CROWN CASTLE

1 Cityplace Dr, Suite 490
Creve Coeur, MO 63141

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

November 12, 2021

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

RE: **Notice of Exempt Modification for Sprint**
Crown Site ID#876341; Sprint Site ID#CT11434A
1969 Saybrook Rd., Middletown, Connecticut 06457
Latitude: 41° 30′ 38.30″ Longitude: --72° 35′ 36.10″

Dear Ms. Bachman:

Sprint currently maintains (6) antennas at the 150-foot mounts on the existing 150-foot Monopole Tower located at **1969 Saybrook Rd., in Middletown.** The property is owned by Regowset Ridge LLC. and the Tower by Crown Castle. Sprint now intends to replace six (6) antennas. This modification/proposal includes hardware that is both 4G(LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Planned Modifications:
Tower:

REMOVE AND REPLACE
(3) RFS/Celwave - APXVTM14-ALU-120 Antennas (**REMOVE**), (3) Ericsson Air6449 B41 Antennas (**REPLACE**)
(3) Commscope NNW-65B-R4 Antennas (REMOVE), (3) RFS – APXVAALL24_43-U-NA20 Antennas (**REPLACE**)
(3) Alcatel Lucent - TD-RRH8x20-25 Remote radio units (**REMOVE**), (3) Ericsson Radio 4480 B71+ B85 Remote Radio units (**REPLACE**)
(3) Alcatel Lucent – PCS 1900MHz 4x45W-65MHz Remote Radio units (**REMOVE**),
(3) Ericsson Radio 4460 B25+ B66 Remote radio units (**REPLACE**)
REMOVE
(6) Alcatel Lucent – RRH2C50-800 Remote radio units
(2) HB114-1-08U4-MSF Cable
(1) HB114-08U3M12-XXXF Cable
(1) HB114-1-0813U4-M5F Cable
INSTALL
(3) Hybrid Trunk 6/24 4 AWG

Ground:

REMOVE:
(1) MMBTS Cabinet
(1) BBU Cabinet

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INSTALL:
(1) 6160 Cabinet
(1) B160 Battery cabinet
(1) RBS 6601 Inside 6160 SSC
(3) BB 6648, (1) CSR IXRe V2, (1) DUG20 In RBS 6601 inside 6160 Cabinet
(1) PSU 4813
ADD 200A

The Facility was approved by the Middletown Building Department on March 31, 1997.

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 Benjamin Florsheim, City of Middletown Mayor, Ronald Baia, City of Middletown Zoning enforcement Officer and Regowset Ridge LLC., property owner

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

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

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

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

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

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

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

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

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cc:

Benjamin Florsheim, Mayor
City of Middletown
245 deKoven Drive
Middletown, CT 06457
860-638-4801
(Via Fedex)

Ronald Baia, Zoning Enforcement Officer
City of Middletown
245 deKoven Drive
Middletown, CT 06457
860-638-4870
(Via Fedex)

Regowset Ridge LLC, Property owner
C/O Lawrence W. Marino
88 High St.
Portland, CT 06480
860-214-9399
(Via Fedex)

TRACK ANOTHER SHIPMENT

775196610416

ADD NICKNAME

Delivered
Monday, 11/15/2021 at 10:47 am

DELIVERED

Signed for by: A.FLYNN

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

Ersilia Davis

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

TO

Benjamin Florsheim, Mayor
City of Middletown

245 deKoven Drive
MIDDLETOWN, CT US 06457
860-638-4801

MANAGE DELIVERY

Travel History

TIME ZONE
Local Scan Time

Monday, November 15, 2021

10:47 AM	MIDDLETOWN, CT	Delivered
7:46 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
5:44 AM	WINDSOR LOCKS, CT	At local FedEx facility

Sunday, November 14, 2021

8:58 PM	EAST GRANBY, CT	At destination sort facility
5:40 PM	MEMPHIS, TN	Departed FedEx hub
Saturday, November 13, 2021		
11:02 AM	MEMPHIS, TN	Arrived at FedEx hub
8:14 AM	NEWARK, NJ	Departed FedEx hub
12:13 AM	NEWARK, NJ	Arrived at FedEx hub
Friday, November 12, 2021		
9:13 PM	NEWBURGH, NY	Left FedEx origin facility
6:18 PM	NEWBURGH, NY	Picked up
11:11 AM		Shipment information sent to FedEx

Expand History

Shipment Facts

TRACKING NUMBER
775196610416

SERVICE
FedEx Priority Overnight

WEIGHT
1 lbs / 0.45 kgs

DELIVERY ATTEMPTS
1

DELIVERED TO
Receptionist/Front Desk

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
1 lbs / 0.45 kgs

TERMS
Shipper

SHIPPER REFERENCE
100788/NBC 876341

PACKAGING
FedEx Envelope

SPECIAL HANDLING SECTION
Deliver Weekday

SHIP DATE
11/12/21

STANDARD TRANSIT
11/15/21 before 11:30 am

ACTUAL DELIVERY
11/15/21 at 10:47 am

TRACK ANOTHER SHIPMENT

775196660307

ADD NICKNAME

Delivered
Monday, 11/15/2021 at 10:47 am

DELIVERED

Signed for by: A.FLYNN

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

Ersilia Davis

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

TO

Ronald Baia, Zoning Officer
City of Middletown

245 de Koven Drive
MIDDLETOWN, CT US 06457
860-638-4870

MANAGE DELIVERY

Travel History

TIME ZONE
Local Scan Time

Monday, November 15, 2021

10:47 AM	MIDDLETOWN, CT	Delivered
7:44 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
5:53 AM	WINDSOR LOCKS, CT	At local FedEx facility

Sunday, November 14, 2021

8:58 PM	EAST GRANBY, CT	At destination sort facility
5:40 PM	MEMPHIS, TN	Departed FedEx hub
Saturday, November 13, 2021		
11:02 AM	MEMPHIS, TN	Arrived at FedEx hub
8:14 AM	NEWARK, NJ	Departed FedEx hub
12:13 AM	NEWARK, NJ	Arrived at FedEx hub
Friday, November 12, 2021		
9:13 PM	NEWBURGH, NY	Left FedEx origin facility
6:18 PM	NEWBURGH, NY	Picked up
11:14 AM		Shipment information sent to FedEx

Expand History

Shipment Facts

TRACKING NUMBER
775196660307

SERVICE
FedEx Priority Overnight

WEIGHT
0.5 lbs / 0.23 kgs

DELIVERY ATTEMPTS
1

DELIVERED TO
Receptionist/Front Desk

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
0.5 lbs / 0.23 kgs

TERMS
Shipper

SHIPPER REFERENCE
100788/NBC 876341

PACKAGING
FedEx Envelope

SPECIAL HANDLING SECTION
Deliver Weekday

SHIP DATE
11/12/21

STANDARD TRANSIT
11/15/21 before 11:30 am

ACTUAL DELIVERY
11/15/21 at 10:47 am

TRACK ANOTHER SHIPMENT

775196730719

ADD NICKNAME

Delivered
Monday, 11/15/2021 at 10:43 am

DELIVERED

Signature not required

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

Ersilia Davis

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

TO

Lawrence W. Marino
Regowset Ridge LLC

88 High St.
PORTLAND, CT US 06480
860-214-9399

MANAGE DELIVERY

Travel History

TIME ZONE
Local Scan Time

Monday, November 15, 2021		
10:43 AM	PORTLAND, CT	Delivered Package delivered to recipient address - release authorized
8:36 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
5:49 AM	WINDSOR LOCKS, CT	At local FedEx facility
Sunday, November 14, 2021		
8:58 PM	EAST GRANBY, CT	At destination sort facility
5:40 PM	MEMPHIS, TN	Departed FedEx hub

Saturday, November 13, 2021		
11:02 AM	MEMPHIS, TN	Arrived at FedEx hub
8:14 AM	NEWARK, NJ	Departed FedEx hub
12:13 AM	NEWARK, NJ	Arrived at FedEx hub
Friday, November 12, 2021		
9:13 PM	NEWBURGH, NY	Left FedEx origin facility
6:18 PM	NEWBURGH, NY	Picked up
11:19 AM		Shipment information sent to FedEx

Expand History

Shipment Facts

TRACKING NUMBER
775196730719

SERVICE
FedEx Priority Overnight

WEIGHT
1 lbs / 0.45 kgs

DELIVERY ATTEMPTS
1

DELIVERED TO
Residence

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
1 lbs / 0.45 kgs

TERMS
Shipper

SHIPPER REFERENCE
100788/NBC 876341

PACKAGING
FedEx Envelope

SPECIAL HANDLING SECTION
Deliver Weekday, Residential Delivery

SHIP DATE
11/12/21

STANDARD TRANSIT
11/15/21 before 1:00 pm

ACTUAL DELIVERY
11/15/21 at 10:43 am

Exhibit A

Original Facility Approval

CT03XC169

BUILDING PERMIT

BUILDING DEPARTMENT • 344-3416 • MIDDLETOWN, CT 06457

DATE March 31 19 97 PERMIT # _____

APPLICANT Sprint Spectrum, L.P.

ADDRESS 9 Barnes Industrial Road, Wallingford, CT 06492
(NO.) (STREET) (CITY) (STATE) (ZIP)

PERMIT TO construct ( ) STORY Communication tower & antennas NUMBER OF DWELLING UNITS _____
(TYPE OF IMPROVEMENT) (NO.) (PROPOSED USE)

AT (LOCATION) 1969 Sayrbook Road, Middletown, CT ZONING DISTRICT _____
(NO.) (STREET)

CONTRACTORS LICENSE to be determined WORK PHONE # _____ MOBILE PHONE # _____

BUILDING IS TO BE _____ FT. WIDE BY _____ FT. LONG BY _____ FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TO TYPE _____ USE GROUP _____ BASEMENT WALLS OR FOUNDATION _____
(TYPE)

REMARKS: Install 150' monopole tower, 6 antennas & associated communications equipment.

PUBLIC UTILITIES AVAILABLE:
CITY WATER ( ) SEWER ( ) SEPTIC/WELL ( ) ESTIMATED COST $ 274,000 PERMIT FEE $ _____

OWNER Seabstian G. Marino

ADDRESS 1969 Sayrbook Road BUILDING DEPT. BY _____

Exhibit B

Property Card

Exhibit B

Property Card

1987 SAYBROOK RD

Location	1987 SAYBROOK RD	**Map-Lot**	49/ / 0015/ /
Acct#	R07180	**Owner**	REGOWSET RIDGE LLC
Municipality		**Assessment**	$382,230
Appraisal	$546,030	**PID**	8044
Building Count	1	**Assessing District**	

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$167,630	$378,400	$546,030
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$117,350	$264,880	$382,230

Parcel Addreses

Additional Addresses
No Additional Addresses available for this parcel

Owner of Record

Owner	REGOWSET RIDGE LLC	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	88 HIGH ST PORTLAND, CT 06480	**Book & Page**	1753/0973
		Sale Date	04/17/2012
		Instrument	29

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
REGOWSET RIDGE LLC	$0		1753/0973	29	04/17/2012
MARINO SEBASTIAN G (EST) (ETALS)	$0		1753/0970	29	04/17/2012
MARINO SEBASTIAN G (EST) (ETALS)	$0		1753/0967	29	04/17/2012

MARINO SEBASTIAN G (EST) (2/4 INT)	$0		1753/0964	29	04/17/2012
MARINO SEBASTIAN G (EST) (3/4 INT) &	$0		1753/0961	29	04/17/2012

Building Information

Building 1 : Section 1

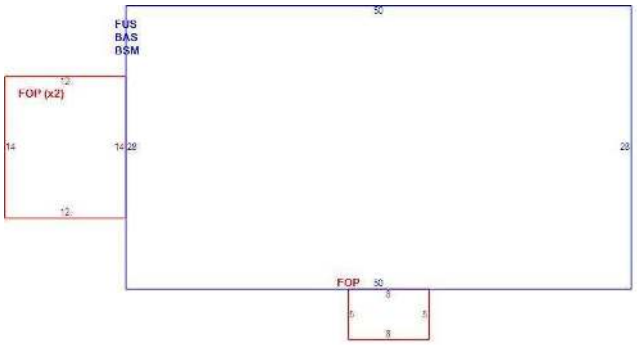
Year Built: 1965
Living Area: 2,800
Replacement Cost: $234,872
Building Percent Good: 65
Replacement Cost Less Depreciation: $152,670

Building Attributes	
Field	**Description**
Style	Two Family
Model	Multi-Family
Grade	C
Stories	2 Stories
Occupancy	2
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure	Gable
Roof Cover	Asphalt Shingl
Interior Wall 1	Plastered
Interior Wall 2	
Interior Floor 1	Hardwood
Interior Floor 2	
Heat Fuel	Oil
Heat Type	Hot Water
Ac Type	None
Bedrooms	6
Full Baths	2
Half Baths	0
Extra Fixtures	0
Total Rooms	10
Bath Remodel	Not Updated
Kitchen Remodel	Not Updated
Extra Kitchens	2
Fireplaces	1
Extra Openings	1
Gas Fireplace	0
Int vs Ext	Same

Building Photo

(http://images.vgsi.com/photos/MiddletownCTPhotos/\00\03\17\55.jpg)

Building Layout



(ParcelSketch.ashx?pid=8044&bid=8044)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	1,400	1,400
FUS	Finished Upper Story	1,400	1,400
BSM	Basement	1,400	0
FOP	Framed Open Porch	376	0
		4,576	2,800

A/C Type	None
A/C %	0
Fireplaces 1	2900
Fin Bsmt Area	0.00
FBM grade	0
Bsmt Garage	0
Fndtn Cndtn	
In Law	0

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 102
Description 2 Family
Zone R-60
Neighborhood 12
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 55.30
Assessed Value $264,880
Appraised Value $378,400

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FGR1	Garage			520.00 UNITS	$7,280	1
FGR2	Garage W/ Loft			480.00 UNITS	$7,680	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$167,630	$378,400	$546,030
2019	$167,630	$378,400	$546,030
2018	$167,630	$378,400	$546,030

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$117,350	$264,880	$382,230
2019	$117,350	$264,880	$382,230
2018	$117,350	$264,880	$382,230

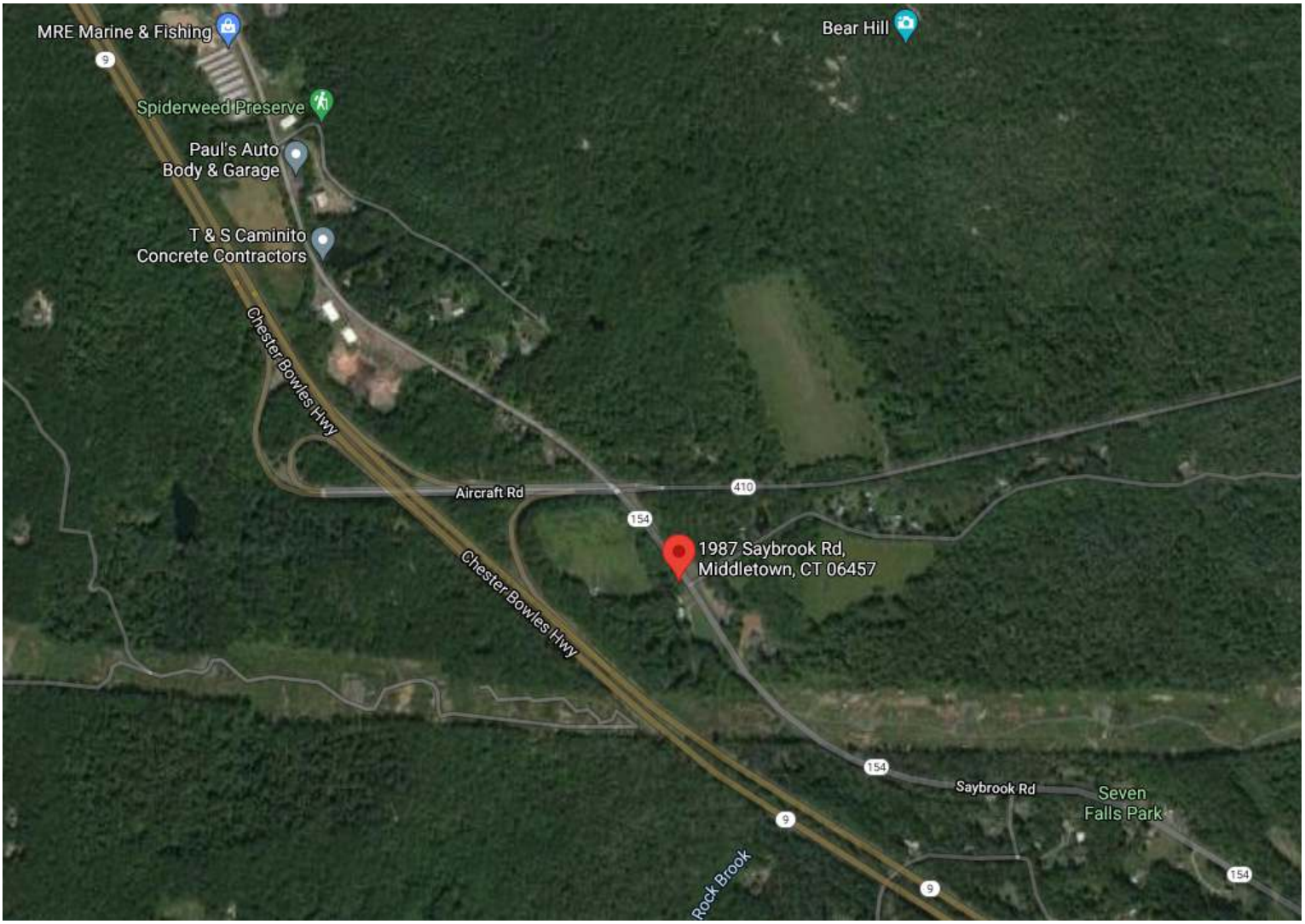


Exhibit C

Construction Drawings

T-MOBILE SITE NUMBER: CT11434A
T-MOBILE SITE NAME: CT11434A
SITE TYPE: MONOPOLE
TOWER HEIGHT: 150'-0"

BUSINESS UNIT #: 876341
SITE ADDRESS: 1969 SAYBROOK RD MIDDLETOWN, CT 06457
COUNTY: MIDDLESEX
JURISDICTION: CONNECTICUT SITING COUNCIL

T-MOBILE SPRINT REPLACEMENT SITE CONFIGURATION: 67E5A998E 6160

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	MIDDLETOWN 2 - MARINO PROPERTY
SITE ADDRESS:	1969 SAYBROOK RD MIDDLETOWN, CT 06457
COUNTY:	MIDDLESEX
MAP/PARCEL #:	49-0015
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41.510639°
LONGITUDE:	-72.593361°
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	535 FT
CURRENT ZONING:	R-60
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:	REGOWSET RIDGE LLC 88 HIGH ST PORTLAND, CT 06480
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	CHOOSE ONE FOR T-MOBILE
ELECTRIC PROVIDER:	N/A N/A
TELCO PROVIDER:	N/A N/A

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

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	CODE SUMMARY
T-3	CODE SUMMARY
T-4	GENERAL NOTES
C-1.1	OVERALL SITE PLAN
C-1.2	SITE PLAN & ENLARGED SITE PLAN
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	ANTENNA & CABLE SCHEDULE
C-4	PLUMBING DIAGRAM
C-5	EQUIPMENT SPECS
E-1	AC PANEL SCHEDULES & ONE LINE DIAGRAM
G-1	ANTENNA GROUNDING DIAGRAM
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS

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

PROJECT DESCRIPTION

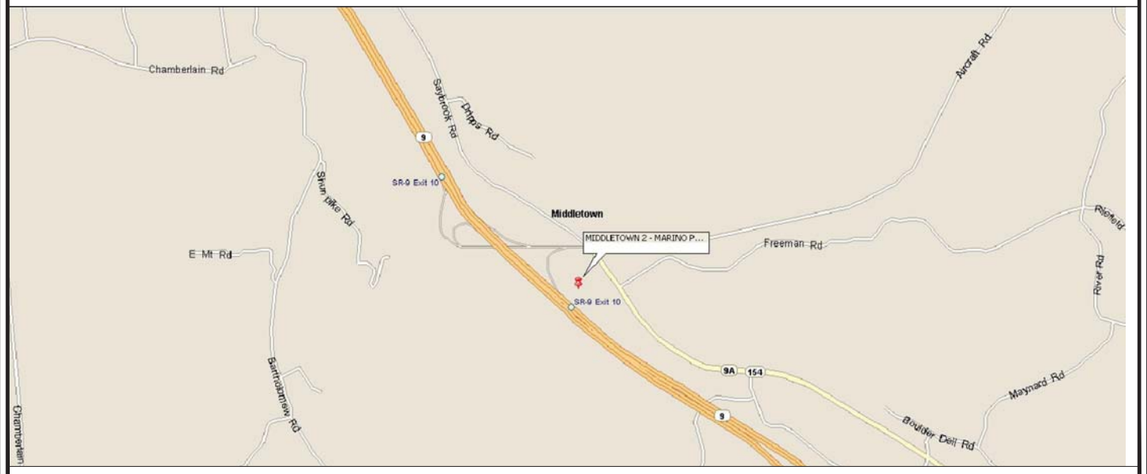
THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:
- REMOVE (6) ANTENNAS
- REMOVE (12) RADIOS
- REMOVE (2) HB114-1-08U4-M5F CABLE
- REMOVE (1) HB114-08U3M12-XXXF CABLE
- REMOVE (1) HB114-1-0813U4-M5F CABLE
- INSTALL (6) ANTENNAS
- INSTALL (6) RADIOS
- INSTALL (3) HYBRID TRUNK 6/24 4AWG

GROUND SCOPE OF WORK:
- REMOVE (1) MMBTS CABINET
- REMOVE (1) BBU CABINET
- INSTALL (1) RBS 6160 CABINET
- INSTALL (1) B160 BATTERY CABINET
- INSTALL (1) RBS 6601 INSIDE 6160 SSC
- INSTALL (3) BB 6648 IN 6160 CABINET
- INSTALL (1) CSR IXRe V2 IN 6160 CABINET
- INSTALL (1) DUG20 IN RBS 6601 INSIDE 6160 CABINET
- INSTALL (1) PSU 4813
- ADD 200A

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

LOCATION MAP



NO SCALE

APPLICABLE CODES/REFERENCE DOCUMENTS

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

CODE TYPE	CODE
BUILDING	2015 IBC
MECHANICAL	2015 IMC
ELECTRICAL	2017 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	B+T GROUP
DATED:	9/13/21
MOUNT ANALYSIS:	INFINIGY ENGINEERING, PLLC
DATED:	9/2/21
AC ELECTRICAL POWER DESIGN:	N/A
DATED:	N/A
RFDS REVISION:	1
DATED:	8/2/21
ORDER ID:	579389
REVISION:	0

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

APPROVALS

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

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

T-Mobile
4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

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

T-MOBILE SITE NUMBER: **CT11434A**

BU #: **876341**
MIDDLETOWN 2 - MARINO PROPERTY

1969 SAYBROOK RD
MIDDLETOWN, CT
06457

EXISTING
150'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/6/21	AN	CONSTRUCTION	JTS

STATE OF CONNECTICUT
No. 23924
LICENSED
PROFESSIONAL ENGINEER
10/6/21

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

SHEET NUMBER: T-1

REVISION: 0

79732.007.01_MIDDLETOWN 2 – MARINO PROPERTY.dwg – Sheet:T–1 – User: jslkes – Oct 06, 2021 – 3:26pm

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

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

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

GREENFIELD GROUNDING NOTES:

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

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 "T–MOBILE".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE

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

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

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

T-MOBILE SITE NUMBER: **CT11434A**

BU #: **876341**
MIDDLETOWN 2 - MARINO PROPERTY

1969 SAYBROOK RD
MIDDLETOWN, CT
06457

EXISTING
150'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/6/21	AN	CONSTRUCTION	JTS

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

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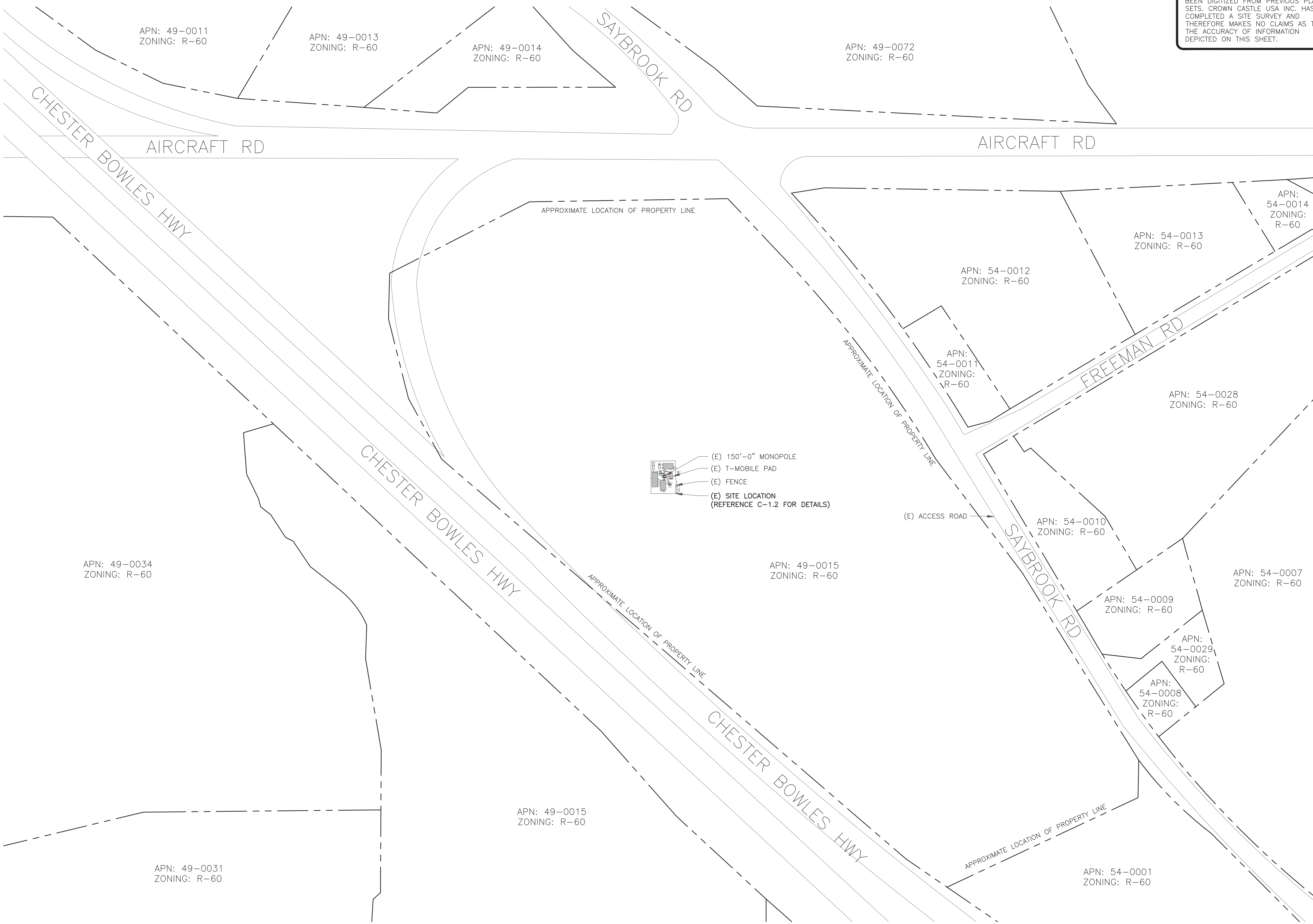
REVISION: 0



SITE PLAN DISCLAIMER:

PROPERTY LINES AND STRUCTURES HAVE BEEN DIGITIZED FROM PREVIOUS PLAN SETS. CROWN CASTLE USA INC. HAS NOT COMPLETED A SITE SURVEY AND THEREFORE MAKES NO CLAIMS AS TO THE ACCURACY OF INFORMATION DEPICTED ON THIS SHEET.

1 OVERALL SITE PLAN

SCALE: 100' 50' 0 100' 1" = 100'-0" (FULL SIZE) 1" = 200'-0" (11x17)

N

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CROWN CASTLE

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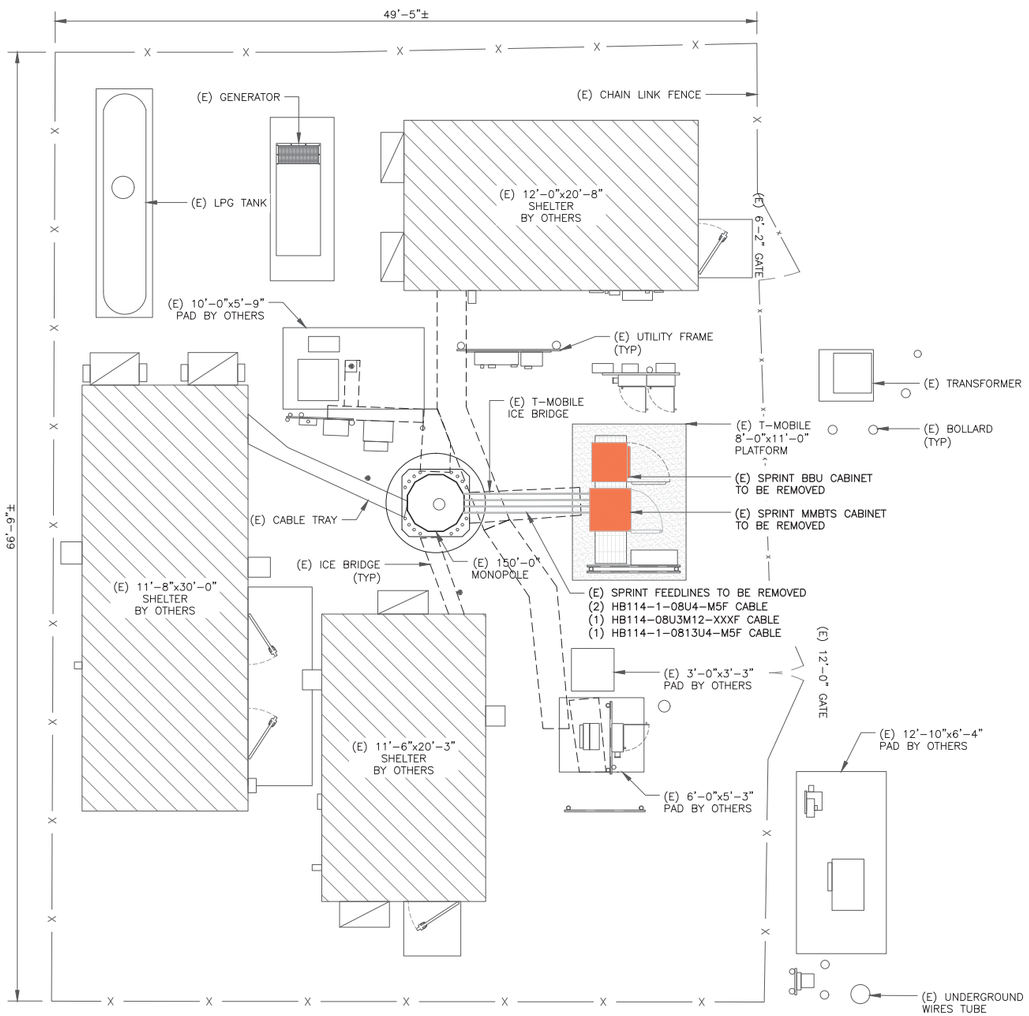
SHEET NUMBER:	REVISION:
C-1.1	0

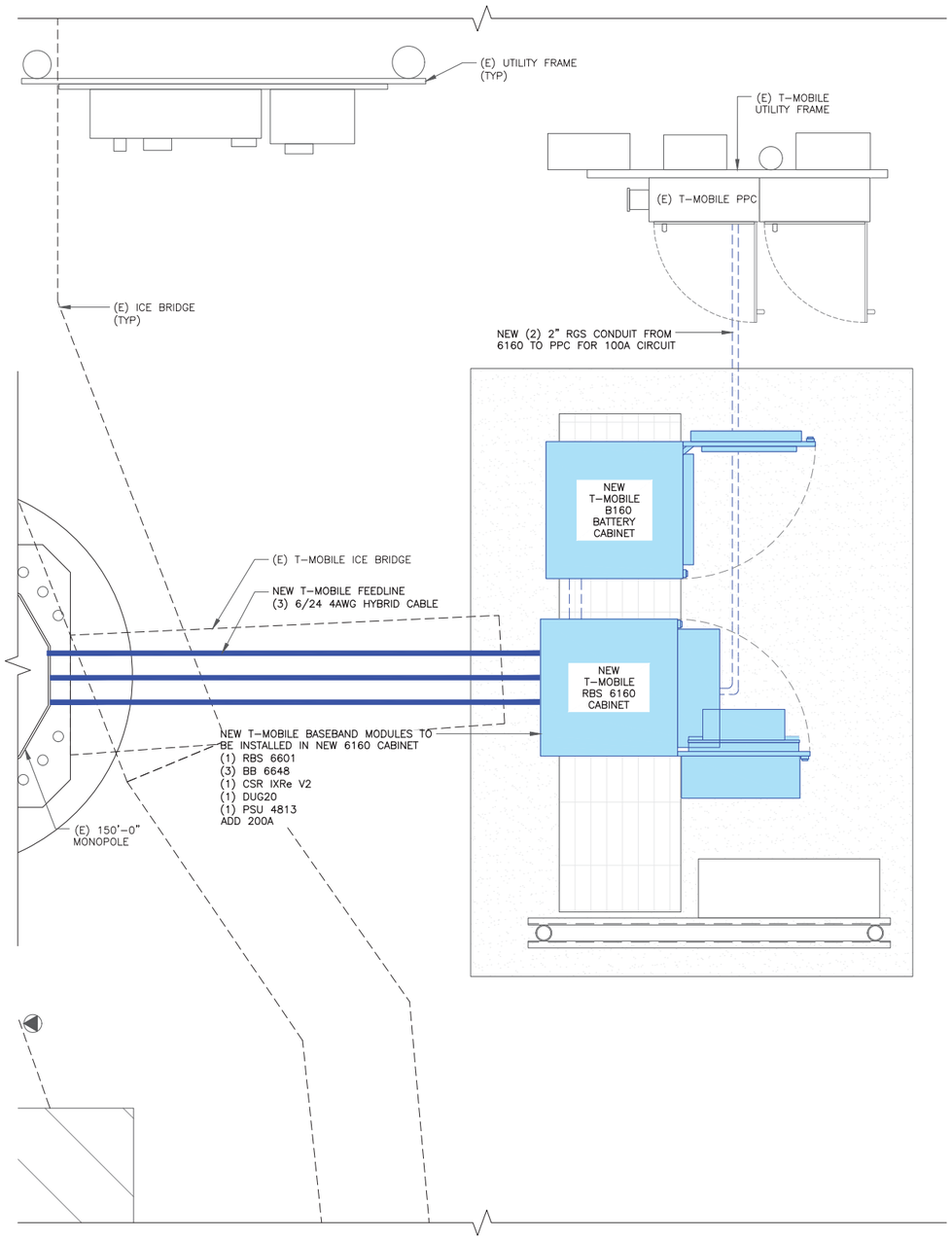


1 SITE PLAN
SCALE: 4' 2' 0 4' 3/16"=1'-0" (FULL SIZE) 3/32"=1'-0" (11x17)

N

NOTES:

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



2 ENLARGED SITE PLAN
SCALE: 1' 6" 0 1' 3/4"=1'-0" (FULL SIZE) 3/8"=1'-0" (11x17)

N

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MIDDLETOWN 2 - MARINO PROPERTY

1969 SAYBROOK RD
MIDDLETOWN, CT
06457

EXISTING
150'-0" MONOPOLE

ISSUED FOR:

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STATE OF CONNECTICUT
JOHN T. STEVENS
No. 23924
LICENSED
PROFESSIONAL ENGINEER
10/6/21

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SHEET NUMBER: C-1.2

REVISION: 0

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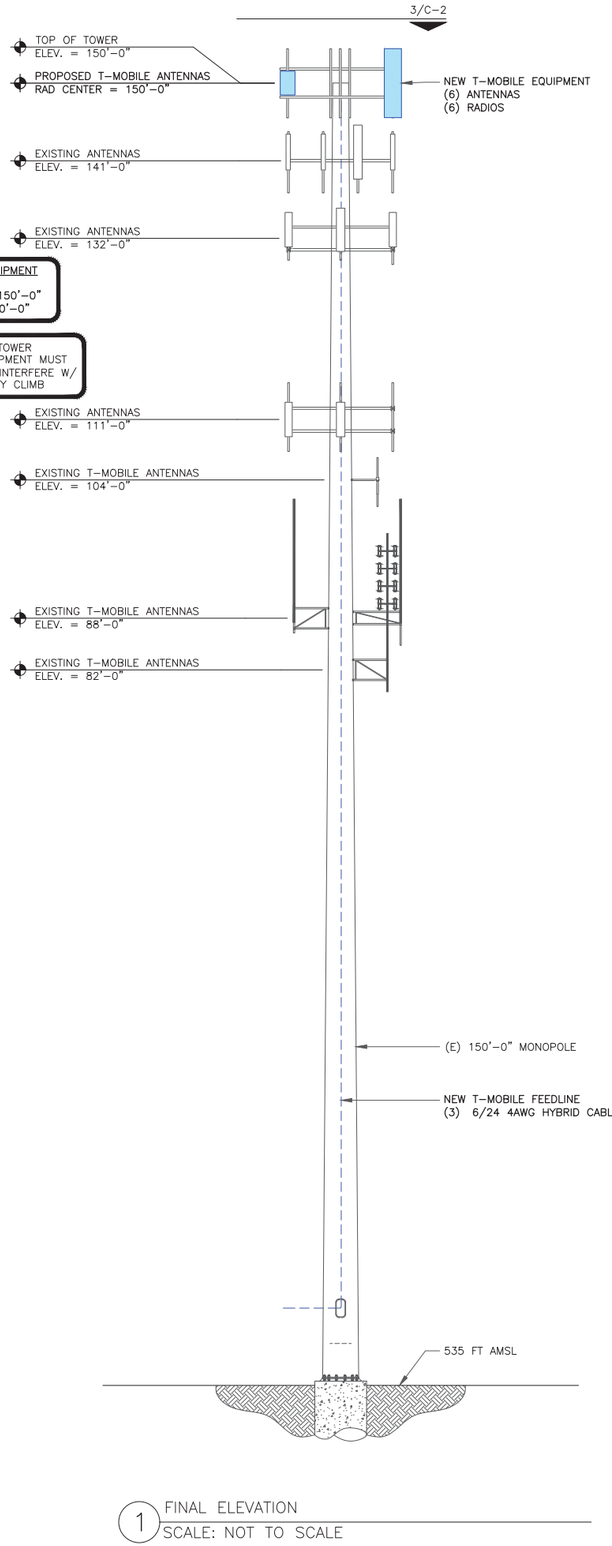
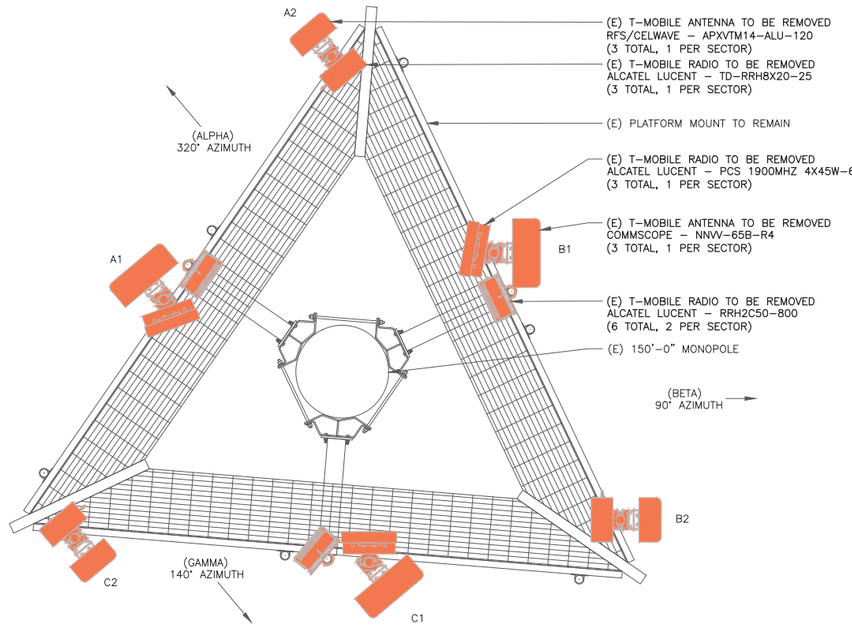
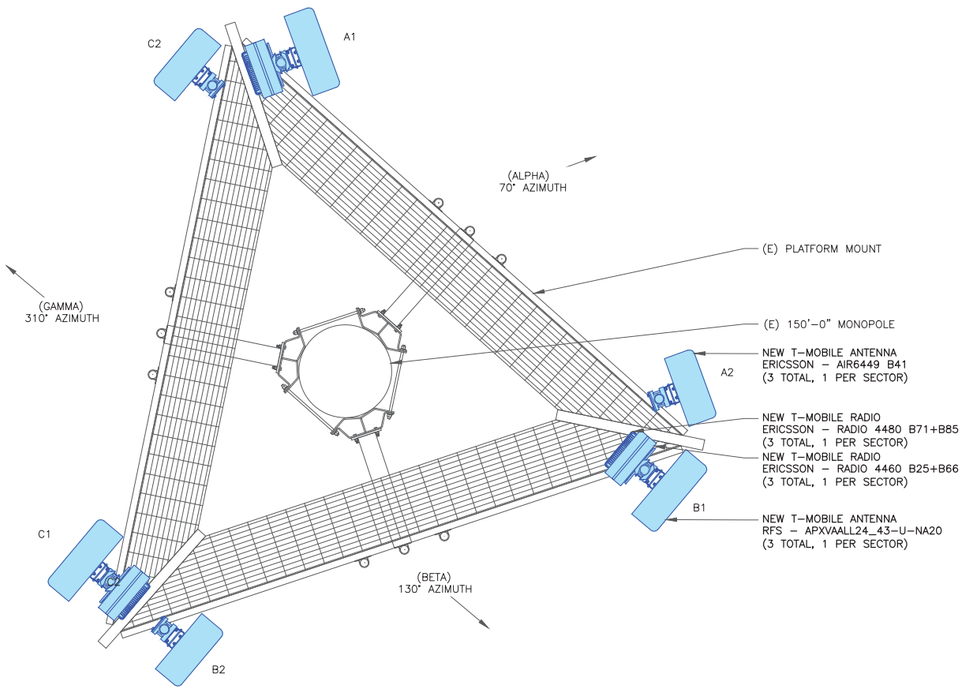


1 FINAL ELEVATION
SCALE: NOT TO SCALE



2 EXISTING ANTENNA LAYOUT
SCALE: NOT TO SCALE



3 FINAL ANTENNA LAYOUT
SCALE: NOT TO SCALE

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MIDDLETOWN 2 - MARINO PROPERTY

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JOHN T. STRAFACE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
10/6/21

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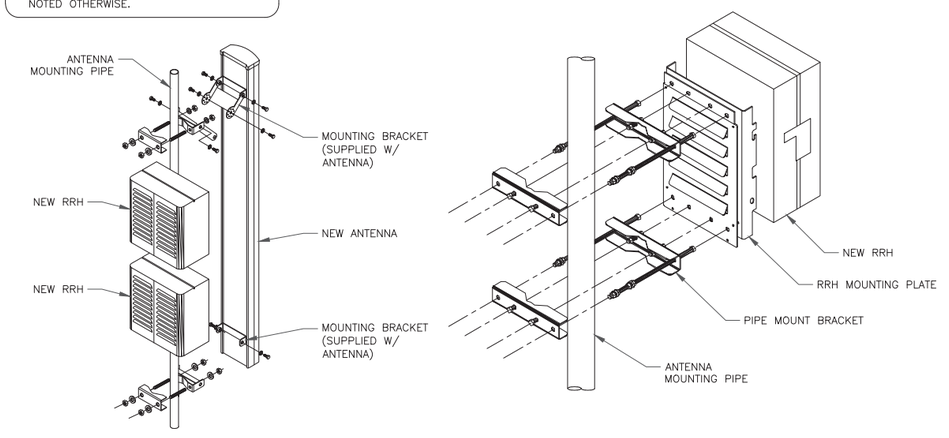
RF SYSTEM SCHEDULE

SECTOR	ANTENNA	TECH	MANUFACTURER	ANTENNA MODEL	AZIMUTH	M–TILT	E–TILT	RAD CENTER	TMA/RRU	FEEDLINE TYPE
ALPHA	A1	L700 / L600 / N600 / L2100 / L1900 / G1900	RFS	APXVAALL24_43–U–NA20	70°	–	5° / 5°	150'–0"	(1) ERICSSON – RADIO 4480 B71+B85 (1) ERICSSON – RADIO 4460 B25+B66	(1) 6/24 4AWG HYBRID CABLE
	–	–	–	EMPTY MOUNT PIPE	–	–	–	–	–	
	–	–	–	EMPTY MOUNT PIPE	–	–	–	–	–	
	–	–	–	EMPTY MOUNT PIPE	–	–	–	–	–	
	A2	L2500 / N2500	ERICSSON	AIR6449 B41	70°	–	2° / 2°	150'–0"	–	
BETA	B1	L700 / L600 / N600 / L2100 / L1900 / G1900	RFS	APXVAALL24_43–U–NA20	130°	0°	5° / 5°	150'–0"	(1) ERICSSON – RADIO 4480 B71+B85 (1) ERICSSON – RADIO 4460 B25+B66	(1) 6/24 4AWG HYBRID CABLE
	–	–	–	EMPTY MOUNT PIPE	–	0°	–	–	–	
	–	–	–	EMPTY MOUNT PIPE	–	0°	–	–	–	
		–	–	EMPTY MOUNT PIPE	–	0°	–	–	–	
	B2	L2500 / N2500	ERICSSON	AIR6449 B41	130°	0°	2° / 2°	150'–0"	–	
GAMMA	C1	L700 / L600 / N600 / L2100 / L1900 / G1900	RFS	APXVAALL24_43–U–NA20	310°	0°	5° / 5°	150'–0"	(1) ERICSSON – RADIO 4480 B71+B85 (1) ERICSSON – RADIO 4460 B25+B66	(1) 6/24 4AWG HYBRID CABLE
	–	–	–	EMPTY MOUNT PIPE	–	0°	–	–	–	
	–	–	–	EMPTY MOUNT PIPE	–	0°	–	–	–	
		–	–	EMPTY MOUNT PIPE	–	0°	–	–	–	
	C2	L2500 / N2500	ERICSSON	AIR6449 B41	310°	0°	2° / 2°	150'–0"	–	

1 ANTENNA AND CABLE SCHEDULE
SCALE: NOT TO SCALE

INSTALLER NOTES:

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



2 ANTENNA WITH RRHs MOUNTING DETAIL
SCALE: NOT TO SCALE

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T-MOBILE SITE NUMBER: **CT11434A**

BU #: **876341**
MIDDLETOWN 2 - MARINO PROPERTY

1969 SAYBROOK RD
MIDDLETOWN, CT
06457

EXISTING
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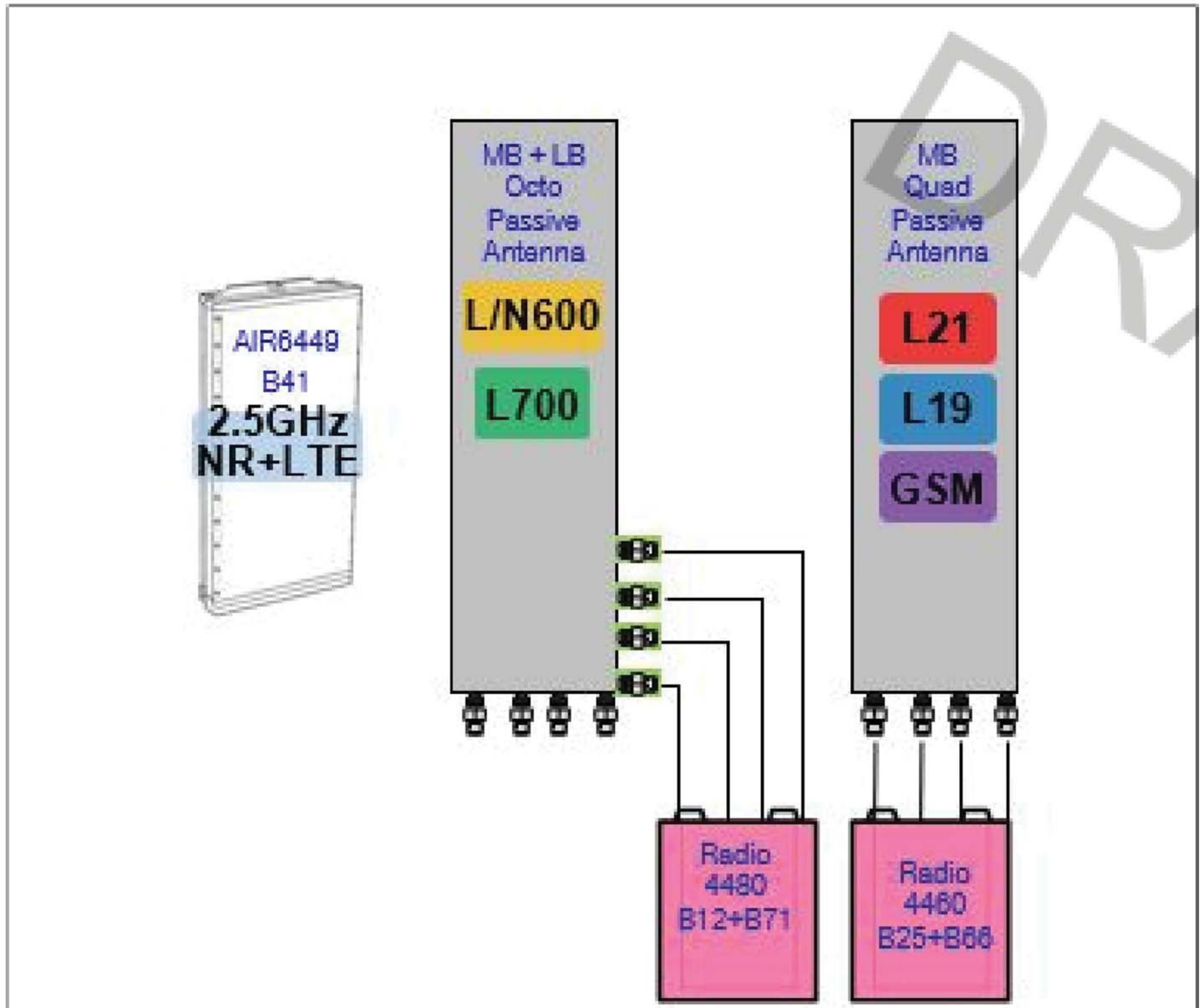

1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

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STATE OF CONNECTICUT
No. 23024
LICENSED
PROFESSIONAL ENGINEER
10/6/21

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SHEET NUMBER: C-4

REVISION: 0

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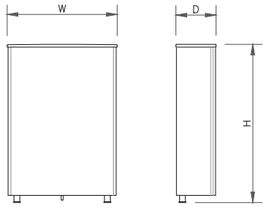
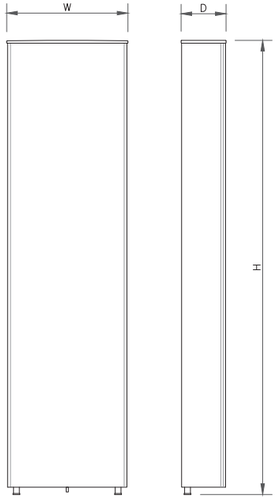


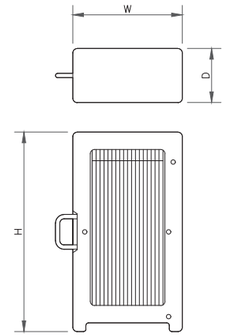
ANTENNA SPECS	
MANUFACTURER	ERICSSON
MODEL #	AIR6449 B41
WIDTH	20.51"
DEPTH	8.54"
HEIGHT	33.11"
WEIGHT	114.63 LBS

1 ANTENNA SPECS
SCALE: NOT TO SCALE



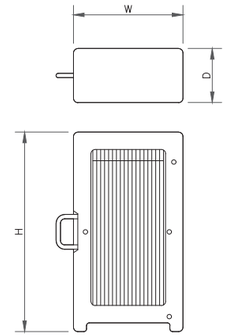
ANTENNA SPECS	
MANUFACTURER	RFS
MODEL #	APXVAALL24_43-U NA20
WIDTH	24.00"
DEPTH	8.50"
HEIGHT	95.90"
WEIGHT	149.90 LBS

2 ANTENNA SPECS
SCALE: NOT TO SCALE



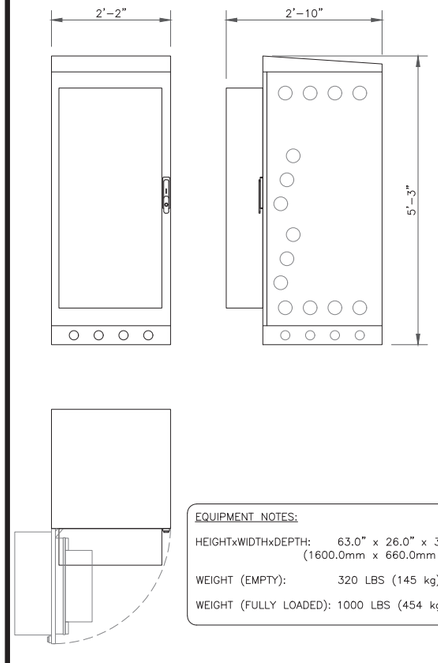
RRU SPECIFICATIONS	
MANUFACTURER	ERICSSON
MODEL #	RADIO 4460 B25+B66
WIDTH	15.10"
DEPTH	11.90"
HEIGHT	17.00"
WEIGHT	109.00 LBS

3 RRU SPECS
SCALE: NOT TO SCALE



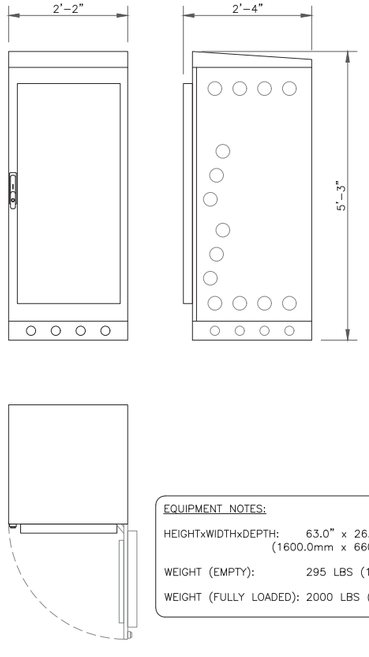
RRU SPECIFICATIONS	
MANUFACTURER	ERICSSON
MODEL #	RADIO 4480 B71+B85
WIDTH	15.70"
DEPTH	7.50"
HEIGHT	22.00"
WEIGHT	81.00 LBS

4 RRU SPECS
SCALE: NOT TO SCALE



EQUIPMENT NOTES:
HEIGHTxWIDTHxDEPTH: 63.0" x 26.0" x 34.0" (1600.0mm x 660.0mm x 864.0mm)
WEIGHT (EMPTY): 320 LBS (145 kg)
WEIGHT (FULLY LOADED): 1000 LBS (454 kg)

5 ERICSSON 6160 SSC
SCALE: NOT TO SCALE



EQUIPMENT NOTES:
HEIGHTxWIDTHxDEPTH: 63.0" x 26.0" x 28.0" (1600.0mm x 660.0mm x 711.0mm)
WEIGHT (EMPTY): 295 LBS (134 kg)
WEIGHT (FULLY LOADED): 2000 LBS (908 kg)

6 ERICSSON B160 BATTERY CABINET
SCALE: NOT TO SCALE

7 ERICSSON B160 BATTERY CABINET
SCALE: NOT TO SCALE

8 ERICSSON B160 BATTERY CABINET
SCALE: NOT TO SCALE

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T-MOBILE SITE NUMBER: **CT11434A**

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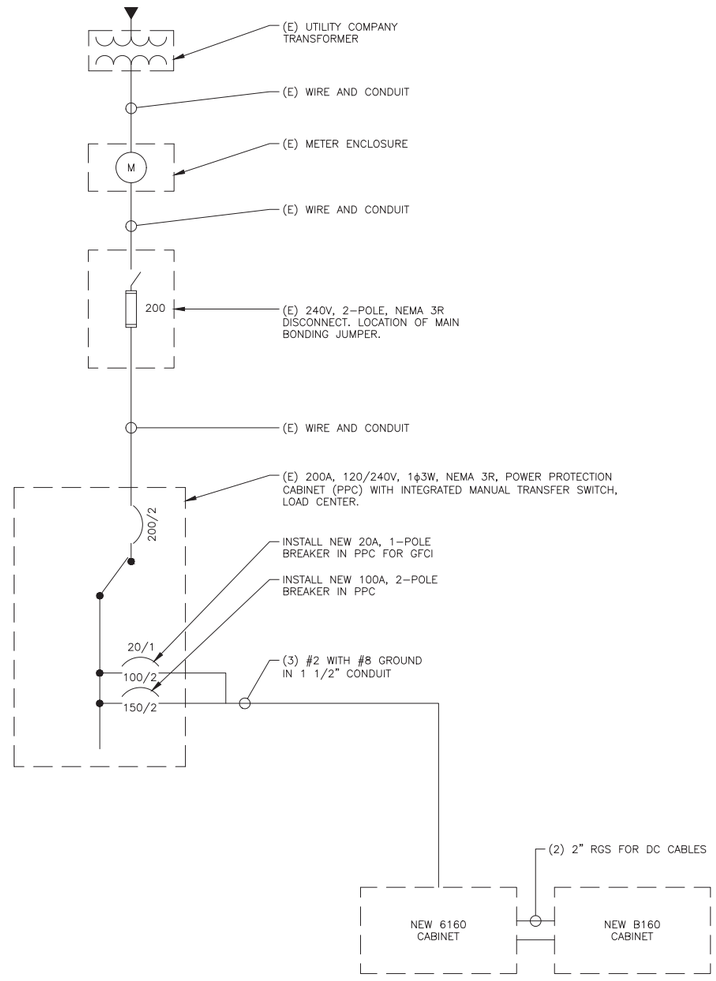
FINAL PANEL SCHEDULE							
LOAD	POLES	AMPS	BUS L1	BUS L2	AMPS	POLES	LOAD
BTS	2	100A	1	2	60A	2	EQUIPMENT
			3	4			
RBS 6160	2	150A	5	6	60A	2	EQUIPMENT
			7	8			
EQUIPMENT	1	10A	9	10	20A	1	EQUIPMENT
FAN	1	10A	11	12	20A	1	B160

RATED VOLTAGE: ■120/240 □_____, 1 PHASE, 3 WIRE	BRANCH POLES: ■12 □24 □30 □42	APPROVED MF'RS
RATED AMPS: ■100 □200 □400 □_____.	CABINET: ■SURFACE □FLUSH	NEMA □1 ■3R □4X
□MAIN LUGS ONLY MAIN 200 AMPS ■BREAKER □FUSED SWITCH	■HINGED DOOR	■KEYED DOOR LATCH
□FUSED ■CIRCUIT BREAKER BRANCH DEVICES	□_____ TO BE GFCI BREAKERS	FULL NEUTRAL BUS GROUND BAR
ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF 10,000 AMPS SYMMETRICAL		

REPLACE EXISTING BREAKER IN POSITION 5 AND 7 WITH A NEW 2P 150A BREAKER
REPLACE EXISTING WIRES FOR EXISTING MMBTS CABINET WITH (3) 1/0 AWG THWN (COPPER) AND (1) #2G AWG. MINIMUM CONDUIT SIZE TO BE 2".
IF 150A BREAKER WILL NOT PROPERLY FIT IN EXISTING PANEL, REPLACE (E) PANEL WITH SQUARE D PANEL QO12040M200RB (OR APPROVED EQUAL).
UPGRADE FEEDER WIRES TO MEET AMPACITY IF NEW PANEL IS REQUIRED.
FINAL PANEL DESIGN AND CALCULATIONS FOR WIRE SIZE WERE BASED OFF OF EXISTING DOCUMENTS AND PHOTOS

1 AC PANEL SCHEDULE
SCALE: NOT TO SCALE



NOTES:

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

2 ONE LINE DIAGRAM
SCALE: NOT TO SCALE

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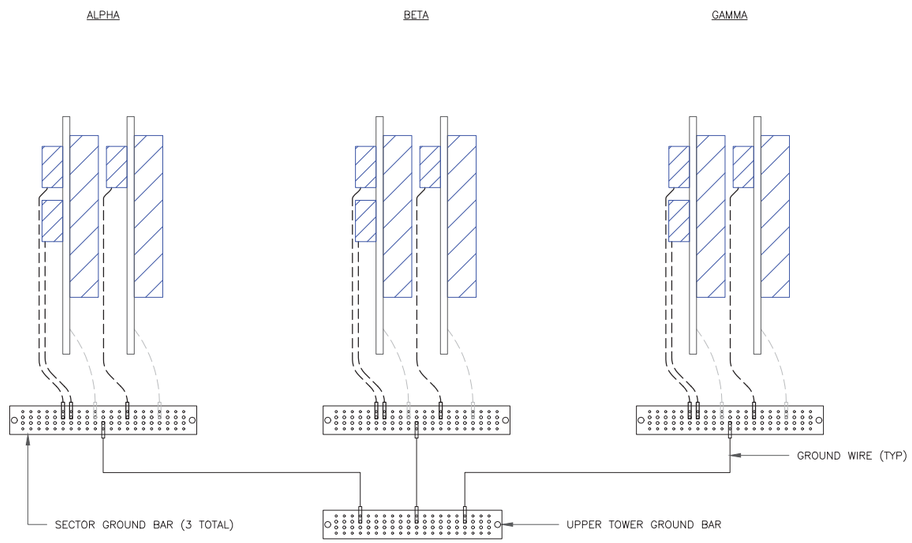
SHEET NUMBER: E-1

REVISION: 0



NOTE:

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

1 ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE

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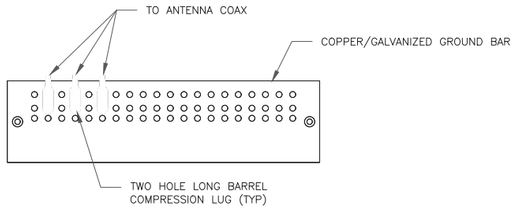
SHEET NUMBER: G-1

REVISION: 0

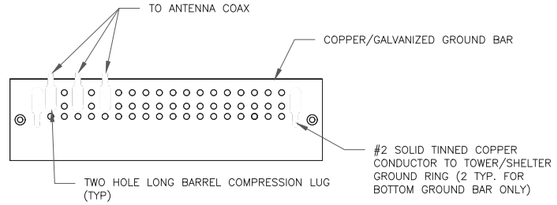
79732.007.01_MIDDLETOWN 2 – MARINO PROPERTY.dwg – Sheet:G-1 – User: jsikes – Oct 06, 2021 – 3:26pm



NOTES:

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

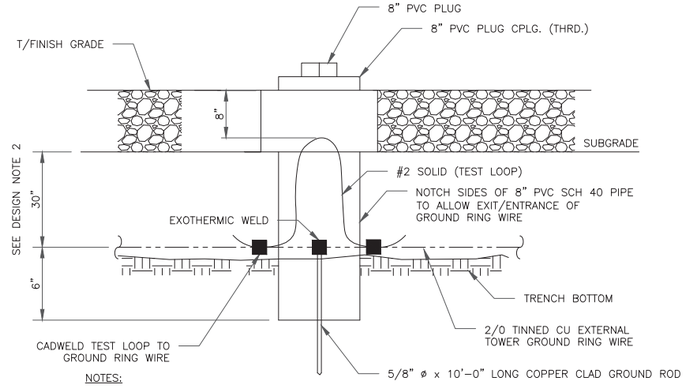
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

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

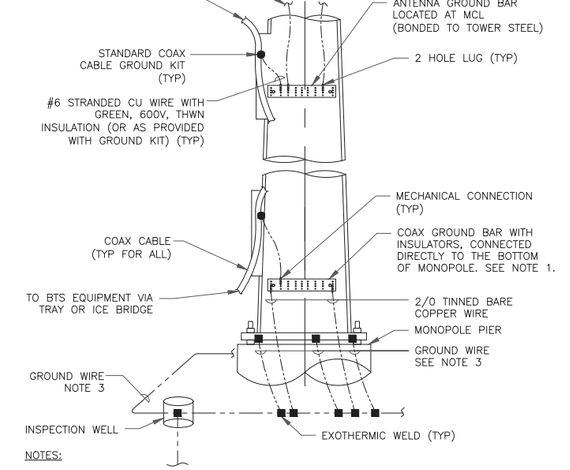
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

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

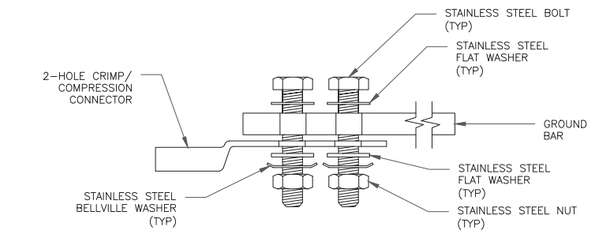
3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



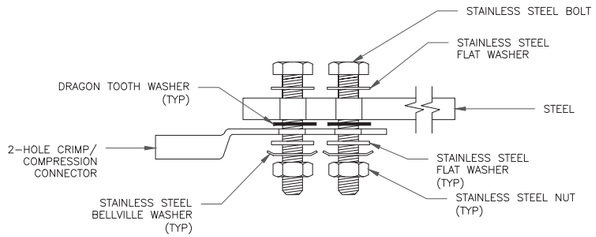
NOTES:

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

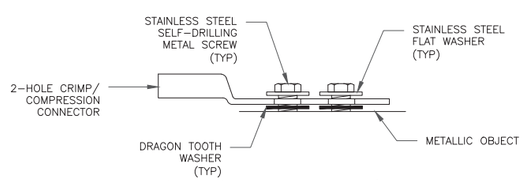
4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

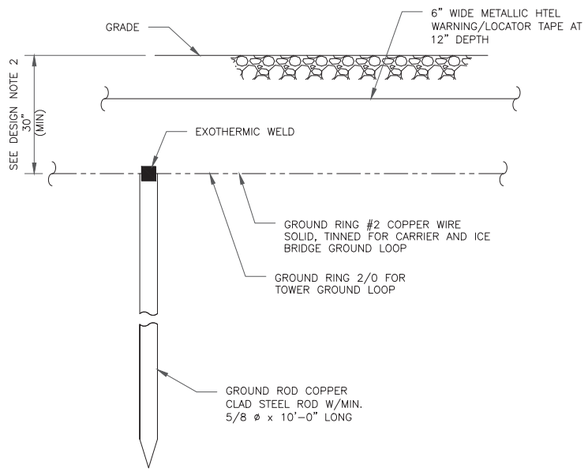


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

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

6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

T-Mobile
4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

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

T-MOBILE SITE NUMBER: **CT11434A**

BU #: **876341**
MIDDLETOWN 2 - MARINO PROPERTY

1969 SAYBROOK RD
MIDDLETOWN, CT
06457

EXISTING
150'-0" MONOPOLE

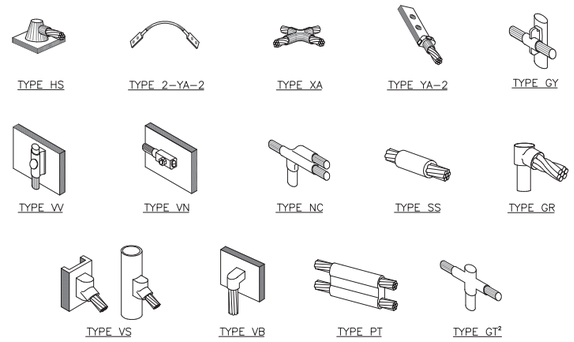
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/6/21	AN	CONSTRUCTION	JTS

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

SHEET NUMBER: G-2

REVISION: 0

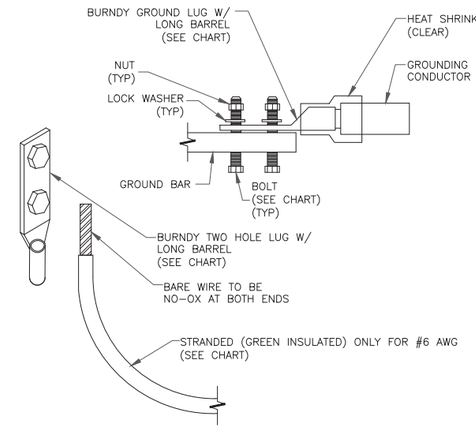


NOTE:

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

1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE

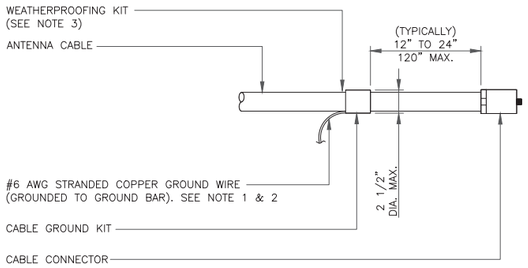
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



NOTES:

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

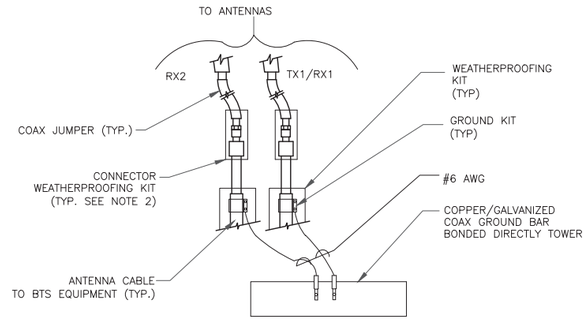
2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



NOTES:

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

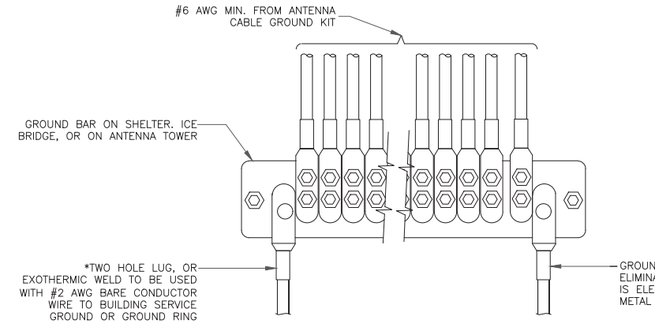
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



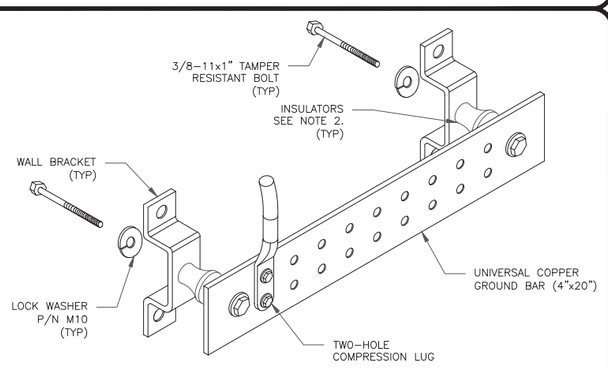
NOTES:

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

4 GROUND CABLE CONNECTION
SCALE: NOT TO SCALE



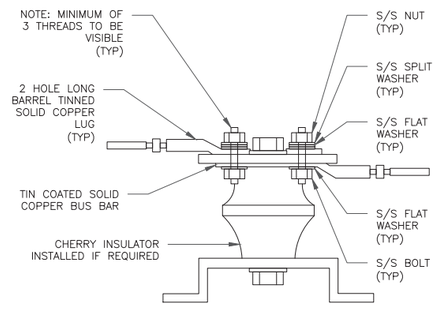
5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



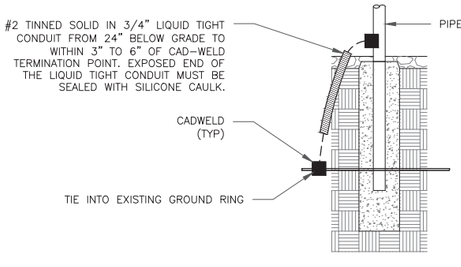
NOTES:

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.

6 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE

T-Mobile
4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

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

T-MOBILE SITE NUMBER: **CT11434A**

BU #: **876341**
MIDDLETOWN 2 - MARINO PROPERTY

1969 SAYBROOK RD
MIDDLETOWN, CT
06457

EXISTING
150'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/6/21	AN	CONSTRUCTION	JTS

STATE OF CONNECTICUT · No. 23924 · LICENSED PROFESSIONAL ENGINEER
10/6/21

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

SHEET NUMBER: G-3
REVISION: 0

Exhibit D

Structural Analysis Report

Date: **September 13, 2021**

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

Subject:	**Structural Analysis Report**	
Carrier Designation:	**Site Number:**	CT11434A
	Site Name:	CT03XC169
Crown Castle Designation:	**BU Number:**	876341
	Site Name:	Middletown 2 - Marino Property
	JDE Job Number:	678525
	Work Order Number:	2015698
	Order Number:	579389 Rev. 0
Engineering Firm Designation:	**B+T Group Project Number:**	79732.008.01
Site Data:	**1969 Saybrook Rd, Middletown, Middlesex County, CT** **Latitude *41° 30' 38.3"*, Longitude *-72° 35' 36.1"*** **150 Foot - Monopole Tower**	

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

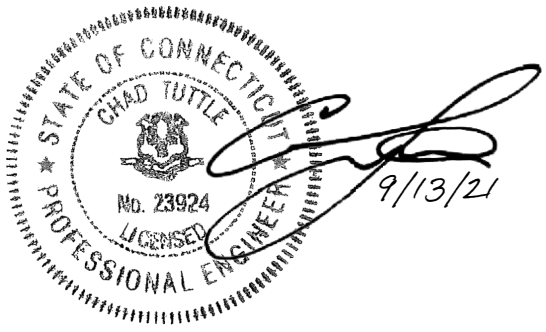
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity – 75.1%**

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2015 International Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Harrison Holmlund

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



Chad E. Tuttle, P.E.

tnxTower Report - version 8.1.1.0

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 150 ft. Monopole tower designed by Summit.

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

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	120 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
150.0	150.0	3	Ericsson	AIR6449 B41_T-MOBILE	3	1-5/8
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	Ericsson	Radio 4480_TMOV2		
		3	RFS Celwave	APXVAALL24_43-U-NA20_TMO		
		1	--	Platform Mount [LP 1201-1_HR-1]		
104.0	104.0	1	Lucent	KS24019-L112A	1	1/2
		1	--	Side Arm Mount [SO 701-1]		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
141.0	145.0	1	Lucent	KS24019-L112A	10 2 1	1-5/8 1-1/2 1/2
	142.0	3	Commscope	CBC78T-DS-43-2X		
		6	Commscope	JAHH-65B-R3B		
		1	Raycap	RVZDC-6627-PF-48		
		6	RFS Celwave	APL868013-42T0		
		3	Samsung Telecom.	RFV01U-D1A		
		3	Samsung Telecom.	RFV01U-D2A		
		3	VZW	Sub6 Antenna - VZS01		
	141.0	1	--	Platform Mount [LP 1201-1]		
132.0	134.0	1	Raycap	DC6-48-60-18-8F	12 2 1	1-5/8 3/4 3/8
	133.0	3	CCI Antennas	OPA-65R-LCUU-H6		
		3	Ericsson	RRUS 11		
		6	Powerwave Tech.	7770.00		
		3	Powerwave Tech.	LGP21401		
	132.0	3	Ericsson	RRUS 12 B2		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		1	--	Platform Mount [LP 1201-1_HR-1]		
	129.0	3	Powerwave Tech.	LGP21401		
	128.0	3	Ericsson	RRUS A2 B2		
121.0	121.0	3	Fujitsu	TA08025-B604	1	1-1/2
		3	Fujitsu	TA08025-B605		
		3	JMA Wireless	MX08FRO665-20		
		1	Raycap	RDIDC-9181-PF-48		
		3	--	Commscope MC-K6MHDX-9-96 (3)		
111.0	111.0	1	--	Platform Mount [LP 303-1_HR-1]	12 1	1-5/8 1-1/4
	110.0	3	Ericsson	KRY 112 144/1		
		3	Ericsson	KRY 112 489/2		
		3	Ericsson	RADIO 4449 B12/B71		
		3	RFS Celwave	APXVAARR24_43-U-NA20		
88.0	95.0	2	Sinclair	SC479-HF1LDF	2 1	7/8 1/2
	88.0	1	Bird Tech. Group	428E-83I-01-T		
		2	--	Side Arm Mount [SO 306-1]		
82.0	92.0	1	RFI Antennas	BA80-41-DIN	1	7/8
	82.0	1	--	Side Arm Mount [SO 306-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Tower Manufacturer Drawing	1614554	CCI Sites
Mount Analysis Report	9964160	CCI Sites
Tower Modification Drawing	1595639	CCI Sites
Post Modification Inspection	2504220	CCI Sites
Tower Modification Drawing	5069317	CCI Sites
Post Modification Inspection	5311239	CCI Sites
Tower Modification Drawing	5570674	CCI Sites
Post Modification Inspection	5810606	CCI Sites
Foundation Drawing	1613596	CCI Sites
Geotech Report	1532967	CCI Sites
Crown CAD Package	Date: 08/27/2021	CCI Sites

3.1) Analysis Method

tnxTower (version 8.0.9.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

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

3.2) Assumptions

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

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	150 - 145	Pole	TP23x22x0.25	1	-5.020	--	4.6	Pass
L2	145 - 140	Pole	TP24x23x0.25	2	-9.625	--	9.6	Pass
L3	140 - 135	Pole	TP25x24x0.25	3	-10.119	--	15.6	Pass
L4	135 - 130	Pole	TP26x25x0.25	4	-14.546	--	22.7	Pass
L5	130 - 125	Pole	TP27.001x26x0.25	5	-15.166	--	30.2	Pass
L6	125 - 120	Pole	TP28.001x27.001x0.25	6	-18.220	--	37.5	Pass
L7	120 - 115	Pole	TP29.001x28.001x0.25	7	-18.913	--	44.9	Pass
L8	115 - 111.75	Pole	TP30.401x29.001x0.25	8	-19.396	--	49.5	Pass
L9	111.75 - 106.75	Pole	TP30.151x29.151x0.313	9	-23.499	--	43.4	Pass
L10	106.75 - 101.75	Pole	TP31.151x30.151x0.313	10	-24.526	--	48.7	Pass
L11	101.75 - 96.75	Pole	TP32.152x31.151x0.313	11	-25.500	--	53.5	Pass
L12	96.75 - 91.75	Pole	TP33.152x32.152x0.313	12	-26.503	--	58.0	Pass
L13	91.75 - 89.5	Pole	TP33.602x33.152x0.313	13	-26.963	--	60.0	Pass
L14	89.5 - 89.25	Pole + Reinf.	TP33.652x33.602x0.5	14	-27.040	--	50.2	Pass
L15	89.25 - 84.25	Pole + Reinf.	TP34.652x33.652x0.494	15	-28.871	--	53.9	Pass
L16	84.25 - 79.25	Pole + Reinf.	TP35.653x34.652x0.488	16	-30.478	--	57.4	Pass
L17	79.25 - 74.5	Pole + Reinf.	TP37.553x35.653x0.481	17	-31.839	--	60.5	Pass
L18	74.5 - 68.75	Pole	TP37.128x35.978x0.375	18	-34.297	--	57.7	Pass
L19	68.75 - 67.42	Pole	TP37.395x37.128x0.375	19	-34.634	--	58.4	Pass
L20	67.42 - 67.17	Pole	TP37.445x37.395x0.375	20	-34.710	--	58.5	Pass
L21	67.17 - 62.17	Pole	TP38.445x37.445x0.375	21	-36.001	--	60.9	Pass
L22	62.17 - 57.58	Pole	TP39.362x38.445x0.375	22	-37.215	--	63.0	Pass
L23	57.58 - 57.33	Pole + Reinf.	TP39.412x39.362x0.7	23	-37.334	--	48.3	Pass
L24	57.33 - 56.42	Pole + Reinf.	TP39.595x39.412x0.7	24	-37.724	--	48.6	Pass
L25	56.42 - 56.17	Pole + Reinf.	TP39.645x39.595x0.588	25	-37.817	--	58.3	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L26	56.17 - 51.17	Pole + Reinf.	TP40.645x39.645x0.575	26	-39.619	--	60.2	Pass
L27	51.17 - 46.17	Pole + Reinf.	TP41.645x40.645x0.575	27	-41.454	--	61.9	Pass
L28	46.17 - 41.17	Pole + Reinf.	TP42.645x41.645x0.563	28	-43.318	--	63.5	Pass
L29	41.17 - 38	Pole + Reinf.	TP44.379x42.645x0.563	29	-44.513	--	64.5	Pass
L30	38 - 31.5	Pole	TP43.829x42.529x0.438	30	-48.260	--	60.8	Pass
L31	31.5 - 26.5	Pole	TP44.829x43.829x0.438	31	-49.906	--	62.0	Pass
L32	26.5 - 26.25	Pole + Reinf.	TP44.879x44.829x0.688	32	-50.029	--	56.0	Pass
L33	26.25 - 21.25	Pole + Reinf.	TP45.879x44.879x0.688	33	-52.320	--	57.0	Pass
L34	21.25 - 16.25	Pole + Reinf.	TP46.88x45.879x0.675	34	-54.647	--	58.0	Pass
L35	16.25 - 11.25	Pole + Reinf.	TP47.88x46.88x0.675	35	-57.004	--	58.9	Pass
L36	11.25 - 6.25	Pole + Reinf.	TP48.88x47.88x0.663	36	-59.392	--	59.7	Pass
L37	6.25 - 1.25	Pole + Reinf.	TP49.88x48.88x0.663	37	-61.811	--	60.5	Pass
L38	1.25 - 0	Pole + Reinf.	TP50.13x49.88x0.663	38	-62.419	--	60.7	Pass
							Summary	
						Pole (L22)	63.0	Pass
						Reinforcement	64.5	Pass
						Rating =	64.5	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Anchor Rods	Base	63.8	Pass
1,2	Base Plate	Base	65.3	Pass
1,2	Base Foundation (Structure)	Base	75.1	Pass
1,2	Base Foundation (Soil Interaction)	Base	38.3	Pass

Structure Rating (max from all components) =	75.1%

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

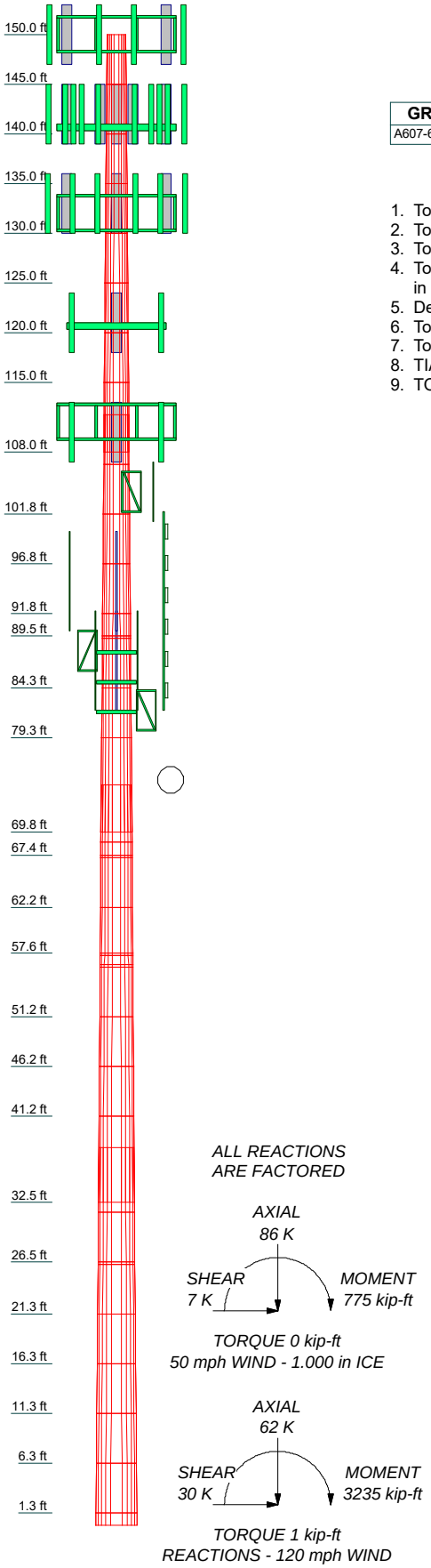
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Section		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Length (ft)		5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	6.667	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	1.250
Number of Sides		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Thickness (in)		0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.313	0.313	0.313	0.313	0.313	0.313	0.438	0.487	0.481	0.375	0.375	0.375	0.375	0.375	0.375	0.375	0.500	0.575	0.575	0.563	0.563	0.438	0.438	0.688	0.688	0.675	0.675	0.662	0.662	0.662
Socket Length (ft)									3.750									4.750												5.500										
Top Dia (in)		22.000	23.000	24.000	25.000	26.000	27.001	28.001	29.001	30.152	31.153	32.152	33.152	34.153	35.153	36.153	37.153	38.153	39.153	40.153	41.153	42.153	43.153	44.153	45.153	46.153	47.153	48.153	49.153	50.153	51.153	52.153	53.153	54.153	55.153	56.153	57.153	58.153	59.153
Bot Dia (in)		23.000	24.000	25.000	26.000	27.001	28.001	29.001	30.401	31.151	31.153	32.152	33.152	34.153	35.653	37.153	34.652	35.653	36.653	37.653	38.653	39.653	40.653	41.653	42.653	43.653	44.653	45.653	46.653	47.653	48.653	49.653	50.653	51.653	52.653	53.653	54.653	55.653	56.653
Grade		A607-60																												A607-65										
Weight (K)		0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.6	0.5	0.5	0.5	0.6	0.3	0.9	0.9	0.9	1.8	0.9	0.9	0.8	0.8	0.7	0.7	1.1	1.2	1.2	1.2	1.3	2.2	1.3	1.1	1.1	1.6	1.6	1.7	1.7	1.7	2.4



ALL REACTIONS ARE FACTORED

TORQUE 0 kip-ft
50 mph WIND - 1.000 in ICE

TORQUE 1 kip-ft
REACTIONS - 120 mph WIND

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-60	60 ksi	75 ksi	A607-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in Middlesex County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 64.5%

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

Job:	***79732.008.01 - MIDDLETOWN 2 - MARINO PROPERTY, CT (BU# 87634***		
Project:			
Client: Crown Castle		Drawn by: Regan	App'd:
Code: TIA-222-H		Date: 09/09/21	Scale: NTS
Path:			Dwg No. E-1

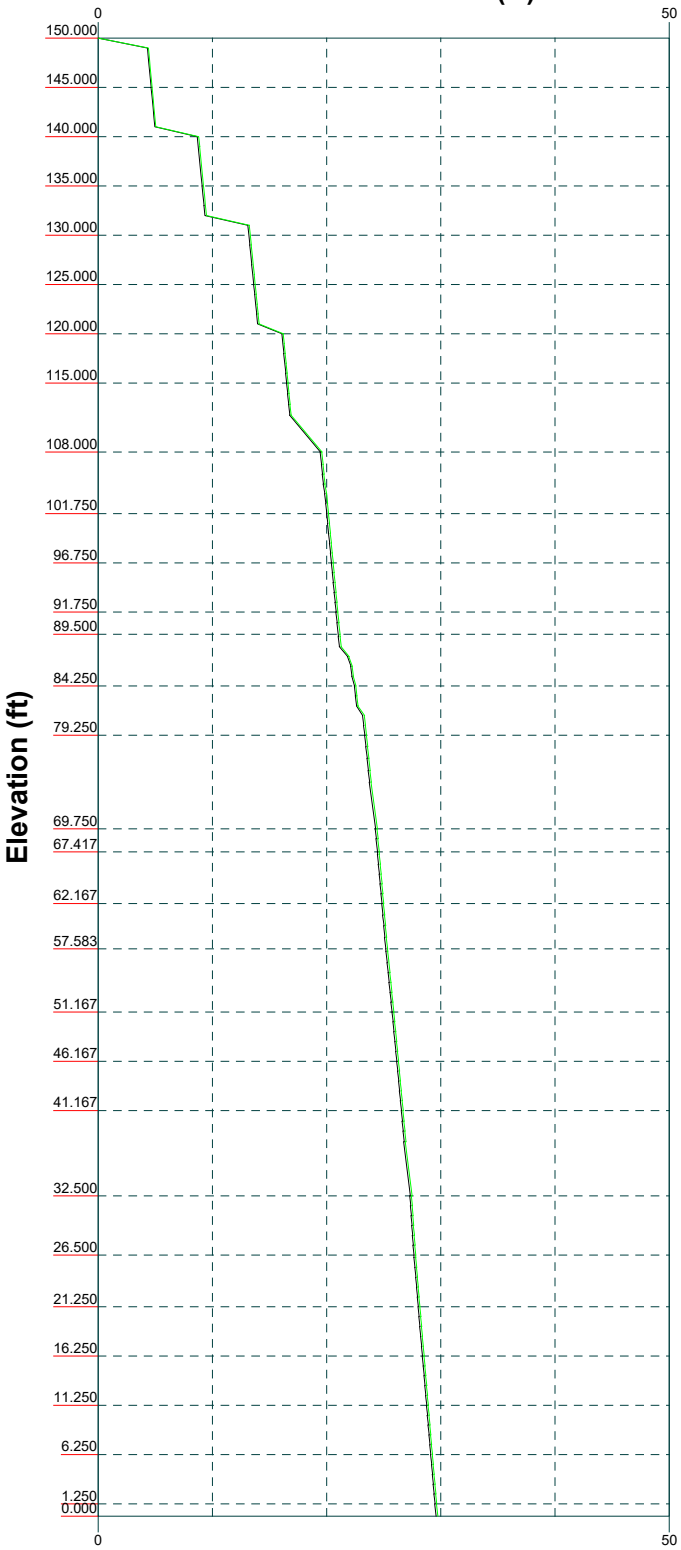
TIA-222-H - 120 mph/50 mph 1.000 in Ice Exposure B

Vx Vz

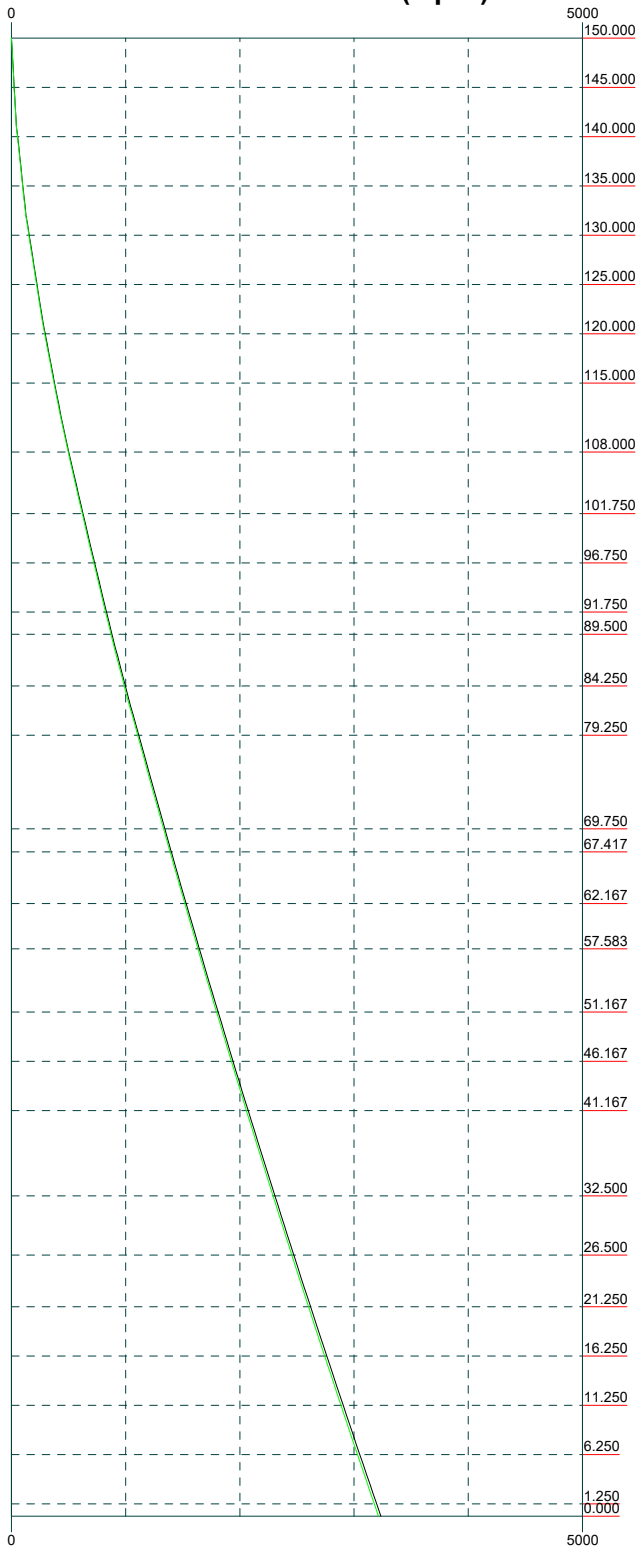
Maximum Values

Mx Mz

Global Mast Shear (K)



Global Mast Moment (kip-ft)



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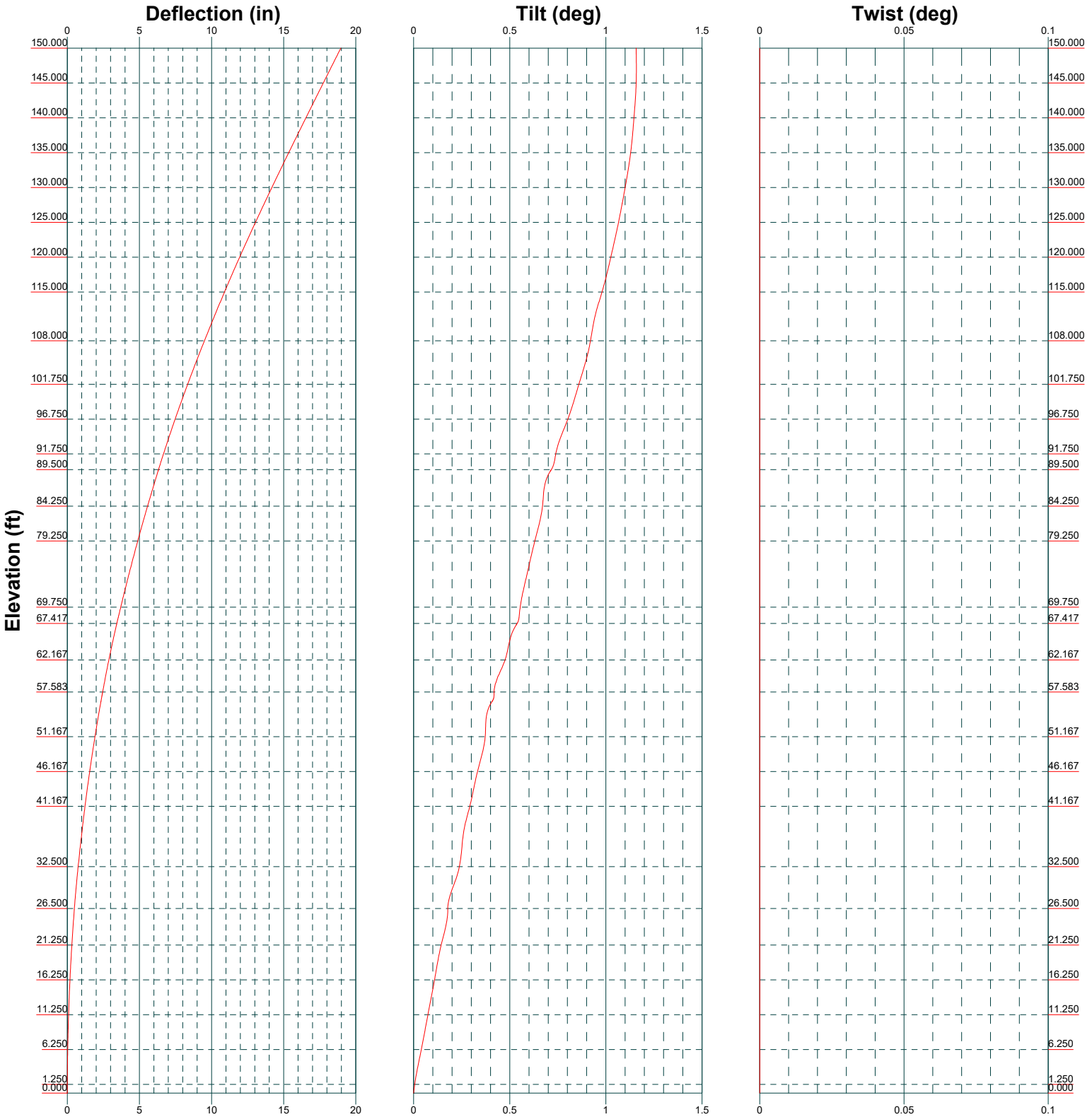
Project:			
Client: Crown Castle	Drawn by: Regan	App'd:	
Code: TIA-222-H	Date: 09/09/21	Scale: NTS	
Path:		Dwg No. E-4	

TIA-222-H - Service - 60 mph

Maximum Values



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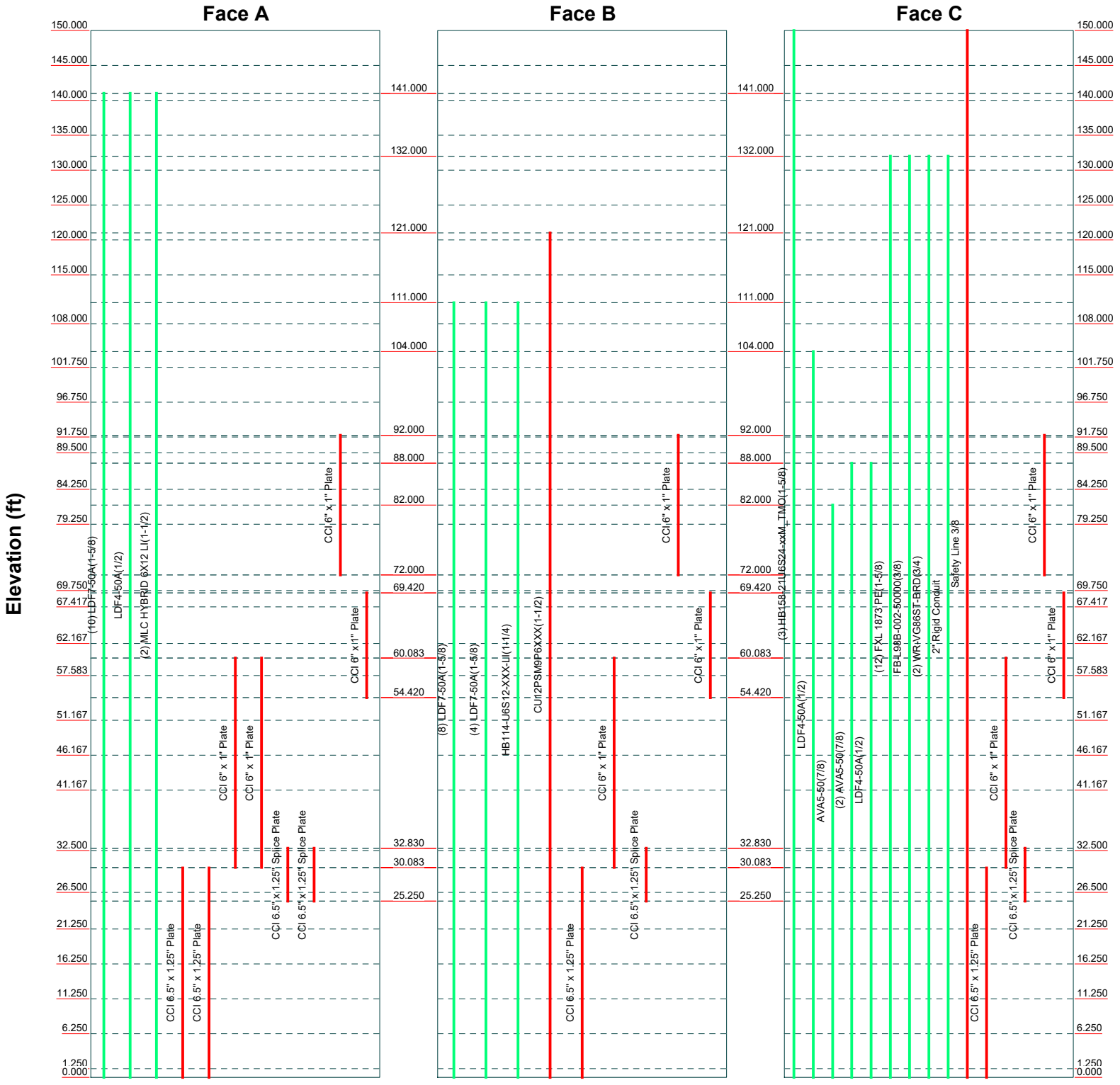
Job: *79732.008.01 - MIDDLETOWN 2 - MARINO PROPERTY, CT (BU# 87634*			
Project:			
Client: Crown Castle	Drawn by: Regan	App'd:	
Code: TIA-222-H	Date: 09/09/21	Scale: NTS	
Path:		Dwg No. E-5	

Feed Line Distribution Chart
0' - 150'

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



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FAX: (918) 295-0265

Job:	***79732.008.01 - MIDDLETOWN 2 - MARINO PROPERTY, CT (BU# 87634***		
Project:			
Client: Crown Castle		Drawn by: Regan	App'd:
Code: TIA-222-H		Date: 09/09/21	Scale: NTS
Path:			Dwg No. E-7

Tower Input Data

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

Tower is located in Middlesex County, Connecticut.
Tower base elevation above sea level: 370.000 ft.
Basic wind speed of 120 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.000 ft.
Nominal ice thickness of 1.000 in.
Ice thickness is considered to increase with height.
Ice density of 56.000 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 60 mph.
TIA-222-H Annex S.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
Maximum demand-capacity ratio is: 1.05.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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	150.000-145.000	5.000	0.000	12	22.000	23.000	0.250	1.000	A607-60 (60 ksi)
L2	145.000-140.000	5.000	0.000	12	23.000	24.000	0.250	1.000	A607-60 (60 ksi)
L3	140.000-135.000	5.000	0.000	12	24.000	25.000	0.250	1.000	A607-60 (60 ksi)
L4	135.000-130.000	5.000	0.000	12	25.000	26.000	0.250	1.000	A607-60 (60 ksi)
L5	130.000-125.000	5.000	0.000	12	26.000	27.001	0.250	1.000	A607-60 (60 ksi)
L6	125.000-120.000	5.000	0.000	12	27.001	28.001	0.250	1.000	A607-60 (60 ksi)
L7	120.000-115.000	5.000	0.000	12	28.001	29.001	0.250	1.000	A607-60 (60 ksi)
L8	115.000-108.000	7.000	3.750	12	29.001	30.401	0.250	1.000	A607-60 (60 ksi)
L9	108.000-106.750	5.000	0.000	12	29.151	30.151	0.313	1.250	A607-60 (60 ksi)
L10	106.750-101.750	5.000	0.000	12	30.151	31.151	0.313	1.250	A607-60 (60 ksi)
L11	101.750-96.750	5.000	0.000	12	31.151	32.152	0.313	1.250	A607-60 (60 ksi)
L12	96.750-91.750	5.000	0.000	12	32.152	33.152	0.313	1.250	A607-60 (60 ksi)
L13	91.750-89.500	2.250	0.000	12	33.152	33.602	0.313	1.250	A607-60 (60 ksi)
L14	89.500-89.250	0.250	0.000	12	33.602	33.652	0.500	2.000	A607-60 (60 ksi)
L15	89.250-84.250	5.000	0.000	12	33.652	34.652	0.494	1.975	A607-60 (60 ksi)
L16	84.250-79.250	5.000	0.000	12	34.652	35.653	0.487	1.950	A607-60 (60 ksi)
L17	79.250-69.750	9.500	4.750	12	35.653	37.553	0.481	1.925	A607-60 (60 ksi)
L18	69.750-68.750	5.750	0.000	12	35.978	37.128	0.375	1.500	A607-65 (65 ksi)
L19	68.750-67.417	1.333	0.000	12	37.128	37.395	0.375	1.500	A607-65 (65 ksi)
L20	67.417-67.167	0.250	0.000	12	37.395	37.445	0.375	1.500	A607-65 (65 ksi)
L21	67.167-62.167	5.000	0.000	12	37.445	38.445	0.375	1.500	A607-65 (65 ksi)
L22	62.167-57.583	4.584	0.000	12	38.445	39.362	0.375	1.500	A607-65 (65 ksi)
L23	57.583-57.333	0.250	0.000	12	39.362	39.412	0.700	2.800	A607-65 (65 ksi)
L24	57.333-56.417	0.916	0.000	12	39.412	39.595	0.700	2.800	A607-65 (65 ksi)
L25	56.417-56.167	0.250	0.000	12	39.595	39.645	0.588	2.350	A607-65 (65 ksi)
L26	56.167-51.167	5.000	0.000	12	39.645	40.645	0.575	2.300	A607-65 (65 ksi)
L27	51.167-46.167	5.000	0.000	12	40.645	41.645	0.575	2.300	A607-65 (65 ksi)
L28	46.167-41.167	5.000	0.000	12	41.645	42.645	0.563	2.250	A607-65 (65 ksi)
L29	41.167-32.500	8.667	5.500	12	42.645	44.379	0.563	2.250	A607-65 (65 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	32.500-31.500	6.500	0.000	12	42.529	43.829	0.438	1.750	A607-65 (65 ksi)
L31	31.500-26.500	5.000	0.000	12	43.829	44.829	0.438	1.750	A607-65 (65 ksi)
L32	26.500-26.250	0.250	0.000	12	44.829	44.879	0.688	2.750	A607-65 (65 ksi)
L33	26.250-21.250	5.000	0.000	12	44.879	45.879	0.688	2.750	A607-65 (65 ksi)
L34	21.250-16.250	5.000	0.000	12	45.879	46.880	0.675	2.700	A607-65 (65 ksi)
L35	16.250-11.250	5.000	0.000	12	46.880	47.880	0.675	2.700	A607-65 (65 ksi)
L36	11.250-6.250	5.000	0.000	12	47.880	48.880	0.662	2.650	A607-65 (65 ksi)
L37	6.250-1.250	5.000	0.000	12	48.880	49.880	0.662	2.650	A607-65 (65 ksi)
L38	1.250-0.000	1.250		12	49.880	50.130	0.662	2.650	A607-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	22.688	17.509	1057.206	7.786	11.396	92.770	2142.186	8.617	5.226	20.904
	23.723	18.314	1209.854	8.145	11.914	101.548	2451.492	9.014	5.494	21.976
L2	23.723	18.314	1209.854	8.145	11.914	101.548	2451.492	9.014	5.494	21.976
	24.759	19.119	1376.530	8.503	12.432	110.724	2789.223	9.410	5.762	23.048
L3	24.759	19.119	1376.530	8.503	12.432	110.724	2789.223	9.410	5.762	23.048
	25.794	19.924	1557.852	8.861	12.950	120.296	3156.631	9.806	6.030	24.12
L4	25.794	19.924	1557.852	8.861	12.950	120.296	3156.631	9.806	6.030	24.12
	26.829	20.729	1754.436	9.219	13.468	130.265	3554.964	10.202	6.298	25.193
L5	26.829	20.729	1754.436	9.219	13.468	130.265	3554.964	10.202	6.298	25.193
	27.865	21.534	1966.900	9.577	13.986	140.630	3985.472	10.598	6.566	26.265
L6	27.865	21.534	1966.900	9.577	13.986	140.630	3985.472	10.598	6.566	26.265
	28.900	22.339	2195.858	9.935	14.504	151.393	4449.404	10.995	6.834	27.337
L7	28.900	22.339	2195.858	9.935	14.504	151.393	4449.404	10.995	6.834	27.337
	29.936	23.144	2441.930	10.293	15.022	162.552	4948.011	11.391	7.102	28.409
L8	29.936	23.144	2441.930	10.293	15.022	162.552	4948.011	11.391	7.102	28.409
	31.385	24.272	2816.352	10.794	15.748	178.842	5706.693	11.946	7.477	29.91
L9	30.846	29.019	3080.391	10.324	15.100	203.997	6241.707	14.282	6.975	22.32
	31.105	30.025	3412.163	10.682	15.618	218.472	6913.967	14.777	7.243	23.178
L10	31.105	30.025	3412.163	10.682	15.618	218.472	6913.967	14.777	7.243	23.178
	32.140	31.032	3766.941	11.040	16.136	233.443	7632.844	15.273	7.511	24.035
L11	32.140	31.032	3766.941	11.040	16.136	233.443	7632.844	15.273	7.511	24.035
	33.176	32.038	4145.496	11.398	16.655	248.911	8399.899	15.768	7.779	24.893
L12	33.176	32.038	4145.496	11.398	16.655	248.911	8399.899	15.768	7.779	24.893
	34.211	33.045	4548.600	11.757	17.173	264.874	9216.696	16.264	8.047	25.751
L13	34.211	33.045	4548.600	11.757	17.173	264.874	9216.696	16.264	8.047	25.751
	34.677	33.498	4738.210	11.918	17.406	272.220	9600.899	16.486	8.168	26.137
L14	34.611	53.294	7453.757	11.851	17.406	428.233	15103.332	26.230	7.665	15.331
	34.663	53.375	7487.593	11.868	17.432	429.538	15171.893	26.269	7.679	15.357
L15	34.665	52.718	7398.180	11.871	17.432	424.408	14990.719	25.946	7.695	15.586
	35.701	54.308	8088.098	12.229	17.950	450.593	16388.679	26.729	7.964	16.129
L16	35.703	53.630	7990.101	12.231	17.950	445.134	16190.111	26.395	7.980	16.37
	36.738	55.200	8712.631	12.589	18.468	471.769	17654.153	27.168	8.248	16.92
L17	36.740	54.502	8605.517	12.591	18.468	465.969	17437.111	26.824	8.265	17.174

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
	38.708	57.447	10077.245	13.272	19.452	518.045	20419.231	28.274	8.774	18.233
L18	38.098	42.990	6955.434	12.746	18.636	373.216	14093.595	21.159	8.637	23.032
	38.305	44.379	7651.544	13.158	19.232	397.849	15504.103	21.842	8.945	23.854
L19	38.305	44.379	7651.544	13.158	19.232	397.849	15504.103	21.842	8.945	23.854
	38.581	44.701	7819.289	13.253	19.370	403.672	15844.000	22.001	9.017	24.045
L20	38.581	44.701	7819.289	13.253	19.370	403.672	15844.000	22.001	9.017	24.045
	38.633	44.762	7851.020	13.271	19.396	404.769	15908.295	22.030	9.030	24.08
L21	38.633	44.762	7851.020	13.271	19.396	404.769	15908.295	22.030	9.030	24.08
	39.669	45.969	8503.787	13.629	19.914	427.018	17230.978	22.625	9.298	24.795
L22	39.669	45.969	8503.787	13.629	19.914	427.018	17230.978	22.625	9.298	24.795
	40.618	47.076	9133.164	13.957	20.389	447.938	18506.266	23.170	9.544	25.45
L23	40.503	87.143	16625.756	13.841	20.389	815.414	33688.290	42.889	8.673	12.39
	40.555	87.256	16690.354	13.859	20.415	817.544	33819.182	42.945	8.686	12.409
L24	40.555	87.256	16690.354	13.859	20.415	817.544	33819.182	42.945	8.686	12.409
	40.745	87.669	16928.470	13.924	20.510	825.370	34301.670	43.148	8.735	12.479
L25	40.784	73.792	14331.464	13.965	20.510	698.750	29039.432	36.318	9.037	15.382
	40.836	73.887	14386.654	13.983	20.536	700.556	29151.261	36.365	9.050	15.405
L26	40.841	72.338	14094.078	13.987	20.536	686.309	28558.424	35.603	9.084	15.798
	41.876	74.190	15204.402	14.345	21.054	722.157	30808.240	36.514	9.352	16.264
L27	41.876	74.190	15204.402	14.345	21.054	722.157	30808.240	36.514	9.352	16.264
	42.911	76.041	16371.559	14.703	21.572	758.919	33173.218	37.425	9.620	16.73
L28	42.916	74.411	16030.284	14.708	21.572	743.099	32481.701	36.623	9.653	17.162
	43.951	76.223	17229.776	15.066	22.090	779.971	34912.197	37.514	9.921	17.638
L29	43.951	76.223	17229.776	15.066	22.090	779.971	34912.197	37.514	9.921	17.638
	45.746	79.363	19448.110	15.686	22.988	846.000	39407.143	39.060	10.386	18.464
L30	45.014	59.296	13409.052	15.069	22.030	608.674	27170.375	29.184	10.225	23.372
	45.221	61.128	14690.446	15.534	22.703	647.058	29766.826	30.085	10.574	24.168
L31	45.221	61.128	14690.446	15.534	22.703	647.058	29766.826	30.085	10.574	24.168
	46.256	62.537	15729.862	15.892	23.222	677.383	31872.965	30.779	10.842	24.781
L32	46.168	97.719	24303.084	15.803	23.222	1046.576	49244.637	48.094	10.172	14.795
	46.220	97.829	24385.776	15.821	23.247	1048.967	49412.193	48.149	10.185	14.815
L33	46.220	97.829	24385.776	15.821	23.247	1048.967	49412.193	48.149	10.185	14.815
	47.255	100.043	26079.238	16.179	23.766	1097.357	52843.606	49.238	10.453	15.205
L34	47.260	98.252	25626.323	16.183	23.766	1078.299	51925.877	48.356	10.487	15.536
	48.295	100.425	27365.193	16.541	24.284	1126.901	55449.299	49.426	10.755	15.933
L35	48.295	100.425	27365.193	16.541	24.284	1126.901	55449.299	49.426	10.755	15.933
	49.331	102.599	29180.996	16.899	24.802	1176.574	59128.609	50.496	11.023	16.33
L36	49.335	100.726	28663.365	16.904	24.802	1155.703	58079.749	49.574	11.056	16.689
	50.370	102.860	30523.660	17.262	25.320	1205.528	61849.211	50.624	11.324	17.093
L37	50.370	102.860	30523.660	17.262	25.320	1205.528	61849.211	50.624	11.324	17.093
	51.406	104.993	32462.753	17.620	25.838	1256.404	65778.338	51.674	11.592	17.498
L38	51.406	104.993	32462.753	17.620	25.838	1256.404	65778.338	51.674	11.592	17.498
	51.665	105.527	32960.030	17.709	25.967	1269.288	66785.956	51.937	11.659	17.599

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 150.000-145.000				1	1	1			
L2 145.000-140.000				1	1	1			
L3 140.000-135.000				1	1	1			
L4 135.000-130.000				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
L5 130.000-125.000				1	1	1			
L6 125.000-120.000				1	1	1			
L7 120.000-115.000				1	1	1			
L8 115.000-108.000				1	1	1			
L9 108.000-106.750				1	1	1			
L10 106.750-101.750				1	1	1			
L11 101.750-96.750				1	1	1			
L12 96.750-91.750				1	1	1			
L13 91.750-89.500				1	1	1			
L14 89.500-89.250				1	1	0.966256			
L15 89.250-84.250				1	1	0.968189			
L16 84.250-79.250				1	1	0.970768			
L17 79.250-69.750				1	1	0.974419			
L18 69.750-68.750				1	1	1			
L19 68.750-67.417				1	1	1			
L20 67.417-67.167				1	1	1			
L21 67.167-62.167				1	1	1			
L22 62.167-57.583				1	1	1			
L23 57.583-57.333				1	1	1.02224			
L24 57.333-56.417				1	1	1.01995			
L25 56.417-56.167				1	1	0.967057			
L26 56.167-51.167				1	1	0.979388			
L27 51.167-46.167				1	1	0.97142			
L28 46.167-41.167				1	1	0.984956			
L29 41.167-32.500				1	1	0.980236			
L30 32.500-31.500				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
L31 31.500-26.500				1	1	1			
L32 26.500-26.250				1	1	0.972651			
L33 26.250-21.250				1	1	0.965209			
L34 21.250-16.250				1	1	0.975567			
L35 16.250-11.250				1	1	0.96863			
L36 11.250-6.250				1	1	0.979877			
L37 6.250-1.250				1	1	0.973384			
L38 1.250-0.000				1	1	0.971802			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
*										
CU12PSM9P6XXX(1-1/2)	B	No	Surface Ar (CaAa)	121.000 - 0.000	1	1	0.200 0.230	1.600		0.002
*										
Safety Line 3/8	C	No	Surface Ar (CaAa)	150.000 - 0.000	1	1	0.150 0.160	0.375		0.000
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	30.000 - 0.000	1	1	0.250 0.300	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	30.000 - 0.000	1	1	-0.500 -0.450	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	30.000 - 0.000	1	1	0.000 0.050	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	30.000 - 0.000	1	1	-0.300 -0.250	6.500	15.500	0.000
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	60.083 - 30.083	1	1	0.250 0.300	6.000	14.000	0.000
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	60.083 - 30.083	1	1	-0.500 -0.450	6.000	14.000	0.000
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	60.083 - 30.083	1	1	0.000 0.050	6.000	14.000	0.000
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	60.083 - 30.083	1	1	-0.300 -0.250	6.000	14.000	0.000
*										
CCI 6.5" x 1.25" Splice Plate	A	No	Surface Af (CaAa)	32.830 - 25.250	1	1	0.250 0.300	6.500	15.500	0.000
CCI 6.5" x 1.25" Splice Plate	A	No	Surface Af (CaAa)	32.830 - 25.250	1	1	-0.500 -0.450	6.500	15.500	0.000
CCI 6.5" x 1.25" Splice Plate	B	No	Surface Af (CaAa)	32.830 - 25.250	1	1	0.000 0.050	6.500	15.500	0.000
CCI 6.5" x 1.25" Splice	C	No	Surface Af	32.830 -	1	1	-0.300	6.500	15.500	0.000

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
Plate			(CaAa)	25.250			-0.250			
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	92.000 - 72.000	1	1	-0.500 -0.450	6.000	14.000	0.000
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	92.000 - 72.000	1	1	-0.500 -0.450	6.000	14.000	0.000
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	92.000 - 72.000	1	1	-0.500 -0.450	6.000	14.000	0.000
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	69.420 - 54.420	1	1	-0.350 -0.300	6.000	14.000	0.000
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	69.420 - 54.420	1	1	-0.500 -0.450	6.000	14.000	0.000
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	69.420 - 54.420	1	1	-0.500 -0.450	6.000	14.000	0.000
*										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
LDF7-50A(1-5/8)	A	No	No	Inside Pole	141.000 - 0.000	10	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
LDF4-50A(1/2)	A	No	No	Inside Pole	141.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
MLC HYBRID 6X12 LI(1-1/2)	A	No	No	Inside Pole	141.000 - 0.000	2	No Ice	0.000	0.002
							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002
*									
LDF7-50A(1-5/8)	B	No	No	Inside Pole	111.000 - 0.000	8	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
LDF7-50A(1-5/8)	B	No	No	Inside Pole	111.000 - 0.000	4	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
HB114-U6S12-XXX -LI(1-1/4)	B	No	No	Inside Pole	111.000 - 0.000	1	No Ice	0.000	0.002
							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002
*									
HB158-21U6S24-xx M_TMO(1-5/8)	C	No	No	Inside Pole	150.000 - 0.000	3	No Ice	0.000	0.003
							1/2" Ice	0.000	0.003
							1" Ice	0.000	0.003
*									
LDF4-50A(1/2)	C	No	No	Inside Pole	104.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
*									
AVA5-50(7/8)	C	No	No	Inside Pole	82.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
AVA5-50(7/8)	C	No	No	Inside Pole	88.000 - 0.000	2	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
LDF4-50A(1/2)	C	No	No	Inside Pole	88.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
*									
FXL 1873 PE(1-5/8)	C	No	No	Inside Pole	132.000 - 0.000	12	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
FB-L98B-002-50000 (3/8)	C	No	No	Inside Pole	132.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
WR-VG86ST-BRD(3/4)	C	No	No	Inside Pole	132.000 - 0.000	2	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
2" Rigid Conduit	C	No	No	Inside Pole	132.000 - 0.000	1	No Ice	0.000	0.003
							1/2" Ice	0.000	0.003
							1" Ice	0.000	0.003
*									

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
L1	150.000-145.000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.188	0.000	0.039
L2	145.000-140.000	A	0.000	0.000	0.000	0.000	0.012
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.188	0.000	0.039
L3	140.000-135.000	A	0.000	0.000	0.000	0.000	0.060
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.188	0.000	0.039
L4	135.000-130.000	A	0.000	0.000	0.000	0.000	0.060
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.188	0.000	0.063
L5	130.000-125.000	A	0.000	0.000	0.000	0.000	0.060
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.188	0.000	0.099
L6	125.000-120.000	A	0.000	0.000	0.000	0.000	0.060
		B	0.000	0.000	0.160	0.000	0.002
		C	0.000	0.000	0.188	0.000	0.099
L7	120.000-115.000	A	0.000	0.000	0.000	0.000	0.060
		B	0.000	0.000	0.800	0.000	0.012
		C	0.000	0.000	0.188	0.000	0.099
L8	115.000-108.000	A	0.000	0.000	0.000	0.000	0.084
		B	0.000	0.000	1.120	0.000	0.051
		C	0.000	0.000	0.263	0.000	0.139
L9	108.000-106.750	A	0.000	0.000	0.000	0.000	0.015
		B	0.000	0.000	0.200	0.000	0.017
		C	0.000	0.000	0.047	0.000	0.025
L10	106.750-101.750	A	0.000	0.000	0.000	0.000	0.060
		B	0.000	0.000	0.800	0.000	0.069
		C	0.000	0.000	0.188	0.000	0.099
L11	101.750-96.750	A	0.000	0.000	0.000	0.000	0.060

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	0.800	0.000	0.069
		C	0.000	0.000	0.188	0.000	0.100
L12	96.750-91.750	A	0.000	0.000	0.250	0.000	0.060
		B	0.000	0.000	1.050	0.000	0.069
		C	0.000	0.000	0.438	0.000	0.100
L13	91.750-89.500	A	0.000	0.000	2.250	0.000	0.027
		B	0.000	0.000	2.610	0.000	0.031
		C	0.000	0.000	2.334	0.000	0.045
L14	89.500-89.250	A	0.000	0.000	0.250	0.000	0.003
		B	0.000	0.000	0.290	0.000	0.003
		C	0.000	0.000	0.259	0.000	0.005
L15	89.250-84.250	A	0.000	0.000	5.000	0.000	0.060
		B	0.000	0.000	5.800	0.000	0.069
		C	0.000	0.000	5.188	0.000	0.102
L16	84.250-79.250	A	0.000	0.000	5.000	0.000	0.060
		B	0.000	0.000	5.800	0.000	0.069
		C	0.000	0.000	5.188	0.000	0.104
L17	79.250-69.750	A	0.000	0.000	7.250	0.000	0.114
		B	0.000	0.000	8.770	0.000	0.132
		C	0.000	0.000	7.606	0.000	0.199
L18	69.750-68.750	A	0.000	0.000	0.670	0.000	0.012
		B	0.000	0.000	0.830	0.000	0.014
		C	0.000	0.000	0.708	0.000	0.021
L19	68.750-67.417	A	0.000	0.000	1.333	0.000	0.016
		B	0.000	0.000	1.546	0.000	0.019
		C	0.000	0.000	1.383	0.000	0.028
L20	67.417-67.167	A	0.000	0.000	0.250	0.000	0.003
		B	0.000	0.000	0.290	0.000	0.003
		C	0.000	0.000	0.259	0.000	0.005
L21	67.167-62.167	A	0.000	0.000	5.000	0.000	0.060
		B	0.000	0.000	5.800	0.000	0.069
		C	0.000	0.000	5.188	0.000	0.105
L22	62.167-57.583	A	0.000	0.000	9.584	0.000	0.055
		B	0.000	0.000	7.817	0.000	0.064
		C	0.000	0.000	7.256	0.000	0.096
L23	57.583-57.333	A	0.000	0.000	0.750	0.000	0.003
		B	0.000	0.000	0.540	0.000	0.003
		C	0.000	0.000	0.509	0.000	0.005
L24	57.333-56.417	A	0.000	0.000	2.748	0.000	0.011
		B	0.000	0.000	1.979	0.000	0.013
		C	0.000	0.000	1.866	0.000	0.019
L25	56.417-56.167	A	0.000	0.000	0.750	0.000	0.003
		B	0.000	0.000	0.540	0.000	0.003
		C	0.000	0.000	0.509	0.000	0.005
L26	56.167-51.167	A	0.000	0.000	11.747	0.000	0.060
		B	0.000	0.000	7.547	0.000	0.069
		C	0.000	0.000	6.934	0.000	0.105
L27	51.167-46.167	A	0.000	0.000	10.000	0.000	0.060
		B	0.000	0.000	5.800	0.000	0.069
		C	0.000	0.000	5.188	0.000	0.105
L28	46.167-41.167	A	0.000	0.000	10.000	0.000	0.060
		B	0.000	0.000	5.800	0.000	0.069
		C	0.000	0.000	5.188	0.000	0.105
L29	41.167-32.500	A	0.000	0.000	17.915	0.000	0.104
		B	0.000	0.000	10.344	0.000	0.120
		C	0.000	0.000	9.282	0.000	0.182
L30	32.500-31.500	A	0.000	0.000	3.760	0.000	0.012
		B	0.000	0.000	2.040	0.000	0.014
		C	0.000	0.000	1.918	0.000	0.021
L31	31.500-26.500	A	0.000	0.000	19.218	0.000	0.060
		B	0.000	0.000	10.409	0.000	0.069

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	9.796	0.000	0.105
L32	26.500-26.250	A	0.000	0.000	0.982	0.000	0.003
		B	0.000	0.000	0.531	0.000	0.003
		C	0.000	0.000	0.500	0.000	0.005
L33	26.250-21.250	A	0.000	0.000	12.593	0.000	0.060
		B	0.000	0.000	7.097	0.000	0.069
		C	0.000	0.000	6.484	0.000	0.105
L34	21.250-16.250	A	0.000	0.000	10.833	0.000	0.060
		B	0.000	0.000	6.217	0.000	0.069
		C	0.000	0.000	5.604	0.000	0.105
L35	16.250-11.250	A	0.000	0.000	10.833	0.000	0.060
		B	0.000	0.000	6.217	0.000	0.069
		C	0.000	0.000	5.604	0.000	0.105
L36	11.250-6.250	A	0.000	0.000	10.833	0.000	0.060
		B	0.000	0.000	6.217	0.000	0.069
		C	0.000	0.000	5.604	0.000	0.105
L37	6.250-1.250	A	0.000	0.000	10.833	0.000	0.060
		B	0.000	0.000	6.217	0.000	0.069
		C	0.000	0.000	5.604	0.000	0.105
L38	1.250-0.000	A	0.000	0.000	2.708	0.000	0.015
		B	0.000	0.000	1.554	0.000	0.017
		C	0.000	0.000	1.401	0.000	0.026

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	150.000-145.000	A	0.987	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	1.175	0.000	0.047
L2	145.000-140.000	A	0.984	0.000	0.000	0.000	0.000	0.012
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	1.171	0.000	0.047
L3	140.000-135.000	A	0.980	0.000	0.000	0.000	0.000	0.060
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	1.168	0.000	0.047
L4	135.000-130.000	A	0.977	0.000	0.000	0.000	0.000	0.060
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	1.164	0.000	0.071
L5	130.000-125.000	A	0.973	0.000	0.000	0.000	0.000	0.060
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	1.161	0.000	0.107
L6	125.000-120.000	A	0.969	0.000	0.000	0.000	0.000	0.060
		B		0.000	0.000	0.354	0.000	0.005
		C		0.000	0.000	1.157	0.000	0.107
L7	120.000-115.000	A	0.965	0.000	0.000	0.000	0.000	0.060
		B		0.000	0.000	1.765	0.000	0.027
		C		0.000	0.000	1.153	0.000	0.107
L8	115.000-108.000	A	0.960	0.000	0.000	0.000	0.000	0.084
		B		0.000	0.000	2.464	0.000	0.072
		C		0.000	0.000	1.607	0.000	0.149
L9	108.000-106.750	A	0.956	0.000	0.000	0.000	0.000	0.015
		B		0.000	0.000	0.440	0.000	0.021
		C		0.000	0.000	0.287	0.000	0.027
L10	106.750-101.750	A	0.954	0.000	0.000	0.000	0.000	0.060
		B		0.000	0.000	1.754	0.000	0.084
		C		0.000	0.000	1.141	0.000	0.107

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
L11	101.750-96.750	A	0.949	0.000	0.000	0.000	0.000	0.060
		B		0.000	0.000	1.749	0.000	0.084
		C		0.000	0.000	1.136	0.000	0.107
L12	96.750-91.750	A	0.944	0.000	0.000	0.297	0.000	0.062
		B		0.000	0.000	2.041	0.000	0.086
		C		0.000	0.000	1.429	0.000	0.109
L13	91.750-89.500	A	0.940	0.000	0.000	2.673	0.000	0.042
		B		0.000	0.000	3.456	0.000	0.052
		C		0.000	0.000	3.181	0.000	0.063
L14	89.500-89.250	A	0.939	0.000	0.000	0.297	0.000	0.005
		B		0.000	0.000	0.384	0.000	0.006
		C		0.000	0.000	0.353	0.000	0.007
L15	89.250-84.250	A	0.936	0.000	0.000	5.936	0.000	0.092
		B		0.000	0.000	7.672	0.000	0.116
		C		0.000	0.000	7.060	0.000	0.142
L16	84.250-79.250	A	0.931	0.000	0.000	5.931	0.000	0.092
		B		0.000	0.000	7.661	0.000	0.116
		C		0.000	0.000	7.049	0.000	0.143
L17	79.250-69.750	A	0.922	0.000	0.000	8.587	0.000	0.160
		B		0.000	0.000	11.859	0.000	0.204
		C		0.000	0.000	10.695	0.000	0.259
L18	69.750-68.750	A	0.915	0.000	0.000	0.787	0.000	0.016
		B		0.000	0.000	1.131	0.000	0.021
		C		0.000	0.000	1.009	0.000	0.027
L19	68.750-67.417	A	0.914	0.000	0.000	1.564	0.000	0.024
		B		0.000	0.000	2.020	0.000	0.031
		C		0.000	0.000	1.857	0.000	0.038
L20	67.417-67.167	A	0.913	0.000	0.000	0.293	0.000	0.005
		B		0.000	0.000	0.379	0.000	0.006
		C		0.000	0.000	0.348	0.000	0.007
L21	67.167-62.167	A	0.909	0.000	0.000	5.862	0.000	0.091
		B		0.000	0.000	7.572	0.000	0.114
		C		0.000	0.000	6.959	0.000	0.143
L22	62.167-57.583	A	0.902	0.000	0.000	11.274	0.000	0.114
		B		0.000	0.000	9.883	0.000	0.120
		C		0.000	0.000	9.321	0.000	0.146
L23	57.583-57.333	A	0.898	0.000	0.000	0.883	0.000	0.008
		B		0.000	0.000	0.673	0.000	0.007
		C		0.000	0.000	0.642	0.000	0.009
L24	57.333-56.417	A	0.898	0.000	0.000	3.234	0.000	0.028
		B		0.000	0.000	2.464	0.000	0.026
		C		0.000	0.000	2.352	0.000	0.032
L25	56.417-56.167	A	0.897	0.000	0.000	0.882	0.000	0.008
		B		0.000	0.000	0.672	0.000	0.007
		C		0.000	0.000	0.642	0.000	0.009
L26	56.167-51.167	A	0.892	0.000	0.000	13.830	0.000	0.131
		B		0.000	0.000	9.630	0.000	0.124
		C		0.000	0.000	9.018	0.000	0.153
L27	51.167-46.167	A	0.884	0.000	0.000	11.767	0.000	0.120
		B		0.000	0.000	7.567	0.000	0.113
		C		0.000	0.000	6.955	0.000	0.142
L28	46.167-41.167	A	0.874	0.000	0.000	11.748	0.000	0.119
		B		0.000	0.000	7.548	0.000	0.112
		C		0.000	0.000	6.936	0.000	0.141
L29	41.167-32.500	A	0.859	0.000	0.000	20.956	0.000	0.209
		B		0.000	0.000	13.354	0.000	0.195
		C		0.000	0.000	12.292	0.000	0.245
L30	32.500-31.500	A	0.847	0.000	0.000	4.292	0.000	0.036
		B		0.000	0.000	2.478	0.000	0.029
		C		0.000	0.000	2.356	0.000	0.034
L31	31.500-26.500	A	0.839	0.000	0.000	21.784	0.000	0.180

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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	12.531	0.000	0.142
		C		0.000	0.000	11.918	0.000	0.171
L32	26.500-26.250	A	0.831	0.000	0.000	1.110	0.000	0.009
		B		0.000	0.000	0.637	0.000	0.007
		C		0.000	0.000	0.606	0.000	0.009
L33	26.250-21.250	A	0.822	0.000	0.000	14.418	0.000	0.132
		B		0.000	0.000	8.831	0.000	0.117
		C		0.000	0.000	8.219	0.000	0.147
L34	21.250-16.250	A	0.803	0.000	0.000	12.440	0.000	0.118
		B		0.000	0.000	7.823	0.000	0.110
		C		0.000	0.000	7.211	0.000	0.140
L35	16.250-11.250	A	0.779	0.000	0.000	12.391	0.000	0.116
		B		0.000	0.000	7.774	0.000	0.109
		C		0.000	0.000	7.162	0.000	0.138
L36	11.250-6.250	A	0.744	0.000	0.000	12.322	0.000	0.113
		B		0.000	0.000	7.705	0.000	0.107
		C		0.000	0.000	7.093	0.000	0.137
L37	6.250-1.250	A	0.684	0.000	0.000	12.201	0.000	0.108
		B		0.000	0.000	7.584	0.000	0.103
		C		0.000	0.000	6.972	0.000	0.133
L38	1.250-0.000	A	0.572	0.000	0.000	2.994	0.000	0.025
		B		0.000	0.000	1.840	0.000	0.024
		C		0.000	0.000	1.687	0.000	0.032

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	150.000-145.000	-0.073	0.217	-0.311	0.925
L2	145.000-140.000	-0.073	0.217	-0.312	0.928
L3	140.000-135.000	-0.073	0.217	-0.313	0.931
L4	135.000-130.000	-0.073	0.217	-0.314	0.933
L5	130.000-125.000	-0.073	0.217	-0.315	0.935
L6	125.000-120.000	0.131	0.199	0.004	0.894
L7	120.000-115.000	0.882	0.133	1.140	0.744
L8	115.000-108.000	0.883	0.134	1.144	0.747
L9	108.000-106.750	0.884	0.134	1.147	0.749
L10	106.750-101.750	0.884	0.134	1.147	0.748
L11	101.750-96.750	0.884	0.135	1.150	0.750
L12	96.750-91.750	0.841	0.128	1.105	0.720
L13	91.750-89.500	0.437	0.067	0.625	0.407
L14	89.500-89.250	0.439	0.067	0.628	0.409
L15	89.250-84.250	0.442	0.068	0.632	0.411
L16	84.250-79.250	0.448	0.069	0.640	0.416
L17	79.250-69.750	0.516	0.079	0.726	0.471
L18	69.750-68.750	-0.471	-1.127	-0.136	-0.576
L19	68.750-67.417	-0.820	-1.452	-0.500	-0.950
L20	67.417-67.167	-0.821	-1.455	-0.501	-0.953
L21	67.167-62.167	-0.827	-1.465	-0.506	-0.961
L22	62.167-57.583	1.243	-0.746	1.346	-0.409
L23	57.583-57.333	2.315	-0.374	2.341	-0.114
L24	57.333-56.417	2.320	-0.375	2.345	-0.114
L25	56.417-56.167	2.324	-0.376	2.349	-0.114
L26	56.167-51.167	3.542	0.319	3.478	0.582
L27	51.167-46.167	4.499	0.849	4.344	1.102
L28	46.167-41.167	4.558	0.861	4.399	1.114

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L29	41.167-32.500	4.700	0.888	4.527	1.135
L30	32.500-31.500	5.752	1.095	5.529	1.256
L31	31.500-26.500	5.844	1.112	5.605	1.266
L32	26.500-26.250	5.929	1.128	5.685	1.279
L33	26.250-21.250	5.175	0.980	4.949	1.189
L34	21.250-16.250	4.955	0.936	4.737	1.163
L35	16.250-11.250	5.012	0.947	4.782	1.168
L36	11.250-6.250	5.068	0.958	4.822	1.168
L37	6.250-1.250	5.122	0.969	4.850	1.157
L38	1.250-0.000	5.156	0.975	4.836	1.119

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	29	Safety Line 3/8	145.00 - 150.00	1.0000	1.0000
L2	29	Safety Line 3/8	140.00 - 145.00	1.0000	1.0000
L3	29	Safety Line 3/8	135.00 - 140.00	1.0000	1.0000
L4	29	Safety Line 3/8	130.00 - 135.00	1.0000	1.0000
L5	29	Safety Line 3/8	125.00 - 130.00	1.0000	1.0000
L6	11	CU12PSM9P6XXX(1-1/2)	120.00 - 121.00	1.0000	1.0000
L6	29	Safety Line 3/8	120.00 - 125.00	1.0000	1.0000
L7	11	CU12PSM9P6XXX(1-1/2)	115.00 - 120.00	1.0000	1.0000
L7	29	Safety Line 3/8	115.00 - 120.00	1.0000	1.0000
L8	11	CU12PSM9P6XXX(1-1/2)	108.00 - 115.00	1.0000	1.0000
L8	29	Safety Line 3/8	108.00 - 115.00	1.0000	1.0000
L9	11	CU12PSM9P6XXX(1-1/2)	106.75 - 108.00	1.0000	1.0000
L9	29	Safety Line 3/8	106.75 - 108.00	1.0000	1.0000
L10	11	CU12PSM9P6XXX(1-1/2)	101.75 - 106.75	1.0000	1.0000
L10	29	Safety Line 3/8	101.75 - 106.75	1.0000	1.0000
L11	11	CU12PSM9P6XXX(1-1/2)	96.75 - 101.75	1.0000	1.0000
L11	29	Safety Line 3/8	96.75 - 101.75	1.0000	1.0000
L12	11	CU12PSM9P6XXX(1-1/2)	91.75 - 96.75	1.0000	1.0000
L12	29	Safety Line 3/8	91.75 - 96.75	1.0000	1.0000
L12	46	CCI 6" x 1" Plate	91.75 - 92.00	1.0000	1.0000
L12	47	CCI 6" x 1" Plate	91.75 - 92.00	1.0000	1.0000
L12	48	CCI 6" x 1" Plate	91.75 - 92.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L13	11	CU12PSM9P6XXX(1-1/2)	89.50 - 91.75	1.0000	1.0000
L13	29	Safety Line 3/8	89.50 - 91.75	1.0000	1.0000
L13	46	CCI 6" x 1" Plate	89.50 - 91.75	1.0000	1.0000
L13	47	CCI 6" x 1" Plate	89.50 - 91.75	1.0000	1.0000
L13	48	CCI 6" x 1" Plate	89.50 - 91.75	1.0000	1.0000
L14	11	CU12PSM9P6XXX(1-1/2)	89.25 - 89.50	1.0000	1.0000
L14	29	Safety Line 3/8	89.25 - 89.50	1.0000	1.0000
L14	46	CCI 6" x 1" Plate	89.25 - 89.50	1.0000	1.0000
L14	47	CCI 6" x 1" Plate	89.25 - 89.50	1.0000	1.0000
L14	48	CCI 6" x 1" Plate	89.25 - 89.50	1.0000	1.0000
L15	11	CU12PSM9P6XXX(1-1/2)	84.25 - 89.25	1.0000	1.0000
L15	29	Safety Line 3/8	84.25 - 89.25	1.0000	1.0000
L15	46	CCI 6" x 1" Plate	84.25 - 89.25	1.0000	1.0000
L15	47	CCI 6" x 1" Plate	84.25 - 89.25	1.0000	1.0000
L15	48	CCI 6" x 1" Plate	84.25 - 89.25	1.0000	1.0000
L16	11	CU12PSM9P6XXX(1-1/2)	79.25 - 84.25	1.0000	1.0000
L16	29	Safety Line 3/8	79.25 - 84.25	1.0000	1.0000
L16	46	CCI 6" x 1" Plate	79.25 - 84.25	1.0000	1.0000
L16	47	CCI 6" x 1" Plate	79.25 - 84.25	1.0000	1.0000
L16	48	CCI 6" x 1" Plate	79.25 - 84.25	1.0000	1.0000
L17	11	CU12PSM9P6XXX(1-1/2)	69.75 - 79.25	1.0000	1.0000
L17	29	Safety Line 3/8	69.75 - 79.25	1.0000	1.0000
L17	46	CCI 6" x 1" Plate	72.00 - 79.25	1.0000	1.0000
L17	47	CCI 6" x 1" Plate	72.00 - 79.25	1.0000	1.0000
L17	48	CCI 6" x 1" Plate	72.00 - 79.25	1.0000	1.0000
L18	11	CU12PSM9P6XXX(1-1/2)	68.75 - 69.75	1.0000	1.0000
L18	29	Safety Line 3/8	68.75 - 69.75	1.0000	1.0000
L18	50	CCI 6" x 1" Plate	68.75 - 69.42	1.0000	1.0000
L18	51	CCI 6" x 1" Plate	68.75 - 69.42	1.0000	1.0000
L18	52	CCI 6" x 1" Plate	68.75 - 69.42	1.0000	1.0000
L19	11	CU12PSM9P6XXX(1-1/2)	67.42 - 68.75	1.0000	1.0000
L19	29	Safety Line 3/8	67.42 - 68.75	1.0000	1.0000
L19	50	CCI 6" x 1" Plate	67.42 - 68.75	1.0000	1.0000
L19	51	CCI 6" x 1" Plate	67.42 - 68.75	1.0000	1.0000
L19	52	CCI 6" x 1" Plate	67.42 - 68.75	1.0000	1.0000
L20	11	CU12PSM9P6XXX(1-1/2)	67.17 - 67.42	1.0000	1.0000
L20	29	Safety Line 3/8	67.17 - 67.42	1.0000	1.0000
L20	50	CCI 6" x 1" Plate	67.17 - 67.42	1.0000	1.0000
L20	51	CCI 6" x 1" Plate	67.17 - 67.42	1.0000	1.0000
L20	52	CCI 6" x 1" Plate	67.17 - 67.42	1.0000	1.0000
L21	11	CU12PSM9P6XXX(1-1/2)	62.17 - 67.17	1.0000	1.0000
L21	29	Safety Line 3/8	62.17 - 67.17	1.0000	1.0000
L21	50	CCI 6" x 1" Plate	62.17 - 67.17	1.0000	1.0000
L21	51	CCI 6" x 1" Plate	62.17 - 67.17	1.0000	1.0000
L21	52	CCI 6" x 1" Plate	62.17 - 67.17	1.0000	1.0000
L22	11	CU12PSM9P6XXX(1-1/2)	57.58 - 62.17	1.0000	1.0000
L22	29	Safety Line 3/8	57.58 - 62.17	1.0000	1.0000
L22	36	CCI 6" x 1" Plate	57.58 - 60.08	1.0000	1.0000
L22	37	CCI 6" x 1" Plate	57.58 - 60.08	1.0000	1.0000
L22	38	CCI 6" x 1" Plate	57.58 - 60.08	1.0000	1.0000
L22	39	CCI 6" x 1" Plate	57.58 - 60.08	1.0000	1.0000
L22	50	CCI 6" x 1" Plate	57.58 - 62.17	1.0000	1.0000
L22	51	CCI 6" x 1" Plate	57.58 - 62.17	1.0000	1.0000
L22	52	CCI 6" x 1" Plate	57.58 - 62.17	1.0000	1.0000
L23	11	CU12PSM9P6XXX(1-1/2)	57.33 - 57.58	1.0000	1.0000
L23	29	Safety Line 3/8	57.33 - 57.58	1.0000	1.0000
L23	36	CCI 6" x 1" Plate	57.33 - 57.58	1.0000	1.0000
L23	37	CCI 6" x 1" Plate	57.33 - 57.58	1.0000	1.0000
L23	38	CCI 6" x 1" Plate	57.33 - 57.58	1.0000	1.0000
L23	39	CCI 6" x 1" Plate	57.33 - 57.58	1.0000	1.0000
L23	50	CCI 6" x 1" Plate	57.33 - 57.58	1.0000	1.0000
L23	51	CCI 6" x 1" Plate	57.33 - 57.58	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L23	52	CCI 6" x 1" Plate	57.33 - 57.58	1.0000	1.0000
L24	11	CU12PSM9P6XXX(1-1/2)	56.42 - 57.33	1.0000	1.0000
L24	29	Safety Line 3/8	56.42 - 57.33	1.0000	1.0000
L24	36	CCI 6" x 1" Plate	56.42 - 57.33	1.0000	1.0000
L24	37	CCI 6" x 1" Plate	56.42 - 57.33	1.0000	1.0000
L24	38	CCI 6" x 1" Plate	56.42 - 57.33	1.0000	1.0000
L24	39	CCI 6" x 1" Plate	56.42 - 57.33	1.0000	1.0000
L24	50	CCI 6" x 1" Plate	56.42 - 57.33	1.0000	1.0000
L24	51	CCI 6" x 1" Plate	56.42 - 57.33	1.0000	1.0000
L24	52	CCI 6" x 1" Plate	56.42 - 57.33	1.0000	1.0000
L25	11	CU12PSM9P6XXX(1-1/2)	56.17 - 56.42	1.0000	1.0000
L25	29	Safety Line 3/8	56.17 - 56.42	1.0000	1.0000
L25	36	CCI 6" x 1" Plate	56.17 - 56.42	1.0000	1.0000
L25	37	CCI 6" x 1" Plate	56.17 - 56.42	1.0000	1.0000
L25	38	CCI 6" x 1" Plate	56.17 - 56.42	1.0000	1.0000
L25	39	CCI 6" x 1" Plate	56.17 - 56.42	1.0000	1.0000
L25	50	CCI 6" x 1" Plate	56.17 - 56.42	1.0000	1.0000
L25	51	CCI 6" x 1" Plate	56.17 - 56.42	1.0000	1.0000
L25	52	CCI 6" x 1" Plate	56.17 - 56.42	1.0000	1.0000
L26	11	CU12PSM9P6XXX(1-1/2)	51.17 - 56.17	1.0000	1.0000
L26	29	Safety Line 3/8	51.17 - 56.17	1.0000	1.0000
L26	36	CCI 6" x 1" Plate	51.17 - 56.17	1.0000	1.0000
L26	37	CCI 6" x 1" Plate	51.17 - 56.17	1.0000	1.0000
L26	38	CCI 6" x 1" Plate	51.17 - 56.17	1.0000	1.0000
L26	39	CCI 6" x 1" Plate	51.17 - 56.17	1.0000	1.0000
L26	50	CCI 6" x 1" Plate	54.42 - 56.17	1.0000	1.0000
L26	51	CCI 6" x 1" Plate	54.42 - 56.17	1.0000	1.0000
L26	52	CCI 6" x 1" Plate	54.42 - 56.17	1.0000	1.0000
L27	11	CU12PSM9P6XXX(1-1/2)	46.17 - 51.17	1.0000	1.0000
L27	29	Safety Line 3/8	46.17 - 51.17	1.0000	1.0000
L27	36	CCI 6" x 1" Plate	46.17 - 51.17	1.0000	1.0000
L27	37	CCI 6" x 1" Plate	46.17 - 51.17	1.0000	1.0000
L27	38	CCI 6" x 1" Plate	46.17 - 51.17	1.0000	1.0000
L27	39	CCI 6" x 1" Plate	46.17 - 51.17	1.0000	1.0000
L28	11	CU12PSM9P6XXX(1-1/2)	41.17 - 46.17	1.0000	1.0000
L28	29	Safety Line 3/8	41.17 - 46.17	1.0000	1.0000
L28	36	CCI 6" x 1" Plate	41.17 - 46.17	1.0000	1.0000
L28	37	CCI 6" x 1" Plate	41.17 - 46.17	1.0000	1.0000
L28	38	CCI 6" x 1" Plate	41.17 - 46.17	1.0000	1.0000
L28	39	CCI 6" x 1" Plate	41.17 - 46.17	1.0000	1.0000
L29	11	CU12PSM9P6XXX(1-1/2)	32.50 - 41.17	1.0000	1.0000
L29	29	Safety Line 3/8	32.50 - 41.17	1.0000	1.0000
L29	36	CCI 6" x 1" Plate	32.50 - 41.17	1.0000	1.0000
L29	37	CCI 6" x 1" Plate	32.50 - 41.17	1.0000	1.0000
L29	38	CCI 6" x 1" Plate	32.50 - 41.17	1.0000	1.0000
L29	39	CCI 6" x 1" Plate	32.50 - 41.17	1.0000	1.0000
L29	41	CCI 6.5" x 1.25" Splice Plate	32.50 - 32.83	1.0000	1.0000
L29	42	CCI 6.5" x 1.25" Splice Plate	32.50 - 32.83	1.0000	1.0000
L29	43	CCI 6.5" x 1.25" Splice Plate	32.50 - 32.83	1.0000	1.0000
L29	44	CCI 6.5" x 1.25" Splice Plate	32.50 - 32.83	1.0000	1.0000
L30	11	CU12PSM9P6XXX(1-1/2)	31.50 - 32.50	1.0000	1.0000
L30	29	Safety Line 3/8	31.50 - 32.50	1.0000	1.0000
L30	36	CCI 6" x 1" Plate	31.50 - 32.50	1.0000	1.0000
L30	37	CCI 6" x 1" Plate	31.50 - 32.50	1.0000	1.0000
L30	38	CCI 6" x 1" Plate	31.50 - 32.50	1.0000	1.0000
L30	39	CCI 6" x 1" Plate	31.50 - 32.50	1.0000	1.0000
L30	41	CCI 6.5" x 1.25" Splice Plate	31.50 - 32.50	1.0000	1.0000
L30	42	CCI 6.5" x 1.25" Splice Plate	31.50 - 32.50	1.0000	1.0000
L30	43	CCI 6.5" x 1.25" Splice Plate	31.50 - 32.50	1.0000	1.0000
L30	44	CCI 6.5" x 1.25" Splice Plate	31.50 - 32.50	1.0000	1.0000
L31	11	CU12PSM9P6XXX(1-1/2)	26.50 - 31.50	1.0000	1.0000
L31	29	Safety Line 3/8	26.50 - 31.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L31	31	CCI 6.5" x 1.25" Plate	26.50 - 30.00	1.0000	1.0000
L31	32	CCI 6.5" x 1.25" Plate	26.50 - 30.00	1.0000	1.0000
L31	33	CCI 6.5" x 1.25" Plate	26.50 - 30.00	1.0000	1.0000
L31	34	CCI 6.5" x 1.25" Plate	26.50 - 30.00	1.0000	1.0000
L31	36	CCI 6" x 1" Plate	30.08 - 31.50	1.0000	1.0000
L31	37	CCI 6" x 1" Plate	30.08 - 31.50	1.0000	1.0000
L31	38	CCI 6" x 1" Plate	30.08 - 31.50	1.0000	1.0000
L31	39	CCI 6" x 1" Plate	30.08 - 31.50	1.0000	1.0000
L31	41	CCI 6.5" x 1.25" Splice Plate	26.50 - 31.50	1.0000	1.0000
L31	42	CCI 6.5" x 1.25" Splice Plate	26.50 - 31.50	1.0000	1.0000
L31	43	CCI 6.5" x 1.25" Splice Plate	26.50 - 31.50	1.0000	1.0000
L31	44	CCI 6.5" x 1.25" Splice Plate	26.50 - 31.50	1.0000	1.0000
L32	11	CU12PSM9P6XXX(1-1/2)	26.25 - 26.50	1.0000	1.0000
L32	29	Safety Line 3/8	26.25 - 26.50	1.0000	1.0000
L32	31	CCI 6.5" x 1.25" Plate	26.25 - 26.50	1.0000	1.0000
L32	32	CCI 6.5" x 1.25" Plate	26.25 - 26.50	1.0000	1.0000
L32	33	CCI 6.5" x 1.25" Plate	26.25 - 26.50	1.0000	1.0000
L32	34	CCI 6.5" x 1.25" Plate	26.25 - 26.50	1.0000	1.0000
L32	41	CCI 6.5" x 1.25" Splice Plate	26.25 - 26.50	1.0000	1.0000
L32	42	CCI 6.5" x 1.25" Splice Plate	26.25 - 26.50	1.0000	1.0000
L32	43	CCI 6.5" x 1.25" Splice Plate	26.25 - 26.50	1.0000	1.0000
L32	44	CCI 6.5" x 1.25" Splice Plate	26.25 - 26.50	1.0000	1.0000
L33	11	CU12PSM9P6XXX(1-1/2)	21.25 - 26.25	1.0000	1.0000
L33	29	Safety Line 3/8	21.25 - 26.25	1.0000	1.0000
L33	31	CCI 6.5" x 1.25" Plate	21.25 - 26.25	1.0000	1.0000
L33	32	CCI 6.5" x 1.25" Plate	21.25 - 26.25	1.0000	1.0000
L33	33	CCI 6.5" x 1.25" Plate	21.25 - 26.25	1.0000	1.0000
L33	34	CCI 6.5" x 1.25" Plate	21.25 - 26.25	1.0000	1.0000
L33	41	CCI 6.5" x 1.25" Splice Plate	25.25 - 26.25	1.0000	1.0000
L33	42	CCI 6.5" x 1.25" Splice Plate	25.25 - 26.25	1.0000	1.0000
L33	43	CCI 6.5" x 1.25" Splice Plate	25.25 - 26.25	1.0000	1.0000
L33	44	CCI 6.5" x 1.25" Splice Plate	25.25 - 26.25	1.0000	1.0000
L34	11	CU12PSM9P6XXX(1-1/2)	16.25 - 21.25	1.0000	1.0000
L34	29	Safety Line 3/8	16.25 - 21.25	1.0000	1.0000
L34	31	CCI 6.5" x 1.25" Plate	16.25 - 21.25	1.0000	1.0000
L34	32	CCI 6.5" x 1.25" Plate	16.25 - 21.25	1.0000	1.0000
L34	33	CCI 6.5" x 1.25" Plate	16.25 - 21.25	1.0000	1.0000
L34	34	CCI 6.5" x 1.25" Plate	16.25 - 21.25	1.0000	1.0000
L35	11	CU12PSM9P6XXX(1-1/2)	11.25 - 16.25	1.0000	1.0000
L35	29	Safety Line 3/8	11.25 - 16.25	1.0000	1.0000
L35	31	CCI 6.5" x 1.25" Plate	11.25 - 16.25	1.0000	1.0000
L35	32	CCI 6.5" x 1.25" Plate	11.25 - 16.25	1.0000	1.0000
L35	33	CCI 6.5" x 1.25" Plate	11.25 - 16.25	1.0000	1.0000
L35	34	CCI 6.5" x 1.25" Plate	11.25 - 16.25	1.0000	1.0000
L36	11	CU12PSM9P6XXX(1-1/2)	6.25 - 11.25	1.0000	1.0000
L36	29	Safety Line 3/8	6.25 - 11.25	1.0000	1.0000
L36	31	CCI 6.5" x 1.25" Plate	6.25 - 11.25	1.0000	1.0000
L36	32	CCI 6.5" x 1.25" Plate	6.25 - 11.25	1.0000	1.0000
L36	33	CCI 6.5" x 1.25" Plate	6.25 - 11.25	1.0000	1.0000
L36	34	CCI 6.5" x 1.25" Plate	6.25 - 11.25	1.0000	1.0000
L37	11	CU12PSM9P6XXX(1-1/2)	1.25 - 6.25	1.0000	1.0000
L37	29	Safety Line 3/8	1.25 - 6.25	1.0000	1.0000
L37	31	CCI 6.5" x 1.25" Plate	1.25 - 6.25	1.0000	1.0000
L37	32	CCI 6.5" x 1.25" Plate	1.25 - 6.25	1.0000	1.0000
L37	33	CCI 6.5" x 1.25" Plate	1.25 - 6.25	1.0000	1.0000
L37	34	CCI 6.5" x 1.25" Plate	1.25 - 6.25	1.0000	1.0000
L38	11	CU12PSM9P6XXX(1-1/2)	0.00 - 1.25	1.0000	1.0000
L38	29	Safety Line 3/8	0.00 - 1.25	1.0000	1.0000
L38	31	CCI 6.5" x 1.25" Plate	0.00 - 1.25	1.0000	1.0000
L38	32	CCI 6.5" x 1.25" Plate	0.00 - 1.25	1.0000	1.0000
L38	33	CCI 6.5" x 1.25" Plate	0.00 - 1.25	1.0000	1.0000
L38	34	CCI 6.5" x 1.25" Plate	0.00 - 1.25	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
L12	46	CCI 6" x 1" Plate	91.75 - 92.00	Auto	0.0000
L12	47	CCI 6" x 1" Plate	91.75 - 92.00	Auto	0.0000
L12	48	CCI 6" x 1" Plate	91.75 - 92.00	Auto	0.0000
L13	46	CCI 6" x 1" Plate	89.50 - 91.75	Auto	0.0000
L13	47	CCI 6" x 1" Plate	89.50 - 91.75	Auto	0.0000
L13	48	CCI 6" x 1" Plate	89.50 - 91.75	Auto	0.0000
L14	46	CCI 6" x 1" Plate	89.25 - 89.50	Auto	0.0000
L14	47	CCI 6" x 1" Plate	89.25 - 89.50	Auto	0.0000
L14	48	CCI 6" x 1" Plate	89.25 - 89.50	Auto	0.0000
L15	46	CCI 6" x 1" Plate	84.25 - 89.25	Auto	0.0000
L15	47	CCI 6" x 1" Plate	84.25 - 89.25	Auto	0.0000
L15	48	CCI 6" x 1" Plate	84.25 - 89.25	Auto	0.0000
L16	46	CCI 6" x 1" Plate	79.25 - 84.25	Auto	0.0000
L16	47	CCI 6" x 1" Plate	79.25 - 84.25	Auto	0.0000
L16	48	CCI 6" x 1" Plate	79.25 - 84.25	Auto	0.0000
L17	46	CCI 6" x 1" Plate	72.00 - 79.25	Auto	0.0000
L17	47	CCI 6" x 1" Plate	72.00 - 79.25	Auto	0.0000
L17	48	CCI 6" x 1" Plate	72.00 - 79.25	Auto	0.0000
L18	50	CCI 6" x 1" Plate	68.75 - 69.42	Auto	0.0000
L18	51	CCI 6" x 1" Plate	68.75 - 69.42	Auto	0.0000
L18	52	CCI 6" x 1" Plate	68.75 - 69.42	Auto	0.0000
L19	50	CCI 6" x 1" Plate	67.42 - 68.75	Auto	0.0000
L19	51	CCI 6" x 1" Plate	67.42 - 68.75	Auto	0.0000
L19	52	CCI 6" x 1" Plate	67.42 - 68.75	Auto	0.0000
L20	50	CCI 6" x 1" Plate	67.17 - 67.42	Auto	0.0000
L20	51	CCI 6" x 1" Plate	67.17 - 67.42	Auto	0.0000
L20	52	CCI 6" x 1" Plate	67.17 - 67.42	Auto	0.0000
L21	50	CCI 6" x 1" Plate	62.17 - 67.17	Auto	0.0000
L21	51	CCI 6" x 1" Plate	62.17 - 67.17	Auto	0.0000
L21	52	CCI 6" x 1" Plate	62.17 - 67.17	Auto	0.0000
L22	36	CCI 6" x 1" Plate	57.58 - 60.08	Auto	0.0000
L22	37	CCI 6" x 1" Plate	57.58 - 60.08	Auto	0.0000
L22	38	CCI 6" x 1" Plate	57.58 - 60.08	Auto	0.0000
L22	39	CCI 6" x 1" Plate	57.58 - 60.08	Auto	0.0000
L22	50	CCI 6" x 1" Plate	57.58 - 62.17	Auto	0.0000
L22	51	CCI 6" x 1" Plate	57.58 - 62.17	Auto	0.0000
L22	52	CCI 6" x 1" Plate	57.58 - 62.17	Auto	0.0000
L23	36	CCI 6" x 1" Plate	57.33 - 57.58	Auto	0.0000
L23	37	CCI 6" x 1" Plate	57.33 - 57.58	Auto	0.0000
L23	38	CCI 6" x 1" Plate	57.33 - 57.58	Auto	0.0000
L23	39	CCI 6" x 1" Plate	57.33 - 57.58	Auto	0.0000
L23	50	CCI 6" x 1" Plate	57.33 - 57.58	Auto	0.0000
L23	51	CCI 6" x 1" Plate	57.33 - 57.58	Auto	0.0000
L23	52	CCI 6" x 1" Plate	57.33 - 57.58	Auto	0.0000
L24	36	CCI 6" x 1" Plate	56.42 - 57.33	Auto	0.0000
L24	37	CCI 6" x 1" Plate	56.42 - 57.33	Auto	0.0000
L24	38	CCI 6" x 1" Plate	56.42 - 57.33	Auto	0.0000
L24	39	CCI 6" x 1" Plate	56.42 - 57.33	Auto	0.0000
L24	50	CCI 6" x 1" Plate	56.42 - 57.33	Auto	0.0000
L24	51	CCI 6" x 1" Plate	56.42 - 57.33	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L24	52	CCI 6" x 1" Plate	56.42 - 57.33	Auto	0.0000
L25	36	CCI 6" x 1" Plate	56.17 - 56.42	Auto	0.0000
L25	37	CCI 6" x 1" Plate	56.17 - 56.42	Auto	0.0000
L25	38	CCI 6" x 1" Plate	56.17 - 56.42	Auto	0.0000
L25	39	CCI 6" x 1" Plate	56.17 - 56.42	Auto	0.0000
L25	50	CCI 6" x 1" Plate	56.17 - 56.42	Auto	0.0000
L25	51	CCI 6" x 1" Plate	56.17 - 56.42	Auto	0.0000
L25	52	CCI 6" x 1" Plate	56.17 - 56.42	Auto	0.0000
L26	36	CCI 6" x 1" Plate	51.17 - 56.17	Auto	0.0000
L26	37	CCI 6" x 1" Plate	51.17 - 56.17	Auto	0.0000
L26	38	CCI 6" x 1" Plate	51.17 - 56.17	Auto	0.0000
L26	39	CCI 6" x 1" Plate	51.17 - 56.17	Auto	0.0000
L26	50	CCI 6" x 1" Plate	54.42 - 56.17	Auto	0.0000
L26	51	CCI 6" x 1" Plate	54.42 - 56.17	Auto	0.0000
L26	52	CCI 6" x 1" Plate	54.42 - 56.17	Auto	0.0000
L27	36	CCI 6" x 1" Plate	46.17 - 51.17	Auto	0.0000
L27	37	CCI 6" x 1" Plate	46.17 - 51.17	Auto	0.0000
L27	38	CCI 6" x 1" Plate	46.17 - 51.17	Auto	0.0000
L27	39	CCI 6" x 1" Plate	46.17 - 51.17	Auto	0.0000
L28	36	CCI 6" x 1" Plate	41.17 - 46.17	Auto	0.0000
L28	37	CCI 6" x 1" Plate	41.17 - 46.17	Auto	0.0000
L28	38	CCI 6" x 1" Plate	41.17 - 46.17	Auto	0.0000
L28	39	CCI 6" x 1" Plate	41.17 - 46.17	Auto	0.0000
L29	36	CCI 6" x 1" Plate	32.50 - 41.17	Auto	0.0000
L29	37	CCI 6" x 1" Plate	32.50 - 41.17	Auto	0.0000
L29	38	CCI 6" x 1" Plate	32.50 - 41.17	Auto	0.0000
L29	39	CCI 6" x 1" Plate	32.50 - 41.17	Auto	0.0000
L29	41	CCI 6.5" x 1.25" Splice Plate	32.50 - 32.83	Auto	0.0000
L29	42	CCI 6.5" x 1.25" Splice Plate	32.50 - 32.83	Auto	0.0000
L29	43	CCI 6.5" x 1.25" Splice Plate	32.50 - 32.83	Auto	0.0000
L29	44	CCI 6.5" x 1.25" Splice Plate	32.50 - 32.83	Auto	0.0000
L30	36	CCI 6" x 1" Plate	31.50 - 32.50	Auto	0.0000
L30	37	CCI 6" x 1" Plate	31.50 - 32.50	Auto	0.0000
L30	38	CCI 6" x 1" Plate	31.50 - 32.50	Auto	0.0000
L30	39	CCI 6" x 1" Plate	31.50 - 32.50	Auto	0.0000
L30	41	CCI 6.5" x 1.25" Splice Plate	31.50 - 32.50	Auto	0.0000
L30	42	CCI 6.5" x 1.25" Splice Plate	31.50 - 32.50	Auto	0.0000
L30	43	CCI 6.5" x 1.25" Splice Plate	31.50 - 32.50	Auto	0.0000
L30	44	CCI 6.5" x 1.25" Splice Plate	31.50 - 32.50	Auto	0.0000
L31	31	CCI 6.5" x 1.25" Plate	26.50 - 30.00	Auto	0.0000
L31	32	CCI 6.5" x 1.25" Plate	26.50 - 30.00	Auto	0.0000
L31	33	CCI 6.5" x 1.25" Plate	26.50 - 30.00	Auto	0.0000
L31	34	CCI 6.5" x 1.25" Plate	26.50 - 30.00	Auto	0.0000
L31	36	CCI 6" x 1" Plate	30.08 - 31.50	Auto	0.0000
L31	37	CCI 6" x 1" Plate	30.08 - 31.50	Auto	0.0000
L31	38	CCI 6" x 1" Plate	30.08 - 31.50	Auto	0.0000
L31	39	CCI 6" x 1" Plate	30.08 - 31.50	Auto	0.0000
L31	41	CCI 6.5" x 1.25" Splice Plate	26.50 - 31.50	Auto	0.0000
L31	42	CCI 6.5" x 1.25" Splice Plate	26.50 - 31.50	Auto	0.0000
L31	43	CCI 6.5" x 1.25" Splice Plate	26.50 - 31.50	Auto	0.0000
L31	44	CCI 6.5" x 1.25" Splice Plate	26.50 - 31.50	Auto	0.0000
L32	31	CCI 6.5" x 1.25" Plate	26.25 - 26.50	Auto	0.0000
L32	32	CCI 6.5" x 1.25" Plate	26.25 - 26.50	Auto	0.0000
L32	33	CCI 6.5" x 1.25" Plate	26.25 - 26.50	Auto	0.0000
L32	34	CCI 6.5" x 1.25" Plate	26.25 - 26.50	Auto	0.0000
L32	41	CCI 6.5" x 1.25" Splice Plate	26.25 - 26.50	Auto	0.0000
L32	42	CCI 6.5" x 1.25" Splice Plate	26.25 - 26.50	Auto	0.0000
L32	43	CCI 6.5" x 1.25" Splice Plate	26.25 - 26.50	Auto	0.0000
L32	44	CCI 6.5" x 1.25" Splice Plate	26.25 - 26.50	Auto	0.0000
L33	31	CCI 6.5" x 1.25" Plate	21.25 - 26.25	Auto	0.0000
L33	32	CCI 6.5" x 1.25" Plate	21.25 - 26.25	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L33	33	CCI 6.5" x 1.25" Plate	21.25 - 26.25	Auto	0.0000
L33	34	CCI 6.5" x 1.25" Plate	21.25 - 26.25	Auto	0.0000
L33	41	CCI 6.5" x 1.25" Splice Plate	25.25 - 26.25	Auto	0.0000
L33	42	CCI 6.5" x 1.25" Splice Plate	25.25 - 26.25	Auto	0.0000
L33	43	CCI 6.5" x 1.25" Splice Plate	25.25 - 26.25	Auto	0.0000
L33	44	CCI 6.5" x 1.25" Splice Plate	25.25 - 26.25	Auto	0.0000
L34	31	CCI 6.5" x 1.25" Plate	16.25 - 21.25	Auto	0.0000
L34	32	CCI 6.5" x 1.25" Plate	16.25 - 21.25	Auto	0.0000
L34	33	CCI 6.5" x 1.25" Plate	16.25 - 21.25	Auto	0.0000
L34	34	CCI 6.5" x 1.25" Plate	16.25 - 21.25	Auto	0.0000
L35	31	CCI 6.5" x 1.25" Plate	11.25 - 16.25	Auto	0.0000
L35	32	CCI 6.5" x 1.25" Plate	11.25 - 16.25	Auto	0.0000
L35	33	CCI 6.5" x 1.25" Plate	11.25 - 16.25	Auto	0.0000
L35	34	CCI 6.5" x 1.25" Plate	11.25 - 16.25	Auto	0.0000
L36	31	CCI 6.5" x 1.25" Plate	6.25 - 11.25	Auto	0.0000
L36	32	CCI 6.5" x 1.25" Plate	6.25 - 11.25	Auto	0.0000
L36	33	CCI 6.5" x 1.25" Plate	6.25 - 11.25	Auto	0.0000
L36	34	CCI 6.5" x 1.25" Plate	6.25 - 11.25	Auto	0.0000
L37	31	CCI 6.5" x 1.25" Plate	1.25 - 6.25	Auto	0.0000
L37	32	CCI 6.5" x 1.25" Plate	1.25 - 6.25	Auto	0.0000
L37	33	CCI 6.5" x 1.25" Plate	1.25 - 6.25	Auto	0.0000
L37	34	CCI 6.5" x 1.25" Plate	1.25 - 6.25	Auto	0.0000
L38	31	CCI 6.5" x 1.25" Plate	0.00 - 1.25	Auto	0.0000
L38	32	CCI 6.5" x 1.25" Plate	0.00 - 1.25	Auto	0.0000
L38	33	CCI 6.5" x 1.25" Plate	0.00 - 1.25	Auto	0.0000
L38	34	CCI 6.5" x 1.25" Plate	0.00 - 1.25	Auto	0.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Top Hat	C	None			0.000	150.500	No Ice	3.000	3.000	0.081
							1/2" Ice	3.480	3.480	0.111
							1" Ice	3.960	3.960	0.141
*										
AIR6449 B41_T-MOBILE	A	From Leg	4.000	0.000	0.000	150.000	No Ice	5.270	2.030	0.115
			0.000				1/2" Ice	5.700	2.360	0.154
			0.000				1" Ice	6.140	2.700	0.197
AIR6449 B41_T-MOBILE	B	From Leg	4.000	0.000	0.000	150.000	No Ice	5.270	2.030	0.115
			0.000				1/2" Ice	5.700	2.360	0.154
			0.000				1" Ice	6.140	2.700	0.197
AIR6449 B41_T-MOBILE	C	From Leg	4.000	0.000	0.000	150.000	No Ice	5.270	2.030	0.115
			0.000				1/2" Ice	5.700	2.360	0.154
			0.000				1" Ice	6.140	2.700	0.197
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	A	From Leg	4.000	0.000	0.000	150.000	No Ice	14.690	6.870	0.183
			0.000				1/2" Ice	15.460	7.550	0.311
			0.000				1" Ice	16.230	8.250	0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	B	From Leg	4.000	0.000	0.000	150.000	No Ice	14.690	6.870	0.183
			0.000				1/2" Ice	15.460	7.550	0.311

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
			0.000			1" Ice	16.230	8.250	0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	C	From Leg	4.000	0.000	150.000	No Ice	14.690	6.870	0.183
			0.000			1/2" Ice	15.460	7.550	0.311
			0.000			1" Ice	16.230	8.250	0.453
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.000	0.000	150.000	No Ice	2.139	1.686	0.109
			0.000			1/2" Ice	2.321	1.850	0.131
			0.000			1" Ice	2.511	2.022	0.156
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.000	0.000	150.000	No Ice	2.139	1.686	0.109
			0.000			1/2" Ice	2.321	1.850	0.131
			0.000			1" Ice	2.511	2.022	0.156
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.000	0.000	150.000	No Ice	2.139	1.686	0.109
			0.000			1/2" Ice	2.321	1.850	0.131
			0.000			1" Ice	2.511	2.022	0.156
Radio 4480_TMOV2	A	From Leg	4.000	0.000	150.000	No Ice	2.878	1.397	0.081
			0.000			1/2" Ice	3.091	1.558	0.103
			0.000			1" Ice	3.312	1.727	0.128
Radio 4480_TMOV2	B	From Leg	4.000	0.000	150.000	No Ice	2.878	1.397	0.081
			0.000			1/2" Ice	3.091	1.558	0.103
			0.000			1" Ice	3.312	1.727	0.128
Radio 4480_TMOV2	A	From Leg	4.000	0.000	150.000	No Ice	2.878	1.397	0.081
			0.000			1/2" Ice	3.091	1.558	0.103
			0.000			1" Ice	3.312	1.727	0.128
(4) 6' x 2" Mount Pipe	A	From Leg	4.000	0.000	150.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			1.000			1" Ice	2.294	2.294	0.048
(4) 6' x 2" Mount Pipe	B	From Leg	4.000	0.000	150.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			1.000			1" Ice	2.294	2.294	0.048
(4) 6' x 2" Mount Pipe	C	From Leg	4.000	0.000	150.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			1.000			1" Ice	2.294	2.294	0.048
Platform Mount [LP 1201-1_HR-1]	C	None		0.000	150.000	No Ice	26.390	26.390	2.356
						1/2" Ice	31.400	31.400	3.061
						1" Ice	36.200	36.200	3.864
*									
(2) APL868013-42T0	A	From Leg	4.000	0.000	141.000	No Ice	2.640	3.290	0.012
			0.000			1/2" Ice	3.110	3.780	0.037
			1.000			1" Ice	3.610	4.290	0.067
(2) APL868013-42T0	B	From Leg	4.000	0.000	141.000	No Ice	2.640	3.290	0.012
			0.000			1/2" Ice	3.110	3.780	0.037
			1.000			1" Ice	3.610	4.290	0.067
(2) APL868013-42T0	C	From Leg	4.000	0.000	141.000	No Ice	2.640	3.290	0.012
			0.000			1/2" Ice	3.110	3.780	0.037
			1.000			1" Ice	3.610	4.290	0.067
KS24019-L112A	A	From Leg	4.000	0.000	141.000	No Ice	0.141	0.141	0.005
			0.000			1/2" Ice	0.198	0.198	0.007
			4.000			1" Ice	0.262	0.262	0.009
(2) JAHH-65B-R3B w/ Mount Pipe	A	From Leg	4.000	0.000	141.000	No Ice	5.500	4.380	0.096
			0.000			1/2" Ice	5.970	4.840	0.169
			1.000			1" Ice	6.450	5.300	0.254
(2) JAHH-65B-R3B w/ Mount Pipe	B	From Leg	4.000	0.000	141.000	No Ice	5.500	4.380	0.096
			0.000			1/2" Ice	5.970	4.840	0.169
			1.000			1" Ice	6.450	5.300	0.254
(2) JAHH-65B-R3B w/ Mount Pipe	C	From Leg	4.000	0.000	141.000	No Ice	5.500	4.380	0.096
			0.000			1/2" Ice	5.970	4.840	0.169
			1.000			1" Ice	6.450	5.300	0.254
Sub6 Antenna - VZS01 w/	A	From Leg	4.000	0.000	141.000	No Ice	4.915	2.687	0.101

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
Mount Pipe			0.000			1/2" Ice	5.264	3.151	0.141
			1.000			1" Ice	5.623	3.631	0.186
Sub6 Antenna - VZS01 w/ Mount Pipe	B	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	4.915 5.264	2.687 3.151	0.101 0.141
			1.000			1" Ice	5.623	3.631	0.186
Sub6 Antenna - VZS01 w/ Mount Pipe	C	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	4.915 5.264	2.687 3.151	0.101 0.141
			1.000			1" Ice	5.623	3.631	0.186
CBC78T-DS-43-2X	A	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	0.368 0.446	0.512 0.605	0.021 0.027
			1.000			1" Ice	0.531	0.705	0.035
CBC78T-DS-43-2X	B	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	0.368 0.446	0.512 0.605	0.021 0.027
			1.000			1" Ice	0.531	0.705	0.035
CBC78T-DS-43-2X	C	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	0.368 0.446	0.512 0.605	0.021 0.027
			1.000			1" Ice	0.531	0.705	0.035
RFV01U-D1A	A	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.875 2.045	1.250 1.393	0.084 0.103
			1.000			1" Ice	2.223	1.543	0.124
RFV01U-D1A	B	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.875 2.045	1.250 1.393	0.084 0.103
			1.000			1" Ice	2.223	1.543	0.124
RFV01U-D1A	C	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.875 2.045	1.250 1.393	0.084 0.103
			1.000			1" Ice	2.223	1.543	0.124
RFV01U-D2A	A	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.875 2.045	1.013 1.145	0.070 0.087
			1.000			1" Ice	2.223	1.284	0.106
RFV01U-D2A	B	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.875 2.045	1.013 1.145	0.070 0.087
			1.000			1" Ice	2.223	1.284	0.106
RFV01U-D2A	C	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.875 2.045	1.013 1.145	0.070 0.087
			1.000			1" Ice	2.223	1.284	0.106
RVZDC-6627-PF-48	A	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	3.792 4.044	2.514 2.727	0.032 0.063
			1.000			1" Ice	4.303	2.947	0.099
(2) 6' x 2" Mount Pipe	A	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.425 1.925	1.425 1.925	0.022 0.033
			0.000			1" Ice	2.294	2.294	0.048
(2) 6' x 2" Mount Pipe	B	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.425 1.925	1.425 1.925	0.022 0.033
			0.000			1" Ice	2.294	2.294	0.048
(2) 6' x 2" Mount Pipe	C	From Leg	4.000 0.000	0.000	141.000	No Ice 1/2" Ice	1.425 1.925	1.425 1.925	0.022 0.033
			0.000			1" Ice	2.294	2.294	0.048
Platform Mount [LP 1201-1]	C	None		0.000	141.000	No Ice 1/2" Ice 1" Ice	18.380 22.110 25.870	18.380 22.110 25.870	2.100 2.652 3.263
*									
(2) 7770.00 w/ Mount Pipe	A	From Leg	4.000 0.000	0.000	132.000	No Ice 1/2" Ice	5.746 6.179	4.254 5.014	0.055 0.103
			1.000			1" Ice	6.607	5.711	0.157
(2) 7770.00 w/ Mount Pipe	B	From Leg	4.000 0.000	0.000	132.000	No Ice 1/2" Ice	5.746 6.179	4.254 5.014	0.055 0.103
			1.000			1" Ice	6.607	5.711	0.157

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) 7770.00 w/ Mount Pipe	C	From Leg	4.000	0.000	132.000	No Ice	5.746	4.254	0.055
			0.000			1/2" Ice	6.179	5.014	0.103
			1.000			1" Ice	6.607	5.711	0.157
OPA-65R-LCUU-H6 w/ Mount Pipe	A	From Leg	4.000	0.000	132.000	No Ice	9.190	6.210	0.106
			0.000			1/2" Ice	9.940	6.930	0.175
			1.000			1" Ice	10.710	7.660	0.256
OPA-65R-LCUU-H6 w/ Mount Pipe	B	From Leg	4.000	0.000	132.000	No Ice	9.190	6.210	0.106
			0.000			1/2" Ice	9.940	6.930	0.175
			1.000			1" Ice	10.710	7.660	0.256
OPA-65R-LCUU-H6 w/ Mount Pipe	C	From Leg	4.000	0.000	132.000	No Ice	9.190	6.210	0.106
			0.000			1/2" Ice	9.940	6.930	0.175
			1.000			1" Ice	10.710	7.660	0.256
RRUS 11	A	From Leg	4.000	0.000	132.000	No Ice	2.784	1.187	0.048
			0.000			1/2" Ice	2.992	1.334	0.068
			1.000			1" Ice	3.207	1.490	0.092
RRUS 11	B	From Leg	4.000	0.000	132.000	No Ice	2.784	1.187	0.048
			0.000			1/2" Ice	2.992	1.334	0.068
			1.000			1" Ice	3.207	1.490	0.092
RRUS 11	C	From Leg	4.000	0.000	132.000	No Ice	2.784	1.187	0.048
			0.000			1/2" Ice	2.992	1.334	0.068
			1.000			1" Ice	3.207	1.490	0.092
RRUS 12 B2	A	From Leg	4.000	0.000	132.000	No Ice	3.143	1.282	0.049
			0.000			1/2" Ice	3.363	1.434	0.073
			0.000			1" Ice	3.590	1.595	0.099
RRUS 12 B2	B	From Leg	4.000	0.000	132.000	No Ice	3.143	1.282	0.049
			0.000			1/2" Ice	3.363	1.434	0.073
			0.000			1" Ice	3.590	1.595	0.099
RRUS 12 B2	C	From Leg	4.000	0.000	132.000	No Ice	3.143	1.282	0.049
			0.000			1/2" Ice	3.363	1.434	0.073
			0.000			1" Ice	3.590	1.595	0.099
RRUS A2 B2	A	From Leg	4.000	0.000	132.000	No Ice	2.196	0.539	0.022
			0.000			1/2" Ice	2.380	0.653	0.035
			-4.000			1" Ice	2.572	0.774	0.051
RRUS A2 B2	B	From Leg	4.000	0.000	132.000	No Ice	2.196	0.539	0.022
			0.000			1/2" Ice	2.380	0.653	0.035
			-4.000			1" Ice	2.572	0.774	0.051
RRUS A2 B2	C	From Leg	4.000	0.000	132.000	No Ice	2.196	0.539	0.022
			0.000			1/2" Ice	2.380	0.653	0.035
			-4.000			1" Ice	2.572	0.774	0.051
LGP21401	A	From Leg	4.000	0.000	132.000	No Ice	1.104	0.207	0.014
			0.000			1/2" Ice	1.239	0.274	0.021
			1.000			1" Ice	1.381	0.348	0.030
LGP21401	B	From Leg	4.000	0.000	132.000	No Ice	1.104	0.207	0.014
			0.000			1/2" Ice	1.239	0.274	0.021
			1.000			1" Ice	1.381	0.348	0.030
LGP21401	C	From Leg	4.000	0.000	132.000	No Ice	1.104	0.207	0.014
			0.000			1/2" Ice	1.239	0.274	0.021
			1.000			1" Ice	1.381	0.348	0.030
LGP21401	A	From Leg	4.000	0.000	132.000	No Ice	1.104	0.207	0.014
			0.000			1/2" Ice	1.239	0.274	0.021
			-3.000			1" Ice	1.381	0.348	0.030
LGP21401	B	From Leg	4.000	0.000	132.000	No Ice	1.104	0.207	0.014
			0.000			1/2" Ice	1.239	0.274	0.021
			-3.000			1" Ice	1.381	0.348	0.030
LGP21401	C	From Leg	4.000	0.000	132.000	No Ice	1.104	0.207	0.014
			0.000			1/2" Ice	1.239	0.274	0.021
			-3.000			1" Ice	1.381	0.348	0.030

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
DC6-48-60-18-8F	A	From Leg	4.000 0.000 2.000	0.000	132.000	No Ice 1/2" Ice 1" Ice	1.212 1.892 2.105	1.212 1.892 2.105	0.033 0.055 0.080
Platform Mount [LP 1201-1_HR-1] *	C	None		0.000	132.000	No Ice 1/2" Ice 1" Ice	26.390 31.400 36.200	26.390 31.400 36.200	2.356 3.061 3.864
MX08FRO665-20 w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	8.010 8.520 9.040	4.230 4.690 5.160	0.098 0.184 0.281
MX08FRO665-20 w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	8.010 8.520 9.040	4.230 4.690 5.160	0.098 0.184 0.281
MX08FRO665-20 w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	8.010 8.520 9.040	4.230 4.690 5.160	0.098 0.184 0.281
TA08025-B604	A	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
TA08025-B604	B	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
TA08025-B604	C	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	0.981 1.112 1.250	0.064 0.081 0.100
TA08025-B605	A	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B605	B	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B605	C	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
RDIDC-9181-PF-48	B	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	2.012 2.189 2.373	1.168 1.311 1.461	0.022 0.040 0.060
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
3' x 2" Pipe Mount	A	From Leg	2.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	0.583 0.770 0.967	0.583 0.770 0.967	0.011 0.017 0.024
3' x 2" Pipe Mount	B	From Leg	2.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	0.583 0.770 0.967	0.583 0.770 0.967	0.011 0.017 0.024
3' x 2" Pipe Mount	C	From Leg	2.000 0.000 0.000	0.000	121.000	No Ice 1/2" Ice 1" Ice	0.583 0.770 0.967	0.583 0.770 0.967	0.011 0.017 0.024
Commscope MC-K6MHDX-9-96 (3)	C	None		0.000	121.000	No Ice 1/2" Ice	15.300 20.480	15.300 20.480	1.190 1.710

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" Ice	25.660	25.660	2.220
*									
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.186 0.315 0.458
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.186 0.315 0.458
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.186 0.315 0.458
(2) KRY 112 144/1	A	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	0.350 0.426 0.509	0.175 0.234 0.301	0.011 0.014 0.019
KRY 112 144/1	B	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	0.350 0.426 0.509	0.175 0.234 0.301	0.011 0.014 0.019
(2) RADIO 4449 B12/B71	A	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	1.650 1.810 1.978	1.163 1.301 1.447	0.074 0.090 0.109
RADIO 4449 B12/B71	B	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	1.650 1.810 1.978	1.163 1.301 1.447	0.074 0.090 0.109
KRY 112 489/2	B	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	0.559 0.658 0.764	0.365 0.448 0.542	0.015 0.020 0.027
(2) KRY 112 489/2	C	From Leg	4.000 0.000 -1.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	0.559 0.658 0.764	0.365 0.448 0.542	0.015 0.020 0.027
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	111.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
Platform Mount [LP 303-1_HR-1]	C	None		0.000	111.000	No Ice 1/2" Ice 1" Ice	17.090 21.470 25.720	17.090 21.470 25.720	1.495 1.881 2.346
*									
KS24019-L112A	B	From Leg	3.000 0.000 0.000	0.000	104.000	No Ice 1/2" Ice 1" Ice	0.141 0.198 0.262	0.141 0.198 0.262	0.005 0.007 0.009
Side Arm Mount [SO 701-1]	B	From Leg	0.500 0.000 0.000	0.000	104.000	No Ice 1/2" Ice 1" Ice	0.850 1.140 1.430	1.670 2.340 3.010	0.065 0.079 0.093
*									
SC479-HF1LDF	A	From Leg	4.000 0.000 7.000	0.000	88.000	No Ice 1/2" Ice 1" Ice	5.031 6.506 7.998	5.031 6.506 7.998	0.034 0.070 0.115
SC479-HF1LDF	C	From Leg	4.000 0.000 7.000	0.000	88.000	No Ice 1/2" Ice 1" Ice	5.031 6.506 7.998	5.031 6.506 7.998	0.034 0.070 0.115
428E-83I-01-T	C	From Leg	4.000 0.000	0.000	88.000	No Ice 1/2" Ice	0.395 0.479	0.462 0.551	0.009 0.014

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
			0.000			1" Ice	0.570	0.647	0.020
Side Arm Mount [SO 306-1]	A	From Leg	2.000	0.000	88.000	No Ice	0.410	2.260	0.042
			0.000			1/2" Ice	0.810	3.830	0.062
			0.000			1" Ice	1.230	5.480	0.094
Side Arm Mount [SO 306-1]	C	From Leg	2.000	0.000	88.000	No Ice	0.410	2.260	0.042
			0.000			1/2" Ice	0.810	3.830	0.062
			0.000			1" Ice	1.230	5.480	0.094
*									
BA80-41-DIN	B	From Leg	4.000	0.000	82.000	No Ice	8.156	8.156	0.070
			0.000			1/2" Ice	10.998	10.998	0.129
			10.000			1" Ice	13.125	13.125	0.204
Side Arm Mount [SO 306-1]	B	From Leg	2.000	0.000	82.000	No Ice	0.410	2.260	0.042
			0.000			1/2" Ice	0.810	3.830	0.062
			0.000			1" Ice	1.230	5.480	0.094
*									
10' x 2" Mount Pipe	A	From Leg	1.000	0.000	87.000	No Ice	2.375	2.375	0.037
			0.000			1/2" Ice	3.403	3.403	0.054
			0.000			1" Ice	4.448	4.448	0.079
10' x 2" Mount Pipe	B	From Leg	1.000	0.000	87.000	No Ice	2.375	2.375	0.037
			0.000			1/2" Ice	3.403	3.403	0.054
			0.000			1" Ice	4.448	4.448	0.079
10' x 2" Mount Pipe	C	From Leg	1.000	0.000	87.000	No Ice	2.375	2.375	0.037
			0.000			1/2" Ice	3.403	3.403	0.054
			0.000			1" Ice	4.448	4.448	0.079
Side Arm Mount [SO 102-3]	C	None		0.000	88.000	No Ice	3.600	3.600	0.075
						1/2" Ice	4.180	4.180	0.105
						1" Ice	4.750	4.750	0.135
Side Arm Mount [SO 102-3]	C	None		0.000	85.000	No Ice	3.600	3.600	0.075
						1/2" Ice	4.180	4.180	0.105
						1" Ice	4.750	4.750	0.135
Side Arm Mount [SO 102-3]	C	None		0.000	82.000	No Ice	3.600	3.600	0.075
						1/2" Ice	4.180	4.180	0.105
						1" Ice	4.750	4.750	0.135
*									

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice

Comb. No.	Description
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	150 - 145	Pole	Max Tension	26	0.000	0.000	-0.000
			Max. Compression	26	-8.739	-0.619	1.064
			Max. Mx	8	-5.031	-23.333	0.570
			Max. My	2	-5.020	-0.279	24.054
			Max. Vy	8	4.635	-23.333	0.570
			Max. Vx	2	-4.720	-0.279	24.054
			Max. Torque	10			0.499
L2	145 - 140	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-16.963	-0.629	1.641
			Max. Mx	8	-9.643	-53.439	0.644
			Max. My	2	-9.625	-0.164	54.886
			Max. Vy	8	8.675	-53.439	0.644
			Max. Vx	2	-8.803	-0.164	54.886
			Max. Torque	22			-0.875
L3	140 - 135	Pole	Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-17.644	-0.645	1.656
			Max. Mx	8	-10.136	-97.857	0.532
			Max. My	2	-10.119	-0.048	99.942
			Max. Vy	8	9.096	-97.857	0.532
			Max. Vx	2	-9.224	-0.048	99.942
			Max. Torque	22			-0.875
L4	135 - 130	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-25.555	-0.662	2.105
			Max. Mx	8	-14.565	-153.016	0.605
			Max. My	2	-14.545	0.068	155.946
			Max. Vy	8	13.193	-153.016	0.605
			Max. Vx	2	-13.324	0.068	155.946
			Max. Torque	8			1.073
L5	130 - 125	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-26.353	-0.682	2.126
			Max. Mx	8	-15.185	-220.028	0.493
			Max. My	2	-15.166	0.185	223.611
			Max. Vy	8	13.620	-220.028	0.493
			Max. Vx	2	-13.751	0.185	223.611
			Max. Torque	8			1.073
L6	125 - 120	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-31.753	-0.990	1.986
			Max. Mx	8	-18.239	-291.334	0.309
			Max. My	2	-18.220	0.205	295.371
			Max. Vy	8	16.090	-291.334	0.309
			Max. Vx	2	-16.210	0.205	295.371
			Max. Torque	8			1.073
L7	120 - 115	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-32.623	-1.044	2.024
			Max. Mx	8	-18.931	-372.814	0.149
			Max. My	2	-18.913	0.362	377.439
			Max. Vy	8	16.509	-372.814	0.149
			Max. Vx	2	-16.628	0.362	377.439
			Max. Torque	10			1.053
L8	115 - 108	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.221	-1.079	2.047
			Max. Mx	8	-19.414	-426.893	0.044
			Max. My	2	-19.396	0.464	431.899
			Max. Vy	8	16.780	-426.893	0.044
			Max. Vx	2	-16.899	0.464	431.899
			Max. Torque	10			1.053
L9	108 - 106.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-39.760	-1.648	2.974
			Max. Mx	8	-23.519	-521.016	0.508
			Max. My	2	-23.499	0.268	526.960
			Max. Vy	8	19.557	-521.016	0.508
			Max. Vx	2	-19.698	0.268	526.960
			Max. Torque	10			1.313
L10	106.75 - 101.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-40.984	-1.903	2.896
			Max. Mx	8	-24.545	-620.050	0.266
			Max. My	2	-24.526	0.291	626.500
			Max. Vy	8	20.020	-620.050	0.266
			Max. Vx	2	-20.175	0.291	626.500
			Max. Torque	10			1.313
L11	101.75 - 96.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-42.119	-1.958	2.930
			Max. Mx	8	-25.519	-721.140	0.136
			Max. My	2	-25.500	0.414	728.357
			Max. Vy	8	20.431	-721.140	0.136

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	2	-20.586	0.414	728.357
			Max. Torque	10			1.313
L12	96.75 - 91.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-43.285	-2.012	2.961
			Max. Mx	8	-26.520	-824.272	0.006
			Max. My	2	-26.504	0.536	832.252
			Max. Vy	8	20.838	-824.272	0.006
			Max. Vx	2	-20.993	0.536	832.252
			Max. Torque	10			1.312
L13	91.75 - 89.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-43.858	-2.036	2.974
			Max. Mx	8	-26.979	-871.342	-0.053
			Max. My	2	-26.963	0.591	879.665
			Max. Vy	8	21.021	-871.342	-0.053
			Max. Vx	2	-21.175	0.591	879.665
			Max. Torque	10			1.312
L14	89.5 - 89.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-43.941	-2.040	2.977
			Max. Mx	8	-27.057	-876.599	-0.059
			Max. My	2	-27.040	0.596	884.959
			Max. Vy	8	21.038	-876.599	-0.059
			Max. Vx	2	-21.192	0.596	884.959
			Max. Torque	10			1.311
L15	89.25 - 84.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-46.593	-1.156	3.427
			Max. Mx	8	-28.885	-987.955	-0.160
			Max. My	2	-28.871	1.157	997.517
			Max. Vy	8	22.443	-987.955	-0.160
			Max. Vx	2	-22.567	1.157	997.517
			Max. Torque	6			1.713
L16	84.25 - 79.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.732	-2.486	2.707
			Max. Mx	8	-30.493	-1105.893	-0.633
			Max. My	2	-30.478	0.874	1115.282
			Max. Vy	8	23.345	-1105.893	-0.633
			Max. Vx	2	-23.499	0.874	1115.282
			Max. Torque	6			1.713
L17	79.25 - 69.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.338	-2.523	2.715
			Max. Mx	8	-31.853	-1217.756	-0.765
			Max. My	2	-31.839	0.996	1227.867
			Max. Vy	8	23.770	-1217.756	-0.765
			Max. Vx	2	-23.924	0.996	1227.867
			Max. Torque	24			-1.345
L18	69.75 - 68.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-53.320	-2.569	2.728
			Max. Mx	8	-34.310	-1356.132	-0.924
			Max. My	2	-34.297	1.144	1367.115
			Max. Vy	8	24.356	-1356.132	-0.924
			Max. Vx	2	-24.510	1.144	1367.115
			Max. Torque	24			-1.344
L19	68.75 - 67.417	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-53.727	-2.582	2.733
			Max. Mx	8	-34.647	-1388.651	-0.961
			Max. My	2	-34.634	1.178	1399.837
			Max. Vy	8	24.463	-1388.651	-0.961
			Max. Vx	2	-24.617	1.178	1399.837
			Max. Torque	24			-1.344
L20	67.417 - 67.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-53.803	-2.585	2.736

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	8	-34.723	-1394.765	-0.968
			Max. My	2	-34.710	1.184	1405.989
			Max. Vy	8	24.472	-1394.765	-0.968
			Max. Vx	2	-24.625	1.184	1405.989
			Max. Torque	24			-1.344
L21	67.167 - 62.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-55.346	-2.631	2.757
			Max. Mx	8	-36.012	-1518.034	-1.107
			Max. My	2	-36.001	1.313	1530.013
			Max. Vy	8	24.855	-1518.034	-1.107
			Max. Vx	2	-25.007	1.313	1530.013
			Max. Torque	24			-1.344
L22	62.167 - 57.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-56.845	-2.663	2.780
			Max. Mx	8	-37.226	-1632.684	-1.235
			Max. My	2	-37.215	1.430	1645.351
			Max. Vy	8	25.195	-1632.684	-1.235
			Max. Vx	2	-25.347	1.430	1645.351
			Max. Torque	24			-1.344
L23	57.583 - 57.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-56.973	-2.666	2.784
			Max. Mx	8	-37.344	-1638.982	-1.241
			Max. My	2	-37.334	1.436	1651.687
			Max. Vy	8	25.206	-1638.982	-1.241
			Max. Vx	2	-25.358	1.436	1651.687
			Max. Torque	24			-1.343
L24	57.333 - 56.417	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-57.443	-2.668	2.788
			Max. Mx	8	-37.734	-1662.106	-1.267
			Max. My	2	-37.724	1.460	1674.948
			Max. Vy	8	25.292	-1662.106	-1.267
			Max. Vx	2	-25.444	1.460	1674.948
			Max. Torque	24			-1.343
L25	56.417 - 56.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-57.553	-2.671	2.791
			Max. Mx	8	-37.827	-1668.431	-1.273
			Max. My	2	-37.817	1.466	1681.310
			Max. Vy	8	25.313	-1668.431	-1.273
			Max. Vx	2	-25.465	1.466	1681.310
			Max. Torque	24			-1.343
L26	56.167 - 51.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.701	-2.688	2.810
			Max. Mx	8	-39.628	-1796.039	-1.412
			Max. My	2	-39.619	1.593	1809.664
			Max. Vy	8	25.742	-1796.039	-1.412
			Max. Vx	2	-25.894	1.593	1809.664
			Max. Torque	24			-1.343
L27	51.167 - 46.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.844	-2.704	2.827
			Max. Mx	8	-41.462	-1925.748	-1.549
			Max. My	2	-41.454	1.719	1940.117
			Max. Vy	8	26.157	-1925.748	-1.549
			Max. Vx	2	-26.308	1.719	1940.117
			Max. Torque	24			-1.343

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L28	46.167 - 41.167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-64.013	-2.721	2.844
			Max. Mx	8	-43.325	-2057.492	-1.687
			Max. My	2	-43.318	1.845	2072.602
			Max. Vy	8	26.557	-2057.492	-1.687
			Max. Vx	2	-26.708	1.845	2072.602
			Max. Torque	24			-1.343
L29	41.167 - 32.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-65.405	-2.731	2.855
			Max. Mx	8	-44.520	-2141.951	-1.773
			Max. My	2	-44.513	1.924	2157.528
			Max. Vy	8	26.797	-2141.951	-1.773
			Max. Vx	2	-26.947	1.924	2157.528
			Max. Torque	24			-1.342
L30	32.5 - 31.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-69.870	-2.746	2.879
			Max. Mx	8	-48.266	-2318.001	-1.951
			Max. My	2	-48.260	2.086	2334.534
			Max. Vy	8	27.367	-2318.001	-1.951
			Max. Vx	2	-27.517	2.086	2334.534
			Max. Torque	24			-1.342
L31	31.5 - 26.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-71.909	-2.733	2.904
			Max. Mx	8	-49.910	-2455.489	-2.087
			Max. My	2	-49.906	2.210	2472.754
			Max. Vy	8	27.657	-2455.489	-2.087
			Max. Vx	2	-27.806	2.210	2472.754
			Max. Torque	24			-1.342
L32	26.5 - 26.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-72.045	-2.734	2.907
			Max. Mx	8	-50.033	-2462.402	-2.094
			Max. My	2	-50.029	2.216	2479.703
			Max. Vy	8	27.663	-2462.402	-2.094
			Max. Vx	2	-27.811	2.216	2479.703
			Max. Torque	24			-1.342
L33	26.25 - 21.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-74.675	-2.742	2.926
			Max. Mx	8	-52.323	-2601.621	-2.230
			Max. My	2	-52.320	2.339	2619.648
			Max. Vy	8	28.035	-2601.621	-2.230
			Max. Vx	2	-28.183	2.339	2619.648
			Max. Torque	24			-1.342
L34	21.25 - 16.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-77.306	-2.758	2.944
			Max. Mx	8	-54.649	-2742.669	-2.365
			Max. My	2	-54.647	2.461	2761.418
			Max. Vy	8	28.401	-2742.669	-2.365
			Max. Vx	2	-28.548	2.461	2761.418
			Max. Torque	24			-1.342
L35	16.25 - 11.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.958	-2.775	2.964
			Max. Mx	8	-57.006	-2885.544	-2.499
			Max. My	2	-57.004	2.583	2905.011
			Max. Vy	8	28.767	-2885.544	-2.499
			Max. Vx	2	-28.913	2.583	2905.011
			Max. Torque	24			-1.342
L36	11.25 - 6.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-82.627	-2.792	2.983
			Max. Mx	8	-59.393	-3030.246	-2.632
			Max. My	2	-59.392	2.703	3050.425

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	8	29.132	-3030.246	-2.632
			Max. Vx	2	-29.277	2.703	3050.425
			Max. Torque	24			-1.342
L37	6.25 - 1.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-85.298	-2.810	3.002
			Max. Mx	8	-61.811	-3176.771	-2.765
			Max. My	2	-61.811	2.822	3197.659
			Max. Vy	8	29.498	-3176.771	-2.765
			Max. Vx	2	-29.642	2.822	3197.659
			Max. Torque	24			-1.342
L38	1.25 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-85.958	-2.815	3.007
			Max. Mx	8	-62.419	-3213.688	-2.798
			Max. My	2	-62.419	2.852	3234.752
			Max. Vy	8	29.593	-3213.688	-2.798
			Max. Vx	2	-29.737	2.852	3234.752
			Max. Torque	24			-1.342

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	85.958	-0.000	0.000
	Max. H_x	20	62.428	29.574	0.029
	Max. H_z	2	62.428	0.029	29.718
	Max. M_x	2	3234.752	0.029	29.718
	Max. M_z	8	3213.688	-29.574	-0.029
	Max. Torsion	12	1.340	-14.816	-25.758
	Min. Vert	19	46.821	25.604	-14.838
	Min. H_x	8	62.428	-29.574	-0.029
	Min. H_z	14	62.428	-0.029	-29.718
	Min. M_x	14	-3230.945	-0.029	-29.718
	Min. M_z	20	-3209.987	29.574	0.029
	Min. Torsion	24	-1.342	14.816	25.758

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	52.024	0.000	-0.000	-1.494	-1.463	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	62.428	-0.029	-29.718	-3234.752	2.852	1.090
0.9 Dead+1.0 Wind 0 deg - No Ice	46.821	-0.029	-29.718	-3191.948	3.268	1.079
1.2 Dead+1.0 Wind 30 deg - No Ice	62.428	14.762	-25.722	-2799.307	-1603.686	0.546
0.9 Dead+1.0 Wind 30 deg - No Ice	46.821	14.762	-25.722	-2762.202	-1582.271	0.548
1.2 Dead+1.0 Wind 60 deg - No Ice	62.428	25.604	-14.838	-1614.398	-2781.233	-0.145
0.9 Dead+1.0 Wind 60 deg - No	46.821	25.604	-14.838	-1592.801	-2744.424	-0.129

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Ice 1.2 Dead+1.0 Wind 90 deg - No Ice	62.428	29.574	0.029	2.798	-3213.688	-0.796
0.9 Dead+1.0 Wind 90 deg - No Ice	46.821	29.574	0.029	3.236	-3171.221	-0.772
1.2 Dead+1.0 Wind 120 deg - No Ice	62.428	25.626	14.884	1618.609	-2785.714	-1.234
0.9 Dead+1.0 Wind 120 deg - No Ice	46.821	25.626	14.884	1597.909	-2748.833	-1.207
1.2 Dead+1.0 Wind 150 deg - No Ice	62.428	14.816	25.758	2800.380	-1611.927	-1.340
0.9 Dead+1.0 Wind 150 deg - No Ice	46.821	14.816	25.758	2764.226	-1590.385	-1.318
1.2 Dead+1.0 Wind 180 deg - No Ice	62.428	0.029	29.718	3230.945	-6.547	-1.089
0.9 Dead+1.0 Wind 180 deg - No Ice	46.821	0.029	29.718	3189.166	-5.982	-1.077
1.2 Dead+1.0 Wind 210 deg - No Ice	62.428	-14.762	25.722	2795.498	1599.987	-0.546
0.9 Dead+1.0 Wind 210 deg - No Ice	46.821	-14.762	25.722	2759.419	1579.554	-0.548
1.2 Dead+1.0 Wind 240 deg - No Ice	62.428	-25.604	14.838	1610.592	2777.531	0.143
0.9 Dead+1.0 Wind 240 deg - No Ice	46.821	-25.604	14.838	1590.020	2741.705	0.128
1.2 Dead+1.0 Wind 270 deg - No Ice	62.428	-29.574	-0.029	-6.601	3209.987	0.795
0.9 Dead+1.0 Wind 270 deg - No Ice	46.821	-29.574	-0.029	-6.015	3168.503	0.770
1.2 Dead+1.0 Wind 300 deg - No Ice	62.428	-25.626	-14.884	-1622.411	2782.017	1.234
0.9 Dead+1.0 Wind 300 deg - No Ice	46.821	-25.626	-14.884	-1600.686	2746.118	1.207
1.2 Dead+1.0 Wind 330 deg - No Ice	62.428	-14.816	-25.758	-2804.184	1608.233	1.342
0.9 Dead+1.0 Wind 330 deg - No Ice	46.821	-14.816	-25.758	-2767.006	1587.671	1.320
1.2 Dead+1.0 Ice+1.0 Temp	85.958	0.000	-0.000	-3.007	-2.815	-0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	85.958	-0.004	-6.891	-775.287	-2.189	0.285
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	85.958	3.428	-5.966	-671.460	-386.243	0.157
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	85.958	5.941	-3.442	-388.559	-667.595	-0.013
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	85.958	6.862	0.004	-2.388	-770.855	-0.180
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	85.958	5.944	3.449	383.578	-668.356	-0.298
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	85.958	3.434	5.969	665.921	-387.562	-0.337
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	85.958	0.004	6.891	768.987	-3.712	-0.285
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	85.958	-3.428	5.966	665.159	380.342	-0.157
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	85.958	-5.941	3.442	382.259	661.693	0.013
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	85.958	-6.862	-0.004	-3.912	764.954	0.180
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	85.958	-5.944	-3.449	-389.878	662.455	0.298
1.2 Dead+1.0 Wind 330	85.958	-3.434	-5.969	-672.221	381.661	0.337

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	52.024	-0.007	-6.999	-756.991	-0.431	0.256
Dead+Wind 30 deg - Service	52.024	3.477	-6.058	-655.236	-375.833	0.125
Dead+Wind 60 deg - Service	52.024	6.030	-3.494	-378.357	-650.986	-0.039
Dead+Wind 90 deg - Service	52.024	6.965	0.007	-0.471	-752.037	-0.193
Dead+Wind 120 deg - Service	52.024	6.035	3.505	377.095	-652.036	-0.295
Dead+Wind 150 deg - Service	52.024	3.489	6.066	653.244	-377.758	-0.318
Dead+Wind 180 deg - Service	52.024	0.007	6.999	753.857	-2.623	-0.256
Dead+Wind 210 deg - Service	52.024	-3.477	6.058	652.102	372.779	-0.125
Dead+Wind 240 deg - Service	52.024	-6.030	3.494	375.223	647.932	0.039
Dead+Wind 270 deg - Service	52.024	-6.965	-0.007	-2.663	748.983	0.193
Dead+Wind 300 deg - Service	52.024	-6.035	-3.505	-380.229	648.982	0.295
Dead+Wind 330 deg - Service	52.024	-3.489	-6.066	-656.378	374.704	0.318

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.000	-52.024	0.000	-0.000	52.024	0.000	0.000%
2	-0.029	-62.428	-29.718	0.029	62.428	29.718	0.000%
3	-0.029	-46.821	-29.718	0.029	46.821	29.718	0.000%
4	14.762	-62.428	-25.722	-14.762	62.428	25.722	0.000%
5	14.762	-46.821	-25.722	-14.762	46.821	25.722	0.000%
6	25.604	-62.428	-14.838	-25.604	62.428	14.838	0.000%
7	25.604	-46.821	-14.838	-25.604	46.821	14.838	0.000%
8	29.574	-62.428	0.029	-29.574	62.428	-0.029	0.000%
9	29.574	-46.821	0.029	-29.574	46.821	-0.029	0.000%
10	25.626	-62.428	14.884	-25.626	62.428	-14.884	0.000%
11	25.626	-46.821	14.884	-25.626	46.821	-14.884	0.000%
12	14.816	-62.428	25.758	-14.816	62.428	-25.758	0.000%
13	14.816	-46.821	25.758	-14.816	46.821	-25.758	0.000%
14	0.029	-62.428	29.718	-0.029	62.428	-29.718	0.000%
15	0.029	-46.821	29.718	-0.029	46.821	-29.718	0.000%
16	-14.762	-62.428	25.722	14.762	62.428	-25.722	0.000%
17	-14.762	-46.821	25.722	14.762	46.821	-25.722	0.000%
18	-25.604	-62.428	14.838	25.604	62.428	-14.838	0.000%
19	-25.604	-46.821	14.838	25.604	46.821	-14.838	0.000%
20	-29.574	-62.428	-0.029	29.574	62.428	0.029	0.000%
21	-29.574	-46.821	-0.029	29.574	46.821	0.029	0.000%
22	-25.626	-62.428	-14.884	25.626	62.428	14.884	0.000%
23	-25.626	-46.821	-14.884	25.626	46.821	14.884	0.000%
24	-14.816	-62.428	-25.758	14.816	62.428	25.758	0.000%
25	-14.816	-46.821	-25.758	14.816	46.821	25.758	0.000%
26	0.000	-85.958	0.000	-0.000	85.958	0.000	0.000%
27	-0.004	-85.958	-6.891	0.004	85.958	6.891	0.000%
28	3.428	-85.958	-5.966	-3.428	85.958	5.966	0.000%
29	5.941	-85.958	-3.442	-5.941	85.958	3.442	0.000%
30	6.862	-85.958	0.004	-6.862	85.958	-0.004	0.000%
31	5.944	-85.958	3.449	-5.944	85.958	-3.449	0.000%
32	3.434	-85.958	5.969	-3.434	85.958	-5.969	0.000%
33	0.004	-85.958	6.891	-0.004	85.958	-6.891	0.000%
34	-3.428	-85.958	5.966	3.428	85.958	-5.966	0.000%
35	-5.941	-85.958	3.442	5.941	85.958	-3.442	0.000%
36	-6.862	-85.958	-0.004	6.862	85.958	0.004	0.000%
37	-5.944	-85.958	-3.449	5.944	85.958	3.449	0.000%
38	-3.434	-85.958	-5.969	3.434	85.958	5.969	0.000%
39	-0.007	-52.024	-6.999	0.007	52.024	6.999	0.000%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
40	3.477	-52.024	-6.058	-3.477	52.024	6.058	0.000%
41	6.030	-52.024	-3.494	-6.030	52.024	3.494	0.000%
42	6.965	-52.024	0.007	-6.965	52.024	-0.007	0.000%
43	6.035	-52.024	3.505	-6.035	52.024	-3.505	0.000%
44	3.489	-52.024	6.066	-3.489	52.024	-6.066	0.000%
45	0.007	-52.024	6.999	-0.007	52.024	-6.999	0.000%
46	-3.477	-52.024	6.058	3.477	52.024	-6.058	0.000%
47	-6.030	-52.024	3.494	6.030	52.024	-3.494	0.000%
48	-6.965	-52.024	-0.007	6.965	52.024	0.007	0.000%
49	-6.035	-52.024	-3.505	6.035	52.024	3.505	0.000%
50	-3.489	-52.024	-6.066	3.489	52.024	6.066	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000657
2	Yes	5	0.00000001	0.00052730
3	Yes	5	0.00000001	0.00023974
4	Yes	6	0.00000001	0.00087717
5	Yes	6	0.00000001	0.00030964
6	Yes	6	0.00000001	0.00087400
7	Yes	6	0.00000001	0.00030856
8	Yes	5	0.00000001	0.00051250
9	Yes	5	0.00000001	0.00022891
10	Yes	6	0.00000001	0.00085306
11	Yes	6	0.00000001	0.00030080
12	Yes	6	0.00000001	0.00089654
13	Yes	6	0.00000001	0.00031695
14	Yes	5	0.00000001	0.00060616
15	Yes	5	0.00000001	0.00028138
16	Yes	6	0.00000001	0.00085827
17	Yes	6	0.00000001	0.00030327
18	Yes	6	0.00000001	0.00085708
19	Yes	6	0.00000001	0.00030314
20	Yes	5	0.00000001	0.00059101
21	Yes	5	0.00000001	0.00027035
22	Yes	6	0.00000001	0.00089437
23	Yes	6	0.00000001	0.00031624
24	Yes	6	0.00000001	0.00085528
25	Yes	6	0.00000001	0.00030128
26	Yes	4	0.00000001	0.00044499
27	Yes	6	0.00000001	0.00053759
28	Yes	6	0.00000001	0.00058760
29	Yes	6	0.00000001	0.00058558
30	Yes	6	0.00000001	0.00053281
31	Yes	6	0.00000001	0.00057887
32	Yes	6	0.00000001	0.00057989
33	Yes	6	0.00000001	0.00052739
34	Yes	6	0.00000001	0.00057134
35	Yes	6	0.00000001	0.00057019
36	Yes	6	0.00000001	0.00052535
37	Yes	6	0.00000001	0.00058050
38	Yes	6	0.00000001	0.00058263
39	Yes	5	0.00000001	0.00006163
40	Yes	5	0.00000001	0.00019967

41	Yes	5	0.00000001	0.00019895
42	Yes	5	0.00000001	0.00006103
43	Yes	5	0.00000001	0.00018541
44	Yes	5	0.00000001	0.00020813
45	Yes	5	0.00000001	0.00006145
46	Yes	5	0.00000001	0.00018826
47	Yes	5	0.00000001	0.00018788
48	Yes	5	0.00000001	0.00006100
49	Yes	5	0.00000001	0.00020786
50	Yes	5	0.00000001	0.00018623

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	150 - 145	18.961	39	1.160	0.003
L2	145 - 140	17.748	39	1.156	0.003
L3	140 - 135	16.542	39	1.146	0.002
L4	135 - 130	15.351	39	1.128	0.002
L5	130 - 125	14.183	39	1.102	0.002
L6	125 - 120	13.046	39	1.068	0.002
L7	120 - 115	11.948	39	1.027	0.002
L8	115 - 108	10.898	39	0.978	0.001
L9	111.75 - 106.75	10.243	39	0.944	0.001
L10	106.75 - 101.75	9.269	39	0.911	0.001
L11	101.75 - 96.75	8.343	39	0.858	0.001
L12	96.75 - 91.75	7.474	39	0.801	0.001
L13	91.75 - 89.5	6.666	39	0.741	0.001
L14	89.5 - 89.25	6.323	39	0.714	0.001
L15	89.25 - 84.25	6.286	39	0.712	0.001
L16	84.25 - 79.25	5.562	39	0.671	0.001
L17	79.25 - 69.75	4.881	39	0.629	0.001
L18	74.5 - 68.75	4.275	39	0.588	0.001
L19	68.75 - 67.417	3.585	39	0.552	0.000
L20	67.417 - 67.167	3.433	39	0.537	0.000
L21	67.167 - 62.167	3.405	39	0.534	0.000
L22	62.167 - 57.583	2.878	39	0.474	0.000
L23	57.583 - 57.333	2.449	39	0.419	0.000
L24	57.333 - 56.417	2.427	39	0.417	0.000
L25	56.417 - 56.167	2.348	39	0.411	0.000
L26	56.167 - 51.167	2.326	39	0.410	0.000
L27	51.167 - 46.167	1.918	39	0.370	0.000
L28	46.167 - 41.167	1.551	39	0.330	0.000
L29	41.167 - 32.5	1.226	39	0.290	0.000
L30	38 - 31.5	1.042	39	0.265	0.000
L31	31.5 - 26.5	0.702	39	0.230	0.000
L32	26.5 - 26.25	0.489	39	0.177	0.000
L33	26.25 - 21.25	0.480	39	0.175	0.000
L34	21.25 - 16.25	0.314	39	0.142	0.000
L35	16.25 - 11.25	0.183	39	0.108	0.000
L36	11.25 - 6.25	0.087	39	0.075	0.000
L37	6.25 - 1.25	0.027	39	0.041	0.000
L38	1.25 - 0	0.001	39	0.008	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
150.500	Top Hat	39	18.961	1.160	0.003	40554
150.000	AIR6449 B41_T-MOBILE	39	18.961	1.160	0.003	40554
141.000	(2) APL868013-42T0	39	16.782	1.148	0.003	23225
132.000	(2) 7770.00 w/ Mount Pipe	39	14.647	1.114	0.002	10811
121.000	MX08FRO665-20 w/ Mount Pipe	39	12.164	1.035	0.002	6629
111.000	APXVAARR24_43-U-NA20 w/ Mount Pipe	39	10.095	0.938	0.001	7326
104.000	KS24019-L112A	39	8.753	0.884	0.001	5560
88.000	SC479-HF1LDF	39	6.101	0.702	0.001	6331
87.000	10' x 2" Mount Pipe	39	5.955	0.694	0.001	6690
85.000	Side Arm Mount [SO 102-3]	39	5.668	0.677	0.001	7002
82.000	BA80-41-DIN	39	5.250	0.653	0.001	6666

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	150 - 145	81.045	2	4.952	0.011
L2	145 - 140	75.871	2	4.936	0.011
L3	140 - 135	70.727	2	4.896	0.010
L4	135 - 130	65.642	2	4.821	0.009
L5	130 - 125	60.653	2	4.714	0.008
L6	125 - 120	55.795	2	4.569	0.007
L7	120 - 115	51.105	2	4.392	0.006
L8	115 - 108	46.615	2	4.186	0.006
L9	111.75 - 106.75	43.817	2	4.038	0.005
L10	106.75 - 101.75	39.653	2	3.900	0.005
L11	101.75 - 96.75	35.690	2	3.671	0.004
L12	96.75 - 91.75	31.974	2	3.428	0.003
L13	91.75 - 89.5	28.519	2	3.173	0.003
L14	89.5 - 89.25	27.053	2	3.055	0.003
L15	89.25 - 84.25	26.893	2	3.046	0.003
L16	84.25 - 79.25	23.795	2	2.873	0.003
L17	79.25 - 69.75	20.881	2	2.693	0.002
L18	74.5 - 68.75	18.290	2	2.517	0.002
L19	68.75 - 67.417	15.337	2	2.363	0.002
L20	67.417 - 67.167	14.687	2	2.296	0.002
L21	67.167 - 62.167	14.567	2	2.284	0.002
L22	62.167 - 57.583	12.310	2	2.028	0.002
L23	57.583 - 57.333	10.476	2	1.793	0.001
L24	57.333 - 56.417	10.382	2	1.786	0.001
L25	56.417 - 56.167	10.042	2	1.761	0.001
L26	56.167 - 51.167	9.950	2	1.752	0.001
L27	51.167 - 46.167	8.204	2	1.583	0.001
L28	46.167 - 41.167	6.635	2	1.414	0.001
L29	41.167 - 32.5	5.244	2	1.242	0.001
L30	38 - 31.5	4.456	2	1.134	0.001
L31	31.5 - 26.5	3.001	2	0.982	0.001
L32	26.5 - 26.25	2.090	2	0.757	0.000
L33	26.25 - 21.25	2.051	2	0.750	0.000
L34	21.25 - 16.25	1.341	2	0.606	0.000
L35	16.25 - 11.25	0.782	2	0.462	0.000
L36	11.25 - 6.25	0.374	2	0.319	0.000
L37	6.25 - 1.25	0.115	2	0.176	0.000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L38	1.25 - 0	0.005	2	0.035	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
150.500	Top Hat	2	81.045	4.952	0.012	10379
150.000	AIR6449 B41_T-MOBILE	2	81.045	4.952	0.012	10379
141.000	(2) APL868013-42T0	2	71.752	4.907	0.011	5726
132.000	(2) 7770.00 w/ Mount Pipe	2	62.635	4.761	0.009	2597
121.000	MX08FRO665-20 w/ Mount Pipe	2	52.028	4.430	0.007	1574
111.000	APXVAARR24_43-U-NA20 w/ Mount Pipe	2	43.182	4.013	0.005	1732
104.000	KS24019-L112A	2	37.445	3.785	0.004	1313
88.000	SC479-HF1LDF	2	26.102	3.004	0.003	1487
87.000	10' x 2" Mount Pipe	2	25.477	2.970	0.003	1572
85.000	Side Arm Mount [SO 102-3]	2	24.248	2.900	0.003	1644
82.000	BA80-41-DIN	2	22.459	2.795	0.003	1564

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)	TP23x22x0.25	5.000	0.000	0.0	18.314	-5.020	988.948	0.005
L2	145 - 140 (2)	TP24x23x0.25	5.000	0.000	0.0	19.119	-9.625	1032.420	0.009
L3	140 - 135 (3)	TP25x24x0.25	5.000	0.000	0.0	19.924	-10.119	1075.900	0.009
L4	135 - 130 (4)	TP26x25x0.25	5.000	0.000	0.0	20.729	-14.546	1119.370	0.013
L5	130 - 125 (5)	TP27.001x26x0.25	5.000	0.000	0.0	21.534	-15.166	1162.850	0.013
L6	125 - 120 (6)	TP28.001x27.001x0.25	5.000	0.000	0.0	22.339	-18.220	1206.320	0.015
L7	120 - 115 (7)	TP29.001x28.001x0.25	5.000	0.000	0.0	23.144	-18.913	1249.800	0.015
L8	115 - 108 (8)	TP30.401x29.001x0.25	7.000	0.000	0.0	23.668	-19.396	1278.060	0.015
L9	108 - 106.75 (9)	TP30.151x29.151x0.313	5.000	0.000	0.0	30.025	-23.499	1621.360	0.014
L10	106.75 - 101.75 (10)	TP31.151x30.151x0.313	5.000	0.000	0.0	31.032	-24.526	1675.710	0.015
L11	101.75 - 96.75 (11)	TP32.152x31.151x0.313	5.000	0.000	0.0	32.038	-25.500	1730.060	0.015
L12	96.75 - 91.75 (12)	TP33.152x32.152x0.313	5.000	0.000	0.0	33.045	-26.503	1784.410	0.015
L13	91.75 - 89.5 (13)	TP33.602x33.152x0.313	2.250	0.000	0.0	33.498	-26.963	1808.870	0.015
L14	89.5 - 89.25 (14)	TP33.652x33.602x0.5	0.250	0.000	0.0	53.375	-27.040	2882.240	0.009
L15	89.25 - 84.25 (15)	TP34.652x33.652x0.494	5.000	0.000	0.0	54.308	-28.871	2932.620	0.010
L16	84.25 - 79.25	TP35.653x34.652x0.488	5.000	0.000	0.0	55.200	-30.478	2980.820	0.010

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L17	79.25 - 69.75 (16)	TP37.553x35.653x0.481	9.500	0.000	0.0	55.975	-31.839	3022.640	0.011
L18	69.75 - 68.75 (17)	TP37.128x35.978x0.375	5.750	0.000	0.0	44.379	-34.297	2596.180	0.013
L19	68.75 - 67.417 (18)	TP37.395x37.128x0.375	1.333	0.000	0.0	44.701	-34.634	2615.020	0.013
L20	67.417 - 67.167 (19)	TP37.445x37.395x0.375	0.250	0.000	0.0	44.762	-34.710	2618.550	0.013
L21	67.167 - 62.167 (20)	TP38.445x37.445x0.375	5.000	0.000	0.0	45.969	-36.001	2689.200	0.013
L22	62.167 - 57.583 (21)	TP39.362x38.445x0.375	4.584	0.000	0.0	47.076	-37.215	2753.970	0.014
L23	57.583 - 57.333 (22)	TP39.412x39.362x0.7	0.250	0.000	0.0	87.256	-37.334	5104.480	0.007
L24	57.333 - 56.417 (23)	TP39.595x39.412x0.7	0.916	0.000	0.0	87.669	-37.724	5128.640	0.007
L25	56.417 - 56.167 (24)	TP39.645x39.595x0.588	0.250	0.000	0.0	73.887	-37.817	4322.380	0.009
L26	56.167 - 51.167 (25)	TP40.645x39.645x0.575	5.000	0.000	0.0	74.190	-39.619	4340.100	0.009
L27	51.167 - 46.167 (26)	TP41.645x40.645x0.575	5.000	0.000	0.0	76.041	-41.454	4448.430	0.009
L28	46.167 - 41.167 (27)	TP42.645x41.645x0.563	5.000	0.000	0.0	76.223	-43.318	4459.020	0.010
L29	41.167 - 32.5 (28)	TP44.379x42.645x0.563	8.667	0.000	0.0	77.370	-44.513	4526.140	0.010
L30	32.5 - 31.5 (29)	TP43.829x42.529x0.438	6.500	0.000	0.0	61.128	-48.260	3575.980	0.013
L31	31.5 - 26.5 (30)	TP44.829x43.829x0.438	5.000	0.000	0.0	62.537	-49.906	3658.400	0.014
L32	26.5 - 26.25 (31)	TP44.879x44.829x0.688	0.250	0.000	0.0	97.829	-50.029	5723.020	0.009
L33	26.25 - 21.25 (32)	TP45.879x44.879x0.688	5.000	0.000	0.0	100.043	-52.320	5852.540	0.009
L34	21.25 - 16.25 (33)	TP46.88x45.879x0.675	5.000	0.000	0.0	100.425	-54.647	5874.890	0.009
L35	16.25 - 11.25 (34)	TP47.88x46.88x0.675	5.000	0.000	0.0	102.599	-57.004	6002.060	0.009
L36	11.25 - 6.25 (35)	TP48.88x47.88x0.663	5.000	0.000	0.0	102.860	-59.392	6017.290	0.010
L37	6.25 - 1.25 (36)	TP49.88x48.88x0.663	5.000	0.000	0.0	104.993	-61.811	6142.100	0.010
L38	1.25 - 0 (37)	TP50.13x49.88x0.663	1.250	0.000	0.0	105.527	-62.419	6173.300	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)	TP23x22x0.25	24.056	564.409	0.043	0.000	564.409	0.000
L2	145 - 140 (2)	TP24x23x0.25	54.886	606.794	0.090	0.000	606.794	0.000
L3	140 - 135 (3)	TP25x24x0.25	99.942	649.895	0.154	0.000	649.895	0.000
L4	135 - 130 (4)	TP26x25x0.25	155.946	693.620	0.225	0.000	693.620	0.000
L5	130 - 125 (5)	TP27.001x26x0.25	223.612	737.877	0.303	0.000	737.877	0.000
L6	125 - 120 (6)	TP28.001x27.001x0.25	295.371	782.572	0.377	0.000	782.572	0.000
L7	120 - 115 (7)	TP29.001x28.001x0.25	377.438	827.613	0.456	0.000	827.613	0.000
L8	115 - 108 (8)	TP30.401x29.001x0.25	431.899	857.033	0.504	0.000	857.033	0.000
L9	108 - 106.75	TP30.151x29.151x0.313	526.960	1195.233	0.441	0.000	1195.233	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 $\frac{M_{uy}}{\phi M_{ny}}$
	(9)							
L10	106.75 - 101.75 (10)	TP31.151x30.151x0.313	626.500	1262.608	0.496	0.000	1262.608	0.000
L11	101.75 - 96.75 (11)	TP32.152x31.151x0.313	728.357	1330.775	0.547	0.000	1330.775	0.000
L12	96.75 - 91.75 (12)	TP33.152x32.152x0.313	832.253	1399.642	0.595	0.000	1399.642	0.000
L13	91.75 - 89.5 (13)	TP33.602x33.152x0.313	879.667	1430.833	0.615	0.000	1430.833	0.000
L14	89.5 - 89.25 (14)	TP33.652x33.602x0.5	884.958	2435.475	0.363	0.000	2435.475	0.000
L15	89.25 - 84.25 (15)	TP34.652x33.652x0.494	997.517	2554.867	0.390	0.000	2554.867	0.000
L16	84.25 - 79.25 (16)	TP35.653x34.652x0.488	1115.283	2674.933	0.417	0.000	2674.933	0.000
L17	79.25 - 69.75 (17)	TP37.553x35.653x0.481	1227.867	2787.725	0.440	0.000	2787.725	0.000
L18	69.75 - 68.75 (18)	TP37.128x35.978x0.375	1367.117	2304.650	0.593	0.000	2304.650	0.000
L19	68.75 - 67.417 (19)	TP37.395x37.128x0.375	1399.833	2332.083	0.600	0.000	2332.083	0.000
L20	67.417 - 67.167 (20)	TP37.445x37.395x0.375	1405.992	2337.242	0.602	0.000	2337.242	0.000
L21	67.167 - 62.167 (21)	TP38.445x37.445x0.375	1530.017	2440.742	0.627	0.000	2440.742	0.000
L22	62.167 - 57.583 (22)	TP39.362x38.445x0.375	1645.350	2536.308	0.649	0.000	2536.308	0.000
L23	57.583 - 57.333 (23)	TP39.412x39.362x0.7	1651.683	5021.758	0.329	0.000	5021.758	0.000
L24	57.333 - 56.417 (24)	TP39.595x39.412x0.7	1674.950	5069.833	0.330	0.000	5069.833	0.000
L25	56.417 - 56.167 (25)	TP39.645x39.595x0.588	1681.308	4303.167	0.391	0.000	4303.167	0.000
L26	56.167 - 51.167 (26)	TP40.645x39.645x0.575	1809.667	4435.850	0.408	0.000	4435.850	0.000
L27	51.167 - 46.167 (27)	TP41.645x40.645x0.575	1940.117	4661.658	0.416	0.000	4661.658	0.000
L28	46.167 - 41.167 (28)	TP42.645x41.645x0.563	2072.600	4790.967	0.433	0.000	4790.967	0.000
L29	41.167 - 32.5 (29)	TP44.379x42.645x0.563	2157.525	4937.258	0.437	0.000	4937.258	0.000
L30	32.5 - 31.5 (30)	TP43.829x42.529x0.438	2334.533	3731.617	0.626	0.000	3731.617	0.000
L31	31.5 - 26.5 (31)	TP44.829x43.829x0.438	2472.758	3872.550	0.639	0.000	3872.550	0.000
L32	26.5 - 26.25 (32)	TP44.879x44.829x0.688	2479.708	6443.275	0.385	0.000	6443.275	0.000
L33	26.25 - 21.25 (33)	TP45.879x44.879x0.688	2619.650	6740.517	0.389	0.000	6740.517	0.000
L34	21.25 - 16.25 (34)	TP46.88x45.879x0.675	2761.417	6921.991	0.399	0.000	6921.991	0.000
L35	16.25 - 11.25 (35)	TP47.88x46.88x0.675	2905.008	7227.108	0.402	0.000	7227.108	0.000
L36	11.25 - 6.25 (36)	TP48.88x47.88x0.663	3050.425	7404.958	0.412	0.000	7404.958	0.000
L37	6.25 - 1.25 (37)	TP49.88x48.88x0.663	3197.658	7717.467	0.414	0.000	7717.467	0.000
L38	1.25 - 0 (38)	TP50.13x49.88x0.663	3234.750	7796.600	0.415	0.000	7796.600	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)	TP23x22x0.25	4.720	294.076	0.016	0.250	593.715	0.000
L2	145 - 140 (2)	TP24x23x0.25	8.803	307.118	0.029	0.250	647.063	0.000
L3	140 - 135 (3)	TP25x24x0.25	9.224	322.769	0.029	0.250	702.706	0.000
L4	135 - 130 (4)	TP26x25x0.25	13.324	335.812	0.040	0.250	760.643	0.000
L5	130 - 125 (5)	TP27.001x26x0.25	13.751	348.855	0.039	0.250	820.876	0.000
L6	125 - 120 (6)	TP28.001x27.001x0.25	16.210	361.897	0.045	0.415	883.400	0.000
L7	120 - 115 (7)	TP29.001x28.001x0.25	16.628	374.940	0.044	0.415	948.225	0.000
L8	115 - 108 (8)	TP30.401x29.001x0.25	16.899	383.417	0.044	0.415	991.592	0.000
L9	108 - 106.75 (9)	TP30.151x29.151x0.313	19.698	486.407	0.040	0.546	1276.675	0.000
L10	106.75 - 101.75 (10)	TP31.151x30.151x0.313	20.175	502.713	0.040	0.656	1363.700	0.000
L11	101.75 - 96.75 (11)	TP32.152x31.151x0.313	20.586	519.018	0.040	0.655	1453.600	0.000
L12	96.75 - 91.75 (12)	TP33.152x32.152x0.313	20.993	535.323	0.039	0.655	1546.367	0.000
L13	91.75 - 89.5 (13)	TP33.602x33.152x0.313	21.175	542.661	0.039	0.655	1589.042	0.000
L14	89.5 - 89.25 (14)	TP33.652x33.602x0.5	21.192	864.671	0.025	0.655	2521.508	0.000
L15	89.25 - 84.25 (15)	TP34.652x33.652x0.494	22.567	879.786	0.026	0.475	2643.483	0.000
L16	84.25 - 79.25 (16)	TP35.653x34.652x0.488	23.499	894.245	0.026	1.093	2766.100	0.000
L17	79.25 - 69.75 (17)	TP37.553x35.653x0.481	23.924	906.792	0.026	1.092	2881.200	0.000
L18	69.75 - 68.75 (18)	TP37.128x35.978x0.375	24.510	778.854	0.031	1.092	2517.958	0.000
L19	68.75 - 67.417 (19)	TP37.395x37.128x0.375	24.617	784.505	0.031	1.092	2554.625	0.000
L20	67.417 - 67.167 (20)	TP37.445x37.395x0.375	24.625	785.565	0.031	1.092	2561.533	0.000
L21	67.167 - 62.167 (21)	TP38.445x37.445x0.375	25.007	806.759	0.031	1.092	2701.617	0.000
L22	62.167 - 57.583 (22)	TP39.362x38.445x0.375	25.347	826.191	0.031	1.091	2833.325	0.000
L23	57.583 - 57.333 (23)	TP39.412x39.362x0.7	25.358	1531.340	0.017	1.091	5214.525	0.000
L24	57.333 - 56.417 (24)	TP39.595x39.412x0.7	25.444	1538.590	0.017	1.091	5264.000	0.000
L25	56.417 - 56.167 (25)	TP39.645x39.595x0.588	25.465	1296.710	0.020	1.091	4455.000	0.000
L26	56.167 - 51.167 (26)	TP40.645x39.645x0.575	25.894	1302.030	0.020	1.091	4589.233	0.000
L27	51.167 - 46.167 (27)	TP41.645x40.645x0.575	26.308	1334.530	0.020	1.091	4821.192	0.000
L28	46.167 - 41.167 (28)	TP42.645x41.645x0.563	26.708	1337.710	0.020	1.091	4951.825	0.000
L29	41.167 - 32.5 (29)	TP44.379x42.645x0.563	26.947	1357.840	0.020	1.091	5102.033	0.000
L30	32.5 - 31.5 (30)	TP43.829x42.529x0.438	27.517	1072.790	0.026	1.091	4094.692	0.000
L31	31.5 - 26.5 (31)	TP44.829x43.829x0.438	27.805	1097.520	0.025	1.090	4285.625	0.000
L32	26.5 - 26.25 (32)	TP44.879x44.829x0.688	27.811	1716.910	0.016	1.090	6674.008	0.000
L33	26.25 - 21.25 (33)	TP45.879x44.879x0.688	28.183	1755.760	0.016	1.090	6979.525	0.000
L34	21.25 - 16.25 (34)	TP46.88x45.879x0.675	28.548	1762.470	0.016	1.090	7163.167	0.000
L35	16.25 - 11.25	TP47.88x46.88x0.675	28.913	1800.620	0.016	1.090	7476.633	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 $\frac{T_u}{\phi T_n}$
L36	11.25 - 6.25 (35) (36)	TP48.88x47.88x0.663	29.277	1805.190	0.016	1.090	7656.400	0.000
L37	6.25 - 1.25 (37)	TP49.88x48.88x0.663	29.642	1842.630	0.016	1.090	7977.325	0.000
L38	1.25 - 0 (38)	TP50.13x49.88x0.663	29.737	1851.990	0.016	1.090	8058.583	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	150 - 145 (1)	0.005	0.043	0.000	0.016	0.000	0.048 ✔	1.050	4.8.2 ✔
L2	145 - 140 (2)	0.009	0.090	0.000	0.029	0.000	0.101 ✔	1.050	4.8.2 ✔
L3	140 - 135 (3)	0.009	0.154	0.000	0.029	0.000	0.164 ✔	1.050	4.8.2 ✔
L4	135 - 130 (4)	0.013	0.225	0.000	0.040	0.000	0.239 ✔	1.050	4.8.2 ✔
L5	130 - 125 (5)	0.013	0.303	0.000	0.039	0.000	0.318 ✔	1.050	4.8.2 ✔
L6	125 - 120 (6)	0.015	0.377	0.000	0.045	0.000	0.395 ✔	1.050	4.8.2 ✔
L7	120 - 115 (7)	0.015	0.456	0.000	0.044	0.000	0.473 ✔	1.050	4.8.2 ✔
L8	115 - 108 (8)	0.015	0.504	0.000	0.044	0.000	0.521 ✔	1.050	4.8.2 ✔
L9	108 - 106.75 (9)	0.014	0.441	0.000	0.040	0.000	0.457 ✔	1.050	4.8.2 ✔
L10	106.75 - 101.75 (10)	0.015	0.496	0.000	0.040	0.000	0.512 ✔	1.050	4.8.2 ✔
L11	101.75 - 96.75 (11)	0.015	0.547	0.000	0.040	0.000	0.564 ✔	1.050	4.8.2 ✔
L12	96.75 - 91.75 (12)	0.015	0.595	0.000	0.039	0.000	0.611 ✔	1.050	4.8.2 ✔
L13	91.75 - 89.5 (13)	0.015	0.615	0.000	0.039	0.000	0.631 ✔	1.050	4.8.2 ✔
L14	89.5 - 89.25 (14)	0.009	0.363	0.000	0.025	0.000	0.373 ✔	1.050	4.8.2 ✔
L15	89.25 - 84.25 (15)	0.010	0.390	0.000	0.026	0.000	0.401 ✔	1.050	4.8.2 ✔
L16	84.25 - 79.25 (16)	0.010	0.417	0.000	0.026	0.000	0.428 ✔	1.050	4.8.2 ✔
L17	79.25 - 69.75 (17)	0.011	0.440	0.000	0.026	0.000	0.452 ✔	1.050	4.8.2 ✔
L18	69.75 - 68.75 (18)	0.013	0.593	0.000	0.031	0.000	0.607 ✔	1.050	4.8.2 ✔
L19	68.75 - 67.417 (19)	0.013	0.600	0.000	0.031	0.000	0.615 ✔	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L20	67.417 - 67.167 (20)	0.013	0.602	0.000	0.031	0.000	0.616 ✔	1.050	4.8.2 ✔
L21	67.167 - 62.167 (21)	0.013	0.627	0.000	0.031	0.000	0.641 ✔	1.050	4.8.2 ✔
L22	62.167 - 57.583 (22)	0.014	0.649	0.000	0.031	0.000	0.663 ✔	1.050	4.8.2 ✔
L23	57.583 - 57.333 (23)	0.007	0.329	0.000	0.017	0.000	0.337 ✔	1.050	4.8.2 ✔
L24	57.333 - 56.417 (24)	0.007	0.330	0.000	0.017	0.000	0.338 ✔	1.050	4.8.2 ✔
L25	56.417 - 56.167 (25)	0.009	0.391	0.000	0.020	0.000	0.400 ✔	1.050	4.8.2 ✔
L26	56.167 - 51.167 (26)	0.009	0.408	0.000	0.020	0.000	0.417 ✔	1.050	4.8.2 ✔
L27	51.167 - 46.167 (27)	0.009	0.416	0.000	0.020	0.000	0.426 ✔	1.050	4.8.2 ✔
L28	46.167 - 41.167 (28)	0.010	0.433	0.000	0.020	0.000	0.443 ✔	1.050	4.8.2 ✔
L29	41.167 - 32.5 (29)	0.010	0.437	0.000	0.020	0.000	0.447 ✔	1.050	4.8.2 ✔
L30	32.5 - 31.5 (30)	0.013	0.626	0.000	0.026	0.000	0.640 ✔	1.050	4.8.2 ✔
L31	31.5 - 26.5 (31)	0.014	0.639	0.000	0.025	0.000	0.653 ✔	1.050	4.8.2 ✔
L32	26.5 - 26.25 (32)	0.009	0.385	0.000	0.016	0.000	0.394 ✔	1.050	4.8.2 ✔
L33	26.25 - 21.25 (33)	0.009	0.389	0.000	0.016	0.000	0.398 ✔	1.050	4.8.2 ✔
L34	21.25 - 16.25 (34)	0.009	0.399	0.000	0.016	0.000	0.409 ✔	1.050	4.8.2 ✔
L35	16.25 - 11.25 (35)	0.009	0.402	0.000	0.016	0.000	0.412 ✔	1.050	4.8.2 ✔
L36	11.25 - 6.25 (36)	0.010	0.412	0.000	0.016	0.000	0.422 ✔	1.050	4.8.2 ✔
L37	6.25 - 1.25 (37)	0.010	0.414	0.000	0.016	0.000	0.425 ✔	1.050	4.8.2 ✔
L38	1.25 - 0 (38)	0.010	0.415	0.000	0.016	0.000	0.425 ✔	1.050	4.8.2 ✔

Section Capacity Table

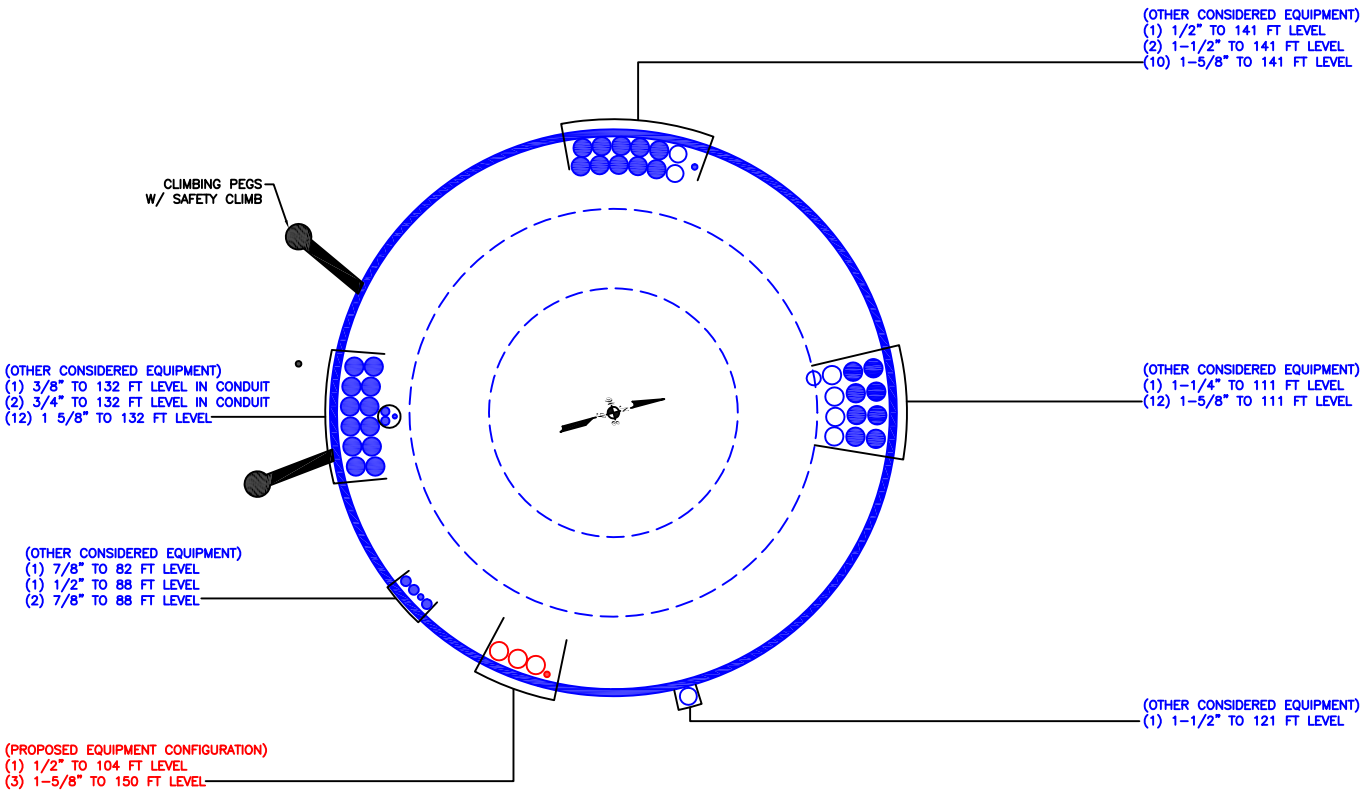
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	150 - 145	Pole	TP23x22x0.25	1	-5.020	--	**	**
L2	145 - 140	Pole	TP24x23x0.25	2	-9.625	--	**	**
L3	140 - 135	Pole	TP25x24x0.25	3	-10.119	--	**	**
L4	135 - 130	Pole	TP26x25x0.25	4	-14.546	--	**	**
L5	130 - 125	Pole	TP27.001x26x0.25	5	-15.166	--	**	**

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L6	125 - 120	Pole	TP28.001x27.001x0.25	6	-18.220	--	**	**
L7	120 - 115	Pole	TP29.001x28.001x0.25	7	-18.913	--	**	**
L8	115 - 108	Pole	TP30.401x29.001x0.25	8	-19.396	--	**	**
L9	108 - 106.75	Pole	TP30.151x29.151x0.313	9	-23.499	--	**	**
L10	106.75 - 101.75	Pole	TP31.151x30.151x0.313	10	-24.526	--	**	**
L11	101.75 - 96.75	Pole	TP32.152x31.151x0.313	11	-25.500	--	**	**
L12	96.75 - 91.75	Pole	TP33.152x32.152x0.313	12	-26.503	--	**	**
L13	91.75 - 89.5	Pole	TP33.602x33.152x0.313	13	-26.963	--	**	**
L14	89.5 - 89.25	Pole	TP33.652x33.602x0.5	14	-27.040	--	**	**
L15	89.25 - 84.25	Pole	TP34.652x33.652x0.494	15	-28.871	--	**	**
L16	84.25 - 79.25	Pole	TP35.653x34.652x0.488	16	-30.478	--	**	**
L17	79.25 - 69.75	Pole	TP37.553x35.653x0.481	17	-31.839	--	**	**
L18	69.75 - 68.75	Pole	TP37.128x35.978x0.375	18	-34.297	--	**	**
L19	68.75 - 67.417	Pole	TP37.395x37.128x0.375	19	-34.634	--	**	**
L20	67.417 - 67.167	Pole	TP37.445x37.395x0.375	20	-34.710	--	**	**
L21	67.167 - 62.167	Pole	TP38.445x37.445x0.375	21	-36.001	--	**	**
L22	62.167 - 57.583	Pole	TP39.362x38.445x0.375	22	-37.215	--	**	**
L23	57.583 - 57.333	Pole	TP39.412x39.362x0.7	23	-37.334	--	**	**
L24	57.333 - 56.417	Pole	TP39.595x39.412x0.7	24	-37.724	--	**	**
L25	56.417 - 56.167	Pole	TP39.645x39.595x0.588	25	-37.817	--	**	**
L26	56.167 - 51.167	Pole	TP40.645x39.645x0.575	26	-39.619	--	**	**
L27	51.167 - 46.167	Pole	TP41.645x40.645x0.575	27	-41.454	--	**	**
L28	46.167 - 41.167	Pole	TP42.645x41.645x0.563	28	-43.318	--	**	**
L29	41.167 - 32.5	Pole	TP44.379x42.645x0.563	29	-44.513	--	**	**
L30	32.5 - 31.5	Pole	TP43.829x42.529x0.438	30	-48.260	--	**	**
L31	31.5 - 26.5	Pole	TP44.829x43.829x0.438	31	-49.906	--	**	**
L32	26.5 - 26.25	Pole	TP44.879x44.829x0.688	32	-50.029	--	**	**
L33	26.25 - 21.25	Pole	TP45.879x44.879x0.688	33	-52.320	--	**	**
L34	21.25 - 16.25	Pole	TP46.88x45.879x0.675	34	-54.647	--	**	**
L35	16.25 - 11.25	Pole	TP47.88x46.88x0.675	35	-57.004	--	**	**
L36	11.25 - 6.25	Pole	TP48.88x47.88x0.663	36	-59.392	--	**	**
L37	6.25 - 1.25	Pole	TP49.88x48.88x0.663	37	-61.811	--	**	**
L38	1.25 - 0	Pole	TP50.13x49.88x0.663	38	-62.419	--	**	**
							Summary	
						Pole (L22)	**	**
						RATING =	**	**

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

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876341

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 876341

Work Order: 2015698

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	42	3.75	12	22	30.401	0.25	Auto	A607-60
2	111.75	42	4.75	12	29.15	37.553	0.3125	Auto	A607-60
3	74.5	42	5.5	12	35.98	44.379	0.375	Auto	A607-65
4	38	38	0	12	42.53	50.13	0.4375	Auto	A607-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12
1	0	26.5	plate	CCI-WAFP-065125	4		E2			E2			E2			E2	
2	26.5	57.583	plate	CCI-AFP-060100	4		E2			E2			E2			E2	
3	74.5	89.5	plate	CCI-AFP-060100	3			E2				E2				E2	
4	56.417	67.417	plate	CCI-SFP-060100	3			E3				E3			E3		
5																	
6																	
7																	
8																	
9																	
10																	

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	6.5	1.25	8.125	0.625	Welded	n/a	PC 8.8 - M20 (100)	42.000	19.000	6.563	1.1875	A572-65
2	6	1	6	0.5	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	16.000	4.750	1.1875	A572-65
3	6	1	6	0.5	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	16.000	4.750	1.1875	A572-65
4	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65

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	22.000	23.000	0.25	A607-60	1.000
2	145 - 140	5		12	23.000	24.000	0.25	A607-60	1.000
3	140 - 135	5		12	24.000	25.000	0.25	A607-60	1.000
4	135 - 130	5		12	25.000	26.000	0.25	A607-60	1.000
5	130 - 125	5		12	26.000	27.001	0.25	A607-60	1.000
6	125 - 120	5		12	27.001	28.001	0.25	A607-60	1.000
7	120 - 115	5		12	28.001	29.001	0.25	A607-60	1.000
8	115 - 111.75	7	3.75	12	29.001	30.401	0.25	A607-60	1.000
9	111.75 - 106.75	5		12	29.151	30.151	0.3125	A607-60	1.000
10	106.75 - 101.75	5		12	30.151	31.151	0.3125	A607-60	1.000
11	101.75 - 96.75	5		12	31.151	32.152	0.3125	A607-60	1.000
12	96.75 - 91.75	5		12	32.152	33.152	0.3125	A607-60	1.000
13	91.75 - 89.5	2.25		12	33.152	33.602	0.3125	A607-60	1.000
14	89.5 - 89.25	0.25		12	33.602	33.652	0.5	A607-60	0.966
15	89.25 - 84.25	5		12	33.652	34.652	0.49375	A607-60	0.968
16	84.25 - 79.25	5		12	34.652	35.653	0.4875	A607-60	0.971
17	79.25 - 74.5	9.5	4.75	12	35.653	37.553	0.48125	A607-60	0.974
18	74.5 - 68.75	5.75		12	35.978	37.128	0.375	A607-65	1.000
19	68.75 - 67.417	1.333		12	37.128	37.395	0.375	A607-65	1.000
20	67.417 - 67.167	0.25		12	37.395	37.445	0.375	A607-65	1.000
21	67.167 - 62.167	5		12	37.445	38.445	0.375	A607-65	1.000
22	62.167 - 57.583	4.584		12	38.445	39.362	0.375	A607-65	1.000
23	57.583 - 57.333	0.25		12	39.362	39.412	0.7	A607-65	1.022
24	57.333 - 56.417	0.916		12	39.412	39.595	0.7	A607-65	1.020
25	56.417 - 56.167	0.25		12	39.595	39.645	0.5875	A607-65	0.967
26	56.167 - 51.167	5		12	39.645	40.645	0.575	A607-65	0.979
27	51.167 - 46.167	5		12	40.645	41.645	0.575	A607-65	0.971
28	46.167 - 41.167	5		12	41.645	42.645	0.5625	A607-65	0.985
29	41.167 - 38	8.667	5.5	12	42.645	44.379	0.5625	A607-65	0.980
30	38 - 31.5	6.5		12	42.529	43.829	0.4375	A607-65	1.000
31	31.5 - 26.5	5		12	43.829	44.829	0.4375	A607-65	1.000
32	26.5 - 26.25	0.25		12	44.829	44.879	0.6875	A607-65	0.973
33	26.25 - 21.25	5		12	44.879	45.879	0.6875	A607-65	0.965
34	21.25 - 16.25	5		12	45.879	46.880	0.675	A607-65	0.976
35	16.25 - 11.25	5		12	46.880	47.880	0.675	A607-65	0.969
36	11.25 - 6.25	5		12	47.880	48.880	0.6625	A607-65	0.980
37	6.25 - 1.25	5		12	48.880	49.880	0.6625	A607-65	0.973
38	1.25 - 0	1.25		12	49.880	50.130	0.6625	A607-65	0.972

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	24.06	4.72
2	145 - 140	9.63	54.89	8.80
3	140 - 135	10.12	99.94	9.22
4	135 - 130	14.55	155.95	13.32
5	130 - 125	15.17	223.61	13.75
6	125 - 120	18.22	295.37	16.21
7	120 - 115	18.91	377.44	16.63
8	115 - 111.75	19.40	431.90	16.90
9	111.75 - 106.75	23.50	526.96	19.70
10	106.75 - 101.75	24.53	626.50	20.18
11	101.75 - 96.75	25.50	728.36	20.59
12	96.75 - 91.75	26.50	832.25	20.99
13	91.75 - 89.5	26.96	879.66	21.18
14	89.5 - 89.25	27.04	884.96	21.19
15	89.25 - 84.25	28.87	997.52	22.57
16	84.25 - 79.25	30.48	1115.28	23.50
17	79.25 - 74.5	31.84	1227.87	23.92
18	74.5 - 68.75	34.30	1367.12	24.51
19	68.75 - 67.417	34.63	1399.84	24.62
20	67.417 - 67.167	34.71	1405.99	24.63
21	67.167 - 62.167	36.00	1530.01	25.01
22	62.167 - 57.583	37.22	1645.35	25.35
23	57.583 - 57.333	37.33	1651.69	25.36
24	57.333 - 56.417	37.72	1674.95	25.44
25	56.417 - 56.167	37.82	1681.31	25.46
26	56.167 - 51.167	39.62	1809.67	25.89
27	51.167 - 46.167	41.45	1940.12	26.31
28	46.167 - 41.167	43.32	2072.60	26.71
29	41.167 - 38	44.51	2157.53	26.95
30	38 - 31.5	48.26	2334.54	27.52
31	31.5 - 26.5	49.91	2472.75	27.81
32	26.5 - 26.25	50.03	2479.70	27.81
33	26.25 - 21.25	52.32	2619.65	28.18
34	21.25 - 16.25	54.65	2761.42	28.55
35	16.25 - 11.25	57.00	2905.01	28.91
36	11.25 - 6.25	59.39	3050.43	29.28
37	6.25 - 1.25	61.81	3197.66	29.64
38	1.25 - 0	62.42	3234.75	29.74

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
150 - 145	Pole	TP23x22x0.25	Pole	4.6%	Pass
145 - 140	Pole	TP24x23x0.25	Pole	9.6%	Pass
140 - 135	Pole	TP25x24x0.25	Pole	15.6%	Pass
135 - 130	Pole	TP26x25x0.25	Pole	22.7%	Pass
130 - 125	Pole	TP27.001x26x0.25	Pole	30.2%	Pass
125 - 120	Pole	TP28.001x27.001x0.25	Pole	37.5%	Pass
120 - 115	Pole	TP29.001x28.001x0.25	Pole	44.9%	Pass
115 - 111.75	Pole	TP30.401x29.001x0.25	Pole	49.5%	Pass
111.75 - 106.75	Pole	TP30.151x29.151x0.3125	Pole	43.4%	Pass
106.75 - 101.75	Pole	TP31.151x30.151x0.3125	Pole	48.7%	Pass
101.75 - 96.75	Pole	TP32.152x31.151x0.3125	Pole	53.5%	Pass
96.75 - 91.75	Pole	TP33.152x32.152x0.3125	Pole	58.0%	Pass
91.75 - 89.5	Pole	TP33.602x33.152x0.3125	Pole	60.0%	Pass
89.5 - 89.25	Pole + Reinf.	TP33.652x33.602x0.5	Reinf. 3 Tension Rupture	50.2%	Pass
89.25 - 84.25	Pole + Reinf.	TP34.652x33.652x0.4938	Reinf. 3 Tension Rupture	53.9%	Pass
84.25 - 79.25	Pole + Reinf.	TP35.653x34.652x0.4875	Reinf. 3 Tension Rupture	57.4%	Pass
79.25 - 74.5	Pole + Reinf.	TP37.553x35.653x0.4813	Reinf. 3 Tension Rupture	60.5%	Pass
74.5 - 68.75	Pole	TP37.128x35.978x0.375	Pole	57.7%	Pass
68.75 - 67.42	Pole	TP37.395x37.128x0.375	Pole	58.4%	Pass
67.42 - 67.17	Pole	TP37.445x37.395x0.375	Pole	58.5%	Pass
67.17 - 62.17	Pole	TP38.445x37.445x0.375	Pole	60.9%	Pass
62.17 - 57.58	Pole	TP39.362x38.445x0.375	Pole	63.0%	Pass
57.58 - 57.33	Pole + Reinf.	TP39.412x39.362x0.7	Reinf. 2 Tension Rupture	48.3%	Pass
57.33 - 56.42	Pole + Reinf.	TP39.595x39.412x0.7	Reinf. 2 Tension Rupture	48.6%	Pass
56.42 - 56.17	Pole + Reinf.	TP39.645x39.595x0.5875	Reinf. 2 Tension Rupture	58.3%	Pass
56.17 - 51.17	Pole + Reinf.	TP40.645x39.645x0.575	Reinf. 2 Tension Rupture	60.2%	Pass
51.17 - 46.17	Pole + Reinf.	TP41.645x40.645x0.575	Reinf. 2 Tension Rupture	61.9%	Pass
46.17 - 41.17	Pole + Reinf.	TP42.645x41.645x0.5625	Reinf. 2 Tension Rupture	63.5%	Pass
41.17 - 38	Pole + Reinf.	TP44.379x42.645x0.5625	Reinf. 2 Tension Rupture	64.5%	Pass
38 - 31.5	Pole	TP43.829x42.529x0.4375	Pole	60.8%	Pass
31.5 - 26.5	Pole	TP44.829x43.829x0.4375	Pole	62.0%	Pass
26.5 - 26.25	Pole + Reinf.	TP44.879x44.829x0.6875	Reinf. 1 Tension Rupture	56.0%	Pass
26.25 - 21.25	Pole + Reinf.	TP45.879x44.879x0.6875	Reinf. 1 Tension Rupture	57.0%	Pass
21.25 - 16.25	Pole + Reinf.	TP46.88x45.879x0.675	Reinf. 1 Tension Rupture	58.0%	Pass
16.25 - 11.25	Pole + Reinf.	TP47.88x46.88x0.675	Reinf. 1 Tension Rupture	58.9%	Pass
11.25 - 6.25	Pole + Reinf.	TP48.88x47.88x0.6625	Reinf. 1 Tension Rupture	59.7%	Pass
6.25 - 1.25	Pole + Reinf.	TP49.88x48.88x0.6625	Reinf. 1 Tension Rupture	60.5%	Pass
1.25 - 0	Pole + Reinf.	TP50.13x49.88x0.6625	Reinf. 1 Tension Rupture	60.7%	Pass
				Summary	
			Pole	63.0%	Pass
			Reinforcement	64.5%	Pass
			Overall	64.5%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity*				
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4
150 - 145	1211	n/a	1211	18.29	n/a	18.29	4.6%				
145 - 140	1378	n/a	1378	19.09	n/a	19.09	9.6%				
140 - 135	1560	n/a	1560	19.90	n/a	19.90	15.6%				
135 - 130	1757	n/a	1757	20.70	n/a	20.70	22.7%				
130 - 125	1970	n/a	1970	21.50	n/a	21.50	30.2%				
125 - 120	2199	n/a	2199	22.31	n/a	22.31	37.5%				
120 - 115	2445	n/a	2445	23.11	n/a	23.11	44.9%				
115 - 111.75	2615	n/a	2615	23.63	n/a	23.63	49.5%				
111.75 - 106.75	3417	n/a	3417	29.98	n/a	29.98	43.4%				
106.75 - 101.75	3772	n/a	3772	30.99	n/a	30.99	48.7%				
101.75 - 96.75	4151	n/a	4151	31.99	n/a	31.99	53.5%				
96.75 - 91.75	4555	n/a	4555	33.00	n/a	33.00	58.0%				
91.75 - 89.5	4745	n/a	4745	33.45	n/a	33.45	60.0%				
89.5 - 89.25	4766	2729	7495	33.50	18.00	51.50	37.0%			50.2%	
89.25 - 84.25	5208	2888	8096	34.50	18.00	52.50	40.2%			53.9%	
84.25 - 79.25	5676	3050	8727	35.51	18.00	53.51	43.4%			57.4%	
79.25 - 74.5	6147	3209	9356	36.46	18.00	54.46	46.2%			60.5%	
74.5 - 68.75	7662	n/a	7662	44.32	n/a	44.32	57.7%				
68.75 - 67.42	7830	n/a	7830	44.64	n/a	44.64	58.4%				
67.42 - 67.17	7862	n/a	7862	44.70	n/a	44.70	58.5%				
67.17 - 62.17	8515	n/a	8515	45.90	n/a	45.90	60.9%				
62.17 - 57.58	9145	n/a	9145	47.01	n/a	47.01	63.0%				
57.58 - 57.33	9185	7695	16880	47.07	42.00	89.07	34.7%		48.3%		46.3%
57.33 - 56.42	9315	7764	17079	47.29	42.00	89.29	35.0%		48.6%		46.6%
56.42 - 56.17	9346	4993	14339	47.35	24.00	71.35	40.1%		58.3%		
56.17 - 51.17	10079	5240	15319	48.56	24.00	72.56	41.9%		60.2%		
51.17 - 46.17	10848	5493	16341	49.76	24.00	73.76	43.6%		61.9%		
46.17 - 41.17	11656	5752	17408	50.97	24.00	74.97	45.2%		63.5%		
41.17 - 38	12188	5919	18107	51.73	24.00	75.73	46.2%		64.5%		
38 - 31.5	14710	n/a	14710	61.04	n/a	61.04	60.8%				
31.5 - 26.5	15751	n/a	15751	62.45	n/a	62.45	62.0%				
26.5 - 26.25	15804	8704	24508	62.52	32.50	95.02	38.8%	56.0%			
26.25 - 21.25	16896	9083	25978	63.92	32.50	96.42	39.8%	57.0%			
21.25 - 16.25	18036	9470	27506	65.33	32.50	97.83	40.9%	58.0%			
16.25 - 11.25	19226	9865	29091	66.74	32.50	99.24	41.9%	58.9%			
11.25 - 6.25	20468	10268	30737	68.15	32.50	100.65	42.9%	59.7%			
6.25 - 1.25	21762	10680	32442	69.55	32.50	102.05	43.9%	60.5%			
1.25 - 0	22094	10784	32878	69.90	32.50	102.40	44.1%	60.7%			

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

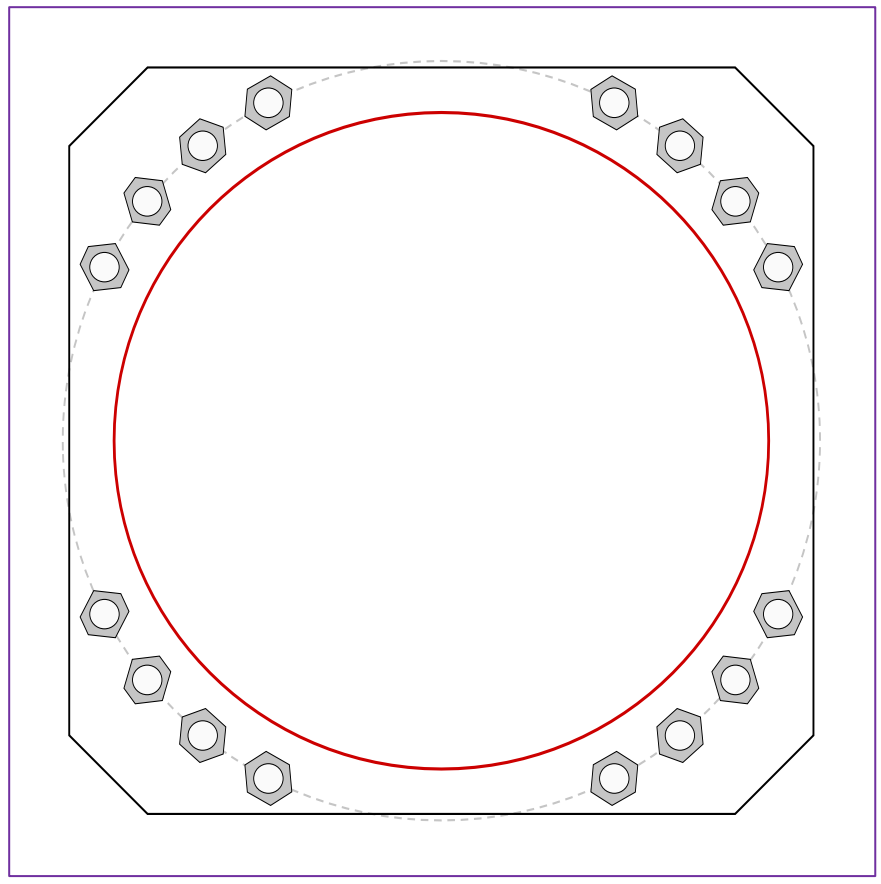
Monopole Base Plate Connection

Site Info	
BU #	876341
Site Name	OWN 2 - MARINO PRO
Order #	579389, Rev.0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	1.25

Applied Loads	
Moment (kip-ft)	3234.75
Axial Force (kips)	62.42
Shear Force (kips)	29.74

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

(16) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 58" BC

Anchor Spacing: 6 in

Base Plate Data

57" W x 3" Plate (A572-50; Fy=50 ksi, Fu=65 ksi); Clip: 6 in

Stiffener Data

N/A

Pole Data

50.13" x 0.4375" 12-sided pole (A607-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

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

Pu_t = 163.31	ϕPn_t = 243.75	**Stress Rating**
Vu = 1.86	ϕVn = 149.1	**63.8%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	30.86	(Flexural)
Allowable Stress (ksi):	45	
Stress Rating:	**65.3%**	**Pass**

Drilled Pier Foundation

BU # :	876341
Site Name:	MIDDLETOWN 2 -
Order Number:	579389, Rev.0
TIA-222 Revison:	H
Tower Type:	Monopole

Applied Loads	Comp.	Uplift
Moment (kip-ft)	3234.75	
Axial Force (kips)	62.43	
Shear Force (kips)	29.72	

Material Properties			Rebar 2, Fy Override (ksi)	Rebar 3, Fy Override (ksi)
Concrete Strength, f'c:	3	ksi		
Rebar Strength, Fy:	60	ksi		
Tie Yield Strength, Fyt:	40	ksi		

Pier Design Data		
Depth	18.5	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
From 0.5' above grade to 18.5' below grade		
Pier Diameter	7	ft
Rebar Quantity	32	
Rebar Size	11	
Clear Cover to Ties	4	in
Tie Size	5	
Tie Spacing	18	in

Rebar & Pier Options

Embedded Pole Inputs

Belled Pier Inputs

Analysis Results		
Soil Lateral Check	*Compression*	*Uplift*
$D_{v=0}$ (ft from TOC)	4.86	-
Soil Safety Factor	3.30	-
Max Moment (kip-ft)	3387.53	-
Rating*	*38.3%*	-
Soil Vertical Check	*Compression*	*Uplift*
Skin Friction (kips)	493.73	-
End Bearing (kips)	412.33	-
Weight of Concrete (kips)	131.62	-
Total Capacity (kips)	906.07	-
Axial (kips)	194.05	-
Rating*	*20.4%*	-
Reinforced Concrete Flexure	*Compression*	*Uplift*
Critical Depth (ft from TOC)	4.89	-
Critical Moment (kip-ft)	3387.50	-
Critical Moment Capacity	7531.98	-
Rating*	*42.8%*	-
Reinforced Concrete Shear	*Compression*	*Uplift*
Critical Depth (ft from TOC)	11.93	-
Critical Shear (kip)	479.28	-
Critical Shear Capacity	608.05	-
Rating*	*75.1%*	-

Structural Foundation Rating*	**75.1%**
Soil Interaction Rating*	**38.3%**

*Rating per TIA-222-H Section 15.5

Check Limitation	
Apply TIA-222-H Section 15.5:	☑
N/A	☐
Additional Longitudinal Rebar	
Input Effective Depths (else Actual):	☐
Shear Design Options	
Check Shear along Depth of Pier:	☑
Utilize Shear-Friction Methodology:	☐
Override Critical Depth:	☐

Go to Soil Calculations

Soil Profile

Groundwater Depth	N/A	# of Layers	3

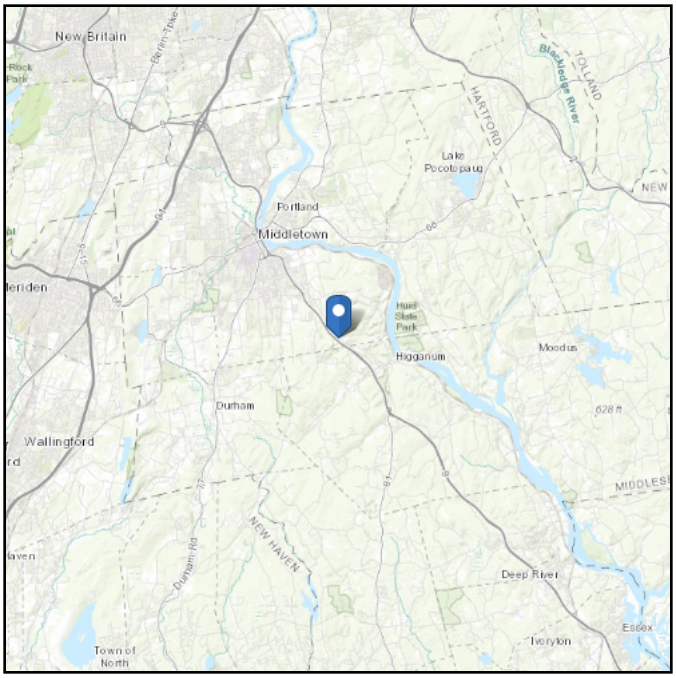
Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ_{soil} (pcf)	$\gamma_{concrete}$ (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	3.5	3.5	120	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	3.5	4	0.5	120	150	0	32	0.557	0.557				51	Cohesionless
3	4	18.5	14.5	125	150	4	0	2.045	2.045			14.28571		Cohesive

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 369.73 ft (NAVD 88)
Latitude: 41.510639
Longitude: -72.593361



Wind

Results:

Wind Speed:	120 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	92 Vmph
100-year MRI	99 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 Sep 09 2021

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

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

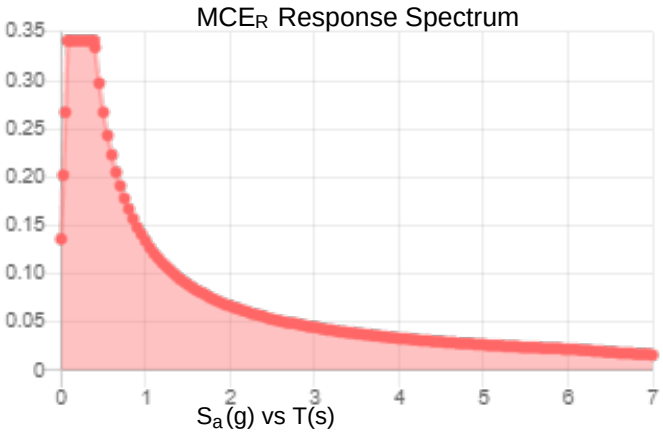
Seismic

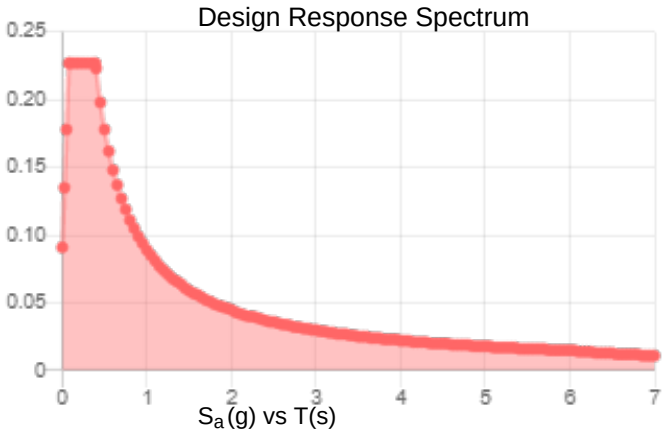
Site Soil Class: D - Default (see Section 11.4.3)

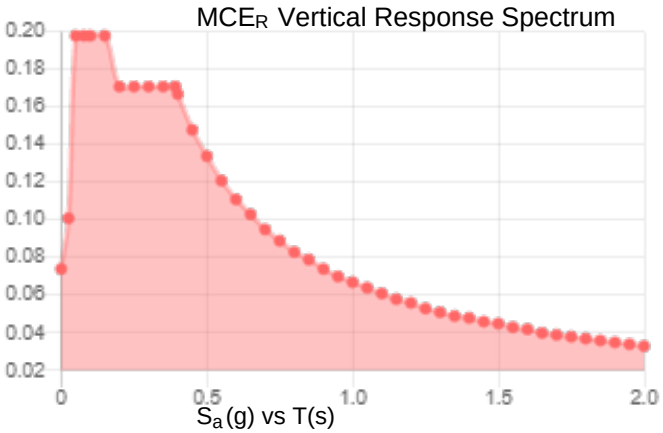
Results:

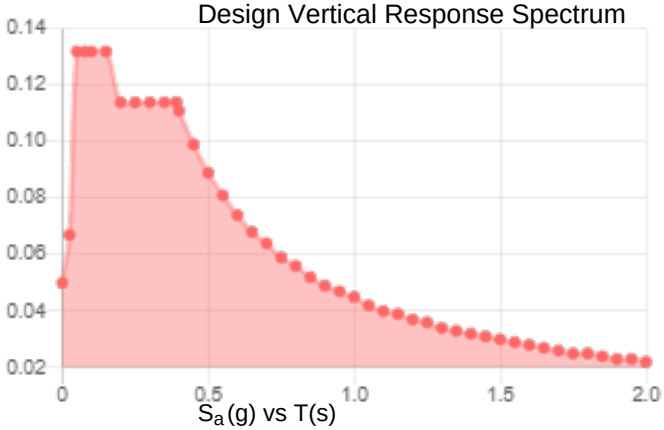
S_S :	0.213	S_{D1} :	0.089
S_1 :	0.056	T_L :	6
F_a :	1.6	PGA :	0.119
F_v :	2.4	PGA_M :	0.186
S_{MS} :	0.341	F_{PGA} :	1.561
S_{M1} :	0.134	I_e :	1
S_{DS} :	0.227	C_v :	0.726

Seismic Design Category B









Data Accessed: Thu Sep 09 2021

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

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Thu Sep 09 2021

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

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

Exhibit E

Mount Analysis

Date: **September 2, 2021**

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

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

Infinigy Engineering, PLLC
1033 Watervliet Shaker Road
Albany, NY 12205
518-690-0790
structural@infinigy.com

Subject:	**Mount Analysis Report**	
Carrier Designation:	**T-Mobile Keep**	
	Carrier Site Number:	CT11434A
	Carrier Site Name:	CT03XC169
Crown Castle Designation:	**Crown Castle BU Number:**	876341
	Crown Castle Site Name:	Middletown 2 – Marino Property
	Crown Castle JDE Job Number:	678525
	Crown Castle Order Number:	579389 Rev.0
Engineering Firm Designation:	**Infinigy Engineering, PLLC Report Designation:** 1039-Z0001-B	
Site Data:	**1969 Saybrook Rd, Middletown, Middlesex County, CT, 06457** **Latitude 41°30'38.30" Longitude -72°35'36.10"**	
Structure Information:	**Tower Height & Type:**	**150.0 ft Monopole**
	Mount Elevation:	**150.0 ft**
	Mount Type:	**14.0 ft Platform**

Dear Darcy Tarr,

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

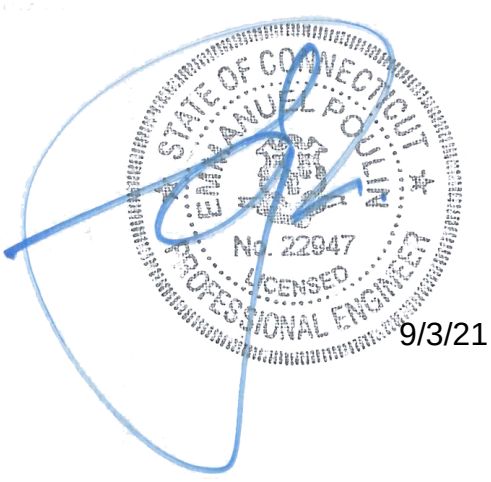
The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Platform **Sufficient**

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

Mount analysis prepared by: Abram Tadrous

Respectfully Submitted by:
Emmanuel Poulin, P.E.
518-690-0790
jjohnston@infinigy.com
CT PE License No. 22947



9/3/21

TABLE OF CONTENTS

1) INTRODUCTION

This is an existing 3 sector 14.0 ft Platform.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	130 mph
Exposure Category:	B
Topographic Factor at Base:	1.0
Topographic Factor at Mount:	1.0
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.180
Seismic S_1:	0.063
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	Antenna Manufacturer	Antenna Model	Mount / Modification Details
150.0	150.0	3	ERICSSON	AIR6449 B41_T-MOBILE	14.0 ft Platform
		3	RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	
		3	ERICSSON	RADIO 4460 B2/B25 B66_TMO	
		3	ERICSSON	RADIO 4480_TMOV2	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Crown Application	T-Mobile Application	579389 Rev.0	CCI Sites
Previous Mount Analysis	Infinigy Engineering, PLLC	7604835	CCI Sites
Loading Documents	T-Mobile	RFDS Version: 1	TSA

3.1) Analysis Method

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

Infinigy Mount Analysis Tool V2.1.7, a tool internally developed by Infinigy, was used to calculate wind loading on all appurtenances, dishes and mount members for various loading cases. Selected output from the analysis is included in Appendix B “Software Input Calculations”.

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

3.2) Assumptions

1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.
2) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1 and the referenced drawings.
3) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
4) The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
5) Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
6) Steel grades have been assumed as follows, unless noted otherwise:

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

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

4) ANALYSIS RESULTS

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

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1,2	Mount Pipe(s)	MP2	150.0	54.9	Pass
	Handrail(s)	M3		84.4	Pass
	Standoff(s)	M11		39.6	Pass
	Handrail Angle(s)	M29		74.0	Pass
	Mount Connection(s)	--		5.3	Pass

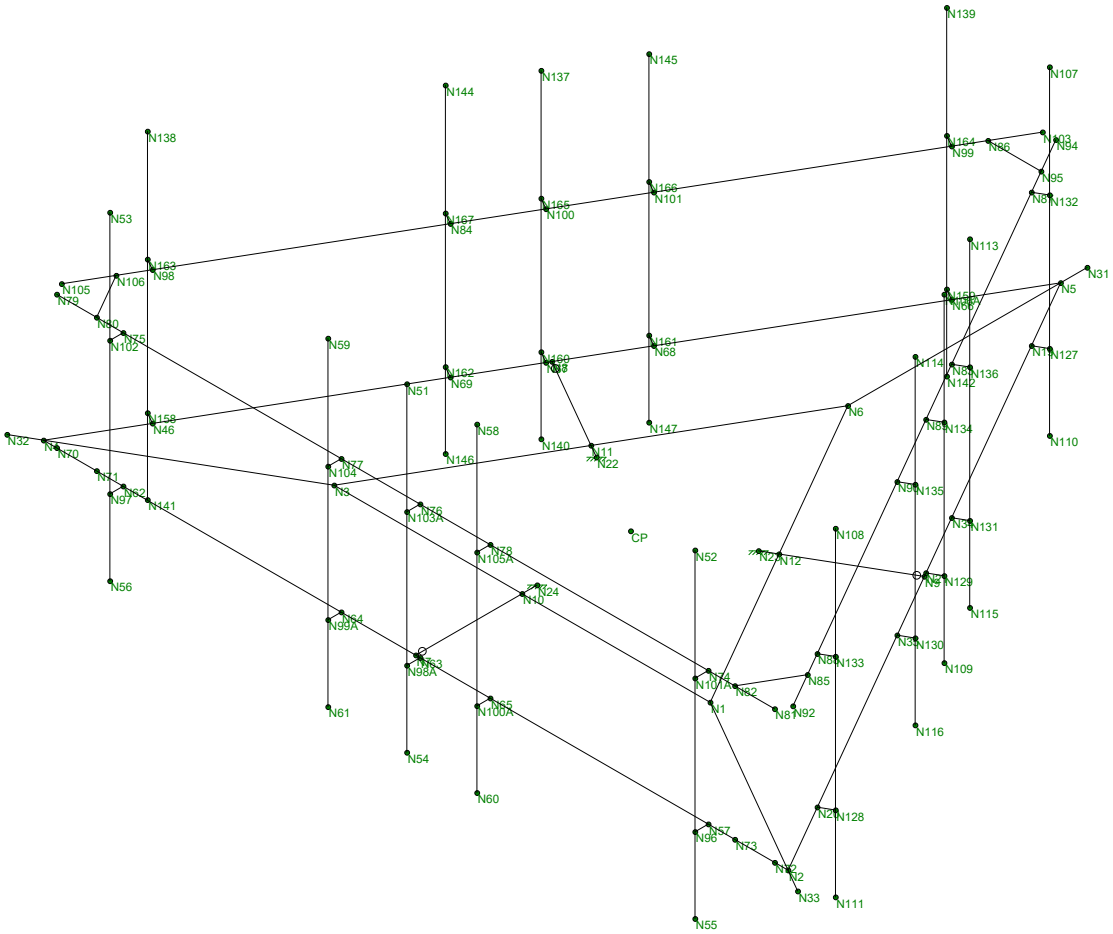
Structure Rating (max from all components) =	84.4%

4.1) Recommendations

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

APPENDIX A

WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

Infinigy Engineering, PLLC	876341	Wire Frame
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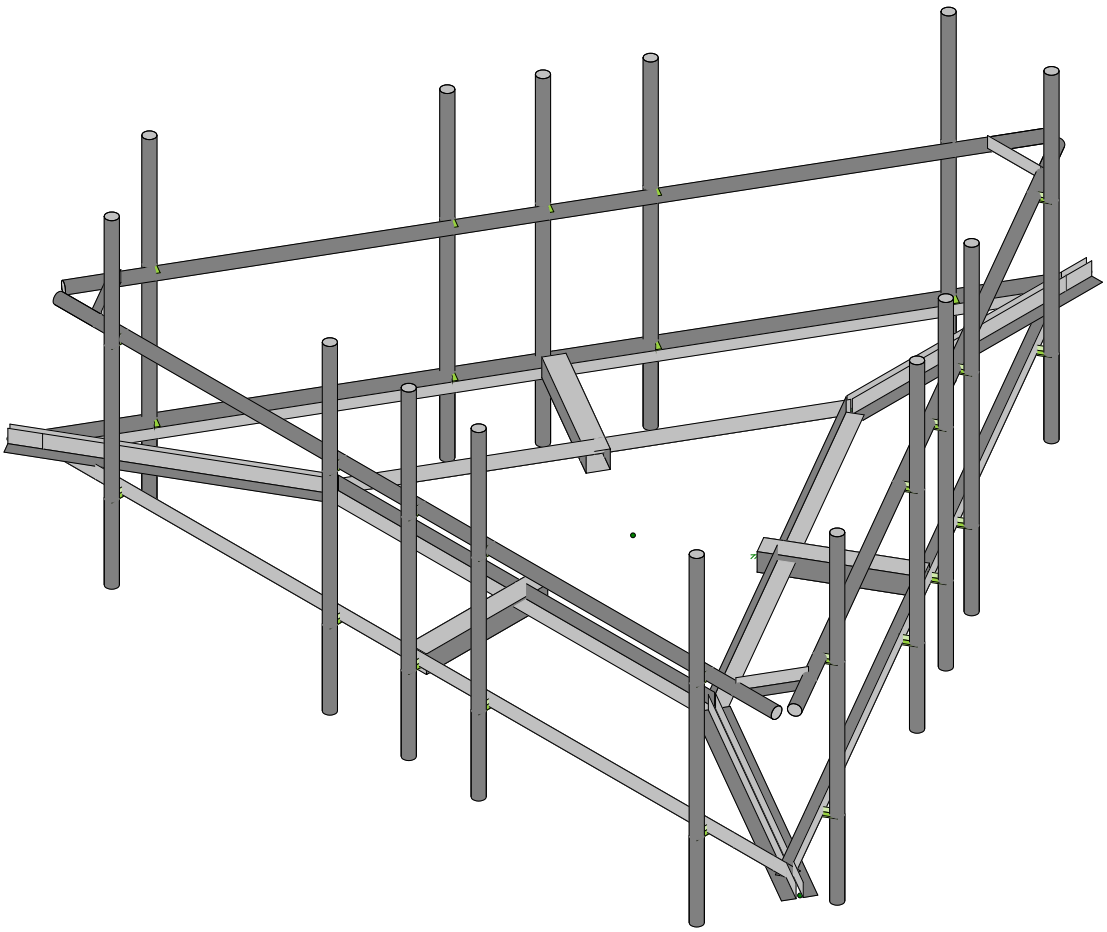

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APPENDIX B

SOFTWARE INPUT CALCULATIONS

Program Inputs

PROJECT INFORMATION	
Client:	Crown Castle
Carrier:	T-Mobile
Engineer:	Abram Tadrous

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	B	
Topo Factor Procedure:	Method 1, Category 1	
Site Class:	D - Stiff Soil (Assumed)	
Ground Elevation:	369.73	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Platform	
Num Sectors:	3	
Centerline AGL:	150.00	ft
Tower Height AGL:	150.00	ft

FACTORS		
Directionality Fact. (K_d):	0.950	
Ground Ele. Factor (K_e):	0.987	*Rev H Only
Rooftop Speed-Up (K_s):	1.000	*Rev H Only
Topographic Factor (K_{zt}):	1.000	
Gust Effect Factor (G_h):	1.000	

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

WIND AND ICE DATA		
Ultimate Wind (V_{ult}):	130	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	1.5	in
Flat Pressure:	89.999	psf
Round Pressure:	53.999	psf
Ice Wind Pressure:	7.988	psf

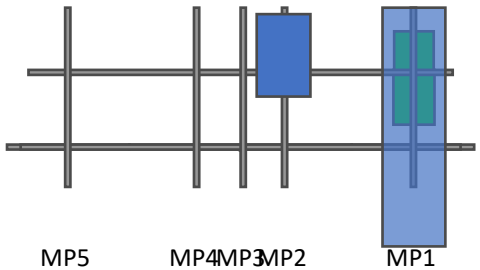
SEISMIC DATA		
Short-Period Accel. (S_s):	0.180	g
1-Second Accel. (S_1):	0.063	g
Short-Period Design (S_{DS}):	0.192	
1-Second Design (S_{D1}):	0.101	
Short-Period Coeff. (F_a):	1.600	
1-Second Coeff. (F_v):	2.400	
Amplification Factor (A_s):	3.000	
Response Mod. Coeff. (R):	2.000	

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

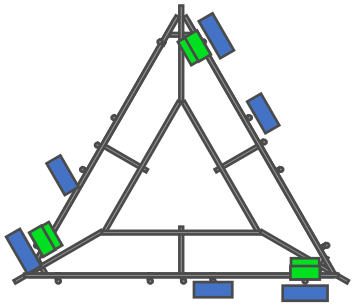
Infinigy Load Calculator V2.1.7

Program Inputs

ELEVATION VIEW



PLAN VIEW



INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

Infinigy Load Calculator V2.1.7

APPURTENANCE INFORMATION

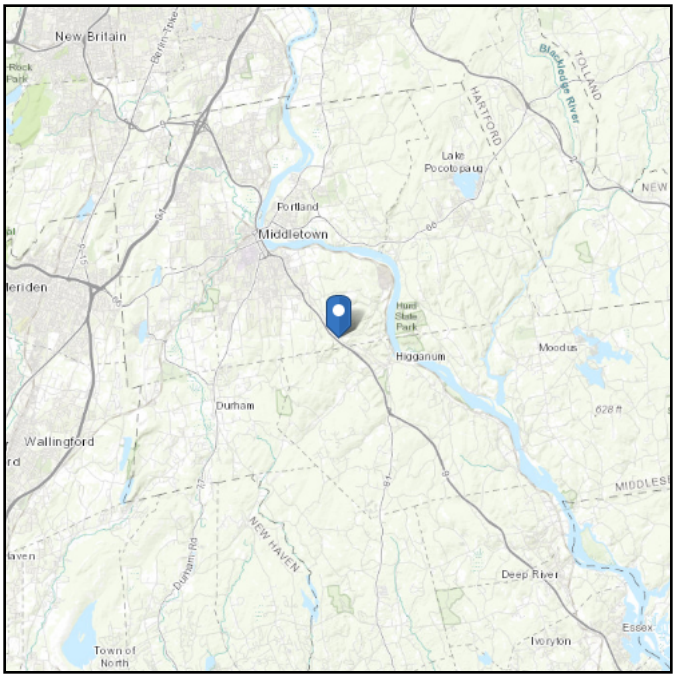
Appurtenance Name	Elevation	Qty.	K_a	q_z (psf)	EPA_N (ft^2)	EPA_T (ft^2)	Wind F_z (lbs)	Wind F_x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)
ERICSSON AIR6449 B41_T-MOBILE	150.0	3	0.90	45.00	5.27	2.03	213.43	82.21	114.63	33.01	MP2
/CELWAVE APXVAALL24_43-U-NA20_TI	150.0	3	0.90	45.00	14.67	5.32	594.13	215.46	149.90	43.17	MP1
RICSSON RADIO 4460 B2/B25 B66_TMC	150.0	3	0.90	45.00	2.14	1.69	86.64	68.28	109.00	31.39	MP1
ERICSSON RADIO 4480_TMOV2	150.0	3	0.90	45.00	2.88	1.40	116.57	56.58	81.00	23.33	MP1

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 369.73 ft (NAVD 88)
Latitude: 41.510639
Longitude: -72.593361



Wind

Results:

Wind Speed:	126 Vmph	130 Vmph Per City Jurisdiction
10-year MRI	78 Vmph	
25-year MRI	87 Vmph	
50-year MRI	95 Vmph	
100-year MRI	103 Vmph	

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

Date Accessed: Thu Sep 02 2021

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

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

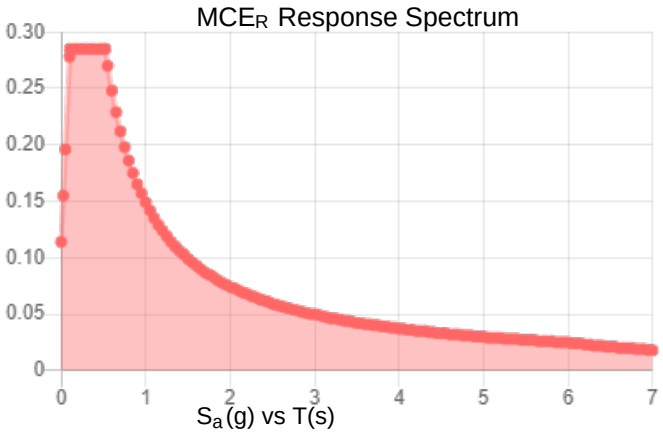
Seismic

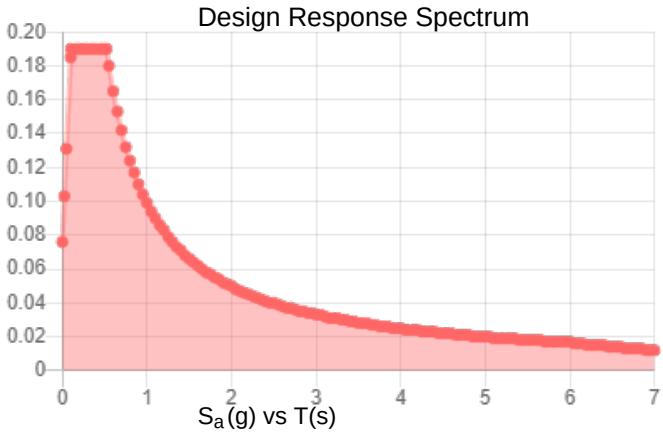
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.178 0.18	S_{DS} :	0.19
S_1 :	0.062 0.063	S_{D1} :	0.099
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.091
S_{MS} :	0.285	PGA_M :	0.145
S_{M1} :	0.149	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B





Data Accessed: Thu Sep 02 2021

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

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Thu Sep 02 2021

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

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

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N4			Frame Rail	Beam	Single Angle	A36 Gr.36	Typical
2	M2	N1	N3		270	Frame Rail	Beam	Single Angle	A36 Gr.36	Typical
3	M3	N5	N4		270	Frame Rail	Beam	Single Angle	A36 Gr.36	Typical
4	M4	N6	N3			Frame Rail	Beam	Single Angle	A36 Gr.36	Typical
5	M5	N5	N2			Frame Rail	Beam	Single Angle	A36 Gr.36	Typical
6	M6	N6	N1		270	Frame Rail	Beam	Single Angle	A36 Gr.36	Typical
7	M7	N1	N33		180	corners	Beam	Double Angle (...	A36 Gr.36	Typical
8	M8	N3	N32		180	corners	Beam	Double Angle (...	A36 Gr.36	Typical
9	M9	N31	N6		180	corners	Beam	Double Angle (...	A36 Gr.36	Typical
10	M10	N7	N24		90	Arm	Beam	Tube	A500 Gr.42	Typical
11	M11	N22	N8		90	Arm	Beam	Tube	A500 Gr.42	Typical
12	M12	N23	N9		90	Arm	Beam	Tube	A500 Gr.42	Typical
13	MP1	N55	N52			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
14	MP5	N56	N53			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
15	MP3	N54	N51			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
16	MP4	N61	N59			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
17	MP2	N58	N60			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
18	M28	N79	N81			Handrail	Beam	Pipe	A53 Gr.B	Typical
19	M29	N82	N85			Hnadrail angle	Beam	Single Angle	A36 Gr.36	Typical
20	M30	N92	N94			Handrail	Beam	Pipe	A53 Gr.B	Typical
21	M31	N95	N86			Hnadrail angle	Beam	Single Angle	A36 Gr.36	Typical
22	M32	N103	N105			Handrail	Beam	Pipe	A53 Gr.B	Typical
23	M33	N106	N80			Hnadrail angle	Beam	Single Angle	A36 Gr.36	Typical
24	M34	N75	N102			RIGID	None	None	RIGID	Typical
25	M35	N62	N97			RIGID	None	None	RIGID	Typical
26	M36	N77	N104			RIGID	None	None	RIGID	Typical
27	M37	N64	N99A			RIGID	None	None	RIGID	Typical
28	M38	N76	N103A			RIGID	None	None	RIGID	Typical
29	M39	N78	N105A			RIGID	None	None	RIGID	Typical
30	M40	N98A	N63			RIGID	None	None	RIGID	Typical
31	M41	N100A	N65			RIGID	None	None	RIGID	Typical
32	M42	N101A	N74			RIGID	None	None	RIGID	Typical
33	M43	N96	N57			RIGID	None	None	RIGID	Typical
34	MP11	N110	N107			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
35	MP15	N111	N108			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
36	MP13	N109	N106A			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
37	MP14	N116	N114			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
38	MP12	N113	N115			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
39	M49	N88	N133			RIGID	None	None	RIGID	Typical
40	M50	N20	N128			RIGID	None	None	RIGID	Typical
41	M51	N90	N135			RIGID	None	None	RIGID	Typical
42	M52	N35	N130			RIGID	None	None	RIGID	Typical
43	M53	N89	N134			RIGID	None	None	RIGID	Typical
44	M54	N83	N136			RIGID	None	None	RIGID	Typical
45	M55	N129	N21			RIGID	None	None	RIGID	Typical
46	M56	N131	N34			RIGID	None	None	RIGID	Typical
47	M57	N132	N87			RIGID	None	None	RIGID	Typical
48	M58	N127	N19			RIGID	None	None	RIGID	Typical
49	MP6	N141	N138			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
50	MP10	N142	N139			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
51	MP8	N140	N137			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
52	MP9	N147	N145			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
53	MP7	N144	N146			Pipe Mount	Column	Pipe	A53 Gr.B	Typical
54	M64	N99	N164			RIGID	None	None	RIGID	Typical
55	M65	N66	N159			RIGID	None	None	RIGID	Typical
56	M66	N101	N166			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
57	M67	N68	N161			RIGID	None	None	RIGID	Typical
58	M68	N100	N165			RIGID	None	None	RIGID	Typical
59	M69	N84	N167			RIGID	None	None	RIGID	Typical
60	M70	N160	N67			RIGID	None	None	RIGID	Typical
61	M71	N162	N69			RIGID	None	None	RIGID	Typical
62	M72	N163	N98			RIGID	None	None	RIGID	Typical
63	M73	N158	N46			RIGID	None	None	RIGID	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		30	90	0
3	Total General		30	90	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	L2.5x2.5x3	3	36	.009
7	A36 Gr.36	L3X3X4	6	758.6	.31
8	A36 Gr.36	LL3x3x4x0	3	162	.132
9	A500 Gr.42	HSS4X4X4	3	82.1	.078
10	A53 Gr.B	PIPE_2.0	18	1566	.453
11	Total HR Steel		33	2604.7	.983

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in...	Izz [in...	J [in4]
1	Arm	HSS4X4X4	Beam	Tube	A500 Gr.42	Typical	3.37	7.8	7.8	12.8
2	Frame Rail	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
3	corners	LL3x3x4x0	Beam	Double Angle...	A36 Gr.36	Typical	2.88	4.5	2.46	.063
4	Pipe Mount	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	Handrail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
6	Hnadrail angle	L2.5x2.5x3	Beam	Single Angle	A36 Gr.36	Typical	.901	.535	.535	.011

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	42.430779	0	24.49742	0	
2	N2	83.999995	0	48.49742	0	
3	N3	-42.430784	0	24.497423	0	
4	N4	-83.999995	0	48.49742	0	
5	N5	-0.	0	-96.994845	0	
6	N6	-0.	0	-48.994845	0	
7	N7	0.	0	48.49742	0	
8	N8	-42.	0	-24.248709	0	
9	N9	41.999998	0	-24.248712	0	
10	N10	0.	0	24.497423	0	
11	N11	-21.215394	0	-12.248711	0	
12	N12	21.215387	0	-12.248711	0	
13	N19	9.000004	0	-81.406374	0	
14	N20	75.000004	0	32.908979	0	
15	N21	41.500004	0	-25.114736	0	
16	N22	-18.294232	0	-10.562178	0	
17	N23	18.294229	0	-10.56218	0	
18	N24	0.	0	21.124356	0	
19	N31	-0.	0	-102.994845	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
20	N32	-89.196152	0	51.497423	0	
21	N33	89.196152	0	51.497423	0	
22	N34	33.599999	0	-38.797939	0	
23	N35	50.399999	0	-9.699486	0	
24	N46	-74.99999	0	32.908955	0	
25	N51	0.999999	55	51.497422	0	
26	N52	65.999998	55	51.497426	0	
27	N53	-66.000002	55	51.497426	0	
28	N54	0.999999	-17	51.497422	0	
29	N55	65.999998	-17	51.497426	0	
30	N56	-66.000002	-17	51.497426	0	
31	N57	65.999986	0	48.497419	0	
32	N58	16.800001	55	51.497423	0	
33	N59	-16.799998	55	51.497423	0	
34	N60	16.800001	-17	51.497423	0	
35	N61	-16.799998	-17	51.497423	0	
36	N62	-66.000002	0	48.49742	0	
37	N63	0.999999	0	48.49742	0	
38	N64	-16.799998	0	48.49742	0	
39	N65	16.800001	0	48.49742	0	
40	N66	-8.999998	0	-81.406392	0	
41	N67	-42.499998	0	-23.382686	0	
42	N68	-33.6	0	-38.797936	0	
43	N69	-50.399999	0	-9.699483	0	
44	N70	-80.999995	0	48.49742	0	
45	N71	-71.999995	0	48.49742	0	
46	N72	80.999995	0	48.49742	0	
47	N73	71.999995	0	48.49742	0	
48	N74	65.999986	30	48.497419	0	
49	N75	-66.000002	30	48.49742	0	
50	N76	0.999999	30	48.49742	0	
51	N77	-16.799998	30	48.49742	0	
52	N78	16.800001	30	48.49742	0	
53	N79	-80.999995	30	48.49742	0	
54	N80	-71.999995	30	48.49742	0	
55	N81	80.999995	30	48.49742	0	
56	N82	71.999995	30	48.49742	0	
57	N83	33.599997	30	-38.797938	0	
58	N84	-50.399998	30	-9.699482	0	
59	N85	77.999995	30	38.105115	0	
60	N86	-6.	30	-86.602535	0	
61	N87	9.000004	30	-81.406374	0	
62	N88	74.999998	30	32.908969	0	
63	N89	41.499998	30	-25.114735	0	
64	N90	50.399996	30	-9.699485	0	
65	N92	82.499995	30	45.899344	0	
66	N94	1.5	30	-94.396763	0	
67	N95	6.	30	-86.602535	0	
68	N98	-74.99999	30	32.908955	0	
69	N99	-8.999996	30	-81.406388	0	
70	N100	-42.499997	30	-23.382685	0	
71	N101	-33.599998	30	-38.797935	0	
72	N103	-1.5	30	-94.396763	0	
73	N105	-82.499995	30	45.899344	0	
74	N106	-77.999995	30	38.105115	0	
75	CP	0	0	0	0	
76	N96	65.999986	0	51.497419	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
77	N97	-66.000002	0	51.49742	0	
78	N98A	0.999999	0	51.49742	0	
79	N99A	-16.799998	0	51.49742	0	
80	N100A	16.800001	0	51.49742	0	
81	N101A	65.999986	30	51.497419	0	
82	N102	-66.000002	30	51.49742	0	
83	N103A	0.999999	30	51.49742	0	
84	N104	-16.799998	30	51.49742	0	
85	N105A	16.800001	30	51.49742	0	
86	N106A	44.098076	55	-26.614736	0	
87	N107	11.59808	55	-82.906388	0	
88	N108	77.59808	55	31.408966	0	
89	N109	44.098076	-17	-26.614736	0	
90	N110	11.59808	-17	-82.906388	0	
91	N111	77.59808	-17	31.408966	0	
92	N113	36.198075	55	-40.297939	0	
93	N114	52.998075	55	-11.199486	0	
94	N115	36.198075	-17	-40.297939	0	
95	N116	52.998075	-17	-11.199486	0	
96	N127	11.59808	0	-82.906374	0	
97	N128	77.598075	0	31.408969	0	
98	N129	44.098074	0	-26.614735	0	
99	N130	52.998072	0	-11.199485	0	
100	N131	36.198073	0	-40.297938	0	
101	N132	11.59808	30	-82.906374	0	
102	N133	77.598075	30	31.408969	0	
103	N134	44.098074	30	-26.614735	0	
104	N135	52.998072	30	-11.199485	0	
105	N136	36.198073	30	-40.297938	0	
106	N137	-45.098076	55	-24.882686	0	
107	N138	-77.598078	55	31.408962	0	
108	N139	-11.598078	55	-82.906392	0	
109	N140	-45.098076	-17	-24.882686	0	
110	N141	-77.598078	-17	31.408962	0	
111	N142	-11.598078	-17	-82.906392	0	
112	N144	-52.998077	55	-11.199483	0	
113	N145	-36.198077	55	-40.297936	0	
114	N146	-52.998077	-17	-11.199483	0	
115	N147	-36.198077	-17	-40.297936	0	
116	N158	-77.598066	0	31.408955	0	
117	N159	-11.598072	0	-82.906388	0	
118	N160	-45.098073	0	-24.882685	0	
119	N161	-36.198075	0	-40.297935	0	
120	N162	-52.998074	0	-11.199482	0	
121	N163	-77.598066	30	31.408955	0	
122	N164	-11.598072	30	-82.906388	0	
123	N165	-45.098073	30	-24.882685	0	
124	N166	-36.198075	30	-40.297935	0	
125	N167	-52.998074	30	-11.199482	0	

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torq...	Kyy	Kzz	Cb	Function
1	M1	Frame Rail	168	Segment	Segment	Lbyy						Lateral
2	M2	Frame Rail	84.862			Lbyy						Lateral
3	M3	Frame Rail	168	Segment	Segment	Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torq...	Kyy	Kzz	Cb	Function
4	M4	Frame Rail	84.862			Lbyy						Lateral
5	M5	Frame Rail	168	Segment	Segment	72	72					Lateral
6	M6	Frame Rail	84.862			Lbyy						Lateral
7	M7	corners	54			Lbyy						Lateral
8	M8	corners	54			Lbyy						Lateral
9	M9	corners	54			Lbyy						Lateral
10	M10	Arm	27.373			Lbyy						Lateral
11	M11	Arm	27.373			Lbyy						Lateral
12	M12	Arm	27.373			Lbyy						Lateral
13	MP1	Pipe Mount	72			Lbyy						Lateral
14	MP5	Pipe Mount	72			Lbyy						Lateral
15	MP3	Pipe Mount	72			Lbyy						Lateral
16	MP4	Pipe Mount	72									Lateral
17	MP2	Pipe Mount	72									Lateral
18	M28	Handrail	162			Lbyy						Lateral
19	M29	Hnadrail an...	12			Lbyy						Lateral
20	M30	Handrail	162			Lbyy						Lateral
21	M31	Hnadrail an...	12			Lbyy						Lateral
22	M32	Handrail	162			Lbyy						Lateral
23	M33	Hnadrail an...	12			Lbyy						Lateral
24	MP11	Pipe Mount	72			Lbyy						Lateral
25	MP15	Pipe Mount	72			Lbyy						Lateral
26	MP13	Pipe Mount	72			Lbyy						Lateral
27	MP14	Pipe Mount	72									Lateral
28	MP12	Pipe Mount	72									Lateral
29	MP6	Pipe Mount	72			Lbyy						Lateral
30	MP10	Pipe Mount	72			Lbyy						Lateral
31	MP8	Pipe Mount	72			Lbyy						Lateral
32	MP9	Pipe Mount	72									Lateral
33	MP7	Pipe Mount	72									Lateral

Basic Load Cases

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(...	Surface(Plate/Wall)
1	Self Weight	DL		-1			18		3	
2	Wind Load AZI 0	WLZ					36			
3	Wind Load AZI ...	None					36			
4	Wind Load AZI ...	None					36			
5	Wind Load AZI ...	WLX					36			
6	Wind Load AZI ...	None					36			
7	Wind Load AZI ...	None					36			
8	Wind Load AZI ...	None					36			
9	Wind Load AZI ...	None					36			
10	Wind Load AZI ...	None					36			
11	Wind Load AZI ...	None					36			
12	Wind Load AZI ...	None					36			
13	Wind Load AZI ...	None					36			
14	Distr. Wind Loa...	WLZ						63		
15	Distr. Wind Loa...	WLX						63		
16	Ice Weight	OL1					18	63	3	
17	Ice Wind Load ...	OL2					36			
18	Ice Wind Load ...	None					36			
19	Ice Wind Load ...	None					36			
20	Ice Wind Load ...	OL3					36			
21	Ice Wind Load ...	None					36			
22	Ice Wind Load ...	None					36			

Basic Load Cases (Continued)

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(...	Surface(Plate/Wall)
23	Ice Wind Load ...	None					36			
24	Ice Wind Load ...	None					36			
25	Ice Wind Load ...	None					36			
26	Ice Wind Load ...	None					36			
27	Ice Wind Load ...	None					36			
28	Ice Wind Load ...	None					36			
29	Distr. Ice Wind ...	OL2						63		
30	Distr. Ice Wind ...	OL3						63		
31	Seismic Load Z	ELZ			-.285		18			
32	Seismic Load X	ELX	-.285				18			
33	Service Live Lo...	LL				1				
34	Maintenance Lo...	LL				1				
35	Maintenance Lo...	LL				1				
36	Maintenance Lo...	LL				1				
37	Maintenance Lo...	LL				1				
38	Maintenance Lo...	LL				1				
39	Maintenance Lo...	LL				1				
40	Maintenance Lo...	LL				1				
41	Maintenance Lo...	LL				1				
42	Maintenance Lo...	LL				1				
43	Maintenance Lo...	LL				1				
44	Maintenance Lo...	LL				1				
45	Maintenance Lo...	LL				1				
46	Maintenance Lo...	LL				1				
47	Maintenance Lo...	LL				1				
48	Maintenance Lo...	LL				1				
49	BLC 1 Transient...	None						32		
50	BLC 16 Transie...	None						32		

Joint Loads and Enforced Displacements (BLC 33 : Service Live Loads)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N2	L	Y	-250

Joint Loads and Enforced Displacements (BLC 34 : Maintenance Load 1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N57	L	Y	-500

Joint Loads and Enforced Displacements (BLC 35 : Maintenance Load 2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N62	L	Y	-500

Joint Loads and Enforced Displacements (BLC 36 : Maintenance Load 3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N63	L	Y	-500

Joint Loads and Enforced Displacements (BLC 37 : Maintenance Load 4)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N64	L	Y	-500

Joint Loads and Enforced Displacements (BLC 38 : Maintenance Load 5)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N65	L	Y	-500

Joint Loads and Enforced Displacements (BLC 39 : Maintenance Load 6)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N19	L	Y	-500

Joint Loads and Enforced Displacements (BLC 40 : Maintenance Load 7)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N20	L	Y	-500

Joint Loads and Enforced Displacements (BLC 41 : Maintenance Load 8)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N21	L	Y	-500

Joint Loads and Enforced Displacements (BLC 42 : Maintenance Load 9)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N35	L	Y	-500

Joint Loads and Enforced Displacements (BLC 43 : Maintenance Load 10)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N34	L	Y	-500

Joint Loads and Enforced Displacements (BLC 44 : Maintenance Load 11)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N46	L	Y	-500

Joint Loads and Enforced Displacements (BLC 45 : Maintenance Load 12)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N66	L	Y	-500

Joint Loads and Enforced Displacements (BLC 46 : Maintenance Load 13)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N67	L	Y	-500

Joint Loads and Enforced Displacements (BLC 47 : Maintenance Load 14)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N68	L	Y	-500

Joint Loads and Enforced Displacements (BLC 48 : Maintenance Load 15)

	Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N69	L	Y	-500

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	Y	-57.315	6
2	MP2	Y	-57.315	39.11
3	MP1	Y	-74.95	0
4	MP1	Y	-74.95	%100
5	MP1	Y	-109	%25
6	MP1	Y	-81	%50
7	MP7	Y	-57.315	6
8	MP7	Y	-57.315	39.11
9	MP6	Y	-74.95	0
10	MP6	Y	-74.95	%100
11	MP6	Y	-109	%25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
12	MP6	Y	-81	%50
13	MP12	Y	-57.315	6
14	MP12	Y	-57.315	39.11
15	MP11	Y	-74.95	0
16	MP11	Y	-74.95	%100
17	MP11	Y	-109	%25
18	MP11	Y	-81	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	0	6
2	MP2	Z	-106.72	6
3	MP2	X	0	39.11
4	MP2	Z	-106.72	39.11
5	MP1	X	0	0
6	MP1	Z	-297.06	0
7	MP1	X	0	%100
8	MP1	Z	-297.06	%100
9	MP1	X	0	%25
10	MP1	Z	-86.64	%25
11	MP1	X	0	%50
12	MP1	Z	-116.57	%50
13	MP7	X	0	6
14	MP7	Z	-57.51	6
15	MP7	X	0	39.11
16	MP7	Z	-57.51	39.11
17	MP6	X	0	0
18	MP6	Z	-155.06	0
19	MP6	X	0	%100
20	MP6	Z	-155.06	%100
21	MP6	X	0	%25
22	MP6	Z	-72.87	%25
23	MP6	X	0	%50
24	MP6	Z	-71.58	%50
25	MP12	X	0	6
26	MP12	Z	-57.51	6
27	MP12	X	0	39.11
28	MP12	Z	-57.51	39.11
29	MP11	X	0	0
30	MP11	Z	-155.06	0
31	MP11	X	0	%100
32	MP11	Z	-155.06	%100
33	MP11	X	0	%25
34	MP11	Z	-72.87	%25
35	MP11	X	0	%50
36	MP11	Z	-71.58	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-45.16	6
2	MP2	Z	-78.21	6
3	MP2	X	-45.16	39.11
4	MP2	Z	-78.21	39.11
5	MP1	X	-124.87	0
6	MP1	Z	-216.27	0
7	MP1	X	-124.87	%100

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
8	MP1	Z	-216.27	%100
9	MP1	X	-41.02	%25
10	MP1	Z	-71.05	%25
11	MP1	X	-50.79	%50
12	MP1	Z	-87.97	%50
13	MP7	X	-20.55	6
14	MP7	Z	-35.6	6
15	MP7	X	-20.55	39.11
16	MP7	Z	-35.6	39.11
17	MP6	X	-53.86	0
18	MP6	Z	-93.3	0
19	MP6	X	-53.86	%100
20	MP6	Z	-93.3	%100
21	MP6	X	-34.14	%25
22	MP6	Z	-59.13	%25
23	MP6	X	-28.29	%50
24	MP6	Z	-49	%50
25	MP12	X	-20.55	6
26	MP12	Z	-35.6	6
27	MP12	X	-20.55	39.11
28	MP12	Z	-35.6	39.11
29	MP11	X	-53.86	0
30	MP11	Z	-93.3	0
31	MP11	X	-53.86	%100
32	MP11	Z	-93.3	%100
33	MP11	X	-34.14	%25
34	MP11	Z	-59.13	%25
35	MP11	X	-28.29	%50
36	MP11	Z	-49	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-49.8	6
2	MP2	Z	-28.75	6
3	MP2	X	-49.8	39.11
4	MP2	Z	-28.75	39.11
5	MP1	X	-134.29	0
6	MP1	Z	-77.53	0
7	MP1	X	-134.29	%100
8	MP1	Z	-77.53	%100
9	MP1	X	-63.1	%25
10	MP1	Z	-36.43	%25
11	MP1	X	-61.99	%50
12	MP1	Z	-35.79	%50
13	MP7	X	-49.8	6
14	MP7	Z	-28.75	6
15	MP7	X	-49.8	39.11
16	MP7	Z	-28.75	39.11
17	MP6	X	-134.29	0
18	MP6	Z	-77.53	0
19	MP6	X	-134.29	%100
20	MP6	Z	-77.53	%100
21	MP6	X	-63.1	%25
22	MP6	Z	-36.43	%25
23	MP6	X	-61.99	%50
24	MP6	Z	-35.79	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
25	MP12	X	-49.8	6
26	MP12	Z	-28.75	6
27	MP12	X	-49.8	39.11
28	MP12	Z	-28.75	39.11
29	MP11	X	-134.29	0
30	MP11	Z	-77.53	0
31	MP11	X	-134.29	%100
32	MP11	Z	-77.53	%100
33	MP11	X	-63.1	%25
34	MP11	Z	-36.43	%25
35	MP11	X	-61.99	%50
36	MP11	Z	-35.79	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-41.11	6
2	MP2	Z	0	6
3	MP2	X	-41.11	39.11
4	MP2	Z	0	39.11
5	MP1	X	-107.73	0
6	MP1	Z	0	0
7	MP1	X	-107.73	%100
8	MP1	Z	0	%100
9	MP1	X	-68.28	%25
10	MP1	Z	0	%25
11	MP1	X	-56.58	%50
12	MP1	Z	0	%50
13	MP7	X	-90.31	6
14	MP7	Z	0	6
15	MP7	X	-90.31	39.11
16	MP7	Z	0	39.11
17	MP6	X	-249.73	0
18	MP6	Z	0	0
19	MP6	X	-249.73	%100
20	MP6	Z	0	%100
21	MP6	X	-82.05	%25
22	MP6	Z	0	%25
23	MP6	X	-101.57	%50
24	MP6	Z	0	%50
25	MP12	X	-90.31	6
26	MP12	Z	0	6
27	MP12	X	-90.31	39.11
28	MP12	Z	0	39.11
29	MP11	X	-249.73	0
30	MP11	Z	0	0
31	MP11	X	-249.73	%100
32	MP11	Z	0	%100
33	MP11	X	-82.05	%25
34	MP11	Z	0	%25
35	MP11	X	-101.57	%50
36	MP11	Z	0	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-49.8	6
2	MP2	Z	28.75	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
3	MP2	X	-49.8	39.11
4	MP2	Z	28.75	39.11
5	MP1	X	-134.29	0
6	MP1	Z	77.53	0
7	MP1	X	-134.29	%100
8	MP1	Z	77.53	%100
9	MP1	X	-63.1	%25
10	MP1	Z	36.43	%25
11	MP1	X	-61.99	%50
12	MP1	Z	35.79	%50
13	MP7	X	-92.42	6
14	MP7	Z	53.36	6
15	MP7	X	-92.42	39.11
16	MP7	Z	53.36	39.11
17	MP6	X	-257.27	0
18	MP6	Z	148.53	0
19	MP6	X	-257.27	%100
20	MP6	Z	148.53	%100
21	MP6	X	-75.03	%25
22	MP6	Z	43.32	%25
23	MP6	X	-100.95	%50
24	MP6	Z	58.29	%50
25	MP12	X	-92.42	6
26	MP12	Z	53.36	6
27	MP12	X	-92.42	39.11
28	MP12	Z	53.36	39.11
29	MP11	X	-257.27	0
30	MP11	Z	148.53	0
31	MP11	X	-257.27	%100
32	MP11	Z	148.53	%100
33	MP11	X	-75.03	%25
34	MP11	Z	43.32	%25
35	MP11	X	-100.95	%50
36	MP11	Z	58.29	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-45.16	6
2	MP2	Z	78.21	6
3	MP2	X	-45.16	39.11
4	MP2	Z	78.21	39.11
5	MP1	X	-124.87	0
6	MP1	Z	216.27	0
7	MP1	X	-124.87	%100
8	MP1	Z	216.27	%100
9	MP1	X	-41.02	%25
10	MP1	Z	71.05	%25
11	MP1	X	-50.79	%50
12	MP1	Z	87.97	%50
13	MP7	X	-45.16	6
14	MP7	Z	78.21	6
15	MP7	X	-45.16	39.11
16	MP7	Z	78.21	39.11
17	MP6	X	-124.87	0
18	MP6	Z	216.27	0
19	MP6	X	-124.87	%100

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
20	MP6	Z	216.27	%100
21	MP6	X	-41.02	%25
22	MP6	Z	71.05	%25
23	MP6	X	-50.79	%50
24	MP6	Z	87.97	%50
25	MP12	X	-45.16	6
26	MP12	Z	78.21	6
27	MP12	X	-45.16	39.11
28	MP12	Z	78.21	39.11
29	MP11	X	-124.87	0
30	MP11	Z	216.27	0
31	MP11	X	-124.87	%100
32	MP11	Z	216.27	%100
33	MP11	X	-41.02	%25
34	MP11	Z	71.05	%25
35	MP11	X	-50.79	%50
36	MP11	Z	87.97	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	0	6
2	MP2	Z	106.72	6
3	MP2	X	0	39.11
4	MP2	Z	106.72	39.11
5	MP1	X	0	0
6	MP1	Z	297.06	0
7	MP1	X	0	%100
8	MP1	Z	297.06	%100
9	MP1	X	0	%25
10	MP1	Z	86.64	%25
11	MP1	X	0	%50
12	MP1	Z	116.57	%50
13	MP7	X	0	6
14	MP7	Z	57.51	6
15	MP7	X	0	39.11
16	MP7	Z	57.51	39.11
17	MP6	X	0	0
18	MP6	Z	155.06	0
19	MP6	X	0	%100
20	MP6	Z	155.06	%100
21	MP6	X	0	%25
22	MP6	Z	72.87	%25
23	MP6	X	0	%50
24	MP6	Z	71.58	%50
25	MP12	X	0	6
26	MP12	Z	57.51	6
27	MP12	X	0	39.11
28	MP12	Z	57.51	39.11
29	MP11	X	0	0
30	MP11	Z	155.06	0
31	MP11	X	0	%100
32	MP11	Z	155.06	%100
33	MP11	X	0	%25
34	MP11	Z	72.87	%25
35	MP11	X	0	%50
36	MP11	Z	71.58	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	45.16	6
2	MP2	Z	78.21	6
3	MP2	X	45.16	39.11
4	MP2	Z	78.21	39.11
5	MP1	X	124.87	0
6	MP1	Z	216.27	0
7	MP1	X	124.87	%100
8	MP1	Z	216.27	%100
9	MP1	X	41.02	%25
10	MP1	Z	71.05	%25
11	MP1	X	50.79	%50
12	MP1	Z	87.97	%50
13	MP7	X	20.55	6
14	MP7	Z	35.6	6
15	MP7	X	20.55	39.11
16	MP7	Z	35.6	39.11
17	MP6	X	53.86	0
18	MP6	Z	93.3	0
19	MP6	X	53.86	%100
20	MP6	Z	93.3	%100
21	MP6	X	34.14	%25
22	MP6	Z	59.13	%25
23	MP6	X	28.29	%50
24	MP6	Z	49	%50
25	MP12	X	20.55	6
26	MP12	Z	35.6	6
27	MP12	X	20.55	39.11
28	MP12	Z	35.6	39.11
29	MP11	X	53.86	0
30	MP11	Z	93.3	0
31	MP11	X	53.86	%100
32	MP11	Z	93.3	%100
33	MP11	X	34.14	%25
34	MP11	Z	59.13	%25
35	MP11	X	28.29	%50
36	MP11	Z	49	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	49.8	6
2	MP2	Z	28.75	6
3	MP2	X	49.8	39.11
4	MP2	Z	28.75	39.11
5	MP1	X	134.29	0
6	MP1	Z	77.53	0
7	MP1	X	134.29	%100
8	MP1	Z	77.53	%100
9	MP1	X	63.1	%25
10	MP1	Z	36.43	%25
11	MP1	X	61.99	%50
12	MP1	Z	35.79	%50
13	MP7	X	49.8	6
14	MP7	Z	28.75	6
15	MP7	X	49.8	39.11
16	MP7	Z	28.75	39.11
17	MP6	X	134.29	0

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
18	MP6	Z	77.53	0
19	MP6	X	134.29	%100
20	MP6	Z	77.53	%100
21	MP6	X	63.1	%25
22	MP6	Z	36.43	%25
23	MP6	X	61.99	%50
24	MP6	Z	35.79	%50
25	MP12	X	49.8	6
26	MP12	Z	28.75	6
27	MP12	X	49.8	39.11
28	MP12	Z	28.75	39.11
29	MP11	X	134.29	0
30	MP11	Z	77.53	0
31	MP11	X	134.29	%100
32	MP11	Z	77.53	%100
33	MP11	X	63.1	%25
34	MP11	Z	36.43	%25
35	MP11	X	61.99	%50
36	MP11	Z	35.79	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	41.11	6
2	MP2	Z	0	6
3	MP2	X	41.11	39.11
4	MP2	Z	0	39.11
5	MP1	X	107.73	0
6	MP1	Z	0	0
7	MP1	X	107.73	%100
8	MP1	Z	0	%100
9	MP1	X	68.28	%25
10	MP1	Z	0	%25
11	MP1	X	56.58	%50
12	MP1	Z	0	%50
13	MP7	X	90.31	6
14	MP7	Z	0	6
15	MP7	X	90.31	39.11
16	MP7	Z	0	39.11
17	MP6	X	249.73	0
18	MP6	Z	0	0
19	MP6	X	249.73	%100
20	MP6	Z	0	%100
21	MP6	X	82.05	%25
22	MP6	Z	0	%25
23	MP6	X	101.57	%50
24	MP6	Z	0	%50
25	MP12	X	90.31	6
26	MP12	Z	0	6
27	MP12	X	90.31	39.11
28	MP12	Z	0	39.11
29	MP11	X	249.73	0
30	MP11	Z	0	0
31	MP11	X	249.73	%100
32	MP11	Z	0	%100
33	MP11	X	82.05	%25
34	MP11	Z	0	%25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
35	MP11	X	101.57	%50
36	MP11	Z	0	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	49.8	6
2	MP2	Z	-28.75	6
3	MP2	X	49.8	39.11
4	MP2	Z	-28.75	39.11
5	MP1	X	134.29	0
6	MP1	Z	-77.53	0
7	MP1	X	134.29	%100
8	MP1	Z	-77.53	%100
9	MP1	X	63.1	%25
10	MP1	Z	-36.43	%25
11	MP1	X	61.99	%50
12	MP1	Z	-35.79	%50
13	MP7	X	92.42	6
14	MP7	Z	-53.36	6
15	MP7	X	92.42	39.11
16	MP7	Z	-53.36	39.11
17	MP6	X	257.27	0
18	MP6	Z	-148.53	0
19	MP6	X	257.27	%100
20	MP6	Z	-148.53	%100
21	MP6	X	75.03	%25
22	MP6	Z	-43.32	%25
23	MP6	X	100.95	%50
24	MP6	Z	-58.29	%50
25	MP12	X	92.42	6
26	MP12	Z	-53.36	6
27	MP12	X	92.42	39.11
28	MP12	Z	-53.36	39.11
29	MP11	X	257.27	0
30	MP11	Z	-148.53	0
31	MP11	X	257.27	%100
32	MP11	Z	-148.53	%100
33	MP11	X	75.03	%25
34	MP11	Z	-43.32	%25
35	MP11	X	100.95	%50
36	MP11	Z	-58.29	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	45.16	6
2	MP2	Z	-78.21	6
3	MP2	X	45.16	39.11
4	MP2	Z	-78.21	39.11
5	MP1	X	124.87	0
6	MP1	Z	-216.27	0
7	MP1	X	124.87	%100
8	MP1	Z	-216.27	%100
9	MP1	X	41.02	%25
10	MP1	Z	-71.05	%25
11	MP1	X	50.79	%50
12	MP1	Z	-87.97	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
13	MP7	X	45.16	6
14	MP7	Z	-78.21	6
15	MP7	X	45.16	39.11
16	MP7	Z	-78.21	39.11
17	MP6	X	124.87	0
18	MP6	Z	-216.27	0
19	MP6	X	124.87	%100
20	MP6	Z	-216.27	%100
21	MP6	X	41.02	%25
22	MP6	Z	-71.05	%25
23	MP6	X	50.79	%50
24	MP6	Z	-87.97	%50
25	MP12	X	45.16	6
26	MP12	Z	-78.21	6
27	MP12	X	45.16	39.11
28	MP12	Z	-78.21	39.11
29	MP11	X	124.87	0
30	MP11	Z	-216.27	0
31	MP11	X	124.87	%100
32	MP11	Z	-216.27	%100
33	MP11	X	41.02	%25
34	MP11	Z	-71.05	%25
35	MP11	X	50.79	%50
36	MP11	Z	-87.97	%50

Member Point Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	Y	-77.267	6
2	MP2	Y	-77.267	39.11
3	MP1	Y	-213.851	0
4	MP1	Y	-213.851	%100
5	MP1	Y	-90.996	%25
6	MP1	Y	-90.278	%50
7	MP7	Y	-77.267	6
8	MP7	Y	-77.267	39.11
9	MP6	Y	-213.851	0
10	MP6	Y	-213.851	%100
11	MP6	Y	-90.996	%25
12	MP6	Y	-90.278	%50
13	MP12	Y	-77.267	6
14	MP12	Y	-77.267	39.11
15	MP11	Y	-213.851	0
16	MP11	Y	-213.851	%100
17	MP11	Y	-90.996	%25
18	MP11	Y	-90.278	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	0	6
2	MP2	Z	-9.14	6
3	MP2	X	0	39.11
4	MP2	Z	-9.14	39.11
5	MP1	X	0	0
6	MP1	Z	-29.83	0
7	MP1	X	0	%100
8	MP1	Z	-29.83	%100

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
9	MP1	X	0	%25
10	MP1	Z	-7.92	%25
11	MP1	X	0	%50
12	MP1	Z	-10.18	%50
13	MP7	X	0	6
14	MP7	Z	-6.54	6
15	MP7	X	0	39.11
16	MP7	Z	-6.54	39.11
17	MP6	X	0	0
18	MP6	Z	-20.88	0
19	MP6	X	0	%100
20	MP6	Z	-20.88	%100
21	MP6	X	0	%25
22	MP6	Z	-7.28	%25
23	MP6	X	0	%50
24	MP6	Z	-8.08	%50
25	MP12	X	0	6
26	MP12	Z	-6.54	6
27	MP12	X	0	39.11
28	MP12	Z	-6.54	39.11
29	MP11	X	0	0
30	MP11	Z	-20.88	0
31	MP11	X	0	%100
32	MP11	Z	-20.88	%100
33	MP11	X	0	%25
34	MP11	Z	-7.28	%25
35	MP11	X	0	%50
36	MP11	Z	-8.08	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-4.13	6
2	MP2	Z	-7.16	6
3	MP2	X	-4.13	39.11
4	MP2	Z	-7.16	39.11
5	MP1	X	-13.42	0
6	MP1	Z	-23.25	0
7	MP1	X	-13.42	%100
8	MP1	Z	-23.25	%100
9	MP1	X	-3.85	%25
10	MP1	Z	-6.68	%25
11	MP1	X	-4.74	%50
12	MP1	Z	-8.21	%50
13	MP7	X	-2.83	6
14	MP7	Z	-4.91	6
15	MP7	X	-2.83	39.11
16	MP7	Z	-4.91	39.11
17	MP6	X	-8.95	0
18	MP6	Z	-15.5	0
19	MP6	X	-8.95	%100
20	MP6	Z	-15.5	%100
21	MP6	X	-3.53	%25
22	MP6	Z	-6.12	%25
23	MP6	X	-3.69	%50
24	MP6	Z	-6.4	%50
25	MP12	X	-2.83	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
26	MP12	Z	-4.91	6
27	MP12	X	-2.83	39.11
28	MP12	Z	-4.91	39.11
29	MP11	X	-8.95	0
30	MP11	Z	-15.5	0
31	MP11	X	-8.95	%100
32	MP11	Z	-15.5	%100
33	MP11	X	-3.53	%25
34	MP11	Z	-6.12	%25
35	MP11	X	-3.69	%50
36	MP11	Z	-6.4	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-5.66	6
2	MP2	Z	-3.27	6
3	MP2	X	-5.66	39.11
4	MP2	Z	-3.27	39.11
5	MP1	X	-18.08	0
6	MP1	Z	-10.44	0
7	MP1	X	-18.08	%100
8	MP1	Z	-10.44	%100
9	MP1	X	-6.3	%25
10	MP1	Z	-3.64	%25
11	MP1	X	-7	%50
12	MP1	Z	-4.04	%50
13	MP7	X	-5.66	6
14	MP7	Z	-3.27	6
15	MP7	X	-5.66	39.11
16	MP7	Z	-3.27	39.11
17	MP6	X	-18.08	0
18	MP6	Z	-10.44	0
19	MP6	X	-18.08	%100
20	MP6	Z	-10.44	%100
21	MP6	X	-6.3	%25
22	MP6	Z	-3.64	%25
23	MP6	X	-7	%50
24	MP6	Z	-4.04	%50
25	MP12	X	-5.66	6
26	MP12	Z	-3.27	6
27	MP12	X	-5.66	39.11
28	MP12	Z	-3.27	39.11
29	MP11	X	-18.08	0
30	MP11	Z	-10.44	0
31	MP11	X	-18.08	%100
32	MP11	Z	-10.44	%100
33	MP11	X	-6.3	%25
34	MP11	Z	-3.64	%25
35	MP11	X	-7	%50
36	MP11	Z	-4.04	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-5.67	6
2	MP2	Z	0	6
3	MP2	X	-5.67	39.11

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
4	MP2	Z	0	39.11
5	MP1	X	-17.9	0
6	MP1	Z	0	0
7	MP1	X	-17.9	%100
8	MP1	Z	0	%100
9	MP1	X	-7.06	%25
10	MP1	Z	0	%25
11	MP1	X	-7.39	%50
12	MP1	Z	0	%50
13	MP7	X	-8.27	6
14	MP7	Z	0	6
15	MP7	X	-8.27	39.11
16	MP7	Z	0	39.11
17	MP6	X	-26.85	0
18	MP6	Z	0	0
19	MP6	X	-26.85	%100
20	MP6	Z	0	%100
21	MP6	X	-7.71	%25
22	MP6	Z	0	%25
23	MP6	X	-9.48	%50
24	MP6	Z	0	%50
25	MP12	X	-8.27	6
26	MP12	Z	0	6
27	MP12	X	-8.27	39.11
28	MP12	Z	0	39.11
29	MP11	X	-26.85	0
30	MP11	Z	0	0
31	MP11	X	-26.85	%100
32	MP11	Z	0	%100
33	MP11	X	-7.71	%25
34	MP11	Z	0	%25
35	MP11	X	-9.48	%50
36	MP11	Z	0	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-5.66	6
2	MP2	Z	3.27	6
3	MP2	X	-5.66	39.11
4	MP2	Z	3.27	39.11
5	MP1	X	-18.08	0
6	MP1	Z	10.44	0
7	MP1	X	-18.08	%100
8	MP1	Z	10.44	%100
9	MP1	X	-6.3	%25
10	MP1	Z	3.64	%25
11	MP1	X	-7	%50
12	MP1	Z	4.04	%50
13	MP7	X	-7.91	6
14	MP7	Z	4.57	6
15	MP7	X	-7.91	39.11
16	MP7	Z	4.57	39.11
17	MP6	X	-25.83	0
18	MP6	Z	14.91	0
19	MP6	X	-25.83	%100
20	MP6	Z	14.91	%100

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
21	MP6	X	-6.86	%25
22	MP6	Z	3.96	%25
23	MP6	X	-8.81	%50
24	MP6	Z	5.09	%50
25	MP12	X	-7.91	6
26	MP12	Z	4.57	6
27	MP12	X	-7.91	39.11
28	MP12	Z	4.57	39.11
29	MP11	X	-25.83	0
30	MP11	Z	14.91	0
31	MP11	X	-25.83	%100
32	MP11	Z	14.91	%100
33	MP11	X	-6.86	%25
34	MP11	Z	3.96	%25
35	MP11	X	-8.81	%50
36	MP11	Z	5.09	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-4.13	6
2	MP2	Z	7.16	6
3	MP2	X	-4.13	39.11
4	MP2	Z	7.16	39.11
5	MP1	X	-13.42	0
6	MP1	Z	23.25	0
7	MP1	X	-13.42	%100
8	MP1	Z	23.25	%100
9	MP1	X	-3.85	%25
10	MP1	Z	6.68	%25
11	MP1	X	-4.74	%50
12	MP1	Z	8.21	%50
13	MP7	X	-4.13	6
14	MP7	Z	7.16	6
15	MP7	X	-4.13	39.11
16	MP7	Z	7.16	39.11
17	MP6	X	-13.42	0
18	MP6	Z	23.25	0
19	MP6	X	-13.42	%100
20	MP6	Z	23.25	%100
21	MP6	X	-3.85	%25
22	MP6	Z	6.68	%25
23	MP6	X	-4.74	%50
24	MP6	Z	8.21	%50
25	MP12	X	-4.13	6
26	MP12	Z	7.16	6
27	MP12	X	-4.13	39.11
28	MP12	Z	7.16	39.11
29	MP11	X	-13.42	0
30	MP11	Z	23.25	0
31	MP11	X	-13.42	%100
32	MP11	Z	23.25	%100
33	MP11	X	-3.85	%25
34	MP11	Z	6.68	%25
35	MP11	X	-4.74	%50
36	MP11	Z	8.21	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	0	6
2	MP2	Z	9.14	6
3	MP2	X	0	39.11
4	MP2	Z	9.14	39.11
5	MP1	X	0	0
6	MP1	Z	29.83	0
7	MP1	X	0	%100
8	MP1	Z	29.83	%100
9	MP1	X	0	%25
10	MP1	Z	7.92	%25
11	MP1	X	0	%50
12	MP1	Z	10.18	%50
13	MP7	X	0	6
14	MP7	Z	6.54	6
15	MP7	X	0	39.11
16	MP7	Z	6.54	39.11
17	MP6	X	0	0
18	MP6	Z	20.88	0
19	MP6	X	0	%100
20	MP6	Z	20.88	%100
21	MP6	X	0	%25
22	MP6	Z	7.28	%25
23	MP6	X	0	%50
24	MP6	Z	8.08	%50
25	MP12	X	0	6
26	MP12	Z	6.54	6
27	MP12	X	0	39.11
28	MP12	Z	6.54	39.11
29	MP11	X	0	0
30	MP11	Z	20.88	0
31	MP11	X	0	%100
32	MP11	Z	20.88	%100
33	MP11	X	0	%25
34	MP11	Z	7.28	%25
35	MP11	X	0	%50
36	MP11	Z	8.08	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	4.13	6
2	MP2	Z	7.16	6
3	MP2	X	4.13	39.11
4	MP2	Z	7.16	39.11
5	MP1	X	13.42	0
6	MP1	Z	23.25	0
7	MP1	X	13.42	%100
8	MP1	Z	23.25	%100
9	MP1	X	3.85	%25
10	MP1	Z	6.68	%25
11	MP1	X	4.74	%50
12	MP1	Z	8.21	%50
13	MP7	X	2.83	6
14	MP7	Z	4.91	6
15	MP7	X	2.83	39.11
16	MP7	Z	4.91	39.11
17	MP6	X	8.95	0

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
18	MP6	Z	15.5	0
19	MP6	X	8.95	%100
20	MP6	Z	15.5	%100
21	MP6	X	3.53	%25
22	MP6	Z	6.12	%25
23	MP6	X	3.69	%50
24	MP6	Z	6.4	%50
25	MP12	X	2.83	6
26	MP12	Z	4.91	6
27	MP12	X	2.83	39.11
28	MP12	Z	4.91	39.11
29	MP11	X	8.95	0
30	MP11	Z	15.5	0
31	MP11	X	8.95	%100
32	MP11	Z	15.5	%100
33	MP11	X	3.53	%25
34	MP11	Z	6.12	%25
35	MP11	X	3.69	%50
36	MP11	Z	6.4	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	5.66	6
2	MP2	Z	3.27	6
3	MP2	X	5.66	39.11
4	MP2	Z	3.27	39.11
5	MP1	X	18.08	0
6	MP1	Z	10.44	0
7	MP1	X	18.08	%100
8	MP1	Z	10.44	%100
9	MP1	X	6.3	%25
10	MP1	Z	3.64	%25
11	MP1	X	7	%50
12	MP1	Z	4.04	%50
13	MP7	X	5.66	6
14	MP7	Z	3.27	6
15	MP7	X	5.66	39.11
16	MP7	Z	3.27	39.11
17	MP6	X	18.08	0
18	MP6	Z	10.44	0
19	MP6	X	18.08	%100
20	MP6	Z	10.44	%100
21	MP6	X	6.3	%25
22	MP6	Z	3.64	%25
23	MP6	X	7	%50
24	MP6	Z	4.04	%50
25	MP12	X	5.66	6
26	MP12	Z	3.27	6
27	MP12	X	5.66	39.11
28	MP12	Z	3.27	39.11
29	MP11	X	18.08	0
30	MP11	Z	10.44	0
31	MP11	X	18.08	%100
32	MP11	Z	10.44	%100
33	MP11	X	6.3	%25
34	MP11	Z	3.64	%25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
35	MP11	X	7	%50
36	MP11	Z	4.04	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	5.67	6
2	MP2	Z	0	6
3	MP2	X	5.67	39.11
4	MP2	Z	0	39.11
5	MP1	X	17.9	0
6	MP1	Z	0	0
7	MP1	X	17.9	%100
8	MP1	Z	0	%100
9	MP1	X	7.06	%25
10	MP1	Z	0	%25
11	MP1	X	7.39	%50
12	MP1	Z	0	%50
13	MP7	X	8.27	6
14	MP7	Z	0	6
15	MP7	X	8.27	39.11
16	MP7	Z	0	39.11
17	MP6	X	26.85	0
18	MP6	Z	0	0
19	MP6	X	26.85	%100
20	MP6	Z	0	%100
21	MP6	X	7.71	%25
22	MP6	Z	0	%25
23	MP6	X	9.48	%50
24	MP6	Z	0	%50
25	MP12	X	8.27	6
26	MP12	Z	0	6
27	MP12	X	8.27	39.11
28	MP12	Z	0	39.11
29	MP11	X	26.85	0
30	MP11	Z	0	0
31	MP11	X	26.85	%100
32	MP11	Z	0	%100
33	MP11	X	7.71	%25
34	MP11	Z	0	%25
35	MP11	X	9.48	%50
36	MP11	Z	0	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	5.66	6
2	MP2	Z	-3.27	6
3	MP2	X	5.66	39.11
4	MP2	Z	-3.27	39.11
5	MP1	X	18.08	0
6	MP1	Z	-10.44	0
7	MP1	X	18.08	%100
8	MP1	Z	-10.44	%100
9	MP1	X	6.3	%25
10	MP1	Z	-3.64	%25
11	MP1	X	7	%50
12	MP1	Z	-4.04	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
13	MP7	X	7.91	6
14	MP7	Z	-4.57	6
15	MP7	X	7.91	39.11
16	MP7	Z	-4.57	39.11
17	MP6	X	25.83	0
18	MP6	Z	-14.91	0
19	MP6	X	25.83	%100
20	MP6	Z	-14.91	%100
21	MP6	X	6.86	%25
22	MP6	Z	-3.96	%25
23	MP6	X	8.81	%50
24	MP6	Z	-5.09	%50
25	MP12	X	7.91	6
26	MP12	Z	-4.57	6
27	MP12	X	7.91	39.11
28	MP12	Z	-4.57	39.11
29	MP11	X	25.83	0
30	MP11	Z	-14.91	0
31	MP11	X	25.83	%100
32	MP11	Z	-14.91	%100
33	MP11	X	6.86	%25
34	MP11	Z	-3.96	%25
35	MP11	X	8.81	%50
36	MP11	Z	-5.09	%50

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	4.13	6
2	MP2	Z	-7.16	6
3	MP2	X	4.13	39.11
4	MP2	Z	-7.16	39.11
5	MP1	X	13.42	0
6	MP1	Z	-23.25	0
7	MP1	X	13.42	%100
8	MP1	Z	-23.25	%100
9	MP1	X	3.85	%25
10	MP1	Z	-6.68	%25
11	MP1	X	4.74	%50
12	MP1	Z	-8.21	%50
13	MP7	X	4.13	6
14	MP7	Z	-7.16	6
15	MP7	X	4.13	39.11
16	MP7	Z	-7.16	39.11
17	MP6	X	13.42	0
18	MP6	Z	-23.25	0
19	MP6	X	13.42	%100
20	MP6	Z	-23.25	%100
21	MP6	X	3.85	%25
22	MP6	Z	-6.68	%25
23	MP6	X	4.74	%50
24	MP6	Z	-8.21	%50
25	MP12	X	4.13	6
26	MP12	Z	-7.16	6
27	MP12	X	4.13	39.11
28	MP12	Z	-7.16	39.11
29	MP11	X	13.42	0

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
30	MP11	Z	-23.25	0
31	MP11	X	13.42	%100
32	MP11	Z	-23.25	%100
33	MP11	X	3.85	%25
34	MP11	Z	-6.68	%25
35	MP11	X	4.74	%50
36	MP11	Z	-8.21	%50

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	Z	-16.323	6
2	MP2	Z	-16.323	39.11
3	MP1	Z	-21.346	0
4	MP1	Z	-21.346	%100
5	MP1	Z	-31.043	%25
6	MP1	Z	-23.069	%50
7	MP7	Z	-16.323	6
8	MP7	Z	-16.323	39.11
9	MP6	Z	-21.346	0
10	MP6	Z	-21.346	%100
11	MP6	Z	-31.043	%25
12	MP6	Z	-23.069	%50
13	MP12	Z	-16.323	6
14	MP12	Z	-16.323	39.11
15	MP11	Z	-21.346	0
16	MP11	Z	-21.346	%100
17	MP11	Z	-31.043	%25
18	MP11	Z	-23.069	%50

Member Point Loads (BLC 32 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[in,%]
1	MP2	X	-16.323	6
2	MP2	X	-16.323	39.11
3	MP1	X	-21.346	0
4	MP1	X	-21.346	%100
5	MP1	X	-31.043	%25
6	MP1	X	-23.069	%50
7	MP7	X	-16.323	6
8	MP7	X	-16.323	39.11
9	MP6	X	-21.346	0
10	MP6	X	-21.346	%100
11	MP6	X	-31.043	%25
12	MP6	X	-23.069	%50
13	MP12	X	-16.323	6
14	MP12	X	-16.323	39.11
15	MP11	X	-21.346	0
16	MP11	X	-21.346	%100
17	MP11	X	-31.043	%25
18	MP11	X	-23.069	%50

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	M1	SZ	-89.999	-89.999	0	%100
2	M2	SZ	-89.999	-89.999	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
3	M3	SZ	-89.999	-89.999	0	%100
4	M4	SZ	-89.999	-89.999	0	%100
5	M5	SZ	-89.999	-89.999	0	%100
6	M6	SZ	-89.999	-89.999	0	%100
7	M7	SZ	-89.999	-89.999	0	%100
8	M8	SZ	-89.999	-89.999	0	%100
9	M9	SZ	-89.999	-89.999	0	%100
10	M10	SZ	-89.999	-89.999	0	%100
11	M11	SZ	-89.999	-89.999	0	%100
12	M12	SZ	-89.999	-89.999	0	%100
13	MP1	SZ	-53.999	-53.999	0	%100
14	MP5	SZ	-53.999	-53.999	0	%100
15	MP3	SZ	-53.999	-53.999	0	%100
16	MP4	SZ	-53.999	-53.999	0	%100
17	MP2	SZ	-53.999	-53.999	0	%100
18	M28	SZ	-53.999	-53.999	0	%100
19	M29	SZ	-89.999	-89.999	0	%100
20	M30	SZ	-53.999	-53.999	0	%100
21	M31	SZ	-89.999	-89.999	0	%100
22	M32	SZ	-53.999	-53.999	0	%100
23	M33	SZ	-89.999	-89.999	0	%100
24	M34	SZ	0	0	0	%100
25	M35	SZ	0	0	0	%100
26	M36	SZ	0	0	0	%100
27	M37	SZ	0	0	0	%100
28	M38	SZ	0	0	0	%100
29	M39	SZ	0	0	0	%100
30	M40	SZ	0	0	0	%100
31	M41	SZ	0	0	0	%100
32	M42	SZ	0	0	0	%100
33	M43	SZ	0	0	0	%100
34	MP11	SZ	-53.999	-53.999	0	%100
35	MP15	SZ	-53.999	-53.999	0	%100
36	MP13	SZ	-53.999	-53.999	0	%100
37	MP14	SZ	-53.999	-53.999	0	%100
38	MP12	SZ	-53.999	-53.999	0	%100
39	M49	SZ	0	0	0	%100
40	M50	SZ	0	0	0	%100
41	M51	SZ	0	0	0	%100
42	M52	SZ	0	0	0	%100
43	M53	SZ	0	0	0	%100
44	M54	SZ	0	0	0	%100
45	M55	SZ	0	0	0	%100
46	M56	SZ	0	0	0	%100
47	M57	SZ	0	0	0	%100
48	M58	SZ	0	0	0	%100
49	MP6	SZ	-53.999	-53.999	0	%100
50	MP10	SZ	-53.999	-53.999	0	%100
51	MP8	SZ	-53.999	-53.999	0	%100
52	MP9	SZ	-53.999	-53.999	0	%100
53	MP7	SZ	-53.999	-53.999	0	%100
54	M64	SZ	0	0	0	%100
55	M65	SZ	0	0	0	%100
56	M66	SZ	0	0	0	%100
57	M67	SZ	0	0	0	%100
58	M68	SZ	0	0	0	%100
59	M69	SZ	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
60	M70	SZ	0	0	0	%100
61	M71	SZ	0	0	0	%100
62	M72	SZ	0	0	0	%100
63	M73	SZ	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	M1	SX	-89.999	-89.999	0	%100
2	M2	SX	-89.999	-89.999	0	%100
3	M3	SX	-89.999	-89.999	0	%100
4	M4	SX	-89.999	-89.999	0	%100
5	M5	SX	-89.999	-89.999	0	%100
6	M6	SX	-89.999	-89.999	0	%100
7	M7	SX	-89.999	-89.999	0	%100
8	M8	SX	-89.999	-89.999	0	%100
9	M9	SX	-89.999	-89.999	0	%100
10	M10	SX	-89.999	-89.999	0	%100
11	M11	SX	-89.999	-89.999	0	%100
12	M12	SX	-89.999	-89.999	0	%100
13	MP1	SX	-53.999	-53.999	0	%100
14	MP5	SX	-53.999	-53.999	0	%100
15	MP3	SX	-53.999	-53.999	0	%100
16	MP4	SX	-53.999	-53.999	0	%100
17	MP2	SX	-53.999	-53.999	0	%100
18	M28	SX	-53.999	-53.999	0	%100
19	M29	SX	-89.999	-89.999	0	%100
20	M30	SX	-53.999	-53.999	0	%100
21	M31	SX	-89.999	-89.999	0	%100
22	M32	SX	-53.999	-53.999	0	%100
23	M33	SX	-89.999	-89.999	0	%100
24	M34	SX	0	0	0	%100
25	M35	SX	0	0	0	%100
26	M36	SX	0	0	0	%100
27	M37	SX	0	0	0	%100
28	M38	SX	0	0	0	%100
29	M39	SX	0	0	0	%100
30	M40	SX	0	0	0	%100
31	M41	SX	0	0	0	%100
32	M42	SX	0	0	0	%100
33	M43	SX	0	0	0	%100
34	MP11	SX	-53.999	-53.999	0	%100
35	MP15	SX	-53.999	-53.999	0	%100
36	MP13	SX	-53.999	-53.999	0	%100
37	MP14	SX	-53.999	-53.999	0	%100
38	MP12	SX	-53.999	-53.999	0	%100
39	M49	SX	0	0	0	%100
40	M50	SX	0	0	0	%100
41	M51	SX	0	0	0	%100
42	M52	SX	0	0	0	%100
43	M53	SX	0	0	0	%100
44	M54	SX	0	0	0	%100
45	M55	SX	0	0	0	%100
46	M56	SX	0	0	0	%100
47	M57	SX	0	0	0	%100
48	M58	SX	0	0	0	%100
49	MP6	SX	-53.999	-53.999	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
50	MP10	SX	-53.999	-53.999	0	%100
51	MP8	SX	-53.999	-53.999	0	%100
52	MP9	SX	-53.999	-53.999	0	%100
53	MP7	SX	-53.999	-53.999	0	%100
54	M64	SX	0	0	0	%100
55	M65	SX	0	0	0	%100
56	M66	SX	0	0	0	%100
57	M67	SX	0	0	0	%100
58	M68	SX	0	0	0	%100
59	M69	SX	0	0	0	%100
60	M70	SX	0	0	0	%100
61	M71	SX	0	0	0	%100
62	M72	SX	0	0	0	%100
63	M73	SX	0	0	0	%100

Member Distributed Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-12.767	-12.767	0	%100
2	M2	Y	-12.767	-12.767	0	%100
3	M3	Y	-12.767	-12.767	0	%100
4	M4	Y	-12.767	-12.767	0	%100
5	M5	Y	-12.767	-12.767	0	%100
6	M6	Y	-12.767	-12.767	0	%100
7	M7	Y	-16.514	-16.514	0	%100
8	M8	Y	-16.514	-16.514	0	%100
9	M9	Y	-16.514	-16.514	0	%100
10	M10	Y	-15.783	-15.783	0	%100
11	M11	Y	-15.783	-15.783	0	%100
12	M12	Y	-15.783	-15.783	0	%100
13	MP1	Y	-8.785	-8.785	0	%100
14	MP5	Y	-8.785	-8.785	0	%100
15	MP3	Y	-8.785	-8.785	0	%100
16	MP4	Y	-8.785	-8.785	0	%100
17	MP2	Y	-8.785	-8.785	0	%100
18	M28	Y	-8.785	-8.785	0	%100
19	M29	Y	-11.26	-11.26	0	%100
20	M30	Y	-8.785	-8.785	0	%100
21	M31	Y	-11.26	-11.26	0	%100
22	M32	Y	-8.785	-8.785	0	%100
23	M33	Y	-11.26	-11.26	0	%100
24	M34	Y	-3.721	-3.721	0	%100
25	M35	Y	-3.721	-3.721	0	%100
26	M36	Y	-3.721	-3.721	0	%100
27	M37	Y	-3.721	-3.721	0	%100
28	M38	Y	-3.721	-3.721	0	%100
29	M39	Y	-3.721	-3.721	0	%100
30	M40	Y	-3.721	-3.721	0	%100
31	M41	Y	-3.721	-3.721	0	%100
32	M42	Y	-3.721	-3.721	0	%100
33	M43	Y	-3.721	-3.721	0	%100
34	MP11	Y	-8.785	-8.785	0	%100
35	MP15	Y	-8.785	-8.785	0	%100
36	MP13	Y	-8.785	-8.785	0	%100
37	MP14	Y	-8.785	-8.785	0	%100
38	MP12	Y	-8.785	-8.785	0	%100
39	M49	Y	-3.721	-3.721	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
40	M50	Y	-3.721	-3.721	0	%100
41	M51	Y	-3.721	-3.721	0	%100
42	M52	Y	-3.721	-3.721	0	%100
43	M53	Y	-3.721	-3.721	0	%100
44	M54	Y	-3.721	-3.721	0	%100
45	M55	Y	-3.721	-3.721	0	%100
46	M56	Y	-3.721	-3.721	0	%100
47	M57	Y	-3.721	-3.721	0	%100
48	M58	Y	-3.721	-3.721	0	%100
49	MP6	Y	-8.785	-8.785	0	%100
50	MP10	Y	-8.785	-8.785	0	%100
51	MP8	Y	-8.785	-8.785	0	%100
52	MP9	Y	-8.785	-8.785	0	%100
53	MP7	Y	-8.785	-8.785	0	%100
54	M64	Y	-3.721	-3.721	0	%100
55	M65	Y	-3.721	-3.721	0	%100
56	M66	Y	-3.721	-3.721	0	%100
57	M67	Y	-3.721	-3.721	0	%100
58	M68	Y	-3.721	-3.721	0	%100
59	M69	Y	-3.721	-3.721	0	%100
60	M70	Y	-3.721	-3.721	0	%100
61	M71	Y	-3.721	-3.721	0	%100
62	M72	Y	-3.721	-3.721	0	%100
63	M73	Y	-3.721	-3.721	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	M1	SZ	-14.56	-14.56	0	%100
2	M2	SZ	-14.56	-14.56	0	%100
3	M3	SZ	-14.56	-14.56	0	%100
4	M4	SZ	-14.56	-14.56	0	%100
5	M5	SZ	-14.56	-14.56	0	%100
6	M6	SZ	-14.56	-14.56	0	%100
7	M7	SZ	-12.635	-12.635	0	%100
8	M8	SZ	-12.635	-12.635	0	%100
9	M9	SZ	-12.635	-12.635	0	%100
10	M10	SZ	-12.917	-12.917	0	%100
11	M11	SZ	-12.917	-12.917	0	%100
12	M12	SZ	-12.917	-12.917	0	%100
13	MP1	SZ	-19.728	-19.728	0	%100
14	MP5	SZ	-19.728	-19.728	0	%100
15	MP3	SZ	-19.728	-19.728	0	%100
16	MP4	SZ	-19.728	-19.728	0	%100
17	MP2	SZ	-19.728	-19.728	0	%100
18	M28	SZ	-19.728	-19.728	0	%100
19	M29	SZ	-15.874	-15.874	0	%100
20	M30	SZ	-19.728	-19.728	0	%100
21	M31	SZ	-15.874	-15.874	0	%100
22	M32	SZ	-19.728	-19.728	0	%100
23	M33	SZ	-15.874	-15.874	0	%100
24	M34	SZ	0	0	0	%100
25	M35	SZ	0	0	0	%100
26	M36	SZ	0	0	0	%100
27	M37	SZ	0	0	0	%100
28	M38	SZ	0	0	0	%100
29	M39	SZ	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
30	M40	SZ	0	0	0	%100
31	M41	SZ	0	0	0	%100
32	M42	SZ	0	0	0	%100
33	M43	SZ	0	0	0	%100
34	MP11	SZ	-19.728	-19.728	0	%100
35	MP15	SZ	-19.728	-19.728	0	%100
36	MP13	SZ	-19.728	-19.728	0	%100
37	MP14	SZ	-19.728	-19.728	0	%100
38	MP12	SZ	-19.728	-19.728	0	%100
39	M49	SZ	0	0	0	%100
40	M50	SZ	0	0	0	%100
41	M51	SZ	0	0	0	%100
42	M52	SZ	0	0	0	%100
43	M53	SZ	0	0	0	%100
44	M54	SZ	0	0	0	%100
45	M55	SZ	0	0	0	%100
46	M56	SZ	0	0	0	%100
47	M57	SZ	0	0	0	%100
48	M58	SZ	0	0	0	%100
49	MP6	SZ	-19.728	-19.728	0	%100
50	MP10	SZ	-19.728	-19.728	0	%100
51	MP8	SZ	-19.728	-19.728	0	%100
52	MP9	SZ	-19.728	-19.728	0	%100
53	MP7	SZ	-19.728	-19.728	0	%100
54	M64	SZ	0	0	0	%100
55	M65	SZ	0	0	0	%100
56	M66	SZ	0	0	0	%100
57	M67	SZ	0	0	0	%100
58	M68	SZ	0	0	0	%100
59	M69	SZ	0	0	0	%100
60	M70	SZ	0	0	0	%100
61	M71	SZ	0	0	0	%100
62	M72	SZ	0	0	0	%100
63	M73	SZ	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	M1	SX	-14.56	-14.56	0	%100
2	M2	SX	-14.56	-14.56	0	%100
3	M3	SX	-14.56	-14.56	0	%100
4	M4	SX	-14.56	-14.56	0	%100
5	M5	SX	-14.56	-14.56	0	%100
6	M6	SX	-14.56	-14.56	0	%100
7	M7	SX	-12.635	-12.635	0	%100
8	M8	SX	-12.635	-12.635	0	%100
9	M9	SX	-12.635	-12.635	0	%100
10	M10	SX	-12.917	-12.917	0	%100
11	M11	SX	-12.917	-12.917	0	%100
12	M12	SX	-12.917	-12.917	0	%100
13	MP1	SX	-19.728	-19.728	0	%100
14	MP5	SX	-19.728	-19.728	0	%100
15	MP3	SX	-19.728	-19.728	0	%100
16	MP4	SX	-19.728	-19.728	0	%100
17	MP2	SX	-19.728	-19.728	0	%100
18	M28	SX	-19.728	-19.728	0	%100
19	M29	SX	-15.874	-15.874	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
20	M30	SX	-19.728	-19.728	0	%100
21	M31	SX	-15.874	-15.874	0	%100
22	M32	SX	-19.728	-19.728	0	%100
23	M33	SX	-15.874	-15.874	0	%100
24	M34	SX	0	0	0	%100
25	M35	SX	0	0	0	%100
26	M36	SX	0	0	0	%100
27	M37	SX	0	0	0	%100
28	M38	SX	0	0	0	%100
29	M39	SX	0	0	0	%100
30	M40	SX	0	0	0	%100
31	M41	SX	0	0	0	%100
32	M42	SX	0	0	0	%100
33	M43	SX	0	0	0	%100
34	MP11	SX	-19.728	-19.728	0	%100
35	MP15	SX	-19.728	-19.728	0	%100
36	MP13	SX	-19.728	-19.728	0	%100
37	MP14	SX	-19.728	-19.728	0	%100
38	MP12	SX	-19.728	-19.728	0	%100
39	M49	SX	0	0	0	%100
40	M50	SX	0	0	0	%100
41	M51	SX	0	0	0	%100
42	M52	SX	0	0	0	%100
43	M53	SX	0	0	0	%100
44	M54	SX	0	0	0	%100
45	M55	SX	0	0	0	%100
46	M56	SX	0	0	0	%100
47	M57	SX	0	0	0	%100
48	M58	SX	0	0	0	%100
49	MP6	SX	-19.728	-19.728	0	%100
50	MP10	SX	-19.728	-19.728	0	%100
51	MP8	SX	-19.728	-19.728	0	%100
52	MP9	SX	-19.728	-19.728	0	%100
53	MP7	SX	-19.728	-19.728	0	%100
54	M64	SX	0	0	0	%100
55	M65	SX	0	0	0	%100
56	M66	SX	0	0	0	%100
57	M67	SX	0	0	0	%100
58	M68	SX	0	0	0	%100
59	M69	SX	0	0	0	%100
60	M70	SX	0	0	0	%100
61	M71	SX	0	0	0	%100
62	M72	SX	0	0	0	%100
63	M73	SX	0	0	0	%100

Member Distributed Loads (BLC 49 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-.132	-1.234	0	28
2	M1	Y	-1.234	-1.759	28	56
3	M1	Y	-1.759	-1.561	56	84
4	M1	Y	-1.561	-1.308	84	112
5	M1	Y	-1.308	-.957	112	140
6	M1	Y	-.957	-.417	140	168
7	M2	Y	-.906	-1.194	0	42.431
8	M2	Y	-1.194	-1.481	42.431	84.862
9	M7	Y	-1.171	-1.194	0	37.8

Member Distributed Loads (BLC 49 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
10	M8	Y	-2.983	-1.672	0	24.3
11	M8	Y	-1.672	-.36	24.3	48.6
12	M10	Y	-2.385	-2.385	0	24
13	M5	Y	-.394	-.934	0	28
14	M5	Y	-.934	-1.285	28	56
15	M5	Y	-1.285	-1.366	56	84
16	M5	Y	-1.366	-1.285	84	112
17	M5	Y	-1.285	-.934	112	140
18	M5	Y	-.934	-.394	140	168
19	M6	Y	-1.339	-1.339	.036	84.825
20	M7	Y	-1.492	-.836	0	24.3
21	M7	Y	-.836	-.18	24.3	48.6
22	M9	Y	-.36	-1.672	5.4	29.7
23	M9	Y	-1.672	-2.983	29.7	54
24	M12	Y	-3.094	-3.094	3.373	27.373
25	M3	Y	-.394	-.934	0	28
26	M3	Y	-.934	-1.285	28	56
27	M3	Y	-1.285	-1.366	56	84
28	M3	Y	-1.366	-1.285	84	112
29	M3	Y	-1.285	-.934	112	140
30	M3	Y	-.934	-.394	140	168
31	M4	Y	-1.339	-1.339	.036	84.825
32	M11	Y	-3.094	-3.094	3.373	27.373

Member Distributed Loads (BLC 50 : BLC 16 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
1	M1	Y	-1.228	-11.497	0	28
2	M1	Y	-11.497	-16.388	28	56
3	M1	Y	-16.388	-14.542	56	84
4	M1	Y	-14.542	-12.184	84	112
5	M1	Y	-12.184	-8.915	112	140
6	M1	Y	-8.915	-3.889	140	168
7	M2	Y	-8.437	-11.118	0	42.431
8	M2	Y	-11.118	-13.798	42.431	84.862
9	M7	Y	-10.906	-11.118	0	37.8
10	M8	Y	-27.788	-15.572	0	24.3
11	M8	Y	-15.572	-3.357	24.3	48.6
12	M10	Y	-22.216	-22.216	0	24
13	M5	Y	-3.67	-8.696	0	28
14	M5	Y	-8.696	-11.965	28	56
15	M5	Y	-11.965	-12.721	56	84
16	M5	Y	-12.721	-11.965	84	112
17	M5	Y	-11.965	-8.696	112	140
18	M5	Y	-8.696	-3.67	140	168
19	M6	Y	-12.469	-12.469	.036	84.825
20	M7	Y	-13.894	-7.786	0	24.3
21	M7	Y	-7.786	-1.678	24.3	48.6
22	M9	Y	-3.357	-15.572	5.4	29.7
23	M9	Y	-15.572	-27.788	29.7	54
24	M12	Y	-28.818	-28.818	3.373	27.373
25	M3	Y	-3.67	-8.696	0	28
26	M3	Y	-8.696	-11.965	28	56
27	M3	Y	-11.965	-12.721	56	84
28	M3	Y	-12.721	-11.965	84	112
29	M3	Y	-11.965	-8.696	112	140
30	M3	Y	-8.696	-3.67	140	168

Member Distributed Loads (BLC 50 : BLC 16 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
31	M4	Y	-12.469	-12.469	.036	84.825
32	M11	Y	-28.818	-28.818	3.373	27.373

Load Combinations

	Descripti...	So...	PDelta	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Factor	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
1	1.4DL	Yes	Y		1	1.4																		
2	1.2DL + ...	Yes	Y		1	1.2	2	1	14	1	15													
3	1.2DL + ...	Yes	Y		1	1.2	3	1	14	.866	15	.5												
4	1.2DL + ...	Yes	Y		1	1.2	4	1	14	.5	15	.866												
5	1.2DL + ...	Yes	Y		1	1.2	5	1	14		15	1												
6	1.2DL + ...	Yes	Y		1	1.2	6	1	14	-.5	15	.866												
7	1.2DL + ...	Yes	Y		1	1.2	7	1	14	-.866	15	.5												
8	1.2DL + ...	Yes	Y		1	1.2	8	1	14	-1	15													
9	1.2DL + ...	Yes	Y		1	1.2	9	1	14	-.866	15	-.5												
10	1.2DL + ...	Yes	Y		1	1.2	10	1	14	-.5	15	-.866												
11	1.2DL + ...	Yes	Y		1	1.2	11	1	14		15	-1												
12	1.2DL + ...	Yes	Y		1	1.2	12	1	14	.5	15	-.866												
13	1.2DL + ...	Yes	Y		1	1.2	13	1	14	.866	15	-.5												
14	0.9DL + ...	Yes	Y		1	.9	2	1	14	1	15													
15	0.9DL + ...	Yes	Y		1	.9	3	1	14	.866	15	.5												
16	0.9DL + ...	Yes	Y		1	.9	4	1	14	.5	15	.866												
17	0.9DL + ...	Yes	Y		1	.9	5	1	14		15	1												
18	0.9DL + ...	Yes	Y		1	.9	6	1	14	-.5	15	.866												
19	0.9DL + ...	Yes	Y		1	.9	7	1	14	-.866	15	.5												
20	0.9DL + ...	Yes	Y		1	.9	8	1	14	-1	15													
21	0.9DL + ...	Yes	Y		1	.9	9	1	14	-.866	15	-.5												
22	0.9DL + ...	Yes	Y		1	.9	10	1	14	-.5	15	-.866												
23	0.9DL + ...	Yes	Y		1	.9	11	1	14		15	-1												
24	0.9DL + ...	Yes	Y		1	.9	12	1	14	.5	15	-.866												
25	0.9DL + ...	Yes	Y		1	.9	13	1	14	.866	15	-.5												
26	1.2D + 1...	Yes	Y		1	1.2	16	1																
27	1.2D + 1...	Yes	Y		1	1.2	16	1	17	1	29	1	30											
28	1.2D + 1...	Yes	Y		1	1.2	16	1	18	1	29	.866	30	.5										
29	1.2D + 1...	Yes	Y		1	1.2	16	1	19	1	29	.5	30	.866										
30	1.2D + 1...	Yes	Y		1	1.2	16	1	20	1	29		30	1										
31	1.2D + 1...	Yes	Y		1	1.2	16	1	21	1	29	-.5	30	.866										
32	1.2D + 1...	Yes	Y		1	1.2	16	1	22	1	29	-.866	30	.5										
33	1.2D + 1...	Yes	Y		1	1.2	16	1	23	1	29	-1	30											
34	1.2D + 1...	Yes	Y		1	1.2	16	1	24	1	29	-.866	30	-.5										
35	1.2D + 1...	Yes	Y		1	1.2	16	1	25	1	29	-.5	30	-.866										
36	1.2D + 1...	Yes	Y		1	1.2	16	1	26	1	29		30	-1										
37	1.2D + 1...	Yes	Y		1	1.2	16	1	27	1	29	.5	30	-.866										
38	1.2D + 1...	Yes	Y		1	1.2	16	1	28	1	29	.866	30	-.5										
39	(1.2 + 0.2...	Yes	Y		1	1.2...	31	1	32															
40	(1.2 + 0.2...	Yes	Y		1	1.2...	31	.866	32	.5														
41	(1.2 + 0.2...	Yes	Y		1	1.2...	31	.5	32	.866														
42	(1.2 + 0.2...	Yes	Y		1	1.2...	31		32	1														
43	(1.2 + 0.2...	Yes	Y		1	1.2...	31	-.5	32	.866														
44	(1.2 + 0.2...	Yes	Y		1	1.2...	31	-.866	32	.5														
45	(1.2 + 0.2...	Yes	Y		1	1.2...	31	-1	32															
46	(1.2 + 0.2...	Yes	Y		1	1.2...	31	-.866	32	-.5														
47	(1.2 + 0.2...	Yes	Y		1	1.2...	31	-.5	32	-.866														
48	(1.2 + 0.2...	Yes	Y		1	1.2...	31		32	-1														
49	(1.2 + 0.2...	Yes	Y		1	1.2...	31	.5	32	-.866														
50	(1.2 + 0.2...	Yes	Y		1	1.2...	31	.866	32	-.5														

Load Combinations (Continued)

	Descripti...	So...	PDelta	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Factor	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
51	(0.9 - 0.2...	Yes	Y		1	.862	31	1	32															
52	(0.9 - 0.2...	Yes	Y		1	.862	31	.866	32	.5														
53	(0.9 - 0.2...	Yes	Y		1	.862	31	.5	32	.866														
54	(0.9 - 0.2...	Yes	Y		1	.862	31		32	1														
55	(0.9 - 0.2...	Yes	Y		1	.862	31	-.5	32	.866														
56	(0.9 - 0.2...	Yes	Y		1	.862	31	-.866	32	.5														
57	(0.9 - 0.2...	Yes	Y		1	.862	31	-1	32															
58	(0.9 - 0.2...	Yes	Y		1	.862	31	-.866	32	-.5														
59	(0.9 - 0.2...	Yes	Y		1	.862	31	-.5	32	-.866														
60	(0.9 - 0.2...	Yes	Y		1	.862	31		32	-1														
61	(0.9 - 0.2...	Yes	Y		1	.862	31	.5	32	-.866														
62	(0.9 - 0.2...	Yes	Y		1	.862	31	.866	32	-.5														
63	1.0DL + ...	Yes	Y		1	1	2	.213	14	.213	15		33	1.5										
64	1.0DL + ...	Yes	Y		1	1	3	.213	14	.184	15	.107	33	1.5										
65	1.0DL + ...	Yes	Y		1	1	4	.213	14	.107	15	.184	33	1.5										
66	1.0DL + ...	Yes	Y		1	1	5	.213	14		15	.213	33	1.5										
67	1.0DL + ...	Yes	Y		1	1	6	.213	14	-.107	15	.184	33	1.5										
68	1.0DL + ...	Yes	Y		1	1	7	.213	14	-.184	15	.107	33	1.5										
69	1.0DL + ...	Yes	Y		1	1	8	.213	14	-.213	15		33	1.5										
70	1.0DL + ...	Yes	Y		1	1	9	.213	14	-.184	15	-.107	33	1.5										
71	1.0DL + ...	Yes	Y		1	1	10	.213	14	-.107	15	-.184	33	1.5										
72	1.0DL + ...	Yes	Y		1	1	11	.213	14		15	-.213	33	1.5										
73	1.0DL + ...	Yes	Y		1	1	12	.213	14	.107	15	-.184	33	1.5										
74	1.0DL + ...	Yes	Y		1	1	13	.213	14	.184	15	-.107	33	1.5										
75	1.2DL + ...	Yes	Y		1	1.2	33	1.5																
76	1.2DL + ...	Yes	Y		1	1.2	34	1.5	2	.053	14	.053	15											
77	1.2DL + ...	Yes	Y		1	1.2	34	1.5	3	.053	14	.046	15	.027										
78	1.2DL + ...	Yes	Y		1	1.2	34	1.5	4	.053	14	.027	15	.046										
79	1.2DL + ...	Yes	Y		1	1.2	34	1.5	5	.053	14		15	.053										
80	1.2DL + ...	Yes	Y		1	1.2	34	1.5	6	.053	14	-.027	15	.046										
81	1.2DL + ...	Yes	Y		1	1.2	34	1.5	7	.053	14	-.046	15	.027										
82	1.2DL + ...	Yes	Y		1	1.2	34	1.5	8	.053	14	-.053	15											
83	1.2DL + ...	Yes	Y		1	1.2	34	1.5	9	.053	14	-.046	15	-.027										
84	1.2DL + ...	Yes	Y		1	1.2	34	1.5	10	.053	14	-.027	15	-.046										
85	1.2DL + ...	Yes	Y		1	1.2	34	1.5	11	.053	14		15	-.053										
86	1.2DL + ...	Yes	Y		1	1.2	34	1.5	12	.053	14	.027	15	-.046										
87	1.2DL + ...	Yes	Y		1	1.2	34	1.5	13	.053	14	.046	15	-.027										
88	1.2DL + ...	Yes	Y		1	1.2	35	1.5	2	.053	14	.053	15											
89	1.2DL + ...	Yes	Y		1	1.2	35	1.5	3	.053	14	.046	15	.027										
90	1.2DL + ...	Yes	Y		1	1.2	35	1.5	4	.053	14	.027	15	.046										
91	1.2DL + ...	Yes	Y		1	1.2	35	1.5	5	.053	14		15	.053										
92	1.2DL + ...	Yes	Y		1	1.2	35	1.5	6	.053	14	-.027	15	.046										
93	1.2DL + ...	Yes	Y		1	1.2	35	1.5	7	.053	14	-.046	15	.027										
94	1.2DL + ...	Yes	Y		1	1.2	35	1.5	8	.053	14	-.053	15											
95	1.2DL + ...	Yes	Y		1	1.2	35	1.5	9	.053	14	-.046	15	-.027										
96	1.2DL + ...	Yes	Y		1	1.2	35	1.5	10	.053	14	-.027	15	-.046										
97	1.2DL + ...	Yes	Y		1	1.2	35	1.5	11	.053	14		15	-.053										
98	1.2DL + ...	Yes	Y		1	1.2	35	1.5	12	.053	14	.027	15	-.046										
99	1.2DL + ...	Yes	Y		1	1.2	35	1.5	13	.053	14	.046	15	-.027										
100	1.2DL + ...	Yes	Y		1	1.2	36	1.5	2	.053	14	.053	15											
101	1.2DL + ...	Yes	Y		1	1.2	36	1.5	3	.053	14	.046	15	.027										
102	1.2DL + ...	Yes	Y		1	1.2	36	1.5	4	.053	14	.027	15	.046										
103	1.2DL + ...	Yes	Y		1	1.2	36	1.5	5	.053	14		15	.053										
104	1.2DL + ...	Yes	Y		1	1.2	36	1.5	6	.053	14	-.027	15	.046										
105	1.2DL + ...	Yes	Y		1	1.2	36	1.5	7	.053	14	-.046	15	.027										
106	1.2DL + ...	Yes	Y		1	1.2	36	1.5	8	.053	14	-.053	15											
107	1.2DL + ...	Yes	Y		1	1.2	36	1.5	9	.053	14	-.046	15	-.027										

Load Combinations (Continued)

	Descripti...	So...	PDelta	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Factor	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
108	1.2DL + ...	Yes	Y		1	1.2	36	1.5	10	.053	14	-.027	15	-.046										
109	1.2DL + ...	Yes	Y		1	1.2	36	1.5	11	.053	14		15	-.053										
110	1.2DL + ...	Yes	Y		1	1.2	36	1.5	12	.053	14	.027	15	-.046										
111	1.2DL + ...	Yes	Y		1	1.2	36	1.5	13	.053	14	.046	15	-.027										
112	1.2DL + ...	Yes	Y		1	1.2	37	1.5	2	.053	14	.053	15											
113	1.2DL + ...	Yes	Y		1	1.2	37	1.5	3	.053	14	.046	15	.027										
114	1.2DL + ...	Yes	Y		1	1.2	37	1.5	4	.053	14	.027	15	.046										
115	1.2DL + ...	Yes	Y		1	1.2	37	1.5	5	.053	14		15	.053										
116	1.2DL + ...	Yes	Y		1	1.2	37	1.5	6	.053	14	-.027	15	.046										
117	1.2DL + ...	Yes	Y		1	1.2	37	1.5	7	.053	14	-.046	15	.027										
118	1.2DL + ...	Yes	Y		1	1.2	37	1.5	8	.053	14	-.053	15											
119	1.2DL + ...	Yes	Y		1	1.2	37	1.5	9	.053	14	-.046	15	-.027										
120	1.2DL + ...	Yes	Y		1	1.2	37	1.5	10	.053	14	-.027	15	-.046										
121	1.2DL + ...	Yes	Y		1	1.2	37	1.5	11	.053	14		15	-.053										
122	1.2DL + ...	Yes	Y		1	1.2	37	1.5	12	.053	14	.027	15	-.046										
123	1.2DL + ...	Yes	Y		1	1.2	37	1.5	13	.053	14	.046	15	-.027										
124	1.2DL + ...	Yes	Y		1	1.2	38	1.5	2	.053	14	.053	15											
125	1.2DL + ...	Yes	Y		1	1.2	38	1.5	3	.053	14	.046	15	.027										
126	1.2DL + ...	Yes	Y		1	1.2	38	1.5	4	.053	14	.027	15	.046										
127	1.2DL + ...	Yes	Y		1	1.2	38	1.5	5	.053	14		15	.053										
128	1.2DL + ...	Yes	Y		1	1.2	38	1.5	6	.053	14	-.027	15	.046										
129	1.2DL + ...	Yes	Y		1	1.2	38	1.5	7	.053	14	-.046	15	.027										
130	1.2DL + ...	Yes	Y		1	1.2	38	1.5	8	.053	14	-.053	15											
131	1.2DL + ...	Yes	Y		1	1.2	38	1.5	9	.053	14	-.046	15	-.027										
132	1.2DL + ...	Yes	Y		1	1.2	38	1.5	10	.053	14	-.027	15	-.046										
133	1.2DL + ...	Yes	Y		1	1.2	38	1.5	11	.053	14		15	-.053										
134	1.2DL + ...	Yes	Y		1	1.2	38	1.5	12	.053	14	.027	15	-.046										
135	1.2DL + ...	Yes	Y		1	1.2	38	1.5	13	.053	14	.046	15	-.027										
136	1.2DL + ...	Yes	Y		1	1.2	39	1.5	2	.053	14	.053	15											
137	1.2DL + ...	Yes	Y		1	1.2	39	1.5	3	.053	14	.046	15	.027										
138	1.2DL + ...	Yes	Y		1	1.2	39	1.5	4	.053	14	.027	15	.046										
139	1.2DL + ...	Yes	Y		1	1.2	39	1.5	5	.053	14		15	.053										
140	1.2DL + ...	Yes	Y		1	1.2	39	1.5	6	.053	14	-.027	15	.046										
141	1.2DL + ...	Yes	Y		1	1.2	39	1.5	7	.053	14	-.046	15	.027										
142	1.2DL + ...	Yes	Y		1	1.2	39	1.5	8	.053	14	-.053	15											
143	1.2DL + ...	Yes	Y		1	1.2	39	1.5	9	.053	14	-.046	15	-.027										
144	1.2DL + ...	Yes	Y		1	1.2	39	1.5	10	.053	14	-.027	15	-.046										
145	1.2DL + ...	Yes	Y		1	1.2	39	1.5	11	.053	14		15	-.053										
146	1.2DL + ...	Yes	Y		1	1.2	39	1.5	12	.053	14	.027	15	-.046										
147	1.2DL + ...	Yes	Y		1	1.2	39	1.5	13	.053	14	.046	15	-.027										
148	1.2DL + ...	Yes	Y		1	1.2	40	1.5	2	.053	14	.053	15											
149	1.2DL + ...	Yes	Y		1	1.2	40	1.5	3	.053	14	.046	15	.027										
150	1.2DL + ...	Yes	Y		1	1.2	40	1.5	4	.053	14	.027	15	.046										
151	1.2DL + ...	Yes	Y		1	1.2	40	1.5	5	.053	14		15	.053										
152	1.2DL + ...	Yes	Y		1	1.2	40	1.5	6	.053	14	-.027	15	.046										
153	1.2DL + ...	Yes	Y		1	1.2	40	1.5	7	.053	14	-.046	15	.027										
154	1.2DL + ...	Yes	Y		1	1.2	40	1.5	8	.053	14	-.053	15											
155	1.2DL + ...	Yes	Y		1	1.2	40	1.5	9	.053	14	-.046	15	-.027										
156	1.2DL + ...	Yes	Y		1	1.2	40	1.5	10	.053	14	-.027	15	-.046										
157	1.2DL + ...	Yes	Y		1	1.2	40	1.5	11	.053	14		15	-.053										
158	1.2DL + ...	Yes	Y		1	1.2	40	1.5	12	.053	14	.027	15	-.046										
159	1.2DL + ...	Yes	Y		1	1.2	40	1.5	13	.053	14	.046	15	-.027										
160	1.2DL + ...	Yes	Y		1	1.2	41	1.5	2	.053	14	.053	15											
161	1.2DL + ...	Yes	Y		1	1.2	41	1.5	3	.053	14	.046	15	.027										
162	1.2DL + ...	Yes	Y		1	1.2	41	1.5	4	.053	14	.027	15	.046										
163	1.2DL + ...	Yes	Y		1	1.2	41	1.5	5	.053	14		15	.053										
164	1.2DL + ...	Yes	Y		1	1.2	41	1.5	6	.053	14	-.027	15	.046										

Load Combinations (Continued)

	Descripti...	So...	PDelta	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Factor	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
165	1.2DL + ...	Yes	Y		1	1.2	41	1.5	7	.053	14	-.046	15	.027										
166	1.2DL + ...	Yes	Y		1	1.2	41	1.5	8	.053	14	-.053	15											
167	1.2DL + ...	Yes	Y		1	1.2	41	1.5	9	.053	14	-.046	15	-.027										
168	1.2DL + ...	Yes	Y		1	1.2	41	1.5	10	.053	14	-.027	15	-.046										
169	1.2DL + ...	Yes	Y		1	1.2	41	1.5	11	.053	14		15	-.053										
170	1.2DL + ...	Yes	Y		1	1.2	41	1.5	12	.053	14	.027	15	-.046										
171	1.2DL + ...	Yes	Y		1	1.2	41	1.5	13	.053	14	.046	15	-.027										
172	1.2DL + ...	Yes	Y		1	1.2	42	1.5	2	.053	14	.053	15											
173	1.2DL + ...	Yes	Y		1	1.2	42	1.5	3	.053	14	.046	15	.027										
174	1.2DL + ...	Yes	Y		1	1.2	42	1.5	4	.053	14	.027	15	.046										
175	1.2DL + ...	Yes	Y		1	1.2	42	1.5	5	.053	14		15	.053										
176	1.2DL + ...	Yes	Y		1	1.2	42	1.5	6	.053	14	-.027	15	.046										
177	1.2DL + ...	Yes	Y		1	1.2	42	1.5	7	.053	14	-.046	15	.027										
178	1.2DL + ...	Yes	Y		1	1.2	42	1.5	8	.053	14	-.053	15											
179	1.2DL + ...	Yes	Y		1	1.2	42	1.5	9	.053	14	-.046	15	-.027										
180	1.2DL + ...	Yes	Y		1	1.2	42	1.5	10	.053	14	-.027	15	-.046										
181	1.2DL + ...	Yes	Y		1	1.2	42	1.5	11	.053	14		15	-.053										
182	1.2DL + ...	Yes	Y		1	1.2	42	1.5	12	.053	14	.027	15	-.046										
183	1.2DL + ...	Yes	Y		1	1.2	42	1.5	13	.053	14	.046	15	-.027										
184	1.2DL + ...	Yes	Y		1	1.2	43	1.5	2	.053	14	.053	15											
185	1.2DL + ...	Yes	Y		1	1.2	43	1.5	3	.053	14	.046	15	.027										
186	1.2DL + ...	Yes	Y		1	1.2	43	1.5	4	.053	14	.027	15	.046										
187	1.2DL + ...	Yes	Y		1	1.2	43	1.5	5	.053	14		15	.053										
188	1.2DL + ...	Yes	Y		1	1.2	43	1.5	6	.053	14	-.027	15	.046										
189	1.2DL + ...	Yes	Y		1	1.2	43	1.5	7	.053	14	-.046	15	.027										
190	1.2DL + ...	Yes	Y		1	1.2	43	1.5	8	.053	14	-.053	15											
191	1.2DL + ...	Yes	Y		1	1.2	43	1.5	9	.053	14	-.046	15	-.027										
192	1.2DL + ...	Yes	Y		1	1.2	43	1.5	10	.053	14	-.027	15	-.046										
193	1.2DL + ...	Yes	Y		1	1.2	43	1.5	11	.053	14		15	-.053										
194	1.2DL + ...	Yes	Y		1	1.2	43	1.5	12	.053	14	.027	15	-.046										
195	1.2DL + ...	Yes	Y		1	1.2	43	1.5	13	.053	14	.046	15	-.027										
196	1.2DL + ...	Yes	Y		1	1.2	44	1.5	2	.053	14	.053	15											
197	1.2DL + ...	Yes	Y		1	1.2	44	1.5	3	.053	14	.046	15	.027										
198	1.2DL + ...	Yes	Y		1	1.2	44	1.5	4	.053	14	.027	15	.046										
199	1.2DL + ...	Yes	Y		1	1.2	44	1.5	5	.053	14		15	.053										
200	1.2DL + ...	Yes	Y		1	1.2	44	1.5	6	.053	14	-.027	15	.046										
201	1.2DL + ...	Yes	Y		1	1.2	44	1.5	7	.053	14	-.046	15	.027										
202	1.2DL + ...	Yes	Y		1	1.2	44	1.5	8	.053	14	-.053	15											
203	1.2DL + ...	Yes	Y		1	1.2	44	1.5	9	.053	14	-.046	15	-.027										
204	1.2DL + ...	Yes	Y		1	1.2	44	1.5	10	.053	14	-.027	15	-.046										
205	1.2DL + ...	Yes	Y		1	1.2	44	1.5	11	.053	14		15	-.053										
206	1.2DL + ...	Yes	Y		1	1.2	44	1.5	12	.053	14	.027	15	-.046										
207	1.2DL + ...	Yes	Y		1	1.2	44	1.5	13	.053	14	.046	15	-.027										
208	1.2DL + ...	Yes	Y		1	1.2	45	1.5	2	.053	14	.053	15											
209	1.2DL + ...	Yes	Y		1	1.2	45	1.5	3	.053	14	.046	15	.027										
210	1.2DL + ...	Yes	Y		1	1.2	45	1.5	4	.053	14	.027	15	.046										
211	1.2DL + ...	Yes	Y		1	1.2	45	1.5	5	.053	14		15	.053										
212	1.2DL + ...	Yes	Y		1	1.2	45	1.5	6	.053	14	-.027	15	.046										
213	1.2DL + ...	Yes	Y		1	1.2	45	1.5	7	.053	14	-.046	15	.027										
214	1.2DL + ...	Yes	Y		1	1.2	45	1.5	8	.053	14	-.053	15											
215	1.2DL + ...	Yes	Y		1	1.2	45	1.5	9	.053	14	-.046	15	-.027										
216	1.2DL + ...	Yes	Y		1	1.2	45	1.5	10	.053	14	-.027	15	-.046										
217	1.2DL + ...	Yes	Y		1	1.2	45	1.5	11	.053	14		15	-.053										
218	1.2DL + ...	Yes	Y		1	1.2	45	1.5	12	.053	14	.027	15	-.046										
219	1.2DL + ...	Yes	Y		1	1.2	45	1.5	13	.053	14	.046	15	-.027										
220	1.2DL + ...	Yes	Y		1	1.2	46	1.5	2	.053	14	.053	15											
221	1.2DL + ...	Yes	Y		1	1.2	46	1.5	3	.053	14	.046	15	.027										

Load Combinations (Continued)

	Descripti...	So...	PDelta	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Factor	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
222	1.2DL + ...	Yes	Y		1	1.2	46	1.5	4	.053	14	.027	15	.046										
223	1.2DL + ...	Yes	Y		1	1.2	46	1.5	5	.053	14		15	.053										
224	1.2DL + ...	Yes	Y		1	1.2	46	1.5	6	.053	14	-.027	15	.046										
225	1.2DL + ...	Yes	Y		1	1.2	46	1.5	7	.053	14	-.046	15	.027										
226	1.2DL + ...	Yes	Y		1	1.2	46	1.5	8	.053	14	-.053	15											
227	1.2DL + ...	Yes	Y		1	1.2	46	1.5	9	.053	14	-.046	15	-.027										
228	1.2DL + ...	Yes	Y		1	1.2	46	1.5	10	.053	14	-.027	15	-.046										
229	1.2DL + ...	Yes	Y		1	1.2	46	1.5	11	.053	14		15	-.053										
230	1.2DL + ...	Yes	Y		1	1.2	46	1.5	12	.053	14	.027	15	-.046										
231	1.2DL + ...	Yes	Y		1	1.2	46	1.5	13	.053	14	.046	15	-.027										
232	1.2DL + ...	Yes	Y		1	1.2	47	1.5	2	.053	14	.053	15											
233	1.2DL + ...	Yes	Y		1	1.2	47	1.5	3	.053	14	.046	15	.027										
234	1.2DL + ...	Yes	Y		1	1.2	47	1.5	4	.053	14	.027	15	.046										
235	1.2DL + ...	Yes	Y		1	1.2	47	1.5	5	.053	14		15	.053										
236	1.2DL + ...	Yes	Y		1	1.2	47	1.5	6	.053	14	-.027	15	.046										
237	1.2DL + ...	Yes	Y		1	1.2	47	1.5	7	.053	14	-.046	15	.027										
238	1.2DL + ...	Yes	Y		1	1.2	47	1.5	8	.053	14	-.053	15											
239	1.2DL + ...	Yes	Y		1	1.2	47	1.5	9	.053	14	-.046	15	-.027										
240	1.2DL + ...	Yes	Y		1	1.2	47	1.5	10	.053	14	-.027	15	-.046										
241	1.2DL + ...	Yes	Y		1	1.2	47	1.5	11	.053	14		15	-.053										
242	1.2DL + ...	Yes	Y		1	1.2	47	1.5	12	.053	14	.027	15	-.046										
243	1.2DL + ...	Yes	Y		1	1.2	47	1.5	13	.053	14	.046	15	-.027										
244	1.2DL + ...	Yes	Y		1	1.2	48	1.5	2	.053	14	.053	15											
245	1.2DL + ...	Yes	Y		1	1.2	48	1.5	3	.053	14	.046	15	.027										
246	1.2DL + ...	Yes	Y		1	1.2	48	1.5	4	.053	14	.027	15	.046										
247	1.2DL + ...	Yes	Y		1	1.2	48	1.5	5	.053	14		15	.053										
248	1.2DL + ...	Yes	Y		1	1.2	48	1.5	6	.053	14	-.027	15	.046										
249	1.2DL + ...	Yes	Y		1	1.2	48	1.5	7	.053	14	-.046	15	.027										
250	1.2DL + ...	Yes	Y		1	1.2	48	1.5	8	.053	14	-.053	15											
251	1.2DL + ...	Yes	Y		1	1.2	48	1.5	9	.053	14	-.046	15	-.027										
252	1.2DL + ...	Yes	Y		1	1.2	48	1.5	10	.053	14	-.027	15	-.046										
253	1.2DL + ...	Yes	Y		1	1.2	48	1.5	11	.053	14		15	-.053										
254	1.2DL + ...	Yes	Y		1	1.2	48	1.5	12	.053	14	.027	15	-.046										

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N22	max	1778.135	18	2985.044	29	2521.343	25	3.015	27	1.218	24	.14	24
2		min	-1826.386	12	233.363	22	-2537.667	7	-.985	19	-1.231	6	-5.053	30
3	N23	max	1315.927	4	2999.853	37	2271.315	14	3.131	27	.83	20	5.006	36
4		min	-1276.064	22	74.674	18	-2307.812	8	-.835	20	-.843	2	-.103	17
5	N24	max	2044.218	5	2993.933	33	613.597	2	-.245	25	.271	16	1.674	12
6		min	-2033.69	11	143.066	14	-560.022	20	-5.764	33	-.286	10	-1.608	17
7	Totals:	max	4554.66	5	8615.317	32	4679.909	2						
8		min	-4554.659	23	2117.886	51	-4679.9	20						

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

	Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc...	phi*Pnt ...	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	M3	L3X3X4	.844	84	6	.143	84	z	30	44673.6...	46656	1.688	3.258	2...	H2-1
2	M5	L3X3X4	.782	84	2	.144	84	y	37	46648.8...	46656	1.688	3.075	1	H2-1
3	M29	L2.5x2.5x3	.740	12	8	.183	12	z	8	27702.87	29192.4	.873	1.972	1...	H2-1
4	M31	L2.5x2.5x3	.709	12	12	.192	12	z	12	27702.87	29192.4	.873	1.972	1...	H2-1
5	M33	L2.5x2.5x3	.667	12	5	.137	12	z	5	27702.87	29192.4	.873	1.972	1...	H2-1
6	M1	L3X3X4	.667	84	11	.146	84	y	33	44673.6...	46656	1.688	3.756	1...	H2-1
7	MP2	PIPE_2.0	.549	54.75	31	.149	54.75		8	20866.7...	32130	1.872	1.872	1...	H1-1b

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

	Member	Shape	Code Check	Loc[in]	LC	Shear ..	Loc[in]	Dir	LC	phi*Pnc...	phi*Pnt ...	phi*Mn ...	phi*Mn ...	Cb	Eqn
8	MP12	PIPE_2.0	.546	54.75	35	.146	54.75		12	20866.7...	32130	1.872	1.872	1...	H1-1b
9	MP7	PIPE_2.0	.545	54.75	27	.145	25.5		5	20866.7...	32130	1.872	1.872	2...	H1-1b
10	MP15	PIPE_2.0	.523	17.25	38	.242	17.25		13	20866.7...	32130	1.872	1.872	2...	H1-1b
11	MP10	PIPE_2.0	.520	17.25	31	.238	17.25		5	20866.7...	32130	1.872	1.872	1...	H1-1b
12	MP5	PIPE_2.0	.520	17.25	34	.225	46.5		8	20866.7...	32130	1.872	1.872	2...	H1-1b
13	M4	L3X3X4	.476	42.431	31	.027	42.4...	y	31	15459.3...	46656	1.688	3.163	1...	H2-1
14	M2	L3X3X4	.475	42.431	31	.027	42.4...	z	31	15459.3...	46656	1.688	3.16	1...	H2-1
15	M6	L3X3X4	.474	42.431	27	.027	42.4...	z	27	15459.38	46656	1.688	3.16	1...	H2-1
16	MP11	PIPE_2.0	.468	46.5	12	.258	46.5		12	20866.7...	32130	1.872	1.872	1...	H1-1b
17	MP1	PIPE_2.0	.450	46.5	8	.252	46.5		8	20866.7...	32130	1.872	1.872	2...	H1-1b
18	M32	PIPE_2.0	.449	146.812	38	.238	151....		11	5397.311	32130	1.872	1.872	2...	H1-1b
19	M28	PIPE_2.0	.445	146.812	31	.327	151....		2	5397.311	32130	1.872	1.872	2...	H1-1b
20	M30	PIPE_2.0	.444	146.812	35	.329	151....		6	5397.311	32130	1.872	1.872	2...	H1-1b
21	MP6	PIPE_2.0	.440	17.25	27	.216	46.5		5	20866.7...	32130	1.872	1.872	1...	H1-1b
22	MP9	PIPE_2.0	.421	17.25	6	.157	17.25		5	20866.7...	32130	1.872	1.872	1...	H1-1b
23	MP14	PIPE_2.0	.408	17.25	27	.190	17.25		12	20866.7...	32130	1.872	1.872	2...	H1-1b
24	MP8	PIPE_2.0	.406	17.25	13	.065	17.25		13	20866.7...	32130	1.872	1.872	2...	H1-1b
25	MP4	PIPE_2.0	.403	17.25	35	.186	17.25		8	20866.7...	32130	1.872	1.872	2...	H1-1b
26	M11	HSS4X4X4	.396	0	30	.241	0	y	7	124878....	127386	14.774	14.774	1...	H1-1b
27	M12	HSS4X4X4	.393	0	36	.194	0	y	3	124878....	127386	14.774	14.774	1...	H1-1b
28	M10	HSS4X4X4	.391	27.373	33	.192	27.3...	y	11	124878....	127386	14.774	14.774	1...	H1-1b
29	MP3	PIPE_2.0	.357	17.25	6	.063	17.25		6	20866.7...	32130	1.872	1.872	2...	H1-1b
30	MP13	PIPE_2.0	.330	17.25	9	.059	17.25		9	20866.7...	32130	1.872	1.872	1...	H1-1b
31	M9	LL3x3x4x0	.181	6.188	12	.025	54	z	12	75676.4...	93312	6.48	4.335	1...	H1-1b
32	M7	LL3x3x4x0	.172	47.813	8	.023	0	z	7	75676.4...	93312	6.48	4.335	1...	H1-1b
33	M8	LL3x3x4x0	.145	47.812	5	.018	0	y	29	75676.4...	93312	6.48	4.335	1...	H1-1b

APPENDIX D

ADDITIONAL CALCUATIONS

INFINIGY

FROM ZERO TO INFINIGY

the solutions are endless

Bolt Calculation Tool, V1.5.1

PROJECT DATA	
Site Name:	CT11434A
Site Number:	876341
Connection Description:	Mount to Tower

MAXIMUM BOLT LOADS		
Bolt Tension:	1522.12	lbs
Bolt Shear:	1860.14	lbs

WORST CASE BOLT LOADS[1]		
Bolt Tension:	94.64	lbs
Bolt Shear:	1860.14	lbs

BOLT PROPERTIES		
Bolt Type:	Bolt	-
Bolt Diameter:	1	in
Bolt Grade:	A325	-
# of Bolts:	2	-
Threads Excluded?	No	-

[1] *Worst case bolt loads correspond to Load combination #36 on member M12 in RISA-3D, which causes the maximum demand on the bolts.*

Member Information
I nodes of M10, M11, M12

BOLT CHECK		
Tensile Strength	54516.96	
Shear Strength	35342.92	
Max Tensile Usage	2.8%	
Max Shear Usage	5.3%	
Interaction Check (Worst Case)	0.00	***≤1.05***
Result	Pass	

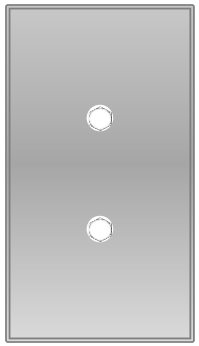


Exhibit F

Power Density/RF Emissions Report

EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CT11434A

876341
1969 Saybrook Road
Middletown, Connecticut 06457

November 10, 2021

EBI Project Number: 6221006614

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**29.44%**

November 10, 2021

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

Emissions Analysis for Site: CT11434A - 876341

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **1969 Saybrook Road** in **Middletown, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

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

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 1969 Saybrook Road in Middletown, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

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

1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.

3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

5) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

6) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

7) 1 LTE Traffic channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 60 Watts.

8) 1 LTE Broadcast channel (LTE 1C and 2C BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 20 Watts.

9) 1 NR Traffic channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 120 Watts.

10) 1 NR Broadcast channel (BRS Band - 2500 MHz) was considered for each sector of the proposed installation. This Channel has a transmit power of 40 Watts.

11) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

12) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

13) The antennas used in this modeling are the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector A, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector B, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied

specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

14) The antenna mounting height centerline of the proposed antennas is 150 feet above ground level (AGL).

15) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

16) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd
Height (AGL):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 feet
Channel Count:	13	Channel Count:	13	Channel Count:	13
Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts
ERP (W):	17,868.72	ERP (W):	17,868.72	ERP (W):	17,868.72
Antenna A1 MPE %:	**4.09%**	Antenna B1 MPE %:	**4.09%**	Antenna C1 MPE %:	**4.09%**
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz / 2500 MHz / 2500 MHz
Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd	Gain:	22.65 dBd / 17.3 dBd / 22.65 dBd / 17.3 dBd
Height (AGL):	150 feet	Height (AGL):	150 feet	Height (AGL):	150 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	36,356.09	ERP (W):	36,356.09	ERP (W):	36,356.09
Antenna A2 MPE %:	**6.30%**	Antenna B2 MPE %:	**6.30%**	Antenna C2 MPE %:	**6.30%**

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	10.39%
Dish	6.79%
AT&T	4.69%
Metro PCS	0.51%
T-Mobile (Existing)	4.56%
Verizon	2.5%
Site Total MPE % :	29.44%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	10.39%
T-Mobile Sector B Total:	10.39%
T-Mobile Sector C Total:	10.39%
Site Total MPE % :	29.44%

T-Mobile Maximum MPE Power Values (Sector A)

T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
T-Mobile 600 MHz LTE	2	591.73	150.0	2.05	600 MHz LTE	400	0.51%
T-Mobile 600 MHz NR	1	1577.94	150.0	2.74	600 MHz NR	400	0.68%
T-Mobile 700 MHz LTE	2	695.22	150.0	2.41	700 MHz LTE	467	0.52%
T-Mobile 1900 MHz GSM	4	1052.26	150.0	7.30	1900 MHz GSM	1000	0.73%
T-Mobile 1900 MHz LTE	2	2104.51	150.0	7.30	1900 MHz LTE	1000	0.73%
T-Mobile 2100 MHz LTE	2	2649.42	150.0	9.19	2100 MHz LTE	1000	0.92%
T-Mobile 2500 MHz LTE 1C & 2C Traffic	1	11044.63	150.0	19.15	2500 MHz LTE 1C & 2C Traffic	1000	1.91%
T-Mobile 2500 MHz LTE 1C & 2C Broadcast	1	1074.06	150.0	1.86	2500 MHz LTE 1C & 2C Broadcast	1000	0.19%
T-Mobile 2500 MHz NR Traffic	1	22089.26	150.0	38.30	2500 MHz NR Traffic	1000	3.83%
T-Mobile 2500 MHz NR Broadcast	1	2148.13	150.0	3.72	2500 MHz NR Broadcast	1000	0.37%
						Total:	**10.39%**

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

Summary

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

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

T-Mobile Sector	Power Density Value (%)
Sector A:	10.39%
Sector B:	10.39%
Sector C:	10.39%
T-Mobile Maximum MPE % (Sector A):	10.39%
Site Total:	29.44%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **29.44%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

14861

Network Building & Consulting LLC SA
1177 Sentry Parkway West, VEVA 17, Suite 400
Blue Bell, PA 19422
(410)712-7092

TRUIST
BB&T is now Truist
65-330/550

CHECK DATE 11/12/2021

PAY Six Hundred Twenty Five and 0/100 Dollars

AMOUNT $625.00

TO Connecticut Siting Council

Void After 6 Months

AUTHORIZED SIGNATURE

Security features. Details on back.

⑈000014861⑈ ⑆055003308⑆ 121000089818 25⑈

Network Building & Consulting LLC SA

14861

Network Building & Consulting, LLC

Check Date: 11/12/2021

Check Request#: CR011422

Project /Site ID: 100788/ 1174

Site Name: 876341

Purpose: Admin Zoning Fee

Memo 1: CSC application fee for Crown Castle_ 876341_579389_1969 Saybrook Rd, MIDDLETOWN, Ct. 06457. Please contact Ersilia Davis 551-804-0667, edavis@nbcllc.com with any questions

Memo 2:

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Memo 3:

Memo 4:

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.