DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND
BUILDING PERMIT

This is to certify that
MAINE CELLULAR CO/John McGillicuddy

Located at
222 Riverside Ind Pkwy

PERMIT ID: 2013-00467

CBL: 330 H005002

has permission to **Swap 12 existing antennas with new ones.**
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.	A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
THERE IS A PENALTY FOR REMOVING THIS CARD

BUILDING PERMIT INSPECTION PROCEDURES
Please call 874-8703 (ONLY)
or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

REQUIRED INSPECTIONS:

Final - Commercial

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	Issue Date:	CBL:
2013-00467		330 H005002

Location of Construction:	Owner Name:	Owner Address:	Phone:
222 Riverside Ind Pkwy	MAINE CELLULAR CO	150 RIVERSIDE STREET PORTLAND , ME 04103	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
Verizon Wireless	John McGillicuddy	49 Brattle Street Arlington MA 02474	(617) 388-6324
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Radio/Telecommunications ~~Tower~~ Equip /Antennas	IM
Past Use:	**Proposed Use:**	**Permit Fee:** / **Cost of Work:**	**CEO District:**
Cell Tower	Cell Tower	$120.00 / $10,000.00	8

FIRE DEPT: ☐ Approved ☐ Denied ☒ N/A

Signature:

INSPECTION: Use Group: U Type: 2B NUBEC 2009

Signature: 4/4/13

Proposed Project Description:
Swap 12 existing antennas with new ones.

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
bjs	03/11/2013

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: OK 3/12/13 ABM	Date:	Date: ABM

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT | ADDRESS | DATE | PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE | DATE | PHONE

General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: ~~220~~ 222 Riverside Industrial Parkway		
Total Square Footage of Proposed Structure/Area	Square Footage of Lot	
Tax Assessor's Chart, Block & Lot Chart# 330 Block# H Lot# 1	Applicant *must be owner, Lessee or Buyer* Name Chuck Webberly Address 49 Brattle Street City, State & Zip Arlington, MA 02474	Telephone: 617-780-5746
Lessee/DBA (If Applicable) Maine Cellular Co. 150 Riverside St. Portland, ME 04103	Owner (if different from Applicant) Name Verizon Wireless Address 400 Friberg Pkwy City, State & Zip Westborough, MA 01581	Cost Of Work: $ 10,000 C of O Fee: $ Total Fee: $ 10,000

Current legal use (i.e. single family) Cell Tower
If vacant, what was the previous use?
Proposed Specific use: Cell Tower
Is property part of a subdivision? NO If yes, please name
Project description: Swap 12 of 12 existing antennas with new ones. NO change to antenna location or quantity. NO change to ground space.

Contractor's name: John McGillicuddy
Address: 49 Brattle Street
City, State & Zip Arlington, MA, 02474 Telephone: 617 388 6324
Who should we contact when the permit is ready: John McGillicuddy Telephone: 617-388-6324
Mailing address: 49 Brattle St. Arlington MA 02474

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: Chuck Webberly Date: 2-28-13

This is not a permit; you may not commence ANY work until the permit is issue

Please find the enclosed building permit application for Verizon Wireless. Verizon is currently installed at this address with existing Telecom equipment. We are looking to swap 12 of 12 existing antennas with new ones. There will be no change to the antenna location, height or mount structure. No change to ground space.

I recall you guys allowing me to mail in my BP application in the past and I hope this is still ok. I have included a return envelope (postage included) for the permit to be mailed to be if possible.

If you have any questions please contact me at any time.

Thanks so much

Kristin

1-781-454-9134

Certificate of Design Application

From Designer: Jaime Reyes, P.E.

Date: 2/25/13

Job Name: Verizon Wireless antenna collocation on an existing 300-ft guyed tower

Address of Construction: ~~225~~ 227 Riverside Industrial Parkway, Portland, ME 04103

2009 International Building Code

Construction project was designed to the building code criteria listed below:

Building Code & Year 2009 IBC Use Group Classification (s) Group U

Type of Construction Type II B

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC N/A

Is the Structure mixed use? No If yes, separated or non separated or non separated (section 302.3) _____

Supervisory alarm System? No Geotechnical/Soils report required? (See Section 1802.2) No

Structural Design Calculations

Yes — Submitted for all structural members (106.1 – 106.11)

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)

Floor Area Use	Loads Shown
N/A (Structure is not a building)	N/A (Structure is not a building)

Wind loads (1603.1.4, 1609)

1609.1.1 Exception 5 — Design option utilized (1609.1.1, 1609.6)

100 mph — Basic wind speed (1809.3)

Importance Factor = 1.0 — Building category and wind importance Factor, I_w table 1604.5, 1609.5)

B — Wind exposure category (1609.4)

N/A — Internal pressure coefficient (ASCE 7)

N/A — Component and cladding pressures (1609.1.1, 1609.6.2.2)

15.2 psf- 28.6 psf — Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

N/A — Design option utilized (1614.1)

N/A — Seismic use group ("Category")

N/A — Spectral response coefficients, SDs & SD1 (1615.1)

N/A — Site class (1615.1.5)

N/A — Live load reduction

N/A — Roof *live* loads (1603.1.2, 1607.11)

N/A — Roof snow loads (1603.7.3, 1608)

N/A — Ground snow load, P_g (1608.2)

N/A — If P_g > 10 psf, flat-roof snow load P_f

N/A — If P_g > 10 psf, snow exposure factor, C_e

N/A — If P_g > 10 psf, snow load importance factor, I_s

N/A — Roof thermal factor, C_t (1608.4)

N/A — Sloped roof snowload, P_s (1608.4)

Seismic design — Seismic design category (1616.3)

not required — Basic seismic force resisting system (1617.6.2)

per TIA-222-G — Response modification coefficient, R_I and deflection amplification factor C_d (1617.6.2)

Standard when — Analysis procedure (1616.6, 1617.5)

Ss = 0.32< 1.0 — Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

N/A — Flood Hazard area (1612.3)

345 ft. — Elevation of structure

Other loads

N/A — Concentrated loads (1607.4)

N/A — Partition loads (1607.5)

1" ice w/ 40 mph wind — Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404

Certificate of Design

Date: 2/25/13

From: Jaime Reyes, P.E.

These plans and / or specifications covering construction work on:

Tower analysis for Verizon Wireless antenna collocation for a 300-ft guyed tower

(ATC #10047) at ~~225~~ 227 Riverside Industrial Parkway, Portland, ME 04103

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the **2009 International Building Code** and local amendments.

STATE OF MAINE
JAIME
REYES
No. 7303
LICENSED
PROFESSIONAL ENGINEER
(SEAL) 2/25/13

Signature: _____

Title: Director of Engineering

Firm: ATC Engineering Services

Address: 8505 Freeport Parkway #135

Irving, TX 75063

Phone: 972-999-8918

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**275 ft Guyed Tower**
ATC Site Name	:	**Portland ME, ME**
ATC Site Number	:	**10047**
Engineering Number	:	**49926421**
Proposed Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**Portland North, ME**
Carrier Site Number	:	**Portland North, ME**
Site Location	:	**~~225~~ 222 Riverside Industrial Parkway** **Portland, ME 04103-1438** **43.706022,-70.310742**
County	:	**Cumberland**
Date	:	**September 17, 2012**
Max Usage	:	**83%**
Result	:	**Pass**

Jianwei "Jack" Kong
Senior Design Engineer

Jianwei Kong

STATE OF MAINE
JAIME
REYES
No. 7303
LICENSED
PROFESSIONAL ENGINEER
9/17/12

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**275 ft Guyed Tower**
ATC Site Name	:	**Portland ME, ME**
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Jianwei "Jack" Kong
Senior Design Engineer

Jianwei Kong

AMERICAN TOWER®
CORPORATION

Eng. Number 49926421
September 17, 2012

Table of Contents

AMERICAN TOWER®
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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 275 ft guyed tower to reflect the change in loading by Verizon Wireless.

Supporting Documents

Tower Drawings	PiRod Drawing # 110412-B dated September 29, 1987
Foundation Drawing	PiRod Drawing # 110412-B dated September 29, 1987
Geotechnical Report	GEOServices, LLC Project # 21-07254 dated April 27, 2008

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	100 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-G / 2009 IBC / Maine Model Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact me via email at jianwei.kong@americantower.com or call 972-999-8935.

Existing and Reserved Equipment

Mount Elev.[1] (ft)	Qty.	Antenna	Mount Type	Coax (in)	Carrier
260.0	3	RFS ATMAA1412D-1A20	Sector Frame	(12) 1 5/8	T-Mobile
	3	Ericsson KRY 112 144/1			
	6	RFS APX16DWV-16DWV-S-E-ACU			
	1	Radio Waves G3-2.4	Pipe	(1) 1/2	
230.0	1	Motorola PTP 45600	Pipe	(1) 1 5/8	US Treasury
	1	Radiowaves HPD6-4.7NS			
200.0	1	10' Omni	Side Arm	(1) 1 1/4	City of Portland
193.0	3	KMW HB-X-WM-17-65-00T-TTLNA	Clearwire Mount	(6) 1 5/8	Clearwire Corporation
	3	KMW HB-X-WM-17-65-00T			
184.0	6	Antel BSA-185065/10CF	Sector Frame	(6) 1 5/8	US Cellular
170.0	1	TXRX Inc. 42186A0805117	Pipe	(1) 1/2	City of Portland
168.0	1	10' Omni	Side Arm	(1) 7/8	
160.0	1	Bird BA40-41-DIN	Pipe	(1) 7/8	US Treasury
140.0	1	Motorola PTP 45600	Pipe	(1) 1 5/8	
	1	Radiowaves HPD4-4.7			
125.0	1	Bird BA40-41-DIN	Pipe	(1) 7/8	
120.0	2	2' Omni	Side Arm	(1) 1/2 (1) 7/8	City of Portland
96.0	1	10' Omni	Side Arm	(1) 1 5/8	Ron Dorler (landlord)
36.0	1	GPS	Side Arm	(1) 1/2	

Proposed Equipment

Elevation[1] (ft)		Qty.	Antenna	Mount Type	Coax (in)	Carrier
Mount	RAD					
272.0	272.0	3	CSS AXP18-60	Sector Frame	(18) 1 5/8	Verizon Wireless
		3	CSS X7C-665-0			
		6	CSS V7C-665			

[1]Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Double stack proposed coax in the place of the existing Verizon Wireless coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	76%	Pass
Diagonals	56%	Pass
Horizontals	83%	Pass
Guys	70%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Base Axial (kips)	256.4	346.1	337.0	97%
Anchor 1 Uplift (kips)	122.7	165.6	101.0	61%
Anchor 1 Shear (kips)	83.3	112.5	68.6	61%

*** The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1**

The structure base reactions resulting from this analysis are less than those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection, Twist and Sway*

Antenna Elevation (ft)	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
272.0	0.141	0.000	0.052

***Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

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CORPORATION

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

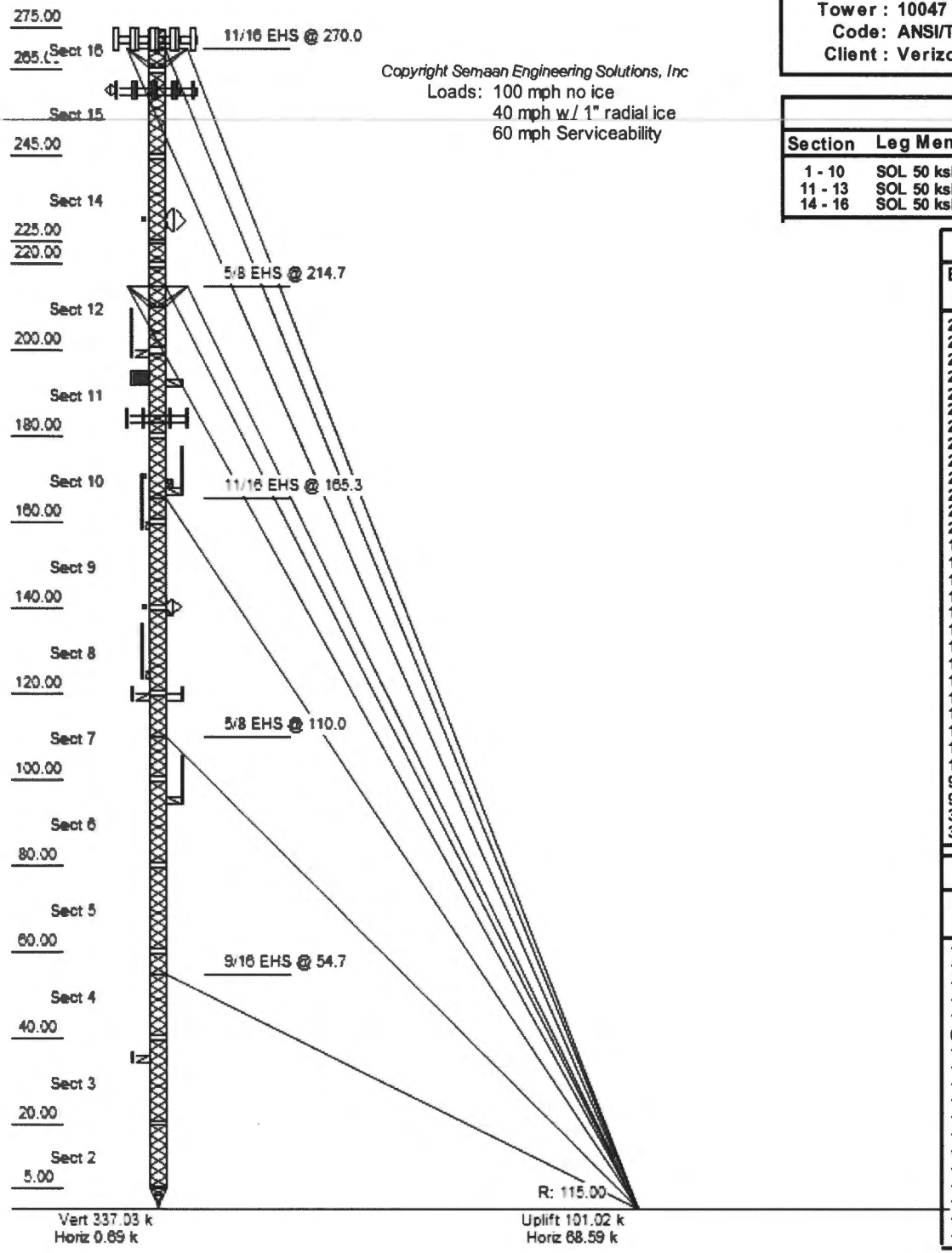
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Engineering Services and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Engineering Services is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information

Tower : 10047	Location : Portland ME, ME	
Code: ANSI/TIA-222 Rev G	Shape : Triangle	Base Width : 3.50 ft
Client : Verizon Wireless		

Sections Properties

Section	Leg Members		Diagonal Members	Horizontal Members
1 - 10	SOL 50 ksi	2 1/4" SOLID	SOL 50 ksi 3/4" SOLID	SOL 50 ksi 3/4" SOLID
11 - 13	SOL 50 ksi	2" SOLID	SOL 50 ksi 3/4" SOLID	SOL 50 ksi 3/4" SOLID
14 - 16	SOL 50 ksi	1 3/4" SOLID	SOL 50 ksi 3/4" SOLID	SOL 50 ksi 3/4" SOLID

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
272.00	Panel	3	CSS AXP18-60
272.00	Panel	3	CSS X7C-665-0
272.00	Panel	6	CSS V7C-665
272.00	Mounting Frame	3	Sector Frame
260.00	Panel	3	RFS ATMAA1412D-1A20
260.00	Panel	3	Ericsson KRY 112 144/1
260.00	Panel	6	RFS APX16DWV-16DWV-S-E-ACU
260.00	Dish	1	Radio Waves G3-2.4
260.00	Mounting Frame	3	Sector Frame
230.00	Panel	1	Motorola PTP 45600
230.00	Dish	1	Radiowaves HPD6-4.7NS
200.00	Straight Arm	1	Side Arm
200.00	Whip	1	10' Omni
193.00	Panel	3	KMW HB-X-WM-17-65-00T-TTLNA
193.00	Panel	3	KMW HB-X-WM-17-65-00T
193.00	Straight Arm	1	Clearwire Mount
184.00	Mounting Frame	3	Sector Frame
184.00	Panel	6	Antel BSA-185065/10CF
170.00	Panel	1	TXRX Inc. 42186A0805117
168.00	Whip	1	10' Omni
168.00	Straight Arm	1	Side Arm
160.00	Whip	1	Bird BA40-41-DIN
140.00	Panel	1	Motorola PTP 45600
140.00	Dish	1	Radiowaves HPD4-4.7
125.00	Whip	1	Bird BA40-41-DIN
120.00	Whip	2	2' Omni
120.00	Straight Arm	2	Side Arm
96.00	Whip	1	10' Omni
96.00	Straight Arm	1	Side Arm
36.00	Whip	1	GPS
36.00	Straight Arm	1	Side Arm

Linear Appurtenance

Elev (ft) From	To	Qty	Description
10.000	272.00	6	1 5/8" Coax
10.000	272.00	6	1 5/8" Coax
10.000	272.00	6	1 5/8" Coax
10.000	260.00	1	1/2" Coax
10.000	260.00	12	1 5/8" Coax
0.000	230.00	1	1 5/8" Coax
10.000	200.00	1	1 1/4" Coax
10.000	193.00	6	1 5/8" Coax
10.000	184.00	6	1 5/8" Coax
10.000	170.00	1	1/2" Coax
10.000	168.00	1	7/8" Coax
10.000	160.00	1	7/8" Coax
10.000	140.00	1	1 5/8" Coax
10.000	125.00	1	7/8" Coax
10.000	120.00	1	7/8" Coax
10.000	120.00	1	1/2" Coax
10.000	96.000	1	1 5/8" Coax
10.000	36.000	1	1/2" Coax

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1

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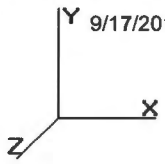


Section Forces

LoadCase 1.2D + 1.6W Normal

100.00 mph Normal to Face with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
16	270.0	28.56	0.00	5.19	0.00	0.14	2.80	1.00	1.00	0.00	2.94	15.03	0.00	637.9	0.0	320.10	476.85	796.95
15	255.0	28.10	0.00	10.48	0.00	0.14	2.79	1.00	1.00	0.00	5.94	55.52	0.00	1,588.9	0.0	634.37	1,767.6	2,402.04
14	235.0	27.45	0.00	10.48	0.00	0.14	2.79	1.00	1.00	0.00	5.94	60.54	0.00	1,653.8	0.0	619.74	1,888.2	2,507.97
13	222.5	27.02	0.00	3.13	0.00	0.17	2.70	1.00	1.00	0.00	1.79	15.75	0.00	488.7	0.0	176.97	481.11	658.08
12	210.0	26.58	0.00	11.31	0.00	0.15	2.76	1.00	1.00	0.00	6.42	63.02	0.00	1,848.9	0.0	640.05	1,892.9	2,532.98
11	190.0	25.83	0.00	11.31	0.00	0.15	2.76	1.00	1.00	0.00	6.42	75.43	0.00	1,971.5	0.0	622.01	2,215.7	2,837.78
10	170.0	25.02	0.00	12.36	0.00	0.17	2.71	1.00	1.00	0.00	7.04	89.98	0.00	2,361.0	0.0	648.86	2,584.5	3,233.42
9	150.0	24.15	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	93.42	0.00	2,356.5	0.0	616.99	2,574.9	3,191.89
8	130.0	23.18	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	97.17	0.00	2,378.2	0.0	592.27	2,556.9	3,149.22
7	110.0	22.10	0.00	12.36	0.00	0.17	2.71	1.00	1.00	0.00	7.04	101.40	0.00	2,414.6	0.0	572.98	2,529.2	3,102.25
6	90.00	20.87	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	104.04	0.00	2,411.4	0.0	533.20	2,442.2	2,975.49
5	70.00	19.42	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	104.70	0.00	2,415.3	0.0	496.26	2,285.6	2,781.88
4	50.00	17.64	0.00	12.36	0.00	0.17	2.71	1.00	1.00	0.00	7.04	104.70	0.00	2,434.3	0.0	457.41	2,076.1	2,533.52
3	30.00	15.24	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	105.54	0.00	2,418.2	0.0	389.56	1,806.7	2,196.28
2	12.50	15.23	0.00	9.24	0.00	0.17	2.71	1.00	1.00	0.00	5.26	53.70	0.00	1,569.9	0.0	295.40	916.47	1,211.87
1	2.50	15.23	0.00	3.19	0.00	0.33	2.22	1.00	1.00	0.00	1.94	0.83	0.00	368.4	0.0	89.25	12.31	101.55
														29,317.5	0.0			36,213.18

LoadCase 1.2D + 1.6W 60 deg

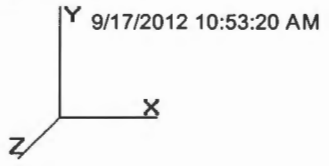
100.00 mph 60 deg with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
16	270.0	28.56	0.00	5.19	0.00	0.14	2.80	0.80	1.00	0.00	2.94	15.03	0.00	637.9	0.0	320.10	476.85	796.95
15	255.0	28.10	0.00	10.48	0.00	0.14	2.79	0.80	1.00	0.00	5.94	55.52	0.00	1,588.9	0.0	634.37	1,767.6	2,402.04
14	235.0	27.45	0.00	10.48	0.00	0.14	2.79	0.80	1.00	0.00	5.94	60.54	0.00	1,653.8	0.0	619.74	1,888.2	2,507.97
13	222.5	27.02	0.00	3.13	0.00	0.17	2.70	0.80	1.00	0.00	1.79	15.75	0.00	488.7	0.0	176.97	481.11	658.08
12	210.0	26.58	0.00	11.31	0.00	0.15	2.76	0.80	1.00	0.00	6.42	63.02	0.00	1,848.9	0.0	640.05	1,892.9	2,532.98
11	190.0	25.83	0.00	11.31	0.00	0.15	2.76	0.80	1.00	0.00	6.42	75.43	0.00	1,971.5	0.0	622.01	2,215.7	2,837.78
10	170.0	25.02	0.00	12.36	0.00	0.17	2.71	0.80	1.00	0.00	7.04	89.98	0.00	2,361.0	0.0	648.86	2,584.5	3,233.42
9	150.0	24.15	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	93.42	0.00	2,356.5	0.0	616.99	2,574.9	3,191.89
8	130.0	23.18	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	97.17	0.00	2,378.2	0.0	592.27	2,556.9	3,149.22
7	110.0	22.10	0.00	12.36	0.00	0.17	2.71	0.80	1.00	0.00	7.04	101.40	0.00	2,414.6	0.0	572.98	2,529.2	3,102.25
6	90.00	20.87	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	104.04	0.00	2,411.4	0.0	533.20	2,442.2	2,975.49
5	70.00	19.42	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	104.70	0.00	2,415.3	0.0	496.26	2,285.6	2,781.88
4	50.00	17.64	0.00	12.36	0.00	0.17	2.71	0.80	1.00	0.00	7.04	104.70	0.00	2,434.3	0.0	457.41	2,076.1	2,533.52
3	30.00	15.24	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	105.54	0.00	2,418.2	0.0	389.56	1,806.7	2,196.28
2	12.50	15.23	0.00	9.24	0.00	0.17	2.71	0.80	1.00	0.00	5.26	53.70	0.00	1,569.9	0.0	295.40	916.47	1,211.87
1	2.50	15.23	0.00	3.19	0.00	0.33	2.22	0.80	1.00	0.00	1.94	0.83	0.00	368.4	0.0	89.25	12.31	101.55
														29,317.5	0.0			36,213.18

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



Section Forces

LoadCase 1.2D + 1.6W 90 deg

100.00 mph 90 deg with No Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
16	270.0	28.56	0.00	5.19	0.00	0.14	2.80	0.85	1.00	0.00	2.94	15.03	0.00	637.9	0.0	320.10	476.85	796.95
15	255.0	28.10	0.00	10.48	0.00	0.14	2.79	0.85	1.00	0.00	5.94	55.52	0.00	1,588.9	0.0	634.37	1,767.6	2,402.04
14	235.0	27.45	0.00	10.48	0.00	0.14	2.79	0.85	1.00	0.00	5.94	60.54	0.00	1,653.8	0.0	619.74	1,888.2	2,507.97
13	222.5	27.02	0.00	3.13	0.00	0.17	2.70	0.85	1.00	0.00	1.79	15.75	0.00	488.7	0.0	176.97	481.11	658.08
12	210.0	26.58	0.00	11.31	0.00	0.15	2.76	0.85	1.00	0.00	6.42	63.02	0.00	1,848.9	0.0	640.05	1,892.9	2,532.98
11	190.0	25.83	0.00	11.31	0.00	0.15	2.76	0.85	1.00	0.00	6.42	75.43	0.00	1,971.5	0.0	622.01	2,215.7	2,837.78
10	170.0	25.02	0.00	12.36	0.00	0.17	2.71	0.85	1.00	0.00	7.04	89.98	0.00	2,361.0	0.0	648.86	2,584.5	3,233.42
9	150.0	24.15	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	93.42	0.00	2,356.5	0.0	616.99	2,574.9	3,191.89
8	130.0	23.18	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	97.17	0.00	2,378.2	0.0	592.27	2,556.9	3,149.22
7	110.0	22.10	0.00	12.36	0.00	0.17	2.71	0.85	1.00	0.00	7.04	101.40	0.00	2,414.6	0.0	572.98	2,529.2	3,102.25
6	90.00	20.87	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	104.04	0.00	2,411.4	0.0	533.20	2,442.2	2,975.49
5	70.00	19.42	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	104.70	0.00	2,415.3	0.0	496.26	2,285.6	2,781.88
4	50.00	17.64	0.00	12.36	0.00	0.17	2.71	0.85	1.00	0.00	7.04	104.70	0.00	2,434.3	0.0	457.41	2,076.1	2,533.52
3	30.00	15.24	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	105.54	0.00	2,418.2	0.0	389.56	1,806.7	2,196.28
2	12.50	15.23	0.00	9.24	0.00	0.17	2.71	0.85	1.00	0.00	5.26	53.70	0.00	1,569.9	0.0	295.40	916.47	1,211.87
1	2.50	15.23	0.00	3.19	0.00	0.33	2.22	0.85	1.00	0.00	1.94	0.83	0.00	368.4	0.0	89.25	12.31	101.55
														29,317.5	0.0			36,213.18

LoadCase 1.2D + 1.0Di + 1.0Wi Normal

40.00 mph Normal with 1.00 in Radial Ice

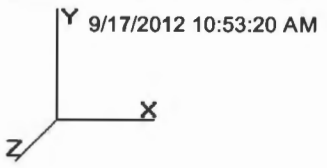
Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.00
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
16	270.0	4.57	0.00	28.40	23.21	0.70	1.78	1.00	1.00	2.47	23.04	20.78	17.27	3,117.6	2,479.6	158.94	58.04	216.98	
15	255.0	4.50	0.00	57.22	46.75	0.71	1.78	1.00	1.00	2.45	46.64	78.01	55.21	8,258.4	6,669.5	316.62	199.21	515.82	
14	235.0	4.39	0.00	56.84	46.37	0.70	1.78	1.00	1.00	2.43	46.16	84.88	58.82	8,582.0	6,928.2	306.09	213.26	519.36	
13	222.5	4.32	0.00	16.63	13.50	0.82	1.83	1.00	1.00	2.42	14.96	21.81	16.14	2,404.2	1,915.5	100.58	33.73	134.31	
12	210.0	4.25	0.00	57.16	45.85	0.70	1.78	1.00	1.00	2.41	46.46	87.08	64.18	8,900.1	7,051.2	298.34	215.46	513.80	
11	190.0	4.13	0.00	56.70	45.39	0.70	1.78	1.00	1.00	2.38	45.89	106.01	71.48	9,701.1	7,729.6	286.33	251.49	537.82	
10	170.0	4.00	0.00	58.63	46.26	0.72	1.78	1.00	1.00	2.36	48.32	129.26	77.76	11,007.4	8,646.4	292.46	267.17	559.62	
9	150.0	3.86	0.00	56.47	44.33	0.69	1.78	1.00	1.00	2.33	45.52	132.20	93.08	11,152.2	8,795.7	265.43	303.11	562.05	**
8	130.0	3.71	0.00	55.84	43.70	0.69	1.78	1.00	1.00	2.29	44.74	135.40	101.31	11,281.7	8,903.6	250.47	310.83	538.80	**
7	110.0	3.54	0.00	56.65	44.29	0.70	1.78	1.00	1.00	2.26	45.84	139.00	120.31	11,675.8	9,261.2	244.62	310.43	512.89	**
6	90.00	3.34	0.00	54.27	42.12	0.67	1.78	1.00	1.00	2.21	42.84	140.89	123.82	11,504.6	9,093.2	216.06	326.26	483.42	**
5	70.00	3.11	0.00	53.22	41.08	0.66	1.78	1.00	1.00	2.16	41.59	140.64	122.18	11,229.2	8,813.9	195.50	311.82	448.91	**
4	50.00	2.82	0.00	53.30	40.93	0.66	1.78	1.00	1.00	2.08	41.76	139.45	118.14	10,910.1	8,475.9	178.22	275.45	406.57	**
3	30.00	2.44	0.00	49.88	37.74	0.62	1.79	1.00	1.00	1.98	37.77	138.56	117.54	10,333.9	7,915.7	140.36	264.01	349.85	**
2	12.50	2.44	0.00	35.81	26.57	0.60	1.80	1.00	1.00	1.81	26.60	68.82	55.96	5,614.2	4,044.2	99.47	136.08	235.55	
1	2.50	2.44	0.00	10.76	7.58	0.98	2.06	1.00	1.00	1.55	11.12	0.83	1.29	759.8	391.4	47.48	0.10	47.58	
														136,432.3	107,114.			6,583.34	

** = Section Force Exceeds Solidity Ratio Criteria

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



Section Forces

LoadCase 1.2D + 1.0Di + 1.0Wi 60 deg — 40.00 mph 60 deg with 1.00 in Radial Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.00
Ice Dead Load Factor : 1.00
Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
16	270.0	4.57	0.00	28.40	23.21	0.70	1.78	0.80	1.00	2.47	23.04	20.78	17.27	3,117.6	2,479.6	158.94	58.04	216.98	
15	255.0	4.50	0.00	57.22	46.75	0.71	1.78	0.80	1.00	2.45	46.64	78.01	55.21	8,258.4	6,669.5	316.62	199.21	515.82	
14	235.0	4.39	0.00	56.84	46.37	0.70	1.78	0.80	1.00	2.43	46.16	84.88	58.82	8,582.0	6,928.2	306.09	213.26	519.36	
13	222.5	4.32	0.00	16.63	13.50	0.82	1.83	0.80	1.00	2.42	14.96	21.81	16.14	2,404.2	1,915.5	100.58	33.73	134.31	
12	210.0	4.25	0.00	57.16	45.85	0.70	1.78	0.80	1.00	2.41	46.46	87.08	64.18	8,900.1	7,051.2	298.34	215.46	513.80	
11	190.0	4.13	0.00	56.70	45.39	0.70	1.78	0.80	1.00	2.38	45.89	106.01	71.48	9,701.1	7,729.6	286.33	251.49	537.82	
10	170.0	4.00	0.00	58.63	46.26	0.72	1.78	0.80	1.00	2.36	48.32	129.26	77.76	11,007.4	8,646.4	292.46	267.17	559.62	
9	150.0	3.86	0.00	56.47	44.33	0.69	1.78	0.80	1.00	2.33	45.52	132.20	93.08	11,152.2	8,795.7	265.43	303.11	562.05	**
8	130.0	3.71	0.00	55.84	43.70	0.69	1.78	0.80	1.00	2.29	44.74	135.40	101.31	11,281.7	8,903.6	250.47	310.83	538.80	**
7	110.0	3.54	0.00	56.65	44.29	0.70	1.78	0.80	1.00	2.26	45.84	139.00	120.31	11,675.8	9,261.2	244.62	310.43	512.89	**
6	90.00	3.34	0.00	54.27	42.12	0.67	1.78	0.80	1.00	2.21	42.84	140.89	123.82	11,504.6	9,093.2	216.06	326.26	483.42	**
5	70.00	3.11	0.00	53.22	41.08	0.66	1.78	0.80	1.00	2.16	41.59	140.64	122.18	11,229.2	8,813.9	195.50	311.82	448.91	**
4	50.00	2.82	0.00	53.30	40.93	0.66	1.78	0.80	1.00	2.08	41.76	139.45	118.14	10,910.1	8,475.9	178.22	275.45	406.57	**
3	30.00	2.44	0.00	49.88	37.74	0.62	1.79	0.80	1.00	1.98	37.77	138.56	117.54	10,333.9	7,915.7	140.36	264.01	349.85	**
2	12.50	2.44	0.00	35.81	26.57	0.60	1.80	0.80	1.00	1.81	26.60	68.82	55.96	5,614.2	4,044.2	99.47	136.08	235.55	
1	2.50	2.44	0.00	10.76	7.58	0.98	2.06	0.80	1.00	1.55	11.12	0.83	1.29	759.8	391.4	47.48	0.10	47.58	
														136,432.3	107,114.			6,583.34	

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0Di + 1.0Wi 90 deg — 40.00 mph 90 deg with 1.00 in Radial Ice

Gust Response Factor : 0.85
Dead Load Factor : 1.20
Wind Load Factor : 1.00
Ice Dead Load Factor : 1.00
Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
16	270.0	4.57	0.00	28.40	23.21	0.70	1.78	0.85	1.00	2.47	23.04	20.78	17.27	3,117.6	2,479.6	158.94	58.04	216.98	
15	255.0	4.50	0.00	57.22	46.75	0.71	1.78	0.85	1.00	2.45	46.64	78.01	55.21	8,258.4	6,669.5	316.62	199.21	515.82	
14	235.0	4.39	0.00	56.84	46.37	0.70	1.78	0.85	1.00	2.43	46.16	84.88	58.82	8,582.0	6,928.2	306.09	213.26	519.36	
13	222.5	4.32	0.00	16.63	13.50	0.82	1.83	0.85	1.00	2.42	14.96	21.81	16.14	2,404.2	1,915.5	100.58	33.73	134.31	
12	210.0	4.25	0.00	57.16	45.85	0.70	1.78	0.85	1.00	2.41	46.46	87.08	64.18	8,900.1	7,051.2	298.34	215.46	513.80	
11	190.0	4.13	0.00	56.70	45.39	0.70	1.78	0.85	1.00	2.38	45.89	106.01	71.48	9,701.1	7,729.6	286.33	251.49	537.82	
10	170.0	4.00	0.00	58.63	46.26	0.72	1.78	0.85	1.00	2.36	48.32	129.26	77.76	11,007.4	8,646.4	292.46	267.17	559.62	
9	150.0	3.86	0.00	56.47	44.33	0.69	1.78	0.85	1.00	2.33	45.52	132.20	93.08	11,152.2	8,795.7	265.43	303.11	562.05	**
8	130.0	3.71	0.00	55.84	43.70	0.69	1.78	0.85	1.00	2.29	44.74	135.40	101.31	11,281.7	8,903.6	250.47	310.83	538.80	**
7	110.0	3.54	0.00	56.65	44.29	0.70	1.78	0.85	1.00	2.26	45.84	139.00	120.31	11,675.8	9,261.2	244.62	310.43	512.89	**
6	90.00	3.34	0.00	54.27	42.12	0.67	1.78	0.85	1.00	2.21	42.84	140.89	123.82	11,504.6	9,093.2	216.06	326.26	483.42	**
5	70.00	3.11	0.00	53.22	41.08	0.66	1.78	0.85	1.00	2.16	41.59	140.64	122.18	11,229.2	8,813.9	195.50	311.82	448.91	**
4	50.00	2.82	0.00	53.30	40.93	0.66	1.78	0.85	1.00	2.08	41.76	139.45	118.14	10,910.1	8,475.9	178.22	275.45	406.57	**
3	30.00	2.44	0.00	49.88	37.74	0.62	1.79	0.85	1.00	1.98	37.77	138.56	117.54	10,333.9	7,915.7	140.36	264.01	349.85	**
2	12.50	2.44	0.00	35.81	26.57	0.60	1.80	0.85	1.00	1.81	26.60	68.82	55.96	5,614.2	4,044.2	99.47	136.08	235.55	
1	2.50	2.44	0.00	10.76	7.58	0.98	2.06	0.85	1.00	1.55	11.12	0.83	1.29	759.8	391.4	47.48	0.10	47.58	
														136,432.3	107,114.			6,583.34	

** = Section Force Exceeds Solidity Ratio Criteria

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1

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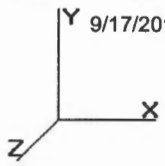


Section Forces

LoadCase 1.0D + 1.0W Service Normal

Serviceability - 60.00 Wind Normal

Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
16	270.0	10.28	0.00	5.19	0.00	0.14	2.80	1.00	1.00	0.00	2.94	15.03	0.00	531.6	0.0	72.02	107.29	179.31
15	255.0	10.12	0.00	10.48	0.00	0.14	2.79	1.00	1.00	0.00	5.94	55.52	0.00	1,324.1	0.0	142.73	397.73	540.46
14	235.0	9.88	0.00	10.48	0.00	0.14	2.79	1.00	1.00	0.00	5.94	60.54	0.00	1,378.2	0.0	139.44	424.85	564.29
13	222.5	9.73	0.00	3.13	0.00	0.17	2.70	1.00	1.00	0.00	1.79	15.75	0.00	407.2	0.0	39.82	108.25	148.07
12	210.0	9.57	0.00	11.31	0.00	0.15	2.76	1.00	1.00	0.00	6.42	63.02	0.00	1,540.8	0.0	144.01	425.91	569.92
11	190.0	9.30	0.00	11.31	0.00	0.15	2.76	1.00	1.00	0.00	6.42	75.43	0.00	1,642.9	0.0	139.95	498.55	638.50
10	170.0	9.01	0.00	12.36	0.00	0.17	2.71	1.00	1.00	0.00	7.04	89.98	0.00	1,967.5	0.0	145.99	581.53	727.52
9	150.0	8.69	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	93.42	0.00	1,963.8	0.0	138.82	579.35	718.18
8	130.0	8.34	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	97.17	0.00	1,981.8	0.0	133.26	575.31	708.58
7	110.0	7.96	0.00	12.36	0.00	0.17	2.71	1.00	1.00	0.00	7.04	101.40	0.00	2,012.1	0.0	128.92	569.09	698.01
6	90.00	7.51	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	104.04	0.00	2,009.5	0.0	119.97	549.51	669.48
5	70.00	6.99	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	104.70	0.00	2,012.8	0.0	111.66	514.26	625.92
4	50.00	6.35	0.00	12.36	0.00	0.17	2.71	1.00	1.00	0.00	7.04	104.70	0.00	2,028.5	0.0	102.92	467.13	570.04
3	30.00	5.49	0.00	12.14	0.00	0.16	2.72	1.00	1.00	0.00	6.91	105.54	0.00	2,015.2	0.0	87.65	406.51	494.16
2	12.50	5.48	0.00	9.24	0.00	0.17	2.71	1.00	1.00	0.00	5.26	53.70	0.00	1,308.3	0.0	66.46	206.21	272.67
1	2.50	5.48	0.00	3.19	0.00	0.33	2.22	1.00	1.00	0.00	1.94	0.83	0.00	307.0	0.0	20.08	2.77	22.85
														24,431.2	0.0			8,147.96

** = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.0D + 1.0W Service 60 deg

Serviceability - 60.00 Wind 60 deg

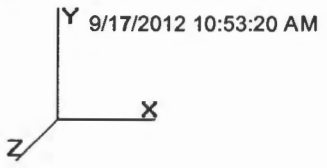
Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
16	270.0	10.28	0.00	5.19	0.00	0.14	2.80	0.80	1.00	0.00	2.94	15.03	0.00	531.6	0.0	72.02	107.29	179.31
15	255.0	10.12	0.00	10.48	0.00	0.14	2.79	0.80	1.00	0.00	5.94	55.52	0.00	1,324.1	0.0	142.73	397.73	540.46
14	235.0	9.88	0.00	10.48	0.00	0.14	2.79	0.80	1.00	0.00	5.94	60.54	0.00	1,378.2	0.0	139.44	424.85	564.29
13	222.5	9.73	0.00	3.13	0.00	0.17	2.70	0.80	1.00	0.00	1.79	15.75	0.00	407.2	0.0	39.82	108.25	148.07
12	210.0	9.57	0.00	11.31	0.00	0.15	2.76	0.80	1.00	0.00	6.42	63.02	0.00	1,540.8	0.0	144.01	425.91	569.92
11	190.0	9.30	0.00	11.31	0.00	0.15	2.76	0.80	1.00	0.00	6.42	75.43	0.00	1,642.9	0.0	139.95	498.55	638.50
10	170.0	9.01	0.00	12.36	0.00	0.17	2.71	0.80	1.00	0.00	7.04	89.98	0.00	1,967.5	0.0	145.99	581.53	727.52
9	150.0	8.69	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	93.42	0.00	1,963.8	0.0	138.82	579.35	718.18
8	130.0	8.34	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	97.17	0.00	1,981.8	0.0	133.26	575.31	708.58
7	110.0	7.96	0.00	12.36	0.00	0.17	2.71	0.80	1.00	0.00	7.04	101.40	0.00	2,012.1	0.0	128.92	569.09	698.01
6	90.00	7.51	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	104.04	0.00	2,009.5	0.0	119.97	549.51	669.48
5	70.00	6.99	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	104.70	0.00	2,012.8	0.0	111.66	514.26	625.92
4	50.00	6.35	0.00	12.36	0.00	0.17	2.71	0.80	1.00	0.00	7.04	104.70	0.00	2,028.5	0.0	102.92	467.13	570.04
3	30.00	5.49	0.00	12.14	0.00	0.16	2.72	0.80	1.00	0.00	6.91	105.54	0.00	2,015.2	0.0	87.65	406.51	494.16
2	12.50	5.48	0.00	9.24	0.00	0.17	2.71	0.80	1.00	0.00	5.26	53.70	0.00	1,308.3	0.0	66.46	206.21	272.67
1	2.50	5.48	0.00	3.19	0.00	0.33	2.22	0.80	1.00	0.00	1.94	0.83	0.00	307.0	0.0	20.08	2.77	22.85
														24,431.2	0.0			8,147.96

** = Section Force Exceeds Solidity Ratio Criteria

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



Section Forces

LoadCase 1.0D + 1.0W Service 90 deg — **Serviceability - 60.00 Wind 90 deg**

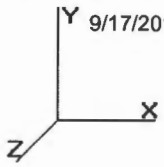
Gust Response Factor : 0.85
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
16	270.0	10.28	0.00	5.19	0.00	0.14	2.80	0.85	1.00	0.00	2.94	15.03	0.00	531.6	0.0	72.02	107.29	179.31
15	255.0	10.12	0.00	10.48	0.00	0.14	2.79	0.85	1.00	0.00	5.94	55.52	0.00	1,324.1	0.0	142.73	397.73	540.46
14	235.0	9.88	0.00	10.48	0.00	0.14	2.79	0.85	1.00	0.00	5.94	60.54	0.00	1,378.2	0.0	139.44	424.85	564.29
13	222.5	9.73	0.00	3.13	0.00	0.17	2.70	0.85	1.00	0.00	1.79	15.75	0.00	407.2	0.0	39.82	108.25	148.07
12	210.0	9.57	0.00	11.31	0.00	0.15	2.76	0.85	1.00	0.00	6.42	63.02	0.00	1,540.8	0.0	144.01	425.91	569.92
11	190.0	9.30	0.00	11.31	0.00	0.15	2.76	0.85	1.00	0.00	6.42	75.43	0.00	1,642.9	0.0	139.95	498.55	638.50
10	170.0	9.01	0.00	12.36	0.00	0.17	2.71	0.85	1.00	0.00	7.04	89.98	0.00	1,967.5	0.0	145.99	581.53	727.52
9	150.0	8.69	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	93.42	0.00	1,963.8	0.0	138.82	579.35	718.18
8	130.0	8.34	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	97.17	0.00	1,981.8	0.0	133.26	575.31	708.58
7	110.0	7.96	0.00	12.36	0.00	0.17	2.71	0.85	1.00	0.00	7.04	101.40	0.00	2,012.1	0.0	128.92	569.09	698.01
6	90.00	7.51	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	104.04	0.00	2,009.5	0.0	119.97	549.51	669.48
5	70.00	6.99	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	104.70	0.00	2,012.8	0.0	111.66	514.26	625.92
4	50.00	6.35	0.00	12.36	0.00	0.17	2.71	0.85	1.00	0.00	7.04	104.70	0.00	2,028.5	0.0	102.92	467.13	570.04
3	30.00	5.49	0.00	12.14	0.00	0.16	2.72	0.85	1.00	0.00	6.91	105.54	0.00	2,015.2	0.0	87.65	406.51	494.16
2	12.50	5.48	0.00	9.24	0.00	0.17	2.71	0.85	1.00	0.00	5.26	53.70	0.00	1,308.3	0.0	66.46	206.21	272.67
1	2.50	5.48	0.00	3.19	0.00	0.33	2.22	0.85	1.00	0.00	1.94	0.83	0.00	307.0	0.0	20.08	2.77	22.85
														24,431.2	0.0			8,147.96

** = Section Force Exceeds Solidity Ratio Criteria

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



Tower Loading

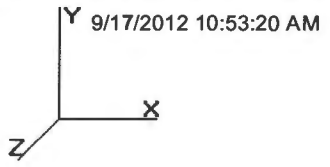
Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	Ice Weight (lb)	Ice CaAa (sf)	Len (ft)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
272.0	CSS AXP18-60	3	10.00	3.130	146.68	4.407	4.000	6.700	4.000	0.80	0.85	0.000
272.0	CSS X7C-665-0	3	30.00	8.750	346.13	10.307	6.000	12.50	7.100	0.80	0.80	0.000
272.0	CSS V7C-665	6	27.40	8.750	342.10	10.307	6.000	12.50	7.000	0.80	0.80	0.000
272.0	Sector Frame	3	400.00	17.900	826.44	39.280	12.00	0.000	0.000	0.75	0.75	0.000
260.0	RFS ATMAA1412D-1A20	3	13.00	1.170	70.20	1.642	1.000	10.00	4.000	0.80	0.67	0.000
260.0	Ericsson KRY 112 144/1	3	11.00	0.410	39.49	0.782	0.580	6.100	2.700	0.80	0.67	0.000
260.0	RFS APX16DWV-16DWV-S-E-	6	39.60	6.700	240.74	7.635	4.420	13.00	3.200	0.80	0.67	0.000
260.0	Radio Waves G3-2.4	1	40.00	4.200	236.30	41.301	3.000	0.000	0.000	1.00	1.00	0.000
260.0	Sector Frame	3	300.00	14.400	818.23	37.721	12.00	0.000	0.000	0.75	0.75	0.000
230.0	Motorola PTP 45600	1	12.10	2.040	91.02	2.553	1.208	14.50	3.700	1.00	1.00	0.000
230.0	Radiowaves HPD6-4.7NS	1	405.00	44.000	1832.28	49.997	6.000	0.000	0.000	1.00	1.00	0.000
200.0	Side Arm	1	150.00	5.200	250.07	8.917	0.000	0.000	0.000	1.00	1.00	0.000
200.0	10' Omni	1	25.00	3.000	233.81	6.738	10.00	3.000	3.000	1.00	1.00	5.000
193.0	KMW HB-X-WM-17-65-00T-	3	15.90	1.140	70.38	1.615	1.325	7.300	3.700	0.80	0.76	0.000
193.0	KMW HB-X-WM-17-65-00T	3	30.00	1.950	196.03	4.597	4.000	7.300	7.300	0.80	1.00	0.000
193.0	Clearwire Mount	1	350.00	8.500	750.28	18.221	0.000	0.000	0.000	1.00	1.00	0.000
184.0	Sector Frame	3	300.00	14.400	803.21	37.044	0.000	0.000	0.000	0.75	0.75	0.000
184.0	Antel BSA-185065/10CF	6	9.10	3.910	142.12	5.383	5.017	6.300	2.000	0.80	0.67	0.000
170.0	TXRX Inc. 42186A0805117	1	50.00	2.590	127.43	3.075	1.580	14.00	1.700	1.00	1.00	1.000
168.0	10' Omni	1	25.00	3.000	230.41	6.705	10.00	3.000	3.000	1.00	1.00	5.000
168.0	Side Arm	1	150.00	5.200	248.96	8.876	0.000	0.000	0.000	1.00	1.00	0.000
160.0	Bird BA40-41-DIN	1	32.00	5.050	119.75	18.174	11.50	0.000	0.000	1.00	1.00	5.750
140.0	Motorola PTP 45600	1	12.10	2.040	84.73	2.501	1.208	14.50	3.700	1.00	1.00	0.000
140.0	Radiowaves HPD4-4.7	1	170.00	15.860	590.53	18.930	4.000	0.000	0.000	1.00	1.00	0.000
125.0	Bird BA40-41-DIN	1	32.00	5.050	118.50	17.987	11.50	0.000	0.000	1.00	1.00	5.750
120.0	2' Omni	2	10.00	0.680	55.14	1.084	2.000	3.000	3.000	1.00	1.00	1.500
120.0	Side Arm	2	150.00	5.200	244.75	8.719	0.000	0.000	0.000	1.00	1.00	0.000
96.00	10' Omni	1	25.00	3.000	212.13	6.522	10.00	3.000	3.000	1.00	1.00	5.000
96.00	Side Arm	1	150.00	5.200	242.87	8.649	0.000	0.000	0.000	1.00	1.00	0.000
36.00	GPS	1	10.00	1.000	55.80	1.006	1.000	9.000	6.000	1.00	1.00	0.500
36.00	Side Arm	1	150.00	5.200	233.20	8.290	0.000	0.000	0.000	1.00	1.00	0.000
	Totals	66	5894.50		20558.02					Number of Appurtenances : 31		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
10.00	272.0	1 5/8" Coax	6	1.98	1.04	50	3	Block	0.00	N	0.50	1.00	0.00
10.00	272.0	1 5/8" Coax	6	1.98	1.04	0	2	Individual	0.00	N	0.50	1.00	0.00
10.00	272.0	1 5/8" Coax	6	1.98	0.82	50	Lin App	Block	0.00	N	0.50	1.00	0.00
10.00	260.0	1 5/8" Coax	12	1.98	0.82	33	2	Block	0.00	N	0.50	1.00	0.00
10.00	260.0	1/2" Coax	1	0.65	0.16	0	2	Individual	0.00	N	1.00	1.00	0.00
0.00	230.0	1 5/8" Coax	1	1.98	0.82	0	3	Individual	0.00	N	1.00	1.00	0.00
10.00	200.0	1 1/4" Coax	1	1.55	0.66	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	193.0	1 5/8" Coax	6	1.98	0.82	50	1	Block	0.00	N	0.50	1.00	0.00
10.00	184.0	1 5/8" Coax	6	1.98	1.04	50	Lin App	Block	0.00	N	0.50	1.00	0.00
10.00	170.0	1/2" Coax	1	0.63	0.15	0	Lin App	Individual	0.00	N	1.00	1.00	0.00

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



Tower Loading

10.00	168.0	7/8" Coax	1	1.09	0.33	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	160.0	7/8" Coax	1	1.09	0.33	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	140.0	1 5/8" Coax	1	1.98	0.82	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	125.0	7/8" Coax	1	1.09	0.33	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	120.0	1/2" Coax	1	0.63	0.15	100	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	120.0	7/8" Coax	1	1.09	0.33	0	Lin App	Individual	0.00	N	1.00	1.00	0.00
10.00	96.00	1 5/8" Coax	1	1.98	0.82	0	3	Individual	0.00	N	1.00	1.00	0.00
10.00	36.00	1/2" Coax	1	0.63	0.15	0	3	Individual	0.00	N	1.00	1.00	0.00

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1

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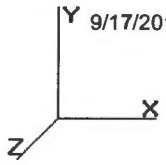


Force/Stress Summary

Section: 1 PIROD42B Bot Elev (ft): 0.00 Height (ft): 5.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-122.44	1.2D + 1.0Di +	1.80	100	100	100	38.3	50.0	160.68	0	0	0.00	0.00	76	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SOL - 3/4" SOLID	-5.44	1.2D + 1.0Di +	2.440	50	50	50	78.1	50.0	12.73	0	0	0.00	0.00	42	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	16.53	1.2D + 1.0Di +	50	65	19.88	0	0	0.00	0.00	83	Member
DIAG SOL - 3/4" SOLID	2.61	1.2D + 1.0Di +	50	65	19.88	0	0	0.00	0.00	13	Member

Section: 2 PIROD42 Bot Elev (ft): 5.00 Height (ft): 15.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-112.68	1.2D + 1.0Di +	2.39	100	100	100	51.0	50.0	147.98	0	0	0.00	0.00	76	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SOL - 3/4" SOLID	-0.71	1.2D + 1.0Di +	4.238	50	50	50	122.0	50.0	6.70	0	0	0.00	0.00	10	Member X

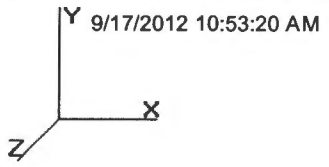
Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	7.31	1.2D + 1.0Di +	50	65	19.88	0	0	0.00	0.00	36	Member
DIAG SOL - 3/4" SOLID	0.60	1.2D + 1.0Di +	50	65	19.88	0	0	0.00	0.00	3	Member

Section: 3 1 Bot Elev (ft): 20.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-110.87	1.2D + 1.0Di +	2.33	100	100	100	49.8	50.0	149.28	0	0	0.00	0.00	74	Member X
HORIZ SOL - 3/4" SOLID	-0.20	1.2D + 1.6W	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	5	Member X
DIAG SOL - 3/4" SOLID	-1.63	1.2D + 1.6W 90	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	24	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	0.81	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	4	Member
DIAG SOL - 3/4" SOLID	0.81	1.2D + 1.6W	50	65	19.88	0	0	0.00	0.00	4	Member

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



Force/Stress Summary

Section: 4 1 Bot Elev (ft): 40.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-106.11	1.2D + 1.0Di +	2.33	100	100	100	49.8	50.0	149.28	0	0	0.00	0.00	71	Member X
HORIZ SOL - 3/4" SOLID	-0.50	1.2D + 1.6W 60	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	12	Member X
DIAG SOL - 3/4" SOLID	-2.75	1.2D + 1.6W 90	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	40	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	1.38	1.2D + 1.6W	50	65	19.88	0	0	0.00	0.00	6	Member
DIAG SOL - 3/4" SOLID	1.79	1.2D + 1.6W	50	65	19.88	0	0	0.00	0.00	9	Member

Section: 5 1 Bot Elev (ft): 60.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-100.27	1.2D + 1.0Di +	2.33	100	100	100	49.8	50.0	149.28	0	0	0.00	0.00	67	Member X
HORIZ SOL - 3/4" SOLID	-0.50	1.2D + 1.6W	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	12	Member X
DIAG SOL - 3/4" SOLID	-2.36	1.2D + 1.6W 90	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	34	Member X

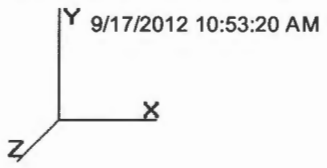
Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	1.03	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	5	Member
DIAG SOL - 3/4" SOLID	1.63	1.2D + 1.6W 90	50	65	19.88	0	0	0.00	0.00	8	Member

Section: 6 1 Bot Elev (ft): 80.00 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-96.12	1.2D + 1.0Di +	2.33	100	100	100	49.8	50.0	149.28	0	0	0.00	0.00	64	Member X
HORIZ SOL - 3/4" SOLID	-0.07	1.2D + 1.6W	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	1	Member X
DIAG SOL - 3/4" SOLID	-1.40	1.2D + 1.6W 60	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	20	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	0.87	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	4	Member
DIAG SOL - 3/4" SOLID	1.03	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	5	Member

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Force/Stress Summary

Section: 7 1 Bot Elev (ft): 100.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-92.66	1.2D + 1.0Di +	2.33	100	100	100	49.8	50.0	149.28	0	0	0.00	0.00	62	Member X
HORIZ SOL - 3/4" SOLID	-0.90	1.2D + 1.6W 60	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	22	Member X
DIAG SOL - 3/4" SOLID	-3.51	1.2D + 1.6W 90	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	51	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	1.60	1.2D + 1.6W	50	65	19.88	0	0	0.00	0.00	8	Member
DIAG SOL - 3/4" SOLID	2.81	1.2D + 1.6W 90	50	65	19.88	0	0	0.00	0.00	14	Member

Section: 8 1 Bot Elev (ft): 120.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-85.14	1.2D + 1.0Di +	2.33	100	100	100	49.8	50.0	149.28	0	0	0.00	0.00	57	Member X
HORIZ SOL - 3/4" SOLID	-0.76	1.2D + 1.6W	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	18	Member X
DIAG SOL - 3/4" SOLID	-3.12	1.2D + 1.6W 90	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	45	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	1.25	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	6	Member
DIAG SOL - 3/4" SOLID	2.51	1.2D + 1.6W 90	50	65	19.88	0	0	0.00	0.00	12	Member

Section: 9 1 Bot Elev (ft): 140.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-83.96	1.2D + 1.0Di +	2.33	100	100	100	49.8	50.0	149.28	0	0	0.00	0.00	56	Member X
HORIZ SOL - 3/4" SOLID	-0.09	1.2D + 1.6W 90	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	2	Member X
DIAG SOL - 3/4" SOLID	-1.81	1.2D + 1.6W 60	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	26	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	0.78	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	3	Member
DIAG SOL - 3/4" SOLID	1.41	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	7	Member

Site Number: 10047
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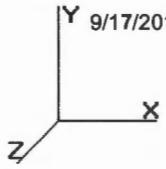
Struct Class : II
Exposure : B
Topo : 1



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Force/Stress Summary

Section: 10 1 Bot Elev (ft): 160.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2 1/4" SOLID	-78.50	1.2D + 1.0Di +	2.33	100	100	100	49.8	50.0	149.28	0	0	0.00	0.00	52	Member X
HORIZ SOL - 3/4" SOLID	-0.53	1.2D + 1.6W 60	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	12	Member X
DIAG SOL - 3/4" SOLID	-2.53	1.2D + 1.6W 60	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	37	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	1.15	1.2D + 1.6W	50	65	19.88	0	0	0.00	0.00	5	Member
DIAG SOL - 3/4" SOLID	2.27	1.2D + 1.6W 90	50	65	19.88	0	0	0.00	0.00	11	Member

Section: 11 2 Bot Elev (ft): 180.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2" SOLID	-69.27	1.2D + 1.0Di +	2.33	100	100	100	56.0	50.0	112.40	0	0	0.00	0.00	61	Member X
HORIZ SOL - 3/4" SOLID	-0.33	1.2D + 1.6W	3.500	80	80	80	125.4	50.0	6.34	0	0	0.00	0.00	5	Member X
DIAG SOL - 3/4" SOLID	-1.87	1.2D + 1.6W 90	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	27	Member X

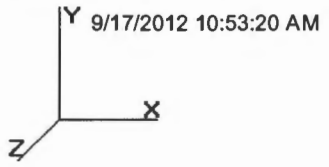
Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	0.78	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	3	Member
DIAG SOL - 3/4" SOLID	1.50	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	7	Member

Section: 12 2 Bot Elev (ft): 200.0 Height (ft): 20.000

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2" SOLID	-64.03	1.2D + 1.0Di +	2.33	100	100	100	56.0	50.0	112.40	0	0	0.00	0.00	56	Member X
HORIZ SOL - 3/4" SOLID	-1.35	1.2D + 1.6W 60	3.500	80	80	80	125.4	50.0	6.34	0	0	0.00	0.00	21	Member X
DIAG SOL - 3/4" SOLID	-3.82	1.2D + 1.6W 60	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	56	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SOL - 2" SOLID	9.54	1.2D + 1.6W 60	50	65	141.37	0	0	0.00	0.00	6	Member
HORIZ SOL - 3/4" SOLID	1.52	1.2D + 1.6W	50	65	19.88	0	0	0.00	0.00	7	Member
DIAG SOL - 3/4" SOLID	3.69	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	18	Member

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



Force/Stress Summary

Section: 13 2 - 5' **Bot Elev (ft): 220.0** **Height (ft): 5.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 2" SOLID	-36.77	1.2D + 1.6W	2.17	100	100	100	52.0	50.0	116.00	0	0	0.00	0.00	31	Member X
HORIZ SOL - 3/4" SOLID	-1.11	1.2D + 1.6W 60	3.500	80	80	80	125.4	50.0	6.34	0	0	0.00	0.00	17	Member X
DIAG SOL - 3/4" SOLID	-3.49	1.2D + 1.6W 60	4.117	50	50	50	118.6	50.0	7.10	0	0	0.00	0.00	49	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	1.14	1.2D + 1.6W	50	65	19.88	0	0	0.00	0.00	5	Member
DIAG SOL - 3/4" SOLID	3.49	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	17	Member

Section: 14 3 **Bot Elev (ft): 225.0** **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 1 3/4" SOLID	-38.06	1.2D + 1.6W 60	2.33	100	100	100	64.0	50.0	80.23	0	0	0.00	0.00	47	Member X
HORIZ SOL - 3/4" SOLID	-1.16	1.2D + 1.6W	3.500	80	80	80	125.4	50.0	6.34	0	0	0.00	0.00	18	Member X
DIAG SOL - 3/4" SOLID	-3.53	1.2D + 1.6W 60	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	51	Member X

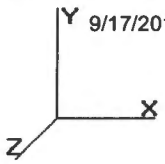
Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0	0.00	0	0	0.00	0.00	0	
HORIZ SOL - 3/4" SOLID	1.40	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	7	Member
DIAG SOL - 3/4" SOLID	2.95	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	14	Member

Section: 15 3 **Bot Elev (ft): 245.0** **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 1 3/4" SOLID	-45.77	1.2D + 1.6W 60	2.33	100	100	100	64.0	50.0	80.23	0	0	0.00	0.00	57	Member X
HORIZ SOL - 3/4" SOLID	-0.43	1.2D + 1.6W	3.500	80	80	80	125.4	50.0	6.34	0	0	0.00	0.00	6	Member X
DIAG SOL - 3/4" SOLID	-1.57	1.2D + 1.6W 60	4.206	50	50	50	121.1	50.0	6.80	0	0	0.00	0.00	23	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SOL - 1 3/4" SOLID	1.48	1.2D + 1.6W	50	65	108.24	0	0	0.00	0.00	1	Member
HORIZ SOL - 3/4" SOLID	0.66	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	3	Member
DIAG SOL - 3/4" SOLID	1.20	1.2D + 1.6W	50	65	19.88	0	0	0.00	0.00	6	Member

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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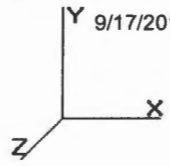
Force/Stress Summary

Section: 16 Top **Bot Elev (ft): 265.0** **Height (ft): 10.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	phi Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG SOL - 1 3/4" SOLID	-42.04	1.2D + 1.6W 60	0.67	100	100	100	18.3	50.0	105.62	0	0	0.00	0.00	39	Member X
HORIZ SOL - 3/4" SOLID	-0.14	1.2D + 1.6W	3.500	100	100	100	156.8	50.0	4.06	0	0	0.00	0.00	3	Member X
DIAG SOL - 3/4" SOLID	-2.79	1.2D + 1.6W 90	4.116	50	50	50	118.5	50.0	7.10	0	0	0.00	0.00	39	Member X

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Fu (ksi)	phit Pn (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG SOL - 1 3/4" SOLID	0.53	1.2D + 1.6W	50	65	108.24	0	0	0.00	0.00	0	Member
HORIZ SOL - 3/4" SOLID	0.25	1.2D + 1.6W 60	50	65	19.88	0	0	0.00	0.00	1	Member
DIAG SOL - 3/4" SOLID	2.53	1.2D + 1.6W 90	50	65	19.88	0	0	0.00	0.00	12	Member

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



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Support Forces Summary

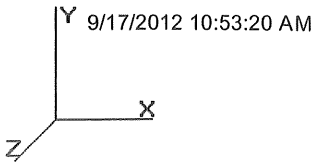
Load Case	Node	FX (kip)	FY (kip)	FZ (kip)
1.0D + 1.0W Service 90 deg	A1b	7.80	-14.72	-4.78
	A1a	-20.26	-34.58	-11.41
	A1	-0.55	-24.62	16.19
	1	-0.25	109.51	0.00
1.0D + 1.0W Service 60 deg	A1b	10.37	-19.20	-6.51
	A1a	-21.07	-36.17	-12.17
	A1	-0.46	-19.16	12.24
	1	-0.22	110.06	-0.12
1.0D + 1.0W Service Normal	A1b	17.20	-30.09	-10.47
	A1a	-17.20	-30.09	-10.47
	A1	0.00	-13.00	8.02
	1	0.00	108.80	-0.25
1.2D + 1.0Di + 1.0Wi 90 deg	A1b	19.95	-30.64	-12.47
	A1a	-35.39	-53.31	-19.48
	A1	-1.84	-41.94	32.02
	1	0.10	336.88	-0.03
1.2D + 1.0Di + 1.0Wi 60 deg	A1b	22.66	-35.55	-14.86
	A1a	-36.03	-55.17	-20.81
	A1	-1.54	-35.47	27.06
	1	0.06	337.03	0.03
1.2D + 1.0Di + 1.0Wi Normal	A1b	31.21	-48.42	-19.80
	A1a	-31.21	-48.43	-19.80
	A1	0.00	-28.69	22.25
	1	0.00	336.68	0.14
1.2D + 1.6W 90 deg	A1b	3.49	-12.11	-3.25
	A1a	-60.15	-101.02	-32.96
	A1	-2.76	-56.60	36.81
	1	0.23	211.40	-0.60
1.2D + 1.6W 60 deg	A1b	8.94	-22.41	-7.52
	A1a	-57.71	-99.32	-33.36
	A1	-2.06	-22.35	11.55
	1	-0.44	185.55	-0.27
1.2D + 1.6W Normal	A1b	49.33	-86.79	-31.46
	A1a	-49.33	-86.79	-31.46
	A1	0.00	-9.87	3.18
	1	0.00	225.33	0.69

(-) = Uplift (+) = Down

Max Reactions (kip)

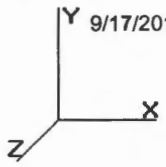
	Base	Anch1
Vertical	337.03	-101.02
Horizontal	0.69	68.59

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1

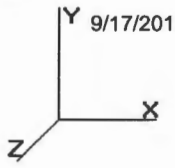


Cable Forces Summary

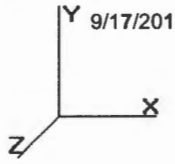
Load Case	Elevation (ft)	Cable	Node 1	Node 2	Allow Tension (kip)	Applied Tension (kip)	Use %
1.2D + 1.6W Normal	54.67	9/16 EHS	A1	29	21.00	0.18	0
		9/16 EHS	A1b	29a	21.00	9.99	47
		9/16 EHS	A1a	29b	21.00	9.99	47
	110.00	5/8 EHS	A1	57	25.44	0.22	0
		5/8 EHS	A1b	57a	25.44	15.24	59
		5/8 EHS	A1a	57b	25.44	15.24	59
	165.33	11/16 EHS	A1	85	30.00	0.75	2
		11/16 EHS	A1b	85a	30.00	17.07	56
		11/16 EHS	A1a	85b	30.00	17.07	56
	214.67	5/8 EHS	A1	109	25.44	1.32	5
		5/8 EHS	A1b	109a	25.44	11.65	45
		5/8 EHS	A1a	109b	25.44	11.65	45
		5/8 EHS	A1	T5	25.44	1.33	5
		5/8 EHS	A1a	T5b	25.44	12.12	47
		5/8 EHS	A1b	T5a	25.44	11.00	43
		5/8 EHS	A1b	T5	25.44	12.13	47
		5/8 EHS	A1a	T5a	25.44	11.02	43
		5/8 EHS	A1	T5b	25.44	1.33	5
	270.00	11/16 EHS	A1	139	30.00	2.40	7
		11/16 EHS	A1b	139a	30.00	11.76	39
		11/16 EHS	A1a	139b	30.00	11.76	39
		5/8 EHS	A1	T7	25.44	2.22	8
		5/8 EHS	A1a	T7b	25.44	10.47	41
		5/8 EHS	A1b	T7a	25.44	9.22	36
		5/8 EHS	A1b	T7	25.44	10.49	41
		5/8 EHS	A1a	T7a	25.44	9.25	36
		5/8 EHS	A1	T7b	25.44	2.22	8
1.2D + 1.6W 60 deg	54.67	9/16 EHS	A1	29	21.00	1.40	6
		9/16 EHS	A1b	29a	21.00	1.33	6
		9/16 EHS	A1a	29b	21.00	10.55	50
	110.00	5/8 EHS	A1	57	25.44	1.61	6
		5/8 EHS	A1b	57a	25.44	1.55	6
		5/8 EHS	A1a	57b	25.44	16.63	65
	165.33	11/16 EHS	A1	85	30.00	2.43	8
		11/16 EHS	A1b	85a	30.00	2.40	8
		11/16 EHS	A1a	85b	30.00	19.49	64
	214.67	5/8 EHS	A1	109	25.44	3.03	11
		5/8 EHS	A1b	109a	25.44	3.04	11
		5/8 EHS	A1a	109b	25.44	13.47	52
		5/8 EHS	A1	T5	25.44	3.23	12
		5/8 EHS	A1a	T5b	25.44	13.74	54
		5/8 EHS	A1b	T5a	25.44	3.02	11
		5/8 EHS	A1b	T5	25.44	3.07	12
		5/8 EHS	A1a	T5a	25.44	12.99	51
		5/8 EHS	A1	T5b	25.44	2.85	11
	270.00	11/16 EHS	A1	139	30.00	4.52	15
		11/16 EHS	A1b	139a	30.00	4.58	15
		11/16 EHS	A1a	139b	30.00	13.84	46
		5/8 EHS	A1	T7	25.44	4.28	16
		5/8 EHS	A1a	T7b	25.44	11.60	45
		5/8 EHS	A1b	T7a	25.44	3.99	15



		5/8 EHS	A1b	T7	25.44	4.24	16
		5/8 EHS	A1a	T7a	25.44	11.34	44
		5/8 EHS	A1	T7b	25.44	3.86	15
1.2D + 1.6W 90 deg	54.67	9/16 EHS	A1	29	21.00	6.42	30
		9/16 EHS	A1b	29a	21.00	0.31	1
		9/16 EHS	A1a	29b	21.00	11.50	54
	110.00	5/8 EHS	A1	57	25.44	9.20	36
		5/8 EHS	A1b	57a	25.44	0.49	1
		5/8 EHS	A1a	57b	25.44	17.85	70
	165.33	11/16 EHS	A1	85	30.00	10.14	33
		11/16 EHS	A1b	85a	30.00	1.03	3
		11/16 EHS	A1a	85b	30.00	20.16	67
	214.67	5/8 EHS	A1	109	25.44	7.52	29
		5/8 EHS	A1b	109a	25.44	1.61	6
		5/8 EHS	A1a	109b	25.44	13.59	53
		5/8 EHS	A1	T5	25.44	8.30	32
		5/8 EHS	A1a	T5b	25.44	13.43	52
		5/8 EHS	A1b	T5a	25.44	1.60	6
		5/8 EHS	A1b	T5	25.44	1.64	6
		5/8 EHS	A1a	T5a	25.44	13.53	53
		5/8 EHS	A1	T5b	25.44	6.72	26
	270.00	11/16 EHS	A1	139	30.00	8.22	27
		11/16 EHS	A1b	139a	30.00	2.81	9
		11/16 EHS	A1a	139b	30.00	13.63	45
		5/8 EHS	A1	T7	25.44	7.72	30
		5/8 EHS	A1a	T7b	25.44	10.98	43
		5/8 EHS	A1b	T7a	25.44	2.55	10
		5/8 EHS	A1b	T7	25.44	2.62	10
		5/8 EHS	A1a	T7a	25.44	11.63	45
		5/8 EHS	A1	T7b	25.44	6.47	25
1.2D + 1.0Di + 1.0Wi Normal	54.67	9/16 EHS	A1	29	21.00	5.35	25
		9/16 EHS	A1b	29a	21.00	7.20	34
		9/16 EHS	A1a	29b	21.00	7.20	34
	110.00	5/8 EHS	A1	57	25.44	5.32	20
		5/8 EHS	A1b	57a	25.44	8.26	32
		5/8 EHS	A1a	57b	25.44	8.26	32
	165.33	11/16 EHS	A1	85	30.00	5.81	19
		11/16 EHS	A1b	85a	30.00	9.15	30
		11/16 EHS	A1a	85b	30.00	9.15	30
	214.67	5/8 EHS	A1	109	25.44	5.77	22
		5/8 EHS	A1b	109a	25.44	8.57	33
		5/8 EHS	A1a	109b	25.44	8.57	33
		5/8 EHS	A1	T5	25.44	5.74	22
		5/8 EHS	A1a	T5b	25.44	8.68	34
		5/8 EHS	A1b	T5a	25.44	8.32	32
		5/8 EHS	A1b	T5	25.44	8.69	34
		5/8 EHS	A1a	T5a	25.44	8.33	32
		5/8 EHS	A1	T5b	25.44	5.74	22
	270.00	11/16 EHS	A1	139	30.00	6.89	22
		11/16 EHS	A1b	139a	30.00	9.80	32
		11/16 EHS	A1a	139b	30.00	9.80	32
		5/8 EHS	A1	T7	25.44	6.24	24
		5/8 EHS	A1a	T7b	25.44	9.24	36
		5/8 EHS	A1b	T7a	25.44	8.82	34
		5/8 EHS	A1b	T7	25.44	9.24	36
		5/8 EHS	A1a	T7a	25.44	8.83	34
		5/8 EHS	A1	T7b	25.44	6.24	24

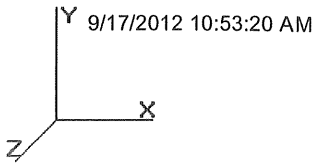


1.2D + 1.0Di + 1.0Wi 60 deg	54.67	9/16 EHS	A1	29	21.00	5.95	28
		9/16 EHS	A1b	29a	21.00	5.92	28
		9/16 EHS	A1a	29b	21.00	7.59	36
	110.00	5/8 EHS	A1	57	25.44	6.23	24
		5/8 EHS	A1b	57a	25.44	6.19	24
		5/8 EHS	A1a	57b	25.44	9.06	35
	165.33	11/16 EHS	A1	85	30.00	6.85	22
		11/16 EHS	A1b	85a	30.00	6.84	22
		11/16 EHS	A1a	85b	30.00	10.29	34
	214.67	5/8 EHS	A1	109	25.44	6.72	26
		5/8 EHS	A1b	109a	25.44	6.74	26
		5/8 EHS	A1a	109b	25.44	9.53	37
		5/8 EHS	A1	T5	25.44	6.85	26
		5/8 EHS	A1a	T5b	25.44	9.47	37
		5/8 EHS	A1b	T5a	25.44	6.56	25
		5/8 EHS	A1b	T5	25.44	6.83	26
		5/8 EHS	A1a	T5a	25.44	9.44	37
		5/8 EHS	A1	T5b	25.44	6.51	25
	270.00	11/16 EHS	A1	139	30.00	7.90	26
		11/16 EHS	A1b	139a	30.00	7.94	26
		11/16 EHS	A1a	139b	30.00	10.93	36
		5/8 EHS	A1	T7	25.44	7.50	29
		5/8 EHS	A1a	T7b	25.44	10.01	39
		5/8 EHS	A1b	T7a	25.44	7.10	27
		5/8 EHS	A1b	T7	25.44	7.52	29
		5/8 EHS	A1a	T7a	25.44	10.00	39
		5/8 EHS	A1	T7b	25.44	7.06	27
1.2D + 1.0Di + 1.0Wi 90 deg	54.67	9/16 EHS	A1	29	21.00	6.62	31
		9/16 EHS	A1b	29a	21.00	5.47	26
		9/16 EHS	A1a	29b	21.00	7.52	35
	110.00	5/8 EHS	A1	57	25.44	7.28	28
		5/8 EHS	A1b	57a	25.44	5.51	21
		5/8 EHS	A1a	57b	25.44	8.88	34
	165.33	11/16 EHS	A1	85	30.00	7.99	26
		11/16 EHS	A1b	85a	30.00	6.06	20
		11/16 EHS	A1a	85b	30.00	9.99	33
	214.67	5/8 EHS	A1	109	25.44	7.64	30
		5/8 EHS	A1b	109a	25.44	6.04	23
		5/8 EHS	A1a	109b	25.44	9.26	36
		5/8 EHS	A1	T5	25.44	7.81	30
		5/8 EHS	A1a	T5b	25.44	9.12	35
		5/8 EHS	A1b	T5a	25.44	5.96	23
		5/8 EHS	A1b	T5	25.44	6.06	23
		5/8 EHS	A1a	T5a	25.44	9.27	36
		5/8 EHS	A1	T5b	25.44	7.36	28
	270.00	11/16 EHS	A1	139	30.00	8.82	29
		11/16 EHS	A1b	139a	30.00	7.21	24
		11/16 EHS	A1a	139b	30.00	10.60	35
		5/8 EHS	A1	T7	25.44	8.40	33
		5/8 EHS	A1a	T7b	25.44	9.63	37
		5/8 EHS	A1b	T7a	25.44	6.46	25
		5/8 EHS	A1b	T7	25.44	6.71	26
		5/8 EHS	A1a	T7a	25.44	9.83	38
		5/8 EHS	A1	T7b	25.44	7.90	31
1.0D + 1.0W Service Normal	54.67	9/16 EHS	A1	29	21.00	1.90	9
		9/16 EHS	A1b	29a	21.00	3.95	18



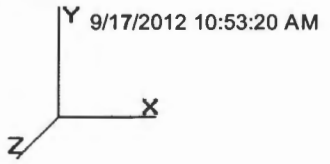
		9/16 EHS	A1a	29b	21.00	3.95	18
	110.00	5/8 EHS	A1	57	25.44	1.40	5
		5/8 EHS	A1b	57a	25.44	4.65	18
		5/8 EHS	A1a	57b	25.44	4.65	18
	165.33	11/16 EHS	A1	85	30.00	1.42	4
		11/16 EHS	A1b	85a	30.00	5.10	16
		11/16 EHS	A1a	85b	30.00	5.10	16
	214.67	5/8 EHS	A1	109	25.44	1.71	6
		5/8 EHS	A1b	109a	25.44	4.06	15
		5/8 EHS	A1a	109b	25.44	4.06	15
		5/8 EHS	A1	T5	25.44	1.74	6
		5/8 EHS	A1a	T5b	25.44	4.14	16
		5/8 EHS	A1b	T5a	25.44	3.94	15
		5/8 EHS	A1b	T5	25.44	4.14	16
		5/8 EHS	A1a	T5a	25.44	3.94	15
		5/8 EHS	A1	T5b	25.44	1.74	6
	270.00	11/16 EHS	A1	139	30.00	2.62	8
		11/16 EHS	A1b	139a	30.00	4.73	15
		11/16 EHS	A1a	139b	30.00	4.73	15
		5/8 EHS	A1	T7	25.44	2.36	9
		5/8 EHS	A1a	T7b	25.44	4.14	16
		5/8 EHS	A1b	T7a	25.44	3.91	15
		5/8 EHS	A1b	T7	25.44	4.14	16
		5/8 EHS	A1a	T7a	25.44	3.92	15
		5/8 EHS	A1	T7b	25.44	2.36	9
1.0D + 1.0W Service 60 deg	54.67	9/16 EHS	A1	29	21.00	2.58	12
		9/16 EHS	A1b	29a	21.00	2.57	12
		9/16 EHS	A1a	29b	21.00	4.60	21
	110.00	5/8 EHS	A1	57	25.44	2.43	9
		5/8 EHS	A1b	57a	25.44	2.42	9
		5/8 EHS	A1a	57b	25.44	5.76	22
	165.33	11/16 EHS	A1	85	30.00	2.71	9
		11/16 EHS	A1b	85a	30.00	2.72	9
		11/16 EHS	A1a	85b	30.00	6.42	21
	214.67	5/8 EHS	A1	109	25.44	2.61	10
		5/8 EHS	A1b	109a	25.44	2.62	10
		5/8 EHS	A1a	109b	25.44	4.89	19
		5/8 EHS	A1	T5	25.44	2.75	10
		5/8 EHS	A1a	T5b	25.44	4.91	19
		5/8 EHS	A1b	T5a	25.44	2.57	10
		5/8 EHS	A1b	T5	25.44	2.67	10
		5/8 EHS	A1a	T5a	25.44	4.80	18
		5/8 EHS	A1	T5b	25.44	2.47	9
	270.00	11/16 EHS	A1	139	30.00	3.40	11
		11/16 EHS	A1b	139a	30.00	3.41	11
		11/16 EHS	A1a	139b	30.00	5.50	18
		5/8 EHS	A1	T7	25.44	3.10	12
		5/8 EHS	A1a	T7b	25.44	4.66	18
		5/8 EHS	A1b	T7a	25.44	2.86	11
		5/8 EHS	A1b	T7	25.44	3.07	12
		5/8 EHS	A1a	T7a	25.44	4.62	18
		5/8 EHS	A1	T7b	25.44	2.82	11
1.0D + 1.0W Service 90 deg	54.67	9/16 EHS	A1	29	21.00	3.28	15
		9/16 EHS	A1b	29a	21.00	2.06	9
		9/16 EHS	A1a	29b	21.00	4.43	21
	110.00	5/8 EHS	A1	57	25.44	3.55	13
		5/8 EHS	A1b	57a	25.44	1.62	6

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



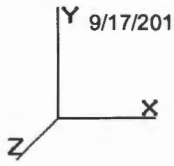
	5/8 EHS	A1a	57b	25.44	5.49	21
165.33	11/16 EHS	A1	85	30.00	3.90	12
	11/16 EHS	A1b	85a	30.00	1.78	5
	11/16 EHS	A1a	85b	30.00	6.08	20
214.67	5/8 EHS	A1	109	25.44	3.34	13
	5/8 EHS	A1b	109a	25.44	1.98	7
	5/8 EHS	A1a	109b	25.44	4.67	18
	5/8 EHS	A1	T5	25.44	3.50	13
	5/8 EHS	A1a	T5b	25.44	4.66	18
	5/8 EHS	A1b	T5a	25.44	2.00	7
	5/8 EHS	A1b	T5	25.44	2.00	7
	5/8 EHS	A1a	T5a	25.44	4.63	18
	5/8 EHS	A1	T5b	25.44	3.15	12
270.00	11/16 EHS	A1	139	30.00	4.06	13
	11/16 EHS	A1b	139a	30.00	2.85	9
	11/16 EHS	A1a	139b	30.00	5.29	17
	5/8 EHS	A1	T7	25.44	3.65	14
	5/8 EHS	A1a	T7b	25.44	4.43	17
	5/8 EHS	A1b	T7a	25.44	2.48	9
	5/8 EHS	A1b	T7	25.44	2.58	10
	5/8 EHS	A1a	T7a	25.44	4.51	17
	5/8 EHS	A1	T7b	25.44	3.33	13

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



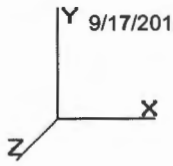
Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
Serviceability - 60.00 Wind 60 deg	37.00	0.0335	0.0346	0.0406
	97.00	0.0809	0.0014	0.0437
	120.00	0.1001	0.0005	0.1134
	125.33	0.1061	0.0004	0.0582
	140.00	0.1189	0.0002	0.0601
	160.00	0.1293	0.0000	0.0311
	167.67	0.1317	0.0000	0.0246
	170.00	0.1328	0.0000	0.0268
	183.00	0.1386	0.0000	0.0129
	192.33	0.1403	0.0000	0.0088
	200.00	0.1394	-0.0006	0.0924
	230.33	0.1472	0.0000	0.0323
	259.67	0.1509	0.0000	0.0265
	272.17	0.1414	0.0000	0.0327
Serviceability - 60.00 Wind 90 deg	37.00	0.0363	0.0621	0.0421
	97.00	0.0846	0.0037	0.0389
	120.00	0.1033	0.0010	0.1076
	125.33	0.1089	0.0008	0.0519
	140.00	0.1207	0.0004	0.0562
	160.00	0.1288	0.0002	0.0444
	167.67	0.1301	0.0002	0.0124
	170.00	0.1308	0.0002	0.0208
	183.00	0.1346	0.0001	0.0104
	192.33	0.1349	0.0001	0.0112
	200.00	0.1326	0.0001	0.1182
	230.33	0.1356	0.0000	0.0249
	259.67	0.1345	0.0000	0.0384
	272.17	0.1232	0.0000	0.0449
Serviceability - 60.00 Wind Normal	37.00	0.0301	-0.0002	0.0420
	97.00	0.0771	0.0000	0.0515
	120.00	0.0939	0.0000	0.1123
	125.33	0.0992	0.0000	0.0545
	140.00	0.1092	0.0000	0.0389
	160.00	0.1153	0.0000	0.0223
	167.67	0.1160	0.0000	0.0215
	170.00	0.1164	0.0000	0.0091
	183.00	0.1187	0.0000	0.0072
	192.33	0.1174	0.0000	0.0134
	200.00	0.1143	0.0000	0.0677
	230.33	0.1118	0.0000	0.0122
	259.67	0.1072	0.0000	0.0441
	272.17	0.0940	0.0000	0.0521
100.00 mph 60 deg with No Ice	37.00	0.1750	0.8358	0.2296
	97.00	0.4589	0.8923	0.2955
	120.00	0.5878	0.9012	0.6549
	125.33	0.6254	0.9024	0.3732
	140.00	0.7137	0.8989	0.4036
	160.00	0.8031	0.8941	0.1153



	167.67	0.8305	0.8926	0.2333
	170.00	0.8406	0.8909	0.2479
	183.00	0.8963	0.8773	0.1794
	192.33	0.9248	0.8640	0.1627
	200.00	0.9375	0.8532	0.3188
	230.33	1.0387	0.8392	0.2726
	259.67	1.1189	0.8326	0.0223
	272.17	1.0997	0.8317	0.0405
100.00 mph 90 deg with No Ice	37.00	0.2644	0.7903	0.3775
	97.00	0.7264	0.7043	0.4525
	120.00	0.9250	0.6789	0.8239
	125.33	0.9768	0.7713	0.5092
	140.00	1.1016	0.7650	0.5497
	160.00	1.2303	0.7575	0.1930
	167.67	1.2687	0.6440	0.2846
	170.00	1.2817	0.6431	0.3201
	183.00	1.3499	0.7502	0.2323
	192.33	1.3845	0.7461	0.1960
	200.00	1.3995	0.6313	0.3892
	230.33	1.4975	0.7342	0.2492
	259.67	1.5562	0.7294	0.0560
	272.17	1.5279	0.7288	0.0764
100.00 mph Normal to Face with No Ice	37.00	0.2701	-0.0026	0.4346
	97.00	0.7969	-0.0009	0.5904
	120.00	1.0232	-0.0005	0.9667
	125.33	1.0829	0.0008	0.6255
	140.00	1.2260	0.0008	0.5953
	160.00	1.3806	0.0007	0.2724
	167.67	1.4293	-0.0002	0.4299
	170.00	1.4449	-0.0002	0.3750
	183.00	1.5279	0.0007	0.2737
	192.33	1.5710	0.0005	0.2306
	200.00	1.5944	-0.0001	0.0828
	230.33	1.7114	0.0005	0.2686
	259.67	1.7897	0.0007	0.0237
	272.17	1.7677	0.0003	0.0521
40.00 mph 60 deg with 1.00 in Radial Ice	37.00	0.0382	0.0267	0.0536
	97.00	0.1028	0.0024	0.0618
	120.00	0.1288	0.0009	0.1343
	125.33	0.1361	0.0008	0.0751
	140.00	0.1516	0.0004	0.0727
	160.00	0.1639	0.0001	0.0174
	167.67	0.1664	0.0000	0.0216
	170.00	0.1671	0.0000	0.0186
	183.00	0.1705	0.0000	0.0092
	192.33	0.1688	0.0000	0.0201
	200.00	0.1640	-0.0005	0.1009
	230.33	0.1457	0.0001	0.0342
	259.67	0.1130	0.0001	0.1107
	272.17	0.0845	0.0001	0.1267
40.00 mph 90 deg with 1.00 in Radial Ice	37.00	0.0447	0.0501	0.0622
	97.00	0.1150	0.0039	0.0591
	120.00	0.1394	0.0013	0.1274
	125.33	0.1455	0.0010	0.0616

Site Number: 10047
Location: Portland ME, ME
Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure : B
Topo : 1



9/17/2012 10:53:20 AM

40.00 mph Normal with 1.00 in Radial Ice

140.00	0.1569	0.0005	0.0601
160.00	0.1601	0.0004	0.0595
167.67	0.1579	0.0005	0.0460
170.00	0.1573	0.0005	0.0431
183.00	0.1521	0.0003	0.0702
192.33	0.1441	0.0003	0.0892
200.00	0.1343	0.0004	0.1836
230.33	0.1058	-0.0001	0.1277
259.67	0.1145	-0.0001	0.2009
272.17	0.1383	-0.0002	0.2171
37.00	0.0438	-0.0006	0.0636
97.00	0.1174	0.0000	0.0645
120.00	0.1392	0.0000	0.1325
125.33	0.1451	0.0000	0.0536
140.00	0.1533	0.0000	0.0363
160.00	0.1488	0.0000	0.0614
167.67	0.1424	0.0000	0.0401
170.00	0.1401	0.0000	0.0550
183.00	0.1256	0.0000	0.0927
192.33	0.1087	0.0000	0.1193
200.00	0.0899	0.0000	0.2018
230.33	0.0079	0.0001	0.1671
259.67	0.0998	0.0001	0.2644
272.17	0.1627	0.0000	0.2817
272.17	0.0000	0.0000	0.0000

12 Existing to be Removed

Slant ±45° Dual Polarized FET Panel 63° / 14.5 dBd
696-900 MHz

BXA-70063/6CF __
When ordering replace "__" with connector type.

Mechanical specifications

Length	1804	mm	71.0	in
Width	285	mm	11.2	in
Depth	114	mm	4.5	in
Depth with z-bracket	154	mm	6.1	in
Weight [4]	7.9	kg	17.0	lbs
Wind Area Fore/Aft	0.51	m^2	5.5	ft^2
Wind Area Side	0.21	m^2	2.2	ft^2
Max Wind Survivability	>201	km/hr	>125	mph
Wind Load @ 100 mph (161 km/hr)				
Fore/Aft	753	N	169	lbf
Side	351	N	79	lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiber-glass radome.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter Ø50-160 mm; Ø2.0-6.3 in

Mounting Bracket Kit	36210002
Downtilt Bracket Kit	36114003

Electrical specifications

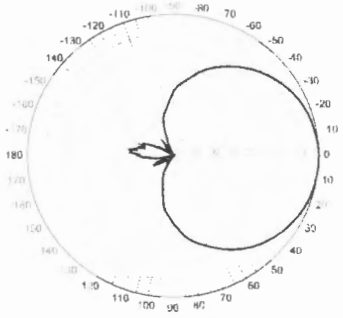
Frequency Range	696-900 MHz
Impedance	50Ω
Connector [3]	NE or E-DIN Female 2 ports / Center
VSWR [1]	≤ 1.4:1
Polarization	Slant ±45°
Isolation Between Ports [1]	< -25 dB
Gain [1]	14.5 dBd
Power Rating [2]	500 W
Half Power Angle [1]	
Horizontal Beamwidth	63°
Vertical Beamwidth	11°
Electrical downtilt [5]	0°
Null fill [1]	5%
Lightning protection	Direct ground

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

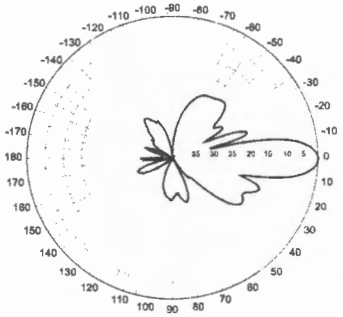
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) Antenna weight does not include brackets.
5) Add'l downtilts may be available. Check website for details.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern[1]
750 MHz

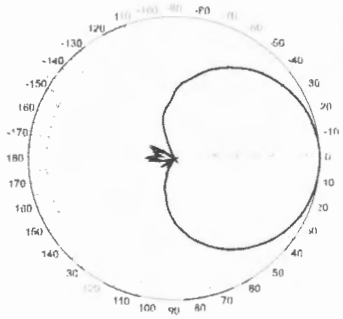


Horizontal

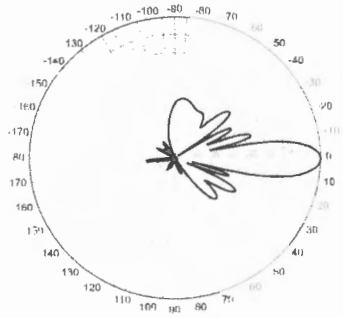


Vertical

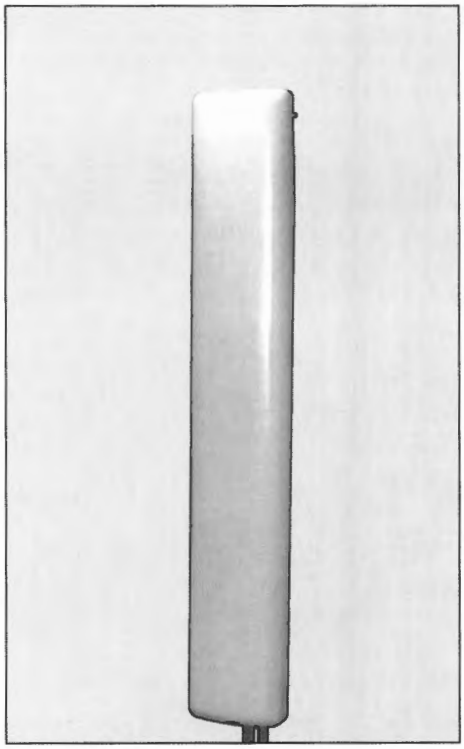
850 MHz



Horizontal



Vertical



Featuring our Exclusive 3T Technology™ Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:
This antenna is under a five-year limited warranty for repair or replacement.

Revision Date: 08/07/08

Quantity: 3 Proposed

Quantity: 3 Proposed

X7C-665

65° Azimuth Beam, 72.0 inches

Directing our energies for you.

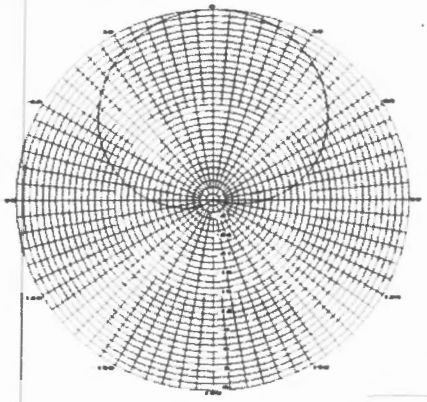
698-896 MHz Xpol

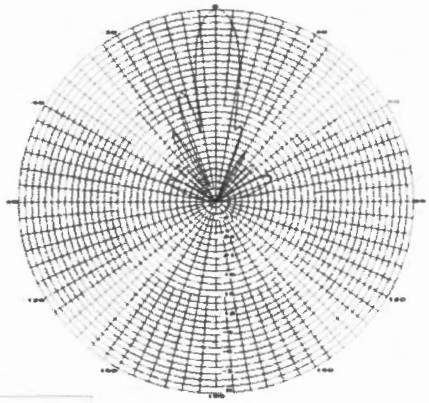
Electrical Specifications

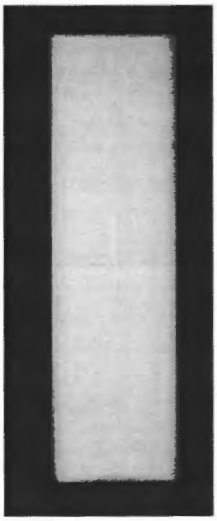
Frequency	698-896 MHz
Polarization	Slant +/- 45
Gain @ 698 MHz	13.2 dBd
Gain @ 752 MHz	13.5 dBd
Gain @ 782 MHz	13.7 dBd
Gain @ 896 MHz	14.3 dBd
Horizontal Beam (3dB Points)	65°
Vertical Beam (3dB Points)	10°
Elect. Downtilt Range, 2° Increments	0-10°
VSWR / Return Loss	<1.40:1 / 15.6 dB
VSWR Opt "i" / Return Loss	<1.50:1 / 14.0 dB
Front-to-Back at Horizon	>30 dB
Upper Side Lobe Suppression	<-18 dB
Impedance	50 Ohms
Power Input Per Connector	500 CW at 800 MHz
Isolation	< -26 dB
Intermodulation (2x20W)	<-150 dBc

Mechanical Specifications

Input Connector (female)	Back 7/16 DIN (silver finish) or w/bot. opt.
Antenna Dimensions (LxWxD)	72.0 x 12.5 x 7.1 in. (1829 x 318 x 180mm)
*Antenna Weight	30.0 lbs
Bracket Weight	13.2 lbs
Lightning Protection	Direct Ground
RF Distribution	Printed Microstrip Substrate
Radome	Ultra High-Strength Luran
Weatherability	UV Stabilized, ASTM D1925
Radome Water Absorption	ASTM D570, 0.45%
Environmental	MIL-STD-810E
Wind Survival	150 mph
Front Wind Load @ 100MPH	177.4 lbs
Equivalent Flat Plate @ 100MPH	3.6 sq-ft. (c=2)
Mounting Brackets	Fits 3.5 Inch Max. O.D. Pipe
Mechanical Downtilt Range	0-12°
Clamps/Bolts	Hot Dip Galvanized Steel/Stainless Steel



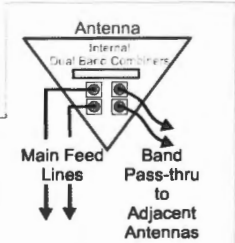




5 Year Warranty

Available with Opt "i"

➢ The Opt "i" antenna option provides Integrated Diplexers that reduce mainline cables and eliminate separate external devices.



Return Loss at pass-thru port into 50Ω load ≥17.7 dB

Ordering Information & Options

X7C-665-x	"-x" is a placeholder for the built-in fixed electrical downtilt in degrees, set to 0, 2, 4, 6, 8 or 10
X7C-665-xi	to add the Opt "i" option for integrated diplexers, add "i" to model number
X7C-665-xi-bot	for bottom mounted connectors, add "-bot" (otherwise antenna comes standard with back mounted connectors)
X7C-665-xi-bot-j#	add a "-j#" to add a 1/2" RF cable, where "#" is the cable length, "j2" is 2 meters, "j4" is 4 meters, "j6" is 6 meters...

*Antenna Weight may vary slightly with options such as back or bottom connector and integrated diplexers.

Published 060810
Subject to alteration.

410-612-0080
www.cssantenna.com

Certified WBENC Women's Business Enterprise

Made in USA

Quantity: 3 Proposed

AXP18-60

60° Azimuth Beam, 48 inches

Directing our energies for you.

1710-2170 MHz Band

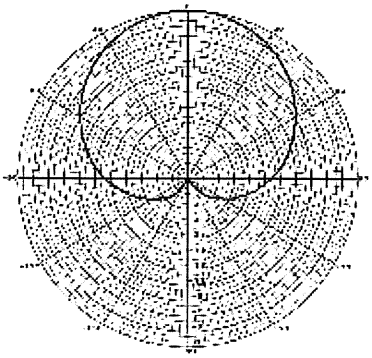
Electrical Specifications

Frequency	1710-2170 MHz
Polarization	Slant +/- 45
Gain @ 1710 MHz	17.1 dBi
Gain @ 1920 MHz	17.4 dBi
Gain @ 2170 MHz	17.8 dBi
Horizontal Beam (3dB Points)	60°
Vertical Beam (3dB Points)	7°
Electrical Downtilt Options	0, 2, 4 or 6°
VSWR	<1.40:1
Front-to-Back at Horizon	>30 dB
Upper Side Lobe Suppression	<-18 dB
Impedance	50 Ohms
Power Input Per Connector (W CW)	250 Watts
Isolation	< -28 dB
Intermodulation (2x20W)	typ -150 dBc

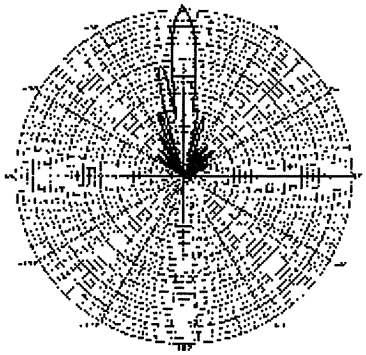
Mechanical Specifications

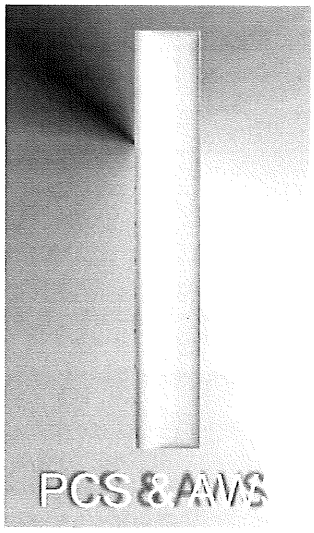
Input Connector (female)	Back Mounted 7/16 DIN (silver finish)
Antenna Dimensions (inches)	48 x 6.7 x 4
Antenna Weight	10 lbs
Bracket Weight	13.4 lbs
Lightning Protection	Direct Ground
RF Distribution	Printed Microstrip Substrate
Radome	Ultra High-Strength Luran
Weatherability	UV Stabilized, ASTM D1925
Radome Water Absorption	ASTM D570, 0.45%
Environmental	MIL-STD-810E
Wind Survival	150 mph
Front Wind Load at 100 mph	63.5 lbs
Front Flat Plate Equivalent	1.35 sq-ft. (c=2)
Mounting Brackets	Fits 2.5 to 3 Inch Schedule 40 Pipe
Mechanical Downtilt Range	0-12°
Clamps/Bolts	Hot Dip Galvanized Steel/Stainless Steel

Typical Horizontal Beam



Typical Vertical Beam

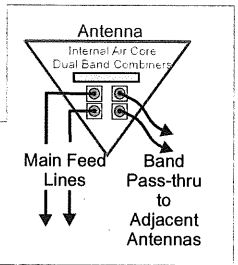




5 Year Warranty

Available with Opt "i"

- The Opt "i" antenna option provides Integrated Diplexers that reduce mainline cables and eliminate separate external devices. Add 1" to the antenna depth for Opt "i".



Ordering Information & Options

AXP18-60-x	"-x" is a placeholder for the built-in fixed electrical downtilt in degrees, set to 0, 2, 4 or 6
AXP18-60-xi	to add the Opt "i" option for integrated diplexers, add "i" to model number
AXP18-60-xi-b	for bottom mounted connectors, add "-b" (otherwise antenna comes standard with back mounted connectors)
AXP18-60-xi-b-j#	add a "-j#" to add a 1/2" RF cable, where "#" is the cable length, "j2" is 2 meters, "j4" is 4 meters, "j6" is 6 meters...

Published 012109
Subject to alteration.

410-612-0080
www.cssantenna.com

WBENC

made in USA

Quantity: 6 Proposed

V7C-665

65° Azimuth Beam, 72.0 inches

Directing our energies for you.

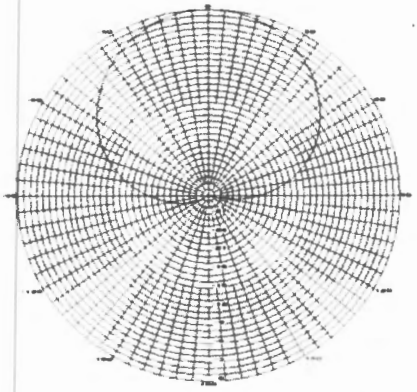
698-896 MHz Vpol

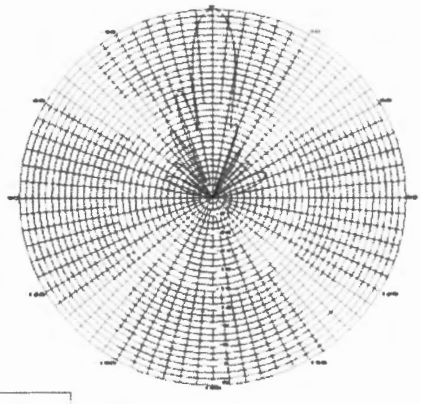
Electrical Specifications

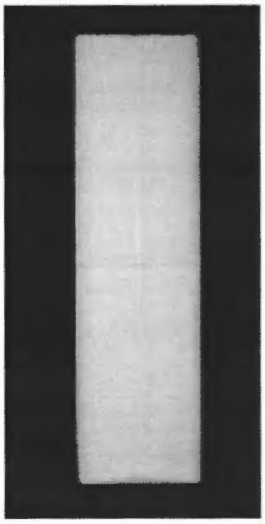
Frequency	698-896 MHz
Polarization	Vertical
Gain @ 698 MHz	13.2 dBd
Gain @ 752 MHz	13.5 dBd
Gain @ 782 MHz	13.7 dBd
Gain @ 896 MHz	14.3 dBd
Horizontal Beam (3dB Points)	65°
Vertical Beam (3dB Points)	10°
Elect. Downtilt Range, 2° increments	0-10°
VSWR / Return Loss	<1.40:1 / 15.6 dB
VSWR Opt "i" / Return Loss	<1.50:1 / 14.0 dB
Front-to-Back at Horizon	>30 dB
Upper Side Lobe Suppression	<-18 dB
Impedance	50 Ohms
Power Input Per Connector	500 CW at 800 MHz
Intermodulation (2x20W)	<-150 dBc

Mechanical Specifications

Input Connector (female)	Back 7/16 DIN (silver finish) or w/bot. opt.
Antenna Dimensions (LxWxD)	72.0 x 12.5 x 7.1 in. (1829 x 318 x 180mm)
*Antenna Weight	27.4 lbs
Bracket Weight	13.2 lbs
Lightning Protection	Direct Ground
RF Distribution	Printed Microstrip Substrate
Radome	Ultra High-Strength Luran
Weatherability	UV Stabilized, ASTM D1925
Radome Water Absorption	ASTM D570, 0.45%
Environmental	MIL-STD-810E
Wind Survival	150 mph
Front Wind Load @ 100MPH	177.4 lbs
Equivalent Flat Plate @ 100MPH	3.6 sq-ft. (c=2)
Mounting Brackets	Fits 3.5 Inch Max. O.D. Pipe
Mechanical Downtilt Range	0-12°
Clamps/Bolts	Hot Dip Galvanized Steel/Stainless Steel



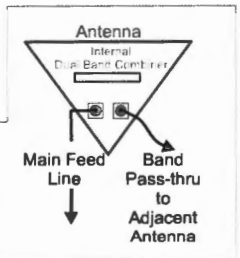




5 Year Warranty

Available with Opt "i"

➢ The Opt "i" antenna option provides Integrated Diplexers that reduce mainline cables and eliminate separate external devices.



Return Loss at pass-thru port into 50Ω load ≥17.7 dB

Ordering Information & Options

V7C-665-x	"-x" is a placeholder for the built-in fixed electrical downtilt in degrees, set to 0, 2, 4, 6, 8 or 10
V7C-665-xi	to add the Opt "i" option for integrated diplexers, add "i" to model number
V7C-665-xi-bot	for bottom mounted connectors, add "-bot" (otherwise antenna comes standard with back mounted connectors)
V7C-665-xi-bot-j#	add a "-j#" to add a 1/2" RF cable, where "#" is the cable length, "j2" is 2 meters, "j4" is 4 meters, "j6" is 6 meters...

*Antenna Weight may vary slightly with options such as back or bottom connector and integrated diplexers.

Published 060810
Subject to alteration.

410-612-0080
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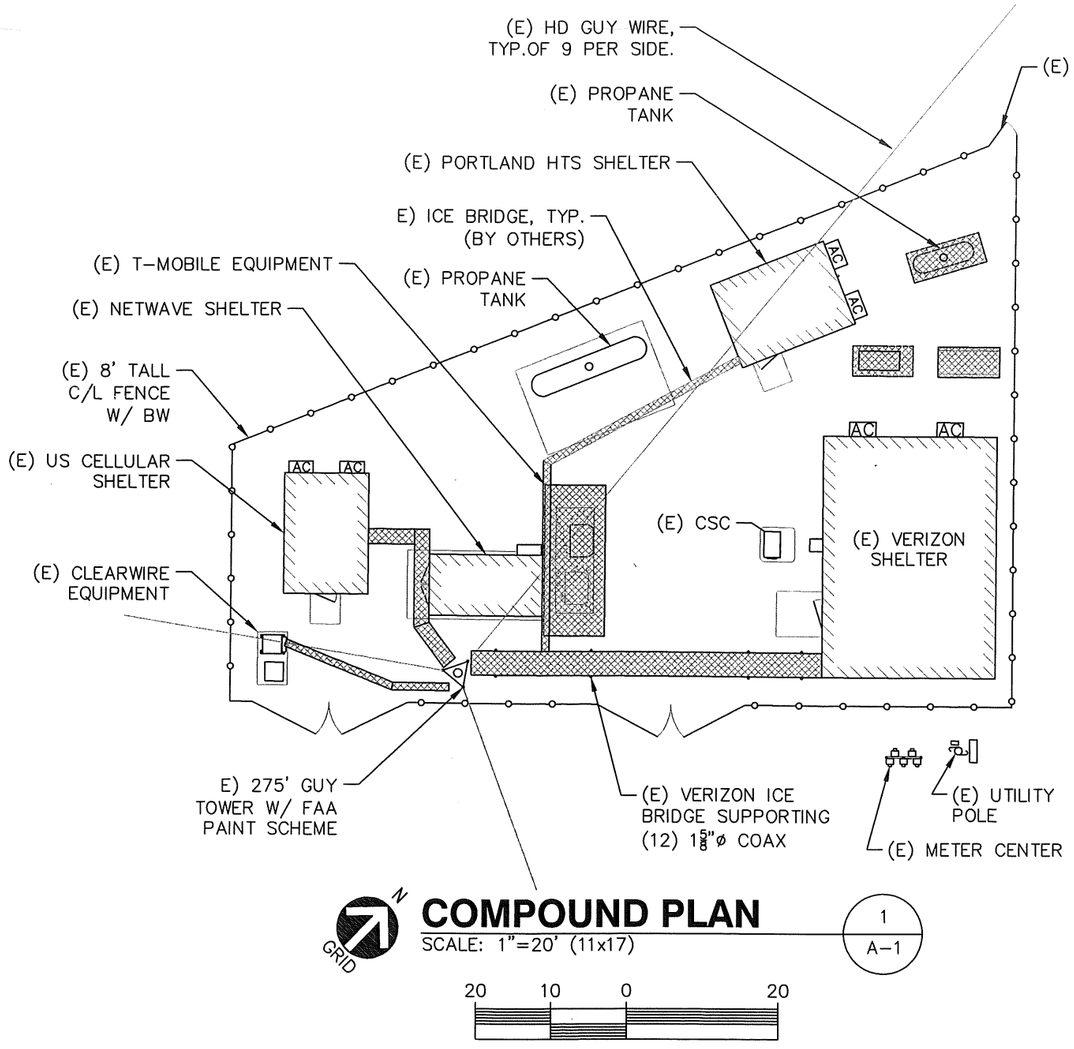
Made in USA

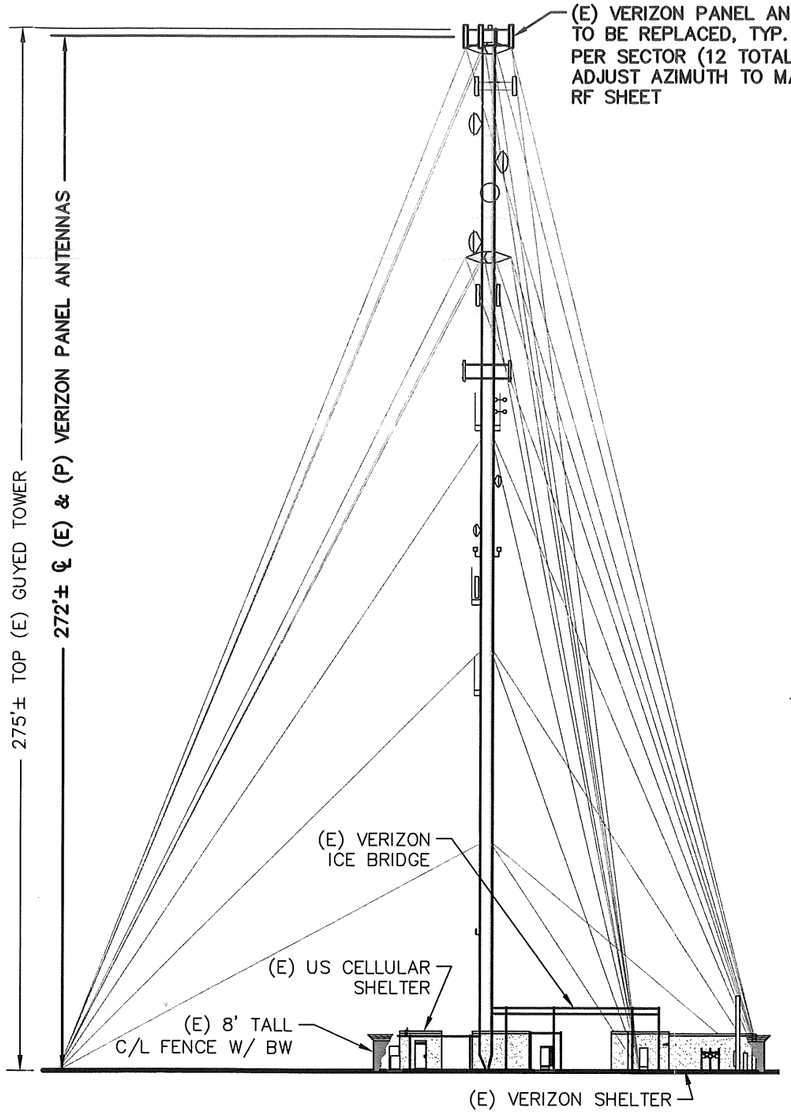


COMPOUND PLAN

SCALE: 1"=20' (11x17)

1 / A-1

20 10 0 20



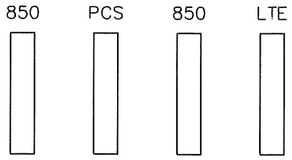
SOUTHEAST ELEVATION

SCALE: 1"=40' (11x17)

2 / A-1

40 20 0 40

STATE OF MAINE
JESSE M. MORENO
No. 11669
LICENSED PROFESSIONAL ENGINEER
7/23/12



ANTENNAS SHOWN FROM BACKSIDE OF SECTOR

(P) ANTENNA CONFIGURATION

SCALE: NONE

3 / A-1

GENERAL NOTES

1. VERIFY COAX CONFIGURATION, ANTENNA CONFIGURATION, AND ANTENNA HEIGHT WITH LATEST RF DATA SHEET PRIOR TO INSTALLATION.
2. ANTENNAS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & TOWER STRUCTURAL ANALYSIS.
3. REUSE (E) ANTENNA PIPE MOUNTS. INSPECT FOR DAMAGE AND REPLACE AS NECESSARY.
4. EQUIPMENT LOCATIONS TO BE FIELD VERIFIED PRIOR TO COMMENCEMENT OF CONSTRUCTION. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
5. NORTH SHOWN IS APPROXIMATE.
6. MATCH (E) ANTENNA TIP HEIGHT WHERE NECESSARY TO MAINTAIN MAX HT. BELOW BEACON.

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WESTBOROUGH, MA 01581

PORTLAND NORTH ME HD
AMERICAN TOWER#10047
FCC#1030405
225 RIVERSIDE INDUSTRIAL PKWY
PORTLAND, ME 04103

REVISIONS			
		DESIGNED BY: JMM/TEJ	JOB #: 12-023
		DRAWN BY: DPM/JWR	REV. #: 0
		DATE: 7/23/12	A-1
		SCALE: AS NOTED	