.916 - 39 (51)	0.008	0.529	0.000	0.018	0.000	0.538	1.050	4.8.2
L52	39 - 38.75 (52)	0.008	0.510	0.000	0.017	0.000	0.518	1.050	4.8.2
L53	38.75 - 37.166 (53)	0.008	0.516	0.000	0.018	0.000	0.525	1.050	4.8.2
L54	37.166 - 36.916 (54)	0.009	0.543	0.000	0.018	0.000	0.552	1.050	4.8.2
L55	36.916 - 34 (55)	0.009	0.543	0.000	0.018	0.000	0.552	1.050	4.8.2
L56	34 - 33.75 (56)	0.009	0.550	0.000	0.018	0.000	0.559	1.050	4.8.2
L57	33.75 - 29.75 (57)	0.009	0.557	0.000	0.019	0.000	0.566	1.050	4.8.2
L58	29.75 - 29.5 (58)	0.009	0.557	0.000	0.018	0.000	0.566	1.050	4.8.2
L59	29.5 - 24.5 (59)	0.009	0.564	0.000	0.019	0.000	0.574	1.050	4.8.2
L60	24.5 - 23 (60)	0.009	0.571	0.000	0.018	0.000	0.581	1.050	4.8.2
L61	23 - 22.75 (61)	0.008	0.502	0.000	0.016	0.000	0.511	1.050	4.8.2

Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		P_u	M_{ux}	M_{uy}	V_u	T_u			
L62	22.75 - 21.583 (62)	0.008	0.502	0.000	0.016	0.000	0.511	1.050	4.8.2
L63	21.583 - 21.333 (63)	0.009	0.562	0.000	0.018	0.000	0.572	1.050	4.8.2
L64	21.333 - 16.333 (64)	0.010	0.570	0.000	0.018	0.000	0.580	1.050	4.8.2
L65	16.333 - 12.917 (65)	0.010	0.576	0.000	0.018	0.000	0.586	1.050	4.8.2
L66	12.917 - 12.667 (66)	0.009	0.523	0.000	0.016	0.000	0.532	1.050	4.8.2
L67	12.667 - 12.5 (67)	0.009	0.523	0.000	0.016	0.000	0.532	1.050	4.8.2
L68	12.5 - 12.25 (68)	0.011	0.618	0.000	0.019	0.000	0.629	1.050	4.8.2
L69	12.25 - 12 (69)	0.011	0.618	0.000	0.019	0.000	0.629	1.050	4.8.2
L70	12 - 11.75 (70)	0.012	0.705	0.000	0.022	0.000	0.718	1.050	4.8.2
L71	11.75 - 8.5 (71)	0.012	0.718	0.000	0.022	0.000	0.731	1.050	4.8.2
L72	8.5 - 8.25 (72)	0.009	0.514	0.000	0.016	0.000	0.524	1.050	4.8.2
L73	8.25 - 7 (73)	0.009	0.521	0.000	0.016	0.000	0.530	1.050	4.8.2
L74	7 - 6.75 (74)	0.010	0.579	0.000	0.018	0.000	0.590	1.050	4.8.2
L75	6.75 - 1.75 (75)	0.010	0.596	0.000	0.018	0.000	0.607	1.050	4.8.2
L76	1.75 - 0 (76)	0.011	0.593	0.000	0.018	0.000	0.604	1.050	4.8.2

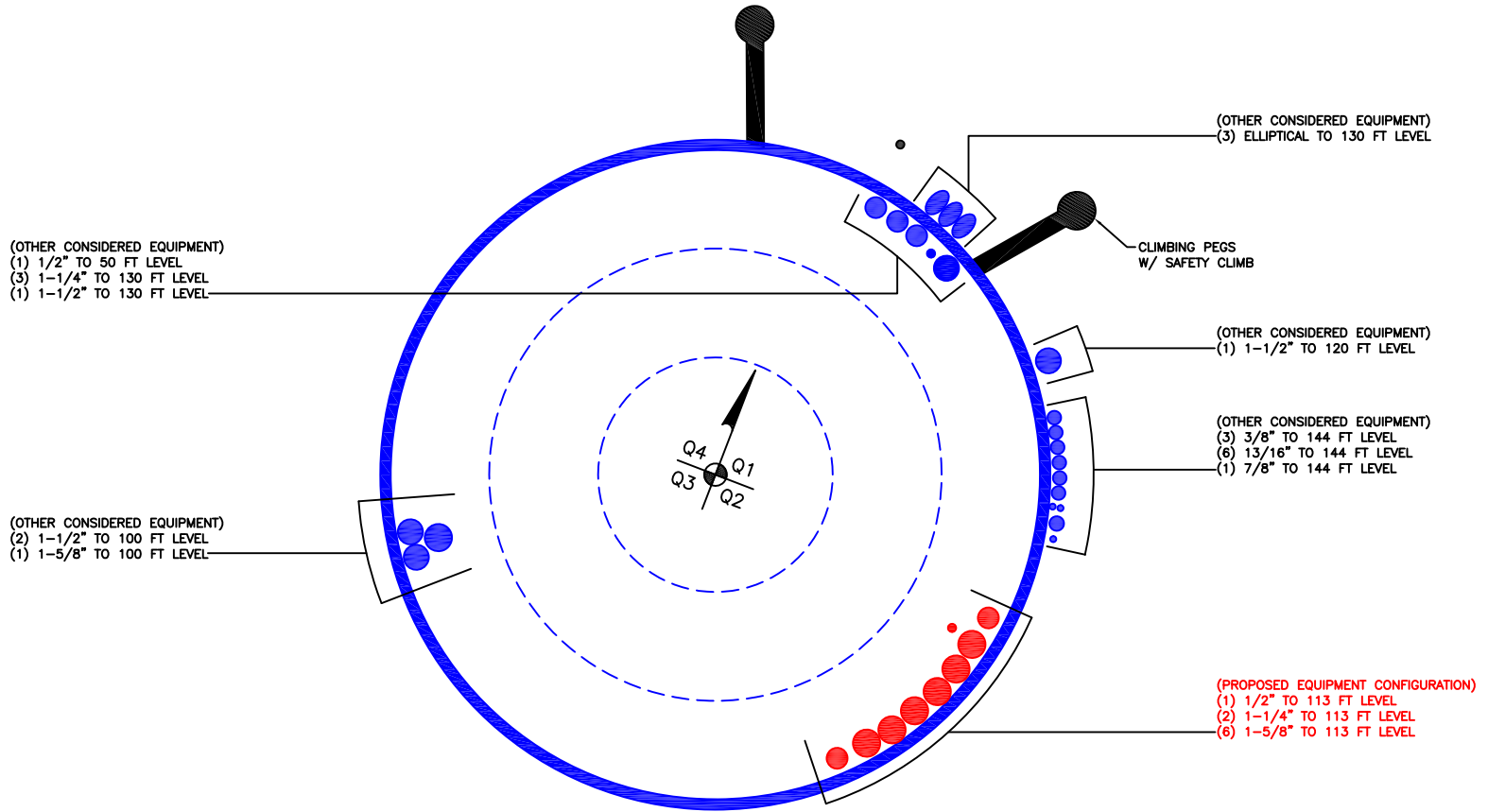
Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	144.25 - 139.25	Pole	TP12.75x12.75x0.375	1	-5.192	633.747	13.6	Pass
L2	139.25 - 134.75	Pole	TP12.75x12.75x0.375	2	-5.480	633.747	27.9	Pass
L3	134.75 - 134.25	Pole	TP13.48x13.48x0.375	3	-5.517	671.132	26.3	Pass
L4	134.25 - 129.25	Pole	TP14.466x13.48x0.188	4	-9.194	529.516	53.1	Pass
L5	129.25 - 124.25	Pole	TP15.452x14.466x0.188	5	-9.535	566.074	71.8	Pass
L6	124.25 - 123.416	Pole	TP15.616x15.452x0.188	6	-9.537	572.172	74.6	Pass
L7	123.416 - 123.166	Pole	TP15.665x15.616x0.538	7	-9.575	1608.253	28.0	Pass
L8	123.166 - 118.166	Pole	TP16.651x15.665x0.513	8	-12.982	1635.921	35.5	Pass
L9	118.166 - 113.166	Pole	TP17.637x16.651x0.488	9	-13.579	1653.582	43.4	Pass
L10	113.166 - 109.5	Pole	TP18.36x17.637x0.475	10	-17.517	1680.262	50.7	Pass
L11	109.5 - 109.25	Pole	TP18.409x18.36x0.588	11	-17.574	2070.873	42.0	Pass
L12	109.25 - 104.75	Pole	TP19.296x18.409x0.563	12	-18.310	2084.239	48.6	Pass
L13	104.75 - 104.5	Pole	TP19.346x19.296x0.775	13	-18.377	2846.602	36.7	Pass
L14	104.5 - 102.416	Pole	TP19.756x19.346x0.763	14	-18.809	2864.536	38.6	Pass
L15	102.416 - 102.166	Pole	TP19.806x19.756x0.563	15	-18.869	2140.918	51.0	Pass
L16	102.166 - 98.75	Pole	TP20.479x19.806x0.55	16	-23.488	2167.966	55.7	Pass
L17	98.75 - 98.5	Pole	TP20.528x20.479x0.838	17	-23.572	3261.762	38.3	Pass
L18	98.5 - 97.5	Pole	TP20.726x20.528x0.838	18	-23.822	3294.427	39.0	Pass
L19	97.5 - 97.25	Pole	TP20.775x20.726x0.75	19	-23.895	2970.523	43.1	Pass
L20	97.25 - 92	Pole	TP21.81x20.775x0.738	20	-24.303	2971.668	45.0	Pass
L21	92 - 90.552	Pole	TP21.73x20.735x0.8	21	-26.340	3311.805	46.3	Pass
L22	90.552 - 89.25	Pole	TP21.989x21.73x0.775	22	-26.700	3251.881	48.3	Pass
L23	89.25 - 89	Pole	TP22.039x21.989x1	23	-26.796	4161.307	38.7	Pass
L24	89 - 88.25	Pole	TP22.189x22.039x0.975	24	-27.023	4090.894	39.8	Pass
L25	88.25 - 88	Pole	TP22.238x22.189x0.763	25	-27.096	3238.851	49.6	Pass
L26	88 - 87.833	Pole	TP22.272x22.238x0.763	26	-27.143	3243.859	49.7	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	σP_{allow} K	% Capacity	Pass Fail	
L27	87.833 - 87.583	Pole	TP22.321x22.272x0.675	27	-27.203	2889.946	55.6	Pass	
L28	87.583 - 82.583	Pole	TP23.317x22.321x0.65	28	-28.441	2914.107	60.0	Pass	
L29	82.583 - 77.583	Pole	TP24.312x23.317x0.625	29	-29.723	2928.177	64.2	Pass	
L30	77.583 - 77	Pole	TP24.428x24.312x0.625	30	-29.884	2942.530	64.4	Pass	
L31	77 - 76.75	Pole	TP24.478x24.428x0.825	31	-29.967	3859.621	50.1	Pass	
L32	76.75 - 76.333	Pole	TP24.561x24.478x0.825	32	-30.090	3873.166	50.2	Pass	
L33	76.333 - 76.083	Pole	TP24.611x24.561x0.825	33	-30.165	3881.293	50.2	Pass	
L34	76.083 - 74.25	Pole	TP24.976x24.611x0.8	34	-30.671	3825.381	52.1	Pass	
L35	74.25 - 74	Pole	TP25.026x24.976x0.888	35	-30.772	4237.159	47.5	Pass	
L36	74 - 73.75	Pole	TP25.076x25.026x0.888	36	-30.848	4245.895	47.6	Pass	
L37	73.75 - 73.5	Pole	TP25.125x25.076x0.913	37	-30.926	4369.974	46.4	Pass	
L38	73.5 - 68.5	Pole	TP26.121x25.125x0.875	38	-32.482	4369.165	49.1	Pass	
L39	68.5 - 63.5	Pole	TP27.116x26.121x0.85	39	-34.072	4415.901	51.2	Pass	
L40	63.5 - 60.5	Pole	TP27.714x26.116x0.825	40	-35.042	4387.561	52.9	Pass	
L41	60.5 - 60.25	Pole	TP27.763x27.714x0.825	41	-35.135	4395.688	53.0	Pass	
L42	60.25 - 59.5	Pole	TP27.913x27.763x0.825	42	-35.372	4420.048	53.0	Pass	
L43	59.5 - 59.25	Pole	TP27.962x27.913x0.888	43	-35.465	4752.667	49.7	Pass	
L44	59.25 - 54.25	Pole	TP28.958x27.962x0.85	44	-37.164	4725.525	52.1	Pass	
L45	54.25 - 45.802	Pole	TP30.64x28.958x0.838	45	-38.636	4798.269	53.1	Pass	
L46	45.802 - 44.802	Pole	TP30.333x29.304x0.838	46	-41.759	4885.860	55.2	Pass	
L47	44.802 - 43.583	Pole	TP30.574x30.333x0.838	47	-42.195	4925.823	55.3	Pass	
L48	43.583 - 43.333	Pole	TP30.624x30.574x0.85	48	-42.305	5005.560	54.5	Pass	
L49	43.333 - 43.166	Pole	TP30.657x30.624x0.85	49	-42.370	5011.114	54.5	Pass	
L50	43.166 - 42.916	Pole	TP30.706x30.657x0.938	50	-42.468	5519.913	49.9	Pass	
L51	42.916 - 39	Pole	TP31.481x30.706x0.913	51	-44.002	5517.109	51.2	Pass	
L52	39 - 38.75	Pole	TP31.531x31.481x0.95	52	-44.121	5746.093	49.4	Pass	
L53	38.75 - 37.166	Pole	TP31.844x31.531x0.938	53	-44.761	5730.931	50.0	Pass	
L54	37.166 - 36.916	Pole	TP31.894x31.844x0.888	54	-44.880	5442.748	52.5	Pass	
L55	36.916 - 34	Pole	TP32.471x31.894x0.888	55	-46.046	5544.052	52.6	Pass	
L56	34 - 33.75	Pole	TP32.52x32.471x0.875	56	-46.162	5476.695	53.2	Pass	
L57	33.75 - 29.75	Pole	TP33.312x32.52x0.863	57	-46.180	5400.591	54.0	Pass	
L58	29.75 - 29.5	Pole	TP33.361x33.312x0.863	58	-47.743	5535.642	53.9	Pass	
L59	29.5 - 24.5	Pole	TP34.351x33.361x0.85	59	-47.855	5465.838	54.7	Pass	
L60	24.5 - 23	Pole	TP34.648x34.351x0.838	60	-49.866	5551.444	55.3	Pass	
L61	23 - 22.75	Pole	TP34.697x34.648x0.963	61	-50.456	6412.738	48.6	Pass	
L62	22.75 - 21.583	Pole	TP34.928x34.697x0.963	62	-50.577	6422.157	48.6	Pass	
L63	21.583 - 21.333	Pole	TP34.978x34.928x0.85	63	-51.080	5729.262	54.5	Pass	
L64	21.333 - 16.333	Pole	TP35.967x34.978x0.838	64	-51.198	5655.279	55.2	Pass	
L65	16.333 - 12.917	Pole	TP36.644x35.967x0.825	65	-53.328	5734.386	55.8	Pass	
L66	12.917 - 12.667	Pole	TP36.693x36.644x0.913	66	-54.786	6448.806	50.7	Pass	
L67	12.667 - 12.5	Pole	TP36.726x36.693x0.913	67	-54.901	6457.731	50.7	Pass	
L68	12.5 - 12.25	Pole	TP36.776x36.726x0.763	68	-54.981	5423.796	59.9	Pass	
L69	12.25 - 12	Pole	TP36.825x36.776x0.763	69	-55.086	5431.261	59.9	Pass	
L70	12 - 11.75	Pole	TP36.874x36.825x0.663	70	-55.192	4738.545	68.4	Pass	
L71	11.75 - 8.5	Pole	TP37.518x36.874x0.65	71	-55.307	4657.107	69.6	Pass	
L72	8.5 - 8.25	Pole	TP37.567x37.518x0.925	72	-56.599	6694.800	49.9	Pass	
L73	8.25 - 7	Pole	TP37.815x37.567x0.913	73	-56.731	6615.514	50.5	Pass	
L74	7 - 6.75	Pole	TP37.864x37.815x0.813	74	-57.322	5946.349	56.2	Pass	
L75	6.75 - 1.75	Pole	TP38.854x37.864x0.788	75	-57.441	5774.989	57.8	Pass	
L76	1.75 - 0	Pole	TP39.2x38.854x0.788	76	-59.636	5929.119	57.6	Pass	
							Summary		
							Pole (L6)	74.6	Pass
							RATING =	74.6	Pass

***NOTE: Above stress ratios for reinforced sections are approximate. More exact calculations are presented in Appendix C.**

APPENDIX B
BASE LEVEL DRAWING



APPENDIX C
ADDITIONAL CALCULATIONS

Pole Geometry

	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	144.25	9.5	0	0	12.75	12.75	0.375		A500-46
2	134.75	0.5	0	0	13.48	13.48	0.375		A500-46
3	134.25	42.25	3.552	12	13.48	21.81	0.1875	Auto	A572-65
4	95.552	49.75	4.198	12	20.73	30.64	0.25	Auto	A572-65
5	50	50	0	12	29.30	39.2	0.3125	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	29.75	plate	PL 6.875x1.25 BW	2				E1								E1
2	0	12.917	plate	PL 6.875x1.25 (14)	2							E1		E1			
3	12.917	29.75	plate	PL 6.875x1.25	1								E1				
4	29.75	59.5	plate	PL 6.625x1.25	3				E1								E1
5	59.5	89.25	plate	PL 5.5x1.25	3				E1				E1				E1
6	89.25	98.75	plate	PL 3.625x1.25	3				E1				E1				E1
7	12.5	39	plate	PL 4x1	1		E2										
8	12.5	34	plate	PL 4x1	2						E2						E2
9	34	60.5	plate	PL 4x1	3			E2				E2					E2
10	60.5	77	plate	PL 4x1	3		E2				E2						E2
11	88.25	104.75	plate	PL 4x1	3		E2				E2						E2
12	0	8.5	plate	TS 1x7	3			3			3						3
13	7	23	plate	CCI-SFP-060100	2						E3						E3
14	12	23	plate	CCI-SFP-060100	1				E3								
15	21.583	37.166	plate	CCI-SFP-045100	1									E3			
16	23	37.166	plate	CCI-SFP-045100	1						E3						
17	23	43.583	plate	CCI-SFP-045100	1			E3									
18	37.166	43.166	plate	CCI-SFP-060100	2						E3						E3
19	43.166	73.75	plate	CCI-SFP-045100	1									E3			
20	46.75	73.75	plate	CCI-SFP-045100	1		E3										
21	43.166	74.25	plate	CCI-SFP-040075	1						E3						
22	73.75	102.416	plate	CCI-SFP-040075	2		E3										E3
23	76.333	89.25	plate	CCI-SFP-040075	1			E3									
24	87.833	102.416	plate	CCI-SFP-050125	1								E3				
25	102.416	123.416	plate	CCI-SFP-045100	2		E3										E3
26	102.416	123.416	plate	CCI-SFP-045100	1						E3						
27	97.5	109.5	plate	CCI-SFP-040075	1			E3									
28	102.416	109.5	plate	CCI-SFP-040075	1												E3
29																	

Reinforcement Details

	B (in)	H (in)	Gross Area (in ²)	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in ²)	Bolt Hole Size (in)	Reinforcement Material
1	6.875	1.25	8.59375	0.625	Welded	n/a	PC 8.8 - M20 (100)	36.000	15.000	6.953	1.2500	A572-65
2	6.875	1.25	8.59375	0.625	Welded	n/a	PC 8.8 - M20 (100)	42.000	15.000	6.953	1.2500	A572-65
3	6.875	1.25	8.59375	0.625	PC 8.8 - M20 (100)	42	PC 8.8 - M20 (100)	36.000	15.000	6.953	1.2500	A572-65
4	6.625	1.25	8.28125	0.625	None	n/a	PC 8.8 - M20 (100)	30.000	18.000	6.641	1.2500	A572-65
5	5.5	1.25	6.875	0.625	None	n/a	PC 8.8 - M20 (100)	18.000	18.000	5.234	1.2500	A572-65
6	3.625	1.25	4.53125	0.625	None	n/a	PC 8.8 - M20 (100)	15.000	24.000	2.891	1.2500	A572-65
7	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
8	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
9	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
10	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
11	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
12	1	7	7	3.5	Welded	n/a	Welded	0.000	0.750	7.000	0.0000	A572-65
13	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
14	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
15	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
16	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
17	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
18	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
19	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
20	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
21	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
22	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
23	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
24	5	1.25	6.25	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	23.000	4.688	1.1875	A572-65
25	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	20.000	3.250	1.1875	A572-65
26	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	20.000	3.250	1.1875	A572-65
27	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65
28	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	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)
PL 6.875x1.25 BW	Top	12	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 6.875x1.25 (14)	Top	14	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 6.875x1.25	Top	12	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	14	N	3	3	0	-	-	-	-	-	-	-	-
PL 6.625x1.25	Top	10	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 5.5x1.25	Top	6	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 3.625x1.25	Top	5	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 4x1	Top	7	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	7	N	3	3	0	-	-	-	-	-	-	-	-
TS 1x7	Top	0	-	0	0	80	None	-	-	-	-	125.25	0.313	-
	Bottom	-	-	-	-	80	CJP Groove	12.5	0.5	45	0.3125	-	-	-

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	144.25 - 139.25	5		0	12.750	12.750	0.375	A500-46	1.000
2	139.25 - 134.75	4.5	0	0	12.750	12.750	0.375	A500-46	1.000
3	134.75 - 134.25	0.5	0	0	13.480	13.480	0.375	A500-46	1.000
4	134.25 - 129.25	5		12	13.480	14.466	0.1875	A572-65	1.000
5	129.25 - 124.25	5		12	14.466	15.452	0.1875	A572-65	1.000
6	124.25 - 123.416	0.834		12	15.452	15.616	0.1875	A572-65	1.000
7	123.416 - 123.166	0.25		12	15.616	15.665	0.5375	A572-65	0.873
8	123.166 - 118.166	5		12	15.665	16.651	0.5125	A572-65	0.881
9	118.166 - 113.166	5		12	16.651	17.637	0.4875	A572-65	0.894
10	113.166 - 109.5	3.666		12	17.637	18.360	0.475	A572-65	0.895
11	109.5 - 109.25	0.25		12	18.360	18.409	0.5875	A572-65	0.906
12	109.25 - 104.75	4.5		12	18.409	19.296	0.5625	A572-65	0.916
13	104.75 - 104.5	0.25		12	19.296	19.346	0.775	A572-65	0.930
14	104.5 - 102.416	2.084		12	19.346	19.756	0.7625	A572-65	0.930
15	102.416 - 102.166	0.25		12	19.756	19.806	0.5625	A572-65	1.123
16	102.166 - 98.75	3.416		12	19.806	20.479	0.55	A572-65	1.120
17	98.75 - 98.5	0.25		12	20.479	20.528	0.8375	A572-65	1.002
18	98.5 - 97.5	1		12	20.528	20.726	0.8375	A572-65	0.994
19	97.5 - 97.25	0.25		12	20.726	20.775	0.75	A572-65	1.041
20	97.25 - 95.552	5.25	3.552	12	20.775	21.810	0.7375	A572-65	1.044
21	95.552 - 90.552	5		12	20.735	21.730	0.8	A572-65	1.024
22	90.552 - 89.25	1.302		12	21.730	21.989	0.775	A572-65	1.046
23	89.25 - 89	0.25		12	21.989	22.039	1	A572-65	0.967
24	89 - 88.25	0.75		12	22.039	22.189	0.975	A572-65	0.985
25	88.25 - 88	0.25		12	22.189	22.238	0.7625	A572-65	1.017
26	88 - 87.833	0.167		12	22.238	22.272	0.7625	A572-65	1.016
27	87.833 - 87.583	0.25		12	22.272	22.321	0.675	A572-65	1.008
28	87.583 - 82.583	5		12	22.321	23.317	0.65	A572-65	1.017
29	82.583 - 77.583	5		12	23.317	24.312	0.625	A572-65	1.029
30	77.583 - 77	0.583		12	24.312	24.428	0.625	A572-65	1.026
31	77 - 76.75	0.25		12	24.428	24.478	0.825	A572-65	0.974
32	76.75 - 76.333	0.417		12	24.478	24.561	0.825	A572-65	0.971
33	76.333 - 76.083	0.25		12	24.561	24.611	0.825	A572-65	0.923
34	76.083 - 74.25	1.833		12	24.611	24.976	0.8	A572-65	0.941
35	74.25 - 74	0.25		12	24.976	25.026	0.8875	A572-65	0.893
36	74 - 73.75	0.25		12	25.026	25.076	0.8875	A572-65	0.892
37	73.75 - 73.5	0.25		12	25.076	25.125	0.9125	A572-65	0.910
38	73.5 - 68.5	5		12	25.125	26.121	0.875	A572-65	0.921
39	68.5 - 63.5	5		12	26.121	27.116	0.85	A572-65	0.922
40	63.5 - 60.5	3		12	27.116	27.714	0.825	A572-65	0.935
41	60.5 - 60.25	0.25		12	27.714	27.763	0.825	A572-65	0.934
42	60.25 - 59.5	0.75		12	27.763	27.913	0.825	A572-65	0.931
43	59.5 - 59.25	0.25		12	27.913	27.962	0.8875	A572-65	0.920
44	59.25 - 54.25	5		12	27.962	28.958	0.85	A572-65	0.936
45	54.25 - 50	8.448	4.198	12	28.958	30.640	0.8375	A572-65	0.931
46	50 - 44.802	5.198		12	29.304	30.333	0.8375	A572-65	0.938
47	44.802 - 43.583	1.219		12	30.333	30.574	0.8375	A572-65	0.933
48	43.583 - 43.333	0.25		12	30.574	30.624	0.85	A572-65	0.975
49	43.333 - 43.166	0.167		12	30.624	30.657	0.85	A572-65	0.974
50	43.166 - 42.916	0.25		12	30.657	30.706	0.9375	A572-65	0.935
51	42.916 - 39	3.916		12	30.706	31.481	0.9125	A572-65	0.944
52	39 - 38.75	0.25		12	31.481	31.531	0.95	A572-65	0.950
53	38.75 - 37.166	1.584		12	31.531	31.844	0.9375	A572-65	0.956
54	37.166 - 36.916	0.25		12	31.844	31.894	0.8875	A572-65	0.973
55	36.916 - 34	2.916		12	31.894	32.471	0.8875	A572-65	0.961
56	34 - 33.75	0.25		12	32.471	32.520	0.875	A572-65	0.929
57	33.75 - 29.75	4		12	32.520	33.312	0.8625	A572-65	0.928
58	29.75 - 29.5	0.25		12	33.312	33.361	0.8625	A572-65	0.937
59	29.5 - 24.5	5		12	33.361	34.351	0.85	A572-65	0.934
60	24.5 - 23	1.5		12	34.351	34.648	0.8375	A572-65	0.942
61	23 - 22.75	0.25		12	34.648	34.697	0.9625	A572-65	0.908
62	22.75 - 21.583	1.167		12	34.697	34.928	0.9625	A572-65	0.904
63	21.583 - 21.333	0.25		12	34.928	34.978	0.85	A572-65	0.971
64	21.333 - 16.333	5		12	34.978	35.967	0.8375	A572-65	0.968
65	16.333 - 12.917	3.416		12	35.967	36.644	0.825	A572-65	0.971
66	12.917 - 12.667	0.25		12	36.644	36.693	0.9125	A572-65	0.961
67	12.667 - 12.5	0.167		12	36.693	36.726	0.9125	A572-65	0.961
68	12.5 - 12.25	0.25		12	36.726	36.776	0.7625	A572-65	1.008
69	12.25 - 12	0.25		12	36.776	36.825	0.7625	A572-65	1.007
70	12 - 11.75	0.25		12	36.825	36.874	0.6625	A572-65	1.077
71	11.75 - 8.5	3.25		12	36.874	37.518	0.65	A572-65	1.087
72	8.5 - 8.25	0.25		12	37.518	37.567	0.925	A572-65	0.962
73	8.25 - 7	1.25		12	37.567	37.815	0.9125	A572-65	0.970
74	7 - 6.75	0.25		12	37.815	37.864	0.8125	A572-65	0.962
75	6.75 - 1.75	5		12	37.864	38.854	0.7875	A572-65	0.976
76	1.75 - 0	1.75		12	38.854	39.200	0.7875	A572-65	0.971

TNX Section Forces

Increment (ft):		TNX Output			
5		P _u	M _{ux} (kip-ft)	V _u	
	Section Height (ft)	(K)		(K)	
1	144.25 - 139.25	5.19	26.39	6.49	
2	139.25 - 134.75	5.48	55.96	6.65	
3	134.75 - 134.25	5.52	59.29	6.67	
4	134.25 - 129.25	9.19	98.07	11.08	
5	129.25 - 124.25	9.53	153.83	11.25	
6	124.25 - 123.416	9.54	163.24	11.37	
7	123.416 - 123.166	9.58	166.09	11.38	
8	123.166 - 118.166	12.98	229.22	14.59	
9	118.166 - 113.166	13.58	303.12	14.99	
10	113.166 - 109.5	17.52	374.69	19.29	
11	109.5 - 109.25	17.57	379.51	19.30	
12	109.25 - 104.75	18.31	467.13	19.67	
13	104.75 - 104.5	18.38	472.05	19.68	
14	104.5 - 102.416	18.81	513.26	19.88	
15	102.416 - 102.166	18.87	518.23	19.90	
16	102.166 - 98.75	23.49	592.19	23.10	
17	98.75 - 98.5	23.57	597.96	23.11	
18	98.5 - 97.5	23.82	621.11	23.22	
19	97.5 - 97.25	23.89	626.92	23.23	
20	97.25 - 95.552	24.30	666.48	23.40	
21	95.552 - 90.552	26.34	784.92	23.98	
22	90.552 - 89.25	26.70	816.19	24.10	
23	89.25 - 89	26.80	822.21	24.11	
24	89 - 88.25	27.02	840.32	24.19	
25	88.25 - 88	27.10	846.36	24.21	
26	88 - 87.833	27.14	850.40	24.22	
27	87.833 - 87.583	27.20	856.46	24.24	
28	87.583 - 82.583	28.44	978.59	24.65	
29	82.583 - 77.583	29.72	1102.65	25.02	
30	77.583 - 77	29.88	1117.23	25.06	
31	77 - 76.75	29.97	1123.50	25.07	
32	76.75 - 76.333	30.09	1133.95	25.11	
33	76.333 - 76.083	30.17	1140.23	25.13	
34	76.083 - 74.25	30.67	1186.43	25.32	
35	74.25 - 74	30.77	1192.75	25.31	
36	74 - 73.75	30.85	1199.08	25.34	
37	73.75 - 73.5	30.93	1205.42	25.36	
38	73.5 - 68.5	32.48	1333.30	25.82	
39	68.5 - 63.5	34.07	1463.41	26.26	
40	63.5 - 60.5	35.04	1542.53	26.53	
41	60.5 - 60.25	35.13	1549.16	26.54	
42	60.25 - 59.5	35.37	1569.08	26.61	
43	59.5 - 59.25	35.47	1575.73	26.62	
44	59.25 - 54.25	37.16	1709.93	27.08	
45	54.25 - 50	38.64	1825.71	27.45	
46	50 - 44.802	41.76	1970.14	28.08	
47	44.802 - 43.583	42.19	2004.40	28.18	
48	43.583 - 43.333	42.30	2011.44	28.18	
49	43.333 - 43.166	42.37	2016.15	28.19	
50	43.166 - 42.916	42.47	2023.19	28.21	
51	42.916 - 39	44.00	2134.24	28.54	
52	39 - 38.75	44.12	2141.37	28.54	
53	38.75 - 37.166	44.76	2186.65	28.69	
54	37.166 - 36.916	44.88	2193.82	28.68	
55	36.916 - 34	46.05	2277.74	28.92	
56	34 - 33.75	46.16	2284.96	28.91	
57	33.75 - 29.75	47.73	2400.95	29.11	
58	29.75 - 29.5	47.84	2408.22	29.11	
59	29.5 - 24.5	49.83	2554.24	29.34	
60	24.5 - 23	50.43	2598.26	29.41	
61	23 - 22.75	50.56	2605.61	29.39	
62	22.75 - 21.583	51.06	2639.94	29.47	
63	21.583 - 21.333	51.18	2647.30	29.46	
64	21.333 - 16.333	53.30	2795.02	29.66	
65	16.333 - 12.917	54.77	2896.49	29.80	
66	12.917 - 12.667	54.90	2903.93	29.79	
67	12.667 - 12.5	54.97	2908.91	29.79	
68	12.5 - 12.25	55.08	2916.36	29.80	
69	12.25 - 12	55.18	2923.81	29.81	
70	12 - 11.75	55.28	2931.26	29.82	
71	11.75 - 8.5	56.58	3028.53	30.08	
72	8.5 - 8.25	56.71	3036.05	30.07	
73	8.25 - 7	57.30	3073.71	30.22	
74	7 - 6.75	57.42	3081.27	30.22	
75	6.75 - 1.75	59.60	3233.54	30.71	
76	1.75 - 0	60.36	3287.39	30.90	

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
144.25 - 139.25	Pole	TP12.75x12.75x0.375	Pole	13.6%	Pass
139.25 - 134.75	Pole	TP12.75x12.75x0.375	Pole	27.9%	Pass
134.75 - 134.25	Pole	TP13.48x13.48x0.375	Pole	26.3%	Pass
134.25 - 129.25	Pole	TP14.466x13.48x0.1875	Pole	52.9%	Pass
129.25 - 124.25	Pole	TP15.452x14.466x0.1875	Pole	71.6%	Pass
124.25 - 123.42	Pole	TP15.616x15.452x0.1875	Pole	74.3%	Pass
123.42 - 123.17	Pole + Reinf.	TP15.665x15.616x0.5375	Reinf. 25 Tension Rupture	48.4%	Pass
123.17 - 118.17	Pole + Reinf.	TP16.651x15.665x0.5125	Reinf. 25 Tension Rupture	61.6%	Pass
118.17 - 113.17	Pole + Reinf.	TP17.637x16.651x0.4875	Reinf. 25 Tension Rupture	75.0%	Pass
113.17 - 109.5	Pole + Reinf.	TP18.36x17.637x0.475	Reinf. 25 Tension Rupture	87.8%	Pass
109.5 - 109.25	Pole + Reinf.	TP18.409x18.36x0.5875	Reinf. 25 Tension Rupture	74.0%	Pass
109.25 - 104.75	Pole + Reinf.	TP19.296x18.409x0.5625	Reinf. 25 Tension Rupture	85.3%	Pass
104.75 - 104.5	Pole + Reinf.	TP19.346x19.296x0.775	Reinf. 11 Tension Rupture	68.8%	Pass
104.5 - 102.42	Pole + Reinf.	TP19.756x19.346x0.7625	Reinf. 11 Tension Rupture	72.8%	Pass
102.42 - 102.17	Pole + Reinf.	TP19.806x19.756x0.5625	Reinf. 11 Tension Rupture	90.8%	Pass
102.17 - 98.75	Pole + Reinf.	TP20.479x19.806x0.55	Reinf. 11 Tension Rupture	99.4%	Pass
98.75 - 98.5	Pole + Reinf.	TP20.528x20.479x0.8375	Reinf. 6 Bolt-Shaft Bearing	86.9%	Pass
98.5 - 97.5	Pole + Reinf.	TP20.726x20.528x0.8375	Reinf. 6 Tension Rupture	75.5%	Pass
97.5 - 97.25	Pole + Reinf.	TP20.775x20.726x0.75	Reinf. 6 Tension Rupture	88.0%	Pass
97.25 - 95.55	Pole + Reinf.	TP21.81x20.775x0.7375	Reinf. 6 Tension Rupture	91.7%	Pass
95.55 - 90.55	Pole + Reinf.	TP21.73x20.735x0.8	Reinf. 6 Tension Rupture	95.0%	Pass
90.55 - 89.25	Pole + Reinf.	TP21.989x21.73x0.775	Reinf. 6 Tension Rupture	97.2%	Pass
89.25 - 89	Pole + Reinf.	TP22.039x21.989x1	Reinf. 5 Bolt-Shaft Bearing	84.0%	Pass
89 - 88.25	Pole + Reinf.	TP22.189x22.039x0.975	Reinf. 11 Tension Rupture	70.2%	Pass
88.25 - 88	Pole + Reinf.	TP22.238x22.189x0.7625	Reinf. 5 Tension Rupture	80.3%	Pass
88 - 87.83	Pole + Reinf.	TP22.272x22.238x0.7625	Reinf. 5 Tension Rupture	80.6%	Pass
87.83 - 87.58	Pole + Reinf.	TP22.321x22.272x0.675	Reinf. 5 Tension Rupture	85.4%	Pass
87.58 - 82.58	Pole + Reinf.	TP23.317x22.321x0.65	Reinf. 5 Tension Rupture	91.9%	Pass
82.58 - 77.58	Pole + Reinf.	TP24.312x23.317x0.625	Reinf. 5 Tension Rupture	97.7%	Pass
77.58 - 77	Pole + Reinf.	TP24.428x24.312x0.625	Reinf. 5 Tension Rupture	98.3%	Pass
77 - 76.75	Pole + Reinf.	TP24.478x24.428x0.825	Reinf. 10 Tension Rupture	92.2%	Pass
76.75 - 76.33	Pole + Reinf.	TP24.561x24.478x0.825	Reinf. 10 Tension Rupture	92.7%	Pass
76.33 - 76.08	Pole + Reinf.	TP24.611x24.561x0.825	Reinf. 10 Tension Rupture	93.8%	Pass
76.08 - 74.25	Pole + Reinf.	TP24.976x24.611x0.8	Reinf. 10 Tension Rupture	95.7%	Pass
74.25 - 74	Pole + Reinf.	TP25.026x24.976x0.8875	Reinf. 10 Tension Rupture	84.5%	Pass
74 - 73.75	Pole + Reinf.	TP25.076x25.026x0.8875	Reinf. 10 Tension Rupture	84.7%	Pass
73.75 - 73.5	Pole + Reinf.	TP25.125x25.076x0.9125	Reinf. 21 Tension Rupture	84.0%	Pass
73.5 - 68.5	Pole + Reinf.	TP26.121x25.125x0.875	Reinf. 21 Tension Rupture	88.4%	Pass
68.5 - 63.5	Pole + Reinf.	TP27.116x26.121x0.85	Reinf. 21 Tension Rupture	92.4%	Pass
63.5 - 60.5	Pole + Reinf.	TP27.714x27.116x0.825	Reinf. 21 Tension Rupture	94.7%	Pass
60.5 - 60.25	Pole + Reinf.	TP27.763x27.714x0.825	Reinf. 21 Tension Rupture	94.9%	Pass
60.25 - 59.5	Pole + Reinf.	TP27.913x27.763x0.825	Reinf. 21 Tension Rupture	95.4%	Pass
59.5 - 59.25	Pole + Reinf.	TP27.962x27.913x0.8875	Reinf. 21 Tension Rupture	89.3%	Pass
59.25 - 54.25	Pole + Reinf.	TP28.958x27.962x0.85	Reinf. 21 Tension Rupture	92.7%	Pass
54.25 - 50	Pole + Reinf.	TP30.64x28.958x0.8375	Reinf. 21 Tension Rupture	95.3%	Pass
50 - 44.8	Pole + Reinf.	TP30.333x29.304x0.8375	Reinf. 9 Tension Rupture	97.1%	Pass
44.8 - 43.58	Pole + Reinf.	TP30.574x30.333x0.8375	Reinf. 9 Tension Rupture	97.7%	Pass
43.58 - 43.33	Pole + Reinf.	TP30.624x30.574x0.85	Reinf. 9 Tension Rupture	96.7%	Pass
43.33 - 43.17	Pole + Reinf.	TP30.657x30.624x0.85	Reinf. 9 Tension Rupture	96.8%	Pass
43.17 - 42.92	Pole + Reinf.	TP30.706x30.657x0.9375	Reinf. 9 Tension Rupture	91.7%	Pass
42.92 - 39	Pole + Reinf.	TP31.481x30.706x0.9125	Reinf. 9 Tension Rupture	93.5%	Pass
39 - 38.75	Pole + Reinf.	TP31.531x31.481x0.95	Reinf. 9 Tension Rupture	88.3%	Pass
38.75 - 37.17	Pole + Reinf.	TP31.844x31.531x0.9375	Reinf. 9 Tension Rupture	89.0%	Pass
37.17 - 36.92	Pole + Reinf.	TP31.894x31.844x0.8875	Reinf. 9 Tension Rupture	92.5%	Pass
36.92 - 34	Pole + Reinf.	TP32.471x31.894x0.8875	Reinf. 9 Tension Rupture	93.8%	Pass
34 - 33.75	Pole + Reinf.	TP32.52x32.471x0.875	Reinf. 8 Tension Rupture	93.8%	Pass
33.75 - 29.75	Pole + Reinf.	TP33.312x32.52x0.8625	Reinf. 8 Tension Rupture	95.3%	Pass
29.75 - 29.5	Pole + Reinf.	TP33.361x33.312x0.8625	Reinf. 8 Tension Rupture	94.3%	Pass
29.5 - 24.5	Pole + Reinf.	TP34.351x33.361x0.85	Reinf. 8 Tension Rupture	96.1%	Pass
24.5 - 23	Pole + Reinf.	TP34.648x34.351x0.8375	Reinf. 8 Tension Rupture	96.6%	Pass
23 - 22.75	Pole + Reinf.	TP34.697x34.648x0.9625	Reinf. 8 Tension Rupture	89.6%	Pass
22.75 - 21.58	Pole + Reinf.	TP34.928x34.697x0.9625	Reinf. 8 Tension Rupture	89.9%	Pass
21.58 - 21.33	Pole + Reinf.	TP34.978x34.928x0.85	Reinf. 8 Tension Rupture	94.9%	Pass
21.33 - 16.33	Pole + Reinf.	TP35.967x34.978x0.8375	Reinf. 8 Tension Rupture	96.5%	Pass
16.33 - 12.92	Pole + Reinf.	TP36.644x35.967x0.825	Reinf. 8 Tension Rupture	97.4%	Pass
12.92 - 12.67	Pole + Reinf.	TP36.693x36.644x0.9125	Reinf. 7 Tension Rupture	88.3%	Pass
12.67 - 12.5	Pole + Reinf.	TP36.726x36.693x0.9125	Reinf. 7 Tension Rupture	88.3%	Pass
12.5 - 12.25	Pole + Reinf.	TP36.776x36.726x0.7625	Reinf. 14 Tension Rupture	91.6%	Pass
12.25 - 12	Pole + Reinf.	TP36.825x36.776x0.7625	Reinf. 14 Tension Rupture	91.7%	Pass
12 - 11.75	Pole + Reinf.	TP36.874x36.825x0.6625	Reinf. 2 Tension Rupture	93.7%	Pass
11.75 - 8.5	Pole + Reinf.	TP37.518x36.874x0.65	Reinf. 2 Tension Rupture	94.5%	Pass
8.5 - 8.25	Pole + Reinf.	TP37.567x37.518x0.925	Reinf. 1 Tension Rupture	77.5%	Pass
8.25 - 7	Pole + Reinf.	TP37.815x37.567x0.9125	Reinf. 1 Tension Rupture	77.7%	Pass
7 - 6.75	Pole + Reinf.	TP37.864x37.815x0.8125	Reinf. 1 Tension Rupture	90.0%	Pass
6.75 - 1.75	Pole + Reinf.	TP38.854x37.864x0.7875	Reinf. 1 Tension Rupture	91.2%	Pass
1.75 - 0	Pole + Reinf.	TP39.2x38.854x0.7875	Reinf. 1 Tension Rupture	91.6%	Pass
				Summary	
			Pole	83.9%	Pass
			Reinforcement	99.4%	Pass
			Overall	99.4%	Pass

Monopole Flange Plate Connection

Elevation = 134.25 ft.

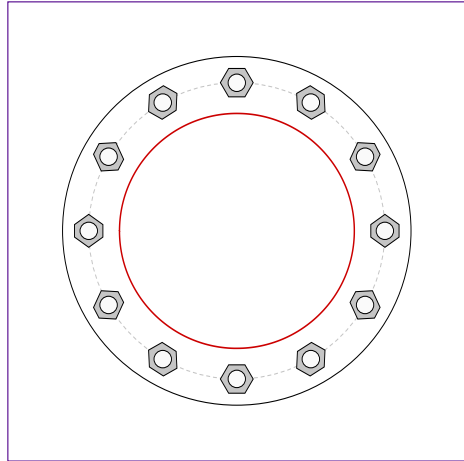


BU #	876317
Site Name	WATERBURY
Order #	
TIA-222 Revision	H

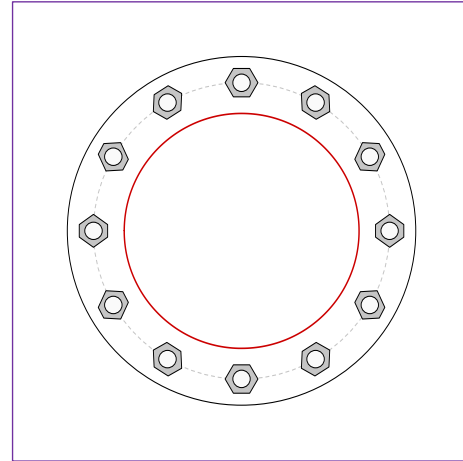
Applied Loads	
Moment (kip-ft)	59.29
Axial Force (kips)	5.52
Shear Force (kips)	6.67

*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - External



Connection Properties

Bolt Data

(12) 1" \emptyset bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 17" BC

Top Plate Data

20" OD x 1" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Top Stiffener Data

N/A

Top Pole Data

13.48" x 0.375" round pole (A500-46; Fy=46 ksi, Fu=62 ksi)

Bottom Plate Data

20" OD x 1" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Bottom Stiffener Data

N/A

Bottom Pole Data

13.48" x 0.1875" 12-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	13.47
Allowable (kips)	54.53
Stress Rating:	23.5% Pass

Top Plate Capacity

Max Stress (ksi):	15.81	(Flexural)
Allowable Stress (ksi):	45.00	
Stress Rating:	33.5%	Pass
Tension Side Stress Rating:	18.4%	Pass

Bottom Plate Capacity

Max Stress (ksi):	15.81	(Flexural)
Allowable Stress (ksi):	45.00	
Stress Rating:	33.5%	Pass
Tension Side Stress Rating:	18.4%	Pass

Monopole Base Plate Connection

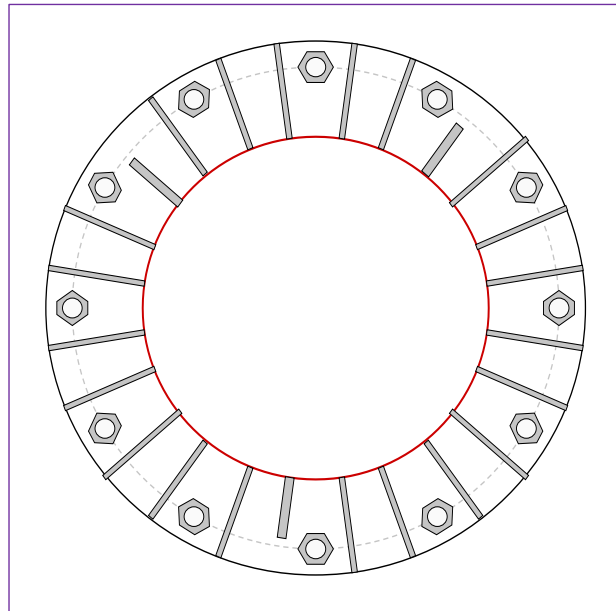


Site Info	
BU #	876317
Site Name	WATERBURY
Order #	

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	0.75

Applied Loads	
Moment (kip-ft)	3287.39
Axial Force (kips)	60.36
Shear Force (kips)	30.90

*TIA-222-H Section 15.5 Applied



Connection Properties	Analysis Results
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Anchor Rod Data	
(12) 2-1/4" ϕ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 55.16" BC	

Base Plate Data	
61.16" OD x 2.5" Plate (S-128; $F_y=60$ ksi, $F_u=80$ ksi)	

Stiffener Data	
Group 1: (21) 21.5"H x 11"W x 0.625"T, Notch: 0.75"	
plate: $F_y= 50$ ksi ; weld: $F_y= 80$ ksi	
horiz. weld: 0.3125" groove, 45° dbl bevel, 0.5" fillet	
vert. weld: 0.3125" fillet	

Group 2: (3) 126"H x 7"W x 1"T, Notch: 0.75"	
plate: $F_y= 65$ ksi ; weld: $F_y= 80$ ksi	
horiz. weld: 0.5" groove, 45° dbl bevel, 0.3125" fillet	
vert. weld: 0.3125" fillet	

Pole Data	
39.2" x 0.3125" 12-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi)	

Anchor Rod Summary		<i>(units of kips, kip-in)</i>	
$Pu_t = 233.2$	$\phi Pn_t = 243.75$		Stress Rating
$Vu = 2.57$	$\phi Vn = 149.1$		91.1%
$Mu = n/a$	$\phi Mn = n/a$		Pass

Base Plate Summary		
Max Stress (ksi):	32.01	(Flexural)
Allowable Stress (ksi):	54	
Stress Rating:	56.5%	Pass

Stiffener Summary		
Horizontal Weld:	42.4%	Pass
Vertical Weld:	42.6%	Pass
Plate Flexure+Shear:	23.4%	Pass
Plate Tension+Shear:	44.1%	Pass
Plate Compression:	63.3%	Pass

Pole Summary		
Punching Shear:	17.2%	Pass

Pier and Pad Foundation



BU # :	876317
Site Name:	WATERBURY
App. Number:	

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} :	60.39	kips
Base Shear, V_{u_comp} :	30.85	kips
Moment, M_u :	3287.39	ft-kips
Tower Height, H :	144.25	ft
BP Dist. Above Fdn, bp_{dist} :	2.75	in
Bolt Circle / Bearing Plate Width, BC :	55.16	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	277.98	30.85	10.6%	Pass
<i>Bearing Pressure (ksf)</i>	22.50	6.66	29.6%	Pass
<i>Overtuning (kip*ft)</i>	3946.43	3502.70	88.8%	Pass
<i>Pad Flexure (kip*ft)</i>	9014.86	2020.34	21.3%	Pass
<i>Pad Shear - 1-way (kips)</i>	1732.56	191.14	10.5%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.190	0.000	0.0%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	18499.97	0.00	0.0%	Pass

*Rating per TIA-222-H Section 15.5

Structural Rating*:	21.3%
Soil Rating*:	88.8%

Pad Properties		
Depth, D :	6.75	ft
Pad Width, W_1 :	20	ft
Pad Thickness, T :	6.75	ft
Pad Rebar Size (Top dir. 2), Sp_{top2} :	9	
Pad Rebar Quantity (Top dir. 2), mp_{top2} :	28	
Pad Rebar Size (Bottom dir. 2), Sp_2 :	10	
Pad Rebar Quantity (Bottom dir. 2), mp_2 :	21	
Pad Clear Cover, cc_{pad} :	3	in

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

Soil Properties		
Total Soil Unit Weight, γ :	125	pcf
Ultimate Gross Bearing, Q_{ult} :	30.000	ksf
Cohesion, C_u :	0.000	ksf
Friction Angle, ϕ :	36	degrees
SPT Blow Count, N_{blows} :		
Base Friction, μ :	0.5	
Neglected Depth, N :	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw :	11.5	ft

B2

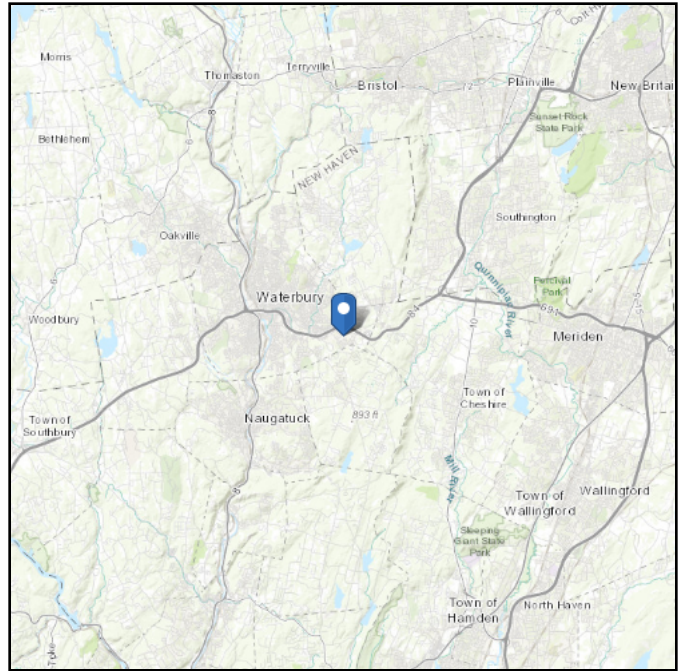
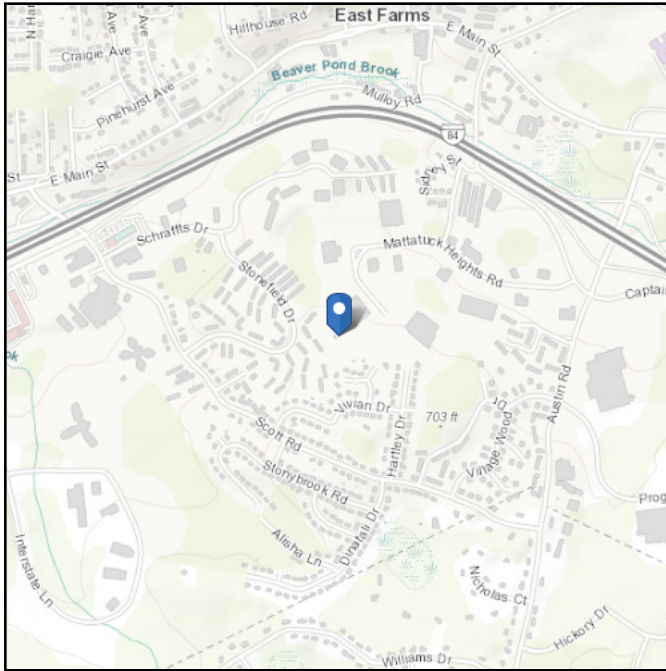
--Toggle between Gross and Net

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 660.21 ft (NAVD 88)
Latitude: 41.537861
Longitude: -72.985028



Wind

Results:

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

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Thu Nov 03 2022

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

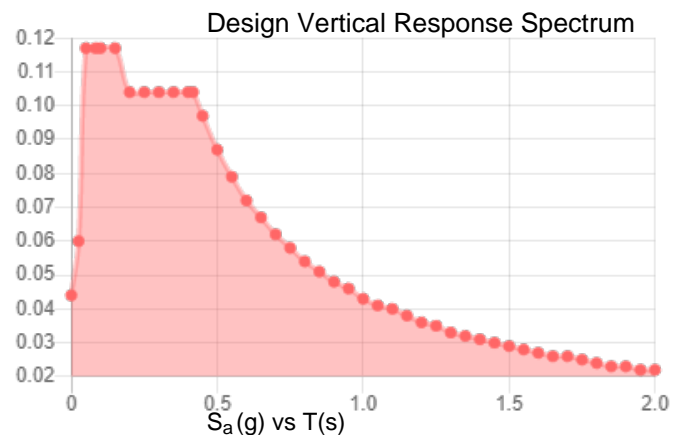
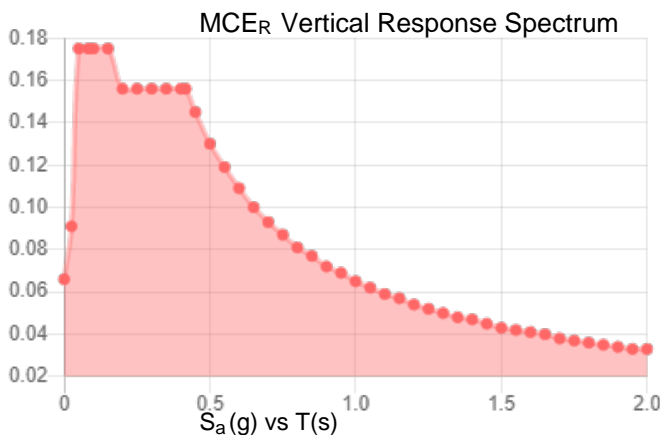
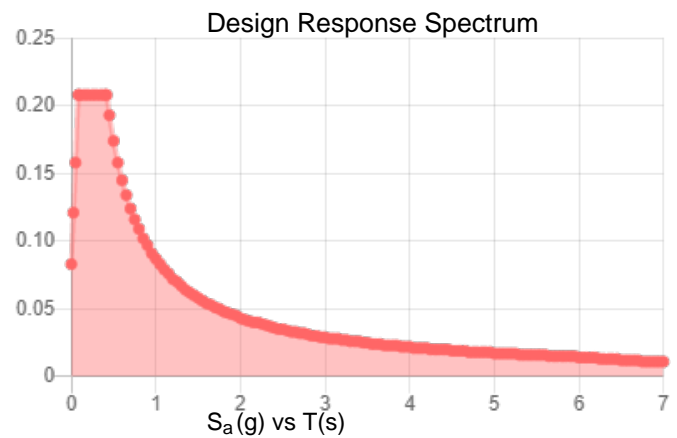
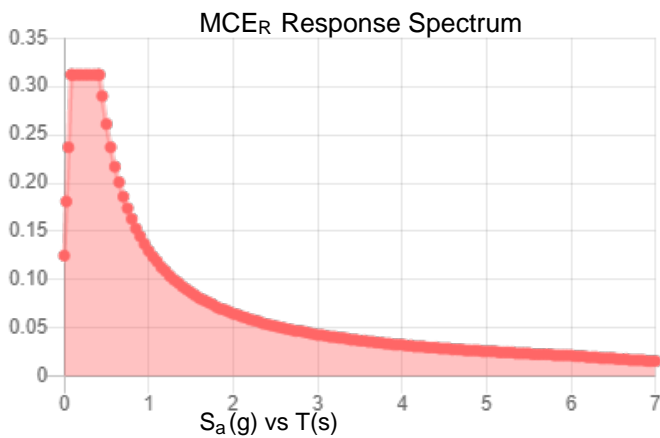
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

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

Results:

S_s :	0.195	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.108
F_v :	2.4	PGA _M :	0.171
S_{MS} :	0.312	F_{PGA} :	1.585
S_{M1} :	0.13	I_e :	1
S_{DS} :	0.208	C_v :	0.7

Seismic Design Category B



Data Accessed: Thu Nov 03 2022

Date Source:

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

Ice

Results:

Ice Thickness: 1.00 in.
Concurrent Temperature: 15 F
Gust Speed 50 mph

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

Date Accessed: Thu Nov 03 2022

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

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

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