STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

VIA ELECTRONIC MAIL

November 15, 2018

Kyle Richers
Transcend Wireless
10 Industrial Avenue, Suite 3
Mahwah, NJ 07430

RE: **EM-T-MOBILE-015-181018** – T-Mobile notice of intent to modify an existing telecommunications facility located at 1069 Connecticut Avenue, Bridgeport, Connecticut.

Dear Mr. Richers:

The Connecticut Siting Council (Council) is in receipt of your correspondence of November 14, 2018 submitted in response to the Council's October 19, 2018 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/FOC/emr

Robidoux, Evan

From: Kyle Richers <krichers@transcendwireless.com>
Sent: Wednesday, November 14, 2018 4:25 PM
To: Robidoux, Evan
Cc: CSC-DL Siting Council; 'Reid, Dan'
Subject: RE: Council Incomplete Letter for EM-T-MOBILE-015-181018-ConnecticutAve-Bridgeport
Attachments: STAMPED PDF. T-Mobile @ 302469 Bridgeport CT 2, CT (OAA732815_C3_03). Structural Analysis (94%).pdf

Hi Evan,

Please find attached revised SA that incorporates the latest AT&T loading. Do you need hard copies of the revised report?

Thanks

From: Robidoux, Evan
Sent: Tuesday, October 23, 2018 8:47 AM
To: 'krichers@transcendwireless.com'
Cc: CSC-DL Siting Council
Subject: Council Incomplete Letter for EM-T-MOBILE-015-181018-ConnecticutAve-Bridgeport

Please see the attached correspondence.

Evan Robidoux
Clerk Typist
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

October 19, 2018

Kyle Richers
Transcend Wireless
10 Industrial Avenue, Suite 3
Mahwah, New Jersey 07430

RE: **EM-T-MOBILE-015-181018 –** T-Mobile notice of intent to modify an existing telecommunications facility located at 1069 Connecticut Avenue, Bridgeport, Connecticut.

Dear Mr. Richers:

The Connecticut Siting Council (Council) received a notice of intent to modify the above-referenced facility on October 18, 2018.

According to Section 16-50j-71 of the Regulations of Connecticut State Agencies, "…any modification, as defined in Section 16-50j-2a of the Regulations of Connecticut State Agencies, to an existing tower site, except as specified in Sections 16-50j-72 and 16-50j-88 of the Regulations of Connecticut State Agencies, may have a substantial adverse environmental effect."

Staff has reviewed this exempt modification request for completeness and has identified a deficiency in the Structural Analysis Report provided with the filing. The Structural Analysis Report provided is dated August 1, 2018. The Council received a request for exempt modification from AT&T for the same facility on May 30, 2018. The above-referenced request for exempt modification does not include AT&T's approved equipment. Please see AT&T's exempt modification request for this facility, which may be found on the Council's website under the Decisions page in Bridgeport under the filing number EM-AT&T-015-180530 or by following the link:

https://www.ct.gov/csc/lib/csc/ems/bridgeport/connecticutave/att_cing/em-at&t-015-180530_filing_connecticutavenue.pdf

Therefore, the exempt modification request is incomplete at this time. The Council recommends that T-Mobile provide an updated Structural Analysis Report for the facility that includes proposed and approved equipment by AT&T and other entities that are located at this facility on or before November 26, 2018. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to November 26, 2018.

This notice of incompletion shall have the effect of tolling the Federal Communications Commission (FCC) 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie Bachman
Executive Director

MAB/FOC/IN

c: The Honorable Joseph P. Ganim, Mayor, City of Bridgeport
Kimberly G. Staley, Chief Administrative Officer, City of Bridgeport
Thomas F. Gill, Director of Planning & Economic Development, City of Bridgeport

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Structural Analysis Report

Structure	:	**126 ft Monopole**
ATC Site Name	:	**Bridgeport CT 2, CT**
ATC Site Number	:	**302469**
Engineering Number	:	**OAA732815_C3_03**
Proposed Carrier	:	**T-Mobile**
Carrier Site Name	:	**CT11452 Transcend-DR JD**
Carrier Site Number	:	**CT11452**
Site Location	:	**1069 Connecticut Avenue** **Bridgeport, CT 06607-1226** **41.183600,-73.158400**
County	:	**Fairfield**
Date	:	**November 8, 2018**
Max Usage	:	**94%**
Result	:	**Pass**

Prepared By:
Aaron Mccullough, E.I.
Structural Engineer I

Reviewed By:

COA: PEC.0001553

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Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 126 ft monopole to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	EEI Project #5543, dated October 14, 1999
Foundation Drawing	EEI Project #5543, dated October 14, 1999
Geotechnical Report	Applied Earth Technologies Project #9903A, dated November 23, 1999
Modifications	ATC Job #41045932, dated November 2, 2007

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, V_{asd}) / 129 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.20, S_1 = 0.06
Site Class:	D - Stiff Soil

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 American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
125.7	131.0	4	Decibel DB844H90E-XY	Platform w/ Handrails	(12) 1 1/4" Coax	Sprint Nextel
		8	EMS RR90-11-00DBL			
124.0	126.0	2	DragonWave Horizon Compact	T-Arms	(3) 1 1/4" Hybriflex (2) 2" Conduit (3) 1/2" Coax (1) 1.7" Hybrid	Clearwire
		1	Dragonwave A-ANT-23G-1-C			
		6	Alcatel-Lucent RRH2x50-08			
		3	Alcatel-Lucent 1900MHz 4x45 RRH			
		3	Nokia 2.5G MAA - AAHC(64T64R)			
		1	Dragonwave A-ANT-18G-2-C			
		3	Commscope NNVV-65B-R4			
116.0	116.0	3	Kathrein Smart Bias Tee	Low Profile Platform	(18) 1 5/8" Coax	T-Mobile
		3	Ericsson AIR-32 B2A/B66Aa			
106.0	110.0	3	Kaelus DBC0061F1V51-2	Platform w/ Handrails	(12) 1 5/8" Coax (4) 0.78" 8 AWG 6 (2) 0.39" Fiber Trunk	AT&T Mobility
		6	Kaelus DBC0062F3V52-1			
		6	Powerwave LGP21401			
		2	Raycap DC6-48-60-18-8F ("Squid")			
		3	Ericsson Radio 8843 - B2 + B66A			
		3	Ericsson RRUS 32 B30 (53 lbs)			
		3	Ericsson RRUS-11 (19.7")			
		3	Powerwave 7750.00			
		6	CCI OPA-65R-LCUU-H4			
103.0	103.0	3	RCU (Remote Control Unit)	Flush	(6) 1 5/8" Coax (1) 3/8" Coax	Metro PCS
		3	Kathrein 800 10504			

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
116.0	116.0	3	RFS APX16DWV-16DWVS-E-A20	-	(1) 7/8" Fiber	T-Mobile
		3	Andrew LNX-6515DS-VTM			
		6	Ericsson KRY 112 489/1			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
116.0	116.0	3	Ericsson KRY 112 144/2	Low Profile Platform	(1) 1 5/8" Fiber (2) 1 1/4" Fiber	T-Mobile
		3	Ericsson KRY 112 489/2			
		3	Ericsson Radio 4449 B12,B71			
		3	RFS APXVAARR24_43-U-NA20			

[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).

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	76%	Pass
Shaft	82%	Pass
Base Plate	61%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	2,049.1	2,766.3	2,590.8	94%
Shear (Kips)	20.7	27.9	25.5	91%

*** 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 acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
126.0	Dragonwave A-ANT-23G-1-C	Clearwire Corporatio	1.916	1.691
	Dragonwave A-ANT-18G-2-C			
116.0	Ericsson KRY 112 144/2	T-Mobile	1.625	1.641
	Ericsson KRY 112 489/2			
	Ericsson Radio 4449 B12,B71			
	Ericsson Air 3246 B66			
	RFS APXVAARR24_43-U-NA20			

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

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Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

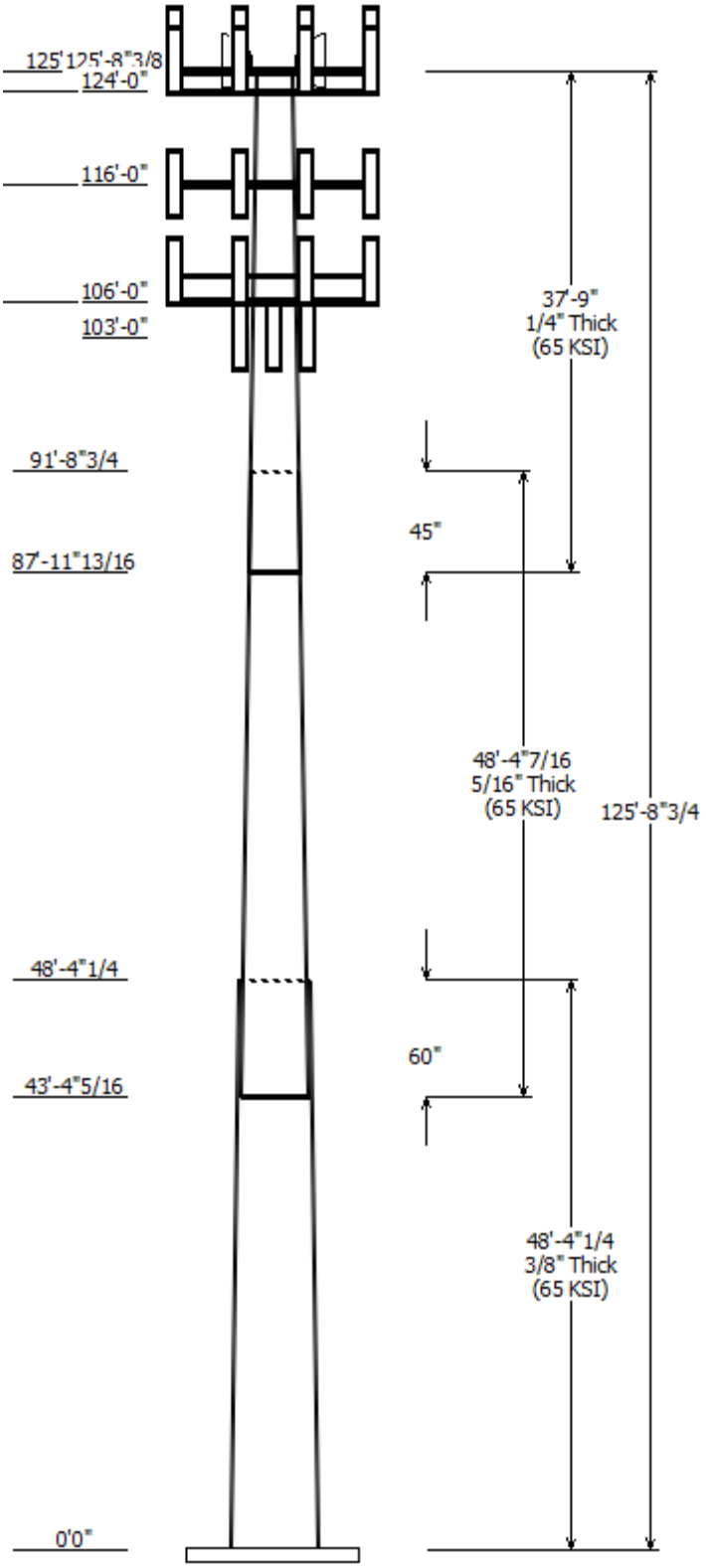
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Job Information

Pole :	302469	Code:	ANSI/TIA-222-G
Location :	Bridgeport CT 2, CT		
Description :	126 ft Monopole		
Client :	T-MOBILE	Struct Class :	II
Shape :	18 Sides	Exposure :	B
Height :	125.73 (ft)	Topo :	1
Base Elev (ft):	0.00		
Taper:	0.235121 (in/ft)		

Sections Properties

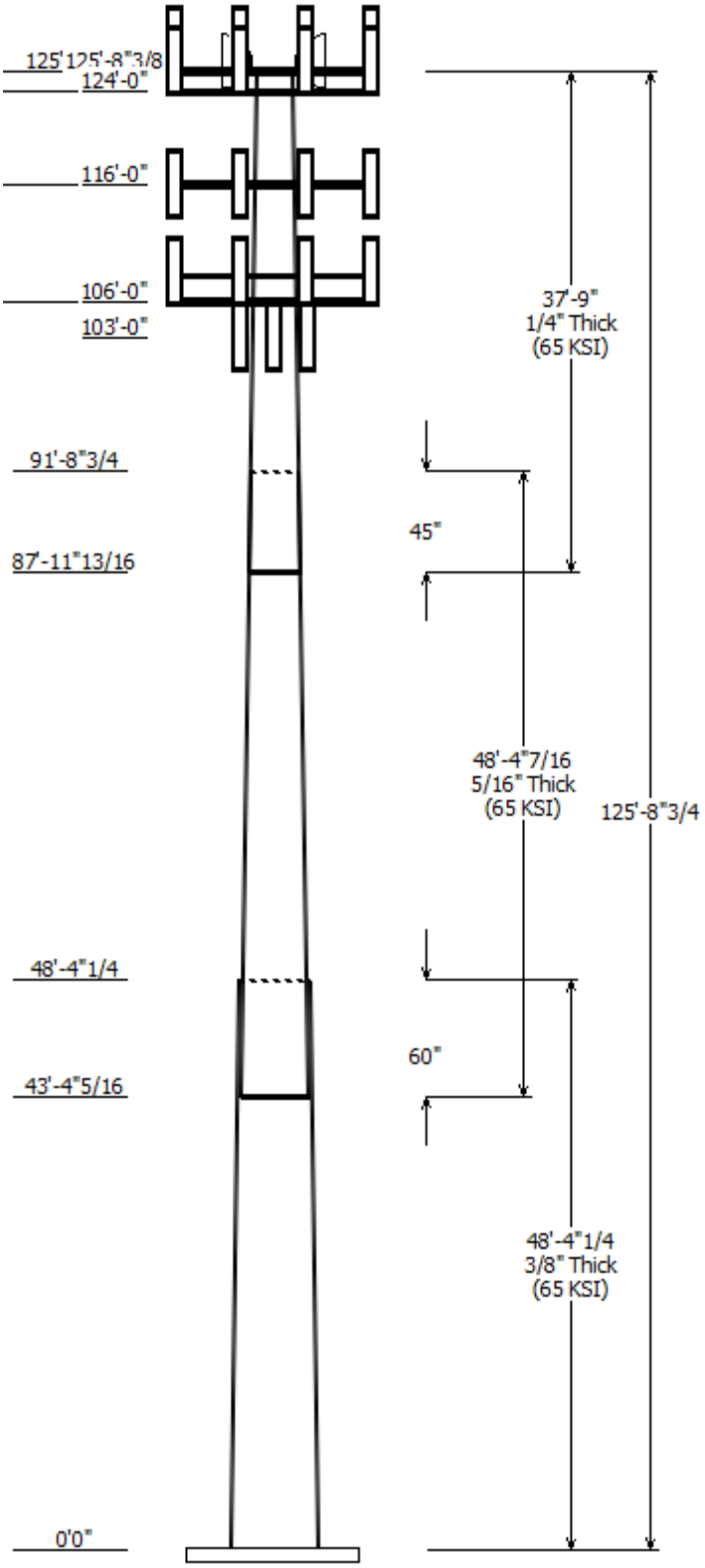
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	48.352	34.13	45.50	0.375		0.000	18 Sides	65
2	48.370	24.55	35.93	0.313	Slip Joint	59.906	18 Sides	65
3	37.748	17.06	25.93	0.250	Slip Joint	44.969	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
125.700	125.700	1	Flat Platform w/ Handrails
125.700	131.000	8	EMS RR90-11-00DBL
125.700	131.000	4	Decibel DB844H90E-XY
124.000	126.000	3	Commscope NNVV-65B-R4
124.000	124.000	3	Flat T-Arm
124.000	126.000	1	Dragonwave A-ANT-18G-2-C
124.000	126.000	3	Nokia 2.5G MAA -
124.000	126.000	3	Alcatel-Lucent 1900 MHz 4x45
124.000	126.000	6	Alcatel-Lucent RRH2x50-08
124.000	126.000	1	Dragonwave A-ANT-23G-1-C
124.000	126.000	2	DragonWave Horizon Compact
116.000	116.000	3	Ericsson Radio 4449 B12,B71
116.000	116.000	3	Ericsson KRY 112 144/2
116.000	116.000	3	Ericsson KRY 112 489/2
116.000	116.000	1	Round Low Profile Platform
116.000	116.000	3	RFS APXVAARR24_43-U-NA20
116.000	116.000	3	Ericsson AIR-32 B2A/B66Aa
116.000	116.000	3	Ericsson Air 3246 B66
116.000	116.000	3	Kathrein Scala Smart Bias Tee
106.000	106.000	1	Round Platform w/ Handrails
106.000	110.000	3	Ericsson RRUS-11 (19.7")
106.000	110.000	6	Kaelus DBC0062F3V52-1
106.000	110.000	3	Kaelus DBC0061F1V51-2
106.000	106.000	1	Round Platform w/ Handrails
106.000	110.000	6	CCI OPA-65R-LCUU-H4
106.000	110.000	3	Powerwave Allgon 7750.00
106.000	110.000	3	Ericsson RRUS 32 B30 (53 lbs)
106.000	110.000	3	Ericsson Radio 8843 - B2 + B66
106.000	110.000	2	Raycap DC6-48-60-18-8F
106.000	110.000	6	Powerwave Allgon LGP21401
103.000	103.000	3	Kathrein Scala 800 10504
103.000	103.000	3	RCU (Remote Control Unit)

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	101.0	1 5/8" Coax	Yes
0.000	101.0	3/8" Coax	Yes
0.000	110.0	0.39" Fiber Trunk	Yes
0.000	110.0	0.78" 8 AWG 6	Yes
0.000	110.0	1 5/8" Coax	Yes
0.000	116.0	1 1/4" Fiber	No



0.000	116.0	1 5/8" Coax	No
0.000	116.0	1 5/8" Fiber	No
0.000	124.0	1 1/4" Hybriflex	No
0.000	124.0	1.7" Hybrid	No
0.000	124.0	1/2" Coax	No
0.000	124.0	2" Conduit	No
0.000	125.7	1 1/4" Coax	No

Load Cases

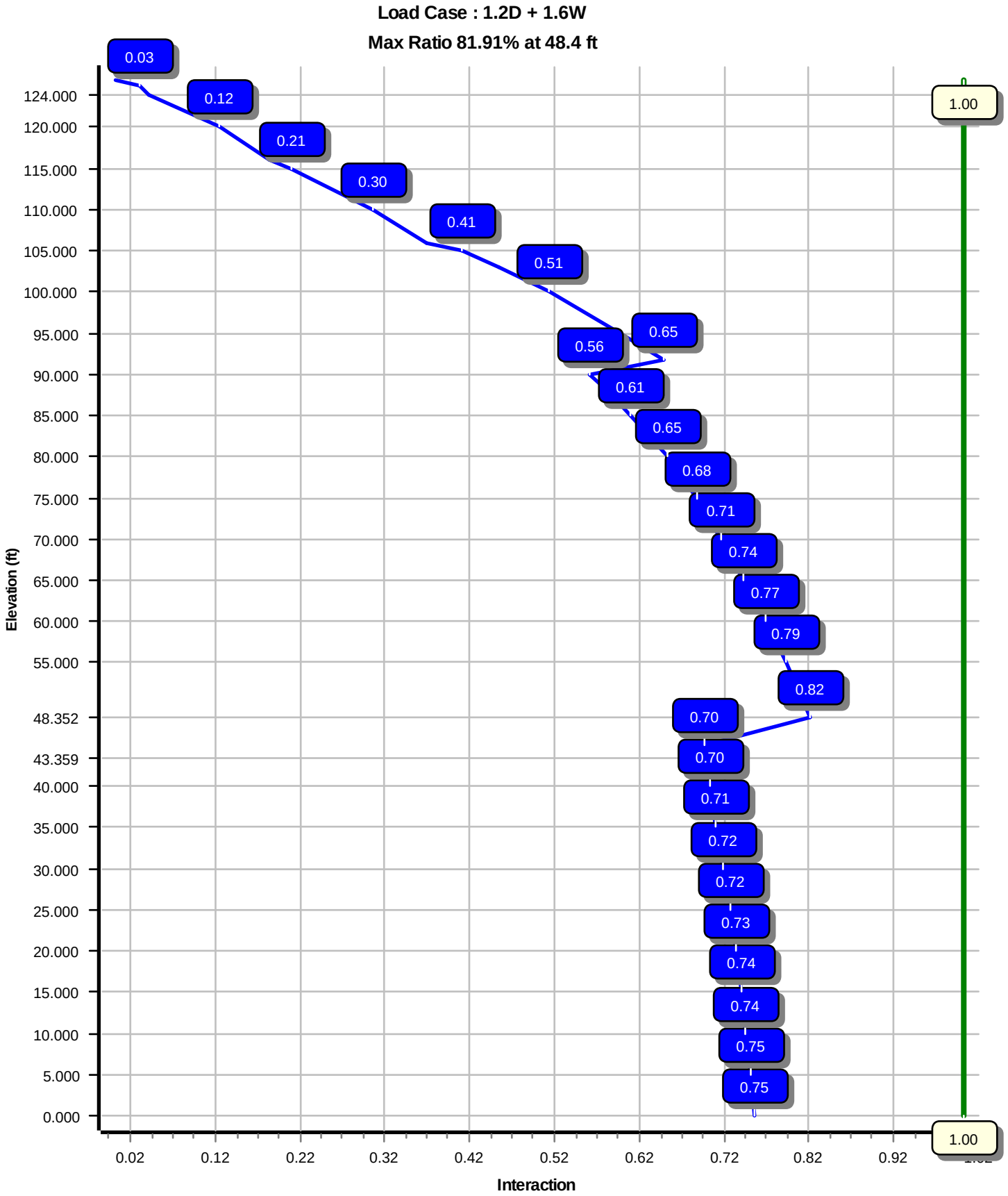
1.2D + 1.6W	100 mph with No Ice
0.9D + 1.6W	100 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2590.79	25.49	40.47
0.9D + 1.6W	2498.72	24.54	30.34
1.2D + 1.0Di + 1.0Wi	672.92	6.16	76.53
(1.2 + 0.2Sds) * DL + E ELFM	113.87	1.02	40.53
(1.2 + 0.2Sds) * DL + E EMAM	262.62	2.35	40.53
(0.9 - 0.2Sds) * DL + E ELFM	111.37	1.01	27.91
(0.9 - 0.2Sds) * DL + E EMAM	256.69	2.35	27.91
1.0D + 1.0W	566.82	5.52	33.77

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	124.00	22.618	1.704
1.0D + 1.0W	124.00	22.618	1.704


Load Case : 1.2D + 1.6W
Max Ratio 81.91% at 48.4 ft
0.03
0.12
0.21
0.30
0.41
0.51
0.56
0.65
0.61
0.65
0.68
0.71
0.74
0.77
0.79
0.82
0.70
0.70
0.71
0.72
0.72
0.73
0.74
0.74
0.75
0.75
1.00
1.00
124.000
120.000
115.000
110.000
105.000
100.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
48.352
43.359
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Elevation (ft)
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 302469 Code: ANSI/TIA-222-G

Site Name: Bridgeport CT 2, CT Engineering Number:OAA732815_C3_03 11/9/2018 4:05:18 PM

Customer: T-MOBILE

Analysis Parameters

Location :	FAIRFIELD County, CT	Height (ft) :	125.73
Code :	ANSI/TIA-222-G	Base Diameter (in) :	45.50
Shape :	18 Sides	Top Diameter (in) :	17.06
Pole Type :	Taper	Taper (in/ft) :	0.235
Pole Manfacturer :	EEI	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	100 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	2.62				
T_L (sec):	6	p:	1	C_s:	0.030
S_s:	0.204	S_1:	0.064	C_s Max:	0.030
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.218	S_{d1}:	0.102		

Load Cases

1.2D + 1.6W	100 mph with No Ice
0.9D + 1.6W	100 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302469 Code: ANSI/TIA-222-G

Site Name: Bridgeport CT 2, CT Engineering Number:OAA732815_C3_03 11/9/2018 4:05:18 PM

Customer: T-MOBILE

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	48.352	0.3750	65		0.00	7,723	45.50	0.00	53.71	13817.4	19.98	121.33	34.13	48.35	40.18	5784.3	14.64	91.02	0.235121
2-18	48.370	0.3125	65	Slip	59.91	4,886	35.93	43.36	35.33	5662.3	18.86	114.98	24.55	91.73	24.05	1785.9	12.45	78.58	0.235121
3-18	37.748	0.2500	65	Slip	44.97	2,166	25.93	87.98	20.38	1699.4	16.88	103.75	17.06	125.73	13.34	476.5	10.62	68.25	0.235121
				Shaft Weight		14,776													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Distance From Face (ft)	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor
125.70	Decibel DB844H90E-XY	4	0.000	5.300	14.00	3.610	0.74
125.70	EMS RR90-11-00DBL	8	0.000	5.300	18.00	5.070	0.68
125.70	Flat Platform w/ Handrails	1	0.000	0.000	2000.00	42.400	1.00
124.00	Alcatel-Lucent 1900 MHz 4x45 R	3	0.000	2.000	60.00	2.320	0.67
124.00	Alcatel-Lucent RRH2x50-08	6	0.000	2.000	52.90	1.700	0.50
124.00	Commscope NNVV-65B-R4	3	0.000	2.000	77.40	12.270	0.64
124.00	Dragonwave A-ANT-18G-2-C	1	0.000	2.000	27.10	4.690	1.00
124.00	Dragonwave A-ANT-23G-1-C	1	0.000	2.000	15.00	1.610	1.00
124.00	DragonWave Horizon Compact	2	0.000	2.000	10.60	0.840	0.50
124.00	Flat T-Arm	3	0.000	0.000	250.00	12.900	1.00
124.00	Nokia 2.5G MAA - AAHC(64T64R)	3	0.000	2.000	103.60	4.200	0.64
116.00	Ericsson Air 3246 B66	3	0.000	0.000	180.00	7.940	0.69
116.00	Ericsson AIR-32 B2A/B66Aa	3	0.000	0.000	132.20	6.510	0.71
116.00	Ericsson KRY 112 144/2	3	0.000	0.000	9.70	0.560	0.50
116.00	Ericsson KRY 112 489/2	3	0.000	0.000	15.40	0.650	0.50
116.00	Ericsson Radio 4449 B12,B71	3	0.000	0.000	74.00	1.640	0.50
116.00	Kathrein Scala Smart Bias Tee	3	0.000	0.000	3.31	0.090	0.50
116.00	RFS APXVAARR24_43-U-NA20	3	0.000	0.000	127.90	20.240	0.63
116.00	Round Low Profile Platform	1	0.000	0.000	1500.00	21.700	1.00
106.00	CCI OPA-65R-LCUU-H4	6	0.000	4.000	57.00	6.080	0.66
106.00	Ericsson Radio 8843 - B2 + B66	3	0.000	4.000	71.90	1.650	0.50
106.00	Ericsson RRUS 32 B30 (53 lbs)	3	0.000	4.000	53.00	2.740	0.67
106.00	Ericsson RRUS-11 (19.7")	3	0.000	4.000	51.00	2.790	0.67
106.00	Kaelus DBC0061F1V51-2	3	0.000	4.000	25.50	0.510	0.50
106.00	Kaelus DBC0062F3V52-1	6	0.000	4.000	13.20	0.830	0.50
106.00	Powerwave Allgon 7750.00	3	0.000	4.000	27.00	5.560	0.65
106.00	Powerwave Allgon LGP21401	6	0.000	4.000	14.10	1.100	0.50
106.00	Raycap DC6-48-60-18-8F ("Squid	2	0.000	4.000	31.80	1.280	1.00
106.00	Round Platform w/ Handrails	1	0.000	0.000	2000.00	27.200	1.00
106.00	Round Platform w/ Handrails	1	0.000	0.000	2000.00	27.200	1.00
103.00	Kathrein Scala 800 10504	3	0.000	0.000	17.60	3.340	0.67
103.00	RCU (Remote Control Unit)	3	0.000	0.000	1.00	0.160	0.50
Totals	Num Loadings:32	100			12491.63		

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	125.70	12	1 1/4" Coax	1.55	0.63	N	0.00	N	Sprint Nextel
0.00	124.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	N	Clearwire Corporation
0.00	124.00	1	1.7" Hybrid	1.70	1.78	N	0.00	N	Clearwire Corporation
0.00	124.00	3	1/2" Coax	0.63	0.15	N	0.00	N	Clearwire Corporation
0.00	124.00	2	2" Conduit	2.38	3.65	N	0.00	N	Clearwire Corporation

0.00	116.00	2	1 1/4" Fiber	1.25	1.05	N	0.00	N	T-Mobile
0.00	116.00	18	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
0.00	116.00	1	1 5/8" Fiber	1.63	1.61	N	0.00	N	T-Mobile
0.00	110.00	2	0.39" Fiber Trunk	0.39	0.06	N	0.00	Y	AT&T Mobility
0.00	110.00	4	0.78" 8 AWG 6	0.78	0.59	N	0.00	Y	AT&T Mobility
0.00	110.00	12	1 5/8" Coax	1.98	0.82	N	3.96	Y	AT&T Mobility
0.00	101.00	6	1 5/8" Coax	1.98	0.82	N	1.98	Y	Metro PCS
0.00	101.00	1	3/8" Coax	0.44	0.08	N	0.00	Y	Metro PCS

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.3750	45.500	53.708	13,817.4	19.98	121.33	77.9	598.1	0.0	0.0
5.00		0.3750	44.324	52.309	12,765.4	19.43	118.20	78.5	567.2	0.0	901.9
10.00		0.3750	43.149	50.910	11,768.2	18.88	115.06	79.2	537.2	0.0	878.1
15.00		0.3750	41.973	49.510	10,824.3	18.33	111.93	79.8	507.9	0.0	854.3
20.00		0.3750	40.798	48.111	9,932.2	17.77	108.79	80.5	479.5	0.0	830.5
25.00		0.3750	39.622	46.712	9,090.6	17.22	105.66	81.1	451.9	0.0	806.7
30.00		0.3750	38.446	45.313	8,297.9	16.67	102.52	81.8	425.1	0.0	782.9
35.00		0.3750	37.271	43.914	7,552.7	16.11	99.39	82.4	399.1	0.0	759.0
40.00		0.3750	36.095	42.514	6,853.5	15.56	96.25	82.6	374.0	0.0	735.2
43.36	Bot - Section 2	0.3750	35.305	41.574	6,408.9	15.19	94.15	82.6	357.5	0.0	480.6
45.00		0.3750	34.920	41.115	6,198.9	15.01	93.12	82.6	349.6	0.0	427.0
48.35	Top - Section 1	0.3125	34.757	34.163	5,120.8	18.20	111.22	80.0	290.2	0.0	857.6
50.00		0.3125	34.369	33.779	4,949.8	17.98	109.98	80.3	283.7	0.0	190.5
55.00		0.3125	33.193	32.612	4,454.7	17.32	106.22	81.0	264.3	0.0	564.8
60.00		0.3125	32.018	31.446	3,993.8	16.66	102.46	81.8	245.7	0.0	544.9
65.00		0.3125	30.842	30.280	3,565.8	15.99	98.69	82.6	227.7	0.0	525.1
70.00		0.3125	29.667	29.114	3,169.5	15.33	94.93	82.6	210.4	0.0	505.3
75.00		0.3125	28.491	27.948	2,803.8	14.67	91.17	82.6	193.8	0.0	485.4
80.00		0.3125	27.315	26.782	2,467.3	14.00	87.41	82.6	177.9	0.0	465.6
85.00		0.3125	26.140	25.616	2,158.9	13.34	83.65	82.6	162.7	0.0	445.8
87.98	Bot - Section 3	0.3125	25.439	24.921	1,987.8	12.94	81.40	82.6	153.9	0.0	256.4
90.00		0.3125	24.964	24.450	1,877.3	12.68	79.89	82.6	148.1	0.0	308.2
91.73	Top - Section 2	0.2500	25.057	19.684	1,530.5	16.26	100.23	82.3	120.3	0.0	259.5
95.00		0.2500	24.288	19.074	1,392.5	15.72	97.15	82.6	112.9	0.0	215.7
100.0		0.2500	23.113	18.141	1,198.1	14.89	92.45	82.6	102.1	0.0	316.6
103.0		0.2500	22.407	17.581	1,090.6	14.39	89.63	82.6	95.9	0.0	182.3
105.0		0.2500	21.937	17.208	1,022.6	14.06	87.75	82.6	91.8	0.0	118.4
106.0		0.2500	21.702	17.022	989.7	13.90	86.81	82.6	89.8	0.0	58.2
110.0		0.2500	20.762	16.275	865.1	13.23	83.05	82.6	82.1	0.0	226.6
115.0		0.2500	19.586	15.343	724.7	12.40	78.34	82.6	72.9	0.0	269.0
116.0		0.2500	19.351	15.156	698.6	12.24	77.40	82.6	71.1	0.0	51.9
120.0		0.2500	18.410	14.410	600.4	11.57	73.64	82.6	64.2	0.0	201.2
124.0		0.2500	17.470	13.664	511.9	10.91	69.88	82.6	57.7	0.0	191.1
125.0		0.2500	17.235	13.477	491.2	10.75	68.94	82.6	56.1	0.0	46.2
125.7		0.2500	17.070	13.346	477.1	10.63	68.28	82.6	55.0	0.0	31.9
125.7		0.2500	17.063	13.341	476.5	10.62	68.25	82.6	55.0	0.0	1.4
											14,775.6

Load Case: 1.2D + 1.6W — 100 mph with No Ice — 25 Iterations

Gust Response Factor :1.10 — Wind Importance Factor 1.00
Dead Load Factor :1.20
Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		201.8	0.0					0.0	0.0	201.8	0.0	0.0	0.0
5.00		400.3	1,082.3					0.0	335.3	400.3	1,417.5	0.0	0.0
10.00		393.5	1,053.7					0.0	335.3	393.5	1,389.0	0.0	0.0
15.00		386.7	1,025.1					0.0	335.3	386.7	1,360.4	0.0	0.0
20.00		379.9	996.6					0.0	335.3	379.9	1,331.8	0.0	0.0
25.00		373.1	968.0					0.0	335.3	373.1	1,303.3	0.0	0.0
30.00		370.7	939.4					0.0	335.3	370.7	1,274.7	0.0	0.0
35.00		375.8	910.9					0.0	335.3	375.8	1,246.1	0.0	0.0
40.00		319.4	882.3					0.0	335.3	319.4	1,217.6	0.0	0.0
43.36	Bot - Section 2	194.3	576.7					0.0	225.3	194.3	802.0	0.0	0.0
45.00		198.0	512.3					0.0	110.0	198.0	622.4	0.0	0.0
48.35	Top - Section 1	198.6	1,029.2					0.0	224.7	198.6	1,253.9	0.0	0.0
50.00		264.7	228.7					0.0	110.5	264.7	339.2	0.0	0.0
55.00		399.8	677.7					0.0	335.3	399.8	1,013.0	0.0	0.0
60.00		401.6	653.9					0.0	335.3	401.6	989.2	0.0	0.0
65.00		402.5	630.1					0.0	335.3	402.5	965.4	0.0	0.0
70.00		486.2	606.3					0.0	335.3	486.2	941.6	0.0	0.0
75.00		563.4	582.5					114.6	335.3	678.0	917.8	0.0	0.0
80.00		550.2	558.7					116.8	335.3	667.0	894.0	0.0	0.0
85.00		430.1	534.9					118.9	335.3	549.0	870.2	0.0	0.0
87.98	Bot - Section 3	266.2	307.7					71.7	199.9	337.9	507.6	0.0	0.0
90.00		199.0	369.9					48.8	135.3	247.8	505.2	0.0	0.0
91.73	Top - Section 2	261.2	311.3					42.0	116.0	303.2	427.3	0.0	0.0
95.00		422.6	258.8					79.8	219.3	502.4	478.1	0.0	0.0
100.00		356.3	379.9					123.0	335.3	479.3	715.2	0.0	0.0
103.00	Appurtenance(s)	167.7	218.8	296.6	0.0	0.0	67.0	0.0	189.2	464.3	474.9	0.0	0.0
105.00		95.9	142.1					0.0	122.1	95.9	264.2	0.0	0.0
106.00	Appurtenance(s)	158.2	69.9	4,218.3	0.0	7,514.3	6,305.5	0.0	61.1	4,376.5	6,436.5	0.0	0.0
110.00		247.7	271.9					0.0	244.2	247.7	516.2	0.0	0.0
115.00		145.0	322.8					0.0	231.4	145.0	554.1	0.0	0.0
116.00	Appurtenance(s)	115.7	62.3	3,533.7	0.0	0.0	3,753.0	0.0	46.3	3,649.4	3,861.6	0.0	0.0
120.00		180.5	241.5					0.0	96.4	180.5	337.9	0.0	0.0
124.00	Appurtenance(s)	109.8	229.3	3,540.5	0.0	3,599.4	2,224.4	0.0	96.4	3,650.3	2,550.1	0.0	0.0
125.00		36.4	55.4					0.0	9.1	36.4	64.5	0.0	0.0
125.70		15.5	38.3					0.0	6.4	15.5	44.7	0.0	0.0
125.73		0.6	1.6					0.0	0.0	0.6	1.6	0.0	0.0
								Totals:		22,373.6	37,888.7	0.00	0.00

Load Case: 1.2D + 1.6W 100 mph with No Ice 25 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.20
Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-40.47	-25.49	0.00	-2,590.79	0.00	2,590.79	3,765.29	1,882.65	6,978.46	3,494.42	0.00	0.00	0.752
5.00	-38.94	-25.27	0.00	-2,463.34	0.00	2,463.34	3,697.80	1,848.90	6,673.37	3,341.64	0.14	-0.26	0.748
10.00	-37.43	-25.04	0.00	-2,337.00	0.00	2,337.00	3,628.68	1,814.34	6,371.97	3,190.72	0.56	-0.53	0.743
15.00	-35.96	-24.81	0.00	-2,211.80	0.00	2,211.80	3,557.92	1,778.96	6,074.51	3,041.77	1.25	-0.80	0.737
20.00	-34.51	-24.59	0.00	-2,087.73	0.00	2,087.73	3,485.52	1,742.76	5,781.22	2,894.91	2.25	-1.09	0.731
25.00	-33.09	-24.35	0.00	-1,964.81	0.00	1,964.81	3,411.48	1,705.74	5,492.34	2,750.25	3.54	-1.38	0.724
30.00	-31.70	-24.12	0.00	-1,843.04	0.00	1,843.04	3,335.81	1,667.90	5,208.12	2,607.93	5.14	-1.67	0.716
35.00	-30.34	-23.87	0.00	-1,722.46	0.00	1,722.46	3,258.50	1,629.25	4,928.79	2,468.06	7.05	-1.98	0.707
40.00	-29.02	-23.64	0.00	-1,603.13	0.00	1,603.13	3,158.60	1,579.30	4,623.93	2,315.40	9.29	-2.29	0.702
43.36	-28.16	-23.49	0.00	-1,523.74	0.00	1,523.74	3,088.76	1,544.38	4,420.66	2,213.61	10.98	-2.51	0.698
45.00	-27.48	-23.34	0.00	-1,485.20	0.00	1,485.20	3,054.65	1,527.33	4,323.05	2,164.74	11.87	-2.62	0.695
48.35	-26.17	-23.16	0.00	-1,406.97	0.00	1,406.97	2,459.53	1,229.76	3,476.81	1,740.99	13.79	-2.84	0.819
50.00	-25.75	-22.99	0.00	-1,368.79	0.00	1,368.79	2,439.67	1,219.84	3,409.59	1,707.33	14.79	-2.95	0.813
55.00	-24.61	-22.70	0.00	-1,253.84	0.00	1,253.84	2,378.35	1,189.18	3,208.11	1,606.44	18.08	-3.33	0.791
60.00	-23.50	-22.40	0.00	-1,140.35	0.00	1,140.35	2,315.40	1,157.70	3,010.48	1,507.48	21.77	-3.71	0.767
65.00	-22.41	-22.08	0.00	-1,028.37	0.00	1,028.37	2,249.69	1,124.84	2,815.52	1,409.85	25.87	-4.10	0.740
70.00	-21.36	-21.67	0.00	-917.97	0.00	917.97	2,163.06	1,081.53	2,601.81	1,302.84	30.37	-4.49	0.715
75.00	-20.36	-21.06	0.00	-809.62	0.00	809.62	2,076.43	1,038.21	2,396.52	1,200.04	35.27	-4.88	0.685
80.00	-19.39	-20.44	0.00	-704.33	0.00	704.33	1,989.80	994.90	2,199.68	1,101.47	40.58	-5.26	0.650
85.00	-18.48	-19.91	0.00	-602.12	0.00	602.12	1,903.17	951.59	2,011.27	1,007.13	46.28	-5.64	0.608
87.98	-17.94	-19.58	0.00	-542.75	0.00	542.75	1,851.51	925.75	1,902.92	952.88	49.87	-5.86	0.580
90.00	-17.42	-19.33	0.00	-503.23	0.00	503.23	1,816.54	908.27	1,831.29	917.01	52.38	-6.01	0.559
91.73	-16.97	-19.03	0.00	-469.81	0.00	469.81	1,457.51	728.76	1,482.45	742.33	54.58	-6.14	0.645
95.00	-16.45	-18.57	0.00	-407.56	0.00	407.56	1,417.09	708.55	1,396.21	699.14	58.86	-6.37	0.595
100.00	-15.70	-18.09	0.00	-314.72	0.00	314.72	1,347.79	673.89	1,262.31	632.09	65.72	-6.74	0.510
103.00	-15.24	-17.61	0.00	-260.46	0.00	260.46	1,306.21	653.10	1,185.22	593.49	70.01	-6.94	0.451
105.00	-14.96	-17.51	0.00	-225.23	0.00	225.23	1,278.48	639.24	1,135.17	568.43	72.94	-7.07	0.409
106.00	-9.08	-12.39	0.00	-200.20	0.00	200.20	1,264.62	632.31	1,110.55	556.10	74.42	-7.13	0.368
110.00	-8.56	-12.11	0.00	-150.63	0.00	150.63	1,209.18	604.59	1,014.77	508.14	80.47	-7.33	0.304
115.00	-8.00	-11.91	0.00	-90.06	0.00	90.06	1,139.88	569.94	901.12	451.23	88.24	-7.53	0.207
116.00	-4.65	-7.79	0.00	-78.15	0.00	78.15	1,126.02	563.01	879.21	440.26	89.81	-7.56	0.182
120.00	-4.32	-7.58	0.00	-46.98	0.00	46.98	1,070.57	535.29	794.23	397.70	96.18	-7.66	0.122
124.00	-2.28	-3.62	0.00	-13.07	0.00	13.07	1,015.13	507.57	713.56	357.31	102.61	-7.72	0.039
125.00	-2.23	-3.57	0.00	-9.45	0.00	9.45	1,001.27	500.64	694.07	347.55	104.22	-7.73	0.029
125.70	0.00	0.00	0.00	0.00	0.00	0.00	991.57	495.78	680.59	340.80	105.36	-7.73	0.000
125.73	0.00	0.00	0.00	0.00	0.00	0.00	991.15	495.58	680.02	340.51	105.40	-7.73	0.000

Load Case: 0.9D + 1.6W — 100 mph with No Ice (Reduced DL) — 25 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
Wind Load Factor :1.60

Wind Importance Factor 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		185.0	0.0					0.0	0.0	185.0	0.0	0.0	0.0
5.00		365.2	811.7					0.0	251.5	365.2	1,063.2	0.0	0.0
10.00		355.5	790.3					0.0	251.5	355.5	1,041.7	0.0	0.0
15.00		345.9	768.8					0.0	251.5	345.9	1,020.3	0.0	0.0
20.00		336.2	747.4					0.0	251.5	336.2	998.9	0.0	0.0
25.00		326.5	726.0					0.0	251.5	326.5	977.5	0.0	0.0
30.00		320.5	704.6					0.0	251.5	320.5	956.0	0.0	0.0
35.00		320.9	683.1					0.0	251.5	320.9	934.6	0.0	0.0
40.00		269.9	661.7					0.0	251.5	269.9	913.2	0.0	0.0
43.36	Bot - Section 2	162.7	432.6					0.0	169.0	162.7	601.5	0.0	0.0
45.00		164.2	384.3					0.0	82.5	164.2	466.8	0.0	0.0
48.35	Top - Section 1	164.3	771.9					0.0	168.6	164.3	940.4	0.0	0.0
50.00		217.6	171.5					0.0	82.9	217.6	254.4	0.0	0.0
55.00		325.4	508.3					0.0	251.5	325.4	759.8	0.0	0.0
60.00		321.7	490.5					0.0	251.5	321.7	741.9	0.0	0.0
65.00		317.1	472.6					0.0	251.5	317.1	724.1	0.0	0.0
70.00		442.1	454.7					0.0	251.5	442.1	706.2	0.0	0.0
75.00		563.4	436.9					114.6	251.5	678.0	688.3	0.0	0.0
80.00		550.2	419.0					116.8	251.5	667.0	670.5	0.0	0.0
85.00		430.1	401.2					118.9	251.5	549.0	652.6	0.0	0.0
87.98	Bot - Section 3	266.2	230.7					71.7	150.0	337.9	380.7	0.0	0.0
90.00		199.0	277.4					48.8	101.5	247.8	378.9	0.0	0.0
91.73	Top - Section 2	261.2	233.5					42.0	87.0	303.2	320.5	0.0	0.0
95.00		422.6	194.1					79.8	164.5	502.4	358.6	0.0	0.0
100.00		332.4	284.9					123.0	251.5	455.4	536.4	0.0	0.0
103.00	Appurtenance(s)	131.9	164.1	296.6	0.0	0.0	50.2	0.0	141.9	428.6	356.2	0.0	0.0
105.00		77.9	106.5					0.0	91.6	77.9	198.1	0.0	0.0
106.00	Appurtenance(s)	126.8	52.4	4,218.3	0.0	7,514.3	4,729.1	0.0	45.8	4,345.0	4,827.3	0.0	0.0
110.00		222.3	203.9					0.0	183.2	222.3	387.1	0.0	0.0
115.00		145.0	242.1					0.0	173.5	145.0	415.6	0.0	0.0
116.00	Appurtenance(s)	115.7	46.7	3,533.7	0.0	0.0	2,814.8	0.0	34.7	3,649.4	2,896.2	0.0	0.0
120.00		180.5	181.1					0.0	72.3	180.5	253.4	0.0	0.0
124.00	Appurtenance(s)	109.8	171.9	3,540.5	0.0	3,599.4	1,668.3	0.0	72.3	3,650.3	1,912.6	0.0	0.0
125.00		36.4	41.6					0.0	6.8	36.4	48.4	0.0	0.0
125.70		15.5	28.8					0.0	4.8	15.5	33.5	0.0	0.0
125.73		0.6	1.2					0.0	0.0	0.6	1.2	0.0	0.0
								Totals:		21,433.1	28,416.5	0.00	0.00

Load Case: 0.9D + 1.6W — 100 mph with No Ice (Reduced DL) — 25 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
Wind Load Factor :1.60
Wind Importance Factor 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-30.34	-24.54	0.00	-2,498.72	0.00	2,498.72	3,765.29	1,882.65	6,978.46	3,494.42	0.00	0.00	0.723
5.00	-29.17	-24.30	0.00	-2,376.01	0.00	2,376.01	3,697.80	1,848.90	6,673.37	3,341.64	0.13	-0.25	0.719
10.00	-28.02	-24.07	0.00	-2,254.50	0.00	2,254.50	3,628.68	1,814.34	6,371.97	3,190.72	0.54	-0.51	0.714
15.00	-26.89	-23.84	0.00	-2,134.15	0.00	2,134.15	3,557.92	1,778.96	6,074.51	3,041.77	1.21	-0.77	0.709
20.00	-25.79	-23.61	0.00	-2,014.96	0.00	2,014.96	3,485.52	1,742.76	5,781.22	2,894.91	2.17	-1.05	0.704
25.00	-24.70	-23.39	0.00	-1,896.91	0.00	1,896.91	3,411.48	1,705.74	5,492.34	2,750.25	3.41	-1.33	0.697
30.00	-23.64	-23.16	0.00	-1,779.98	0.00	1,779.98	3,335.81	1,667.90	5,208.12	2,607.93	4.96	-1.61	0.690
35.00	-22.59	-22.93	0.00	-1,664.16	0.00	1,664.16	3,258.50	1,629.25	4,928.79	2,468.06	6.81	-1.91	0.681
40.00	-21.59	-22.73	0.00	-1,549.51	0.00	1,549.51	3,158.60	1,579.30	4,623.93	2,315.40	8.97	-2.21	0.676
43.36	-20.93	-22.60	0.00	-1,473.16	0.00	1,473.16	3,088.76	1,544.38	4,420.66	2,213.61	10.60	-2.42	0.672
45.00	-20.41	-22.47	0.00	-1,436.09	0.00	1,436.09	3,054.65	1,527.33	4,323.05	2,164.74	11.45	-2.53	0.670
48.35	-19.42	-22.32	0.00	-1,360.79	0.00	1,360.79	2,459.53	1,229.76	3,476.81	1,740.99	13.30	-2.74	0.790
50.00	-19.08	-22.17	0.00	-1,324.00	0.00	1,324.00	2,439.67	1,219.84	3,409.59	1,707.33	14.27	-2.85	0.784
55.00	-18.20	-21.92	0.00	-1,213.17	0.00	1,213.17	2,378.35	1,189.18	3,208.11	1,606.44	17.45	-3.22	0.763
60.00	-17.34	-21.67	0.00	-1,103.57	0.00	1,103.57	2,315.40	1,157.70	3,010.48	1,507.48	21.02	-3.59	0.740
65.00	-16.49	-21.41	0.00	-995.24	0.00	995.24	2,249.69	1,124.84	2,815.52	1,409.85	24.98	-3.96	0.714
70.00	-15.68	-21.02	0.00	-888.19	0.00	888.19	2,163.06	1,081.53	2,601.81	1,302.84	29.32	-4.34	0.689
75.00	-14.92	-20.39	0.00	-783.08	0.00	783.08	2,076.43	1,038.21	2,396.52	1,200.04	34.06	-4.71	0.660
80.00	-14.18	-19.76	0.00	-681.13	0.00	681.13	1,989.80	994.90	2,199.68	1,101.47	39.19	-5.08	0.626
85.00	-13.49	-19.22	0.00	-582.33	0.00	582.33	1,903.17	951.59	2,011.27	1,007.13	44.71	-5.45	0.586
87.98	-13.08	-18.89	0.00	-525.02	0.00	525.02	1,851.51	925.75	1,902.92	952.88	48.18	-5.67	0.558
90.00	-12.68	-18.63	0.00	-486.90	0.00	486.90	1,816.54	908.27	1,831.29	917.01	50.60	-5.81	0.538
91.73	-12.34	-18.34	0.00	-454.68	0.00	454.68	1,457.51	728.76	1,482.45	742.33	52.72	-5.93	0.622
95.00	-11.94	-17.86	0.00	-394.70	0.00	394.70	1,417.09	708.55	1,396.21	699.14	56.86	-6.16	0.574
100.00	-11.38	-17.40	0.00	-305.39	0.00	305.39	1,347.79	673.89	1,262.31	632.09	63.49	-6.51	0.492
103.00	-11.03	-16.97	0.00	-253.18	0.00	253.18	1,306.21	653.10	1,185.22	593.49	67.64	-6.71	0.436
105.00	-10.81	-16.89	0.00	-219.24	0.00	219.24	1,278.48	639.24	1,135.17	568.43	70.48	-6.84	0.395
106.00	-6.51	-12.01	0.00	-194.84	0.00	194.84	1,264.62	632.31	1,110.55	556.10	71.91	-6.89	0.356
110.00	-6.12	-11.76	0.00	-146.80	0.00	146.80	1,209.18	604.59	1,014.77	508.14	77.76	-7.09	0.294
115.00	-5.70	-11.58	0.00	-87.99	0.00	87.99	1,139.88	569.94	901.12	451.23	85.28	-7.28	0.200
116.00	-3.28	-7.59	0.00	-76.42	0.00	76.42	1,126.02	563.01	879.21	440.26	86.81	-7.32	0.177
120.00	-3.04	-7.39	0.00	-46.05	0.00	46.05	1,070.57	535.29	794.23	397.70	92.97	-7.42	0.119
124.00	-1.62	-3.52	0.00	-12.90	0.00	12.90	1,015.13	507.57	713.56	357.31	99.19	-7.48	0.038
125.00	-1.58	-3.48	0.00	-9.38	0.00	9.38	1,001.27	500.64	694.07	347.55	100.75	-7.48	0.029
125.70	0.00	0.00	0.00	0.00	0.00	0.00	991.57	495.78	680.59	340.80	101.85	-7.48	0.000
125.73	0.00	0.00	0.00	0.00	0.00	0.00	991.15	495.58	680.02	340.51	101.89	-7.48	0.000

Site Number: 302469 Code: ANSI/TIA-222-G

Site Name: Bridgeport CT 2, CT Engineering Number:OAA732815_C3_03 11/9/2018 4:05:26 PM

Customer: T-MOBILE

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 0.75 in Radial Ice 25 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00 Wind Importance Factor :1.00

Dead Load Factor :1.20 Ice Importance Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		56.1	0.0					0.0	0.0	56.1	0.0	0.0	0.0
5.00		111.1	1,412.4					0.0	587.1	111.1	1,999.6	0.0	0.0
10.00		108.8	1,413.8					0.0	618.1	108.8	2,031.9	0.0	0.0
15.00		106.2	1,394.6					0.0	634.2	106.2	2,028.8	0.0	0.0
20.00		103.6	1,368.7					0.0	645.4	103.6	2,014.1	0.0	0.0
25.00		101.0	1,339.3					0.0	654.1	101.0	1,993.4	0.0	0.0
30.00		99.5	1,307.7					0.0	661.2	99.5	1,968.9	0.0	0.0
35.00		100.0	1,274.5					0.0	667.3	100.0	1,941.8	0.0	0.0
40.00		84.3	1,240.2					0.0	672.7	84.3	1,912.9	0.0	0.0
43.36	Bot - Section 2	50.9	814.8					0.0	454.7	50.9	1,269.4	0.0	0.0
45.00		51.5	630.1					0.0	222.8	51.5	852.8	0.0	0.0
48.35	Top - Section 1	51.6	1,265.9					0.0	456.5	51.6	1,722.4	0.0	0.0
50.00		68.5	344.5					0.0	225.2	68.5	569.7	0.0	0.0
55.00		102.6	1,019.8					0.0	685.7	102.6	1,705.5	0.0	0.0
60.00		101.9	987.6					0.0	689.3	101.9	1,676.9	0.0	0.0
65.00		100.9	954.9					0.0	692.6	100.9	1,647.6	0.0	0.0
70.00		99.5	921.9					0.0	695.8	99.5	1,617.7	0.0	0.0
75.00		97.9	888.5					37.5	698.7	135.4	1,587.2	0.0	0.0
80.00		96.1	854.8					38.3	701.5	134.5	1,556.3	0.0	0.0
85.00		75.5	820.9					39.1	704.1	114.6	1,525.0	0.0	0.0
87.98	Bot - Section 3	46.9	474.7					23.7	421.1	70.6	895.8	0.0	0.0
90.00		35.1	483.4					16.2	285.5	51.3	768.9	0.0	0.0
91.73	Top - Section 2	46.2	407.4					14.0	244.9	60.2	652.3	0.0	0.0
95.00		75.0	435.7					26.7	464.0	101.7	899.7	0.0	0.0
100.00		71.3	639.3					41.4	711.2	112.7	1,350.5	0.0	0.0
103.00	Appurtenance(s)	43.6	370.6	73.4	0.0	0.0	250.5	0.0	365.9	117.1	987.0	0.0	0.0
105.00		25.9	241.6					0.0	223.6	25.9	465.1	0.0	0.0
106.00	Appurtenance(s)	42.3	119.2	1,093.5	0.0	1,640.3	10,398.2	0.0	111.9	1,135.7	10,629.3	0.0	0.0
110.00		74.5	461.8					0.0	448.0	74.5	909.8	0.0	0.0
115.00		48.8	548.6					0.0	231.4	48.8	780.0	0.0	0.0
116.00	Appurtenance(s)	39.3	107.1	787.6	0.0	0.0	15,428.4	0.0	46.3	826.8	15,581.7	0.0	0.0
120.00		61.6	413.0					0.0	96.4	61.6	509.5	0.0	0.0
124.00	Appurtenance(s)	37.7	393.4	809.3	0.0	736.1	5,256.3	0.0	96.4	847.0	5,746.1	0.0	0.0
125.00		12.5	96.0					0.0	9.1	12.5	105.1	0.0	0.0
125.70		5.4	66.5					0.0	6.4	5.4	72.9	0.0	0.0
125.73		0.2	2.8					0.0	0.0	0.2	2.8	0.0	0.0
								Totals:		5,434.46	71,978.2	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 0.75 in Radial Ice 25 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00 Wind Importance Factor :1.00
Dead Load Factor :1.20 Ice Importance Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-76.53	-6.16	0.00	-672.92	0.00	672.92	3,765.29	1,882.65	6,978.46	3,494.42	0.00	0.00	0.213
5.00	-74.53	-6.13	0.00	-642.14	0.00	642.14	3,697.80	1,848.90	6,673.37	3,341.64	0.04	-0.07	0.212
10.00	-72.49	-6.11	0.00	-611.47	0.00	611.47	3,628.68	1,814.34	6,371.97	3,190.72	0.14	-0.14	0.212
15.00	-70.45	-6.09	0.00	-580.91	0.00	580.91	3,557.92	1,778.96	6,074.51	3,041.77	0.33	-0.21	0.211
20.00	-68.43	-6.07	0.00	-550.47	0.00	550.47	3,485.52	1,742.76	5,781.22	2,894.91	0.59	-0.28	0.210
25.00	-66.43	-6.05	0.00	-520.13	0.00	520.13	3,411.48	1,705.74	5,492.34	2,750.25	0.92	-0.36	0.209
30.00	-64.45	-6.02	0.00	-489.91	0.00	489.91	3,335.81	1,667.90	5,208.12	2,607.93	1.34	-0.44	0.207
35.00	-62.50	-6.00	0.00	-459.80	0.00	459.80	3,258.50	1,629.25	4,928.79	2,468.06	1.85	-0.52	0.205
40.00	-60.58	-5.97	0.00	-429.82	0.00	429.82	3,158.60	1,579.30	4,623.93	2,315.40	2.44	-0.60	0.205
43.36	-59.31	-5.95	0.00	-409.78	0.00	409.78	3,088.76	1,544.38	4,420.66	2,213.61	2.89	-0.66	0.204
45.00	-58.45	-5.93	0.00	-400.02	0.00	400.02	3,054.65	1,527.33	4,323.05	2,164.74	3.12	-0.69	0.204
48.35	-56.73	-5.90	0.00	-380.14	0.00	380.14	2,459.53	1,229.76	3,476.81	1,740.99	3.63	-0.75	0.241
50.00	-56.15	-5.89	0.00	-370.40	0.00	370.40	2,439.67	1,219.84	3,409.59	1,707.33	3.89	-0.78	0.240
55.00	-54.44	-5.86	0.00	-340.94	0.00	340.94	2,378.35	1,189.18	3,208.11	1,606.44	4.77	-0.89	0.235
60.00	-52.75	-5.83	0.00	-311.62	0.00	311.62	2,315.40	1,157.70	3,010.48	1,507.48	5.75	-0.99	0.230
65.00	-51.10	-5.80	0.00	-282.46	0.00	282.46	2,249.69	1,124.84	2,815.52	1,409.85	6.84	-1.10	0.223
70.00	-49.47	-5.76	0.00	-253.49	0.00	253.49	2,163.06	1,081.53	2,601.81	1,302.84	8.05	-1.20	0.217
75.00	-47.88	-5.68	0.00	-224.71	0.00	224.71	2,076.43	1,038.21	2,396.52	1,200.04	9.37	-1.31	0.210
80.00	-46.31	-5.59	0.00	-196.33	0.00	196.33	1,989.80	994.90	2,199.68	1,101.47	10.80	-1.42	0.202
85.00	-44.78	-5.50	0.00	-168.38	0.00	168.38	1,903.17	951.59	2,011.27	1,007.13	12.34	-1.52	0.191
87.98	-43.89	-5.45	0.00	-151.98	0.00	151.98	1,851.51	925.75	1,902.92	952.88	13.31	-1.58	0.183
90.00	-43.11	-5.40	0.00	-140.99	0.00	140.99	1,816.54	908.27	1,831.29	917.01	13.99	-1.63	0.178
91.73	-42.46	-5.36	0.00	-131.65	0.00	131.65	1,457.51	728.76	1,482.45	742.33	14.58	-1.66	0.207
95.00	-41.56	-5.30	0.00	-114.11	0.00	114.11	1,417.09	708.55	1,396.21	699.14	15.74	-1.73	0.193
100.00	-40.20	-5.20	0.00	-87.64	0.00	87.64	1,347.79	673.89	1,262.31	632.09	17.61	-1.83	0.169
103.00	-39.22	-5.08	0.00	-72.05	0.00	72.05	1,306.21	653.10	1,185.22	593.49	18.78	-1.89	0.151
105.00	-38.75	-5.05	0.00	-61.90	0.00	61.90	1,278.48	639.24	1,135.17	568.43	19.57	-1.92	0.139
106.00	-28.16	-3.58	0.00	-55.20	0.00	55.20	1,264.62	632.31	1,110.55	556.10	19.98	-1.94	0.122
110.00	-27.25	-3.50	0.00	-40.89	0.00	40.89	1,209.18	604.59	1,014.77	508.14	21.63	-1.99	0.103
115.00	-26.47	-3.44	0.00	-23.39	0.00	23.39	1,139.88	569.94	901.12	451.23	23.75	-2.05	0.075
116.00	-10.93	-2.06	0.00	-19.96	0.00	19.96	1,126.02	563.01	879.21	440.26	24.17	-2.05	0.055
120.00	-10.42	-1.98	0.00	-11.74	0.00	11.74	1,070.57	535.29	794.23	397.70	25.91	-2.08	0.039
124.00	-4.71	-0.92	0.00	-3.09	0.00	3.09	1,015.13	507.57	713.56	357.31	27.66	-2.10	0.013
125.00	-4.61	-0.91	0.00	-2.16	0.00	2.16	1,001.27	500.64	694.07	347.55	28.10	-2.10	0.011
125.70	0.00	0.00	0.00	0.00	0.00	0.00	991.57	495.78	680.59	340.80	28.40	-2.10	0.000
125.73	0.00	0.00	0.00	0.00	0.00	0.00	991.15	495.58	680.02	340.51	28.42	-2.10	0.000

Load Case: 1.0D + 1.0W Serviceability 60 mph 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		41.6	0.0					0.0	0.0	41.6	0.0	0.0	0.0
5.00		82.2	901.9					0.0	279.4	82.2	1,181.3	0.0	0.0
10.00		80.0	878.1					0.0	279.4	80.0	1,157.5	0.0	0.0
15.00		77.8	854.3					0.0	279.4	77.8	1,133.7	0.0	0.0
20.00		75.6	830.5					0.0	279.4	75.6	1,109.9	0.0	0.0
25.00		73.5	806.7					0.0	279.4	73.5	1,086.1	0.0	0.0
30.00		72.1	782.9					0.0	279.4	72.1	1,062.3	0.0	0.0
35.00		72.2	759.0					0.0	279.4	72.2	1,038.4	0.0	0.0
40.00		60.7	735.2					0.0	279.4	60.7	1,014.6	0.0	0.0
43.36	Bot - Section 2	36.6	480.6					0.0	187.7	36.6	668.3	0.0	0.0
45.00		37.0	427.0					0.0	91.7	37.0	518.6	0.0	0.0
48.35	Top - Section 1	37.0	857.6					0.0	187.3	37.0	1,044.9	0.0	0.0
50.00		49.0	190.5					0.0	92.1	49.0	282.7	0.0	0.0
55.00		73.2	564.8					0.0	279.4	73.2	844.2	0.0	0.0
60.00		72.4	544.9					0.0	279.4	72.4	824.3	0.0	0.0
65.00		71.4	525.1					0.0	279.4	71.4	804.5	0.0	0.0
70.00		99.5	505.3					0.0	279.4	99.5	784.7	0.0	0.0
75.00		126.8	485.4					25.8	279.4	152.6	764.8	0.0	0.0
80.00		123.8	465.6					26.3	279.4	150.1	745.0	0.0	0.0
85.00		96.8	445.8					26.8	279.4	123.5	725.2	0.0	0.0
87.98	Bot - Section 3	59.9	256.4					16.2	166.6	76.1	423.0	0.0	0.0
90.00		44.8	308.2					11.0	112.8	55.8	421.0	0.0	0.0
91.73	Top - Section 2	58.8	259.5					9.5	96.6	68.3	356.1	0.0	0.0
95.00		95.1	215.7					18.1	182.8	113.2	398.5	0.0	0.0
100.00		74.8	316.6					28.1	279.4	102.9	596.0	0.0	0.0
103.00	Appurtenance(s)	29.7	182.3	66.7	0.0	0.0	55.8	0.0	157.6	96.4	395.8	0.0	0.0
105.00		17.5	118.4					0.0	101.8	17.5	220.1	0.0	0.0
106.00	Appurtenance(s)	28.5	58.2	949.1	0.0	1,690.7	5,254.6	0.0	50.9	977.6	5,363.7	0.0	0.0
110.00		50.0	226.6					0.0	203.5	50.0	430.1	0.0	0.0
115.00		32.6	269.0					0.0	192.8	32.6	461.8	0.0	0.0
116.00	Appurtenance(s)	26.0	51.9	795.1	0.0	0.0	3,127.5	0.0	38.6	821.1	3,218.0	0.0	0.0
120.00		40.6	201.2					0.0	80.4	40.6	281.6	0.0	0.0
124.00	Appurtenance(s)	24.7	191.1	796.6	0.0	809.9	1,853.7	0.0	80.4	821.3	2,125.1	0.0	0.0
125.00		8.2	46.2					0.0	7.6	8.2	53.7	0.0	0.0
125.70		3.5	31.9					0.0	5.3	3.5	37.2	0.0	0.0
125.73		0.1	1.4					0.0	0.0	0.1	1.4	0.0	0.0
								Totals:		4,823.21	31,573.9	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-33.77	-5.52	0.00	-566.82	0.00	566.82	3,765.29	1,882.65	6,978.46	3,494.42	0.00	0.00	0.171
5.00	-32.58	-5.47	0.00	-539.20	0.00	539.20	3,697.80	1,848.90	6,673.37	3,341.64	0.03	-0.06	0.170
10.00	-31.42	-5.42	0.00	-511.83	0.00	511.83	3,628.68	1,814.34	6,371.97	3,190.72	0.12	-0.12	0.169
15.00	-30.28	-5.38	0.00	-484.71	0.00	484.71	3,557.92	1,778.96	6,074.51	3,041.77	0.27	-0.18	0.168
20.00	-29.17	-5.33	0.00	-457.83	0.00	457.83	3,485.52	1,742.76	5,781.22	2,894.91	0.49	-0.24	0.167
25.00	-28.08	-5.28	0.00	-431.18	0.00	431.18	3,411.48	1,705.74	5,492.34	2,750.25	0.77	-0.30	0.165
30.00	-27.01	-5.23	0.00	-404.77	0.00	404.77	3,335.81	1,667.90	5,208.12	2,607.93	1.13	-0.37	0.163
35.00	-25.96	-5.19	0.00	-378.60	0.00	378.60	3,258.50	1,629.25	4,928.79	2,468.06	1.55	-0.43	0.161
40.00	-24.94	-5.14	0.00	-352.67	0.00	352.67	3,158.60	1,579.30	4,623.93	2,315.40	2.04	-0.50	0.160
43.36	-24.27	-5.11	0.00	-335.40	0.00	335.40	3,088.76	1,544.38	4,420.66	2,213.61	2.41	-0.55	0.159
45.00	-23.75	-5.09	0.00	-327.00	0.00	327.00	3,054.65	1,527.33	4,323.05	2,164.74	2.60	-0.57	0.159
48.35	-22.70	-5.05	0.00	-309.95	0.00	309.95	2,459.53	1,229.76	3,476.81	1,740.99	3.02	-0.62	0.187
50.00	-22.42	-5.02	0.00	-301.62	0.00	301.62	2,439.67	1,219.84	3,409.59	1,707.33	3.24	-0.65	0.186
55.00	-21.57	-4.97	0.00	-276.50	0.00	276.50	2,378.35	1,189.18	3,208.11	1,606.44	3.97	-0.73	0.181
60.00	-20.74	-4.92	0.00	-251.64	0.00	251.64	2,315.40	1,157.70	3,010.48	1,507.48	4.78	-0.82	0.176
65.00	-19.93	-4.87	0.00	-227.04	0.00	227.04	2,249.69	1,124.84	2,815.52	1,409.85	5.68	-0.90	0.170
70.00	-19.14	-4.78	0.00	-202.71	0.00	202.71	2,163.06	1,081.53	2,601.81	1,302.84	6.67	-0.99	0.164
75.00	-18.37	-4.64	0.00	-178.81	0.00	178.81	2,076.43	1,038.21	2,396.52	1,200.04	7.75	-1.07	0.158
80.00	-17.62	-4.50	0.00	-155.59	0.00	155.59	1,989.80	994.90	2,199.68	1,101.47	8.92	-1.16	0.150
85.00	-16.89	-4.39	0.00	-133.07	0.00	133.07	1,903.17	951.59	2,011.27	1,007.13	10.18	-1.24	0.141
87.98	-16.47	-4.31	0.00	-119.99	0.00	119.99	1,851.51	925.75	1,902.92	952.88	10.97	-1.29	0.135
90.00	-16.04	-4.25	0.00	-111.29	0.00	111.29	1,816.54	908.27	1,831.29	917.01	11.52	-1.32	0.130
91.73	-15.69	-4.19	0.00	-103.93	0.00	103.93	1,457.51	728.76	1,482.45	742.33	12.00	-1.35	0.151
95.00	-15.29	-4.08	0.00	-90.23	0.00	90.23	1,417.09	708.55	1,396.21	699.14	12.95	-1.40	0.140
100.00	-14.69	-3.98	0.00	-69.81	0.00	69.81	1,347.79	673.89	1,262.31	632.09	14.46	-1.48	0.121
103.00	-14.29	-3.89	0.00	-57.86	0.00	57.86	1,306.21	653.10	1,185.22	593.49	15.41	-1.53	0.108
105.00	-14.07	-3.87	0.00	-50.09	0.00	50.09	1,278.48	639.24	1,135.17	568.43	16.06	-1.56	0.099
106.00	-8.74	-2.75	0.00	-44.54	0.00	44.54	1,264.62	632.31	1,110.55	556.10	16.38	-1.57	0.087
110.00	-8.31	-2.69	0.00	-33.55	0.00	33.55	1,209.18	604.59	1,014.77	508.14	17.72	-1.62	0.073
115.00	-7.84	-2.65	0.00	-20.09	0.00	20.09	1,139.88	569.94	901.12	451.23	19.44	-1.66	0.051
116.00	-4.65	-1.74	0.00	-17.44	0.00	17.44	1,126.02	563.01	879.21	440.26	19.79	-1.67	0.044
120.00	-4.37	-1.69	0.00	-10.49	0.00	10.49	1,070.57	535.29	794.23	397.70	21.20	-1.69	0.030
124.00	-2.27	-0.81	0.00	-2.93	0.00	2.93	1,015.13	507.57	713.56	357.31	22.62	-1.70	0.010
125.00	-2.22	-0.80	0.00	-2.12	0.00	2.12	1,001.27	500.64	694.07	347.55	22.98	-1.71	0.008
125.70	0.00	0.00	0.00	0.00	0.00	0.00	991.57	495.78	680.59	340.80	23.23	-1.71	0.000
125.73	0.00	0.00	0.00	0.00	0.00	0.00	991.15	495.58	680.02	340.51	23.24	-1.71	0.000

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.20	
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06	
Long-Period Transition Period (T_L):	6	
Importance Factor (I_E):	1.00	
Site Coefficient F_a:	1.60	
Site Coeffiecient F_v:	2.40	
Response Modification Coefficient (R):	1.50	
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22	
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10	
Seismic Response Coefficient (C_s):	0.03	
Upper Limit C_s	0.03	
Lower Limit C_s	0.03	
Period based on Rayleigh Method (sec):	2.62	
Redundancy Factor (p):	1.00	
Seismic Force Distribution Exponent (k):	2.00	
Total Unfactored Dead Load:	33.77	k
Seismic Base Shear (E):	1.01	k

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
35	125.71	1	22	0.000	0	2
34	125.35	37	585	0.002	2	46
33	124.50	54	833	0.003	3	67
32	122.00	271	4,040	0.016	17	338
31	118.00	282	3,921	0.016	16	350
30	115.50	90	1,207	0.005	5	112
29	112.50	462	5,844	0.024	24	574
28	108.00	430	5,017	0.020	21	535
27	105.50	109	1,215	0.005	5	136
26	104.00	220	2,381	0.010	10	274
25	101.50	340	3,502	0.014	14	423
24	97.50	596	5,666	0.023	23	741
23	93.36	398	3,473	0.014	14	495
22	90.86	356	2,940	0.012	12	443
21	88.99	421	3,334	0.014	14	524
20	86.49	423	3,164	0.013	13	526
19	82.50	725	4,936	0.020	20	902
18	77.50	745	4,475	0.018	18	926
17	72.50	765	4,020	0.016	16	951
16	67.50	785	3,575	0.014	15	976
15	62.50	805	3,143	0.013	13	1,000
14	57.50	824	2,725	0.011	11	1,025
13	52.50	844	2,327	0.009	10	1,050

12	49.18	283	684	0.003	3	351
11	46.68	1,045	2,277	0.009	9	1,299
10	44.18	519	1,012	0.004	4	645
9	41.68	668	1,161	0.005	5	831
8	37.50	1,015	1,427	0.006	6	1,262
7	32.50	1,038	1,097	0.004	5	1,291
6	27.50	1,062	803	0.003	3	1,321
5	22.50	1,086	550	0.002	2	1,351
4	17.50	1,110	340	0.001	1	1,380
3	12.50	1,134	177	0.001	1	1,410
2	7.50	1,157	65	0.000	0	1,439
1	2.50	1,181	7	0.000	0	1,469
Decibel DB844H90E-XY	125.70	56	885	0.004	4	70
EMS RR90-11-00DBL	125.70	144	2,275	0.009	9	179
Flat Platform w/ Han	125.70	2,000	31,601	0.128	130	2,487
DragonWave Horizon C	124.00	21	326	0.001	1	26
Dragonwave A-ANT-23G	124.00	15	231	0.001	1	19
Alcatel-Lucent RRH2x	124.00	317	4,880	0.020	20	395
Alcatel-Lucent 1900	124.00	180	2,768	0.011	11	224
Nokia 2.5G MAA - AAH	124.00	311	4,779	0.019	20	386
Dragonwave A-ANT-18G	124.00	27	417	0.002	2	34
Commscope NNVV-65B-R	124.00	232	3,570	0.014	15	289
Flat T-Arm	124.00	750	11,532	0.047	47	933
Kathrein Scala Smart	116.00	10	134	0.001	1	12
Ericsson KRY 112 144	116.00	29	392	0.002	2	36
Ericsson KRY 112 489	116.00	46	622	0.003	3	57
Ericsson Radio 4449	116.00	222	2,987	0.012	12	276
Ericsson AIR-32 B2A/	116.00	397	5,337	0.022	22	493
Ericsson Air 3246 B6	116.00	540	7,266	0.029	30	672
RFS APXVAARR24_43-U-	116.00	384	5,163	0.021	21	477
Round Low Profile Pl	116.00	1,500	20,184	0.082	83	1,865
Kaelus DBC0061F1V51-	106.00	76	860	0.003	4	95
Kaelus DBC0062F3V52-	106.00	79	890	0.004	4	98
Powerwave Allgon LGP	106.00	85	951	0.004	4	105
Raycap DC6-48-60-18-	106.00	64	715	0.003	3	79
Ericsson Radio 8843	106.00	216	2,424	0.010	10	268
Ericsson RRUS 32 B30	106.00	159	1,787	0.007	7	198
Ericsson RRUS-11 (19	106.00	153	1,719	0.007	7	190
Powerwave Allgon 775	106.00	81	910	0.004	4	101
CCI OPA-65R-LCUU-H4	106.00	342	3,843	0.016	16	425
Round Platform w/ Ha	106.00	2,000	22,472	0.091	92	2,487
Round Platform w/ Ha	106.00	2,000	22,472	0.091	92	2,487
RCU (Remote Control	103.00	3	32	0.000	0	4
Kathrein Scala 800 1	103.00	53	560	0.002	2	66
		33,774	246,924	1.000	1,013	41,999

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
35	125.71	1	22	0.000	0	1
34	125.35	37	585	0.002	2	32
33	124.50	54	833	0.003	3	46
32	122.00	271	4,040	0.016	17	232
31	118.00	282	3,921	0.016	16	241
30	115.50	90	1,207	0.005	5	77
29	112.50	462	5,844	0.024	24	395
28	108.00	430	5,017	0.020	21	368
27	105.50	109	1,215	0.005	5	93
26	104.00	220	2,381	0.010	10	189

25	101.50	340	3,502	0.014	14	291
24	97.50	596	5,666	0.023	23	510
23	93.36	398	3,473	0.014	14	341
22	90.86	356	2,940	0.012	12	305
21	88.99	421	3,334	0.014	14	361
20	86.49	423	3,164	0.013	13	362
19	82.50	725	4,936	0.020	20	621
18	77.50	745	4,475	0.018	18	638
17	72.50	765	4,020	0.016	16	655
16	67.50	785	3,575	0.014	15	672
15	62.50	805	3,143	0.013	13	689
14	57.50	824	2,725	0.011	11	706
13	52.50	844	2,327	0.009	10	723
12	49.18	283	684	0.003	3	242
11	46.68	1,045	2,277	0.009	9	895
10	44.18	519	1,012	0.004	4	444
9	41.68	668	1,161	0.005	5	572
8	37.50	1,015	1,427	0.006	6	869
7	32.50	1,038	1,097	0.004	5	889
6	27.50	1,062	803	0.003	3	910
5	22.50	1,086	550	0.002	2	930
4	17.50	1,110	340	0.001	1	951
3	12.50	1,134	177	0.001	1	971
2	7.50	1,157	65	0.000	0	991
1	2.50	1,181	7	0.000	0	1,012
Decibel DB844H90E-XY	125.70	56	885	0.004	4	48
EMS RR90-11-00DBL	125.70	144	2,275	0.009	9	123
Flat Platform w/ Han	125.70	2,000	31,601	0.128	130	1,713
DragonWave Horizon C	124.00	21	326	0.001	1	18
Dragonwave A-ANT-23G	124.00	15	231	0.001	1	13
Alcatel-Lucent RRH2x	124.00	317	4,880	0.020	20	272
Alcatel-Lucent 1900	124.00	180	2,768	0.011	11	154
Nokia 2.5G MAA - AAH	124.00	311	4,779	0.019	20	266
Dragonwave A-ANT-18G	124.00	27	417	0.002	2	23
Commscope NNVV-65B-R	124.00	232	3,570	0.014	15	199
Flat T-Arm	124.00	750	11,532	0.047	47	642
Kathrein Scala Smart	116.00	10	134	0.001	1	9
Ericsson KRY 112 144	116.00	29	392	0.002	2	25
Ericsson KRY 112 489	116.00	46	622	0.003	3	40
Ericsson Radio 4449	116.00	222	2,987	0.012	12	190
Ericsson AIR-32 B2A/	116.00	397	5,337	0.022	22	340
Ericsson Air 3246 B6	116.00	540	7,266	0.029	30	462
RFS APXVAARR24_43-U-	116.00	384	5,163	0.021	21	329
Round Low Profile Pl	116.00	1,500	20,184	0.082	83	1,285
Kaelus DBC0061F1V51-	106.00	76	860	0.003	4	66
Kaelus DBC0062F3V52-	106.00	79	890	0.004	4	68
Powerwave Allgon LGP	106.00	85	951	0.004	4	72
Raycap DC6-48-60-18-	106.00	64	715	0.003	3	54
Ericsson Radio 8843	106.00	216	2,424	0.010	10	185
Ericsson RRUS 32 B30	106.00	159	1,787	0.007	7	136
Ericsson RRUS-11 (19	106.00	153	1,719	0.007	7	131
Powerwave Allgon 775	106.00	81	910	0.004	4	69
CCI OPA-65R-LCUU-H4	106.00	342	3,843	0.016	16	293
Round Platform w/ Ha	106.00	2,000	22,472	0.091	92	1,713
Round Platform w/ Ha	106.00	2,000	22,472	0.091	92	1,713
RCU (Remote Control	103.00	3	32	0.000	0	3
Kathrein Scala 800 1	103.00	53	560	0.002	2	45
		33,774	246,924	1.000	1,013	28,927

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-40.53	-1.02	0.00	-113.87	0.00	113.87	3,765.29	1,882.65	6,978.46	3,494.42	0.00	0.00	0.043
5.00	-39.09	-1.02	0.00	-108.79	0.00	108.79	3,697.80	1,848.90	6,673.37	3,341.64	0.01	-0.01	0.043
10.00	-37.68	-1.03	0.00	-103.67	0.00	103.67	3,628.68	1,814.34	6,371.97	3,190.72	0.02	-0.02	0.043
15.00	-36.30	-1.04	0.00	-98.51	0.00	98.51	3,557.92	1,778.96	6,074.51	3,041.77	0.06	-0.04	0.043
20.00	-34.95	-1.04	0.00	-93.33	0.00	93.33	3,485.52	1,742.76	5,781.22	2,894.91	0.10	-0.05	0.042
25.00	-33.63	-1.04	0.00	-88.12	0.00	88.12	3,411.48	1,705.74	5,492.34	2,750.25	0.16	-0.06	0.042
30.00	-32.34	-1.05	0.00	-82.90	0.00	82.90	3,335.81	1,667.90	5,208.12	2,607.93	0.23	-0.07	0.041
35.00	-31.07	-1.05	0.00	-77.67	0.00	77.67	3,258.50	1,629.25	4,928.79	2,468.06	0.31	-0.09	0.041
40.00	-30.24	-1.05	0.00	-72.43	0.00	72.43	3,158.60	1,579.30	4,623.93	2,315.40	0.41	-0.10	0.041
43.36	-29.60	-1.04	0.00	-68.92	0.00	68.92	3,088.76	1,544.38	4,420.66	2,213.61	0.49	-0.11	0.041
45.00	-28.30	-1.04	0.00	-67.21	0.00	67.21	3,054.65	1,527.33	4,323.05	2,164.74	0.53	-0.12	0.040
48.35	-27.95	-1.04	0.00	-63.73	0.00	63.73	2,459.53	1,229.76	3,476.81	1,740.99	0.61	-0.13	0.048
50.00	-26.90	-1.03	0.00	-62.02	0.00	62.02	2,439.67	1,219.84	3,409.59	1,707.33	0.66	-0.13	0.047
55.00	-25.87	-1.02	0.00	-56.87	0.00	56.87	2,378.35	1,189.18	3,208.11	1,606.44	0.81	-0.15	0.046
60.00	-24.87	-1.02	0.00	-51.75	0.00	51.75	2,315.40	1,157.70	3,010.48	1,507.48	0.97	-0.17	0.045
65.00	-23.89	-1.01	0.00	-46.67	0.00	46.67	2,249.69	1,124.84	2,815.52	1,409.85	1.16	-0.18	0.044
70.00	-22.94	-0.99	0.00	-41.64	0.00	41.64	2,163.06	1,081.53	2,601.81	1,302.84	1.36	-0.20	0.043
75.00	-22.02	-0.98	0.00	-36.68	0.00	36.68	2,076.43	1,038.21	2,396.52	1,200.04	1.58	-0.22	0.041
80.00	-21.11	-0.96	0.00	-31.79	0.00	31.79	1,989.80	994.90	2,199.68	1,101.47	1.82	-0.24	0.039
85.00	-20.59	-0.95	0.00	-26.98	0.00	26.98	1,903.17	951.59	2,011.27	1,007.13	2.08	-0.25	0.038
87.98	-20.07	-0.94	0.00	-24.15	0.00	24.15	1,851.51	925.75	1,902.92	952.88	2.24	-0.26	0.036
90.00	-19.62	-0.93	0.00	-22.26	0.00	22.26	1,816.54	908.27	1,831.29	917.01	2.35	-0.27	0.035
91.73	-19.13	-0.91	0.00	-20.66	0.00	20.66	1,457.51	728.76	1,482.45	742.33	2.45	-0.28	0.041
95.00	-18.39	-0.89	0.00	-17.68	0.00	17.68	1,417.09	708.55	1,396.21	699.14	2.64	-0.29	0.038
100.00	-17.96	-0.88	0.00	-13.24	0.00	13.24	1,347.79	673.89	1,262.31	632.09	2.95	-0.30	0.034
103.00	-17.62	-0.86	0.00	-10.61	0.00	10.61	1,306.21	653.10	1,185.22	593.49	3.15	-0.31	0.031
105.00	-17.48	-0.86	0.00	-8.88	0.00	8.88	1,278.48	639.24	1,135.17	568.43	3.28	-0.32	0.029
106.00	-10.42	-0.56	0.00	-8.02	0.00	8.02	1,264.62	632.31	1,110.55	556.10	3.34	-0.32	0.023
110.00	-9.84	-0.53	0.00	-5.79	0.00	5.79	1,209.18	604.59	1,014.77	508.14	3.61	-0.33	0.020
115.00	-9.73	-0.53	0.00	-3.13	0.00	3.13	1,139.88	569.94	901.12	451.23	3.96	-0.33	0.015
116.00	-5.49	-0.31	0.00	-2.60	0.00	2.60	1,126.02	563.01	879.21	440.26	4.03	-0.33	0.011
120.00	-5.15	-0.30	0.00	-1.34	0.00	1.34	1,070.57	535.29	794.23	397.70	4.31	-0.34	0.008
124.00	-2.78	-0.16	0.00	-0.16	0.00	0.16	1,015.13	507.57	713.56	357.31	4.59	-0.34	0.003
125.00	0.00	0.00	0.00	0.00	0.00	0.00	1,001.27	500.64	694.07	347.55	4.66	-0.34	0.000
125.70	0.00	0.00	0.00	0.00	0.00	0.00	991.57	495.78	680.59	340.80	4.71	-0.34	0.000
125.73	0.00	0.00	0.00	0.00	0.00	0.00	991.15	495.58	680.02	340.51	4.72	-0.34	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-27.91	-1.01	0.00	-111.37	0.00	111.37	3,765.29	1,882.65	6,978.46	3,494.42	0.00	0.00	0.039
5.00	-26.92	-1.02	0.00	-106.29	0.00	106.29	3,697.80	1,848.90	6,673.37	3,341.64	0.01	-0.01	0.039
10.00	-25.95	-1.02	0.00	-101.19	0.00	101.19	3,628.68	1,814.34	6,371.97	3,190.72	0.02	-0.02	0.039
15.00	-25.00	-1.03	0.00	-96.07	0.00	96.07	3,557.92	1,778.96	6,074.51	3,041.77	0.05	-0.03	0.039
20.00	-24.07	-1.03	0.00	-90.94	0.00	90.94	3,485.52	1,742.76	5,781.22	2,894.91	0.10	-0.05	0.038
25.00	-23.16	-1.03	0.00	-85.79	0.00	85.79	3,411.48	1,705.74	5,492.34	2,750.25	0.15	-0.06	0.038
30.00	-22.27	-1.03	0.00	-80.63	0.00	80.63	3,335.81	1,667.90	5,208.12	2,607.93	0.22	-0.07	0.038
35.00	-21.40	-1.03	0.00	-75.48	0.00	75.48	3,258.50	1,629.25	4,928.79	2,468.06	0.31	-0.09	0.037
40.00	-20.83	-1.03	0.00	-70.34	0.00	70.34	3,158.60	1,579.30	4,623.93	2,315.40	0.40	-0.10	0.037
43.36	-20.39	-1.02	0.00	-66.89	0.00	66.89	3,088.76	1,544.38	4,420.66	2,213.61	0.48	-0.11	0.037
45.00	-19.49	-1.02	0.00	-65.20	0.00	65.20	3,054.65	1,527.33	4,323.05	2,164.74	0.52	-0.11	0.037
48.35	-19.25	-1.02	0.00	-61.80	0.00	61.80	2,459.53	1,229.76	3,476.81	1,740.99	0.60	-0.12	0.043
50.00	-18.52	-1.01	0.00	-60.13	0.00	60.13	2,439.67	1,219.84	3,409.59	1,707.33	0.64	-0.13	0.043
55.00	-17.82	-1.00	0.00	-55.09	0.00	55.09	2,378.35	1,189.18	3,208.11	1,606.44	0.79	-0.15	0.042
60.00	-17.13	-0.99	0.00	-50.09	0.00	50.09	2,315.40	1,157.70	3,010.48	1,507.48	0.95	-0.16	0.041
65.00	-16.46	-0.98	0.00	-45.14	0.00	45.14	2,249.69	1,124.84	2,815.52	1,409.85	1.13	-0.18	0.039
70.00	-15.80	-0.96	0.00	-40.24	0.00	40.24	2,163.06	1,081.53	2,601.81	1,302.84	1.32	-0.20	0.038
75.00	-15.16	-0.95	0.00	-35.42	0.00	35.42	2,076.43	1,038.21	2,396.52	1,200.04	1.54	-0.21	0.037
80.00	-14.54	-0.93	0.00	-30.68	0.00	30.68	1,989.80	994.90	2,199.68	1,101.47	1.77	-0.23	0.035
85.00	-14.18	-0.92	0.00	-26.03	0.00	26.03	1,903.17	951.59	2,011.27	1,007.13	2.02	-0.25	0.033
87.98	-13.82	-0.91	0.00	-23.29	0.00	23.29	1,851.51	925.75	1,902.92	952.88	2.18	-0.26	0.032
90.00	-13.51	-0.89	0.00	-21.46	0.00	21.46	1,816.54	908.27	1,831.29	917.01	2.29	-0.26	0.031
91.73	-13.17	-0.88	0.00	-19.92	0.00	19.92	1,457.51	728.76	1,482.45	742.33	2.38	-0.27	0.036
95.00	-12.66	-0.86	0.00	-17.04	0.00	17.04	1,417.09	708.55	1,396.21	699.14	2.57	-0.28	0.033
100.00	-12.37	-0.84	0.00	-12.76	0.00	12.76	1,347.79	673.89	1,262.31	632.09	2.87	-0.29	0.029
103.00	-12.13	-0.83	0.00	-10.23	0.00	10.23	1,306.21	653.10	1,185.22	593.49	3.06	-0.30	0.027
105.00	-12.04	-0.83	0.00	-8.56	0.00	8.56	1,278.48	639.24	1,135.17	568.43	3.18	-0.31	0.024
106.00	-7.17	-0.54	0.00	-7.74	0.00	7.74	1,264.62	632.31	1,110.55	556.10	3.25	-0.31	0.020
110.00	-6.78	-0.51	0.00	-5.58	0.00	5.58	1,209.18	604.59	1,014.77	508.14	3.51	-0.32	0.017
115.00	-6.70	-0.51	0.00	-3.02	0.00	3.02	1,139.88	569.94	901.12	451.23	3.84	-0.32	0.013
116.00	-3.78	-0.30	0.00	-2.51	0.00	2.51	1,126.02	563.01	879.21	440.26	3.91	-0.32	0.009
120.00	-3.55	-0.29	0.00	-1.30	0.00	1.30	1,070.57	535.29	794.23	397.70	4.18	-0.33	0.007
124.00	-1.92	-0.16	0.00	-0.16	0.00	0.16	1,015.13	507.57	713.56	357.31	4.46	-0.33	0.002
125.00	0.00	0.00	0.00	0.00	0.00	0.00	1,001.27	500.64	694.07	347.55	4.53	-0.33	0.000
125.70	0.00	0.00	0.00	0.00	0.00	0.00	991.57	495.78	680.59	340.80	4.58	-0.33	0.000
125.73	0.00	0.00	0.00	0.00	0.00	0.00	991.15	495.58	680.02	340.51	4.58	-0.33	0.000

Equivalent Modal Forces Analysis

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.22
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	2.62
Redundancy Factor (p):	1.00

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
35	125.71	1	1.890	1.978	1.139	0.410	0	2
34	125.35	37	1.879	1.920	1.118	0.402	10	46
33	124.50	54	1.853	1.792	1.072	0.383	14	67
32	122.00	271	1.780	1.447	0.942	0.332	60	338
31	118.00	282	1.665	0.993	0.762	0.256	48	350
30	115.50	90	1.595	0.763	0.663	0.212	13	112
29	112.50	462	1.513	0.534	0.559	0.165	51	574
28	108.00	430	1.395	0.274	0.426	0.102	29	535
27	105.50	109	1.331	0.165	0.364	0.072	5	136
26	104.00	220	1.293	0.111	0.330	0.055	8	274
25	101.50	340	1.232	0.037	0.279	0.030	7	423
24	97.50	596	1.137	-0.047	0.210	-0.005	-2	741
23	93.36	398	1.042	-0.097	0.153	-0.032	-9	495
22	90.86	356	0.987	-0.113	0.125	-0.045	-11	443
21	88.99	421	0.947	-0.119	0.107	-0.052	-15	524
20	86.49	423	0.894	-0.122	0.085	-0.059	-17	526
19	82.50	725	0.814	-0.114	0.058	-0.064	-31	902
18	77.50	745	0.718	-0.092	0.034	-0.059	-29	926
17	72.50	765	0.628	-0.063	0.018	-0.042	-21	951
16	67.50	785	0.545	-0.033	0.009	-0.016	-8	976
15	62.50	805	0.467	-0.004	0.006	0.012	6	1,000
14	57.50	824	0.395	0.020	0.007	0.036	20	1,025
13	52.50	844	0.330	0.038	0.010	0.052	29	1,050
12	49.18	283	0.289	0.048	0.013	0.058	11	351
11	46.68	1,045	0.260	0.053	0.016	0.061	43	1,299
10	44.18	519	0.233	0.058	0.019	0.063	22	645
9	41.68	668	0.208	0.062	0.022	0.064	28	831
8	37.50	1,015	0.168	0.066	0.028	0.064	43	1,262
7	32.50	1,038	0.126	0.070	0.034	0.063	43	1,291
6	27.50	1,062	0.090	0.071	0.038	0.061	43	1,321
5	22.50	1,086	0.061	0.072	0.041	0.059	43	1,351
4	17.50	1,110	0.037	0.070	0.041	0.057	42	1,380
3	12.50	1,134	0.019	0.063	0.037	0.053	40	1,410
2	7.50	1,157	0.007	0.049	0.028	0.044	34	1,439

1	2.50	1,181	0.001	0.021	0.011	0.022	17	1,469
Decibel DB844H90E-XY	125.70	56	1.889	1.975	1.138	0.410	15	70
EMS RR90-11-00DBL	125.70	144	1.889	1.975	1.138	0.410	39	179
Flat Platform w/ Han	125.70	2,000	1.889	1.975	1.138	0.410	546	2,487
DragonWave Horizon C	124.00	21	1.838	1.719	1.045	0.373	5	26
Dragonwave A-ANT-23G	124.00	15	1.838	1.719	1.045	0.373	4	19
Alcatel-Lucent RRH2x	124.00	317	1.838	1.719	1.045	0.373	79	395
Alcatel-Lucent 1900	124.00	180	1.838	1.719	1.045	0.373	45	224
Nokia 2.5G MAA - AAH	124.00	311	1.838	1.719	1.045	0.373	77	386
Dragonwave A-ANT-18G	124.00	27	1.838	1.719	1.045	0.373	7	34
Commscope NNVV-	124.00	232	1.838	1.719	1.045	0.373	58	289
Flat T-Arm	124.00	750	1.838	1.719	1.045	0.373	186	933
Kathrein Scala Smart	116.00	10	1.609	0.806	0.682	0.221	1	12
Ericsson KRY 112 144	116.00	29	1.609	0.806	0.682	0.221	4	36
Ericsson KRY 112 489	116.00	46	1.609	0.806	0.682	0.221	7	57
Ericsson Radio 4449	116.00	222	1.609	0.806	0.682	0.221	33	276
Ericsson AIR-32 B2A/	116.00	397	1.609	0.806	0.682	0.221	58	493
Ericsson Air 3246 B6	116.00	540	1.609	0.806	0.682	0.221	80	672
RFS APXVAARR24_43-U-	116.00	384	1.609	0.806	0.682	0.221	56	477
Round Low Profile Pl	116.00	1,500	1.609	0.806	0.682	0.221	221	1,865
Kaelus DBC0061F1V51-	106.00	76	1.343	0.185	0.376	0.078	4	95
Kaelus DBC0062F3V52-	106.00	79	1.343	0.185	0.376	0.078	4	98
Powerwave Allgon LGP	106.00	85	1.343	0.185	0.376	0.078	4	105
Raycap DC6-48-60-18-	106.00	64	1.343	0.185	0.376	0.078	3	79
Ericsson Radio 8843	106.00	216	1.343	0.185	0.376	0.078	11	268
Ericsson RRUS 32 B30	106.00	159	1.343	0.185	0.376	0.078	8	198
Ericsson RRUS-11 (19	106.00	153	1.343	0.185	0.376	0.078	8	190
Powerwave Allgon 775	106.00	81	1.343	0.185	0.376	0.078	4	101
CCI OPA-65R-LCUU-H4	106.00	342	1.343	0.185	0.376	0.078	18	425
Round Platform w/ Ha	106.00	2,000	1.343	0.185	0.376	0.078	104	2,487
Round Platform w/ Ha	106.00	2,000	1.343	0.185	0.376	0.078	104	2,487
RCU (Remote Control	103.00	3	1.268	0.079	0.309	0.045	0	4
Kathrein Scala 800 1	103.00	53	1.268	0.079	0.309	0.045	2	66
		33,774	78.385	38.286	30.785	9.736	2,363	41,999

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
35	125.71	1	1.890	1.978	1.139	0.410	0	1
34	125.35	37	1.879	1.920	1.118	0.402	10	32
33	124.50	54	1.853	1.792	1.072	0.383	14	46
32	122.00	271	1.780	1.447	0.942	0.332	60	232
31	118.00	282	1.665	0.993	0.762	0.256	48	241
30	115.50	90	1.595	0.763	0.663	0.212	13	77
29	112.50	462	1.513	0.534	0.559	0.165	51	395
28	108.00	430	1.395	0.274	0.426	0.102	29	368
27	105.50	109	1.331	0.165	0.364	0.072	5	93
26	104.00	220	1.293	0.111	0.330	0.055	8	189
25	101.50	340	1.232	0.037	0.279	0.030	7	291
24	97.50	596	1.137	-0.047	0.210	-0.005	-2	510
23	93.36	398	1.042	-0.097	0.153	-0.032	-9	341
22	90.86	356	0.987	-0.113	0.125	-0.045	-11	305
21	88.99	421	0.947	-0.119	0.107	-0.052	-15	361
20	86.49	423	0.894	-0.122	0.085	-0.059	-17	362
19	82.50	725	0.814	-0.114	0.058	-0.064	-31	621
18	77.50	745	0.718	-0.092	0.034	-0.059	-29	638
17	72.50	765	0.628	-0.063	0.018	-0.042	-21	655
16	67.50	785	0.545	-0.033	0.009	-0.016	-8	672

15	62.50	805	0.467	-0.004	0.006	0.012	6	689
14	57.50	824	0.395	0.020	0.007	0.036	20	706
13	52.50	844	0.330	0.038	0.010	0.052	29	723
12	49.18	283	0.289	0.048	0.013	0.058	11	242
11	46.68	1,045	0.260	0.053	0.016	0.061	43	895
10	44.18	519	0.233	0.058	0.019	0.063	22	444
9	41.68	668	0.208	0.062	0.022	0.064	28	572
8	37.50	1,015	0.168	0.066	0.028	0.064	43	869
7	32.50	1,038	0.126	0.070	0.034	0.063	43	889
6	27.50	1,062	0.090	0.071	0.038	0.061	43	910
5	22.50	1,086	0.061	0.072	0.041	0.059	43	930
4	17.50	1,110	0.037	0.070	0.041	0.057	42	951
3	12.50	1,134	0.019	0.063	0.037	0.053	40	971
2	7.50	1,157	0.007	0.049	0.028	0.044	34	991
1	2.50	1,181	0.001	0.021	0.011	0.022	17	1,012
Decibel DB844H90E-XY	125.70	56	1.889	1.975	1.138	0.410	15	48
EMS RR90-11-00DBL	125.70	144	1.889	1.975	1.138	0.410	39	123
Flat Platform w/ Han	125.70	2,000	1.889	1.975	1.138	0.410	546	1,713
DragonWave Horizon C	124.00	21	1.838	1.719	1.045	0.373	5	18
Dragonwave A-ANT-23G	124.00	15	1.838	1.719	1.045	0.373	4	13
Alcatel-Lucent RRH2x	124.00	317	1.838	1.719	1.045	0.373	79	272
Alcatel-Lucent 1900	124.00	180	1.838	1.719	1.045	0.373	45	154
Nokia 2.5G MAA - AAH	124.00	311	1.838	1.719	1.045	0.373	77	266
Dragonwave A-ANT-18G	124.00	27	1.838	1.719	1.045	0.373	7	23
Commscope NNVV-	124.00	232	1.838	1.719	1.045	0.373	58	199
Flat T-Arm	124.00	750	1.838	1.719	1.045	0.373	186	642
Kathrein Scala Smart	116.00	10	1.609	0.806	0.682	0.221	1	9
Ericsson KRY 112 144	116.00	29	1.609	0.806	0.682	0.221	4	25
Ericsson KRY 112 489	116.00	46	1.609	0.806	0.682	0.221	7	40
Ericsson Radio 4449	116.00	222	1.609	0.806	0.682	0.221	33	190
Ericsson AIR-32 B2A/	116.00	397	1.609	0.806	0.682	0.221	58	340
Ericsson Air 3246 B6	116.00	540	1.609	0.806	0.682	0.221	80	462
RFS APXVAARR24_43-U-	116.00	384	1.609	0.806	0.682	0.221	56	329
Round Low Profile Pl	116.00	1,500	1.609	0.806	0.682	0.221	221	1,285
Kaelus DBC0061F1V51-	106.00	76	1.343	0.185	0.376	0.078	4	66
Kaelus DBC0062F3V52-	106.00	79	1.343	0.185	0.376	0.078	4	68
Powerwave Allgon LGP	106.00	85	1.343	0.185	0.376	0.078	4	72
Raycap DC6-48-60-18-	106.00	64	1.343	0.185	0.376	0.078	3	54
Ericsson Radio 8843	106.00	216	1.343	0.185	0.376	0.078	11	185
Ericsson RRUS 32 B30	106.00	159	1.343	0.185	0.376	0.078	8	136
Ericsson RRUS-11 (19	106.00	153	1.343	0.185	0.376	0.078	8	131
Powerwave Allgon 775	106.00	81	1.343	0.185	0.376	0.078	4	69
CCI OPA-65R-LCUU-H4	106.00	342	1.343	0.185	0.376	0.078	18	293
Round Platform w/ Ha	106.00	2,000	1.343	0.185	0.376	0.078	104	1,713
Round Platform w/ Ha	106.00	2,000	1.343	0.185	0.376	0.078	104	1,713
RCU (Remote Control	103.00	3	1.268	0.079	0.309	0.045	0	3
Kathrein Scala 800 1	103.00	53	1.268	0.079	0.309	0.045	2	45
		33,774	78.385	38.286	30.785	9.736	2,363	28,927

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-40.53	-2.35	0.00	-262.62	0.00	262.62	3,765.29	1,882.65	6,978.46	3,494.42	0.00	0.00	0.086
5.00	-39.09	-2.34	0.00	-250.85	0.00	250.85	3,697.80	1,848.90	6,673.37	3,341.64	0.01	-0.03	0.086
10.00	-37.68	-2.32	0.00	-239.15	0.00	239.15	3,628.68	1,814.34	6,371.97	3,190.72	0.06	-0.05	0.085
15.00	-36.30	-2.29	0.00	-227.57	0.00	227.57	3,557.92	1,778.96	6,074.51	3,041.77	0.13	-0.08	0.085
20.00	-34.94	-2.26	0.00	-216.12	0.00	216.12	3,485.52	1,742.76	5,781.22	2,894.91	0.23	-0.11	0.085
25.00	-33.62	-2.24	0.00	-204.80	0.00	204.80	3,411.48	1,705.74	5,492.34	2,750.25	0.36	-0.14	0.084
30.00	-32.33	-2.21	0.00	-193.62	0.00	193.62	3,335.81	1,667.90	5,208.12	2,607.93	0.53	-0.17	0.084
35.00	-31.07	-2.18	0.00	-182.59	0.00	182.59	3,258.50	1,629.25	4,928.79	2,468.06	0.72	-0.20	0.084
40.00	-30.24	-2.16	0.00	-171.70	0.00	171.70	3,158.60	1,579.30	4,623.93	2,315.40	0.96	-0.24	0.084
43.36	-29.59	-2.15	0.00	-164.44	0.00	164.44	3,088.76	1,544.38	4,420.66	2,213.61	1.13	-0.26	0.084
45.00	-28.29	-2.11	0.00	-160.92	0.00	160.92	3,054.65	1,527.33	4,323.05	2,164.74	1.22	-0.27	0.084
48.35	-27.94	-2.10	0.00	-153.87	0.00	153.87	2,459.53	1,229.76	3,476.81	1,740.99	1.42	-0.30	0.100
50.00	-26.89	-2.08	0.00	-150.40	0.00	150.40	2,439.67	1,219.84	3,409.59	1,707.33	1.53	-0.31	0.099
55.00	-25.86	-2.07	0.00	-140.01	0.00	140.01	2,378.35	1,189.18	3,208.11	1,606.44	1.88	-0.35	0.098
60.00	-24.86	-2.08	0.00	-129.64	0.00	129.64	2,315.40	1,157.70	3,010.48	1,507.48	2.27	-0.39	0.097
65.00	-23.88	-2.10	0.00	-119.24	0.00	119.24	2,249.69	1,124.84	2,815.52	1,409.85	2.70	-0.44	0.095
70.00	-22.93	-2.13	0.00	-108.75	0.00	108.75	2,163.06	1,081.53	2,601.81	1,302.84	3.19	-0.48	0.094
75.00	-22.00	-2.17	0.00	-98.09	0.00	98.09	2,076.43	1,038.21	2,396.52	1,200.04	3.72	-0.53	0.092
80.00	-21.10	-2.21	0.00	-87.24	0.00	87.24	1,989.80	994.90	2,199.68	1,101.47	4.30	-0.58	0.090
85.00	-20.57	-2.23	0.00	-76.19	0.00	76.19	1,903.17	951.59	2,011.27	1,007.13	4.93	-0.62	0.086
87.98	-20.04	-2.25	0.00	-69.53	0.00	69.53	1,851.51	925.75	1,902.92	952.88	5.33	-0.65	0.084
90.00	-19.60	-2.26	0.00	-64.98	0.00	64.98	1,816.54	908.27	1,831.29	917.01	5.61	-0.67	0.082
91.73	-19.10	-2.27	0.00	-61.07	0.00	61.07	1,457.51	728.76	1,482.45	742.33	5.86	-0.69	0.095
95.00	-18.36	-2.28	0.00	-53.63	0.00	53.63	1,417.09	708.55	1,396.21	699.14	6.34	-0.72	0.090
100.00	-17.94	-2.28	0.00	-42.24	0.00	42.24	1,347.79	673.89	1,262.31	632.09	7.12	-0.77	0.080
103.00	-17.59	-2.27	0.00	-35.40	0.00	35.40	1,306.21	653.10	1,185.22	593.49	7.62	-0.80	0.073
105.00	-17.46	-2.27	0.00	-30.86	0.00	30.86	1,278.48	639.24	1,135.17	568.43	7.95	-0.81	0.068
106.00	-10.39	-1.87	0.00	-28.59	0.00	28.59	1,264.62	632.31	1,110.55	556.10	8.12	-0.82	0.060
110.00	-9.82	-1.81	0.00	-21.11	0.00	21.11	1,209.18	604.59	1,014.77	508.14	8.83	-0.85	0.050
115.00	-9.71	-1.80	0.00	-12.04	0.00	12.04	1,139.88	569.94	901.12	451.23	9.73	-0.88	0.035
116.00	-5.47	-1.23	0.00	-10.24	0.00	10.24	1,126.02	563.01	879.21	440.26	9.92	-0.88	0.028
120.00	-5.14	-1.17	0.00	-5.32	0.00	5.32	1,070.57	535.29	794.23	397.70	10.66	-0.89	0.018
124.00	-2.77	-0.65	0.00	-0.65	0.00	0.65	1,015.13	507.57	713.56	357.31	11.41	-0.90	0.005
125.00	0.00	0.00	0.00	0.00	0.00	0.00	1,001.27	500.64	694.07	347.55	11.60	-0.90	0.000
125.70	0.00	0.00	0.00	0.00	0.00	0.00	991.57	495.78	680.59	340.80	11.73	-0.90	0.000
125.73	0.00	0.00	0.00	0.00	0.00	0.00	991.15	495.58	680.02	340.51	11.74	-0.90	0.000

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-27.91	-2.35	0.00	-256.69	0.00	256.69	3,765.29	1,882.65	6,978.46	3,494.42	0.00	0.00	0.081
5.00	-26.92	-2.33	0.00	-244.93	0.00	244.93	3,697.80	1,848.90	6,673.37	3,341.64	0.01	-0.03	0.081
10.00	-25.95	-2.30	0.00	-233.28	0.00	233.28	3,628.68	1,814.34	6,371.97	3,190.72	0.06	-0.05	0.080
15.00	-25.00	-2.27	0.00	-221.77	0.00	221.77	3,557.92	1,778.96	6,074.51	3,041.77	0.12	-0.08	0.080
20.00	-24.07	-2.24	0.00	-210.42	0.00	210.42	3,485.52	1,742.76	5,781.22	2,894.91	0.22	-0.11	0.080
25.00	-23.16	-2.21	0.00	-199.23	0.00	199.23	3,411.48	1,705.74	5,492.34	2,750.25	0.35	-0.14	0.079
30.00	-22.27	-2.17	0.00	-188.20	0.00	188.20	3,335.81	1,667.90	5,208.12	2,607.93	0.51	-0.17	0.079
35.00	-21.40	-2.14	0.00	-177.34	0.00	177.34	3,258.50	1,629.25	4,928.79	2,468.06	0.71	-0.20	0.078
40.00	-20.82	-2.12	0.00	-166.65	0.00	166.65	3,158.60	1,579.30	4,623.93	2,315.40	0.93	-0.23	0.079
43.36	-20.38	-2.10	0.00	-159.54	0.00	159.54	3,088.76	1,544.38	4,420.66	2,213.61	1.10	-0.25	0.079
45.00	-19.48	-2.06	0.00	-156.09	0.00	156.09	3,054.65	1,527.33	4,323.05	2,164.74	1.19	-0.27	0.078
48.35	-19.24	-2.05	0.00	-149.19	0.00	149.19	2,459.53	1,229.76	3,476.81	1,740.99	1.39	-0.29	0.094
50.00	-18.52	-2.03	0.00	-145.81	0.00	145.81	2,439.67	1,219.84	3,409.59	1,707.33	1.49	-0.30	0.093
55.00	-17.81	-2.02	0.00	-135.67	0.00	135.67	2,378.35	1,189.18	3,208.11	1,606.44	1.83	-0.34	0.092
60.00	-17.12	-2.02	0.00	-125.58	0.00	125.58	2,315.40	1,157.70	3,010.48	1,507.48	2.21	-0.38	0.091
65.00	-16.44	-2.04	0.00	-115.48	0.00	115.48	2,249.69	1,124.84	2,815.52	1,409.85	2.63	-0.43	0.089
70.00	-15.79	-2.06	0.00	-105.30	0.00	105.30	2,163.06	1,081.53	2,601.81	1,302.84	3.10	-0.47	0.088
75.00	-15.15	-2.10	0.00	-94.98	0.00	94.98	2,076.43	1,038.21	2,396.52	1,200.04	3.62	-0.52	0.086
80.00	-14.52	-2.14	0.00	-84.48	0.00	84.48	1,989.80	994.90	2,199.68	1,101.47	4.18	-0.56	0.084
85.00	-14.16	-2.16	0.00	-73.80	0.00	73.80	1,903.17	951.59	2,011.27	1,007.13	4.80	-0.61	0.081
87.98	-13.80	-2.17	0.00	-67.37	0.00	67.37	1,851.51	925.75	1,902.92	952.88	5.18	-0.63	0.078
90.00	-13.49	-2.19	0.00	-62.98	0.00	62.98	1,816.54	908.27	1,831.29	917.01	5.46	-0.65	0.076
91.73	-13.15	-2.20	0.00	-59.20	0.00	59.20	1,457.51	728.76	1,482.45	742.33	5.70	-0.67	0.089
95.00	-12.64	-2.20	0.00	-52.02	0.00	52.02	1,417.09	708.55	1,396.21	699.14	6.16	-0.70	0.083
100.00	-12.35	-2.20	0.00	-41.02	0.00	41.02	1,347.79	673.89	1,262.31	632.09	6.92	-0.75	0.074
103.00	-12.11	-2.19	0.00	-34.42	0.00	34.42	1,306.21	653.10	1,185.22	593.49	7.40	-0.77	0.067
105.00	-12.02	-2.19	0.00	-30.04	0.00	30.04	1,278.48	639.24	1,135.17	568.43	7.73	-0.79	0.062
106.00	-7.15	-1.82	0.00	-27.86	0.00	27.86	1,264.62	632.31	1,110.55	556.10	7.89	-0.80	0.056
110.00	-6.76	-1.77	0.00	-20.58	0.00	20.58	1,209.18	604.59	1,014.77	508.14	8.57	-0.83	0.046
115.00	-6.68	-1.75	0.00	-11.76	0.00	11.76	1,139.88	569.94	901.12	451.23	9.45	-0.85	0.032
116.00	-3.77	-1.20	0.00	-10.00	0.00	10.00	1,126.02	563.01	879.21	440.26	9.63	-0.86	0.026
120.00	-3.53	-1.14	0.00	-5.20	0.00	5.20	1,070.57	535.29	794.23	397.70	10.36	-0.87	0.016
124.00	-1.91	-0.64	0.00	-0.64	0.00	0.64	1,015.13	507.57	713.56	357.31	11.09	-0.87	0.004
125.00	0.00	0.00	0.00	0.00	0.00	0.00	1,001.27	500.64	694.07	347.55	11.27	-0.87	0.000
125.70	0.00	0.00	0.00	0.00	0.00	0.00	991.57	495.78	680.59	340.80	11.40	-0.87	0.000
125.73	0.00	0.00	0.00	0.00	0.00	0.00	991.15	495.58	680.02	340.51	11.40	-0.87	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	25.49	0.00	40.47	0.00	0.00	2590.79	48.35	0.82
0.9D + 1.6W	24.54	0.00	30.34	0.00	0.00	2498.72	48.35	0.79
1.2D + 1.0Di + 1.0Wi	6.16	0.00	76.53	0.00	0.00	672.92	48.35	0.24
(1.2 + 0.2Sds) * DL + E ELFM	1.02	0.00	40.53	0.00	0.00	113.87	48.35	0.05
(1.2 + 0.2Sds) * DL + E EMAM	2.35	0.00	40.53	0.00	0.00	262.62	48.35	0.10
(0.9 - 0.2Sds) * DL + E ELFM	1.01	0.00	27.91	0.00	0.00	111.37	48.35	0.04
(0.9 - 0.2Sds) * DL + E EMAM	2.35	0.00	27.91	0.00	0.00	256.69	48.35	0.09
1.0D + 1.0W	5.52	0.00	33.77	0.00	0.00	566.82	48.35	0.19

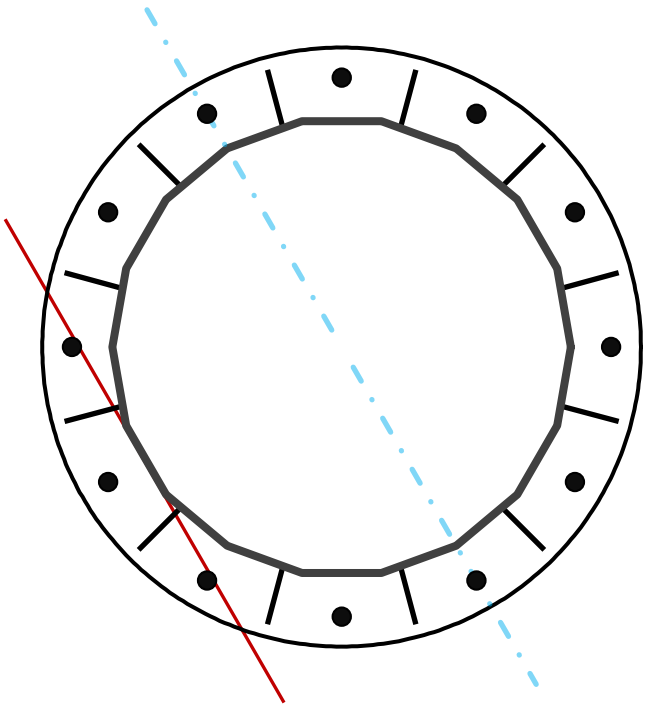
Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	45	in
Thickness	0.375	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	2590.8	k-ft
Axial, Pu	40.5	k
Shear, Vu	25.5	k
Neutral Axis	120	°

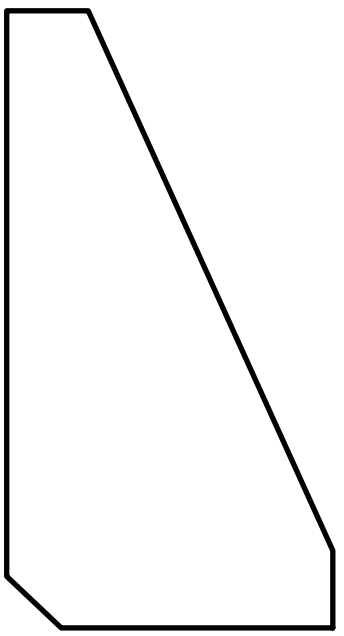
Report Capacities		
Component	Capacity	Result
Base Plate	61%	Pass
Anchor Rods	76%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	60	in
Thickness	1 3/4	in
Grade	Other	-
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	80	ksi
Clip	N/A	in
Orientation Offset	0	°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	1110.6	k
Bending Stress, ϕMn	1811.4	k



Original Anchor Rods		
Arrangement	Radial	-
Quantity	12	-
Diameter, ø	2 1/4	in
Bolt Circle	54	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	14.1	in
Orientation Offset	0	°
Applied Force, Pu	195.1	k
Anchor Rods, ϕPn	259.8	k

Stiffeners		
Arrangement	Radial	-
Quantity	12	-
Height	12	in
Width	6	in
Effective Width	6.000	in
Thickness	1/2	in
Effective Thickness	0.500	in
Notch	1	in
Flat Edge	1.5	in
Grade	A572-50	-
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Horizontal Weld	Fillet	
Horizontal Fillet Size	1/2	in
Bevel Depth		in
Vertical Weld	Fillet	
Vertical Fillet Size	3/8	in
Weld Strength	70	ksi
Electrode Coefficient	1	-
Orientation Offset	0	°
Vertical Weld, ϕRn	198.2	k
Horz. Weld, ϕRn	111.2	k
Ten. Capacity, ϕTn	109.7	k
Comp. Capacity, ϕPn	227.0	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	25.5	2590.8	1.00
Anchor Rod Forces	25.5	2590.8	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	10.3	1047.1	0.40

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	52.3061	2.9059	0.1368		13022.69
Bolt	3.9761	3.2477	0.8393	4.5	14215.47
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	2.5000	2.2500	36.0000		8832.75

Base Plate		
Shape	Round	-
Diameter, D	60	in
Thickness, t	1.75	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	80	ksi
Base Plate Chord	39.686	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

External Base Plate		
Chord Length AA	33.833	in
Additional AA	9.981	in
Section Modulus, Z	33.545	in^3
Applied Moment, Mu	1110.6	k-ft
Bending Capacity, ϕMn	1811.4	k-ft
Capacity, Mu/ϕMn	0.613	OK
Chord Length AB	32.879	in
Additional AB	9.027	in
Section Modulus, Z	32.084	in^3
Applied Moment, Mu	924.2	k-ft
Bending Capacity, ϕMn	1732.6	k-ft
Capacity, Mu/ϕMn	0.533	OK
Bend Line Length	44.971	in
Additional Bend Line	18.392	in
Section Modulus, Z	48.512	in^3
Applied Moment, Mu	1110.6	k-ft
Bending Capacity, ϕMn	2619.6	k-ft
Capacity, Mu/ϕMn	0.424	OK

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in^3
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

Anchor Rods		
Anchor Rod Quantity, N	12	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	54	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	195.1	k
Applied Shear, Vu	1.7	k
Compressive Capacity, ϕPn	259.8	k
Tensile Capacity, ϕRnt	0.751	OK
Interaction Capacity	0.764	OK

Base Plate Stiffeners		
Applied Axial Force, Pu	80.2	k
Applied Horizontal Force, Vu	0.43	k

Vertical Weld		
Vert.-to-Stiffener a=e_x/l	0.167	-
Spacing Ratio, k	0.042	-
Weld Coefficient, C	3.670	-
Compressive Capacity, ϕPn	198.2	k
Vert.-to-Plate a=e_x/l	0.333	-
Spacing Ratio, k	0.042	-
Weld Coefficient, C	2.940	-
Shear Capacity, ϕVn	158.8	k
$P_u/\phi_P P_n + V_u/\phi_V V_n$	0.407	OK

Horizontal Weld		
Horz.-to-Stiffener a=e_x/l	0.167	-
Spacing Ratio, k	0.083	-
Weld Coefficient, C	2.940	-
Effective Fillet	0.500	in
Compressive Capacity, ϕPn	105.8	k
Horz.-to-Pole a=e_x/l	0.333	-
Spacing Ratio, k	0.083	-
Weld Coefficient, C	3.090	-
Shear Capacity, ϕVn	111.2	k
$P_u/\phi_P P_n + V_u/\phi_V V_n$	0.762	OK

Plate Tension		
Gross Cross Section	2.500	in^2
Net Cross Section	2.250	in^2
Tensile Capacity, ϕTn	109.7	k
Capacity, Tu/ϕTn	0.366	OK

Plate Compression		
Radius of Gyration	0.144	in^3
kl/r	49.88	-
4.71 √(E/Fy)	113.43	-
Buckling Stress(Fe)	115.0	-
Crit. Buckling Stress(Fcr)	100.9	ksi
Compressive Capacity, ϕPn	227.0	k
Capacity, Pu/ϕPn	0.177	OK