CROWN CASTLE

1 Cityplace Dr, Suite 490
Creve Coeur, MO 63141

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

April 12, 2023

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

RE: **Notice of Exempt Modification for AT&T**
Crown Site ID#841288; AT&T Site ID#CTL02106
205 Kaechele Place., Bridgeport, CT 06606
Latitude: 41° 13′ 24.04″/ Longitude: -73° 13′ 0.38″

Dear Ms. Bachman:

AT&T currently maintains (9) antennas at the 154-foot mounts on the existing 150-foot Monopole Tower located at 205 Kaechele Place., Bridgeport. The property is owned by Southern New England Telephone and the Tower by Crown Castle. AT&T now intends to replace six (6) antennas and add three (3) antennas. This modification/proposal includes hardware that is both 4G(LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Planned Modifications:
TOWER:

REMOVE:
(3) Quintel – QS66512-2 Antenna
(3) CCI – HPA-65R-BUU-H6 Antennas
(6) CCI – TPX-070821 Triplexers
(2) Raycap – DC6-48-60-18-8f Surge suppressors
RELOCATE:
(3) Ericsson RRUS-E2 B29 Remote radio units to Ground
(3) CCI – DMP65R-BU6DA Antennas
(3) Ericsson – RRUS-32 B66A Remote Radio Heads
(3) Ericsson – RRUS-32 B2 Remote Radio Heads
(3) Ericsson – RRUS-32 B30 Remote Radio Heads
(3) Ericsson – 4478 B14 Remote Radio Heads
(3) Ericsson – 4449 B5/B12 Remote Radio Heads
INSTALL:
Perfect Vision PV-LPPGS-14M-HR25-B Platform mount with Pipes and attachment hardware
(3) Quintel – QD6616-7 Antennas
(6) Ericsson Air6449 B77D Below + Air6419 B77G Above
(1) Ericsson 4478 B14 Remote radio unit
(3) Raycap – DC9-48-60-24-8C-EV surge suppressor
(6) Commscope – RR-FA2 Dual Radio mounts
(5) 6AWG DC Cables (7/8”)
(3) 24 pair fiber cables (3/8”)

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GROUND:
REMOVE:
Existing 2 Volt Batteries
(6) CCI- TPX-070821 Triplexers
RELOCATE:
(2) Ericsson – 4478 B14 Remote radio units to tower
INSTALL:
(1) Battery Rack w/5 Strings of batteries
(1) 6648 W/XCEDE
(1) 6630 W/Idle cable
(4) Rectifiers
(2) DC12
The Facility was approved by the Connecticut Siting Council on September 14, 1984, Docket#45.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72(b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to Joseph P. Ganim, City of Bridgeport Mayor, Arben Kica, City of Bridgeport Building Dept., property owner, Southern New England Telephone, and the tower owner, Crown Castle.

1. The proposed modifications will not result in an increase in the height of the existing tower.

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

3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Ersilia Davis, Agent for Applicant
Crown Castle, Site Acquisition Specialist
edavis@nbcllc.com/551-804-0667

CROWN CASTLE

1 Cityplace Dr, Suite 490
Creve Coeur, MO 63141

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

cc:

Joseph P. Ganim, Mayor *(Via Fedex)*
999 Broad Street
Bridgeport, CT 06604
(203) 576-7201

Arben Kica, Building Official *(Via Fedex)*
Building Department
45 Lyon Terrace, Room 222
Bridgeport, CT 06604
203-576-7226

Southern New England Telephone *(Via Fedex)*
C/O Frontier Communications
401 Merritt 7
Norwalk, CT 06851

(https://www.fedex.com/en-us/home.html) Ersilia

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Thursday

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5518040667

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City of Bridgeport

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771830189324

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5518040667

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4/13/2023 9:15 AM

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Arben Kica, Building Official
City of Bridgeport

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Thursday

4/13/2023 at 10:06 am

Signature release on file
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771830941262

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STAMFORD, CT
4/13/2023 9:17 AM

DELIVERED
C/O Frontier Communications
Southern New England Telephone
401 Merritt 7
NORWALK, CT US 06851
2036145600

Delivered
4/13/2023 at 10:06 AM

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Exhibit A

Original Facility Approval

DOCKET NO. 45

AN APPLICATION SUBMITTED BY THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF FACILITIES TO PROVIDE CELLULAR SERVICE IN FAIRFIELD COUNTY.	:	CONNECTICUT SITING COUNCIL
	:	September 14, 1984

DECISION AND ORDER

Pursuant to the foregoing opinion, the Council hereby directs that a certificate of environmental compatibility and public need as required by section 16-50k of the General Statutes of Connecticut, revisions of 1958, revised to 1983, as amended, be issued to the Southern New England Telephone Company for the construction, operation, and maintenance of a telecommunications tower and associated equipment to provide cellular service at each of the following sites:

Kaechele Place, Bridgeport, Connecticut;
Connecticut Avenue, Norwalk, Connecticut;
Nells Rock Road, Shelton, Connecticut;
Newfield Avenue, Stamford, Connecticut; and
Bayberry Lane, (former Nike site), Westport, Connecticut.

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

1. The towers shall be no taller than necessary to provide the proposed service, and in no event shall exceed

   a) 167' at the Bridgeport site,
   b) 167' at the Norwalk site,
   c) 189.5' at the Shelton site,
   d) 167' at the Stamford site,
   e) 117' at the Westport site;

2. A fence not lower than eight feet shall surround each tower and its associated equipment;

3. The applicant or its successor shall notify the Council if and when directional antennas or any other equipment is added to any of these facilities;

4. The applicant or its successor shall permit, in accordance with representations made by it during the proceeding, public or private entities to share space on the facilities, for due consideration received, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing;
5. Unless necessary to comply with condition number six, below, no lights shall be installed on any of these towers;
6. The facilities shall be constructed in accordance with all applicable federal, state, and municipal laws and regulations;
7. The applicant shall submit a development and management plan (D&M) for the Bridgeport, Stamford, and Westport sites pursuant to sections 16-50j-85 through 16-50j-87 of the regulations of state agencies, except that irrelevant items in section 16-50j-86 need only be identified as such. The D&M plans shall include appropriate evergreen screening of the sites, erosion control measures, reseeding plans, and tree removal plans. The applicant shall consult with the Stamford Environmental Protection Board in the preparation of a drainage and erosion control plan for the Stamford tower. The applicant shall comply with the reporting requirements of section 16-50j-87 for all sites;
8. Construction activities shall take place during daylight working hours;
9. This decision and order shall be void and the towers and associated equipment approved herein shall be dismantled and

removed, or reapplication for any new use shall be made to the Connecticut Siting Council before any such new use is made, if the towers do not provide or permanently cease to provide cellular service following completion of construction;

10. This decision and order shall be void if all construction authorized is not completed within three years of the issuance of this decision.

Pursuant to section 16-50p of the General Statutes, we hereby direct that a copy of the opinion and decision and order be served on each person listed below. A notice of the issuance shall be published in the Bridgeport Post, the Norwalk Hour, the Stamford Advocate, and the Shelton Suburban News, and the Westport News.

The parties to this proceeding are

The Southern New England Telephone Company Room 314 227 Church Street New Haven, Connecticut 06506	(Applicant)
Attention: Mr. Peter J. Tyrrell Senior Attorney	(its attorney)
Rolnick Observatory 52 Sawyer Road Fairfield, Connecticut	represented by: Frederick H. Bump Director
Mr. Adam Norton 40 Highland Road Westport, Connecticut 06880	
Representative John Wayne Fox 13 Apple Tree Drive Stamford, Connecticut 06906	(service waived)
Mr. George C. Lenfest 4 Highland Road Westport, Connecticut	

Mr. William Seiden
First Selectman
Town of Westport
110 Myrtle Avenue
P.O. Box 549
Westport, Connecticut 06881

Mr. Arthur L. Schimel
174 Bayberry Lane
Westport, Connecticut

Mr. Seymour Bendremer
11 Apache Trail
Westport, Connecticut

Ms. Gladys Floch
32 Woody Lane
Westport, Connecticut

Ms. Helen S. Cohen
15 Highland Road
Westport, Connecticut
(service waived)

Mr. Jack Braverman
226 Bayberry Lane
Westport, Connecticut

Mr. Kevin Gavin
191 Bayberry Lane
Westport, Connecticut
(service waived)

Mr. A.B. Beiser
12 Highland Road
Westport, Connecticut

Mr. Edward V. Polusky
4 Hooper Road
Westport, Connecticut
(service waived)

Ms. Lois Schine
represented by:

Mary D. Mix, Esquire
830 Post Road - East
Suite 100
Westport, Connecticut 06880

Mr. Allen Witt
3 Apache Trail
Westport, Connecticut

Ms. Gayle Shiller
5 Apache Trail
Westport, Connecticut
(service waived)

Mrs. Ronnie Hammer
3 Hooper Road
Westport, Connecticut

Mr. Paul Rosenblatt (service waived)
7 Apache Trail
Westport, Connecticut

Mr. Henry J. Wolfson (service waived)
179 Bayberry Lane
Westport, Connecticut

Mr. Melvin H. Barr (service waived)
Planning Director
Town of Westport
110 Myrtle Avenue
P.O. Box 549
Westport, Connecticut 06881

Mr. Mark Infeld (service waived)
6 Apache Trail
Westport, Connecticut

Ms. Barbara Saipe (service waived)
Representative Town
Meeting Member
District #8
Town Hall
P.O. Box 549
Westport, Connecticut 06881

Ms. Peggy Goldenberg (service waived)
201 Bayberry Lane
Westport, Connecticut

Ms. Martha Hauhuth (service waived)
Board of Selectman
Town Hall
P.O. Box 549
Westport, Connecticut 06881

Ms. Meg Coffee
32 Otter Trail
Westport, Connecticut (service waived)

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut, this 14th day of September, 1984.

Council Members	Vote Cast
Gloria Dibble Pond Chairperson	Yes
Commissioner John Downey Designee: Commissioner Peter G. Boucher	Absent
Commissioner Stanley Pac	Absent
Owen L. Clark	Yes
Fred J. Doocy	Yes
Mortimer A. Gelston	Yes
James G. Horsfall	Yes
Janet Sitty	Yes
Colin C. Tait	Absent

STATE OF CONNECTICUT)
: ss. New Britain, September 14, 1984
COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the decision and order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

Christopher S. Wood

Christopher S. Wood, Executive Director
Connecticut Siting Council

Exhibit B

Property Card

205 KAECHELE PL

Location	205 KAECHELE PL	**Mblu**	81/ 2602/ 9/ /
Acct#	R--0148640	**Owner**	SOUTHERN NEW ENGLAND TEL
Assessment	$124,470	**Appraisal**	$177,820
PID	29859	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$53,520	$124,300	$177,820

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$37,460	$87,010	$124,470

Owner of Record

Owner	SOUTHERN NEW ENGLAND TEL	**Sale Price**	$0
Co-Owner	SNET/FRONTIER COMM	**Certificate**	
Address	PO BOX 2629 ADDISON, TX 75001	**Book & Page**	0000/0000
		Sale Date	01/01/2000
		Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
SOUTHERN NEW ENGLAND TEL	$0		0000/0000		01/01/2000

Building Information

Building 1 : Section 1

Year Built:	
Living Area:	0
Replacement Cost:	$0
Building Percent Good:	
Replacement Cost Less Depreciation:	$0

Building Attributes	
Field	**Description**
Style:	Vacant Land
Model	
Grade:	
Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Flr 1:	
Interior Flr 2	
Heat Fuel:	
Heat Type:	
AC Type:	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Fireplaces	
Fin Bsmt Area	
Fin Bsmt Quality	
Num Park	
Bsmt Garages	
.	
Fndtn Cndtn	
Basement	

Building Photo

(https://images.vgsi.com/photos2/BridgeportCTPhotos//\0111\IMG_7024_1

Building Layout

(ParcelSketch.ashx?pid=29859&bid=29859)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	499
Description	Utility Vac Ln
Zone	RA
Neighborhood	20
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0.15
Frontage	0
Depth	0
Assessed Value	$87,010
Appraised Value	$124,300

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
SHD3	Shed w/ Lt	CM	Comm	384.00 SF	$7,260	1
SHD3	Shed w/ Lt	CM	Comm	384.00 SF	$7,260	1
SHD3	Shed w/ Lt	CM	Comm	576.00 SF	$10,890	1
FN1	Fence, Chain	8	8 ft	350.00 LF	$3,150	1
TWR	Tower			120.00 LF	$24,960	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$53,520	$124,300	$177,820
2021	$53,520	$124,300	$177,820
2020	$53,520	$124,300	$177,820

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2022	$37,460	$87,010	$124,470
2021	$37,460	$87,010	$124,470
2020	$37,460	$87,010	$124,470

Exhibit C

Construction Drawings

AT&T

AT&T SITE NUMBER: CTL02106
AT&T SITE NAME: BRIDGEPORT NORTH
AT&T FA CODE: 10034977
AT&T PACE NUMBER: MRCTB057902, MRCTB057895, MRCTB052119, MRCTB050739
AT&T PROJECT: 5G NR ACTIVATION, 5G NR 1SR CBAND

BUSINESS UNIT #: 841288
SITE ADDRESS: 205 KAECHELE PLACE
BRIDGEPORT, CT 06606
COUNTY: FAIRFIELD
SITE TYPE: MONOPOLE
TOWER HEIGHT: 150'-0"

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	BRIDGEPORT NORTH
SITE ADDRESS:	205 KAECHELE PLACE BRIDGEPORT, CT 06606
COUNTY:	FAIRFIELD
MAP/PARCEL #:	81/ 2602/ 9/ /
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41° 13' 24.04"
LONGITUDE:	-73° 13' 0.38"
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	240'
CURRENT ZONING:	R-A
JURISDICTION:	CONNECTICUT SITING COUNCIL
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	SOUTHERN NEW ENGLAND TEL PO BOX 2629 ADDISON, TX 75001
TOWER OWNER:	CROWN CASTLE USA INC 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	AT&T TOWER ASSET GROUP 575 MOROSGO DRIVE ATLANTA, GA 30324-3300
ELECTRIC PROVIDER:	UNITED ILLUMINATING CO. (800) 722-5584
TELCO PROVIDER:	LIGHTOWER (855) 91-FIBER

PROJECT TEAM

A&E FIRM:	B+T GROUP 1717 S. BOULDER AVE. TULSA, OK 74119 MARVIN PHILLIPS MARVIN.PHILLIPS@BTGRP.COM
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3 CORPORATE PARK DRIVE, SUITE 101 CLIFTON PARK, NY 12065 PAUL PEDICONE - PROJECT MANAGER PAUL.PEDICONE@CROWNCASTLE.COM JASON D'AMICO - CONSTRUCTION MANAGER JASON.DAMICO@CROWNCASTLE.COM HEATHER MILLER - AES HEATHER.MILLER@CROWNCASTLE.COM

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

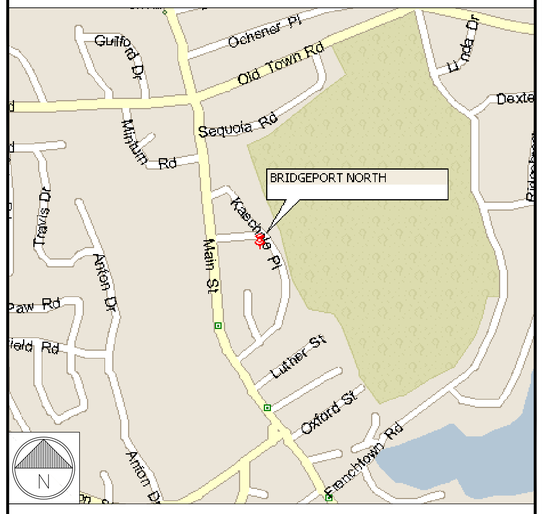
DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.1	SITE PLAN
C-1.2	EQUIPMENT PLANS
C-2	TOWER ELEVATION & ANTENNA PLANS
C-3	ANTENNA SCHEDULE
C-4	EQUIPMENT DETAILS
C-5	EQUIPMENT SPECS.
G-1	GROUNDING DETAILS
G-2	GROUNDING DETAILS
ATTACHED	PLUMBING DIAGRAM
ATTACHED	MOUNT SPECIFICATIONS

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

CALL CONNECTICUT ONE CALL
(800) 922-4455 CBYD.COM
CALL 2 WORKING DAYS
BEFORE YOU DIG!

LOCATION MAP



NO SCALE

SITE PHOTO

PROJECT DESCRIPTION

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

TOWER SCOPE OF WORK:
- REMOVE (3) QUINTEL - QS66512-2 ANTENNAS
- REMOVE (3) CCI - HPA-65R-BUU-H6 ANTENNAS
- REMOVE (6) CCI - TPX-070821 TRIPLEXERS
- REMOVE (2) RAYCAP - DC6-48-60-18-8F SQUIDS
- RELOCATE (3) ERICSSON - RRUS-E2 B29 RRUs TO GROUND
- REMOVE PLATFORM MOUNT
- RELOCATE REMAINING EQUIPMENT TO NEW PLATFORM MOUNT
- INSTALL PERFECT VISION - PV-LPPGS-14M-HR25-B PLATFORM MOUNT W/(12) 2-1/2" STD. 12'-0" LONG PIPES & ATTACHMENT HARDWARE
- INSTALL (6) 2" STD. 6'-0" LONG PIPES W/ATTACHMENT HARDWARE
- INSTALL (3) QUINTEL - QD6616-7 ANTENNAS
- INSTALL (6) ERICSSON - AIR6449 B77D (BELOW) + AIR6419 B77G (ABOVE) STACKED ANTENNAS
- INSTALL (1) ERICSSON - 4478 B14 RRU
- INSTALL (3) RAYCAP - DC9-48-60-24-8C-EV SQUIDS
- INSTALL (6) COMMSCOPE - RR-FA2 DUAL RADIO MOUNTS
- INSTALL (5) 6AWG DC CABLES (7/8")
- INSTALL (3) 24-PAIR FIBER CABLES (3/8")

GROUND SCOPE OF WORK:
- REMOVE EXISTING 2 VOLT BATTERIES
- REMOVE (6) CCI - TPX-070821 TRIPLEXERS
- RELOCATE (2) ERICSSON - 4478 B14 RRUs TO TOWER
- INSTALL (1) BATTERY RACK W/ (5) STRINGS OF BATTERIES
- INSTALL (1) 6648 W/XCEDE
- INSTALL (1) 6630 W/ IDLE CABLE
- INSTALL (4) RECTIFIERS
- INSTALL (2) DC12

INSTALLER NOTE:
TOWER DOES NOT HAVE CLIMBING FACILITIES -- MANLIFT REQUIRED FOR ELEVATED WORK.

INSTALLER NOTE:
NO PROPOSED LOADING TO BE ADDED UNTIL MOUNT SWAP IS COMPLETE. CONTRACTOR TO INSTALL MOUNT PER MANUFACTURER'S SPECIFICATIONS AND MOUNT REPLACEMENT ANALYSIS BY B+T GROUP DATED 12/22/22.

APPLICABLE CODES & REFERENCE DOCUMENTS

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

CODE TYPE	CODE
BUILDING	2022 CONNECTICUT SBC/ 2021 IBC
MECHANICAL	2022 CONNECTICUT SBC/ 2021 IMC
ELECTRICAL	2022 CONNECTICUT SBC/2020 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	TOWER ENGINEERING PROFESSIONALS
DATED:	12/29/22
MOUNT REPLACEMENT ANALYSIS:	B+T GROUP
DATED:	12/22/22
RFDS REVISION:	AS-BUILT/IN PROGRESS
DATED:	10/11/2022
ORDER ID:	641288
REVISION:	1

575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

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

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

AT&T SITE NUMBER:
CTL02106

BU #: **841288**
BRIDGEPORT NORTH

205 KAECHELE PLACE
BRIDGEPORT, CT 06606

EXISTING
150'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
5	5/10/22	MEH	CONSTRUCTION	KT
6	8/2/22	MLC	CONSTRUCTION	LR
7	1/6/23	TDG	CONSTRUCTION	LR
8	1/18/23	TDG	CONSTRUCTION	LR
9	3/28/23	TDG	CONSTRUCTION	MTJ

STATE OF CONNECTICUT
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/28/23

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER: T-1
REVISION: 9

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

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

GENERAL NOTES:

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

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

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

GREENFIELD GROUNDING NOTES:

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

ELECTRICAL INSTALLATION NOTES:

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

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

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

APWA UNIFORM COLOR CODE:

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

ABBREVIATIONS:

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

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

AT&T SITE NUMBER:
CTL02106

BU #: **841288**
BRIDGEPORT NORTH

205 KAECHELE PLACE
BRIDGEPORT, CT 06606

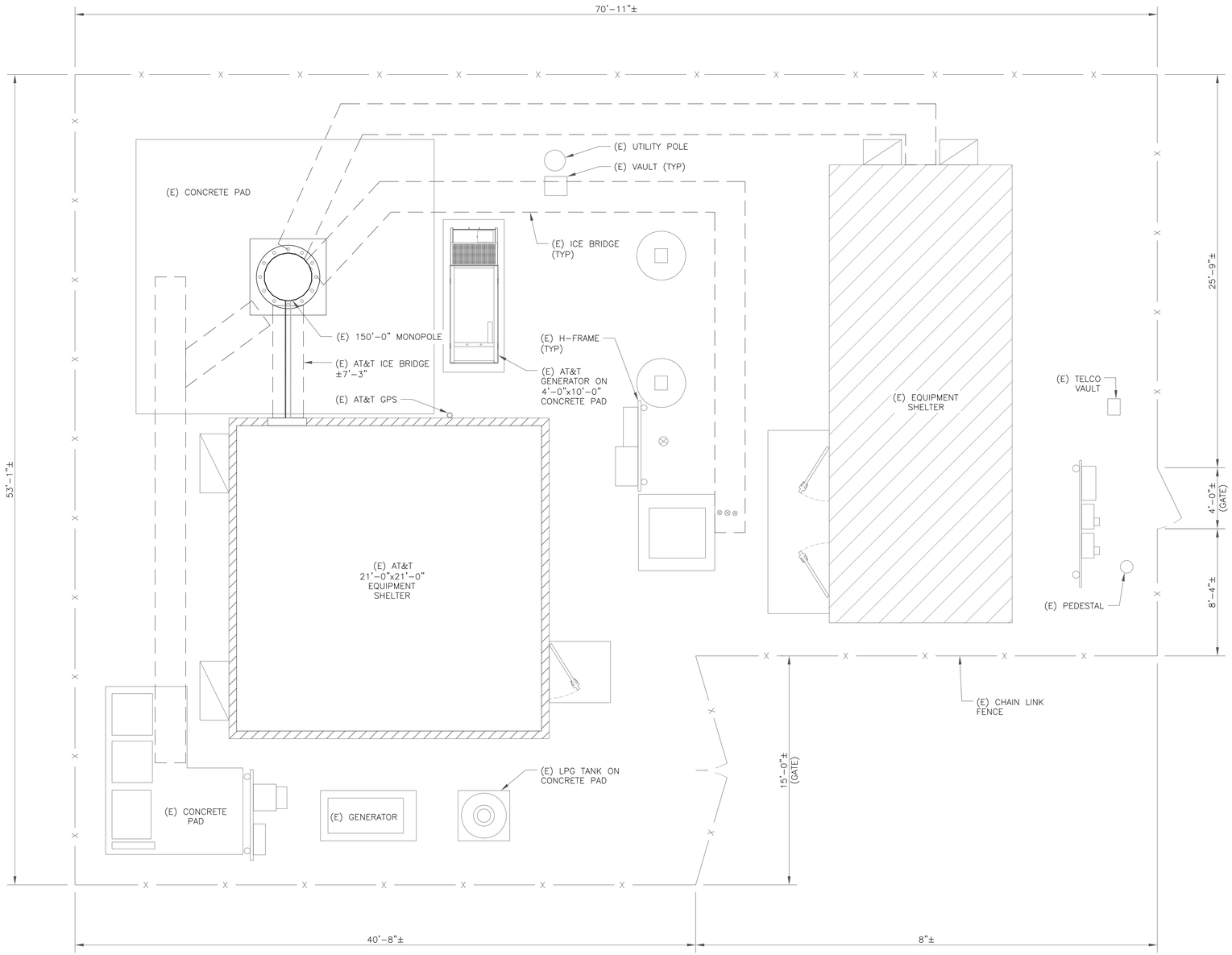
EXISTING
150'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
5	5/10/22	MEH	CONSTRUCTION	KT
6	8/2/22	MLC	CONSTRUCTION	LR
7	1/6/23	TDG	CONSTRUCTION	LR
8	1/18/23	TDG	CONSTRUCTION	LR
9	3/28/23	TDG	CONSTRUCTION	MTJ

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER: **T-2**
REVISION: **9**



1 SITE PLAN
SCALE: 4' 3' 2' 1' 0 4'
1/4"=1'-0" (FULL SIZE)
1/8"=1'-0" (11x17)

N

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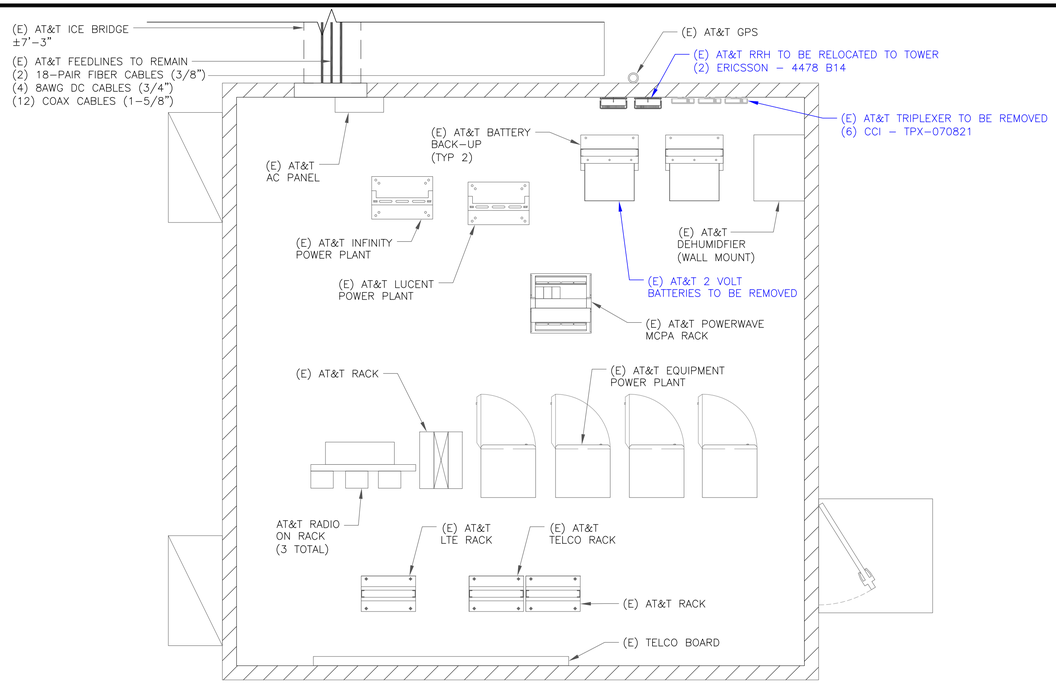
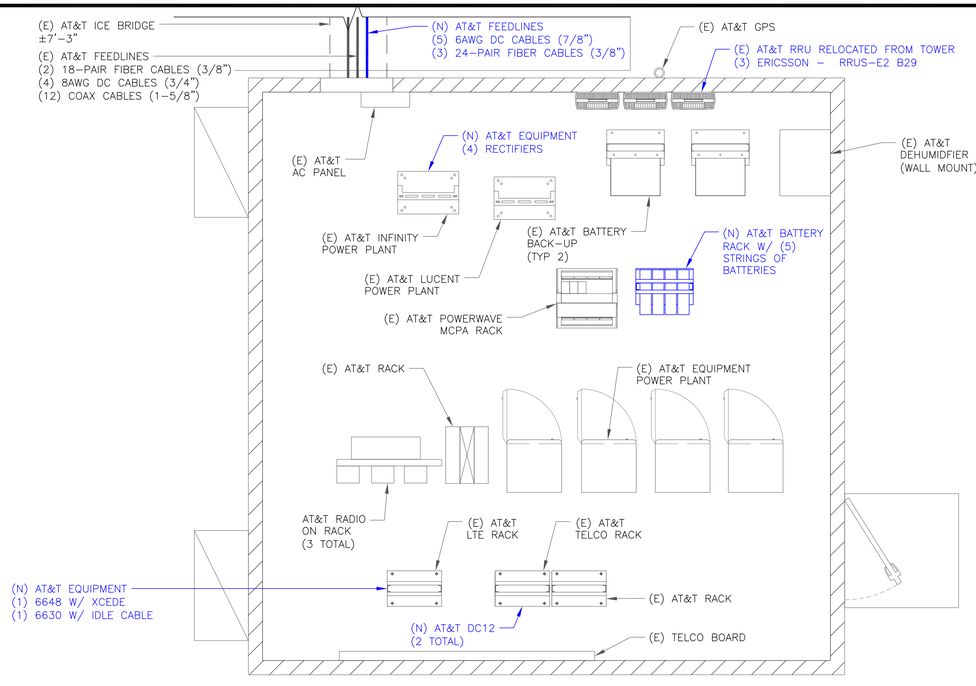
SHEET NUMBER: C-1.1
REVISION: 9



1 EXISTING EQUIPMENT PLAN

SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)

N



2 FINAL EQUIPMENT PLAN

SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)

N

GROUND SCOPE OF WORK:

- REMOVE EXISTING 2 VOLT BATTERIES
- REMOVE (6) CCI - TPX-070821 TRIPLEXERS
- RELOCATE (2) ERICSSON - 4478 B14 RRUs TO TOWER
- INSTALL (1) BATTERY RACK W/ (5) STRINGS OF BATTERIES
- INSTALL (1) 6648 W/ XCEDE
- INSTALL (1) 6630 W/ IDLE CABLE
- INSTALL (4) RECTIFIERS
- INSTALL (2) DC12

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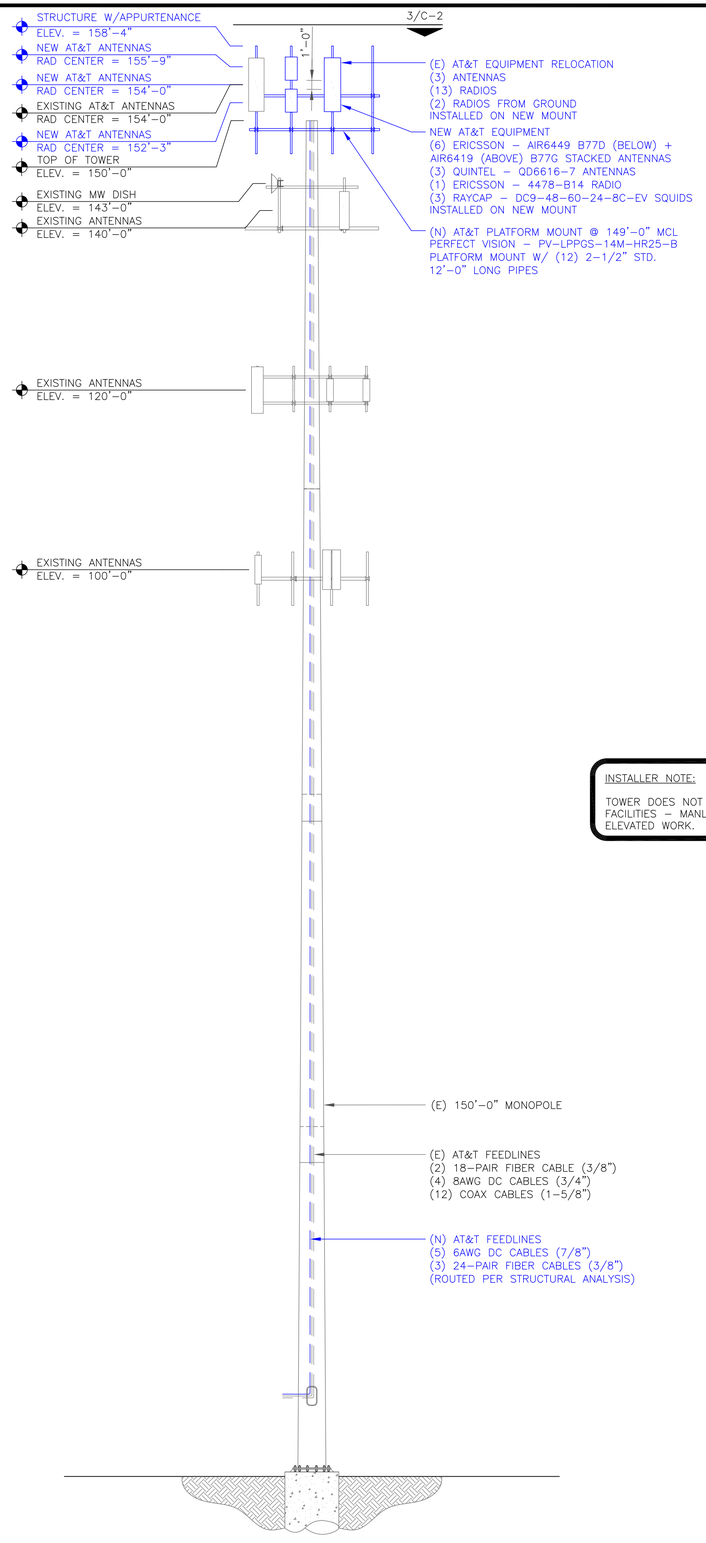
9	3/28/23	TDG	CONSTRUCTION	MTJ

STATE OF CONNECTICUT
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/28/23

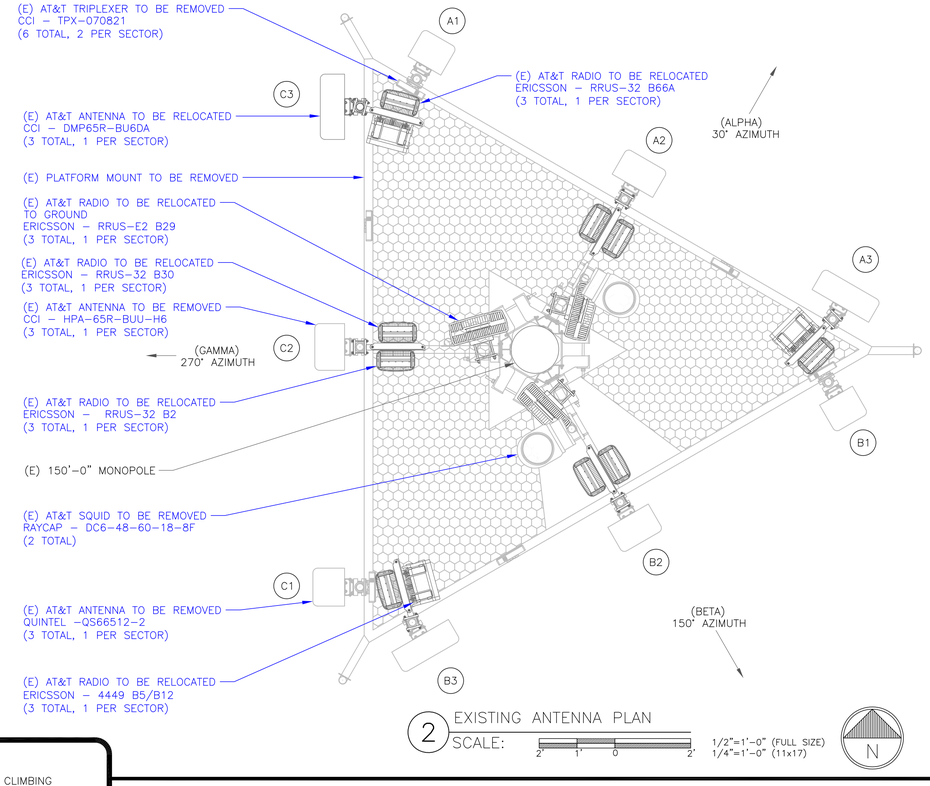
MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER: C-1.2

REVISION: 9



1 FINAL ELEVATION
SCALE: NOT TO SCALE

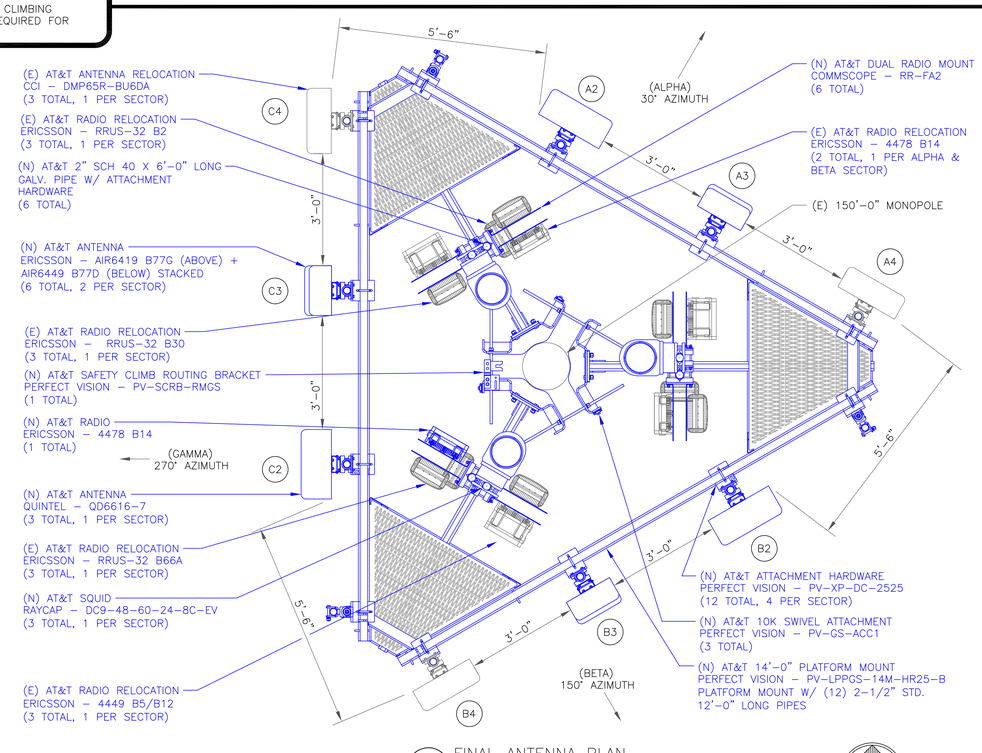


2 EXISTING ANTENNA PLAN
SCALE: 2' 1' 0 2' 1/2"=1'-0" (FULL SIZE) 1/4"=1'-0" (11x17)

N

INSTALLER NOTE:

TOWER DOES NOT HAVE CLIMBING FACILITIES - MANLIFT REQUIRED FOR ELEVATED WORK.



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

N

"LOOK UP" - CROWN CASTLE USA INC.
SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.

INSTALLER NOTES:

1. REFERENCE C-3 FOR FINAL EQUIPMENT SCHEDULE.
2. REFERENCE C-4 FOR NEW EQUIPMENT SPECIFICATIONS.
3. CONTRACTOR TO VERIFY ALL ANTENNA TIP HEIGHTS DO NOT EXCEED BEACON BASE HEIGHT.
4. 3'-0" MINIMUM DISTANCE REQUIRED BETWEEN LTE ANTENNAS ON SAME SECTOR.
5. 6'-0" MINIMUM DISTANCE REQUIRED BETWEEN 700BC & 700DE ANTENNAS ON SAME SECTOR.
6. 4'-0" MINIMUM DISTANCE REQUIRED BETWEEN LTE 700 ANTENNAS ON OPPOSING SECTORS.
7. ALL ANTENNA MEASUREMENT DISTANCES MUST BE EDGE TO EDGE (RELOCATE ANTENNAS AS NEEDED).
8. 8" MINIMUM DISTANCE REQUIRED BETWEEN ANTENNA & RADIO. SEE GENERIC EXAMPLE DETAIL ON SHEET C-4.

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BU #: **841288**
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MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER: C-2

REVISION: 9

FINAL EQUIPMENT SCHEDULE
(VERIFY WITH CURRENT RFDS)

ALPHA

POSITION	ANTENNA				RADIO			DIPLEXER			TMA		SURGE PROTECTION		CABLES			
	TECH.	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	LOCATION	QTY.	STATUS/MANUFACTURER MODEL	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENGTH
A1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
A2	LTE/5G	(N) QUINTEL QD6616-7	30°	154'-0"	1	(E) RRUS-E2 B29	GROUND	–	–	–	–	–	–	–	2	(E) COAX	1-5/8"	204'-0"
					1	(E) 4478 B14	TOWER											
					1	(E) RRUS-32 B2	TOWER											
					1	(E) RRUS-32 B66A	TOWER											
A3	5G CBAND 5G DoD	(N) ERICSSON – AIR6419 B77G (ABOVE) (N) ERICSSON – AIR6449 B77D (BELOW) STACKED	30°	155'-9" 152'-3"	–	INTEGRATED WITHIN	TOWER	–	–	–	–	–	1	(N) DC9-48-60-24-8C-EV	3	(E) 8AWG DC	3/4"	204'-0"
															1	(N) 24-PAIR FIBER	3/8"	204'-0"
A4	LTE/5G	(E) CCI DMP65R-BU6DA	30°	154'-0"	1	(E) 4449 B5/B12	TOWER	–	–	–	–	–	–	–	–	–	–	–
					1	(E) RRUS-32 B30	TOWER											
					–	–	–											

BETA

B1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
B2	LTE/5G	(N) QUINTEL QD6616-7	150°	154'-0"	1	(E) RRUS-E2 B29	GROUND	–	–	–	–	–	–	–	2	(E) COAX	1-5/8"	204'-0"
					1	(E) 4478 B14	TOWER											
					1	(E) RRUS-32 B2	TOWER											
					1	(E) RRUS-32 B66A	TOWER											
B3	5G CBAND 5G DoD	(N) ERICSSON – AIR6419 B77G (ABOVE) (N) ERICSSON – AIR6449 B77D (BELOW) STACKED	150°	155'-9" 152'-3"	–	INTEGRATED WITHIN	TOWER	–	–	–	–	–	1	(N) DC9-48-60-24-8C-EV	1	(E) 8AWG DC	3/4"	204'-0"
															1	(N) 24-PAIR FIBER	3/8"	204'-0"
															2	(N) 6AWG DC	7/8"	204'-0"
B4	LTE/5G	(E) CCI DMP65R-BU6DA	150°	154'-0"	1	(E) 4449 B5/B12	TOWER	–	–	–	–	–	–	–	–	–	–	–
					1	(E) RRUS-32 B30	TOWER											
					–	–	–											

GAMMA

C1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
C2	LTE/5G	(N) QUINTEL QD6616-7	270°	154'-0"	1	(E) RRUS-E2 B29	GROUND	–	–	–	–	–	–	–	2	(E) COAX	1-5/8"	204'-0"
					1	(N) 4478 B14	TOWER											
					1	(E) RRUS-32 B2	TOWER											
					1	(E) RRUS-32 B66A	TOWER											
C3	5G CBAND 5G DoD	(N) ERICSSON – AIR6419 B77G (ABOVE) (N) ERICSSON – AIR6449 B77D (BELOW) STACKED	270°	155'-9" 152'-3"	–	INTEGRATED WITHIN	TOWER	–	–	–	–	–	1	(N) DC9-48-60-24-8C-EV	1	(N) 24-PAIR FIBER	3/8"	204'-0"
															3	(N) 6AWG DC	7/8"	204'-0"
C4	LTE/5G	(E) CCI DMP65R-BU6DA	270°	154'-0"	1	(E) 4449 B5/B12	TOWER	–	–	–	–	–	–	–	–	–	–	–
					1	(E) RRUS-32 B30	TOWER											
					–	–	–											
													UNUSED FEEDLINES		6	(E) COAX	1-5/8"	204'-0"
															2	(E) 18-PAIR FIBER	3/8"	3/8"

NOTE:
(E) – EXISTING
(N) – NEW

1 FINAL ANTENNA AND FEEDLINE SCHEDULE
SCALE: NOT TO SCALE

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9	3/28/23	TDG	CONSTRUCTION	MTJ

STATE OF CONNECTICUT
MICHAEL T. JONES
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/28/23

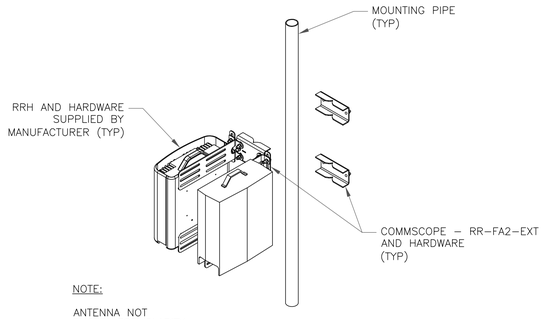
MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER: C-3

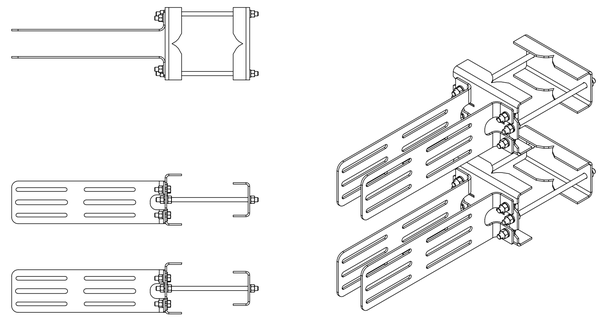
REVISION: 9

INSTALLER NOTES:

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

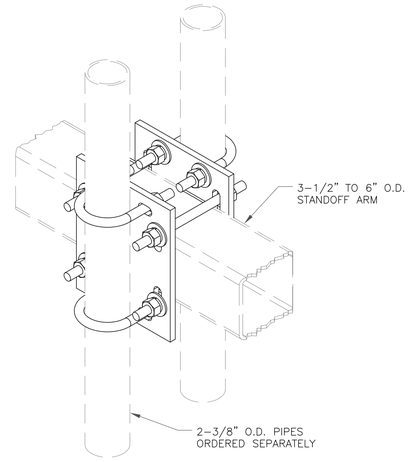


1 BACK TO BACK MOUNTING DETAIL
SCALE: NOT TO SCALE



COMMSCOPE – RR-FA2
FAST ACCESS DUAL RRH MOUNT

2 COMMSCOPE – RR-FA2
SCALE: NOT TO SCALE

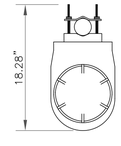


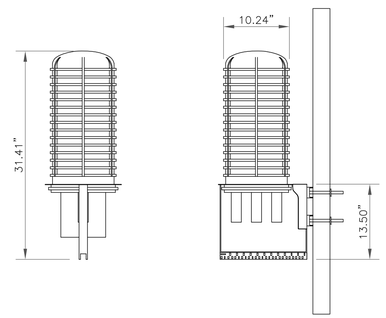
3 SITE PRO1 – BBPM-K3
SCALE: NOT TO SCALE

RAYCAP
DC9-48-60-24-8C-EV

RAYCAP – DC9-48-60-24-8C-EV
SIZE: 10.24x31.40 IN.
WEIGHT: 26.2 LBS
NOMINAL OPERATING VOLTAGE: 48 VDC
VOLTAGE PROTECTION RATING: 330 V
WIND LOADING: 150 MPH SUSTAINED (105.7 LBS)
WIND LOADING: 195 MPH GUST (213.6 LBS)

CONTRACTOR TO USE "THREAD LUBRICANT" ON MOUNTING BOLTS DURING INSTALLATION





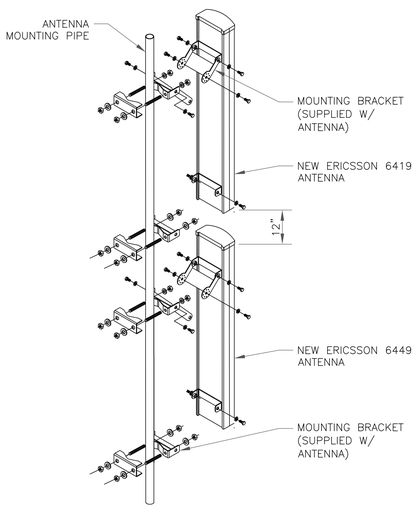
NOTES:

1. REMOVE CABLE SEALING GLAND AND INSTALL M32x1.5 METRIC-TO-1" NPT ADAPTER (COOPER CROUSE-HINES P/N CAP 740 994 OR EQUIVALENT MFR) WHEN CONNECTING CONDUIT TO OVP.

6 SQUID MOUNTING DETAIL
SCALE: NOT TO SCALE

INSTALLER NOTE:

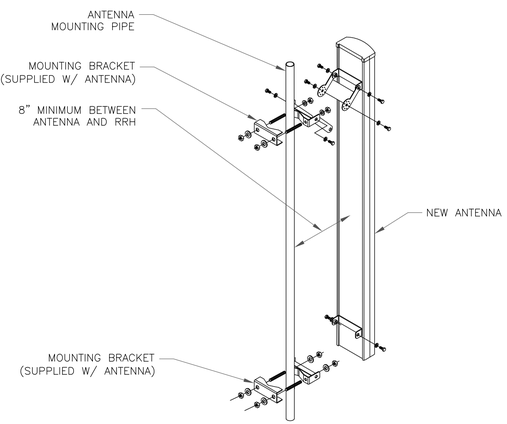
ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



4 STACKED ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE

INSTALLER NOTES:

1. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.
2. EQUIPMENT SHALL NOT BE INSTALLED CLOSER THAN 8" TO ANTENNAS.



5 ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE

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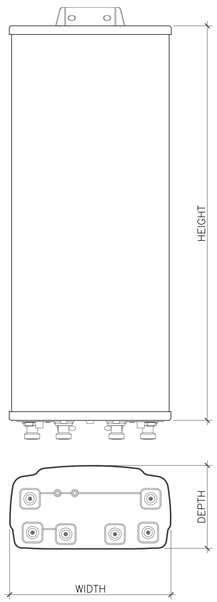
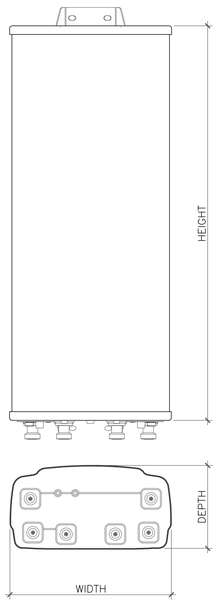
SHEET NUMBER: C-4

REVISION: 9



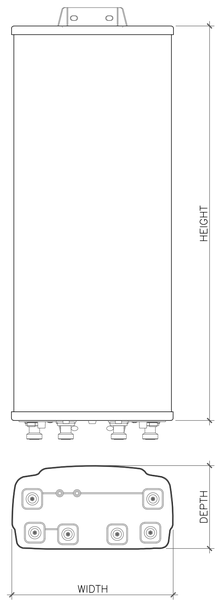
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
AIR6419 B77G	31.10"	16.10"	7.30"	55.40 lbs

1 ANTENNA DETAIL
SCALE: NOT TO SCALE



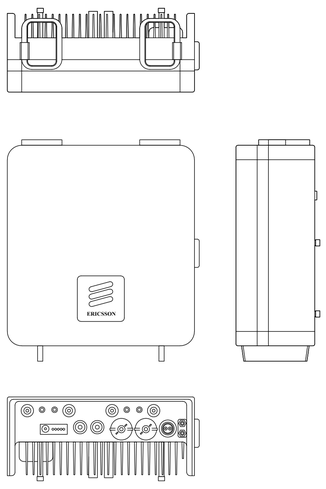
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
AIR6449 B77D	30.63"	15.87"	10.55"	96.80 lbs

2 ANTENNA DETAIL
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
QD6616-7	72.0"	22.0"	9.6"	130.0 lbs

3 ANTENNA DETAIL
SCALE: NOT TO SCALE



ERICSSON – RADIO 4478 B14
WEIGHT: 60.0 LBS
SIZE (HxWxD): 15.0x13.0x8.0 IN.

4 ERICSSON – RADIO 4478 B14
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

AT&T
575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

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

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

AT&T SITE NUMBER:
CTL02106

BU #: **841288**
BRIDGEPORT NORTH

205 KAECHELE PLACE
BRIDGEPORT, CT 06606

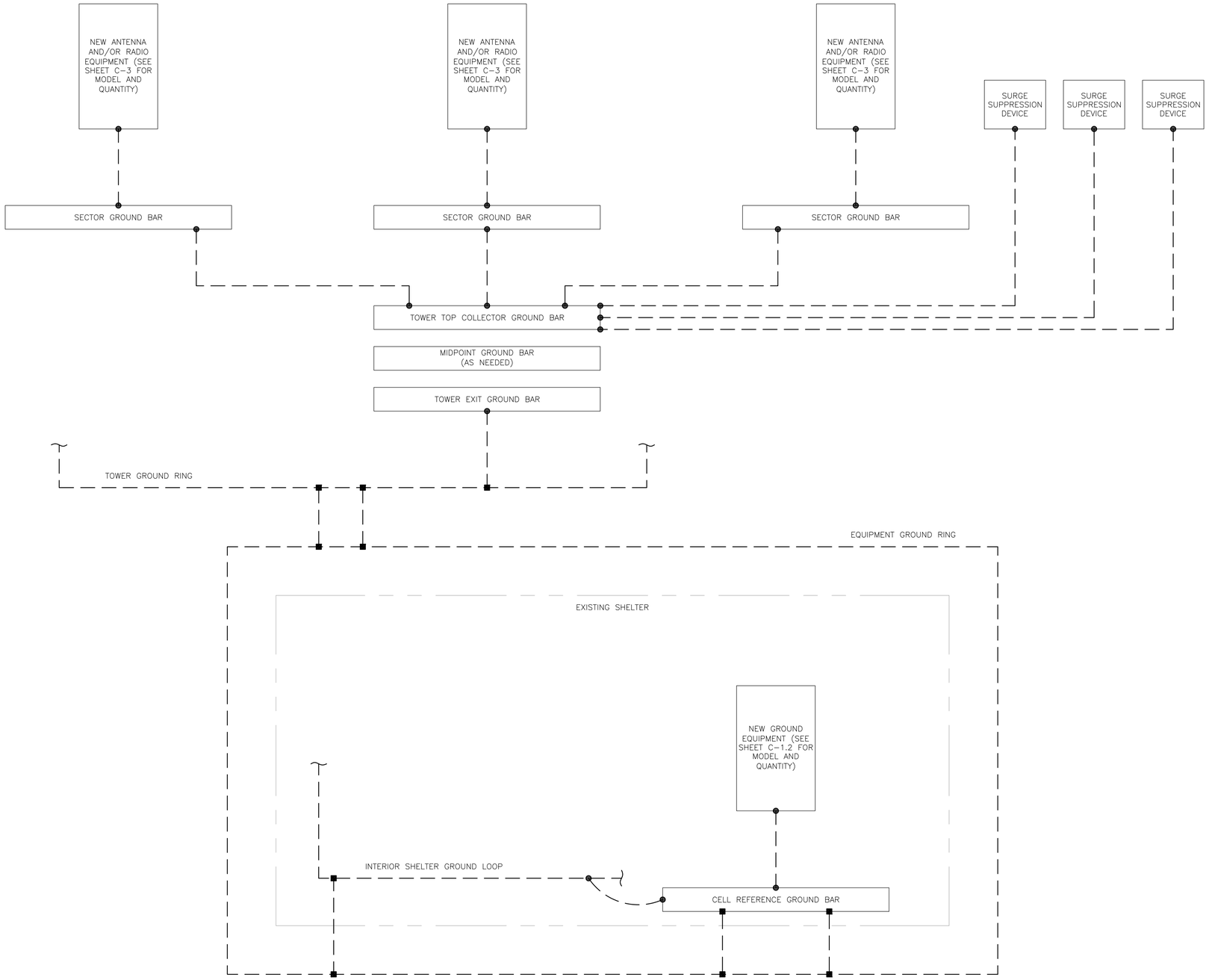
EXISTING
150'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
5	5/10/22	MEH	CONSTRUCTION	KT
6	8/2/22	MLC	CONSTRUCTION	LR
7	1/6/23	TDG	CONSTRUCTION	LR
8	1/18/23	TDG	CONSTRUCTION	LR
9	3/28/23	TDG	CONSTRUCTION	MTJ

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER: C-5
REVISION: 9



1 GROUNDING SCHEMATIC
SCALE: NOT TO SCALE

GROUNDING PLAN LEGEND:

- GROUND WIRE
- EXOTHERMIC WELD
- MECHANICAL CONNECTION
- COPPER GROUND ROD
- GROUND ROD W/ TEST WELL

CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUITS (ATT-TP-76416 7.6.7).

HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CELL SITE REFERENCE GROUND BAR MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS.

EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE (ATT-TP-76416 7.6.7.2).

DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICES CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR PER TP76300 SECTION H 6 AND TP76416 FIGURE 7-11 REQUIREMENTS.

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AT&T SITE NUMBER:
CTL02106

BU #: **841288**
BRIDGEPORT NORTH

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BRIDGEPORT, CT 06606

EXISTING
150'-0" MONOPOLE

ISSUED FOR:

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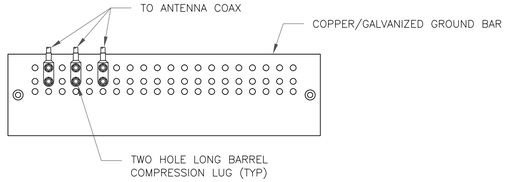
6	8/2/22	MLC	CONSTRUCTION	LR
7	1/6/23	TDG	CONSTRUCTION	LR
8	1/18/23	TDG	CONSTRUCTION	LR
9	3/28/23	TDG	CONSTRUCTION	MTJ

STATE OF CONNECTICUT
No. 23024
LICENSED
PROFESSIONAL ENGINEER
3/28/23

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER: G-1

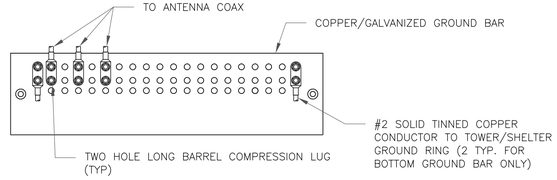
REVISION: 9



NOTES:

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

1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE

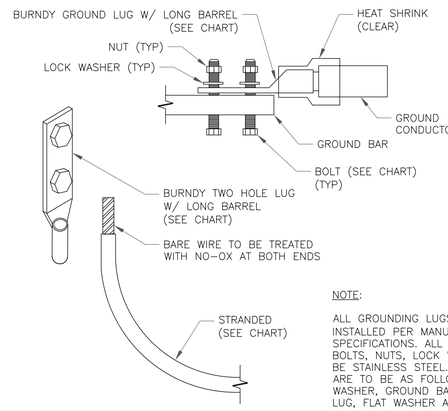


NOTES:

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

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

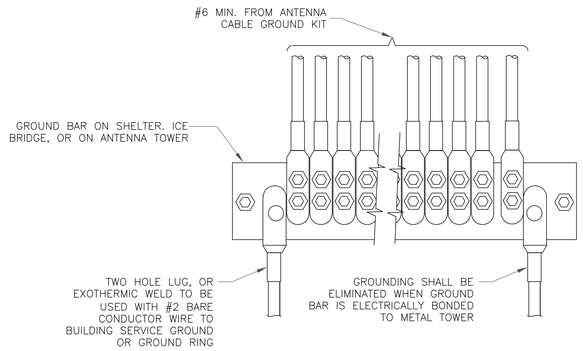
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" - 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" - 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" - 16 NC SS 2 BOLT



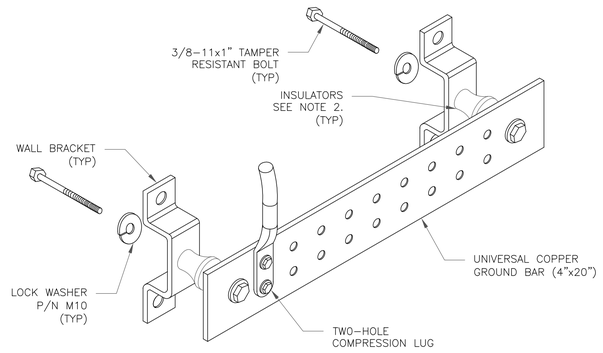
NOTE:

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

3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE

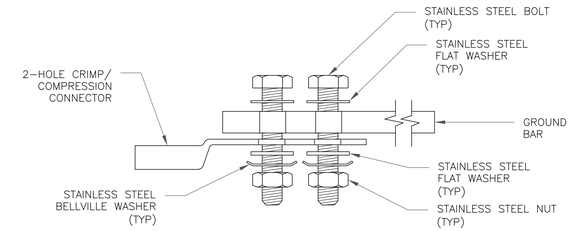


NOTES:

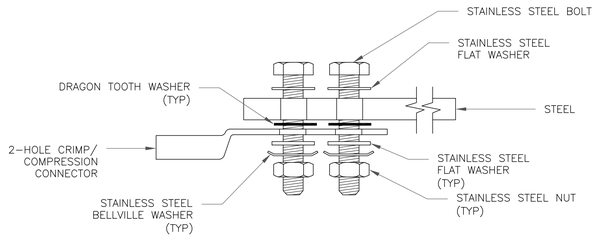
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.

2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

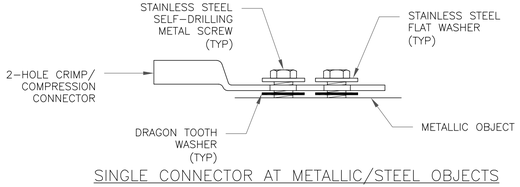
5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

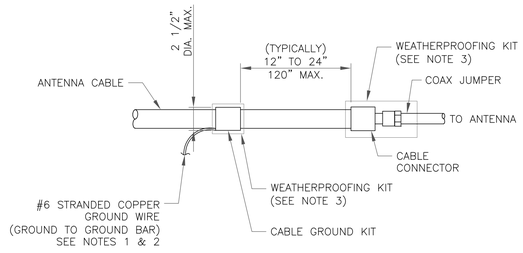


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

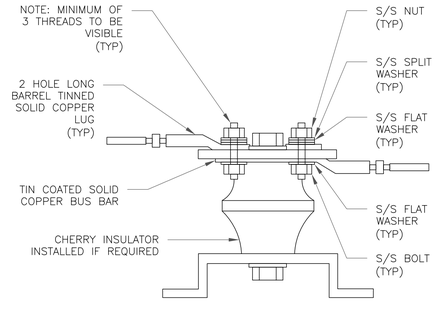
8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

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

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

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MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER: G-2
REVISION: 9

ANTENNA POSITION 1

EMPTY

Antenna 2
LTE 700 DE /LTE B14 / PCS /AWS

Q-7 16PORT

Low 850 +45/-45 - +
Low 700 +45/-45 - +
Low 700 B14 +45/-45 - +
Low 700 B14 +45/-45 - +
AWS/WCS/PCS 4Tx/4Rx +45/-45 - +
AWS/WCS/PCS 4Tx/4Rx +45/-45 - +
AWS/WCS/PCS 4Tx/4Rx +45/-45 - +
AWS/WCS/PCS 4Tx/4Rx +45/-45 - +

RET RET RET RET RET RET RET RET

LTE RRUS-4478 700 B-14
LTE PCS RRH
LTE AWS RRH

Antenna 3
DoD + Cband

DoD +45/-45 - +

E// AIR C-BAND +45/-45 - +

Antenna 4
LTE 700 BC / 850 / WCS

Broadband Octo Low 700/850 +45/-45 - +
Broadband Octo Low 700/850 +45/-45 - +
Broadband Octo High 4Tx/4Rx +45/-45 - +
Broadband Octo High 4Tx/4Rx +45/-45 - +

RET RET RET RET

LTE RRUS-4449 B5Q/700 BC
LTE WCS RRH

(Y- Cable)

24Fiber/DC9 Demarcation Box (Squid)

1 Squid per sector

LTE RRUS-E2 700 (D/E)

DC Plant

- 3 Feet Minimum Separation between ALL Antennas
- 6 Feet Minimum Separation between 700BC & 700 DE
- 12" Vertical Separation between DoD and C Band Antenna.
- Use "Y Cable" for Dual band RRHs

6648

6630 XMU

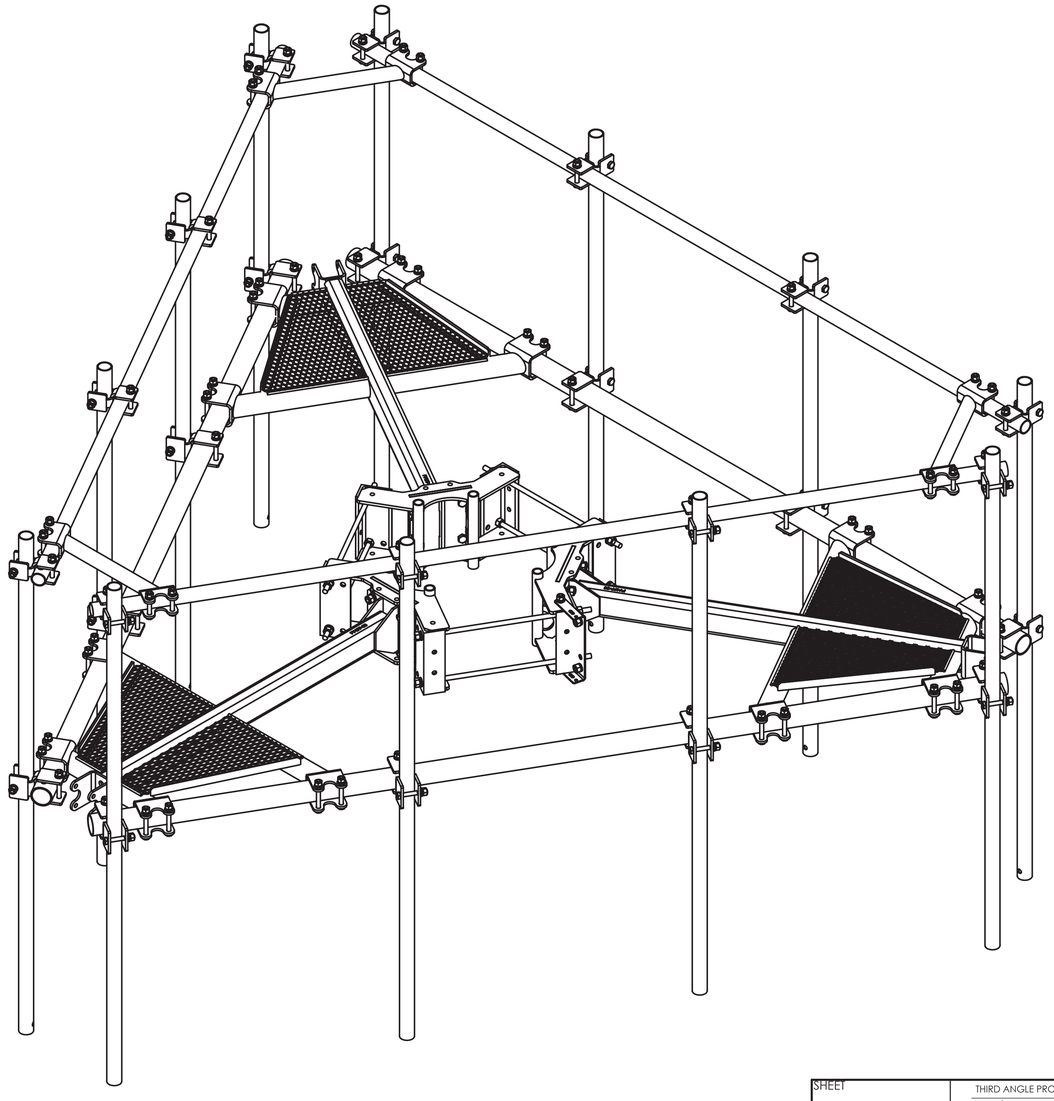
6630

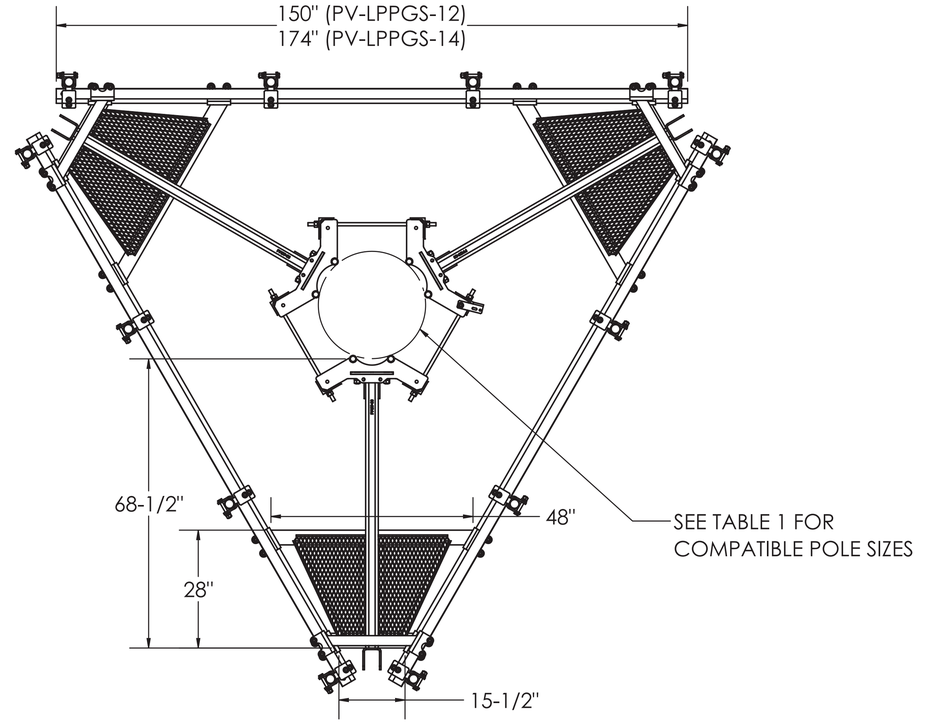
IDLe Xcede

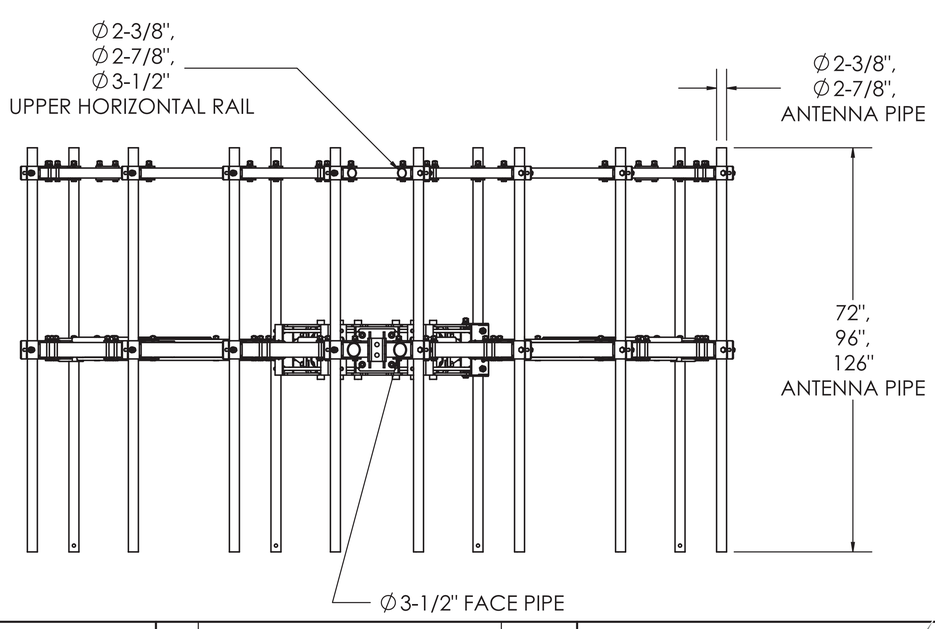
IDLe

PV-LPPGS
MONOPOLE GUARDIAN MOUNT

SEE SHEET 2 - TABLE 1 FOR FULL CONFIGURATION DETAILS







SHEET 1 OF 12	THIRD ANGLE PROJECTION	CATEGORY 02_Monopole	4		
		SERIES 01_Triangular	3	ACC UPDATE	8/27/19
8/27/2019	SCALE 1:36	TYPE PV-LPPGS_GUARDIAN MOUNT	2	MASTER PART # UPDATE	8/22/19
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE ±1/4°, BEND ±2° ALL OTHERS: ±1/16"		BY DJN	1	FULL RELEASE	8/14/19
		CHECKED SJS	0	INITIAL RELEASE	1/16/19
		STATUS APPROVED	REV	DESCRIPTION	DATE

PERFECTVISION®

MONOPOLE GUARDIAN MOUNT

DOCUMENT NUMBER LPPGS-ENG-01-R3 | REV 3

C:\PVMSteel\Catalog\SW Working Files\Engineering Details\

PART NUMBERS, WEIGHTS, & EPA

Table 1: Configurations

Part Number	Description	Weight (lbs)	(EPA)A (ft2)*	(EPA)A 1/2" Radial Ice (ft2)*	Included Parts																										
					PV-RM1045-GS	PV-RM3060-GS	PV-LPP-GS-B	PV--LPP-GS-EXT	PV-LPP-GS-HK	PV-LPP-GS-HR238	PV-LPP-GS-HR278	PV-LPP-GS-HR312	PV-LPP-GS-TKB	PV-XP-DC-2020	PV-XP-DC-2025	PV-XP-DC-2030	PV-XP-DC-2525	PV-XP-DC-2530	PIPE-238X96	PIPE-238X150	PIPE-238X174	PIPE-278X96	PIPE-278X126	PIPE-278X150	PIPE-278X174	PIPE-312X150	PIPE-312X174	PV-SCRB-RMGS	115-242	PV-GS-ACC1
PV-LPPGS-12M-B†	12'6" Face, 10"-40" OD Pole	1210	13.9	18.1	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	1	1	3
PV-LPPGS-14M-B†	14'6" Face, 13"-44" OD Pole	1480	16.7	21.4	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	1	3
PV-LPPGS-14L-B†	14'6" Face, 35"-60" OD Pole	1495	14.8	19.3	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	1	3
PV-LPPGS-12M-HR2-B	12'6" Face, 10"-40" OD Pole, 2-3/8" OD Horizontal Rail, No Antenna Pipe	1400	18.5	25.0	1	-	1	-	1	1	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3	-	1	1	3
PV-LPPGS-12M-HR25-B	12'6" Face, 10"-40" OD Pole, 2-7/8" OD Horizontal Rail, No Antenna Pipe	1495	19.4	25.9	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3	-	3	-	1	1	3
PV-LPPGS-12M-HR3-B	12'6" Face, 10"-40" OD Pole, 3-1/2" OD Horizontal Rail, No Antenna Pipe	1575	20.6	27.1	1	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	6	-	1	1	3
PV-LPPGS-14M-HR2-B	14'6" Face, 13"-44" OD Pole, 2-3/8" OD Horizontal Rail, No Antenna Pipe	1695	22.0	29.2	1	-	1	1	1	1	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3	1	1	3
PV-LPPGS-14M-HR25-B	14'6" Face, 13"-44" OD Pole, 2-7/8" OD Horizontal Rail, No Antenna Pipe	1800	23.0	30.3	1	-	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3	-	3	1	1	3
PV-LPPGS-14M-HR3-B	14'6" Face, 13"-44" OD Pole, 3-1/2" OD Horizontal Rail, No Antenna Pipe	1895	24.4	31.6	1	-	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	6	1	1	3
PV-LPPGS-14L-HR2-B	14'6" Face, 35"-60" OD Pole, 2-3/8" OD Horizontal Rail, No Antenna Pipe	1710	20.0	27.1	-	1	1	-	1	1	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3	1	1	3
PV-LPPGS-14L-HR25-B	14'6" Face, 35"-60" OD Pole, 2-7/8" OD Horizontal Rail, No Antenna Pipe	1820	21.1	28.2	-	1	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3	-	3	1	1	3
PV-LPPGS-14L-HR3-B	14'6" Face, 35"-60" OD Pole, 3-1/2" OD Horizontal Rail, No Antenna Pipe	1910	22.5	29.5	-	1	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	6	1	1	3
PV-LPPGS-12M-HR2-AP1	12'6" Face, 10"-40" OD Pole, 2-3/8" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	1925	19.0	25.6	1	-	1	-	1	1	-	-	-	12	-	12	-	-	12	3	-	-	-	-	3	-	1	1	3
PV-LPPGS-12M-HR25-AP1	12'6" Face, 10"-40" OD Pole, 2-7/8" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	2030	19.9	26.5	1	-	1	-	1	-	1	-	-	-	12	12	-	-	12	-	-	-	-	3	-	3	-	1	1	3
PV-LPPGS-12M-HR3-AP1	12'6" Face, 10"-40" OD Pole, 3-1/2" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	2120	21.0	27.7	1	-	1	-	1	-	-	1	-	-	-	24	-	-	12	-	-	-	-	-	-	6	-	1	1	3
PV-LPPGS-14M-HR2-AP1	14'6" Face, 13"-44" OD Pole, 2-3/8" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	2215	22.5	29.8	1	-	1	1	1	1	-	-	-	12	-	12	-	-	12	-	3	-	-	-	-	-	3	1	1	3
PV-LPPGS-14M-HR25-AP1	14'6" Face, 13"-44" OD Pole, 2-7/8" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	2335	23.6	30.9	1	-	1	1	1	-	1	-	-	-	12	12	-	-	12	-	-	-	-	-	3	-	3	1	1	3
PV-LPPGS-14M-HR3-AP1	14'6" Face, 13"-44" OD Pole, 3-1/2" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	2440	24.9	32.2	1	-	1	1	1	-	-	1	-	-	-	24	-	-	12	-	-	-	-	-	-	-	6	1	1	3
PV-LPPGS-14L-HR2-AP1	14'6" Face, 35"-60" OD Pole, 2-3/8" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	2230	20.6	27.7	-	1	1	-	1	1	-	-	-	12	-	12	-	-	12	-	3	-	-	-	-	-	3	1	1	3
PV-LPPGS-14L-HR25-AP1	14'6" Face, 35"-60" OD Pole, 2-7/8" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	2350	21.6	28.8	-	1	1	-	1	-	1	-	-	-	12	12	-	-	12	-	-	-	-	-	3	-	3	1	1	3
PV-LPPGS-14L-HR3-AP1	14'6" Face, 35"-60" OD Pole, 3-1/2" OD Horizontal Rail, (12) 2-3/8" x 96" Pipe	2450	23.0	30.1	-	1	1	-	1	-	-	1	-	-	-	24	-	-	12	-	-	-	-	-	-	-	6	1	1	3
PV-LPPGS-12M-HR25-AP3	12'6" Face, 10"-40" OD Pole, 2-7/8" OD Horizontal Rail, (12) 2-7/8" x 96" Pipe	2260	19.9	26.5	1	-	1	-	1	-	1	-	-	-	-	-	12	12	-	-	-	12	-	3	-	3	-	1	1	3
PV-LPPGS-12M-HR3-AP3	12'6" Face, 10"-40" OD Pole, 3-1/2" OD Horizontal Rail, (12) 2-7/8" x 96" Pipe	2355	21.0	27.6	1	-	1	-	1	-	-	1	-	-	-	-	-	24	-	-	-	12	-	-	-	6	-	1	1	3
PV-LPPGS-14M-HR25-AP3	14'6" Face, 13"-44" OD Pole, 2-7/8" OD Horizontal Rail, (12) 2-7/8" x 96" Pipe	2565	23.5	30.8	1	-	1	1	1	-	1	-	-	-	-	-	12	12	-	-	-	12	-	-	3	-	3	1	1	3
PV-LPPGS-14M-HR3-AP3	14'6" Face, 13"-44" OD Pole, 3-1/2" OD Horizontal Rail, (12) 2-7/8" x 96" Pipe	2670	24.8	32.2	1	-	1	1	1	-	-	1	-	-	-	-	-	24	-	-	-	12	-	-	-	-	6	1	1	3
PV-LPPGS-14L-HR25-AP3	14'6" Face, 35"-60" OD Pole, 2-7/8" OD Horizontal Rail, (12) 2-7/8" x 96" Pipe	2580	21.6	28.7	-	1	1	-	1	-	1	-	-	-	-	-	12	12	-	-	-	12	-	-	3	-	3	1	1	3
PV-LPPGS-14L-HR3-AP3	14'6" Face, 35"-60" OD Pole, 3-1/2" OD Horizontal Rail, (12) 2-7/8" x 96" Pipe	2690	22.9	30.1	-	1	1	-	1	-	-	1	-	-	-	-	-	24	-	-	-	12	-	-	-	-	6	1	1	3
PV-LPPGS-12M-TKB3-AP4	12'6" Face, 10"-40" OD Pole, 3-1/2" OD Horizontal Rail with Brace Kit, (12) 2-7/8" x 126" Pipe	3180	27.7	37.3	2	-	1	-	1	-	-	1	1	-	-	-	-	24	-	-	-	-	12	-	-	6	-	2	2	3
PV-LPPGS-14M-TKB3-AP4	14'6" Face, 13"-44"" OD Pole, 3-1/2" OD Horizontal Rail with Brace Kit, (12) 2-7/8" x 126" Pipe	3715	31.5	41.9	2	-	1	2	1	-	-	1	1	-	-	-	-	24	-	-	-	-	12	-	-	-	6	2	2	3
PV-LPPGS-14L-TKB3-AP4	14'6" Face, 35"-60" OD Pole, 3-1/2" OD Horizontal Rail with Brace Kit, (12) 2-7/8" x 126" Pipe	3745	29.5	39.8	-	2	1	-	1	-	-	1	1	-	-	-	-	24	-	-	-	-	12	-	-	-	6	2	2	3

* (EPA)A INCLUDES ALL STRUCTURAL MEMBERS INCLUDING CROSSOVER CONNECTIONS. IF DESIRED ADD ANTENNA PIPE PER TABLE 2.
† THESE MOUNTS ARE NOT CLASSIFIED TO TIA-5053 STANDARD

Table 2: Antenna Pipe Additional EPA (Each)

Size	(EPA)A (ft2)	(EPA)A 1/2" Radial Ice (ft2)
2-3/8" x 96"	1.5	2.2
2-7/8" x 96"	1.8	2.5
2-7/8" x 126"	2.4	3.3

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SHEET 2 OF 12	THIRD ANGLE PROJECTION	CATEGORY 02_Monopole	4		
		SERIES 01_Triangular	3	ACC UPDATE	8/27/19
8/27/2019	SCALE 1:48	TYPE PV-LPPGS_GUARDIAN MOUNT	2	MASTER PART # UPDATE	8/22/19
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4°, BEND±2° ALL OTHERS: ±1/16"		BY DJN	1	FULL RELEASE	8/14/19
		CHECKED SJS	0	INITIAL RELEASE	1/16/19
		STATUS APPROVED	REV	DESCRIPTION	DATE

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MONOPOLE GUARDIAN MOUNT

DOCUMENT NUMBER LPPGS-ENG-01-R3 REV 3

MOUNT CLASSIFICATIONS

MOUNT CLASSIFICATION INFORMATION:

- STANDARDS: TIA-222-G, TIA-222-H, TIA-5053
- MAX STRUCTURE HEIGHT: 400ft
- STRUCTURE CLASS: I OR II
- EXPOSURE CATEGORY: B OR C
- TOPOGRAPHIC CATEGORY: 1
- DESIGN WIND PRESSURE: 135psf
- DESIGN WIND PRESSURE (ICED): 15psf
- DESING ICE THICKNESS (RADIAL): 2.75"

MOUNTS EXCEED THE FOLLOWING REQUIREMENTS:

- HEAVY 5
- HEAVY 10
- HEAVY WLL

SEE STRUCTURAL LETTER **LPPGS-STL-01** FOR ADDITIONAL ANALYSIS INFO

APPROVED MOUNT CLASSIFICATIONS:

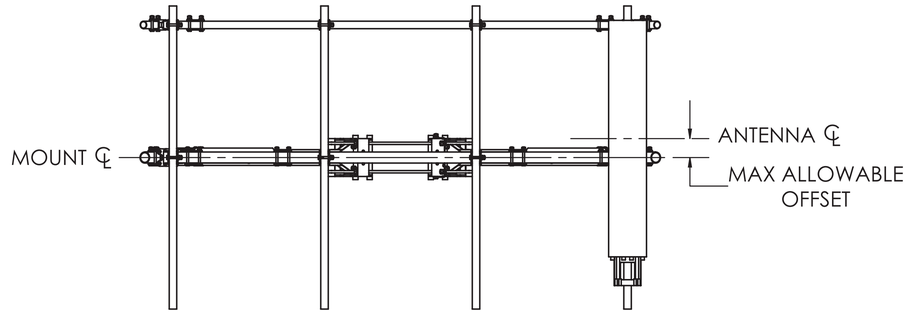
Table 4: Approved Mount Classifications

		Maximum Antenna Centerline Offset				
		0in	**6in**	**12in**	**24in**	**39in**
Part Number	**PV-LPPGS-12M-HR2-AP1**	M1300R(1250)-4[0]	M1300R(1250)-4[6]	M1100R(1150)-4[12]	M700R(1000)-4[24]	-
	PV-LPPGS-12M-HR25-AP1	M1350R(1250)-4[0]	M1350R(1250)-4[6]	M1150R(1200)-4[12]	M750R(1100)-4[24]	-
	PV-LPPGS-12M-HR3-AP1	M1350R(1250)-4[0]	M1350R(1250)-4[6]	M1150R(1200)-4[12]	M750R(1100)-4[24]	-
	PV-LPPGS-14M-HR2-AP1	M1300R(1200)-4[0]	M1300R(1200)-4[6]	M1100R(1150)-4[12]	M700R(1100)-4[24]	-
	PV-LPPGS-14M-HR25-AP1	M1350R(1200)-4[0]	M1350R(1200)-4[6]	M1100R(1150)-4[12]	M700R(1100)-4[24]	-
	PV-LPPGS-14M-HR3-AP1	M1350R(1200)-4[0]	M1350R(1200)-4[6]	M1100R(1150)-4[12]	M700R(1100)-4[24]	-
	PV-LPPGS-14L-HR2-AP1	M1300R(1200)-4[0]	M1300R(1200)-4[6]	M1100R(1150)-4[12]	M700R(1100)-4[24]	-
	PV-LPPGS-14L-HR25-AP1	M1350R(1200)-4[0]	M1350R(1200)-4[6]	M1100R(1150)-4[12]	M700R(1100)-4[24]	-
	PV-LPPGS-14L-HR3-AP1	M1350R(1200)-4[0]	M1350R(1200)-4[6]	M1100R(1150)-4[12]	M700R(1100)-4[24]	-
	PV-LPPGS-12M-HR25-AP3	M1900R(1350)-4[0]	M1900R(1350)-4[6]	M1600R(1250)-4[12]	M1100R(1150)-4[24]	-
	PV-LPPGS-12M-HR3-AP3	M1850R(1300)-4[0]	M1850R(1300)-4[6]	M1500R(1250)-4[12]	M1050R(1150)-4[24]	-
	PV-LPPGS-14M-HR25-AP3	M1800R(1300)-4[0]	M1800R(1300)-4[6]	M1600R(1250)-4[12]	M1200R(1150)-4[24]	-
	PV-LPPGS-14M-HR3-AP3	M1800R(1300)-4[0]	M1800R(1300)-4[6]	M1600R(1250)-4[12]	M1200R(1150)-4[24]	-
	PV-LPPGS-14L-HR25-AP3	M1800R(1300)-4[0]	M1800R(1300)-4[6]	M1600R(1250)-4[12]	M1200R(1150)-4[24]	-
	PV-LPPGS-14L-HR3-AP3	M1800R(1300)-4[0]	M1800R(1300)-4[6]	M1600R(1250)-4[12]	M1200R(1150)-4[24]	-
	PV-LPPGS-12M-TKB3-AP4	-	-	-	-	M1650R(2750)-4[39]
	PV-LPPGS-14M-TKB3-AP4	-	-	-	-	M2400R(3150)-4[39]
	PV-LPPGS-14L-TKB3-AP4	-	-	-	-	M2400R(3150)-4[39]

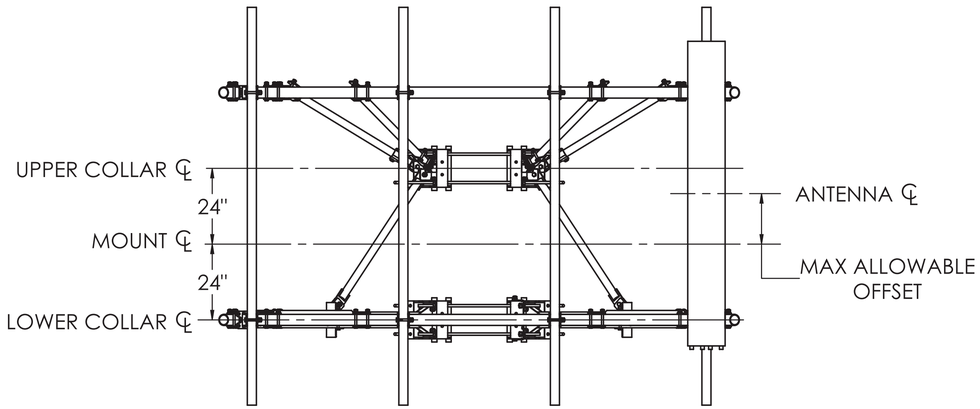
NOTE: ON POLES 3/16" OR LESS THICK, PV-PKBK KICKER KIT IS REQUIRED.

Table 5: Mount Classification Identification Example

M1750R(1450)-4[6]	Used at the beginning of each mount identification.
M**1750**R(1450)-4[6]	The maximum factored horizontal force (**1750**lbf), F, considered for design under extreme wind condition at each mounting pipe location.
M1750**R**(1450)-4[6]	Classification category.
M1750R(**1450**)-4[6]	Maximum factored vertical force (**1450**lbf), Fzi, considered for design under extreme ice condition at each mounting pipe location.
M1750R(1450)-**4**[6]	The mount is designed for (**4**) mounting pipe locations per sector.
M1750R(1450)-4[**6**]	The centerline of the maximum horizontal concentrated force, F, may be offset vertically from the mount centerline by up to **6** inches.



SINGLE COLLAR OFFSET



DUAL COLLAR WITH TKB OFFSET

SHEET 4 OF 12	THIRD ANGLE PROJECTION	CATEGORY 02_Monopole	4		
		SERIES 01_Triangular	3	ACC UPDATE	8/27/19
8/27/2019	SCALE 1:48	TYPE PV-LPPGS_GUARDIAN MOUNT	2	MASTER PART # UPDATE	8/22/19
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE ±1/4°, BEND ±2° ALL OTHERS: ±1/16"		BY DJN	1	FULL RELEASE	8/14/19
		CHECKED SJS	0	INITIAL RELEASE	1/16/19
		STATUS APPROVED	REV	DESCRIPTION	DATE

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MONOPOLE GUARDIAN MOUNT

DOCUMENT NUMBER LPPGS-ENG-01-R3 | REV 3

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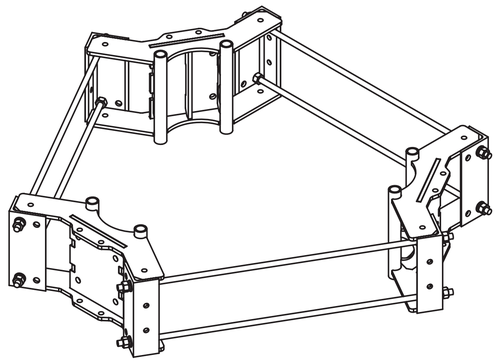
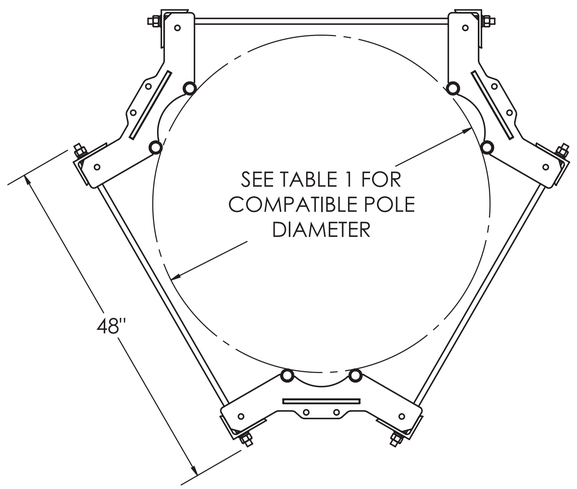
STANDARD POLE

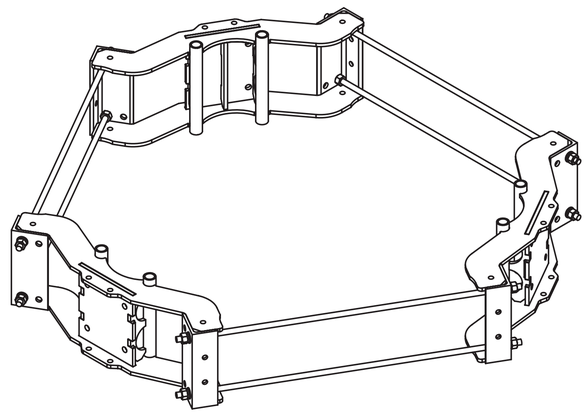
PV-RM1045-GS

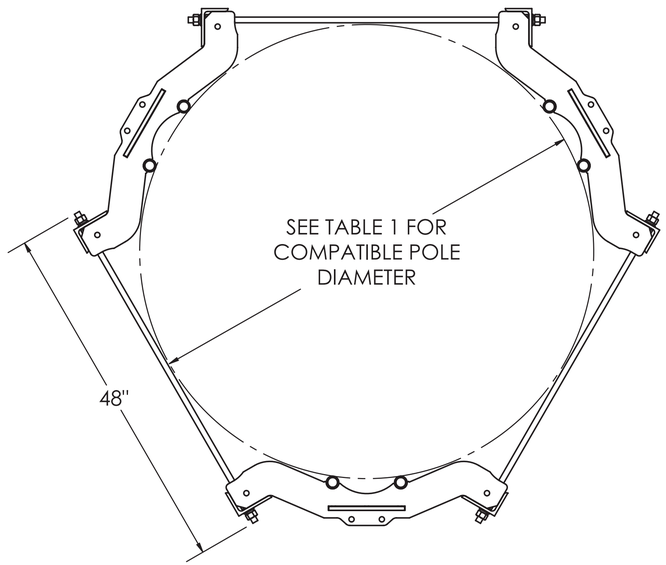




LARGE POLE

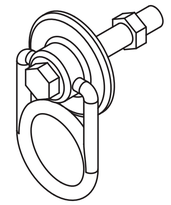
PV-RM3060-GS



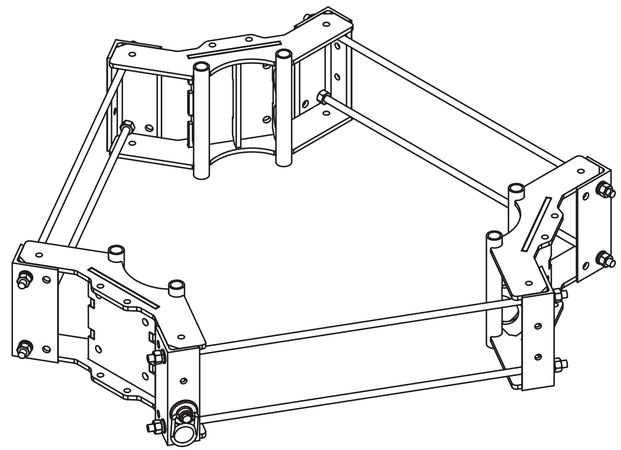


PV-GS-ACC1

- 10K SWIVEL ATTACHMENT ACCESSORY
- (3) INCLUDED WITH ALL PV-LPPGS KITS, (1) INSTALLED PER SECTOR MAX
- MOUNT TO COLLAR
- SHOULDER HEIGHT WHEN INSTALLED ON TKB UPPER COLLAR



PV-GS-ACC1
10K SWIVEL ATTACHMENT ACCESSORY



COLLAR MOUNTING

ROD CUT LENGTH

Table 6: Threaded Rod Cut Length (in)		
Pole OD (in)	**PV-RM1045-GS**	**PV-RM3060-GS**
10	14	-
15	19.5	-
20	24.5	-
25	29	-
30	33.5	24
35	38	26.5
40	42.5	31
45	48	35.5
50	-	40
55	-	44
60	-	48

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SHEET 5 OF 12	THIRD ANGLE PROJECTION	CATEGORY 02_Monopole	4		
		SERIES 01_Triangular	3	ACC UPDATE	8/27/19
8/27/2019	SCALE 1:20	TYPE PV-LPPGS_GUARDIAN MOUNT	2	MASTER PART # UPDATE	8/22/19
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4°, BEND±2° ALL OTHERS: ±1/16"		BY DJN	1	FULL RELEASE	8/14/19
		CHECKED SJS	0	INITIAL RELEASE	1/16/19
		STATUS APPROVED	REV	DESCRIPTION	DATE

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MONOPOLE GUARDIAN MOUNT

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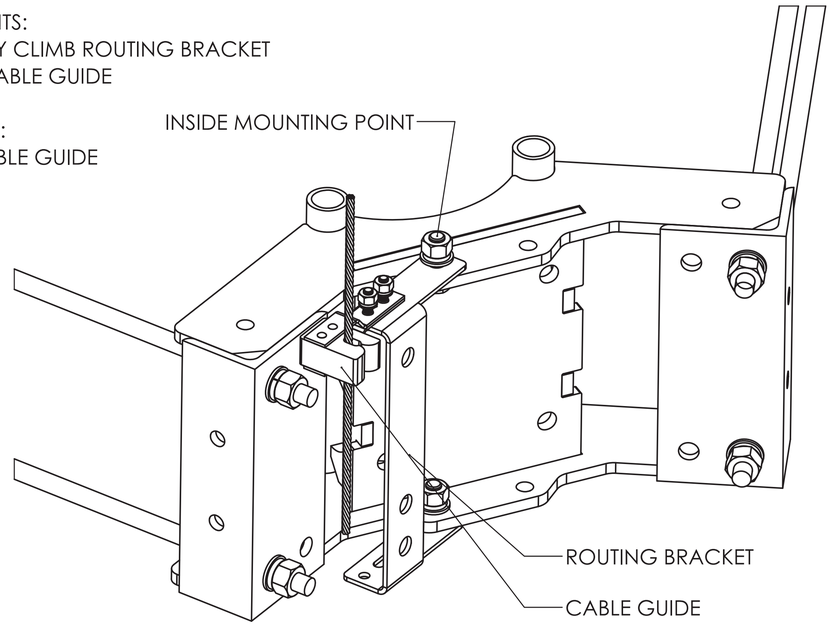
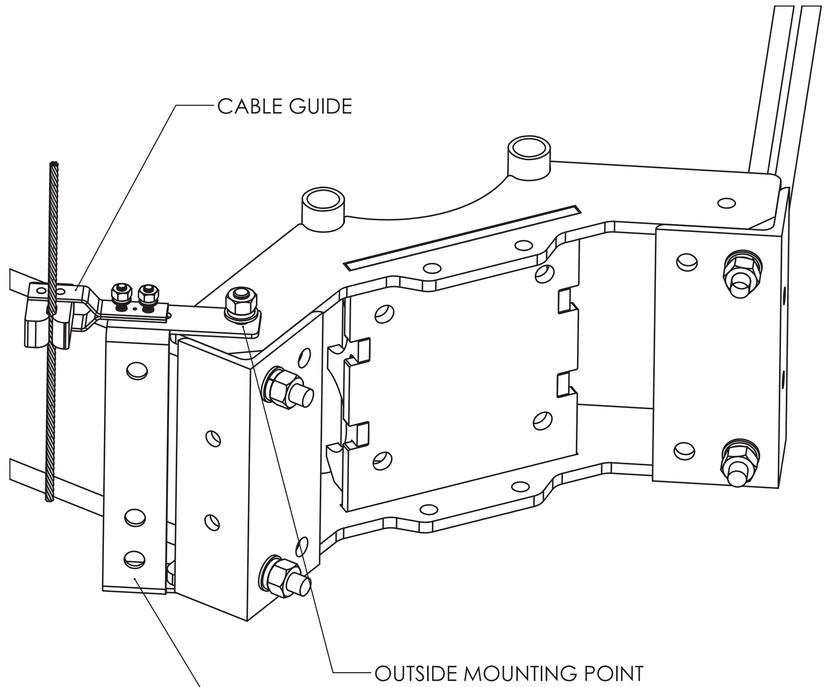
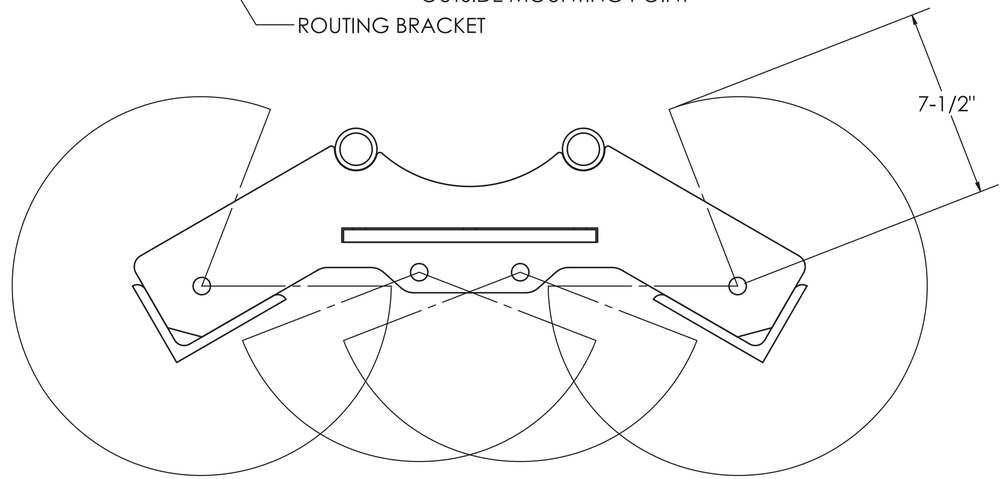
SAFETY CLIMB ROUTING

INCLUDED COMPONENTS:
PV-SCRB-RMGS - SAFETY CLIMB ROUTING BRACKET
115-242 - STANDARD CABLE GUIDE

OPTIONAL ACCESSORY:
115-203 - LOCKING CABLE GUIDE







CABLE GUIDE RANGE

SHEET 6 OF 12	THIRD ANGLE PROJECTION	CATEGORY 02_Monopole	4			PERFECTVISION®
		SERIES 01_Triangular	3	ACC UPDATE	8/27/19	
8/27/2019	SCALE 1:6	TYPE PV-LPPGS_GUARDIAN MOUNT	2	MASTER PART # UPDATE	8/22/19	
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4°, BEND±2° ALL OTHERS: ±1/16"		BY DJN	1	FULL RELEASE	8/14/19	MONOPOLE GUARDIAN MOUNT
		CHECKED SJS	0	INITIAL RELEASE	1/16/19	DOCUMENT NUMBER LPPGS-ENG-01-R3 REV 3
		STATUS APPROVED	REV	DESCRIPTION	DATE	

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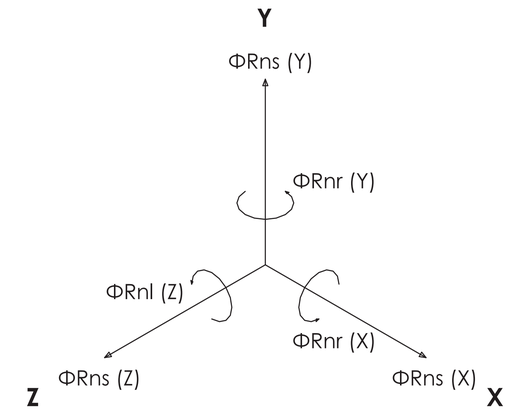
PV-XP-DC

DUALCROSS 90° CROSSOVER BRACKET

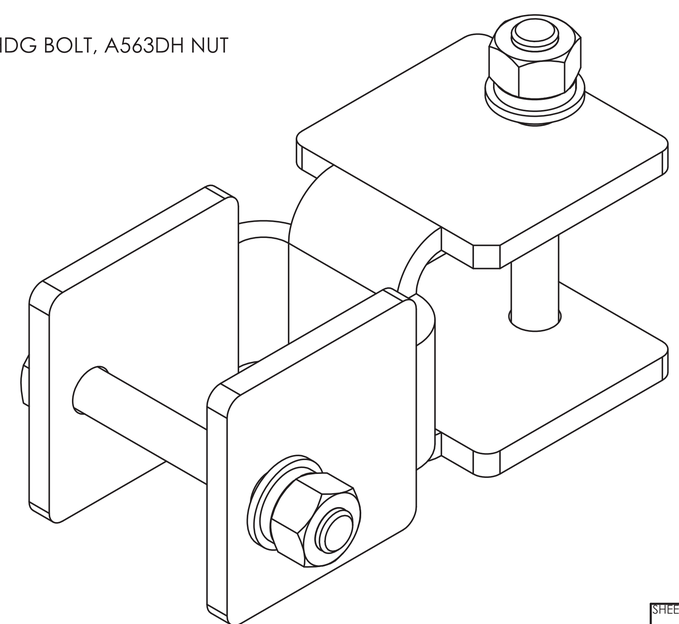
Table 7: Crossover Configurations and Capacities

Part Number	Weight	Pipe 1 Size (Vertical)	Pipe 2 Size (Horizontal)	Pipe 1 Bolt Size	Pipe 2 Bolt Size	Available Sliding Strength (Φ=0.7)			Available Torsional Strength (Φ=0.7)		Available Lateral Twist Strength (Φ=0.9)
						ΦRns (X)	ΦRns (Y)	ΦRns (Z)	ΦRnr (X)	ΦRnr (Y)	ΦRnl (Z)
	lbs	*in*	*in*	*in*	*in*	*kip*	*kip*	*kip*	*kip-in*	*kip-in*	*kip-in*
PV-XP-DC-2020	6.1	∅2.375	∅2.375	∅5/8 x 4-1/2	∅5/8 x 4-1/2	3.85	3.85	Fixed	6.0	6.0	14.0
PV-XP-DC-2025	7.0	∅2.375	∅2.875	∅5/8 x 4-1/2	∅5/8 x 5	3.85	3.85	Fixed	6.0	6.0	14.0
PV-XP-DC-2030	8.1	∅2.375	∅3.5	∅5/8 x 4-1/2	∅5/8 x 5-1/2	3.85	3.85	Fixed	6.8	6.0	14.0
PV-XP-DC-2525	8.0	∅2.875	∅2.875	∅5/8 x 5	∅5/8 x 5	3.85	3.85	Fixed	6.0	6.0	20.0
PV-XP-DC-2530	9.3	∅2.875	∅3.5	∅5/8 x 5	∅5/8 x 5-1/2	3.85	3.85	Fixed	6.8	6.0	20.0
PV-XP-DC-3030	10.7	∅3.5	∅3.5	∅5/8 x 5-1/2	∅5/8 x 5-1/2	3.85	3.85	Fixed	6.8	6.8	27.0
PV-XP-DC-3040	13.1	∅3.5	∅4.5	∅5/8 x 5-1/2	∅5/8 x 6-1/2	3.85	3.85	Fixed	6.8	6.8	27.0

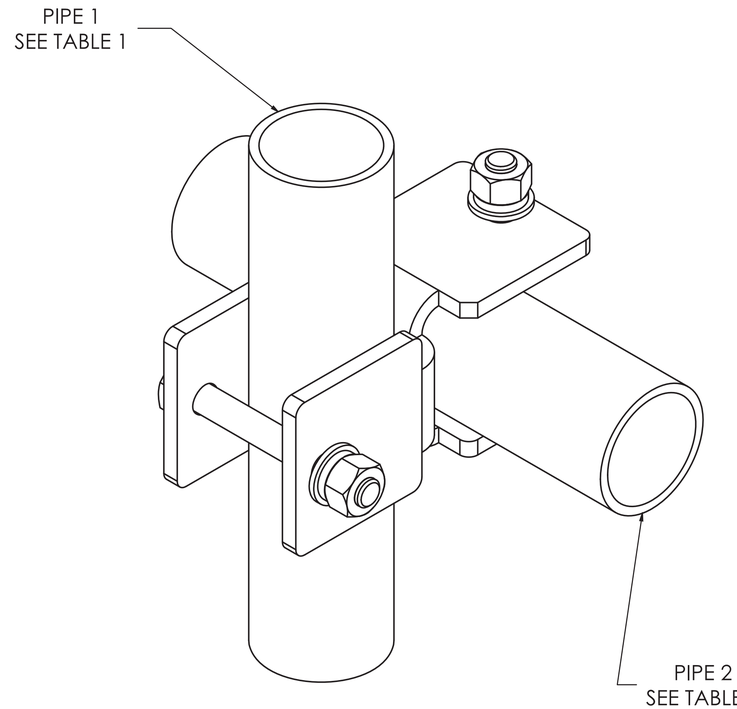


NOTES:

- CAPACITY VALUES EXPERIMENTALLY DETERMINED
- INSTALLATION REQUIREMENTS:
  - MINIMUM BOLT TORQUE: 100 FT-LBS
  - CLEAN, DRY ASSEMBLY
  - GALVANIZED BRACKET AND HARDWARE
  - COLORED WAX COATING ON NUTS
- MATERIALS
  - BRACKET: A36 HDG
  - HARDWARE: A325 HDG BOLT, A563DH NUT



PV-XP-DC
DUALCROSS 90° CROSSOVER



SHEET 7 OF 12	THIRD ANGLE PROJECTION	CATEGORY 02_Monopole	4		
		SERIES 01_Triangular	3	ACC UPDATE	8/27/19
8/27/2019	SCALE NTS	TYPE PV-LPPGS_GUARDIAN MOUNT	2	MASTER PART # UPDATE	8/22/19
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE±1/4°, BEND±2° ALL OTHERS: ±1/16"		BY DJN	1	FULL RELEASE	8/14/19
		CHECKED SJS	0	INITIAL RELEASE	1/16/19
		STATUS APPROVED	REV	DESCRIPTION	DATE

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MONOPOLE GUARDIAN MOUNT

DOCUMENT NUMBER LPPGS-ENG-01-R3 | REV 3

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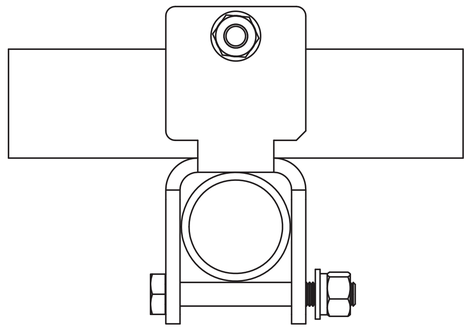
PV-XP-DC

DUALCROSS 90° CROSSOVER BRACKET

PRE-INSTALL ASSEMBLY:



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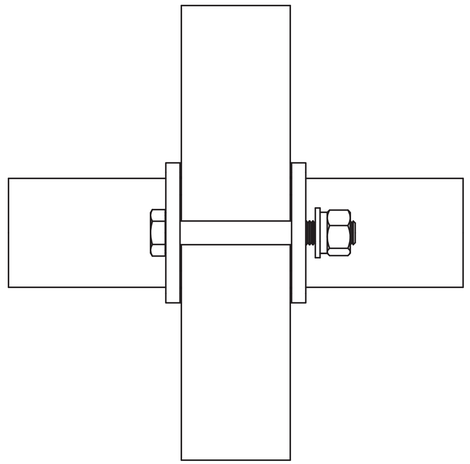
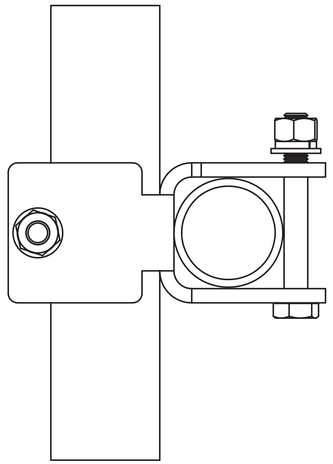
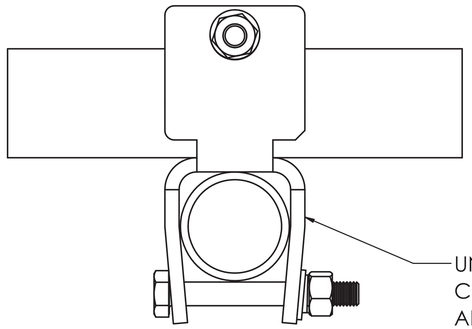


FRONT



SIDE

POST-INSTALL ASSEMBLY:



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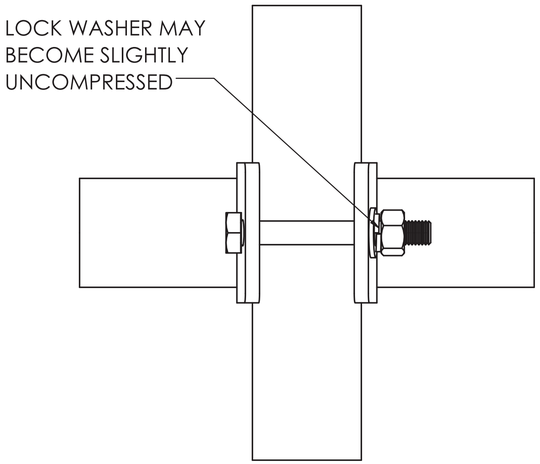

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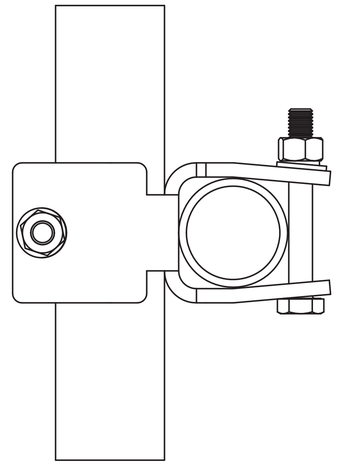


SIDE

C:\PVMSteel\Catalog\SW Working Files\Engineering Details\

SHEET 8 OF 12	THIRD ANGLE PROJECTION	CATEGORY 02_Monopole	4		
		SERIES 01_Triangular	3	ACC UPDATE	8/27/19
8/27/2019	SCALE 1:4	TYPE PV-LPPGS_GUARDIAN MOUNT	2	MASTER PART # UPDATE	8/22/19
DIMENSIONS ARE IN INCHES TOLERANCES U.N.O. HOLES: +1/16", -1/32" ANGULAR: PROFILE ±1/4°, BEND ±2° ALL OTHERS: ±1/16"		BY DJN	1	FULL RELEASE	8/14/19
		CHECKED SJS	0	INITIAL RELEASE	1/16/19
		STATUS APPROVED	REV	DESCRIPTION	DATE

PERFECTVISION®

MONOPOLE GUARDIAN MOUNT

DOCUMENT NUMBER LPPGS-ENG-01-R3 | REV 3

Exhibit D

Structural Analysis Report

Date: **December 29, 2022**

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351

Subject: Structural Analysis Report

Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Site Number:	CTL02106
	Site Name:	Bridgeport North
	FA Number:	10034977
Crown Castle Designation:	**BU Number:**	841288
	Site Name:	Bridgeport North
	JDE Job Number:	737982
	Work Order Number:	2190498
	Order Number:	641288 Rev. 1
Engineering Firm Designation:	**TEP Project Number:**	25567.804552
Site Data:	**205 Kaechele Place, Bridgeport, Fairfield County, CT 06606** **Latitude *41° 13' 24.04"*, Longitude *-73° 13' 0.38"*** **150 Foot - Monopole Tower**	

Tower Engineering Professionals 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 - 95.6%**

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: James Fisher / CLT

Respectfully submitted by:

Aaron T. Rucker, P.E.

Aaron T. Rucker

Digitally signed by Aaron Rucker
DN: cn=Aaron T. Rucker, c=US, email=arucker@tepgroup.net
Date: 2023.03.23 12:46:01 -04'00'

STATE OF CONNECTICUT AARON THOMAS RUCKER 32608 LICENSED PROFESSIONAL ENGINEER

Electronic Copy

12/29/2022

TABLE OF CONTENTS

1) INTRODUCTION

This is a 150-ft monopole tower mapped by GPD in April of 2008. 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:	1.0
Ice Thickness:	1.0 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)
149.0	156.0	3	Ericsson	AIR 6419 B77G_CCIV3	6 6 3 3	1-5/8 1-1/8 7/8 3/8
	154.0	3	Quintel Technology	QD6616-7		
		3	CCI Antennas	DMP65R-BU6D		
		3	Ericsson	RRUS 32 B2		
		3	Ericsson	RRUS 32 B66A		
		3	Raycap	DC9-48-60-24-8C-EV		
		3	Ericsson	RRUS 4478 B14_CCIV2		
		3	Ericsson	RRUS 32 B30		
		3	Ericsson	RRUS 4449 B5/B12		
	152.0	3	Ericsson	AIR 6449 B77D_CCIV3		
	149.0	12	Generic	2-1/2” STD x 12’-0” Mount Pipe		
		6	Generic	2-1/2” STD x 6’-0” Mount Pipe		
		1	Perfect Vision	PV-LPPGS-ENG-14-R0 Platform Mount		

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)
138.0	143.0	1	Andrew	VHLP2-23	2 6	1/2 5/16
		1	Andrew	VHLP2-18		
		2	Dragonwave	HORIZON COMPACT		
		1	Clearwire	CW JUNCTION BOX		
	140.0	3	Argus Technologies	LLPX310R-V1 w/ Mount Pipe		
		3	Samsung Telecom.	RAS SPI-2213 RRH		
	138.0	1	Tower Mounts	Platform Mount [LP 1201-1]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
128.0	128.0	3	JMA Wireless	MX08FRO665-21 w/ Mount Pipe	1	1-1/2
		1	Raycap	RDIDC-9181-PF-48		
		3	Fujitsu	TA08025-B605		
		3	Fujitsu	TA08025-B604		
		1	Tower Mounts	Commscope MC-PK8-DSH		
120.0	120.0	3	Ericsson	AIR 21 B2A/B4P	9 1	1-5/8 1-1/2
		3	Ericsson	AIR -32 B2A/B66AA		
		3	Ericsson	AIR6449 B41		
		3	RFS Celwave	APXVAARR24_43-U-NA20		
		3	Ericsson	KRY 112 144/1		
		3	Ericsson	RADIO 4449 B71 B85A _T-MOBILE		
		3	Ericsson	RRUS 4415 B25_CCIV2		
		1	Tower Mounts	Platform Mount [LP 301-1_KCKR]		
99.0	100.0	3	Samsung Telecom.	CBRS w/ Mount Pipe	6 1	1-5/8 1-1/4
		3	Commscope	JAHH-65A-R3B w/ Mount Pipe		
		3	Commscope	JAHH-65A-R3B		
		3	VZW	Sub6 Antenna - VZS01 w/ Mount Pipe		
		3	Antel	BXA-70063/4CF w/ Mount Pipe		
		3	Samsung Telecom.	RFV01U-D2A		
		3	Samsung Telecom.	RFV01U-D1A		
		1	RFS Celwave	DB-C1-12C-24AB-0Z		
	99.0	1	Tower Mounts	T-Arm Mount [TA 602-3]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Geotechnical Report	5110784	CCISites
Tower Foundation Drawings	5110783	CCISites
Tower Manufacturer Drawings	4710143	CCISites
Tower Reinforcement Drawings	4945043	CCISites
Tower Reinforcement Drawings	5237204	CCISites
Tower Reinforcement Drawings	5303781	CCISites
Post-Modification Inspection	5401472	CCISites
Post-Modification Inspection	5739992	CCISites
Tower Reinforcement Drawings	6650617	CCISites
Post-Modification Inspection	6894091	CCISites
Tower Reinforcement Drawings	6801057	CCISites
Post-Modification Inspection	7594134	CCISites

3.1) Analysis Method

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

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

RISA-3D, a commercially available analysis software package, was used to model and analyze the foundation. Selected output from the analysis is included in Appendix C.

3.2) Assumptions

1) The tower and structures were maintained in accordance with the TIA-222 Standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2, and the referenced drawings.
3) The foundation steel reinforcement was assumed to be the minimum required per ACI 318.
4) The following material grades were assumed:
   a) Anchor bolts: ASTM A615-75.
   b) Pole shaft: ASTM A572-50.
   c) Base plate: ASTM A572-50.
   d) #20 Dywidag Reinforcement: fy = 80 ksi, fu = 100 ksi.
   e) Concrete compressive strength: f'c = 3.
   f) Foundation flexural reinforcement: fy = 60 ksi.
5) The existing rock anchors designed by GPD Group in April of 2013 (CCI Doc# 4945043) were assumed to be sufficiently embedded to develop their full tensile capacity.

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)[1,2]

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
150 - 145	Pole	TP15.732x15x0.2188	Pole	27.2%	Pass
145 - 140	Pole	TP16.463x15.732x0.2188	Pole	41.7%	Pass
140 - 135	Pole	TP17.195x16.463x0.2188	Pole	58.4%	Pass
135 - 130	Pole	TP17.927x17.195x0.2188	Pole	73.4%	Pass
130 - 128.5	Pole	TP18.146x17.927x0.2188	Pole	77.4%	Pass
128.5 - 128.25	Pole + Reinf.	TP18.183x18.146x0.6688	Reinf. 10 Bolt-Shaft Bearing	46.8%	Pass
128.25 - 123.25	Pole + Reinf.	TP18.915x18.183x0.6438	Reinf. 10 Tension Rupture	48.6%	Pass
123.25 - 118.25	Pole + Reinf.	TP19.646x18.915x0.6188	Reinf. 10 Tension Rupture	59.0%	Pass
118.25 - 113.25	Pole + Reinf.	TP20.378x19.646x0.6063	Reinf. 10 Tension Rupture	70.2%	Pass
113.25 - 109	Pole + Reinf.	TP21x20.378x0.5938	Reinf. 10 Bolt-Shaft Bearing	95.6%	Pass
109 - 108.75	Pole + Reinf.	TP21.038x21x0.725	Reinf. 6 Tension Rupture	60.3%	Pass
108.75 - 104.17	Pole + Reinf.	TP21.729x21.038x0.7	Reinf. 6 Tension Rupture	67.3%	Pass

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
104.17 - 103.92	Pole + Reinf.	TP21.767x21.729x0.975	Reinf. 6 Tension Rupture	60.0%	Pass
103.92 - 103.17	Pole + Reinf.	TP21.88x21.767x0.975	Reinf. 6 Tension Rupture	61.0%	Pass
103.17 - 102.92	Pole + Reinf.	TP21.918x21.88x1.125	Reinf. 6 Tension Rupture	49.7%	Pass
102.92 - 102.42	Pole + Reinf.	TP21.994x21.918x1.125	Reinf. 6 Tension Rupture	50.2%	Pass
102.42 - 102.17	Pole + Reinf.	TP22.031x21.994x0.9375	Reinf. 6 Tension Rupture	55.2%	Pass
102.17 - 100.92	Pole + Reinf.	TP22.22x22.031x0.925	Reinf. 6 Tension Rupture	56.6%	Pass
100.92 - 100.67	Pole + Reinf.	TP22.258x22.22x1.025	Reinf. 6 Tension Rupture	55.4%	Pass
100.67 - 99.58	Pole + Reinf.	TP22.422x22.258x1	Reinf. 6 Tension Rupture	56.6%	Pass
99.58 - 99.33	Pole + Reinf.	TP22.46x22.422x1.4	Reinf. 14 Tension Rupture	41.1%	Pass
99.33 - 95.42	Pole + Reinf.	TP23.051x22.46x1.35	Reinf. 14 Tension Rupture	44.9%	Pass
95.42 - 95.17	Pole + Reinf.	TP23.088x23.051x1.05	Reinf. 15 Tension Rupture	55.5%	Pass
95.17 - 90.17	Pole + Reinf.	TP23.843x23.088x1	Reinf. 15 Tension Rupture	60.9%	Pass
90.17 - 85.17	Pole + Reinf.	TP24.598x23.843x0.975	Reinf. 15 Tension Rupture	66.1%	Pass
85.17 - 80.5	Pole + Reinf.	TP25.304x24.598x0.95	Reinf. 15 Tension Rupture	70.8%	Pass
80.5 - 80.25	Pole + Reinf.	TP25.341x25.304x1.3	Reinf. 5 Bolt-Shaft Bearing	61.3%	Pass
80.25 - 75.25	Pole + Reinf.	TP26.096x25.341x1.25	Reinf. 5 Tension Rupture	61.8%	Pass
75.25 - 73.58	Pole + Reinf.	TP26.348x26.096x1.25	Reinf. 5 Tension Rupture	63.2%	Pass
73.58 - 73.33	Pole + Reinf.	TP26.386x26.348x1.225	Reinf. 5 Tension Rupture	63.4%	Pass
73.33 - 72	Pole + Reinf.	TP27.04x26.386x1.225	Reinf. 5 Tension Rupture	64.4%	Pass
72 - 67	Pole + Reinf.	TP26.897x26.087x1.2875	Reinf. 5 Tension Rupture	65.8%	Pass
67 - 66.75	Pole + Reinf.	TP26.937x26.897x1.2875	Reinf. 5 Tension Rupture	66.0%	Pass
66.75 - 66.5	Pole + Reinf.	TP26.978x26.937x1.3625	Reinf. 13 Tension Rupture	58.3%	Pass
66.5 - 61.5	Pole + Reinf.	TP27.788x26.978x1.3125	Reinf. 13 Tension Rupture	61.2%	Pass
61.5 - 56.5	Pole + Reinf.	TP28.598x27.788x1.2875	Reinf. 13 Tension Rupture	63.9%	Pass
56.5 - 51.5	Pole + Reinf.	TP29.408x28.598x1.2375	Reinf. 13 Tension Rupture	66.4%	Pass
51.5 - 48.25	Pole + Reinf.	TP29.934x29.408x1.2125	Reinf. 13 Tension Rupture	68.0%	Pass
48.25 - 48	Pole + Reinf.	TP29.974x29.934x1.6125	Reinf. 1 Compression	54.5%	Pass
48 - 44.25	Pole + Reinf.	TP30.582x29.974x1.5625	Reinf. 1 Compression	56.0%	Pass
44.25 - 44	Pole + Reinf.	TP30.622x30.582x1.6625	Reinf. 1 Compression	52.8%	Pass
44 - 39	Pole + Reinf.	TP31.432x30.622x1.6125	Reinf. 1 Compression	54.6%	Pass
39 - 38.5	Pole + Reinf.	TP31.513x31.432x1.6125	Reinf. 1 Compression	54.7%	Pass
38.5 - 38.25	Pole + Reinf.	TP31.554x31.513x1.6125	Reinf. 1 Compression	54.8%	Pass
38.25 - 34	Pole + Reinf.	TP32.89x31.554x1.5625	Reinf. 1 Compression	56.3%	Pass
34 - 29	Pole + Reinf.	TP32.462x31.617x1.6813	Reinf. 1 Compression	55.6%	Pass
29 - 24	Pole + Reinf.	TP33.306x32.462x1.6313	Reinf. 1 Compression	56.9%	Pass
24 - 23.75	Pole + Reinf.	TP33.348x33.306x1.6313	Reinf. 1 Compression	57.0%	Pass
23.75 - 23.5	Pole + Reinf.	TP33.391x33.348x1.6063	Reinf. 1 Compression	57.1%	Pass
23.5 - 18.5	Pole + Reinf.	TP34.235x33.391x1.5813	Reinf. 1 Compression	58.3%	Pass
18.5 - 13.5	Pole + Reinf.	TP35.08x34.235x1.5313	Reinf. 12 Tension Rupture	59.6%	Pass
13.5 - 8.5	Pole + Reinf.	TP35.924x35.08x1.5063	Reinf. 12 Tension Rupture	60.8%	Pass
8.5 - 3.5	Pole + Reinf.	TP36.769x35.924x1.4563	Reinf. 12 Tension Rupture	62.0%	Pass
3.5 - 0	Pole + Reinf.	TP37.36x36.769x1.4313	Reinf. 12 Tension Rupture	62.8%	Pass
				Summary	

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
			Pole	77.4%	Pass
			Reinforcement	95.6%	Pass
			Overall	**95.6%**	**Pass**

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Flange Connection	109.0	58.9	Pass
1,2	Anchor Rods	-	70.3	Pass
1,2	Base Plate	-	50.8	Pass
1,2	Base Foundation Structural	-	28.9	Pass
1,2	Base Foundation Soil Interaction	-	32.2	Pass

Structure Rating (max from all components) =	**95.6%**

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

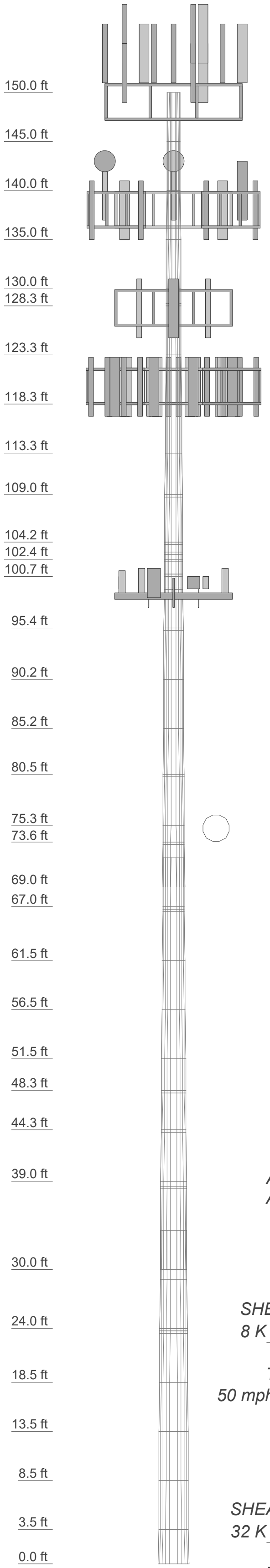
4.1) Recommendations

1) 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	5.00	12	0.2188		15.0000	15.7317	A572-50	0.2
2	5.00	12	0.2188		15.7317	16.4634		0.2
3	5.00	12	0.2188		16.4634	17.1951		0.2
4	5.00	12	0.2188		17.1951	17.9268		0.2
5	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
6	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
7	5.00	12	[illegible]		[illegible]	18.9146		0.6
8	5.00	12	0.6188		18.9146	19.6463		0.6
9	5.00	12	0.6062		19.6463	20.3780		0.6
10	4.25	12	[illegible]		[illegible]	[illegible]		0.5
11	[illegible]	12	[illegible]		[illegible]	[illegible]		0.0
12	[illegible]	12	[illegible]		[illegible]	[illegible]		0.6
13–21	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]
22	[illegible]	12	[illegible]		[illegible]	[illegible]		1.0
23	[illegible]	12	[illegible]		[illegible]	[illegible]		0.1
24	5.00	12	[illegible]		[illegible]	[illegible]		1.0
25	5.00	12	0.9750		23.8433	24.5983		1.0
26	4.67	12	[illegible]		24.5983	[illegible]		1.0
27	[illegible]	12	[illegible]		[illegible]	[illegible]		0.1
28	5.00	12	[illegible]		[illegible]	[illegible]		1.4
29	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
30	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
31	[illegible]	12	[illegible]	3.00	[illegible]	[illegible]		1.2
32	[illegible]	12	[illegible]		[illegible]	[illegible]		1.5
33–34	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]
35	5.00	12	[illegible]		[illegible]	[illegible]		1.6
36	5.00	12	1.2875		27.7877	28.5976		1.6
37	5.00	12	1.2375		28.5976	29.4075		1.6
38	5.25	12	[illegible]		[illegible]	[illegible]		1.1
39–44	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]
45	8.25	12	1.5625	4.00	[illegible]	[illegible]		3.5
46	[illegible]	12	[illegible]		[illegible]	[illegible]		2.3
47	5.00	12	[illegible]		[illegible]	[illegible]		2.3
48–49	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]
50	5.00	12	[illegible]		[illegible]	[illegible]		2.3
51	5.00	12	1.5313		34.2352	35.0797		2.3
52	5.00	12	1.5063		35.0797	35.9243		2.4
53	5.00	12	1.4563		35.9243	36.7688		2.4
54	3.50	12	1.4313		36.7688	37.3600		1.7
								43.3



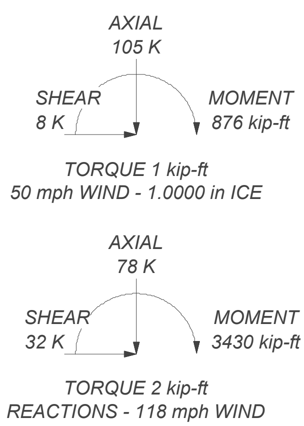
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

TOWER DESIGN NOTES

1. Tower is located in Fairfield 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 0.00 ft
8. TOWER RATING: 95.6%

ALL REACTIONS ARE FACTORED



Tower Engineering Professionals	
Tower Engineering Professionals 326 Tryon Road Raleigh, NC 27603 Phone: (919) 661-6351 FAX: (919) 661-6350	Job: **Bridgeport North (BU 841288)** Project: ***TEP No. 25567.804552*** Client: Crown Castle · Drawn by: jfisher · App'd: Code: TIA-222-H · Date: 12/29/22 · Scale: NTS Path: C:\Users\jfisher\Desktop\Temp\bridge\841288_2190498_LC7.eri · Dwg No. E-1

Tower Input Data

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

Tower is located in Fairfield County, Connecticut.
Tower base elevation above sea level: 241.00 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: 0.00 ft.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
Maximum demand-capacity ratio is: 1.05.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Horizontals	Assume Legs Pinned	Calculate Redundant Bracing Forces
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Use Moment Magnification	√ Use Clear Spans For Wind Area	SR Leg Bolts Resist Compression
√ Use Code Stress Ratios	Use Clear Spans For KL/r	All Leg Panels Have Same Allowable
√ Use Code Safety Factors - Guys	Retension Guys To Initial Tension	Offset Girt At Foundation
Escalate Ice	√ Bypass Mast Stability Checks	√ Consider Feed Line Torque
Always Use Max Kz	√ Use Azimuth Dish Coefficients	Include Angle Block Shear Check
Use Special Wind Profile	√ Project Wind Area of Appurt.	Use TIA-222-H Bracing Resist. Exemption
Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Use TIA-222-H Tension Splice Exemption
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Poles
Secondary Horizontal Braces Leg	√ Sort Capacity Reports By Component	√ Include Shear-Torsion Interaction
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Always Use Sub-Critical Flow
SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Use Top Mounted Sockets
SR Members Are Concentric	Ignore KL/ry For 60 Deg. Angle Legs	Pole Without Linear Attachments
		Pole With Shroud Or No Appurtenances
		Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	150.00-145.00	5.00	0.00	12	15.0000	15.7317	0.2188	0.8750	A572-50 (50 ksi)
L2	145.00-140.00	5.00	0.00	12	15.7317	16.4634	0.2188	0.8750	A572-50 (50 ksi)
L3	140.00-135.00	5.00	0.00	12	16.4634	17.1951	0.2188	0.8750	A572-50 (50 ksi)
L4	135.00-130.00	5.00	0.00	12	17.1951	17.9268	0.2188	0.8750	A572-50 (50 ksi)
L5	130.00-128.50	1.50	0.00	12	17.9268	18.1463	0.2188	0.8750	A572-50 (50 ksi)
L6	128.50-128.25	0.25	0.00	12	18.1463	18.1829	0.6687	2.6750	A572-50 (50 ksi)
L7	128.25-123.25	5.00	0.00	12	18.1829	18.9146	0.6438	2.5750	A572-50 (50 ksi)
L8	123.25-118.25	5.00	0.00	12	18.9146	19.6463	0.6188	2.4750	A572-50 (50 ksi)
L9	118.25-113.25	5.00	0.00	12	19.6463	20.3780	0.6062	2.4250	A572-50 (50 ksi)
L10	113.25-109.00	4.25	0.00	12	20.3780	21.0000	0.5938	2.3750	A572-50 (50 ksi)
L11	109.00-108.75	0.25	0.00	12	21.0000	21.0377	0.7250	2.9000	A572-50 (50 ksi)
L12	108.75-104.17	4.58	0.00	12	21.0377	21.7293	0.7000	2.8000	A572-50 (50 ksi)
L13	104.17-103.92	0.25	0.00	12	21.7293	21.7671	0.9750	3.9000	A572-50 (50 ksi)
L14	103.92-103.17	0.75	0.00	12	21.7671	21.8803	0.9750	3.9000	A572-50 (50 ksi)
L15	103.17-102.92	0.25	0.00	12	21.8803	21.9181	1.1250	4.5000	A572-50 (50 ksi)
L16	102.92-102.42	0.50	0.00	12	21.9181	21.9936	1.1250	4.5000	A572-50 (50 ksi)
L17	102.42-102.17	0.25	0.00	12	21.9936	22.0313	0.9375	3.7500	A572-50 (50 ksi)
L18	102.17-100.92	1.25	0.00	12	22.0313	22.2201	0.9250	3.7000	A572-50 (50 ksi)
L19	100.92-100.67	0.25	0.00	12	22.2201	22.2578	1.0250	4.1000	A572-50 (50 ksi)
L20	100.67-99.58	1.09	0.00	12	22.2578	22.4224	1.0000	4.0000	A572-50 (50 ksi)
L21	99.58-99.33	0.25	0.00	12	22.4224	22.4602	1.4000	5.6000	A572-50 (50 ksi)
L22	99.33-95.42	3.91	0.00	12	22.4602	23.0506	1.3500	5.4000	A572-50 (50 ksi)
L23	95.42-95.17	0.25	0.00	12	23.0506	23.0883	1.0500	4.2000	A572-50 (50 ksi)
L24	95.17-90.17	5.00	0.00	12	23.0883	23.8433	1.0000	4.0000	A572-50 (50 ksi)
L25	90.17-85.17	5.00	0.00	12	23.8433	24.5983	0.9750	3.9000	A572-50 (50 ksi)
L26	85.17-80.50	4.67	0.00	12	24.5983	25.3035	0.9500	3.8000	A572-50 (50 ksi)
L27	80.50-80.25	0.25	0.00	12	25.3035	25.3412	1.3000	5.2000	A572-50 (50 ksi)
L28	80.25-75.25	5.00	0.00	12	25.3412	26.0963	1.2500	5.0000	A572-50 (50 ksi)
L29	75.25-73.58	1.67	0.00	12	26.0963	26.3484	1.2500	5.0000	A572-50 (50 ksi)

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
L30	73.58-73.33	0.25	0.00	12	26.3484	26.3862	1.2250	4.9000	A572-50 (50 ksi)
L31	73.33-69.00	4.33	3.00	12	26.3862	27.0400	1.2250	4.9000	A572-50 (50 ksi)
L32	69.00-67.00	5.00	0.00	12	26.0870	26.8969	1.2875	5.1500	A572-50 (50 ksi)
L33	67.00-66.75	0.25	0.00	12	26.8969	26.9374	1.2875	5.1500	A572-50 (50 ksi)
L34	66.75-66.50	0.25	0.00	12	26.9374	26.9779	1.3625	5.4500	A572-50 (50 ksi)
L35	66.50-61.50	5.00	0.00	12	26.9779	27.7877	1.3125	5.2500	A572-50 (50 ksi)
L36	61.50-56.50	5.00	0.00	12	27.7877	28.5976	1.2875	5.1500	A572-50 (50 ksi)
L37	56.50-51.50	5.00	0.00	12	28.5976	29.4075	1.2375	4.9500	A572-50 (50 ksi)
L38	51.50-48.25	3.25	0.00	12	29.4075	29.9339	1.2125	4.8500	A572-50 (50 ksi)
L39	48.25-48.00	0.25	0.00	12	29.9339	29.9744	1.6125	6.4500	A572-50 (50 ksi)
L40	48.00-44.25	3.75	0.00	12	29.9744	30.5818	1.5625	6.2500	A572-50 (50 ksi)
L41	44.25-44.00	0.25	0.00	12	30.5818	30.6223	1.6625	6.6500	A572-50 (50 ksi)
L42	44.00-39.00	5.00	0.00	12	30.6223	31.4322	1.6125	6.4500	A572-50 (50 ksi)
L43	39.00-38.50	0.50	0.00	12	31.4322	31.5132	1.6125	6.4500	A572-50 (50 ksi)
L44	38.50-38.25	0.25	0.00	12	31.5132	31.5537	1.6125	6.4500	A572-50 (50 ksi)
L45	38.25-30.00	8.25	4.00	12	31.5537	32.8900	1.5625	6.2500	A572-50 (50 ksi)
L46	30.00-29.00	5.00	0.00	12	31.6171	32.4616	1.6813	6.7252	A572-50 (50 ksi)
L47	29.00-24.00	5.00	0.00	12	32.4616	33.3062	1.6313	6.5252	A572-50 (50 ksi)
L48	24.00-23.75	0.25	0.00	12	33.3062	33.3484	1.6313	6.5252	A572-50 (50 ksi)
L49	23.75-23.50	0.25	0.00	12	33.3484	33.3906	1.6063	6.4252	A572-50 (50 ksi)
L50	23.50-18.50	5.00	0.00	12	33.3906	34.2352	1.5813	6.3252	A572-50 (50 ksi)
L51	18.50-13.50	5.00	0.00	12	34.2352	35.0797	1.5313	6.1252	A572-50 (50 ksi)
L52	13.50-8.50	5.00	0.00	12	35.0797	35.9243	1.5063	6.0252	A572-50 (50 ksi)
L53	8.50-3.50	5.00	0.00	12	35.9243	36.7688	1.4563	5.8252	A572-50 (50 ksi)
L54	3.50-0.00	3.50		12	36.7688	37.3600	1.4313	5.7252	A572-50 (50 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	15.4520	10.4115	290.3510	5.2917	7.7700	37.3682	588.3299	5.1242	3.4337	15.697

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
	16.2095	10.9269	335.6400	5.5536	8.1490	41.1877	680.0975	5.3779	3.6298	16.594
L2	16.2095	10.9269	335.6400	5.5536	8.1490	41.1877	680.0975	5.3779	3.6298	16.594
	16.9670	11.4423	385.4093	5.8156	8.5280	45.1931	780.9437	5.6316	3.8259	17.49
L3	16.9670	11.4423	385.4093	5.8156	8.5280	45.1931	780.9437	5.6316	3.8259	17.49
	17.7245	11.9577	439.8702	6.0775	8.9071	49.3844	891.2963	5.8852	4.0220	18.386
L4	17.7245	11.9577	439.8702	6.0775	8.9071	49.3844	891.2963	5.8852	4.0220	18.386
	18.4821	12.4731	499.2341	6.3395	9.2861	53.7615	1011.5836	6.1389	4.2181	19.283
L5	18.4821	12.4731	499.2341	6.3395	9.2861	53.7615	1011.5836	6.1389	4.2181	19.283
	18.7093	12.6277	518.0309	6.4181	9.3998	55.1108	1049.6711	6.2150	4.2770	19.552
L6	18.5506	37.6358	1467.4061	6.2570	9.3998	156.1103	2973.3627	18.5232	3.0710	4.592
	18.5884	37.7146	1476.6407	6.2701	9.4188	156.7766	2992.0743	18.5620	3.0808	4.607
L7	18.5973	36.3565	1427.5348	6.2790	9.4188	151.5630	2892.5725	17.8936	3.1478	4.89
	19.3548	37.8733	1613.7555	6.5410	9.7978	164.7062	3269.9062	18.6401	3.3439	5.194
L8	19.3636	36.4523	1557.4612	6.5499	9.7978	158.9606	3155.8386	17.9407	3.4109	5.513
	20.1211	37.9101	1751.8965	6.8119	10.1768	172.1460	3549.8174	18.6582	3.6070	5.829
L9	20.1255	37.1686	1719.8898	6.8164	10.1768	169.0010	3484.9631	18.2933	3.6405	6.005
	20.8830	38.5970	1925.8929	7.0783	10.5558	182.4483	3902.3812	18.9963	3.8366	6.328
L10	20.8875	37.8251	1889.7635	7.0828	10.5558	179.0256	3829.1731	18.6164	3.8701	6.518
	21.5313	39.0142	2073.6481	7.3054	10.8780	190.6277	4201.7732	19.2016	4.0367	6.799
L11	21.4850	47.3320	2483.4900	7.2584	10.8780	228.3039	5032.2241	23.2954	3.6850	5.083
	21.5241	47.4201	2497.3879	7.2720	10.8976	229.1696	5060.3849	23.3387	3.6951	5.097
L12	21.5329	45.8413	2420.1851	7.2809	10.8976	222.0852	4903.9511	22.5617	3.7621	5.374
	22.2489	47.4001	2675.5691	7.5285	11.2558	237.7060	5421.4284	23.3289	3.9475	5.639
L13	22.1519	65.1582	3582.3878	7.4301	11.2558	318.2706	7258.8888	32.0689	3.2105	3.293
	22.1910	65.2767	3601.9713	7.4436	11.2753	319.4555	7298.5704	32.1272	3.2206	3.303
L14	22.1910	65.2767	3601.9713	7.4436	11.2753	319.4555	7298.5704	32.1272	3.2206	3.303
	22.3082	65.6323	3661.1500	7.4841	11.3340	323.0233	7418.4824	32.3022	3.2509	3.334
L15	22.2553	75.1862	4134.1218	7.4304	11.3340	364.7536	8376.8517	37.0044	2.8489	2.532
	22.2944	75.3229	4156.7204	7.4439	11.3536	366.1159	8422.6426	37.0717	2.8590	2.541
L16	22.2944	75.3229	4156.7204	7.4439	11.3536	366.1159	8422.6426	37.0717	2.8590	2.541
	22.3726	75.5964	4202.1644	7.4710	11.3927	368.8479	8514.7244	37.2063	2.8793	2.559
L17	22.4387	63.5630	3597.0433	7.5381	11.3927	315.7330	7288.5849	31.2838	3.3818	3.607
	22.4778	63.6770	3616.4247	7.5516	11.4122	316.8903	7327.8568	31.3399	3.3919	3.618
L18	22.4822	62.8652	3574.5529	7.5561	11.4122	313.2213	7243.0133	30.9403	3.4254	3.703
	22.6776	63.4274	3671.3127	7.6236	11.5100	318.9672	7439.0750	31.2170	3.4760	3.758
L19	22.6423	69.9544	4011.1681	7.5878	11.5100	348.4941	8127.7141	34.4294	3.2080	3.13
	22.6814	70.0790	4032.6389	7.6014	11.5296	349.7653	8171.2197	34.4907	3.2181	3.14
L20	22.6902	68.4502	3948.1952	7.6103	11.5296	342.4412	8000.1138	33.6891	3.2851	3.285
	22.8606	68.9802	4040.6144	7.6692	11.6148	347.8846	8187.3803	33.9500	3.3292	3.329
L21	22.7195	94.7691	5345.8649	7.5260	11.6148	460.2627	10832.1717	46.6425	2.2572	1.612
	22.7586	94.9392	5374.7154	7.5395	11.6344	461.9688	10890.6306	46.7262	2.2673	1.62
L22	22.7763	91.7659	5219.7630	7.5574	11.6344	448.6503	10576.6549	45.1644	2.4013	1.779
	23.3875	94.3324	5670.0856	7.7688	11.9402	474.8736	11489.1307	46.4275	2.5596	1.896
L23	23.4933	74.3840	4595.5078	7.8762	11.9402	384.8769	9311.7448	36.6095	3.3636	3.203
	23.5324	74.5116	4619.2043	7.8897	11.9598	386.2290	9359.7601	36.6723	3.3737	3.213
L24	23.5500	71.1244	4429.2528	7.9076	11.9598	370.3465	8974.8670	35.0053	3.5077	3.508
	24.3317	73.5555	4899.1424	8.1779	12.3508	396.6646	9926.9907	36.2018	3.7100	3.71
L25	24.3405	71.7951	4792.3639	8.1869	12.3508	388.0191	9710.6286	35.3354	3.7770	3.874
	25.1221	74.1654	5282.8683	8.4572	12.7419	414.6049	10704.5235	36.5020	3.9794	4.081
L26	25.1309	72.3402	5163.7696	8.4661	12.7419	405.2579	10463.1972	35.6037	4.0464	4.259
	25.8610	74.4974	5639.6166	8.7186	13.1072	430.2682	11427.3923	36.6653	4.2353	4.458
L27	25.7375	100.4787	7389.3951	8.5933	13.1072	563.7655	14972.9179	49.4525	3.2973	2.536
	25.7766	100.6367	7424.3136	8.6068	13.1268	565.5858	15043.6722	49.5303	3.3075	2.544
L28	25.7942	96.9673	7183.3965	8.6247	13.1268	547.2327	14555.5088	47.7243	3.4415	2.753
	26.5759	100.0062	7880.1482	8.8950	13.5179	582.9436	15967.3167	49.2200	3.6438	2.915
L29	26.5759	100.0062	7880.1482	8.8950	13.5179	582.9436	15967.3167	49.2200	3.6438	2.915
	26.8369	101.0211	8122.5236	8.9852	13.6485	595.1229	16458.4350	49.7195	3.7114	2.969
L30	26.8458	99.0993	7983.8834	8.9942	13.6485	584.9650	16177.5123	48.7737	3.7784	3.084
	26.8848	99.2482	8019.9268	9.0077	13.6680	586.7651	16250.5461	48.8470	3.7885	3.093
L31	26.8848	99.2482	8019.9268	9.0077	13.6680	586.7651	16250.5461	48.8470	3.7885	3.093
	27.5617	101.8273	8661.5237	9.2418	14.0067	618.3834	17550.5953	50.1163	3.9637	3.236
L32	27.0561	102.8125	8070.8232	8.8782	13.5131	597.2607	16353.6759	50.6012	3.5408	2.75

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
	27.3915	106.1701	8887.6369	9.1682	13.9326	637.9030	18008.7619	52.2537	3.7579	2.919
L33	27.3915	106.1701	8887.6369	9.1682	13.9326	637.9030	18008.7619	52.2537	3.7579	2.919
	27.4334	106.3380	8929.8635	9.1827	13.9536	639.9703	18094.3244	52.3363	3.7687	2.927
L34	27.4070	112.2034	9367.3963	9.1558	13.9536	671.3266	18980.8844	55.2231	3.5677	2.619
	27.4489	112.3810	9411.9624	9.1703	13.9745	673.5080	19071.1875	55.3105	3.5786	2.626
L35	27.4665	108.4683	9119.7655	9.1882	13.9745	652.5988	18479.1174	53.3848	3.7126	2.829
	28.3050	111.8910	10010.6285	9.4781	14.3941	695.4697	20284.2473	55.0694	3.9296	2.994
L36	28.3138	109.8634	9847.7944	9.4871	14.3941	684.1571	19954.3013	54.0714	3.9966	3.104
	29.1523	113.2210	10778.5517	9.7770	14.8136	727.6132	21840.2680	55.7239	4.2137	3.273
L37	29.1699	109.0233	10416.9732	9.7949	14.8136	703.2046	21107.6119	53.6579	4.3477	3.513
	30.0084	112.2505	11369.6770	10.0849	15.2331	746.3802	23038.0480	55.2463	4.5647	3.689
L38	30.0172	110.0804	11169.6720	10.0938	15.2331	733.2505	22632.7837	54.1782	4.6317	3.82
	30.5622	112.1357	11807.0655	10.2823	15.5058	761.4623	23924.3158	55.1898	4.7728	3.936
L39	30.4211	147.0520	15055.2270	10.1391	15.5058	970.9430	30505.9716	72.3745	3.7008	2.295
	30.4630	147.2622	15119.8973	10.1536	15.5268	973.7964	30637.0112	72.4780	3.7116	2.302
L40	30.4806	142.9475	14728.6862	10.1715	15.5268	948.6005	29844.3114	70.3544	3.8456	2.461
	31.1095	146.0035	15693.6656	10.3889	15.8414	990.6746	31799.6214	71.8585	4.0084	2.565
L41	31.0742	154.8125	16526.0310	10.3531	15.8414	1043.2183	33486.2192	76.1940	3.7404	2.25
	31.1161	155.0292	16595.5494	10.3676	15.8624	1046.2214	33627.0824	76.3007	3.7513	2.256
L42	31.1337	150.6263	16179.9521	10.3855	15.8624	1020.0212	32784.9695	74.1337	3.8853	2.409
	31.9722	154.8314	17573.2451	10.6755	16.2819	1079.3126	35608.1589	76.2033	4.1023	2.544
L43	31.9722	154.8314	17573.2451	10.6755	16.2819	1079.3126	35608.1589	76.2033	4.1023	2.544
	32.0560	155.2519	17716.8170	10.7045	16.3238	1085.3340	35899.0745	76.4103	4.1240	2.558
L44	32.0560	155.2519	17716.8170	10.7045	16.3238	1085.3340	35899.0745	76.4103	4.1240	2.558
	32.0980	155.4622	17788.8953	10.7189	16.3448	1088.3510	36045.1246	76.5138	4.1349	2.564
L45	32.1156	150.8932	17323.8017	10.7368	16.3448	1059.8959	35102.7189	74.2650	4.2689	2.732
	33.4990	157.6165	19744.1783	11.2152	17.0370	1158.8986	40007.0581	77.5740	4.6270	2.961
L46	32.8388	162.0660	18537.8525	10.7170	16.3777	1131.8991	37562.7151	79.7639	3.9675	2.36
	33.0137	166.6382	20151.4951	11.0194	16.8151	1198.4145	40832.3924	82.0142	4.1938	2.494
L47	33.0313	161.9452	19647.6494	11.0373	16.8151	1168.4507	39811.4645	79.7045	4.3278	2.653
	33.9056	166.3814	21306.9260	11.3396	17.2526	1234.9977	43173.6088	81.8879	4.5542	2.792
L48	33.9056	166.3814	21306.9260	11.3396	17.2526	1234.9977	43173.6088	81.8879	4.5542	2.792
	33.9494	166.6032	21392.2549	11.3547	17.2745	1238.3735	43346.5082	81.9970	4.5655	2.799
L49	33.9582	164.1793	21114.2637	11.3637	17.2745	1222.2809	42783.2225	80.8040	4.6325	2.884
	34.0019	164.3977	21198.6417	11.3788	17.2964	1225.6135	42954.1952	80.9115	4.6438	2.891
L50	34.0107	161.9663	20917.9936	11.3877	17.2964	1209.3877	42385.5262	79.7149	4.7108	2.979
	34.8850	166.2666	22628.7534	11.6901	17.7338	1276.0221	45851.9894	81.8314	4.9371	3.122
L51	34.9027	161.2559	22014.0580	11.7080	17.7338	1241.3598	44606.4497	79.3652	5.0711	3.312
	35.7770	165.4201	23763.9521	12.0103	18.1713	1307.7739	48152.2097	81.4148	5.2975	3.459
L52	35.7858	162.8407	23428.2796	12.0193	18.1713	1289.3013	47472.0461	80.1453	5.3645	3.561
	36.6602	166.9370	25241.1539	12.3216	18.6088	1356.4114	51145.4210	82.1613	5.5908	3.712
L53	36.6778	161.6302	24509.8098	12.3395	18.6088	1317.1104	49663.5196	79.5495	5.7248	3.931
	37.5522	165.5905	26355.9556	12.6419	19.0462	1383.7873	53404.3116	81.4986	5.9512	4.086
L54	37.5610	162.8631	25958.5636	12.6508	19.0462	1362.9227	52599.0877	80.1562	6.0182	4.205
	38.1730	165.5877	27283.3066	12.8625	19.3525	1409.8093	55283.3761	81.4972	6.1766	4.315

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	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
L1 150.00-145.00				1	1	1			
L2 145.00-140.00				1	1	1			
L3 140.00-135.00				1	1	1			
L4 135.00-130.00				1	1	1			
L5 130.00-128.50				1	1	1			

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	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
L6 128.50-128.25				1	1	0.866566			
L7 128.25-123.25				1	1	0.876544			
L8 123.25-118.25				1	1	0.889288			
L9 118.25-113.25				1	1	0.886814			
L10 113.25-109.00				1	1	0.88856			
L11 109.00-108.75				1	1	0.880849			
L12 108.75-104.17				1	1	0.892966			
L13 104.17-103.92				1	1	0.971053			
L14 103.92-103.17				1	1	0.967182			
L15 103.17-102.92				1	1	0.982753			
L16 102.92-102.42				1	1	0.980001			
L17 102.42-102.17				1	1	1.06563			
L18 102.17-100.92				1	1	1.07222			
L19 100.92-100.67				1	1	0.970881			
L20 100.67-99.58				1	1	0.988267			
L21 99.58-99.33				1	1	0.829123			
L22 99.33-95.42				1	1	0.839495			
L23 95.42-95.17				1	1	0.811217			
L24 95.17-90.17				1	1	0.830024			
L25 90.17-85.17				1	1	0.831393			
L26 85.17-80.50				1	1	0.835309			
L27 80.50-80.25				1	1	0.817668			
L28 80.25-75.25				1	1	0.8289			
L29 75.25-73.58				1	1	0.822581			
L30 73.58-73.33				1	1	0.837582			
L31 73.33-69.00				1	1	0.832565			
L32 69.00-67.00				1	1	0.836765			
L33 67.00-66.75				1	1	0.835827			
L34 66.75-66.50				1	1	0.8358			
L35				1	1	0.846744			

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	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
66.50-61.50									
L36				1	1	0.843995			
61.50-56.50									
L37				1	1	0.858553			
56.50-51.50									
L38				1	1	0.864155			
51.50-48.25									
L39				1	1	0.791829			
48.25-48.00									
L40				1	1	0.802841			
48.00-44.25									
L41				1	1	0.804811			
44.25-44.00									
L42				1	1	0.811102			
44.00-39.00									
L43				1	1	0.80943			
39.00-38.50									
L44				1	1	0.808598			
38.50-38.25									
L45				1	1	0.818876			
38.25-30.00									
L46				1	1	0.817385			
30.00-29.00									
L47				1	1	0.825287			
29.00-24.00									
L48				1	1	0.82452			
24.00-23.75									
L49				1	1	0.835917			
23.75-23.50									
L50				1	1	0.833167			
23.50-18.50									
L51				1	1	0.844109			
18.50-13.50									
L52 13.50-8.50				1	1	0.843058			
L53 8.50-3.50				1	1	0.856586			
L54 3.50-0.00				1	1	0.861271			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
**										
2" Flexible Conduit	B	No	Surface Ar (CaAa)	138.00 - 0.00	1	1	0.250 0.250	2.0000		0.34
128										
CU12PSM9P6XXX(1-1/2)	C	No	Surface Ar (CaAa)	128.00 - 0.00	1	1	0.250 0.250	1.6000		2.35
120										
AL7-50(1-5/8)	B	No	Surface Ar (CaAa)	120.00 - 0.00	10	5	0.500 0.500	1.9600		0.52
HB114-U6S12-XXX-LI(1-1/4)	B	No	Surface Ar (CaAa)	99.00 - 0.00	1	1	0.000 0.000	1.5400		1.70
LDF7-50A(1-5/8)	B	No	Surface Ar	99.00 - 0.00	3	2	0.000	1.9800		0.82

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
			(CaAa)				0.000			
Mods										
#20 Bar	A	No	Surface Ar (CaAa)	51.00 - 0.00	1	1	0.000 0.000	2.5000		0.00
#20 Bar	B	No	Surface Ar (CaAa)	51.00 - 0.00	1	1	-0.250 -0.250	2.5000		0.00
#20 Bar	B	No	Surface Ar (CaAa)	51.00 - 0.00	1	1	0.500 0.500	2.5000		0.00
#20 Bar	C	No	Surface Ar (CaAa)	51.00 - 0.00	1	1	0.250 0.250	2.5000		0.00
***										
(Area) CCI-65FP-065125 (H)	A	No	Surface Af (CaAa)	47.00 - 0.00	1	1	0.250 0.250	6.5000	15.5000	0.00
(Area) CCI-65FP-065125 (H)	B	No	Surface Af (CaAa)	47.00 - 0.00	1	1	0.000 0.000	6.5000	15.5000	0.00
(Area) CCI-65FP-065125 (H)	C	No	Surface Af (CaAa)	47.00 - 0.00	1	1	-0.250 -0.250	6.5000	15.5000	0.00
(Area) CCI-65FP-065125 (H)	C	No	Surface Af (CaAa)	47.00 - 0.00	1	1	0.500 0.500	6.5000	15.5000	0.00
***										
PL 1.25x5	A	No	Surface Af (CaAa)	69.00 - 47.00	1	1	0.250 0.250	5.0000	12.5000	0.00
PL 1.25x5	B	No	Surface Af (CaAa)	69.00 - 47.00	1	1	0.000 0.000	5.0000	12.5000	0.00
PL 1.25x5	C	No	Surface Af (CaAa)	69.00 - 47.00	1	1	-0.250 -0.250	5.0000	12.5000	0.00
PL 1.25x5	C	No	Surface Af (CaAa)	69.00 - 47.00	1	1	0.500 0.500	5.0000	12.5000	0.00
***										
PL 1.25x4	A	No	Surface Af (CaAa)	82.00 - 66.50	1	1	0.000 0.000	4.0000	10.5000	0.00
PL 1.25x4	B	No	Surface Af (CaAa)	82.00 - 66.50	1	1	-0.250 -0.250	4.0000	10.5000	0.00
PL 1.25x4	B	No	Surface Af (CaAa)	82.00 - 66.50	1	1	0.500 0.500	4.0000	10.5000	0.00
PL 1.25x4	C	No	Surface Af (CaAa)	82.00 - 66.50	1	1	0.250 0.250	4.0000	10.5000	0.00
***										
PL 1.25x5	C	No	Surface Af (CaAa)	109.00 - 93.17	1	1	-0.250 -0.250	5.0000	12.5000	0.00
PL 1.25x5	C	No	Surface Af (CaAa)	109.00 - 93.17	1	1	0.500 0.500	5.0000	12.5000	0.00
PL 1.25x5	B	No	Surface Af (CaAa)	103.17 - 93.17	1	1	-0.250 -0.250	5.0000	12.5000	0.00
PL 1.25x5	B	No	Surface Af (CaAa)	109.00 - 100.17	1	1	0.000 0.000	5.0000	12.5000	0.00
PL 1.25x5	A	No	Surface Af (CaAa)	109.00 - 100.17	1	1	0.250 0.250	5.0000	12.5000	0.00
***										
PL 1.25x4	A	No	Surface Af (CaAa)	130.00 - 109.00	1	1	0.250 0.250	4.0000	10.5000	0.00
PL 1.25x4	B	No	Surface Af (CaAa)	130.00 - 109.00	1	1	0.000 0.000	4.0000	10.5000	0.00
PL 1.25x4	C	No	Surface Af (CaAa)	130.00 - 109.00	1	1	-0.250 -0.250	4.0000	10.5000	0.00
PL 1.25x4	C	No	Surface Af (CaAa)	130.00 - 109.00	1	1	0.500 0.500	4.0000	10.5000	0.00
***										
PL 2x6	A	No	Surface Af (CaAa)	108.67 - 0.00	1	1	-0.250 -0.250	6.0000	16.0000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
PL 2x6	C	No	Surface Af (CaAa)	106.00 - 0.00	1	1	0.000 0.000	6.0000	16.0000	0.00
PL 2x6	B	No	Surface Af (CaAa)	108.67 - 0.00	1	1	0.250 0.250	6.0000	16.0000	0.00
PL 2x6	A	No	Surface Af (CaAa)	107.75 - 0.00	1	1	0.500 0.500	6.0000	16.0000	0.00
***										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
****149*****									
LDF7-50A(1-5/8")	C	No	No	Inside Pole	149.00 - 0.00	6	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
PWRT-604-S(1-1/8)	C	No	No	Inside Pole	149.00 - 0.00	6	No Ice	0.00	1.25
							1/2" Ice	0.00	1.25
							1" Ice	0.00	1.25
PWRT-606-S(7/8)	C	No	No	Inside Pole	149.00 - 0.00	3	No Ice	0.00	0.89
							1/2" Ice	0.00	0.89
							1" Ice	0.00	0.89
RFFT-36SM-001-xx M(3/8)	C	No	No	Inside Pole	149.00 - 0.00	2	No Ice	0.00	0.09
							1/2" Ice	0.00	0.09
							1" Ice	0.00	0.09
RFFT-48SM-001-X XX(3/8)	C	No	No	Inside Pole	149.00 - 0.00	1	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
2" Flexible Conduit	C	No	No	Inside Pole	149.00 - 0.00	15	No Ice	0.00	0.34
							1/2" Ice	0.00	0.34
							1" Ice	0.00	0.34
138									
EC4-50(1/2)	B	No	No	Inside Pole	138.00 - 0.00	2	No Ice	0.00	0.16
							1/2" Ice	0.00	0.16
							1" Ice	0.00	0.16
9207(5/16")	B	No	No	Inside Pole	138.00 - 0.00	6	No Ice	0.00	0.60
							1/2" Ice	0.00	0.60
							1" Ice	0.00	0.60
99									
LDF7-50A(1-5/8)	B	No	No	Inside Pole	99.00 - 0.00	3	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
							1" Ice	0.00	0.82
***									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	150.00-145.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.08
L2	145.00-140.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.10
L3	140.00-135.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.600	0.000	0.01
		C	0.000	0.000	0.000	0.000	0.10
L4	135.00-130.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	1.000	0.000	0.02
		C	0.000	0.000	0.000	0.000	0.10
L5	130.00-128.50	A	0.000	0.000	1.000	0.000	0.00
		B	0.000	0.000	1.300	0.000	0.01
		C	0.000	0.000	2.000	0.000	0.03
L6	128.50-128.25	A	0.000	0.000	0.167	0.000	0.00
		B	0.000	0.000	0.217	0.000	0.00
		C	0.000	0.000	0.333	0.000	0.01
L7	128.25-123.25	A	0.000	0.000	3.333	0.000	0.00
		B	0.000	0.000	4.333	0.000	0.02
		C	0.000	0.000	7.427	0.000	0.11
L8	123.25-118.25	A	0.000	0.000	3.333	0.000	0.00
		B	0.000	0.000	6.048	0.000	0.03
		C	0.000	0.000	7.467	0.000	0.11
L9	118.25-113.25	A	0.000	0.000	3.333	0.000	0.00
		B	0.000	0.000	9.233	0.000	0.05
		C	0.000	0.000	7.467	0.000	0.11
L10	113.25-109.00	A	0.000	0.000	2.833	0.000	0.00
		B	0.000	0.000	7.848	0.000	0.04
		C	0.000	0.000	6.347	0.000	0.10
L11	109.00-108.75	A	0.000	0.000	0.193	0.000	0.00
		B	0.000	0.000	0.488	0.000	0.00
		C	0.000	0.000	0.457	0.000	0.01
L12	108.75-104.17	A	0.000	0.000	11.614	0.000	0.00
		B	0.000	0.000	13.439	0.000	0.04
		C	0.000	0.000	10.196	0.000	0.10
L13	104.17-103.92	A	0.000	0.000	0.693	0.000	0.00
		B	0.000	0.000	0.738	0.000	0.00
		C	0.000	0.000	0.707	0.000	0.01
L14	103.92-103.17	A	0.000	0.000	2.079	0.000	0.00
		B	0.000	0.000	2.214	0.000	0.01
		C	0.000	0.000	2.120	0.000	0.02
L15	103.17-102.92	A	0.000	0.000	0.693	0.000	0.00
		B	0.000	0.000	0.940	0.000	0.00
		C	0.000	0.000	0.707	0.000	0.01
L16	102.92-102.42	A	0.000	0.000	1.386	0.000	0.00
		B	0.000	0.000	1.881	0.000	0.00
		C	0.000	0.000	1.413	0.000	0.01
L17	102.42-102.17	A	0.000	0.000	0.693	0.000	0.00
		B	0.000	0.000	0.940	0.000	0.00
		C	0.000	0.000	0.707	0.000	0.01
L18	102.17-100.92	A	0.000	0.000	3.465	0.000	0.00
		B	0.000	0.000	4.701	0.000	0.01
		C	0.000	0.000	3.533	0.000	0.03
L19	100.92-100.67	A	0.000	0.000	0.693	0.000	0.00
		B	0.000	0.000	0.940	0.000	0.00
		C	0.000	0.000	0.707	0.000	0.01
L20	100.67-99.58	A	0.000	0.000	2.566	0.000	0.00
		B	0.000	0.000	3.644	0.000	0.01
		C	0.000	0.000	3.081	0.000	0.02
L21	99.58-99.33	A	0.000	0.000	0.500	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	0.747	0.000	0.00
		C	0.000	0.000	0.707	0.000	0.01
L22	99.33-95.42	A	0.000	0.000	7.820	0.000	0.00
		B	0.000	0.000	13.658	0.000	0.06
		C	0.000	0.000	11.052	0.000	0.09
L23	95.42-95.17	A	0.000	0.000	0.500	0.000	0.00
		B	0.000	0.000	0.885	0.000	0.00
		C	0.000	0.000	0.707	0.000	0.01
L24	95.17-90.17	A	0.000	0.000	10.000	0.000	0.00
		B	0.000	0.000	15.269	0.000	0.08
		C	0.000	0.000	9.133	0.000	0.11
L25	90.17-85.17	A	0.000	0.000	10.000	0.000	0.00
		B	0.000	0.000	13.650	0.000	0.08
		C	0.000	0.000	5.800	0.000	0.11
L26	85.17-80.50	A	0.000	0.000	10.340	0.000	0.00
		B	0.000	0.000	14.749	0.000	0.08
		C	0.000	0.000	6.417	0.000	0.11
L27	80.50-80.25	A	0.000	0.000	0.667	0.000	0.00
		B	0.000	0.000	1.016	0.000	0.00
		C	0.000	0.000	0.457	0.000	0.01
L28	80.25-75.25	A	0.000	0.000	13.333	0.000	0.00
		B	0.000	0.000	20.317	0.000	0.08
		C	0.000	0.000	9.133	0.000	0.11
L29	75.25-73.58	A	0.000	0.000	4.453	0.000	0.00
		B	0.000	0.000	6.786	0.000	0.03
		C	0.000	0.000	3.051	0.000	0.04
L30	73.58-73.33	A	0.000	0.000	0.667	0.000	0.00
		B	0.000	0.000	1.016	0.000	0.00
		C	0.000	0.000	0.457	0.000	0.01
L31	73.33-69.00	A	0.000	0.000	11.547	0.000	0.00
		B	0.000	0.000	17.594	0.000	0.07
		C	0.000	0.000	7.909	0.000	0.10
L32	69.00-67.00	A	0.000	0.000	7.000	0.000	0.00
		B	0.000	0.000	9.793	0.000	0.03
		C	0.000	0.000	6.987	0.000	0.05
L33	67.00-66.75	A	0.000	0.000	0.875	0.000	0.00
		B	0.000	0.000	1.224	0.000	0.00
		C	0.000	0.000	0.873	0.000	0.01
L34	66.75-66.50	A	0.000	0.000	0.875	0.000	0.00
		B	0.000	0.000	1.224	0.000	0.00
		C	0.000	0.000	0.873	0.000	0.01
L35	66.50-61.50	A	0.000	0.000	14.167	0.000	0.00
		B	0.000	0.000	17.817	0.000	0.08
		C	0.000	0.000	14.133	0.000	0.11
L36	61.50-56.50	A	0.000	0.000	14.167	0.000	0.00
		B	0.000	0.000	17.817	0.000	0.08
		C	0.000	0.000	14.133	0.000	0.11
L37	56.50-51.50	A	0.000	0.000	14.167	0.000	0.00
		B	0.000	0.000	17.817	0.000	0.08
		C	0.000	0.000	14.133	0.000	0.11
L38	51.50-48.25	A	0.000	0.000	9.896	0.000	0.00
		B	0.000	0.000	12.956	0.000	0.05
		C	0.000	0.000	9.874	0.000	0.07
L39	48.25-48.00	A	0.000	0.000	0.771	0.000	0.00
		B	0.000	0.000	1.016	0.000	0.00
		C	0.000	0.000	0.769	0.000	0.01
L40	48.00-44.25	A	0.000	0.000	12.250	0.000	0.00
		B	0.000	0.000	15.925	0.000	0.06
		C	0.000	0.000	12.913	0.000	0.09
L41	44.25-44.00	A	0.000	0.000	0.833	0.000	0.00
		B	0.000	0.000	1.078	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	0.894	0.000	0.01
L42	44.00-39.00	A	0.000	0.000	16.667	0.000	0.00
		B	0.000	0.000	21.567	0.000	0.08
		C	0.000	0.000	17.883	0.000	0.11
L43	39.00-38.50	A	0.000	0.000	1.667	0.000	0.00
		B	0.000	0.000	2.157	0.000	0.01
		C	0.000	0.000	1.788	0.000	0.01
L44	38.50-38.25	A	0.000	0.000	0.833	0.000	0.00
		B	0.000	0.000	1.078	0.000	0.00
		C	0.000	0.000	0.894	0.000	0.01
L45	38.25-30.00	A	0.000	0.000	27.500	0.000	0.00
		B	0.000	0.000	35.585	0.000	0.13
		C	0.000	0.000	29.508	0.000	0.19
L46	30.00-29.00	A	0.000	0.000	3.333	0.000	0.00
		B	0.000	0.000	4.313	0.000	0.02
		C	0.000	0.000	3.577	0.000	0.02
L47	29.00-24.00	A	0.000	0.000	16.667	0.000	0.00
		B	0.000	0.000	21.567	0.000	0.08
		C	0.000	0.000	17.883	0.000	0.11
L48	24.00-23.75	A	0.000	0.000	0.833	0.000	0.00
		B	0.000	0.000	1.078	0.000	0.00
		C	0.000	0.000	0.894	0.000	0.01
L49	23.75-23.50	A	0.000	0.000	0.833	0.000	0.00
		B	0.000	0.000	1.078	0.000	0.00
		C	0.000	0.000	0.894	0.000	0.01
L50	23.50-18.50	A	0.000	0.000	16.667	0.000	0.00
		B	0.000	0.000	21.567	0.000	0.08
		C	0.000	0.000	17.883	0.000	0.11
L51	18.50-13.50	A	0.000	0.000	16.667	0.000	0.00
		B	0.000	0.000	21.567	0.000	0.08
		C	0.000	0.000	17.883	0.000	0.11
L52	13.50-8.50	A	0.000	0.000	16.667	0.000	0.00
		B	0.000	0.000	21.567	0.000	0.08
		C	0.000	0.000	17.883	0.000	0.11
L53	8.50-3.50	A	0.000	0.000	16.667	0.000	0.00
		B	0.000	0.000	21.567	0.000	0.08
		C	0.000	0.000	17.883	0.000	0.11
L54	3.50-0.00	A	0.000	0.000	11.667	0.000	0.00
		B	0.000	0.000	15.097	0.000	0.06
		C	0.000	0.000	12.518	0.000	0.08

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	150.00-145.00	A	0.987	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.08
L2	145.00-140.00	A	0.984	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.10
L3	140.00-135.00	A	0.980	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	1.188	0.000	0.02
		C		0.000	0.000	0.000	0.000	0.10
L4	135.00-130.00	A	0.977	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	1.977	0.000	0.04
		C		0.000	0.000	0.000	0.000	0.10

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L5	130.00-128.50	A	0.974	0.000	0.000	1.292	0.000	0.01
		B		0.000	0.000	1.885	0.000	0.02
		C		0.000	0.000	2.585	0.000	0.05
L6	128.50-128.25	A	0.974	0.000	0.000	0.215	0.000	0.00
		B		0.000	0.000	0.314	0.000	0.00
		C		0.000	0.000	0.431	0.000	0.01
L7	128.25-123.25	A	0.972	0.000	0.000	4.305	0.000	0.03
		B		0.000	0.000	6.277	0.000	0.07
		C		0.000	0.000	10.293	0.000	0.18
L8	123.25-118.25	A	0.968	0.000	0.000	4.301	0.000	0.03
		B		0.000	0.000	8.836	0.000	0.10
		C		0.000	0.000	10.370	0.000	0.18
L9	118.25-113.25	A	0.964	0.000	0.000	4.297	0.000	0.03
		B		0.000	0.000	13.590	0.000	0.16
		C		0.000	0.000	10.358	0.000	0.18
L10	113.25-109.00	A	0.960	0.000	0.000	3.649	0.000	0.02
		B		0.000	0.000	11.541	0.000	0.14
		C		0.000	0.000	8.794	0.000	0.15
L11	109.00-108.75	A	0.958	0.000	0.000	0.219	0.000	0.00
		B		0.000	0.000	0.683	0.000	0.01
		C		0.000	0.000	0.600	0.000	0.01
L12	108.75-104.17	A	0.956	0.000	0.000	13.629	0.000	0.09
		B		0.000	0.000	17.861	0.000	0.18
		C		0.000	0.000	13.172	0.000	0.19
L13	104.17-103.92	A	0.953	0.000	0.000	0.814	0.000	0.01
		B		0.000	0.000	0.980	0.000	0.01
		C		0.000	0.000	0.897	0.000	0.01
L14	103.92-103.17	A	0.953	0.000	0.000	2.442	0.000	0.02
		B		0.000	0.000	2.939	0.000	0.03
		C		0.000	0.000	2.692	0.000	0.03
L15	103.17-102.92	A	0.953	0.000	0.000	0.814	0.000	0.01
		B		0.000	0.000	1.207	0.000	0.01
		C		0.000	0.000	0.897	0.000	0.01
L16	102.92-102.42	A	0.952	0.000	0.000	1.627	0.000	0.01
		B		0.000	0.000	2.415	0.000	0.02
		C		0.000	0.000	1.794	0.000	0.02
L17	102.42-102.17	A	0.952	0.000	0.000	0.814	0.000	0.01
		B		0.000	0.000	1.207	0.000	0.01
		C		0.000	0.000	0.897	0.000	0.01
L18	102.17-100.92	A	0.951	0.000	0.000	4.068	0.000	0.03
		B		0.000	0.000	6.036	0.000	0.06
		C		0.000	0.000	4.484	0.000	0.06
L19	100.92-100.67	A	0.950	0.000	0.000	0.814	0.000	0.01
		B		0.000	0.000	1.207	0.000	0.01
		C		0.000	0.000	0.897	0.000	0.01
L20	100.67-99.58	A	0.950	0.000	0.000	3.031	0.000	0.02
		B		0.000	0.000	4.746	0.000	0.05
		C		0.000	0.000	3.909	0.000	0.05
L21	99.58-99.33	A	0.949	0.000	0.000	0.595	0.000	0.00
		B		0.000	0.000	0.988	0.000	0.01
		C		0.000	0.000	0.896	0.000	0.01
L22	99.33-95.42	A	0.947	0.000	0.000	9.301	0.000	0.06
		B		0.000	0.000	19.300	0.000	0.21
		C		0.000	0.000	14.015	0.000	0.18
L23	95.42-95.17	A	0.945	0.000	0.000	0.595	0.000	0.00
		B		0.000	0.000	1.256	0.000	0.01
		C		0.000	0.000	0.896	0.000	0.01
L24	95.17-90.17	A	0.942	0.000	0.000	11.885	0.000	0.07
		B		0.000	0.000	22.374	0.000	0.26
		C		0.000	0.000	11.772	0.000	0.19
L25	90.17-85.17	A	0.937	0.000	0.000	11.874	0.000	0.07

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	20.525	0.000	0.25
		C		0.000	0.000	7.674	0.000	0.16
L26	85.17-80.50	A	0.932	0.000	0.000	12.360	0.000	0.07
		B		0.000	0.000	21.702	0.000	0.24
		C		0.000	0.000	8.438	0.000	0.16
L27	80.50-80.25	A	0.929	0.000	0.000	0.806	0.000	0.00
		B		0.000	0.000	1.450	0.000	0.01
		C		0.000	0.000	0.596	0.000	0.01
L28	80.25-75.25	A	0.926	0.000	0.000	16.111	0.000	0.10
		B		0.000	0.000	28.982	0.000	0.29
		C		0.000	0.000	11.911	0.000	0.19
L29	75.25-73.58	A	0.922	0.000	0.000	5.377	0.000	0.03
		B		0.000	0.000	9.670	0.000	0.10
		C		0.000	0.000	3.974	0.000	0.06
L30	73.58-73.33	A	0.921	0.000	0.000	0.805	0.000	0.00
		B		0.000	0.000	1.447	0.000	0.01
		C		0.000	0.000	0.595	0.000	0.01
L31	73.33-69.00	A	0.918	0.000	0.000	13.931	0.000	0.08
		B		0.000	0.000	25.045	0.000	0.25
		C		0.000	0.000	10.294	0.000	0.16
L32	69.00-67.00	A	0.914	0.000	0.000	8.469	0.000	0.05
		B		0.000	0.000	13.602	0.000	0.13
		C		0.000	0.000	8.822	0.000	0.10
L33	67.00-66.75	A	0.912	0.000	0.000	1.057	0.000	0.01
		B		0.000	0.000	1.698	0.000	0.02
		C		0.000	0.000	1.101	0.000	0.01
L34	66.75-66.50	A	0.912	0.000	0.000	1.057	0.000	0.01
		B		0.000	0.000	1.698	0.000	0.02
		C		0.000	0.000	1.101	0.000	0.01
L35	66.50-61.50	A	0.908	0.000	0.000	16.891	0.000	0.10
		B		0.000	0.000	25.440	0.000	0.27
		C		0.000	0.000	17.766	0.000	0.22
L36	61.50-56.50	A	0.901	0.000	0.000	16.869	0.000	0.10
		B		0.000	0.000	25.392	0.000	0.27
		C		0.000	0.000	17.737	0.000	0.22
L37	56.50-51.50	A	0.893	0.000	0.000	16.845	0.000	0.09
		B		0.000	0.000	25.340	0.000	0.27
		C		0.000	0.000	17.705	0.000	0.22
L38	51.50-48.25	A	0.886	0.000	0.000	12.110	0.000	0.07
		B		0.000	0.000	18.791	0.000	0.19
		C		0.000	0.000	12.665	0.000	0.15
L39	48.25-48.00	A	0.883	0.000	0.000	0.947	0.000	0.01
		B		0.000	0.000	1.477	0.000	0.02
		C		0.000	0.000	0.990	0.000	0.01
L40	48.00-44.25	A	0.879	0.000	0.000	14.887	0.000	0.09
		B		0.000	0.000	22.818	0.000	0.23
		C		0.000	0.000	16.208	0.000	0.18
L41	44.25-44.00	A	0.875	0.000	0.000	1.008	0.000	0.01
		B		0.000	0.000	1.536	0.000	0.02
		C		0.000	0.000	1.113	0.000	0.01
L42	44.00-39.00	A	0.870	0.000	0.000	20.145	0.000	0.11
		B		0.000	0.000	30.679	0.000	0.30
		C		0.000	0.000	22.232	0.000	0.24
L43	39.00-38.50	A	0.864	0.000	0.000	2.012	0.000	0.01
		B		0.000	0.000	3.063	0.000	0.03
		C		0.000	0.000	2.220	0.000	0.02
L44	38.50-38.25	A	0.863	0.000	0.000	1.006	0.000	0.01
		B		0.000	0.000	1.531	0.000	0.01
		C		0.000	0.000	1.110	0.000	0.01
L45	38.25-30.00	A	0.853	0.000	0.000	33.128	0.000	0.19
		B		0.000	0.000	50.383	0.000	0.49

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	36.543	0.000	0.39
L46	30.00-29.00	A	0.841	0.000	0.000	4.016	0.000	0.02
		B		0.000	0.000	6.107	0.000	0.06
		C		0.000	0.000	4.429	0.000	0.05
L47	29.00-24.00	A	0.832	0.000	0.000	19.993	0.000	0.11
		B		0.000	0.000	30.355	0.000	0.29
		C		0.000	0.000	22.041	0.000	0.23
L48	24.00-23.75	A	0.823	0.000	0.000	0.998	0.000	0.01
		B		0.000	0.000	1.514	0.000	0.01
		C		0.000	0.000	1.100	0.000	0.01
L49	23.75-23.50	A	0.822	0.000	0.000	0.998	0.000	0.01
		B		0.000	0.000	1.514	0.000	0.01
		C		0.000	0.000	1.100	0.000	0.01
L50	23.50-18.50	A	0.812	0.000	0.000	19.916	0.000	0.11
		B		0.000	0.000	30.192	0.000	0.29
		C		0.000	0.000	21.945	0.000	0.23
L51	18.50-13.50	A	0.791	0.000	0.000	19.829	0.000	0.10
		B		0.000	0.000	30.007	0.000	0.28
		C		0.000	0.000	21.836	0.000	0.23
L52	13.50-8.50	A	0.761	0.000	0.000	19.713	0.000	0.10
		B		0.000	0.000	29.759	0.000	0.27
		C		0.000	0.000	21.691	0.000	0.22
L53	8.50-3.50	A	0.717	0.000	0.000	19.533	0.000	0.09
		B		0.000	0.000	29.378	0.000	0.26
		C		0.000	0.000	21.467	0.000	0.21
L54	3.50-0.00	A	0.634	0.000	0.000	13.441	0.000	0.06
		B		0.000	0.000	20.070	0.000	0.17
		C		0.000	0.000	14.736	0.000	0.14

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	150.00-145.00	0.0000	0.0000	0.0000	0.0000
L2	145.00-140.00	0.0000	0.0000	0.0000	0.0000
L3	140.00-135.00	0.7625	0.0000	1.0399	0.0000
L4	135.00-130.00	1.1656	0.0000	1.6104	0.0000
L5	130.00-128.50	0.9616	-1.8784	1.1534	-1.8003
L6	128.50-128.25	0.9684	-1.8924	1.1615	-1.8138
L7	128.25-123.25	0.7814	-1.5662	0.8421	-1.2715
L8	123.25-118.25	1.4070	-1.0509	1.5041	-0.7277
L9	118.25-113.25	2.3308	-0.2930	2.4773	0.0388
L10	113.25-109.00	2.3839	-0.3070	2.5289	0.0328
L11	109.00-108.75	2.2280	-0.4844	2.3751	0.0610
L12	108.75-104.17	2.3533	0.2824	2.4793	0.6120
L13	104.17-103.92	2.4026	0.6973	2.5210	0.9802
L14	103.92-103.17	2.4091	0.6990	2.5281	0.9827
L15	103.17-102.92	2.3145	-0.2356	2.4370	0.1280
L16	102.92-102.42	2.3192	-0.2363	2.4421	0.1280
L17	102.42-102.17	2.3312	-0.2377	2.4539	0.1284
L18	102.17-100.92	2.3411	-0.2391	2.4646	0.1284
L19	100.92-100.67	2.3465	-0.2401	2.4712	0.1282
L20	100.67-99.58	2.1840	0.4701	2.3360	0.7905
L21	99.58-99.33	2.0088	1.1575	2.1906	1.4212
L22	99.33-95.42	2.4660	0.8095	2.7640	0.8522
L23	95.42-95.17	2.5428	0.7904	2.8508	0.8168

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L24	95.17-90.17	3.2204	1.4426	3.5020	1.3482
L25	90.17-85.17	3.8492	2.0342	4.0998	1.8214
L26	85.17-80.50	3.1626	1.9894	3.4575	1.8018
L27	80.50-80.25	1.9769	1.8727	2.3030	1.7216
L28	80.25-75.25	1.9965	1.8938	2.3279	1.7430
L29	75.25-73.58	2.0217	1.9209	2.3596	1.7704
L30	73.58-73.33	2.0287	1.9284	2.3685	1.7781
L31	73.33-69.00	2.0458	1.9468	2.3900	1.7968
L32	69.00-67.00	1.8593	0.4625	2.1456	0.4574
L33	67.00-66.75	1.8683	0.4648	2.1561	0.4600
L34	66.75-66.50	1.8701	0.4652	2.1583	0.4605
L35	66.50-61.50	3.3494	0.2969	3.6446	0.2988
L36	61.50-56.50	3.4180	0.3020	3.7238	0.3049
L37	56.50-51.50	3.4854	0.3071	3.8018	0.3111
L38	51.50-48.25	3.3118	0.2911	3.5469	0.2901
L39	48.25-48.00	3.2989	0.2897	3.5225	0.2881
L40	48.00-44.25	3.2226	0.0054	3.4655	0.0741
L41	44.25-44.00	3.2099	-0.0915	3.4613	-0.0001
L42	44.00-39.00	3.2454	-0.0932	3.5006	-0.0007
L43	39.00-38.50	3.2789	-0.0948	3.5385	-0.0014
L44	38.50-38.25	3.2834	-0.0950	3.5437	-0.0014
L45	38.25-30.00	3.3343	-0.0975	3.6014	-0.0024
L46	30.00-29.00	3.3468	-0.0981	3.6159	-0.0027
L47	29.00-24.00	3.3837	-0.1000	3.6561	-0.0034
L48	24.00-23.75	3.4162	-0.1016	3.6926	-0.0041
L49	23.75-23.50	3.4191	-0.1017	3.6959	-0.0042
L50	23.50-18.50	3.4511	-0.1033	3.7319	-0.0048
L51	18.50-13.50	3.5116	-0.1063	3.7994	-0.0061
L52	13.50-8.50	3.5715	-0.1093	3.8652	-0.0074
L53	8.50-3.50	3.6305	-0.1122	3.9278	-0.0087
L54	3.50-0.00	3.6803	-0.1146	3.9740	-0.0102

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
L3	13	2" Flexible Conduit	135.00 - 138.00	1.0000	1.0000
L4	13	2" Flexible Conduit	130.00 - 135.00	1.0000	1.0000
L5	13	2" Flexible Conduit	128.50 - 130.00	1.0000	1.0000
L5	53	PL 1.25x4	128.50 - 130.00	1.0000	1.0000
L5	54	PL 1.25x4	128.50 - 130.00	1.0000	1.0000
L5	55	PL 1.25x4	128.50 - 130.00	1.0000	1.0000
L5	56	PL 1.25x4	128.50 - 130.00	1.0000	1.0000
L6	13	2" Flexible Conduit	128.25 - 128.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L6	53	PL 1.25x4	128.25 - 128.50	1.0000	1.0000
L6	54	PL 1.25x4	128.25 - 128.50	1.0000	1.0000
L6	55	PL 1.25x4	128.25 - 128.50	1.0000	1.0000
L6	56	PL 1.25x4	128.25 - 128.50	1.0000	1.0000
L7	13	2" Flexible Conduit	123.25 - 128.25	1.0000	1.0000
L7	17	CU12PSM9P6XXX(1-1/2)	123.25 - 128.00	1.0000	1.0000
L7	53	PL 1.25x4	123.25 - 128.25	1.0000	1.0000
L7	54	PL 1.25x4	123.25 - 128.25	1.0000	1.0000
L7	55	PL 1.25x4	123.25 - 128.25	1.0000	1.0000
L7	56	PL 1.25x4	123.25 - 128.25	1.0000	1.0000
L8	13	2" Flexible Conduit	118.25 - 123.25	1.0000	1.0000
L8	17	CU12PSM9P6XXX(1-1/2)	118.25 - 123.25	1.0000	1.0000
L8	19	AL7-50(1-5/8)	118.25 - 120.00	1.0000	1.0000
L8	53	PL 1.25x4	118.25 - 123.25	1.0000	1.0000
L8	54	PL 1.25x4	118.25 - 123.25	1.0000	1.0000
L8	55	PL 1.25x4	118.25 - 123.25	1.0000	1.0000
L8	56	PL 1.25x4	118.25 - 123.25	1.0000	1.0000
L9	13	2" Flexible Conduit	113.25 - 118.25	1.0000	1.0000
L9	17	CU12PSM9P6XXX(1-1/2)	113.25 - 118.25	1.0000	1.0000
L9	19	AL7-50(1-5/8)	113.25 - 118.25	1.0000	1.0000
L9	53	PL 1.25x4	113.25 - 118.25	1.0000	1.0000
L9	54	PL 1.25x4	113.25 - 118.25	1.0000	1.0000
L9	55	PL 1.25x4	113.25 - 118.25	1.0000	1.0000
L9	56	PL 1.25x4	113.25 - 118.25	1.0000	1.0000
L10	13	2" Flexible Conduit	109.00 - 113.25	1.0000	1.0000
L10	17	CU12PSM9P6XXX(1-1/2)	109.00 - 113.25	1.0000	1.0000
L10	19	AL7-50(1-5/8)	109.00 - 113.25	1.0000	1.0000
L10	53	PL 1.25x4	109.00 - 113.25	1.0000	1.0000
L10	54	PL 1.25x4	109.00 - 113.25	1.0000	1.0000
L10	55	PL 1.25x4	109.00 - 113.25	1.0000	1.0000
L10	56	PL 1.25x4	109.00 - 113.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L11	13	2" Flexible Conduit	108.75 - 109.00	1.0000	1.0000
L11	17	CU12PSM9P6XXX(1-1/2)	108.75 - 109.00	1.0000	1.0000
L11	19	AL7-50(1-5/8)	108.75 - 109.00	1.0000	1.0000
L11	46	PL 1.25x5	108.75 - 109.00	1.0000	1.0000
L11	47	PL 1.25x5	108.75 - 109.00	1.0000	1.0000
L11	50	PL 1.25x5	108.75 - 109.00	1.0000	1.0000
L11	51	PL 1.25x5	108.75 - 109.00	1.0000	1.0000
L12	13	2" Flexible Conduit	104.17 - 108.75	1.0000	1.0000
L12	17	CU12PSM9P6XXX(1-1/2)	104.17 - 108.75	1.0000	1.0000
L12	19	AL7-50(1-5/8)	104.17 - 108.75	1.0000	1.0000
L12	46	PL 1.25x5	104.17 - 108.75	1.0000	1.0000
L12	47	PL 1.25x5	104.17 - 108.75	1.0000	1.0000
L12	50	PL 1.25x5	104.17 - 108.75	1.0000	1.0000
L12	51	PL 1.25x5	104.17 - 108.75	1.0000	1.0000
L12	58	PL 2x6	104.17 - 108.67	1.0000	1.0000
L12	59	PL 2x6	104.17 - 106.00	1.0000	1.0000
L12	60	PL 2x6	104.17 - 108.67	1.0000	1.0000
L12	61	PL 2x6	104.17 - 107.75	1.0000	1.0000
L13	13	2" Flexible Conduit	103.92 - 104.17	1.0000	1.0000
L13	17	CU12PSM9P6XXX(1-1/2)	103.92 - 104.17	1.0000	1.0000
L13	19	AL7-50(1-5/8)	103.92 - 104.17	1.0000	1.0000
L13	46	PL 1.25x5	103.92 - 104.17	1.0000	1.0000
L13	47	PL 1.25x5	103.92 - 104.17	1.0000	1.0000
L13	50	PL 1.25x5	103.92 - 104.17	1.0000	1.0000
L13	51	PL 1.25x5	103.92 - 104.17	1.0000	1.0000
L13	58	PL 2x6	103.92 - 104.17	1.0000	1.0000
L13	59	PL 2x6	103.92 - 104.17	1.0000	1.0000
L13	60	PL 2x6	103.92 - 104.17	1.0000	1.0000
L13	61	PL 2x6	103.92 - 104.17	1.0000	1.0000
L14	13	2" Flexible Conduit	103.17 - 103.92	1.0000	1.0000
L14	17	CU12PSM9P6XXX(1-1/2)	103.17 - 103.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L14	19	AL7-50(1-5/8)	103.17 - 103.92	1.0000	1.0000
L14	46	PL 1.25x5	103.17 - 103.92	1.0000	1.0000
L14	47	PL 1.25x5	103.17 - 103.92	1.0000	1.0000
L14	50	PL 1.25x5	103.17 - 103.92	1.0000	1.0000
L14	51	PL 1.25x5	103.17 - 103.92	1.0000	1.0000
L14	58	PL 2x6	103.17 - 103.92	1.0000	1.0000
L14	59	PL 2x6	103.17 - 103.92	1.0000	1.0000
L14	60	PL 2x6	103.17 - 103.92	1.0000	1.0000
L14	61	PL 2x6	103.17 - 103.92	1.0000	1.0000
L15	13	2" Flexible Conduit	102.92 - 103.17	1.0000	1.0000
L15	17	CU12PSM9P6XXX(1-1/2)	102.92 - 103.17	1.0000	1.0000
L15	19	AL7-50(1-5/8)	102.92 - 103.17	1.0000	1.0000
L15	46	PL 1.25x5	102.92 - 103.17	1.0000	1.0000
L15	47	PL 1.25x5	102.92 - 103.17	1.0000	1.0000
L15	48	PL 1.25x5	102.92 - 103.17	1.0000	1.0000
L15	50	PL 1.25x5	102.92 - 103.17	1.0000	1.0000
L15	51	PL 1.25x5	102.92 - 103.17	1.0000	1.0000
L15	58	PL 2x6	102.92 - 103.17	1.0000	1.0000
L15	59	PL 2x6	102.92 - 103.17	1.0000	1.0000
L15	60	PL 2x6	102.92 - 103.17	1.0000	1.0000
L15	61	PL 2x6	102.92 - 103.17	1.0000	1.0000
L16	13	2" Flexible Conduit	102.42 - 102.92	1.0000	1.0000
L16	17	CU12PSM9P6XXX(1-1/2)	102.42 - 102.92	1.0000	1.0000
L16	19	AL7-50(1-5/8)	102.42 - 102.92	1.0000	1.0000
L16	46	PL 1.25x5	102.42 - 102.92	1.0000	1.0000
L16	47	PL 1.25x5	102.42 - 102.92	1.0000	1.0000
L16	48	PL 1.25x5	102.42 - 102.92	1.0000	1.0000
L16	50	PL 1.25x5	102.42 - 102.92	1.0000	1.0000
L16	51	PL 1.25x5	102.42 - 102.92	1.0000	1.0000
L16	58	PL 2x6	102.42 - 102.92	1.0000	1.0000
L16	59	PL 2x6	102.42 - 102.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L16	60	PL 2x6	102.42 - 102.92	1.0000	1.0000
L16	61	PL 2x6	102.42 - 102.92	1.0000	1.0000
L17	13	2" Flexible Conduit	102.17 - 102.42	1.0000	1.0000
L17	17	CU12PSM9P6XXX(1-1/2)	102.17 - 102.42	1.0000	1.0000
L17	19	AL7-50(1-5/8)	102.17 - 102.42	1.0000	1.0000
L17	46	PL 1.25x5	102.17 - 102.42	1.0000	1.0000
L17	47	PL 1.25x5	102.17 - 102.42	1.0000	1.0000
L17	48	PL 1.25x5	102.17 - 102.42	1.0000	1.0000
L17	50	PL 1.25x5	102.17 - 102.42	1.0000	1.0000
L17	51	PL 1.25x5	102.17 - 102.42	1.0000	1.0000
L17	58	PL 2x6	102.17 - 102.42	1.0000	1.0000
L17	59	PL 2x6	102.17 - 102.42	1.0000	1.0000
L17	60	PL 2x6	102.17 - 102.42	1.0000	1.0000
L17	61	PL 2x6	102.17 - 102.42	1.0000	1.0000
L18	13	2" Flexible Conduit	100.92 - 102.17	1.0000	1.0000
L18	17	CU12PSM9P6XXX(1-1/2)	100.92 - 102.17	1.0000	1.0000
L18	19	AL7-50(1-5/8)	100.92 - 102.17	1.0000	1.0000
L18	46	PL 1.25x5	100.92 - 102.17	1.0000	1.0000
L18	47	PL 1.25x5	100.92 - 102.17	1.0000	1.0000
L18	48	PL 1.25x5	100.92 - 102.17	1.0000	1.0000
L18	50	PL 1.25x5	100.92 - 102.17	1.0000	1.0000
L18	51	PL 1.25x5	100.92 - 102.17	1.0000	1.0000
L18	58	PL 2x6	100.92 - 102.17	1.0000	1.0000
L18	59	PL 2x6	100.92 - 102.17	1.0000	1.0000
L18	60	PL 2x6	100.92 - 102.17	1.0000	1.0000
L18	61	PL 2x6	100.92 - 102.17	1.0000	1.0000
L19	13	2" Flexible Conduit	100.67 - 100.92	1.0000	1.0000
L19	17	CU12PSM9P6XXX(1-1/2)	100.67 - 100.92	1.0000	1.0000
L19	19	AL7-50(1-5/8)	100.67 - 100.92	1.0000	1.0000
L19	46	PL 1.25x5	100.67 - 100.92	1.0000	1.0000
L19	47	PL 1.25x5	100.67 - 100.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L19	48	PL 1.25x5	100.67 - 100.92	1.0000	1.0000
L19	50	PL 1.25x5	100.67 - 100.92	1.0000	1.0000
L19	51	PL 1.25x5	100.67 - 100.92	1.0000	1.0000
L19	58	PL 2x6	100.67 - 100.92	1.0000	1.0000
L19	59	PL 2x6	100.67 - 100.92	1.0000	1.0000
L19	60	PL 2x6	100.67 - 100.92	1.0000	1.0000
L19	61	PL 2x6	100.67 - 100.92	1.0000	1.0000
L20	13	2" Flexible Conduit	99.58 - 100.67	1.0000	1.0000
L20	17	CU12PSM9P6XXX(1-1/2)	99.58 - 100.67	1.0000	1.0000
L20	19	AL7-50(1-5/8)	99.58 - 100.67	1.0000	1.0000
L20	46	PL 1.25x5	99.58 - 100.67	1.0000	1.0000
L20	47	PL 1.25x5	99.58 - 100.67	1.0000	1.0000
L20	48	PL 1.25x5	99.58 - 100.67	1.0000	1.0000
L20	50	PL 1.25x5	100.17 - 100.67	1.0000	1.0000
L20	51	PL 1.25x5	100.17 - 100.67	1.0000	1.0000
L20	58	PL 2x6	99.58 - 100.67	1.0000	1.0000
L20	59	PL 2x6	99.58 - 100.67	1.0000	1.0000
L20	60	PL 2x6	99.58 - 100.67	1.0000	1.0000
L20	61	PL 2x6	99.58 - 100.67	1.0000	1.0000
L21	13	2" Flexible Conduit	99.33 - 99.58	1.0000	1.0000
L21	17	CU12PSM9P6XXX(1-1/2)	99.33 - 99.58	1.0000	1.0000
L21	19	AL7-50(1-5/8)	99.33 - 99.58	1.0000	1.0000
L21	46	PL 1.25x5	99.33 - 99.58	1.0000	1.0000
L21	47	PL 1.25x5	99.33 - 99.58	1.0000	1.0000
L21	48	PL 1.25x5	99.33 - 99.58	1.0000	1.0000
L21	58	PL 2x6	99.33 - 99.58	1.0000	1.0000
L21	59	PL 2x6	99.33 - 99.58	1.0000	1.0000
L21	60	PL 2x6	99.33 - 99.58	1.0000	1.0000
L21	61	PL 2x6	99.33 - 99.58	1.0000	1.0000
L22	13	2" Flexible Conduit	95.42 - 99.33	1.0000	1.0000
L22	17	CU12PSM9P6XXX(1-1/2)	95.42 - 99.33	1.0000	1.0000
L22	19	AL7-50(1-5/8)	95.42 - 99.33	1.0000	1.0000
L22	23	HB114-U6S12-XXX-LI(1-1/4)	95.42 - 99.00	1.0000	1.0000
L22	24	LDF7-50A(1-5/8)	95.42 - 99.00	1.0000	1.0000
L22	46	PL 1.25x5	95.42 - 99.33	1.0000	1.0000
L22	47	PL 1.25x5	95.42 - 99.33	1.0000	1.0000
L22	48	PL 1.25x5	95.42 - 99.33	1.0000	1.0000
L22	58	PL 2x6	95.42 - 99.33	1.0000	1.0000
L22	59	PL 2x6	95.42 - 99.33	1.0000	1.0000
L22	60	PL 2x6	95.42 - 99.33	1.0000	1.0000
L22	61	PL 2x6	95.42 - 99.33	1.0000	1.0000
L23	13	2" Flexible Conduit	95.17 - 95.42	1.0000	1.0000
L23	17	CU12PSM9P6XXX(1-1/2)	95.17 - 95.42	1.0000	1.0000
L23	19	AL7-50(1-5/8)	95.17 - 95.42	1.0000	1.0000
L23	23	HB114-U6S12-XXX-LI(1-1/4)	95.17 - 95.42	1.0000	1.0000
L23	24	LDF7-50A(1-5/8)	95.17 - 95.42	1.0000	1.0000
L23	46	PL 1.25x5	95.17 - 95.42	1.0000	1.0000
L23	47	PL 1.25x5	95.17 - 95.42	1.0000	1.0000
L23	48	PL 1.25x5	95.17 - 95.42	1.0000	1.0000
L23	58	PL 2x6	95.17 - 95.42	1.0000	1.0000
L23	59	PL 2x6	95.17 - 95.42	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L23	60	PL 2x6	95.17 - 95.42	1.0000	1.0000
L23	61	PL 2x6	95.17 - 95.42	1.0000	1.0000
L24	13	2" Flexible Conduit	90.17 - 95.17	1.0000	1.0000
L24	17	CU12PSM9P6XXX(1-1/2)	90.17 - 95.17	1.0000	1.0000
L24	19	AL7-50(1-5/8)	90.17 - 95.17	1.0000	1.0000
L24	23	HB114-U6S12-XXX-LI(1-1/4)	90.17 - 95.17	1.0000	1.0000
L24	24	LDF7-50A(1-5/8)	90.17 - 95.17	1.0000	1.0000
L24	46	PL 1.25x5	93.17 - 95.17	1.0000	1.0000
L24	47	PL 1.25x5	93.17 - 95.17	1.0000	1.0000
L24	48	PL 1.25x5	93.17 - 95.17	1.0000	1.0000
L24	58	PL 2x6	90.17 - 95.17	1.0000	1.0000
L24	59	PL 2x6	90.17 - 95.17	1.0000	1.0000
L24	60	PL 2x6	90.17 - 95.17	1.0000	1.0000
L24	61	PL 2x6	90.17 - 95.17	1.0000	1.0000
L25	13	2" Flexible Conduit	85.17 - 90.17	1.0000	1.0000
L25	17	CU12PSM9P6XXX(1-1/2)	85.17 - 90.17	1.0000	1.0000
L25	19	AL7-50(1-5/8)	85.17 - 90.17	1.0000	1.0000
L25	23	HB114-U6S12-XXX-LI(1-1/4)	85.17 - 90.17	1.0000	1.0000
L25	24	LDF7-50A(1-5/8)	85.17 - 90.17	1.0000	1.0000
L25	58	PL 2x6	85.17 - 90.17	1.0000	1.0000
L25	59	PL 2x6	85.17 - 90.17	1.0000	1.0000
L25	60	PL 2x6	85.17 - 90.17	1.0000	1.0000
L25	61	PL 2x6	85.17 - 90.17	1.0000	1.0000
L26	13	2" Flexible Conduit	80.50 - 85.17	1.0000	1.0000
L26	17	CU12PSM9P6XXX(1-1/2)	80.50 - 85.17	1.0000	1.0000
L26	19	AL7-50(1-5/8)	80.50 - 85.17	1.0000	1.0000
L26	23	HB114-U6S12-XXX-LI(1-1/4)	80.50 - 85.17	1.0000	1.0000
L26	24	LDF7-50A(1-5/8)	80.50 - 85.17	1.0000	1.0000
L26	41	PL 1.25x4	80.50 - 82.00	1.0000	1.0000
L26	42	PL 1.25x4	80.50 - 82.00	1.0000	1.0000
L26	43	PL 1.25x4	80.50 - 82.00	1.0000	1.0000
L26	44	PL 1.25x4	80.50 - 82.00	1.0000	1.0000
L26	58	PL 2x6	80.50 - 85.17	1.0000	1.0000
L26	59	PL 2x6	80.50 - 85.17	1.0000	1.0000
L26	60	PL 2x6	80.50 - 85.17	1.0000	1.0000
L26	61	PL 2x6	80.50 - 85.17	1.0000	1.0000
L27	13	2" Flexible Conduit	80.25 - 80.50	1.0000	1.0000
L27	17	CU12PSM9P6XXX(1-1/2)	80.25 - 80.50	1.0000	1.0000
L27	19	AL7-50(1-5/8)	80.25 - 80.50	1.0000	1.0000
L27	23	HB114-U6S12-XXX-LI(1-1/4)	80.25 - 80.50	1.0000	1.0000
L27	24	LDF7-50A(1-5/8)	80.25 - 80.50	1.0000	1.0000
L27	41	PL 1.25x4	80.25 - 80.50	1.0000	1.0000
L27	42	PL 1.25x4	80.25 - 80.50	1.0000	1.0000
L27	43	PL 1.25x4	80.25 - 80.50	1.0000	1.0000
L27	44	PL 1.25x4	80.25 - 80.50	1.0000	1.0000
L27	58	PL 2x6	80.25 - 80.50	1.0000	1.0000
L27	59	PL 2x6	80.25 - 80.50	1.0000	1.0000
L27	60	PL 2x6	80.25 - 80.50	1.0000	1.0000
L27	61	PL 2x6	80.25 - 80.50	1.0000	1.0000
L28	13	2" Flexible Conduit	75.25 - 80.25	1.0000	1.0000
L28	17	CU12PSM9P6XXX(1-1/2)	75.25 - 80.25	1.0000	1.0000
L28	19	AL7-50(1-5/8)	75.25 - 80.25	1.0000	1.0000
L28	23	HB114-U6S12-XXX-LI(1-1/4)	75.25 - 80.25	1.0000	1.0000
L28	24	LDF7-50A(1-5/8)	75.25 - 80.25	1.0000	1.0000
L28	41	PL 1.25x4	75.25 - 80.25	1.0000	1.0000
L28	42	PL 1.25x4	75.25 - 80.25	1.0000	1.0000
L28	43	PL 1.25x4	75.25 - 80.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L28	44	PL 1.25x4	75.25 - 80.25	1.0000	1.0000
L28	58	PL 2x6	75.25 - 80.25	1.0000	1.0000
L28	59	PL 2x6	75.25 - 80.25	1.0000	1.0000
L28	60	PL 2x6	75.25 - 80.25	1.0000	1.0000
L28	61	PL 2x6	75.25 - 80.25	1.0000	1.0000
L29	13	2" Flexible Conduit	73.58 - 75.25	1.0000	1.0000
L29	17	CU12PSM9P6XXX(1-1/2)	73.58 - 75.25	1.0000	1.0000
L29	19	AL7-50(1-5/8)	73.58 - 75.25	1.0000	1.0000
L29	23	HB114-U6S12-XXX-LI(1-1/4)	73.58 - 75.25	1.0000	1.0000
L29	24	LDF7-50A(1-5/8)	73.58 - 75.25	1.0000	1.0000
L29	41	PL 1.25x4	73.58 - 75.25	1.0000	1.0000
L29	42	PL 1.25x4	73.58 - 75.25	1.0000	1.0000
L29	43	PL 1.25x4	73.58 - 75.25	1.0000	1.0000
L29	44	PL 1.25x4	73.58 - 75.25	1.0000	1.0000
L29	58	PL 2x6	73.58 - 75.25	1.0000	1.0000
L29	59	PL 2x6	73.58 - 75.25	1.0000	1.0000
L29	60	PL 2x6	73.58 - 75.25	1.0000	1.0000
L29	61	PL 2x6	73.58 - 75.25	1.0000	1.0000
L30	13	2" Flexible Conduit	73.33 - 73.58	1.0000	1.0000
L30	17	CU12PSM9P6XXX(1-1/2)	73.33 - 73.58	1.0000	1.0000
L30	19	AL7-50(1-5/8)	73.33 - 73.58	1.0000	1.0000
L30	23	HB114-U6S12-XXX-LI(1-1/4)	73.33 - 73.58	1.0000	1.0000
L30	24	LDF7-50A(1-5/8)	73.33 - 73.58	1.0000	1.0000
L30	41	PL 1.25x4	73.33 - 73.58	1.0000	1.0000
L30	42	PL 1.25x4	73.33 - 73.58	1.0000	1.0000
L30	43	PL 1.25x4	73.33 - 73.58	1.0000	1.0000
L30	44	PL 1.25x4	73.33 - 73.58	1.0000	1.0000
L30	58	PL 2x6	73.33 - 73.58	1.0000	1.0000
L30	59	PL 2x6	73.33 - 73.58	1.0000	1.0000
L30	60	PL 2x6	73.33 - 73.58	1.0000	1.0000
L30	61	PL 2x6	73.33 - 73.58	1.0000	1.0000
L31	13	2" Flexible Conduit	69.00 - 73.33	1.0000	1.0000
L31	17	CU12PSM9P6XXX(1-1/2)	69.00 - 73.33	1.0000	1.0000
L31	19	AL7-50(1-5/8)	69.00 - 73.33	1.0000	1.0000
L31	23	HB114-U6S12-XXX-LI(1-1/4)	69.00 - 73.33	1.0000	1.0000
L31	24	LDF7-50A(1-5/8)	69.00 - 73.33	1.0000	1.0000
L31	41	PL 1.25x4	69.00 - 73.33	1.0000	1.0000
L31	42	PL 1.25x4	69.00 - 73.33	1.0000	1.0000
L31	43	PL 1.25x4	69.00 - 73.33	1.0000	1.0000
L31	44	PL 1.25x4	69.00 - 73.33	1.0000	1.0000
L31	58	PL 2x6	69.00 - 73.33	1.0000	1.0000
L31	59	PL 2x6	69.00 - 73.33	1.0000	1.0000
L31	60	PL 2x6	69.00 - 73.33	1.0000	1.0000
L31	61	PL 2x6	69.00 - 73.33	1.0000	1.0000
L32	13	2" Flexible Conduit	67.00 - 69.00	1.0000	1.0000
L32	17	CU12PSM9P6XXX(1-1/2)	67.00 - 69.00	1.0000	1.0000
L32	19	AL7-50(1-5/8)	67.00 - 69.00	1.0000	1.0000
L32	23	HB114-U6S12-XXX-LI(1-1/4)	67.00 - 69.00	1.0000	1.0000
L32	24	LDF7-50A(1-5/8)	67.00 - 69.00	1.0000	1.0000
L32	36	PL 1.25x5	67.00 - 69.00	1.0000	1.0000
L32	37	PL 1.25x5	67.00 - 69.00	1.0000	1.0000
L32	38	PL 1.25x5	67.00 - 69.00	1.0000	1.0000
L32	39	PL 1.25x5	67.00 - 69.00	1.0000	1.0000
L32	41	PL 1.25x4	67.00 - 69.00	1.0000	1.0000
L32	42	PL 1.25x4	67.00 - 69.00	1.0000	1.0000
L32	43	PL 1.25x4	67.00 - 69.00	1.0000	1.0000
L32	44	PL 1.25x4	67.00 - 69.00	1.0000	1.0000
L32	58	PL 2x6	67.00 - 69.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L32	59	PL 2x6	67.00 - 69.00	1.0000	1.0000
L32	60	PL 2x6	67.00 - 69.00	1.0000	1.0000
L32	61	PL 2x6	67.00 - 69.00	1.0000	1.0000
L33	13	2" Flexible Conduit	66.75 - 67.00	1.0000	1.0000
L33	17	CU12PSM9P6XXX(1-1/2)	66.75 - 67.00	1.0000	1.0000
L33	19	AL7-50(1-5/8)	66.75 - 67.00	1.0000	1.0000
L33	23	HB114-U6S12-XXX-LI(1-1/4)	66.75 - 67.00	1.0000	1.0000
L33	24	LDF7-50A(1-5/8)	66.75 - 67.00	1.0000	1.0000
L33	36	PL 1.25x5	66.75 - 67.00	1.0000	1.0000
L33	37	PL 1.25x5	66.75 - 67.00	1.0000	1.0000
L33	38	PL 1.25x5	66.75 - 67.00	1.0000	1.0000
L33	39	PL 1.25x5	66.75 - 67.00	1.0000	1.0000
L33	41	PL 1.25x4	66.75 - 67.00	1.0000	1.0000
L33	42	PL 1.25x4	66.75 - 67.00	1.0000	1.0000
L33	43	PL 1.25x4	66.75 - 67.00	1.0000	1.0000
L33	44	PL 1.25x4	66.75 - 67.00	1.0000	1.0000
L33	58	PL 2x6	66.75 - 67.00	1.0000	1.0000
L33	59	PL 2x6	66.75 - 67.00	1.0000	1.0000
L33	60	PL 2x6	66.75 - 67.00	1.0000	1.0000
L33	61	PL 2x6	66.75 - 67.00	1.0000	1.0000
L34	13	2" Flexible Conduit	66.50 - 66.75	1.0000	1.0000
L34	17	CU12PSM9P6XXX(1-1/2)	66.50 - 66.75	1.0000	1.0000
L34	19	AL7-50(1-5/8)	66.50 - 66.75	1.0000	1.0000
L34	23	HB114-U6S12-XXX-LI(1-1/4)	66.50 - 66.75	1.0000	1.0000
L34	24	LDF7-50A(1-5/8)	66.50 - 66.75	1.0000	1.0000
L34	36	PL 1.25x5	66.50 - 66.75	1.0000	1.0000
L34	37	PL 1.25x5	66.50 - 66.75	1.0000	1.0000
L34	38	PL 1.25x5	66.50 - 66.75	1.0000	1.0000
L34	39	PL 1.25x5	66.50 - 66.75	1.0000	1.0000
L34	41	PL 1.25x4	66.50 - 66.75	1.0000	1.0000
L34	42	PL 1.25x4	66.50 - 66.75	1.0000	1.0000
L34	43	PL 1.25x4	66.50 - 66.75	1.0000	1.0000
L34	44	PL 1.25x4	66.50 - 66.75	1.0000	1.0000
L34	58	PL 2x6	66.50 - 66.75	1.0000	1.0000
L34	59	PL 2x6	66.50 - 66.75	1.0000	1.0000
L34	60	PL 2x6	66.50 - 66.75	1.0000	1.0000
L34	61	PL 2x6	66.50 - 66.75	1.0000	1.0000
L35	13	2" Flexible Conduit	61.50 - 66.50	1.0000	1.0000
L35	17	CU12PSM9P6XXX(1-1/2)	61.50 - 66.50	1.0000	1.0000
L35	19	AL7-50(1-5/8)	61.50 - 66.50	1.0000	1.0000
L35	23	HB114-U6S12-XXX-LI(1-1/4)	61.50 - 66.50	1.0000	1.0000
L35	24	LDF7-50A(1-5/8)	61.50 - 66.50	1.0000	1.0000
L35	36	PL 1.25x5	61.50 - 66.50	1.0000	1.0000
L35	37	PL 1.25x5	61.50 - 66.50	1.0000	1.0000
L35	38	PL 1.25x5	61.50 - 66.50	1.0000	1.0000
L35	39	PL 1.25x5	61.50 - 66.50	1.0000	1.0000
L35	58	PL 2x6	61.50 - 66.50	1.0000	1.0000
L35	59	PL 2x6	61.50 - 66.50	1.0000	1.0000
L35	60	PL 2x6	61.50 - 66.50	1.0000	1.0000
L35	61	PL 2x6	61.50 - 66.50	1.0000	1.0000
L36	13	2" Flexible Conduit	56.50 - 61.50	1.0000	1.0000
L36	17	CU12PSM9P6XXX(1-1/2)	56.50 - 61.50	1.0000	1.0000
L36	19	AL7-50(1-5/8)	56.50 - 61.50	1.0000	1.0000
L36	23	HB114-U6S12-XXX-LI(1-1/4)	56.50 - 61.50	1.0000	1.0000
L36	24	LDF7-50A(1-5/8)	56.50 - 61.50	1.0000	1.0000
L36	36	PL 1.25x5	56.50 - 61.50	1.0000	1.0000
L36	37	PL 1.25x5	56.50 - 61.50	1.0000	1.0000
L36	38	PL 1.25x5	56.50 - 61.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L36	39	PL 1.25x5	56.50 - 61.50	1.0000	1.0000
L36	58	PL 2x6	56.50 - 61.50	1.0000	1.0000
L36	59	PL 2x6	56.50 - 61.50	1.0000	1.0000
L36	60	PL 2x6	56.50 - 61.50	1.0000	1.0000
L36	61	PL 2x6	56.50 - 61.50	1.0000	1.0000
L37	13	2" Flexible Conduit	51.50 - 56.50	1.0000	1.0000
L37	17	CU12PSM9P6XXX(1-1/2)	51.50 - 56.50	1.0000	1.0000
L37	19	AL7-50(1-5/8)	51.50 - 56.50	1.0000	1.0000
L37	23	HB114-U6S12-XXX-LI(1-1/4)	51.50 - 56.50	1.0000	1.0000
L37	24	LDF7-50A(1-5/8)	51.50 - 56.50	1.0000	1.0000
L37	36	PL 1.25x5	51.50 - 56.50	1.0000	1.0000
L37	37	PL 1.25x5	51.50 - 56.50	1.0000	1.0000
L37	38	PL 1.25x5	51.50 - 56.50	1.0000	1.0000
L37	39	PL 1.25x5	51.50 - 56.50	1.0000	1.0000
L37	58	PL 2x6	51.50 - 56.50	1.0000	1.0000
L37	59	PL 2x6	51.50 - 56.50	1.0000	1.0000
L37	60	PL 2x6	51.50 - 56.50	1.0000	1.0000
L37	61	PL 2x6	51.50 - 56.50	1.0000	1.0000
L38	13	2" Flexible Conduit	48.25 - 51.50	1.0000	1.0000
L38	17	CU12PSM9P6XXX(1-1/2)	48.25 - 51.50	1.0000	1.0000
L38	19	AL7-50(1-5/8)	48.25 - 51.50	1.0000	1.0000
L38	23	HB114-U6S12-XXX-LI(1-1/4)	48.25 - 51.50	1.0000	1.0000
L38	24	LDF7-50A(1-5/8)	48.25 - 51.50	1.0000	1.0000
L38	26	#20 Bar	48.25 - 51.00	1.0000	1.0000
L38	27	#20 Bar	48.25 - 51.00	1.0000	1.0000
L38	28	#20 Bar	48.25 - 51.00	1.0000	1.0000
L38	29	#20 Bar	48.25 - 51.00	1.0000	1.0000
L38	36	PL 1.25x5	48.25 - 51.50	1.0000	1.0000
L38	37	PL 1.25x5	48.25 - 51.50	1.0000	1.0000
L38	38	PL 1.25x5	48.25 - 51.50	1.0000	1.0000
L38	39	PL 1.25x5	48.25 - 51.50	1.0000	1.0000
L38	58	PL 2x6	48.25 - 51.50	1.0000	1.0000
L38	59	PL 2x6	48.25 - 51.50	1.0000	1.0000
L38	60	PL 2x6	48.25 - 51.50	1.0000	1.0000
L38	61	PL 2x6	48.25 - 51.50	1.0000	1.0000
L39	13	2" Flexible Conduit	48.00 - 48.25	1.0000	1.0000
L39	17	CU12PSM9P6XXX(1-1/2)	48.00 - 48.25	1.0000	1.0000
L39	19	AL7-50(1-5/8)	48.00 - 48.25	1.0000	1.0000
L39	23	HB114-U6S12-XXX-LI(1-1/4)	48.00 - 48.25	1.0000	1.0000
L39	24	LDF7-50A(1-5/8)	48.00 - 48.25	1.0000	1.0000
L39	26	#20 Bar	48.00 - 48.25	1.0000	1.0000
L39	27	#20 Bar	48.00 - 48.25	1.0000	1.0000
L39	28	#20 Bar	48.00 - 48.25	1.0000	1.0000
L39	29	#20 Bar	48.00 - 48.25	1.0000	1.0000
L39	36	PL 1.25x5	48.00 - 48.25	1.0000	1.0000
L39	37	PL 1.25x5	48.00 - 48.25	1.0000	1.0000
L39	38	PL 1.25x5	48.00 - 48.25	1.0000	1.0000
L39	39	PL 1.25x5	48.00 - 48.25	1.0000	1.0000
L39	58	PL 2x6	48.00 - 48.25	1.0000	1.0000
L39	59	PL 2x6	48.00 - 48.25	1.0000	1.0000
L39	60	PL 2x6	48.00 - 48.25	1.0000	1.0000
L39	61	PL 2x6	48.00 - 48.25	1.0000	1.0000
L40	13	2" Flexible Conduit	44.25 - 48.00	1.0000	1.0000
L40	17	CU12PSM9P6XXX(1-1/2)	44.25 - 48.00	1.0000	1.0000
L40	19	AL7-50(1-5/8)	44.25 - 48.00	1.0000	1.0000
L40	23	HB114-U6S12-XXX-LI(1-1/4)	44.25 - 48.00	1.0000	1.0000
L40	24	LDF7-50A(1-5/8)	44.25 - 48.00	1.0000	1.0000
L40	26	#20 Bar	44.25 - 48.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L40	27	#20 Bar	44.25 - 48.00	1.0000	1.0000
L40	28	#20 Bar	44.25 - 48.00	1.0000	1.0000
L40	29	#20 Bar	44.25 - 48.00	1.0000	1.0000
L40	31	(Area) CCI-65FP-065125 (H)	44.25 - 47.00	1.0000	1.0000
L40	32	(Area) CCI-65FP-065125 (H)	44.25 - 47.00	1.0000	1.0000
L40	33	(Area) CCI-65FP-065125 (H)	44.25 - 47.00	1.0000	1.0000
L40	34	(Area) CCI-65FP-065125 (H)	44.25 - 47.00	1.0000	1.0000
L40	36	PL 1.25x5	47.00 - 48.00	1.0000	1.0000
L40	37	PL 1.25x5	47.00 - 48.00	1.0000	1.0000
L40	38	PL 1.25x5	47.00 - 48.00	1.0000	1.0000
L40	39	PL 1.25x5	47.00 - 48.00	1.0000	1.0000
L40	58	PL 2x6	44.25 - 48.00	1.0000	1.0000
L40	59	PL 2x6	44.25 - 48.00	1.0000	1.0000
L40	60	PL 2x6	44.25 - 48.00	1.0000	1.0000
L40	61	PL 2x6	44.25 - 48.00	1.0000	1.0000
L41	13	2" Flexible Conduit	44.00 - 44.25	1.0000	1.0000
L41	17	CU12PSM9P6XXX(1-1/2)	44.00 - 44.25	1.0000	1.0000
L41	19	AL7-50(1-5/8)	44.00 - 44.25	1.0000	1.0000
L41	23	HB114-U6S12-XXX-LI(1-1/4)	44.00 - 44.25	1.0000	1.0000
L41	24	LDF7-50A(1-5/8)	44.00 - 44.25	1.0000	1.0000
L41	26	#20 Bar	44.00 - 44.25	1.0000	1.0000
L41	27	#20 Bar	44.00 - 44.25	1.0000	1.0000
L41	28	#20 Bar	44.00 - 44.25	1.0000	1.0000
L41	29	#20 Bar	44.00 - 44.25	1.0000	1.0000
L41	31	(Area) CCI-65FP-065125 (H)	44.00 - 44.25	1.0000	1.0000
L41	32	(Area) CCI-65FP-065125 (H)	44.00 - 44.25	1.0000	1.0000
L41	33	(Area) CCI-65FP-065125 (H)	44.00 - 44.25	1.0000	1.0000
L41	34	(Area) CCI-65FP-065125 (H)	44.00 - 44.25	1.0000	1.0000
L41	58	PL 2x6	44.00 - 44.25	1.0000	1.0000
L41	59	PL 2x6	44.00 - 44.25	1.0000	1.0000
L41	60	PL 2x6	44.00 - 44.25	1.0000	1.0000
L41	61	PL 2x6	44.00 - 44.25	1.0000	1.0000
L42	13	2" Flexible Conduit	39.00 - 44.00	1.0000	1.0000
L42	17	CU12PSM9P6XXX(1-1/2)	39.00 - 44.00	1.0000	1.0000
L42	19	AL7-50(1-5/8)	39.00 - 44.00	1.0000	1.0000
L42	23	HB114-U6S12-XXX-LI(1-1/4)	39.00 - 44.00	1.0000	1.0000
L42	24	LDF7-50A(1-5/8)	39.00 - 44.00	1.0000	1.0000
L42	26	#20 Bar	39.00 - 44.00	1.0000	1.0000
L42	27	#20 Bar	39.00 - 44.00	1.0000	1.0000
L42	28	#20 Bar	39.00 - 44.00	1.0000	1.0000
L42	29	#20 Bar	39.00 - 44.00	1.0000	1.0000
L42	31	(Area) CCI-65FP-065125 (H)	39.00 - 44.00	1.0000	1.0000
L42	32	(Area) CCI-65FP-065125 (H)	39.00 - 44.00	1.0000	1.0000
L42	33	(Area) CCI-65FP-065125 (H)	39.00 - 44.00	1.0000	1.0000
L42	34	(Area) CCI-65FP-065125 (H)	39.00 - 44.00	1.0000	1.0000
L42	58	PL 2x6	39.00 - 44.00	1.0000	1.0000
L42	59	PL 2x6	39.00 - 44.00	1.0000	1.0000
L42	60	PL 2x6	39.00 - 44.00	1.0000	1.0000
L42	61	PL 2x6	39.00 - 44.00	1.0000	1.0000
L43	13	2" Flexible Conduit	38.50 - 39.00	1.0000	1.0000
L43	17	CU12PSM9P6XXX(1-1/2)	38.50 - 39.00	1.0000	1.0000
L43	19	AL7-50(1-5/8)	38.50 - 39.00	1.0000	1.0000
L43	23	HB114-U6S12-XXX-LI(1-1/4)	38.50 - 39.00	1.0000	1.0000
L43	24	LDF7-50A(1-5/8)	38.50 - 39.00	1.0000	1.0000
L43	26	#20 Bar	38.50 - 39.00	1.0000	1.0000
L43	27	#20 Bar	38.50 - 39.00	1.0000	1.0000
L43	28	#20 Bar	38.50 - 39.00	1.0000	1.0000
L43	29	#20 Bar	38.50 - 39.00	1.0000	1.0000
L43	31	(Area) CCI-65FP-065125 (H)	38.50 - 39.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L43	32	(Area) CCI-65FP-065125 (H)	38.50 - 39.00	1.0000	1.0000
L43	33	(Area) CCI-65FP-065125 (H)	38.50 - 39.00	1.0000	1.0000
L43	34	(Area) CCI-65FP-065125 (H)	38.50 - 39.00	1.0000	1.0000
L43	58	PL 2x6	38.50 - 39.00	1.0000	1.0000
L43	59	PL 2x6	38.50 - 39.00	1.0000	1.0000
L43	60	PL 2x6	38.50 - 39.00	1.0000	1.0000
L43	61	PL 2x6	38.50 - 39.00	1.0000	1.0000
L44	13	2" Flexible Conduit	38.25 - 38.50	1.0000	1.0000
L44	17	CU12PSM9P6XXX(1-1/2)	38.25 - 38.50	1.0000	1.0000
L44	19	AL7-50(1-5/8)	38.25 - 38.50	1.0000	1.0000
L44	23	HB114-U6S12-XXX-LI(1-1/4)	38.25 - 38.50	1.0000	1.0000
L44	24	LDF7-50A(1-5/8)	38.25 - 38.50	1.0000	1.0000
L44	26	#20 Bar	38.25 - 38.50	1.0000	1.0000
L44	27	#20 Bar	38.25 - 38.50	1.0000	1.0000
L44	28	#20 Bar	38.25 - 38.50	1.0000	1.0000
L44	29	#20 Bar	38.25 - 38.50	1.0000	1.0000
L44	31	(Area) CCI-65FP-065125 (H)	38.25 - 38.50	1.0000	1.0000
L44	32	(Area) CCI-65FP-065125 (H)	38.25 - 38.50	1.0000	1.0000
L44	33	(Area) CCI-65FP-065125 (H)	38.25 - 38.50	1.0000	1.0000
L44	34	(Area) CCI-65FP-065125 (H)	38.25 - 38.50	1.0000	1.0000
L44	58	PL 2x6	38.25 - 38.50	1.0000	1.0000
L44	59	PL 2x6	38.25 - 38.50	1.0000	1.0000
L44	60	PL 2x6	38.25 - 38.50	1.0000	1.0000
L44	61	PL 2x6	38.25 - 38.50	1.0000	1.0000
L45	13	2" Flexible Conduit	30.00 - 38.25	1.0000	1.0000
L45	17	CU12PSM9P6XXX(1-1/2)	30.00 - 38.25	1.0000	1.0000
L45	19	AL7-50(1-5/8)	30.00 - 38.25	1.0000	1.0000
L45	23	HB114-U6S12-XXX-LI(1-1/4)	30.00 - 38.25	1.0000	1.0000
L45	24	LDF7-50A(1-5/8)	30.00 - 38.25	1.0000	1.0000
L45	26	#20 Bar	30.00 - 38.25	1.0000	1.0000
L45	27	#20 Bar	30.00 - 38.25	1.0000	1.0000
L45	28	#20 Bar	30.00 - 38.25	1.0000	1.0000
L45	29	#20 Bar	30.00 - 38.25	1.0000	1.0000
L45	31	(Area) CCI-65FP-065125 (H)	30.00 - 38.25	1.0000	1.0000
L45	32	(Area) CCI-65FP-065125 (H)	30.00 - 38.25	1.0000	1.0000
L45	33	(Area) CCI-65FP-065125 (H)	30.00 - 38.25	1.0000	1.0000
L45	34	(Area) CCI-65FP-065125 (H)	30.00 - 38.25	1.0000	1.0000
L45	58	PL 2x6	30.00 - 38.25	1.0000	1.0000
L45	59	PL 2x6	30.00 - 38.25	1.0000	1.0000
L45	60	PL 2x6	30.00 - 38.25	1.0000	1.0000
L45	61	PL 2x6	30.00 - 38.25	1.0000	1.0000
L46	13	2" Flexible Conduit	29.00 - 30.00	1.0000	1.0000
L46	17	CU12PSM9P6XXX(1-1/2)	29.00 - 30.00	1.0000	1.0000
L46	19	AL7-50(1-5/8)	29.00 - 30.00	1.0000	1.0000
L46	23	HB114-U6S12-XXX-LI(1-1/4)	29.00 - 30.00	1.0000	1.0000
L46	24	LDF7-50A(1-5/8)	29.00 - 30.00	1.0000	1.0000
L46	26	#20 Bar	29.00 - 30.00	1.0000	1.0000
L46	27	#20 Bar	29.00 - 30.00	1.0000	1.0000
L46	28	#20 Bar	29.00 - 30.00	1.0000	1.0000
L46	29	#20 Bar	29.00 - 30.00	1.0000	1.0000
L46	31	(Area) CCI-65FP-065125 (H)	29.00 - 30.00	1.0000	1.0000
L46	32	(Area) CCI-65FP-065125 (H)	29.00 - 30.00	1.0000	1.0000
L46	33	(Area) CCI-65FP-065125 (H)	29.00 - 30.00	1.0000	1.0000
L46	34	(Area) CCI-65FP-065125 (H)	29.00 - 30.00	1.0000	1.0000
L46	58	PL 2x6	29.00 - 30.00	1.0000	1.0000
L46	59	PL 2x6	29.00 - 30.00	1.0000	1.0000
L46	60	PL 2x6	29.00 - 30.00	1.0000	1.0000
L46	61	PL 2x6	29.00 - 30.00	1.0000	1.0000
L47	13	2" Flexible Conduit	24.00 - 29.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L47	17	CU12PSM9P6XXX(1-1/2)	24.00 - 29.00	1.0000	1.0000
L47	19	AL7-50(1-5/8)	24.00 - 29.00	1.0000	1.0000
L47	23	HB114-U6S12-XXX-LI(1-1/4)	24.00 - 29.00	1.0000	1.0000
L47	24	LDF7-50A(1-5/8)	24.00 - 29.00	1.0000	1.0000
L47	26	#20 Bar	24.00 - 29.00	1.0000	1.0000
L47	27	#20 Bar	24.00 - 29.00	1.0000	1.0000
L47	28	#20 Bar	24.00 - 29.00	1.0000	1.0000
L47	29	#20 Bar	24.00 - 29.00	1.0000	1.0000
L47	31	(Area) CCI-65FP-065125 (H)	24.00 - 29.00	1.0000	1.0000
L47	32	(Area) CCI-65FP-065125 (H)	24.00 - 29.00	1.0000	1.0000
L47	33	(Area) CCI-65FP-065125 (H)	24.00 - 29.00	1.0000	1.0000
L47	34	(Area) CCI-65FP-065125 (H)	24.00 - 29.00	1.0000	1.0000
L47	58	PL 2x6	24.00 - 29.00	1.0000	1.0000
L47	59	PL 2x6	24.00 - 29.00	1.0000	1.0000
L47	60	PL 2x6	24.00 - 29.00	1.0000	1.0000
L47	61	PL 2x6	24.00 - 29.00	1.0000	1.0000
L48	13	2" Flexible Conduit	23.75 - 24.00	1.0000	1.0000
L48	17	CU12PSM9P6XXX(1-1/2)	23.75 - 24.00	1.0000	1.0000
L48	19	AL7-50(1-5/8)	23.75 - 24.00	1.0000	1.0000
L48	23	HB114-U6S12-XXX-LI(1-1/4)	23.75 - 24.00	1.0000	1.0000
L48	24	LDF7-50A(1-5/8)	23.75 - 24.00	1.0000	1.0000
L48	26	#20 Bar	23.75 - 24.00	1.0000	1.0000
L48	27	#20 Bar	23.75 - 24.00	1.0000	1.0000
L48	28	#20 Bar	23.75 - 24.00	1.0000	1.0000
L48	29	#20 Bar	23.75 - 24.00	1.0000	1.0000
L48	31	(Area) CCI-65FP-065125 (H)	23.75 - 24.00	1.0000	1.0000
L48	32	(Area) CCI-65FP-065125 (H)	23.75 - 24.00	1.0000	1.0000
L48	33	(Area) CCI-65FP-065125 (H)	23.75 - 24.00	1.0000	1.0000
L48	34	(Area) CCI-65FP-065125 (H)	23.75 - 24.00	1.0000	1.0000
L48	58	PL 2x6	23.75 - 24.00	1.0000	1.0000
L48	59	PL 2x6	23.75 - 24.00	1.0000	1.0000
L48	60	PL 2x6	23.75 - 24.00	1.0000	1.0000
L48	61	PL 2x6	23.75 - 24.00	1.0000	1.0000
L49	13	2" Flexible Conduit	23.50 - 23.75	1.0000	1.0000
L49	17	CU12PSM9P6XXX(1-1/2)	23.50 - 23.75	1.0000	1.0000
L49	19	AL7-50(1-5/8)	23.50 - 23.75	1.0000	1.0000
L49	23	HB114-U6S12-XXX-LI(1-1/4)	23.50 - 23.75	1.0000	1.0000
L49	24	LDF7-50A(1-5/8)	23.50 - 23.75	1.0000	1.0000
L49	26	#20 Bar	23.50 - 23.75	1.0000	1.0000
L49	27	#20 Bar	23.50 - 23.75	1.0000	1.0000
L49	28	#20 Bar	23.50 - 23.75	1.0000	1.0000
L49	29	#20 Bar	23.50 - 23.75	1.0000	1.0000
L49	31	(Area) CCI-65FP-065125 (H)	23.50 - 23.75	1.0000	1.0000
L49	32	(Area) CCI-65FP-065125 (H)	23.50 - 23.75	1.0000	1.0000
L49	33	(Area) CCI-65FP-065125 (H)	23.50 - 23.75	1.0000	1.0000
L49	34	(Area) CCI-65FP-065125 (H)	23.50 - 23.75	1.0000	1.0000
L49	58	PL 2x6	23.50 - 23.75	1.0000	1.0000
L49	59	PL 2x6	23.50 - 23.75	1.0000	1.0000
L49	60	PL 2x6	23.50 - 23.75	1.0000	1.0000
L49	61	PL 2x6	23.50 - 23.75	1.0000	1.0000
L50	13	2" Flexible Conduit	18.50 - 23.50	1.0000	1.0000
L50	17	CU12PSM9P6XXX(1-1/2)	18.50 - 23.50	1.0000	1.0000
L50	19	AL7-50(1-5/8)	18.50 - 23.50	1.0000	1.0000
L50	23	HB114-U6S12-XXX-LI(1-1/4)	18.50 - 23.50	1.0000	1.0000
L50	24	LDF7-50A(1-5/8)	18.50 - 23.50	1.0000	1.0000
L50	26	#20 Bar	18.50 - 23.50	1.0000	1.0000
L50	27	#20 Bar	18.50 - 23.50	1.0000	1.0000
L50	28	#20 Bar	18.50 - 23.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L50	29	#20 Bar	18.50 - 23.50	1.0000	1.0000
L50	31	(Area) CCI-65FP-065125 (H)	18.50 - 23.50	1.0000	1.0000
L50	32	(Area) CCI-65FP-065125 (H)	18.50 - 23.50	1.0000	1.0000
L50	33	(Area) CCI-65FP-065125 (H)	18.50 - 23.50	1.0000	1.0000
L50	34	(Area) CCI-65FP-065125 (H)	18.50 - 23.50	1.0000	1.0000
L50	58	PL 2x6	18.50 - 23.50	1.0000	1.0000
L50	59	PL 2x6	18.50 - 23.50	1.0000	1.0000
L50	60	PL 2x6	18.50 - 23.50	1.0000	1.0000
L50	61	PL 2x6	18.50 - 23.50	1.0000	1.0000
L51	13	2" Flexible Conduit	13.50 - 18.50	1.0000	1.0000
L51	17	CU12PSM9P6XXX(1-1/2)	13.50 - 18.50	1.0000	1.0000
L51	19	AL7-50(1-5/8)	13.50 - 18.50	1.0000	1.0000
L51	23	HB114-U6S12-XXX-LI(1-1/4)	13.50 - 18.50	1.0000	1.0000
L51	24	LDF7-50A(1-5/8)	13.50 - 18.50	1.0000	1.0000
L51	26	#20 Bar	13.50 - 18.50	1.0000	1.0000
L51	27	#20 Bar	13.50 - 18.50	1.0000	1.0000
L51	28	#20 Bar	13.50 - 18.50	1.0000	1.0000
L51	29	#20 Bar	13.50 - 18.50	1.0000	1.0000
L51	31	(Area) CCI-65FP-065125 (H)	13.50 - 18.50	1.0000	1.0000
L51	32	(Area) CCI-65FP-065125 (H)	13.50 - 18.50	1.0000	1.0000
L51	33	(Area) CCI-65FP-065125 (H)	13.50 - 18.50	1.0000	1.0000
L51	34	(Area) CCI-65FP-065125 (H)	13.50 - 18.50	1.0000	1.0000
L51	58	PL 2x6	13.50 - 18.50	1.0000	1.0000
L51	59	PL 2x6	13.50 - 18.50	1.0000	1.0000
L51	60	PL 2x6	13.50 - 18.50	1.0000	1.0000
L51	61	PL 2x6	13.50 - 18.50	1.0000	1.0000
L52	13	2" Flexible Conduit	8.50 - 13.50	1.0000	1.0000
L52	17	CU12PSM9P6XXX(1-1/2)	8.50 - 13.50	1.0000	1.0000
L52	19	AL7-50(1-5/8)	8.50 - 13.50	1.0000	1.0000
L52	23	HB114-U6S12-XXX-LI(1-1/4)	8.50 - 13.50	1.0000	1.0000
L52	24	LDF7-50A(1-5/8)	8.50 - 13.50	1.0000	1.0000
L52	26	#20 Bar	8.50 - 13.50	1.0000	1.0000
L52	27	#20 Bar	8.50 - 13.50	1.0000	1.0000
L52	28	#20 Bar	8.50 - 13.50	1.0000	1.0000
L52	29	#20 Bar	8.50 - 13.50	1.0000	1.0000
L52	31	(Area) CCI-65FP-065125 (H)	8.50 - 13.50	1.0000	1.0000
L52	32	(Area) CCI-65FP-065125 (H)	8.50 - 13.50	1.0000	1.0000
L52	33	(Area) CCI-65FP-065125 (H)	8.50 - 13.50	1.0000	1.0000
L52	34	(Area) CCI-65FP-065125 (H)	8.50 - 13.50	1.0000	1.0000
L52	58	PL 2x6	8.50 - 13.50	1.0000	1.0000
L52	59	PL 2x6	8.50 - 13.50	1.0000	1.0000
L52	60	PL 2x6	8.50 - 13.50	1.0000	1.0000
L52	61	PL 2x6	8.50 - 13.50	1.0000	1.0000
L53	13	2" Flexible Conduit	3.50 - 8.50	1.0000	1.0000
L53	17	CU12PSM9P6XXX(1-1/2)	3.50 - 8.50	1.0000	1.0000
L53	19	AL7-50(1-5/8)	3.50 - 8.50	1.0000	1.0000
L53	23	HB114-U6S12-XXX-LI(1-1/4)	3.50 - 8.50	1.0000	1.0000
L53	24	LDF7-50A(1-5/8)	3.50 - 8.50	1.0000	1.0000
L53	26	#20 Bar	3.50 - 8.50	1.0000	1.0000
L53	27	#20 Bar	3.50 - 8.50	1.0000	1.0000
L53	28	#20 Bar	3.50 - 8.50	1.0000	1.0000
L53	29	#20 Bar	3.50 - 8.50	1.0000	1.0000
L53	31	(Area) CCI-65FP-065125 (H)	3.50 - 8.50	1.0000	1.0000
L53	32	(Area) CCI-65FP-065125 (H)	3.50 - 8.50	1.0000	1.0000
L53	33	(Area) CCI-65FP-065125 (H)	3.50 - 8.50	1.0000	1.0000
L53	34	(Area) CCI-65FP-065125 (H)	3.50 - 8.50	1.0000	1.0000
L53	58	PL 2x6	3.50 - 8.50	1.0000	1.0000
L53	59	PL 2x6	3.50 - 8.50	1.0000	1.0000
L53	60	PL 2x6	3.50 - 8.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L53	61	PL 2x6	3.50 - 8.50	1.0000	1.0000
L54	13	2" Flexible Conduit	0.00 - 3.50	1.0000	1.0000
L54	17	CU12PSM9P6XXX(1-1/2)	0.00 - 3.50	1.0000	1.0000
L54	19	AL7-50(1-5/8)	0.00 - 3.50	1.0000	1.0000
L54	23	HB114-U6S12-XXX-LI(1-1/4)	0.00 - 3.50	1.0000	1.0000
L54	24	LDF7-50A(1-5/8)	0.00 - 3.50	1.0000	1.0000
L54	26	#20 Bar	0.00 - 3.50	1.0000	1.0000
L54	27	#20 Bar	0.00 - 3.50	1.0000	1.0000
L54	28	#20 Bar	0.00 - 3.50	1.0000	1.0000
L54	29	#20 Bar	0.00 - 3.50	1.0000	1.0000
L54	31	(Area) CCI-65FP-065125 (H)	0.00 - 3.50	1.0000	1.0000
L54	32	(Area) CCI-65FP-065125 (H)	0.00 - 3.50	1.0000	1.0000
L54	33	(Area) CCI-65FP-065125 (H)	0.00 - 3.50	1.0000	1.0000
L54	34	(Area) CCI-65FP-065125 (H)	0.00 - 3.50	1.0000	1.0000
L54	58	PL 2x6	0.00 - 3.50	1.0000	1.0000
L54	59	PL 2x6	0.00 - 3.50	1.0000	1.0000
L54	60	PL 2x6	0.00 - 3.50	1.0000	1.0000
L54	61	PL 2x6	0.00 - 3.50	1.0000	1.0000

Effective Width of Flat Linear Attachments / Feed Lines

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L5	53	PL 1.25x4	128.50 - 130.00	Auto	0.0000
L5	54	PL 1.25x4	128.50 - 130.00	Auto	0.0000
L5	55	PL 1.25x4	128.50 - 130.00	Auto	0.0000
L5	56	PL 1.25x4	128.50 - 130.00	Auto	0.0000
L6	53	PL 1.25x4	128.25 - 128.50	Auto	0.2310
L6	54	PL 1.25x4	128.25 - 128.50	Auto	0.2310
L6	55	PL 1.25x4	128.25 - 128.50	Auto	0.2310
L6	56	PL 1.25x4	128.25 - 128.50	Auto	0.2310
L7	53	PL 1.25x4	123.25 - 128.25	Auto	0.1885
L7	54	PL 1.25x4	123.25 - 128.25	Auto	0.1885
L7	55	PL 1.25x4	123.25 - 128.25	Auto	0.1885
L7	56	PL 1.25x4	123.25 - 128.25	Auto	0.1885
L8	53	PL 1.25x4	118.25 - 123.25	Auto	0.1228
L8	54	PL 1.25x4	118.25 - 123.25	Auto	0.1228
L8	55	PL 1.25x4	118.25 -	Auto	0.1228

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
			123.25		
L8	56	PL 1.25x4	118.25 - 123.25	Auto	0.1228
L9	53	PL 1.25x4	113.25 - 118.25	Auto	0.0654
L9	54	PL 1.25x4	113.25 - 118.25	Auto	0.0654
L9	55	PL 1.25x4	113.25 - 118.25	Auto	0.0654
L9	56	PL 1.25x4	113.25 - 118.25	Auto	0.0654
L10	53	PL 1.25x4	109.00 - 113.25	Auto	0.0127
L10	54	PL 1.25x4	109.00 - 113.25	Auto	0.0127
L10	55	PL 1.25x4	109.00 - 113.25	Auto	0.0127
L10	56	PL 1.25x4	109.00 - 113.25	Auto	0.0127
L11	46	PL 1.25x5	108.75 - 109.00	Auto	0.2620
L11	47	PL 1.25x5	108.75 - 109.00	Auto	0.2620
L11	50	PL 1.25x5	108.75 - 109.00	Auto	0.2620
L11	51	PL 1.25x5	108.75 - 109.00	Auto	0.2620
L12	46	PL 1.25x5	104.17 - 108.75	Auto	0.2290
L12	47	PL 1.25x5	104.17 - 108.75	Auto	0.2290
L12	50	PL 1.25x5	104.17 - 108.75	Auto	0.2290
L12	51	PL 1.25x5	104.17 - 108.75	Auto	0.2290
L12	58	PL 2x6	104.17 - 108.67	Auto	0.3573
L12	59	PL 2x6	104.17 - 106.00	Auto	0.3483
L12	60	PL 2x6	104.17 - 108.67	Auto	0.3573
L12	61	PL 2x6	104.17 - 107.75	Auto	0.3542
L13	46	PL 1.25x5	103.92 - 104.17	Auto	0.3569
L13	47	PL 1.25x5	103.92 - 104.17	Auto	0.3569
L13	50	PL 1.25x5	103.92 - 104.17	Auto	0.3569
L13	51	PL 1.25x5	103.92 - 104.17	Auto	0.3569
L13	58	PL 2x6	103.92 - 104.17	Auto	0.4641
L13	59	PL 2x6	103.92 - 104.17	Auto	0.4641
L13	60	PL 2x6	103.92 - 104.17	Auto	0.4641
L13	61	PL 2x6	103.92 - 104.17	Auto	0.4641
L14	46	PL 1.25x5	103.17 - 103.92	Auto	0.3528

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L14	47	PL 1.25x5	103.17 - 103.92	Auto	0.3528
L14	50	PL 1.25x5	103.17 - 103.92	Auto	0.3528
L14	51	PL 1.25x5	103.17 - 103.92	Auto	0.3528
L14	58	PL 2x6	103.17 - 103.92	Auto	0.4607
L14	59	PL 2x6	103.17 - 103.92	Auto	0.4607
L14	60	PL 2x6	103.17 - 103.92	Auto	0.4607
L14	61	PL 2x6	103.17 - 103.92	Auto	0.4607
L15	46	PL 1.25x5	102.92 - 103.17	Auto	0.4292
L15	47	PL 1.25x5	102.92 - 103.17	Auto	0.4292
L15	48	PL 1.25x5	102.92 - 103.17	Auto	0.4292
L15	50	PL 1.25x5	102.92 - 103.17	Auto	0.4292
L15	51	PL 1.25x5	102.92 - 103.17	Auto	0.4292
L15	58	PL 2x6	102.92 - 103.17	Auto	0.5243
L15	59	PL 2x6	102.92 - 103.17	Auto	0.5243
L15	60	PL 2x6	102.92 - 103.17	Auto	0.5243
L15	61	PL 2x6	102.92 - 103.17	Auto	0.5243
L16	46	PL 1.25x5	102.42 - 102.92	Auto	0.4262
L16	47	PL 1.25x5	102.42 - 102.92	Auto	0.4262
L16	48	PL 1.25x5	102.42 - 102.92	Auto	0.4262
L16	50	PL 1.25x5	102.42 - 102.92	Auto	0.4262
L16	51	PL 1.25x5	102.42 - 102.92	Auto	0.4262
L16	58	PL 2x6	102.42 - 102.92	Auto	0.5218
L16	59	PL 2x6	102.42 - 102.92	Auto	0.5218
L16	60	PL 2x6	102.42 - 102.92	Auto	0.5218
L16	61	PL 2x6	102.42 - 102.92	Auto	0.5218
L17	46	PL 1.25x5	102.17 - 102.42	Auto	0.3226
L17	47	PL 1.25x5	102.17 - 102.42	Auto	0.3226
L17	48	PL 1.25x5	102.17 - 102.42	Auto	0.3226
L17	50	PL 1.25x5	102.17 - 102.42	Auto	0.3226
L17	51	PL 1.25x5	102.17 - 102.42	Auto	0.3226
L17	58	PL 2x6	102.17 -	Auto	0.4355

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
			102.42		
L17	59	PL 2x6	102.17 - 102.42	Auto	0.4355
L17	60	PL 2x6	102.17 - 102.42	Auto	0.4355
L17	61	PL 2x6	102.17 - 102.42	Auto	0.4355
L18	46	PL 1.25x5	100.92 - 102.17	Auto	0.3099
L18	47	PL 1.25x5	100.92 - 102.17	Auto	0.3099
L18	48	PL 1.25x5	100.92 - 102.17	Auto	0.3099
L18	50	PL 1.25x5	100.92 - 102.17	Auto	0.3099
L18	51	PL 1.25x5	100.92 - 102.17	Auto	0.3099
L18	58	PL 2x6	100.92 - 102.17	Auto	0.4249
L18	59	PL 2x6	100.92 - 102.17	Auto	0.4249
L18	60	PL 2x6	100.92 - 102.17	Auto	0.4249
L18	61	PL 2x6	100.92 - 102.17	Auto	0.4249
L19	46	PL 1.25x5	100.67 - 100.92	Auto	0.3574
L19	47	PL 1.25x5	100.67 - 100.92	Auto	0.3574
L19	48	PL 1.25x5	100.67 - 100.92	Auto	0.3574
L19	50	PL 1.25x5	100.67 - 100.92	Auto	0.3574
L19	51	PL 1.25x5	100.67 - 100.92	Auto	0.3574
L19	58	PL 2x6	100.67 - 100.92	Auto	0.4645
L19	59	PL 2x6	100.67 - 100.92	Auto	0.4645
L19	60	PL 2x6	100.67 - 100.92	Auto	0.4645
L19	61	PL 2x6	100.67 - 100.92	Auto	0.4645
L20	46	PL 1.25x5	99.58 - 100.67	Auto	0.3386
L20	47	PL 1.25x5	99.58 - 100.67	Auto	0.3386
L20	48	PL 1.25x5	99.58 - 100.67	Auto	0.3386
L20	50	PL 1.25x5	100.17 - 100.67	Auto	0.3410
L20	51	PL 1.25x5	100.17 - 100.67	Auto	0.3410
L20	58	PL 2x6	99.58 - 100.67	Auto	0.4488
L20	59	PL 2x6	99.58 - 100.67	Auto	0.4488
L20	60	PL 2x6	99.58 - 100.67	Auto	0.4488
L20	61	PL 2x6	99.58 - 100.67	Auto	0.4488
L21	46	PL 1.25x5	99.33 - 99.58	Auto	0.5475
L21	47	PL 1.25x5	99.33 - 99.58	Auto	0.5475
L21	48	PL 1.25x5	99.33 - 99.58	Auto	0.5475
L21	58	PL 2x6	99.33 - 99.58	Auto	0.6230
L21	59	PL 2x6	99.33 - 99.58	Auto	0.6230
L21	60	PL 2x6	99.33 - 99.58	Auto	0.6230
L21	61	PL 2x6	99.33 - 99.58	Auto	0.6230

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L22	46	PL 1.25x5	95.42 - 99.33	Auto	0.5039
L22	47	PL 1.25x5	95.42 - 99.33	Auto	0.5039
L22	48	PL 1.25x5	95.42 - 99.33	Auto	0.5039
L22	58	PL 2x6	95.42 - 99.33	Auto	0.5866
L22	59	PL 2x6	95.42 - 99.33	Auto	0.5866
L22	60	PL 2x6	95.42 - 99.33	Auto	0.5866
L22	61	PL 2x6	95.42 - 99.33	Auto	0.5866
L23	46	PL 1.25x5	95.17 - 95.42	Auto	0.3263
L23	47	PL 1.25x5	95.17 - 95.42	Auto	0.3263
L23	48	PL 1.25x5	95.17 - 95.42	Auto	0.3263
L23	58	PL 2x6	95.17 - 95.42	Auto	0.4386
L23	59	PL 2x6	95.17 - 95.42	Auto	0.4386
L23	60	PL 2x6	95.17 - 95.42	Auto	0.4386
L23	61	PL 2x6	95.17 - 95.42	Auto	0.4386
L24	46	PL 1.25x5	93.17 - 95.17	Auto	0.2904
L24	47	PL 1.25x5	93.17 - 95.17	Auto	0.2904
L24	48	PL 1.25x5	93.17 - 95.17	Auto	0.2904
L24	58	PL 2x6	90.17 - 95.17	Auto	0.3985
L24	59	PL 2x6	90.17 - 95.17	Auto	0.3985
L24	60	PL 2x6	90.17 - 95.17	Auto	0.3985
L24	61	PL 2x6	90.17 - 95.17	Auto	0.3985
L25	58	PL 2x6	85.17 - 90.17	Auto	0.3536
L25	59	PL 2x6	85.17 - 90.17	Auto	0.3536
L25	60	PL 2x6	85.17 - 90.17	Auto	0.3536
L25	61	PL 2x6	85.17 - 90.17	Auto	0.3536
L26	41	PL 1.25x4	80.50 - 82.00	Auto	0.0000
L26	42	PL 1.25x4	80.50 - 82.00	Auto	0.0000
L26	43	PL 1.25x4	80.50 - 82.00	Auto	0.0000
L26	44	PL 1.25x4	80.50 - 82.00	Auto	0.0000
L26	58	PL 2x6	80.50 - 85.17	Auto	0.3099
L26	59	PL 2x6	80.50 - 85.17	Auto	0.3099
L26	60	PL 2x6	80.50 - 85.17	Auto	0.3099
L26	61	PL 2x6	80.50 - 85.17	Auto	0.3099
L27	41	PL 1.25x4	80.25 - 80.50	Auto	0.1744
L27	42	PL 1.25x4	80.25 - 80.50	Auto	0.1744
L27	43	PL 1.25x4	80.25 - 80.50	Auto	0.1744
L27	44	PL 1.25x4	80.25 - 80.50	Auto	0.1744
L27	58	PL 2x6	80.25 - 80.50	Auto	0.4496
L27	59	PL 2x6	80.25 - 80.50	Auto	0.4496
L27	60	PL 2x6	80.25 - 80.50	Auto	0.4496
L27	61	PL 2x6	80.25 - 80.50	Auto	0.4496
L28	41	PL 1.25x4	75.25 - 80.25	Auto	0.1143
L28	42	PL 1.25x4	75.25 - 80.25	Auto	0.1143
L28	43	PL 1.25x4	75.25 - 80.25	Auto	0.1143
L28	44	PL 1.25x4	75.25 - 80.25	Auto	0.1143
L28	58	PL 2x6	75.25 - 80.25	Auto	0.4096
L28	59	PL 2x6	75.25 - 80.25	Auto	0.4096
L28	60	PL 2x6	75.25 - 80.25	Auto	0.4096
L28	61	PL 2x6	75.25 - 80.25	Auto	0.4096
L29	41	PL 1.25x4	73.58 - 75.25	Auto	0.0806
L29	42	PL 1.25x4	73.58 - 75.25	Auto	0.0806
L29	43	PL 1.25x4	73.58 - 75.25	Auto	0.0806
L29	44	PL 1.25x4	73.58 - 75.25	Auto	0.0806
L29	58	PL 2x6	73.58 - 75.25	Auto	0.3871
L29	59	PL 2x6	73.58 - 75.25	Auto	0.3871
L29	60	PL 2x6	73.58 - 75.25	Auto	0.3871
L29	61	PL 2x6	73.58 - 75.25	Auto	0.3871
L30	41	PL 1.25x4	73.33 - 73.58	Auto	0.0541
L30	42	PL 1.25x4	73.33 - 73.58	Auto	0.0541
L30	43	PL 1.25x4	73.33 - 73.58	Auto	0.0541
L30	44	PL 1.25x4	73.33 - 73.58	Auto	0.0541

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L30	58	PL 2x6	73.33 - 73.58	Auto	0.3694
L30	59	PL 2x6	73.33 - 73.58	Auto	0.3694
L30	60	PL 2x6	73.33 - 73.58	Auto	0.3694
L30	61	PL 2x6	73.33 - 73.58	Auto	0.3694
L31	41	PL 1.25x4	69.00 - 73.33	Auto	0.0310
L31	42	PL 1.25x4	69.00 - 73.33	Auto	0.0310
L31	43	PL 1.25x4	69.00 - 73.33	Auto	0.0310
L31	44	PL 1.25x4	69.00 - 73.33	Auto	0.0310
L31	58	PL 2x6	69.00 - 73.33	Auto	0.3540
L31	59	PL 2x6	69.00 - 73.33	Auto	0.3540
L31	60	PL 2x6	69.00 - 73.33	Auto	0.3540
L31	61	PL 2x6	69.00 - 73.33	Auto	0.3540
L32	36	PL 1.25x5	67.00 - 69.00	Auto	0.2571
L32	37	PL 1.25x5	67.00 - 69.00	Auto	0.2571
L32	38	PL 1.25x5	67.00 - 69.00	Auto	0.2571
L32	39	PL 1.25x5	67.00 - 69.00	Auto	0.2571
L32	41	PL 1.25x4	67.00 - 69.00	Auto	0.0714
L32	42	PL 1.25x4	67.00 - 69.00	Auto	0.0714
L32	43	PL 1.25x4	67.00 - 69.00	Auto	0.0714
L32	44	PL 1.25x4	67.00 - 69.00	Auto	0.0714
L32	58	PL 2x6	67.00 - 69.00	Auto	0.3809
L32	59	PL 2x6	67.00 - 69.00	Auto	0.3809
L32	60	PL 2x6	67.00 - 69.00	Auto	0.3809
L32	61	PL 2x6	67.00 - 69.00	Auto	0.3809
L33	36	PL 1.25x5	66.75 - 67.00	Auto	0.2473
L33	37	PL 1.25x5	66.75 - 67.00	Auto	0.2473
L33	38	PL 1.25x5	66.75 - 67.00	Auto	0.2473
L33	39	PL 1.25x5	66.75 - 67.00	Auto	0.2473
L33	41	PL 1.25x4	66.75 - 67.00	Auto	0.0592
L33	42	PL 1.25x4	66.75 - 67.00	Auto	0.0592
L33	43	PL 1.25x4	66.75 - 67.00	Auto	0.0592
L33	44	PL 1.25x4	66.75 - 67.00	Auto	0.0592
L33	58	PL 2x6	66.75 - 67.00	Auto	0.3728
L33	59	PL 2x6	66.75 - 67.00	Auto	0.3728
L33	60	PL 2x6	66.75 - 67.00	Auto	0.3728
L33	61	PL 2x6	66.75 - 67.00	Auto	0.3728
L34	36	PL 1.25x5	66.50 - 66.75	Auto	0.2854
L34	37	PL 1.25x5	66.50 - 66.75	Auto	0.2854
L34	38	PL 1.25x5	66.50 - 66.75	Auto	0.2854
L34	39	PL 1.25x5	66.50 - 66.75	Auto	0.2854
L34	41	PL 1.25x4	66.50 - 66.75	Auto	0.1067
L34	42	PL 1.25x4	66.50 - 66.75	Auto	0.1067
L34	43	PL 1.25x4	66.50 - 66.75	Auto	0.1067
L34	44	PL 1.25x4	66.50 - 66.75	Auto	0.1067
L34	58	PL 2x6	66.50 - 66.75	Auto	0.4045
L34	59	PL 2x6	66.50 - 66.75	Auto	0.4045
L34	60	PL 2x6	66.50 - 66.75	Auto	0.4045
L34	61	PL 2x6	66.50 - 66.75	Auto	0.4045
L35	36	PL 1.25x5	61.50 - 66.50	Auto	0.2358
L35	37	PL 1.25x5	61.50 - 66.50	Auto	0.2358
L35	38	PL 1.25x5	61.50 - 66.50	Auto	0.2358
L35	39	PL 1.25x5	61.50 - 66.50	Auto	0.2358
L35	58	PL 2x6	61.50 - 66.50	Auto	0.3632
L35	59	PL 2x6	61.50 - 66.50	Auto	0.3632
L35	60	PL 2x6	61.50 - 66.50	Auto	0.3632
L35	61	PL 2x6	61.50 - 66.50	Auto	0.3632
L36	36	PL 1.25x5	56.50 - 61.50	Auto	0.1790
L36	37	PL 1.25x5	56.50 - 61.50	Auto	0.1790
L36	38	PL 1.25x5	56.50 - 61.50	Auto	0.1790
L36	39	PL 1.25x5	56.50 - 61.50	Auto	0.1790
L36	58	PL 2x6	56.50 - 61.50	Auto	0.3158

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L36	59	PL 2x6	56.50 - 61.50	Auto	0.3158
L36	60	PL 2x6	56.50 - 61.50	Auto	0.3158
L36	61	PL 2x6	56.50 - 61.50	Auto	0.3158
L37	36	PL 1.25x5	51.50 - 56.50	Auto	0.1088
L37	37	PL 1.25x5	51.50 - 56.50	Auto	0.1088
L37	38	PL 1.25x5	51.50 - 56.50	Auto	0.1088
L37	39	PL 1.25x5	51.50 - 56.50	Auto	0.1088
L37	58	PL 2x6	51.50 - 56.50	Auto	0.2573
L37	59	PL 2x6	51.50 - 56.50	Auto	0.2573
L37	60	PL 2x6	51.50 - 56.50	Auto	0.2573
L37	61	PL 2x6	51.50 - 56.50	Auto	0.2573
L38	36	PL 1.25x5	48.25 - 51.50	Auto	0.0595
L38	37	PL 1.25x5	48.25 - 51.50	Auto	0.0595
L38	38	PL 1.25x5	48.25 - 51.50	Auto	0.0595
L38	39	PL 1.25x5	48.25 - 51.50	Auto	0.0595
L38	58	PL 2x6	48.25 - 51.50	Auto	0.2163
L38	59	PL 2x6	48.25 - 51.50	Auto	0.2163
L38	60	PL 2x6	48.25 - 51.50	Auto	0.2163
L38	61	PL 2x6	48.25 - 51.50	Auto	0.2163
L39	36	PL 1.25x5	48.00 - 48.25	Auto	0.2588
L39	37	PL 1.25x5	48.00 - 48.25	Auto	0.2588
L39	38	PL 1.25x5	48.00 - 48.25	Auto	0.2588
L39	39	PL 1.25x5	48.00 - 48.25	Auto	0.2588
L39	58	PL 2x6	48.00 - 48.25	Auto	0.3823
L39	59	PL 2x6	48.00 - 48.25	Auto	0.3823
L39	60	PL 2x6	48.00 - 48.25	Auto	0.3823
L39	61	PL 2x6	48.00 - 48.25	Auto	0.3823
L40	31	(Area) CCI-65FP-065125 (H)	44.25 - 47.00	Auto	0.3925
L40	32	(Area) CCI-65FP-065125 (H)	44.25 - 47.00	Auto	0.3925
L40	33	(Area) CCI-65FP-065125 (H)	44.25 - 47.00	Auto	0.3925
L40	34	(Area) CCI-65FP-065125 (H)	44.25 - 47.00	Auto	0.3925
L40	36	PL 1.25x5	47.00 - 48.00	Auto	0.2265
L40	37	PL 1.25x5	47.00 - 48.00	Auto	0.2265
L40	38	PL 1.25x5	47.00 - 48.00	Auto	0.2265
L40	39	PL 1.25x5	47.00 - 48.00	Auto	0.2265
L40	58	PL 2x6	44.25 - 48.00	Auto	0.3455
L40	59	PL 2x6	44.25 - 48.00	Auto	0.3455
L40	60	PL 2x6	44.25 - 48.00	Auto	0.3455
L40	61	PL 2x6	44.25 - 48.00	Auto	0.3455
L41	31	(Area) CCI-65FP-065125 (H)	44.00 - 44.25	Auto	0.4237
L41	32	(Area) CCI-65FP-065125 (H)	44.00 - 44.25	Auto	0.4237
L41	33	(Area) CCI-65FP-065125 (H)	44.00 - 44.25	Auto	0.4237
L41	34	(Area) CCI-65FP-065125 (H)	44.00 - 44.25	Auto	0.4237
L41	58	PL 2x6	44.00 - 44.25	Auto	0.3757
L41	59	PL 2x6	44.00 - 44.25	Auto	0.3757
L41	60	PL 2x6	44.00 - 44.25	Auto	0.3757
L41	61	PL 2x6	44.00 - 44.25	Auto	0.3757
L42	31	(Area) CCI-65FP-065125 (H)	39.00 - 44.00	Auto	0.3856
L42	32	(Area) CCI-65FP-065125 (H)	39.00 - 44.00	Auto	0.3856
L42	33	(Area) CCI-65FP-065125 (H)	39.00 - 44.00	Auto	0.3856
L42	34	(Area) CCI-65FP-065125 (H)	39.00 - 44.00	Auto	0.3856
L42	58	PL 2x6	39.00 - 44.00	Auto	0.3344
L42	59	PL 2x6	39.00 - 44.00	Auto	0.3344
L42	60	PL 2x6	39.00 - 44.00	Auto	0.3344
L42	61	PL 2x6	39.00 - 44.00	Auto	0.3344
L43	31	(Area) CCI-65FP-065125 (H)	38.50 - 39.00	Auto	0.3672
L43	32	(Area) CCI-65FP-065125 (H)	38.50 - 39.00	Auto	0.3672
L43	33	(Area) CCI-65FP-065125 (H)	38.50 - 39.00	Auto	0.3672
L43	34	(Area) CCI-65FP-065125 (H)	38.50 - 39.00	Auto	0.3672
L43	58	PL 2x6	38.50 - 39.00	Auto	0.3145
L43	59	PL 2x6	38.50 - 39.00	Auto	0.3145

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L43	60	PL 2x6	38.50 - 39.00	Auto	0.3145
L43	61	PL 2x6	38.50 - 39.00	Auto	0.3145
L44	31	(Area) CCI-65FP-065125 (H)	38.25 - 38.50	Auto	0.3647
L44	32	(Area) CCI-65FP-065125 (H)	38.25 - 38.50	Auto	0.3647
L44	33	(Area) CCI-65FP-065125 (H)	38.25 - 38.50	Auto	0.3647
L44	34	(Area) CCI-65FP-065125 (H)	38.25 - 38.50	Auto	0.3647
L44	58	PL 2x6	38.25 - 38.50	Auto	0.3118
L44	59	PL 2x6	38.25 - 38.50	Auto	0.3118
L44	60	PL 2x6	38.25 - 38.50	Auto	0.3118
L44	61	PL 2x6	38.25 - 38.50	Auto	0.3118
L45	31	(Area) CCI-65FP-065125 (H)	30.00 - 38.25	Auto	0.3157
L45	32	(Area) CCI-65FP-065125 (H)	30.00 - 38.25	Auto	0.3157
L45	33	(Area) CCI-65FP-065125 (H)	30.00 - 38.25	Auto	0.3157
L45	34	(Area) CCI-65FP-065125 (H)	30.00 - 38.25	Auto	0.3157
L45	58	PL 2x6	30.00 - 38.25	Auto	0.2587
L45	59	PL 2x6	30.00 - 38.25	Auto	0.2587
L45	60	PL 2x6	30.00 - 38.25	Auto	0.2587
L45	61	PL 2x6	30.00 - 38.25	Auto	0.2587
L46	31	(Area) CCI-65FP-065125 (H)	29.00 - 30.00	Auto	0.3583
L46	32	(Area) CCI-65FP-065125 (H)	29.00 - 30.00	Auto	0.3583
L46	33	(Area) CCI-65FP-065125 (H)	29.00 - 30.00	Auto	0.3583
L46	34	(Area) CCI-65FP-065125 (H)	29.00 - 30.00	Auto	0.3583
L46	58	PL 2x6	29.00 - 30.00	Auto	0.3048
L46	59	PL 2x6	29.00 - 30.00	Auto	0.3048
L46	60	PL 2x6	29.00 - 30.00	Auto	0.3048
L46	61	PL 2x6	29.00 - 30.00	Auto	0.3048
L47	31	(Area) CCI-65FP-065125 (H)	24.00 - 29.00	Auto	0.3168
L47	32	(Area) CCI-65FP-065125 (H)	24.00 - 29.00	Auto	0.3168
L47	33	(Area) CCI-65FP-065125 (H)	24.00 - 29.00	Auto	0.3168
L47	34	(Area) CCI-65FP-065125 (H)	24.00 - 29.00	Auto	0.3168
L47	58	PL 2x6	24.00 - 29.00	Auto	0.2598
L47	59	PL 2x6	24.00 - 29.00	Auto	0.2598
L47	60	PL 2x6	24.00 - 29.00	Auto	0.2598
L47	61	PL 2x6	24.00 - 29.00	Auto	0.2598
L48	31	(Area) CCI-65FP-065125 (H)	23.75 - 24.00	Auto	0.2985
L48	32	(Area) CCI-65FP-065125 (H)	23.75 - 24.00	Auto	0.2985
L48	33	(Area) CCI-65FP-065125 (H)	23.75 - 24.00	Auto	0.2985
L48	34	(Area) CCI-65FP-065125 (H)	23.75 - 24.00	Auto	0.2985
L48	58	PL 2x6	23.75 - 24.00	Auto	0.2400
L48	59	PL 2x6	23.75 - 24.00	Auto	0.2400
L48	60	PL 2x6	23.75 - 24.00	Auto	0.2400
L48	61	PL 2x6	23.75 - 24.00	Auto	0.2400
L49	31	(Area) CCI-65FP-065125 (H)	23.50 - 23.75	Auto	0.2864
L49	32	(Area) CCI-65FP-065125 (H)	23.50 - 23.75	Auto	0.2864
L49	33	(Area) CCI-65FP-065125 (H)	23.50 - 23.75	Auto	0.2864
L49	34	(Area) CCI-65FP-065125 (H)	23.50 - 23.75	Auto	0.2864
L49	58	PL 2x6	23.50 - 23.75	Auto	0.2270
L49	59	PL 2x6	23.50 - 23.75	Auto	0.2270
L49	60	PL 2x6	23.50 - 23.75	Auto	0.2270
L49	61	PL 2x6	23.50 - 23.75	Auto	0.2270
L50	31	(Area) CCI-65FP-065125 (H)	18.50 - 23.50	Auto	0.2578
L50	32	(Area) CCI-65FP-065125 (H)	18.50 - 23.50	Auto	0.2578
L50	33	(Area) CCI-65FP-065125 (H)	18.50 - 23.50	Auto	0.2578
L50	34	(Area) CCI-65FP-065125 (H)	18.50 - 23.50	Auto	0.2578
L50	58	PL 2x6	18.50 - 23.50	Auto	0.1960
L50	59	PL 2x6	18.50 - 23.50	Auto	0.1960
L50	60	PL 2x6	18.50 - 23.50	Auto	0.1960
L50	61	PL 2x6	18.50 - 23.50	Auto	0.1960
L51	31	(Area) CCI-65FP-065125 (H)	13.50 - 18.50	Auto	0.2024
L51	32	(Area) CCI-65FP-065125 (H)	13.50 - 18.50	Auto	0.2024
L51	33	(Area) CCI-65FP-065125 (H)	13.50 - 18.50	Auto	0.2024

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L51	34	(Area) CCI-65FP-065125 (H)	13.50 - 18.50	Auto	0.2024
L51	58	PL 2x6	13.50 - 18.50	Auto	0.1359
L51	59	PL 2x6	13.50 - 18.50	Auto	0.1359
L51	60	PL 2x6	13.50 - 18.50	Auto	0.1359
L51	61	PL 2x6	13.50 - 18.50	Auto	0.1359
L52	31	(Area) CCI-65FP-065125 (H)	8.50 - 13.50	Auto	0.1573
L52	32	(Area) CCI-65FP-065125 (H)	8.50 - 13.50	Auto	0.1573
L52	33	(Area) CCI-65FP-065125 (H)	8.50 - 13.50	Auto	0.1573
L52	34	(Area) CCI-65FP-065125 (H)	8.50 - 13.50	Auto	0.1573
L52	58	PL 2x6	8.50 - 13.50	Auto	0.0871
L52	59	PL 2x6	8.50 - 13.50	Auto	0.0871
L52	60	PL 2x6	8.50 - 13.50	Auto	0.0871
L52	61	PL 2x6	8.50 - 13.50	Auto	0.0871
L53	31	(Area) CCI-65FP-065125 (H)	3.50 - 8.50	Auto	0.1018
L53	32	(Area) CCI-65FP-065125 (H)	3.50 - 8.50	Auto	0.1018
L53	33	(Area) CCI-65FP-065125 (H)	3.50 - 8.50	Auto	0.1018
L53	34	(Area) CCI-65FP-065125 (H)	3.50 - 8.50	Auto	0.1018
L53	58	PL 2x6	3.50 - 8.50	Auto	0.0270
L53	59	PL 2x6	3.50 - 8.50	Auto	0.0270
L53	60	PL 2x6	3.50 - 8.50	Auto	0.0270
L53	61	PL 2x6	3.50 - 8.50	Auto	0.0270
L54	31	(Area) CCI-65FP-065125 (H)	0.00 - 3.50	Auto	0.0619
L54	32	(Area) CCI-65FP-065125 (H)	0.00 - 3.50	Auto	0.0619
L54	33	(Area) CCI-65FP-065125 (H)	0.00 - 3.50	Auto	0.0619
L54	34	(Area) CCI-65FP-065125 (H)	0.00 - 3.50	Auto	0.0619
L54	58	PL 2x6	0.00 - 3.50	Auto	0.0000
L54	59	PL 2x6	0.00 - 3.50	Auto	0.0000
L54	60	PL 2x6	0.00 - 3.50	Auto	0.0000
L54	61	PL 2x6	0.00 - 3.50	Auto	0.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
149*									
QD6616-7 w/ Mount Pipe	A	From Centroid-Leg	4.00 -3.00 5.00	30.0000	149.00	No Ice 1/2" Ice 1" Ice	12.56 13.30 14.06	6.93 7.60 8.28	0.16 0.25 0.36
QD6616-7 w/ Mount Pipe	B	From Centroid-Leg	4.00 -3.00 5.00	30.0000	149.00	No Ice 1/2" Ice 1" Ice	12.56 13.30 14.06	6.93 7.60 8.28	0.16 0.25 0.36
QD6616-7 w/ Mount Pipe	C	From Centroid-Leg	4.00 -3.00 5.00	30.0000	149.00	No Ice 1/2" Ice 1" Ice	12.56 13.30 14.06	6.93 7.60 8.28	0.16 0.25 0.36
AIR 6419 B77G_CCIV3	A	From Centroid-Leg	4.00 3.00 7.00	30.0000	149.00	No Ice 1/2" Ice 1" Ice	3.84 4.21 4.60	1.51 1.81 2.12	0.06 0.08 0.12
AIR 6419 B77G_CCIV3	B	From Centroid-Leg	4.00 3.00	30.0000	149.00	No Ice 1/2" Ice	3.84 4.21	1.51 1.81	0.06 0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
		g	7.00			1" Ice	4.60	2.12	0.12
AIR 6419 B77G_CCIV3	C	From	4.00	30.0000	149.00	No Ice	3.84	1.51	0.06
		Centroid-Le	3.00			1/2" Ice	4.21	1.81	0.08
		g	7.00			1" Ice	4.60	2.12	0.12
AIR 6449 B77D_CCIV3	A	From	4.00	30.0000	149.00	No Ice	3.70	2.14	0.10
		Centroid-Le	3.00			1/2" Ice	4.06	2.45	0.13
		g	3.00			1" Ice	4.44	2.78	0.17
AIR 6449 B77D_CCIV3	B	From	4.00	30.0000	149.00	No Ice	3.70	2.14	0.10
		Centroid-Le	3.00			1/2" Ice	4.06	2.45	0.13
		g	3.00			1" Ice	4.44	2.78	0.17
AIR 6449 B77D_CCIV3	C	From	4.00	30.0000	149.00	No Ice	3.70	2.14	0.10
		Centroid-Le	3.00			1/2" Ice	4.06	2.45	0.13
		g	3.00			1" Ice	4.44	2.78	0.17
DMP65R-BU6D w/ Mount Pipe	A	From	4.00	30.0000	149.00	No Ice	11.96	5.97	0.11
		Centroid-Le	7.00			1/2" Ice	12.70	6.63	0.20
		g	5.00			1" Ice	13.46	7.30	0.30
DMP65R-BU6D w/ Mount Pipe	B	From	4.00	30.0000	149.00	No Ice	11.96	5.97	0.11
		Centroid-Le	7.00			1/2" Ice	12.70	6.63	0.20
		g	5.00			1" Ice	13.46	7.30	0.30
DMP65R-BU6D w/ Mount Pipe	C	From	4.00	30.0000	149.00	No Ice	11.96	5.97	0.11
		Centroid-Le	7.00			1/2" Ice	12.70	6.63	0.20
		g	5.00			1" Ice	13.46	7.30	0.30
RRUS 32 B2	A	From	4.00	30.0000	149.00	No Ice	2.73	1.67	0.05
		Centroid-Le	-3.00			1/2" Ice	2.95	1.86	0.07
		g	5.00			1" Ice	3.18	2.05	0.10
RRUS 32 B2	B	From	4.00	30.0000	149.00	No Ice	2.73	1.67	0.05
		Centroid-Le	-3.00			1/2" Ice	2.95	1.86	0.07
		g	5.00			1" Ice	3.18	2.05	0.10
RRUS 32 B2	C	From	4.00	30.0000	149.00	No Ice	2.73	1.67	0.05
		Centroid-Le	-3.00			1/2" Ice	2.95	1.86	0.07
		g	5.00			1" Ice	3.18	2.05	0.10
RRUS 32 B66a	A	From	4.00	30.0000	149.00	No Ice	2.85	1.78	0.06
		Centroid-Le	-3.00			1/2" Ice	3.08	1.97	0.08
		g	5.00			1" Ice	3.31	2.17	0.10
RRUS 32 B66a	B	From	4.00	30.0000	149.00	No Ice	2.85	1.78	0.06
		Centroid-Le	-3.00			1/2" Ice	3.08	1.97	0.08
		g	5.00			1" Ice	3.31	2.17	0.10
RRUS 32 B66a	C	From	4.00	30.0000	149.00	No Ice	2.85	1.78	0.06
		Centroid-Le	-3.00			1/2" Ice	3.08	1.97	0.08
		g	5.00			1" Ice	3.31	2.17	0.10
DC9-48-60-24-8C-EV	A	From	4.00	30.0000	149.00	No Ice	1.14	1.14	0.03
		Centroid-Le	-3.00			1/2" Ice	1.79	1.79	0.05
		g	5.00			1" Ice	2.00	2.00	0.07
DC9-48-60-24-8C-EV	B	From	4.00	30.0000	149.00	No Ice	1.14	1.14	0.03
		Centroid-Le	-3.00			1/2" Ice	1.79	1.79	0.05
		g	5.00			1" Ice	2.00	2.00	0.07
DC9-48-60-24-8C-EV	C	From	4.00	30.0000	149.00	No Ice	1.14	1.14	0.03
		Centroid-Le	-3.00			1/2" Ice	1.79	1.79	0.05
		g	5.00			1" Ice	2.00	2.00	0.07
RRUS 4478 B14_CCIV2	A	From	4.00	30.0000	149.00	No Ice	2.02	1.25	0.06
		Centroid-Le	-3.00			1/2" Ice	2.20	1.40	0.08
		g	5.00			1" Ice	2.39	1.55	0.10
RRUS 4478 B14_CCIV2	B	From	4.00	30.0000	149.00	No Ice	2.02	1.25	0.06
		Centroid-Le	-3.00			1/2" Ice	2.20	1.40	0.08
		g	5.00			1" Ice	2.39	1.55	0.10
RRUS 4478 B14_CCIV2	C	From	4.00	30.0000	149.00	No Ice	2.02	1.25	0.06
		Centroid-Le	-3.00			1/2" Ice	2.20	1.40	0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
		g	5.00			1" Ice	2.39	1.55	0.10
RRUS 32 B30	A	From	4.00	30.0000	149.00	No Ice	2.73	1.67	0.05
		Centroid-Le	7.00			1/2" Ice	2.95	1.86	0.07
		g	5.00			1" Ice	3.18	2.05	0.10
RRUS 32 B30	B	From	4.00	30.0000	149.00	No Ice	2.73	1.67	0.05
		Centroid-Le	7.00			1/2" Ice	2.95	1.86	0.07
		g	5.00			1" Ice	3.18	2.05	0.10
RRUS 32 B30	C	From	4.00	30.0000	149.00	No Ice	2.73	1.67	0.05
		Centroid-Le	7.00			1/2" Ice	2.95	1.86	0.07
		g	5.00			1" Ice	3.18	2.05	0.10
RRUS 4449 B5/B12	A	From	4.00	30.0000	149.00	No Ice	1.97	1.41	0.07
		Centroid-Le	7.00			1/2" Ice	2.14	1.56	0.09
		g	5.00			1" Ice	2.33	1.73	0.11
RRUS 4449 B5/B12	B	From	4.00	30.0000	149.00	No Ice	1.97	1.41	0.07
		Centroid-Le	7.00			1/2" Ice	2.14	1.56	0.09
		g	5.00			1" Ice	2.33	1.73	0.11
RRUS 4449 B5/B12	C	From	4.00	30.0000	149.00	No Ice	1.97	1.41	0.07
		Centroid-Le	7.00			1/2" Ice	2.14	1.56	0.09
		g	5.00			1" Ice	2.33	1.73	0.11
(2) 2.9" Dia. x 12' Pipe	A	From	4.00	0.0000	149.00	No Ice	3.46	3.46	0.07
		Centroid-Le	0.00			1/2" Ice	4.69	4.69	0.09
		g	5.00			1" Ice	5.94	5.94	0.13
(2) 2.9" Dia. x 12' Pipe	B	From	4.00	0.0000	149.00	No Ice	3.46	3.46	0.07
		Centroid-Le	0.00			1/2" Ice	4.69	4.69	0.09
		g	5.00			1" Ice	5.94	5.94	0.13
(2) 2.9" Dia. x 12' Pipe	C	From	4.00	0.0000	149.00	No Ice	3.46	3.46	0.07
		Centroid-Le	0.00			1/2" Ice	4.69	4.69	0.09
		g	5.00			1" Ice	5.94	5.94	0.13
(2) 2.9" Dia. x 6-ft Mount Pipe	A	From	2.00	0.0000	149.00	No Ice	1.73	1.73	0.03
		Centroid-Le	0.00			1/2" Ice	2.09	2.09	0.05
		g	0.00			1" Ice	2.46	2.46	0.06
(2) 2.9" Dia. x 6-ft Mount Pipe	B	From	2.00	0.0000	149.00	No Ice	1.73	1.73	0.03
		Centroid-Le	0.00			1/2" Ice	2.09	2.09	0.05
		g	0.00			1" Ice	2.46	2.46	0.06
(2) 2.9" Dia. x 6-ft Mount Pipe	C	From	2.00	0.0000	149.00	No Ice	1.73	1.73	0.03
		Centroid-Le	0.00			1/2" Ice	2.09	2.09	0.05
		g	0.00			1" Ice	2.46	2.46	0.06
Perfect Vision PV-LPPGS-14M-HR25-B	C	None		0.0000	149.00	No Ice	23.00	23.00	1.80
						1/2" Ice	30.30	30.30	2.34
						1" Ice	37.60	37.60	2.88
138									
LLPX310R-V1 w/ Mount Pipe	A	From	4.00	0.0000	138.00	No Ice	3.88	2.36	0.06
		Centroid-Fa	-7.00			1/2" Ice	4.29	2.73	0.09
		ce	2.00			1" Ice	4.72	3.12	0.13
LLPX310R-V1 w/ Mount Pipe	B	From	4.00	0.0000	138.00	No Ice	3.88	2.36	0.06
		Centroid-Fa	-7.00			1/2" Ice	4.29	2.73	0.09
		ce	2.00			1" Ice	4.72	3.12	0.13
LLPX310R-V1 w/ Mount Pipe	C	From	4.00	0.0000	138.00	No Ice	3.88	2.36	0.06
		Centroid-Fa	-7.00			1/2" Ice	4.29	2.73	0.09
		ce	2.00			1" Ice	4.72	3.12	0.13
RAS SPI-2213 RRH	A	From	4.00	0.0000	138.00	No Ice	1.56	0.73	0.03
		Centroid-Fa	-7.00			1/2" Ice	1.72	0.85	0.05
		ce	2.00			1" Ice	1.88	0.97	0.06
RAS SPI-2213 RRH	B	From	4.00	0.0000	138.00	No Ice	1.56	0.73	0.03
		Centroid-Fa	-7.00			1/2" Ice	1.72	0.85	0.05
		ce	2.00			1" Ice	1.88	0.97	0.06
RAS SPI-2213 RRH	C	From	4.00	0.0000	138.00	No Ice	1.56	0.73	0.03

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
		Centroid-Face	-7.00			1/2" Ice	1.72	0.85	0.05
			2.00			1" Ice	1.88	0.97	0.06
HORIZON COMPACT	A	From Centroid-Face	4.00	0.0000	138.00	No Ice	0.72	0.37	0.01
			7.00			1/2" Ice	0.83	0.45	0.02
			5.00			1" Ice	0.94	0.54	0.03
HORIZON COMPACT	C	From Centroid-Face	4.00	0.0000	138.00	No Ice	0.72	0.37	0.01
			7.00			1/2" Ice	0.83	0.45	0.02
			5.00			1" Ice	0.94	0.54	0.03
CW JUNCTION BOX	A	From Centroid-Face	4.00	0.0000	138.00	No Ice	1.20	0.60	0.00
			7.00			1/2" Ice	1.34	0.70	0.01
			5.00			1" Ice	1.48	0.81	0.02
2.4" Dia x 8-ft Mount Pipe	A	From Centroid-Face	4.00	0.0000	138.00	No Ice	1.90	1.90	0.03
			0.00			1/2" Ice	2.73	2.73	0.04
			0.00			1" Ice	3.40	3.40	0.06
2.4" Dia x 8-ft Mount Pipe	B	From Centroid-Face	4.00	0.0000	138.00	No Ice	1.90	1.90	0.03
			0.00			1/2" Ice	2.73	2.73	0.04
			0.00			1" Ice	3.40	3.40	0.06
2.4" Dia x 8-ft Mount Pipe	C	From Centroid-Face	4.00	0.0000	138.00	No Ice	1.90	1.90	0.03
			0.00			1/2" Ice	2.73	2.73	0.04
			0.00			1" Ice	3.40	3.40	0.06
(2) L2 1/2x2 1/2x1/4 x 6-ft	A	From Centroid-Face	2.00	0.0000	138.00	No Ice	2.50	2.50	0.02
			0.00			1/2" Ice	3.09	3.09	0.03
			0.00			1" Ice	3.52	3.52	0.05
(2) L2 1/2x2 1/2x1/4 x 6-ft	B	From Centroid-Face	2.00	0.0000	138.00	No Ice	2.50	2.50	0.02
			0.00			1/2" Ice	3.09	3.09	0.03
			0.00			1" Ice	3.52	3.52	0.05
(2) L2 1/2x2 1/2x1/4 x 6-ft	C	From Centroid-Face	2.00	0.0000	138.00	No Ice	2.50	2.50	0.02
			0.00			1/2" Ice	3.09	3.09	0.03
			0.00			1" Ice	3.52	3.52	0.05
L2 1/2x2 1/2x1/4 x 6-ft	A	From Centroid-Face	4.00	0.0000	138.00	No Ice	2.50	2.50	0.02
			0.00			1/2" Ice	3.09	3.09	0.03
			0.00			1" Ice	3.52	3.52	0.05
L2 1/2x2 1/2x1/4 x 6-ft	B	From Centroid-Face	4.00	0.0000	138.00	No Ice	2.50	2.50	0.02
			0.00			1/2" Ice	3.09	3.09	0.03
			0.00			1" Ice	3.52	3.52	0.05
L2 1/2x2 1/2x1/4 x 6-ft	C	From Centroid-Face	4.00	0.0000	138.00	No Ice	2.50	2.50	0.02
			0.00			1/2" Ice	3.09	3.09	0.03
			0.00			1" Ice	3.52	3.52	0.05
Platform Mount [LP 1201-1]	C	None		0.0000	138.00	No Ice	18.38	18.38	2.10
						1/2" Ice	22.11	22.11	2.65
						1" Ice	25.87	25.87	3.26
128									
MX08FRO665-21 w/ Mount Pipe	A	From Centroid-Face	4.00	0.0000	128.00	No Ice	8.01	4.23	0.11
			0.00			1/2" Ice	8.52	4.69	0.19
			0.00			1" Ice	9.04	5.16	0.29
MX08FRO665-21 w/ Mount Pipe	B	From Centroid-Face	4.00	0.0000	128.00	No Ice	8.01	4.23	0.11
			0.00			1/2" Ice	8.52	4.69	0.19
			0.00			1" Ice	9.04	5.16	0.29
MX08FRO665-21 w/ Mount Pipe	C	From Centroid-Face	4.00	0.0000	128.00	No Ice	8.01	4.23	0.11
			0.00			1/2" Ice	8.52	4.69	0.19
			0.00			1" Ice	9.04	5.16	0.29
RDIDC-9181-PF-48	B	From Centroid-Face	4.00	0.0000	128.00	No Ice	2.01	1.17	0.02
			0.00			1/2" Ice	2.19	1.31	0.04
			0.00			1" Ice	2.37	1.46	0.06
TA08025-B605	A	From Centroid-Face	4.00	0.0000	128.00	No Ice	1.96	1.13	0.08
			0.00			1/2" Ice	2.14	1.27	0.09
			0.00			1" Ice	2.32	1.41	0.11

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
TA08025-B605	B	From Centroid-Face	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.96 2.14 2.32	1.13 1.27 1.41	0.08 0.09 0.11
TA08025-B605	C	From Centroid-Face	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.96 2.14 2.32	1.13 1.27 1.41	0.08 0.09 0.11
TA08025-B604	A	From Centroid-Face	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.96 2.14 2.32	0.98 1.11 1.25	0.06 0.08 0.10
TA08025-B604	B	From Centroid-Face	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.96 2.14 2.32	0.98 1.11 1.25	0.06 0.08 0.10
TA08025-B604	C	From Centroid-Face	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.96 2.14 2.32	0.98 1.11 1.25	0.06 0.08 0.10
(2) 2.4" Dia x 8-ft Mount Pipe	A	From Centroid-Face	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
(2) 2.4" Dia x 8-ft Mount Pipe	B	From Centroid-Face	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
(2) 2.4" Dia x 8-ft Mount Pipe	C	From Centroid-Face	4.00 0.00 0.00	0.0000	128.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
Commscope MC-PK8-DSH	A	None		0.0000	128.00	No Ice 1/2" Ice 1" Ice	34.24 62.95 91.66	34.24 62.95 91.66	1.75 2.10 2.45
120									
AIR 21 B2A/B4P	A	From Centroid-Face	4.00 -6.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	3.19 3.51 3.85	1.98 2.28 2.58	0.08 0.12 0.17
AIR 21 B2A/B4P	B	From Centroid-Face	4.00 -6.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	3.19 3.51 3.85	1.98 2.28 2.58	0.08 0.12 0.17
AIR 21 B2A/B4P	C	From Centroid-Face	4.00 -6.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	3.19 3.51 3.85	1.98 2.28 2.58	0.08 0.12 0.17
AIR -32 B2A/B66AA	A	From Centroid-Face	4.00 -2.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	3.86 4.23 4.61	2.51 2.86 3.22	0.17 0.22 0.27
AIR -32 B2A/B66AA	B	From Centroid-Face	4.00 -2.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	3.86 4.23 4.61	2.51 2.86 3.22	0.17 0.22 0.27
AIR -32 B2A/B66AA	C	From Centroid-Face	4.00 -2.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	3.86 4.23 4.61	2.51 2.86 3.22	0.17 0.22 0.27
AIR6449 B41	A	From Centroid-Face	4.00 2.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	5.28 5.71 6.15	2.05 2.38 2.72	0.10 0.14 0.19
AIR6449 B41	B	From Centroid-Face	4.00 2.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	5.28 5.71 6.15	2.05 2.38 2.72	0.10 0.14 0.19
AIR6449 B41	C	From Centroid-Face	4.00 2.00 0.00	30.0000	120.00	No Ice 1/2" Ice 1" Ice	5.28 5.71 6.15	2.05 2.38 2.72	0.10 0.14 0.19
APXVAARR24_43-U-NA20	A	From Centroid-Face	4.00 6.00	30.0000	120.00	No Ice 1/2" Ice	14.67 15.43	5.32 5.99	0.15 0.27

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
		ce	0.00			1" Ice	16.21	6.68	0.39
APXVAARR24_43-U-NA20	B	From	4.00	30.0000	120.00	No Ice	14.67	5.32	0.15
		Centroid-Fa	6.00			1/2" Ice	15.43	5.99	0.27
		ce	0.00			1" Ice	16.21	6.68	0.39
APXVAARR24_43-U-NA20	C	From	4.00	30.0000	120.00	No Ice	14.67	5.32	0.15
		Centroid-Fa	6.00			1/2" Ice	15.43	5.99	0.27
		ce	0.00			1" Ice	16.21	6.68	0.39
KRY 112 144/1	A	From	4.00	30.0000	120.00	No Ice	0.35	0.17	0.01
		Centroid-Fa	-6.00			1/2" Ice	0.43	0.23	0.01
		ce	0.00			1" Ice	0.51	0.30	0.02
KRY 112 144/1	B	From	4.00	30.0000	120.00	No Ice	0.35	0.17	0.01
		Centroid-Fa	-6.00			1/2" Ice	0.43	0.23	0.01
		ce	0.00			1" Ice	0.51	0.30	0.02
KRY 112 144/1	C	From	4.00	30.0000	120.00	No Ice	0.35	0.17	0.01
		Centroid-Fa	-6.00			1/2" Ice	0.43	0.23	0.01
		ce	0.00			1" Ice	0.51	0.30	0.02
RADIO 4449 B71 B85A_T-MOBILE	A	From	4.00	30.0000	120.00	No Ice	1.97	1.59	0.07
		Centroid-Fa	6.00			1/2" Ice	2.15	1.75	0.09
		ce	0.00			1" Ice	2.33	1.92	0.12
RADIO 4449 B71 B85A_T-MOBILE	B	From	4.00	30.0000	120.00	No Ice	1.97	1.59	0.07
		Centroid-Fa	6.00			1/2" Ice	2.15	1.75	0.09
		ce	0.00			1" Ice	2.33	1.92	0.12
RADIO 4449 B71 B85A_T-MOBILE	C	From	4.00	30.0000	120.00	No Ice	1.97	1.59	0.07
		Centroid-Fa	6.00			1/2" Ice	2.15	1.75	0.09
		ce	0.00			1" Ice	2.33	1.92	0.12
RRUS 4415 B25_CCIV2	A	From	4.00	30.0000	120.00	No Ice	1.84	0.82	0.05
		Centroid-Fa	6.00			1/2" Ice	2.01	0.94	0.06
		ce	0.00			1" Ice	2.19	1.07	0.08
RRUS 4415 B25_CCIV2	B	From	4.00	30.0000	120.00	No Ice	1.84	0.82	0.05
		Centroid-Fa	6.00			1/2" Ice	2.01	0.94	0.06
		ce	0.00			1" Ice	2.19	1.07	0.08
RRUS 4415 B25_CCIV2	C	From	4.00	30.0000	120.00	No Ice	1.84	0.82	0.05
		Centroid-Fa	6.00			1/2" Ice	2.01	0.94	0.06
		ce	0.00			1" Ice	2.19	1.07	0.08
Platform Mount [LP 301-1_KCKR]	C	None		0.0000	120.00	No Ice	35.03	35.03	1.86
						1/2" Ice	44.46	44.46	2.52
						1" Ice	53.72	53.72	3.33
99									
CBRS w/ Mount Pipe	A	From Face	4.00	0.0000	99.00	No Ice	1.45	0.99	0.03
			-2.00			1/2" Ice	1.67	1.18	0.05
			1.00			1" Ice	1.90	1.39	0.07
CBRS w/ Mount Pipe	B	From Face	4.00	0.0000	99.00	No Ice	1.45	0.99	0.03
			-6.00			1/2" Ice	1.67	1.18	0.05
			1.00			1" Ice	1.90	1.39	0.07
CBRS w/ Mount Pipe	C	From Face	4.00	0.0000	99.00	No Ice	1.45	0.99	0.03
			-2.00			1/2" Ice	1.67	1.18	0.05
			1.00			1" Ice	1.90	1.39	0.07
JAHH-65A-R3B w/ Mount Pipe	A	From Face	4.00	0.0000	99.00	No Ice	3.35	2.61	0.07
			-6.00			1/2" Ice	3.64	2.89	0.13
			1.00			1" Ice	3.95	3.18	0.19
JAHH-65A-R3B	A	From Face	4.00	0.0000	99.00	No Ice	3.30	1.98	0.05
			-2.00			1/2" Ice	3.60	2.26	0.10
			1.00			1" Ice	3.92	2.55	0.15
JAHH-65A-R3B w/ Mount Pipe	B	From Face	4.00	0.0000	99.00	No Ice	3.35	2.61	0.07
			-2.00			1/2" Ice	3.64	2.89	0.13
			1.00			1" Ice	3.95	3.18	0.19
JAHH-65A-R3B	B	From Face	4.00	0.0000	99.00	No Ice	3.30	1.98	0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			-2.00			1/2" Ice	3.60	2.26	0.10
			1.00			1" Ice	3.92	2.55	0.15
JAHH-65A-R3B w/ Mount Pipe	C	From Face	4.00	0.0000	99.00	No Ice	3.35	2.61	0.07
			-6.00			1/2" Ice	3.64	2.89	0.13
			1.00			1" Ice	3.95	3.18	0.19
JAHH-65A-R3B	C	From Face	4.00	0.0000	99.00	No Ice	3.30	1.98	0.05
			-2.00			1/2" Ice	3.60	2.26	0.10
			1.00			1" Ice	3.92	2.55	0.15
Sub6 Antenna - VZS01 w/ Mount Pipe	A	From Face	4.00	0.0000	99.00	No Ice	4.92	2.69	0.10
			2.00			1/2" Ice	5.26	3.15	0.14
			1.00			1" Ice	5.62	3.63	0.19
Sub6 Antenna - VZS01 w/ Mount Pipe	B	From Face	4.00	0.0000	99.00	No Ice	4.92	2.69	0.10
			2.00			1/2" Ice	5.26	3.15	0.14
			1.00			1" Ice	5.62	3.63	0.19
Sub6 Antenna - VZS01 w/ Mount Pipe	C	From Face	4.00	0.0000	99.00	No Ice	4.92	2.69	0.10
			2.00			1/2" Ice	5.26	3.15	0.14
			1.00			1" Ice	5.62	3.63	0.19
BXA-70063/4CF w/ Mount Pipe	A	From Face	4.00	0.0000	99.00	No Ice	4.84	3.54	0.04
			6.00			1/2" Ice	5.35	4.03	0.08
			1.00			1" Ice	5.88	4.53	0.12
BXA-70063/4CF w/ Mount Pipe	B	From Face	4.00	0.0000	99.00	No Ice	4.84	3.54	0.04
			6.00			1/2" Ice	5.35	4.03	0.08
			1.00			1" Ice	5.88	4.53	0.12
BXA-70063/4CF w/ Mount Pipe	C	From Face	4.00	0.0000	99.00	No Ice	4.84	3.54	0.04
			6.00			1/2" Ice	5.35	4.03	0.08
			1.00			1" Ice	5.88	4.53	0.12
RFV01U-D2A	A	From Face	4.00	0.0000	99.00	No Ice	1.88	1.01	0.07
			-2.00			1/2" Ice	2.05	1.14	0.09
			1.00			1" Ice	2.22	1.28	0.11
RFV01U-D2A	B	From Face	4.00	0.0000	99.00	No Ice	1.88	1.01	0.07
			-2.00			1/2" Ice	2.05	1.14	0.09
			1.00			1" Ice	2.22	1.28	0.11
RFV01U-D2A	C	From Face	4.00	0.0000	99.00	No Ice	1.88	1.01	0.07
			-2.00			1/2" Ice	2.05	1.14	0.09
			1.00			1" Ice	2.22	1.28	0.11
RFV01U-D1A	A	From Face	4.00	0.0000	99.00	No Ice	1.88	1.25	0.08
			-2.00			1/2" Ice	2.05	1.39	0.10
			1.00			1" Ice	2.22	1.54	0.12
RFV01U-D1A	B	From Face	4.00	0.0000	99.00	No Ice	1.88	1.25	0.08
			-2.00			1/2" Ice	2.05	1.39	0.10
			1.00			1" Ice	2.22	1.54	0.12
RFV01U-D1A	C	From Face	4.00	0.0000	99.00	No Ice	1.88	1.25	0.08
			-2.00			1/2" Ice	2.05	1.39	0.10
			1.00			1" Ice	2.22	1.54	0.12
DB-C1-12C-24AB-0Z	A	From Face	4.00	0.0000	99.00	No Ice	4.06	3.10	0.03
			-2.00			1/2" Ice	4.32	3.34	0.07
			1.00			1" Ice	4.58	3.58	0.11
2.4" Dia x 3-ft Mount Pipe	A	From Face	2.00	0.0000	99.00	No Ice	0.58	0.58	0.01
			0.00			1/2" Ice	0.77	0.77	0.02
			0.00			1" Ice	0.97	0.97	0.02
2.4" Dia x 3-ft Mount Pipe	B	From Face	2.00	0.0000	99.00	No Ice	0.58	0.58	0.01
			0.00			1/2" Ice	0.77	0.77	0.02
			0.00			1" Ice	0.97	0.97	0.02
2.4" Dia x 3-ft Mount Pipe	C	From Face	2.00	0.0000	99.00	No Ice	0.58	0.58	0.01
			0.00			1/2" Ice	0.77	0.77	0.02
			0.00			1" Ice	0.97	0.97	0.02
T-Arm Mount [TA 602-3]	C	None		0.0000	99.00	No Ice	13.40	13.40	0.77

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1/2" Ice	16.44	16.44	1.00
						1" Ice	19.70	19.70	1.29
***									
Bridge Stiffener (76" x 10.5" x 1.25")	A	From Leg	0.50 0.00 0.00	0.0000	109.50	No Ice 1/2" Ice 1" Ice	1.32 2.04 2.77	7.80 8.29 8.77	0.28 0.31 0.35
Bridge Stiffener (76" x 10.5" x 1.25")	B	From Leg	0.50 0.00 0.00	0.0000	109.50	No Ice 1/2" Ice 1" Ice	1.32 2.04 2.77	7.80 8.29 8.77	0.28 0.31 0.35
Bridge Stiffener (76" x 10.5" x 1.25")	C	From Leg	0.50 0.00 0.00	0.0000	109.50	No Ice 1/2" Ice 1" Ice	1.32 2.04 2.77	7.80 8.29 8.77	0.28 0.31 0.35
***									

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
VHLP2-23	C	Paraboloid w/Shroud (HP)	From Centroid -Face	4.00 7.00 5.00	0.0000		138.00	2.17	No Ice 1/2" Ice 1" Ice	3.72 4.01 4.30	0.03 0.05 0.07
VHLP2-18	A	Paraboloid w/Shroud (HP)	From Centroid -Face	4.00 7.00 5.00	0.0000		138.00	2.17	No Ice 1/2" Ice 1" Ice	3.72 4.01 4.30	0.03 0.05 0.07

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	150 - 145 (1)	TP15.7317x15x0.2188	5.00	0.00	0.0	10.9269	-5.02	491.71	0.010
L2	145 - 140 (2)	TP16.4634x15.7317x0.2188	5.00	0.00	0.0	11.4423	-5.41	514.90	0.011
L3	140 - 135 (3)	TP17.1951x16.4634x0.2188	5.00	0.00	0.0	11.9577	-8.75	538.10	0.016
L4	135 - 130 (4)	TP17.9268x17.1951x0.2188	5.00	0.00	0.0	12.4731	-9.21	561.29	0.016
L5	130 - 128.5 (5)	TP18.1463x17.9268x0.2188	1.50	0.00	0.0	12.6277	-9.35	568.25	0.016
L6	128.5 - 128.25 (6)	TP18.1829x18.1463x0.6688	0.25	0.00	0.0	37.7146	-9.40	1697.16	0.006
L7	128.25 - 123.25 (7)	TP18.9146x18.1829x0.6438	5.00	0.00	0.0	37.8733	-13.22	1704.30	0.008
L8	123.25 -	TP19.6463x18.9146x0.6188	5.00	0.00	0.0	37.9101	-18.33	1705.95	0.011

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L9	118.25 (8) 118.25 - 113.25 (9)	TP20.378x19.6463x0.6063	5.00	0.00	0.0	38.5970	-19.27	1736.87	0.011
L10	113.25 - 109 (10)	TP21x20.378x0.5938	4.25	0.00	0.0	39.0142	-21.07	1755.64	0.012
L11	109 - 108.75 (11)	TP21.0378x21x0.725	0.25	0.00	0.0	47.4201	-21.14	2133.91	0.010
L12	108.75 - 104.17 (12)	TP21.7293x21.0378x0.7	4.58	0.00	0.0	47.4001	-22.11	2133.01	0.010
L13	104.17 - 103.92 (13)	TP21.7671x21.7293x0.975	0.25	0.00	0.0	65.2767	-22.20	2937.45	0.008
L14	103.92 - 103.17 (14)	TP21.8803x21.7671x0.975	0.75	0.00	0.0	65.6323	-22.42	2953.45	0.008
L15	103.17 - 102.92 (15)	TP21.9181x21.8803x1.125	0.25	0.00	0.0	75.3229	-22.51	3389.53	0.007
L16	102.92 - 102.42 (16)	TP21.9936x21.9181x1.125	0.50	0.00	0.0	75.5964	-22.68	3401.84	0.007
L17	102.42 - 102.17 (17)	TP22.0313x21.9936x0.9375	0.25	0.00	0.0	63.6770	-22.76	2865.47	0.008
L18	102.17 - 100.92 (18)	TP22.2201x22.0313x0.925	1.25	0.00	0.0	63.4274	-23.16	2854.23	0.008
L19	100.92 - 100.67 (19)	TP22.2578x22.2201x1.025	0.25	0.00	0.0	70.0790	-23.25	3153.55	0.007
L20	100.67 - 99.58 (20)	TP22.4224x22.2578x1	1.09	0.00	0.0	68.9802	-23.60	3104.11	0.008
L21	99.58 - 99.33 (21)	TP22.4602x22.4224x1.4	0.25	0.00	0.0	94.9392	-23.69	4272.27	0.006
L22	99.33 - 95.42 (22)	TP23.0506x22.4602x1.35	3.91	0.00	0.0	94.3324	-27.58	4244.96	0.006
L23	95.42 - 95.17 (23)	TP23.0883x23.0506x1.05	0.25	0.00	0.0	74.5116	-27.67	3353.02	0.008
L24	95.17 - 90.17 (24)	TP23.8433x23.0883x1	5.00	0.00	0.0	73.5555	-29.18	3310.00	0.009
L25	90.17 - 85.17 (25)	TP24.5983x23.8433x0.975	5.00	0.00	0.0	74.1654	-30.72	3337.45	0.009
L26	85.17 - 80.5 (26)	TP25.3035x24.5983x0.95	4.67	0.00	0.0	74.4974	-32.19	3352.38	0.010
L27	80.5 - 80.25 (27)	TP25.3413x25.3035x1.3	0.25	0.00	0.0	100.6370	-32.30	4528.65	0.007
L28	80.25 - 75.25 (28)	TP26.0963x25.3413x1.25	5.00	0.00	0.0	100.0060	-34.25	4500.28	0.008
L29	75.25 - 73.58 (29)	TP26.3484x26.0963x1.25	1.67	0.00	0.0	101.0210	-34.91	4545.95	0.008
L30	73.58 - 73.33 (30)	TP26.3862x26.3484x1.225	0.25	0.00	0.0	99.2482	-35.02	4466.17	0.008
L31	73.33 - 69 (31)	TP27.04x26.3862x1.225	4.33	0.00	0.0	100.0400	-35.54	4501.82	0.008
L32	69 - 67 (32)	TP26.8969x26.087x1.2875	5.00	0.00	0.0	106.1700	-38.64	4777.65	0.008
L33	67 - 66.75 (33)	TP26.9374x26.8969x1.2875	0.25	0.00	0.0	106.3380	-38.75	4785.21	0.008
L34	66.75 - 66.5 (34)	TP26.9779x26.9374x1.3625	0.25	0.00	0.0	112.3810	-38.86	5057.15	0.008
L35	66.5 - 61.5 (35)	TP27.7878x26.9779x1.3125	5.00	0.00	0.0	111.8910	-41.07	5035.10	0.008
L36	61.5 - 56.5 (36)	TP28.5976x27.7878x1.2875	5.00	0.00	0.0	113.2210	-43.31	5094.94	0.009
L37	56.5 - 51.5 (37)	TP29.4075x28.5976x1.2375	5.00	0.00	0.0	112.2500	-45.58	5051.27	0.009
L38	51.5 - 48.25	TP29.9339x29.4075x1.2125	3.25	0.00	0.0	112.136	-47.06	5046.11	0.009

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
	(38)					0			
L39	48.25 - 48 (39)	TP29.9744x29.9339x1.6125	0.25	0.00	0.0	147.262 0	-47.21	6626.80	0.007
L40	48 - 44.25 (40)	TP30.5818x29.9744x1.5625	3.75	0.00	0.0	146.004 0	-49.21	6570.16	0.007
L41	44.25 - 44 (41)	TP30.6223x30.5818x1.6625	0.25	0.00	0.0	155.029 0	-49.36	6976.32	0.007
L42	44 - 39 (42)	TP31.4322x30.6223x1.6125	5.00	0.00	0.0	154.831 0	-52.19	6967.41	0.007
L43	39 - 38.5 (43)	TP31.5132x31.4322x1.6125	0.50	0.00	0.0	155.252 0	-52.48	6986.34	0.008
L44	38.5 - 38.25 (44)	TP31.5537x31.5132x1.6125	0.25	0.00	0.0	155.462 0	-52.63	6995.80	0.008
L45	38.25 - 30 (45)	TP32.89x31.5537x1.5625	8.25	0.00	0.0	154.357 0	-55.06	6946.05	0.008
L46	30 - 29 (46)	TP32.4616x31.6171x1.6813	5.00	0.00	0.0	166.638 0	-60.16	7498.72	0.008
L47	29 - 24 (47)	TP33.3062x32.4616x1.6313	5.00	0.00	0.0	166.381 0	-63.25	7487.16	0.008
L48	24 - 23.75 (48)	TP33.3484x33.3062x1.6313	0.25	0.00	0.0	166.603 0	-63.41	7497.14	0.008
L49	23.75 - 23.5 (49)	TP33.3906x33.3484x1.6063	0.25	0.00	0.0	164.398 0	-63.57	7397.90	0.009
L50	23.5 - 18.5 (50)	TP34.2352x33.3906x1.5813	5.00	0.00	0.0	166.267 0	-66.67	7482.00	0.009
L51	18.5 - 13.5 (51)	TP35.0797x34.2352x1.5313	5.00	0.00	0.0	165.420 0	-69.81	7443.91	0.009
L52	13.5 - 8.5 (52)	TP35.9243x35.0797x1.5063	5.00	0.00	0.0	164.479 0	-71.09	7401.57	0.010
L53	8.5 - 3.5 (53)	TP36.7688x35.9243x1.4563	5.00	0.00	0.0	161.630 0	-73.00	7273.36	0.010
L54	3.5 - 0 (54)	TP37.36x36.7688x1.4313	3.50	0.00	0.0	162.863 0	-76.19	7328.84	0.010

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	150 - 145 (1)	TP15.7317x15x0.2188	53.30	194.61	0.274	0.00	194.61	0.000
L2	145 - 140 (2)	TP16.4634x15.7317x0.2188	91.08	213.54	0.427	0.00	213.54	0.000
L3	140 - 135 (3)	TP17.1951x16.4634x0.2188	138.75	233.34	0.595	0.00	233.34	0.000
L4	135 - 130 (4)	TP17.9268x17.1951x0.2188	191.04	254.02	0.752	0.00	254.02	0.000
L5	130 - 128.5 (5)	TP18.1463x17.9268x0.2188	206.96	260.40	0.795	0.00	260.40	0.000
L6	128.5 - 128.25 (6)	TP18.1829x18.1463x0.6688	209.63	740.77	0.283	0.00	740.77	0.000
L7	128.25 - 123.25 (7)	TP18.9146x18.1829x0.6438	276.95	778.24	0.356	0.00	778.24	0.000
L8	123.25 - 118.25 (8)	TP19.6463x18.9146x0.6188	353.04	813.39	0.434	0.00	813.39	0.000
L9	118.25 - 113.25 (9)	TP20.378x19.6463x0.6063	442.58	862.07	0.513	0.00	862.07	0.000
L10	113.25 - 109 (10)	TP21x20.378x0.5938	520.02	900.72	0.577	0.00	900.72	0.000
L11	109 - 108.75 (11)	TP21.0378x21x0.725	524.71	1082.83	0.485	0.00	1082.83	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 $\frac{M_{uy}}{\phi M_{ny}}$
L12	108.75 - 104.17 (12)	TP21.7293x21.0378x0.7	611.94	1123.16	0.545	0.00	1123.16	0.000
L13	104.17 - 103.92 (13)	TP21.7671x21.7293x0.975	616.77	1509.43	0.409	0.00	1509.43	0.000
L14	103.92 - 103.17 (14)	TP21.8803x21.7671x0.975	631.30	1526.28	0.414	0.00	1526.28	0.000
L15	103.17 - 102.92 (15)	TP21.9181x21.8803x1.125	636.16	1729.90	0.368	0.00	1729.90	0.000
L16	102.92 - 102.42 (16)	TP21.9936x21.9181x1.125	645.90	1742.81	0.371	0.00	1742.81	0.000
L17	102.42 - 102.17 (17)	TP22.0313x21.9936x0.9375	650.78	1497.31	0.435	0.00	1497.31	0.000
L18	102.17 - 100.92 (18)	TP22.2201x22.0313x0.925	675.29	1507.12	0.448	0.00	1507.12	0.000
L19	100.92 - 100.67 (19)	TP22.2578x22.2201x1.025	680.22	1652.64	0.412	0.00	1652.64	0.000
L20	100.67 - 99.58 (20)	TP22.4224x22.2578x1	701.77	1643.76	0.427	0.00	1643.76	0.000
L21	99.58 - 99.33 (21)	TP22.4602x22.4224x1.4	706.74	2182.80	0.324	0.00	2182.80	0.000
L22	99.33 - 95.42 (22)	TP23.0506x22.4602x1.35	794.96	2243.78	0.354	0.00	2243.78	0.000
L23	95.42 - 95.17 (23)	TP23.0883x23.0506x1.05	800.62	1824.93	0.439	0.00	1824.93	0.000
L24	95.17 - 90.17 (24)	TP23.8433x23.0883x1	915.37	1874.24	0.488	0.00	1874.24	0.000
L25	90.17 - 85.17 (25)	TP24.5983x23.8433x0.975	1032.88	1959.01	0.527	0.00	1959.01	0.000
L26	85.17 - 80.5 (26)	TP25.3035x24.5983x0.95	1145.08	2033.02	0.563	0.00	2033.02	0.000
L27	80.5 - 80.25 (27)	TP25.3413x25.3035x1.3	1151.14	2672.39	0.431	0.00	2672.39	0.000
L28	80.25 - 75.25 (28)	TP26.0963x25.3413x1.25	1274.06	2754.41	0.463	0.00	2754.41	0.000
L29	75.25 - 73.58 (29)	TP26.3484x26.0963x1.25	1315.75	2811.96	0.468	0.00	2811.96	0.000
L30	73.58 - 73.33 (30)	TP26.3862x26.3484x1.225	1322.02	2772.47	0.477	0.00	2772.47	0.000
L31	73.33 - 69 (31)	TP27.04x26.3862x1.225	1355.47	2817.93	0.481	0.00	2817.93	0.000
L32	69 - 67 (32)	TP26.8969x26.087x1.2875	1483.31	3014.09	0.492	0.00	3014.09	0.000
L33	67 - 66.75 (33)	TP26.9374x26.8969x1.2875	1489.78	3023.86	0.493	0.00	3023.86	0.000
L34	66.75 - 66.5 (34)	TP26.9779x26.9374x1.3625	1496.26	3182.32	0.470	0.00	3182.32	0.000
L35	66.5 - 61.5 (35)	TP27.7878x26.9779x1.3125	1627.16	3286.09	0.495	0.00	3286.09	0.000
L36	61.5 - 56.5 (36)	TP28.5976x27.7878x1.2875	1760.63	3437.97	0.512	0.00	3437.97	0.000
L37	56.5 - 51.5 (37)	TP29.4075x28.5976x1.2375	1896.58	3526.65	0.538	0.00	3526.65	0.000
L38	51.5 - 48.25 (38)	TP29.9339x29.4075x1.2125	1986.21	3597.91	0.552	0.00	3597.91	0.000
L39	48.25 - 48 (39)	TP29.9744x29.9339x1.6125	1993.14	4601.19	0.433	0.00	4601.19	0.000
L40	48 - 44.25 (40)	TP30.5818x29.9744x1.5625	2097.93	4680.94	0.448	0.00	4680.94	0.000
L41	44.25 - 44 (41)	TP30.6223x30.5818x1.6625	2104.96	4943.40	0.426	0.00	4943.40	0.000
L42	44 - 39 (42)	TP31.4322x30.6223x1.6125	2246.93	5099.75	0.441	0.00	5099.75	0.000
L43	39 - 38.5 (43)	TP31.5132x31.4322x1.6125	2261.25	5128.20	0.441	0.00	5128.20	0.000
L44	38.5 - 38.25 (44)	TP31.5537x31.5132x1.6125	2268.43	5142.46	0.441	0.00	5142.46	0.000
L45	38.25 - 30 (45)	TP32.89x31.5537x1.5625	2391.22	5246.38	0.456	0.00	5246.38	0.000
L46	30 - 29 (46)	TP32.4616x31.6171x1.6813	2538.07	5662.51	0.448	0.00	5662.51	0.000
L47	29 - 24 (47)	TP33.3062x32.4616x1.6313	2687.23	5835.37	0.461	0.00	5835.37	0.000
L48	24 - 23.75 (48)	TP33.3484x33.3062x1.6313	2694.75	5851.32	0.461	0.00	5851.32	0.000
L49	23.75 - 23.5	TP33.3906x33.3484x1.6063	2702.27	5791.02	0.467	0.00	5791.02	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 $\frac{M_{uy}}{\phi M_{ny}}$
	(49)							
L50	23.5 - 18.5 (50)	TP34.2352x33.3906x1.5813	2853.62	6029.21	0.473	0.00	6029.21	0.000
L51	18.5 - 13.5 (51)	TP35.0797x34.2352x1.5313	3006.93	6179.23	0.487	0.00	6179.23	0.000
L52	13.5 - 8.5 (52)	TP35.9243x35.0797x1.5063	3068.78	6217.82	0.494	0.00	6217.82	0.000
L53	8.5 - 3.5 (53)	TP36.7688x35.9243x1.4563	3162.14	6223.35	0.508	0.00	6223.35	0.000
L54	3.5 - 0 (54)	TP37.36x36.7688x1.4313	3319.22	6439.81	0.515	0.00	6439.81	0.000

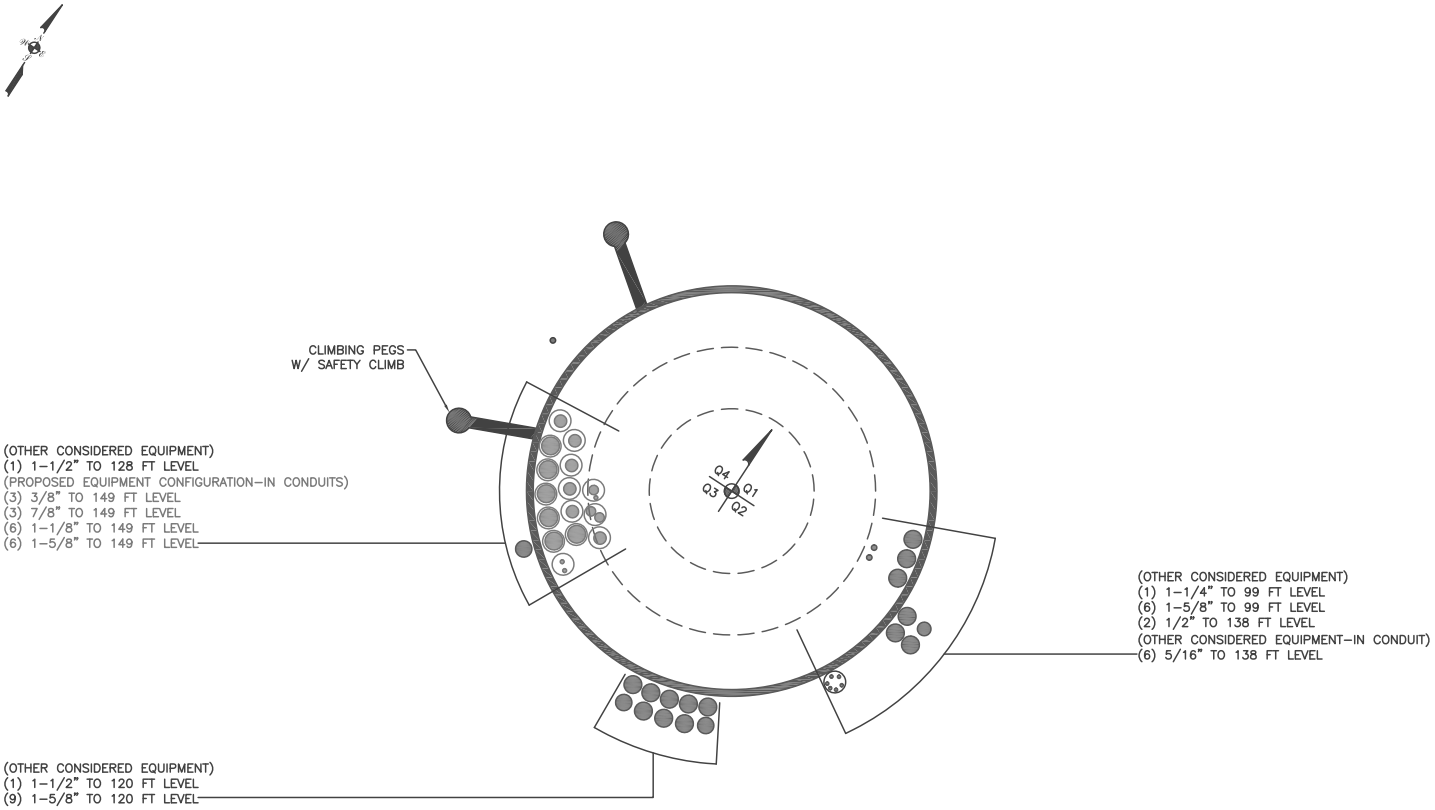
Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	150 - 145 (1)	TP15.7317x15x0.2188	7.20	147.51	0.049	0.01	201.29	0.000
L2	145 - 140 (2)	TP16.4634x15.7317x0.2188	7.77	154.47	0.050	0.50	220.73	0.002
L3	140 - 135 (3)	TP17.1951x16.4634x0.2188	10.35	161.43	0.064	0.37	241.06	0.002
L4	135 - 130 (4)	TP17.9268x17.1951x0.2188	10.58	168.39	0.063	0.37	262.29	0.001
L5	130 - 128.5 (5)	TP18.1463x17.9268x0.2188	10.66	170.47	0.063	0.37	268.83	0.001
L6	128.5 - 128.25 (6)	TP18.1829x18.1463x0.6688	10.67	509.15	0.021	0.37	784.39	0.000
L7	128.25 - 123.25 (7)	TP18.9146x18.1829x0.6438	13.78	511.29	0.027	0.24	821.72	0.000
L8	123.25 - 118.25 (8)	TP19.6463x18.9146x0.6188	17.78	511.79	0.035	0.24	856.59	0.000
L9	118.25 - 113.25 (9)	TP20.378x19.6463x0.6063	18.06	521.06	0.035	0.24	906.22	0.000
L10	113.25 - 109 (10)	TP21x20.378x0.5938	18.77	526.69	0.036	0.24	945.41	0.000
L11	109 - 108.75 (11)	TP21.0378x21x0.725	18.77	640.17	0.029	0.24	1143.84	0.000
L12	108.75 - 104.17 (12)	TP21.7293x21.0378x0.7	19.32	639.90	0.030	0.76	1183.69	0.001
L13	104.17 - 103.92 (13)	TP21.7671x21.7293x0.975	19.34	881.24	0.022	0.75	1611.72	0.000
L14	103.92 - 103.17 (14)	TP21.8803x21.7671x0.975	19.43	886.04	0.022	0.75	1629.33	0.000
L15	103.17 - 102.92 (15)	TP21.9181x21.8803x1.125	19.45	1016.86	0.019	0.74	1859.86	0.000
L16	102.92 - 102.42 (16)	TP21.9936x21.9181x1.125	19.51	1020.55	0.019	0.74	1873.39	0.000
L17	102.42 - 102.17 (17)	TP22.0313x21.9936x0.9375	19.54	859.64	0.023	0.74	1595.04	0.000
L18	102.17 - 100.92 (18)	TP22.2201x22.0313x0.925	19.69	856.27	0.023	0.74	1603.95	0.000
L19	100.92 - 100.67 (19)	TP22.2578x22.2201x1.025	19.71	946.07	0.021	0.73	1766.97	0.000
L20	100.67 - 99.58 (20)	TP22.4224x22.2578x1	19.85	931.23	0.021	0.72	1754.79	0.000
L21	99.58 - 99.33 (21)	TP22.4602x22.4224x1.4	19.87	1281.68	0.016	0.72	2374.33	0.000
L22	99.33 - 95.42 (22)	TP23.0506x22.4602x1.35	22.65	1273.49	0.018	1.06	2430.89	0.000
L23	95.42 - 95.17 (23)	TP23.0883x23.0506x1.05	22.67	1005.91	0.023	1.05	1950.01	0.001
L24	95.17 - 90.17 (24)	TP23.8433x23.0883x1	23.24	993.00	0.023	0.99	1995.30	0.000
L25	90.17 - 85.17	TP24.5983x23.8433x0.975	23.79	1001.23	0.024	0.91	2080.54	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 $\frac{T_u}{\phi T_n}$
	(25)							
L26	85.17 - 80.5	TP25.3035x24.5983x0.95	24.29	1005.71	0.024	0.84	2154.45	0.000
	(26)							
L27	80.5 - 80.25	TP25.3413x25.3035x1.3	24.30	1358.60	0.018	0.83	2873.07	0.000
	(27)							
L28	80.25 - 75.25	TP26.0963x25.3413x1.25	24.88	1350.08	0.018	0.79	2950.68	0.000
	(28)							
L29	75.25 - 73.58	TP26.3484x26.0963x1.25	25.07	1363.79	0.018	0.79	3010.88	0.000
	(29)							
L30	73.58 - 73.33	TP26.3862x26.3484x1.225	25.08	1339.85	0.019	0.77	2965.43	0.000
	(30)							
L31	73.33 - 69 (31)	TP27.04x26.3862x1.225	25.24	1350.55	0.019	0.77	3012.96	0.000
L32	69 - 67 (32)	TP26.8969x26.087x1.2875	25.88	1433.30	0.018	0.73	3228.75	0.000
L33	67 - 66.75 (33)	TP26.9374x26.8969x1.2875	25.89	1435.56	0.018	0.72	3238.97	0.000
L34	66.75 - 66.5	TP26.9779x26.9374x1.3625	25.92	1517.14	0.017	0.72	3418.43	0.000
	(34)							
L35	66.5 - 61.5 (35)	TP27.7878x26.9779x1.3125	26.45	1510.53	0.018	0.67	3517.78	0.000
L36	61.5 - 56.5 (36)	TP28.5976x27.7878x1.2875	26.96	1528.48	0.018	0.61	3671.84	0.000
L37	56.5 - 51.5 (37)	TP29.4075x28.5976x1.2375	27.44	1515.38	0.018	0.55	3754.99	0.000
L38	51.5 - 48.25	TP29.9339x29.4075x1.2125	27.75	1513.83	0.018	0.51	3824.57	0.000
	(38)							
L39	48.25 - 48 (39)	TP29.9744x29.9339x1.6125	27.76	1988.04	0.014	0.50	4959.76	0.000
L40	48 - 44.25 (40)	TP30.5818x29.9744x1.5625	28.14	1971.05	0.014	0.47	5031.35	0.000
L41	44.25 - 44 (41)	TP30.6223x30.5818x1.6625	28.15	2092.89	0.013	0.45	5331.43	0.000
L42	44 - 39 (42)	TP31.4322x30.6223x1.6125	28.65	2090.22	0.014	0.41	5482.73	0.000
L43	39 - 38.5 (43)	TP31.5132x31.4322x1.6125	28.69	2095.90	0.014	0.40	5512.54	0.000
L44	38.5 - 38.25	TP31.5537x31.5132x1.6125	28.71	2098.74	0.014	0.39	5527.48	0.000
	(44)							
L45	38.25 - 30 (45)	TP32.89x31.5537x1.5625	29.09	2083.82	0.014	0.36	5623.52	0.000
L46	30 - 29 (46)	TP32.4616x31.6171x1.6813	29.65	2249.62	0.013	0.31	6090.90	0.000
L47	29 - 24 (47)	TP33.3062x32.4616x1.6313	30.05	2246.15	0.013	0.26	6258.26	0.000
L48	24 - 23.75 (48)	TP33.3484x33.3062x1.6313	30.05	2249.14	0.013	0.25	6274.96	0.000
L49	23.75 - 23.5	TP33.3906x33.3484x1.6063	30.07	2219.37	0.014	0.24	6205.01	0.000
	(49)							
L50	23.5 - 18.5 (50)	TP34.2352x33.3906x1.5813	30.48	2244.60	0.014	0.20	6447.23	0.000
L51	18.5 - 13.5 (51)	TP35.0797x34.2352x1.5313	30.87	2233.17	0.014	0.15	6590.13	0.000
L52	13.5 - 8.5 (52)	TP35.9243x35.0797x1.5063	31.10	2231.53	0.014	0.11	6623.52	0.000
L53	8.5 - 3.5 (53)	TP36.7688x35.9243x1.4563	31.32	2192.70	0.014	0.08	6615.64	0.000
L54	3.5 - 0 (54)	TP37.36x36.7688x1.4313	31.71	2210.91	0.014	0.03	6834.27	0.000

APPENDIX B

BASE LEVEL DRAWING


CLIMBING PEGS
W/ SAFETY CLIMB
(OTHER CONSIDERED EQUIPMENT)
(1) 1-1/2" TO 128 FT LEVEL
(PROPOSED EQUIPMENT CONFIGURATION-IN CONDUITS)
(3) 3/8" TO 149 FT LEVEL
(3) 7/8" TO 149 FT LEVEL
(6) 1-1/8" TO 149 FT LEVEL
(6) 1-5/8" TO 149 FT LEVEL
Q4
Q1
Q3
Q2
(OTHER CONSIDERED EQUIPMENT)
(1) 1-1/4" TO 99 FT LEVEL
(6) 1-5/8" TO 99 FT LEVEL
(2) 1/2" TO 138 FT LEVEL
(OTHER CONSIDERED EQUIPMENT-IN CONDUIT)
(6) 5/16" TO 138 FT LEVEL
(OTHER CONSIDERED EQUIPMENT)
(1) 1-1/2" TO 120 FT LEVEL
(9) 1-5/8" TO 120 FT LEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

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)

Latitude: 41.223344
Longitude: -73.216772
Elevation: 240.76 ft (NAVD 88)

Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	98 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: Tue Dec 27 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.

Seismic

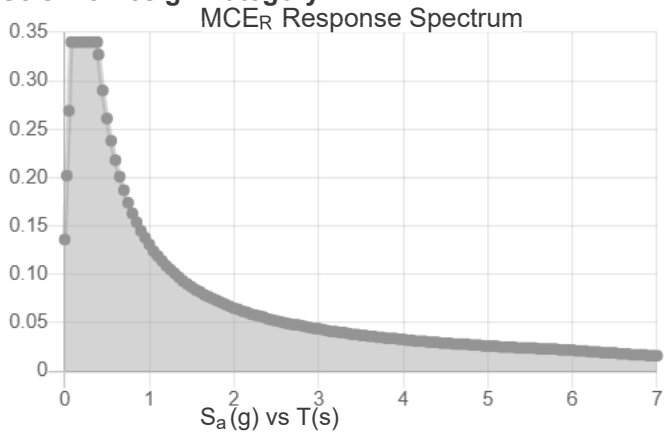
D - Default (see Section 11.4.3)

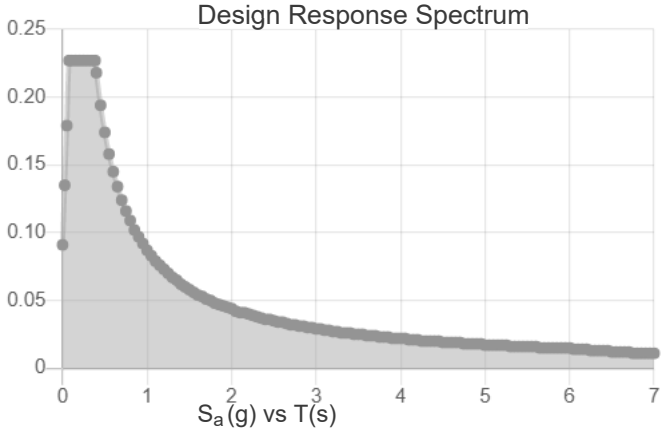
Site Soil Class:

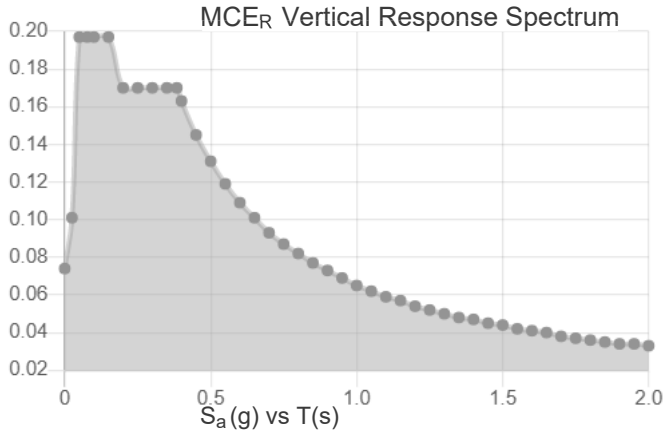
Results:

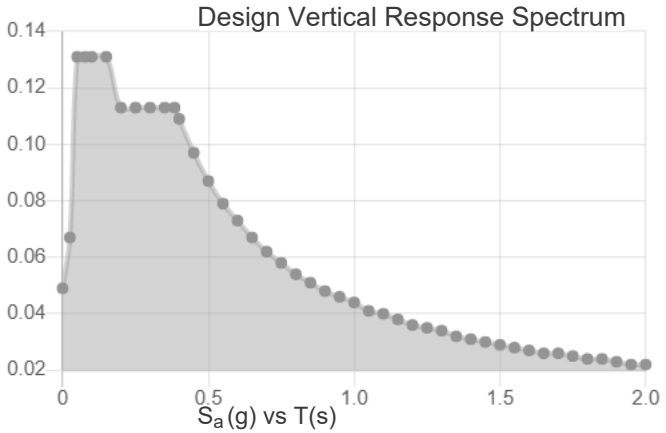
S_S :	0.212	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.121
F_v :	2.4	PGA_M :	0.189
S_{MS} :	0.34	F_{PGA} :	1.558
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.227	C_v :	0.725

Seismic Design Category: B









Data Accessed: **Tue Dec 27 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:	Tue Dec 27 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.

CCIpole

per TIA-222- H

Site BU: 841288

Work Order: 2190498

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	150	41	0	12	15	21	0.21875	Auto	A572-50
2	109	40	3	12	21.00	27.04	0.25	Auto	A572-50
3	72	42	4	12	26.09	32.89	0.3125	Auto	A572-50
4	34	34	0	12	31.62	37.36	0.4063	Auto	A572-50

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	48.25	solid round	Dywidag #20	4			x			x			x			x
2	0	23.75	plate	PL 6.5x1.25	4		x			x			x			x	
3	23.75	44.25	plate	PL 6.5x1.25	4		x			x			x			x	
4	44.25	66.75	plate	PL 5x1.25	4		x			x			x			x	
5	66.75	80.5	plate	PL 4x1.25	4			x			x			x			x
6	95.42	109	plate	PL 5x1.25	2		x			x							
7	95.42	100.92	plate	PL 5x1.25	1									x			
8	100.92	109	plate	PL 5x1.25	1								x				
9	102.42	109	plate	PL 5x1.25	1											x	
10	109	128.5	plate	PL 4x1.25	4		x			x			x			x	
11	0	38.5	plate	(1) PL 6x1 w/ PL 4.5x1	1	x											
12	0	38.5	plate	(2) PL 6x1 w/ PL 4.5x1	3				x			x			x		
13	38.5	73.58	plate	(3) PL 6x1 w/ PL 4.5x1	4	x			x			x			x		
14	73.58	104.17	plate	(3) PL 6x1 w/ PL 4.5x1	2	x									x		
15	73.58	99.58	plate	(3) PL 6x1 w/ PL 4.5x1	1				x								
16	73.58	103.17	plate	(3) PL 6x1 w/ PL 4.5x1	1							x					
17																	

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 (in2)	Bolt Hole Size (in)	Reinforcement Material
1	0	0	4.90874	3	None	0	None	0.000	34.400	4.909	0.0000	Dywidag
2	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
3	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
4	5	1.25	6.25	0.625	PC 8.8 - M20 (100)	27	PC 8.8 - M20 (100)	27.000	18.000	4.688	1.1875	A572-65
5	4	1.25	5	0.625	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	18.000	3.438	1.1875	A572-65
6	5	1.25	6.25	0.625	PC 8.8 - M20 (100)	27	PC 8.8 - M20 (100)	27.000	18.000	4.688	1.1875	A572-65
7	5	1.25	6.25	0.625	PC 8.8 - M20 (100)	27	PC 8.8 - M20 (100)	27.000	18.000	4.688	1.1875	A572-65
8	5	1.25	6.25	0.625	PC 8.8 - M20 (100)	27	PC 8.8 - M20 (100)	27.000	18.000	4.688	1.1875	A572-65
9	5	1.25	6.25	0.625	PC 8.8 - M20 (100)	27	PC 8.8 - M20 (100)	27.000	18.000	4.688	1.1875	A572-65
10	4	1.25	5	0.625	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	18.000	3.438	1.1875	A572-65
11	5.40899	1.94121	10.5	1.07	FORGBolt - M20 (A)	45	FORGBolt - M20 (A)	54.000	20.000	8.000	1.1875	A572-65
12	5.40899	1.94121	10.5	1.07	FORGBolt - M20 (A)	39	FORGBolt - M20 (A)	54.000	20.000	8.000	1.1875	A572-65
13	5.40899	1.94121	10.5	1.07	FORGBolt - M20 (A)	54	FORGBolt - M20 (A)	54.000	20.000	8.000	1.1875	A572-65
14	5.40899	1.94121	10.5	1.07	FORGBolt - M20 (A)	54	FORGBolt - M20 (A)	54.000	20.000	8.000	1.1875	A572-65
15	5.40899	1.94121	10.5	1.07	FORGBolt - M20 (A)	54	FORGBolt - M20 (A)	54.000	20.000	8.000	1.1875	A572-65
16	5.40899	1.94121	10.5	1.07	FORGBolt - M20 (A)	54	FORGBolt - M20 (A)	54.000	20.000	8.000	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)
Dywidag #20	Top	0	-	0	0	0	0	0	-	-	0	-	-	-
	Bottom	0	-	0	0	0	0	0	-	-	0	-	-	-
PL 6.5x1.25	Top	11	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	11	N	3	3	-	-	-	-	-	-	-	-	-
PL 5x1.25	Top	9	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	9	N	3	3	-	-	-	-	-	-	-	-	-
PL 4x1.25	Top	6	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	6	N	3	3	-	-	-	-	-	-	-	-	-
(1) PL 6x1 w/ PL 4.5x1	Top	18	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	15	N	3	3	-	-	-	-	-	-	-	-	-
(2) PL 6x1 w/ PL 4.5x1	Top	18	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	13	N	3	3	-	-	-	-	-	-	-	-	-
(3) PL 6x1 w/ PL 4.5x1	Top	18	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	18	N	3	3	-	-	-	-	-	-	-	-	-

TNX Geometry Input

Increment (ft): 5 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	150 - 145	5		12	15.000	15.732	0.21875	A572-50	1.000
2	145 - 140	5		12	15.732	16.463	0.21875	A572-50	1.000
3	140 - 135	5		12	16.463	17.195	0.21875	A572-50	1.000
4	135 - 130	5		12	17.195	17.927	0.21875	A572-50	1.000
5	130 - 128.5	1.5		12	17.927	18.146	0.21875	A572-50	1.000
6	128.5 - 128.25	0.25		12	18.146	18.183	0.66875	A572-50	0.867
7	128.25 - 123.25	5		12	18.183	18.915	0.64375	A572-50	0.877
8	123.25 - 118.25	5		12	18.915	19.646	0.61875	A572-50	0.889
9	118.25 - 113.25	5		12	19.646	20.378	0.60625	A572-50	0.887
10	113.25 - 109	4.25	0	12	20.378	21.000	0.59375	A572-50	0.889
11	109 - 108.75	0.25		12	21.000	21.038	0.725	A572-50	0.881
12	108.75 - 104.17	4.58		12	21.038	21.729	0.7	A572-50	0.893
13	104.17 - 103.92	0.25		12	21.729	21.767	0.975	A572-50	0.971
14	103.92 - 103.17	0.75		12	21.767	21.880	0.975	A572-50	0.967
15	103.17 - 102.92	0.25		12	21.880	21.918	1.125	A572-50	0.983
16	102.92 - 102.42	0.5		12	21.918	21.994	1.125	A572-50	0.980
17	102.42 - 102.17	0.25		12	21.994	22.031	0.9375	A572-50	1.066
18	102.17 - 100.92	1.25		12	22.031	22.220	0.925	A572-50	1.072
19	100.92 - 100.67	0.25		12	22.220	22.258	1.025	A572-50	0.971
20	100.67 - 99.58	1.09		12	22.258	22.422	1	A572-50	0.988
21	99.58 - 99.33	0.25		12	22.422	22.460	1.4	A572-50	0.829
22	99.33 - 95.42	3.91		12	22.460	23.051	1.35	A572-50	0.839
23	95.42 - 95.17	0.25		12	23.051	23.088	1.05	A572-50	0.811
24	95.17 - 90.17	5		12	23.088	23.843	1	A572-50	0.830
25	90.17 - 85.17	5		12	23.843	24.598	0.975	A572-50	0.831
26	85.17 - 80.5	4.67		12	24.598	25.304	0.95	A572-50	0.835
27	80.5 - 80.25	0.25		12	25.304	25.341	1.3	A572-50	0.818
28	80.25 - 75.25	5		12	25.341	26.096	1.25	A572-50	0.829
29	75.25 - 73.58	1.67		12	26.096	26.348	1.25	A572-50	0.823
30	73.58 - 73.33	0.25		12	26.348	26.386	1.225	A572-50	0.838
31	73.33 - 72	4.33	3	12	26.386	27.040	1.225	A572-50	0.833
32	72 - 67	5		12	26.087	26.897	1.2875	A572-50	0.837
33	67 - 66.75	0.25		12	26.897	26.937	1.2875	A572-50	0.836
34	66.75 - 66.5	0.25		12	26.937	26.978	1.3625	A572-50	0.836
35	66.5 - 61.5	5		12	26.978	27.788	1.3125	A572-50	0.847
36	61.5 - 56.5	5		12	27.788	28.598	1.2875	A572-50	0.844
37	56.5 - 51.5	5		12	28.598	29.408	1.2375	A572-50	0.859
38	51.5 - 48.25	3.25		12	29.408	29.934	1.2125	A572-50	0.864
39	48.25 - 48	0.25		12	29.934	29.974	1.6125	A572-50	0.792
40	48 - 44.25	3.75		12	29.974	30.582	1.5625	A572-50	0.803
41	44.25 - 44	0.25		12	30.582	30.622	1.6625	A572-50	0.805
42	44 - 39	5		12	30.622	31.432	1.6125	A572-50	0.811
43	39 - 38.5	0.5		12	31.432	31.513	1.6125	A572-50	0.809
44	38.5 - 38.25	0.25		12	31.513	31.554	1.6125	A572-50	0.809
45	38.25 - 34	8.25	4	12	31.554	32.890	1.5625	A572-50	0.819
46	34 - 29	5		12	31.617	32.462	1.6813	A572-50	0.817
47	29 - 24	5		12	32.462	33.306	1.6313	A572-50	0.825
48	24 - 23.75	0.25		12	33.306	33.348	1.6313	A572-50	0.825
49	23.75 - 23.5	0.25		12	33.348	33.391	1.6063	A572-50	0.836
50	23.5 - 18.5	5		12	33.391	34.235	1.5813	A572-50	0.833
51	18.5 - 13.5	5		12	34.235	35.080	1.5313	A572-50	0.844
52	13.5 - 8.5	5		12	35.080	35.924	1.5063	A572-50	0.843
53	8.5 - 3.5	5		12	35.924	36.769	1.4563	A572-50	0.857
54	3.5 - 0	3.5		12	36.769	37.360	1.4313	A572-50	0.861

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	150 - 145	5.02	53.30	7.20
2	145 - 140	5.41	91.08	7.77
3	140 - 135	8.75	138.75	10.35
4	135 - 130	9.21	191.04	10.58
5	130 - 128.5	9.35	206.96	10.66
6	128.5 - 128.25	9.40	209.63	10.67
7	128.25 - 123.25	13.22	276.95	13.78
8	123.25 - 118.25	18.33	353.04	17.78
9	118.25 - 113.25	19.27	442.58	18.06
10	113.25 - 109	21.07	520.02	18.77
11	109 - 108.75	21.14	524.71	18.77
12	108.75 - 104.17	22.11	611.94	19.32
13	104.17 - 103.92	22.20	616.77	19.34
14	103.92 - 103.17	22.42	631.30	19.43
15	103.17 - 102.92	22.51	636.16	19.45
16	102.92 - 102.42	22.68	645.90	19.51
17	102.42 - 102.17	22.76	650.78	19.54
18	102.17 - 100.92	23.16	675.29	19.69
19	100.92 - 100.67	23.25	680.22	19.71
20	100.67 - 99.58	23.60	701.77	19.85
21	99.58 - 99.33	23.69	706.74	19.87
22	99.33 - 95.42	27.58	794.96	22.65
23	95.42 - 95.17	27.67	800.62	22.67
24	95.17 - 90.17	29.18	915.37	23.24
25	90.17 - 85.17	30.72	1032.89	23.79
26	85.17 - 80.5	32.19	1145.07	24.29
27	80.5 - 80.25	32.30	1151.15	24.30
28	80.25 - 75.25	34.25	1274.06	24.88
29	75.25 - 73.58	34.91	1315.75	25.07
30	73.58 - 73.33	35.02	1322.02	25.08
31	73.33 - 72	35.54	1355.47	25.24
32	72 - 67	38.64	1483.31	25.88
33	67 - 66.75	38.75	1489.78	25.89
34	66.75 - 66.5	38.86	1496.26	25.92
35	66.5 - 61.5	41.07	1627.16	26.45
36	61.5 - 56.5	43.31	1760.63	26.96
37	56.5 - 51.5	45.58	1896.57	27.44
38	51.5 - 48.25	47.06	1986.21	27.75
39	48.25 - 48	47.21	1993.14	27.76
40	48 - 44.25	49.21	2097.92	28.14
41	44.25 - 44	49.36	2104.96	28.15
42	44 - 39	52.19	2246.92	28.65
43	39 - 38.5	52.48	2261.25	28.69
44	38.5 - 38.25	52.63	2268.43	28.71
45	38.25 - 34	55.05	2391.22	29.09
46	34 - 29	60.16	2538.07	29.65
47	29 - 24	63.25	2687.24	30.05
48	24 - 23.75	63.41	2694.75	30.05
49	23.75 - 23.5	63.57	2702.26	30.07
50	23.5 - 18.5	66.67	2853.62	30.48
51	18.5 - 13.5	69.81	3006.92	30.87
52	13.5 - 8.5	72.98	3162.14	31.25
53	8.5 - 3.5	76.17	3319.22	31.62
54	3.5 - 0	78.42	3430.27	31.88

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
150 - 145	Pole	TP15.732x15x0.2188	Pole	27.2%	Pass
145 - 140	Pole	TP16.463x15.732x0.2188	Pole	41.7%	Pass
140 - 135	Pole	TP17.195x16.463x0.2188	Pole	58.4%	Pass
135 - 130	Pole	TP17.927x17.195x0.2188	Pole	73.4%	Pass
130 - 128.5	Pole	TP18.146x17.927x0.2188	Pole	77.4%	Pass
128.5 - 128.25	Pole + Reinf.	TP18.183x18.146x0.6688	Reinf. 10 Bolt-Shaft Bearing	46.8%	Pass
128.25 - 123.25	Pole + Reinf.	TP18.915x18.183x0.6438	Reinf. 10 Tension Rupture	48.6%	Pass
123.25 - 118.25	Pole + Reinf.	TP19.646x18.915x0.6188	Reinf. 10 Tension Rupture	59.0%	Pass
118.25 - 113.25	Pole + Reinf.	TP20.378x19.646x0.6063	Reinf. 10 Tension Rupture	70.2%	Pass
113.25 - 109	Pole + Reinf.	TP21x20.378x0.5938	Reinf. 10 Bolt-Shaft Bearing	95.6%	Pass
109 - 108.75	Pole + Reinf.	TP21.038x21x0.725	Reinf. 6 Tension Rupture	60.3%	Pass
108.75 - 104.17	Pole + Reinf.	TP21.729x21.038x0.7	Reinf. 6 Tension Rupture	67.3%	Pass
104.17 - 103.92	Pole + Reinf.	TP21.767x21.729x0.975	Reinf. 6 Tension Rupture	60.0%	Pass
103.92 - 103.17	Pole + Reinf.	TP21.88x21.767x0.975	Reinf. 6 Tension Rupture	61.0%	Pass
103.17 - 102.92	Pole + Reinf.	TP21.918x21.88x1.125	Reinf. 6 Tension Rupture	49.7%	Pass
102.92 - 102.42	Pole + Reinf.	TP21.994x21.918x1.125	Reinf. 6 Tension Rupture	50.2%	Pass
102.42 - 102.17	Pole + Reinf.	TP22.031x21.994x0.9375	Reinf. 6 Tension Rupture	55.2%	Pass
102.17 - 100.92	Pole + Reinf.	TP22.22x22.031x0.925	Reinf. 6 Tension Rupture	56.6%	Pass
100.92 - 100.67	Pole + Reinf.	TP22.258x22.22x1.025	Reinf. 6 Tension Rupture	55.4%	Pass
100.67 - 99.58	Pole + Reinf.	TP22.422x22.258x1	Reinf. 6 Tension Rupture	56.6%	Pass
99.58 - 99.33	Pole + Reinf.	TP22.46x22.422x1.4	Reinf. 14 Tension Rupture	41.1%	Pass
99.33 - 95.42	Pole + Reinf.	TP23.051x22.46x1.35	Reinf. 14 Tension Rupture	44.9%	Pass
95.42 - 95.17	Pole + Reinf.	TP23.088x23.051x1.05	Reinf. 15 Tension Rupture	55.5%	Pass
95.17 - 90.17	Pole + Reinf.	TP23.843x23.088x1	Reinf. 15 Tension Rupture	60.9%	Pass
90.17 - 85.17	Pole + Reinf.	TP24.598x23.843x0.975	Reinf. 15 Tension Rupture	66.1%	Pass
85.17 - 80.5	Pole + Reinf.	TP25.304x24.598x0.95	Reinf. 15 Tension Rupture	70.8%	Pass
80.5 - 80.25	Pole + Reinf.	TP25.341x25.304x1.3	Reinf. 5 Bolt-Shaft Bearing	61.3%	Pass
80.25 - 75.25	Pole + Reinf.	TP26.096x25.341x1.25	Reinf. 5 Tension Rupture	61.8%	Pass
75.25 - 73.58	Pole + Reinf.	TP26.348x26.096x1.25	Reinf. 5 Tension Rupture	63.2%	Pass
73.58 - 73.33	Pole + Reinf.	TP26.386x26.348x1.225	Reinf. 5 Tension Rupture	63.4%	Pass
73.33 - 72	Pole + Reinf.	TP27.04x26.386x1.225	Reinf. 5 Tension Rupture	64.4%	Pass
72 - 67	Pole + Reinf.	TP26.897x26.087x1.2875	Reinf. 5 Tension Rupture	65.8%	Pass
67 - 66.75	Pole + Reinf.	TP26.937x26.897x1.2875	Reinf. 5 Tension Rupture	66.0%	Pass
66.75 - 66.5	Pole + Reinf.	TP26.978x26.937x1.3625	Reinf. 13 Tension Rupture	58.3%	Pass
66.5 - 61.5	Pole + Reinf.	TP27.788x26.978x1.3125	Reinf. 13 Tension Rupture	61.2%	Pass
61.5 - 56.5	Pole + Reinf.	TP28.598x27.788x1.2875	Reinf. 13 Tension Rupture	63.9%	Pass
56.5 - 51.5	Pole + Reinf.	TP29.408x28.598x1.2375	Reinf. 13 Tension Rupture	66.4%	Pass
51.5 - 48.25	Pole + Reinf.	TP29.934x29.408x1.2125	Reinf. 13 Tension Rupture	68.0%	Pass
48.25 - 48	Pole + Reinf.	TP29.974x29.934x1.6125	Reinf. 1 Compression	54.5%	Pass
48 - 44.25	Pole + Reinf.	TP30.582x29.974x1.5625	Reinf. 1 Compression	56.0%	Pass
44.25 - 44	Pole + Reinf.	TP30.622x30.582x1.6625	Reinf. 1 Compression	52.8%	Pass
44 - 39	Pole + Reinf.	TP31.432x30.622x1.6125	Reinf. 1 Compression	54.6%	Pass
39 - 38.5	Pole + Reinf.	TP31.513x31.432x1.6125	Reinf. 1 Compression	54.7%	Pass
38.5 - 38.25	Pole + Reinf.	TP31.554x31.513x1.6125	Reinf. 1 Compression	54.8%	Pass
38.25 - 34	Pole + Reinf.	TP32.89x31.554x1.5625	Reinf. 1 Compression	56.3%	Pass
34 - 29	Pole + Reinf.	TP32.462x31.617x1.6813	Reinf. 1 Compression	55.6%	Pass
29 - 24	Pole + Reinf.	TP33.306x32.462x1.6313	Reinf. 1 Compression	56.9%	Pass
24 - 23.75	Pole + Reinf.	TP33.348x33.306x1.6313	Reinf. 1 Compression	57.0%	Pass
23.75 - 23.5	Pole + Reinf.	TP33.391x33.348x1.6063	Reinf. 1 Compression	57.1%	Pass
23.5 - 18.5	Pole + Reinf.	TP34.235x33.391x1.5813	Reinf. 1 Compression	58.3%	Pass
18.5 - 13.5	Pole + Reinf.	TP35.08x34.235x1.5313	Reinf. 12 Tension Rupture	59.6%	Pass
13.5 - 8.5	Pole + Reinf.	TP35.924x35.08x1.5063	Reinf. 12 Tension Rupture	60.8%	Pass
8.5 - 3.5	Pole + Reinf.	TP36.769x35.924x1.4563	Reinf. 12 Tension Rupture	62.0%	Pass
3.5 - 0	Pole + Reinf.	TP37.36x36.769x1.4313	Reinf. 12 Tension Rupture	62.8%	Pass
				Summary	
			Pole	77.4%	Pass
			Reinforcement	95.6%	Pass
			Overall	95.6%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity* (100% Max. Allowable)															
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16
150 - 145	336	n/a	336	10.91	n/a	10.91	27.2%																
145 - 140	386	n/a	386	11.43	n/a	11.43	41.7%																
140 - 135	440	n/a	440	11.94	n/a	11.94	58.4%																
135 - 130	500	n/a	500	12.46	n/a	12.46	73.4%																
130 - 128.5	519	n/a	519	12.61	n/a	12.61	77.4%																
128.5 - 128.25	522	959	1481	12.64	20.00	32.64	26.5%										46.8%						
128.25 - 123.25	588	1031	1619	13.15	20.00	33.15	33.4%										48.6%						
123.25 - 118.25	660	1106	1766	13.66	20.00	33.66	40.7%										59.0%						
118.25 - 113.25	738	1184	1922	14.18	20.00	34.18	48.5%										70.2%						
113.25 - 109	808	1252	2060	14.62	20.00	34.62	55.0%										95.6%						
109 - 108.75	924	1580	2504	16.71	25.00	41.71	45.5%						60.3%		60.3%	60.3%							
108.75 - 104.17	1020	1678	2697	17.27	25.00	42.27	50.8%						67.3%		67.3%	67.3%							
104.17 - 103.92	1157	2598	3755	17.30	46.00	63.30	46.6%						60.0%		48.4%	37.2%					39.3%		
103.92 - 103.17	1175	2623	3798	17.39	46.00	63.39	47.3%						61.0%		49.3%	37.9%					40.0%		
103.17 - 102.92	1094	3130	4225	17.42	56.50	73.92	40.0%						49.7%		33.1%	37.3%					40.5%		34.2%
102.92 - 102.42	1106	3150	4256	17.48	56.50	73.98	40.4%						50.2%		33.5%	37.7%					41.0%		34.6%
102.42 - 102.17	1074	2568	3642	17.51	50.25	67.76	44.5%						55.2%		34.6%						50.6%		35.7%
102.17 - 100.92	1102	2608	3710	17.66	50.25	67.91	45.7%						56.6%		35.5%						51.9%		36.7%
100.92 - 100.67	1123	2913	4036	17.69	50.25	67.94	43.8%						55.4%	40.2%							45.9%		40.9%
100.67 - 99.58	1148	2952	4100	17.82	50.25	68.07	44.7%						56.6%	41.1%							46.9%		41.8%
99.58 - 99.33	1128	4237	5365	17.85	60.75	78.60	31.9%						38.3%	36.3%							41.1%	36.3%	40.0%
99.33 - 95.42	1220	4441	5661	18.33	60.75	79.08	34.9%						41.9%	39.7%							44.9%	39.6%	43.7%
95.42 - 95.17	1226	3399	4625	18.36	42.00	60.36	41.2%														55.5%	55.5%	55.5%
95.17 - 90.17	1351	3602	4954	18.97	42.00	60.97	45.5%														60.9%	60.9%	60.9%
90.17 - 85.17	1485	3811	5296	19.57	42.00	61.57	50.0%														66.1%	66.1%	66.1%
85.17 - 80.5	1618	4012	5630	20.14	42.00	62.14	54.1%														70.8%	70.8%	70.8%
80.5 - 80.25	1625	5805	7430	20.17	62.00	82.17	41.2%					61.3%									54.0%	54.0%	54.0%
80.25 - 75.25	1776	6128	7904	20.78	62.00	82.78	44.6%					61.8%									57.7%	57.7%	57.7%
75.25 - 73.58	1829	6237	8066	20.98	62.00	82.98	45.7%					63.2%									58.9%	58.9%	58.9%
73.58 - 73.33	1837	6254	8091	21.01	62.00	83.01	45.9%					63.4%								59.1%			
73.33 - 72	1880	6342	8222	21.17	62.00	83.17	46.8%					64.4%								60.0%			
72 - 67	2416	6480	8896	26.71	62.00	88.71	46.0%					65.8%								61.4%			
67 - 66.75	2427	6498	8925	26.75	62.00	88.75	46.2%					66.0%								61.5%			
66.75 - 66.5	2439	7027	9465	26.79	67.00	93.79	43.8%				57.5%									58.3%			
66.5 - 61.5	2668	7423	10090	27.61	67.00	94.61	46.0%				60.3%									61.2%			
61.5 - 56.5	2910	7830	10740	28.42	67.00	95.42	48.1%				63.0%									63.9%			
56.5 - 51.5	3168	8248	11415	29.23	67.00	96.23	50.1%				65.6%									66.4%			
51.5 - 48.25	3343	8525	11868	29.76	67.00	96.76	51.7%				67.2%									68.0%			
48.25 - 48	3356	11731	15088	29.80	86.63	116.44	40.9%	54.5%			53.2%									53.8%			
48 - 44.25	3567	12166	15733	30.41	86.63	117.05	42.4%	56.0%			54.7%									55.3%			
44.25 - 44	3581	13179	16760	30.46	94.13	124.59	40.0%	52.8%		48.0%										52.2%			
44 - 39	3876	13821	17697	31.27	94.13	125.40	41.9%	54.6%		49.7%										54.1%			
39 - 38.5	3906	13886	17792	31.35	94.13	125.49	42.0%	54.7%		49.9%										54.3%			
38.5 - 38.25	3922	13918	17840	31.39	94.13	125.53	42.1%	54.8%		50.0%								54.4%	54.4%				
38.25 - 34	4187	14478	18664	32.08	94.13	126.22	43.7%	56.3%		51.4%								55.9%	55.9%				
34 - 29	5508	14659	20166	41.88	94.13	136.01	42.0%	55.6%		50.9%								55.3%	55.3%				
29 - 24	5955	15365	21319	42.98	94.13	137.12	43.2%	56.9%		52.3%								56.7%	56.7%				
24 - 23.75	5978	15400	21378	43.04	94.13	137.17	43.3%	57.0%		52.3%								56.8%	56.8%				
23.75 - 23.5	6001	15436	21437	43.09	94.13	137.23	43.3%	57.1%	52.4%									56.9%	56.9%				
23.5 - 18.5	6474	16161	22634	44.19	94.13	138.33	44.4%	58.3%	53.7%									58.3%	58.3%				
18.5 - 13.5	6971	16902	23872	45.30	94.13	139.43	45.5%	59.5%	54.9%									59.6%	59.6%				
13.5 - 8.5	7492	17660	25152	46.40	94.13	140.54	46.5%	60.6%	56.1%									60.8%	60.8%				
8.5 - 3.5	8040	18435	26474	47.50	94.13	141.64	47.5%	61.7%	57.2%									62.0%	62.0%				
3.5 - 0	8438	18987	27425	48.28	94.13	142.41	48.2%	62.4%	58.0%									62.8%	62.8%				

Note: Section capacity checked assuming all reinforcements are effective and using 5 degree increments.

**Rating per TIA-222-H Section 15.5.*

Bridgeport North (BU 841288)

TEP #: 25567.804552

Analysis: JNF 12/29/2022

Check: CLT 12/29/2022

Elevation: 109.00-ft

Loads	
Axial:	21.1 k
Moment:	520.0 k·ft
Shear:	18.8 k
Torsion:	0.2 k·ft

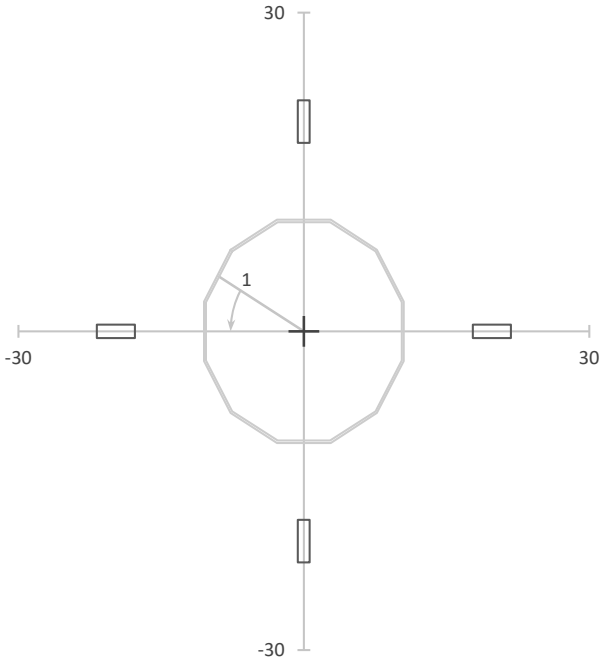
Pole Info	
OD:	21.00 in
t:	0.2188 in
Pole A_G:	0.00 in^2
Pole I_G:	0.0 in^4

Equivalent Loads to Pole	
Axial:	0.0 k
Moment:	0.0 k·ft
Shear:	0.0 k
Torsion:	0.0 k·ft

Controlling	
Angle:	**300.00°**
I_G:	3,915.3 in^4
A_G:	20.00 in^2

Shear Flow	
Controlling Mod:	1
q:	0.473 k/in
Bolt/Weld Cap:	1000.0 k/bolt
Max Spacing:	2112.84 in
Stitch:	15.00 in
Capacity:	**0.7%**

Minimum	
Angle:	**162.20°**
I_{MIN}:	3,915.3 in^4
t_{EFF}:	1.2335 in



Pole Segment: L1, F_Y = 50 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
345.00	10.88	3915.3	0.000	0.000	0.000	0.000	45.000	56.348	13.500	28.500	**0.0%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
1	1	**30.00**	19.75	3915.3	1.054	31.478	0.938	52.663	52.663	29.250	**58.9%**
1	2	**120.00**	19.75	3915.3	1.054	31.478	0.938	52.663	52.663	29.250	**58.9%**
1	3	**210.00**	19.75	3915.3	1.054	31.478	0.938	52.663	52.663	29.250	**58.9%**
1	4	**300.00**	19.75	3915.3	1.054	31.478	0.938	52.663	52.663	29.250	**58.9%**

Tower Engineering Professionals, Inc.

326 Tryon Road|Raleigh, NC 27603-3530|Office: (919) 661-6351|Fax: (919) 661-6350|www.tepgroup.net

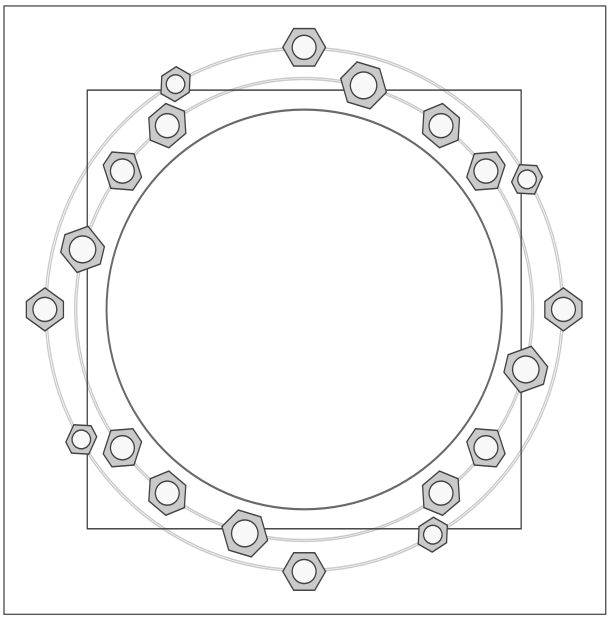
Monopole Base Plate Connection

Site Info	
BU #	841288
Site Name	Bridgeport North
Order #	641288 Rev. 1

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
l_{ar} (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	3430.00
Axial Force (kips)	78.00
Shear Force (kips)	32.00

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (8) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 43" BC
Anchor Spacing: 6 in
GROUP 2: (4) 2-1/4" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 49" BC
GROUP 3: (4) 1-3/4" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 48.63" BC
GROUP 4: (4) 2-1/2" ø bolts (Dywidag N; Fy=80 ksi, Fu=100 ksi) on 43.36" BC

Base Plate Data

41" W x 2.75" Plate (A572-50; Fy=50 ksi, Fu=65 ksi); Clip: 0 in

Stiffener Data

N/A

Pole Data

37.36" x 0.4063" 12-sided pole (A572-50; Fy=50 ksi, Fu=65 ksi)

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

GROUP 1:		
Pu_c = 180.92	ϕPn_c = 268.39	**Stress Rating**
Vu = 4	ϕVn = 120.77	**64.3%**
Mu = n/a	ϕMn = n/a	Pass
GROUP 2:		
Pu_t = 195.17	ϕPn_t = 304.69	**Stress Rating**
Vu = 0	ϕVn = 186.38	**61.0%**
Mu = n/a	ϕMn = n/a	Pass
GROUP 3:		
Pu_t = 113.24	ϕPn_t = 178.13	**Stress Rating**
Vu = 0	ϕVn = 112.75	**60.5%**
Mu = n/a	ϕMn = n/a	Pass
GROUP 4:		
Pu_c = 260.92	ϕPn_c = 353.52	**Stress Rating**
Vu = 0	ϕVn = 159.08	**70.3%**
Mu = n/a	ϕMn = n/a	Pass

Base Plate Summary

Max Stress (ksi):	24.01	(Flexural)
Allowable Stress (ksi):	45	
Stress Rating:	**50.8%**	Pass

CCIplate

Elevation (ft)	0	*(Base)*

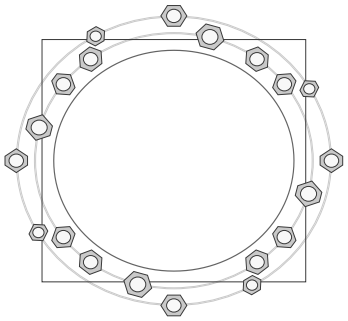
note: Bending interaction not considered when Grout Considered = "Yes"

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending	Grout Considered	Apply at BARB Elevation	BARB CL Elevation (ft)
1	Yes	Yes	Yes	Yes	No	
2	No	No	No	No	No	
3	No	No	No	No	No	
4	No	No	No	No	No	

Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	l_{ar} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	36.979067	2.25	A615-75	43	0.5	2.25	N-Included		No
2	1	53.020933	2.25	A615-75	43	0.5	2.25	N-Included		No
3	1	126.97907	2.25	A615-75	43	0.5	2.25	N-Included		No
4	1	143.02093	2.25	A615-75	43	0.5	2.25	N-Included		No
5	1	216.97907	2.25	A615-75	43	0.5	2.25	N-Included		No
6	1	233.02093	2.25	A615-75	43	0.5	2.25	N-Included		No
7	1	306.97907	2.25	A615-75	43	0.5	2.25	N-Included		No
8	1	323.02093	2.25	A615-75	43	0.5	2.25	N-Included		No
9	2	90	2.25	A193 Gr. B7	49	0.5	0	N-Included		No
10	2	180	2.25	A193 Gr. B7	49	0.5	0	N-Included		No
11	2	270	2.25	A193 Gr. B7	49	0.5	0	N-Included		No
12	2	360	2.25	A193 Gr. B7	49	0.5	0	N-Included		No
13	3	30	1.75	A193 Gr. B7	48.63	0.5	0	N-Included		No
14	3	120	1.75	A193 Gr. B7	48.63	0.5	0	N-Included		No
15	3	210	1.75	A193 Gr. B7	48.63	0.5	0	N-Included		No
16	3	300	1.75	A193 Gr. B7	48.63	0.5	0	N-Included		No
17	4	75	2.5	Dywidag	43.36	0.5	0	N-Included	4.91	No
18	4	165	2.5	Dywidag	43.36	0.5	0	N-Included	4.91	No
19	4	255	2.5	Dywidag	43.36	0.5	0	N-Included	4.91	No
20	4	345	2.5	Dywidag	43.36	0.5	0	N-Included	4.91	No

Plot Graphic



Monopole on Mat Foundation with Rock Anchors - TIA-222-H

Site Data	
Site Name:	Bridgeport North
CCI Number:	BU 841288
TEP Job Number:	25567.804552

Factored Reactions from TNX		
Axial	78	k
Shear	32	k
Moment	3430	k-ft

Mat and Pier Properties		
Mat Width	18.0	ft
Mat Length	20.0	ft
Mat Thickness	6.8	ft
Pier Type	Square	
Pier Width/Diam.	0.0	ft
Pier Height	0.0	ft

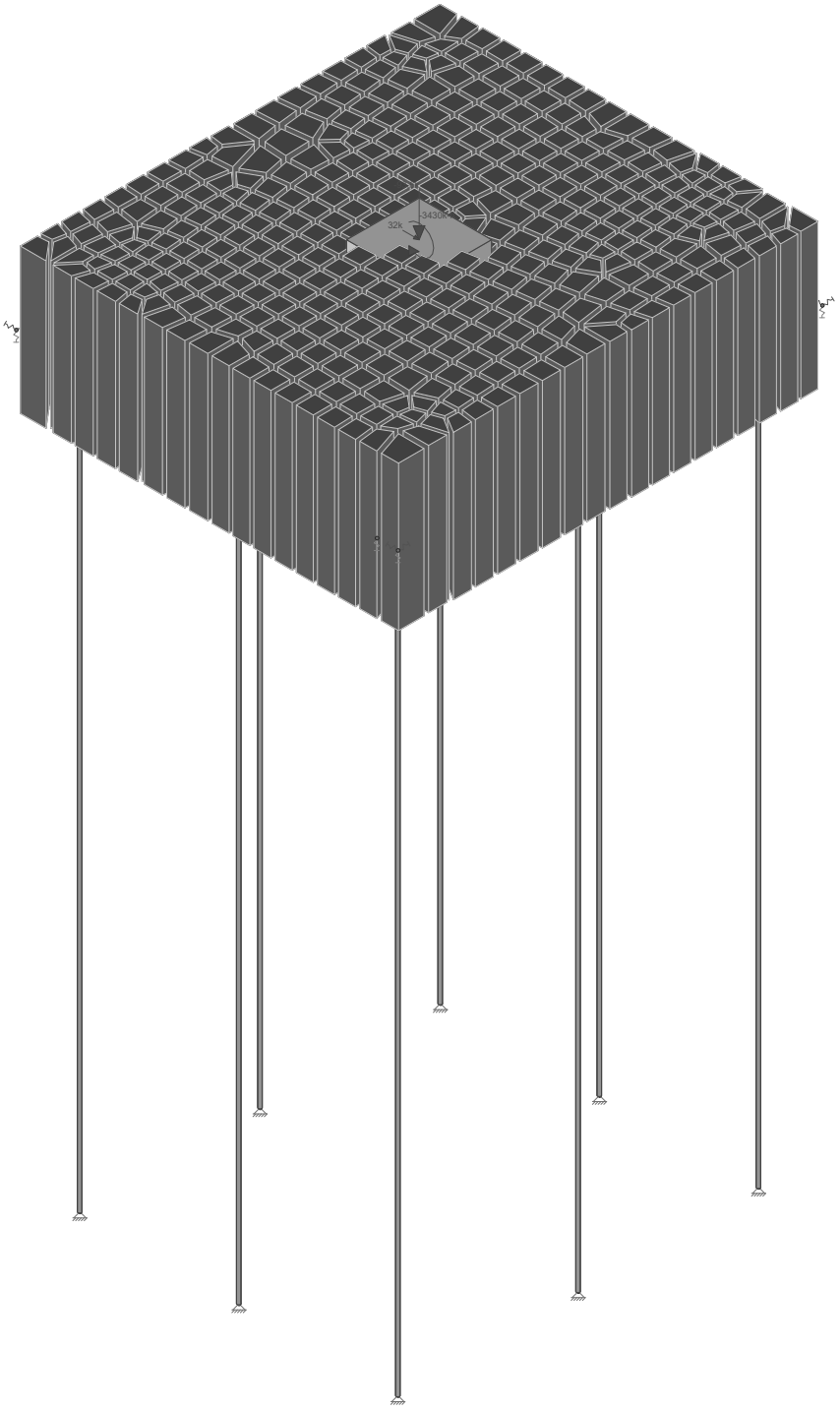
Mat Foundation Results		
Bearing Stress	7.2	ksf
Bearing Capacity, ϕq_{allow}	22.5	ksf
% Capacity	32.2%	Pass

Soil Properties		
q_{allow}	10.0	ksf
FS	3.0	
Subgrade Mod.	360	kcf

Mat and Pier Structural Results		
Bending Moment	1665.4	kft
Clearance	3	in
Rebar Fy	60	ksi
Rebar Diameter	1	in
Rebar Spacing	12	in
Concrete F'c	3	ksi
Flexural Capacity, ϕMn	5763.1	kft
% Capacity	28.9%	Pass

Rock Anchor Properties		
Type of Bar	WilliamsForm150	
Bar Size	1.75	in
Net Area	2.60	in^2
Ultimate Stress, Fu	150.0	ksi
Yield Stress, Fy	120.0	ksi
Bar Diameter	1.750	in

Rock Anchor Steel Results		
Max Tension Force	33.1	k
Anchor Capacity, ϕPn	280.8	k
% Capacity	11.8%	Pass



Loads: LC 1, 1.2D+Wind 0

Tower Engineering Profes...	Bridgeport North (BU 841288)	SK - 1
JNF		Dec 28, 2022 at 12:03 PM
TEP No. 25567.804552		841288_Fdn.r3d

Exhibit E

Mount Analysis

Date: March 30, 2023

MTS Engineering, P.L.L.C
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630
towersupport@btgrp.com

Subject:	**Mount Replacement Analysis Report**	
Carrier Designation:	**AT&T Mobility Equipment Change-Out**	
	Carrier Site Number:	CTL02106
	Carrier Site Name:	Bridgeport North
	Carrier FA Number:	10034977
Crown Castle Designation:	**BU Number:**	841288
	Site Name:	Bridgeport North
	JDE Job Number:	737982
	Order Number:	641288, Rev.1
Engineering Firm Designation:	**Report Designation:**	126536.016.01.0001
Site Data:	**205 Kaechele Place, Bridgeport, CT, Fairfield County, 06606** **Latitude 41° 13' 24.04" Longitude -73° 13' 0.38"**	
Structure Information:	**Tower Height & Type:**	**150 ft. Monopole**
	Mount Elevation:	**149 ft.**
	Mount Type:	**14.5 ft. Platform Mount**

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

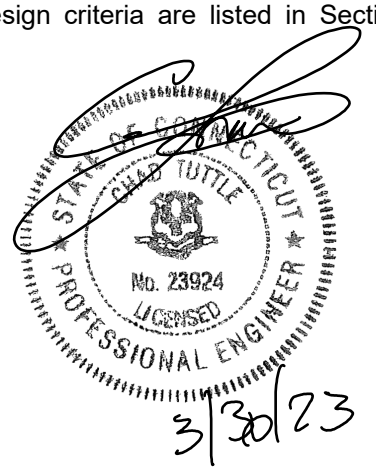
The purpose of the analysis is to determine acceptability of the mount's stress level. Based on our analysis we have determined the stress level to be:

Platform Mount **Sufficient**
***Sufficient upon completion of the changes listed in the 'Recommendations' section of the report.**

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount structural analysis prepared by: Austin Steward

Respectfully submitted by: MTS Engineering, P.L.L.C
COA: BER:2386985 Expires: 3/31/2024



Chad E. Tuttle, P.E.

TABLE OF CONTENTS

1) INTRODUCTION

This is a proposed 3 - sector 14.5' Platform Mount, designed by Perfect Vision (Part# LPPGS-ENG-14-R0 w/ (12) 2-1/2'' STDx12'-0'' long mount pipe).

2) ANALYSIS CRITERIA

Building Code:	2022 Connecticut State Building Code
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	118 mph
Exposure Category:	B
Topographic Factor at Base:	1
Topographic Factor at Mount:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.212
Seismic S_1:	0.054
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb.
Man Live Load at Mount Pipes:	500 lb.

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft.)	Antenna Centerline (ft.)	Number of Antennas	Manufacturer	Model / Type	Mount / Modification Details
149	156	3	Ericsson	AIR 6419 B77G_CCIV3	14.5 ft. Platform Mount
	154	3	CCI Antennas	DMP65R-BU6D	
		3	Quintel	QD6616-7	
		3	Ericsson	RRUS 4478 B14_CCIV2	
		3	Ericsson	RRUS 32 B2	
		3	Ericsson	RRUS 32 B30	
		3	Ericsson	RRUS 32 B66A	
		3	Ericsson	RRUS 4449 B5/B12	
		3	Raycap	DC9-48-60-24-8C-EV	
	152	3	Ericsson	AIR 6449 B77D_CCIV3	

Table 2 - Documents Provided

Document	Remarks	Reference	Source
CCI Order	Existing Loading Proposed Loading	Date: 12/16/2022	Crown Castle
RFDS		Date: 04/11/2022	
CDs		Date: 08/02/2022	On File
Previous MA	MTS Engineering, P.L.L.C	Date: 07/19/2022	
Mount Manufacturer Drawing	Perfect Vision (Part# LPPGS-ENG-14-R0)	Date: 11/01/2017	Perfect Vision

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 20.0.5), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed by MTS Engineering, P.L.L.C, was used to calculate wind loading on all appurtenances, dishes and mount members for various loading cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Mount Analysis* (Revision E). In addition, this analysis is in accordance with *AT&T's Mount Technical Directive – R22.0*.

Manufacturers drawing were used to create the model.

3.2) Assumptions

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

Component	Section	Length	Note
Proposed Mount Pipes	2-1/2" Std. Pipe	12'-0"	All Positions, All Sectors
Proposed RRH Pipes	2-1/2" Std. Pipe	6'-0"	Attached to Support Tubes, All Sectors

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

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

4) ANALYSIS RESULTS

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

Notes	Component	Centerline (ft.)	Critical Member	% Capacity	Pass / Fail
1,2	Support Tubes	149	1	61.0	Pass
	Support Pipes		15	37.2	Pass
	Support Angles		4	17.9	Pass
	Main Horizontals		78	24.0	Pass
	Support Rails		79	41.4	Pass
	Connection Pipes		53	31.5	Pass
	Mount Pipes		111	61.9	Pass
	Extension Beams		54	22.7	Pass
3	Mount to Tower Connection		-	69.2	Pass

Structure Rating (max from all components) =	**69.2%**

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

4.1) Recommendations

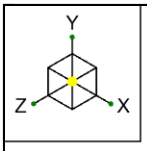
The proposed mount has sufficient capacity to support the proposed loading configuration. In order for the results of this analysis to be considered valid, the mount listed below shall be installed.

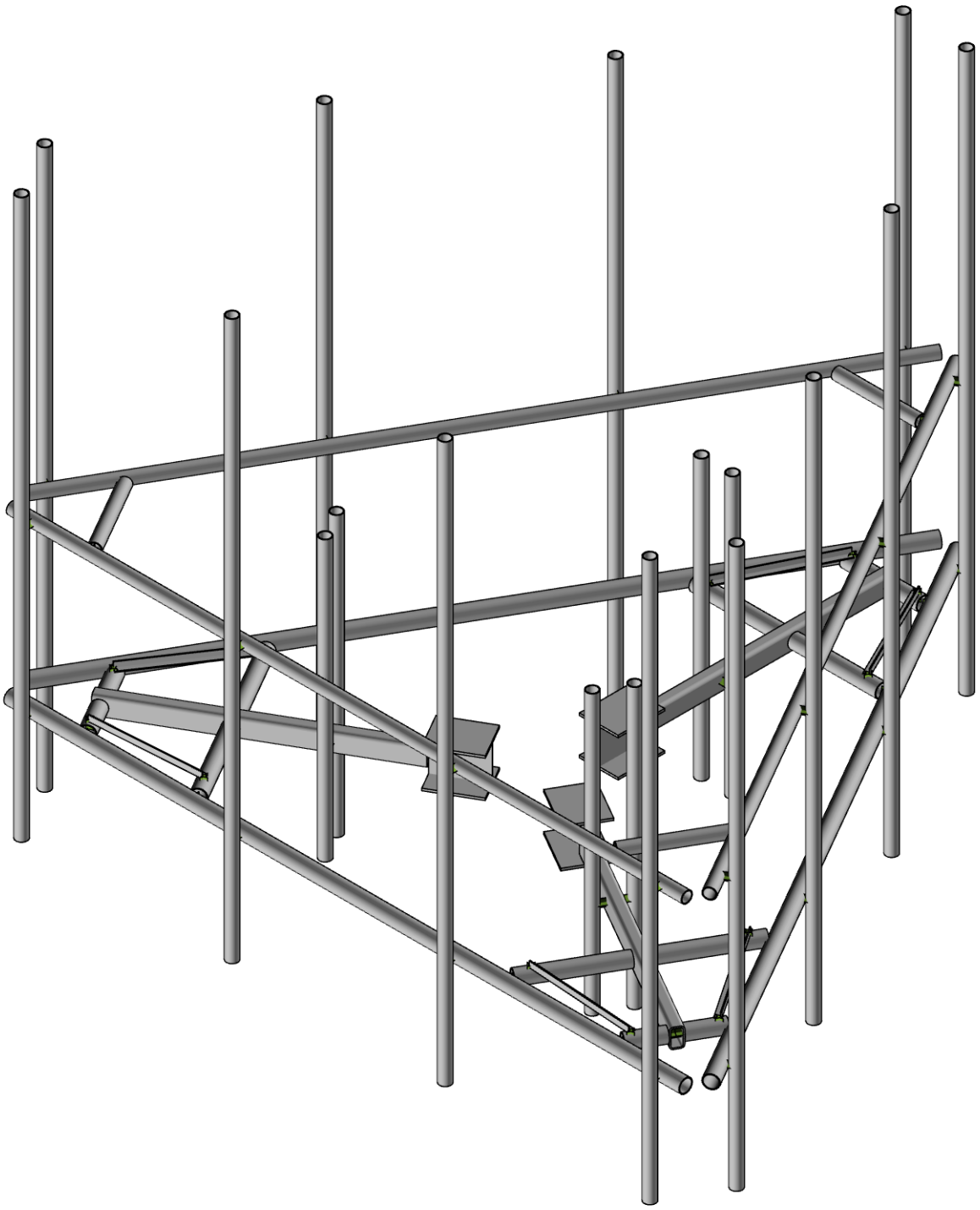
1. Mount replacement, Perfect Vision (Part# LPPGS-ENG-14-R0) (P/N: or equivalent approved Conmat item).
2. Install (12) 2-1/2'' STDx12'-0'' long mount pipe (P/N: or equivalent approved Conmat item) for proposed antennas on all sectors.
3. Install (6) 2-1/2'' STD x 6'-0'' long mount pipe (P/N: or equivalent approved Conmat item) connected to support tubes using crossover plate (P/N: or equivalent approved Conmat item) for proposed RRh's.

Beyond the mount replacement, no structural modifications are required at this time, provided that the above-listed changes are implemented.

APPENDIX A

WIRE FRAME AND RENDERED MODELS





Envelope Only Solution

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MSP		Dec 22, 2022
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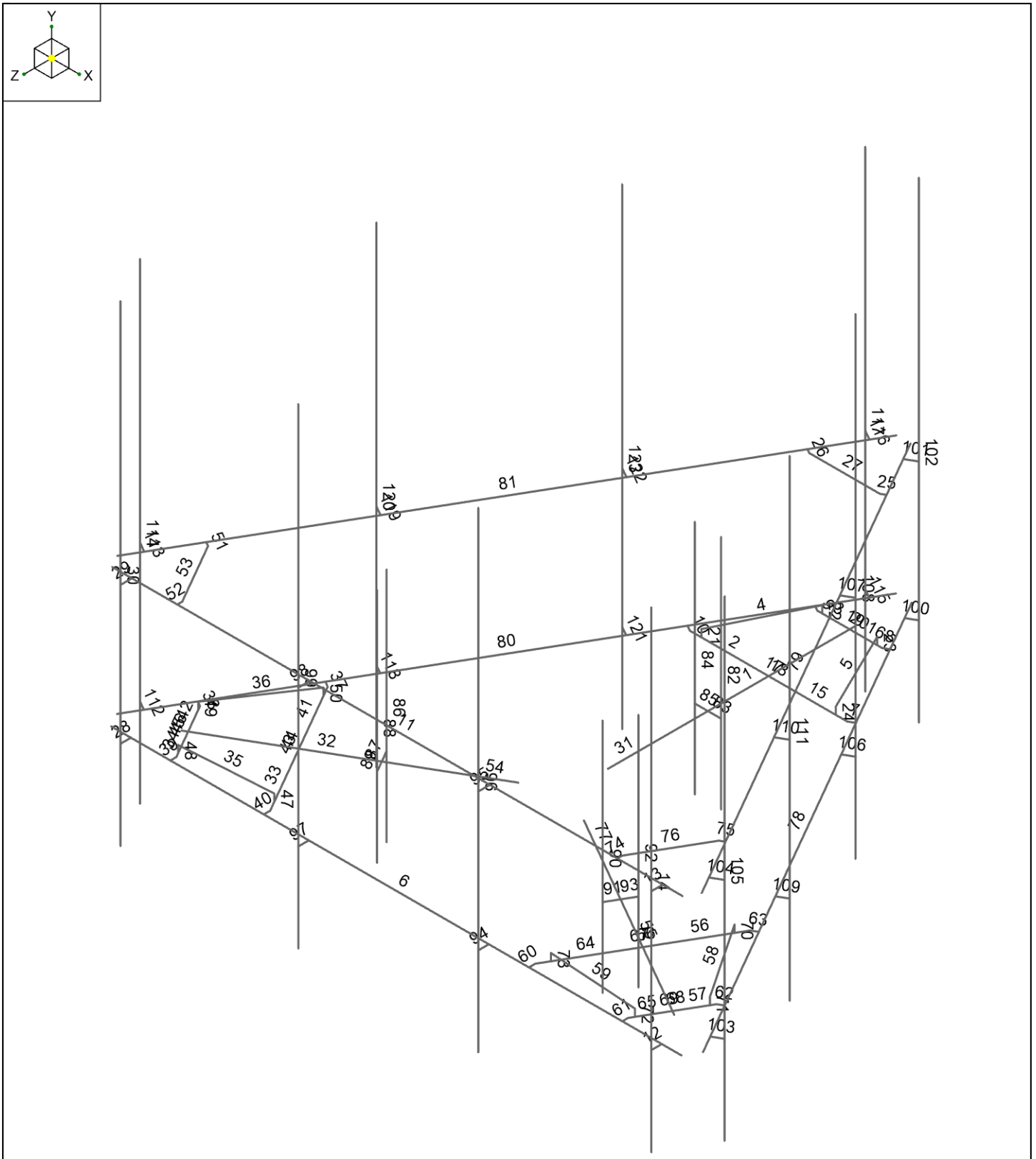

Envelope Only Solution

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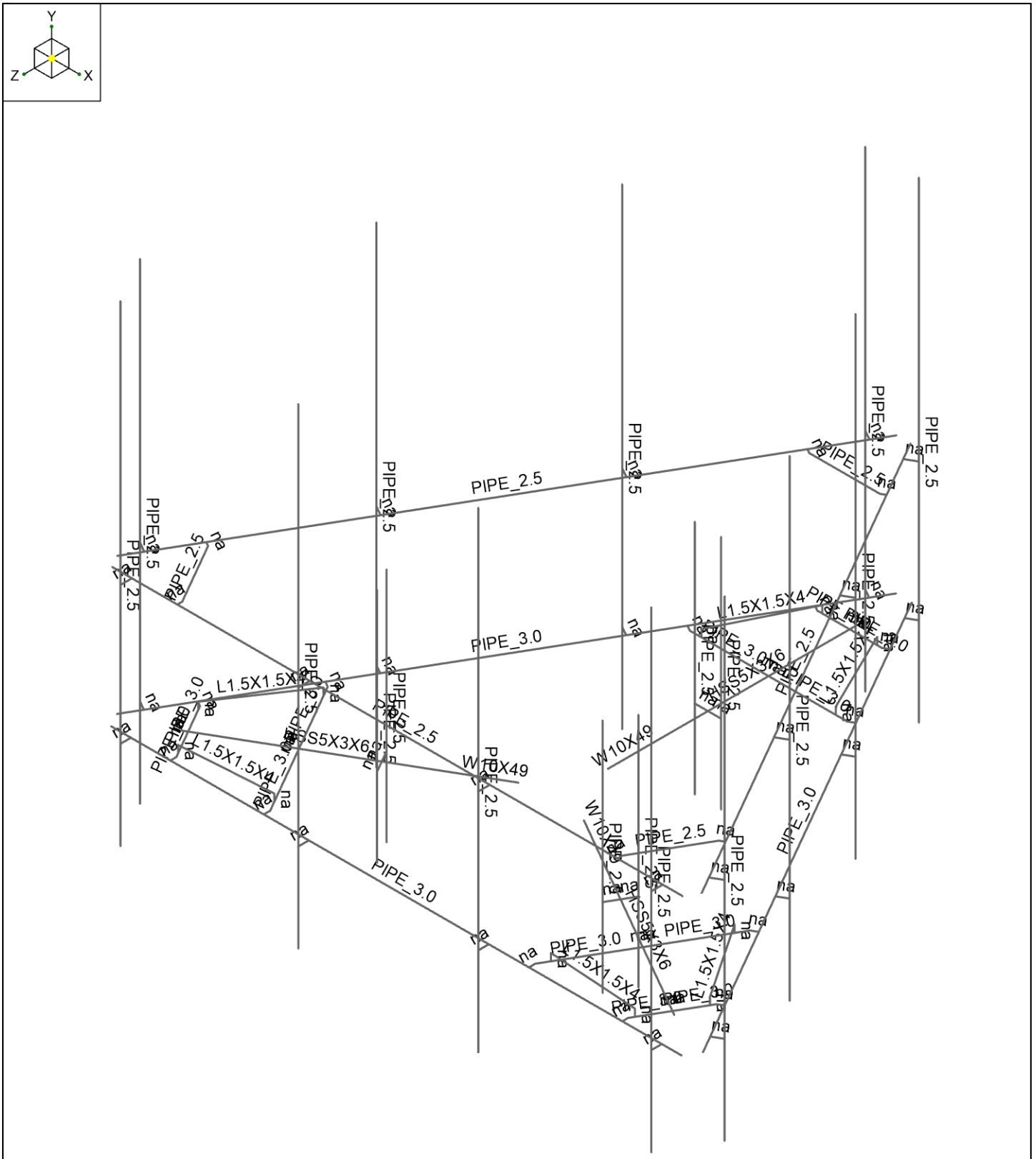

Envelope Only Solution

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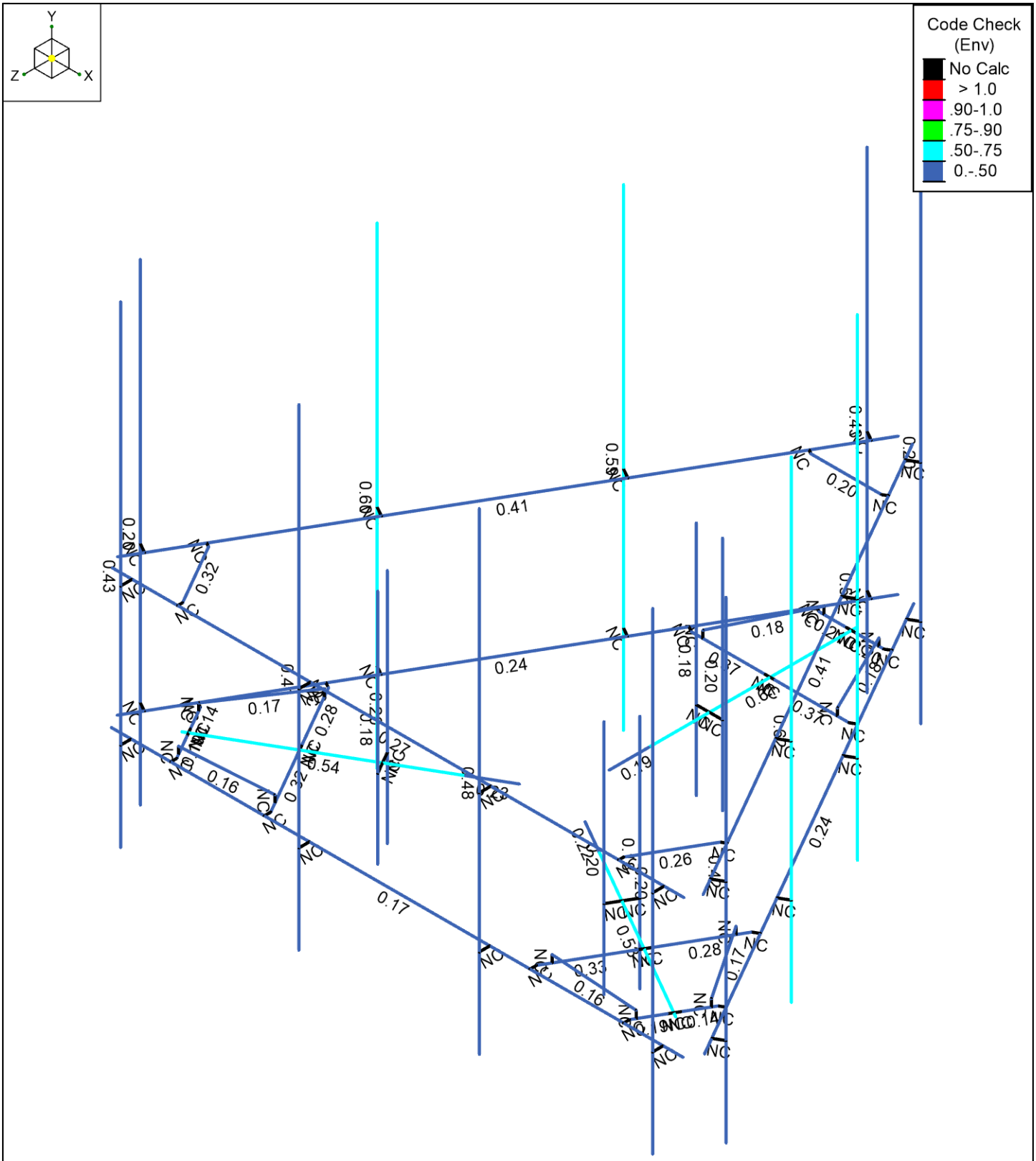

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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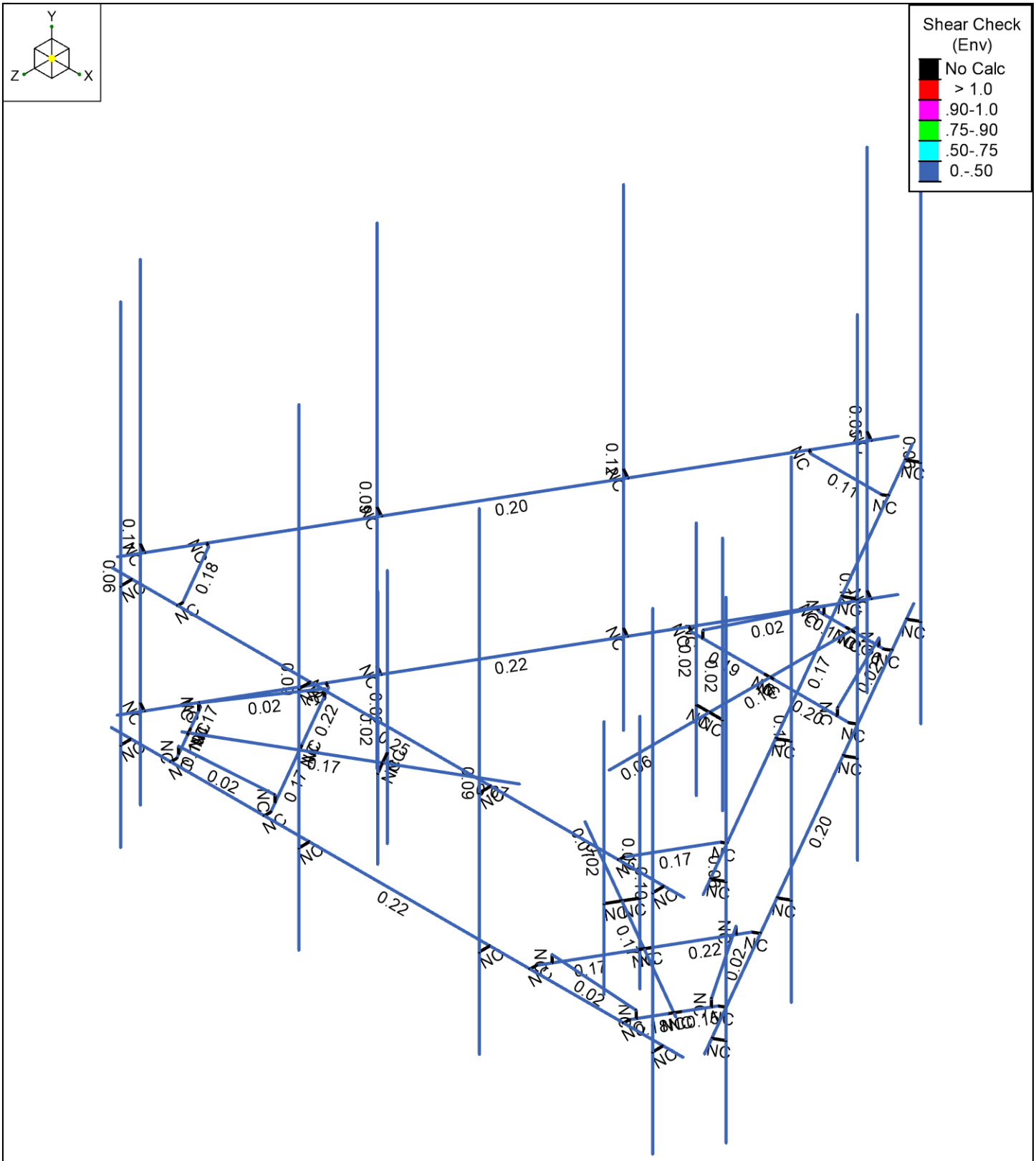

Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

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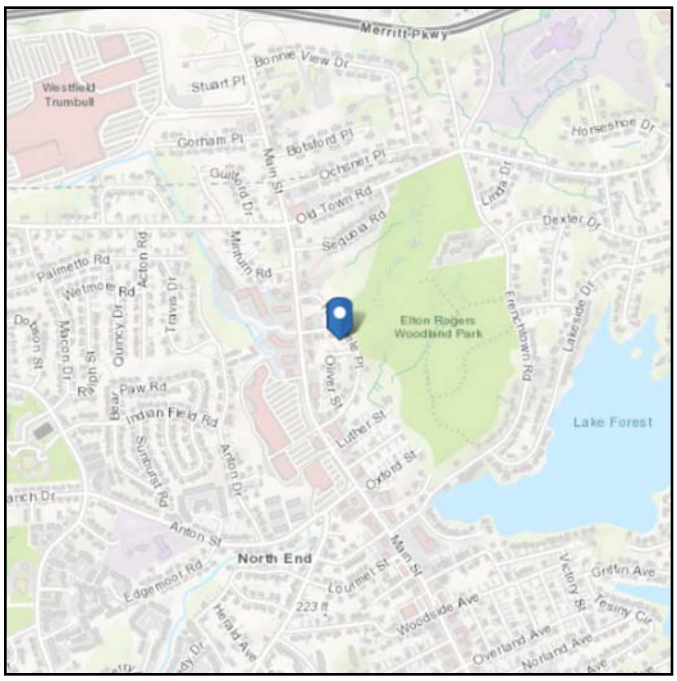
APPENDIX B

SOFTWARE INPUT CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-16	**Latitude:**	41.223344
Risk Category:	II	**Longitude:**	-73.216772
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	240.76 ft (NAVD 88)



Wind

Results:

Wind Speed	118 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	98 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 Dec 22 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.

Seismic

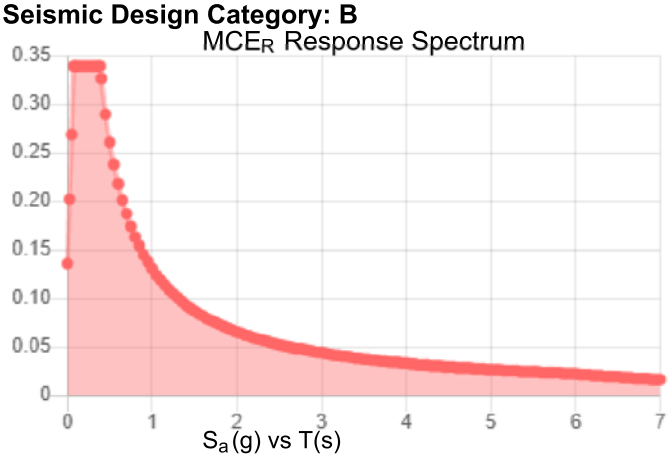
D - Default (see Section 11.4.3)

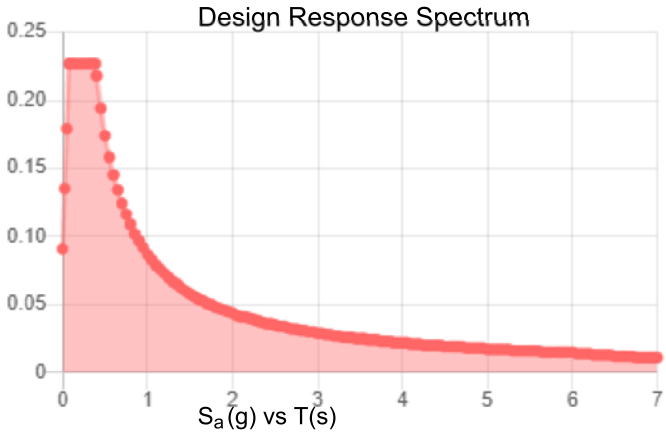
Site Soil Class:

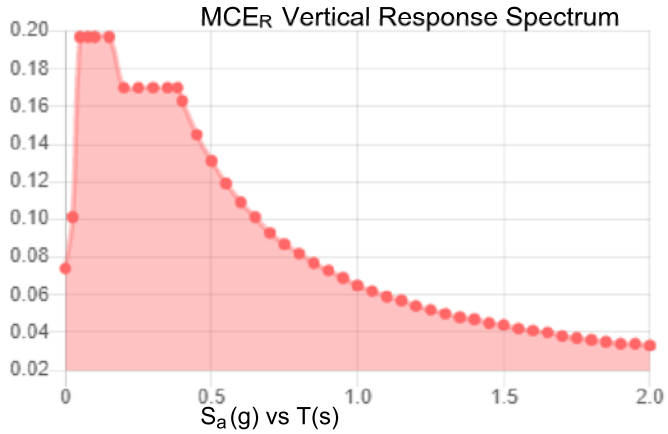
Results:

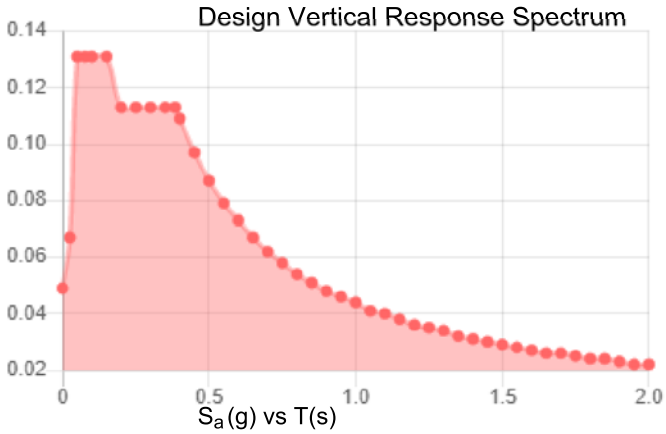
S_S :	0.212	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.121
F_v :	2.4	PGA_M :	0.189
S_{MS} :	0.34	F_{PGA} :	1.558
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.227	C_v :	0.725

Seismic Design Category: B









Data Accessed: **Thu Dec 22 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 Dec 22 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.

PROJECT	**126536.016.01.0001 - Bridgeport Nort KSC**
SUBJECT	**Platform Mount Analysis**
DATE	**12/22/22**

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

Tower Type		:	Monopole		
Ground Elevation	z_s	:	241	ft	[ASCE7 Hazard Tool]
Tower Height		:	150.00	ft	
Mount Elevation		:	149.00	ft	
Antenna Elevation		:	156.00	ft	
Crest Height		:	0	ft	
Risk Category		:	II		[Table 2-1]
Exposure Category		:	B		[Sec. 2.6.5.1.2]
Topography Category		:	1.00		[Sec. 2.6.6.2]
Wind Velocity	V	:	118	mph	[ASCE7 Hazard Tool]
Ice wind Velocity	V_i	:	50	mph	[ASCE7 Hazard Tool]
Service Velocity	V_s	:	30	mph	[ASCE7 Hazard Tool]
Base Ice thickness	t_i	:	1.00	in	[ASCE7 Hazard Tool]
Seismic Design Cat.		:	B		[ASCE7 Hazard Tool]
	S_S	:	0.21		
	S_1	:	0.05		
	S_{DS}	:	0.23		
	S_{D1}	:	0.09		

Gust Factor	G_h	:	1.00		[Sec. 16.6]
Pressure Coefficient	K_z	:	1.12		[Sec. 2.6.5.2]
Topography Facto	K_{zt}	:	1.00		[Sec. 2.6.6]
Elevation Factor	K_e	:	0.99		[Sec. 2.6.8]
Directionality Factor	K_d	:	0.95		[Sec. 16.6]
Shielding Factor	K_a	:	0.90		[Sec. 16.6]
Design Ice Thickness	t_{iz}	:	1.17	in	[Sec. 2.6.10]

Importance Factor	I_e	:	1		[Table 2-3]
Response Coefficient	C_s	:	0.114		[Sec. 2.7.7.1]
Amplification	A_s	:	2.973333		[Sec. 16.7]

	q_z	:	37.18	psf

PROJECT	**126536.016.01.0001 - Bridgeport Nor1 KSC**
SUBJECT	**Platform Mount Analysis**
DATE	**12/22/22**

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

Manufacturer	Model	Qty	Height (in^2)	Width (in^2)	Depth (in^2)	Weight (lbs)	C_aA_a (N) (ft^2)	C_aA_a (T) (ft^2)	C_aA_a (N) Ice (ft^2)	C_aA_a (T) Ice (ft^2)	$F_{A\,(N)}$ (k)	$F_{A\,(T)}$ (k)	$F_{A\,(N)}$ Ice (k)	$F_{A\,(T)}$ Ice (k)
INTEL TECHNOLC	QD6616-7	0.5	72.0	22.0	9.6	130.0	6.80	2.96	7.62	3.68	0.26	0.11	0.05	0.02
INTEL TECHNOLC	QD6616-7	0.5					6.80	2.96	7.62	3.68	0.26	0.11	0.05	0.02
ERICSSON	AIR 6419 B77G_CCIV3	0.5	31.1	16.1	7.3	55.4	2.09	1.01	2.57	1.43	0.07	0.03	0.01	0.01
ERICSSON	AIR 6419 B77G_CCIV3	0.5					2.09	1.01	2.57	1.43	0.07	0.03	0.01	0.01
ERICSSON	AIR 6449 B77D_CCIV3	0.5	30.6	15.9	10.6	96.8	2.03	1.37	2.50	1.79	0.07	0.05	0.01	0.01
ERICSSON	AIR 6449 B77D_CCIV3	0.5	30.6	15.9	10.6	96.8	2.03	1.37	2.50	1.79	0.07	0.05	0.01	0.01
CCI ANTENNAS	DMP65R-BU6D	0.5	71.2	20.7	7.7	89.3	5.97	2.24	6.73	2.89	0.22	0.08	0.05	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5					5.97	2.24	6.73	2.89	0.22	0.08	0.05	0.02
ERICSSON	RRUS 4478 B14_CCIV2	1	18.1	8.3	13.4	59.4	1.25	2.02	1.80	2.68	0.04	0.07	0.01	0.01
ERICSSON	RRUS 32 B66A	1	27.6	7.4	12.5	55.1	1.78	2.86	2.54	3.68	0.06	0.10	0.01	0.02
ERICSSON	RRUS 32 B2	1	27.2	7.0	12.1	52.9	1.67	2.73	2.41	3.54	0.06	0.10	0.01	0.02
ERICSSON	RRUS 32 B30	1	27.2	7.0	12.1	52.9	1.67	2.73	2.41	3.54	0.06	0.10	0.01	0.02
ERICSSON	RRUS 4449 B5/B12	1	17.9	9.4	13.2	71.0	1.41	1.97	1.98	2.62	0.05	0.07	0.01	0.01
RAYCAP	TME-DC9-48-60-24-8C-EV	1	31.4	10.2	10.2	26.2	1.14	1.14	1.51	1.51	0.04	0.04	0.01	0.01
INTEL TECHNOLC	QD6616-7	0.5	72.0	22.0	9.6	130.0	6.80	2.96	7.62	3.68	0.26	0.11	0.05	0.02
INTEL TECHNOLC	QD6616-7	0.5					6.80	2.96	7.62	3.68	0.26	0.11	0.05	0.02
ERICSSON	AIR 6419 B77G_CCIV3	0.5	31.1	16.1	7.3	55.4	2.09	1.01	2.57	1.43	0.07	0.03	0.01	0.01
ERICSSON	AIR 6419 B77G_CCIV3	0.5					2.09	1.01	2.57	1.43	0.07	0.03	0.01	0.01
ERICSSON	AIR 6449 B77D_CCIV3	0.5	30.6	15.9	10.6	96.8	2.03	1.37	2.50	1.79	0.07	0.05	0.01	0.01
ERICSSON	AIR 6449 B77D_CCIV3	0.5	30.6	15.9	10.6	96.8	2.03	1.37	2.50	1.79	0.07	0.05	0.01	0.01
CCI ANTENNAS	DMP65R-BU6D	0.5	71.2	20.7	7.7	89.3	5.97	2.24	6.73	2.89	0.22	0.08	0.05	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5					5.97	2.24	6.73	2.89	0.22	0.08	0.05	0.02

PROJECT	**126536.016.01.0001 - Bridgeport Nort KSC**
SUBJECT	**Platform Mount Analysis**
DATE	**12/22/22**

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

Manufacturer	Model	Qty	Height (in^2)	Width (in^2)	Depth (in^2)	Weight (lbs)	C_aA_a (N) (ft^2)	C_aA_a (T) (ft^2)	C_aA_a (N) Ice (ft^2)	C_aA_a (T) Ice (ft^2)	$F_{A\,(N)}$ (k)	$F_{A\,(T)}$ (k)	$F_{A\,(N)}$ Ice (k)	$F_{A\,(T)}$ Ice (k)
ERICSSON	RRUS 4478 B14_CCIV2	1	18.1	8.3	13.4	59.4	1.25	2.02	1.80	2.68	0.04	0.07	0.01	0.01
ERICSSON	RRUS 32 B66A	1	27.6	7.4	12.5	55.1	1.78	2.86	2.54	3.68	0.06	0.10	0.01	0.02
ERICSSON	RRUS 32 B2	1	27.2	7.0	12.1	52.9	1.67	2.73	2.41	3.54	0.06	0.10	0.01	0.02
ERICSSON	RRUS 32 B30	1	27.2	7.0	12.1	52.9	1.67	2.73	2.41	3.54	0.06	0.10	0.01	0.02
ERICSSON	RRUS 4449 B5/B12	1	17.9	9.4	13.2	71.0	1.41	1.97	1.98	2.62	0.05	0.07	0.01	0.01
RAYCAP	TME-DC9-48-60-24-8C-EV	1	31.4	10.2	10.2	26.2	1.14	1.14	1.51	1.51	0.04	0.04	0.01	0.01
INTEL TECHNOLC	QD6616-7	0.5	72.0	22.0	9.6	130.0	6.80	2.96	7.62	3.68	0.26	0.11	0.05	0.02
INTEL TECHNOLC	QD6616-7	0.5					6.80	2.96	7.62	3.68	0.26	0.11	0.05	0.02
ERICSSON	AIR 6419 B77G_CCIV3	0.5	31.1	16.1	7.3	55.4	2.09	1.01	2.57	1.43	0.07	0.03	0.01	0.01
ERICSSON	AIR 6419 B77G_CCIV3	0.5					2.09	1.01	2.57	1.43	0.07	0.03	0.01	0.01
ERICSSON	AIR 6449 B77D_CCIV3	0.5	30.6	15.9	10.6	96.8	2.03	1.37	2.50	1.79	0.07	0.05	0.01	0.01
ERICSSON	AIR 6449 B77D_CCIV3	0.5	30.6	15.9	10.6	96.8	2.03	1.37	2.50	1.79	0.07	0.05	0.01	0.01
CCI ANTENNAS	DMP65R-BU6D	0.5	71.2	20.7	7.7	89.3	5.97	2.24	6.73	2.89	0.22	0.08	0.05	0.02
CCI ANTENNAS	DMP65R-BU6D	0.5					5.97	2.24	6.73	2.89	0.22	0.08	0.05	0.02
ERICSSON	RRUS 4478 B14_CCIV2	1	18.1	8.3	13.4	59.4	1.25	2.02	1.80	2.68	0.04	0.07	0.01	0.01
ERICSSON	RRUS 32 B66A	1	27.6	7.4	12.5	55.1	1.78	2.86	2.54	3.68	0.06	0.10	0.01	0.02
ERICSSON	RRUS 32 B2	1		7.0	12.1	52.9	1.67	2.73	2.41	3.54	0.06	0.10	0.01	0.02
ERICSSON	RRUS 32 B30	1	27.2	7.0	12.1	52.9	1.67	2.73	2.41	3.54	0.06	0.10	0.01	0.02
ERICSSON	RRUS 4449 B5/B12	1	17.9	9.4	13.2	71.0	1.41	1.97	1.98	2.62	0.05	0.07	0.01	0.01
RAYCAP	TME-DC9-48-60-24-8C-EV	1	31.4	10.2	10.2	26.2	1.14	1.14	1.51	1.51	0.04	0.04	0.01	0.01

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	1	0	0	0	
2	2	0	0	-1.964428	
3	3	0	0	-7.235261	
4	4	0	0	-5.047761	
5	5	-2	0	-5.047761	
6	6	2	0	-5.047761	
7	7	0	0	-7.110261	
8	8	0.822917	0	-7.110261	
9	9	-0.822917	0	-7.110261	
10	10	-0.697917	0.182	-7.110261	
11	11	-1.708333	0.182	-5.047761	
12	12	0.697917	0.182	-7.110261	
13	13	1.708333	0.182	-5.047761	
14	14	-7.250006	0	4.417792	
15	15	7.250006	0	4.417792	
16	16	0.952816	0	-7.185258	
17	17	-0.952816	0	-7.185258	
18	18	-7.250006	3.5	4.392792	
19	19	7.250006	3.5	4.392792	
20	20	6.750006	0	4.417792	
21	21	6.750006	0	4.684458	
22	22	6.750006	-2.25	4.684458	
23	23	6.750006	9.75	4.684458	
24	24	6.750006	3.5	4.392792	
25	25	6.750006	3.5	4.684458	
26	26	0.125	0	-5.047761	
27	27	-0.125	0	-5.047761	
28	28	-0.125	0	-7.110261	
29	29	0.125	0	-7.110261	
30	30	-1.708333	0	-5.047761	
31	31	-0.697917	0	-7.110261	
32	32	0.697917	0	-7.110261	
33	33	1.708333	0	-5.047761	
34	34	1.006438	3.5	-7.042382	
35	35	0.898189	3.5	-6.979885	
36	36	-1.006438	3.5	-7.042382	
37	37	-0.898189	3.5	-6.979885	
38	38	-6.750007	0	4.417792	
39	39	-6.750007	0	4.684458	
40	40	-6.750007	-2.25	4.684458	
41	41	-6.750007	9.75	4.684458	
42	42	-6.750007	3.5	4.392792	
43	43	-6.750007	3.5	4.684458	
44	44	0	0	-0.964428	
45	45	2.140175	0	-5.128691	
46	46	-2.140175	0	-5.128691	
47	47	-1.701244	0	0.982214	
48	48	-6.26592	0	3.61763	
49	49	-4.371489	0	2.52388	
50	50	-3.371489	0	4.255931	
51	51	-5.371489	0	0.79183	
52	52	-6.157667	0	3.55513	
53	53	-6.569125	0	2.842464	
54	54	-5.746208	0	4.267797	
55	55	-5.808708	0.182	4.159544	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
56	56	-3.517322	0.182	4.003341	
57	57	-6.506625	0.182	2.950717	
58	58	-5.225656	0.182	1.04442	
59	59	-6.699024	0	2.767466	
60	60	-5.746208	0	4.417792	
61	61	-4.433989	0	2.415627	
62	62	-4.308989	0	2.632134	
63	63	-6.095167	0	3.663384	
64	64	-6.220167	0	3.446877	
65	65	-3.517322	0	4.003341	
66	66	-5.808708	0	4.159544	
67	67	-6.506625	0	2.950717	
68	68	-5.225656	0	1.04442	
69	69	-6.602101	3.5	2.649591	
70	70	-6.493852	3.5	2.712088	
71	71	-5.595663	3.5	4.392792	
72	72	-5.595663	3.5	4.267797	
73	73	-0.835219	0	0.482214	
74	74	-5.511664	0	0.710899	
75	75	-3.371489	0	4.417792	
76	76	1.701244	0	0.982214	
77	77	6.26592	0	3.61763	
78	78	4.371489	0	2.52388	
79	79	5.371489	0	0.79183	
80	80	3.371489	0	4.255931	
81	81	6.157667	0	3.55513	
82	82	5.746208	0	4.267797	
83	83	6.569125	0	2.842464	
84	84	6.506625	0.182	2.950717	
85	85	5.225656	0.182	1.04442	
86	86	5.808708	0.182	4.159544	
87	87	3.517322	0.182	4.003341	
88	88	5.746208	0	4.417792	
89	89	6.699024	0	2.767466	
90	90	4.308989	0	2.632134	
91	91	4.433989	0	2.415627	
92	92	6.220167	0	3.446877	
93	93	6.095167	0	3.663384	
94	94	5.225656	0	1.04442	
95	95	6.506625	0	2.950717	
96	96	5.808708	0	4.159544	
97	97	3.517322	0	4.003341	
98	98	5.595663	3.5	4.392792	
99	99	5.595663	3.5	4.267797	
100	100	6.602101	3.5	2.649591	
101	101	6.493852	3.5	2.712088	
102	102	0.835219	0	0.482214	
103	103	3.371489	0	4.417792	
104	104	5.511664	0	0.710899	
105	105	7.450923	0	4.069794	
106	106	0.200917	0	-8.487586	
107	107	7.429272	3.5	4.082294	
108	108	0.179266	3.5	-8.475086	
109	109	-0.200917	0	-8.487586	
110	110	-7.450923	0	4.069794	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
111	111	-0.179266	3.5	-8.475086	
112	112	-7.429272	3.5	4.082294	
113	113	0	0	-3.506078	
114	114	0.3333	0	-3.506078	
115	115	0.3333	4	-3.506078	
116	116	0.3333	-2	-3.506078	
117	117	-0.3333	0	-3.506078	
118	118	-0.3333	4	-3.506078	
119	119	-0.3333	-2	-3.506078	
120	120	-3.036352	0	1.753039	
121	121	-3.203002	0	1.464393	
122	122	-3.203002	4	1.464393	
123	123	-3.203002	-2	1.464393	
124	124	-2.869702	0	2.041685	
125	125	-2.869702	4	2.041685	
126	126	-2.869702	-2	2.041685	
127	127	3.036352	0	1.753039	
128	128	2.869702	0	2.041685	
129	129	2.869702	4	2.041685	
130	130	2.869702	-2	2.041685	
131	131	3.203002	0	1.464393	
132	132	3.203002	4	1.464393	
133	133	3.203002	-2	1.464393	
134	134	2.351673	0	4.417792	
135	135	2.351673	0	4.684458	
136	136	2.351673	-2.25	4.684458	
137	137	2.351673	9.75	4.684458	
138	138	2.351673	3.5	4.392792	
139	139	2.351673	3.5	4.684458	
140	140	-2.226244	0	4.417792	
141	141	-2.226244	0	4.684458	
142	142	-2.226244	-2.25	4.684458	
143	143	-2.226244	9.75	4.684458	
144	144	-2.226244	3.5	4.392792	
145	145	-2.226244	3.5	4.684458	
146	146	0.450917	0	-8.054573	
147	147	0.681857	0	-8.187906	
148	148	0.681857	-2.25	-8.187906	
149	149	0.681857	9.75	-8.187906	
150	150	0.429266	3.5	-8.042073	
151	151	0.681857	3.5	-8.187906	
152	152	7.200923	0	3.636781	
153	153	7.431863	0	3.503448	
154	154	7.431863	-2.25	3.503448	
155	155	7.431863	9.75	3.503448	
156	156	7.179273	3.5	3.649281	
157	157	7.431863	3.5	3.503448	
158	158	2.650083	0	-4.245504	
159	159	2.881024	0	-4.378838	
160	160	2.881024	-2.25	-4.378838	
161	161	2.881024	9.75	-4.378838	
162	162	2.628433	3.5	-4.233004	
163	163	2.881024	3.5	-4.378838	
164	164	4.939042	0	-0.280912	
165	165	5.169982	0	-0.414246	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
166	166	5.169982	-2.25	-0.414246	
167	167	5.169982	9.75	-0.414246	
168	168	4.917391	3.5	-0.268412	
169	169	5.169982	3.5	-0.414246	
170	170	-7.200923	0	3.636781	
171	171	-7.431863	0	3.503448	
172	172	-7.431863	-2.25	3.503448	
173	173	-7.431863	9.75	3.503448	
174	174	-7.179272	3.5	3.649281	
175	175	-7.431863	3.5	3.503448	
176	176	-0.450917	0	-8.054573	
177	177	-0.681857	0	-8.187907	
178	178	-0.681857	-2.25	-8.187907	
179	179	-0.681857	9.75	-8.187907	
180	180	-0.429266	3.5	-8.042073	
181	181	-0.681857	3.5	-8.187907	
182	182	-5.001756	0	-0.172287	
183	183	-5.232696	0	-0.305621	
184	184	-5.232696	-2.25	-0.305621	
185	185	-5.232696	9.75	-0.305621	
186	186	-4.980106	3.5	-0.159787	
187	187	-5.232696	3.5	-0.305621	
188	188	-2.712798	0	-4.136879	
189	189	-2.943738	0	-4.270213	
190	190	-2.943738	-2.25	-4.270213	
191	191	-2.943738	9.75	-4.270213	
192	192	-2.691147	3.5	-4.124379	
193	193	-2.943738	3.5	-4.270213	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	2						
2	3						
3	4						
4	5						
5	6						
6	7						
7	8						
8	9						
9	10						
10	11						
11	12						
12	13						
13	14						
14	15						
15	16						
16	17						
17	18						
18	19						
19	20						
20	21						
21	22						
22	23						
23	24						
24	25						

Node Boundary Conditions (Continued)

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
25	26						
26	27						
27	28						
28	29						
29	30						
30	31						
31	32						
32	33						
33	34						
34	35						
35	36						
36	37						
37	38						
38	39						
39	40						
40	41						
41	42						
42	43						
43	44	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
44	45						
45	46						
46	47						
47	48						
48	49						
49	50						
50	51						
51	52						
52	53						
53	54						
54	55						
55	56						
56	57						
57	58						
58	59						
59	60						
60	61						
61	62						
62	63						
63	64						
64	65						
65	66						
66	67						
67	68						
68	69						
69	70						
70	71						
71	72						
72	73	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
73	74						
74	75						
75	76						
76	77						
77	78						
78	79						
79	80						

Node Boundary Conditions (Continued)

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
80	81						
81	82						
82	83						
83	84						
84	85						
85	86						
86	87						
87	88						
88	89						
89	90						
90	91						
91	92						
92	93						
93	94						
94	95						
95	96						
96	97						
97	98						
98	99						
99	100						
100	101						
101	102	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
102	103						
103	104						
104	105						
105	106						
106	107						
107	108						
108	109						
109	110						
110	111						
111	112						
112	113						
113	114						
114	115						
115	116						
116	117						
117	118						
118	119						
119	120						
120	121						
121	122						
122	123						
123	124						
124	125						
125	126						
126	127						
127	128						
128	129						
129	130						
130	131						
131	132						
132	133						
133	134						
134	135						

Node Boundary Conditions (Continued)

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
135	136						
136	137						
137	138						
138	139						
139	140						
140	141						
141	142						
142	143						
143	144						
144	145						
145	146						
146	147						
147	148						
148	149						
149	150						
150	151						
151	152						
152	153						
153	154						
154	155						
155	156						
156	157						
157	158						
158	159						
159	160						
160	161						
161	162						
162	163						
163	164						
164	165						
165	166						
166	167						
167	168						
168	169						
169	170						
170	171						
171	172						
172	173						
173	174						
174	175						
175	176						
176	177						
177	178						
178	179						
179	180						
180	181						
181	182						
182	183						
183	184						
184	185						
185	186						
186	187						
187	188						
188	189						
189	190						

Node Boundary Conditions (Continued)

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
190	191						
191	192						
192	193						

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	MF-S1	HSS5X3X6	Beam	Tube	A500 Gr.B Rect	Typical	4.78	6.25	14.1	14.9
2	MF-S2	PIPE_3.0	Beam	Pipe	A500 Gr.B RND	Typical	2.07	2.85	2.85	5.69
3	MF-S3	L1.5X1.5X4	Beam	Single Angle	A36 Gr.36	Typical	0.688	0.139	0.139	0.013
4	MF-H1	PIPE_3.0	Beam	Pipe	A500 Gr.B RND	Typical	2.07	2.85	2.85	5.69
5	SR	PIPE_2.5	Beam	Pipe	A500 Gr.B RND	Typical	1.61	1.45	1.45	2.89
6	HR-S1	PIPE_2.5	Beam	Pipe	A500 Gr.B RND	Typical	1.61	1.45	1.45	2.89
7	MP1	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
8	Extension Beam	W10X49	Beam	Wide Flange	A992	Typical	14.4	93.4	272	1.39
9	RRH-P1	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	1	2	3		MF-S1	Beam	Tube	A500 Gr.B Rect	Typical
2	2	5	27		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
3	3	9	28		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
4	4	10	11	270	MF-S3	Beam	Single Angle	A36 Gr.36	Typical
5	5	12	13		MF-S3	Beam	Single Angle	A36 Gr.36	Typical
6	6	14	15		MF-H1	Beam	Pipe	A500 Gr.B RND	Typical
7	7	6	45		RIGID	None	None	RIGID	Typical
8	8	8	16		RIGID	None	None	RIGID	Typical
9	9	9	17		RIGID	None	None	RIGID	Typical
10	10	5	46		RIGID	None	None	RIGID	Typical
11	11	18	19		SR	Beam	Pipe	A500 Gr.B RND	Typical
12	12	21	20		RIGID	None	None	RIGID	Typical
13	13	25	24		RIGID	None	None	RIGID	Typical
14	14	23	22		MP1	Column	Pipe	A53 Gr.B	Typical
15	15	26	6		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
16	16	29	8		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
17	17	27	4		RIGID	None	None	RIGID	Typical
18	18	4	26		RIGID	None	None	RIGID	Typical
19	19	28	7		RIGID	None	None	RIGID	Typical
20	20	7	29		RIGID	None	None	RIGID	Typical
21	21	11	30		RIGID	None	None	RIGID	Typical
22	22	10	31		RIGID	None	None	RIGID	Typical
23	23	12	32		RIGID	None	None	RIGID	Typical
24	24	13	33		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
25	25	35	34		RIGID	None	None	RIGID	Typical
26	26	37	36		RIGID	None	None	RIGID	Typical
27	27	37	35		HR-S1	Beam	Pipe	A500 Gr.B RND	Typical
28	28	39	38		RIGID	None	None	RIGID	Typical
29	29	43	42		RIGID	None	None	RIGID	Typical
30	30	41	40		MP1	Column	Pipe	A53 Gr.B	Typical
31	31	44	2		Extension Beam	Beam	Wide Flange	A992	Typical
32	32	47	48		MF-S1	Beam	Tube	A500 Gr.B Rect	Typical
33	33	50	62		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
34	34	54	63		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
35	35	55	56	270	MF-S3	Beam	Single Angle	A36 Gr.36	Typical
36	36	57	58		MF-S3	Beam	Single Angle	A36 Gr.36	Typical
37	37	51	74		RIGID	None	None	RIGID	Typical
38	38	53	59		RIGID	None	None	RIGID	Typical
39	39	54	60		RIGID	None	None	RIGID	Typical
40	40	50	75		RIGID	None	None	RIGID	Typical
41	41	61	51		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
42	42	64	53		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
43	43	62	49		RIGID	None	None	RIGID	Typical
44	44	49	61		RIGID	None	None	RIGID	Typical
45	45	63	52		RIGID	None	None	RIGID	Typical
46	46	52	64		RIGID	None	None	RIGID	Typical
47	47	56	65		RIGID	None	None	RIGID	Typical
48	48	55	66		RIGID	None	None	RIGID	Typical
49	49	57	67		RIGID	None	None	RIGID	Typical
50	50	58	68		RIGID	None	None	RIGID	Typical
51	51	70	69		RIGID	None	None	RIGID	Typical
52	52	72	71		RIGID	None	None	RIGID	Typical
53	53	72	70		HR-S1	Beam	Pipe	A500 Gr.B RND	Typical
54	54	73	47		Extension Beam	Beam	Wide Flange	A992	Typical
55	55	76	77		MF-S1	Beam	Tube	A500 Gr.B Rect	Typical
56	56	79	91		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
57	57	83	92		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
58	58	84	85	270	MF-S3	Beam	Single Angle	A36 Gr.36	Typical
59	59	86	87		MF-S3	Beam	Single Angle	A36 Gr.36	Typical
60	60	80	103		RIGID	None	None	RIGID	Typical
61	61	82	88		RIGID	None	None	RIGID	Typical
62	62	83	89		RIGID	None	None	RIGID	Typical
63	63	79	104		RIGID	None	None	RIGID	Typical
64	64	90	80		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
65	65	93	82		MF-S2	Beam	Pipe	A500 Gr.B RND	Typical
66	66	91	78		RIGID	None	None	RIGID	Typical
67	67	78	90		RIGID	None	None	RIGID	Typical
68	68	92	81		RIGID	None	None	RIGID	Typical
69	69	81	93		RIGID	None	None	RIGID	Typical
70	70	85	94		RIGID	None	None	RIGID	Typical
71	71	84	95		RIGID	None	None	RIGID	Typical
72	72	86	96		RIGID	None	None	RIGID	Typical
73	73	87	97		RIGID	None	None	RIGID	Typical
74	74	99	98		RIGID	None	None	RIGID	Typical
75	75	101	100		RIGID	None	None	RIGID	Typical
76	76	101	99		HR-S1	Beam	Pipe	A500 Gr.B RND	Typical
77	77	102	76		Extension Beam	Beam	Wide Flange	A992	Typical
78	78	105	106		MF-H1	Beam	Pipe	A500 Gr.B RND	Typical
79	79	107	108		SR	Beam	Pipe	A500 Gr.B RND	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
80	80	109	110		MF-H1	Beam	Pipe	A500 Gr.B RND	Typical
81	81	111	112		SR	Beam	Pipe	A500 Gr.B RND	Typical
82	82	115	116		RRH-P1	Column	Pipe	A53 Gr.B	Typical
83	83	113	114		RIGID	None	None	RIGID	Typical
84	84	118	119		RRH-P1	Column	Pipe	A53 Gr.B	Typical
85	85	113	117		RIGID	None	None	RIGID	Typical
86	86	122	123		RRH-P1	Column	Pipe	A53 Gr.B	Typical
87	87	120	121		RIGID	None	None	RIGID	Typical
88	88	125	126		RRH-P1	Column	Pipe	A53 Gr.B	Typical
89	89	120	124		RIGID	None	None	RIGID	Typical
90	90	129	130		RRH-P1	Column	Pipe	A53 Gr.B	Typical
91	91	127	128		RIGID	None	None	RIGID	Typical
92	92	132	133		RRH-P1	Column	Pipe	A53 Gr.B	Typical
93	93	127	131		RIGID	None	None	RIGID	Typical
94	94	135	134		RIGID	None	None	RIGID	Typical
95	95	139	138		RIGID	None	None	RIGID	Typical
96	96	137	136		MP1	Column	Pipe	A53 Gr.B	Typical
97	97	141	140		RIGID	None	None	RIGID	Typical
98	98	145	144		RIGID	None	None	RIGID	Typical
99	99	143	142		MP1	Column	Pipe	A53 Gr.B	Typical
100	100	147	146		RIGID	None	None	RIGID	Typical
101	101	151	150		RIGID	None	None	RIGID	Typical
102	102	149	148		MP1	Column	Pipe	A53 Gr.B	Typical
103	103	153	152		RIGID	None	None	RIGID	Typical
104	104	157	156		RIGID	None	None	RIGID	Typical
105	105	155	154		MP1	Column	Pipe	A53 Gr.B	Typical
106	106	159	158		RIGID	None	None	RIGID	Typical
107	107	163	162		RIGID	None	None	RIGID	Typical
108	108	161	160		MP1	Column	Pipe	A53 Gr.B	Typical
109	109	165	164		RIGID	None	None	RIGID	Typical
110	110	169	168		RIGID	None	None	RIGID	Typical
111	111	167	166		MP1	Column	Pipe	A53 Gr.B	Typical
112	112	171	170		RIGID	None	None	RIGID	Typical
113	113	175	174		RIGID	None	None	RIGID	Typical
114	114	173	172		MP1	Column	Pipe	A53 Gr.B	Typical
115	115	177	176		RIGID	None	None	RIGID	Typical
116	116	181	180		RIGID	None	None	RIGID	Typical
117	117	179	178		MP1	Column	Pipe	A53 Gr.B	Typical
118	118	183	182		RIGID	None	None	RIGID	Typical
119	119	187	186		RIGID	None	None	RIGID	Typical
120	120	185	184		MP1	Column	Pipe	A53 Gr.B	Typical
121	121	189	188		RIGID	None	None	RIGID	Typical
122	122	193	192		RIGID	None	None	RIGID	Typical
123	123	191	190		MP1	Column	Pipe	A53 Gr.B	Typical

Member Advanced Data

	Label	Physical	Deflection Ratio Options	Seismic DR
1	1	Yes	N/A	None
2	2	Yes	Default	None
3	3	Yes	Default	None
4	4	Yes	N/A	None
5	5	Yes	Default	None
6	6	Yes	Default	None
7	7	Yes	** NA **	None
8	8	Yes	** NA **	None

Member Advanced Data (Continued)

	Label	Physical	Deflection Ratio Options	Seismic DR
9	9	Yes	** NA **	None
10	10	Yes	** NA **	None
11	11	Yes	N/A	None
12	12	Yes	** NA **	None
13	13	Yes	** NA **	None
14	14	Yes	** NA **	None
15	15	Yes	Default	None
16	16	Yes	Default	None
17	17	Yes	** NA **	None
18	18	Yes	** NA **	None
19	19	Yes	** NA **	None
20	20	Yes	** NA **	None
21	21	Yes	** NA **	None
22	22	Yes	** NA **	None
23	23	Yes	** NA **	None
24	24	Yes	** NA **	None
25	25	Yes	** NA **	None
26	26	Yes	** NA **	None
27	27	Yes	N/A	None
28	28	Yes	** NA **	None
29	29	Yes	** NA **	None
30	30	Yes	** NA **	None
31	31	Yes	N/A	None
32	32	Yes	N/A	None
33	33	Yes	Default	None
34	34	Yes	Default	None
35	35	Yes	N/A	None
36	36	Yes	Default	None
37	37	Yes	** NA **	None
38	38	Yes	** NA **	None
39	39	Yes	** NA **	None
40	40	Yes	** NA **	None
41	41	Yes	Default	None
42	42	Yes	Default	None
43	43	Yes	** NA **	None
44	44	Yes	** NA **	None
45	45	Yes	** NA **	None
46	46	Yes	** NA **	None
47	47	Yes	** NA **	None
48	48	Yes	** NA **	None
49	49	Yes	** NA **	None
50	50	Yes	** NA **	None
51	51	Yes	** NA **	None
52	52	Yes	** NA **	None
53	53	Yes	N/A	None
54	54	Yes	N/A	None
55	55	Yes	N/A	None
56	56	Yes	Default	None
57	57	Yes	Default	None
58	58	Yes	N/A	None
59	59	Yes	Default	None
60	60	Yes	** NA **	None
61	61	Yes	** NA **	None
62	62	Yes	** NA **	None
63	63	Yes	** NA **	None

Member Advanced Data (Continued)

	Label	Physical	Deflection Ratio Options	Seismic DR
64	64	Yes	Default	None
65	65	Yes	Default	None
66	66	Yes	** NA **	None
67	67	Yes	** NA **	None
68	68	Yes	** NA **	None
69	69	Yes	** NA **	None
70	70	Yes	** NA **	None
71	71	Yes	** NA **	None
72	72	Yes	** NA **	None
73	73	Yes	** NA **	None
74	74	Yes	** NA **	None
75	75	Yes	** NA **	None
76	76	Yes	N/A	None
77	77	Yes	N/A	None
78	78	Yes	Default	None
79	79	Yes	N/A	None
80	80	Yes	Default	None
81	81	Yes	N/A	None
82	82	Yes	** NA **	None
83	83	Yes	** NA **	None
84	84	Yes	** NA **	None
85	85	Yes	** NA **	None
86	86	Yes	** NA **	None
87	87	Yes	** NA **	None
88	88	Yes	** NA **	None
89	89	Yes	** NA **	None
90	90	Yes	** NA **	None
91	91	Yes	** NA **	None
92	92	Yes	** NA **	None
93	93	Yes	** NA **	None
94	94	Yes	** NA **	None
95	95	Yes	** NA **	None
96	96	Yes	** NA **	None
97	97	Yes	** NA **	None
98	98	Yes	** NA **	None
99	99	Yes	** NA **	None
100	100	Yes	** NA **	None
101	101	Yes	** NA **	None
102	102	Yes	** NA **	None
103	103	Yes	** NA **	None
104	104	Yes	** NA **	None
105	105	Yes	** NA **	None
106	106	Yes	** NA **	None
107	107	Yes	** NA **	None
108	108	Yes	** NA **	None
109	109	Yes	** NA **	None
110	110	Yes	** NA **	None
111	111	Yes	** NA **	None
112	112	Yes	** NA **	None
113	113	Yes	** NA **	None
114	114	Yes	** NA **	None
115	115	Yes	** NA **	None
116	116	Yes	** NA **	None
117	117	Yes	** NA **	None
118	118	Yes	** NA **	None

Member Advanced Data (Continued)

	Label	Physical	Deflection Ratio Options	Seismic DR
119	119	Yes	** NA **	None
120	120	Yes	** NA **	None
121	121	Yes	** NA **	None
122	122	Yes	** NA **	None
123	123	Yes	** NA **	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
1	1	MF-S1	5.271	Lbyy	N/A	N/A	Lateral
2	2	MF-S2	1.875	Lbyy	N/A	N/A	Lateral
3	3	MF-S2	0.698	Lbyy	N/A	N/A	Lateral
4	4	MF-S3	2.297	Lbyy	N/A	N/A	Lateral
5	5	MF-S3	2.297	Lbyy	N/A	N/A	Lateral
6	6	MF-H1	14.5	Lbyy	N/A	N/A	Lateral
7	11	SR	14.5	Lbyy	N/A	N/A	Lateral
8	14	MP1	12	Lbyy	N/A	N/A	Lateral
9	15	MF-S2	1.875	Lbyy	N/A	N/A	Lateral
10	16	MF-S2	0.698	Lbyy	N/A	N/A	Lateral
11	27	HR-S1	1.796	Lbyy	N/A	N/A	Lateral
12	30	MP1	12	Lbyy	N/A	N/A	Lateral
13	31	Extension Beam	1	Lbyy	N/A	N/A	Lateral
14	32	MF-S1	5.271	Lbyy	N/A	N/A	Lateral
15	33	MF-S2	1.875	Lbyy	N/A	N/A	Lateral
16	34	MF-S2	0.698	Lbyy	N/A	N/A	Lateral
17	35	MF-S3	2.297	Lbyy	N/A	N/A	Lateral
18	36	MF-S3	2.297	Lbyy	N/A	N/A	Lateral
19	41	MF-S2	1.875	Lbyy	N/A	N/A	Lateral
20	42	MF-S2	0.698	Lbyy	N/A	N/A	Lateral
21	53	HR-S1	1.796	Lbyy	N/A	N/A	Lateral
22	54	Extension Beam	1	Lbyy	N/A	N/A	Lateral
23	55	MF-S1	5.271	Lbyy	N/A	N/A	Lateral
24	56	MF-S2	1.875	Lbyy	N/A	N/A	Lateral
25	57	MF-S2	0.698	Lbyy	N/A	N/A	Lateral
26	58	MF-S3	2.297	Lbyy	N/A	N/A	Lateral
27	59	MF-S3	2.297	Lbyy	N/A	N/A	Lateral
28	64	MF-S2	1.875	Lbyy	N/A	N/A	Lateral
29	65	MF-S2	0.698	Lbyy	N/A	N/A	Lateral
30	76	HR-S1	1.796	Lbyy	N/A	N/A	Lateral
31	77	Extension Beam	1	Lbyy	N/A	N/A	Lateral
32	78	MF-H1	14.5	Lbyy	N/A	N/A	Lateral
33	79	SR	14.5	Lbyy	N/A	N/A	Lateral
34	80	MF-H1	14.5	Lbyy	N/A	N/A	Lateral
35	81	SR	14.5	Lbyy	N/A	N/A	Lateral
36	82	RRH-P1	6	Lbyy	N/A	N/A	Lateral
37	84	RRH-P1	6	Lbyy	N/A	N/A	Lateral
38	86	RRH-P1	6	Lbyy	N/A	N/A	Lateral
39	88	RRH-P1	6	Lbyy	N/A	N/A	Lateral
40	90	RRH-P1	6	Lbyy	N/A	N/A	Lateral
41	92	RRH-P1	6	Lbyy	N/A	N/A	Lateral
42	96	MP1	12	Lbyy	N/A	N/A	Lateral
43	99	MP1	12	Lbyy	N/A	N/A	Lateral
44	102	MP1	12	Lbyy	N/A	N/A	Lateral
45	105	MP1	12	Lbyy	N/A	N/A	Lateral
46	108	MP1	12	Lbyy	N/A	N/A	Lateral
47	111	MP1	12	Lbyy	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
48	114	MP1	12	Lbyy	N/A	N/A	Lateral
49	117	MP1	12	Lbyy	N/A	N/A	Lateral
50	120	MP1	12	Lbyy	N/A	N/A	Lateral
51	123	MP1	12	Lbyy	N/A	N/A	Lateral

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	Y	-0.065	%5
2	96	Y	-0.065	%65
3	96	Y	0	0
4	96	Y	0	0
5	96	Y	0	0
6	99	Y	-0.028	%5
7	99	Y	-0.028	%25
8	99	Y	-0.048	%75
9	99	Y	-0.048	%95
10	99	Y	0	0
11	30	Y	-0.045	%5
12	30	Y	-0.045	%65
13	30	Y	0	0
14	30	Y	0	0
15	30	Y	0	0
16	90	Y	-0.059	%15
17	90	Y	-0.055	%15
18	90	Y	-0.053	%50
19	90	Y	0	0
20	90	Y	0	0
21	88	Y	-0.053	%15
22	88	Y	-0.071	%15
23	88	Y	-0.026	%50
24	88	Y	0	0
25	88	Y	0	0
26	120	Y	-0.065	%5
27	120	Y	-0.065	%65
28	120	Y	0	0
29	120	Y	0	0
30	120	Y	0	0
31	123	Y	-0.028	%5
32	123	Y	-0.028	%25
33	123	Y	-0.048	%75
34	123	Y	-0.048	%95
35	123	Y	0	0
36	117	Y	-0.045	%5
37	117	Y	-0.045	%65
38	117	Y	0	0
39	117	Y	0	0
40	117	Y	0	0
41	86	Y	-0.059	%15
42	86	Y	-0.055	%15
43	86	Y	-0.053	%50
44	86	Y	0	0
45	86	Y	0	0
46	84	Y	-0.053	%15
47	84	Y	-0.071	%15
48	84	Y	-0.026	%50

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
49	84	Y	0	0
50	84	Y	0	0
51	108	Y	-0.065	%5
52	108	Y	-0.065	%65
53	108	Y	0	0
54	108	Y	0	0
55	108	Y	0	0
56	111	Y	-0.028	%5
57	111	Y	-0.028	%25
58	111	Y	-0.048	%75
59	111	Y	-0.048	%95
60	111	Y	0	0
61	105	Y	-0.045	%5
62	105	Y	-0.045	%65
63	105	Y	0	0
64	105	Y	0	0
65	105	Y	0	0
66	82	Y	-0.059	%15
67	82	Y	-0.055	%15
68	82	Y	-0.053	%50
69	82	Y	0	0
70	82	Y	0	0
71	92	Y	-0.053	%15
72	92	Y	-0.071	%15
73	92	Y	-0.026	%50
74	92	Y	0	0
75	92	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	Z	-0.256	%5
2	96	Z	-0.256	%65
3	96	Z	0	0
4	96	Z	0	0
5	96	Z	0	0
6	99	Z	-0.071	%5
7	99	Z	-0.071	%25
8	99	Z	-0.069	%75
9	99	Z	-0.069	%95
10	99	Z	0	0
11	30	Z	-0.225	%5
12	30	Z	-0.225	%65
13	30	Z	0	0
14	30	Z	0	0
15	30	Z	0	0
16	90	Z	-0.042	%15
17	90	Z	-0.06	%15
18	90	Z	-0.057	%50
19	90	Z	0	0
20	90	Z	0	0
21	88	Z	-0.057	%15
22	88	Z	-0.048	%15
23	88	Z	-0.039	%50
24	88	Z	0	0
25	88	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
26	120	Z	-0.256	%5
27	120	Z	-0.256	%65
28	120	Z	0	0
29	120	Z	0	0
30	120	Z	0	0
31	123	Z	-0.071	%5
32	123	Z	-0.071	%25
33	123	Z	-0.069	%75
34	123	Z	-0.069	%95
35	123	Z	0	0
36	117	Z	-0.225	%5
37	117	Z	-0.225	%65
38	117	Z	0	0
39	117	Z	0	0
40	117	Z	0	0
41	86	Z	-0.042	%15
42	86	Z	-0.06	%15
43	86	Z	-0.057	%50
44	86	Z	0	0
45	86	Z	0	0
46	84	Z	-0.057	%15
47	84	Z	-0.048	%15
48	84	Z	-0.039	%50
49	84	Z	0	0
50	84	Z	0	0
51	108	Z	-0.256	%5
52	108	Z	-0.256	%65
53	108	Z	0	0
54	108	Z	0	0
55	108	Z	0	0
56	111	Z	-0.071	%5
57	111	Z	-0.071	%25
58	111	Z	-0.069	%75
59	111	Z	-0.069	%95
60	111	Z	0	0
61	105	Z	-0.225	%5
62	105	Z	-0.225	%65
63	105	Z	0	0
64	105	Z	0	0
65	105	Z	0	0
66	82	Z	-0.042	%15
67	82	Z	-0.06	%15
68	82	Z	-0.057	%50
69	82	Z	0	0
70	82	Z	0	0
71	92	Z	-0.057	%15
72	92	Z	-0.048	%15
73	92	Z	-0.039	%50
74	92	Z	0	0
75	92	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	X	-0.112	%5
2	96	X	-0.112	%65

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
3	96	X	0	0
4	96	X	0	0
5	96	X	0	0
6	99	X	-0.032	%5
7	99	X	-0.032	%25
8	99	X	-0.046	%75
9	99	X	-0.046	%95
10	99	X	0	0
11	30	X	-0.084	%5
12	30	X	-0.084	%65
13	30	X	0	0
14	30	X	0	0
15	30	X	0	0
16	90	X	-0.069	%15
17	90	X	-0.102	%15
18	90	X	-0.097	%50
19	90	X	0	0
20	90	X	0	0
21	88	X	-0.097	%15
22	88	X	-0.067	%15
23	88	X	-0.039	%50
24	88	X	0	0
25	88	X	0	0
26	120	X	-0.112	%5
27	120	X	-0.112	%65
28	120	X	0	0
29	120	X	0	0
30	120	X	0	0
31	123	X	-0.032	%5
32	123	X	-0.032	%25
33	123	X	-0.046	%75
34	123	X	-0.046	%95
35	123	X	0	0
36	117	X	-0.084	%5
37	117	X	-0.084	%65
38	117	X	0	0
39	117	X	0	0
40	117	X	0	0
41	86	X	-0.069	%15
42	86	X	-0.102	%15
43	86	X	-0.097	%50
44	86	X	0	0
45	86	X	0	0
46	84	X	-0.097	%15
47	84	X	-0.067	%15
48	84	X	-0.039	%50
49	84	X	0	0
50	84	X	0	0
51	108	X	-0.112	%5
52	108	X	-0.112	%65
53	108	X	0	0
54	108	X	0	0
55	108	X	0	0
56	111	X	-0.032	%5
57	111	X	-0.032	%25

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
58	111	X	-0.046	%75
59	111	X	-0.046	%95
60	111	X	0	0
61	105	X	-0.084	%5
62	105	X	-0.084	%65
63	105	X	0	0
64	105	X	0	0
65	105	X	0	0
66	82	X	-0.069	%15
67	82	X	-0.102	%15
68	82	X	-0.097	%50
69	82	X	0	0
70	82	X	0	0
71	92	X	-0.097	%15
72	92	X	-0.067	%15
73	92	X	-0.039	%50
74	92	X	0	0
75	92	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	Z	-0.051	%5
2	96	Z	-0.051	%65
3	96	Z	0	0
4	96	Z	0	0
5	96	Z	0	0
6	99	Z	-0.013	%5
7	99	Z	-0.013	%25
8	99	Z	-0.012	%75
9	99	Z	-0.012	%95
10	99	Z	0	0
11	30	Z	-0.045	%5
12	30	Z	-0.045	%65
13	30	Z	0	0
14	30	Z	0	0
15	30	Z	0	0
16	90	Z	-0.008	%15
17	90	Z	-0.011	%15
18	90	Z	-0.01	%50
19	90	Z	0	0
20	90	Z	0	0
21	88	Z	-0.01	%15
22	88	Z	-0.009	%15
23	88	Z	-0.007	%50
24	88	Z	0	0
25	88	Z	0	0
26	120	Z	-0.051	%5
27	120	Z	-0.051	%65
28	120	Z	0	0
29	120	Z	0	0
30	120	Z	0	0
31	123	Z	-0.013	%5
32	123	Z	-0.013	%25
33	123	Z	-0.012	%75
34	123	Z	-0.012	%95

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
35	123	Z	0	0
36	117	Z	-0.045	%5
37	117	Z	-0.045	%65
38	117	Z	0	0
39	117	Z	0	0
40	117	Z	0	0
41	86	Z	-0.008	%15
42	86	Z	-0.011	%15
43	86	Z	-0.01	%50
44	86	Z	0	0
45	86	Z	0	0
46	84	Z	-0.01	%15
47	84	Z	-0.009	%15
48	84	Z	-0.007	%50
49	84	Z	0	0
50	84	Z	0	0
51	108	Z	-0.051	%5
52	108	Z	-0.051	%65
53	108	Z	0	0
54	108	Z	0	0
55	108	Z	0	0
56	111	Z	-0.013	%5
57	111	Z	-0.013	%25
58	111	Z	-0.012	%75
59	111	Z	-0.012	%95
60	111	Z	0	0
61	105	Z	-0.045	%5
62	105	Z	-0.045	%65
63	105	Z	0	0
64	105	Z	0	0
65	105	Z	0	0
66	82	Z	-0.008	%15
67	82	Z	-0.011	%15
68	82	Z	-0.01	%50
69	82	Z	0	0
70	82	Z	0	0
71	92	Z	-0.01	%15
72	92	Z	-0.009	%15
73	92	Z	-0.007	%50
74	92	Z	0	0
75	92	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	X	-0.025	%5
2	96	X	-0.025	%65
3	96	X	0	0
4	96	X	0	0
5	96	X	0	0
6	99	X	-0.006	%5
7	99	X	-0.006	%25
8	99	X	-0.008	%75
9	99	X	-0.008	%95
10	99	X	0	0
11	30	X	-0.019	%5

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
12	30	X	-0.019	%65
13	30	X	0	0
14	30	X	0	0
15	30	X	0	0
16	90	X	-0.012	%15
17	90	X	-0.018	%15
18	90	X	-0.018	%50
19	90	X	0	0
20	90	X	0	0
21	88	X	-0.018	%15
22	88	X	-0.012	%15
23	88	X	-0.007	%50
24	88	X	0	0
25	88	X	0	0
26	120	X	-0.025	%5
27	120	X	-0.025	%65
28	120	X	0	0
29	120	X	0	0
30	120	X	0	0
31	123	X	-0.006	%5
32	123	X	-0.006	%25
33	123	X	-0.008	%75
34	123	X	-0.008	%95
35	123	X	0	0
36	117	X	-0.019	%5
37	117	X	-0.019	%65
38	117	X	0	0
39	117	X	0	0
40	117	X	0	0
41	86	X	-0.012	%15
42	86	X	-0.018	%15
43	86	X	-0.018	%50
44	86	X	0	0
45	86	X	0	0
46	84	X	-0.018	%15
47	84	X	-0.012	%15
48	84	X	-0.007	%50
49	84	X	0	0
50	84	X	0	0
51	108	X	-0.025	%5
52	108	X	-0.025	%65
53	108	X	0	0
54	108	X	0	0
55	108	X	0	0
56	111	X	-0.006	%5
57	111	X	-0.006	%25
58	111	X	-0.008	%75
59	111	X	-0.008	%95
60	111	X	0	0
61	105	X	-0.019	%5
62	105	X	-0.019	%65
63	105	X	0	0
64	105	X	0	0
65	105	X	0	0
66	82	X	-0.012	%15

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
67	82	X	-0.018	%15
68	82	X	-0.018	%50
69	82	X	0	0
70	82	X	0	0
71	92	X	-0.018	%15
72	92	X	-0.012	%15
73	92	X	-0.007	%50
74	92	X	0	0
75	92	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	Z	-0.017	%5
2	96	Z	-0.017	%65
3	96	Z	0	0
4	96	Z	0	0
5	96	Z	0	0
6	99	Z	-0.005	%5
7	99	Z	-0.005	%25
8	99	Z	-0.004	%75
9	99	Z	-0.004	%95
10	99	Z	0	0
11	30	Z	-0.015	%5
12	30	Z	-0.015	%65
13	30	Z	0	0
14	30	Z	0	0
15	30	Z	0	0
16	90	Z	-0.003	%15
17	90	Z	-0.004	%15
18	90	Z	-0.004	%50
19	90	Z	0	0
20	90	Z	0	0
21	88	Z	-0.004	%15
22	88	Z	-0.003	%15
23	88	Z	-0.003	%50
24	88	Z	0	0
25	88	Z	0	0
26	120	Z	-0.017	%5
27	120	Z	-0.017	%65
28	120	Z	0	0
29	120	Z	0	0
30	120	Z	0	0
31	123	Z	-0.005	%5
32	123	Z	-0.005	%25
33	123	Z	-0.004	%75
34	123	Z	-0.004	%95
35	123	Z	0	0
36	117	Z	-0.015	%5
37	117	Z	-0.015	%65
38	117	Z	0	0
39	117	Z	0	0
40	117	Z	0	0
41	86	Z	-0.003	%15
42	86	Z	-0.004	%15
43	86	Z	-0.004	%50

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
44	86	Z	0	0
45	86	Z	0	0
46	84	Z	-0.004	%15
47	84	Z	-0.003	%15
48	84	Z	-0.003	%50
49	84	Z	0	0
50	84	Z	0	0
51	108	Z	-0.017	%5
52	108	Z	-0.017	%65
53	108	Z	0	0
54	108	Z	0	0
55	108	Z	0	0
56	111	Z	-0.005	%5
57	111	Z	-0.005	%25
58	111	Z	-0.004	%75
59	111	Z	-0.004	%95
60	111	Z	0	0
61	105	Z	-0.015	%5
62	105	Z	-0.015	%65
63	105	Z	0	0
64	105	Z	0	0
65	105	Z	0	0
66	82	Z	-0.003	%15
67	82	Z	-0.004	%15
68	82	Z	-0.004	%50
69	82	Z	0	0
70	82	Z	0	0
71	92	Z	-0.004	%15
72	92	Z	-0.003	%15
73	92	Z	-0.003	%50
74	92	Z	0	0
75	92	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	X	-0.007	%5
2	96	X	-0.007	%65
3	96	X	0	0
4	96	X	0	0
5	96	X	0	0
6	99	X	-0.002	%5
7	99	X	-0.002	%25
8	99	X	-0.003	%75
9	99	X	-0.003	%95
10	99	X	0	0
11	30	X	-0.005	%5
12	30	X	-0.005	%65
13	30	X	0	0
14	30	X	0	0
15	30	X	0	0
16	90	X	-0.004	%15
17	90	X	-0.007	%15
18	90	X	-0.006	%50
19	90	X	0	0
20	90	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
21	88	X	-0.006	%15
22	88	X	-0.004	%15
23	88	X	-0.003	%50
24	88	X	0	0
25	88	X	0	0
26	120	X	-0.007	%5
27	120	X	-0.007	%65
28	120	X	0	0
29	120	X	0	0
30	120	X	0	0
31	123	X	-0.002	%5
32	123	X	-0.002	%25
33	123	X	-0.003	%75
34	123	X	-0.003	%95
35	123	X	0	0
36	117	X	-0.005	%5
37	117	X	-0.005	%65
38	117	X	0	0
39	117	X	0	0
40	117	X	0	0
41	86	X	-0.004	%15
42	86	X	-0.007	%15
43	86	X	-0.006	%50
44	86	X	0	0
45	86	X	0	0
46	84	X	-0.006	%15
47	84	X	-0.004	%15
48	84	X	-0.003	%50
49	84	X	0	0
50	84	X	0	0
51	108	X	-0.007	%5
52	108	X	-0.007	%65
53	108	X	0	0
54	108	X	0	0
55	108	X	0	0
56	111	X	-0.002	%5
57	111	X	-0.002	%25
58	111	X	-0.003	%75
59	111	X	-0.003	%95
60	111	X	0	0
61	105	X	-0.005	%5
62	105	X	-0.005	%65
63	105	X	0	0
64	105	X	0	0
65	105	X	0	0
66	82	X	-0.004	%15
67	82	X	-0.007	%15
68	82	X	-0.006	%50
69	82	X	0	0
70	82	X	0	0
71	92	X	-0.006	%15
72	92	X	-0.004	%15
73	92	X	-0.003	%50
74	92	X	0	0
75	92	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	Y	-0.152	%5
2	96	Y	-0.152	%65
3	96	Y	0	0
4	96	Y	0	0
5	96	Y	0	0
6	99	Y	-0.035	%5
7	99	Y	-0.035	%25
8	99	Y	-0.037	%75
9	99	Y	-0.037	%95
10	99	Y	0	0
11	30	Y	-0.122	%5
12	30	Y	-0.122	%65
13	30	Y	0	0
14	30	Y	0	0
15	30	Y	0	0
16	90	Y	-0.036	%15
17	90	Y	-0.051	%15
18	90	Y	-0.049	%50
19	90	Y	0	0
20	90	Y	0	0
21	88	Y	-0.049	%15
22	88	Y	-0.037	%15
23	88	Y	-0.043	%50
24	88	Y	0	0
25	88	Y	0	0
26	120	Y	-0.152	%5
27	120	Y	-0.152	%65
28	120	Y	0	0
29	120	Y	0	0
30	120	Y	0	0
31	123	Y	-0.035	%5
32	123	Y	-0.035	%25
33	123	Y	-0.037	%75
34	123	Y	-0.037	%95
35	123	Y	0	0
36	117	Y	-0.122	%5
37	117	Y	-0.122	%65
38	117	Y	0	0
39	117	Y	0	0
40	117	Y	0	0
41	86	Y	-0.036	%15
42	86	Y	-0.051	%15
43	86	Y	-0.049	%50
44	86	Y	0	0
45	86	Y	0	0
46	84	Y	-0.049	%15
47	84	Y	-0.037	%15
48	84	Y	-0.043	%50
49	84	Y	0	0
50	84	Y	0	0
51	108	Y	-0.152	%5
52	108	Y	-0.152	%65
53	108	Y	0	0
54	108	Y	0	0
55	108	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
56	111	Y	-0.035	%5
57	111	Y	-0.035	%25
58	111	Y	-0.037	%75
59	111	Y	-0.037	%95
60	111	Y	0	0
61	105	Y	-0.122	%5
62	105	Y	-0.122	%65
63	105	Y	0	0
64	105	Y	0	0
65	105	Y	0	0
66	82	Y	-0.036	%15
67	82	Y	-0.051	%15
68	82	Y	-0.049	%50
69	82	Y	0	0
70	82	Y	0	0
71	92	Y	-0.049	%15
72	92	Y	-0.037	%15
73	92	Y	-0.043	%50
74	92	Y	0	0
75	92	Y	0	0

Member Point Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	Z	-0.044	%5
2	96	Z	-0.044	%65
3	96	Z	0	0
4	96	Z	0	0
5	96	Z	0	0
6	99	Z	-0.019	%5
7	99	Z	-0.019	%25
8	99	Z	-0.033	%75
9	99	Z	-0.033	%95
10	99	Z	0	0
11	30	Z	-0.03	%5
12	30	Z	-0.03	%65
13	30	Z	0	0
14	30	Z	0	0
15	30	Z	0	0
16	90	Z	-0.02	%15
17	90	Z	-0.019	%15
18	90	Z	-0.018	%50
19	90	Z	0	0
20	90	Z	0	0
21	88	Z	-0.018	%15
22	88	Z	-0.024	%15
23	88	Z	-0.009	%50
24	88	Z	0	0
25	88	Z	0	0
26	120	Z	-0.044	%5
27	120	Z	-0.044	%65
28	120	Z	0	0
29	120	Z	0	0
30	120	Z	0	0
31	123	Z	-0.019	%5
32	123	Z	-0.019	%25

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
33	123	Z	-0.033	%75
34	123	Z	-0.033	%95
35	123	Z	0	0
36	117	Z	-0.03	%5
37	117	Z	-0.03	%65
38	117	Z	0	0
39	117	Z	0	0
40	117	Z	0	0
41	86	Z	-0.02	%15
42	86	Z	-0.019	%15
43	86	Z	-0.018	%50
44	86	Z	0	0
45	86	Z	0	0
46	84	Z	-0.018	%15
47	84	Z	-0.024	%15
48	84	Z	-0.009	%50
49	84	Z	0	0
50	84	Z	0	0
51	108	Z	-0.044	%5
52	108	Z	-0.044	%65
53	108	Z	0	0
54	108	Z	0	0
55	108	Z	0	0
56	111	Z	-0.019	%5
57	111	Z	-0.019	%25
58	111	Z	-0.033	%75
59	111	Z	-0.033	%95
60	111	Z	0	0
61	105	Z	-0.03	%5
62	105	Z	-0.03	%65
63	105	Z	0	0
64	105	Z	0	0
65	105	Z	0	0
66	82	Z	-0.02	%15
67	82	Z	-0.019	%15
68	82	Z	-0.018	%50
69	82	Z	0	0
70	82	Z	0	0
71	92	Z	-0.018	%15
72	92	Z	-0.024	%15
73	92	Z	-0.009	%50
74	92	Z	0	0
75	92	Z	0	0

Member Point Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	96	X	-0.044	%5
2	96	X	-0.044	%65
3	96	X	0	0
4	96	X	0	0
5	96	X	0	0
6	99	X	-0.019	%5
7	99	X	-0.019	%25
8	99	X	-0.033	%75
9	99	X	-0.033	%95

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
10	99	X	0	0
11	30	X	-0.03	%5
12	30	X	-0.03	%65
13	30	X	0	0
14	30	X	0	0
15	30	X	0	0
16	90	X	-0.02	%15
17	90	X	-0.019	%15
18	90	X	-0.018	%50
19	90	X	0	0
20	90	X	0	0
21	88	X	-0.018	%15
22	88	X	-0.024	%15
23	88	X	-0.009	%50
24	88	X	0	0
25	88	X	0	0
26	120	X	-0.044	%5
27	120	X	-0.044	%65
28	120	X	0	0
29	120	X	0	0
30	120	X	0	0
31	123	X	-0.019	%5
32	123	X	-0.019	%25
33	123	X	-0.033	%75
34	123	X	-0.033	%95
35	123	X	0	0
36	117	X	-0.03	%5
37	117	X	-0.03	%65
38	117	X	0	0
39	117	X	0	0
40	117	X	0	0
41	86	X	-0.02	%15
42	86	X	-0.019	%15
43	86	X	-0.018	%50
44	86	X	0	0
45	86	X	0	0
46	84	X	-0.018	%15
47	84	X	-0.024	%15
48	84	X	-0.009	%50
49	84	X	0	0
50	84	X	0	0
51	108	X	-0.044	%5
52	108	X	-0.044	%65
53	108	X	0	0
54	108	X	0	0
55	108	X	0	0
56	111	X	-0.019	%5
57	111	X	-0.019	%25
58	111	X	-0.033	%75
59	111	X	-0.033	%95
60	111	X	0	0
61	105	X	-0.03	%5
62	105	X	-0.03	%65
63	105	X	0	0
64	105	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
65	105	X	0	0
66	82	X	-0.02	%15
67	82	X	-0.019	%15
68	82	X	-0.018	%50
69	82	X	0	0
70	82	X	0	0
71	92	X	-0.018	%15
72	92	X	-0.024	%15
73	92	X	-0.009	%50
74	92	X	0	0
75	92	X	0	0

Member Point Loads (BLC 15 : Maint LL 1)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	6	Y	-0.25	%5

Member Point Loads (BLC 16 : Maint LL 2)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	11	Y	-0.25	%5

Member Point Loads (BLC 17 : Maint LL 3)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	78	Y	-0.25	%5

Member Point Loads (BLC 18 : Maint LL 4)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	79	Y	-0.25	%5

Member Point Loads (BLC 19 : Maint LL 5)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	80	Y	-0.25	%5

Member Point Loads (BLC 20 : Maint LL 6)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	81	Y	-0.25	%5

Member Point Loads (BLC 21 : Maint LL 7)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	6	Y	-0.25	%95

Member Point Loads (BLC 22 : Maint LL 8)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	11	Y	-0.25	%95

Member Point Loads (BLC 23 : Maint LL 9)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	78	Y	-0.25	%95

Member Point Loads (BLC 24 : Maint LL 10)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	79	Y	-0.25	%95

Member Point Loads (BLC 25 : Maint LL 11)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	80	Y	-0.25	%95

Member Point Loads (BLC 26 : Maint LL 12)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	81	Y	-0.25	%95

Member Point Loads (BLC 27 : Maint LL 13)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	32	Y	-0.25	%95

Member Point Loads (BLC 28 : Maint LL 14)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	55	Y	-0.25	%95

Member Point Loads (BLC 29 : Maint LL 15)

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

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.022	-0.022	0	%100
2	2	Z	-0.009	-0.009	0	%100
3	3	Z	-0.007	-0.007	0	%100
4	4	Z	-0.007	-0.007	0	%100
5	5	Z	-0.007	-0.007	0	%100
6	6	Z	-0.012	-0.012	0	%100
7	11	Z	-0.01	-0.01	0	%100
8	14	Z	-0.01	-0.01	0	%100
9	15	Z	-0.009	-0.009	0	%100
10	16	Z	-0.007	-0.007	0	%100
11	27	Z	-0.007	-0.007	0	%100
12	30	Z	-0.01	-0.01	0	%100
13	31	Z	-0.034	-0.034	0	%100
14	32	Z	-0.022	-0.022	0	%100
15	33	Z	-0.009	-0.009	0	%100
16	34	Z	-0.007	-0.007	0	%100
17	35	Z	-0.007	-0.007	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
18	36	Z	-0.007	-0.007	0	%100
19	41	Z	-0.009	-0.009	0	%100
20	42	Z	-0.007	-0.007	0	%100
21	53	Z	-0.007	-0.007	0	%100
22	54	Z	-0.034	-0.034	0	%100
23	55	Z	-0.022	-0.022	0	%100
24	56	Z	-0.009	-0.009	0	%100
25	57	Z	-0.007	-0.007	0	%100
26	58	Z	-0.007	-0.007	0	%100
27	59	Z	-0.007	-0.007	0	%100
28	64	Z	-0.009	-0.009	0	%100
29	65	Z	-0.007	-0.007	0	%100
30	76	Z	-0.007	-0.007	0	%100
31	77	Z	-0.034	-0.034	0	%100
32	78	Z	-0.012	-0.012	0	%100
33	79	Z	-0.01	-0.01	0	%100
34	80	Z	-0.012	-0.012	0	%100
35	81	Z	-0.01	-0.01	0	%100
36	82	Z	-0.01	-0.01	0	%100
37	84	Z	-0.01	-0.01	0	%100
38	86	Z	-0.01	-0.01	0	%100
39	88	Z	-0.01	-0.01	0	%100
40	90	Z	-0.01	-0.01	0	%100
41	92	Z	-0.01	-0.01	0	%100
42	96	Z	-0.01	-0.01	0	%100
43	99	Z	-0.01	-0.01	0	%100
44	102	Z	-0.01	-0.01	0	%100
45	105	Z	-0.01	-0.01	0	%100
46	108	Z	-0.01	-0.01	0	%100
47	111	Z	-0.01	-0.01	0	%100
48	114	Z	-0.01	-0.01	0	%100
49	117	Z	-0.01	-0.01	0	%100
50	120	Z	-0.01	-0.01	0	%100
51	123	Z	-0.01	-0.01	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.022	-0.022	0	%100
2	2	X	-0.009	-0.009	0	%100
3	3	X	-0.007	-0.007	0	%100
4	4	X	-0.007	-0.007	0	%100
5	5	X	-0.007	-0.007	0	%100
6	6	X	-0.012	-0.012	0	%100
7	11	X	-0.01	-0.01	0	%100
8	14	X	-0.01	-0.01	0	%100
9	15	X	-0.009	-0.009	0	%100
10	16	X	-0.007	-0.007	0	%100
11	27	X	-0.007	-0.007	0	%100
12	30	X	-0.01	-0.01	0	%100
13	31	X	-0.034	-0.034	0	%100
14	32	X	-0.022	-0.022	0	%100
15	33	X	-0.009	-0.009	0	%100
16	34	X	-0.007	-0.007	0	%100
17	35	X	-0.007	-0.007	0	%100
18	36	X	-0.007	-0.007	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
19	41	X	-0.009	-0.009	0	%100
20	42	X	-0.007	-0.007	0	%100
21	53	X	-0.007	-0.007	0	%100
22	54	X	-0.034	-0.034	0	%100
23	55	X	-0.022	-0.022	0	%100
24	56	X	-0.009	-0.009	0	%100
25	57	X	-0.007	-0.007	0	%100
26	58	X	-0.007	-0.007	0	%100
27	59	X	-0.007	-0.007	0	%100
28	64	X	-0.009	-0.009	0	%100
29	65	X	-0.007	-0.007	0	%100
30	76	X	-0.007	-0.007	0	%100
31	77	X	-0.034	-0.034	0	%100
32	78	X	-0.012	-0.012	0	%100
33	79	X	-0.01	-0.01	0	%100
34	80	X	-0.012	-0.012	0	%100
35	81	X	-0.01	-0.01	0	%100
36	82	X	-0.01	-0.01	0	%100
37	84	X	-0.01	-0.01	0	%100
38	86	X	-0.01	-0.01	0	%100
39	88	X	-0.01	-0.01	0	%100
40	90	X	-0.01	-0.01	0	%100
41	92	X	-0.01	-0.01	0	%100
42	96	X	-0.01	-0.01	0	%100
43	99	X	-0.01	-0.01	0	%100
44	102	X	-0.01	-0.01	0	%100
45	105	X	-0.01	-0.01	0	%100
46	108	X	-0.01	-0.01	0	%100
47	111	X	-0.01	-0.01	0	%100
48	114	X	-0.01	-0.01	0	%100
49	117	X	-0.01	-0.01	0	%100
50	120	X	-0.01	-0.01	0	%100
51	123	X	-0.01	-0.01	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.006	-0.006	0	%100
2	2	Z	-0.002	-0.002	0	%100
3	3	Z	-0.002	-0.002	0	%100
4	4	Z	-0.004	-0.004	0	%100
5	5	Z	-0.004	-0.004	0	%100
6	6	Z	-0.002	-0.002	0	%100
7	11	Z	-0.002	-0.002	0	%100
8	14	Z	-0.002	-0.002	0	%100
9	15	Z	-0.002	-0.002	0	%100
10	16	Z	-0.002	-0.002	0	%100
11	27	Z	-0.002	-0.002	0	%100
12	30	Z	-0.002	-0.002	0	%100
13	31	Z	-0.009	-0.009	0	%100
14	32	Z	-0.006	-0.006	0	%100
15	33	Z	-0.002	-0.002	0	%100
16	34	Z	-0.002	-0.002	0	%100
17	35	Z	-0.004	-0.004	0	%100
18	36	Z	-0.004	-0.004	0	%100
19	41	Z	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
20	42	Z	-0.002	-0.002	0	%100
21	53	Z	-0.002	-0.002	0	%100
22	54	Z	-0.009	-0.009	0	%100
23	55	Z	-0.006	-0.006	0	%100
24	56	Z	-0.002	-0.002	0	%100
25	57	Z	-0.002	-0.002	0	%100
26	58	Z	-0.004	-0.004	0	%100
27	59	Z	-0.004	-0.004	0	%100
28	64	Z	-0.002	-0.002	0	%100
29	65	Z	-0.002	-0.002	0	%100
30	76	Z	-0.002	-0.002	0	%100
31	77	Z	-0.009	-0.009	0	%100
32	78	Z	-0.002	-0.002	0	%100
33	79	Z	-0.002	-0.002	0	%100
34	80	Z	-0.002	-0.002	0	%100
35	81	Z	-0.002	-0.002	0	%100
36	82	Z	-0.002	-0.002	0	%100
37	84	Z	-0.002	-0.002	0	%100
38	86	Z	-0.002	-0.002	0	%100
39	88	Z	-0.002	-0.002	0	%100
40	90	Z	-0.002	-0.002	0	%100
41	92	Z	-0.002	-0.002	0	%100
42	96	Z	-0.002	-0.002	0	%100
43	99	Z	-0.002	-0.002	0	%100
44	102	Z	-0.002	-0.002	0	%100
45	105	Z	-0.002	-0.002	0	%100
46	108	Z	-0.002	-0.002	0	%100
47	111	Z	-0.002	-0.002	0	%100
48	114	Z	-0.002	-0.002	0	%100
49	117	Z	-0.002	-0.002	0	%100
50	120	Z	-0.002	-0.002	0	%100
51	123	Z	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.006	-0.006	0	%100
2	2	X	-0.002	-0.002	0	%100
3	3	X	-0.002	-0.002	0	%100
4	4	X	-0.004	-0.004	0	%100
5	5	X	-0.004	-0.004	0	%100
6	6	X	-0.002	-0.002	0	%100
7	11	X	-0.002	-0.002	0	%100
8	14	X	-0.002	-0.002	0	%100
9	15	X	-0.002	-0.002	0	%100
10	16	X	-0.002	-0.002	0	%100
11	27	X	-0.002	-0.002	0	%100
12	30	X	-0.002	-0.002	0	%100
13	31	X	-0.009	-0.009	0	%100
14	32	X	-0.006	-0.006	0	%100
15	33	X	-0.002	-0.002	0	%100
16	34	X	-0.002	-0.002	0	%100
17	35	X	-0.004	-0.004	0	%100
18	36	X	-0.004	-0.004	0	%100
19	41	X	-0.002	-0.002	0	%100
20	42	X	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
21	53	X	-0.002	-0.002	0	%100
22	54	X	-0.009	-0.009	0	%100
23	55	X	-0.006	-0.006	0	%100
24	56	X	-0.002	-0.002	0	%100
25	57	X	-0.002	-0.002	0	%100
26	58	X	-0.004	-0.004	0	%100
27	59	X	-0.004	-0.004	0	%100
28	64	X	-0.002	-0.002	0	%100
29	65	X	-0.002	-0.002	0	%100
30	76	X	-0.002	-0.002	0	%100
31	77	X	-0.009	-0.009	0	%100
32	78	X	-0.002	-0.002	0	%100
33	79	X	-0.002	-0.002	0	%100
34	80	X	-0.002	-0.002	0	%100
35	81	X	-0.002	-0.002	0	%100
36	82	X	-0.002	-0.002	0	%100
37	84	X	-0.002	-0.002	0	%100
38	86	X	-0.002	-0.002	0	%100
39	88	X	-0.002	-0.002	0	%100
40	90	X	-0.002	-0.002	0	%100
41	92	X	-0.002	-0.002	0	%100
42	96	X	-0.002	-0.002	0	%100
43	99	X	-0.002	-0.002	0	%100
44	102	X	-0.002	-0.002	0	%100
45	105	X	-0.002	-0.002	0	%100
46	108	X	-0.002	-0.002	0	%100
47	111	X	-0.002	-0.002	0	%100
48	114	X	-0.002	-0.002	0	%100
49	117	X	-0.002	-0.002	0	%100
50	120	X	-0.002	-0.002	0	%100
51	123	X	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.001	-0.001	0	%100
2	2	Z	-0.0004	-0.0004	0	%100
3	3	Z	-0.0003	-0.0003	0	%100
4	4	Z	-0.0005	-0.0005	0	%100
5	5	Z	-0.0005	-0.0005	0	%100
6	6	Z	-0.0004	-0.0004	0	%100
7	11	Z	-0.0003	-0.0003	0	%100
8	14	Z	-0.0003	-0.0003	0	%100
9	15	Z	-0.0004	-0.0004	0	%100
10	16	Z	-0.0003	-0.0003	0	%100
11	27	Z	-0.0003	-0.0003	0	%100
12	30	Z	-0.0003	-0.0003	0	%100
13	31	Z	-0.002	-0.002	0	%100
14	32	Z	-0.001	-0.001	0	%100
15	33	Z	-0.0004	-0.0004	0	%100
16	34	Z	-0.0003	-0.0003	0	%100
17	35	Z	-0.0005	-0.0005	0	%100
18	36	Z	-0.0005	-0.0005	0	%100
19	41	Z	-0.0004	-0.0004	0	%100
20	42	Z	-0.0003	-0.0003	0	%100
21	53	Z	-0.0003	-0.0003	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
22	54	Z	-0.002	-0.002	0	%100
23	55	Z	-0.001	-0.001	0	%100
24	56	Z	-0.0004	-0.0004	0	%100
25	57	Z	-0.0003	-0.0003	0	%100
26	58	Z	-0.0005	-0.0005	0	%100
27	59	Z	-0.0005	-0.0005	0	%100
28	64	Z	-0.0004	-0.0004	0	%100
29	65	Z	-0.0003	-0.0003	0	%100
30	76	Z	-0.0003	-0.0003	0	%100
31	77	Z	-0.002	-0.002	0	%100
32	78	Z	-0.0004	-0.0004	0	%100
33	79	Z	-0.0003	-0.0003	0	%100
34	80	Z	-0.0004	-0.0004	0	%100
35	81	Z	-0.0003	-0.0003	0	%100
36	82	Z	-0.0003	-0.0003	0	%100
37	84	Z	-0.0003	-0.0003	0	%100
38	86	Z	-0.0003	-0.0003	0	%100
39	88	Z	-0.0003	-0.0003	0	%100
40	90	Z	-0.0003	-0.0003	0	%100
41	92	Z	-0.0003	-0.0003	0	%100
42	96	Z	-0.0003	-0.0003	0	%100
43	99	Z	-0.0003	-0.0003	0	%100
44	102	Z	-0.0003	-0.0003	0	%100
45	105	Z	-0.0003	-0.0003	0	%100
46	108	Z	-0.0003	-0.0003	0	%100
47	111	Z	-0.0003	-0.0003	0	%100
48	114	Z	-0.0003	-0.0003	0	%100
49	117	Z	-0.0003	-0.0003	0	%100
50	120	Z	-0.0003	-0.0003	0	%100
51	123	Z	-0.0003	-0.0003	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.001	-0.001	0	%100
2	2	X	-0.0004	-0.0004	0	%100
3	3	X	-0.0003	-0.0003	0	%100
4	4	X	-0.0005	-0.0005	0	%100
5	5	X	-0.0005	-0.0005	0	%100
6	6	X	-0.0004	-0.0004	0	%100
7	11	X	-0.0003	-0.0003	0	%100
8	14	X	-0.0003	-0.0003	0	%100
9	15	X	-0.0004	-0.0004	0	%100
10	16	X	-0.0003	-0.0003	0	%100
11	27	X	-0.0003	-0.0003	0	%100
12	30	X	-0.0003	-0.0003	0	%100
13	31	X	-0.002	-0.002	0	%100
14	32	X	-0.001	-0.001	0	%100
15	33	X	-0.0004	-0.0004	0	%100
16	34	X	-0.0003	-0.0003	0	%100
17	35	X	-0.0005	-0.0005	0	%100
18	36	X	-0.0005	-0.0005	0	%100
19	41	X	-0.0004	-0.0004	0	%100
20	42	X	-0.0003	-0.0003	0	%100
21	53	X	-0.0003	-0.0003	0	%100
22	54	X	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
23	55	X	-0.001	-0.001	0	%100
24	56	X	-0.0004	-0.0004	0	%100
25	57	X	-0.0003	-0.0003	0	%100
26	58	X	-0.0005	-0.0005	0	%100
27	59	X	-0.0005	-0.0005	0	%100
28	64	X	-0.0004	-0.0004	0	%100
29	65	X	-0.0003	-0.0003	0	%100
30	76	X	-0.0003	-0.0003	0	%100
31	77	X	-0.002	-0.002	0	%100
32	78	X	-0.0004	-0.0004	0	%100
33	79	X	-0.0003	-0.0003	0	%100
34	80	X	-0.0004	-0.0004	0	%100
35	81	X	-0.0003	-0.0003	0	%100
36	82	X	-0.0003	-0.0003	0	%100
37	84	X	-0.0003	-0.0003	0	%100
38	86	X	-0.0003	-0.0003	0	%100
39	88	X	-0.0003	-0.0003	0	%100
40	90	X	-0.0003	-0.0003	0	%100
41	92	X	-0.0003	-0.0003	0	%100
42	96	X	-0.0003	-0.0003	0	%100
43	99	X	-0.0003	-0.0003	0	%100
44	102	X	-0.0003	-0.0003	0	%100
45	105	X	-0.0003	-0.0003	0	%100
46	108	X	-0.0003	-0.0003	0	%100
47	111	X	-0.0003	-0.0003	0	%100
48	114	X	-0.0003	-0.0003	0	%100
49	117	X	-0.0003	-0.0003	0	%100
50	120	X	-0.0003	-0.0003	0	%100
51	123	X	-0.0003	-0.0003	0	%100

Member Distributed Loads (BLC 8 : Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Y	-0.01	-0.01	0	%100
2	2	Y	-0.007	-0.007	0	%100
3	3	Y	-0.007	-0.007	0	%100
4	4	Y	-0.005	-0.005	0	%100
5	5	Y	-0.005	-0.005	0	%100
6	6	Y	-0.007	-0.007	0	%100
7	11	Y	-0.006	-0.006	0	%100
8	14	Y	-0.006	-0.006	0	%100
9	15	Y	-0.007	-0.007	0	%100
10	16	Y	-0.007	-0.007	0	%100
11	27	Y	-0.006	-0.006	0	%100
12	30	Y	-0.006	-0.006	0	%100
13	31	Y	-0.022	-0.022	0	%100
14	32	Y	-0.01	-0.01	0	%100
15	33	Y	-0.007	-0.007	0	%100
16	34	Y	-0.007	-0.007	0	%100
17	35	Y	-0.005	-0.005	0	%100
18	36	Y	-0.005	-0.005	0	%100
19	41	Y	-0.007	-0.007	0	%100
20	42	Y	-0.007	-0.007	0	%100
21	53	Y	-0.006	-0.006	0	%100
22	54	Y	-0.022	-0.022	0	%100
23	55	Y	-0.01	-0.01	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
24	56	Y	-0.007	-0.007	0	%100
25	57	Y	-0.007	-0.007	0	%100
26	58	Y	-0.005	-0.005	0	%100
27	59	Y	-0.005	-0.005	0	%100
28	64	Y	-0.007	-0.007	0	%100
29	65	Y	-0.007	-0.007	0	%100
30	76	Y	-0.006	-0.006	0	%100
31	77	Y	-0.022	-0.022	0	%100
32	78	Y	-0.007	-0.007	0	%100
33	79	Y	-0.006	-0.006	0	%100
34	80	Y	-0.007	-0.007	0	%100
35	81	Y	-0.006	-0.006	0	%100
36	82	Y	-0.006	-0.006	0	%100
37	84	Y	-0.006	-0.006	0	%100
38	86	Y	-0.006	-0.006	0	%100
39	88	Y	-0.006	-0.006	0	%100
40	90	Y	-0.006	-0.006	0	%100
41	92	Y	-0.006	-0.006	0	%100
42	96	Y	-0.006	-0.006	0	%100
43	99	Y	-0.006	-0.006	0	%100
44	102	Y	-0.006	-0.006	0	%100
45	105	Y	-0.006	-0.006	0	%100
46	108	Y	-0.006	-0.006	0	%100
47	111	Y	-0.006	-0.006	0	%100
48	114	Y	-0.006	-0.006	0	%100
49	117	Y	-0.006	-0.006	0	%100
50	120	Y	-0.006	-0.006	0	%100
51	123	Y	-0.006	-0.006	0	%100

Member Distributed Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.006	-0.006	0	%100
2	2	Z	-0.003	-0.003	0	%100
3	3	Z	-0.003	-0.003	0	%100
4	4	Z	-0.0008	-0.0008	0	%100
5	5	Z	-0.0008	-0.0008	0	%100
6	6	Z	-0.003	-0.003	0	%100
7	11	Z	-0.002	-0.002	0	%100
8	14	Z	-0.002	-0.002	0	%100
9	15	Z	-0.003	-0.003	0	%100
10	16	Z	-0.003	-0.003	0	%100
11	27	Z	-0.002	-0.002	0	%100
12	30	Z	-0.002	-0.002	0	%100
13	31	Z	-0.017	-0.017	0	%100
14	32	Z	-0.006	-0.006	0	%100
15	33	Z	-0.003	-0.003	0	%100
16	34	Z	-0.003	-0.003	0	%100
17	35	Z	-0.0008	-0.0008	0	%100
18	36	Z	-0.0008	-0.0008	0	%100
19	41	Z	-0.003	-0.003	0	%100
20	42	Z	-0.003	-0.003	0	%100
21	53	Z	-0.002	-0.002	0	%100
22	54	Z	-0.017	-0.017	0	%100
23	55	Z	-0.006	-0.006	0	%100
24	56	Z	-0.003	-0.003	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
25	57	Z	-0.003	-0.003	0	%100
26	58	Z	-0.0008	-0.0008	0	%100
27	59	Z	-0.0008	-0.0008	0	%100
28	64	Z	-0.003	-0.003	0	%100
29	65	Z	-0.003	-0.003	0	%100
30	76	Z	-0.002	-0.002	0	%100
31	77	Z	-0.017	-0.017	0	%100
32	78	Z	-0.003	-0.003	0	%100
33	79	Z	-0.002	-0.002	0	%100
34	80	Z	-0.003	-0.003	0	%100
35	81	Z	-0.002	-0.002	0	%100
36	82	Z	-0.002	-0.002	0	%100
37	84	Z	-0.002	-0.002	0	%100
38	86	Z	-0.002	-0.002	0	%100
39	88	Z	-0.002	-0.002	0	%100
40	90	Z	-0.002	-0.002	0	%100
41	92	Z	-0.002	-0.002	0	%100
42	96	Z	-0.002	-0.002	0	%100
43	99	Z	-0.002	-0.002	0	%100
44	102	Z	-0.002	-0.002	0	%100
45	105	Z	-0.002	-0.002	0	%100
46	108	Z	-0.002	-0.002	0	%100
47	111	Z	-0.002	-0.002	0	%100
48	114	Z	-0.002	-0.002	0	%100
49	117	Z	-0.002	-0.002	0	%100
50	120	Z	-0.002	-0.002	0	%100
51	123	Z	-0.002	-0.002	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.006	-0.006	0	%100
2	2	X	-0.003	-0.003	0	%100
3	3	X	-0.003	-0.003	0	%100
4	4	X	-0.0008	-0.0008	0	%100
5	5	X	-0.0008	-0.0008	0	%100
6	6	X	-0.003	-0.003	0	%100
7	11	X	-0.002	-0.002	0	%100
8	14	X	-0.002	-0.002	0	%100
9	15	X	-0.003	-0.003	0	%100
10	16	X	-0.003	-0.003	0	%100
11	27	X	-0.002	-0.002	0	%100
12	30	X	-0.002	-0.002	0	%100
13	31	X	-0.017	-0.017	0	%100
14	32	X	-0.006	-0.006	0	%100
15	33	X	-0.003	-0.003	0	%100
16	34	X	-0.003	-0.003	0	%100
17	35	X	-0.0008	-0.0008	0	%100
18	36	X	-0.0008	-0.0008	0	%100
19	41	X	-0.003	-0.003	0	%100
20	42	X	-0.003	-0.003	0	%100
21	53	X	-0.002	-0.002	0	%100
22	54	X	-0.017	-0.017	0	%100
23	55	X	-0.006	-0.006	0	%100
24	56	X	-0.003	-0.003	0	%100
25	57	X	-0.003	-0.003	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
26	58	X	-0.0008	-0.0008	0	%100
27	59	X	-0.0008	-0.0008	0	%100
28	64	X	-0.003	-0.003	0	%100
29	65	X	-0.003	-0.003	0	%100
30	76	X	-0.002	-0.002	0	%100
31	77	X	-0.017	-0.017	0	%100
32	78	X	-0.003	-0.003	0	%100
33	79	X	-0.002	-0.002	0	%100
34	80	X	-0.003	-0.003	0	%100
35	81	X	-0.002	-0.002	0	%100
36	82	X	-0.002	-0.002	0	%100
37	84	X	-0.002	-0.002	0	%100
38	86	X	-0.002	-0.002	0	%100
39	88	X	-0.002	-0.002	0	%100
40	90	X	-0.002	-0.002	0	%100
41	92	X	-0.002	-0.002	0	%100
42	96	X	-0.002	-0.002	0	%100
43	99	X	-0.002	-0.002	0	%100
44	102	X	-0.002	-0.002	0	%100
45	105	X	-0.002	-0.002	0	%100
46	108	X	-0.002	-0.002	0	%100
47	111	X	-0.002	-0.002	0	%100
48	114	X	-0.002	-0.002	0	%100
49	117	X	-0.002	-0.002	0	%100
50	120	X	-0.002	-0.002	0	%100
51	123	X	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	58	Y	-0.015	-0.014	0	1.034
2	58	Y	-0.014	-0.012	1.034	2.067
3	59	Y	-0.007	-0.014	0	2.067
4	4	Y	-0.015	-0.014	0	1.034
5	4	Y	-0.014	-0.012	1.034	2.067
6	5	Y	-0.007	-0.014	0	2.067
7	35	Y	-0.015	-0.014	0	1.034
8	35	Y	-0.014	-0.012	1.034	2.067
9	36	Y	-0.007	-0.014	0	2.067

Member Distributed Loads (BLC 40 : BLC 8 Transient Area Loads)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	4	Y	-0.009	-0.008	0	1.034
2	4	Y	-0.008	-0.007	1.034	2.067
3	5	Y	-0.004	-0.008	0	2.067
4	35	Y	-0.009	-0.008	0	1.034
5	35	Y	-0.008	-0.007	1.034	2.067
6	36	Y	-0.004	-0.008	0	2.067
7	58	Y	-0.009	-0.008	0	1.034
8	58	Y	-0.008	-0.007	1.034	2.067
9	59	Y	-0.004	-0.008	0	2.067

Member Area Loads (BLC 1 : Dead)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	11	10	12	13	Y	Two Way	-0.01
2	56	55	57	58	Y	Two Way	-0.01
3	85	84	86	87	Y	Two Way	-0.01

Member Area Loads (BLC 8 : Ice)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	11	10	12	13	Y	Two Way	-0.006
2	56	55	57	58	Y	Two Way	-0.006
3	85	84	86	87	Y	Two Way	-0.006

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

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	38	L	Y	-0.5
2	152	L	Y	-0.5
3	176	L	Y	-0.5

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

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	140	L	Y	-0.5
2	164	L	Y	-0.5
3	188	L	Y	-0.5

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

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	134	L	Y	-0.5
2	158	L	Y	-0.5
3	182	L	Y	-0.5

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

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s²/ft, k*s²*ft)]
1	20	L	Y	-0.5
2	146	L	Y	-0.5
3	170	L	Y	-0.5

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
1	Dead	DL	-1		75		3
2	0 Wind - No Ice	WLZ			75	51	
3	90 Wind - No Ice	WLX			75	51	
4	0 Wind - Ice	WLZ			75	51	
5	90 Wind - Ice	WLX			75	51	
6	0 Wind - Service	WLZ			75	51	
7	90 Wind - Service	WLX			75	51	
8	Ice	OL1			75	51	3
9	0 Seismic	ELZ			75	51	
10	90 Seismic	ELX			75	51	

Basic Load Cases (Continued)

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
11	Live Load a	LL		3			
12	Live Load b	LL		3			
13	Live Load c	LL		3			
14	Live Load d	LL		3			
15	Maint LL 1	LL			1		
16	Maint LL 2	LL			1		
17	Maint LL 3	LL			1		
18	Maint LL 4	LL			1		
19	Maint LL 5	LL			1		
20	Maint LL 6	LL			1		
21	Maint LL 7	LL			1		
22	Maint LL 8	LL			1		
23	Maint LL 9	LL			1		
24	Maint LL 10	LL			1		
25	Maint LL 11	LL			1		
26	Maint LL 12	LL			1		
27	Maint LL 13	LL			1		
28	Maint LL 14	LL			1		
29	Maint LL 15	LL			1		
30	Maint LL 16	LL					
31	Maint LL 17	LL					
32	Maint LL 18	LL					
33	Maint LL 19	LL					
34	Maint LL 20	LL					
35	Maint LL 21	LL					
36	Maint LL 22	LL					
37	Maint LL 23	LL					
38	Maint LL 24	LL					
39	BLC 1 Transient Area Loads	None				9	
40	BLC 8 Transient Area Loads	None				9	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.4 Dead	Yes	Y	1	1.4						
2	1.2 D + 1.0 - 0 W	Yes	Y	1	1.2	2	1				
3	1.2 D + 1.0 - 30 W	Yes	Y	1	1.2	2	0.866	3	0.5		
4	1.2 D + 1.0 - 60 W	Yes	Y	1	1.2	3	0.866	2	0.5		
5	1.2 D + 1.0 - 90 W	Yes	Y	1	1.2	3	1				
6	1.2 D + 1.0 - 120 W	Yes	Y	1	1.2	3	0.866	2	-0.5		
7	1.2 D + 1.0 - 150 W	Yes	Y	1	1.2	2	-0.866	3	0.5		
8	1.2 D + 1.0 - 180 W	Yes	Y	1	1.2	2	-1				
9	1.2 D + 1.0 - 210 W	Yes	Y	1	1.2	2	-0.866	3	-0.5		
10	1.2 D + 1.0 - 240 W	Yes	Y	1	1.2	3	-0.866	2	-0.5		
11	1.2 D + 1.0 - 270 W	Yes	Y	1	1.2	3	-1				
12	1.2 D + 1.0 - 300 W	Yes	Y	1	1.2	3	-0.866	2	0.5		
13	1.2 D + 1.0 - 330 W	Yes	Y	1	1.2	2	0.866	3	-0.5		
14	1.2 D + 1.0 - 0 W/Ice	Yes	Y	1	1.2	4	1			8	1
15	1.2 D + 1.0 - 30 W/Ice	Yes	Y	1	1.2	4	0.866	5	0.5	8	1
16	1.2 D + 1.0 - 60 W/Ice	Yes	Y	1	1.2	5	0.866	4	0.5	8	1
17	1.2 D + 1.0 - 90 W/Ice	Yes	Y	1	1.2	5	1			8	1
18	1.2 D + 1.0 - 120 W/Ice	Yes	Y	1	1.2	5	0.866	4	-0.5	8	1
19	1.2 D + 1.0 - 150 W/Ice	Yes	Y	1	1.2	4	-0.866	5	0.5	8	1
20	1.2 D + 1.0 - 180 W/Ice	Yes	Y	1	1.2	4	-1			8	1
21	1.2 D + 1.0 - 210 W/Ice	Yes	Y	1	1.2	4	-0.866	5	-0.5	8	1
22	1.2 D + 1.0 - 240 W/Ice	Yes	Y	1	1.2	5	-0.866	4	-0.5	8	1

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
23	1.2 D + 1.0 - 270 W/Ice	Yes	Y	1	1.2	5	-1			8	1
24	1.2 D + 1.0 - 300 W/Ice	Yes	Y	1	1.2	5	-0.866	4	0.5	8	1
25	1.2 D + 1.0 - 330 W/Ice	Yes	Y	1	1.2	4	0.866	5	-0.5	8	1
26	1.2 D + 1.0 E - 0	Yes	Y	1	1.2	9	1				
27	1.2 D + 1.0 E - 30	Yes	Y	1	1.2	9	0.866	10	0.5		
28	1.2 D + 1.0 E - 60	Yes	Y	1	1.2	10	0.866	9	0.5		
29	1.2 D + 1.0 E - 90	Yes	Y	1	1.2	10	1				
30	1.2 D + 1.0 E - 120	Yes	Y	1	1.2	10	0.866	9	-0.5		
31	1.2 D + 1.0 E - 150	Yes	Y	1	1.2	9	-0.866	10	0.5		
32	1.2 D + 1.0 E - 180	Yes	Y	1	1.2	9	-1				
33	1.2 D + 1.0 E - 210	Yes	Y	1	1.2	9	-0.866	10	-0.5		
34	1.2 D + 1.0 E - 240	Yes	Y	1	1.2	10	-0.866	9	-0.5		
35	1.2 D + 1.0 E - 270	Yes	Y	1	1.2	10	-1				
36	1.2 D + 1.0 E - 300	Yes	Y	1	1.2	10	-0.866	9	0.5		
37	1.2 D + 1.0 E - 330	Yes	Y	1	1.2	9	0.866	10	-0.5		
38	1.2 D + 1.5 LL a + Service - 0 W	Yes	Y	1	1.2	6	1			11	1.5
39	1.2 D + 1.5 LL a + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	11	1.5
40	1.2 D + 1.5 LL a + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	11	1.5
41	1.2 D + 1.5 LL a + Service - 90 W	Yes	Y	1	1.2	7	1			11	1.5
42	1.2 D + 1.5 LL a + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	11	1.5
43	1.2 D + 1.5 LL a + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	11	1.5
44	1.2 D + 1.5 LL a + Service - 180 W	Yes	Y	1	1.2	6	-1			11	1.5
45	1.2 D + 1.5 LL a + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	11	1.5
46	1.2 D + 1.5 LL a + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	11	1.5
47	1.2 D + 1.5 LL a + Service - 270 W	Yes	Y	1	1.2	7	-1			11	1.5
48	1.2 D + 1.5 LL a + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	11	1.5
49	1.2 D + 1.5 LL a + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	11	1.5
50	1.2 D + 1.5 LL b + Service - 0 W	Yes	Y	1	1.2	6	1			12	1.5
51	1.2 D + 1.5 LL b + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	12	1.5
52	1.2 D + 1.5 LL b + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	12	1.5
53	1.2 D + 1.5 LL b + Service - 90 W	Yes	Y	1	1.2	7	1			12	1.5
54	1.2 D + 1.5 LL b + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	12	1.5
55	1.2 D + 1.5 LL b + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	12	1.5
56	1.2 D + 1.5 LL b + Service - 180 W	Yes	Y	1	1.2	6	-1			12	1.5
57	1.2 D + 1.5 LL b + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	12	1.5
58	1.2 D + 1.5 LL b + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	12	1.5
59	1.2 D + 1.5 LL b + Service - 270 W	Yes	Y	1	1.2	7	-1			12	1.5
60	1.2 D + 1.5 LL b + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	12	1.5
61	1.2 D + 1.5 LL b + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	12	1.5
62	1.2 D + 1.5 LL c + Service - 0 W	Yes	Y	1	1.2	6	1			13	1.5
63	1.2 D + 1.5 LL c + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	13	1.5
64	1.2 D + 1.5 LL c + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	13	1.5
65	1.2 D + 1.5 LL c + Service - 90 W	Yes	Y	1	1.2	7	1			13	1.5
66	1.2 D + 1.5 LL c + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	13	1.5
67	1.2 D + 1.5 LL c + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	13	1.5
68	1.2 D + 1.5 LL c + Service - 180 W	Yes	Y	1	1.2	6	-1			13	1.5
69	1.2 D + 1.5 LL c + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	13	1.5
70	1.2 D + 1.5 LL c + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	13	1.5
71	1.2 D + 1.5 LL c + Service - 270 W	Yes	Y	1	1.2	7	-1			13	1.5
72	1.2 D + 1.5 LL c + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	13	1.5
73	1.2 D + 1.5 LL c + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	13	1.5
74	1.2 D + 1.5 LL d + Service - 0 W	Yes	Y	1	1.2	6	1			14	1.5
75	1.2 D + 1.5 LL d + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	14	1.5
76	1.2 D + 1.5 LL d + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	14	1.5
77	1.2 D + 1.5 LL d + Service - 90 W	Yes	Y	1	1.2	7	1			14	1.5

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
78	1.2 D + 1.5 LL d + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	14	1.5
79	1.2 D + 1.5 LL d + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	14	1.5
80	1.2 D + 1.5 LL d + Service - 180 W	Yes	Y	1	1.2	6	-1			14	1.5
81	1.2 D + 1.5 LL d + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	14	1.5
82	1.2 D + 1.5 LL d + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	14	1.5
83	1.2 D + 1.5 LL d + Service - 270 W	Yes	Y	1	1.2	7	-1			14	1.5
84	1.2 D + 1.5 LL d + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	14	1.5
85	1.2 D + 1.5 LL d + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	14	1.5
86	1.2 D + 1.5 LL Maint (1)	Yes	Y	1	1.2					15	1.5
87	1.2 D + 1.5 LL Maint (2)	Yes	Y	1	1.2					16	1.5
88	1.2 D + 1.5 LL Maint (3)	Yes	Y	1	1.2					17	1.5
89	1.2 D + 1.5 LL Maint (4)	Yes	Y	1	1.2					18	1.5
90	1.2 D + 1.5 LL Maint (5)	Yes	Y	1	1.2					19	1.5
91	1.2 D + 1.5 LL Maint (6)	Yes	Y	1	1.2					20	1.5
92	1.2 D + 1.5 LL Maint (7)	Yes	Y	1	1.2					21	1.5
93	1.2 D + 1.5 LL Maint (8)	Yes	Y	1	1.2					22	1.5
94	1.2 D + 1.5 LL Maint (9)	Yes	Y	1	1.2					23	1.5
95	1.2 D + 1.5 LL Maint (10)	Yes	Y	1	1.2					24	1.5
96	1.2 D + 1.5 LL Maint (11)	Yes	Y	1	1.2					25	1.5
97	1.2 D + 1.5 LL Maint (12)	Yes	Y	1	1.2					26	1.5
98	1.2 D + 1.5 LL Maint (13)	Yes	Y	1	1.2					27	1.5
99	1.2 D + 1.5 LL Maint (14)	Yes	Y	1	1.2					28	1.5
100	1.2 D + 1.5 LL Maint (15)	Yes	Y	1	1.2					29	1.5
101	1.2 D + 1.5 LL Maint (16)	Yes	Y	1	1.2					30	1.5
102	1.2 D + 1.5 LL Maint (17)	Yes	Y	1	1.2					31	1.5
103	1.2 D + 1.5 LL Maint (18)	Yes	Y	1	1.2					32	1.5
104	1.2 D + 1.5 LL Maint (19)	Yes	Y	1	1.2					33	1.5
105	1.2 D + 1.5 LL Maint (20)	Yes	Y	1	1.2					34	1.5
106	1.2 D + 1.5 LL Maint (21)	Yes	Y	1	1.2					35	1.5
107	1.2 D + 1.5 LL Maint (22)	Yes	Y	1	1.2					36	1.5
108	1.2 D + 1.5 LL Maint (23)	Yes	Y	1	1.2					37	1.5
109	1.2 D + 1.5 LL Maint (24)	Yes	Y	1	1.2					38	1.5

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	44	max	1.242	5	4.551	2	3.686	2	19.666	2	2.764	11	1.877	11
2		min	-1.243	11	-1.031	8	-4.262	8	-8.48	8	-2.765	5	-1.898	5
3	73	max	2.566	6	3.812	18	2.321	13	3.371	13	3.092	3	3.918	12
4		min	-3.06	12	-0.189	12	-2.033	7	-9.014	7	-3.092	9	-13.636	6
5	102	max	3.072	4	3.812	22	2.266	3	3.318	3	3.069	7	13.651	10
6		min	-2.576	10	-0.187	4	-1.979	9	-8.919	9	-3.074	13	-3.915	4
7	Totals:	max	6.454	5	10.304	15	8.03	2						
8		min	-6.454	11	5.271	9	-8.03	8						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	1	HSS5X3X6	0.61	0	2	0.142	0	z	5	161.081	197.892	17.595	25.323	2.344	H1-1b
2	2	PIPE_3.0	0.369	1.875	2	0.19	0.273		13	76.499	78.246	6.899	6.899	1	H1-1b
3	3	PIPE_3.0	0.206	0.698	2	0.167	0.124		9	78.002	78.246	6.899	6.899	1	H1-1b
4	4	L1.5X1.5X4	0.179	2.297	13	0.017	2.297	z	25	13.937	22.275	0.36	0.834	1.298	H2-1
5	5	L1.5X1.5X4	0.175	2.297	3	0.018	2.297	y	15	13.937	22.275	0.36	0.834	1.259	H2-1
6	6	PIPE_3.0	0.174	3.927	6	0.216	10.573		13	21.266	78.246	6.899	6.899	1	H1-1b
7	11	PIPE_2.5	0.272	9.667	8	0.251	12.839		8	10.82	60.858	4.316	4.316	1	H3-6

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
8	14	PIPE_2.5	0.199	9.75	76	0.1	9.75		7	15.797	50.715	3.596	3.596	1	H1-1b
9	15	PIPE_3.0	0.372	0	2	0.195	1.602		3	76.499	78.246	6.899	6.899	1	H1-1b
10	16	PIPE_3.0	0.202	0	2	0.155	0.574		7	78.002	78.246	6.899	6.899	1	H1-1b
11	27	PIPE_2.5	0.197	0	10	0.11	0		5	58.96	60.858	4.316	4.316	1	H1-1b
12	30	PIPE_2.5	0.432	6.25	8	0.062	6.25		8	15.797	50.715	3.596	3.596	1	H1-1b
13	31	W10X49	0.193	0	4	0.055	1	z	5	646.949	648	106.125	226.5	1.11	H1-1b
14	32	HSS5X3X6	0.538	0	7	0.168	0	z	9	161.081	197.892	17.595	25.323	2.433	H1-1b
15	33	PIPE_3.0	0.323	1.875	7	0.171	0.273		4	76.499	78.246	6.899	6.899	1	H1-1b
16	34	PIPE_3.0	0.188	0.698	7	0.19	0.131		2	78.002	78.246	6.899	6.899	1	H1-1b
17	35	L1.5X1.5X4	0.161	2.297	18	0.017	2.297	z	17	13.937	22.275	0.36	0.834	1.5	H2-1
18	36	L1.5X1.5X4	0.168	2.297	7	0.018	2.297	y	19	13.937	22.275	0.36	0.834	1.359	H2-1
19	41	PIPE_3.0	0.284	0	18	0.225	1.602		8	76.499	78.246	6.899	6.899	1	H1-1b
20	42	PIPE_3.0	0.138	0	6	0.171	0.574		8	78.002	78.246	6.899	6.899	1	H1-1b
21	53	PIPE_2.5	0.315	0	2	0.178	0		9	58.96	60.858	4.316	4.316	1	H1-1b
22	54	W10X49	0.227	0	8	0.067	1	z	9	646.949	648	106.125	226.5	1.11	H1-1b
23	55	HSS5X3X6	0.531	0	9	0.167	0	z	13	161.081	197.892	17.595	25.323	2.443	H1-1b
24	56	PIPE_3.0	0.285	1.875	10	0.217	0.273		8	76.499	78.246	6.899	6.899	1	H1-1b
25	57	PIPE_3.0	0.142	0.698	10	0.154	0.131		7	78.002	78.246	6.899	6.899	1	H1-1b
26	58	L1.5X1.5X4	0.171	2.297	9	0.017	2.297	z	21	13.937	22.275	0.36	0.834	1.402	H2-1
27	59	L1.5X1.5X4	0.156	2.297	23	0.018	2.297	y	22	13.937	22.275	0.36	0.834	1.5	H2-1
28	64	PIPE_3.0	0.332	0	9	0.174	1.602		12	76.499	78.246	6.899	6.899	1	H1-1b
29	65	PIPE_3.0	0.191	0	9	0.182	0.567		2	78.002	78.246	6.899	6.899	1	H1-1b
30	76	PIPE_2.5	0.259	0	7	0.167	0		13	58.96	60.858	4.316	4.316	1	H1-1b
31	77	W10X49	0.222	0	8	0.066	1	z	13	646.949	648	106.125	226.5	1.11	H1-1b
32	78	PIPE_3.0	0.24	9.516	3	0.203	3.927		8	21.266	78.246	6.899	6.899	1	H1-1b
33	79	PIPE_2.5	0.414	9.516	3	0.173	1.51		7	10.82	60.858	4.316	4.316	1	H1-1b
34	80	PIPE_3.0	0.237	9.516	7	0.22	10.573		8	21.266	78.246	6.899	6.899	1	H1-1b
35	81	PIPE_2.5	0.406	9.516	7	0.198	9.667		3	10.82	60.858	4.316	4.316	1	H1-1b
36	82	PIPE_2.5	0.199	4	5	0.02	4		5	37.774	50.715	3.596	3.596	1	H1-1b
37	84	PIPE_2.5	0.177	4	5	0.016	4		5	37.774	50.715	3.596	3.596	1	H1-1b
38	86	PIPE_2.5	0.199	4	5	0.02	4		5	37.774	50.715	3.596	3.596	1	H1-1b
39	88	PIPE_2.5	0.177	4	5	0.016	4		5	37.774	50.715	3.596	3.596	1	H1-1b
40	90	PIPE_2.5	0.199	4	11	0.02	4		11	37.774	50.715	3.596	3.596	1	H1-1b
41	92	PIPE_2.5	0.177	4	11	0.016	4		11	37.774	50.715	3.596	3.596	1	H1-1b
42	96	PIPE_2.5	0.478	6.25	8	0.086	6.25		8	15.797	50.715	3.596	3.596	1	H1-1b
43	99	PIPE_2.5	0.411	9.75	4	0.085	9.75		7	15.797	50.715	3.596	3.596	1	H1-1b
44	102	PIPE_2.5	0.202	9.75	80	0.065	9.75		10	15.797	50.715	3.596	3.596	1	H1-1b
45	105	PIPE_2.5	0.415	6.25	2	0.06	6.25		13	15.797	50.715	3.596	3.596	1	H1-1b
46	108	PIPE_2.5	0.552	9.75	3	0.12	9.75		2	15.797	50.715	3.596	3.596	1	H1-1b
47	111	PIPE_2.5	0.619	9.75	8	0.099	9.75		2	15.797	50.715	3.596	3.596	1	H1-1b
48	114	PIPE_2.5	0.2	9.75	85	0.109	9.75		2	15.797	50.715	3.596	3.596	1	H1-1b
49	117	PIPE_2.5	0.43	6.25	2	0.047	6.25		4	15.797	50.715	3.596	3.596	1	H1-1b
50	120	PIPE_2.5	0.602	9.75	8	0.09	9.75		7	15.797	50.715	3.596	3.596	1	H1-1b
51	123	PIPE_2.5	0.589	9.75	13	0.119	9.75		2	15.797	50.715	3.596	3.596	1	H1-1b

APPENDIX D

ADDITIONAL CALCULATIONS

PROJECT	**126536.016.01.0001 - Bridgeport Nor KSC**				
SUBJECT	**Platform Mount Analysis**				
DATE	**12/22/22**	PAGE	1	OF	1

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

[REF: AISC 360-05]

Reactions at Bolted Connection

Tension	:	4.262	k
Vertical Shear	:	4.551	k
Horizontal Shear	:	1.243	k
Torsion	:	1.898	k.ft
Moment from Horizontal Forces	:	2.765	k.ft
Moment from Vertical Forces	:	19.666	k.ft

Bolt Parameters

Bolt Grade	:	A325	
Bolt Diameter	:	0.75	in
Nominal Bolt Area	:	0.4417	in^2
Bolt spacing, Horizontal	:	7	in
Bolt spacing, Vertical	:	7	in
Bolt edge distance, plate height	:	1.5	in
Bolt edge distance, plate width	:	1.5	in
Total Number of Bolts	:	4	bolts

Summary of Forces

Shear Resultant Force	:	4.72	k
Force from Horz. Moment	:	4.28	k
Force from Vert. Moment	:	30.45	k
Shear Load / Bolt	:	1.18	k
Tension Load / Bolt	:	1.07	k
Resultant from Moments / Bolt	:	15.38	k

0

Bolt Checks

Nominal Tensile Stress, F_{nt}	:	90.00	ksi	[AISC Table J3.2]
Available Tensile Stress, ΦR_{nt}	:	29.81	k/bolt	[Eq. J3-1]
Unity Check, Bolt Tension	:	**55.14%**		**OKAY**
Nominal Shear Stress, F_{nv}	:	48.00	ksi	[AISC Table J3.2]
Available Shear Stress, ΦR_{nv}	:	15.90	k/bolt	[Eq. J3-1]
Unity Check, Bolt Shear	:	**14.12%**		**OKAY**
Unity Check, Combined	:	**69.26%**		**OKAY**
Available Bearing Strength, ΦR_n	:	32.63	k/bolt	
Unity Check, Bolt Bearing	:	**3.62%**		**OKAY**

Exhibit F

Power Density/RF Emissions Report

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

Site Name:	BRIDGEPORT NORTH
Crown Castle Site#:	841288
Site ID:	CTL02106
Project Name:	5G NR 1SR CBAND
Address:	205 KAECHELE PLACE BRIDGEPORT, CT 06606
County:	FAIRFIELD
Latitude:	41.2233250
Longitude:	-73.2167769
Structure Type:	MONOPOLE
Property Owner:	SOUTHERN NEW ENGLAND TEL
Property Contact:	PAUL PEDICONE

AT&T Existing Facility

Report Information

Report Writer: Monti Kumar **Report Generated Date:** 03-01-2023

Site Compliance Statement

Compliance Status	Compliant
Cumulative General Population % MPE (Ground Level)	0.7123%

March 01, 2023

Emissions Analysis for Site: **CTL02106– BRIDGEPORT NORTH**

MobileComm Professionals, Inc was directed to analyze the proposed AT&T facility located at **205 KAECHELE PLACE BRIDGEPORT, CT 06606**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter (µW/cm2). The number of mW/cm^2 or µW/cm2 calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the 700 and 850 MHz Bands are approximately 0.467 mW/cm^2 and 0.567 mW/cm^2 respectively or 466.667 µW/cm2 and 566.667 µW/cm2 respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS), 2300 MHz (WCS), 3540 MHz (DoD Band) and 3840 MHz (C-Band) bands is 1 mW/cm^2 or 1000 µW/cm2. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

1. Theoretical Calculations: Methods and Procedures

MobileComm Professionals, Inc has performed theoretical modeling of the site using a software tool, RoofMaster® Version 40.12.23.2022, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

The following table details the antennas and operating parameters for the AT&T antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at the ground.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.

2. Antenna Inventory & Power Data

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (^{0})	HBW (^{0})	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density ($\mu W/cm^2$)	Allowable MPE ($\mu W/cm^2$)	Calculated MPE%
A	1	AT&T	Quintel	QD6616-7	Panel	700	LTE(FN)	30	71	12.05	6	4	40.00	2565.19	4208.43	154.00	0.000009	466.67	0.000002
A	1	AT&T	Quintel	QD6616-7	Panel	700	LTE(B29)	30	71	12.05	6	2	40.00	1282.60	2104.21	154.00	0.000003	466.67	0.000001
A	1	AT&T	Quintel	QD6616-7	Panel	1900	LTE/5G	30	67	15.05	6	4	40.00	5118.23	8396.92	154.00	0.000004	1000.00	0.000000
A	1	AT&T	Quintel	QD6616-7	Panel	2100	LTE/5G	30	62	15.55	6	4	40.00	5742.75	9421.50	154.00	0.000038	1000.00	0.000004
A	2-1	AT&T	Ericsson	AIR 6419 B77G	Panel	3450	5G	30	11	23.5	2.55	1	54.22	12138.53	19914.34	155.75	0.000510	1000.00	0.000051
A	2-2	AT&T	Ericsson	AIR 6449 B77D	Panel	3840	5G	30	11	23.5	2.55	1	86.75	19421.64	31862.94	152.25	0.026514	1000.00	0.002651
A	3	AT&T	CCI	DMP65R-BU6D	Panel	700	LTE(B12)	30	74	11.85	6	4	40.00	2449.74	4019.02	154.00	0.000055	466.67	0.000012
A	3	AT&T	CCI	DMP65R-BU6D	Panel	850	5G	30	63	12.45	6	4	40.00	2812.68	4614.45	154.00	0.000135	566.67	0.000024
A	3	AT&T	CCI	DMP65R-BU6D	Panel	2300	LTE	30	54	16.25	6	4	25.00	4216.97	6918.31	154.00	0.000052	1000.00	0.000005
B	4	AT&T	Quintel	QD6616-7	Panel	700	LTE(FN)	150	71	12.05	6	4	40.00	2565.19	4208.43	154.00	0.000210	466.67	0.000045
B	4	AT&T	Quintel	QD6616-7	Panel	700	LTE(B29)	150	71	12.05	6	2	40.00	1282.60	2104.21	154.00	0.000070	466.67	0.000015
B	4	AT&T	Quintel	QD6616-7	Panel	1900	LTE/5G	150	67	15.05	6	4	40.00	5118.23	8396.92	154.00	0.000267	1000.00	0.000027
B	4	AT&T	Quintel	QD6616-7	Panel	2100	LTE/5G	150	62	15.55	6	4	40.00	5742.75	9421.50	154.00	0.000088	1000.00	0.000009
B	5-1	AT&T	Ericsson	AIR 6419 B77G	Panel	3450	5G	150	11	23.5	2.55	1	54.22	12138.53	19914.34	155.75	0.000849	1000.00	0.000085
B	5-2	AT&T	Ericsson	AIR 6449 B77D	Panel	3840	5G	150	11	23.5	2.55	1	86.75	19421.64	31862.94	152.25	0.009767	1000.00	0.000977
B	6	AT&T	CCI	DMP65R-BU6D	Panel	700	LTE(B12)	150	74	11.85	6	4	40.00	2449.74	4019.02	154.00	0.000152	466.67	0.000033
B	6	AT&T	CCI	DMP65R-BU6D	Panel	850	5G	150	63	12.45	6	4	40.00	2812.68	4614.45	154.00	0.000098	566.67	0.000017
B	6	AT&T	CCI	DMP65R-BU6D	Panel	2300	LTE	150	54	16.25	6	4	25.00	4216.97	6918.31	154.00	0.000034	1000.00	0.000003
C	7	AT&T	Quintel	QD6616-7	Panel	700	LTE(FN)	270	71	12.05	6	4	40.00	2565.19	4208.43	154.00	0.070324	466.67	0.015069
C	7	AT&T	Quintel	QD6616-7	Panel	700	LTE(B29)	270	71	12.05	6	2	40.00	1282.60	2104.21	154.00	0.035788	466.67	0.007669
C	7	AT&T	Quintel	QD6616-7	Panel	1900	LTE/5G	270	67	15.05	6	4	40.00	5118.23	8396.92	154.00	0.063587	1000.00	0.006359
C	7	AT&T	Quintel	QD6616-7	Panel	2100	LTE/5G	270	62	15.55	6	4	40.00	5742.75	9421.50	154.00	0.076605	1000.00	0.007660
C	8-1	AT&T	Ericsson	AIR 6419 B77G	Panel	3450	5G	270	11	23.5	2.55	1	54.22	12138.53	19914.34	155.75	0.269866	1000.00	0.026987
C	8-2	AT&T	Ericsson	AIR 6449 B77D	Panel	3840	5G	270	11	23.5	2.55	1	86.75	19421.64	31862.94	152.25	0.503345	1000.00	0.050335
C	9	AT&T	CCI	DMP65R-BU6D	Panel	700	LTE(B12)	270	74	11.85	6	4	40.00	2449.74	4019.02	154.00	0.061779	466.67	0.013238
C	9	AT&T	CCI	DMP65R-BU6D	Panel	850	5G	270	63	12.45	6	4	40.00	2812.68	4614.45	154.00	0.069266	566.67	0.012223
C	9	AT&T	CCI	DMP65R-BU6D	Panel	2300	LTE	270	54	16.25	6	4	25.00	4216.97	6918.31	154.00	0.097238	1000.00	0.009724

Table 2.1: Antenna Inventory & Power Data

**NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.*

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (^{0})	HBW (^{0})	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density ($\mu W/cm^2$)	Allowable MPE ($\mu W/cm^2$)	Calculated MPE%
A	10	Sprint	CommScope	NNVV-65B-R4	Panel	850	CDMA	25	64	12.75	6	1	20.00	376.73	618.06	140.00	0.000043	566.67	0.000008
A	10	Sprint	CommScope	NNVV-65B-R4	Panel	850	LTE	25	64	12.75	6	2	50.00	1883.65	3090.30	140.00	0.000025	566.67	0.000004
A	10	Sprint	CommScope	NNVV-65B-R4	Panel	1900	CDMA	25	62	15.05	6	5	16.00	2559.12	4198.46	140.00	0.000014	1000.00	0.000001
A	10	Sprint	CommScope	NNVV-65B-R4	Panel	1900	LTE	25	62	15.05	6	2	40.00	2559.12	4198.46	140.00	0.000006	1000.00	0.000001
A	11	Sprint	Nokia	AAHC	Panel	2500	LTE	25	13	15.05	2.16	8	20.00	1734.47	2845.55	140.00	0.001429	1000.00	0.000143
B	12	Sprint	CommScope	NNVV-65B-R4	Panel	850	CDMA	145	64	12.75	6	1	20.00	376.73	618.06	140.00	0.000035	566.67	0.000006
B	12	Sprint	CommScope	NNVV-65B-R4	Panel	850	LTE	145	64	12.75	6	2	50.00	1883.65	3090.30	140.00	0.000001	566.67	0.000000
B	12	Sprint	CommScope	NNVV-65B-R4	Panel	1900	CDMA	145	62	15.05	6	5	16.00	2559.12	4198.46	140.00	0.000062	1000.00	0.000006
B	12	Sprint	CommScope	NNVV-65B-R4	Panel	1900	LTE	145	62	15.05	6	2	40.00	2559.12	4198.46	140.00	0.000064	1000.00	0.000006
B	13	Sprint	Nokia	AAHC	Panel	2500	LTE	145	13	15.05	2.16	8	20.00	1734.47	2845.55	140.00	0.001729	1000.00	0.000173
B	14	Sprint	CommScope	VHLP2-18	Microwave	18000	Unknown	180	2.1	36.85	2	1	1.00	4841.72	7943.28	143.00	0.000000	1000.00	0.000000
C	15	Sprint	CommScope	NNVV-65B-R4	Panel	850	CDMA	265	64	12.75	6	1	20.00	376.73	618.06	140.00	0.003777	566.67	0.000667
C	15	Sprint	CommScope	NNVV-65B-R4	Panel	850	LTE	265	64	12.75	6	2	50.00	1883.65	3090.30	140.00	0.041191	566.67	0.007269
C	15	Sprint	CommScope	NNVV-65B-R4	Panel	1900	CDMA	265	62	15.05	6	5	16.00	2559.12	4198.46	140.00	0.000012	1000.00	0.000001
C	15	Sprint	CommScope	NNVV-65B-R4	Panel	1900	LTE	265	62	15.05	6	2	40.00	2559.12	4198.46	140.00	0.049918	1000.00	0.004992
C	16	Sprint	Nokia	AAHC	Panel	2500	LTE	265	13	15.05	2.16	8	20.00	1734.47	2845.55	140.00	0.079268	1000.00	0.007927
C	17	Sprint	CommScope	VHLP2-23	Microwave	23000	Unknown	300	1.7	38.55	2	1	1.00	7161.43	11748.98	143.00	0.000000	1000.00	0.000000
A	18	Dish	JMA Wireless	MX08FR0665	Panel	600	5G	60	68	11.35	6	4	30.00	1637.50	2686.47	128.00	0.000030	400.00	0.000008
A	18	Dish	JMA Wireless	MX08FR0665	Panel	1900	5G	60	62	15.75	6	4	40.00	6013.40	9865.52	128.00	0.000020	1000.00	0.000002
A	18	Dish	JMA Wireless	MX08FR0665	Panel	2100	5G	60	64	16.75	6	4	40.00	7570.42	12419.95	128.00	0.000036	1000.00	0.000004
B	19	Dish	JMA Wireless	MX08FR0665	Panel	600	5G	180	68	11.35	6	4	30.00	1637.50	2686.47	128.00	0.001096	400.00	0.000274
B	19	Dish	JMA Wireless	MX08FR0665	Panel	1900	5G	180	62	15.75	6	4	40.00	6013.40	9865.52	128.00	0.072653	1000.00	0.007265
B	19	Dish	JMA Wireless	MX08FR0665	Panel	2100	5G	180	64	16.75	6	4	40.00	7570.42	12419.95	128.00	0.000143	1000.00	0.000014
C	20	Dish	JMA Wireless	MX08FR0665	Panel	600	5G	300	68	11.35	6	4	30.00	1637.50	2686.47	128.00	0.074292	400.00	0.018573
C	20	Dish	JMA Wireless	MX08FR0665	Panel	1900	5G	300	62	15.75	6	4	40.00	6013.40	9865.52	128.00	0.072344	1000.00	0.007234
C	20	Dish	JMA Wireless	MX08FR0665	Panel	2100	5G	300	64	16.75	6	4	40.00	7570.42	12419.95	128.00	0.000866	1000.00	0.000087

Table 2.2: Antenna Inventory & Power Data

**NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.*

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (^{0})	H B W (^{0})	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density ($\mu W/cm^2$)	Allowable MPE ($\mu W/cm^2$)	Calculated MPE%
A	21	T-Mobile	Ericsson	KRC118023-1_B2A	Panel	1900	GSM	90	65.6	15.6	4.68	4	30.00	4356.94	7147.95	120.00	0.000020	1000.00	0.000002
A	21	T-Mobile	Ericsson	KRC118023-1_B4P	Panel	2100	UMTS	90	57.4	15.7	4.68	2	30.00	2229.21	3657.22	120.00	0.000001	1000.00	0.000000
A	22	T-Mobile	Ericsson	KRD901146-1_A	Panel	1900	LTE	90	63.3	15.35	4.94	2	60.00	4113.21	6748.10	120.00	0.000052	1000.00	0.000005
A	22	T-Mobile	Ericsson	KRD901146-1_A	Panel	2100	LTE	90	63.3	15.35	4.94	2	60.00	4113.21	6748.10	120.00	0.000015	1000.00	0.000002
A	23	T-Mobile	Ericsson	AIR6449_LTE_B41	Panel	2500	LTE	90	12.5	22.65	2.75	1	40.67	7485.61	12280.81	120.00	0.005581	1000.00	0.000558
A	23	T-Mobile	Ericsson	AIR6449_NR_B41	Panel	2500	5G	90	12.5	22.65	2.75	1	67.78	12476.02	20468.02	120.00	0.000799	1000.00	0.000080
A	24	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	LTE	90	69	13.25	8	2	30.00	1268.09	2080.42	120.00	0.000006	400.00	0.000001
A	24	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	5G	90	69	13.25	8	1	80.00	1690.79	2773.89	120.00	0.000008	400.00	0.000002
A	24	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	700	LTE	90	64	13.65	8	2	30.00	1390.44	2281.14	120.00	0.000045	466.67	0.000010
A	24	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	LTE	90	63	16.05	8	2	60.00	4832.60	7928.32	120.00	0.000003	1000.00	0.000000
B	25	T-Mobile	Ericsson	KRC118023-1_B2A	Panel	1900	GSM	210	65.6	15.6	4.68	4	30.00	4356.94	7147.95	120.00	0.050268	1000.00	0.005027
B	25	T-Mobile	Ericsson	KRC118023-1_B4P	Panel	2100	UMTS	210	57.4	15.7	4.68	2	30.00	2229.21	3657.22	120.00	0.008179	1000.00	0.000818
B	26	T-Mobile	Ericsson	KRD901146-1_A	Panel	1900	LTE	210	63.3	15.35	4.94	2	60.00	4113.21	6748.10	120.00	0.002001	1000.00	0.000200
B	26	T-Mobile	Ericsson	KRD901146-1_A	Panel	2100	LTE	210	63.3	15.35	4.94	2	60.00	4113.21	6748.10	120.00	0.029428	1000.00	0.002943
B	27	T-Mobile	Ericsson	AIR6449_LTE_B41	Panel	2500	LTE	210	12.5	22.65	2.75	1	40.67	7485.61	12280.81	120.00	0.006703	1000.00	0.000670
B	27	T-Mobile	Ericsson	AIR6449_NR_B41	Panel	2500	5G	210	12.5	22.65	2.75	1	67.78	12476.02	20468.02	120.00	0.321208	1000.00	0.032121
B	28	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	LTE	210	69	13.25	8	2	30.00	1268.09	2080.42	120.00	0.002904	400.00	0.000726
B	28	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	5G	210	69	13.25	8	1	80.00	1690.79	2773.89	120.00	0.012087	400.00	0.003022
B	28	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	700	LTE	210	64	13.65	8	2	30.00	1390.44	2281.14	120.00	0.000961	466.67	0.000206
B	28	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	LTE	210	63	16.05	8	2	60.00	4832.60	7928.32	120.00	0.000121	1000.00	0.000012
C	29	T-Mobile	Ericsson	KRC118023-1_B2A	Panel	1900	GSM	330	65.6	15.6	4.68	4	30.00	4356.94	7147.95	120.00	0.014155	1000.00	0.001415
C	29	T-Mobile	Ericsson	KRC118023-1_B4P	Panel	2100	UMTS	330	57.4	15.7	4.68	2	30.00	2229.21	3657.22	120.00	0.028668	1000.00	0.002867
C	30	T-Mobile	Ericsson	KRD901146-1_A	Panel	1900	LTE	330	63.3	15.35	4.94	2	60.00	4113.21	6748.10	120.00	0.092911	1000.00	0.009291
C	30	T-Mobile	Ericsson	KRD901146-1_A	Panel	2100	LTE	330	63.3	15.35	4.94	2	60.00	4113.21	6748.10	120.00	0.073985	1000.00	0.007399
C	31	T-Mobile	Ericsson	AIR6449_LTE_B41	Panel	2500	LTE	330	12.5	22.65	2.75	1	40.67	7485.61	12280.81	120.00	0.212863	1000.00	0.021286
C	31	T-Mobile	Ericsson	AIR6449_NR_B41	Panel	2500	5G	330	12.5	22.65	2.75	1	67.78	12476.02	20468.02	120.00	0.418588	1000.00	0.041859
C	32	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	LTE	330	69	13.25	8	2	30.00	1268.09	2080.42	120.00	0.013207	400.00	0.003302
C	32	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	5G	330	69	13.25	8	1	80.00	1690.79	2773.89	120.00	0.017700	400.00	0.004425
C	32	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	700	LTE	330	64	13.65	8	2	30.00	1390.44	2281.14	120.00	0.001274	466.67	0.000273
C	32	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	LTE	330	63	16.05	8	2	60.00	4832.60	7928.32	120.00	0.069867	1000.00	0.006987

Table 2.3: Antenna Inventory & Power Data

**NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.*

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (^{0})	H B W (^{0})	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density ($\mu W/cm^2$)	Allowable MPE ($\mu W/cm^2$)	Calculated MPE%
A	33	Verizon	Antel	BXA-70063-4CF	Panel	850	CDMA	60	63	12.95	3.95	2	10	394.48	647.19	100.00	0.000023	566.67	0.000004
A	34-1	Verizon	Commscope	JAHH-65A-R3B	Panel	700	LTE	60	68	11.45	4.5	2	40	1117.09	1832.69	100.00	0.000121	466.67	0.000026
A	34-1	Verizon	Commscope	JAHH-65A-R3B	Panel	850	LTE	60	64	11.75	4.5	2	40	1196.99	1963.77	100.00	0.000090	566.67	0.000016
A	34-1	Verizon	Commscope	JAHH-65A-R3B	Panel	1900	LTE	60	62	15.15	4.5	2	40	2618.73	4296.25	100.00	0.000019	1000.00	0.000002
A	34-1	Verizon	Commscope	JAHH-65A-R3B	Panel	2100	LTE	60	63	15.65	4.5	2	40	2938.26	4820.48	100.00	0.000072	1000.00	0.000007
A	34-2	Verizon	Commscope	JAHH-65A-R3B	Panel	700	LTE	60	68	11.45	4.5	2	40	1117.09	1832.69	100.00	0.000033	466.67	0.000007
A	34-2	Verizon	Commscope	JAHH-65A-R3B	Panel	850	LTE	60	64	11.75	4.5	2	40	1196.99	1963.77	100.00	0.000028	566.67	0.000005
A	34-2	Verizon	Commscope	JAHH-65A-R3B	Panel	1900	LTE	60	62	15.15	4.5	2	40	2618.73	4296.25	100.00	0.000002	1000.00	0.000000
A	34-2	Verizon	Commscope	JAHH-65A-R3B	Panel	2100	LTE	60	63	15.65	4.5	2	40	2938.26	4820.48	100.00	0.000087	1000.00	0.000009
A	35	Verizon	Samsung	MT6407-77A	Panel	3700	5G	60	17	22.85	2.92	4	35	26985.35	44271.89	100.00	0.001999	1000.00	0.000200
A	36	Verizon	Samsung	XXDWMM-12.5-65-8T-C	Panel	3500	LTE	60	65	10.85	1	4	1	48.65	79.81	100.00	0.000014	1000.00	0.000001
B	37	Verizon	Antel	BXA-70063-4CF	Panel	850	CDMA	180	63	12.95	3.95	2	10	394.48	647.19	100.00	0.000019	566.67	0.000003
B	38-1	Verizon	Commscope	JAHH-65A-R3B	Panel	700	LTE	180	68	11.45	4.5	2	40	1117.09	1832.69	100.00	0.001147	466.67	0.000246
B	38-1	Verizon	Commscope	JAHH-65A-R3B	Panel	850	LTE	180	64	11.75	4.5	2	40	1196.99	1963.77	100.00	0.006622	566.67	0.001169
B	38-1	Verizon	Commscope	JAHH-65A-R3B	Panel	1900	LTE	180	62	15.15	4.5	2	40	2618.73	4296.25	100.00	0.022291	1000.00	0.002229
B	38-1	Verizon	Commscope	JAHH-65A-R3B	Panel	2100	LTE	180	63	15.65	4.5	2	40	2938.26	4820.48	100.00	0.000496	1000.00	0.000050
B	38-2	Verizon	Commscope	JAHH-65A-R3B	Panel	700	LTE	180	68	11.45	4.5	2	40	1117.09	1832.69	100.00	0.008510	466.67	0.001824
B	38-2	Verizon	Commscope	JAHH-65A-R3B	Panel	850	LTE	180	64	11.75	4.5	2	40	1196.99	1963.77	100.00	0.001283	566.67	0.000226
B	38-2	Verizon	Commscope	JAHH-65A-R3B	Panel	1900	LTE	180	62	15.15	4.5	2	40	2618.73	4296.25	100.00	0.000066	1000.00	0.000007
B	38-2	Verizon	Commscope	JAHH-65A-R3B	Panel	2100	LTE	180	63	15.65	4.5	2	40	2938.26	4820.48	100.00	0.000641	1000.00	0.000064
B	39	Verizon	Samsung	MT6407-77A	Panel	3700	5G	180	17	22.85	2.92	4	35	26985.35	44271.89	100.00	0.904888	1000.00	0.090489
B	40	Verizon	Samsung	XXDWMM-12.5-65-8T-C	Panel	3500	LTE	180	65	10.85	1	4	1	48.65	79.81	100.00	0.000017	1000.00	0.000002
C	41	Verizon	Antel	BXA-70063-4CF	Panel	850	CDMA	300	63	12.95	3.95	2	10	394.48	647.19	100.00	0.030891	566.67	0.005451
C	42-1	Verizon	Commscope	JAHH-65A-R3B	Panel	700	LTE	300	68	11.45	4.5	2	40	1117.09	1832.69	100.00	0.114407	466.67	0.024516
C	42-1	Verizon	Commscope	JAHH-65A-R3B	Panel	850	LTE	300	64	11.75	4.5	2	40	1196.99	1963.77	100.00	0.093007	566.67	0.016413
C	42-1	Verizon	Commscope	JAHH-65A-R3B	Panel	1900	LTE	300	62	15.15	4.5	2	40	2618.73	4296.25	100.00	0.113049	1000.00	0.011305
C	42-1	Verizon	Commscope	JAHH-65A-R3B	Panel	2100	LTE	300	63	15.65	4.5	2	40	2938.26	4820.48	100.00	0.034528	1000.00	0.003453
C	42-2	Verizon	Commscope	JAHH-65A-R3B	Panel	700	LTE	300	68	11.45	4.5	2	40	1117.09	1832.69	100.00	0.119821	466.67	0.025676
C	42-2	Verizon	Commscope	JAHH-65A-R3B	Panel	850	LTE	300	64	11.75	4.5	2	40	1196.99	1963.77	100.00	0.027631	566.67	0.004876
C	42-2	Verizon	Commscope	JAHH-65A-R3B	Panel	1900	LTE	300	62	15.15	4.5	2	40	2618.73	4296.25	100.00	0.054333	1000.00	0.005433
C	42-2	Verizon	Commscope	JAHH-65A-R3B	Panel	2100	LTE	300	63	15.65	4.5	2	40	2938.26	4820.48	100.00	0.061786	1000.00	0.006179
C	43	Verizon	Samsung	MT6407-77A	Panel	3700	5G	300	17	22.85	2.92	4	35	26985.35	44271.89	100.00	1.582445	1000.00	0.158245
C	44	Verizon	Samsung	XXDWMM-12.5-65-8T-C	Panel	3500	LTE	300	65	10.85	1	4	1	48.65	79.81	100.00	0.008100	1000.00	0.000810
																Calculated Power Density ($\mu W/cm^2$)	6.257781	Calculated MPE%	0.7123

Table 2.4: Antenna Inventory & Power Data

**NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.*

3. Compliance Summary

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

The anticipated composite MPE value for this site assuming all carriers present is 0.7123% of the allowable FCC established general public limit sampled at the ground level.

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

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