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

July 14, 2020

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

RE: **Notice of Exempt Modification for T-Mobile:**
876355 - T-Mobile Site ID: CT11264C
474-480 Main St. Monroe, CT 06468
Latitude: 41° 19' 31.99"/ Longitude: -73° 15' 57.05"

Dear Ms. Bachman:

T-Mobile currently maintains 12 total antennas at the 192-foot mount on the existing 194-foot Monopole Tower, located at 474-480 Main Street, Monroe, CT. The tower is owned by Crown Castle. The property is owned by Sprint/Global Signal Acquisition II LLC (a Crown Castle subsidiary). T-Mobile now intends to add three (3) new remote radios and one (1) hybrid fiber line while also relocating some antennas already installed on the tower.

Planned Modifications:
Tower:

Remove:
(6) 1 5/8" Coax
(3) Bias Tee

Remove and Replace:
(3) RRUS11 B12 **(REMOVE) –** (3) Radio 4449 B71/B12 **(REPLACE)**

New:
(1) Hybrid Fiber

Existing to Remain:
(18) 1 5/8" Coax
(6) TMA
(3) RFS-APXVAARR24_43-U-NA20 Antenna 600/700 MHz (relocated)
(3) APX16DWV-16DWV-S-EA20 19000/2100 MHz (relocated)
(6) EMS RR65-18-XXDP Antennas (Dormant)

Ground:
Upgrade to existing ground cabinet. (Internally)

This facility was approved by the Town of Monroe on October 17, 2000 in No. 10461. The approval did not include any conditions.

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.S.C.A. § 16-50j-73, a copy of this letter is being sent to First Selectman, Kenneth Kellogg, Town of Monroe, Zoning Enforcement Officer Joe Chapman, Town of Monroe. Crown Castle owns both the property and the tower.

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

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

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

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

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

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Anne Marie Zsamba.

Sincerely,

Anne Marie Zsamba
Site Acquisition Specialist
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
201-236-9224
annemarie.zsamba@crowncastle.com

Attachments

cc:
First Selectman Kenneth Kellogg (*via email to kkellogg@monroect.org*)
Town of Monroe

7 Fan Hill Road
Monroe, CT 06468
203-452-2800

Zoning Enforcement Officer Joe Chapman (*via email to jchapman@monroect.org*)
Town of Monroe
7 Fan Hill Road
Monroe, CT 06468
203-452-2800

Sprint/Crown Castle, Property Owner

Crown Castle, Tower Owner

From:	Zsamba, Anne Marie
To:	kkellogg@monroect.org
Subject:	Notice of Exempt Modification - T-Mobile - 474 Main Street
Date:	Tuesday, July 14, 2020 6:34:00 AM
Attachments:	EM-T-MOBILE_474_480 Main Street_Monroe_876355_CT11264C_notice.pdf

Dear First Selectman Kellogg:

Attached please find T-Mobile's exempt modification application that is being submitted to the Connecticut Siting Council, today July 14, 2020.

In light of the present circumstances with Covid-19, The Council has advised that electronic notification of this filing is acceptable. If you could kindly confirm receipt. Thank you.

Best,
Anne Marie Zsamba

ANNE MARIE ZSAMBA
Site Acquisition Specialist
T: (201) 236-9224
M: (518) 350-3639
F: (724) 416-6112

CROWN CASTLE
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
CrownCastle.com

From:	Zsamba, Anne Marie
To:	jchapman@monroect.org
Subject:	Notice of Exempt Modification - T-Mobile - 474 Main Street
Date:	Tuesday, July 14, 2020 6:34:00 AM
Attachments:	EM-T-MOBILE_474_480 Main Street_Monroe_876355_CT11264C_notice.pdf

Dear ZEO Chapman:

Attached please find T-Mobile's exempt modification application that is being submitted to the Connecticut Siting Council, today July 14, 2020.

In light of the present circumstances with Covid-19, The Council has advised that electronic notification of this filing is acceptable. If you could kindly confirm receipt. Thank you.

Best,
Anne Marie Zsamba

ANNE MARIE ZSAMBA
Site Acquisition Specialist
T: (201) 236-9224
M: (518) 350-3639
F: (724) 416-6112

CROWN CASTLE
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065
CrownCastle.com

Exhibit A

Original Facility Approval

Town of Monroe

OFFICE OF THE TOWN
ENGINEERING DEPARTMENT
Town Hall
7 Fan Hill Road
Monroe, Connecticut 06468
Phone: (203) 452-5437
(203) 452-5438

July 10,2000

Paul T. Tusch
Cacase, Tusch, Santagam
777 Summer Street
P.O. Box 15859
Stamford, CT. 06901-0859

Re: Sprint PCS
474-480 Main Street
Special Exception Permit

Dear Mr. Tusch:

Please be advised that this department has reviewed the plans (4 pages) submitted for the above project and, although the design concept is generally acceptable, the following item should be addressed:

1) if the access roadway is to have a gravel surface (ie; not asphalt paved), construct the road using a minimum 6" depth of 3/4" medium coarse process gravel, shaped and crowned to control water runoff and compacted to 95%. Construct sufficient riprap leak offs to control erosion in road shoulder areas.

It is required that installation of the security fencing commence immediately following erection of the tower and continue non stop (without interruption) until completely installed.

If you have any questions, please contact my office at (203) 452-5438.

Very Truly Yours,

Sherwood Lovejoy, P.E.
Director of Public Works
Town Engineer

SL/fjm

Town Hall
7 Fan Hill Road
Monroe, Connecticut 06468-1800

Phone (203) 452-5489
Pager (203) 396-7778

TOWN OF MONROE

OFFICE OF THE FIRE MARSHAL

June 27, 2000

Attorney Paul T. Tusch
Cacase, Tusch, Santagata
777 Summer Street
P. O. Box 15859
Stamford, CT 06901-0859

RE: Sprint PCS Tower , 474-480 Main Street

Dear Attorney Tusch,

I have reviewed the proposed Sprint PCS Tower located at TLC, 474-480 Main Street, and my only requirements would be:

- Knox box system
- Access road be at least 20' wide

If you have any questions, please call me.

Sincerely,

Anthony Carpenter
Fire Marshal

cd

TOWN OF MONROE, CONNECTICUT
PROVISIONAL CERTIFICATE OF ZONING COMPLIANCE

This is to certify that the proposed Communication Tower – equipment compound
(structure, ~~addition, use~~)

located at No. 480 (Lot No. ____) Main (Street, ~~Road, Drive~~)

Application dated 10/17 20~~19~~00, made by Andrew Schoettle

has been examined and based on the information contained in said application the proposal conforms to the Zoning Regulations of the Town of Monroe, dated 7-31-00.
(Effective date of last amendment)

This provisional certificate expires one year from the date herein, or upon issuance of a permanent certificate of zoning compliance, whichever is first. Failure to obtain said permanent certificate prior to use shall constitute a violation of the Zoning Regulations of the Town of Monroe.

Dated at Monroe, Connecticut this 27th day of October, 2000

№ 10461

By: _____
(Zoning Enforcement Officer) (~~Planning Administrator~~)

Town of Monroe
conservation and
water resources
commission/inland
wetland
commission

TOWN HALL
7 Fan Hill Road
Monroe, Connecticut 06468
Phone (203) 452-5467
Fax (203) 261-6197

November 16, 2000

CERTIFIED MAIL RETURN RECEIPT REQUESTED **7009 3400 0007 9991 7695**

Sprint PCS
1 International Blvd
Suite 800
Mahwah, NJ 07495

CONDITIONAL APPROVAL
Inland Wetlands Permit No. 00-23

Applicant: Sprint PCS

Property Owner " "

Property Location: 474-480 Main Street Assessor's Map No. 45 Parcel No. 21A & 22B
Plans & Preparer: URS Corporation AES 500 Enterprise Drive, Rocky Hill CT

PERMIT APPROVED (date): October 25, 2000. All appropriate conditions must be satisfied prior to site disturbance. THIS APPROVAL IS NOT AN AUTHORIZATION TO START CONSTRUCTION.

PERMIT EXPIRES: October 25, 2005
Permit duration is five (5) years. Additional extensions must be requested prior to expiration. A renewal fee will be required. **THIS PERMIT CANNOT BE REINSTATED IF IT EXPIRES.**

THIS PERMIT IS NOT TRANSFERABLE UNLESS THE NEW OWNER PROVIDES THE COMMISSION WITH A SIGNED ACKNOWLEDGMENT THAT HE UNDERSTANDS AND ACCEPTS THE CONDITIONS OF APPROVAL.

Commission's findings and resolution: The following resolution was adopted by the Inland Wetlands Commission.

Be it resolved that Inland Wetland Permit Application No. 00-23 is hereby approved based upon the findings and subject to the modifications and conditions hereinafter set forth.

The Commission reviewed the application and the site plan and determined there will be no significant impact and the application does not warrant a public hearing. There was also no public interest demonstrated.

The Commission finds that the proposed activities are located entirely within the regulated setback and there will be no direct wetland disturbance.

MODIFICATIONS AND CONDITIONS:

1) The excavated trench shall be refilled, seeded and stabilized immediately after completion of the utility installation.
2) Access to the construction area will be by existing roads.

STANDARD CONDITIONS:

1) Regulated activities herein shall be implemented by the permittee in accordance with the timing, location, duration and intent proposed and approved by the Commission.
2) Notice of assignment or transfer of the permit must be given to the Commission immediately. Failure to do so may invalidate your permit.
3) Install sediment and erosion controls prior to soil disturbance and maintain them during construction and remove them prior to requesting final inspection.
4) Any changes in the approved plans must be approved by the Commission. This includes changes required by any other agency.
5) The posting of a cash or passbook savings account may be required at any time during construction by the Inland Wetlands Commission for erosion controls or any required wetland mitigation measures, in an amount to be determined by the Commission or its agent.
6) For the purpose of making site inspections of sediment and erosion controls, the permittee shall provide forty-eight (48) hours notice prior to site disturbance.
7) Anti tracking aprons shall be installed on all road and driveway exits with six (6) inches in depth of crushed stone spread to the traveled width, forty (40) feet long and underlain with construction fabric.
8) In the event an appeal is taken from this decision the applicant shall provide the Commission with three (3) sets of all plans, reports and documents in support of the application within thirty (30) days.
9) Heating oil tanks will not be buried anywhere on the property.

This application is approved with the above conditions and/or modifications. This decision and these conditions are consistent with the purposes of the wetland regulations which are designed to protect the citizens of Monroe by providing a balance between the need for growth, development and enjoyment of the Town's natural resources with the need to protect its' environment and ecological stability.

cc: Dean Gustafson, Applicants Agent

James P. White, Jr.
Chairman of the Commission

Town of Monroe
conservation and
water resources
commission/inland
wetland
commission

TOWN HALL
7 Fan Hill Road
Monroe, Connecticut 06468
Phone (203) 452-5467
Fax (203) 261-6197

July 11, 2000

URS Greiner Woodward Clyde
500 Enterprise Drive
Rocky Hill, CT 06067

RE: Sprint PCS Upper Stepney

Dear Mr. Clyde:

Based on my review of the site plan for Sprint PCS Upper Stepney dated June 23, 2000. An Inland Wetland permit will not be required for this project.

Please contact me if you have any questions.

Yours truly,

Richard Jacobson

Richard B. Jacobson
Wetland Consultant

gw
cc: Planning and Zoning

Rjclyde

Exhibit B

Property Card

474 MAIN ST

Location	474 MAIN ST	**Map/Lot**	045/ 022/ 0Z/ /
Acct#	0450220Z	**Owner**	SPRINT PCS
Assessment	$239,700	**Appraisal**	$342,400
PID	16240	**Building Count**	1
Survey	1676 B	**Affordable**	

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$125,000	$217,400	$342,400
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$87,500	$152,200	$239,700

Owner of Record

Owner	SPRINT PCS
Co-Owner	GLOBAL SIGNAL ACQ II LLC
Address	PMB 331 4017 WASHINGTON RD MCMURRAY, PA 15317

Sale Price	$0
Certificate	1
Book & Page	943/ 187
Sale Date	04/27/2001
Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
SPRINT PCS	$0	1	943/ 187		04/27/2001

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0

Building Attributes	
Field	**Description**
Style	Vacant Land

Model	
Stories:	
Occupancy	
Exterior Wall 1	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Rooms:	
Fireplaces	
Basement Gar.	
Basement	
In Law Apt	

Building Photo

(http://images.vgsi.com/photos/MonroeCTPhotos//\00\00\64/02.

Building Layout

(http://images.vgsi.com/photos/MonroeCTPhotos//Sketches/162

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

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 431
Description TEL REL TW
Zone B1
Neighborhood
Alt Land Approved No
Category

Land Line Valuation

Size (Acres) 0.06
Appraised Value $217,400

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
TT4	TOWER MONOPOLE			1 UNITS	$125,000	1

Valuation History

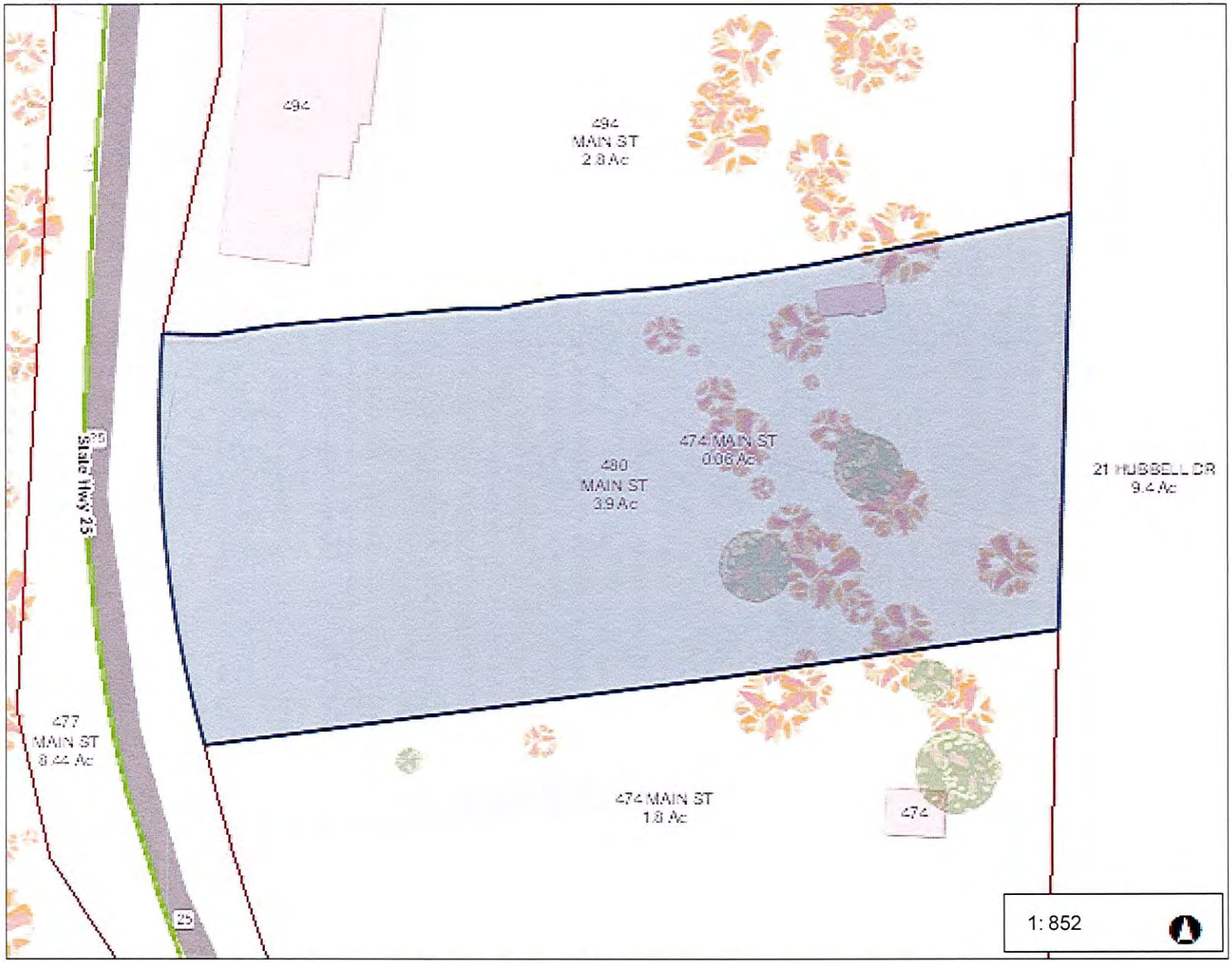
Appraisal			
Valuation Year	Improvements	Land	Total

2018	$125,000	$217,400	$342,400
2017	$125,000	$217,400	$342,400

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$87,500	$152,200	$239,700
2017	$87,500	$152,200	$239,700

Town of Monroe

Map Title



Legend

- Parcels
- Streetname
- Roadways
  - Local
  - Collector
  - Minor Collector
  - Minor Arterial
  - Major Collector
  - PA Other
  - PA Other Expwy
  - PA Interstate

141.9 0 70.97 141.9 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere
Created by Greater Bridgeport Regional Council

METROCOG
Connecticut Metropolitan Council of Governments

Exhibit C

Construction Drawings

T-MOBILE SITE NAME:

MONROE / RT 59 / RT 25

T-MOBILE SITE NUMBER:

CT11264C

CROWN BU: 876355 / APP#: 479825

67D04G CONFIGURATION

474-480 MAIN STREET
MONROE, CT 06468

EXISTING 192'-0" MONOPOLE

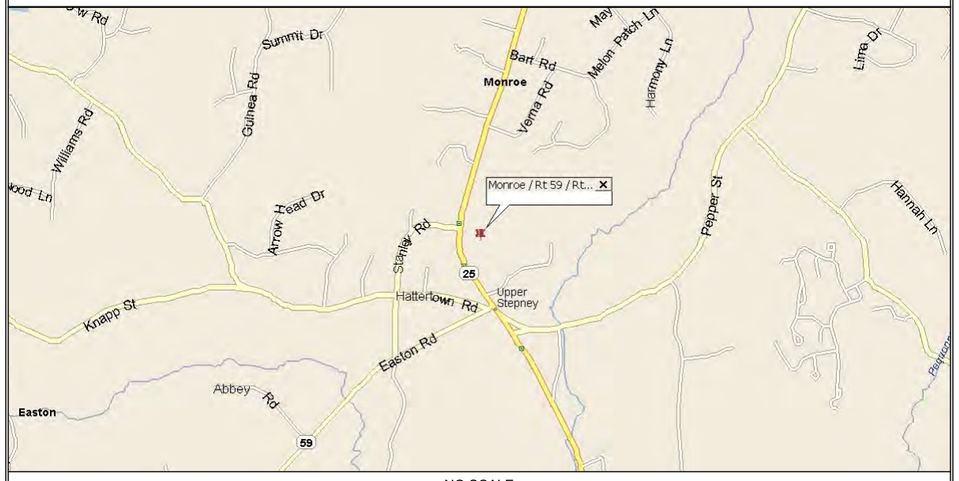
PROJECT SUMMARY

SITE TYPE:	EXISTING EQUIPMENT UPGRADE
SITE ADDRESS:	474–480 MAIN STREET MONROE, CT 06468
JURISDICTION:	FAIRFIELD COUNTY

NAD83

LATITUDE:	41.325528° N
LONGITUDE:	73.265980° W
TOWER OWNER:	CROWN CASTLE 3200 HORIZON DRIVE, SUITE 150 KING OF PRUSSIA, PA 19406 JASON SMITH (610) 635–3225
CUSTOMER/APPLICANT:	T–MOBILE 4 SYLVAN WAY PARSIPPANY, NJ 07054 (973) 397–4800
OCCUPANCY TYPE:	UNMANNED
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION

LOCATION MAP



NO SCALE

DRAWING INDEX

SHEET #	SHEET DESCRIPTION	REV. #
T–1	TITLE SHEET	3
A–1	OVERALL SITE PLAN	3
A–2	ANTENNA/CABLE SCHEDULE AND AZIMUTH PLANS	3
A–3	TOWER ELEVATION	3
A–4	ANTENNA AND RRU DETAILS	3
E–1	PANEL SCEHDULE AND ONE–LINE DIAGRAM	3

CONTACT INFORMATION

A&E FIRM:	B+T GROUP 1717 S. BOULDER, STE. 300 TULSA, OK 74119	ELECTRIC PROVIDER:	EVERSOURCE 800–286–2000
CONTACT:	MIKE OAKES	TELCO PROVIDER:	AT&T 855–637–9527
PHONE:	(918) 587–4630		

DRIVING DIRECTIONS

DEPART BRADLEY INTERNATIONAL AIRPORT ON TERMINAL RD. ROAD NAME CHANGES TO CT–20 [BRADLEY FIELD CONNECTOR]. TAKE RAMP (RIGHT) ONTO I–91 [RICHARD P HORAN MEMORIAL HWY]. AT EXIT 17, TURN RIGHT ONTO RAMP. TAKE RAMP (LEFT) ONTO CT–15 [WILBUR CROSS PKWY]. AT EXIT 49, TAKE RAMP (RIGHT) ONTO CT–25. TURN RIGHT ONTO LOCAL ROAD(S). ARRIVE AT MONROE / RT 59 / RT 25.

A/E DOCUMENT REVIEW STATUS

TITLE	SIGNATURE	DATE
T–MOBILE PROP:		
T–MOBILE R.F. MGR.:		
T–MOBILE NetOps:		
T–MOBILE CONST. MGR.:		
INTERCONNECT:		
T–MOBILE SITE DEV. MGR.:		
PROPERTY OWNER:		
PLANNING:		

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

CODE COMPLIANCE

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/DWELLING	2018 CONNECTICUT STATE BUILDING CODE
STRUCTURAL	2018 CONNECTICUT STATE BUILDING CODE
MECHANICAL	2018 CONNECTICUT STATE BUILDING CODE
ELECTRICAL	NEC 2017

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES:

- REMOVE (3) APXVAA24_43–U–A20 QUAD ANTENNAS.
- REMOVE (6) 1 5/8" COAX.
- REMOVE (6) RUS01 B12.
- INSTALL (3) APXVAARR24_43–U–NA20 OCTO ANTENNAS.
- INSTALL (3) NEW RADIO 4449 B71+B12 AT 192'–0".
- INSTALL (1) BB 6630.
- INSTALL (1) NEW 6x12 HCS FIBER.

DO NOT SCALE DRAWINGS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X17.
CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL CONNECTICUT ONE CALL
(800) 922-4455
CALL 3 WORKING DAYS
BEFORE YOU DIG!

811

B+T GRP

CROWN CASTLE

T-Mobile

CT11264C
BU #: 876355

MONROE / RT 59 / RT 25

474-480 MAIN STREET
MONROE, CT 06468

EXISTING 192'-0" MONOPOLE

PROJECT NO:	137165.002.01
CHECKED BY:	RMC

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	8/5/19	DAC	CONSTRUCTION
1	4/1/20	GEH	CONSTRUCTION
2	6/9/20	GEH	CONSTRUCTION
3	6/16/20	GEH	CONSTRUCTION

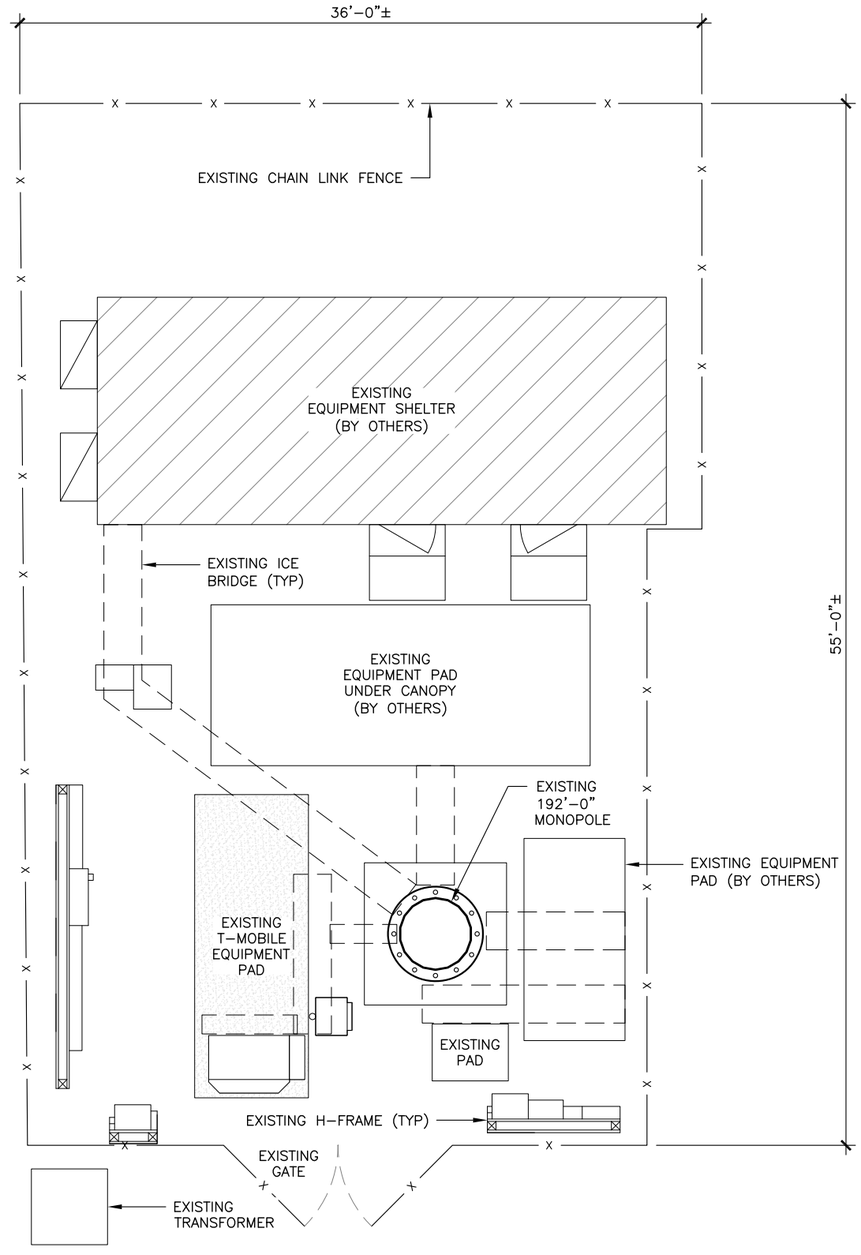
B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

STATE OF CONNECTICUT
31627
LICENSED
PROFESSIONAL ENGINEER

6/16/20

SHEET NUMBER: T-1

REVISION: 3



1 OVERALL SITE PLAN

SCALE: 0' 1' 4' 8' 20'

N

GENERAL NOTES:

1. SUBJECT PROPERTY IS SITUATED AT 474-480 MAIN STREET, MONROE, CT 06468.

2. APPLICANT: T-MOBILE
A DELAWARE LIMITED LIABILITY COMPANY
4 SYLVAN WAY
PARSIPPANY, NEW JERSEY 07054
(973) 397-4800

   TOWER OWNER: CROWN CASTLE INTERNATIONAL

- THE APPLICANT IS TO UPDATE THEIR NETWORK BY INSTALLING THREE (3) RRUS AND ONE (1) ADDITIONAL CABLE MOUNTED ON AN EXISTING MONOPOLE.

3. THIS FACILITY SHALL BE VISITED ON THE AVERAGE OF ONCE A MONTH FOR MAINTENANCE AND SHALL BE MONITORED FROM A REMOTE FACILITY.

4. THE EXISTING SITE IS LOCATED AT LATITUDE OF 41.325528° N± AND LONGITUDE OF 73.265980° W±. THE HORIZONTAL DATUM ARE IN TERMS OF NORTH AMERICAN DATUM OF 1983 (NAD 83).

5. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND EACH OF THE DRAWINGS HAVE BEEN REVISED TO INDICATED "ISSUED FOR CONSTRUCTION"

6. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:

   6.A. CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
   6.B. CURRENT PREVAILING UTILITY COMPANY AUTHORITY SPECIFICATIONS, STANDARDS AND REQUIREMENTS.

7. THE CONTRACTOR SHALL NOTIFY B+T GROUP, P.A. IMMEDIATELY IF ANY FIELD-CONDITIONS ENCOUNTERED DIFFER FROM THOSE REPRESENTED HEREON, AND/OR IF SUCH CONDITIONS WOULD OR COULD RENDER THE DESIGNS SHOWN HEREON INAPPROPRIATE AND/OR INEFFECTIVE.

8. THE CONTRACTOR IS RESPONSIBLE TO PROTECT, REPAIR AND/OR REPLACE ANY DAMAGED STRUCTURES, UTILITIES OR LANDSCAPED AREA WHICH MAY BE DISTURBED DURING THE CONSTRUCTION OF THIS FACILITY.

9. THE CONSTRUCTION CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ALL CONSTRUCTION MEANS AND METHODS. THE CONSTRUCTION CONTRACTOR IS ALSO RESPONSIBLE FOR ALL JOB SITE SAFETY.

10. SITE INFORMATION SHOWN TAKEN FROM CROWN SITE PLANS AND FROM CROWN INSPECTION PHOTOS.

11. NO GUARANTEE IS MADE NOR SHOULD BE ASSUMED AS TO THE COMPLETENESS OR ACCURACY OF THE HORIZONTAL OR VERTICAL LOCATIONS. ALL PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN PRIOR TO CONSTRUCTION ACTIVITIES.

12. ALL IMPROVEMENTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE TOWNSHIP ENGINEER WHO WILL BE GIVEN PROPER NOTIFICATION PRIOR TO THE START OF ANY CONSTRUCTION.

B+T GRP

CROWN CASTLE

T-Mobile

CT11264C
BU #: 876355

MONROE / RT 59 / RT 25

474-480 MAIN STREET
MONROE, CT 06468

EXISTING 192'-0" MONOPOLE

PROJECT NO:	137165.002.01
CHECKED BY:	RMC

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	8/5/19	DAC	CONSTRUCTION
1	4/1/20	GEH	CONSTRUCTION
2	6/9/20	GEH	CONSTRUCTION
3	6/16/20	GEH	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/21

STATE OF CONNECTICUT
31627
LICENSED
PROFESSIONAL ENGINEER

6/16/20

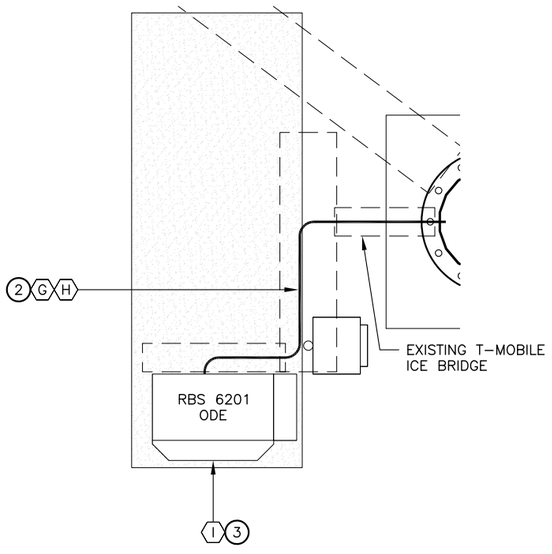
SHEET NUMBER:	REVISION:
A-1	3

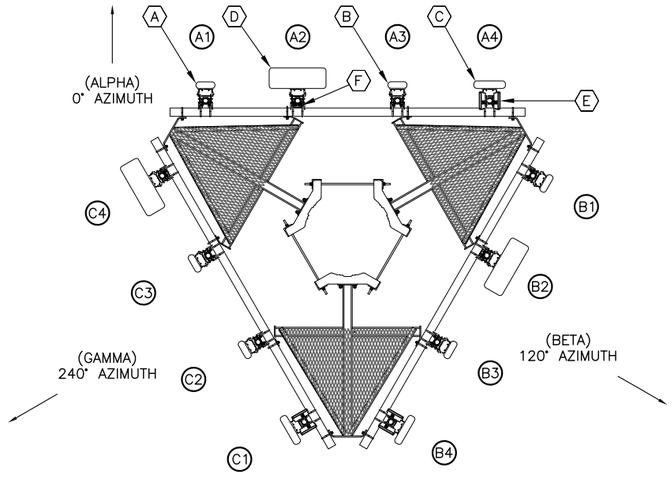
LEGEND

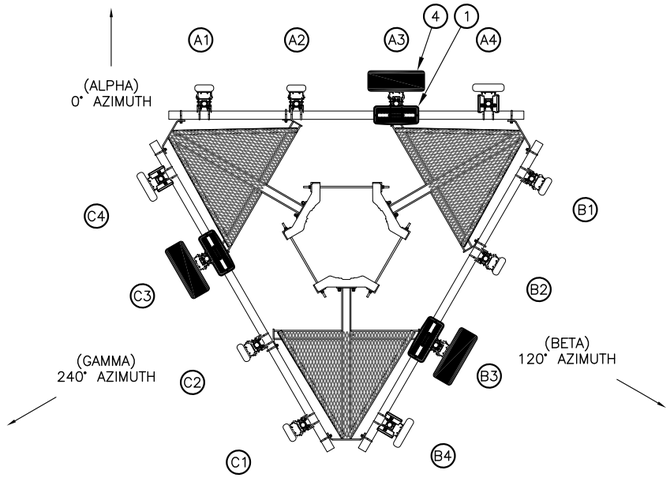
EXISTING/DEMOLITION NOTES		INSTALLATION NOTES	
A	EXISTING EMS RR65-18-XXDP DUAL TO REMAIN IN POS. A1, B1, & C2 (TOTAL OF 3)	1	INSTALL RADIO 4449 B71/B12 (TOTAL OF 3)
B	EXISTING EMS RR65-18-XXDP DUAL TO BE RELOCATED FROM A3 TO A2, B3 TO B2, & C3 TO C1 (TOTAL OF 3)	2	INSTALL (1) 6x12 HCS FIBER. RUN FROM EQUIPMENT TO ANTENNAS FOLLOWING EXISTING ROUTING
C	EXISTING APX16DWV-16DWV-S-EA20 QUAD ANTENNA TO REMAIN IN POS. A4 & B4, AND TO BE RELOCATED FROM C1 TO C4 (TOTAL OF 3)	3	INSTALL (1) BB 6630
D	EXISTING RFS APXVAA24_43-U-NA20 QUAD TO BE REMOVED IN POS. A2, B2, & C4 (TOTAL OF 3)	4	INSTALL RFS APXVAARR24_43-U-NA20 OCTO IN POS. A3, B3, & C3 (TOTAL OF 3)
E	EXISTING TMA TO REMAIN (TOTAL OF 6)		
F	EXISTING SMART BIAS TEE TO BE REMOVED (TOTAL OF 3)		
G	EXISTING 1 5/8" COAX CABLES TO REMAIN (TOTAL OF 18)		
H	REMOVE (6) EXISTING 1 5/8" COAX CABLES		
I	REMOVE (6) RUS01 B12 RADIO		

ANTENNA AND CABLE SCHEDULE

SECTOR	POSITION	EXISTING ANTENNAS	PROPOSED ANTENNAS	E-TILT	M-TILT	ANTENNA CENTERLINE	TMA/RRU	CABLES	JUMPER TYPE	CABLE LENGTH
0° – ALPHA	A1	EMS RR65-18-XXDP DUAL	EMS RR65-18-XXDP DUAL	–	–	194'-0"	–	–	–	–
	A2	RFS APXVAA24_43-U-NA20 QUAD	EMS RR65-18-XXDP DUAL	–	–		–	–	–	–
	A3	EMS RR65-18-XXDP DUAL	**RFS APXVAARR24_43-U-NA20 OCTO**	0°	0°	192'-0"	**(1) RADIO 4449**	(3) 1 5/8" COAX **(1) 6x12 HCS FIBER**	DC/FIBER	242'-0"
	A4	RFS APX16DWV-16DWV-S-EA20 QUAD	RFS APX16DWV-16DWV-S-EA20 QUAD	0°	0°	194'-0"	(1) 1A-KRY 112 489/2 (1) 1BX-KRY112 144/2	(3) 1 5/8" COAX	1/2" COAX	242'-0"
120° – BETA	B1	EMS RR65-18-XXDP DUAL	EMS RR65-18-XXDP DUAL	–	–	194'-0"	–	–	–	–
	B2	RFS APXVAA24_43-U-NA20 QUAD	EMS RR65-18-XXDP DUAL	–	–		–	–	–	–
	B3	EMS RR65-18-XXDP DUAL	**RFS APXVAARR24_43-U-NA20 OCTO**	0°	0°	192'-0"	**(1) RADIO 4449**	(3) 1 5/8" COAX **SHARED FIBER**	DC/FIBER	242'-0"
	B4	RFS APX16DWV-16DWV-S-EA20 QUAD	RFS APX16DWV-16DWV-S-EA20 QUAD	0°	0°	194'-0"	(1) 1A-KRY 112 489/2 (1) 1BX-KRY112 144/2	(3) 1 5/8" COAX	1/2" COAX	242'-0"
240° – GAMMA	C1	RFS APX16DWV-16DWV-S-EA20 QUAD	EMS RR65-18-XXDP DUAL	–	–	194'-0"	–	–	–	–
	C2	EMS RR65-18-XXDP DUAL	EMS RR65-18-XXDP DUAL	–	–		–	–	–	–
	C3	EMS RR65-18-XXDP DUAL	**RFS APXVAARR24_43-U-NA20 OCTO**	0°	0°	192'-0"	**(1) RADIO 4449**	(3) 1 5/8" COAX **SHARED FIBER**	DC/FIBER	242'-0"
	C4	RFS APXVAA24_43-U-NA20 QUAD	RFS APX16DWV-16DWV-S-EA20 QUAD	0°	0°	194'-0"	(1) 1A-KRY 112 489/2 (1) 1BX-KRY112 144/2	(3) 1 5/8" COAX	1/2" COAX	242'-0"







1 ENLARGED AREA PLAN
SCALE: 0' 1' 4' 8' 16'

2 EXISTING ANTENNA ORIENTATION
SCALE: 0' 1' 4' 8' 16'

N

3 PROPOSED ANTENNA ORIENTATION
SCALE: 0' 1' 4' 8' 16'

N

B+T GRP

CROWN CASTLE

T-Mobile

CT11264C
BU #: 876355
MONROE / RT 59 / RT 25
474-480 MAIN STREET
MONROE, CT 06468
EXISTING 192'-0" MONOPOLE

PROJECT NO: 137165.002.01
CHECKED BY: RMC

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	8/5/19	DAC	CONSTRUCTION
1	4/1/20	GEH	CONSTRUCTION
2	6/9/20	GEH	CONSTRUCTION
3	6/16/20	GEH	CONSTRUCTION

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6/16/20

SHEET NUMBER: A-2
REVISION: 3

LEGEND

EXISTING/DEMOLITION NOTES		INSTALLATION NOTES	
A	EXISTING EMS RR65-18-XXDP DUAL TO REMAIN IN POS. A1, B1, & C2 (TOTAL OF 3)	1	INSTALL RADIO 4449 B71/B12 (TOTAL OF 3)
B	EXISTING EMS RR65-18-XXDP DUAL TO BE RELOCATED FROM A3 TO A2, B3 TO B2, & C3 TO C1 (TOTAL OF 3)	2	INSTALL (1) 6x12 HCS FIBER. RUN FROM EQUIPMENT TO ANTENNAS FOLLOWING EXISTING ROUTING
C	EXISTING APX16DWV-16DWV-S-EA20 QUAD ANTENNA TO REMAIN IN POS. A4 & B4, AND TO BE RELOCATED FROM C1 TO C4 (TOTAL OF 3)	3	INSTALL RFS APXVAARR24_43-U-NA20 OCTO IN POS. A3, B3, & C3 (TOTAL OF 3)
D	EXISTING RFS APXVAA24_43-U-NA20 QUAD TO BE REMOVED IN POS. A2, B2, & C4 (TOTAL OF 3)		
E	EXISTING TMA TO REMAIN (TOTAL OF 6)		
F	EXISTING SMART BIAS TEE TO BE REMOVED (TOTAL OF 3)		
G	EXISTING 1 5/8" COAX CABLES TO REMAIN (TOTAL OF 18)		
H	REMOVE (6) EXISTING 1 5/8" COAX CABLES		

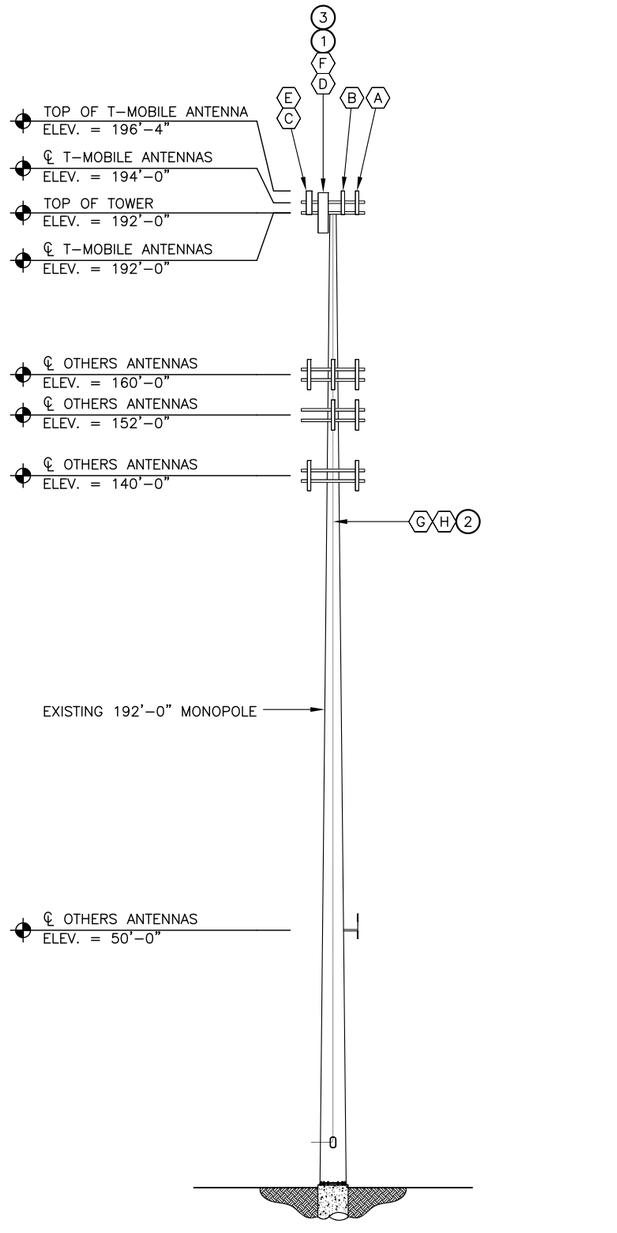
EXISTING TOWER IS SUFFICIENT PER STRUCTURAL ANALYSIS REPORT BY TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C. DATED 6/24/19

EXISTING MOUNT IS SUFFICIENT PER MOUNT ANALYSIS BY MASTEC DATED 6/13/19

LEGEND:

NEW

EXISTING



1 TOWER ELEVATION

SCALE: 1"=30'

0' 15' 30' 45' 60'

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CROWN CASTLE

T-Mobile

CT11264C
BU #: 876355

MONROE / RT 59 / RT 25

474-480 MAIN STREET
MONROE, CT 06468

EXISTING 192'-0" MONOPOLE

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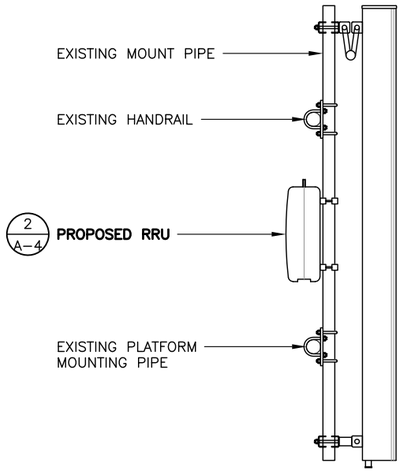
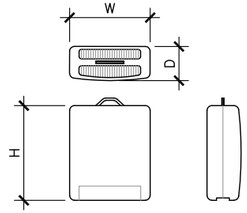
SHEET NUMBER:	REVISION:
A-3	3



1 PROPOSED RRU MOUNTING DETAIL

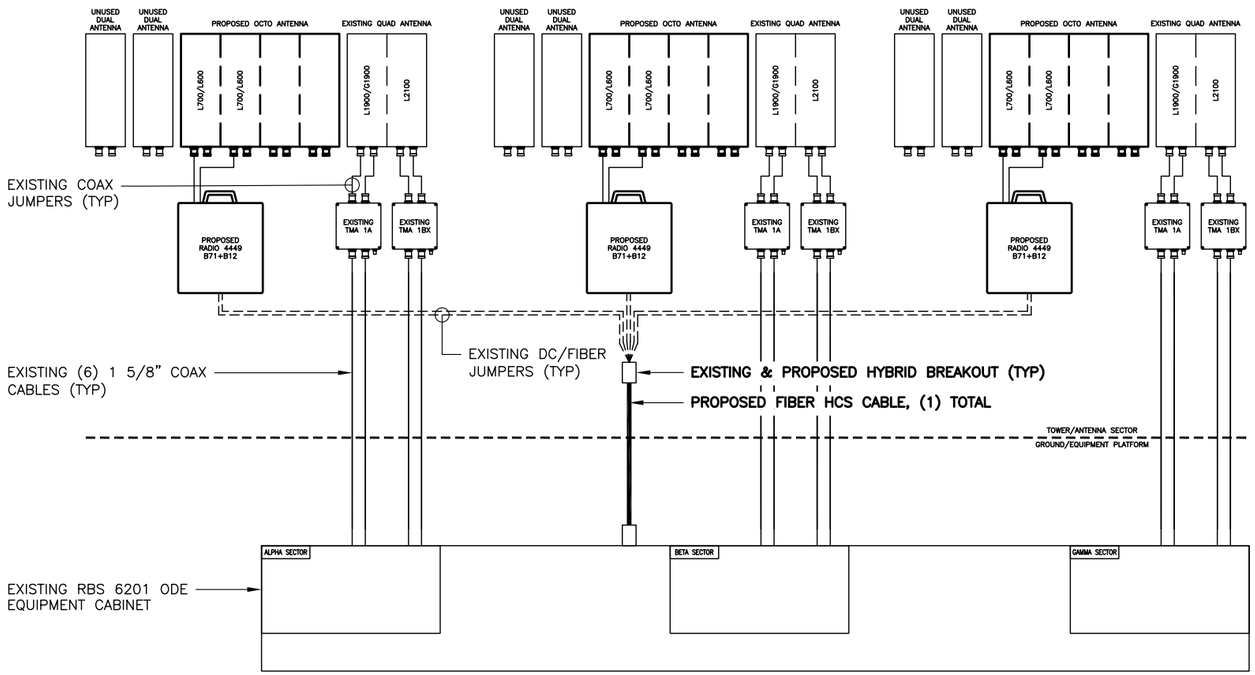
SCALE: 3/8" = 1'-0"



RRU SPECIFICATIONS	
MANUFACTURER	ERICSSON
MODEL #	4449
WIDTH	13.2"
DEPTH	10.4"
HEIGHT	14.9"
WEIGHT	74 LBS

2 PROPOSED REMOTE RADIO UNIT (RRU)

SCALE: 3/8" = 1'-0"



3 ANTENNA & CABLING SCHEMATIC

SCALE: N.T.S.

NOTES:
1. TAG ALL EXISTING AND PROPOSED CABLES/JUMPERS PER T-MOBILE SPECIFICATIONS.
2. SEE RF SCHEDULE FOR CABLE AND JUMPER LENGTHS.
3. REFER TO ANTENNA ORIENTATION ON SHEET A-2 FOR EXACT ANTENNA POSITIONING.

B+T GRP

CROWN CASTLE

T-Mobile

CT11264C
BU #: 876355
MONROE / RT 59 / RT 25
474-480 MAIN STREET
MONROE, CT 06468
EXISTING 192'-0" MONOPOLE

PROJECT NO:	137165.002.01
CHECKED BY:	RMC

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
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2	6/9/20	GEH	CONSTRUCTION
3	6/16/20	GEH	CONSTRUCTION

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SHEET NUMBER:	REVISION:
A-4	3

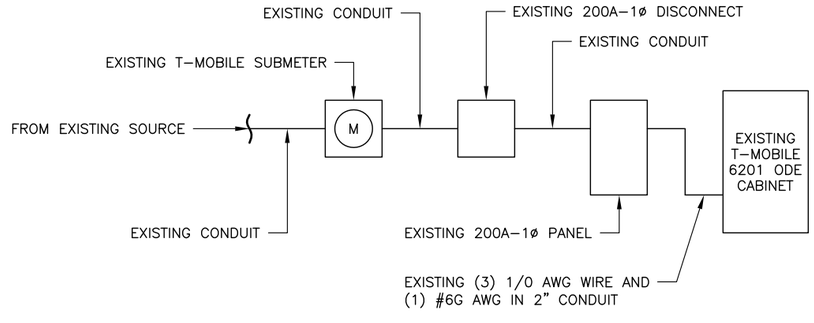
FINAL PANEL SCHEDULE							
LOAD	POLES	AMPS	BUS L1	BUS L2	AMPS	POLES	LOAD
RBS 6201 ODE	2	100A	1	2	50A	2	EQUIPMENT
			3	4			
GFI OUTLET	1	20A	5	6	50A	2	EQUIPMENT
FIBER CABINET	1	20A	7	8			
				10	20A	1	SPOT LIGHT

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			

FINAL PANEL DESIGN AND CALCULATIONS FOR WIRE SIZE WERE BASED OFF OF EXISTING PHOTOS

1 FINAL T-MOBILE PANEL DETAIL

SCALE: N.T.S.



2 ONE-LINE DIAGRAM

SCALE: N.T.S.

B+T GRP

CROWN CASTLE

T···Mobile

CT11264C
BU #: 876355

MONROE / RT 59 / RT 25

474-480 MAIN STREET
MONROE, CT 06468

EXISTING 192'-0" MONOPOLE

PROJECT NO:	137165.002.01
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1	4/1/20	GEH	CONSTRUCTION
2	6/9/20	GEH	CONSTRUCTION
3	6/16/20	GEH	CONSTRUCTION

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6/16/20

SHEET NUMBER:	REVISION:
E-1	3

Exhibit D

Structural Analysis Report

Date: **June 24, 2019**

Denice Nicholson
Crown Castle
3 Corporate Dr
Clifton Park, NY 12065

Tectonic Engineering & Surveying Consultants P.C.
1279 Route 300
Newburgh, NY 12550
(845) 567-6656

Subject:	**Structural Analysis Report**	
Carrier Designation:	***T-Mobile* Co-Locate**	
	Carrier Site Number:	CT11264C
	Carrier Site Name:	Monroe / Rt 59 / Rt 25
Crown Castle Designation:	**Crown Castle BU Number:**	876355
	Crown Castle Site Name:	UPPER STEPNEY - TLC
	Crown Castle JDE Job Number:	559330
	Crown Castle Work Order Number:	1748337
	Crown Castle Order Number:	479825 Rev. 0
Engineering Firm Designation:	**Tectonic Project Number:**	9800.876355
Site Data:	**474-480 Main St., Monroe, Fairfield County, CT** **Latitude *41° 19' 31.99"*, Longitude *-73° 15' 57.05"*** **191.5 Foot - Monopole Tower**	

Dear Denice Nicholson,

Tectonic Engineering & Surveying Consultants P.C. (Tectonic) 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 – 52.4%**

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2018 Connecticut State Building Code (2015 IBC). Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Neha Lomate / IM

Respectfully submitted by:

Tectonic

Antonio A. Gualtieri, P.E.
Executive Vice President

Antonio A. Gualtieri
I have reviewed this document
2019-06-25 10:16-04:00

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 191.5 ft Monopole tower designed by Engineered Endeavors, Inc.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	120 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
192.0	194.0	3	commscope	ATSBT-TOP-MF-4G	19	1-5/8
		6	ems wireless	RR65-18-00DP		
		3	ericsson	KRY 112 144/2		
		3	ericsson	KRY 112 489/2		
		3	rfs celwave	APX16DWV-16DWV-S-E-A20		
	192.0	1	crown mounts	LP 301-1		
		3	ericsson	RADIO 4449 B12/B71		
		3	rfs celwave	APXVAARR24_43-U-NA20		

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)
160.0	160.0	3	alcatel lucent	RRH2X60-700	13	1-5/8
		3	alcatel lucent	RRH4X45-AWS4 B66		
		4	antel	LPA-80063/6CF w/ Mount Pipe		
		2	antel	LPA-80080/4CF w/ Mount Pipe		
		3	commoscope	Side-By-Side Mounting Kit [# BSAMNT-SBS-2-2]		
		6	commscope	JAHH-65B-R3B-V3 w/ Mount Pipe		
		1	crown mounts	LP 303-1		
		1	rfs celwave	DB-B1-6C-8AB-0Z		
154.0	154.0	3	alcatel lucent	PCS 1900MHZ 4X45W-65MHZ	-	-
		1	crown mounts	SO 102-3		
	152.0	3	alcatel lucent	800 EXTERNAL NOTCH FILTER		
		3	alcatel lucent	800MHZ 2X50W RRH		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
150.0	154.0	3	alcatel lucent	TD-RRH8X20-25	4	1-1/4
	152.0	3	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe		
		3	rfs celwave	APXVTM14-C-120 w/ Mount Pipe		
	150.0	1	crown mounts	LP 601-1		
		9	rfs celwave	ACU-A20-N		
137.0	140.0	3	ericsson	RRUS-11	2 1 6	5/8 3/8 1-1/4
		3	powerwave technologies	7770.00 w/ Mount Pipe		
		3	powerwave technologies	P65-16-XLH-RR w/ Mount Pipe		
		1	raycap	DC6-48-60-18-8F		
	139.0	6	powerwave technologies	LGP21401		
	137.0	1	crown mounts	LP 303-1		
50.0	52.0	1	kathrein	OG-860/1920/GPS-A	1	1/2
	50.0	1	crown mounts	SO 701-1		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Clarence Welti Associates, Inc.	1531885	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Engineered Endeavors, Inc.	1631625	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Engineered Endeavors, Inc.	1631582	CCISITES
4-MOUNT ANALYSIS REPORT	MasTec Network Solutions	8472863	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.5.0), 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.

3.2) Assumptions

1) Tower and structures were built and maintained in accordance with the manufacturer's specifications.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
3) Tectonic did not analyze the antenna supporting mounts as a part of this analysis report and assumed they are structurally sufficient. It is the carrier's responsibility to ensure structural compliance of their existing and/or proposed antenna supporting mounts.
4) Effective projected area (EPA) of the panel antennas have been computed by the tower owner using Computational Fluid Dynamics. Verification of its accuracy is outside the scope of this structural analysis. Tectonic does not assume any responsibility for its accuracy.

This analysis may be affected if any assumptions are not valid or have been made in error. Tectonic 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	191.5 - 172.46	Pole	TP20.46x15.5x0.1875	1	-3.57	711.71	24.6	Pass
L2	172.46 - 157.753	Pole	TP23.8673x19.2818x0.3125	2	-8.41	1435.10	23.7	Pass
L3	157.753 - 142.753	Pole	TP27.7336x23.8673x0.3125	3	-13.30	1670.65	35.2	Pass
L4	142.753 - 127.753	Pole	TP31.6x27.7336x0.3125	4	-17.31	1835.55	42.5	Pass
L5	127.753 - 113.083	Pole	TP34.7567x29.8151x0.4375	5	-22.34	2927.31	38.1	Pass
L6	113.083 - 98.0833	Pole	TP38.6233x34.7567x0.4375	6	-26.27	3257.11	40.7	Pass
L7	98.0833 - 83.0833	Pole	TP42.49x38.6233x0.4375	7	-28.83	3458.66	41.7	Pass
L8	83.0833 - 70.4566	Pole	TP44.8648x40.1113x0.5	8	-36.22	4324.75	39.3	Pass
L9	70.4566 - 55.4566	Pole	TP48.7274x44.8648x0.5	9	-41.58	4701.28	39.8	Pass
L10	55.4566 - 40.4566	Pole	TP52.59x48.7274x0.5	10	-44.64	4900.00	40.3	Pass
L11	40.4566 - 30	Pole	TP54.2798x49.766x0.5	11	-53.81	5242.53	42.6	Pass
L12	30 - 15	Pole	TP58.1399x54.2798x0.5	12	-60.10	5618.82	43.1	Pass
L13	15 - 0	Pole	TP62x58.1399x0.5	13	-66.48	5995.11	43.6	Pass
							Summary	
						Pole (L13)	43.6	Pass
						Rating* =	43.6	Pass

*Rating per TIA-222-H Section 15.5

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	42.9	Pass
1	Base Plate	0	51.5	Pass
1	Base Foundation	0	52.4	Pass
1	Base Foundation Soil Interaction	0	45.3	Pass

Structure Rating (max from all components) =	52.4%

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

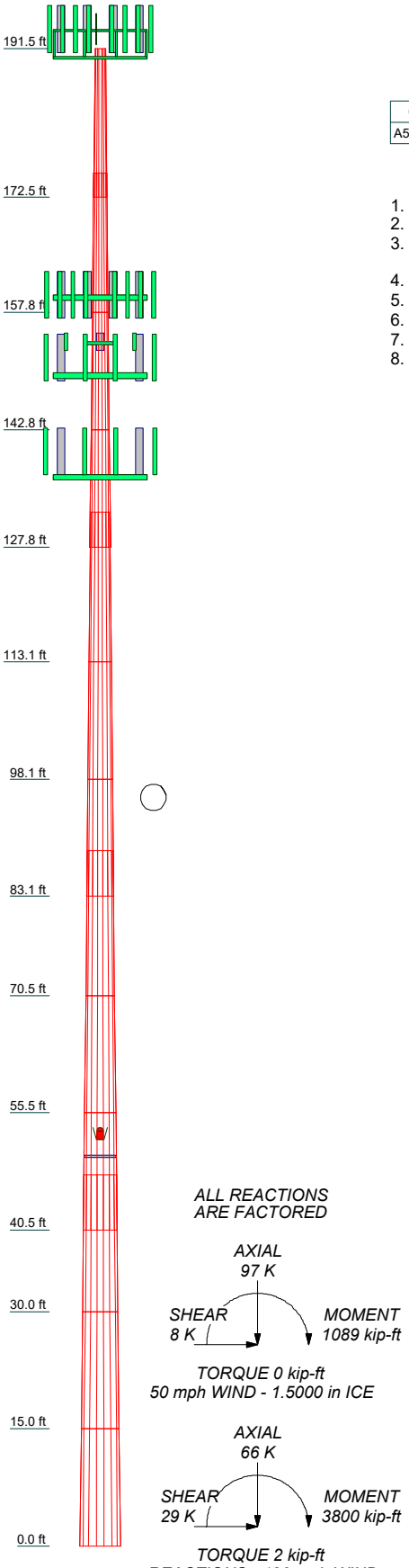
The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Section	1	2	3	4	5	6	7	8	9	10	11	12	13
Length (ft)	19.04	17.79	15.00	15.00	19.17	15.00	15.00	18.46	15.00	15.00	17.54	15.00	15.00
Number of Sides	18	18	18	18	18	18	18	18	18	18	18	18	18
Thickness (in)	0.1875	0.3125	0.3125	0.3125	0.4375	0.4375	0.4375	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Socket Length (ft)	3.08			4.50			5.83			7.08			
Top Dia (in)	15.5000	19.2818	23.8673	27.7336	29.8151	34.7567	38.6233	40.1113	44.8648	48.7274	49.7660	54.2798	58.1399
Bot Dia (in)	20.4600	23.8673	27.7336	31.6000	34.7567	38.6233	42.4900	44.8648	48.7274	52.5900	54.2798	58.1399	62.0000
Grade	A572-65												
Weight (K)	0.7	1.3	1.3	1.5	2.9	2.6	2.8	4.2	3.8	4.1	4.9	4.5	4.8

39.3



MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-H Standard.
2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TIA-222-H Annex S
8. TOWER RATING: 43.6%

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Tectonic
1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656
FAX: (845) 567-8703

Job: ***9800.876355***			
Project: ***BU 876355 - UPPER STEPNEY - TLC***			
Client: Crown Castle	Drawn by: Ian Marinaccio		App'd:
Code: TIA-222-H	Date: 06/24/19		Scale: NTS
Path: G:\Newburgh\Secure\Crown\9800 Crown SA\876355\1748337\Structural\9800.876355 Structural Analysis.eri			Dwg No. E-1

Tower Input Data

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

1) Tower base elevation above sea level: 446.00 ft.
2) Basic wind speed of 120 mph.
3) Risk Category II.
4) Exposure Category B.
5) Simplified Topographic Factor Procedure for wind speed-up calculations is used.
6) Topographic Category: 1.
7) Crest Height: 0.00 ft.
8) Nominal ice thickness of 1.5000 in.
9) Ice thickness is considered to increase with height.
10) Ice density of 56 pcf.
11) A wind speed of 50 mph is used in combination with ice.
12) Temperature drop of 50 °F.
13) Deflections calculated using a wind speed of 60 mph.
14) TIA-222-H Annex S.
15) A non-linear (P-delta) analysis was used.
16) Pressures are calculated at each section.
17) Stress ratio used in pole design is 1.05.
18) Tower analysis based on target reliabilities in accordance with Annex S.
19) Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
20) 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*	*Section Length*	*Splice Length*	*Number of Sides*	*Top Diameter*	*Bottom Diameter*	*Wall Thickness*	*Bend Radius*	*Pole Grade*
	ft	*ft*	*ft*		*in*	*in*	*in*	*in*	
L1	191.50-172.46	19.04	3.08	18	15.5000	20.4600	0.1875	0.7500	A572-65 (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
L2	172.46-157.75	17.79	0.00	18	19.2818	23.8673	0.3125	1.2500	A572-65 (65 ksi)
L3	157.75-142.75	15.00	0.00	18	23.8673	27.7336	0.3125	1.2500	A572-65 (65 ksi)
L4	142.75-127.75	15.00	4.50	18	27.7336	31.6000	0.3125	1.2500	A572-65 (65 ksi)
L5	127.75-113.08	19.17	0.00	18	29.8151	34.7567	0.4375	1.7500	A572-65 (65 ksi)
L6	113.08-98.08	15.00	0.00	18	34.7567	38.6233	0.4375	1.7500	A572-65 (65 ksi)
L7	98.08-83.08	15.00	5.83	18	38.6233	42.4900	0.4375	1.7500	A572-65 (65 ksi)
L8	83.08-70.46	18.46	0.00	18	40.1113	44.8648	0.5000	2.0000	A572-65 (65 ksi)
L9	70.46-55.46	15.00	0.00	18	44.8648	48.7274	0.5000	2.0000	A572-65 (65 ksi)
L10	55.46-40.46	15.00	7.08	18	48.7274	52.5900	0.5000	2.0000	A572-65 (65 ksi)
L11	40.46-30.00	17.54	0.00	18	49.7660	54.2798	0.5000	2.0000	A572-65 (65 ksi)
L12	30.00-15.00	15.00	0.00	18	54.2798	58.1399	0.5000	2.0000	A572-65 (65 ksi)
L13	15.00-0.00	15.00		18	58.1399	62.0000	0.5000	2.0000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	15.7102	9.1129	269.9504	5.4359	7.8740	34.2838	540.2560	4.5573	2.3980	12.789
	20.7467	12.0647	626.4228	7.1967	10.3937	60.2696	1253.6699	6.0335	3.2710	17.445
L2	20.3380	18.8152	855.3570	6.7341	9.7951	87.3246	1711.8395	9.4094	2.8436	9.1
	24.1873	23.3634	1637.6936	8.3620	12.1246	135.0721	3277.5422	11.6839	3.6506	11.682
L3	24.1873	23.3634	1637.6936	8.3620	12.1246	135.0721	3277.5422	11.6839	3.6506	11.682
	28.1132	27.1983	2583.7412	9.7345	14.0887	183.3914	5170.8822	13.6017	4.3311	13.86
L4	28.1132	27.1983	2583.7412	9.7345	14.0887	183.3914	5170.8822	13.6017	4.3311	13.86
	32.0393	31.0333	3838.0178	11.1071	16.0528	239.0871	7681.0857	15.5196	5.0116	16.037
L5	31.3854	40.7944	4448.0584	10.4290	15.1461	293.6776	8901.9697	20.4011	4.4775	10.234
	35.2254	47.6565	7091.4313	12.1833	17.6564	401.6351	14192.1936	23.8328	5.3472	12.222
L6	35.2254	47.6565	7091.4313	12.1833	17.6564	401.6351	14192.1936	23.8328	5.3472	12.222
	39.1516	53.0258	9768.5052	13.5560	19.6206	497.8689	19549.8640	26.5179	6.0277	13.778
L7	39.1516	53.0258	9768.5052	13.5560	19.6206	497.8689	19549.8640	26.5179	6.0277	13.778
	43.0780	58.3952	13046.6163	14.9286	21.5849	604.4320	26110.3996	29.2031	6.7082	15.333
L8	42.1782	62.8631	12461.5310	14.0620	20.3765	611.5628	24939.4591	31.4375	6.1796	12.359
	45.4798	70.4069	17507.7349	15.7495	22.7913	768.1756	35038.5069	35.2102	7.0162	14.032
L9	45.4798	70.4069	17507.7349	15.7495	22.7913	768.1756	35038.5069	35.2102	7.0162	14.032
	49.4020	76.5369	22490.3350	17.1207	24.7535	908.5712	45010.2634	38.2757	7.6960	15.392
L10	49.4020	76.5369	22490.3350	17.1207	24.7535	908.5712	45010.2634	38.2757	7.6960	15.392
	53.3242	82.6668	28338.5385	18.4919	26.7157	1060.7440	56714.3657	41.3413	8.3758	16.752
L11	52.3076	78.1851	23974.8377	17.4894	25.2811	948.3299	47981.2222	39.1000	7.8788	15.758
	55.0400	85.3485	31186.8797	19.0918	27.5741	1131.0192	62414.7959	42.6824	8.6732	17.346
L12	55.0400	85.3485	31186.879	19.0918	27.5741	1131.0192	62414.795	42.6824	8.6732	17.346

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
	58.9597	91.4745	38395.8277	20.4622	29.5351	1300.0080	76842.1774	45.7460	9.3526	18.705
L13	58.9597	91.4745	38395.8276	20.4622	29.5351	1300.0080	76842.1774	45.7460	9.3526	18.705
	62.8793	97.6005	46637.9792	21.8325	31.4960	1480.7588	93337.3258	48.8095	10.0320	20.064

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 191.50-172.46				1	1	1			
L2 172.46-157.75				1	1	1			
L3 157.75-142.75				1	1	1			
L4 142.75-127.75				1	1	1			
L5 127.75-113.08				1	1	1			
L6 113.08-98.08				1	1	1			
L7 98.08-83.08				1	1	1			
L8 83.08-70.46				1	1	1			
L9 70.46-55.46				1	1	1			
L10 55.46-40.46				1	1	1			
L11 40.46-30.00				1	1	1			
L12 30.00-15.00				1	1	1			
L13 15.00-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
***										
Safety Line 3/8	C	No	Surface Ar (CaAa)	191.50 - 11.00	1	1	0.000 0.000	0.3750		0.22
Step Bolts	C	No	Surface Ar (CaAa)	191.50 - 11.00	1	1	-0.250 0.250	0.3750		2.00
***										
***										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
***									
LDF7-50A(1-5/8)	C	No	No	Inside Pole	191.50 - 2.00	19	No Ice 1/2" Ice	0.00 0.00	0.82 0.82

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft²/ft	Weight plf
							1" Ice	0.00	0.82
							2" Ice	0.00	0.82
AVA7-50(1-5/8)	B	No	No	Inside Pole	160.00 - 10.00	13	No Ice	0.00	0.70
							1/2" Ice	0.00	0.70
							1" Ice	0.00	0.70
							2" Ice	0.00	0.70
***									
HB114-1-0813U4-M5J(1-1/4)	B	No	No	Inside Pole	150.00 - 7.50	4	No Ice	0.00	1.20
							1/2" Ice	0.00	1.20
							1" Ice	0.00	1.20
							2" Ice	0.00	1.20
***									
LDF6-50A(1-1/4)	B	No	No	Inside Pole	137.00 - 10.00	6	No Ice	0.00	0.60
							1/2" Ice	0.00	0.60
							1" Ice	0.00	0.60
							2" Ice	0.00	0.60
FB-L98B-002-75000(3/8)	B	No	No	Inside Pole	137.00 - 10.00	1	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
							2" Ice	0.00	0.06
WR-VG82ST-BRDA(5/8)	C	No	No	Inside Pole	137.00 - 7.50	2	No Ice	0.00	0.31
							1/2" Ice	0.00	0.31
							1" Ice	0.00	0.31
							2" Ice	0.00	0.31
2" Rigid Conduit	C	No	No	Inside Pole	137.00 - 7.50	1	No Ice	0.00	2.80
							1/2" Ice	0.00	2.80
							1" Ice	0.00	2.80
							2" Ice	0.00	2.80
***									
LDF4-50A(1/2)	B	No	No	Inside Pole	50.00 - 7.50	1	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
***									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
L1	191.50-172.46	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	1.428	0.000	0.34
L2	172.46-157.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.02
		C	0.000	0.000	1.103	0.000	0.26
L3	157.75-142.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.17
		C	0.000	0.000	1.125	0.000	0.27
L4	142.75-127.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.24
		C	0.000	0.000	1.125	0.000	0.30
L5	127.75-113.08	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.26
		C	0.000	0.000	1.100	0.000	0.31
L6	113.08-98.08	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.26
		C	0.000	0.000	1.125	0.000	0.32
L7	98.08-83.08	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.26
		C	0.000	0.000	1.125	0.000	0.32
L8	83.08-70.46	A	0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	0.000	0.000	0.22
		C	0.000	0.000	0.947	0.000	0.27
L9	70.46-55.46	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.26
		C	0.000	0.000	1.125	0.000	0.32
L10	55.46-40.46	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.26
		C	0.000	0.000	1.125	0.000	0.32
L11	40.46-30.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.19
		C	0.000	0.000	0.784	0.000	0.22
L12	30.00-15.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.27
		C	0.000	0.000	1.125	0.000	0.32
L13	15.00-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.10
		C	0.000	0.000	0.300	0.000	0.24

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	191.50-172.46	A	1.512	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	12.944	0.000	0.47
L2	172.46-157.75	A	1.498	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.02
		C		0.000	0.000	9.998	0.000	0.36
L3	157.75-142.75	A	1.483	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.17
		C		0.000	0.000	10.026	0.000	0.37
L4	142.75-127.75	A	1.468	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.24
		C		0.000	0.000	9.933	0.000	0.40
L5	127.75-113.08	A	1.451	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.26
		C		0.000	0.000	9.714	0.000	0.41
L6	113.08-98.08	A	1.432	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.26
		C		0.000	0.000	9.717	0.000	0.41
L7	98.08-83.08	A	1.410	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.26
		C		0.000	0.000	9.587	0.000	0.41
L8	83.08-70.46	A	1.387	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.22
		C		0.000	0.000	8.070	0.000	0.35
L9	70.46-55.46	A	1.360	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.26
		C		0.000	0.000	9.284	0.000	0.40
L10	55.46-40.46	A	1.323	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.26
		C		0.000	0.000	9.065	0.000	0.40
L11	40.46-30.00	A	1.283	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.19
		C		0.000	0.000	6.319	0.000	0.28
L12	30.00-15.00	A	1.227	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.27
		C		0.000	0.000	8.485	0.000	0.39
L13	15.00-0.00	A	1.098	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.10
		C		0.000	0.000	2.057	0.000	0.25

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	191.50-172.46	0.0000	0.5814	0.0000	2.2242
L2	172.46-157.75	0.0000	0.5863	0.0000	2.3674
L3	157.75-142.75	0.0000	0.5893	0.0000	2.4434
L4	142.75-127.75	0.0000	0.5915	0.0000	2.5096
L5	127.75-113.08	0.0000	0.5933	0.0000	2.5677
L6	113.08-98.08	0.0000	0.5947	0.0000	2.5802
L7	98.08-83.08	0.0000	0.5958	0.0000	2.5990
L8	83.08-70.46	0.0000	0.5966	0.0000	2.6276
L9	70.46-55.46	0.0000	0.5974	0.0000	2.5906
L10	55.46-40.46	0.0000	0.5981	0.0000	2.5678
L11	40.46-30.00	0.0000	0.5985	0.0000	2.5829
L12	30.00-15.00	0.0000	0.5990	0.0000	2.4579
L13	15.00-0.00	0.0000	0.1584	0.0000	0.6277

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	2	Safety Line 3/8	172.46 - 191.50	1.0000	1.0000
L1	3	Step Bolts	172.46 - 191.50	1.0000	1.0000
L3	2	Safety Line 3/8	142.75 - 157.75	1.0000	1.0000
L3	3	Step Bolts	142.75 - 157.75	1.0000	1.0000
L4	2	Safety Line 3/8	127.75 - 142.75	1.0000	1.0000
L4	3	Step Bolts	127.75 - 142.75	1.0000	1.0000
L6	2	Safety Line 3/8	98.08 - 113.08	1.0000	1.0000
L6	3	Step Bolts	98.08 - 113.08	1.0000	1.0000
L7	2	Safety Line 3/8	83.08 - 98.08	1.0000	1.0000
L7	3	Step Bolts	83.08 - 98.08	1.0000	1.0000
L9	2	Safety Line 3/8	55.46 - 70.46	1.0000	1.0000
L9	3	Step Bolts	55.46 - 70.46	1.0000	1.0000
L10	2	Safety Line 3/8	40.46 - 55.46	1.0000	1.0000
L10	3	Step Bolts	40.46 - 55.46	1.0000	1.0000
L12	2	Safety Line 3/8	15.00 - 30.00	1.0000	1.0000
L12	3	Step Bolts	15.00 - 30.00	1.0000	1.0000
L13	2	Safety Line 3/8	11.00 - 15.00	1.0000	1.0000
L13	3	Step Bolts	11.00 - 15.00	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
***									
5' Lightning Rod	C	From Leg	0.00 0.00 2.50	0.0000	191.50	No Ice 1/2" Ice 1" Ice 2" Ice	0.31 0.83 1.32 1.96	0.31 0.83 1.32 1.96	0.01 0.01 0.02 0.04
***									
(2) RR65-18-00DP	A	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.36 4.70 5.06 5.79	1.97 2.31 2.66 3.37	0.01 0.04 0.06 0.13
(2) RR65-18-00DP	B	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.36 4.70 5.06 5.79	1.97 2.31 2.66 3.37	0.01 0.04 0.06 0.13
(2) RR65-18-00DP	C	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.36 4.70 5.06 5.79	1.97 2.31 2.66 3.37	0.01 0.04 0.06 0.13
APX16DWV-16DWV-S-E-A20	A	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.26 6.85 7.46 8.72	1.50 2.00 2.52 3.62	0.04 0.07 0.11 0.20
APX16DWV-16DWV-S-E-A20	B	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.26 6.85 7.46 8.72	1.50 2.00 2.52 3.62	0.04 0.07 0.11 0.20
APX16DWV-16DWV-S-E-A20	C	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.26 6.85 7.46 8.72	1.50 2.00 2.52 3.62	0.04 0.07 0.11 0.20
APXVAARR24_43-U-NA20	A	From Leg	4.00 0.00 0.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	14.67 15.43 16.21 17.81	5.32 5.99 6.68 8.08	0.15 0.27 0.39 0.66
APXVAARR24_43-U-NA20	B	From Leg	4.00 0.00 0.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	14.67 15.43 16.21 17.81	5.32 5.99 6.68 8.08	0.15 0.27 0.39 0.66
APXVAARR24_43-U-NA20	C	From Leg	4.00 0.00 0.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	14.67 15.43 16.21 17.81	5.32 5.99 6.68 8.08	0.15 0.27 0.39 0.66
(2) KRY 112 489/2	A	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.56 0.66 0.76 1.00	0.37 0.45 0.54 0.75	0.02 0.02 0.03 0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
KRY 112 489/2	B	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.56 0.66 0.76 1.00	0.37 0.45 0.54 0.75	0.02 0.02 0.03 0.05
KRY 112 144/2	B	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.48 0.57 0.66 0.88	0.23 0.30 0.38 0.55	0.01 0.01 0.02 0.04
(2) KRY 112 144/2	C	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.48 0.57 0.66 0.88	0.23 0.30 0.38 0.55	0.01 0.01 0.02 0.04
ATSBT-TOP-MF-4G	A	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.17 0.23 0.29 0.44	0.09 0.14 0.19 0.32	0.00 0.00 0.01 0.01
ATSBT-TOP-MF-4G	B	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.17 0.23 0.29 0.44	0.09 0.14 0.19 0.32	0.00 0.00 0.01 0.01
ATSBT-TOP-MF-4G	C	From Leg	4.00 0.00 2.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.17 0.23 0.29 0.44	0.09 0.14 0.19 0.32	0.00 0.00 0.01 0.01
(3) RADIO 4449 B12/B71	A	From Leg	4.00 0.00 0.00	0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.65 1.81 1.98 2.34	1.16 1.30 1.45 1.76	0.07 0.09 0.11 0.16
LP 301-1	C	None		0.0000	192.00	No Ice 1/2" Ice 1" Ice 2" Ice	30.10 40.80 51.50 72.90	30.10 40.80 51.50 72.90	1.59 2.03 2.47 3.35
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(2) LPA-80063/6CF w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.83 10.40 10.93 12.03	10.22 11.38 12.27 14.09	0.05 0.14 0.25 0.48
(2) LPA-80063/6CF w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.83 10.40 10.93 12.03	10.22 11.38 12.27 14.09	0.05 0.14 0.25 0.48
(2) LPA-80080/4CF w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.86 3.22 3.59 4.34	6.57 7.19 7.84 9.17	0.03 0.08 0.13 0.25
JAHH-65B-R3B-V3 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.35 9.92 10.46 11.55	7.65 8.83 9.73 11.56	0.09 0.17 0.25 0.45
JAHH-65B-R3B-V3 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	9.35 9.92 10.46 11.55	7.65 8.83 9.73 11.56	0.09 0.17 0.25 0.45

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice			
JAHH-65B-R3B-V3 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.35 9.92 10.46 11.55	7.65 8.83 9.73 11.56	0.09 0.17 0.25 0.45
JAHH-65B-R3B-V3	A	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.11 9.58 10.05 11.02	5.98 6.44 6.91 7.86	0.06 0.12 0.19 0.33
JAHH-65B-R3B-V3	B	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.11 9.58 10.05 11.02	5.98 6.44 6.91 7.86	0.06 0.12 0.19 0.33
JAHH-65B-R3B-V3	C	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	9.11 9.58 10.05 11.02	5.98 6.44 6.91 7.86	0.06 0.12 0.19 0.33
(3) RRH4X45-AWS4 B66	A	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.66 2.88 3.10 3.58	1.59 1.77 1.96 2.36	0.06 0.08 0.11 0.17
RRH2X60-700	A	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.50 3.76 4.03 4.58	1.82 2.05 2.29 2.79	0.06 0.08 0.11 0.17
(2) RRH2X60-700	B	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.50 3.76 4.03 4.58	1.82 2.05 2.29 2.79	0.06 0.08 0.11 0.17
DB-B1-6C-8AB-0Z	C	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.80 5.07 5.35 5.93	2.00 2.19 2.39 2.81	0.04 0.08 0.12 0.21
(2) 6' x 2" STD Pipe	A	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09
(2) 6' x 2" STD Pipe	B	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09
(2) 6' x 2" STD Pipe	C	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.43 1.92 2.29 3.06	1.43 1.92 2.29 3.06	0.02 0.03 0.05 0.09
Side-By-Side Mounting Kit [# BSAMNT-SBS-2-2]	A	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.07 0.10 0.13 0.19
Side-By-Side Mounting Kit [# BSAMNT-SBS-2-2]	B	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.07 0.10 0.13 0.19

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice			
Side-By-Side Mounting Kit [# BSAMNT-SBS-2-2]	C	From Leg	4.00 0.00 0.00	0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.07 0.10 0.13 0.19
LP 303-1	C	None		0.0000	160.00	No Ice 1/2" Ice 1" Ice 2" Ice	14.66 18.87 23.08 31.50	14.66 18.87 23.08 31.50	1.25 1.48 1.71 2.18
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PCS 1900MHZ 4X45W-65MHZ	A	From Leg	4.00 0.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.32 2.53 2.74 3.19	2.24 2.44 2.65 3.09	0.06 0.08 0.11 0.17
PCS 1900MHZ 4X45W-65MHZ	B	From Leg	4.00 0.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.32 2.53 2.74 3.19	2.24 2.44 2.65 3.09	0.06 0.08 0.11 0.17
PCS 1900MHZ 4X45W-65MHZ	C	From Leg	4.00 0.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.32 2.53 2.74 3.19	2.24 2.44 2.65 3.09	0.06 0.08 0.11 0.17
800 EXTERNAL NOTCH FILTER	A	From Leg	4.00 -2.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.66 0.76 0.87 1.11	0.32 0.40 0.48 0.67	0.01 0.02 0.02 0.04
800 EXTERNAL NOTCH FILTER	B	From Leg	4.00 -2.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.66 0.76 0.87 1.11	0.32 0.40 0.48 0.67	0.01 0.02 0.02 0.04
800 EXTERNAL NOTCH FILTER	C	From Leg	4.00 -2.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.66 0.76 0.87 1.11	0.32 0.40 0.48 0.67	0.01 0.02 0.02 0.04
800MHZ 2X50W RRH	A	From Leg	4.00 -2.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.06 2.24 2.43 2.83	1.36 1.52 1.68 2.03	0.05 0.07 0.09 0.14
800MHZ 2X50W RRH	B	From Leg	4.00 -2.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.06 2.24 2.43 2.83	1.36 1.52 1.68 2.03	0.05 0.07 0.09 0.14
800MHZ 2X50W RRH	C	From Leg	4.00 -2.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.06 2.24 2.43 2.83	1.36 1.52 1.68 2.03	0.05 0.07 0.09 0.14
SO 102-3	C	None		0.0000	154.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.00 3.48 3.96 4.92	3.00 3.48 3.96 4.92	0.08 0.11 0.14 0.20
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APXVTM14-C-120 w/ Mount Pipe	A	From Leg	4.00 0.00	0.0000	150.00	No Ice 1/2"	4.09 4.48	2.86 3.23	0.08 0.13

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			2.00			Ice	4.88	3.61	0.19
						1" Ice	5.71	4.40	0.33
						2" Ice			
APXVTM14-C-120 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.09 4.48 4.88 5.71	2.86 3.23 3.61 4.40	0.08 0.13 0.19 0.33
APXVTM14-C-120 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.09 4.48 4.88 5.71	2.86 3.23 3.61 4.40	0.08 0.13 0.19 0.33
APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.60 5.05 5.50 6.44	4.01 4.45 4.89 5.82	0.10 0.16 0.23 0.42
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.60 5.05 5.50 6.44	4.01 4.45 4.89 5.82	0.10 0.16 0.23 0.42
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.60 5.05 5.50 6.44	4.01 4.45 4.89 5.82	0.10 0.16 0.23 0.42
TD-RRH8X20-25	A	From Leg	4.00 0.00 4.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.05 4.30 4.56 5.10	1.53 1.71 1.90 2.30	0.07 0.10 0.13 0.20
TD-RRH8X20-25	B	From Leg	4.00 0.00 4.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.05 4.30 4.56 5.10	1.53 1.71 1.90 2.30	0.07 0.10 0.13 0.20
TD-RRH8X20-25	C	From Leg	4.00 0.00 4.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.05 4.30 4.56 5.10	1.53 1.71 1.90 2.30	0.07 0.10 0.13 0.20
(3) ACU-A20-N	A	From Leg	4.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.07 0.10 0.15 0.26	0.12 0.16 0.21 0.34	0.00 0.00 0.00 0.01
(3) ACU-A20-N	B	From Leg	4.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.07 0.10 0.15 0.26	0.12 0.16 0.21 0.34	0.00 0.00 0.00 0.01
(3) ACU-A20-N	C	From Leg	4.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.07 0.10 0.15 0.26	0.12 0.16 0.21 0.34	0.00 0.00 0.00 0.01
Climbing Ladder 6'	C	From Leg	2.00 0.00 -3.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.00 8.00 10.00 14.00	6.00 8.00 10.00 14.00	0.16 0.24 0.32 0.48
6' x 2" STD Pipe	A	From Leg	4.00 0.00	0.0000	150.00	No Ice 1/2"	1.43 1.92	1.43 1.92	0.02 0.03

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
6' x 2" STD Pipe	B	From Leg	4.00	0.0000	150.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
6' x 2" STD Pipe	C	From Leg	4.00	0.0000	150.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
LP 601-1	C	None		0.0000	150.00	No Ice	28.47	28.47	1.12
						1/2"	33.59	33.59	1.51
						Ice	38.71	38.71	1.91
						1" Ice	48.95	48.95	2.69
						2" Ice			
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7770.00 w/ Mount Pipe	A	From Leg	4.00	0.0000	137.00	No Ice	5.75	4.25	0.06
			0.00			1/2"	6.18	5.01	0.10
			3.00			Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
7770.00 w/ Mount Pipe	B	From Leg	4.00	0.0000	137.00	No Ice	5.75	4.25	0.06
			0.00			1/2"	6.18	5.01	0.10
			3.00			Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
7770.00 w/ Mount Pipe	C	From Leg	4.00	0.0000	137.00	No Ice	5.75	4.25	0.06
			0.00			1/2"	6.18	5.01	0.10
			3.00			Ice	6.61	5.71	0.16
						1" Ice	7.49	7.16	0.29
						2" Ice			
P65-16-XLH-RR w/ Mount Pipe	A	From Leg	4.00	0.0000	137.00	No Ice	8.37	6.36	0.08
			0.00			1/2"	8.93	7.54	0.14
			3.00			Ice	9.46	8.43	0.22
						1" Ice	10.53	10.24	0.39
						2" Ice			
P65-16-XLH-RR w/ Mount Pipe	B	From Leg	4.00	0.0000	137.00	No Ice	8.37	6.36	0.08
			0.00			1/2"	8.93	7.54	0.14
			3.00			Ice	9.46	8.43	0.22
						1" Ice	10.53	10.24	0.39
						2" Ice			
P65-16-XLH-RR w/ Mount Pipe	C	From Leg	4.00	0.0000	137.00	No Ice	8.37	6.36	0.08
			0.00			1/2"	8.93	7.54	0.14
			3.00			Ice	9.46	8.43	0.22
						1" Ice	10.53	10.24	0.39
						2" Ice			
(2) LGP21401	A	From Leg	4.00	0.0000	137.00	No Ice	1.10	0.21	0.01
			0.00			1/2"	1.24	0.27	0.02
			2.00			Ice	1.38	0.35	0.03
						1" Ice	1.69	0.52	0.05
						2" Ice			
(2) LGP21401	B	From Leg	4.00	0.0000	137.00	No Ice	1.10	0.21	0.01
			0.00			1/2"	1.24	0.27	0.02
			2.00			Ice	1.38	0.35	0.03
						1" Ice	1.69	0.52	0.05
						2" Ice			
(2) LGP21401	C	From Leg	4.00	0.0000	137.00	No Ice	1.10	0.21	0.01
			0.00			1/2"	1.24	0.27	0.02
			2.00			Ice	1.38	0.35	0.03
						1" Ice	1.69	0.52	0.05
						2" Ice			
RRUS-11	A	From Leg	4.00	0.0000	137.00	No Ice	2.78	1.19	0.05

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2"	2.99	1.33	0.07
			3.00			Ice	3.21	1.49	0.09
						1" Ice	3.66	1.83	0.15
						2" Ice			
RRUS-11	B	From Leg	4.00	0.0000	137.00	No Ice	2.78	1.19	0.05
			0.00			1/2"	2.99	1.33	0.07
			3.00			Ice	3.21	1.49	0.09
						1" Ice	3.66	1.83	0.15
						2" Ice			
RRUS-11	C	From Leg	4.00	0.0000	137.00	No Ice	2.78	1.19	0.05
			0.00			1/2"	2.99	1.33	0.07
			3.00			Ice	3.21	1.49	0.09
						1" Ice	3.66	1.83	0.15
						2" Ice			
DC6-48-60-18-8F	C	From Leg	4.00	0.0000	137.00	No Ice	0.92	0.92	0.02
			0.00			1/2"	1.46	1.46	0.04
			3.00			Ice	1.64	1.64	0.06
						1" Ice	2.04	2.04	0.11
						2" Ice			
3' x 2" STD Pipe	A	From Leg	1.00	0.0000	139.00	No Ice	0.58	0.58	0.01
			0.00			1/2"	0.77	0.77	0.02
			0.00			Ice	0.97	0.97	0.02
						1" Ice	1.39	1.39	0.05
						2" Ice			
3' x 2" STD Pipe	B	From Leg	1.00	0.0000	139.00	No Ice	0.58	0.58	0.01
			0.00			1/2"	0.77	0.77	0.02
			0.00			Ice	0.97	0.97	0.02
						1" Ice	1.39	1.39	0.05
						2" Ice			
3' x 2" STD Pipe	C	From Leg	1.00	0.0000	139.00	No Ice	0.58	0.58	0.01
			0.00			1/2"	0.77	0.77	0.02
			0.00			Ice	0.97	0.97	0.02
						1" Ice	1.39	1.39	0.05
						2" Ice			
SO 102-3	A	None		0.0000	139.00	No Ice	3.00	3.00	0.08
						1/2"	3.48	3.48	0.11
						Ice	3.96	3.96	0.14
						1" Ice	4.92	4.92	0.20
						2" Ice			
LP 303-1	C	None		0.0000	137.00	No Ice	14.66	14.66	1.25
						1/2"	18.87	18.87	1.48
						Ice	23.08	23.08	1.71
						1" Ice	31.50	31.50	2.18
						2" Ice			
***									
OG-860/1920/GPS-A	A	From Leg	3.00	0.0000	50.00	No Ice	0.31	0.37	0.00
			0.00			1/2"	0.40	0.46	0.01
			2.00			Ice	0.49	0.55	0.01
						1" Ice	0.70	0.77	0.03
						2" Ice			
SO 701-1	A	From Leg	1.50	0.0000	50.00	No Ice	0.85	1.67	0.07
			0.00			1/2"	1.14	2.34	0.08
			0.00			Ice	1.43	3.01	0.09
						1" Ice	2.01	4.35	0.12
						2" Ice			
***									

Load Combinations

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

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	191.5 - 172.46	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-8.46	-0.04	2.09
			Max. Mx	8	-3.58	-82.62	1.18
			Max. My	2	-3.57	-0.05	84.85
			Max. Vy	8	5.28	-82.62	1.18
			Max. Vx	2	-5.34	-0.05	84.85
			Max. Torque	8			0.86
L2	172.46 - 157.753	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-19.55	-2.12	4.66

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	-8.45	-197.76	1.91
			Max. My	2	-8.41	-0.32	201.94
			Max. Vy	8	11.21	-197.76	1.91
			Max. Vx	2	-11.45	-0.32	201.94
			Max. Torque	10			2.44
L3	157.753 - 142.753	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-29.21	-1.00	3.94
			Max. Mx	8	-13.33	-401.30	0.07
			Max. My	2	-13.30	1.71	409.24
			Max. Vy	8	15.56	-401.30	0.07
			Max. Vx	2	-15.80	1.71	409.24
			Max. Torque	10			2.44
L4	142.753 - 127.753	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-36.41	-0.64	3.66
			Max. Mx	8	-17.35	-584.48	-1.11
			Max. My	2	-17.31	2.93	594.96
			Max. Vy	8	18.69	-584.48	-1.11
			Max. Vx	2	-18.94	2.93	594.96
			Max. Torque	10			1.81
L5	127.753 - 113.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-42.86	-0.65	3.50
			Max. Mx	8	-22.37	-957.58	-3.19
			Max. My	2	-22.34	4.97	972.66
			Max. Vy	8	20.21	-957.58	-3.19
			Max. Vx	2	-20.45	4.97	972.66
			Max. Torque	10			1.68
L6	113.083 - 98.0833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-47.75	-0.65	3.29
			Max. Mx	8	-26.29	-1269.36	-4.83
			Max. My	2	-26.27	6.57	1288.01
			Max. Vy	8	21.39	-1269.36	-4.83
			Max. Vx	2	-21.63	6.57	1288.01
			Max. Torque	10			1.68
L7	98.0833 - 83.0833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-50.95	-0.65	3.15
			Max. Mx	8	-28.86	-1468.63	-5.84
			Max. My	2	-28.84	7.55	1489.45
			Max. Vy	8	22.11	-1468.63	-5.84
			Max. Vx	2	-22.35	7.55	1489.45
			Max. Torque	10			1.68
L8	83.0833 - 70.4566	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-60.15	-0.65	2.86
			Max. Mx	8	-36.24	-1892.14	-7.87
			Max. My	2	-36.23	9.52	1917.33
			Max. Vy	8	23.72	-1892.14	-7.87
			Max. Vx	2	-23.96	9.52	1917.33
			Max. Torque	10			1.67
L9	70.4566 - 55.4566	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-66.65	-0.65	2.61
			Max. Mx	8	-41.59	-2256.56	-9.52
			Max. My	2	-41.58	11.11	2285.26
			Max. Vy	8	24.90	-2256.56	-9.52
			Max. Vx	2	-25.14	11.11	2285.26
			Max. Torque	10			1.67
L10	55.4566 - 40.4566	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-70.39	-0.65	2.98
			Max. Mx	8	-44.65	-2456.16	-10.10
			Max. My	2	-44.64	11.94	2486.93
			Max. Vy	8	25.56	-2456.16	-10.10
			Max. Vx	2	-25.78	11.94	2486.93
			Max. Torque	10			1.87

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L11	40.4566 - 30	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-81.62	-0.65	2.66
			Max. Mx	8	-53.82	-2917.29	-12.03
			Max. My	2	-53.81	13.78	2951.66
			Max. Vy	8	26.93	-2917.29	-12.03
			Max. Vx	2	-27.14	13.78	2951.66
			Max. Torque	10			1.87
L12	30 - 15	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-89.11	-0.65	2.40
			Max. Mx	8	-60.11	-3328.45	-13.67
			Max. My	2	-60.11	15.33	3365.83
			Max. Vy	8	27.92	-3328.45	-13.67
			Max. Vx	2	-28.13	15.33	3365.83
			Max. Torque	10			1.87
L13	15 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-96.57	-0.65	2.33
			Max. Mx	8	-66.48	-3754.72	-15.23
			Max. My	2	-66.48	16.85	3795.12
			Max. Vy	8	28.95	-3754.72	-15.23
			Max. Vx	2	-29.15	16.85	3795.12
			Max. Torque	10			1.87

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	96.57	-0.00	0.00
	Max. H_x	20	66.48	28.93	0.10
	Max. H_z	3	49.86	0.10	29.14
	Max. M_x	2	3795.12	0.10	29.14
	Max. M_z	8	3754.72	-28.93	-0.10
	Max. Torsion	10	1.87	-25.11	-14.66
	Min. Vert	7	49.86	-25.01	14.48
	Min. H_x	8	66.48	-28.93	-0.10
	Min. H_z	14	66.48	-0.10	-29.14
	Min. M_x	14	-3791.76	-0.10	-29.14
	Min. M_z	20	-3754.61	28.93	0.10
	Min. Torsion	22	-1.87	25.11	14.66

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	55.40	0.00	0.00	-1.30	-0.04	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	66.48	-0.10	-29.14	-3795.12	16.85	0.53
0.9 Dead+1.0 Wind 0 deg - No Ice	49.86	-0.10	-29.14	-3750.22	16.65	0.52
1.2 Dead+1.0 Wind 30 deg - No Ice	66.48	14.38	-25.18	-3278.50	-1862.73	-0.47
0.9 Dead+1.0 Wind 30 deg - No Ice	49.86	14.38	-25.18	-3239.66	-1840.94	-0.46
1.2 Dead+1.0 Wind 60 deg - No Ice	66.48	25.01	-14.48	-1883.82	-3243.25	-1.35
0.9 Dead+1.0 Wind 60 deg - No Ice	49.86	25.01	-14.48	-1861.32	-3205.30	-1.31
1.2 Dead+1.0 Wind 90 deg - No Ice	66.48	28.93	0.10	15.23	-3754.72	-1.86
0.9 Dead+1.0 Wind 90 deg -	49.86	28.93	0.10	15.47	-3710.78	-1.82

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
No Ice						
1.2 Dead+1.0 Wind 120 deg - No Ice	66.48	25.11	14.66	1909.71	-3260.08	-1.87
0.9 Dead+1.0 Wind 120 deg - No Ice	49.86	25.11	14.66	1887.76	-3221.93	-1.83
1.2 Dead+1.0 Wind 150 deg - No Ice	66.48	14.55	25.28	3291.99	-1891.96	-1.38
0.9 Dead+1.0 Wind 150 deg - No Ice	49.86	14.55	25.28	3253.85	-1869.81	-1.36
1.2 Dead+1.0 Wind 180 deg - No Ice	66.48	0.10	29.14	3791.76	-16.94	-0.52
0.9 Dead+1.0 Wind 180 deg - No Ice	49.86	0.10	29.14	3747.78	-16.72	-0.52
1.2 Dead+1.0 Wind 210 deg - No Ice	66.48	-14.38	25.18	3275.14	1862.63	0.48
0.9 Dead+1.0 Wind 210 deg - No Ice	49.86	-14.38	25.18	3237.21	1840.87	0.46
1.2 Dead+1.0 Wind 240 deg - No Ice	66.48	-25.01	14.48	1880.46	3243.14	1.35
0.9 Dead+1.0 Wind 240 deg - No Ice	49.86	-25.01	14.48	1858.88	3205.23	1.31
1.2 Dead+1.0 Wind 270 deg - No Ice	66.48	-28.93	-0.10	-18.57	3754.61	1.86
0.9 Dead+1.0 Wind 270 deg - No Ice	49.86	-28.93	-0.10	-17.91	3710.71	1.82
1.2 Dead+1.0 Wind 300 deg - No Ice	66.48	-25.11	-14.66	-1913.05	3259.99	1.87
0.9 Dead+1.0 Wind 300 deg - No Ice	49.86	-25.11	-14.66	-1890.19	3221.86	1.83
1.2 Dead+1.0 Wind 330 deg - No Ice	66.48	-14.55	-25.28	-3295.34	1891.87	1.38
0.9 Dead+1.0 Wind 330 deg - No Ice	49.86	-14.55	-25.28	-3256.29	1869.74	1.36
1.2 Dead+1.0 Ice+1.0 Temp	96.57	0.00	-0.00	-2.33	-0.65	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	96.57	-0.01	-8.20	-1089.22	1.90	0.04
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	96.57	4.07	-7.09	-942.33	-538.39	-0.19
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	96.57	7.07	-4.09	-543.63	-934.61	-0.38
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	96.57	8.17	0.01	0.06	-1080.59	-0.46
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	96.57	7.08	4.11	543.05	-937.21	-0.42
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	96.57	4.10	7.11	939.85	-542.90	-0.27
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	96.57	0.01	8.20	1084.14	-3.31	-0.04
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	96.57	-4.07	7.09	937.25	536.99	0.19
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	96.57	-7.07	4.09	538.54	933.20	0.38
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	96.57	-8.17	-0.01	-5.14	1079.18	0.46
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	96.57	-7.08	-4.11	-548.13	935.81	0.42
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	96.57	-4.10	-7.11	-944.93	541.49	0.27
Dead+Wind 0 deg - Service	55.40	-0.02	-6.86	-888.44	3.91	0.12
Dead+Wind 30 deg - Service	55.40	3.39	-5.93	-767.63	-435.61	-0.11
Dead+Wind 60 deg - Service	55.40	5.89	-3.41	-441.49	-758.42	-0.31
Dead+Wind 90 deg - Service	55.40	6.81	0.02	2.57	-878.02	-0.43
Dead+Wind 120 deg - Service	55.40	5.91	3.45	445.57	-762.37	-0.44
Dead+Wind 150 deg - Service	55.40	3.43	5.95	768.81	-442.45	-0.32
Dead+Wind 180 deg - Service	55.40	0.02	6.86	885.68	-3.99	-0.12
Dead+Wind 210 deg -	55.40	-3.39	5.93	764.86	435.53	0.11

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Service						
Dead+Wind 240 deg - Service	55.40	-5.89	3.41	438.73	758.33	0.31
Dead+Wind 270 deg - Service	55.40	-6.81	-0.02	-5.33	877.94	0.43
Dead+Wind 300 deg - Service	55.40	-5.91	-3.45	-448.33	762.28	0.44
Dead+Wind 330 deg - Service	55.40	-3.43	-5.95	-771.57	442.37	0.32

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.00	-55.40	0.00	0.00	55.40	0.00	0.000%
2	-0.10	-66.48	-29.14	0.10	66.48	29.14	0.000%
3	-0.10	-49.86	-29.14	0.10	49.86	29.14	0.000%
4	14.38	-66.48	-25.18	-14.38	66.48	25.18	0.000%
5	14.38	-49.86	-25.18	-14.38	49.86	25.18	0.000%
6	25.01	-66.48	-14.48	-25.01	66.48	14.48	0.000%
7	25.01	-49.86	-14.48	-25.01	49.86	14.48	0.000%
8	28.93	-66.48	0.10	-28.93	66.48	-0.10	0.000%
9	28.93	-49.86	0.10	-28.93	49.86	-0.10	0.000%
10	25.11	-66.48	14.66	-25.11	66.48	-14.66	0.000%
11	25.11	-49.86	14.66	-25.11	49.86	-14.66	0.000%
12	14.55	-66.48	25.28	-14.55	66.48	-25.28	0.000%
13	14.55	-49.86	25.28	-14.55	49.86	-25.28	0.000%
14	0.10	-66.48	29.14	-0.10	66.48	-29.14	0.000%
15	0.10	-49.86	29.14	-0.10	49.86	-29.14	0.000%
16	-14.38	-66.48	25.18	14.38	66.48	-25.18	0.000%
17	-14.38	-49.86	25.18	14.38	49.86	-25.18	0.000%
18	-25.01	-66.48	14.48	25.01	66.48	-14.48	0.000%
19	-25.01	-49.86	14.48	25.01	49.86	-14.48	0.000%
20	-28.93	-66.48	-0.10	28.93	66.48	0.10	0.000%
21	-28.93	-49.86	-0.10	28.93	49.86	0.10	0.000%
22	-25.11	-66.48	-14.66	25.11	66.48	14.66	0.000%
23	-25.11	-49.86	-14.66	25.11	49.86	14.66	0.000%
24	-14.55	-66.48	-25.28	14.55	66.48	25.28	0.000%
25	-14.55	-49.86	-25.28	14.55	49.86	25.28	0.000%
26	0.00	-96.57	0.00	-0.00	96.57	0.00	0.000%
27	-0.01	-96.57	-8.20	0.01	96.57	8.20	0.000%
28	4.07	-96.57	-7.09	-4.07	96.57	7.09	0.000%
29	7.07	-96.57	-4.09	-7.07	96.57	4.09	0.000%
30	8.17	-96.57	0.01	-8.17	96.57	-0.01	0.000%
31	7.08	-96.57	4.11	-7.08	96.57	-4.11	0.000%
32	4.10	-96.57	7.11	-4.10	96.57	-7.11	0.000%
33	0.01	-96.57	8.20	-0.01	96.57	-8.20	0.000%
34	-4.07	-96.57	7.09	4.07	96.57	-7.09	0.000%
35	-7.07	-96.57	4.09	7.07	96.57	-4.09	0.000%
36	-8.17	-96.57	-0.01	8.17	96.57	0.01	0.000%
37	-7.08	-96.57	-4.11	7.08	96.57	4.11	0.000%
38	-4.10	-96.57	-7.11	4.10	96.57	7.11	0.000%
39	-0.02	-55.40	-6.86	0.02	55.40	6.86	0.000%
40	3.39	-55.40	-5.93	-3.39	55.40	5.93	0.000%
41	5.89	-55.40	-3.41	-5.89	55.40	3.41	0.000%
42	6.81	-55.40	0.02	-6.81	55.40	-0.02	0.000%
43	5.91	-55.40	3.45	-5.91	55.40	-3.45	0.000%
44	3.43	-55.40	5.95	-3.43	55.40	-5.95	0.000%
45	0.02	-55.40	6.86	-0.02	55.40	-6.86	0.000%
46	-3.39	-55.40	5.93	3.39	55.40	-5.93	0.000%
47	-5.89	-55.40	3.41	5.89	55.40	-3.41	0.000%
48	-6.81	-55.40	-0.02	6.81	55.40	0.02	0.000%
49	-5.91	-55.40	-3.45	5.91	55.40	3.45	0.000%
50	-3.43	-55.40	-5.95	3.43	55.40	5.95	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00006045
3	Yes	4	0.00000001	0.00061296
4	Yes	6	0.00000001	0.00016973
5	Yes	6	0.00000001	0.00005859
6	Yes	6	0.00000001	0.00017431
7	Yes	6	0.00000001	0.00006036
8	Yes	5	0.00000001	0.00016838
9	Yes	5	0.00000001	0.00008005
10	Yes	6	0.00000001	0.00016786
11	Yes	6	0.00000001	0.00005779
12	Yes	6	0.00000001	0.00017872
13	Yes	6	0.00000001	0.00006178
14	Yes	5	0.00000001	0.00011320
15	Yes	5	0.00000001	0.00005304
16	Yes	6	0.00000001	0.00017126
17	Yes	6	0.00000001	0.00005927
18	Yes	6	0.00000001	0.00016556
19	Yes	6	0.00000001	0.00005722
20	Yes	5	0.00000001	0.00023688
21	Yes	5	0.00000001	0.00011378
22	Yes	6	0.00000001	0.00018012
23	Yes	6	0.00000001	0.00006227
24	Yes	6	0.00000001	0.00017039
25	Yes	6	0.00000001	0.00005855
26	Yes	4	0.00000001	0.00011040
27	Yes	6	0.00000001	0.00017311
28	Yes	6	0.00000001	0.00020443
29	Yes	6	0.00000001	0.00020473
30	Yes	6	0.00000001	0.00020092
31	Yes	6	0.00000001	0.00020124
32	Yes	6	0.00000001	0.00020285
33	Yes	6	0.00000001	0.00016978
34	Yes	6	0.00000001	0.00020046
35	Yes	6	0.00000001	0.00019914
36	Yes	6	0.00000001	0.00017000
37	Yes	6	0.00000001	0.00020541
38	Yes	6	0.00000001	0.00020483
39	Yes	4	0.00000001	0.00019695
40	Yes	4	0.00000001	0.00085870
41	Yes	4	0.00000001	0.00093242
42	Yes	4	0.00000001	0.00026145
43	Yes	4	0.00000001	0.00081503
44	Yes	4	0.00000001	0.00095532
45	Yes	4	0.00000001	0.00020036
46	Yes	4	0.00000001	0.00087486
47	Yes	4	0.00000001	0.00080575
48	Yes	4	0.00000001	0.00027317
49	Yes	4	0.00000001	0.00098950
50	Yes	4	0.00000001	0.00084410

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	191.5 - 172.46	26.400	39	1.4195	0.0068
L2	175.543 - 157.753	21.824	50	1.3006	0.0042
L3	157.753 -	17.199	50	1.1746	0.0031

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
	142.753				
L4	142.753 - 127.753	13.727	50	1.0311	0.0018
L5	132.253 - 113.083	11.585	50	0.9144	0.0013
L6	113.083 - 98.0833	8.202	50	0.7569	0.0009
L7	98.0833 - 83.0833	6.038	50	0.6221	0.0006
L8	88.9166 - 70.4566	4.920	50	0.5429	0.0005
L9	70.4566 - 55.4566	3.024	50	0.4244	0.0004
L10	55.4566 - 40.4566	1.859	50	0.3190	0.0003
L11	47.54 - 30	1.374	50	0.2665	0.0002
L12	30 - 15	0.537	50	0.1755	0.0001
L13	15 - 0	0.131	50	0.0844	0.0001

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
192.00	(2) RR65-18-00DP	39	26.400	1.4195	0.0068	19440
191.50	5' Lightning Rod	39	26.400	1.4195	0.0068	19440
160.00	(2) LPA-80063/6CF w/ Mount Pipe	50	17.754	1.1921	0.0033	7490
154.00	PCS 1900MHZ 4X45W-65MHZ	50	16.290	1.1429	0.0029	6798
150.00	APXVTM14-C-120 w/ Mount Pipe	50	15.348	1.1060	0.0025	5976
139.00	3' x 2" STD Pipe	50	12.934	0.9886	0.0016	5484
137.00	7770.00 w/ Mount Pipe	50	12.525	0.9658	0.0015	5851
50.00	OG-860/1920/GPS-A	50	1.516	0.2818	0.0002	10829

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	191.5 - 172.46	112.477	2	6.0018	0.0291
L2	175.543 - 157.753	93.104	24	5.5313	0.0176
L3	157.753 - 142.753	73.437	24	5.0071	0.0132
L4	142.753 - 127.753	58.642	24	4.4043	0.0077
L5	132.253 - 113.083	49.507	24	3.9082	0.0055
L6	113.083 - 98.0833	35.060	24	3.2362	0.0037
L7	98.0833 - 83.0833	25.810	24	2.6604	0.0027
L8	88.9166 - 70.4566	21.032	24	2.3220	0.0022
L9	70.4566 - 55.4566	12.928	24	1.8148	0.0015
L10	55.4566 - 40.4566	7.945	24	1.3640	0.0011
L11	47.54 - 30	5.871	24	1.1393	0.0009
L12	30 - 15	2.297	24	0.7501	0.0005

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L13	15 - 0	0.560	24	0.3609	0.0002

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
192.00	(2) RR65-18-00DP	2	112.477	6.0018	0.0291	4864
191.50	5' Lightning Rod	2	112.477	6.0018	0.0291	4864
160.00	(2) LPA-80063/6CF w/ Mount Pipe	24	75.799	5.0810	0.0141	1814
154.00	PCS 1900MHZ 4X45W-65MHZ	24	69.565	4.8746	0.0122	1634
150.00	APXVTM14-C-120 w/ Mount Pipe	24	65.554	4.7202	0.0107	1434
139.00	3' x 2" STD Pipe	24	55.264	4.2239	0.0069	1309
137.00	7770.00 w/ Mount Pipe	24	53.517	4.1269	0.0065	1394
50.00	OG-860/1920/GPS-A	24	6.482	1.2049	0.0009	2534

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	191.5 - 172.46 (1)	TP20.46x15.5x0.1875	19.04	0.00	0.0	11.5867	-3.57	677.82	0.005
L2	172.46 - 157.753 (2)	TP23.8673x19.2818x0.3125	17.79	0.00	0.0	23.3634	-8.41	1366.76	0.006
L3	157.753 - 142.753 (3)	TP27.7336x23.8673x0.3125	15.00	0.00	0.0	27.1983	-13.30	1591.10	0.008
L4	142.753 - 127.753 (4)	TP31.6x27.7336x0.3125	15.00	0.00	0.0	29.8828	-17.31	1748.14	0.010
L5	127.753 - 113.083 (5)	TP34.7567x29.8151x0.4375	19.17	0.00	0.0	47.6565	-22.34	2787.91	0.008
L6	113.083 - 98.0833 (6)	TP38.6233x34.7567x0.4375	15.00	0.00	0.0	53.0258	-26.27	3102.01	0.008
L7	98.0833 - 83.0833 (7)	TP42.49x38.6233x0.4375	15.00	0.00	0.0	56.3071	-28.83	3293.96	0.009
L8	83.0833 - 70.4566 (8)	TP44.8648x40.1113x0.5	18.46	0.00	0.0	70.4069	-36.22	4118.81	0.009
L9	70.4566 - 55.4566 (9)	TP48.7274x44.8648x0.5	15.00	0.00	0.0	76.5369	-41.58	4477.41	0.009
L10	55.4566 - 40.4566 (10)	TP52.59x48.7274x0.5	15.00	0.00	0.0	79.7721	-44.64	4666.67	0.010
L11	40.4566 - 30 (11)	TP54.2798x49.766x0.5	17.54	0.00	0.0	85.3485	-53.81	4992.89	0.011
L12	30 - 15 (12)	TP58.1399x54.2798x0.5	15.00	0.00	0.0	91.4745	-60.10	5351.26	0.011
L13	15 - 0 (13)	TP62x58.1399x0.5	15.00	0.00	0.0	97.6005	-66.48	5709.63	0.012

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	191.5 - 172.46 (1)	TP20.46x15.5x0.1875	84.85	336.46	0.252	0.00	336.46	0.000
L2	172.46 - 157.753 (2)	TP23.8673x19.2818x0.3125	201.94	836.27	0.241	0.00	836.27	0.000
L3	157.753 - 142.753 (3)	TP27.7336x23.8673x0.3125	409.25	1135.43	0.360	0.00	1135.43	0.000
L4	142.753 - 127.753 (4)	TP31.6x27.7336x0.3125	595.08	1367.38	0.435	0.00	1367.38	0.000
L5	127.753 - 113.083 (5)	TP34.7567x29.8151x0.4375	973.39	2486.63	0.391	0.00	2486.63	0.000
L6	113.083 - 98.0833 (6)	TP38.6233x34.7567x0.4375	1289.22	3082.43	0.418	0.00	3082.43	0.000
L7	98.0833 - 83.0833 (7)	TP42.49x38.6233x0.4375	1490.97	3478.03	0.429	0.00	3478.03	0.000
L8	83.0833 - 70.4566 (8)	TP44.8648x40.1113x0.5	1919.46	4755.97	0.404	0.00	4755.97	0.000
L9	70.4566 - 55.4566 (9)	TP48.7274x44.8648x0.5	2287.88	5605.54	0.408	0.00	5605.54	0.000
L10	55.4566 - 40.4566 (10)	TP52.59x48.7274x0.5	2489.78	6029.48	0.413	0.00	6029.48	0.000
L11	40.4566 - 30 (11)	TP54.2798x49.766x0.5	2955.18	6782.97	0.436	0.00	6782.97	0.000
L12	30 - 15 (12)	TP58.1399x54.2798x0.5	3369.94	7640.62	0.441	0.00	7640.62	0.000
L13	15 - 0 (13)	TP62x58.1399x0.5	3799.79	8525.50	0.446	0.00	8525.50	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	191.5 - 172.46 (1)	TP20.46x15.5x0.1875	5.34	200.45	0.027	0.02	346.71	0.000
L2	172.46 - 157.753 (2)	TP23.8673x19.2818x0.3125	11.45	410.03	0.028	1.28	845.81	0.002
L3	157.753 - 142.753 (3)	TP27.7336x23.8673x0.3125	15.80	477.33	0.033	0.65	1146.26	0.001
L4	142.753 - 127.753 (4)	TP31.6x27.7336x0.3125	18.97	524.44	0.036	1.27	1383.70	0.001
L5	127.753 - 113.083 (5)	TP34.7567x29.8151x0.4375	20.49	836.37	0.024	1.27	2513.72	0.001
L6	113.083 - 98.0833 (6)	TP38.6233x34.7567x0.4375	21.66	930.60	0.023	1.27	3112.04	0.000
L7	98.0833 - 83.0833 (7)	TP42.49x38.6233x0.4375	22.39	988.19	0.023	1.27	3509.12	0.000
L8	83.0833 - 70.4566 (8)	TP44.8648x40.1113x0.5	23.99	1235.64	0.019	1.27	4800.77	0.000
L9	70.4566 - 55.4566 (9)	TP48.7274x44.8648x0.5	25.18	1343.22	0.019	1.27	5673.12	0.000
L10	55.4566 - 40.4566 (10)	TP52.59x48.7274x0.5	25.81	1400.00	0.018	1.38	6162.86	0.000
L11	40.4566 - 30 (11)	TP54.2798x49.766x0.5	27.18	1497.87	0.018	1.38	7054.60	0.000
L12	30 - 15 (12)	TP58.1399x54.2798x0.5	28.16	1605.38	0.018	1.38	8103.65	0.000
L13	15 - 0 (13)	TP62x58.1399x0.5	29.19	1712.89	0.017	1.38	9225.42	0.000

Pole Interaction Design Data

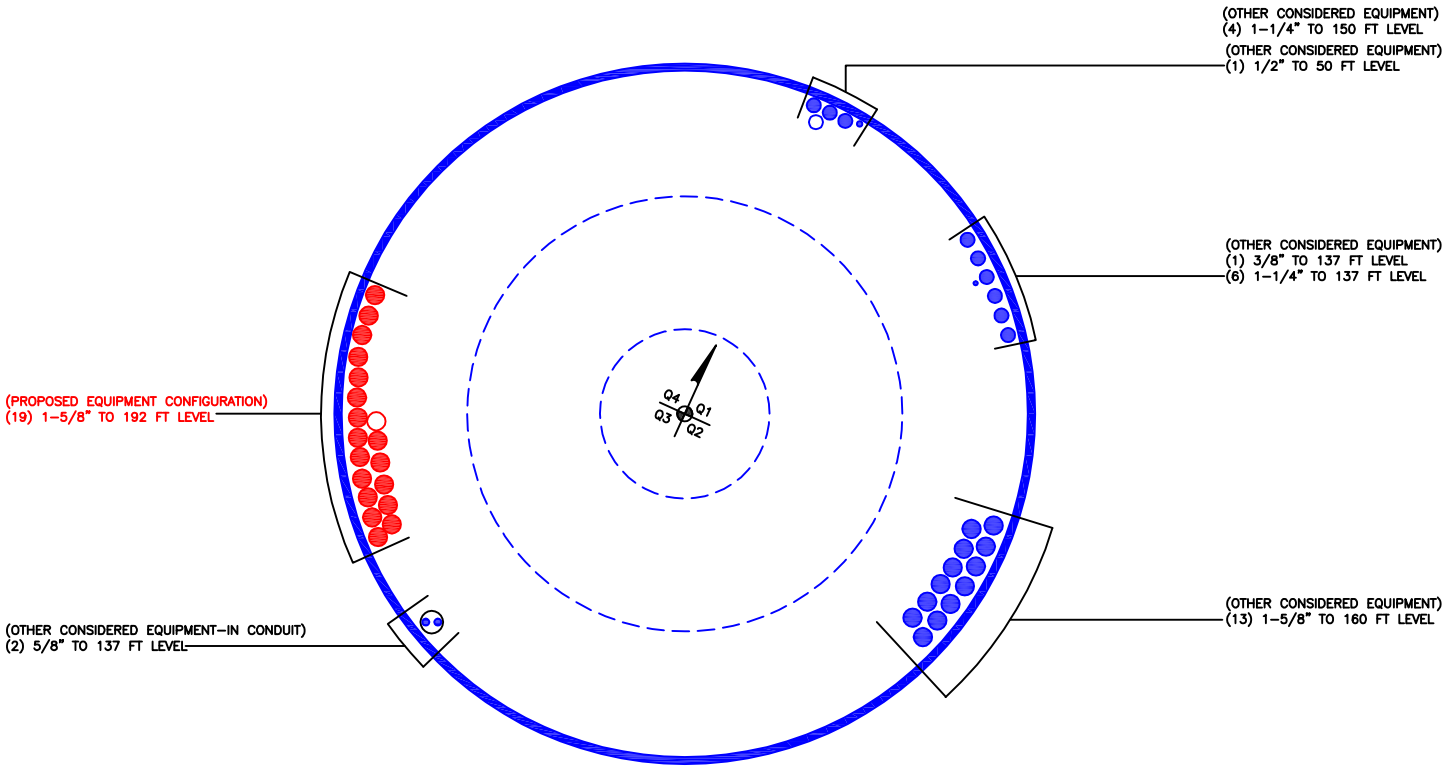
Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	191.5 - 172.46 (1)	0.005	0.252	0.000	0.027	0.000	0.258	1.050	4.8.2
L2	172.46 - 157.753 (2)	0.006	0.241	0.000	0.028	0.002	0.248	1.050	4.8.2
L3	157.753 - 142.753 (3)	0.008	0.360	0.000	0.033	0.001	0.370	1.050	4.8.2
L4	142.753 - 127.753 (4)	0.010	0.435	0.000	0.036	0.001	0.446	1.050	4.8.2
L5	127.753 - 113.083 (5)	0.008	0.391	0.000	0.024	0.001	0.400	1.050	4.8.2
L6	113.083 - 98.0833 (6)	0.008	0.418	0.000	0.023	0.000	0.427	1.050	4.8.2
L7	98.0833 - 83.0833 (7)	0.009	0.429	0.000	0.023	0.000	0.438	1.050	4.8.2
L8	83.0833 - 70.4566 (8)	0.009	0.404	0.000	0.019	0.000	0.413	1.050	4.8.2
L9	70.4566 - 55.4566 (9)	0.009	0.408	0.000	0.019	0.000	0.418	1.050	4.8.2
L10	55.4566 - 40.4566 (10)	0.010	0.413	0.000	0.018	0.000	0.423	1.050	4.8.2
L11	40.4566 - 30 (11)	0.011	0.436	0.000	0.018	0.000	0.447	1.050	4.8.2
L12	30 - 15 (12)	0.011	0.441	0.000	0.018	0.000	0.453	1.050	4.8.2
L13	15 - 0 (13)	0.012	0.446	0.000	0.017	0.000	0.458	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	191.5 - 172.46	Pole	TP20.46x15.5x0.1875	1	-3.57	711.71	24.6	Pass
L2	172.46 - 157.753	Pole	TP23.8673x19.2818x0.3125	2	-8.41	1435.10	23.7	Pass
L3	157.753 - 142.753	Pole	TP27.7336x23.8673x0.3125	3	-13.30	1670.65	35.2	Pass
L4	142.753 - 127.753	Pole	TP31.6x27.7336x0.3125	4	-17.31	1835.55	42.5	Pass
L5	127.753 - 113.083	Pole	TP34.7567x29.8151x0.4375	5	-22.34	2927.31	38.1	Pass
L6	113.083 - 98.0833	Pole	TP38.6233x34.7567x0.4375	6	-26.27	3257.11	40.7	Pass
L7	98.0833 - 83.0833	Pole	TP42.49x38.6233x0.4375	7	-28.83	3458.66	41.7	Pass
L8	83.0833 - 70.4566	Pole	TP44.8648x40.1113x0.5	8	-36.22	4324.75	39.3	Pass
L9	70.4566 - 55.4566	Pole	TP48.7274x44.8648x0.5	9	-41.58	4701.28	39.8	Pass
L10	55.4566 - 40.4566	Pole	TP52.59x48.7274x0.5	10	-44.64	4900.00	40.3	Pass
L11	40.4566 - 30	Pole	TP54.2798x49.766x0.5	11	-53.81	5242.53	42.6	Pass
L12	30 - 15	Pole	TP58.1399x54.2798x0.5	12	-60.10	5618.82	43.1	Pass
L13	15 - 0	Pole	TP62x58.1399x0.5	13	-66.48	5995.11	43.6	Pass
						Summary		
						Pole (L13)	43.6	Pass
						RATING =	**43.6**	**Pass**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876355 TOWER ID:C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

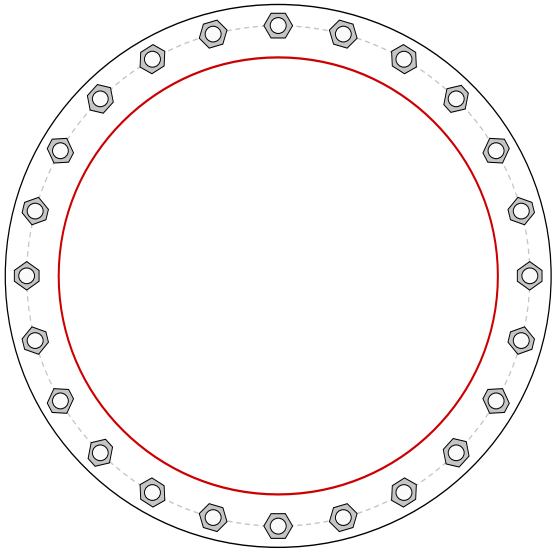
Monopole Base Plate Connection

Site Info	
BU #	876355
Site Name	UPPER STEPNEY - TLC
Order #	479825 Rev 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	2

Applied Loads	
Moment (kip-ft)	3799.79
Axial Force (kips)	66.48
Shear Force (kips)	29.19

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

(24) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 71" BC

Base Plate Data

77" OD x 2.25" Plate (A871-60; Fy=60 ksi, Fu=75 ksi)

Stiffener Data

N/A

Pole Data

62" x 0.5" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

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

Pu_c = 109.76	ϕPn_c = 243.75	**Stress Rating**
Vu = 1.22	ϕVn = 73.13	**42.9%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	29.21	(Flexural)
Allowable Stress (ksi):	54	
Stress Rating:	**51.5%**	**Pass**

Pier and Pad Foundation

BU # :	876355
Site Name:	UPPER STEPNEY
App. Number:	479825 Rev 0

TIA-222 Revision:	H
Tower Type:	Monopole

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

Superstructure Analysis Reactions		
Compression, P_{comp}:	66	kips
Base Shear, Vu_comp:	29	kips
Moment, M_u:	3800	ft-kips
Tower Height, **H**:	191.5	ft
BP Dist. Above Fdn, bp_{dist}:	4.25	in

Pier Properties		
Pier Shape:	Square	
Pier Diameter, **dpier**:	7.5	ft
Ext. Above Grade, **E**:	1	ft
Pier Rebar Size, **Sc**:	8	
Pier Rebar Quantity, **mc**:	51	
Pier Tie/Spiral Size, **St**:	4	
Pier Tie/Spiral Quantity, **mt**:	4	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties		
Depth, **D**:	5	ft
Pad Width, **W**:	30	ft
Pad Thickness, **T**:	3	ft
Pad Rebar Size (Top), Sp_{top}:	8	
Pad Top Rebar Quantity (Top), mp_{top}:	26	
Pad Rebar Size (Bottom), **Sp**:	8	
Pad Rebar Quantity (Bottom), **mp**:	52	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties		
Rebar Grade, **Fy**:	60	ksi
Concrete Compressive Strength, **F'c**:	4	ksi
Dry Concrete Density, δc:	150	pcf

Soil Properties		
Total Soil Unit Weight, γ:	110	pcf
Ultimate Gross Bearing, Qult:	24.000	ksf
Cohesion, **Cu**:		ksf
Friction Angle, φ:	30	degrees
SPT Blow Count, N_{blows}:		
Base Friction, μ:	0.7	
Neglected Depth, **N**:	3.50	ft
Foundation Bearing on Rock?	Yes	
Groundwater Depth, **gw**:	N/A	ft

<--Toggle between Gross and Net

Foundation Analysis Checks	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	364.35	29.00	**7.6%**	**Pass**
Bearing Pressure (ksf)	18.00	2.16	**11.4%**	**Pass**
*Overturning (kip*ft)*	8786.95	3984.27	**45.3%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	7070.36	3887.00	**52.4%**	**Pass**
Pier Compression (kip)	35802.00	96.38	**0.3%**	**Pass**
*Pad Flexure (kip*ft)*	5636.96	1436.18	**24.3%**	**Pass**
Pad Shear - 1-way (kips)	1075.81	186.67	**16.5%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.190	0.035	**17.6%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	4646.67	2332.20	**47.8%**	**Pass**

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

Soil Rating*:	**45.3%**
Structural Rating*:	**52.4%**

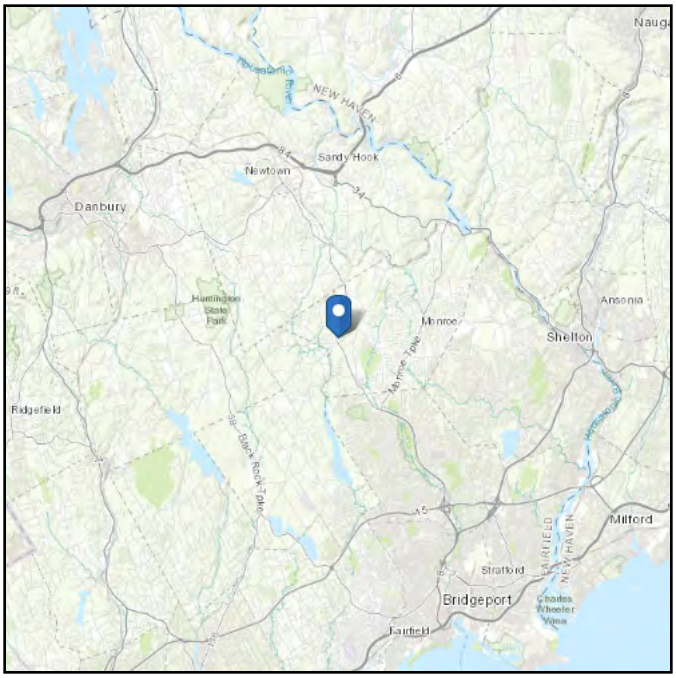
Version 3.2.0

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 445.89 ft (NAVD 88)
Latitude: 41.325553
Longitude: -73.265847



Wind

Results:

Wind Speed:	120 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	91 Vmph
100-year MRI	98 Vmph

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

Date Accessed: Thu Jun 20 2019

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.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

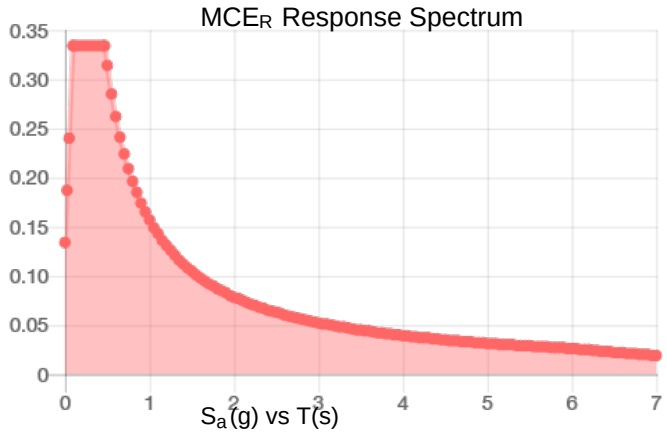
Seismic

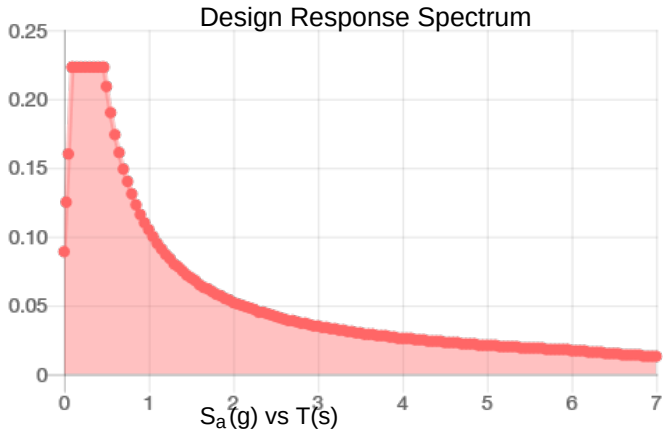
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.209	S_{DS} :	0.223
S_1 :	0.065	S_{D1} :	0.105
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.113
S_{MS} :	0.334	PGA_M :	0.178
S_{M1} :	0.157	F_{PGA} :	1.574
		I_e :	1

Seismic Design Category B





Data Accessed: Thu Jun 20 2019

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 Jun 20 2019

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.

Exhibit E

Mount Analysis

Date: **June 13, 2019**

Charles McGuirt
Crown Castle
3530 Torington Way Suite, 300
Charlotte, NC 28277

MasTec
507 Airport Blvd Suite 111
Morrisville, NC 27560
(919) 674-5866

Subject:	**Mount Analysis**	
Carrier Designation:	**T-Mobile Equipment Change-Out**	
	Carrier Site Number:	CT11264C
	Carrier Site Name:	MONROE/RT59/RT25
Crown Castle Designation:	**Crown Castle BU Number:**	876355
	Crown Castle Site Name:	UPPER STEPNEY-TLC
	Crown Castle JDE Number:	559330
	Crown Castle Order Number:	479825 Revision 0
Engineering Firm Designation:	**MasTec Project Number:**	18814-MNT2
Site Data:	**474-480 Main St., Monroe, Fairfield, CT, 06468** **Latitude: 41° 19' 31.99'' Longitude: -73° 15' 57''**	
Structure Information	**Tower Height & Type:**	191.5 ft Monopole
	Mount Elevation:	192 ft
	Mount Width & Type:	12.5 ft Platform Mount

Dear Charles McGuirt,

MasTec 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 above mentioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

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

Platform Mount **Sufficient**

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Noah Noxon, EI

Respectfully Submitted by:

Raphael Mohamed, PE , Peng
Senior Director of Engineering
CT PE License No. 25112

Raphael Mohamed

Digitally signed by Raphael Mohamed
DN: E=Raphael.Mohamed@mastec.com, CN=Raphael Mohamed, OU=Users, OU=MasTec Network Solutions, OU=Service Lines, DC=mastec, DC=local
Date: 2019.06.13 20:21:48-04'00'

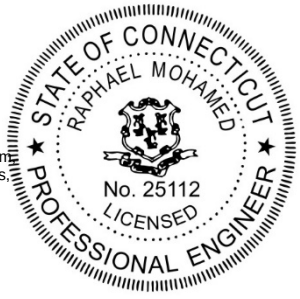


TABLE OF CONTENTS

1) INTRODUCTION

This is a 12.5 ft Platform Mount mapped by P-SEC.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category	II
an ultimate:	120 mph
Exposure Category:	C
Topographic Category at Base:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic Ss:	0.205
Seismic S1:	0.065
Live Loading Wind Speed:	30 mph
Live Loading at Mid/End-Points:	250 lb
Man Live Loading at Mount Pipes	500 lb

Table 1 - Proposed Loading Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
192.0	194.0	6	ems wireless	RR65-18-00DP	12.5 ft Platform W/Handrails
		3	rfs/celwave	APX16DWV-16DWVS-E-A20	
		3	commscope	ATSBTTOP-MF-4G	
		3	ericsson	KRY 112 144/2	
		3	ericsson	KRY 112 489/3	
	192.0	3	rfs/celwave	APXVAARR24_43-U-NA20	
		3	ericsson	RADIO 4449 B12/B71	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
4-ORDER INFORMATION	CROWN CASTLE	ORDER NO. 479825 Rev. 0	CCIsites
4-MOUNT MAPPING	P-Sec	8347820	CCIsites

3.1) Analysis Method

RISA-3D (Version No. 17.0.2), 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.

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

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 Tables 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) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM 500 (GR B-46)
Pipe	ASTM A53 (GR B-35)
Connection Bolts	ASTM A325

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

4) ANALYSIS RESULTS

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

Notes	Component	Beam No.	Centerline (ft)	% Capacity	Pass / Fail
1	Standoffs	--	192	44.7	Pass
1	Crossarms	--	192	35.4	Pass
1	Interior Standoff	--	192	29.5	Pass
1	Face Horizontal	--	192	24.1	Pass
1	Handrail	--	192	35.4	Pass
1	Outer Plates	--	192	41	Pass
1	Mount Pipes	--	192	85.8	Pass
1	Grate Supports	--	192	36.9	Pass
1	Lower Plate	--	192	30.7	Pass
1	Connection Bolts	--	192	53.5	Pass
1	Connection Plates	--	192	39.9	Pass

Structure Rating (max from all components) =	**85.8%**

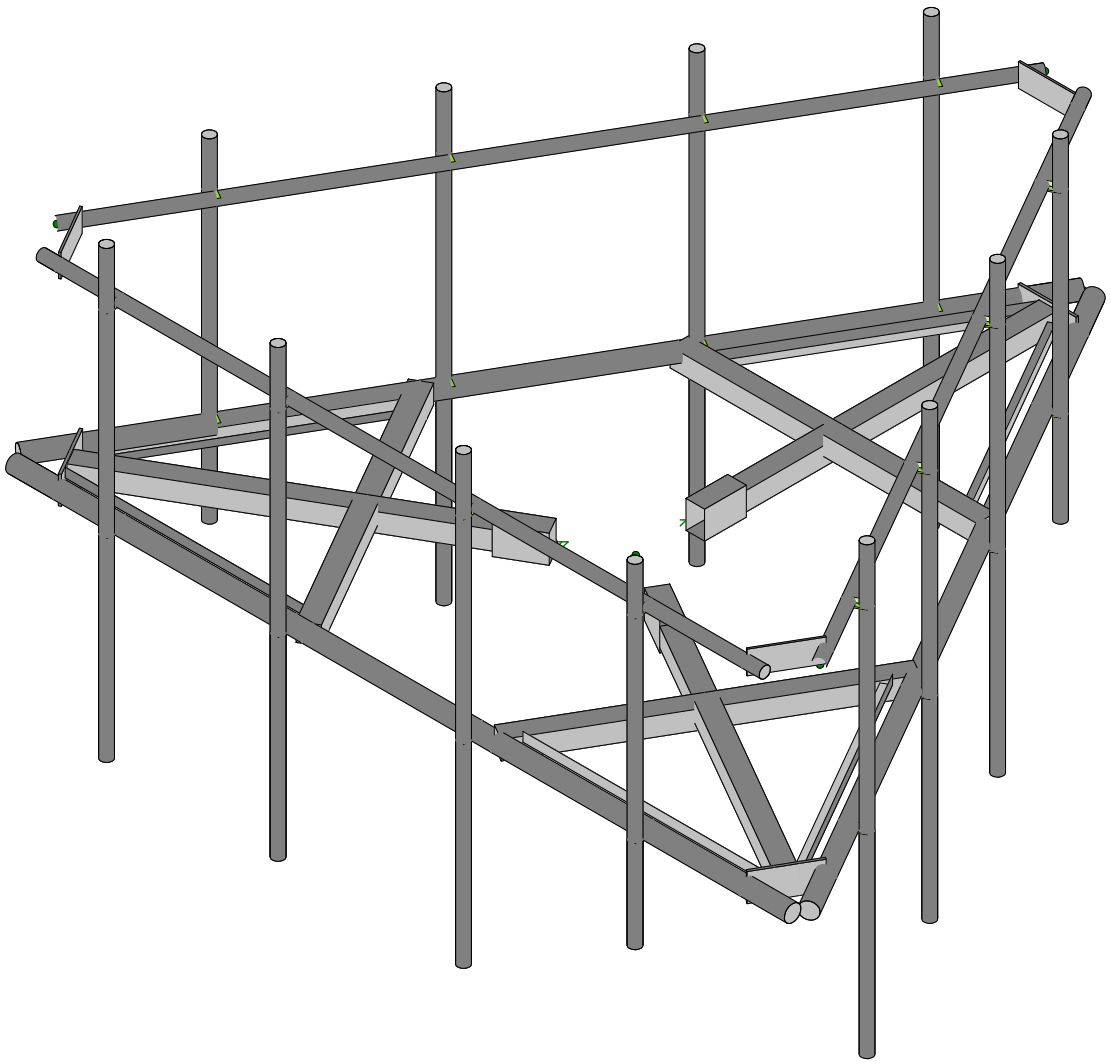
Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
2) All sectors are typical

4.1) Recommendations

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

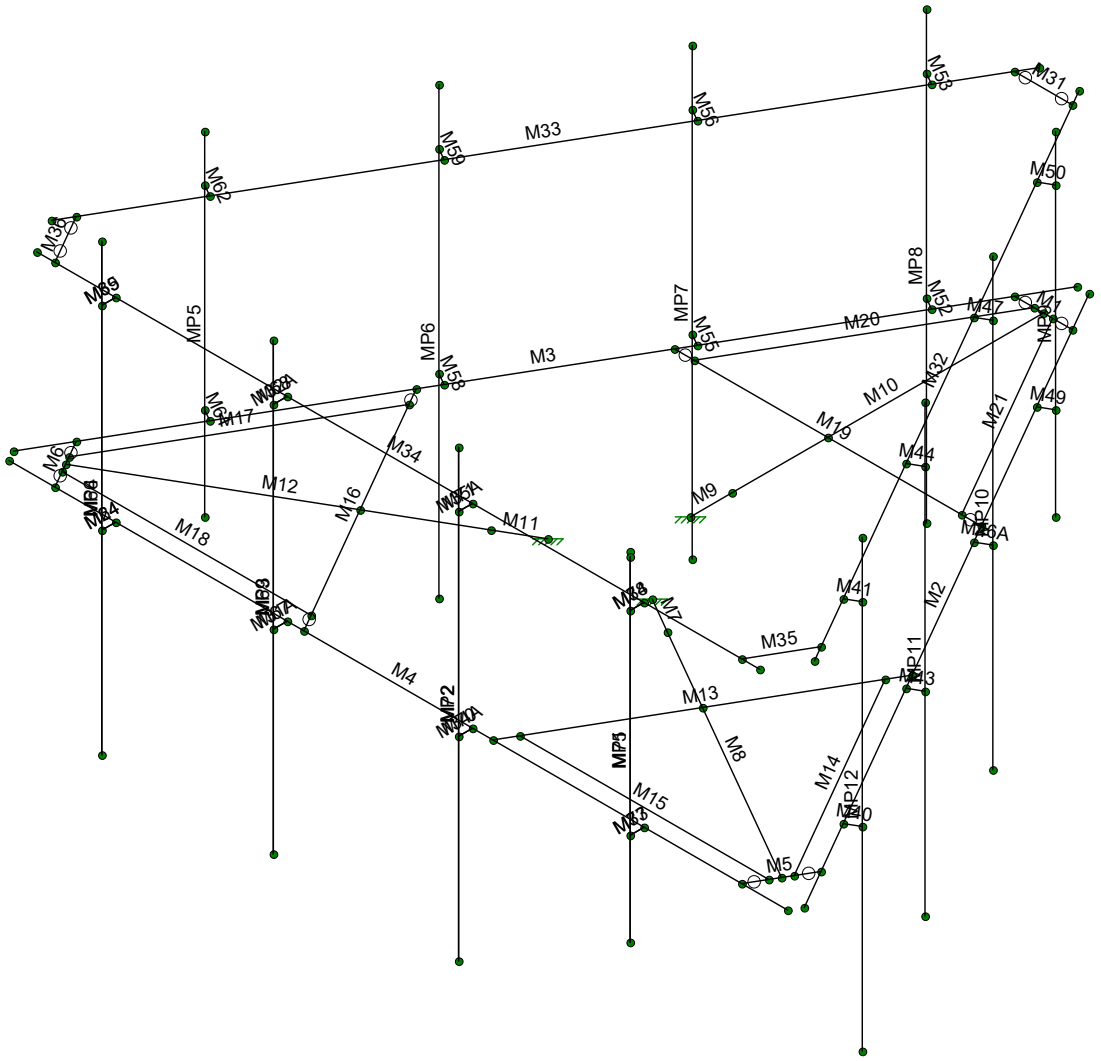
APPENDIX A

WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

Mastec	841956-Delaware	Render
NDN		June 7, 2019 at 3:51 PM
18817-MNT1		876355-Upper Stepney.R3D



Envelope Only Solution

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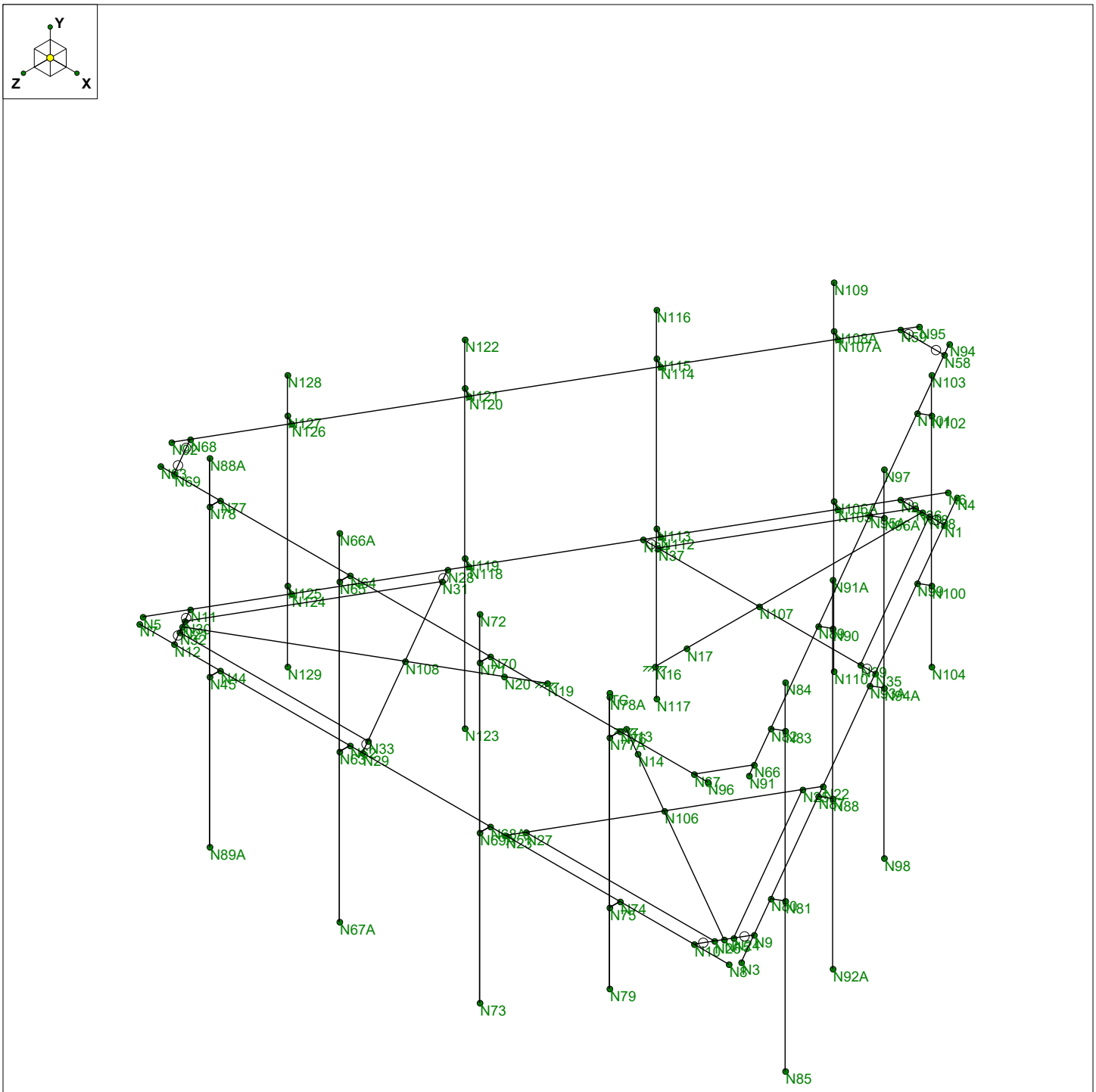

Envelope Only Solution

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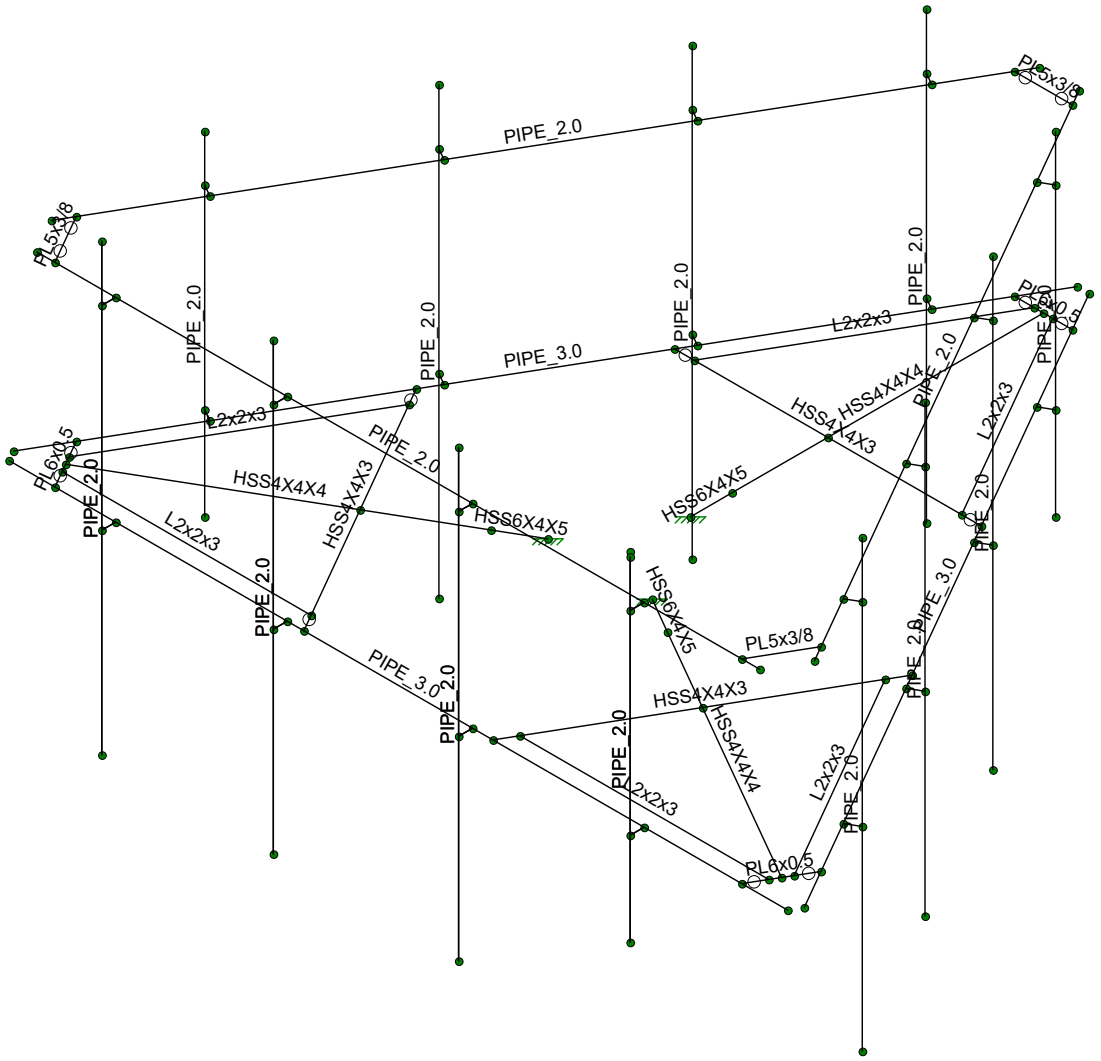

Envelope Only Solution

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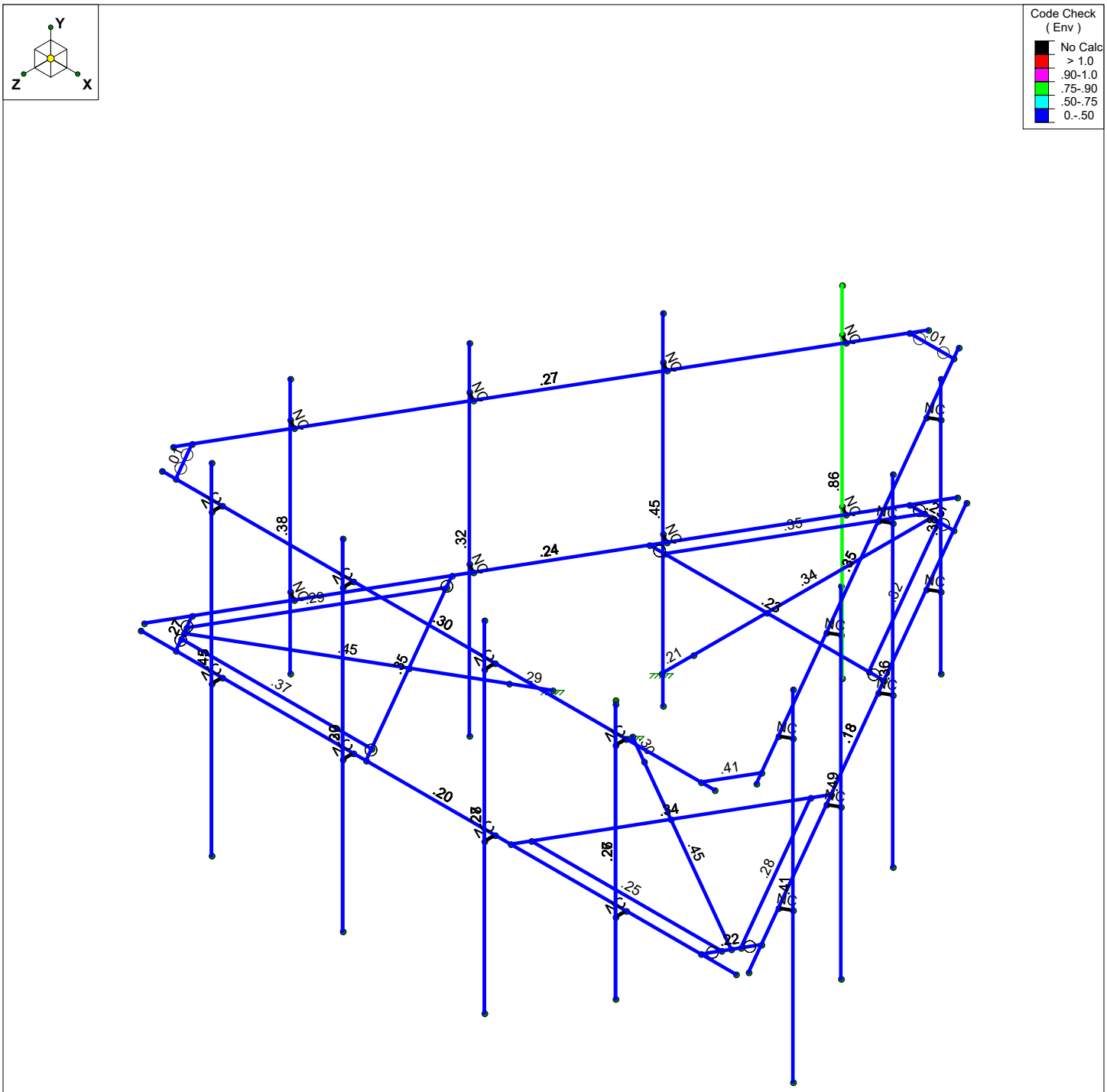

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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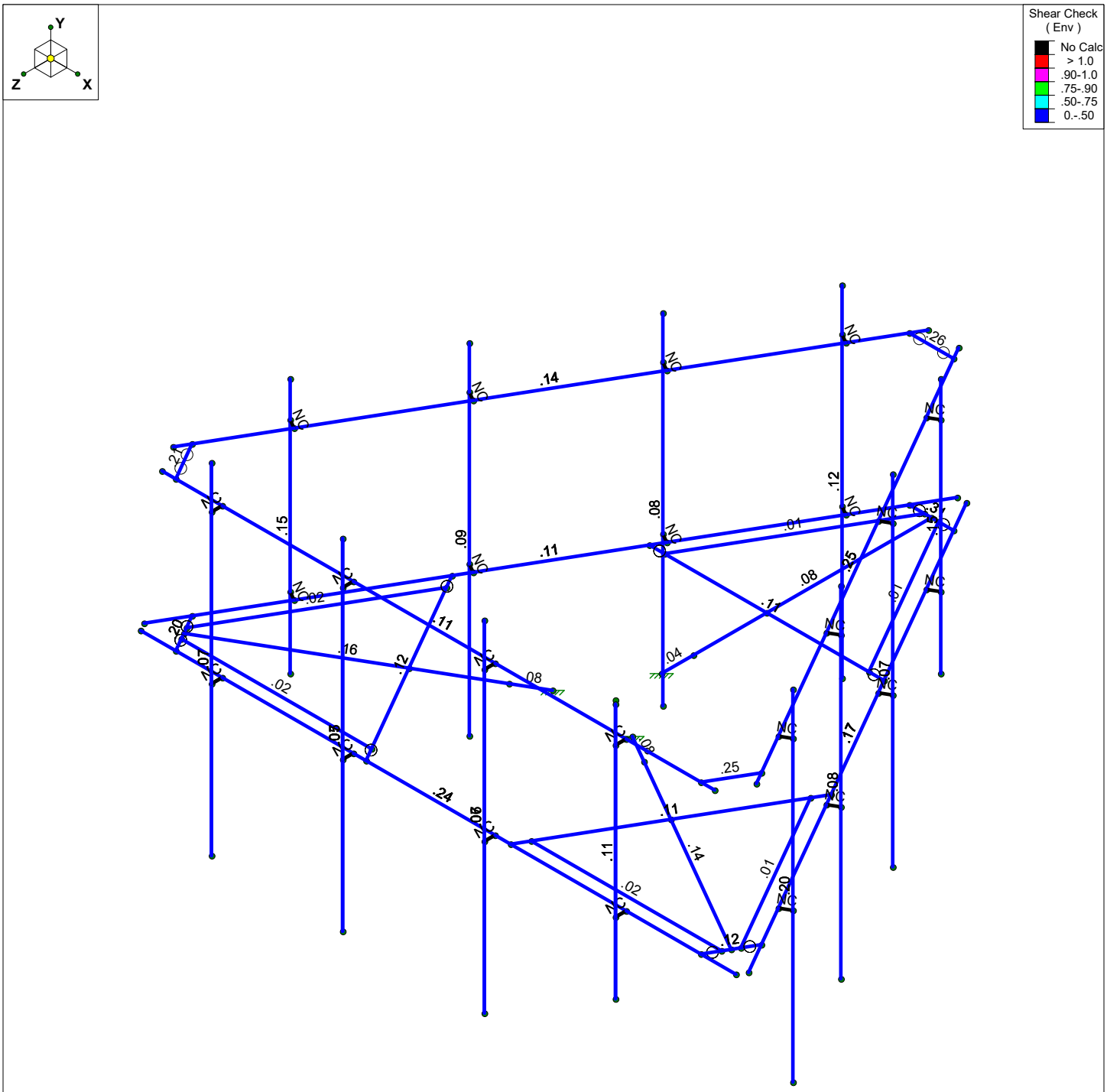

Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

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18817-MNT1		876355-Upper Stepney.R3D

APPENDIX B

SOFTWARE INPUT CALCULATIONS

MasTec Network Solutions

Mount Analysis Tool

Site Name	Upper Stepney		
Site ID	876355		
Job Number	18814	Mount Existing?	Crown
Code	H	Risk Category	II

Legend
Input
Calculated
Notes

Maximum Capacity		
Controlling Capacity	85.8%	PASS

Analysis Parameters		
Mount Height	192	ft
Exposure Category	C	(B,C, or D)
Ultimate Wind Speed	120	mph
Ice Wind Speed	50	mph
Design Ice Thickness, t_i	1.5	in
Maintenance Wind Speed	30	mph
Run Earthquake Analysis?	Yes	
Ground Elevation	445.89	ft, Google Earth
S_1	0.205	USGS
S_{DS}	0.065	2.7.5
Vertical Seismic Loads, E_v	0.013	2.7.6
Seismic Response Coefficient, C_s	0.033	2.7.7.1.1
C_s Min	0.030	2.7.7.1.1

Wind Parameters					
Gust Effect Factor, G_h	1.000	2.6.9	K_s	1.000	2.6.7
K_Z	1.452	2.6.5.2	K_e	0.984	2.6.8
K_{Zt}	1.000	2.6.6	K_a	0.900	16.6
K_d	0.950	Table 2-2	*Note for Rooftop Structures greater than 50', unobstructed for 90 deg and protruding 50' above surrounding buildings Ks must be calculated.		
q_z	45.171	psf, 2.6.11.6			
C/D	144.595	Table 2-9			
t_{iz}	1.789	in, 2.6.10			
q_{iz}	7.842	psf, 2.6.9.6	I, Ice	1.000	Table 2-3
C/D_{iz}	60.248	Table 2-9	I, EQ	1.000	Table 2-3
$q_{Maintenance}$	2.860	psf, 2.6.9.6	$K_{es\ (Wind)}$	1.000	Table S-1
$C/D_{Maintenance}$	36.149	Table 2-9	$K_{es\ (ice)}$	1.000	Table S-1
Ice Dead, Grating	0.016695782	ksf			

Pipe Mounts (Orientation Drawn Top-Down)			
Risa 3D Label	Elevation (ft)	Length (in)	Diameter (in)
MP1	192	72	2.375
MP2	192	96	2.375
MP3	192	96	2.375
MP4	192	96	2.375
MP5	192	72	2.375
MP6	192	96	2.375
MP7	192	96	2.375
MP8	192	96	2.375
MP9	192	72	2.375
MP10	192	96	2.375
MP11	192	96	2.375
MP12	192	96	2.375

Appurtenances					
Model	Type	Height (in)	Width (in)	Depth (in)	Weight (lbs)
EMS RR65-18-00DP	Antenna	56	8	2.75	13.5
RFS CELWAVE APX16DWV-16DWV-S	Antenna	55.9	13.3	3.15	40.7
RFS CELWAVE APXVAARR24-43-U-I	Antenna	95.9	24	8.7	128
Ericsson KRY 112 144/2	RRU, TMA, Etc.	8.65	6.65	3.19	9.7
Ericsson KRY 112 489/2	RRU, TMA, Etc.	11	6.1	3.94	15.4
COMMSCOPE ATSBT-TOP-MF-4	RRU, TMA, Etc.	5.63	3.7	2	1.8
Ericsson RADIO 4449 B12/B71	RRU, TMA, Etc.	14.95	13.19	9.25	75

Pipe Mount	Antenna	Elevation (ft)	Quantity	Orientation (deg)	Front Exposed (%)	Side Exposed (%)	Type	Height (in)	Width (in)	Depth (in)	Weight (lbs)	Front CaAa (ft^2)	Side CaAa (ft^2)	Front F_A (kips)	Side F_A (kips)	Top %	Bottom %
MP1	EMS RR65-18-00DP	194	1	0	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.197	0.089	0.0%	55.6%
MP1	Ericsson KRY 112 489/2	194	1	90	50.0%	100.0%	RRU, TMA, Etc.	11.000	6.100	3.940	15.400	0.559	0.365	0.008	0.025	9.0%	24.3%
MP1	OMMSCOPE ATSBT-TOP-MF-4	194	1	90	50.0%	0.0%	RRU, TMA, Etc.	5.630	3.700	2.000	1.800	0.174	0.095	0.002	0.000	12.8%	20.6%
MP1	Ericsson RADIO 4449 B12/B71	192	1	0	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.037	0.052	39.6%	60.4%
MP1																	
MP1																	
MP2	EMS RR65-18-00DP	194	1	0	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.197	0.089	0.0%	54.2%
MP2	Ericsson RADIO 4449 B12/B71	192	1	0	50.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.037	0.052	42.2%	57.8%
MP2																	
MP2																	
MP2																	
MP2																	
MP3	LWAVE APX16DWV-16DWV-S	194	1	0	100.0%	100.0%	Antenna	55.900	13.300	3.150	40.700	6.586	2.150	0.298	0.097	0.0%	54.1%
MP3	Ericsson RADIO 4449 B12/B71	194	1	0	15.0%	100.0%	RRU, TMA, Etc.	14.950	13.190	9.250	75.000	1.643	1.152	0.011	0.052	17.2%	32.8%
MP3																	
MP3																	
MP3																	
MP3																	
MP4	CELWAVE APXVAARR24-43-U-I	192	1	0	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.914	0.402	0.1%	99.9%
MP4																	
MP4																	
MP4																	
MP4																	
MP4																	
MP5	LWAVE APX16DWV-16DWV-S-E-A20		1	120	100.0%	100.0%	Antenna	55.900	13.300	3.150	40.700	6.586	2.150	0.147	0.247	100.0%	100.0%
MP5	Ericsson KRY 112 489/2	194	1	210	50.0%	25.0%	RRU, TMA, Etc.	11.000	6.100	3.940	15.400	0.559	0.365	0.012	0.005	9.0%	24.3%
MP5	Ericsson KRY 112 144/2	194	1	210	50.0%	100.0%	RRU, TMA, Etc.	8.650	6.650	3.190	9.700	0.479	0.232	0.009	0.013	10.7%	22.7%
MP5	OMMSCOPE ATSBT-TOP-MF-4	193	1	120	0.0%	100.0%	RRU, TMA, Etc.	5.630	3.700	2.000	1.800	0.174	0.095	0.000	0.007	29.4%	37.2%
MP5																	
MP5																	
MP6	EMS RR65-18-00DP	194	1	120	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.116	0.170	0.0%	54.2%
MP6																	
MP6																	
MP6																	
MP6																	
MP6																	
MP7	EMS RR65-18-00DP	194	1	120	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.116	0.170	0.0%	54.2%
MP7																	
MP7																	
MP7																	
MP7																	
MP7																	
MP8	CELWAVE APXVAARR24-43-U-I	192	1	120	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.530	0.786	0.1%	99.9%
MP8																	
MP8																	
MP8																	
MP8																	
MP8																	
MP9	EMS RR65-18-00DP	194	1	240	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.116	0.170	0.0%	55.6%
MP9	Ericsson KRY 112 144/2	194	1	330	50.0%	50.0%	RRU, TMA, Etc.	8.650	6.650	3.190	9.700	0.479	0.232	0.009	0.007	10.7%	22.7%
MP9																	
MP9																	
MP9																	
MP9																	
MP10	EMS RR65-18-00DP	194	1	240	100.0%	100.0%	Antenna	56.000	8.000	2.750	13.500	4.356	1.974	0.116	0.170	0.0%	54.2%
MP10																	
MP10																	
MP10																	
MP10																	
MP10																	
MP11	LWAVE APX16DWV-16DWV-S	194	1	240	100.0%	100.0%	Antenna	55.900	13.300	3.150	40.700	6.586	2.150	0.147	0.247	0.0%	54.1%
MP11																	
MP11																	
MP11																	
MP11																	
MP11																	
MP12	CELWAVE APXVAARR24-43-U-I	194	1	240	100.0%	100.0%	Antenna	95.900	24.000	8.700	128.000	20.243	8.889	0.530	0.786	0.0%	74.9%

Member	Section Set	Member Length (ft)	Flat/Round	Wind Projection (in)	D_c (in)	A_n (in^2)	C_F	Front Wind (klf)	Side Wind (klf)	Front Ice Wind (klf)	Side Ice Wind (klf)	Ice Dead (klf)	Front Maint Wind (klf)	Side Maint Wind (klf)
M1	Lower Plate	1.041666	Flat	6.000	8.484	57.731	2.000	0.045	0.000	0.013	0.005	0.022	0.003	0.000
M2	Face Horizontal	14.0000003	Round	3.500	3.500	29.722	1.200	0.004	0.012	0.001	0.003	0.012	0.000	0.001
M3	Face Horizontal	14.0000003	Round	3.500	3.500	29.722	1.200	0.004	0.012	0.001	0.003	0.012	0.000	0.001
M4	Face Horizontal	14	Round	3.500	3.500	29.722	1.200	0.016	0.000	0.006	0.003	0.012	0.001	0.000
M5	Lower Plate	1.041666677	Flat	6.000	8.484	57.731	2.000	0.011	0.034	0.003	0.007	0.022	0.001	0.002
M6	Lower Plate	1.041666677	Flat	6.000	8.484	57.731	2.000	0.011	0.034	0.003	0.007	0.022	0.001	0.002
M7	Interior Standoff	0.749999954	Flat	6.000	7.211	50.578	2.000	0.034	0.011	0.010	0.006	0.020	0.002	0.001
M8	Standoffs	5.597675465	Flat	4.000	5.657	41.843	2.000	0.023	0.008	0.006	0.004	0.016	0.001	0.000
M9	Interior Standoff	0.75	Flat	6.000	7.211	50.578	2.000	0.000	0.045	0.000	0.008	0.020	0.000	0.003
M10	Standoffs	5.597675	Flat	4.000	5.657	41.843	2.000	0.000	0.030	0.000	0.005	0.016	0.000	0.002
M11	Interior Standoff	0.749999954	Flat	6.000	7.211	50.578	2.000	0.034	0.011	0.010	0.006	0.020	0.002	0.001
M12	Standoffs	5.597675465	Flat	4.000	5.657	41.843	2.000	0.023	0.008	0.006	0.004	0.016	0.001	0.000
M13	Crossarms	5.516131617	Flat	4.000	5.657	41.843	2.000	0.008	0.023	0.002	0.005	0.016	0.000	0.001
M14	Grate Supports	4.47446494	Flat	2.000	2.828	25.948	2.000	0.004	0.011	0.001	0.003	0.010	0.000	0.001
M15	Grate Supports	4.474465	Flat	2.000	2.828	25.948	2.000	0.015	0.000	0.006	0.003	0.010	0.001	0.000
M16	Crossarms	5.516131617	Flat	4.000	5.657	41.843	2.000	0.008	0.023	0.002	0.005	0.016	0.000	0.001
M17	Grate Supports	4.47446494	Flat	2.000	2.828	25.948	2.000	0.004	0.011	0.001	0.003	0.010	0.000	0.001
M18	Grate Supports	4.474465	Flat	2.000	2.828	25.948	2.000	0.015	0.000	0.006	0.003	0.010	0.001	0.000
M19	Crossarms	5.516132	Flat	4.000	5.657	41.843	2.000	0.030	0.000	0.008	0.003	0.016	0.002	0.000
M20	Grate Supports	4.47446444	Flat	2.000	2.828	25.948	2.000	0.004	0.011	0.001	0.003	0.010	0.000	0.001
M21	Grate Supports	4.47446444	Flat	2.000	2.828	25.948	2.000	0.004	0.011	0.001	0.003	0.010	0.000	0.001
M24	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M31	Outer Plates	1.041666	Flat	5.000	7.070	49.785	2.000	0.038	0.000	0.011	0.005	0.019	0.002	0.000
M32	Handrail	12.99999978	Round	2.380	2.380	23.428	1.200	0.003	0.008	0.001	0.002	0.009	0.000	0.001
M33	Handrail	12.99999978	Round	2.380	2.380	23.428	1.200	0.003	0.008	0.001	0.002	0.009	0.000	0.001
M34	Handrail	13	Round	2.380	2.380	23.428	1.200	0.011	0.000	0.005	0.003	0.009	0.001	0.000
M35	Outer Plates	1.041666677	Flat	5.000	7.070	49.785	2.000	0.009	0.028	0.003	0.006	0.019	0.001	0.002
M36	Outer Plates	1.041666677	Flat	5.000	7.070	49.785	2.000	0.009	0.028	0.003	0.006	0.019	0.001	0.002
M39	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
MP4	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M31A	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M32A	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
MP3	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M34A	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M35A	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
MP2	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M37	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M38	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
MP1	Mount Pipes	6	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M40	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
M41	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
MP12	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M43	RIGID	0.250000562	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
M44	RIGID	0.250000562	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
MP11	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M46A	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
M47	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
MP10	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M49	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
M50	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
MP9	Mount Pipes	6	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M52	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
M53	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
MP8	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M55	RIGID	0.250000562	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
M56	RIGID	0.250000562	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
MP7	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M58	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
M59	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
MP6	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M61	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
M62	RIGID	0.249999696	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.005	0.005	0.004	0.000	0.000
MP5	Mount Pipes	6	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M64	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M65	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M66	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M67	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M68	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M69	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M70	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M71	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M72	Mount Pipes	8	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001
M73	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000

M74	RIGID	0.25	Flat	0.000	0.000	10.053	2.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000
M75	Mount Pipes	6	Round	2.380	2.380	23.428	1.200	0.011	0.011	0.005	0.005	0.009	0.001	0.001

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Hot Rolled Steel Properties

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

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoffs	HSS4X4X4	Beam	SquareTube	A500 Gr....	Typical	3.37	7.8	7.8	12.8
2	Crossarms	HSS4X4X3	Beam	SquareTube	A500 Gr....	Typical	2.58	6.21	6.21	10
3	Interior Standoff	HSS6X4X5	Beam	SquareTube	A500 Gr....	Typical	5.26	13.2	24.8	28.4
4	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
5	Handrail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
6	Outer Plates	PL5x3/8	Beam	RECT	A36 Gr.36	Typical	1.875	.022	3.906	.084
7	Mount Pipes	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
8	Grate Supports	L2x2x3	Beam	Single Angle	A36 Gr.36	Typical	.722	.271	.271	.009
9	Lower Plate	PL6x0.5	Beam	RECT	A36 Gr.36	Typical	3	.063	9	.237

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0.520833	0	-7.430794	0	
2	N2	-0.520833	0	-7.430794	0	
3	N3	7.108253	0	3.978952	0	
4	N4	0.108253	0	-8.145404	0	
5	N5	-7.108253	0	3.978952	0	
6	N6	-0.108253	0	-8.145404	0	
7	N7	-7	0	4.166452	0	
8	N8	7	0	4.166452	0	
9	N9	6.695673	0	3.264342	0	
10	N10	6.17484	0	4.166452	0	
11	N11	-6.695673	0	3.264342	0	
12	N12	-6.17484	0	4.166452	0	
13	N13	0.938008	0	0.541559	0	
14	N14	1.587527	0	0.916559	0	
15	N15	6.435256	0	3.715397	0	
16	N16	0.	0	-1.083119	0	
17	N17	0.	0	-1.833119	0	
18	N18	0.	0	-7.430794	0	
19	N19	-0.938008	0	0.541559	0	
20	N20	-1.587527	0	0.916559	0	
21	N21	-6.435256	0	3.715397	0	
22	N22	4.458441	0	-0.610658	0	
23	N23	1.700375	0	4.166452	0	
24	N24	6.51859	0	3.571059	0	
25	N25	4.281357	0	-0.303941	0	
26	N26	6.351923	0	3.859735	0	
27	N27	1.877458	0	3.859735	0	
28	N28	-4.458441	0	-0.610658	0	
29	N29	-1.700375	0	4.166452	0	
30	N30	-6.51859	0	3.571059	0	
31	N31	-4.281357	0	-0.303941	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
32	N32	-6.351923	0	3.859735	0	
33	N33	-1.877458	0	3.859735	0	
34	N34	-2.758066	0	-3.555794	0	
35	N35	2.758066	0	-3.555794	0	
36	N36	-0.166667	0	-7.430794	0	
37	N37	-2.403899	0	-3.555794	0	
38	N38	0.166667	0	-7.430794	0	
39	N39	2.403899	0	-3.555794	0	
40	N44	-5.083333	0	4.166452	0	
41	N45	-5.083333	0	4.416452	0	
42	N58	0.520833	3.5	-7.430794	0	
43	N59	-0.520833	3.5	-7.430794	0	
44	N66	6.695673	3.5	3.264342	0	
45	N67	6.17484	3.5	4.166452	0	
46	N68	-6.695673	3.5	3.264342	0	
47	N69	-6.17484	3.5	4.166452	0	
48	N77	-5.083333	3.5	4.166452	0	
49	N78	-5.083333	3.5	4.416452	0	
50	N91	6.858253	3.5	3.545939	0	
51	N92	-6.858253	3.5	3.545939	0	
52	N93	-6.5	3.5	4.166452	0	
53	N94	0.358253	3.5	-7.712391	0	
54	N95	-0.358253	3.5	-7.712391	0	
55	N96	6.5	3.5	4.166452	0	
56	N88A	-5.083333	4.5	4.416452	0	
57	N89A	-5.083333	-3.5	4.416452	0	
58	N106	3.079408	0	1.777897	0	
59	N107	0.	0	-3.555794	0	
60	N108	-3.079408	0	1.777897	0	
61	TC	0	0	0	0	
62	N62	-2	0	4.166452	0	
63	N63	-2	0	4.416452	0	
64	N64	-2	3.5	4.166452	0	
65	N65	-2	3.5	4.416452	0	
66	N66A	-2	4.5	4.416452	0	
67	N67A	-2	-3.5	4.416452	0	
68	N68A	1.333333	0	4.166452	0	
69	N69A	1.333333	0	4.416452	0	
70	N70	1.333333	3.5	4.166452	0	
71	N71	1.333333	3.5	4.416452	0	
72	N72	1.333333	4.5	4.416452	0	
73	N73	1.333333	-3.5	4.416452	0	
74	N74	4.416667	0	4.166452	0	
75	N75	4.416667	0	4.416452	0	
76	N76	4.416667	3.5	4.166452	0	
77	N77A	4.416667	3.5	4.416452	0	
78	N78A	4.416667	4.333333	4.416452	0	
79	N79	4.416667	-1.666667	4.416452	0	
80	N80	6.14992	0	2.31907	0	
81	N81	6.366426	0	2.19407	0	
82	N82	6.14992	3.5	2.31907	0	
83	N83	6.366426	3.5	2.19407	0	
84	N84	6.366426	4.5	2.19407	0	
85	N85	6.366426	-3.5	2.19407	0	
86	N87	4.608253	0	-0.351175	0	
87	N88	4.82476	0	-0.476175	0	
88	N89	4.608253	3.5	-0.351175	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
89	N90	4.82476	3.5	-0.476175	0	
90	N91A	4.82476	4.5	-0.476175	0	
91	N92A	4.82476	-3.5	-0.476175	0	
92	N93A	2.941587	0	-3.237926	0	
93	N94A	3.158093	0	-3.362926	0	
94	N95A	2.941587	3.5	-3.237926	0	
95	N96A	3.158093	3.5	-3.362926	0	
96	N97	3.158093	4.5	-3.362926	0	
97	N98	3.158093	-3.5	-3.362926	0	
98	N99	1.39992	0	-5.908171	0	
99	N100	1.616426	0	-6.033171	0	
100	N101	1.39992	3.5	-5.908171	0	
101	N102	1.616426	3.5	-6.033171	0	
102	N103	1.616426	4.333333	-6.033171	0	
103	N104	1.616426	-1.666667	-6.033171	0	
104	N105	-1.066587	0	-6.485522	0	
105	N106A	-1.283093	0	-6.610522	0	
106	N107A	-1.066587	3.5	-6.485522	0	
107	N108A	-1.283093	3.5	-6.610522	0	
108	N109	-1.283093	4.5	-6.610522	0	
109	N110	-1.283093	-3.5	-6.610522	0	
110	N112	-2.608253	0	-3.815277	0	
111	N113	-2.82476	0	-3.940277	0	
112	N114	-2.608253	3.5	-3.815277	0	
113	N115	-2.82476	3.5	-3.940277	0	
114	N116	-2.82476	4.5	-3.940277	0	
115	N117	-2.82476	-3.5	-3.940277	0	
116	N118	-4.27492	0	-0.928525	0	
117	N119	-4.491426	0	-1.053525	0	
118	N120	-4.27492	3.5	-0.928525	0	
119	N121	-4.491426	3.5	-1.053525	0	
120	N122	-4.491426	4.5	-1.053525	0	
121	N123	-4.491426	-3.5	-1.053525	0	
122	N124	-5.816587	0	1.74172	0	
123	N125	-6.033093	0	1.61672	0	
124	N126	-5.816587	3.5	1.74172	0	
125	N127	-6.033093	3.5	1.61672	0	
126	N128	-6.033093	4.333333	1.61672	0	
127	N129	-6.033093	-1.666667	1.61672	0	

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N19	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N16	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N13	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Lower Plate	Beam	RECT	A36 Gr.36	Typical
2	M2	N3	N4			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
3	M3	N5	N6			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
4	M4	N7	N8			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
5	M5	N9	N10			Lower Plate	Beam	RECT	A36 Gr.36	Typical
6	M6	N11	N12			Lower Plate	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
7	M7	N13	N14			Interior Standoff	Beam	SquareTube	A500 Gr.B...	Typical
8	M8	N14	N15			Standoffs	Beam	SquareTube	A500 Gr.B...	Typical
9	M9	N16	N17			Interior Standoff	Beam	SquareTube	A500 Gr.B...	Typical
10	M10	N17	N18			Standoffs	Beam	SquareTube	A500 Gr.B...	Typical
11	M11	N19	N20			Interior Standoff	Beam	SquareTube	A500 Gr.B...	Typical
12	M12	N20	N21			Standoffs	Beam	SquareTube	A500 Gr.B...	Typical
13	M13	N22	N23			Crossarms	Beam	SquareTube	A500 Gr.B...	Typical
14	M14	N24	N25		270	Grate Supports	Beam	Single Angle	A36 Gr.36	Typical
15	M15	N26	N27			Grate Supports	Beam	Single Angle	A36 Gr.36	Typical
16	M16	N28	N29			Crossarms	Beam	SquareTube	A500 Gr.B...	Typical
17	M17	N30	N31			Grate Supports	Beam	Single Angle	A36 Gr.36	Typical
18	M18	N32	N33		270	Grate Supports	Beam	Single Angle	A36 Gr.36	Typical
19	M19	N34	N35			Crossarms	Beam	SquareTube	A500 Gr.B...	Typical
20	M20	N36	N37		270	Grate Supports	Beam	Single Angle	A36 Gr.36	Typical
21	M21	N38	N39			Grate Supports	Beam	Single Angle	A36 Gr.36	Typical
22	M24	N44	N45			RIGID	None	None	RIGID	Typical
23	M31	N58	N59			Outer Plates	Beam	RECT	A36 Gr.36	Typical
24	M32	N91	N94			Handrail	Beam	Pipe	A53 Gr.B	Typical
25	M33	N92	N95			Handrail	Beam	Pipe	A53 Gr.B	Typical
26	M34	N93	N96			Handrail	Beam	Pipe	A53 Gr.B	Typical
27	M35	N66	N67			Outer Plates	Beam	RECT	A36 Gr.36	Typical
28	M36	N68	N69			Outer Plates	Beam	RECT	A36 Gr.36	Typical
29	M39	N77	N78			RIGID	None	None	RIGID	Typical
30	MP4	N88A	N89A			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
31	M31A	N62	N63			RIGID	None	None	RIGID	Typical
32	M32A	N64	N65			RIGID	None	None	RIGID	Typical
33	MP3	N66A	N67A			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
34	M34A	N68A	N69A			RIGID	None	None	RIGID	Typical
35	M35A	N70	N71			RIGID	None	None	RIGID	Typical
36	MP2	N72	N73			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
37	M37	N74	N75			RIGID	None	None	RIGID	Typical
38	M38	N76	N77A			RIGID	None	None	RIGID	Typical
39	MP1	N78A	N79			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
40	M40	N80	N81			RIGID	None	None	RIGID	Typical
41	M41	N82	N83			RIGID	None	None	RIGID	Typical
42	MP12	N84	N85			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
43	M43	N87	N88			RIGID	None	None	RIGID	Typical
44	M44	N89	N90			RIGID	None	None	RIGID	Typical
45	MP11	N91A	N92A			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
46	M46A	N93A	N94A			RIGID	None	None	RIGID	Typical
47	M47	N95A	N96A			RIGID	None	None	RIGID	Typical
48	MP10	N97	N98			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
49	M49	N99	N100			RIGID	None	None	RIGID	Typical
50	M50	N101	N102			RIGID	None	None	RIGID	Typical
51	MP9	N103	N104			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
52	M52	N105	N106A			RIGID	None	None	RIGID	Typical
53	M53	N107A	N108A			RIGID	None	None	RIGID	Typical
54	MP8	N109	N110			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
55	M55	N112	N113			RIGID	None	None	RIGID	Typical
56	M56	N114	N115			RIGID	None	None	RIGID	Typical
57	MP7	N116	N117			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
58	M58	N118	N119			RIGID	None	None	RIGID	Typical
59	M59	N120	N121			RIGID	None	None	RIGID	Typical
60	MP6	N122	N123			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
61	M61	N124	N125			RIGID	None	None	RIGID	Typical
62	M62	N126	N127			RIGID	None	None	RIGID	Typical
63	MP5	N128	N129			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
64	M64	N44	N45			RIGID	None	None	RIGID	Typical
65	M65	N77	N78			RIGID	None	None	RIGID	Typical
66	M66	N88A	N89A			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
67	M67	N62	N63			RIGID	None	None	RIGID	Typical
68	M68	N64	N65			RIGID	None	None	RIGID	Typical
69	M69	N66A	N67A			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
70	M70	N68A	N69A			RIGID	None	None	RIGID	Typical
71	M71	N70	N71			RIGID	None	None	RIGID	Typical
72	M72	N72	N73			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
73	M73	N74	N75			RIGID	None	None	RIGID	Typical
74	M74	N76	N77A			RIGID	None	None	RIGID	Typical
75	M75	N78A	N79			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical

Joint Loads and Enforced Displacements (BLC 42 : Man 1 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N44	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 43 : Man 2 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N105	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 44 : Man 3 (500 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N80	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 45 : Man 4 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N7	L	Y	-.25

Joint Loads and Enforced Displacements (BLC 46 : Man 5 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N6	L	Y	-.25

Joint Loads and Enforced Displacements (BLC 47 : Man 6 (250 lbs))

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/f...
1	N3	L	Y	-.25

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Y	-.014	%27.8
2	MP1	Y	-.015	%16.7
3	MP1	Y	-.002	%16.7
4	MP1	Y	-.075	%50
5	MP2	Y	-.014	%27.1
6	MP2	Y	-.075	%50
7	MP3	Y	-.041	%27.1
8	MP3	Y	-.075	%25
9	MP4	Y	-.128	%50
10	MP5	Y	-.041	%100
11	MP5	Y	-.015	%16.7
12	MP5	Y	-.01	%16.7

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

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
13	MP5	Y	-.002	%33.3
14	MP6	Y	-.014	%27.1
15	MP7	Y	-.014	%27.1
16	MP8	Y	-.128	%50
17	MP9	Y	-.014	%27.8
18	MP9	Y	-.01	%16.7
19	MP10	Y	-.014	%27.1
20	MP11	Y	-.041	%27.1
21	MP12	Y	-.128	%37.5

Member Point Loads (BLC 2 : Ice Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Y	-.105	%27.8
2	MP1	Y	-.018	%16.7
3	MP1	Y	-.006	%16.7
4	MP1	Y	-.049	%50
5	MP2	Y	-.105	%27.1
6	MP2	Y	-.049	%50
7	MP3	Y	-.157	%27.1
8	MP3	Y	-.049	%25
9	MP4	Y	-.477	%50
10	MP5	Y	-.157	%100
11	MP5	Y	-.018	%16.7
12	MP5	Y	-.014	%16.7
13	MP5	Y	-.006	%33.3
14	MP6	Y	-.105	%27.1
15	MP7	Y	-.105	%27.1
16	MP8	Y	-.477	%50
17	MP9	Y	-.105	%27.8
18	MP9	Y	-.014	%16.7
19	MP10	Y	-.105	%27.1
20	MP11	Y	-.157	%27.1
21	MP12	Y	-.477	%37.5

Member Point Loads (BLC 3 : Full Wind Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.098	0
2	MP1	Z	-.008	%16.7
3	MP1	Z	-.002	%16.7
4	MP1	Z	-.037	%50
5	MP2	Z	-.098	0
6	MP2	Z	-.037	%50
7	MP3	Z	-.149	0
8	MP3	Z	-.011	%25
9	MP4	Z	-.457	%.1
10	MP5	Z	-.074	%100
11	MP5	Z	-.012	%16.7
12	MP5	Z	-.009	%16.7
13	MP6	Z	-.058	0
14	MP7	Z	-.058	0
15	MP8	Z	-.265	%.1
16	MP9	Z	-.058	0
17	MP9	Z	-.009	%16.7
18	MP10	Z	-.058	0
19	MP11	Z	-.074	0
20	MP12	Z	-.265	0

Member Point Loads (BLC 3 : Full Wind Antenna (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
21	MP1	Z	-.098	%55.6
22	MP2	Z	-.098	%54.2
23	MP3	Z	-.149	%54.1
24	MP4	Z	-.457	%99.9
25	MP5	Z	-.074	%100
26	MP6	Z	-.058	%54.2
27	MP7	Z	-.058	%54.2
28	MP8	Z	-.265	%99.9
29	MP9	Z	-.058	%55.6
30	MP10	Z	-.058	%54.2
31	MP11	Z	-.074	%54.1
32	MP12	Z	-.265	%74.9

Member Point Loads (BLC 4 : Full Wind Antenna (30 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.074	0
2	MP1	Z	-.008	%16.7
3	MP1	Z	-.002	%16.7
4	MP1	Z	-.03	%50
5	MP2	Z	-.074	0
6	MP2	Z	-.03	%50
7	MP3	Z	-.107	0
8	MP3	Z	-.009	%25
9	MP4	Z	-.34	%.1
10	MP5	Z	-.042	%100
11	MP5	Z	-.011	%16.7
12	MP5	Z	-.009	%16.7
13	MP6	Z	-.039	0
14	MP7	Z	-.039	0
15	MP8	Z	-.174	%.1
16	MP9	Z	-.074	0
17	MP9	Z	-.006	%16.7
18	MP10	Z	-.074	0
19	MP11	Z	-.107	0
20	MP12	Z	-.34	0
21	MP1	Z	-.074	%55.6
22	MP2	Z	-.074	%54.2
23	MP3	Z	-.107	%54.1
24	MP4	Z	-.34	%99.9
25	MP5	Z	-.042	%100
26	MP6	Z	-.039	%54.2
27	MP7	Z	-.039	%54.2
28	MP8	Z	-.174	%99.9
29	MP9	Z	-.074	%55.6
30	MP10	Z	-.074	%54.2
31	MP11	Z	-.107	%54.1
32	MP12	Z	-.34	%74.9
33	MP1	X	.042	0
34	MP1	X	.008	%16.7
35	MP1	X	0	%16.7
36	MP1	X	.02	%50
37	MP2	X	.042	0
38	MP2	X	.02	%50
39	MP3	X	.062	0
40	MP3	X	.011	%25
41	MP4	X	.197	%.1

Member Point Loads (BLC 4 : Full Wind Antenna (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
42	MP5	X	.024	%100
43	MP5	X	.006	%16.7
44	MP5	X	.005	%16.7
45	MP5	X	.002	%33.3
46	MP6	X	.022	0
47	MP7	X	.022	0
48	MP8	X	.1	%.1
49	MP9	X	.042	0
50	MP9	X	.003	%16.7
51	MP10	X	.042	0
52	MP11	X	.062	0
53	MP12	X	.197	0
54	MP1	X	.042	%55.6
55	MP2	X	.042	%54.2
56	MP3	X	.062	%54.1
57	MP4	X	.197	%99.9
58	MP5	X	.024	%100
59	MP6	X	.022	%54.2
60	MP7	X	.022	%54.2
61	MP8	X	.1	%99.9
62	MP9	X	.042	%55.6
63	MP10	X	.042	%54.2
64	MP11	X	.062	%54.1
65	MP12	X	.197	%74.9

Member Point Loads (BLC 5 : Full Wind Antenna (60 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.029	0
2	MP1	Z	-.006	%16.7
3	MP1	Z	-.002	%16.7
4	MP1	Z	-.014	%50
5	MP2	Z	-.029	0
6	MP2	Z	-.014	%50
7	MP3	Z	-.037	0
8	MP3	Z	-.004	%25
9	MP4	Z	-.132	%.1
10	MP5	Z	-.037	%100
11	MP5	Z	-.006	%16.7
12	MP5	Z	-.005	%16.7
13	MP6	Z	-.029	0
14	MP7	Z	-.029	0
15	MP8	Z	-.132	%.1
16	MP9	Z	-.049	0
17	MP9	Z	-.003	%16.7
18	MP10	Z	-.049	0
19	MP11	Z	-.074	0
20	MP12	Z	-.229	0
21	MP1	Z	-.029	%55.6
22	MP2	Z	-.029	%54.2
23	MP3	Z	-.037	%54.1
24	MP4	Z	-.132	%99.9
25	MP5	Z	-.037	%100
26	MP6	Z	-.029	%54.2
27	MP7	Z	-.029	%54.2
28	MP8	Z	-.132	%99.9
29	MP9	Z	-.049	%55.6

Member Point Loads (BLC 5 : Full Wind Antenna (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
30	MP10	Z	-.049	%54.2
31	MP11	Z	-.074	%54.1
32	MP12	Z	-.229	%74.9
33	MP1	X	.05	0
34	MP1	X	.012	%16.7
35	MP1	X	.003	%16.7
36	MP1	X	.042	%50
37	MP2	X	.05	0
38	MP2	X	.042	%50
39	MP3	X	.064	0
40	MP3	X	.036	%25
41	MP4	X	.229	%.1
42	MP5	X	.064	%100
43	MP5	X	.009	%16.7
44	MP5	X	.009	%16.7
45	MP5	X	.003	%33.3
46	MP6	X	.05	0
47	MP7	X	.05	0
48	MP8	X	.229	%.1
49	MP9	X	.085	0
50	MP9	X	.005	%16.7
51	MP10	X	.085	0
52	MP11	X	.129	0
53	MP12	X	.396	0
54	MP1	X	.05	%55.6
55	MP2	X	.05	%54.2
56	MP3	X	.064	%54.1
57	MP4	X	.229	%99.9
58	MP5	X	.064	%100
59	MP6	X	.05	%54.2
60	MP7	X	.05	%54.2
61	MP8	X	.229	%99.9
62	MP9	X	.085	%55.6
63	MP10	X	.085	%54.2
64	MP11	X	.129	%54.1
65	MP12	X	.396	%74.9

Member Point Loads (BLC 6 : Full Wind Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	0	0
2	MP1	Z	0	%16.7
3	MP1	Z	0	%16.7
4	MP1	Z	0	%50
5	MP2	Z	0	0
6	MP2	Z	0	%50
7	MP3	Z	0	0
8	MP3	Z	0	%25
9	MP4	Z	0	%.1
10	MP5	Z	0	%100
11	MP5	Z	0	%16.7
12	MP5	Z	0	%16.7
13	MP6	Z	0	0
14	MP7	Z	0	0
15	MP8	Z	0	%.1
16	MP9	Z	0	0
17	MP9	Z	0	%16.7

Member Point Loads (BLC 6 : Full Wind Antenna (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
18	MP10	Z	0	0
19	MP11	Z	0	0
20	MP12	Z	0	0
21	MP1	Z	0	%55.6
22	MP2	Z	0	%54.2
23	MP3	Z	0	%54.1
24	MP4	Z	0	%99.9
25	MP5	Z	0	%100
26	MP6	Z	0	%54.2
27	MP7	Z	0	%54.2
28	MP8	Z	0	%99.9
29	MP9	Z	0	%55.6
30	MP10	Z	0	%54.2
31	MP11	Z	0	%54.1
32	MP12	Z	0	%74.9
33	MP1	X	.045	0
34	MP1	X	.013	%16.7
35	MP1	X	.004	%16.7
36	MP1	X	.052	%50
37	MP2	X	.045	0
38	MP2	X	.052	%50
39	MP3	X	.049	0
40	MP3	X	.052	%25
41	MP4	X	.201	%.1
42	MP5	X	.124	%100
43	MP5	X	.006	%16.7
44	MP5	X	.011	%16.7
45	MP5	X	.001	%33.3
46	MP6	X	.085	0
47	MP7	X	.085	0
48	MP8	X	.393	%.1
49	MP9	X	.085	0
50	MP9	X	.007	%16.7
51	MP10	X	.085	0
52	MP11	X	.124	0
53	MP12	X	.393	0
54	MP1	X	.045	%55.6
55	MP2	X	.045	%54.2
56	MP3	X	.049	%54.1
57	MP4	X	.201	%99.9
58	MP5	X	.124	%100
59	MP6	X	.085	%54.2
60	MP7	X	.085	%54.2
61	MP8	X	.393	%99.9
62	MP9	X	.085	%55.6
63	MP10	X	.085	%54.2
64	MP11	X	.124	%54.1
65	MP12	X	.393	%74.9

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	.029	0
2	MP1	Z	.006	%16.7
3	MP1	Z	.002	%16.7
4	MP1	Z	.014	%50
5	MP2	Z	.029	0

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
6	MP2	Z	.014	%50
7	MP3	Z	.037	0
8	MP3	Z	.004	%25
9	MP4	Z	.132	%.1
10	MP5	Z	.074	%100
11	MP5	Z	.004	%16.7
12	MP5	Z	.003	%16.7
13	MP6	Z	.049	0
14	MP7	Z	.049	0
15	MP8	Z	.229	%.1
16	MP9	Z	.029	0
17	MP9	Z	.005	%16.7
18	MP10	Z	.029	0
19	MP11	Z	.037	0
20	MP12	Z	.132	0
21	MP1	Z	.029	%55.6
22	MP2	Z	.029	%54.2
23	MP3	Z	.037	%54.1
24	MP4	Z	.132	%99.9
25	MP5	Z	.074	%100
26	MP6	Z	.049	%54.2
27	MP7	Z	.049	%54.2
28	MP8	Z	.229	%99.9
29	MP9	Z	.029	%55.6
30	MP10	Z	.029	%54.2
31	MP11	Z	.037	%54.1
32	MP12	Z	.132	%74.9
33	MP1	X	.05	0
34	MP1	X	.012	%16.7
35	MP1	X	.003	%16.7
36	MP1	X	.042	%50
37	MP2	X	.05	0
38	MP2	X	.042	%50
39	MP3	X	.064	0
40	MP3	X	.036	%25
41	MP4	X	.229	%.1
42	MP5	X	.129	%100
43	MP5	X	.004	%16.7
44	MP5	X	.009	%16.7
45	MP6	X	.085	0
46	MP7	X	.085	0
47	MP8	X	.396	%.1
48	MP9	X	.05	0
49	MP9	X	.008	%16.7
50	MP10	X	.05	0
51	MP11	X	.064	0
52	MP12	X	.229	0
53	MP1	X	.05	%55.6
54	MP2	X	.05	%54.2
55	MP3	X	.064	%54.1
56	MP4	X	.229	%99.9
57	MP5	X	.129	%100
58	MP6	X	.085	%54.2
59	MP7	X	.085	%54.2
60	MP8	X	.396	%99.9
61	MP9	X	.05	%55.6
62	MP10	X	.05	%54.2

Member Point Loads (BLC 7 : Full Wind Antenna (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
63	MP11	X	.064	%54.1
64	MP12	X	.229	%74.9

Member Point Loads (BLC 8 : Full Wind Antenna (150 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	.074	0
2	MP1	Z	.008	%16.7
3	MP1	Z	.002	%16.7
4	MP1	Z	.03	%50
5	MP2	Z	.074	0
6	MP2	Z	.03	%50
7	MP3	Z	.107	0
8	MP3	Z	.009	%25
9	MP4	Z	.34	%.1
10	MP5	Z	.107	%100
11	MP5	Z	.008	%16.7
12	MP5	Z	.006	%16.7
13	MP6	Z	.074	0
14	MP7	Z	.074	0
15	MP8	Z	.34	%.1
16	MP9	Z	.039	0
17	MP9	Z	.009	%16.7
18	MP10	Z	.039	0
19	MP11	Z	.042	0
20	MP12	Z	.174	0
21	MP1	Z	.074	%55.6
22	MP2	Z	.074	%54.2
23	MP3	Z	.107	%54.1
24	MP4	Z	.34	%99.9
25	MP5	Z	.107	%100
26	MP6	Z	.074	%54.2
27	MP7	Z	.074	%54.2
28	MP8	Z	.34	%99.9
29	MP9	Z	.039	%55.6
30	MP10	Z	.039	%54.2
31	MP11	Z	.042	%54.1
32	MP12	Z	.174	%74.9
33	MP1	X	.042	0
34	MP1	X	.008	%16.7
35	MP1	X	0	%16.7
36	MP1	X	.02	%50
37	MP2	X	.042	0
38	MP2	X	.02	%50
39	MP3	X	.062	0
40	MP3	X	.011	%25
41	MP4	X	.197	%.1
42	MP5	X	.062	%100
43	MP5	X	.003	%16.7
44	MP5	X	.005	%16.7
45	MP5	X	.001	%33.3
46	MP6	X	.042	0
47	MP7	X	.042	0
48	MP8	X	.197	%.1
49	MP9	X	.022	0
50	MP9	X	.005	%16.7
51	MP10	X	.022	0

Member Point Loads (BLC 8 : Full Wind Antenna (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
52	MP11	X	.024	0
53	MP12	X	.1	0
54	MP1	X	.042	%55.6
55	MP2	X	.042	%54.2
56	MP3	X	.062	%54.1
57	MP4	X	.197	%99.9
58	MP5	X	.062	%100
59	MP6	X	.042	%54.2
60	MP7	X	.042	%54.2
61	MP8	X	.197	%99.9
62	MP9	X	.022	%55.6
63	MP10	X	.022	%54.2
64	MP11	X	.024	%54.1
65	MP12	X	.1	%74.9

Member Point Loads (BLC 15 : Ice Wind Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.025	0
2	MP1	Z	-.004	%16.7
3	MP1	Z	-.002	%16.7
4	MP1	Z	-.01	%50
5	MP2	Z	-.025	0
6	MP2	Z	-.01	%50
7	MP3	Z	-.034	0
8	MP3	Z	-.003	%25
9	MP4	Z	-.093	%.1
10	MP5	Z	-.02	%100
11	MP5	Z	-.004	%16.7
12	MP5	Z	-.004	%16.7
13	MP6	Z	-.018	0
14	MP7	Z	-.018	0
15	MP8	Z	-.059	%.1
16	MP9	Z	-.018	0
17	MP9	Z	-.004	%16.7
18	MP10	Z	-.018	0
19	MP11	Z	-.02	0
20	MP12	Z	-.059	0
21	MP1	Z	-.025	%55.6
22	MP2	Z	-.025	%54.2
23	MP3	Z	-.034	%54.1
24	MP4	Z	-.093	%99.9
25	MP5	Z	-.02	%100
26	MP6	Z	-.018	%54.2
27	MP7	Z	-.018	%54.2
28	MP8	Z	-.059	%99.9
29	MP9	Z	-.018	%55.6
30	MP10	Z	-.018	%54.2
31	MP11	Z	-.02	%54.1
32	MP12	Z	-.059	%74.9

Member Point Loads (BLC 16 : Ice Wind Antenna (30 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.019	0
2	MP1	Z	-.003	%16.7
3	MP1	Z	-.002	%16.7
4	MP1	Z	-.008	%50

Member Point Loads (BLC 16 : Ice Wind Antenna (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
5	MP2	Z	-.019	0
6	MP2	Z	-.008	%50
7	MP3	Z	-.026	0
8	MP3	Z	-.002	%25
9	MP4	Z	-.071	%.1
10	MP5	Z	-.014	%100
11	MP5	Z	-.004	%16.7
12	MP5	Z	-.004	%16.7
13	MP6	Z	-.013	0
14	MP7	Z	-.013	0
15	MP8	Z	-.041	%.1
16	MP9	Z	-.019	0
17	MP9	Z	-.003	%16.7
18	MP10	Z	-.019	0
19	MP11	Z	-.026	0
20	MP12	Z	-.071	0
21	MP1	Z	-.019	%55.6
22	MP2	Z	-.019	%54.2
23	MP3	Z	-.026	%54.1
24	MP4	Z	-.071	%99.9
25	MP5	Z	-.014	%100
26	MP6	Z	-.013	%54.2
27	MP7	Z	-.013	%54.2
28	MP8	Z	-.041	%99.9
29	MP9	Z	-.019	%55.6
30	MP10	Z	-.019	%54.2
31	MP11	Z	-.026	%54.1
32	MP12	Z	-.071	%74.9
33	MP1	X	.011	0
34	MP1	X	.003	%16.7
35	MP1	X	0	%16.7
36	MP1	X	.006	%50
37	MP2	X	.011	0
38	MP2	X	.006	%50
39	MP3	X	.015	0
40	MP3	X	.003	%25
41	MP4	X	.041	%.1
42	MP5	X	.008	%100
43	MP5	X	.002	%16.7
44	MP5	X	.002	%16.7
45	MP5	X	.002	%33.3
46	MP6	X	.008	0
47	MP7	X	.008	0
48	MP8	X	.024	%.1
49	MP9	X	.011	0
50	MP9	X	.002	%16.7
51	MP10	X	.011	0
52	MP11	X	.015	0
53	MP12	X	.041	0
54	MP1	X	.011	%55.6
55	MP2	X	.011	%54.2
56	MP3	X	.015	%54.1
57	MP4	X	.041	%99.9
58	MP5	X	.008	%100
59	MP6	X	.008	%54.2
60	MP7	X	.008	%54.2
61	MP8	X	.024	%99.9

Member Point Loads (BLC 16 : Ice Wind Antenna (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
62	MP9	X	.011	%55.6
63	MP10	X	.011	%54.2
64	MP11	X	.015	%54.1
65	MP12	X	.041	%74.9

Member Point Loads (BLC 17 : Ice Wind Antenna (60 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	-.009	0
2	MP1	Z	-.002	%16.7
3	MP1	Z	-.001	%16.7
4	MP1	Z	-.004	%50
5	MP2	Z	-.009	0
6	MP2	Z	-.004	%50
7	MP3	Z	-.01	0
8	MP3	Z	-.001	%25
9	MP4	Z	-.03	%.1
10	MP5	Z	-.01	%100
11	MP5	Z	-.002	%16.7
12	MP5	Z	-.002	%16.7
13	MP6	Z	-.009	0
14	MP7	Z	-.009	0
15	MP8	Z	-.03	%.1
16	MP9	Z	-.012	0
17	MP9	Z	-.001	%16.7
18	MP10	Z	-.012	0
19	MP11	Z	-.017	0
20	MP12	Z	-.047	0
21	MP1	Z	-.009	%55.6
22	MP2	Z	-.009	%54.2
23	MP3	Z	-.01	%54.1
24	MP4	Z	-.03	%99.9
25	MP5	Z	-.01	%100
26	MP6	Z	-.009	%54.2
27	MP7	Z	-.009	%54.2
28	MP8	Z	-.03	%99.9
29	MP9	Z	-.012	%55.6
30	MP10	Z	-.012	%54.2
31	MP11	Z	-.017	%54.1
32	MP12	Z	-.047	%74.9
33	MP1	X	.015	0
34	MP1	X	.005	%16.7
35	MP1	X	.001	%16.7
36	MP1	X	.012	%50
37	MP2	X	.015	0
38	MP2	X	.012	%50
39	MP3	X	.018	0
40	MP3	X	.011	%25
41	MP4	X	.051	%.1
42	MP5	X	.018	%100
43	MP5	X	.003	%16.7
44	MP5	X	.004	%16.7
45	MP5	X	.002	%33.3
46	MP6	X	.015	0
47	MP7	X	.015	0
48	MP8	X	.051	%.1
49	MP9	X	.021	0

Member Point Loads (BLC 17 : Ice Wind Antenna (60 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
50	MP9	X	.002	%16.7
51	MP10	X	.021	0
52	MP11	X	.029	0
53	MP12	X	.081	0
54	MP1	X	.015	%55.6
55	MP2	X	.015	%54.2
56	MP3	X	.018	%54.1
57	MP4	X	.051	%99.9
58	MP5	X	.018	%100
59	MP6	X	.015	%54.2
60	MP7	X	.015	%54.2
61	MP8	X	.051	%99.9
62	MP9	X	.021	%55.6
63	MP10	X	.021	%54.2
64	MP11	X	.029	%54.1
65	MP12	X	.081	%74.9

Member Point Loads (BLC 18 : Ice Wind Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	0	0
2	MP1	Z	0	%16.7
3	MP1	Z	0	%16.7
4	MP1	Z	0	%50
5	MP2	Z	0	0
6	MP2	Z	0	%50
7	MP3	Z	0	0
8	MP3	Z	0	%25
9	MP4	Z	0	%.1
10	MP5	Z	0	%100
11	MP5	Z	0	%16.7
12	MP5	Z	0	%16.7
13	MP6	Z	0	0
14	MP7	Z	0	0
15	MP8	Z	0	%.1
16	MP9	Z	0	0
17	MP9	Z	0	%16.7
18	MP10	Z	0	0
19	MP11	Z	0	0
20	MP12	Z	0	0
21	MP1	Z	0	%55.6
22	MP2	Z	0	%54.2
23	MP3	Z	0	%54.1
24	MP4	Z	0	%99.9
25	MP5	Z	0	%100
26	MP6	Z	0	%54.2
27	MP7	Z	0	%54.2
28	MP8	Z	0	%99.9
29	MP9	Z	0	%55.6
30	MP10	Z	0	%54.2
31	MP11	Z	0	%54.1
32	MP12	Z	0	%74.9
33	MP1	X	.015	0
34	MP1	X	.005	%16.7
35	MP1	X	.002	%16.7
36	MP1	X	.016	%50
37	MP2	X	.015	0

Member Point Loads (BLC 18 : Ice Wind Antenna (90 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
38	MP2	X	.016	%50
39	MP3	X	.016	0
40	MP3	X	.016	%25
41	MP4	X	.048	%.1
42	MP5	X	.03	%100
43	MP5	X	.002	%16.7
44	MP5	X	.005	%16.7
45	MP5	X	.001	%33.3
46	MP6	X	.022	0
47	MP7	X	.022	0
48	MP8	X	.082	%.1
49	MP9	X	.022	0
50	MP9	X	.003	%16.7
51	MP10	X	.022	0
52	MP11	X	.03	0
53	MP12	X	.082	0
54	MP1	X	.015	%55.6
55	MP2	X	.015	%54.2
56	MP3	X	.016	%54.1
57	MP4	X	.048	%99.9
58	MP5	X	.03	%100
59	MP6	X	.022	%54.2
60	MP7	X	.022	%54.2
61	MP8	X	.082	%99.9
62	MP9	X	.022	%55.6
63	MP10	X	.022	%54.2
64	MP11	X	.03	%54.1
65	MP12	X	.082	%74.9

Member Point Loads (BLC 19 : Ice Wind Antenna (120 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	.009	0
2	MP1	Z	.002	%16.7
3	MP1	Z	.001	%16.7
4	MP1	Z	.004	%50
5	MP2	Z	.009	0
6	MP2	Z	.004	%50
7	MP3	Z	.01	0
8	MP3	Z	.001	%25
9	MP4	Z	.03	%.1
10	MP5	Z	.017	%100
11	MP5	Z	.002	%16.7
12	MP5	Z	.001	%16.7
13	MP6	Z	.012	0
14	MP7	Z	.012	0
15	MP8	Z	.047	%.1
16	MP9	Z	.009	0
17	MP9	Z	.002	%16.7
18	MP10	Z	.009	0
19	MP11	Z	.01	0
20	MP12	Z	.03	0
21	MP1	Z	.009	%55.6
22	MP2	Z	.009	%54.2
23	MP3	Z	.01	%54.1
24	MP4	Z	.03	%99.9
25	MP5	Z	.017	%100

Member Point Loads (BLC 19 : Ice Wind Antenna (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
26	MP6	Z	.012	%54.2
27	MP7	Z	.012	%54.2
28	MP8	Z	.047	%99.9
29	MP9	Z	.009	%55.6
30	MP10	Z	.009	%54.2
31	MP11	Z	.01	%54.1
32	MP12	Z	.03	%74.9
33	MP1	X	.015	0
34	MP1	X	.005	%16.7
35	MP1	X	.001	%16.7
36	MP1	X	.012	%50
37	MP2	X	.015	0
38	MP2	X	.012	%50
39	MP3	X	.018	0
40	MP3	X	.011	%25
41	MP4	X	.051	%.1
42	MP5	X	.029	%100
43	MP5	X	.002	%16.7
44	MP5	X	.005	%16.7
45	MP6	X	.021	0
46	MP7	X	.021	0
47	MP8	X	.081	%.1
48	MP9	X	.015	0
49	MP9	X	.003	%16.7
50	MP10	X	.015	0
51	MP11	X	.018	0
52	MP12	X	.051	0
53	MP1	X	.015	%55.6
54	MP2	X	.015	%54.2
55	MP3	X	.018	%54.1
56	MP4	X	.051	%99.9
57	MP5	X	.029	%100
58	MP6	X	.021	%54.2
59	MP7	X	.021	%54.2
60	MP8	X	.081	%99.9
61	MP9	X	.015	%55.6
62	MP10	X	.015	%54.2
63	MP11	X	.018	%54.1
64	MP12	X	.051	%74.9

Member Point Loads (BLC 20 : Ice Wind Antenna (150 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	.019	0
2	MP1	Z	.002	%16.7
3	MP1	Z	.001	%16.7
4	MP1	Z	.004	%50
5	MP2	Z	.009	0
6	MP2	Z	.004	%50
7	MP3	Z	.01	0
8	MP3	Z	.001	%25
9	MP4	Z	.03	%.1
10	MP5	Z	.017	%100
11	MP5	Z	.002	%16.7
12	MP5	Z	.001	%16.7
13	MP6	Z	.012	0
14	MP7	Z	.012	0

Member Point Loads (BLC 20 : Ice Wind Antenna (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
15	MP8	Z	.047	%.1
16	MP9	Z	.009	0
17	MP9	Z	.002	%16.7
18	MP10	Z	.009	0
19	MP11	Z	.01	0
20	MP12	Z	.03	0
21	MP1	Z	.019	%55.6
22	MP2	Z	.009	%54.2
23	MP3	Z	.01	%54.1
24	MP4	Z	.03	%99.9
25	MP5	Z	.017	%100
26	MP6	Z	.012	%54.2
27	MP7	Z	.012	%54.2
28	MP8	Z	.047	%99.9
29	MP9	Z	.009	%55.6
30	MP10	Z	.009	%54.2
31	MP11	Z	.01	%54.1
32	MP12	Z	.03	%74.9
33	MP1	X	.011	0
34	MP1	X	.005	%16.7
35	MP1	X	.001	%16.7
36	MP1	X	.012	%50
37	MP2	X	.015	0
38	MP2	X	.012	%50
39	MP3	X	.018	0
40	MP3	X	.011	%25
41	MP4	X	.051	%.1
42	MP5	X	.029	%100
43	MP5	X	.002	%16.7
44	MP5	X	.005	%16.7
45	MP6	X	.021	0
46	MP7	X	.021	0
47	MP8	X	.081	%.1
48	MP9	X	.015	0
49	MP9	X	.003	%16.7
50	MP10	X	.015	0
51	MP11	X	.018	0
52	MP12	X	.051	0
53	MP1	X	.011	%55.6
54	MP2	X	.015	%54.2
55	MP3	X	.018	%54.1
56	MP4	X	.051	%99.9
57	MP5	X	.029	%100
58	MP6	X	.021	%54.2
59	MP7	X	.021	%54.2
60	MP8	X	.081	%99.9
61	MP9	X	.015	%55.6
62	MP10	X	.015	%54.2
63	MP11	X	.018	%54.1
64	MP12	X	.051	%74.9

Member Point Loads (BLC 27 : Seismic Antenna (0 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Z	0	%27.8
2	MP1	Z	-.001	%16.7
3	MP1	Z	0	%16.7

Member Point Loads (BLC 27 : Seismic Antenna (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
4	MP1	Z	-.002	%50
5	MP2	Z	0	%27.1
6	MP2	Z	-.002	%50
7	MP3	Z	-.001	%27.1
8	MP3	Z	-.002	%25
9	MP4	Z	-.004	%50
10	MP5	Z	-.001	%100
11	MP5	Z	-.001	%16.7
12	MP5	Z	0	%16.7
13	MP5	Z	0	%33.3
14	MP6	Z	0	%27.1
15	MP7	Z	0	%27.1
16	MP8	Z	-.004	%50
17	MP9	Z	0	%27.8
18	MP9	Z	0	%16.7
19	MP10	Z	0	%27.1
20	MP11	Z	-.001	%27.1
21	MP12	Z	-.004	%37.5

Member Point Loads (BLC 28 : Seismic Antenna (90 Deg))

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	X	0	%27.8
2	MP1	X	.001	%16.7
3	MP1	X	0	%16.7
4	MP1	X	.002	%50
5	MP2	X	0	%27.1
6	MP2	X	.002	%50
7	MP3	X	.001	%27.1
8	MP3	X	.002	%25
9	MP4	X	.004	%50
10	MP5	X	.001	%100
11	MP5	X	.001	%16.7
12	MP5	X	0	%16.7
13	MP5	X	0	%33.3
14	MP6	X	0	%27.1
15	MP7	X	0	%27.1
16	MP8	X	.004	%50
17	MP9	X	0	%27.8
18	MP9	X	0	%16.7
19	MP10	X	0	%27.1
20	MP11	X	.001	%27.1
21	MP12	X	.004	%37.5

Member Point Loads (BLC 41 : Seismic Vertical Antennas)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP1	Y	-.003	%27.8
2	MP1	Y	-.003	%16.7
3	MP1	Y	0	%16.7
4	MP1	Y	-.015	%50
5	MP2	Y	-.003	%27.1
6	MP2	Y	-.015	%50
7	MP3	Y	-.008	%27.1
8	MP3	Y	-.015	%25
9	MP4	Y	-.026	%50
10	MP5	Y	-.008	%100
11	MP5	Y	-.003	%16.7

Member Point Loads (BLC 41 : Seismic Vertical Antennas) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
12	MP5	Y	-.002	%16.7
13	MP5	Y	0	%33.3
14	MP6	Y	-.003	%27.1
15	MP7	Y	-.003	%27.1
16	MP8	Y	-.026	%50
17	MP9	Y	-.003	%27.8
18	MP9	Y	-.002	%16.7
19	MP10	Y	-.003	%27.1
20	MP11	Y	-.008	%27.1
21	MP12	Y	-.026	%37.5

Member Distributed Loads (BLC 2 : Ice Dead)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Y	-.022	-.022	0	%100
2	M2	Y	-.012	-.012	0	%100
3	M3	Y	-.012	-.012	0	%100
4	M4	Y	-.012	-.012	0	%100
5	M5	Y	-.022	-.022	0	%100
6	M6	Y	-.022	-.022	0	%100
7	M7	Y	-.02	-.02	0	%100
8	M8	Y	-.016	-.016	0	%100
9	M9	Y	-.02	-.02	0	%100
10	M10	Y	-.016	-.016	0	%100
11	M11	Y	-.02	-.02	0	%100
12	M12	Y	-.016	-.016	0	%100
13	M13	Y	-.016	-.016	0	%100
14	M14	Y	-.01	-.01	0	%100
15	M15	Y	-.01	-.01	0	%100
16	M16	Y	-.016	-.016	0	%100
17	M17	Y	-.01	-.01	0	%100
18	M18	Y	-.01	-.01	0	%100
19	M19	Y	-.016	-.016	0	%100
20	M20	Y	-.01	-.01	0	%100
21	M21	Y	-.01	-.01	0	%100
22	M24	Y	-.004	-.004	0	%100
23	M31	Y	-.019	-.019	0	%100
24	M32	Y	-.009	-.009	0	%100
25	M33	Y	-.009	-.009	0	%100
26	M34	Y	-.009	-.009	0	%100
27	M35	Y	-.019	-.019	0	%100
28	M36	Y	-.019	-.019	0	%100
29	M39	Y	-.004	-.004	0	%100
30	MP4	Y	-.009	-.009	0	%100
31	M31A	Y	-.004	-.004	0	%100
32	M32A	Y	-.004	-.004	0	%100
33	MP3	Y	-.009	-.009	0	%100
34	M34A	Y	-.004	-.004	0	%100
35	M35A	Y	-.004	-.004	0	%100
36	MP2	Y	-.009	-.009	0	%100
37	M37	Y	-.004	-.004	0	%100
38	M38	Y	-.004	-.004	0	%100
39	MP1	Y	-.009	-.009	0	%100
40	M40	Y	-.004	-.004	0	%100
41	M41	Y	-.004	-.004	0	%100
42	MP12	Y	-.009	-.009	0	%100

Member Distributed Loads (BLC 2 : Ice Dead) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
43	M43	Y	-.004	-.004	0	%100
44	M44	Y	-.004	-.004	0	%100
45	MP11	Y	-.009	-.009	0	%100
46	M46A	Y	-.004	-.004	0	%100
47	M47	Y	-.004	-.004	0	%100
48	MP10	Y	-.009	-.009	0	%100
49	M49	Y	-.004	-.004	0	%100
50	M50	Y	-.004	-.004	0	%100
51	MP9	Y	-.009	-.009	0	%100
52	M52	Y	-.004	-.004	0	%100
53	M53	Y	-.004	-.004	0	%100
54	MP8	Y	-.009	-.009	0	%100
55	M55	Y	-.004	-.004	0	%100
56	M56	Y	-.004	-.004	0	%100
57	MP7	Y	-.009	-.009	0	%100
58	M58	Y	-.004	-.004	0	%100
59	M59	Y	-.004	-.004	0	%100
60	MP6	Y	-.009	-.009	0	%100
61	M61	Y	-.004	-.004	0	%100
62	M62	Y	-.004	-.004	0	%100
63	MP5	Y	-.009	-.009	0	%100
64	M64	Y	-.004	-.004	0	%100
65	M65	Y	-.004	-.004	0	%100
66	M66	Y	-.009	-.009	0	%100
67	M67	Y	-.004	-.004	0	%100
68	M68	Y	-.004	-.004	0	%100
69	M69	Y	-.009	-.009	0	%100
70	M70	Y	-.004	-.004	0	%100
71	M71	Y	-.004	-.004	0	%100
72	M72	Y	-.009	-.009	0	%100
73	M73	Y	-.004	-.004	0	%100
74	M74	Y	-.004	-.004	0	%100
75	M75	Y	-.009	-.009	0	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.045	-.045	0	%100
2	M2	Z	-.004	-.004	0	%100
3	M3	Z	-.004	-.004	0	%100
4	M4	Z	-.016	-.016	0	%100
5	M5	Z	-.011	-.011	0	%100
6	M6	Z	-.011	-.011	0	%100
7	M7	Z	-.034	-.034	0	%100
8	M8	Z	-.023	-.023	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	-.034	-.034	0	%100
12	M12	Z	-.023	-.023	0	%100
13	M13	Z	-.008	-.008	0	%100
14	M14	Z	-.004	-.004	0	%100
15	M15	Z	-.015	-.015	0	%100
16	M16	Z	-.008	-.008	0	%100
17	M17	Z	-.004	-.004	0	%100
18	M18	Z	-.015	-.015	0	%100
19	M19	Z	-.03	-.03	0	%100
20	M20	Z	-.004	-.004	0	%100

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
21	M21	Z	-.004	-.004	0	%100
22	M31	Z	-.038	-.038	0	%100
23	M32	Z	-.003	-.003	0	%100
24	M33	Z	-.003	-.003	0	%100
25	M34	Z	-.011	-.011	0	%100
26	M35	Z	-.009	-.009	0	%100
27	M36	Z	-.009	-.009	0	%100
28	MP4	Z	-.011	-.011	0	%.1
29	MP8	Z	-.011	-.011	0	%.1
30	MP5	Z	-.011	-.011	0	%9
31	M66	Z	-.011	-.011	0	%100
32	M69	Z	-.011	-.011	0	%100
33	M72	Z	-.011	-.011	0	%100
34	M75	Z	-.011	-.011	0	%100
35	MP4	Z	-.011	-.011	%99.9	%100
36	MP3	Z	-.011	-.011	%54.1	%100
37	MP2	Z	-.011	-.011	%57.8	%100
38	MP1	Z	-.011	-.011	%60.4	%100
39	MP12	Z	-.011	-.011	%74.9	%100
40	MP11	Z	-.011	-.011	%54.1	%100
41	MP10	Z	-.011	-.011	%54.2	%100
42	MP9	Z	-.011	-.011	%55.6	%100
43	MP8	Z	-.011	-.011	%99.9	%100
44	MP7	Z	-.011	-.011	%54.2	%100
45	MP6	Z	-.011	-.011	%54.2	%100
46	M1	X	0	0	0	%100
47	M2	X	0	0	0	%100
48	M3	X	0	0	0	%100
49	M4	X	0	0	0	%100
50	M5	X	0	0	0	%100
51	M6	X	0	0	0	%100
52	M7	X	0	0	0	%100
53	M8	X	0	0	0	%100
54	M9	X	0	0	0	%100
55	M10	X	0	0	0	%100
56	M11	X	0	0	0	%100
57	M12	X	0	0	0	%100
58	M13	X	0	0	0	%100
59	M14	X	0	0	0	%100
60	M15	X	0	0	0	%100
61	M16	X	0	0	0	%100
62	M17	X	0	0	0	%100
63	M18	X	0	0	0	%100
64	M19	X	0	0	0	%100
65	M20	X	0	0	0	%100
66	M21	X	0	0	0	%100
67	M31	X	0	0	0	%100
68	M32	X	0	0	0	%100
69	M33	X	0	0	0	%100
70	M34	X	0	0	0	%100
71	M35	X	0	0	0	%100
72	M36	X	0	0	0	%100
73	MP4	X	0	0	0	%100
74	MP3	X	0	0	0	%100
75	MP2	X	0	0	0	%100
76	MP1	X	0	0	0	%100
77	MP8	X	0	0	0	%.1

Member Distributed Loads (BLC 9 : Full Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
78	MP5	X	0	0	0	%9
79	M66	X	0	0	0	%100
80	M69	X	0	0	0	%100
81	M72	X	0	0	0	%100
82	M75	X	0	0	0	%100
83	MP12	X	0	0	%74.9	%100
84	MP11	X	0	0	%54.1	%100
85	MP10	X	0	0	%54.2	%100
86	MP9	X	0	0	%55.6	%100
87	MP8	X	0	0	%99.9	%100
88	MP7	X	0	0	%54.2	%100
89	MP6	X	0	0	%54.2	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.029	-.029	0	%100
2	M2	Z	-.01	-.01	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	-.01	-.01	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	-.029	-.029	0	%100
7	M7	Z	-.039	-.039	0	%100
8	M8	Z	-.026	-.026	0	%100
9	M9	Z	-.01	-.01	0	%100
10	M10	Z	-.007	-.007	0	%100
11	M11	Z	-.01	-.01	0	%100
12	M12	Z	-.007	-.007	0	%100
13	M13	Z	0	0	0	%100
14	M14	Z	-.01	-.01	0	%100
15	M15	Z	-.01	-.01	0	%100
16	M16	Z	-.02	-.02	0	%100
17	M17	Z	0	0	0	%100
18	M18	Z	-.01	-.01	0	%100
19	M19	Z	-.02	-.02	0	%100
20	M20	Z	0	0	0	%100
21	M21	Z	-.01	-.01	0	%100
22	M31	Z	-.024	-.024	0	%100
23	M32	Z	-.007	-.007	0	%100
24	M33	Z	0	0	0	%100
25	M34	Z	-.007	-.007	0	%100
26	M35	Z	0	0	0	%100
27	M36	Z	-.024	-.024	0	%100
28	MP4	Z	-.009	-.009	0	%.1
29	MP8	Z	-.009	-.009	0	%.1
30	MP5	Z	-.009	-.009	0	%9
31	M66	Z	-.009	-.009	0	%100
32	M69	Z	-.009	-.009	0	%100
33	M72	Z	-.009	-.009	0	%100
34	M75	Z	-.009	-.009	0	%100
35	MP4	Z	-.009	-.009	%99.9	%100
36	MP3	Z	-.009	-.009	%54.1	%100
37	MP2	Z	-.009	-.009	%57.8	%100
38	MP1	Z	-.009	-.009	%60.4	%100
39	MP12	Z	-.009	-.009	%74.9	%100
40	MP11	Z	-.009	-.009	%54.1	%100
41	MP10	Z	-.009	-.009	%54.2	%100

Member Distributed Loads (BLC 10 : Full Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
42	MP9	Z	-.009	-.009	%55.6	%100
43	MP8	Z	-.009	-.009	%99.9	%100
44	MP7	Z	-.009	-.009	%54.2	%100
45	MP6	Z	-.009	-.009	%54.2	%100
46	M1	X	.017	.017	0	%100
47	M2	X	.006	.006	0	%100
48	M3	X	0	0	0	%100
49	M4	X	.006	.006	0	%100
50	M5	X	0	0	0	%100
51	M6	X	.017	.017	0	%100
52	M7	X	.023	.023	0	%100
53	M8	X	.015	.015	0	%100
54	M9	X	.006	.006	0	%100
55	M10	X	.004	.004	0	%100
56	M11	X	.006	.006	0	%100
57	M12	X	.004	.004	0	%100
58	M13	X	0	0	0	%100
59	M14	X	.006	.006	0	%100
60	M15	X	.006	.006	0	%100
61	M16	X	.011	.011	0	%100
62	M17	X	0	0	0	%100
63	M18	X	.006	.006	0	%100
64	M19	X	.011	.011	0	%100
65	M20	X	0	0	0	%100
66	M21	X	.006	.006	0	%100
67	M31	X	.014	.014	0	%100
68	M32	X	.004	.004	0	%100
69	M33	X	0	0	0	%100
70	M34	X	.004	.004	0	%100
71	M35	X	0	0	0	%100
72	M36	X	.014	.014	0	%100
73	MP4	X	.005	.005	0	%100
74	MP3	X	.005	.005	0	%100
75	MP2	X	.005	.005	0	%100
76	MP1	X	.005	.005	0	%100
77	MP8	X	.005	.005	0	%.1
78	MP5	X	.005	.005	0	%9
79	M66	X	.005	.005	0	%100
80	M69	X	.005	.005	0	%100
81	M72	X	.005	.005	0	%100
82	M75	X	.005	.005	0	%100
83	MP12	X	.005	.005	%74.9	%100
84	MP11	X	.005	.005	%54.1	%100
85	MP10	X	.005	.005	%54.2	%100
86	MP9	X	.005	.005	%55.6	%100
87	MP8	X	.005	.005	%99.9	%100
88	MP7	X	.005	.005	%54.2	%100
89	MP6	X	.005	.005	%54.2	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.006	-.006	0	%100
2	M2	Z	-.008	-.008	0	%100
3	M3	Z	-.002	-.002	0	%100
4	M4	Z	-.002	-.002	0	%100
5	M5	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
6	M6	Z	-.023	-.023	0	%100
7	M7	Z	-.017	-.017	0	%100
8	M8	Z	-.011	-.011	0	%100
9	M9	Z	-.017	-.017	0	%100
10	M10	Z	-.011	-.011	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	0	0	0	%100
13	M13	Z	-.004	-.004	0	%100
14	M14	Z	-.008	-.008	0	%100
15	M15	Z	-.002	-.002	0	%100
16	M16	Z	-.015	-.015	0	%100
17	M17	Z	-.002	-.002	0	%100
18	M18	Z	-.002	-.002	0	%100
19	M19	Z	-.004	-.004	0	%100
20	M20	Z	-.002	-.002	0	%100
21	M21	Z	-.008	-.008	0	%100
22	M31	Z	-.005	-.005	0	%100
23	M32	Z	-.005	-.005	0	%100
24	M33	Z	-.001	-.001	0	%100
25	M34	Z	-.001	-.001	0	%100
26	M35	Z	-.005	-.005	0	%100
27	M36	Z	-.019	-.019	0	%100
28	MP4	Z	-.005	-.005	0	%.1
29	MP8	Z	-.005	-.005	0	%.1
30	MP5	Z	-.005	-.005	0	%9
31	M66	Z	-.005	-.005	0	%100
32	M69	Z	-.005	-.005	0	%100
33	M72	Z	-.005	-.005	0	%100
34	M75	Z	-.005	-.005	0	%100
35	MP4	Z	-.005	-.005	%99.9	%100
36	MP3	Z	-.005	-.005	%54.1	%100
37	MP2	Z	-.005	-.005	%57.8	%100
38	MP1	Z	-.005	-.005	%60.4	%100
39	MP12	Z	-.005	-.005	%74.9	%100
40	MP11	Z	-.005	-.005	%54.1	%100
41	MP10	Z	-.005	-.005	%54.2	%100
42	MP9	Z	-.005	-.005	%55.6	%100
43	MP8	Z	-.005	-.005	%99.9	%100
44	MP7	Z	-.005	-.005	%54.2	%100
45	MP6	Z	-.005	-.005	%54.2	%100
46	M1	X	.01	.01	0	%100
47	M2	X	.014	.014	0	%100
48	M3	X	.003	.003	0	%100
49	M4	X	.003	.003	0	%100
50	M5	X	.01	.01	0	%100
51	M6	X	.039	.039	0	%100
52	M7	X	.029	.029	0	%100
53	M8	X	.02	.02	0	%100
54	M9	X	.029	.029	0	%100
55	M10	X	.02	.02	0	%100
56	M11	X	0	0	0	%100
57	M12	X	0	0	0	%100
58	M13	X	.007	.007	0	%100
59	M14	X	.013	.013	0	%100
60	M15	X	.003	.003	0	%100
61	M16	X	.026	.026	0	%100
62	M17	X	.003	.003	0	%100

Member Distributed Loads (BLC 11 : Full Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
63	M18	X	.003	.003	0	%100
64	M19	X	.007	.007	0	%100
65	M20	X	.003	.003	0	%100
66	M21	X	.013	.013	0	%100
67	M31	X	.008	.008	0	%100
68	M32	X	.009	.009	0	%100
69	M33	X	.002	.002	0	%100
70	M34	X	.002	.002	0	%100
71	M35	X	.008	.008	0	%100
72	M36	X	.033	.033	0	%100
73	MP4	X	.009	.009	0	%100
74	MP3	X	.009	.009	0	%100
75	MP2	X	.009	.009	0	%100
76	MP1	X	.009	.009	0	%100
77	MP8	X	.009	.009	0	%.1
78	MP5	X	.009	.009	0	%9
79	M66	X	.009	.009	0	%100
80	M69	X	.009	.009	0	%100
81	M72	X	.009	.009	0	%100
82	M75	X	.009	.009	0	%100
83	MP12	X	.009	.009	%74.9	%100
84	MP11	X	.009	.009	%54.1	%100
85	MP10	X	.009	.009	%54.2	%100
86	MP9	X	.009	.009	%55.6	%100
87	MP8	X	.009	.009	%99.9	%100
88	MP7	X	.009	.009	%54.2	%100
89	MP6	X	.009	.009	%54.2	%100

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	0	0	0	%100
13	M13	Z	0	0	0	%100
14	M14	Z	0	0	0	%100
15	M15	Z	0	0	0	%100
16	M16	Z	0	0	0	%100
17	M17	Z	0	0	0	%100
18	M18	Z	0	0	0	%100
19	M19	Z	0	0	0	%100
20	M20	Z	0	0	0	%100
21	M21	Z	0	0	0	%100
22	M31	Z	0	0	0	%100
23	M32	Z	0	0	0	%100
24	M33	Z	0	0	0	%100
25	M34	Z	0	0	0	%100
26	M35	Z	0	0	0	%100

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
27	M36	Z	0	0	0	%100
28	MP4	Z	0	0	0	%.1
29	MP8	Z	0	0	0	%.1
30	MP5	Z	0	0	0	%9
31	M66	Z	0	0	0	%100
32	M69	Z	0	0	0	%100
33	M72	Z	0	0	0	%100
34	M75	Z	0	0	0	%100
35	MP4	Z	0	0	%99.9	%100
36	MP3	Z	0	0	%54.1	%100
37	MP2	Z	0	0	%57.8	%100
38	MP1	Z	0	0	%60.4	%100
39	MP12	Z	0	0	%74.9	%100
40	MP11	Z	0	0	%54.1	%100
41	MP10	Z	0	0	%54.2	%100
42	MP9	Z	0	0	%55.6	%100
43	MP8	Z	0	0	%99.9	%100
44	MP7	Z	0	0	%54.2	%100
45	MP6	Z	0	0	%54.2	%100
46	M1	X	0	0	0	%100
47	M2	X	.012	.012	0	%100
48	M3	X	.012	.012	0	%100
49	M4	X	0	0	0	%100
50	M5	X	.034	.034	0	%100
51	M6	X	.034	.034	0	%100
52	M7	X	.011	.011	0	%100
53	M8	X	.008	.008	0	%100
54	M9	X	.045	.045	0	%100
55	M10	X	.03	.03	0	%100
56	M11	X	.011	.011	0	%100
57	M12	X	.008	.008	0	%100
58	M13	X	.023	.023	0	%100
59	M14	X	.011	.011	0	%100
60	M15	X	0	0	0	%100
61	M16	X	.023	.023	0	%100
62	M17	X	.011	.011	0	%100
63	M18	X	0	0	0	%100
64	M19	X	0	0	0	%100
65	M20	X	.011	.011	0	%100
66	M21	X	.011	.011	0	%100
67	M31	X	0	0	0	%100
68	M32	X	.008	.008	0	%100
69	M33	X	.008	.008	0	%100
70	M34	X	0	0	0	%100
71	M35	X	.028	.028	0	%100
72	M36	X	.028	.028	0	%100
73	MP4	X	.011	.011	0	%100
74	MP3	X	.011	.011	0	%100
75	MP2	X	.011	.011	0	%100
76	MP1	X	.011	.011	0	%100
77	MP8	X	.011	.011	0	%.1
78	MP5	X	.011	.011	0	%9
79	M66	X	.011	.011	0	%100
80	M69	X	.011	.011	0	%100
81	M72	X	.011	.011	0	%100
82	M75	X	.011	.011	0	%100
83	MP12	X	.011	.011	%74.9	%100

Member Distributed Loads (BLC 12 : Full Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
84	MP11	X	.011	.011	%54.1	%100
85	MP10	X	.011	.011	%54.2	%100
86	MP9	X	.011	.011	%55.6	%100
87	MP8	X	.011	.011	%99.9	%100
88	MP7	X	.011	.011	%54.2	%100
89	MP6	X	.011	.011	%54.2	%100

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	.006	.006	0	%100
2	M2	Z	.002	.002	0	%100
3	M3	Z	.008	.008	0	%100
4	M4	Z	.002	.002	0	%100
5	M5	Z	.023	.023	0	%100
6	M6	Z	.006	.006	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	.017	.017	0	%100
10	M10	Z	.011	.011	0	%100
11	M11	Z	.017	.017	0	%100
12	M12	Z	.011	.011	0	%100
13	M13	Z	.015	.015	0	%100
14	M14	Z	.002	.002	0	%100
15	M15	Z	.002	.002	0	%100
16	M16	Z	.004	.004	0	%100
17	M17	Z	.008	.008	0	%100
18	M18	Z	.002	.002	0	%100
19	M19	Z	.004	.004	0	%100
20	M20	Z	.008	.008	0	%100
21	M21	Z	.002	.002	0	%100
22	M31	Z	.005	.005	0	%100
23	M32	Z	.001	.001	0	%100
24	M33	Z	.005	.005	0	%100
25	M34	Z	.001	.001	0	%100
26	M35	Z	.019	.019	0	%100
27	M36	Z	.005	.005	0	%100
28	MP4	Z	.005	.005	0	%.1
29	MP8	Z	.005	.005	0	%.1
30	MP5	Z	.005	.005	0	%9
31	M66	Z	.005	.005	0	%100
32	M69	Z	.005	.005	0	%100
33	M72	Z	.005	.005	0	%100
34	M75	Z	.005	.005	0	%100
35	MP4	Z	.005	.005	%99.9	%100
36	MP3	Z	.005	.005	%54.1	%100
37	MP2	Z	.005	.005	%57.8	%100
38	MP1	Z	.005	.005	%60.4	%100
39	MP12	Z	.005	.005	%74.9	%100
40	MP11	Z	.005	.005	%54.1	%100
41	MP10	Z	.005	.005	%54.2	%100
42	MP9	Z	.005	.005	%55.6	%100
43	MP8	Z	.005	.005	%99.9	%100
44	MP7	Z	.005	.005	%54.2	%100
45	MP6	Z	.005	.005	%54.2	%100
46	M1	X	.01	.01	0	%100
47	M2	X	.003	.003	0	%100

Member Distributed Loads (BLC 13 : Full Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
48	M3	X	.014	.014	0	%100
49	M4	X	.003	.003	0	%100
50	M5	X	.039	.039	0	%100
51	M6	X	.01	.01	0	%100
52	M7	X	0	0	0	%100
53	M8	X	0	0	0	%100
54	M9	X	.029	.029	0	%100
55	M10	X	.02	.02	0	%100
56	M11	X	.029	.029	0	%100
57	M12	X	.02	.02	0	%100
58	M13	X	.026	.026	0	%100
59	M14	X	.003	.003	0	%100
60	M15	X	.003	.003	0	%100
61	M16	X	.007	.007	0	%100
62	M17	X	.013	.013	0	%100
63	M18	X	.003	.003	0	%100
64	M19	X	.007	.007	0	%100
65	M20	X	.013	.013	0	%100
66	M21	X	.003	.003	0	%100
67	M31	X	.008	.008	0	%100
68	M32	X	.002	.002	0	%100
69	M33	X	.009	.009	0	%100
70	M34	X	.002	.002	0	%100
71	M35	X	.033	.033	0	%100
72	M36	X	.008	.008	0	%100
73	MP4	X	.009	.009	0	%100
74	MP3	X	.009	.009	0	%100
75	MP2	X	.009	.009	0	%100
76	MP1	X	.009	.009	0	%100
77	MP8	X	.009	.009	0	%.1
78	MP5	X	.009	.009	0	%9
79	M66	X	.009	.009	0	%100
80	M69	X	.009	.009	0	%100
81	M72	X	.009	.009	0	%100
82	M75	X	.009	.009	0	%100
83	MP12	X	.009	.009	%74.9	%100
84	MP11	X	.009	.009	%54.1	%100
85	MP10	X	.009	.009	%54.2	%100
86	MP9	X	.009	.009	%55.6	%100
87	MP8	X	.009	.009	%99.9	%100
88	MP7	X	.009	.009	%54.2	%100
89	MP6	X	.009	.009	%54.2	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	.029	.029	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	.01	.01	0	%100
4	M4	Z	.01	.01	0	%100
5	M5	Z	.029	.029	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	.01	.01	0	%100
8	M8	Z	.007	.007	0	%100
9	M9	Z	.01	.01	0	%100
10	M10	Z	.007	.007	0	%100
11	M11	Z	.039	.039	0	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
12	M12	Z	.026	.026	0	%100
13	M13	Z	.02	.02	0	%100
14	M14	Z	0	0	0	%100
15	M15	Z	.01	.01	0	%100
16	M16	Z	0	0	0	%100
17	M17	Z	.01	.01	0	%100
18	M18	Z	.01	.01	0	%100
19	M19	Z	.02	.02	0	%100
20	M20	Z	.01	.01	0	%100
21	M21	Z	0	0	0	%100
22	M31	Z	.024	.024	0	%100
23	M32	Z	0	0	0	%100
24	M33	Z	.007	.007	0	%100
25	M34	Z	.007	.007	0	%100
26	M35	Z	.024	.024	0	%100
27	M36	Z	0	0	0	%100
28	MP4	Z	.009	.009	0	%.1
29	MP8	Z	.009	.009	0	%.1
30	MP5	Z	.009	.009	0	%9
31	M66	Z	.009	.009	0	%100
32	M69	Z	.009	.009	0	%100
33	M72	Z	.009	.009	0	%100
34	M75	Z	.009	.009	0	%100
35	MP4	Z	.009	.009	%99.9	%100
36	MP3	Z	.009	.009	%54.1	%100
37	MP2	Z	.009	.009	%57.8	%100
38	MP1	Z	.009	.009	%60.4	%100
39	MP12	Z	.009	.009	%74.9	%100
40	MP11	Z	.009	.009	%54.1	%100
41	MP10	Z	.009	.009	%54.2	%100
42	MP9	Z	.009	.009	%55.6	%100
43	MP8	Z	.009	.009	%99.9	%100
44	MP7	Z	.009	.009	%54.2	%100
45	MP6	Z	.009	.009	%54.2	%100
46	M1	X	.017	.017	0	%100
47	M2	X	0	0	0	%100
48	M3	X	.006	.006	0	%100
49	M4	X	.006	.006	0	%100
50	M5	X	.017	.017	0	%100
51	M6	X	0	0	0	%100
52	M7	X	.006	.006	0	%100
53	M8	X	.004	.004	0	%100
54	M9	X	.006	.006	0	%100
55	M10	X	.004	.004	0	%100
56	M11	X	.023	.023	0	%100
57	M12	X	.015	.015	0	%100
58	M13	X	.011	.011	0	%100
59	M14	X	0	0	0	%100
60	M15	X	.006	.006	0	%100
61	M16	X	0	0	0	%100
62	M17	X	.006	.006	0	%100
63	M18	X	.006	.006	0	%100
64	M19	X	.011	.011	0	%100
65	M20	X	.006	.006	0	%100
66	M21	X	0	0	0	%100
67	M31	X	.014	.014	0	%100
68	M32	X	0	0	0	%100

Member Distributed Loads (BLC 14 : Full Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
69	M33	X	.004	.004	0	%100
70	M34	X	.004	.004	0	%100
71	M35	X	.014	.014	0	%100
72	M36	X	0	0	0	%100
73	MP4	X	.005	.005	0	%100
74	MP3	X	.005	.005	0	%100
75	MP2	X	.005	.005	0	%100
76	MP1	X	.005	.005	0	%100
77	MP8	X	.005	.005	0	%.1
78	MP5	X	.005	.005	0	%9
79	M66	X	.005	.005	0	%100
80	M69	X	.005	.005	0	%100
81	M72	X	.005	.005	0	%100
82	M75	X	.005	.005	0	%100
83	MP12	X	.005	.005	%74.9	%100
84	MP11	X	.005	.005	%54.1	%100
85	MP10	X	.005	.005	%54.2	%100
86	MP9	X	.005	.005	%55.6	%100
87	MP8	X	.005	.005	%99.9	%100
88	MP7	X	.005	.005	%54.2	%100
89	MP6	X	.005	.005	%54.2	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.013	-.013	0	%100
2	M2	Z	-.001	-.001	0	%100
3	M3	Z	-.001	-.001	0	%100
4	M4	Z	-.006	-.006	0	%100
5	M5	Z	-.003	-.003	0	%100
6	M6	Z	-.003	-.003	0	%100
7	M7	Z	-.01	-.01	0	%100
8	M8	Z	-.006	-.006	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	-.01	-.01	0	%100
12	M12	Z	-.006	-.006	0	%100
13	M13	Z	-.002	-.002	0	%100
14	M14	Z	-.001	-.001	0	%100
15	M15	Z	-.006	-.006	0	%100
16	M16	Z	-.002	-.002	0	%100
17	M17	Z	-.001	-.001	0	%100
18	M18	Z	-.006	-.006	0	%100
19	M19	Z	-.008	-.008	0	%100
20	M20	Z	-.001	-.001	0	%100
21	M21	Z	-.001	-.001	0	%100
22	M24	Z	0	0	0	%100
23	M31	Z	-.011	-.011	0	%100
24	M32	Z	-.001	-.001	0	%100
25	M33	Z	-.001	-.001	0	%100
26	M34	Z	-.005	-.005	0	%100
27	M35	Z	-.003	-.003	0	%100
28	M36	Z	-.003	-.003	0	%100
29	M39	Z	0	0	0	%100
30	MP4	Z	-.005	-.005	0	%.1
31	M31A	Z	0	0	0	%100
32	M32A	Z	0	0	0	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
33	M34A	Z	0	0	0	%100
34	M35A	Z	0	0	0	%100
35	M37	Z	0	0	0	%100
36	M38	Z	0	0	0	%100
37	M40	Z	-.005	-.005	0	%100
38	M41	Z	-.005	-.005	0	%100
39	M43	Z	-.005	-.005	0	%100
40	M44	Z	-.005	-.005	0	%100
41	M46A	Z	-.005	-.005	0	%100
42	M47	Z	-.005	-.005	0	%100
43	M49	Z	-.005	-.005	0	%100
44	M50	Z	-.005	-.005	0	%100
45	M52	Z	-.005	-.005	0	%100
46	M53	Z	-.005	-.005	0	%100
47	MP8	Z	-.005	-.005	0	%.1
48	M55	Z	-.005	-.005	0	%100
49	M56	Z	-.005	-.005	0	%100
50	M58	Z	-.005	-.005	0	%100
51	M59	Z	-.005	-.005	0	%100
52	M61	Z	-.005	-.005	0	%100
53	M62	Z	-.005	-.005	0	%100
54	MP5	Z	-.005	-.005	0	%9
55	M64	Z	0	0	0	%100
56	M65	Z	0	0	0	%100
57	M66	Z	-.005	-.005	0	%100
58	M67	Z	0	0	0	%100
59	M68	Z	0	0	0	%100
60	M69	Z	-.005	-.005	0	%100
61	M70	Z	0	0	0	%100
62	M71	Z	0	0	0	%100
63	M72	Z	-.005	-.005	0	%100
64	M73	Z	0	0	0	%100
65	M74	Z	0	0	0	%100
66	M75	Z	-.005	-.005	0	%100
67	MP4	Z	-.005	-.005	%99.9	%100
68	MP3	Z	-.005	-.005	%54.1	%100
69	MP2	Z	-.005	-.005	%57.8	%100
70	MP1	Z	-.005	-.005	%60.4	%100
71	MP12	Z	-.005	-.005	%74.9	%100
72	MP11	Z	-.005	-.005	%54.1	%100
73	MP10	Z	-.005	-.005	%54.2	%100
74	MP9	Z	-.005	-.005	%55.6	%100
75	MP8	Z	-.005	-.005	%99.9	%100
76	MP7	Z	-.005	-.005	%54.2	%100
77	MP6	Z	-.005	-.005	%54.2	%100
78	M1	X	0	0	0	%100
79	M2	X	0	0	0	%100
80	M3	X	0	0	0	%100
81	M4	X	0	0	0	%100
82	M5	X	0	0	0	%100
83	M6	X	0	0	0	%100
84	M7	X	0	0	0	%100
85	M8	X	0	0	0	%100
86	M9	X	0	0	0	%100
87	M10	X	0	0	0	%100
88	M11	X	0	0	0	%100
89	M12	X	0	0	0	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
90	M13	X	0	0	0	%100
91	M14	X	0	0	0	%100
92	M15	X	0	0	0	%100
93	M16	X	0	0	0	%100
94	M17	X	0	0	0	%100
95	M18	X	0	0	0	%100
96	M19	X	0	0	0	%100
97	M20	X	0	0	0	%100
98	M21	X	0	0	0	%100
99	M24	X	0	0	0	%100
100	M31	X	0	0	0	%100
101	M32	X	0	0	0	%100
102	M33	X	0	0	0	%100
103	M34	X	0	0	0	%100
104	M35	X	0	0	0	%100
105	M36	X	0	0	0	%100
106	M39	X	0	0	0	%100
107	MP4	X	0	0	0	%100
108	M31A	X	0	0	0	%100
109	M32A	X	0	0	0	%100
110	MP3	X	0	0	0	%100
111	M34A	X	0	0	0	%100
112	M35A	X	0	0	0	%100
113	MP2	X	0	0	0	%100
114	M37	X	0	0	0	%100
115	M38	X	0	0	0	%100
116	MP1	X	0	0	0	%100
117	M40	X	0	0	0	%100
118	M41	X	0	0	0	%100
119	M43	X	0	0	0	%100
120	M44	X	0	0	0	%100
121	M46A	X	0	0	0	%100
122	M47	X	0	0	0	%100
123	M49	X	0	0	0	%100
124	M50	X	0	0	0	%100
125	M52	X	0	0	0	%100
126	M53	X	0	0	0	%100
127	MP8	X	0	0	0	%.1
128	M55	X	0	0	0	%100
129	M56	X	0	0	0	%100
130	M58	X	0	0	0	%100
131	M59	X	0	0	0	%100
132	M61	X	0	0	0	%100
133	M62	X	0	0	0	%100
134	MP5	X	0	0	0	%9
135	M64	X	0	0	0	%100
136	M65	X	0	0	0	%100
137	M66	X	0	0	0	%100
138	M67	X	0	0	0	%100
139	M68	X	0	0	0	%100
140	M69	X	0	0	0	%100
141	M70	X	0	0	0	%100
142	M71	X	0	0	0	%100
143	M72	X	0	0	0	%100
144	M73	X	0	0	0	%100
145	M74	X	0	0	0	%100
146	M75	X	0	0	0	%100

Member Distributed Loads (BLC 21 : Ice Wind Members (0 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
147	MP12	X	0	0	%74.9	%100
148	MP11	X	0	0	%54.1	%100
149	MP10	X	0	0	%54.2	%100
150	MP9	X	0	0	%55.6	%100
151	MP8	X	0	0	%99.9	%100
152	MP7	X	0	0	%54.2	%100
153	MP6	X	0	0	%54.2	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.009	-.009	0	%100
2	M2	Z	-.002	-.002	0	%100
3	M3	Z	-.001	-.001	0	%100
4	M4	Z	-.004	-.004	0	%100
5	M5	Z	-.001	-.001	0	%100
6	M6	Z	-.006	-.006	0	%100
7	M7	Z	-.011	-.011	0	%100
8	M8	Z	-.007	-.007	0	%100
9	M9	Z	-.002	-.002	0	%100
10	M10	Z	-.001	-.001	0	%100
11	M11	Z	-.005	-.005	0	%100
12	M12	Z	-.003	-.003	0	%100
13	M13	Z	-.001	-.001	0	%100
14	M14	Z	-.002	-.002	0	%100
15	M15	Z	-.004	-.004	0	%100
16	M16	Z	-.004	-.004	0	%100
17	M17	Z	-.001	-.001	0	%100
18	M18	Z	-.004	-.004	0	%100
19	M19	Z	-.006	-.006	0	%100
20	M20	Z	-.001	-.001	0	%100
21	M21	Z	-.002	-.002	0	%100
22	M24	Z	0	0	0	%100
23	M31	Z	-.008	-.008	0	%100
24	M32	Z	-.002	-.002	0	%100
25	M33	Z	-.001	-.001	0	%100
26	M34	Z	-.004	-.004	0	%100
27	M35	Z	-.001	-.001	0	%100
28	M36	Z	-.005	-.005	0	%100
29	M39	Z	0	0	0	%100
30	MP4	Z	-.004	-.004	0	%.1
31	M31A	Z	0	0	0	%100
32	M32A	Z	0	0	0	%100
33	M34A	Z	0	0	0	%100
34	M35A	Z	0	0	0	%100
35	M37	Z	0	0	0	%100
36	M38	Z	0	0	0	%100
37	M40	Z	-.004	-.004	0	%100
38	M41	Z	-.004	-.004	0	%100
39	M43	Z	-.004	-.004	0	%100
40	M44	Z	-.004	-.004	0	%100
41	M46A	Z	-.004	-.004	0	%100
42	M47	Z	-.004	-.004	0	%100
43	M49	Z	-.004	-.004	0	%100
44	M50	Z	-.004	-.004	0	%100
45	M52	Z	-.004	-.004	0	%100
46	M53	Z	-.004	-.004	0	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
47	MP8	Z	-.004	-.004	0	%.1
48	M55	Z	-.004	-.004	0	%100
49	M56	Z	-.004	-.004	0	%100
50	M58	Z	-.004	-.004	0	%100
51	M59	Z	-.004	-.004	0	%100
52	M61	Z	-.004	-.004	0	%100
53	M62	Z	-.004	-.004	0	%100
54	MP5	Z	-.004	-.004	0	%9
55	M64	Z	0	0	0	%100
56	M65	Z	0	0	0	%100
57	M66	Z	-.004	-.004	0	%100
58	M67	Z	0	0	0	%100
59	M68	Z	0	0	0	%100
60	M69	Z	-.004	-.004	0	%100
61	M70	Z	0	0	0	%100
62	M71	Z	0	0	0	%100
63	M72	Z	-.004	-.004	0	%100
64	M73	Z	0	0	0	%100
65	M74	Z	0	0	0	%100
66	M75	Z	-.004	-.004	0	%100
67	MP4	Z	-.004	-.004	%99.9	%100
68	MP3	Z	-.004	-.004	%54.1	%100
69	MP2	Z	-.004	-.004	%57.8	%100
70	MP1	Z	-.004	-.004	%60.4	%100
71	MP12	Z	-.004	-.004	%74.9	%100
72	MP11	Z	-.004	-.004	%54.1	%100
73	MP10	Z	-.004	-.004	%54.2	%100
74	MP9	Z	-.004	-.004	%55.6	%100
75	MP8	Z	-.004	-.004	%99.9	%100
76	MP7	Z	-.004	-.004	%54.2	%100
77	MP6	Z	-.004	-.004	%54.2	%100
78	M1	X	.005	.005	0	%100
79	M2	X	.001	.001	0	%100
80	M3	X	0	0	0	%100
81	M4	X	.002	.002	0	%100
82	M5	X	.001	.001	0	%100
83	M6	X	.004	.004	0	%100
84	M7	X	.006	.006	0	%100
85	M8	X	.004	.004	0	%100
86	M9	X	.001	.001	0	%100
87	M10	X	.001	.001	0	%100
88	M11	X	.003	.003	0	%100
89	M12	X	.002	.002	0	%100
90	M13	X	0	0	0	%100
91	M14	X	.001	.001	0	%100
92	M15	X	.003	.003	0	%100
93	M16	X	.002	.002	0	%100
94	M17	X	0	0	0	%100
95	M18	X	.003	.003	0	%100
96	M19	X	.004	.004	0	%100
97	M20	X	0	0	0	%100
98	M21	X	.001	.001	0	%100
99	M24	X	0	0	0	%100
100	M31	X	.005	.005	0	%100
101	M32	X	.001	.001	0	%100
102	M33	X	0	0	0	%100
103	M34	X	.002	.002	0	%100

Member Distributed Loads (BLC 22 : Ice Wind Members (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
104	M35	X	.001	.001	0	%100
105	M36	X	.003	.003	0	%100
106	M39	X	0	0	0	%100
107	MP4	X	.003	.003	0	%100
108	M31A	X	0	0	0	%100
109	M32A	X	0	0	0	%100
110	MP3	X	.003	.003	0	%100
111	M34A	X	0	0	0	%100
112	M35A	X	0	0	0	%100
113	MP2	X	.003	.003	0	%100
114	M37	X	0	0	0	%100
115	M38	X	0	0	0	%100
116	MP1	X	.003	.003	0	%100
117	M40	X	.002	.002	0	%100
118	M41	X	.002	.002	0	%100
119	M43	X	.002	.002	0	%100
120	M44	X	.002	.002	0	%100
121	M46A	X	.002	.002	0	%100
122	M47	X	.002	.002	0	%100
123	M49	X	.002	.002	0	%100
124	M50	X	.002	.002	0	%100
125	M52	X	.002	.002	0	%100
126	M53	X	.002	.002	0	%100
127	MP8	X	.003	.003	0	%.1
128	M55	X	.002	.002	0	%100
129	M56	X	.002	.002	0	%100
130	M58	X	.002	.002	0	%100
131	M59	X	.002	.002	0	%100
132	M61	X	.002	.002	0	%100
133	M62	X	.002	.002	0	%100
134	MP5	X	.003	.003	0	%9
135	M64	X	0	0	0	%100
136	M65	X	0	0	0	%100
137	M66	X	.003	.003	0	%100
138	M67	X	0	0	0	%100
139	M68	X	0	0	0	%100
140	M69	X	.003	.003	0	%100
141	M70	X	0	0	0	%100
142	M71	X	0	0	0	%100
143	M72	X	.003	.003	0	%100
144	M73	X	0	0	0	%100
145	M74	X	0	0	0	%100
146	M75	X	.003	.003	0	%100
147	MP12	X	.003	.003	%74.9	%100
148	MP11	X	.003	.003	%54.1	%100
149	MP10	X	.003	.003	%54.2	%100
150	MP9	X	.003	.003	%55.6	%100
151	MP8	X	.003	.003	%99.9	%100
152	MP7	X	.003	.003	%54.2	%100
153	MP6	X	.003	.003	%54.2	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	-.003	-.003	0	%100
2	M2	Z	-.002	-.002	0	%100
3	M3	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
4	M4	Z	-.002	-.002	0	%100
5	M5	Z	-.002	-.002	0	%100
6	M6	Z	-.005	-.005	0	%100
7	M7	Z	-.005	-.005	0	%100
8	M8	Z	-.003	-.003	0	%100
9	M9	Z	-.003	-.003	0	%100
10	M10	Z	-.002	-.002	0	%100
11	M11	Z	-.002	-.002	0	%100
12	M12	Z	-.001	-.001	0	%100
13	M13	Z	-.001	-.001	0	%100
14	M14	Z	-.002	-.002	0	%100
15	M15	Z	-.002	-.002	0	%100
16	M16	Z	-.003	-.003	0	%100
17	M17	Z	-.001	-.001	0	%100
18	M18	Z	-.002	-.002	0	%100
19	M19	Z	-.002	-.002	0	%100
20	M20	Z	-.001	-.001	0	%100
21	M21	Z	-.002	-.002	0	%100
22	M24	Z	0	0	0	%100
23	M31	Z	-.003	-.003	0	%100
24	M32	Z	-.001	-.001	0	%100
25	M33	Z	-.001	-.001	0	%100
26	M34	Z	-.002	-.002	0	%100
27	M35	Z	-.001	-.001	0	%100
28	M36	Z	-.004	-.004	0	%100
29	M39	Z	0	0	0	%100
30	MP4	Z	-.003	-.003	0	%.1
31	M31A	Z	0	0	0	%100
32	M32A	Z	0	0	0	%100
33	M34A	Z	0	0	0	%100
34	M35A	Z	0	0	0	%100
35	M37	Z	0	0	0	%100
36	M38	Z	0	0	0	%100
37	M40	Z	-.002	-.002	0	%100
38	M41	Z	-.002	-.002	0	%100
39	M43	Z	-.002	-.002	0	%100
40	M44	Z	-.002	-.002	0	%100
41	M46A	Z	-.002	-.002	0	%100
42	M47	Z	-.002	-.002	0	%100
43	M49	Z	-.002	-.002	0	%100
44	M50	Z	-.002	-.002	0	%100
45	M52	Z	-.002	-.002	0	%100
46	M53	Z	-.002	-.002	0	%100
47	MP8	Z	-.003	-.003	0	%.1
48	M55	Z	-.002	-.002	0	%100
49	M56	Z	-.002	-.002	0	%100
50	M58	Z	-.002	-.002	0	%100
51	M59	Z	-.002	-.002	0	%100
52	M61	Z	-.002	-.002	0	%100
53	M62	Z	-.002	-.002	0	%100
54	MP5	Z	-.003	-.003	0	%9
55	M64	Z	0	0	0	%100
56	M65	Z	0	0	0	%100
57	M66	Z	-.003	-.003	0	%100
58	M67	Z	0	0	0	%100
59	M68	Z	0	0	0	%100
60	M69	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
61	M70	Z	0	0	0	%100
62	M71	Z	0	0	0	%100
63	M72	Z	-.003	-.003	0	%100
64	M73	Z	0	0	0	%100
65	M74	Z	0	0	0	%100
66	M75	Z	-.003	-.003	0	%100
67	MP4	Z	-.003	-.003	%99.9	%100
68	MP3	Z	-.003	-.003	%54.1	%100
69	MP2	Z	-.003	-.003	%57.8	%100
70	MP1	Z	-.003	-.003	%60.4	%100
71	MP12	Z	-.003	-.003	%74.9	%100
72	MP11	Z	-.003	-.003	%54.1	%100
73	MP10	Z	-.003	-.003	%54.2	%100
74	MP9	Z	-.003	-.003	%55.6	%100
75	MP8	Z	-.003	-.003	%99.9	%100
76	MP7	Z	-.003	-.003	%54.2	%100
77	MP6	Z	-.003	-.003	%54.2	%100
78	M1	X	.006	.006	0	%100
79	M2	X	.003	.003	0	%100
80	M3	X	.001	.001	0	%100
81	M4	X	.003	.003	0	%100
82	M5	X	.003	.003	0	%100
83	M6	X	.008	.008	0	%100
84	M7	X	.009	.009	0	%100
85	M8	X	.005	.005	0	%100
86	M9	X	.005	.005	0	%100
87	M10	X	.003	.003	0	%100
88	M11	X	.004	.004	0	%100
89	M12	X	.002	.002	0	%100
90	M13	X	.002	.002	0	%100
91	M14	X	.003	.003	0	%100
92	M15	X	.003	.003	0	%100
93	M16	X	.005	.005	0	%100
94	M17	X	.001	.001	0	%100
95	M18	X	.003	.003	0	%100
96	M19	X	.004	.004	0	%100
97	M20	X	.001	.001	0	%100
98	M21	X	.003	.003	0	%100
99	M24	X	0	0	0	%100
100	M31	X	.006	.006	0	%100
101	M32	X	.002	.002	0	%100
102	M33	X	.001	.001	0	%100
103	M34	X	.003	.003	0	%100
104	M35	X	.002	.002	0	%100
105	M36	X	.007	.007	0	%100
106	M39	X	0	0	0	%100
107	MP4	X	.004	.004	0	%100
108	M31A	X	0	0	0	%100
109	M32A	X	0	0	0	%100
110	MP3	X	.004	.004	0	%100
111	M34A	X	0	0	0	%100
112	M35A	X	0	0	0	%100
113	MP2	X	.004	.004	0	%100
114	M37	X	0	0	0	%100
115	M38	X	0	0	0	%100
116	MP1	X	.004	.004	0	%100
117	M40	X	.004	.004	0	%100

Member Distributed Loads (BLC 23 : Ice Wind Members (60 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
118	M41	X	.004	.004	0	%100
119	M43	X	.004	.004	0	%100
120	M44	X	.004	.004	0	%100
121	M46A	X	.004	.004	0	%100
122	M47	X	.004	.004	0	%100
123	M49	X	.004	.004	0	%100
124	M50	X	.004	.004	0	%100
125	M52	X	.004	.004	0	%100
126	M53	X	.004	.004	0	%100
127	MP8	X	.004	.004	0	%.1
128	M55	X	.004	.004	0	%100
129	M56	X	.004	.004	0	%100
130	M58	X	.004	.004	0	%100
131	M59	X	.004	.004	0	%100
132	M61	X	.004	.004	0	%100
133	M62	X	.004	.004	0	%100
134	MP5	X	.004	.004	0	%9
135	M64	X	0	0	0	%100
136	M65	X	0	0	0	%100
137	M66	X	.004	.004	0	%100
138	M67	X	0	0	0	%100
139	M68	X	0	0	0	%100
140	M69	X	.004	.004	0	%100
141	M70	X	0	0	0	%100
142	M71	X	0	0	0	%100
143	M72	X	.004	.004	0	%100
144	M73	X	0	0	0	%100
145	M74	X	0	0	0	%100
146	M75	X	.004	.004	0	%100
147	MP12	X	.004	.004	%74.9	%100
148	MP11	X	.004	.004	%54.1	%100
149	MP10	X	.004	.004	%54.2	%100
150	MP9	X	.004	.004	%55.6	%100
151	MP8	X	.004	.004	%99.9	%100
152	MP7	X	.004	.004	%54.2	%100
153	MP6	X	.004	.004	%54.2	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M3	Z	0	0	0	%100
4	M4	Z	0	0	0	%100
5	M5	Z	0	0	0	%100
6	M6	Z	0	0	0	%100
7	M7	Z	0	0	0	%100
8	M8	Z	0	0	0	%100
9	M9	Z	0	0	0	%100
10	M10	Z	0	0	0	%100
11	M11	Z	0	0	0	%100
12	M12	Z	0	0	0	%100
13	M13	Z	0	0	0	%100
14	M14	Z	0	0	0	%100
15	M15	Z	0	0	0	%100
16	M16	Z	0	0	0	%100
17	M17	Z	0	0	0	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
18	M18	Z	0	0	0	%100
19	M19	Z	0	0	0	%100
20	M20	Z	0	0	0	%100
21	M21	Z	0	0	0	%100
22	M24	Z	0	0	0	%100
23	M31	Z	0	0	0	%100
24	M32	Z	0	0	0	%100
25	M33	Z	0	0	0	%100
26	M34	Z	0	0	0	%100
27	M35	Z	0	0	0	%100
28	M36	Z	0	0	0	%100
29	M39	Z	0	0	0	%100
30	MP4	Z	0	0	0	%.1
31	M31A	Z	0	0	0	%100
32	M32A	Z	0	0	0	%100
33	M34A	Z	0	0	0	%100
34	M35A	Z	0	0	0	%100
35	M37	Z	0	0	0	%100
36	M38	Z	0	0	0	%100
37	M40	Z	0	0	0	%100
38	M41	Z	0	0	0	%100
39	M43	Z	0	0	0	%100
40	M44	Z	0	0	0	%100
41	M46A	Z	0	0	0	%100
42	M47	Z	0	0	0	%100
43	M49	Z	0	0	0	%100
44	M50	Z	0	0	0	%100
45	M52	Z	0	0	0	%100
46	M53	Z	0	0	0	%100
47	MP8	Z	0	0	0	%.1
48	M55	Z	0	0	0	%100
49	M56	Z	0	0	0	%100
50	M58	Z	0	0	0	%100
51	M59	Z	0	0	0	%100
52	M61	Z	0	0	0	%100
53	M62	Z	0	0	0	%100
54	MP5	Z	0	0	0	%9
55	M64	Z	0	0	0	%100
56	M65	Z	0	0	0	%100
57	M66	Z	0	0	0	%100
58	M67	Z	0	0	0	%100
59	M68	Z	0	0	0	%100
60	M69	Z	0	0	0	%100
61	M70	Z	0	0	0	%100
62	M71	Z	0	0	0	%100
63	M72	Z	0	0	0	%100
64	M73	Z	0	0	0	%100
65	M74	Z	0	0	0	%100
66	M75	Z	0	0	0	%100
67	MP4	Z	0	0	%99.9	%100
68	MP3	Z	0	0	%54.1	%100
69	MP2	Z	0	0	%57.8	%100
70	MP1	Z	0	0	%60.4	%100
71	MP12	Z	0	0	%74.9	%100
72	MP11	Z	0	0	%54.1	%100
73	MP10	Z	0	0	%54.2	%100
74	MP9	Z	0	0	%55.6	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
75	MP8	Z	0	0	%99.9	%100
76	MP7	Z	0	0	%54.2	%100
77	MP6	Z	0	0	%54.2	%100
78	M1	X	.005	.005	0	%100
79	M2	X	.003	.003	0	%100
80	M3	X	.003	.003	0	%100
81	M4	X	.003	.003	0	%100
82	M5	X	.007	.007	0	%100
83	M6	X	.007	.007	0	%100
84	M7	X	.006	.006	0	%100
85	M8	X	.004	.004	0	%100
86	M9	X	.008	.008	0	%100
87	M10	X	.005	.005	0	%100
88	M11	X	.006	.006	0	%100
89	M12	X	.004	.004	0	%100
90	M13	X	.005	.005	0	%100
91	M14	X	.003	.003	0	%100
92	M15	X	.003	.003	0	%100
93	M16	X	.005	.005	0	%100
94	M17	X	.003	.003	0	%100
95	M18	X	.003	.003	0	%100
96	M19	X	.003	.003	0	%100
97	M20	X	.003	.003	0	%100
98	M21	X	.003	.003	0	%100
99	M24	X	0	0	0	%100
100	M31	X	.005	.005	0	%100
101	M32	X	.002	.002	0	%100
102	M33	X	.002	.002	0	%100
103	M34	X	.003	.003	0	%100
104	M35	X	.006	.006	0	%100
105	M36	X	.006	.006	0	%100
106	M39	X	0	0	0	%100
107	MP4	X	.005	.005	0	%100
108	M31A	X	0	0	0	%100
109	M32A	X	0	0	0	%100
110	MP3	X	.005	.005	0	%100
111	M34A	X	0	0	0	%100
112	M35A	X	0	0	0	%100
113	MP2	X	.005	.005	0	%100
114	M37	X	0	0	0	%100
115	M38	X	0	0	0	%100
116	MP1	X	.005	.005	0	%100
117	M40	X	.005	.005	0	%100
118	M41	X	.005	.005	0	%100
119	M43	X	.005	.005	0	%100
120	M44	X	.005	.005	0	%100
121	M46A	X	.005	.005	0	%100
122	M47	X	.005	.005	0	%100
123	M49	X	.005	.005	0	%100
124	M50	X	.005	.005	0	%100
125	M52	X	.005	.005	0	%100
126	M53	X	.005	.005	0	%100
127	MP8	X	.005	.005	0	%.1
128	M55	X	.005	.005	0	%100
129	M56	X	.005	.005	0	%100
130	M58	X	.005	.005	0	%100
131	M59	X	.005	.005	0	%100

Member Distributed Loads (BLC 24 : Ice Wind Members (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
132	M61	X	.005	.005	0	%100
133	M62	X	.005	.005	0	%100
134	MP5	X	.005	.005	0	%9
135	M64	X	0	0	0	%100
136	M65	X	0	0	0	%100
137	M66	X	.005	.005	0	%100
138	M67	X	0	0	0	%100
139	M68	X	0	0	0	%100
140	M69	X	.005	.005	0	%100
141	M70	X	0	0	0	%100
142	M71	X	0	0	0	%100
143	M72	X	.005	.005	0	%100
144	M73	X	0	0	0	%100
145	M74	X	0	0	0	%100
146	M75	X	.005	.005	0	%100
147	MP12	X	.005	.005	%74.9	%100
148	MP11	X	.005	.005	%54.1	%100
149	MP10	X	.005	.005	%54.2	%100
150	MP9	X	.005	.005	%55.6	%100
151	MP8	X	.005	.005	%99.9	%100
152	MP7	X	.005	.005	%54.2	%100
153	MP6	X	.005	.005	%54.2	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	.003	.003	0	%100
2	M2	Z	.001	.001	0	%100
3	M3	Z	.002	.002	0	%100
4	M4	Z	.002	.002	0	%100
5	M5	Z	.005	.005	0	%100
6	M6	Z	.002	.002	0	%100
7	M7	Z	.002	.002	0	%100
8	M8	Z	.001	.001	0	%100
9	M9	Z	.003	.003	0	%100
10	M10	Z	.002	.002	0	%100
11	M11	Z	.005	.005	0	%100
12	M12	Z	.003	.003	0	%100
13	M13	Z	.003	.003	0	%100
14	M14	Z	.001	.001	0	%100
15	M15	Z	.002	.002	0	%100
16	M16	Z	.001	.001	0	%100
17	M17	Z	.002	.002	0	%100
18	M18	Z	.002	.002	0	%100
19	M19	Z	.002	.002	0	%100
20	M20	Z	.002	.002	0	%100
21	M21	Z	.001	.001	0	%100
22	M24	Z	0	0	0	%100
23	M31	Z	.003	.003	0	%100
24	M32	Z	.001	.001	0	%100
25	M33	Z	.001	.001	0	%100
26	M34	Z	.002	.002	0	%100
27	M35	Z	.004	.004	0	%100
28	M36	Z	.001	.001	0	%100
29	M39	Z	0	0	0	%100
30	MP4	Z	.003	.003	0	%.1
31	M31A	Z	0	0	0	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
32	M32A	Z	0	0	0	%100
33	M34A	Z	0	0	0	%100
34	M35A	Z	0	0	0	%100
35	M37	Z	0	0	0	%100
36	M38	Z	0	0	0	%100
37	M40	Z	.002	.002	0	%100
38	M41	Z	.002	.002	0	%100
39	M43	Z	.002	.002	0	%100
40	M44	Z	.002	.002	0	%100
41	M46A	Z	.002	.002	0	%100
42	M47	Z	.002	.002	0	%100
43	M49	Z	.002	.002	0	%100
44	M50	Z	.002	.002	0	%100
45	M52	Z	.002	.002	0	%100
46	M53	Z	.002	.002	0	%100
47	MP8	Z	.003	.003	0	%.1
48	M55	Z	.002	.002	0	%100
49	M56	Z	.002	.002	0	%100
50	M58	Z	.002	.002	0	%100
51	M59	Z	.002	.002	0	%100
52	M61	Z	.002	.002	0	%100
53	M62	Z	.002	.002	0	%100
54	MP5	Z	.003	.003	0	%9
55	M64	Z	0	0	0	%100
56	M65	Z	0	0	0	%100
57	M66	Z	.003	.003	0	%100
58	M67	Z	0	0	0	%100
59	M68	Z	0	0	0	%100
60	M69	Z	.003	.003	0	%100
61	M70	Z	0	0	0	%100
62	M71	Z	0	0	0	%100
63	M72	Z	.003	.003	0	%100
64	M73	Z	0	0	0	%100
65	M74	Z	0	0	0	%100
66	M75	Z	.003	.003	0	%100
67	MP4	Z	.003	.003	%99.9	%100
68	MP3	Z	.003	.003	%54.1	%100
69	MP2	Z	.003	.003	%57.8	%100
70	MP1	Z	.003	.003	%60.4	%100
71	MP12	Z	.003	.003	%74.9	%100
72	MP11	Z	.003	.003	%54.1	%100
73	MP10	Z	.003	.003	%54.2	%100
74	MP9	Z	.003	.003	%55.6	%100
75	MP8	Z	.003	.003	%99.9	%100
76	MP7	Z	.003	.003	%54.2	%100
77	MP6	Z	.003	.003	%54.2	%100
78	M1	X	.006	.006	0	%100
79	M2	X	.001	.001	0	%100
80	M3	X	.003	.003	0	%100
81	M4	X	.003	.003	0	%100
82	M5	X	.008	.008	0	%100
83	M6	X	.003	.003	0	%100
84	M7	X	.004	.004	0	%100
85	M8	X	.002	.002	0	%100
86	M9	X	.005	.005	0	%100
87	M10	X	.003	.003	0	%100
88	M11	X	.009	.009	0	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
89	M12	X	.005	.005	0	%100
90	M13	X	.005	.005	0	%100
91	M14	X	.001	.001	0	%100
92	M15	X	.003	.003	0	%100
93	M16	X	.002	.002	0	%100
94	M17	X	.003	.003	0	%100
95	M18	X	.003	.003	0	%100
96	M19	X	.004	.004	0	%100
97	M20	X	.003	.003	0	%100
98	M21	X	.001	.001	0	%100
99	M24	X	0	0	0	%100
100	M31	X	.006	.006	0	%100
101	M32	X	.001	.001	0	%100
102	M33	X	.002	.002	0	%100
103	M34	X	.003	.003	0	%100
104	M35	X	.007	.007	0	%100
105	M36	X	.002	.002	0	%100
106	M39	X	0	0	0	%100
107	MP4	X	.004	.004	0	%100
108	M31A	X	0	0	0	%100
109	M32A	X	0	0	0	%100
110	MP3	X	.004	.004	0	%100
111	M34A	X	0	0	0	%100
112	M35A	X	0	0	0	%100
113	MP2	X	.004	.004	0	%100
114	M37	X	0	0	0	%100
115	M38	X	0	0	0	%100
116	MP1	X	.004	.004	0	%100
117	M40	X	.004	.004	0	%100
118	M41	X	.004	.004	0	%100
119	M43	X	.004	.004	0	%100
120	M44	X	.004	.004	0	%100
121	M46A	X	.004	.004	0	%100
122	M47	X	.004	.004	0	%100
123	M49	X	.004	.004	0	%100
124	M50	X	.004	.004	0	%100
125	M52	X	.004	.004	0	%100
126	M53	X	.004	.004	0	%100
127	MP8	X	.004	.004	0	%.1
128	M55	X	.004	.004	0	%100
129	M56	X	.004	.004	0	%100
130	M58	X	.004	.004	0	%100
131	M59	X	.004	.004	0	%100
132	M61	X	.004	.004	0	%100
133	M62	X	.004	.004	0	%100
134	MP5	X	.004	.004	0	%9
135	M64	X	0	0	0	%100
136	M65	X	0	0	0	%100
137	M66	X	.004	.004	0	%100
138	M67	X	0	0	0	%100
139	M68	X	0	0	0	%100
140	M69	X	.004	.004	0	%100
141	M70	X	0	0	0	%100
142	M71	X	0	0	0	%100
143	M72	X	.004	.004	0	%100
144	M73	X	0	0	0	%100
145	M74	X	0	0	0	%100

Member Distributed Loads (BLC 25 : Ice Wind Members (120 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
146	M75	X	.004	.004	0	%100
147	MP12	X	.004	.004	%74.9	%100
148	MP11	X	.004	.004	%54.1	%100
149	MP10	X	.004	.004	%54.2	%100
150	MP9	X	.004	.004	%55.6	%100
151	MP8	X	.004	.004	%99.9	%100
152	MP7	X	.004	.004	%54.2	%100
153	MP6	X	.004	.004	%54.2	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg))

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M1	Z	.009	.009	0	%100
2	M2	Z	.001	.001	0	%100
3	M3	Z	.002	.002	0	%100
4	M4	Z	.004	.004	0	%100
5	M5	Z	.006	.006	0	%100
6	M6	Z	.001	.001	0	%100
7	M7	Z	.005	.005	0	%100
8	M8	Z	.003	.003	0	%100
9	M9	Z	.002	.002	0	%100
10	M10	Z	.001	.001	0	%100
11	M11	Z	.011	.011	0	%100
12	M12	Z	.007	.007	0	%100
13	M13	Z	.004	.004	0	%100
14	M14	Z	.001	.001	0	%100
15	M15	Z	.004	.004	0	%100
16	M16	Z	.001	.001	0	%100
17	M17	Z	.002	.002	0	%100
18	M18	Z	.004	.004	0	%100
19	M19	Z	.006	.006	0	%100
20	M20	Z	.002	.002	0	%100
21	M21	Z	.001	.001	0	%100
22	M24	Z	0	0	0	%100
23	M31	Z	.008	.008	0	%100
24	M32	Z	.001	.001	0	%100
25	M33	Z	.002	.002	0	%100
26	M34	Z	.004	.004	0	%100
27	M35	Z	.005	.005	0	%100
28	M36	Z	.001	.001	0	%100
29	M39	Z	0	0	0	%100
30	MP4	Z	.004	.004	0	%.1
31	M31A	Z	0	0	0	%100
32	M32A	Z	0	0	0	%100
33	M34A	Z	0	0	0	%100
34	M35A	Z	0	0	0	%100
35	M37	Z	0	0	0	%100
36	M38	Z	0	0	0	%100
37	M40	Z	.004	.004	0	%100
38	M41	Z	.004	.004	0	%100
39	M43	Z	.004	.004	0	%100
40	M44	Z	.004	.004	0	%100
41	M46A	Z	.004	.004	0	%100
42	M47	Z	.004	.004	0	%100
43	M49	Z	.004	.004	0	%100
44	M50	Z	.004	.004	0	%100
45	M52	Z	.004	.004	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
46	M53	Z	.004	.004	0	%100
47	MP8	Z	.004	.004	0	%.1
48	M55	Z	.004	.004	0	%100
49	M56	Z	.004	.004	0	%100
50	M58	Z	.004	.004	0	%100
51	M59	Z	.004	.004	0	%100
52	M61	Z	.004	.004	0	%100
53	M62	Z	.004	.004	0	%100
54	MP5	Z	.004	.004	0	%9
55	M64	Z	0	0	0	%100
56	M65	Z	0	0	0	%100
57	M66	Z	.004	.004	0	%100
58	M67	Z	0	0	0	%100
59	M68	Z	0	0	0	%100
60	M69	Z	.004	.004	0	%100
61	M70	Z	0	0	0	%100
62	M71	Z	0	0	0	%100
63	M72	Z	.004	.004	0	%100
64	M73	Z	0	0	0	%100
65	M74	Z	0	0	0	%100
66	M75	Z	.004	.004	0	%100
67	MP4	Z	.004	.004	%99.9	%100
68	MP3	Z	.004	.004	%54.1	%100
69	MP2	Z	.004	.004	%57.8	%100
70	MP1	Z	.004	.004	%60.4	%100
71	MP12	Z	.004	.004	%74.9	%100
72	MP11	Z	.004	.004	%54.1	%100
73	MP10	Z	.004	.004	%54.2	%100
74	MP9	Z	.004	.004	%55.6	%100
75	MP8	Z	.004	.004	%99.9	%100
76	MP7	Z	.004	.004	%54.2	%100
77	MP6	Z	.004	.004	%54.2	%100
78	M1	X	.005	.005	0	%100
79	M2	X	0	0	0	%100
80	M3	X	.001	.001	0	%100
81	M4	X	.002	.002	0	%100
82	M5	X	.004	.004	0	%100
83	M6	X	.001	.001	0	%100
84	M7	X	.003	.003	0	%100
85	M8	X	.002	.002	0	%100
86	M9	X	.001	.001	0	%100
87	M10	X	.001	.001	0	%100
88	M11	X	.006	.006	0	%100
89	M12	X	.004	.004	0	%100
90	M13	X	.002	.002	0	%100
91	M14	X	0	0	0	%100
92	M15	X	.003	.003	0	%100
93	M16	X	0	0	0	%100
94	M17	X	.001	.001	0	%100
95	M18	X	.003	.003	0	%100
96	M19	X	.004	.004	0	%100
97	M20	X	.001	.001	0	%100
98	M21	X	0	0	0	%100
99	M24	X	0	0	0	%100
100	M31	X	.005	.005	0	%100
101	M32	X	0	0	0	%100
102	M33	X	.001	.001	0	%100

Member Distributed Loads (BLC 26 : Ice Wind Members (150 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
103	M34	X	.002	.002	0	%100
104	M35	X	.003	.003	0	%100
105	M36	X	.001	.001	0	%100
106	M39	X	0	0	0	%100
107	MP4	X	.003	.003	0	%100
108	M31A	X	0	0	0	%100
109	M32A	X	0	0	0	%100
110	MP3	X	.003	.003	0	%100
111	M34A	X	0	0	0	%100
112	M35A	X	0	0	0	%100
113	MP2	X	.003	.003	0	%100
114	M37	X	0	0	0	%100
115	M38	X	0	0	0	%100
116	MP1	X	.003	.003	0	%100
117	M40	X	.002	.002	0	%100
118	M41	X	.002	.002	0	%100
119	M43	X	.002	.002	0	%100
120	M44	X	.002	.002	0	%100
121	M46A	X	.002	.002	0	%100
122	M47	X	.002	.002	0	%100
123	M49	X	.002	.002	0	%100
124	M50	X	.002	.002	0	%100
125	M52	X	.002	.002	0	%100
126	M53	X	.002	.002	0	%100
127	MP8	X	.003	.003	0	%.1
128	M55	X	.002	.002	0	%100
129	M56	X	.002	.002	0	%100
130	M58	X	.002	.002	0	%100
131	M59	X	.002	.002	0	%100
132	M61	X	.002	.002	0	%100
133	M62	X	.002	.002	0	%100
134	MP5	X	.003	.003	0	%9
135	M64	X	0	0	0	%100
136	M65	X	0	0	0	%100
137	M66	X	.003	.003	0	%100
138	M67	X	0	0	0	%100
139	M68	X	0	0	0	%100
140	M69	X	.003	.003	0	%100
141	M70	X	0	0	0	%100
142	M71	X	0	0	0	%100
143	M72	X	.003	.003	0	%100
144	M73	X	0	0	0	%100
145	M74	X	0	0	0	%100
146	M75	X	.003	.003	0	%100
147	MP12	X	.003	.003	%74.9	%100
148	MP11	X	.003	.003	%54.1	%100
149	MP10	X	.003	.003	%54.2	%100
150	MP9	X	.003	.003	%55.6	%100
151	MP8	X	.003	.003	%99.9	%100
152	MP7	X	.003	.003	%54.2	%100
153	MP6	X	.003	.003	%54.2	%100

Member Distributed Loads (BLC 48 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M6	Y	-.001	-.001	.331	.71
2	M12	Y	-.0002562	-.014	1.679	2.463

Member Distributed Loads (BLC 48 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
3	M12	Y	-.014	-.021	2.463	3.247
4	M12	Y	-.021	-.012	3.247	4.03
5	M12	Y	-.012	-.007	4.03	4.814
6	M12	Y	-.007	-.002	4.814	5.598
7	M16	Y	-.008	-.008	.573	4.943
8	M17	Y	-.0008881	-.003	0	.805
9	M17	Y	-.003	-.006	.805	1.611
10	M17	Y	-.006	-.01	1.611	2.416
11	M17	Y	-.01	-.007	2.416	3.222
12	M17	Y	-.007	-.0001273	3.222	4.027
13	M18	Y	-.0008881	-.003	0	.805
14	M18	Y	-.003	-.006	.805	1.611
15	M18	Y	-.006	-.01	1.611	2.416
16	M18	Y	-.01	-.007	2.416	3.222
17	M18	Y	-.007	-.0001273	3.222	4.027
18	M1	Y	-.001	-.001	.331	.71
19	M10	Y	-.0002562	-.014	1.679	2.463
20	M10	Y	-.014	-.021	2.463	3.247
21	M10	Y	-.021	-.012	3.247	4.03
22	M10	Y	-.012	-.007	4.03	4.814
23	M10	Y	-.007	-.002	4.814	5.598
24	M19	Y	-.008	-.008	.573	4.943
25	M20	Y	-.0008881	-.003	0	.805
26	M20	Y	-.003	-.006	.805	1.611
27	M20	Y	-.006	-.01	1.611	2.416
28	M20	Y	-.01	-.007	2.416	3.222
29	M20	Y	-.007	-.0001273	3.222	4.027
30	M21	Y	-.0008881	-.003	0	.805
31	M21	Y	-.003	-.006	.805	1.611
32	M21	Y	-.006	-.01	1.611	2.416
33	M21	Y	-.01	-.007	2.416	3.222
34	M21	Y	-.007	-.0001273	3.222	4.027
35	M5	Y	-.001	-.001	.331	.71
36	M8	Y	-.0002562	-.014	1.679	2.463
37	M8	Y	-.014	-.021	2.463	3.247
38	M8	Y	-.021	-.012	3.247	4.03
39	M8	Y	-.012	-.007	4.03	4.814
40	M8	Y	-.007	-.002	4.814	5.598
41	M13	Y	-.008	-.008	.573	4.943
42	M14	Y	-.0008881	-.003	0	.805
43	M14	Y	-.003	-.006	.805	1.611
44	M14	Y	-.006	-.01	1.611	2.416
45	M14	Y	-.01	-.007	2.416	3.222
46	M14	Y	-.007	-.0001273	3.222	4.027
47	M15	Y	-.0008881	-.003	0	.805
48	M15	Y	-.003	-.006	.805	1.611
49	M15	Y	-.006	-.01	1.611	2.416
50	M15	Y	-.01	-.007	2.416	3.222
51	M15	Y	-.007	-.0001273	3.222	4.027

Member Distributed Loads (BLC 49 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
1	M6	Y	-.001	-.001	.331	.71
2	M12	Y	-.000363	-.019	1.679	2.463
3	M12	Y	-.019	-.029	2.463	3.247
4	M12	Y	-.029	-.017	3.247	4.03

Member Distributed Loads (BLC 49 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,F,ksf]	End Magnitude[k/ft,F,ksf]	Start Location[ft,...	End Location[ft,%]
5	M12	Y	-.017	-.01	4.03	4.814
6	M12	Y	-.01	-.003	4.814	5.598
7	M16	Y	-.011	-.011	.573	4.943
8	M17	Y	-.001	-.005	0	.805
9	M17	Y	-.005	-.008	.805	1.611
10	M17	Y	-.008	-.015	1.611	2.416
11	M17	Y	-.015	-.01	2.416	3.222
12	M17	Y	-.01	-.0001803	3.222	4.027
13	M18	Y	-.001	-.005	0	.805
14	M18	Y	-.005	-.008	.805	1.611
15	M18	Y	-.008	-.015	1.611	2.416
16	M18	Y	-.015	-.01	2.416	3.222
17	M18	Y	-.01	-.0001803	3.222	4.027
18	M1	Y	-.001	-.001	.331	.71
19	M10	Y	-.000363	-.019	1.679	2.463
20	M10	Y	-.019	-.029	2.463	3.247
21	M10	Y	-.029	-.017	3.247	4.03
22	M10	Y	-.017	-.01	4.03	4.814
23	M10	Y	-.01	-.003	4.814	5.598
24	M19	Y	-.011	-.011	.573	4.943
25	M20	Y	-.001	-.005	0	.805
26	M20	Y	-.005	-.008	.805	1.611
27	M20	Y	-.008	-.015	1.611	2.416
28	M20	Y	-.015	-.01	2.416	3.222
29	M20	Y	-.01	-.0001803	3.222	4.027
30	M21	Y	-.001	-.005	0	.805
31	M21	Y	-.005	-.008	.805	1.611
32	M21	Y	-.008	-.015	1.611	2.416
33	M21	Y	-.015	-.01	2.416	3.222
34	M21	Y	-.01	-.0001803	3.222	4.027
35	M5	Y	-.001	-.001	.331	.71
36	M8	Y	-.000363	-.019	1.679	2.463
37	M8	Y	-.019	-.029	2.463	3.247
38	M8	Y	-.029	-.017	3.247	4.03
39	M8	Y	-.017	-.01	4.03	4.814
40	M8	Y	-.01	-.003	4.814	5.598
41	M13	Y	-.011	-.011	.573	4.943
42	M14	Y	-.001	-.005	0	.805
43	M14	Y	-.005	-.008	.805	1.611
44	M14	Y	-.008	-.015	1.611	2.416
45	M14	Y	-.015	-.01	2.416	3.222
46	M14	Y	-.01	-.0001803	3.222	4.027
47	M15	Y	-.001	-.005	0	.805
48	M15	Y	-.005	-.008	.805	1.611
49	M15	Y	-.008	-.015	1.611	2.416
50	M15	Y	-.015	-.01	2.416	3.222
51	M15	Y	-.01	-.0001803	3.222	4.027

Member Area Loads (BLC 1 : Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N32	N30	N31	N33	Y	Two Way	-.012
2	N37	N36	N38	N39	Y	Two Way	-.012
3	N27	N25	N24	N26	Y	Two Way	-.012

Member Area Loads (BLC 2 : Ice Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N32	N30	N31	N33	Y	Two Way	-.017
2	N37	N36	N38	N39	Y	Two Way	-.017
3	N27	N25	N24	N26	Y	Two Way	-.017

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Dead	None		-1			21		3	
2	Ice Dead	None					21	75	3	
3	Full Wind Antenna (0 Deg)	None					32			
4	Full Wind Antenna (30 Deg)	None					65			
5	Full Wind Antenna (60 Deg)	None					65			
6	Full Wind Antenna (90 Deg)	None					65			
7	Full Wind Antenna (120 Deg)	None					64			
8	Full Wind Antenna (150 Deg)	None					65			
9	Full Wind Members (0 Deg)	None						89		
10	Full Wind Members (30 Deg)	None						89		
11	Full Wind Members (60 Deg)	None						89		
12	Full Wind Members (90 Deg)	None						89		
13	Full Wind Members (120 Deg)	None						89		
14	Full Wind Members (150 Deg)	None						89		
15	Ice Wind Antenna (0 Deg)	None					32			
16	Ice Wind Antenna (30 Deg)	None					65			
17	Ice Wind Antenna (60 Deg)	None					65			
18	Ice Wind Antenna (90 Deg)	None					65			
19	Ice Wind Antenna (120 Deg)	None					64			
20	Ice Wind Antenna (150 Deg)	None					64			
21	Ice Wind Members (0 Deg)	None						153		
22	Ice Wind Members (30 Deg)	None						153		
23	Ice Wind Members (60 Deg)	None						153		
24	Ice Wind Members (90 Deg)	None						153		
25	Ice Wind Members (120 Deg)	None						153		
26	Ice Wind Members (150 Deg)	None						153		
27	Seismic Antenna (0 Deg)	None					21			
28	Seismic Antenna (90 Deg)	None					21			
29	Seismic Members (0 Deg)	None		-.013	-.033					
30	Seismic Members (30 Deg)	None	.016	-.013	-.028					
31	Seismic Members (60 Deg)	None	.028	-.013	-.016					
32	Seismic Members (90 Deg)	None	.033	-.013	-1.991e-...					
33	Seismic Members (120 Deg)	None	.028	-.013	.016					
34	Seismic Members (150 Deg)	None	.016	-.013	.028					
35	Seismic Members (180 Deg)	None	3.982e-18	-.013	.033					
36	Seismic Members (210 Deg)	None	-.016	-.013	.028					
37	Seismic Members (240 Deg)	None	-.028	-.013	.016					
38	Seismic Members (270 Deg)	None	-.033	-.013	5.973e-18					
39	Seismic Members (300 Deg)	None	-.028	-.013	-.016					
40	Seismic Members (330 Deg)	None	-.016	-.013	-.028					
41	Seismic Vertical Antennas	None					21			
42	Man 1 (500 lbs)	None				1				
43	Man 2 (500 lbs)	None				1				
44	Man 3 (500 lbs)	None				1				
45	Man 4 (250 lbs)	None				1				
46	Man 5 (250 lbs)	None				1				
47	Man 6 (250 lbs)	None				1				
48	BLC 1 Transient Area Loads	None						51		
49	BLC 2 Transient Area Loads	None						51		

Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4D	Yes	Y		1	1.4																		
2	1.2D + 1.0W 0°	Yes	Y		1	1.2	3	1	9	1														
3	1.2D + 1.0W 30°	Yes	Y		1	1.2	4	1	10	1														
4	1.2D + 1.0W 60°	Yes	Y		1	1.2	5	1	11	1														
5	1.2D + 1.0W 90°	Yes	Y		1	1.2	6	1	12	1														
6	1.2D + 1.0W 120°	Yes	Y		1	1.2	7	1	13	1														
7	1.2D + 1.0W 150°	Yes	Y		1	1.2	8	1	14	1														
8	1.2D + 1.0W 180°	Yes	Y		1	1.2	3	-1	9	-1														
9	1.2D + 1.0W 210°	Yes	Y		1	1.2	4	-1	10	-1														
10	1.2D + 1.0W 240°	Yes	Y		1	1.2	5	-1	11	-1														
11	1.2D + 1.0W 270°	Yes	Y		1	1.2	6	-1	12	-1														
12	1.2D + 1.0W 300°	Yes	Y		1	1.2	7	-1	13	-1														
13	1.2D + 1.0W 330°	Yes	Y		1	1.2	8	-1	14	-1														
14	1.2D + 1.0Di + 1.0Wi 0°	Yes	Y		1	1.2	2	1	15	1	21	1												
15	1.2D + 1.0Di + 1.0Wi 30°	Yes	Y		1	1.2	2	1	16	1	22	1												
16	1.2D + 1.0Di + 1.0Wi 60°	Yes	Y		1	1.2	2	1	17	1	23	1												
17	1.2D + 1.0Di + 1.0Wi 90°	Yes	Y		1	1.2	2	1	18	1	24	1												
18	1.2D + 1.0Di + 1.0Wi 120°	Yes	Y		1	1.2	2	1	19	1	25	1												
19	1.2D + 1.0Di + 1.0Wi 150°	Yes	Y		1	1.2	2	1	20	1	26	1												
20	1.2D + 1.0Di + 1.0Wi 180°	Yes	Y		1	1.2	2	1	15	-1	21	-1												
21	1.2D + 1.0Di + 1.0Wi 210°	Yes	Y		1	1.2	2	1	16	-1	22	-1												
22	1.2D + 1.0Di + 1.0Wi 240°	Yes	Y		1	1.2	2	1	17	-1	23	-1												
23	1.2D + 1.0Di + 1.0Wi 270°	Yes	Y		1	1.2	2	1	18	-1	24	-1												
24	1.2D + 1.0Di + 1.0Wi 300°	Yes	Y		1	1.2	2	1	19	-1	25	-1												
25	1.2D + 1.0Di + 1.0Wi 330°	Yes	Y		1	1.2	2	1	20	-1	26	-1												
26	1.2D + 1.5Lm_1 + 1.0Wm 0°	Yes	Y		1	1.2	3	.069	9	.069	42	1.5												
27	1.2D + 1.5Lm_1 + 1.0Wm 30°	Yes	Y		1	1.2	4	.069	10	.069	42	1.5												
28	1.2D + 1.5Lm_1 + 1.0Wm 60°	Yes	Y		1	1.2	5	.069	11	.069	42	1.5												
29	1.2D + 1.5Lm_1 + 1.0Wm 90°	Yes	Y		1	1.2	6	.069	12	.069	42	1.5												
30	1.2D + 1.5Lm_1 + 1.0Wm 120°	Yes	Y		1	1.2	7	.069	13	.069	42	1.5												
31	1.2D + 1.5Lm_1 + 1.0Wm 150°	Yes	Y		1	1.2	8	.069	14	.069	42	1.5												
32	1.2D + 1.5Lm_1 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	42	1.5												
33	1.2D + 1.5Lm_1 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	42	1.5												
34	1.2D + 1.5Lm_1 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	42	1.5												
35	1.2D + 1.5Lm_1 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	42	1.5												
36	1.2D + 1.5Lm_1 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	42	1.5												
37	1.2D + 1.5Lm_1 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	42	1.5												
38	1.2D + 1.5Lm_2 + 1.0Wm 0°	Yes	Y		1	1.2	3	.069	9	.069	43	1.5												
39	1.2D + 1.5Lm_2 + 1.0Wm 30°	Yes	Y		1	1.2	4	.069	10	.069	43	1.5												
40	1.2D + 1.5Lm_2 + 1.0Wm 60°	Yes	Y		1	1.2	5	.069	11	.069	43	1.5												
41	1.2D + 1.5Lm_2 + 1.0Wm 90°	Yes	Y		1	1.2	6	.069	12	.069	43	1.5												
42	1.2D + 1.5Lm_2 + 1.0Wm 120°	Yes	Y		1	1.2	7	.069	13	.069	43	1.5												
43	1.2D + 1.5Lm_2 + 1.0Wm 150°	Yes	Y		1	1.2	8	.069	14	.069	43	1.5												
44	1.2D + 1.5Lm_2 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	43	1.5												
45	1.2D + 1.5Lm_2 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	43	1.5												
46	1.2D + 1.5Lm_2 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	43	1.5												
47	1.2D + 1.5Lm_2 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	43	1.5												
48	1.2D + 1.5Lm_2 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	43	1.5												
49	1.2D + 1.5Lm_2 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	43	1.5												
50	1.2D + 1.5Lm_3 + 1.0Wm 0°	Yes	Y		1	1.2	3	.069	9	.069	44	1.5												
51	1.2D + 1.5Lm_3 + 1.0Wm 30°	Yes	Y		1	1.2	4	.069	10	.069	44	1.5												
52	1.2D + 1.5Lm_3 + 1.0Wm 60°	Yes	Y		1	1.2	5	.069	11	.069	44	1.5												
53	1.2D + 1.5Lm_3 + 1.0Wm 90°	Yes	Y		1	1.2	6	.069	12	.069	44	1.5												
54	1.2D + 1.5Lm_3 + 1.0Wm 120°	Yes	Y		1	1.2	7	.069	13	.069	44	1.5												
55	1.2D + 1.5Lm_3 + 1.0Wm 150°	Yes	Y		1	1.2	8	.069	14	.069	44	1.5												
56	1.2D + 1.5Lm_3 + 1.0Wm 180°	Yes	Y		1	1.2	3	-.0...	9	-.0...	44	1.5												

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
57	1.2D + 1.5Lm_3 + 1.0Wm 210°	Yes	Y		1	1.2	4	-.0...	10	-.0...	44	1.5												
58	1.2D + 1.5Lm_3 + 1.0Wm 240°	Yes	Y		1	1.2	5	-.0...	11	-.0...	44	1.5												
59	1.2D + 1.5Lm_3 + 1.0Wm 270°	Yes	Y		1	1.2	6	-.0...	12	-.0...	44	1.5												
60	1.2D + 1.5Lm_3 + 1.0Wm 300°	Yes	Y		1	1.2	7	-.0...	13	-.0...	44	1.5												
61	1.2D + 1.5Lm_3 + 1.0Wm 330°	Yes	Y		1	1.2	8	-.0...	14	-.0...	44	1.5												
62	1.2D + 1.5Lv_1 0°	Yes	Y		1	1.2	45	1.5																
63	1.2D + 1.5Lv_1 30°	Yes	Y		1	1.2	45	1.5																
64	1.2D + 1.5Lv_1 60°	Yes	Y		1	1.2	45	1.5																
65	1.2D + 1.5Lv_1 90°	Yes	Y		1	1.2	45	1.5																
66	1.2D + 1.5Lv_1 120°	Yes	Y		1	1.2	45	1.5																
67	1.2D + 1.5Lv_1 150°	Yes	Y		1	1.2	45	1.5																
68	1.2D + 1.5Lv_1 180°	Yes	Y		1	1.2	45	1.5																
69	1.2D + 1.5Lv_1 210°	Yes	Y		1	1.2	45	1.5																
70	1.2D + 1.5Lv_1 240°	Yes	Y		1	1.2	45	1.5																
71	1.2D + 1.5Lv_1 270°	Yes	Y		1	1.2	45	1.5																
72	1.2D + 1.5Lv_1 300°	Yes	Y		1	1.2	45	1.5																
73	1.2D + 1.5Lv_1 330°	Yes	Y		1	1.2	45	1.5																
74	1.2D + 1.5Lv_2 0°	Yes	Y		1	1.2	46	1.5																
75	1.2D + 1.5Lv_2 30°	Yes	Y		1	1.2	46	1.5																
76	1.2D + 1.5Lv_2 60°	Yes	Y		1	1.2	46	1.5																
77	1.2D + 1.5Lv_2 90°	Yes	Y		1	1.2	46	1.5																
78	1.2D + 1.5Lv_2 120°	Yes	Y		1	1.2	46	1.5																
79	1.2D + 1.5Lv_2 150°	Yes	Y		1	1.2	46	1.5																
80	1.2D + 1.5Lv_2 180°	Yes	Y		1	1.2	46	1.5																
81	1.2D + 1.5Lv_2 210°	Yes	Y		1	1.2	46	1.5																
82	1.2D + 1.5Lv_2 240°	Yes	Y		1	1.2	46	1.5																
83	1.2D + 1.5Lv_2 270°	Yes	Y		1	1.2	46	1.5																
84	1.2D + 1.5Lv_2 300°	Yes	Y		1	1.2	46	1.5																
85	1.2D + 1.5Lv_2 330°	Yes	Y		1	1.2	46	1.5																
86	1.2D + 1.5Lv_3 0°	Yes	Y		1	1.2	47	1.5																
87	1.2D + 1.5Lv_3 30°	Yes	Y		1	1.2	47	1.5																
88	1.2D + 1.5Lv_3 60°	Yes	Y		1	1.2	47	1.5																
89	1.2D + 1.5Lv_3 90°	Yes	Y		1	1.2	47	1.5																
90	1.2D + 1.5Lv_3 120°	Yes	Y		1	1.2	47	1.5																
91	1.2D + 1.5Lv_3 150°	Yes	Y		1	1.2	47	1.5																
92	1.2D + 1.5Lv_3 180°	Yes	Y		1	1.2	47	1.5																
93	1.2D + 1.5Lv_3 210°	Yes	Y		1	1.2	47	1.5																
94	1.2D + 1.5Lv_3 240°	Yes	Y		1	1.2	47	1.5																
95	1.2D + 1.5Lv_3 270°	Yes	Y		1	1.2	47	1.5																
96	1.2D + 1.5Lv_3 300°	Yes	Y		1	1.2	47	1.5																
97	1.2D + 1.5Lv_3 330°	Yes	Y		1	1.2	47	1.5																
98	1.2D + 1.0EV +1.0 EH 0°	Yes	Y		1	1.2	27	1	28		29	1	40	1										
99	1.2D + 1.0EV +1.0 EH 30°	Yes	Y		1	1.2	27	.866	28	.5	30	1	40	1										
100	1.2D + 1.0EV +1.0 EH 60°	Yes	Y		1	1.2	27	.5	28	.866	31	1	40	1										
101	1.2D + 1.0EV +1.0 EH 90°	Yes	Y		1	1.2	27		28	1	32	1	40	1										
102	1.2D + 1.0EV +1.0 EH 120°	Yes	Y		1	1.2	27	-.5	28	.866	33	1	40	1										
103	1.2D + 1.0EV +1.0 EH 150°	Yes	Y		1	1.2	27	-.8...	28	.5	34	1	40	1										
104	1.2D + 1.0EV +1.0 EH 180°	Yes	Y		1	1.2	27	-1	28		35	1	40	1										
105	1.2D + 1.0EV +1.0 EH 210°	Yes	Y		1	1.2	27	-.8...	28	-.5	36	1	40	1										
106	1.2D + 1.0EV +1.0 EH 240°	Yes	Y		1	1.2	27	-.5	28	-.8...	37	1	40	1										
107	1.2D + 1.0EV +1.0 EH 270°	Yes	Y		1	1.2	27		28	-1	38	1	40	1										
108	1.2D + 1.0EV +1.0 EH 300°	Yes	Y		1	1.2	27	.5	28	-.8...	39	1	40	1										
109	1.2D + 1.0EV +1.0 EH 330°	Yes	Y		1	1.2	27	.866	28	-.5	40	1	40	1										

Envelope Joint Reactions

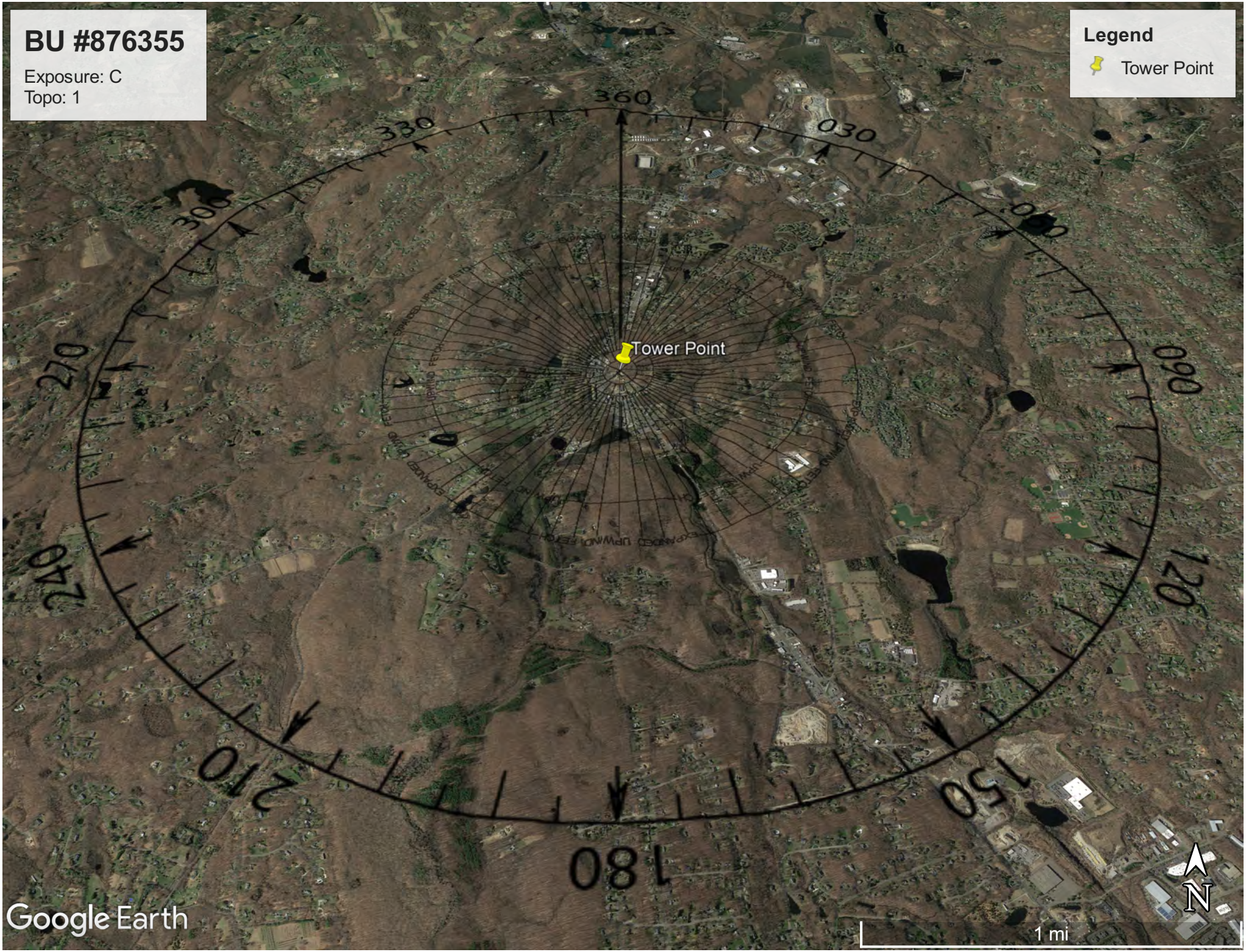
	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N19	max	2.258	10	3.641	22	2.009	2	-.263	4	3.253	13	-.372	4
2		min	-2.318	4	.415	4	-1.987	8	-5.564	22	-3.264	7	-7.992	22
3	N16	max	1.242	11	2.671	14	2.38	2	7.341	14	1.901	5	.175	4
4		min	-1.237	5	.102	8	-2.427	8	-.238	8	-1.9	11	-.422	46
5	N13	max	2.589	11	3.594	18	1.407	3	-.399	13	3.314	9	8.116	17
6		min	-2.535	5	.598	12	-1.382	9	-5.237	19	-3.299	3	.028	11
7	Totals:	max	5.936	11	9.326	14	5.655	2						
8		min	-5.936	5	3.121	8	-5.655	8						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Mem...	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	phi*...	phi*...	phi*...	phi*...	Cb	Eqn
1	M1	PL6x0.5	.250	.521	7	.307	0	y	5	65.4...	97.2	1.012	12.15	1.316	H1...
2	M2	PIPE_3.0	.180	8.604	14	.173	5.25		10	22.8...	65.2...	5.749	5.749	2.082	H1...
3	M3	PIPE_3.0	.241	5.396	21	.113	9.042		12	22.8...	65.2...	5.749	5.749	2.456	H1...
4	M4	PIPE_3.0	.196	8.604	18	.235	8.604		2	22.8...	65.2...	5.749	5.749	2.692	H1...
5	M5	PL6x0.5	.219	.521	5	.118	.521	y	17	65.4...	97.2	1.012	12.15	1.643	H1...
6	M6	PL6x0.5	.270	.521	3	.203	.694	y	13	65.4...	97.2	1.012	12.15	1.291	H1...
7	M7	HSS6X4X5	.295	0	16	.081	0	z	9	217...	217...	26.7...	35.5...	1.128	H1...
8	M8	HSS4X4X4	.447	0	17	.140	0	y	21	122...	139...	16.1...	16.1...	3.298	H1...
9	M9	HSS6X4X5	.213	0	15	.044	0	y	24	217...	217...	26.7...	35.5...	1.123	H1...
10	M10	HSS4X4X4	.339	0	15	.084	0	y	24	122...	139...	16.1...	16.1...	3.158	H1...
11	M11	HSS6X4X5	.290	0	24	.083	0	y	21	217...	217...	26.7...	35.5...	1.127	H1...
12	M12	HSS4X4X4	.447	0	22	.157	0	y	21	122...	139...	16.1...	16.1...	3.275	H1...
13	M13	HSS4X4X3	.343	2.758	20	.108	.345	z	11	94.5...	106...	12.6...	12.6...	1.373	H1...
14	M14	L2x2x3	.277	4.474	5	.014	4.474	z	20	8.561	23.3...	.558	1.221	2.199	H2...
15	M15	L2x2x3	.250	0	7	.017	0	y	20	8.561	23.3...	.558	1.219	2.176	H2...
16	M16	HSS4X4X3	.354	2.758	21	.117	5.171	z	2	94.5...	106...	12.6...	12.6...	1.364	H1...
17	M17	L2x2x3	.290	0	11	.017	4.474	y	20	8.561	23.3...	.558	1.223	2.217	H2...
18	M18	L2x2x3	.369	4.474	9	.017	4.474	y	8	8.561	23.3...	.558	1.224	2.235	H2...
19	M19	HSS4X4X3	.226	2.758	15	.111	.345	z	7	94.5...	106...	12.6...	12.6...	1.343	H1...
20	M20	L2x2x3	.346	4.474	13	.014	4.474	y	12	8.561	23.3...	.558	1.226	2.254	H2...
21	M21	L2x2x3	.322	0	4	.015	0	y	17	8.561	23.3...	.558	1.219	2.171	H2...
22	M31	PL5x3/8	.012	.521	8	.256	1.042	y	6	31.7...	60.75	.475	6.328	1.136	H1...
23	M32	PIPE_2.0	.354	1.354	10	.254	.406		4	5.82	32.13	1.872	1.872	4.414	H3...
24	M33	PIPE_2.0	.273	5.146	14	.140	8.531		11	5.82	32.13	1.872	1.872	2.81	H1...
25	M34	PIPE_2.0	.296	1.49	6	.106	7.854		8	5.82	32.13	1.872	1.872	3.749	H1...
26	M35	PL5x3/8	.410	1.042	4	.247	1.042	y	10	31.7...	60.75	.475	6.328	1.352	H1...
27	M36	PL5x3/8	.012	.521	10	.207	1.042	y	8	31.7...	60.75	.475	6.328	1.136	H1...
28	MP4	PIPE_2.0	.451	4.5	8	.066	4.5		15	14.9...	32.13	1.872	1.872	2.168	H1...
29	MP3	PIPE_2.0	.299	4.5	2	.065	4.5		2	14.9...	32.13	1.872	1.872	2.017	H1...
30	MP2	PIPE_2.0	.283	4.5	2	.071	4.417		8	14.9...	32.13	1.872	1.872	2.087	H1...
31	MP1	PIPE_2.0	.267	4.313	24	.109	.875		20	20.8...	32.13	1.872	1.872	2.55	H1...
32	MP12	PIPE_2.0	.405	4.5	4	.198	4.5		4	14.9...	32.13	1.872	1.872	2.243	H1...
33	MP11	PIPE_2.0	.490	4.5	10	.083	4.5		4	14.9...	32.13	1.872	1.872	1.832	H1...
34	MP10	PIPE_2.0	.361	4.5	10	.071	4.5		6	14.9...	32.13	1.872	1.872	1.609	H1...
35	MP9	PIPE_2.0	.376	4.313	6	.146	4.313		12	20.8...	32.13	1.872	1.872	2.704	H1...
36	MP8	PIPE_2.0	.858	4.5	6	.123	1		4	14.9...	32.13	1.872	1.872	1.561	H1...
37	MP7	PIPE_2.0	.450	4.5	6	.079	4.5		5	14.9...	32.13	1.872	1.872	1.632	H1...
38	MP6	PIPE_2.0	.320	4.5	6	.088	4.5		12	14.9...	32.13	1.872	1.872	1.701	H1...
39	MP5	PIPE_2.0	.381	4.313	17	.149	.875		21	20.8...	32.13	1.872	1.872	2.372	H1...
40	M66	PIPE_2.0	.453	4.5	8	.066	4.5		15	14.9...	32.13	1.872	1.872	2.168	H1...
41	M69	PIPE_2.0	.291	4.5	2	.053	4.5		2	14.9...	32.13	1.872	1.872	2.017	H1...
42	M72	PIPE_2.0	.271	4.5	2	.060	4.5		8	14.9...	32.13	1.872	1.872	2.087	H1...
43	M75	PIPE_2.0	.257	4.313	24	.109	.875		20	20.8...	32.13	1.872	1.872	2.468	H1...

APPENDIX D

ADDITIONAL CALCUATIONS

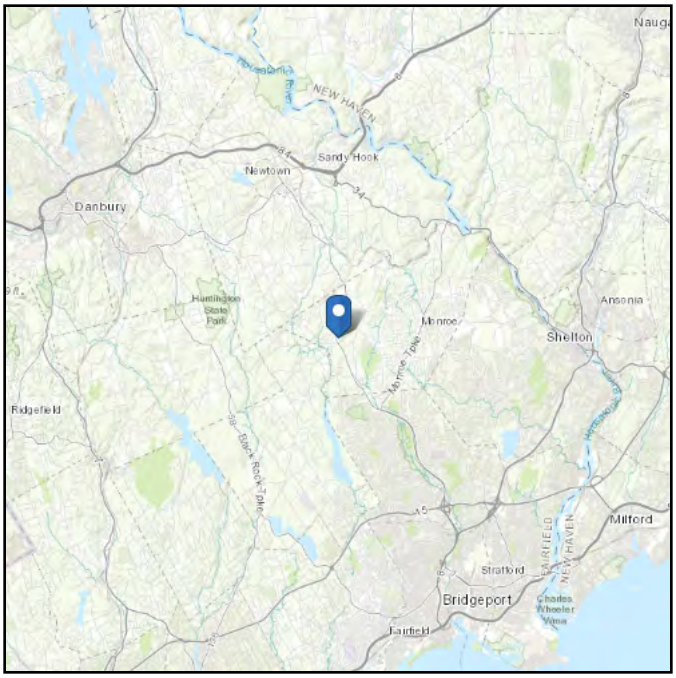

BU #876355
Exposure: C
Topo: 1
Legend
Tower Point
360
030
060
090
120
150
180
210
240
270
300
330
Tower Point
Google Earth
1 mi
N

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 445.89 ft (NAVD 88)
Latitude: 41.325553
Longitude: -73.265847



Wind

Results:

Wind Speed:	120 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	91 Vmph
100-year MRI	98 Vmph
Data Source:	ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014
Date Accessed:	Fri Jun 07 2019

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.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

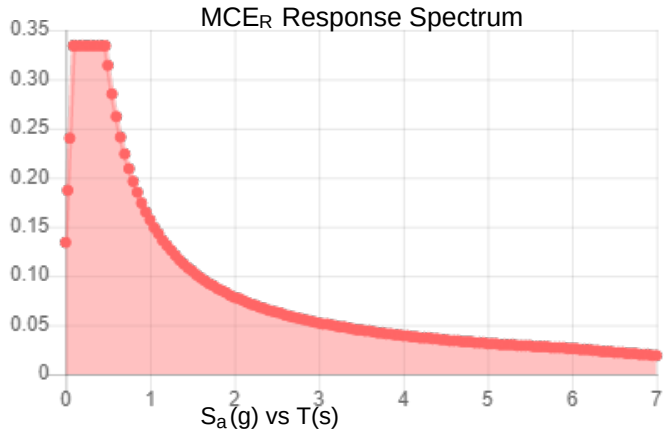
Seismic

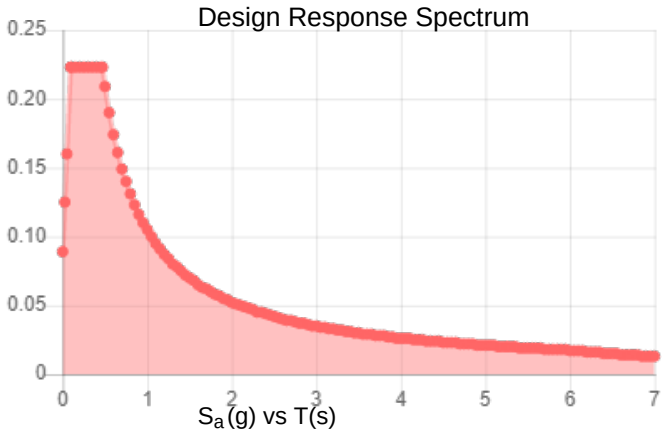
Site Soil Class: D - Stiff Soil

Results: **Ss = 0.205 per Monroe Municipality

S_S :	0.209	S_{DS} :	0.223
S_1 :	0.065	S_{D1} :	0.105
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.113
S_{MS} :	0.334	PGA_M :	0.178
S_{M1} :	0.157	F_{PGA} :	1.574
		I_e :	1

Seismic Design Category B





Data Accessed: Fri Jun 07 2019

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:	Fri Jun 07 2019

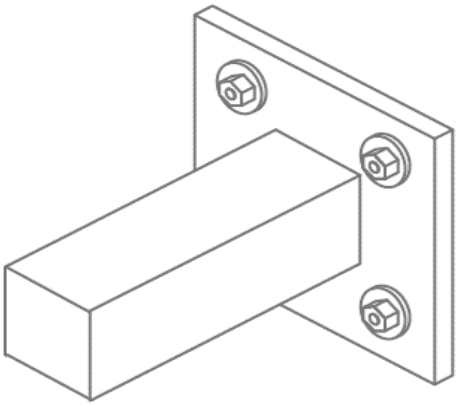
Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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.

MasTec
Network Solutions

Bolt Calcuations:

Bolt Size:	5/8	in
# Bolts:	4	
Plate Width:	8.25	in
Plate Height:	8.25	in
Bolt H Gap:	6	in
Bolt V Gap:	6	in
Plate T:	0.75	in
Bolt Grade:	A325N	
Fu_{bolt}	120	ksi
r:	4.243	in
J:	72.000	in^4/in^2
Bolt Area, $_{Normal}$:	0.307	
Bolt Area, $_{Net\ Tensile}$:	0.226	in^2



Allowable Shear:	12.4	kip
Allowable Tension:	20.3	kip

Tension Capacity:	37.3%
Shear Capacity:	53.5%
Combined Capacity:	36.4%

Bolt Capacity:	53.5%

Plate Calculations:

Horizontal Member Height:	4	in
Horizontal Member Width:	4	in
Plate Grade:	A36	
Plate Fy:	36	ksi

Mx =	7.380	k*in
Mz =	14.985	k*in

Zx =	1.160	in^3
Zz =	1.160	in^3

ØMpy (X) =	37.589	k - in
ØMpx (X) =	37.589	k - in

Plate Capacity:	39.9%

Exhibit F

Power Density/RF Emissions Report

Transcom Engineering, Inc.
Wireless Network Design and Deployment

Radio Frequency Emissions Analysis Report

T-MOBILE Existing Facility

Site ID: CT11264C

Monroe_Rt 59_ Rt 25
474-480 Main Street
Monroe, CT 06468

June 12, 2019

Transcom Engineering Project Number: 737001-0154

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**7.15 %**

June 12, 2019

T-MOBILE
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 6009

Emissions Analysis for Site: **CT11264C – Monroe_Rt 59_ Rt 25**

Transcom Engineering, Inc ("Transcom") was directed to analyze the proposed upgrades to the T-MOBILE facility located at **474-480 Main Street, Monroe, CT**, 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 (μW/cm2). 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.

Population 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 & 700 MHz 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) and 2100 MHz (AWS) 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 performed for the proposed upgrades to the T-MOBILE antenna facility located at **474-480 Main Street, Monroe, CT**, 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 manufactures supplied specifications, minus 10 dB for directional panel antennas, 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.

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. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
LTE	1900 MHz (PCS)	4	40
LTE	2100 MHz (AWS)	2	60
GSM	1900 MHz (PCS)	1	15
LTE / 5G NR	600 MHz	2	40
LTE	700 MHz	2	20

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 600 MHz, 700 MHz, 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, 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.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	RFS APX16DWV-16DWV-S-E-ACU	194
A	2	RFS APXVAARR24_43-U-NA20	192
A	3	EMS RR65-18-XXDP (Dormant)	194
A	4	EMS RR65-18-XXDP (Dormant)	194
B	1	RFS APX16DWV-16DWV-S-E-ACU	194
B	2	RFS APXVAARR24_43-U-NA20	192
B	3	EMS RR65-18-XXDP (Dormant)	194
B	4	EMS RR65-18-XXDP (Dormant)	194
C	1	RFS APX16DWV-16DWV-S-E-ACU	194
C	2	RFS APXVAARR24_43-U-NA20	192
C	3	EMS RR65-18-XXDP (Dormant)	194
C	4	EMS RR65-18-XXDP (Dormant)	194

Table 2: Antenna Data

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

Cable losses were factored in the calculations for this site. Since all **1900 MHz (PCS)** & **2100 MHz (AWS)** radios are ground mounted the following cable loss values were used. For each ground mounted **1900 MHz (PCS)** radio there was **1.65 dB** of cable loss calculated into the system gains / losses for this site. For each ground mounted **2100 MHz (AWS)** radio there was **1.70 dB** of cable loss calculated into the system gains / losses for this site. These values were calculated based upon the manufacturers specifications for **160 feet** of **1-5/8"** coax.

RESULTS

Per the calculations completed for the proposed T-MOBILE configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	RFS APX16DWV-16DWV-S-E-ACU	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	7	295	7,812.59	0.79
Antenna A2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	0.60
Antenna A3	EMS RR65-18-XXDP	Dormant	N/A	0	0	0.00	0.00
Antenna A4	EMS RR65-18-XXDP	Dormant	N/A	0	0	0.00	0.00
						Sector A Composite MPE%	**1.39**
Antenna B1	RFS APX16DWV-16DWV-S-E-ACU	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	7	295	7,812.59	0.79
Antenna B2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	0.60
Antenna B3	EMS RR65-18-XXDP	Dormant	N/A	0	0	0.00	0.00
Antenna B4	EMS RR65-18-XXDP	Dormant	N/A	0	0	0.00	0.00
						Sector B Composite MPE%	**1.39**
Antenna C1	RFS APX16DWV-16DWV-S-E-ACU	1900 MHz (PCS) / 2100 MHz (AWS)	15.9 / 15.9	7	295	7,812.59	0.79
Antenna C2	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	0.60
Antenna C3	EMS RR65-18-XXDP	Dormant	N/A	0	0	0.00	0.00
Antenna C4	EMS RR65-18-XXDP	Dormant	N/A	0	0	0.00	0.00
						Sector C Composite MPE%	**1.39**

Table 3: T-MOBILE Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum T-MOBILE MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each T-MOBILE Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
T-MOBILE – Max Per Sector Value	**1.39 %**
AT&T	1.09 %
Sprint	2.49 %
Verizon Wireless	2.18 %
Site Total MPE %:	**7.15 %**

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	1.39 %
T-MOBILE Sector B Total:	1.39 %
T-MOBILE Sector C Total:	1.39 %
Site Total:	7.15 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-MOBILE sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 1900 MHz (PCS) LTE	4	1,064.29	194	4.33	1900 MHz (PCS)	1000	0.43%
T-Mobile 2100 MHz (AWS) LTE	2	1,578.16	194	3.21	2100 MHz (AWS)	1000	0.32%
T-Mobile 1900 MHz (PCS) GSM	1	399.11	194	0.41	1900 MHz (PCS)	1000	0.04%
T-Mobile 600 MHz LTE / 5G NR	2	788.97	192	1.64	600 MHz	400	0.41%
T-Mobile 700 MHz LTE	2	432.54	192	0.90	700 MHz	467	0.19%
						Total:	**1.39%**

Table 6: T-MOBILE Maximum Sector MPE Power Values

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:	1.39 %
Sector B:	1.39 %
Sector C:	1.39 %
T-MOBILE Maximum Total (per sector):	1.39 %
Site Total:	7.15 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **7.15 %** 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.

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