MJ Umali, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (978) 568-7906
MUmali@centerlinecommunications.com

August 26, 2021

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

RE: Notice of Exempt Modification // Site: FARMINGTON NO II (ATC: 411258)
199 Town Farm Road, Farmington, CT 06032
N 41.7577 // W 72.8299

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains 12 antennas at the 109-ft level on the existing 111-foot monopine tower, located at 199 Town Farm Road, Farmington, CT. The tower is owned by American Tower. The property is also owned by Town of Farmington CT and Rodger Phillips. The Council approved Verizon Wireless use of the existing tower in 2009. Verizon Wireless now intends to install 3 new antennas for the LTE (3700 MHz) replacements for its 5G upgrade. Additionally, Verizon Wireless will remove 9 Remote Radio Heads (RRHs) and install with 6 new RRHs and complete mount modifications per mount analysis; altogether updating leased equipment rights, as reflected by the final configuration outlined in the structural analysis and proposed hereby.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Kathleen A. Blonski, Town Manager, its Town Planner, Kathryn Kramer, the tower owner, American Tower, and the property owners, Town of Farmington and Rodger Phillips.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2). Enclosed to accommodate this filing are construction drawings dated August 9, 2021, by Power of Design, a structural analysis dated May 3, 2021, by A.T. Engineering, PLLC., and a structural mount analysis by Maser Consulting Connecticut date July 22, 2021, and radio frequency (RF) analysis table showing worst-case RF emission calculation by Verizon Wireless RF Design Engineering.

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

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

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

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

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

6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis by A.T. Engineering, PLLC, dated May 3, 2021, and a structural mount analysis by Maser Consulting Connecticut, dated July 22, 2021, pursuant to certain conditions defined therein. Design and engineering is fully illustrated within final construction drawings, signed and stamped dated August 9, 2021.

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

Sincerely,

MJ Umali

_____

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West Bridgewater, MA 02379
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MUmali@centerlinecommunications.com

Attachments

cc: Kathleen A Blonski, Town Manager – Chief Elected Official
Kathryn Kramer, AICP, Town Planner - as P&Z official
American Tower Corporation - as tower owner
Town of Farmington CT and Rodger Phillips - as ground owner

UPS CampusShip: View/Print Label

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   Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.
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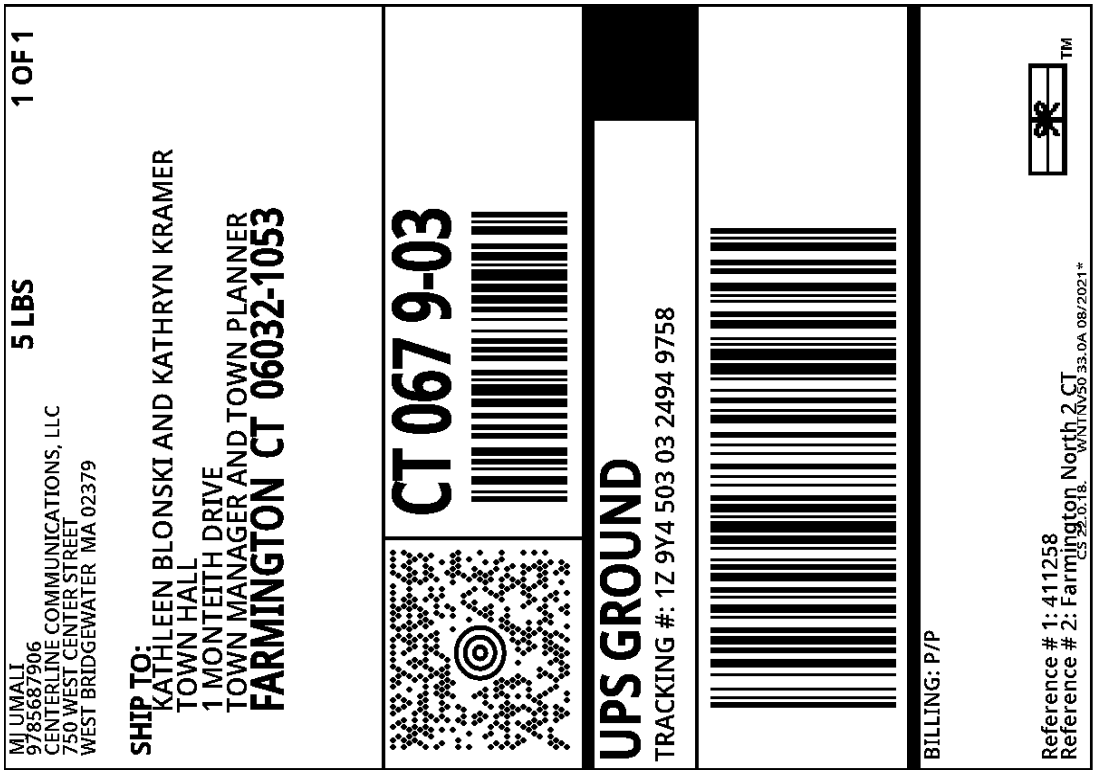

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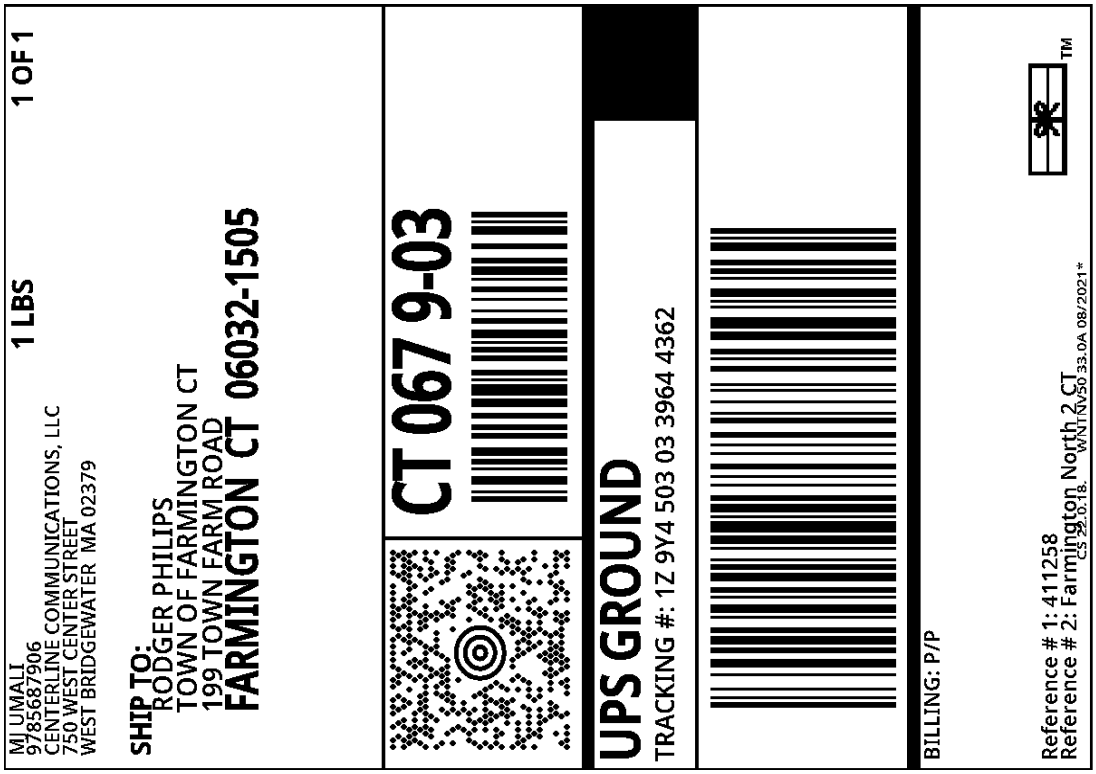

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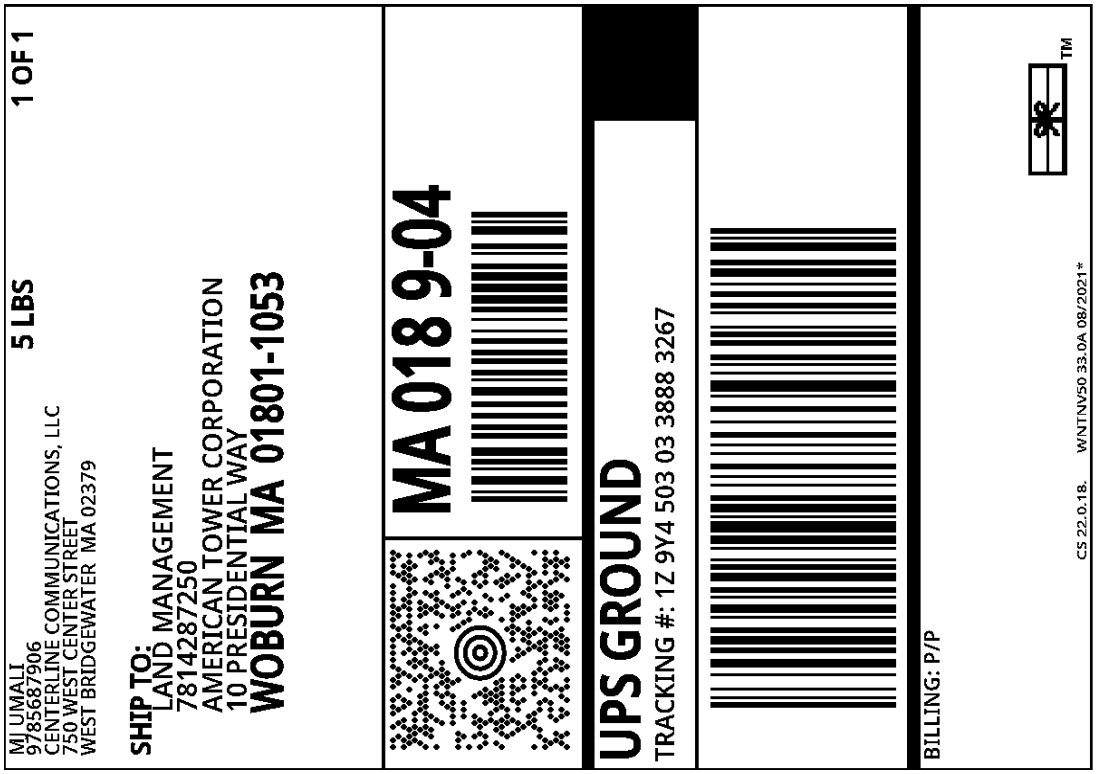

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Structural Analysis Report

Structure	:	**111 ft Monopine**
ATC Site Name	:	**Farmington North 2 CT, CT**
ATC Asset Number	:	**411258**
Engineering Number	:	**13668715_C3_01**
Proposed Carrier	:	**VERIZON WIRELESS**
Carrier Site Name	:	**FARMINGTON NO II**
Carrier Site Number	:	**467261**
Site Location	:	**199 Town Farm Road** **Farmington, CT 06032-1554** **41.757800, -72.829900**
County	:	**Hartford**
Date	:	**May 3, 2021**
Max Usage	:	**66%**
Result	:	**Pass**

Prepared By:
Nicholas Beam
Structural Engineer

Nicholas Beam

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 111 ft monopine to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	EEI Project #16046 Rev. 3, dated February 8, 2011
Foundation Drawing	EEI Project #16046 Rev. 2, dated December 14, 2010
Geotechnical Report	Clarence Welti Associates, Inc. Project Name Verizon Wireless Cell Tower, dated September 11, 2009

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:	117 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1 ½" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	Ss = 0.19, S_1 = 0.05
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

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
109.0	1	VZW Unused Reserve (16533.55 sqin)	T-Arm	(2) 1 1/4" Hybriflex Cable (12) 1 5/8" Coax	VERIZON WIRELESS
	6	Commscope SBNHH-1D65B			
	6	Antel LPA-80063/4CF			
	2	Raycap RC2DC-3315-PF-48			
100.0	3	Ericsson RRUS 32 (50.8 lbs)	T-Arm	(2) 3" conduit (2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (18) 1 5/8" Coax (1) 2" conduit (1) 3/8" (0.38"-9.5mm) RET Control Cable	AT&T MOBILITY
	3	Ericsson RRUS 32 B2			
	1	Quintel QS66512-2			
	6	Andrew SBNH-1D6565C (60.8 lbs)			
	3	Ericsson RRUS-11 (50 lbs.)			
	1	Raycap DC6-48-60-18-8F(32.8 lbs)			
	2	CCI TPA-65R-LCUUUU-H8			
	9	CCI DTMABP7819VG12A (w/ Bracket)			
	18	Generic RCU (Remote Control Unit)			
	1	Raycap DC6-48-60-18-8F ("Squid")			

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
109.0	3	Samsung PCS/AWS Dual Band RRH	-	-	VERIZON WIRELESS
	3	Samsung 700/850MHz Dual Band RRH			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
109.0	3	Samsung B5/B13 RRH-BR04C	T-Arm	-	VERIZON WIRELESS
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung MT6407-77A			

[1] Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	60%	Pass
Shaft	49%	Pass
Base Plate	20%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	6,395.5	3,825.8	60%
Shear (Kips)	68.9	45.4	66%

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) (°)
109.0	Samsung B5/B13 RRH-BR04C	VERIZON WIRELESS	0.639	0.587
	Samsung B2/B66A RRH-BR049			
	Samsung MT6407-77A			

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

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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:

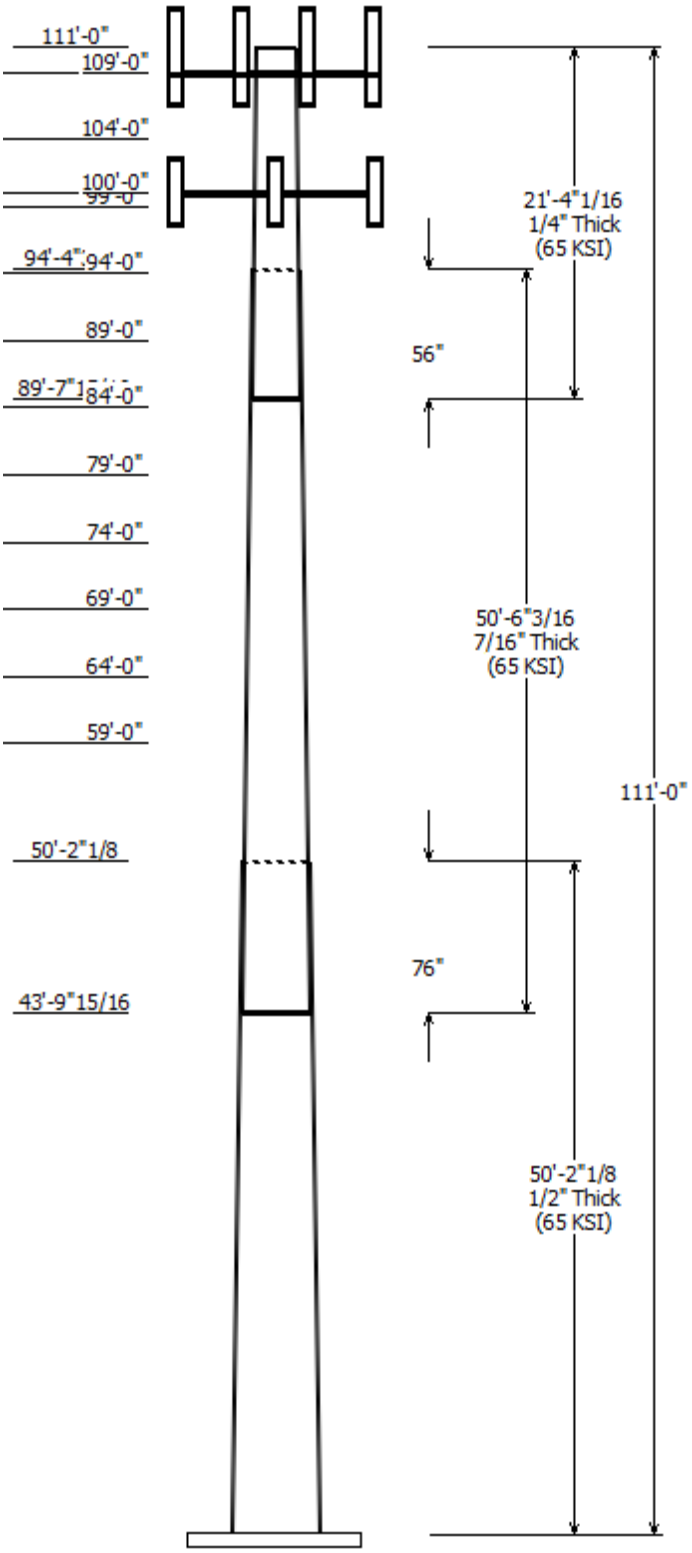
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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

Client :	VERIZON WIRELESS		
Pole :	411258	Code:	ANSI/TIA-222-H
Location :	Farmington North 2 CT, CT		
Description :		Risk Category :	II
Shape :	18 Sides	Exposure :	C
Height :	111.00 (ft)	Topo Method :	Method 1
Base Elev (ft):	0.00	Topographic Category :	1
Taper:	0.300226 (in/ft)		

Sections Properties

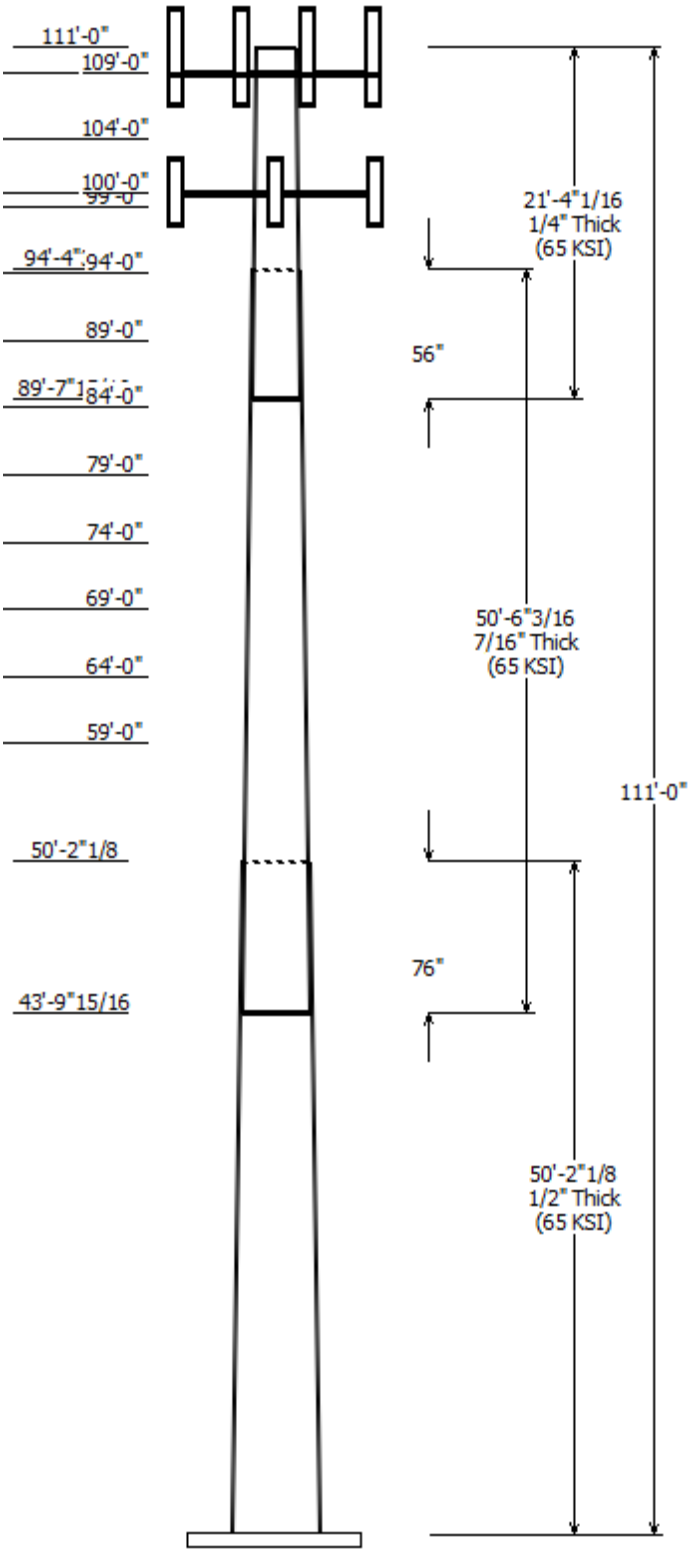
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	50.175	43.93	59.00	0.500		0.000	18 Sides	65
2	50.518	31.55	46.71	0.438	Slip Joint	76.156	18 Sides	65
3	21.341	27.05	33.45	0.250	Slip Joint	56.250	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
109.000	109.000	1	VZW Unused Reserve
109.000	109.000	3	Flat T-Arm
109.000	109.000	1	Pine Branch
109.000	111.000	6	Commscope SBNHH-1D65B
109.000	111.000	6	Antel LPA-80063/4CF
109.000	109.000	3	Samsung MT6407-77A
109.000	109.000	2	Raycap RC2DC-3315-PF-48
109.000	109.000	3	Samsung B2/B66A RRH-BR049
109.000	109.000	3	Samsung B5/B13 RRH-BR04C
104.000	104.000	1	Pine Branch
100.000	100.000	3	Flat T-Arm
100.000	100.000	2	CCI TPA-65R-LCUUUU-H8
100.000	100.000	6	Andrew SBNH-1D6565C (60.8
100.000	100.000	1	Quintel QS66512-2
100.000	100.000	3	Ericsson RRUS 32 B2
100.000	100.000	3	Ericsson RRUS 32 (50.8 lbs)
100.000	100.000	3	Ericsson RRUS-11 (50 lbs.)
100.000	100.000	1	Raycap DC6-48-60-18-8F(32.8 lb
100.000	100.000	1	Raycap DC6-48-60-18-8F
100.000	100.000	9	CCI DTMABP7819VG12A (w/
100.000	101.000	18	Generic RCU (Remote Control
99.000	99.000	1	Pine Branch
94.000	94.000	1	Pine Branch
89.000	89.000	1	Pine Branch
84.000	84.000	1	Pine Branch
79.000	79.000	1	Pine Branch
74.000	74.000	1	Pine Branch
69.000	69.000	1	Pine Branch
64.000	64.000	1	Pine Branch
59.000	59.000	1	Pine Branch

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
3.000	100.0	0.39" (10mm)	No
3.000	100.0	0.78" (19.7mm) 8	No
3.000	100.0	1 5/8" Coax	No
3.000	100.0	2" conduit	No
3.000	109.0	1 1/4" Hybriflex	No
3.000	109.0	1 5/8" Coax	No
0.000	100.0	3/8" (0.38"-	No
0.000	101.0	3" conduit	No



Load Cases

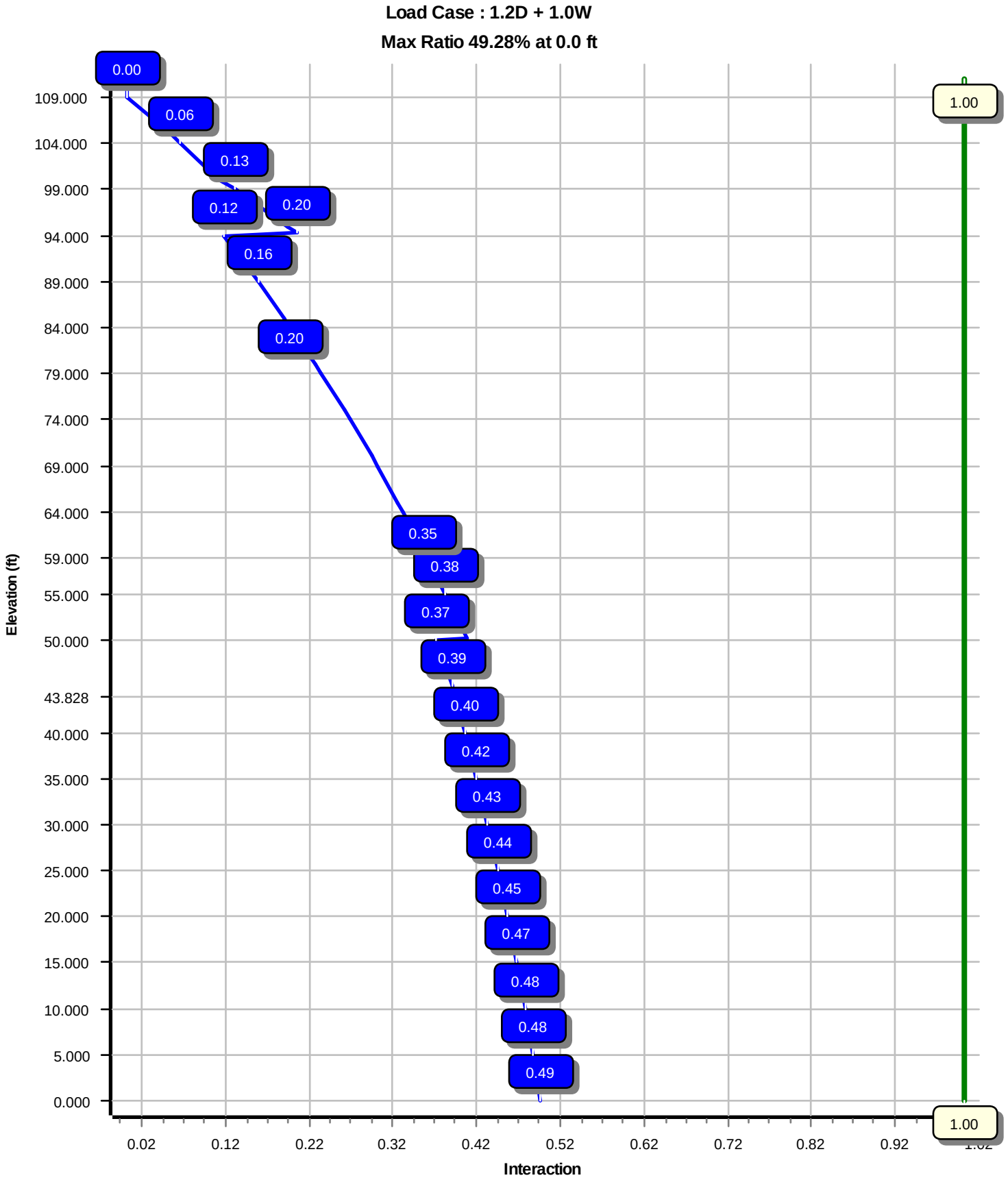
1.2D + 1.0W	117 mph with No Ice
0.9D + 1.0W	117 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.50 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	3825.82	45.43	49.83
0.9D + 1.0W	3811.40	45.41	37.36
1.2D + 1.0Di + 1.0Wi	1140.11	13.57	70.07
1.2D + 1.0Ev + 1.0Eh	174.49	2.11	49.41
0.9D - 1.0Ev + 1.0Eh	173.72	2.11	34.30
1.0D + 1.0W	898.13	10.69	41.56

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000


Load Case : 1.2D + 1.0W
Max Ratio 49.28% at 0.0 ft
0.00
0.06
0.13
0.12
0.20
0.16
0.20
0.35
0.38
0.37
0.39
0.40
0.42
0.43
0.44
0.45
0.47
0.48
0.48
0.49
1.00
1.00
109.000
104.000
99.000
94.000
89.000
84.000
79.000
74.000
69.000
64.000
59.000
55.000
50.000
43.828
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: 411258 Code: ANSI/TIA-222-H

Site Name: Farmington North 2 CT, CT Engineering Number:13668715_C3_01 5/3/2021 10:40:24 AM

Customer: VERIZON WIRELESS

Analysis Parameters

Location :	Hartford County, CT	Height (ft) :	111
Code :	ANSI/TIA-222-H	Base Diameter (in) :	59.00
Shape :	18 Sides	Top Diameter (in) :	27.05
Pole Type :	Taper	Taper (in/ft) :	0.300
Pole Manfacturer :		Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	0.99

Ice & Wind Parameters

Exposure Category:	C	Design Wind Speed Without Ice:	117 mph
Risk Category:	II	Design Wind Speed With Ice:	50 mph
Topographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	1.50 in
Crest Height:	0 ft	HMSL:	183.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	1.16				
T_L (sec):	6	p:	1	C_s:	0.051
S_s:	0.185	S_1:	0.055	C_s Max:	0.051
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.197	S_{d1}:	0.088		

Load Cases

1.2D + 1.0W	117 mph with No Ice
0.9D + 1.0W	117 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.50 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	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	50.175	0.5000	65		0.00	13,810	59.00	0.00	92.84	40140.4	19.40	118.00	43.93	50.17	68.93	16431.3	14.08	87.87	0.300226
2-18	50.518	0.4375	65	Slip	76.16	9,237	46.71	43.83	64.26	17389.1	17.42	106.78	31.55	94.35	43.20	5283.5	11.31	72.11	0.300226
3-18	21.341	0.2500	65	Slip	56.25	1,729	33.45	89.66	26.35	3670.9	22.19	133.83	27.05	111.00	21.27	1929.7	17.67	108.20	0.300226
				Shaft Weight		24,775													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor
109.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	125.72	2.749	0.50
109.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	146.20	2.749	0.50
109.00	Raycap RC2DC-3315-PF-48	2	0.80	0.000	32.00	3.781	0.67	138.19	5.062	0.67
109.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	180.34	6.180	0.61
109.00	Antel LPA-80063/4CF	6	0.80	2.000	20.00	6.142	0.76	218.37	7.146	0.76
109.00	Commscope SBNHH-1D65B	6	0.80	2.000	50.70	8.173	0.69	220.73	10.914	0.69
109.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	452.47	20.823	0.67
109.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	1,004.94	75.370	1.00
109.00	VZW Unused Reserve (16533.55	1	0.80	0.000	1,302.90	114.816	0.90	2,182.22	192.305	0.90
104.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	1,003.01	75.225	1.00
100.00	Generic RCU (Remote Control	18	0.80	1.000	1.00	0.141	1.00	6.32	0.466	1.00
100.00	CCI DTMABP7819VG12A (w/	9	0.80	0.000	19.20	1.370	0.50	51.95	2.121	0.50
100.00	Raycap DC6-48-60-18-8F	1	0.80	0.000	31.80	1.470	1.00	91.14	2.142	1.00
100.00	Raycap DC6-48-60-18-8F(32.8	1	0.80	0.000	32.80	1.470	1.00	92.14	2.142	1.00
100.00	Ericsson RRUS-11 (50 lbs.)	3	0.80	0.000	50.00	2.566	0.67	115.56	3.573	0.67
100.00	Ericsson RRUS 32 (50.8 lbs)	3	0.80	0.000	50.80	2.692	0.67	119.59	3.803	0.67
100.00	Ericsson RRUS 32 B2	3	0.80	0.000	53.00	2.743	0.67	123.74	3.868	0.67
100.00	Quintel QS66512-2	1	0.80	0.000	111.00	8.133	0.74	302.65	10.814	0.74
100.00	Andrew SBNH-1D6565C (60.8 lbs)	6	0.80	0.000	60.80	11.440	0.70	281.47	14.552	0.70
100.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	451.00	20.765	0.67
100.00	CCI TPA-65R-LCUUUU-H8	2	0.80	0.000	81.60	13.298	0.69	347.80	16.889	0.69
99.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	1,000.99	75.074	1.00
94.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	998.87	74.915	1.00
89.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	996.65	74.748	1.00
84.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	994.31	74.573	1.00
79.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	991.83	74.387	1.00
74.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	989.21	74.191	1.00
69.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	986.42	73.981	1.00
64.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	983.43	73.758	1.00
59.00	Pine Branch	1	1.00	0.000	600.00	45.000	1.00	980.22	73.517	1.00
Totals	Num Loadings:30	88			11,955.80			24,618.62		

Linear Appurtenance Properties

Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
3.00	109.00	2	1 1/4" Hybriflex Cable	1.54	1.00	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
3.00	109.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	101.00	2	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	100.00	1	3/8" (0.38"- 9.5mm)	0.38	0.23	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
3.00	100.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
3.00	100.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
3.00	100.00	18	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY

3.00	100.00	1	2" conduit	2.38	3.65	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY

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		0.5000	59.000	92.836	40,140.4	19.40	118.00	78.6	1340.	0.0	0.0
5.00		0.5000	57.499	90.454	37,129.0	18.87	115.00	79.2	1271.	0.0	1,559.2
10.00		0.5000	55.998	88.072	34,272.1	18.34	112.00	79.8	1205.	0.0	1,518.7
15.00		0.5000	54.497	85.690	31,565.6	17.81	108.99	80.5	1140.	0.0	1,478.2
20.00		0.5000	52.995	83.307	29,005.5	17.28	105.99	81.1	1078.	0.0	1,437.6
25.00		0.5000	51.494	80.925	26,587.7	16.75	102.99	81.7	1017.	0.0	1,397.1
30.00		0.5000	49.993	78.543	24,308.1	16.22	99.99	82.3	957.7	0.0	1,356.6
35.00		0.5000	48.492	76.161	22,162.8	15.69	96.98	82.6	900.2	0.0	1,316.1
40.00		0.5000	46.991	73.779	20,147.5	15.16	93.98	82.6	844.5	0.0	1,275.5
43.83	Bot - Section 2	0.5000	45.842	71.955	18,689.8	14.76	91.68	82.6	803.0	0.0	949.2
45.00		0.5000	45.490	71.396	18,258.2	14.63	90.98	82.6	790.5	0.0	541.0
50.00		0.5000	43.989	69.014	16,490.9	14.10	87.98	82.6	738.4	0.0	2,261.8
50.17	Top - Section 1	0.4375	44.811	61.616	15,328.6	16.65	102.43	81.8	673.7	0.0	77.7
55.00		0.4375	43.363	59.605	13,875.7	16.07	99.11	82.5	630.3	0.0	995.2
59.00		0.4375	42.162	57.937	12,743.4	15.58	96.37	82.6	595.3	0.0	799.9
60.00		0.4375	41.861	57.520	12,470.3	15.46	95.68	82.6	586.7	0.0	196.4
64.00		0.4375	40.661	55.853	11,416.9	14.98	92.94	82.6	553.0	0.0	771.6
65.00		0.4375	40.360	55.436	11,163.1	14.86	92.25	82.6	544.8	0.0	189.3
69.00		0.4375	39.159	53.768	10,185.8	14.37	89.51	82.6	512.3	0.0	743.2
70.00		0.4375	38.859	53.351	9,950.7	14.25	88.82	82.6	504.4	0.0	182.3
74.00		0.4375	37.658	51.684	9,046.5	13.77	86.08	82.6	473.2	0.0	714.8
75.00		0.4375	37.358	51.267	8,829.3	13.65	85.39	82.6	465.5	0.0	175.2
79.00		0.4375	36.157	49.599	7,995.5	13.16	82.64	82.6	435.5	0.0	686.5
80.00		0.4375	35.857	49.183	7,795.6	13.04	81.96	82.6	428.2	0.0	168.1
84.00		0.4375	34.656	47.515	7,029.2	12.56	79.21	82.6	399.5	0.0	658.1
85.00		0.4375	34.356	47.098	6,845.8	12.44	78.53	82.6	392.5	0.0	161.0
89.00		0.4375	33.155	45.431	6,144.1	11.95	75.78	82.6	365.0	0.0	629.7
89.66	Bot - Section 3	0.4375	32.957	45.156	6,033.4	11.87	75.33	82.6	360.6	0.0	101.5
90.00		0.4375	32.855	45.014	5,976.5	11.83	75.10	82.6	358.3	0.0	82.9
94.00		0.4375	31.654	43.346	5,336.6	11.35	72.35	82.6	332.1	0.0	952.4
94.35	Top - Section 2	0.2500	32.050	25.232	3,223.7	21.19	128.20	76.5	198.1	0.0	80.8
95.00		0.2500	31.854	25.077	3,164.4	21.06	127.41	76.6	195.7	0.0	55.9
99.00		0.2500	30.653	24.124	2,817.2	20.21	122.61	77.6	181.0	0.0	334.8
100.0		0.2500	30.352	23.885	2,734.6	20.00	121.41	77.9	177.5	0.0	81.7
104.0		0.2500	29.152	22.933	2,420.2	19.15	116.61	78.9	163.5	0.0	318.6
105.0		0.2500	28.851	22.694	2,345.5	18.94	115.41	79.1	160.1	0.0	77.6
109.0		0.2500	27.650	21.741	2,062.3	18.09	110.60	80.1	146.9	0.0	302.4
110.0		0.2500	27.350	21.503	1,995.3	17.88	109.40	80.4	143.7	0.0	73.6
111.0		0.2500	27.050	21.265	1,929.7	17.67	108.20	80.6	140.5	0.0	72.8
											24,775.0

Load Case: 1.2D + 1.0W — 117 mph with No Ice — 18 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.20
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		278.2	0.0					0.0	0.0	278.2	0.0	0.0	0.0
5.00		549.1	1,871.1					0.0	170.9	549.1	2,042.0	0.0	0.0
10.00		534.8	1,822.4					0.0	288.7	534.8	2,111.2	0.0	0.0
15.00		528.6	1,773.8					0.0	288.7	528.6	2,062.5	0.0	0.0
20.00		536.1	1,725.2					0.0	288.7	536.1	2,013.9	0.0	0.0
25.00		546.3	1,676.5					0.0	288.7	546.3	1,965.3	0.0	0.0
30.00		551.3	1,627.9					0.0	288.7	551.3	1,916.6	0.0	0.0
35.00		552.5	1,579.3					0.0	288.7	552.5	1,868.0	0.0	0.0
40.00		486.5	1,530.6					0.0	288.7	486.5	1,819.3	0.0	0.0
43.83	Bot - Section 2	275.8	1,139.1					0.0	221.1	275.8	1,360.1	0.0	0.0
45.00		342.6	649.2					0.0	67.7	342.6	716.8	0.0	0.0
50.00		286.9	2,714.1					0.0	288.7	286.9	3,002.8	0.0	0.0
50.17	Top - Section 1	273.9	93.2					0.0	10.1	273.9	103.3	0.0	0.0
55.00		480.3	1,194.2					0.0	278.6	480.3	1,472.9	0.0	0.0
59.00	Appurtenance(s)	269.6	959.9	1,854.1	0.0	0.0	720.0	0.0	231.0	2,123.7	1,910.9	0.0	0.0
60.00		265.8	235.7					0.0	57.7	265.8	293.5	0.0	0.0
64.00	Appurtenance(s)	264.8	925.9	1,886.1	0.0	0.0	720.0	0.0	231.0	2,150.8	1,876.9	0.0	0.0
65.00		260.4	227.2					0.0	57.7	260.4	285.0	0.0	0.0
69.00	Appurtenance(s)	259.3	891.8	1,916.2	0.0	0.0	720.0	0.0	231.0	2,175.5	1,842.8	0.0	0.0
70.00		254.5	218.7					0.0	57.7	254.5	276.4	0.0	0.0
74.00	Appurtenance(s)	253.2	857.8	1,944.6	0.0	0.0	720.0	0.0	231.0	2,197.8	1,808.8	0.0	0.0
75.00		248.0	210.2					0.0	57.7	248.0	267.9	0.0	0.0
79.00	Appurtenance(s)	246.7	823.7	1,971.6	0.0	0.0	720.0	0.0	231.0	2,218.3	1,774.7	0.0	0.0
80.00		241.1	201.7					0.0	57.7	241.1	259.4	0.0	0.0
84.00	Appurtenance(s)	239.7	789.7	1,997.2	0.0	0.0	720.0	0.0	231.0	2,236.9	1,740.7	0.0	0.0
85.00		233.8	193.2					0.0	57.7	233.8	250.9	0.0	0.0
89.00	Appurtenance(s)	216.7	755.7	2,021.7	0.0	0.0	720.0	0.0	231.0	2,238.4	1,706.6	0.0	0.0
89.66	Bot - Section 3	46.1	121.9					0.0	38.0	46.1	159.9	0.0	0.0
90.00		198.9	99.4					0.0	19.7	198.9	119.1	0.0	0.0
94.00	Appurtenance(s)	198.7	1,142.9	2,045.1	0.0	0.0	720.0	0.0	231.0	2,243.8	2,093.8	0.0	0.0
94.35	Top - Section 2	45.0	96.9					0.0	20.0	45.0	116.9	0.0	0.0
95.00		206.0	67.1					0.0	37.7	206.0	104.9	0.0	0.0
99.00	Appurtenance(s)	220.0	401.8	2,067.5	0.0	0.0	720.0	0.0	231.0	2,287.5	1,352.8	0.0	0.0
100.00	Appurtenance(s)	213.3	98.0	4,584.2	0.0	93.7	2,527.0	0.0	57.7	4,797.4	2,682.7	0.0	0.0
104.00	Appurtenance(s)	211.6	382.3	2,089.1	0.0	0.0	720.0	0.0	75.0	2,300.6	1,177.4	0.0	0.0
105.00		204.6	93.2					0.0	14.2	204.6	107.4	0.0	0.0
109.00	Appurtenance(s)	197.4	362.9	9,950.2	0.0	4,657.1	4,620.0	0.0	56.8	10,147.6	5,039.7	0.0	0.0
110.00		68.5	88.3					0.0	0.0	68.5	88.3	0.0	0.0
111.00		34.1	87.3					0.0	0.0	34.1	87.3	0.0	0.0
	Totals:									45,648.1	49,879.5	0.00	0.00

Load Case: 1.2D + 1.0W — 117 mph with No Ice — 18 Iterations

Gust Response Factor :1.10
Dead Load Factor :1.20
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	-49.83	-45.43	0.00	-3,825.82	0.00	3,825.82	6,566.18	1,629.27	8,609.06	7,898.16	0.00	0.00	0.493
5.00	-47.68	-44.99	0.00	-3,598.68	0.00	3,598.68	6,448.38	1,587.47	8,172.96	7,555.74	0.07	-0.13	0.484
10.00	-45.47	-44.55	0.00	-3,373.75	0.00	3,373.75	6,327.91	1,545.66	7,748.20	7,217.61	0.28	-0.27	0.475
15.00	-43.30	-44.11	0.00	-3,150.99	0.00	3,150.99	6,204.77	1,503.85	7,334.77	6,884.02	0.63	-0.40	0.466
20.00	-41.19	-43.66	0.00	-2,930.43	0.00	2,930.43	6,078.95	1,462.04	6,932.67	6,555.22	1.13	-0.54	0.455
25.00	-39.12	-43.19	0.00	-2,712.13	0.00	2,712.13	5,950.47	1,420.24	6,541.91	6,231.45	1.77	-0.68	0.443
30.00	-37.11	-42.70	0.00	-2,496.19	0.00	2,496.19	5,819.32	1,378.43	6,162.49	5,912.97	2.55	-0.82	0.429
35.00	-35.15	-42.21	0.00	-2,282.67	0.00	2,282.67	5,658.36	1,336.62	5,794.40	5,573.30	3.48	-0.96	0.417
40.00	-33.25	-41.76	0.00	-2,071.64	0.00	2,071.64	5,481.38	1,294.81	5,437.64	5,228.36	4.56	-1.09	0.403
43.83	-31.84	-41.50	0.00	-1,911.77	0.00	1,911.77	5,345.86	1,262.80	5,172.14	4,971.70	5.48	-1.20	0.392
45.00	-31.07	-41.19	0.00	-1,863.15	0.00	1,863.15	5,304.39	1,253.01	5,092.22	4,894.44	5.78	-1.24	0.388
50.00	-28.03	-40.86	0.00	-1,657.23	0.00	1,657.23	5,127.40	1,211.20	4,758.13	4,571.54	7.15	-1.37	0.369
50.17	-27.88	-40.62	0.00	-1,650.09	0.00	1,650.09	4,537.16	1,081.37	4,334.33	4,134.30	7.20	-1.38	0.407
55.00	-26.34	-40.16	0.00	-1,454.08	0.00	1,454.08	4,425.87	1,046.06	4,055.98	3,899.95	8.66	-1.51	0.380
59.00	-24.44	-38.01	0.00	-1,293.44	0.00	1,293.44	4,304.44	1,016.80	3,832.25	3,685.77	9.98	-1.62	0.358
60.00	-24.11	-37.77	0.00	-1,255.43	0.00	1,255.43	4,273.47	1,009.48	3,777.30	3,632.64	10.32	-1.65	0.353
64.00	-22.25	-35.59	0.00	-1,104.35	0.00	1,104.35	4,149.58	980.22	3,561.50	3,424.00	11.75	-1.76	0.329
65.00	-21.94	-35.35	0.00	-1,068.76	0.00	1,068.76	4,118.61	972.90	3,508.54	3,372.81	12.12	-1.78	0.324
69.00	-20.13	-33.13	0.00	-927.39	0.00	927.39	3,994.72	943.63	3,300.67	3,171.88	13.66	-1.89	0.299
70.00	-19.82	-32.89	0.00	-894.25	0.00	894.25	3,963.74	936.32	3,249.70	3,122.61	14.06	-1.91	0.293
74.00	-18.06	-30.65	0.00	-762.69	0.00	762.69	3,839.85	907.05	3,049.76	2,929.40	15.70	-2.01	0.266
75.00	-17.77	-30.41	0.00	-732.04	0.00	732.04	3,808.88	899.74	3,000.77	2,882.06	16.12	-2.03	0.260
79.00	-16.05	-28.15	0.00	-610.39	0.00	610.39	3,684.99	870.47	2,808.77	2,696.56	17.86	-2.12	0.232
80.00	-15.78	-27.91	0.00	-582.25	0.00	582.25	3,654.02	863.15	2,761.76	2,651.15	18.31	-2.14	0.225
84.00	-14.10	-25.62	0.00	-470.61	0.00	470.61	3,530.13	833.89	2,577.69	2,473.36	20.13	-2.21	0.195
85.00	-13.84	-25.39	0.00	-444.99	0.00	444.99	3,499.16	826.57	2,532.67	2,429.88	20.60	-2.23	0.188
89.00	-12.21	-23.09	0.00	-343.45	0.00	343.45	3,375.27	797.31	2,356.53	2,259.81	22.50	-2.30	0.156
89.66	-12.05	-23.04	0.00	-328.24	0.00	328.24	3,354.86	792.49	2,328.13	2,232.39	22.82	-2.31	0.151
90.00	-11.93	-22.84	0.00	-320.38	0.00	320.38	3,344.29	789.99	2,313.49	2,218.25	22.98	-2.31	0.149
94.00	-9.92	-20.52	0.00	-229.02	0.00	229.02	3,220.40	760.73	2,145.29	2,055.89	24.95	-2.37	0.115
94.35	-9.80	-20.47	0.00	-221.91	0.00	221.91	1,736.61	442.83	1,271.90	1,136.26	25.12	-2.37	0.203
95.00	-9.69	-20.27	0.00	-208.53	0.00	208.53	1,729.57	440.09	1,256.25	1,124.62	25.44	-2.38	0.193
99.00	-8.43	-17.93	0.00	-127.47	0.00	127.47	1,685.47	423.37	1,162.61	1,053.98	27.46	-2.44	0.128
100.00	-5.94	-13.02	0.00	-109.45	0.00	109.45	1,674.18	419.19	1,139.76	1,036.49	27.98	-2.45	0.110
104.00	-4.86	-10.68	0.00	-57.35	0.00	57.35	1,627.96	402.47	1,050.65	967.33	30.05	-2.48	0.063
105.00	-4.76	-10.47	0.00	-46.68	0.00	46.68	1,616.13	398.29	1,028.94	950.25	30.57	-2.49	0.053
109.00	-0.17	-0.11	0.00	-0.15	0.00	0.15	1,567.77	381.56	944.36	882.77	32.66	-2.50	0.000
110.00	-0.09	-0.04	0.00	-0.04	0.00	0.04	1,555.41	377.38	923.78	866.13	33.18	-2.50	0.000
111.00	0.00	-0.03	0.00	0.00	0.00	0.00	1,542.94	373.20	903.43	849.58	33.71	-2.50	0.000

Site Number: 411258 Code: ANSI/TIA-222-H

Site Name: Farmington North 2 CT, CT Engineering Number:13668715_C3_01 5/3/2021 10:40:26 AM

Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.0W 117 mph with No Ice (Reduced DL) 18 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
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		278.2	0.0					0.0	0.0	278.2	0.0	0.0	0.0
5.00		549.1	1,403.3					0.0	128.2	549.1	1,531.5	0.0	0.0
10.00		534.8	1,366.8					0.0	216.5	534.8	1,583.4	0.0	0.0
15.00		528.6	1,330.4					0.0	216.5	528.6	1,546.9	0.0	0.0
20.00		536.1	1,293.9					0.0	216.5	536.1	1,510.4	0.0	0.0
25.00		546.3	1,257.4					0.0	216.5	546.3	1,473.9	0.0	0.0
30.00		551.3	1,220.9					0.0	216.5	551.3	1,437.5	0.0	0.0
35.00		552.5	1,184.4					0.0	216.5	552.5	1,401.0	0.0	0.0
40.00		486.5	1,148.0					0.0	216.5	486.5	1,364.5	0.0	0.0
43.83	Bot - Section 2	275.8	854.3					0.0	165.8	275.8	1,020.1	0.0	0.0
45.00		342.6	486.9					0.0	50.7	342.6	537.6	0.0	0.0
50.00		286.9	2,035.6					0.0	216.5	286.9	2,252.1	0.0	0.0
50.17	Top - Section 1	273.9	69.9					0.0	7.6	273.9	77.5	0.0	0.0
55.00		480.3	895.7					0.0	209.0	480.3	1,104.6	0.0	0.0
59.00	Appurtenance(s)	269.6	719.9	1,854.1	0.0	0.0	540.0	0.0	173.2	2,123.7	1,433.2	0.0	0.0
60.00		265.8	176.8					0.0	43.3	265.8	220.1	0.0	0.0
64.00	Appurtenance(s)	264.8	694.4	1,886.1	0.0	0.0	540.0	0.0	173.2	2,150.8	1,407.6	0.0	0.0
65.00		260.4	170.4					0.0	43.3	260.4	213.7	0.0	0.0
69.00	Appurtenance(s)	259.3	668.9	1,916.2	0.0	0.0	540.0	0.0	173.2	2,175.5	1,382.1	0.0	0.0
70.00		254.5	164.0					0.0	43.3	254.5	207.3	0.0	0.0
74.00	Appurtenance(s)	253.2	643.3	1,944.6	0.0	0.0	540.0	0.0	173.2	2,197.8	1,356.6	0.0	0.0
75.00		248.0	157.6					0.0	43.3	248.0	201.0	0.0	0.0
79.00	Appurtenance(s)	246.7	617.8	1,971.6	0.0	0.0	540.0	0.0	173.2	2,218.3	1,331.0	0.0	0.0
80.00		241.1	151.3					0.0	43.3	241.1	194.6	0.0	0.0
84.00	Appurtenance(s)	239.7	592.3	1,997.2	0.0	0.0	540.0	0.0	173.2	2,236.9	1,305.5	0.0	0.0
85.00		233.8	144.9					0.0	43.3	233.8	188.2	0.0	0.0
89.00	Appurtenance(s)	216.7	566.7	2,021.7	0.0	0.0	540.0	0.0	173.2	2,238.4	1,280.0	0.0	0.0
89.66	Bot - Section 3	46.1	91.4					0.0	28.5	46.1	119.9	0.0	0.0
90.00		198.9	74.6					0.0	14.8	198.9	89.4	0.0	0.0
94.00	Appurtenance(s)	198.7	857.1	2,045.1	0.0	0.0	540.0	0.0	173.2	2,243.8	1,570.4	0.0	0.0
94.35	Top - Section 2	45.0	72.7					0.0	15.0	45.0	87.7	0.0	0.0
95.00		206.0	50.4					0.0	28.3	206.0	78.7	0.0	0.0
99.00	Appurtenance(s)	220.0	301.4	2,067.5	0.0	0.0	540.0	0.0	173.2	2,287.5	1,014.6	0.0	0.0
100.00	Appurtenance(s)	213.3	73.5	4,584.2	0.0	93.7	1,895.2	0.0	43.3	4,797.4	2,012.0	0.0	0.0
104.00	Appurtenance(s)	211.6	286.8	2,089.1	0.0	0.0	540.0	0.0	56.3	2,300.6	883.0	0.0	0.0
105.00		204.6	69.9					0.0	10.7	204.6	80.5	0.0	0.0
109.00	Appurtenance(s)	197.4	272.2	9,950.2	0.0	4,657.1	3,465.0	0.0	42.6	10,147.6	3,779.8	0.0	0.0
110.00		68.5	66.2					0.0	0.0	68.5	66.2	0.0	0.0
111.00		34.1	65.5					0.0	0.0	34.1	65.5	0.0	0.0
								Totals:		45,648.1	37,409.6	0.00	0.00

Load Case: 0.9D + 1.0W 117 mph with No Ice (Reduced DL) 18 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
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	-37.36	-45.41	0.00	-3,811.40	0.00	3,811.40	6,566.18	1,629.27	8,609.06	7,898.16	0.00	0.00	0.489
5.00	-35.72	-44.94	0.00	-3,584.33	0.00	3,584.33	6,448.38	1,587.47	8,172.96	7,555.74	0.07	-0.13	0.481
10.00	-34.04	-44.48	0.00	-3,359.61	0.00	3,359.61	6,327.91	1,545.66	7,748.20	7,217.61	0.28	-0.26	0.472
15.00	-32.39	-44.02	0.00	-3,137.20	0.00	3,137.20	6,204.77	1,503.85	7,334.77	6,884.02	0.63	-0.40	0.462
20.00	-30.78	-43.55	0.00	-2,917.08	0.00	2,917.08	6,078.95	1,462.04	6,932.67	6,555.22	1.12	-0.54	0.451
25.00	-29.21	-43.06	0.00	-2,699.34	0.00	2,699.34	5,950.47	1,420.24	6,541.91	6,231.45	1.76	-0.67	0.439
30.00	-27.67	-42.55	0.00	-2,484.05	0.00	2,484.05	5,819.32	1,378.43	6,162.49	5,912.97	2.54	-0.81	0.426
35.00	-26.18	-42.04	0.00	-2,271.28	0.00	2,271.28	5,658.36	1,336.62	5,794.40	5,573.30	3.47	-0.95	0.413
40.00	-24.73	-41.59	0.00	-2,061.06	0.00	2,061.06	5,481.38	1,294.81	5,437.64	5,228.36	4.54	-1.09	0.400
43.83	-23.67	-41.32	0.00	-1,901.86	0.00	1,901.86	5,345.86	1,262.80	5,172.14	4,971.70	5.46	-1.20	0.388
45.00	-23.08	-41.00	0.00	-1,853.44	0.00	1,853.44	5,304.39	1,253.01	5,092.22	4,894.44	5.76	-1.23	0.384
50.00	-20.78	-40.69	0.00	-1,648.45	0.00	1,648.45	5,127.40	1,211.20	4,758.13	4,571.54	7.12	-1.37	0.366
50.17	-20.66	-40.44	0.00	-1,641.34	0.00	1,641.34	4,537.16	1,081.37	4,334.33	4,134.30	7.17	-1.37	0.403
55.00	-19.49	-39.97	0.00	-1,446.22	0.00	1,446.22	4,425.87	1,046.06	4,055.98	3,899.95	8.62	-1.50	0.377
59.00	-18.07	-37.83	0.00	-1,286.34	0.00	1,286.34	4,304.44	1,016.80	3,832.25	3,685.77	9.93	-1.61	0.355
60.00	-17.81	-37.58	0.00	-1,248.51	0.00	1,248.51	4,273.47	1,009.48	3,777.30	3,632.64	10.27	-1.64	0.349
64.00	-16.43	-35.41	0.00	-1,098.20	0.00	1,098.20	4,149.58	980.22	3,561.50	3,424.00	11.70	-1.75	0.326
65.00	-16.18	-35.16	0.00	-1,062.79	0.00	1,062.79	4,118.61	972.90	3,508.54	3,372.81	12.06	-1.78	0.320
69.00	-14.83	-32.96	0.00	-922.16	0.00	922.16	3,994.72	943.63	3,300.67	3,171.88	13.60	-1.88	0.296
70.00	-14.60	-32.71	0.00	-889.21	0.00	889.21	3,963.74	936.32	3,249.70	3,122.61	13.99	-1.90	0.290
74.00	-13.29	-30.48	0.00	-758.37	0.00	758.37	3,839.85	907.05	3,049.76	2,929.40	15.63	-2.00	0.263
75.00	-13.07	-30.24	0.00	-727.89	0.00	727.89	3,808.88	899.74	3,000.77	2,882.06	16.05	-2.02	0.257
79.00	-11.79	-27.98	0.00	-606.94	0.00	606.94	3,684.99	870.47	2,808.77	2,696.56	17.78	-2.11	0.229
80.00	-11.58	-27.75	0.00	-578.95	0.00	578.95	3,654.02	863.15	2,761.76	2,651.15	18.22	-2.13	0.223
84.00	-10.34	-25.47	0.00	-467.97	0.00	467.97	3,530.13	833.89	2,577.69	2,473.36	20.04	-2.20	0.193
85.00	-10.14	-25.24	0.00	-442.50	0.00	442.50	3,499.16	826.57	2,532.67	2,429.88	20.50	-2.22	0.186
89.00	-8.94	-22.96	0.00	-341.55	0.00	341.55	3,375.27	797.31	2,356.53	2,259.81	22.39	-2.29	0.155
89.66	-8.82	-22.91	0.00	-326.43	0.00	326.43	3,354.86	792.49	2,328.13	2,232.39	22.71	-2.30	0.150
90.00	-8.72	-22.71	0.00	-318.61	0.00	318.61	3,344.29	789.99	2,313.49	2,218.25	22.87	-2.30	0.147
94.00	-7.23	-20.41	0.00	-227.78	0.00	227.78	3,220.40	760.73	2,145.29	2,055.89	24.83	-2.35	0.114
94.35	-7.15	-20.36	0.00	-220.71	0.00	220.71	1,736.61	442.83	1,271.90	1,136.26	25.00	-2.36	0.200
95.00	-7.06	-20.15	0.00	-207.41	0.00	207.41	1,729.57	440.09	1,256.25	1,124.62	25.32	-2.37	0.191
99.00	-6.14	-17.83	0.00	-126.79	0.00	126.79	1,685.47	423.37	1,162.61	1,053.98	27.33	-2.43	0.126
100.00	-4.32	-12.95	0.00	-108.87	0.00	108.87	1,674.18	419.19	1,139.76	1,036.49	27.84	-2.44	0.109
104.00	-3.54	-10.62	0.00	-57.06	0.00	57.06	1,627.96	402.47	1,050.65	967.33	29.90	-2.47	0.062
105.00	-3.46	-10.41	0.00	-46.44	0.00	46.44	1,616.13	398.29	1,028.94	950.25	30.42	-2.48	0.052
109.00	-0.13	-0.11	0.00	-0.14	0.00	0.14	1,567.77	381.56	944.36	882.77	32.50	-2.49	0.000
110.00	-0.06	-0.04	0.00	-0.04	0.00	0.04	1,555.41	377.38	923.78	866.13	33.02	-2.49	0.000
111.00	0.00	-0.03	0.00	0.00	0.00	0.00	1,542.94	373.20	903.43	849.58	33.55	-2.49	0.000

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 1.50 in Radial Ice — 18 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00
Dead Load Factor :1.20 Ice Importance 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		86.8	0.0					0.0	0.0	86.8	0.0	0.0	0.0
5.00		171.8	2,296.9					0.0	170.9	171.8	2,467.8	0.0	0.0
10.00		168.1	2,286.7					0.0	288.7	168.1	2,575.4	0.0	0.0
15.00		166.6	2,250.1					0.0	288.7	166.6	2,538.8	0.0	0.0
20.00		169.5	2,204.9					0.0	288.7	169.5	2,493.7	0.0	0.0
25.00		173.2	2,155.3					0.0	288.7	173.2	2,444.0	0.0	0.0
30.00		175.2	2,102.7					0.0	288.7	175.2	2,391.5	0.0	0.0
35.00		176.0	2,048.2					0.0	288.7	176.0	2,337.0	0.0	0.0
40.00		155.4	1,992.3					0.0	288.7	155.4	2,281.0	0.0	0.0
43.83	Bot - Section 2	88.2	1,488.2					0.0	221.1	88.2	1,709.2	0.0	0.0
45.00		109.7	757.8					0.0	67.7	109.7	825.5	0.0	0.0
50.00		91.9	3,166.4					0.0	288.7	91.9	3,455.1	0.0	0.0
50.17	Top - Section 1	88.0	109.1					0.0	10.1	88.0	119.1	0.0	0.0
55.00		154.5	1,621.1					0.0	278.6	154.5	1,899.7	0.0	0.0
59.00	Appurtenance(s)	86.9	1,307.2	553.2	0.0	0.0	1,040.2	0.0	231.0	640.1	2,578.4	0.0	0.0
60.00		85.9	322.3					0.0	57.7	85.9	380.1	0.0	0.0
64.00	Appurtenance(s)	85.6	1,264.2	564.6	0.0	0.0	1,043.4	0.0	231.0	650.2	2,538.6	0.0	0.0
65.00		84.4	311.5					0.0	57.7	84.4	369.3	0.0	0.0
69.00	Appurtenance(s)	84.1	1,220.7	575.3	0.0	0.0	1,046.4	0.0	231.0	659.4	2,498.1	0.0	0.0
70.00		82.7	300.6					0.0	57.7	82.7	358.4	0.0	0.0
74.00	Appurtenance(s)	82.4	1,176.9	585.5	0.0	0.0	1,049.2	0.0	231.0	667.9	2,457.1	0.0	0.0
75.00		80.9	289.7					0.0	57.7	80.9	347.4	0.0	0.0
79.00	Appurtenance(s)	80.6	1,132.8	595.2	0.0	0.0	1,051.8	0.0	231.0	675.8	2,415.7	0.0	0.0
80.00		79.0	278.6					0.0	57.7	79.0	336.3	0.0	0.0
84.00	Appurtenance(s)	78.6	1,088.5	604.5	0.0	0.0	1,054.3	0.0	231.0	683.0	2,373.8	0.0	0.0
85.00		76.9	267.5					0.0	57.7	76.9	325.2	0.0	0.0
89.00	Appurtenance(s)	71.4	1,043.8	613.3	0.0	0.0	1,056.6	0.0	231.0	684.6	2,331.5	0.0	0.0
89.66	Bot - Section 3	15.2	169.2					0.0	38.0	15.2	207.2	0.0	0.0
90.00		65.7	124.3					0.0	19.7	65.7	144.0	0.0	0.0
94.00	Appurtenance(s)	65.6	1,424.4	621.8	0.0	0.0	1,058.9	0.0	231.0	687.4	2,714.2	0.0	0.0
94.35	Top - Section 2	14.9	121.3					0.0	20.0	14.9	141.3	0.0	0.0
95.00		68.3	112.9					0.0	37.7	68.3	150.6	0.0	0.0
99.00	Appurtenance(s)	73.0	672.3	629.9	0.0	0.0	1,061.0	0.0	231.0	703.0	1,964.3	0.0	0.0
100.00	Appurtenance(s)	71.1	165.2	1,186.5	0.0	56.5	5,739.0	0.0	57.7	1,257.6	5,962.0	0.0	0.0
104.00	Appurtenance(s)	70.6	641.7	637.8	0.0	0.0	1,063.0	0.0	75.0	708.4	1,779.7	0.0	0.0
105.00		68.6	157.5					0.0	14.2	68.6	171.7	0.0	0.0
109.00	Appurtenance(s)	67.0	610.8	2,814.9	0.0	1,069.6	9,023.4	0.0	56.8	2,881.9	9,691.1	0.0	0.0
110.00		24.5	149.8					0.0	0.0	24.5	149.8	0.0	0.0
111.00		12.2	148.2					0.0	0.0	12.2	148.2	0.0	0.0
	Totals:									13,633.4	70,071.7	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 1.50 in Radial Ice 18 Iterations

Gust Response Factor :1.10 Ice Dead Load 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	-70.07	-13.57	0.00	-1,140.11	0.00	1,140.11	6,566.18	1,629.27	8,609.06	7,898.16	0.00	0.00	0.155
5.00	-67.59	-13.45	0.00	-1,072.26	0.00	1,072.26	6,448.38	1,587.47	8,172.96	7,555.74	0.02	-0.04	0.152
10.00	-65.01	-13.32	0.00	-1,005.04	0.00	1,005.04	6,327.91	1,545.66	7,748.20	7,217.61	0.08	-0.08	0.150
15.00	-62.46	-13.19	0.00	-938.44	0.00	938.44	6,204.77	1,503.85	7,334.77	6,884.02	0.19	-0.12	0.146
20.00	-59.95	-13.06	0.00	-872.47	0.00	872.47	6,078.95	1,462.04	6,932.67	6,555.22	0.34	-0.16	0.143
25.00	-57.50	-12.92	0.00	-807.17	0.00	807.17	5,950.47	1,420.24	6,541.91	6,231.45	0.53	-0.20	0.139
30.00	-55.10	-12.78	0.00	-742.57	0.00	742.57	5,819.32	1,378.43	6,162.49	5,912.97	0.76	-0.24	0.135
35.00	-52.76	-12.63	0.00	-678.69	0.00	678.69	5,658.36	1,336.62	5,794.40	5,573.30	1.04	-0.28	0.131
40.00	-50.47	-12.49	0.00	-615.55	0.00	615.55	5,481.38	1,294.81	5,437.64	5,228.36	1.36	-0.33	0.127
43.83	-48.76	-12.41	0.00	-567.73	0.00	567.73	5,345.86	1,262.80	5,172.14	4,971.70	1.63	-0.36	0.123
45.00	-47.93	-12.32	0.00	-553.18	0.00	553.18	5,304.39	1,253.01	5,092.22	4,894.44	1.72	-0.37	0.122
50.00	-44.47	-12.22	0.00	-491.59	0.00	491.59	5,127.40	1,211.20	4,758.13	4,571.54	2.13	-0.41	0.116
50.17	-44.34	-12.15	0.00	-489.46	0.00	489.46	4,537.16	1,081.37	4,334.33	4,134.30	2.14	-0.41	0.128
55.00	-42.44	-12.00	0.00	-430.85	0.00	430.85	4,425.87	1,046.06	4,055.98	3,899.95	2.58	-0.45	0.120
59.00	-39.86	-11.36	0.00	-382.84	0.00	382.84	4,304.44	1,016.80	3,832.25	3,685.77	2.97	-0.48	0.113
60.00	-39.48	-11.28	0.00	-371.48	0.00	371.48	4,273.47	1,009.48	3,777.30	3,632.64	3.07	-0.49	0.112
64.00	-36.94	-10.62	0.00	-326.35	0.00	326.35	4,149.58	980.22	3,561.50	3,424.00	3.50	-0.52	0.104
65.00	-36.57	-10.55	0.00	-315.73	0.00	315.73	4,118.61	972.90	3,508.54	3,372.81	3.61	-0.53	0.103
69.00	-34.07	-9.87	0.00	-273.54	0.00	273.54	3,994.72	943.63	3,300.67	3,171.88	4.06	-0.56	0.095
70.00	-33.71	-9.80	0.00	-263.67	0.00	263.67	3,963.74	936.32	3,249.70	3,122.61	4.18	-0.57	0.093
74.00	-31.26	-9.12	0.00	-224.47	0.00	224.47	3,839.85	907.05	3,049.76	2,929.40	4.67	-0.60	0.085
75.00	-30.91	-9.04	0.00	-215.36	0.00	215.36	3,808.88	899.74	3,000.77	2,882.06	4.80	-0.60	0.083
79.00	-28.50	-8.35	0.00	-179.20	0.00	179.20	3,684.99	870.47	2,808.77	2,696.56	5.31	-0.63	0.074
80.00	-28.16	-8.27	0.00	-170.85	0.00	170.85	3,654.02	863.15	2,761.76	2,651.15	5.45	-0.63	0.072
84.00	-25.80	-7.57	0.00	-137.77	0.00	137.77	3,530.13	833.89	2,577.69	2,473.36	5.99	-0.66	0.063
85.00	-25.47	-7.49	0.00	-130.20	0.00	130.20	3,499.16	826.57	2,532.67	2,429.88	6.12	-0.66	0.061
89.00	-23.14	-6.78	0.00	-100.24	0.00	100.24	3,375.27	797.31	2,356.53	2,259.81	6.69	-0.68	0.051
89.66	-22.94	-6.77	0.00	-95.77	0.00	95.77	3,354.86	792.49	2,328.13	2,232.39	6.78	-0.68	0.050
90.00	-22.79	-6.70	0.00	-93.46	0.00	93.46	3,344.29	789.99	2,313.49	2,218.25	6.83	-0.69	0.049
94.00	-20.09	-5.99	0.00	-66.65	0.00	66.65	3,220.40	760.73	2,145.29	2,055.89	7.41	-0.70	0.039
94.35	-19.95	-5.97	0.00	-64.57	0.00	64.57	1,736.61	442.83	1,271.90	1,136.26	7.46	-0.70	0.068
95.00	-19.79	-5.90	0.00	-60.67	0.00	60.67	1,729.57	440.09	1,256.25	1,124.62	7.56	-0.70	0.066
99.00	-17.84	-5.18	0.00	-37.06	0.00	37.06	1,685.47	423.37	1,162.61	1,053.98	8.16	-0.72	0.046
100.00	-11.89	-3.85	0.00	-31.82	0.00	31.82	1,674.18	419.19	1,139.76	1,036.49	8.31	-0.73	0.038
104.00	-10.12	-3.12	0.00	-16.43	0.00	16.43	1,627.96	402.47	1,050.65	967.33	8.92	-0.74	0.023
105.00	-9.95	-3.05	0.00	-13.31	0.00	13.31	1,616.13	398.29	1,028.94	950.25	9.08	-0.74	0.020
109.00	-0.30	-0.04	0.00	-0.05	0.00	0.05	1,567.77	381.56	944.36	882.77	9.70	-0.74	0.000
110.00	-0.15	-0.01	0.00	-0.01	0.00	0.01	1,555.41	377.38	923.78	866.13	9.85	-0.74	0.000
111.00	0.00	-0.01	0.00	0.00	0.00	0.00	1,542.94	373.20	903.43	849.58	10.01	-0.74	0.000

Load Case: 1.0D + 1.0W Serviceability 60 mph 17 Iterations

Gust Response Factor :1.10
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		65.5	0.0					0.0	0.0	65.5	0.0	0.0	0.0
5.00		129.2	1,559.2					0.0	142.4	129.2	1,701.6	0.0	0.0
10.00		125.8	1,518.7					0.0	240.6	125.8	1,759.3	0.0	0.0
15.00		124.4	1,478.2					0.0	240.6	124.4	1,718.8	0.0	0.0
20.00		126.2	1,437.6					0.0	240.6	126.2	1,678.2	0.0	0.0
25.00		128.5	1,397.1					0.0	240.6	128.5	1,637.7	0.0	0.0
30.00		129.7	1,356.6					0.0	240.6	129.7	1,597.2	0.0	0.0
35.00		130.0	1,316.1					0.0	240.6	130.0	1,556.7	0.0	0.0
40.00		114.5	1,275.5					0.0	240.6	114.5	1,516.1	0.0	0.0
43.83	Bot - Section 2	64.9	949.2					0.0	184.2	64.9	1,133.5	0.0	0.0
45.00		80.6	541.0					0.0	56.4	80.6	597.4	0.0	0.0
50.00		67.5	2,261.8					0.0	240.6	67.5	2,502.4	0.0	0.0
50.17	Top - Section 1	64.4	77.7					0.0	8.4	64.4	86.1	0.0	0.0
55.00		113.0	995.2					0.0	232.2	113.0	1,227.4	0.0	0.0
59.00	Appurtenance(s)	63.4	799.9	436.3	0.0	0.0	600.0	0.0	192.5	499.7	1,592.4	0.0	0.0
60.00		62.5	196.4					0.0	48.1	62.5	244.6	0.0	0.0
64.00	Appurtenance(s)	62.3	771.6	443.8	0.0	0.0	600.0	0.0	192.5	506.1	1,564.0	0.0	0.0
65.00		61.3	189.3					0.0	48.1	61.3	237.5	0.0	0.0
69.00	Appurtenance(s)	61.0	743.2	450.9	0.0	0.0	600.0	0.0	192.5	511.9	1,535.7	0.0	0.0
70.00		59.9	182.3					0.0	48.1	59.9	230.4	0.0	0.0
74.00	Appurtenance(s)	59.6	714.8	457.6	0.0	0.0	600.0	0.0	192.5	517.2	1,507.3	0.0	0.0
75.00		58.4	175.2					0.0	48.1	58.4	223.3	0.0	0.0
79.00	Appurtenance(s)	58.0	686.5	463.9	0.0	0.0	600.0	0.0	192.5	522.0	1,478.9	0.0	0.0
80.00		56.7	168.1					0.0	48.1	56.7	216.2	0.0	0.0
84.00	Appurtenance(s)	56.4	658.1	469.9	0.0	0.0	600.0	0.0	192.5	526.4	1,450.6	0.0	0.0
85.00		55.0	161.0					0.0	48.1	55.0	209.1	0.0	0.0
89.00	Appurtenance(s)	51.0	629.7	475.7	0.0	0.0	600.0	0.0	192.5	526.7	1,422.2	0.0	0.0
89.66	Bot - Section 3	10.8	101.5					0.0	31.7	10.8	133.2	0.0	0.0
90.00		46.8	82.9					0.0	16.4	46.8	99.3	0.0	0.0
94.00	Appurtenance(s)	46.8	952.4	481.2	0.0	0.0	600.0	0.0	192.5	528.0	1,744.9	0.0	0.0
94.35	Top - Section 2	10.6	80.8					0.0	16.7	10.6	97.5	0.0	0.0
95.00		48.5	55.9					0.0	31.5	48.5	87.4	0.0	0.0
99.00	Appurtenance(s)	51.8	334.8	486.5	0.0	0.0	600.0	0.0	192.5	538.2	1,127.3	0.0	0.0
100.00	Appurtenance(s)	50.2	81.7	1,078.7	0.0	22.0	2,105.8	0.0	48.1	1,128.9	2,235.6	0.0	0.0
104.00	Appurtenance(s)	49.8	318.6	491.6	0.0	0.0	600.0	0.0	62.5	541.3	981.1	0.0	0.0
105.00		48.1	77.6					0.0	11.8	48.1	89.5	0.0	0.0
109.00	Appurtenance(s)	46.4	302.4	2,341.3	0.0	1,095.8	3,850.0	0.0	47.4	2,387.8	4,199.8	0.0	0.0
110.00		16.1	73.6					0.0	0.0	16.1	73.6	0.0	0.0
111.00		8.0	72.8					0.0	0.0	8.0	72.8	0.0	0.0
								Totals:		10,741.1	41,566.2	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 17 Iterations

Gust Response Factor :1.10
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	-41.56	-10.69	0.00	-898.13	0.00	898.13	6,566.18	1,629.27	8,609.06	7,898.16	0.00	0.00	0.120
5.00	-39.86	-10.58	0.00	-844.70	0.00	844.70	6,448.38	1,587.47	8,172.96	7,555.74	0.02	-0.03	0.118
10.00	-38.09	-10.47	0.00	-791.81	0.00	791.81	6,327.91	1,545.66	7,748.20	7,217.61	0.07	-0.06	0.116
15.00	-36.37	-10.37	0.00	-739.45	0.00	739.45	6,204.77	1,503.85	7,334.77	6,884.02	0.15	-0.09	0.113
20.00	-34.68	-10.26	0.00	-687.63	0.00	687.63	6,078.95	1,462.04	6,932.67	6,555.22	0.26	-0.13	0.111
25.00	-33.04	-10.14	0.00	-636.35	0.00	636.35	5,950.47	1,420.24	6,541.91	6,231.45	0.41	-0.16	0.108
30.00	-31.44	-10.02	0.00	-585.64	0.00	585.64	5,819.32	1,378.43	6,162.49	5,912.97	0.60	-0.19	0.104
35.00	-29.88	-9.91	0.00	-535.52	0.00	535.52	5,658.36	1,336.62	5,794.40	5,573.30	0.82	-0.22	0.101
40.00	-28.35	-9.80	0.00	-485.99	0.00	485.99	5,481.38	1,294.81	5,437.64	5,228.36	1.07	-0.26	0.098
43.83	-27.22	-9.74	0.00	-448.47	0.00	448.47	5,345.86	1,262.80	5,172.14	4,971.70	1.29	-0.28	0.095
45.00	-26.62	-9.66	0.00	-437.06	0.00	437.06	5,304.39	1,253.01	5,092.22	4,894.44	1.36	-0.29	0.094
50.00	-24.11	-9.59	0.00	-388.75	0.00	388.75	5,127.40	1,211.20	4,758.13	4,571.54	1.68	-0.32	0.090
50.17	-24.03	-9.53	0.00	-387.07	0.00	387.07	4,537.16	1,081.37	4,334.33	4,134.30	1.69	-0.32	0.099
55.00	-22.79	-9.42	0.00	-341.08	0.00	341.08	4,425.87	1,046.06	4,055.98	3,899.95	2.03	-0.35	0.093
59.00	-21.20	-8.92	0.00	-303.39	0.00	303.39	4,304.44	1,016.80	3,832.25	3,685.77	2.34	-0.38	0.087
60.00	-20.96	-8.86	0.00	-294.48	0.00	294.48	4,273.47	1,009.48	3,777.30	3,632.64	2.42	-0.39	0.086
64.00	-19.39	-8.35	0.00	-259.04	0.00	259.04	4,149.58	980.22	3,561.50	3,424.00	2.76	-0.41	0.080
65.00	-19.15	-8.29	0.00	-250.69	0.00	250.69	4,118.61	972.90	3,508.54	3,372.81	2.84	-0.42	0.079
69.00	-17.62	-7.77	0.00	-217.53	0.00	217.53	3,994.72	943.63	3,300.67	3,171.88	3.21	-0.44	0.073
70.00	-17.39	-7.71	0.00	-209.75	0.00	209.75	3,963.74	936.32	3,249.70	3,122.61	3.30	-0.45	0.072
74.00	-15.88	-7.19	0.00	-178.90	0.00	178.90	3,839.85	907.05	3,049.76	2,929.40	3.68	-0.47	0.065
75.00	-15.66	-7.13	0.00	-171.71	0.00	171.71	3,808.88	899.74	3,000.77	2,882.06	3.78	-0.48	0.064
79.00	-14.18	-6.60	0.00	-143.18	0.00	143.18	3,684.99	870.47	2,808.77	2,696.56	4.19	-0.50	0.057
80.00	-13.97	-6.55	0.00	-136.58	0.00	136.58	3,654.02	863.15	2,761.76	2,651.15	4.30	-0.50	0.055
84.00	-12.52	-6.01	0.00	-110.40	0.00	110.40	3,530.13	833.89	2,577.69	2,473.36	4.72	-0.52	0.048
85.00	-12.31	-5.95	0.00	-104.39	0.00	104.39	3,499.16	826.57	2,532.67	2,429.88	4.83	-0.52	0.047
89.00	-10.89	-5.42	0.00	-80.57	0.00	80.57	3,375.27	797.31	2,356.53	2,259.81	5.28	-0.54	0.039
89.66	-10.76	-5.40	0.00	-77.01	0.00	77.01	3,354.86	792.49	2,328.13	2,232.39	5.35	-0.54	0.038
90.00	-10.66	-5.36	0.00	-75.16	0.00	75.16	3,344.29	789.99	2,313.49	2,218.25	5.39	-0.54	0.037
94.00	-8.92	-4.81	0.00	-53.73	0.00	53.73	3,220.40	760.73	2,145.29	2,055.89	5.85	-0.56	0.029
94.35	-8.82	-4.80	0.00	-52.07	0.00	52.07	1,736.61	442.83	1,271.90	1,136.26	5.89	-0.56	0.051
95.00	-8.73	-4.75	0.00	-48.93	0.00	48.93	1,729.57	440.09	1,256.25	1,124.62	5.97	-0.56	0.049
99.00	-7.61	-4.21	0.00	-29.91	0.00	29.91	1,685.47	423.37	1,162.61	1,053.98	6.44	-0.57	0.033
100.00	-5.39	-3.06	0.00	-25.68	0.00	25.68	1,674.18	419.19	1,139.76	1,036.49	6.57	-0.57	0.028
104.00	-4.41	-2.50	0.00	-13.46	0.00	13.46	1,627.96	402.47	1,050.65	967.33	7.05	-0.58	0.017
105.00	-4.32	-2.46	0.00	-10.95	0.00	10.95	1,616.13	398.29	1,028.94	950.25	7.17	-0.58	0.014
109.00	-0.15	-0.03	0.00	-0.03	0.00	0.03	1,567.77	381.56	944.36	882.77	7.66	-0.59	0.000
110.00	-0.07	-0.01	0.00	-0.01	0.00	0.01	1,555.41	377.38	923.78	866.13	7.79	-0.59	0.000
111.00	0.00	-0.01	0.00	0.00	0.00	0.00	1,542.94	373.20	903.43	849.58	7.91	-0.59	0.000

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.05
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}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.05
Upper Limit C_s	0.05
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.16
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.33
Total Unfactored Dead Load:	41.57 k
Seismic Base Shear (E):	2.11 k

Load Case 1.2D + 1.0Ev + 1.0Eh Seismic

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	110.50	73	38	0.004	8	90
37	109.50	74	38	0.004	8	91
36	107.00	350	173	0.017	36	434
35	104.50	89	43	0.004	9	111
34	102.00	381	177	0.017	36	472
33	99.50	130	58	0.006	12	161
32	97.00	527	230	0.022	47	654
31	94.67	87	37	0.004	8	108
30	94.17	97	41	0.004	8	121
29	92.00	1,145	464	0.045	95	1,419
28	89.83	99	39	0.004	8	123
27	89.33	133	52	0.005	11	165
26	87.00	822	310	0.030	63	1,019
25	84.50	209	76	0.007	16	259
24	82.00	851	296	0.029	61	1,054
23	79.50	216	72	0.007	15	268
22	77.00	879	282	0.027	58	1,089
21	74.50	223	68	0.007	14	277
20	72.00	907	266	0.026	54	1,125
19	69.50	230	64	0.006	13	286
18	67.00	936	249	0.024	51	1,160
17	64.50	237	60	0.006	12	294
16	62.00	964	232	0.022	47	1,195
15	59.50	245	56	0.005	11	303
14	57.00	992	213	0.021	44	1,230

13	52.59	1,227	237	0.023	49	1,521
12	50.09	86	16	0.002	3	107
11	47.50	2,502	422	0.041	86	3,102
10	44.41	597	92	0.009	19	740
9	41.91	1,133	162	0.016	33	1,405
8	37.50	1,516	187	0.018	38	1,879
7	32.50	1,557	159	0.015	32	1,929
6	27.50	1,597	130	0.013	27	1,980
5	22.50	1,638	102	0.010	21	2,030
4	17.50	1,678	75	0.007	15	2,080
3	12.50	1,719	49	0.005	10	2,130
2	7.50	1,759	26	0.002	5	2,181
1	2.50	1,702	6	0.001	1	2,109
Samsung B5/B13 RRH-B	109.00	211	107	0.010	22	261
Samsung B2/B66A RRH-	109.00	253	129	0.013	26	314
Raycap RC2DC-3315-PF	109.00	64	33	0.003	7	79
Samsung MT6407-77A	109.00	245	124	0.012	25	303
Antel LPA-80063/4CF	109.00	120	61	0.006	12	149
Commscope SBNHH-1D65	109.00	304	155	0.015	32	377
Flat T-Arm	109.00	750	381	0.037	78	930
Pine Branch	109.00	600	305	0.030	62	744
VZW Unused Reserve (	109.00	1,303	662	0.064	136	1,615
Pine Branch	104.00	600	286	0.028	59	744
Generic RCU (Remote	100.00	18	8	0.001	2	22
CCI DTMABP7819VG12A	100.00	173	78	0.008	16	214
Raycap DC6-48-60-18-	100.00	32	14	0.001	3	39
Raycap DC6-48-60-18-	100.00	33	15	0.001	3	41
Ericsson RRUS-11 (50	100.00	150	68	0.007	14	186
Ericsson RRUS 32 (50	100.00	152	69	0.007	14	189
Ericsson RRUS 32 B2	100.00	159	72	0.007	15	197
Quintel QS66512-2	100.00	111	50	0.005	10	138
Andrew SBNH-1D6565C	100.00	365	165	0.016	34	452
Flat T-Arm	100.00	750	340	0.033	70	930
CCI TPA-65R-LCUUUU-H	100.00	163	74	0.007	15	202
Pine Branch	99.00	600	268	0.026	55	744
Pine Branch	94.00	600	250	0.024	51	744
Pine Branch	89.00	600	233	0.023	48	744
Pine Branch	84.00	600	216	0.021	44	744
Pine Branch	79.00	600	199	0.019	41	744
Pine Branch	74.00	600	182	0.018	37	744
Pine Branch	69.00	600	166	0.016	34	744
Pine Branch	64.00	600	150	0.015	31	744
Pine Branch	59.00	600	135	0.013	28	744
		41,566	10,293	1.000	2,109	51,520

Load Case 0.9D - 1.0Ev + 1.0Eh Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
38	110.50	73	38	0.004	8	63
37	109.50	74	38	0.004	8	63
36	107.00	350	173	0.017	36	301
35	104.50	89	43	0.004	9	77
34	102.00	381	177	0.017	36	328
33	99.50	130	58	0.006	12	112
32	97.00	527	230	0.022	47	454
31	94.67	87	37	0.004	8	75
30	94.17	97	41	0.004	8	84
29	92.00	1,145	464	0.045	95	985
28	89.83	99	39	0.004	8	85
27	89.33	133	52	0.005	11	115

26	87.00	822	310	0.030	63	708
25	84.50	209	76	0.007	16	180
24	82.00	851	296	0.029	61	732
23	79.50	216	72	0.007	15	186
22	77.00	879	282	0.027	58	756
21	74.50	223	68	0.007	14	192
20	72.00	907	266	0.026	54	781
19	69.50	230	64	0.006	13	198
18	67.00	936	249	0.024	51	805
17	64.50	237	60	0.006	12	204
16	62.00	964	232	0.022	47	830
15	59.50	245	56	0.005	11	210
14	57.00	992	213	0.021	44	854
13	52.59	1,227	237	0.023	49	1,056
12	50.09	86	16	0.002	3	74
11	47.50	2,502	422	0.041	86	2,153
10	44.41	597	92	0.009	19	514
9	41.91	1,133	162	0.016	33	975
8	37.50	1,516	187	0.018	38	1,305
7	32.50	1,557	159	0.015	32	1,340
6	27.50	1,597	130	0.013	27	1,374
5	22.50	1,638	102	0.010	21	1,409
4	17.50	1,678	75	0.007	15	1,444
3	12.50	1,719	49	0.005	10	1,479
2	7.50	1,759	26	0.002	5	1,514
1	2.50	1,702	6	0.001	1	1,464
Samsung B5/B13 RRH-B	109.00	211	107	0.010	22	181
Samsung B2/B66A RRH-	109.00	253	129	0.013	26	218
Raycap RC2DC-3315-PF	109.00	64	33	0.003	7	55
Samsung MT6407-77A	109.00	245	124	0.012	25	211
Antel LPA-80063/4CF	109.00	120	61	0.006	12	103
Commscope SBNHH-1D65	109.00	304	155	0.015	32	262
Flat T-Arm	109.00	750	381	0.037	78	645
Pine Branch	109.00	600	305	0.030	62	516
VZW Unused Reserve (	109.00	1,303	662	0.064	136	1,121
Pine Branch	104.00	600	286	0.028	59	516
Generic RCU (Remote	100.00	18	8	0.001	2	15
CCI DTMABP7819VG12A	100.00	173	78	0.008	16	149
Raycap DC6-48-60-18-	100.00	32	14	0.001	3	27
Raycap DC6-48-60-18-	100.00	33	15	0.001	3	28
Ericsson RRUS-11 (50	100.00	150	68	0.007	14	129
Ericsson RRUS 32 (50	100.00	152	69	0.007	14	131
Ericsson RRUS 32 B2	100.00	159	72	0.007	15	137
Quintel QS66512-2	100.00	111	50	0.005	10	96
Andrew SBNH-1D6565C	100.00	365	165	0.016	34	314
Flat T-Arm	100.00	750	340	0.033	70	645
CCI TPA-65R-LCUUUU-H	100.00	163	74	0.007	15	140
Pine Branch	99.00	600	268	0.026	55	516
Pine Branch	94.00	600	250	0.024	51	516
Pine Branch	89.00	600	233	0.023	48	516
Pine Branch	84.00	600	216	0.021	44	516
Pine Branch	79.00	600	199	0.019	41	516
Pine Branch	74.00	600	182	0.018	37	516
Pine Branch	69.00	600	166	0.016	34	516
Pine Branch	64.00	600	150	0.015	31	516
Pine Branch	59.00	600	135	0.013	28	516
		41,566	10,293	1.000	2,109	35,769

Load Case 1.2D + 1.0Ev + 1.0Eh Seismic

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	-49.41	-2.11	0.00	-174.49	0.00	174.49	6,566.18	1,629.27	8,609.06	7,898.16	0.00	0.00	0.030
5.00	-47.23	-2.11	0.00	-163.95	0.00	163.95	6,448.38	1,587.47	8,172.96	7,555.74	0.00	-0.01	0.029
10.00	-45.10	-2.10	0.00	-153.40	0.00	153.40	6,327.91	1,545.66	7,748.20	7,217.61	0.01	-0.01	0.028
15.00	-43.02	-2.09	0.00	-142.88	0.00	142.88	6,204.77	1,503.85	7,334.77	6,884.02	0.03	-0.02	0.028
20.00	-40.99	-2.07	0.00	-132.42	0.00	132.42	6,078.95	1,462.04	6,932.67	6,555.22	0.05	-0.02	0.027
25.00	-39.01	-2.05	0.00	-122.05	0.00	122.05	5,950.47	1,420.24	6,541.91	6,231.45	0.08	-0.03	0.026
30.00	-37.08	-2.02	0.00	-111.79	0.00	111.79	5,819.32	1,378.43	6,162.49	5,912.97	0.12	-0.04	0.025
35.00	-35.20	-1.99	0.00	-101.69	0.00	101.69	5,658.36	1,336.62	5,794.40	5,573.30	0.16	-0.04	0.024
40.00	-33.79	-1.95	0.00	-91.76	0.00	91.76	5,481.38	1,294.81	5,437.64	5,228.36	0.21	-0.05	0.024
43.83	-33.05	-1.94	0.00	-84.27	0.00	84.27	5,345.86	1,262.80	5,172.14	4,971.70	0.25	-0.05	0.023
45.00	-29.95	-1.85	0.00	-82.00	0.00	82.00	5,304.39	1,253.01	5,092.22	4,894.44	0.26	-0.06	0.022
50.00	-29.85	-1.85	0.00	-72.75	0.00	72.75	5,127.40	1,211.20	4,758.13	4,571.54	0.32	-0.06	0.022
50.17	-28.32	-1.80	0.00	-72.43	0.00	72.43	4,537.16	1,081.37	4,334.33	4,134.30	0.33	-0.06	0.024
55.00	-27.09	-1.76	0.00	-63.75	0.00	63.75	4,425.87	1,046.06	4,055.98	3,899.95	0.39	-0.07	0.022
59.00	-26.05	-1.72	0.00	-56.72	0.00	56.72	4,304.44	1,016.80	3,832.25	3,685.77	0.45	-0.07	0.021
60.00	-24.85	-1.67	0.00	-55.00	0.00	55.00	4,273.47	1,009.48	3,777.30	3,632.64	0.47	-0.07	0.021
64.00	-23.81	-1.63	0.00	-48.32	0.00	48.32	4,149.58	980.22	3,561.50	3,424.00	0.53	-0.08	0.020
65.00	-22.65	-1.58	0.00	-46.69	0.00	46.69	4,118.61	972.90	3,508.54	3,372.81	0.55	-0.08	0.019
69.00	-21.63	-1.53	0.00	-40.39	0.00	40.39	3,994.72	943.63	3,300.67	3,171.88	0.61	-0.08	0.018
70.00	-20.50	-1.47	0.00	-38.86	0.00	38.86	3,963.74	936.32	3,249.70	3,122.61	0.63	-0.09	0.018
74.00	-19.48	-1.42	0.00	-32.97	0.00	32.97	3,839.85	907.05	3,049.76	2,929.40	0.71	-0.09	0.016
75.00	-18.39	-1.36	0.00	-31.55	0.00	31.55	3,808.88	899.74	3,000.77	2,882.06	0.72	-0.09	0.016
79.00	-17.38	-1.31	0.00	-26.10	0.00	26.10	3,684.99	870.47	2,808.77	2,696.56	0.80	-0.09	0.014
80.00	-16.33	-1.24	0.00	-24.80	0.00	24.80	3,654.02	863.15	2,761.76	2,651.15	0.82	-0.09	0.014
84.00	-15.32	-1.18	0.00	-19.82	0.00	19.82	3,530.13	833.89	2,577.69	2,473.36	0.90	-0.10	0.012
85.00	-14.30	-1.12	0.00	-18.64	0.00	18.64	3,499.16	826.57	2,532.67	2,429.88	0.92	-0.10	0.012
89.00	-13.40	-1.06	0.00	-14.17	0.00	14.17	3,375.27	797.31	2,356.53	2,259.81	1.01	-0.10	0.010
89.66	-13.27	-1.05	0.00	-13.47	0.00	13.47	3,354.86	792.49	2,328.13	2,232.39	1.02	-0.10	0.010
90.00	-11.85	-0.95	0.00	-13.11	0.00	13.11	3,344.29	789.99	2,313.49	2,218.25	1.03	-0.10	0.009
94.00	-10.99	-0.89	0.00	-9.30	0.00	9.30	3,220.40	760.73	2,145.29	2,055.89	1.12	-0.10	0.008
94.35	-10.88	-0.88	0.00	-8.99	0.00	8.99	1,736.61	442.83	1,271.90	1,136.26	1.12	-0.10	0.014
95.00	-10.23	-0.84	0.00	-8.41	0.00	8.41	1,729.57	440.09	1,256.25	1,124.62	1.14	-0.10	0.013
99.00	-9.32	-0.77	0.00	-5.06	0.00	5.06	1,685.47	423.37	1,162.61	1,053.98	1.23	-0.11	0.010
100.00	-6.24	-0.53	0.00	-4.30	0.00	4.30	1,674.18	419.19	1,139.76	1,036.49	1.25	-0.11	0.008
104.00	-5.39	-0.46	0.00	-2.17	0.00	2.17	1,627.96	402.47	1,050.65	967.33	1.34	-0.11	0.006
105.00	-4.95	-0.43	0.00	-1.71	0.00	1.71	1,616.13	398.29	1,028.94	950.25	1.36	-0.11	0.005
109.00	-0.09	-0.01	0.00	-0.01	0.00	0.01	1,567.77	381.56	944.36	882.77	1.45	-0.11	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	1,555.41	377.38	923.78	866.13	1.48	-0.11	0.000
111.00	0.00	0.00	0.00	0.00	0.00	0.00	1,542.94	373.20	903.43	849.58	1.50	-0.11	0.000

Load Case 0.9D - 1.0Ev + 1.0Eh Seismic (Reduced DL)

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	-34.30	-2.11	0.00	-173.72	0.00	173.72	6,566.18	1,629.27	8,609.06	7,898.16	0.00	0.00	0.027
5.00	-32.79	-2.11	0.00	-163.18	0.00	163.18	6,448.38	1,587.47	8,172.96	7,555.74	0.00	-0.01	0.027
10.00	-31.31	-2.10	0.00	-152.65	0.00	152.65	6,327.91	1,545.66	7,748.20	7,217.61	0.01	-0.01	0.026
15.00	-29.87	-2.09	0.00	-142.15	0.00	142.15	6,204.77	1,503.85	7,334.77	6,884.02	0.03	-0.02	0.025
20.00	-28.46	-2.07	0.00	-131.71	0.00	131.71	6,078.95	1,462.04	6,932.67	6,555.22	0.05	-0.02	0.025
25.00	-27.08	-2.04	0.00	-121.37	0.00	121.37	5,950.47	1,420.24	6,541.91	6,231.45	0.08	-0.03	0.024
30.00	-25.74	-2.01	0.00	-111.15	0.00	111.15	5,819.32	1,378.43	6,162.49	5,912.97	0.12	-0.04	0.023
35.00	-24.44	-1.98	0.00	-101.08	0.00	101.08	5,658.36	1,336.62	5,794.40	5,573.30	0.16	-0.04	0.022
40.00	-23.46	-1.95	0.00	-91.19	0.00	91.19	5,481.38	1,294.81	5,437.64	5,228.36	0.21	-0.05	0.022
43.83	-22.95	-1.93	0.00	-83.75	0.00	83.75	5,345.86	1,262.80	5,172.14	4,971.70	0.25	-0.05	0.021
45.00	-20.79	-1.84	0.00	-81.49	0.00	81.49	5,304.39	1,253.01	5,092.22	4,894.44	0.26	-0.06	0.021
50.00	-20.72	-1.84	0.00	-72.29	0.00	72.29	5,127.40	1,211.20	4,758.13	4,571.54	0.32	-0.06	0.020
50.17	-19.66	-1.79	0.00	-71.96	0.00	71.96	4,537.16	1,081.37	4,334.33	4,134.30	0.32	-0.06	0.022
55.00	-18.81	-1.75	0.00	-63.33	0.00	63.33	4,425.87	1,046.06	4,055.98	3,899.95	0.39	-0.07	0.020
59.00	-18.08	-1.71	0.00	-56.34	0.00	56.34	4,304.44	1,016.80	3,832.25	3,685.77	0.45	-0.07	0.019
60.00	-17.25	-1.66	0.00	-54.64	0.00	54.64	4,273.47	1,009.48	3,777.30	3,632.64	0.46	-0.07	0.019
64.00	-16.53	-1.62	0.00	-48.00	0.00	48.00	4,149.58	980.22	3,561.50	3,424.00	0.53	-0.08	0.018
65.00	-15.73	-1.57	0.00	-46.38	0.00	46.38	4,118.61	972.90	3,508.54	3,372.81	0.54	-0.08	0.018
69.00	-15.01	-1.52	0.00	-40.12	0.00	40.12	3,994.72	943.63	3,300.67	3,171.88	0.61	-0.08	0.016
70.00	-14.23	-1.46	0.00	-38.60	0.00	38.60	3,963.74	936.32	3,249.70	3,122.61	0.63	-0.08	0.016
74.00	-13.52	-1.41	0.00	-32.75	0.00	32.75	3,839.85	907.05	3,049.76	2,929.40	0.70	-0.09	0.015
75.00	-12.77	-1.35	0.00	-31.34	0.00	31.34	3,808.88	899.74	3,000.77	2,882.06	0.72	-0.09	0.014
79.00	-12.07	-1.30	0.00	-25.92	0.00	25.92	3,684.99	870.47	2,808.77	2,696.56	0.80	-0.09	0.013
80.00	-11.33	-1.24	0.00	-24.63	0.00	24.63	3,654.02	863.15	2,761.76	2,651.15	0.82	-0.09	0.012
84.00	-10.64	-1.17	0.00	-19.69	0.00	19.69	3,530.13	833.89	2,577.69	2,473.36	0.90	-0.10	0.011
85.00	-9.93	-1.11	0.00	-18.51	0.00	18.51	3,499.16	826.57	2,532.67	2,429.88	0.92	-0.10	0.010
89.00	-9.30	-1.05	0.00	-14.07	0.00	14.07	3,375.27	797.31	2,356.53	2,259.81	1.00	-0.10	0.009
89.66	-9.21	-1.04	0.00	-13.38	0.00	13.38	3,354.86	792.49	2,328.13	2,232.39	1.02	-0.10	0.009
90.00	-8.23	-0.95	0.00	-13.02	0.00	13.02	3,344.29	789.99	2,313.49	2,218.25	1.02	-0.10	0.008
94.00	-7.63	-0.89	0.00	-9.23	0.00	9.23	3,220.40	760.73	2,145.29	2,055.89	1.11	-0.10	0.007
94.35	-7.55	-0.88	0.00	-8.93	0.00	8.93	1,736.61	442.83	1,271.90	1,136.26	1.12	-0.10	0.012
95.00	-7.10	-0.83	0.00	-8.35	0.00	8.35	1,729.57	440.09	1,256.25	1,124.62	1.13	-0.10	0.012
99.00	-6.47	-0.76	0.00	-5.03	0.00	5.03	1,685.47	423.37	1,162.61	1,053.98	1.22	-0.11	0.009
100.00	-4.33	-0.53	0.00	-4.27	0.00	4.27	1,674.18	419.19	1,139.76	1,036.49	1.24	-0.11	0.007
104.00	-3.74	-0.46	0.00	-2.16	0.00	2.16	1,627.96	402.47	1,050.65	967.33	1.33	-0.11	0.005
105.00	-3.44	-0.42	0.00	-1.70	0.00	1.70	1,616.13	398.29	1,028.94	950.25	1.36	-0.11	0.004
109.00	-0.06	-0.01	0.00	-0.01	0.00	0.01	1,567.77	381.56	944.36	882.77	1.45	-0.11	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	1,555.41	377.38	923.78	866.13	1.47	-0.11	0.000
111.00	0.00	0.00	0.00	0.00	0.00	0.00	1,542.94	373.20	903.43	849.58	1.49	-0.11	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 + 1.0W	45.43	0.00	49.83	0.00	0.00	3825.82	0.00	0.49
0.9D + 1.0W	45.41	0.00	37.36	0.00	0.00	3811.40	0.00	0.49
1.2D + 1.0Di + 1.0Wi	13.57	0.00	70.07	0.00	0.00	1140.11	0.00	0.16
1.2D + 1.0Ev + 1.0Eh	2.11	0.00	49.41	0.00	0.00	174.49	0.00	0.03
0.9D - 1.0Ev + 1.0Eh	2.11	0.00	34.30	0.00	0.00	173.72	0.00	0.03
1.0D + 1.0W	10.69	0.00	41.56	0.00	0.00	898.13	0.00	0.12

AMERICAN TOWER CORPORATION

Base Plate & Anchor Rod Analysis

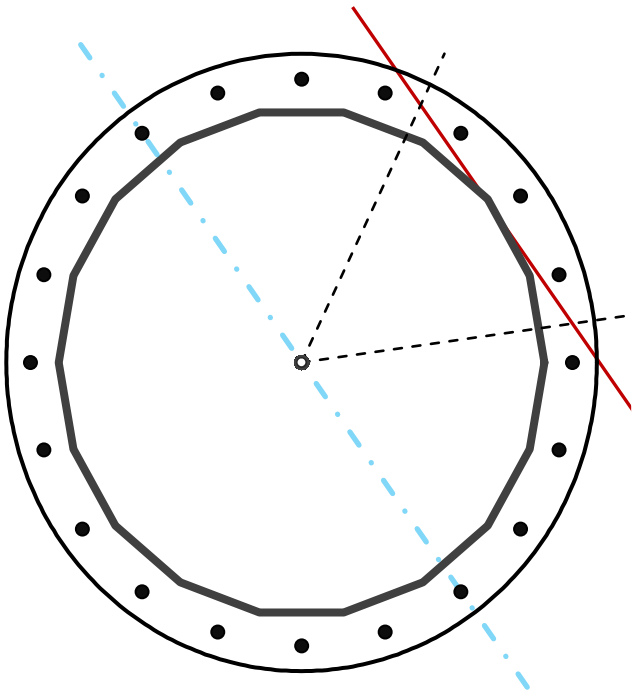
Pole Dimensions		
Number of Sides	18	-
Diameter	59	in
Thickness	1/2	in
Orientation Offset		°

Base Reactions		
Moment, Mu	3,825.8	k-ft
Axial, Pu	49.8	k
Shear, Vu	45.4	k
Neutral Axis	306	°

Report Capacities		
Component	Capacity	Result
Base Plate	20%	Pass
Anchor Rods	60%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	73	in
Thickness	3	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	N/A	in
Orientation Offset		°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	718.8	k
Bending Stress, ϕMn	3547.8	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	20	-
Diameter, ø	2 1/4	in
Bolt Circle	67	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	10.5	in
Orientation Offset		°
Applied Force, Pu	144.5	k
Anchor Rods, ϕPn	243.6	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	45.4	3825.8	1.00
Anchor Rod Forces	45.4	3825.8	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	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	91.4258	5.0792	0.4251		39117.88
Bolt	3.9761	3.2477	0.8393	4.5	33925.84
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	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Round	-
Diameter, D	73	in
Thickness, t	3	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	42.988	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	20	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	67	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	144.5	k
Applied Shear, Vu	1.1	k
Compressive Capacity, ϕPn	243.6	k
Tensile Capacity, ϕRnt	0.593	OK
Interaction Capacity	0.602	OK

External Base Plate		
Chord Length AA	36.531	in
Additional AA	6.000	in
Section Modulus, Z	95.694	in^3
Applied Moment, Mu	718.8	k-ft
Bending Capacity, ϕMn	4306.2	k-ft
Capacity, Mu/ϕMn	0.167	OK
Chord Length AB	35.011	in
Additional AB	6.000	in
Section Modulus, Z	92.276	in^3
Applied Moment, Mu	527.5	k-ft
Bending Capacity, ϕMn	4152.4	k-ft
Capacity, Mu/ϕMn	0.127	OK
Bend Line Length	35.040	in
Additional Bend Line	0.000	in
Section Modulus, Z	78.839	in^3
Applied Moment, Mu	718.8	k-ft
Bending Capacity, ϕMn	3547.8	k-ft
Capacity, Mu/ϕMn	0.203	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		

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Mt. Laurel, NJ 08054
856.797.0412
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Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10086840
Maser Consulting Connecticut Project #: 21777814A

July 22, 2021

Site Information	*Site ID:*	*467261-VZW / FARMINGTON N 2 CT*
	Site Name:	*FARMINGTON N 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*199 Town Farm Road* *Farmington, Connecticut 06032* *Hartford County*
	Latitude:	*41.757775°*
	Longitude:	*-72.829931°*
Structure Information	*Tower Type:*	*111-Ft Monopole*
	Mount Type:	*9.50-Ft T-Arm*

FUZE ID # 16244117

Analysis Results

T-Arm: **75.7% Pass**

******Contractor PMI Requirements***:
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared By: Cody Sherman

Digitally signed by Eric Anderson
Date: 2021.07.23 17:24:16-04'00'

Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS Site ID: 812453, dated March 19, 2021*
Desktop Mount Mapping Form	*Colliers Engineering & Design, Project #: 21777814, dated June 22, 2021*
Previous Mount Analysis	*Maser Consulting Project #: 21777814A, dated July 9, 2021*
Mount Modification Drawings	*Maser Consulting Project #: 21777814A, dated July 19, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	117 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.50 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.993
Seismic Parameters:	S_S:	0.185
	S_1:	0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
108.00	110.00	3	Samsung	MT6407-77A	Added
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		6	Andrew	SBNHH-1D65B	Retained
		6	Antel	LPA-80063/4CF	
		2	Raycap	OVP*	

* Equipment to be flush mounted directly to the Monopole. They are not mounted on T-Arm mounts and are not included in this mount analysis.

The recent mount mapping reported existing OVP units. It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-B1-6C-12AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

   Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

   The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by Maser Consulting Connecticut, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Proposed Face Horizontal	29.0%	Pass
Proposed Standoff Horizontal	44.0%	Pass
Face Horizontal	16.0%	Pass
Mount Pipe	22.0%	Pass
Standoff	25.0%	Pass
Mount Connection	75.7%	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**75.7%**

Recommendation:

The existing mounts will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. Mount Photos
2. Desktop Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter


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Desktop Mount Mapping Form

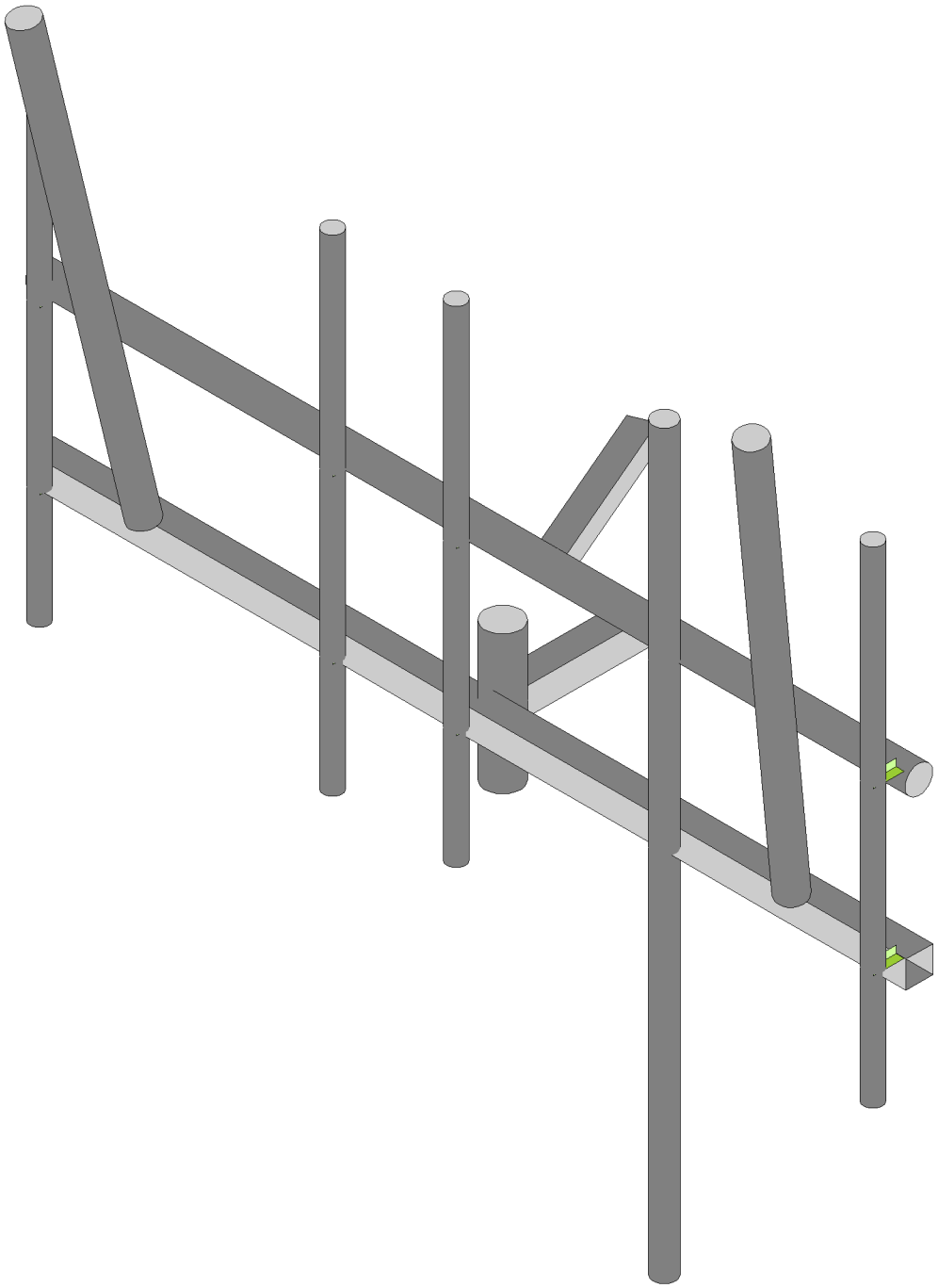
Site Name:	Farmington_N_2_CT	**Tower Type:**	Monopole
Site ID:	467261	**Tower Owner:**	ATC Sequoia
FUZE Project ID:	16244117	**Tower Height (Ft.):**	
Customer:	Verizon Wireless	**Mount Elevation (Ft.):**	
Colliers Project No.	21777814	**Date:**	6/22/2021

Document Type	Provided? (Yes/No)	Source Name	Project No.	Dated	Comments/Remarks
Previous Mount Mapping	No				
Previous Mapping Photos	No				
Previous Mount Analysis	No				
Previous Mount Modifications	No				
Previous Structural Analysis	No				
Construction Drawings	Yes	Nexius	VZ11509	3/21/2018	
Closeout Package	No				
Closeout Photos	No				
Handover Package	No				
New Build 445 Documentation	No				
Other	Yes	Elite		4/30/2021	Ground Photo Package
Previous PMI	No				

The desktop mount mapping is based on the engineering review of the available site documents in FUZE, as listed above, in place of a full mount mapping. It is assumed that the information provided in the documents listed above, provide an accurate representation of the existing mount. EOR reserves the right and will typically require additional clarification and verification as will be included in the PMI requirements. During the Post Modification Inspection (PMI) process, the GC on site will be required to confirm all questions, confirmations, and validations as posed by the EOR. The engineering review for this desktop mount mapping was performed in accordance to the ANSI/TIA-222-H requirements and Verizon's NSTD446 standard.

Photo taken from: Closeout Package

Photo taken from: Closeout Package



Envelope Only Solution

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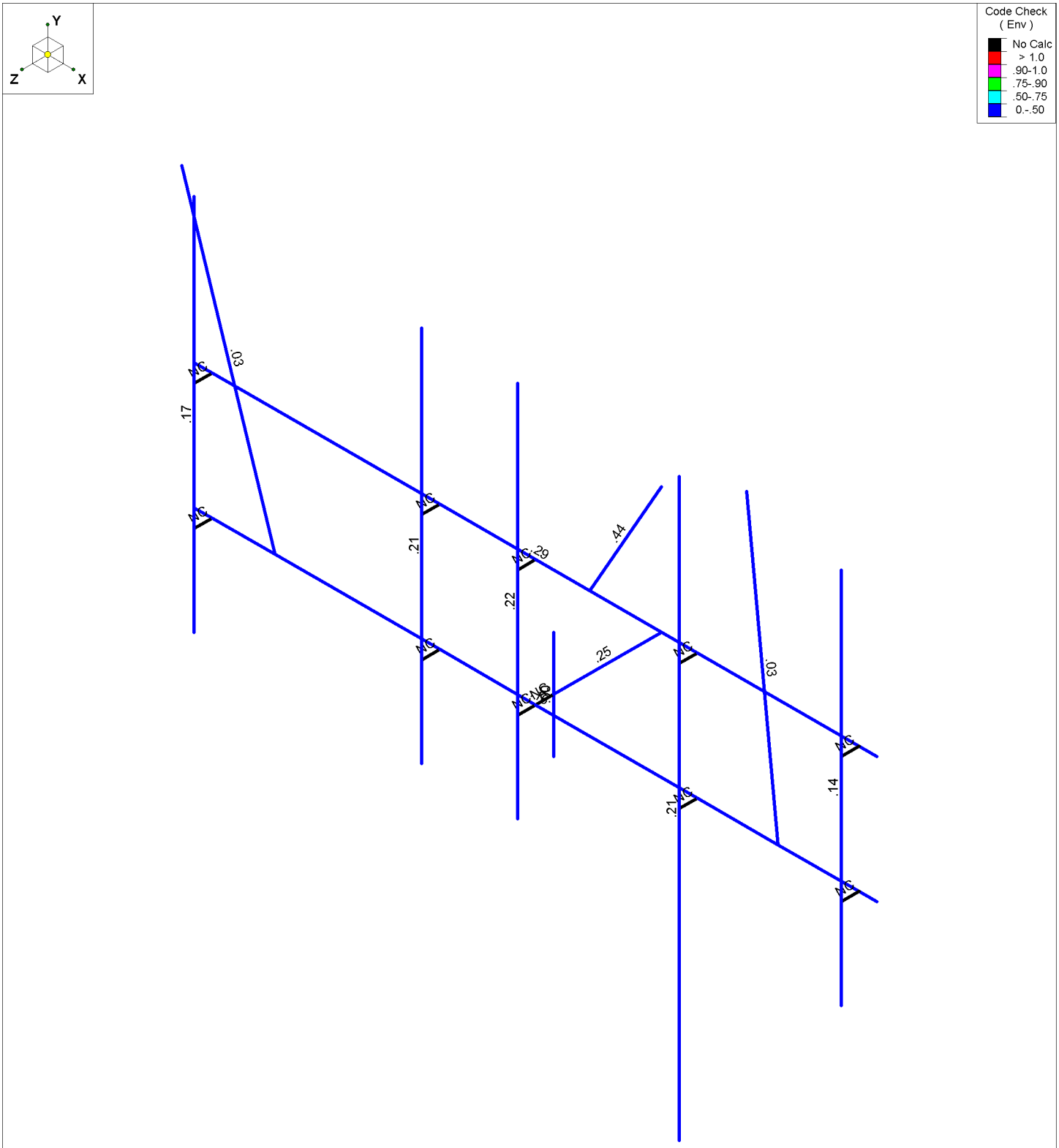

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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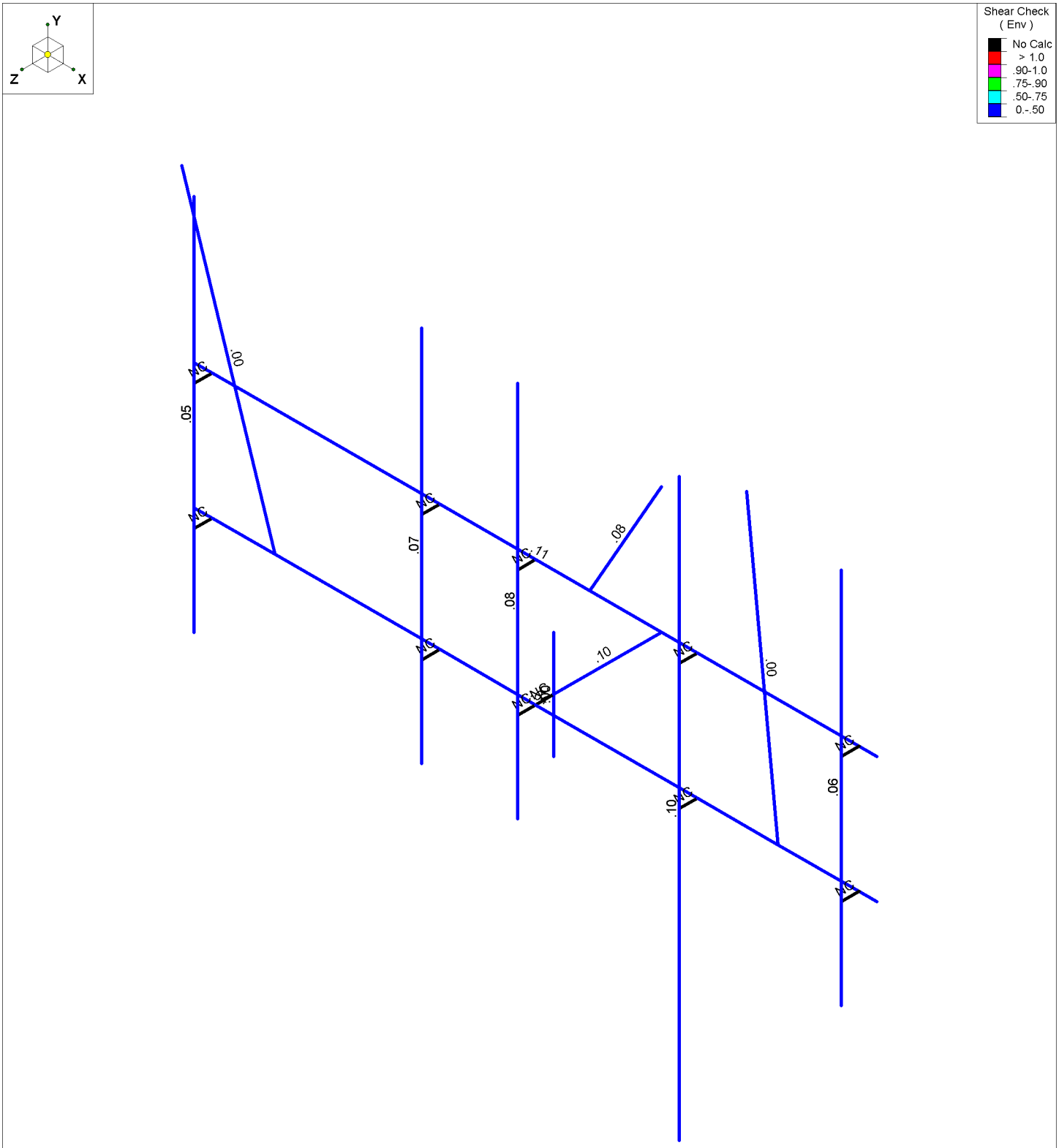

Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting		SK - 3
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Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Antenna D	None					36			
2	Antenna Di	None					36			
3	Antenna Wo (0 Deg)	None					36			
4	Antenna Wo (30 Deg)	None					36			
5	Antenna Wo (60 Deg)	None					36			
6	Antenna Wo (90 Deg)	None					36			
7	Antenna Wo (120 Deg)	None					36			
8	Antenna Wo (150 Deg)	None					36			
9	Antenna Wo (180 Deg)	None					36			
10	Antenna Wo (210 Deg)	None					36			
11	Antenna Wo (240 Deg)	None					36			
12	Antenna Wo (270 Deg)	None					36			
13	Antenna Wo (300 Deg)	None					36			
14	Antenna Wo (330 Deg)	None					36			
15	Antenna Wi (0 Deg)	None					36			
16	Antenna Wi (30 Deg)	None					36			
17	Antenna Wi (60 Deg)	None					36			
18	Antenna Wi (90 Deg)	None					36			
19	Antenna Wi (120 Deg)	None					36			
20	Antenna Wi (150 Deg)	None					36			
21	Antenna Wi (180 Deg)	None					36			
22	Antenna Wi (210 Deg)	None					36			
23	Antenna Wi (240 Deg)	None					36			
24	Antenna Wi (270 Deg)	None					36			
25	Antenna Wi (300 Deg)	None					36			
26	Antenna Wi (330 Deg)	None					36			
27	Antenna Wm (0 Deg)	None					36			
28	Antenna Wm (30 Deg)	None					36			
29	Antenna Wm (60 Deg)	None					36			
30	Antenna Wm (90 Deg)	None					36			
31	Antenna Wm (120 Deg)	None					36			
32	Antenna Wm (150 Deg)	None					36			
33	Antenna Wm (180 Deg)	None					36			
34	Antenna Wm (210 Deg)	None					36			
35	Antenna Wm (240 Deg)	None					36			
36	Antenna Wm (270 Deg)	None					36			
37	Antenna Wm (300 Deg)	None					36			
38	Antenna Wm (330 Deg)	None					36			
39	Structure D	None		-1						
40	Structure Di	None						12		
41	Structure Wo (0 Deg)	None						24		
42	Structure Wo (30 Deg)	None						24		
43	Structure Wo (60 Deg)	None						24		
44	Structure Wo (90 Deg)	None						24		
45	Structure Wo (120 Deg)	None						24		
46	Structure Wo (150 Deg)	None						24		
47	Structure Wo (180 Deg)	None						24		
48	Structure Wo (210 Deg)	None						24		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
49	Structure Wo (240 Deg)	None						24		
50	Structure Wo (270 Deg)	None						24		
51	Structure Wo (300 Deg)	None						24		
52	Structure Wo (330 Deg)	None						24		
53	Structure Wi (0 Deg)	None						24		
54	Structure Wi (30 Deg)	None						24		
55	Structure Wi (60 Deg)	None						24		
56	Structure Wi (90 Deg)	None						24		
57	Structure Wi (120 Deg)	None						24		
58	Structure Wi (150 Deg)	None						24		
59	Structure Wi (180 Deg)	None						24		
60	Structure Wi (210 Deg)	None						24		
61	Structure Wi (240 Deg)	None						24		
62	Structure Wi (270 Deg)	None						24		
63	Structure Wi (300 Deg)	None						24		
64	Structure Wi (330 Deg)	None						24		
65	Structure Wm (0 Deg)	None						24		
66	Structure Wm (30 Deg)	None						24		
67	Structure Wm (60 Deg)	None						24		
68	Structure Wm (90 Deg)	None						24		
69	Structure Wm (120 Deg)	None						24		
70	Structure Wm (150 Deg)	None						24		
71	Structure Wm (180 Deg)	None						24		
72	Structure Wm (210 Deg)	None						24		
73	Structure Wm (240 Deg)	None						24		
74	Structure Wm (270 Deg)	None						24		
75	Structure Wm (300 Deg)	None						24		
76	Structure Wm (330 Deg)	None						24		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 Deg)	Yes	Y		1	1.2	39	1.2	3	1	41	1														
2	1.2D+1.0Wo (30 Deg)	Yes	Y		1	1.2	39	1.2	4	1	42	1														
3	1.2D+1.0Wo (60 Deg)	Yes	Y		1	1.2	39	1.2	5	1	43	1														
4	1.2D+1.0Wo (90 Deg)	Yes	Y		1	1.2	39	1.2	6	1	44	1														
5	1.2D+1.0Wo (120 Deg)	Yes	Y		1	1.2	39	1.2	7	1	45	1														
6	1.2D+1.0Wo (150 Deg)	Yes	Y		1	1.2	39	1.2	8	1	46	1														
7	1.2D+1.0Wo (180 Deg)	Yes	Y		1	1.2	39	1.2	9	1	47	1														
8	1.2D+1.0Wo (210 Deg)	Yes	Y		1	1.2	39	1.2	10	1	48	1														
9	1.2D+1.0Wo (240 Deg)	Yes	Y		1	1.2	39	1.2	11	1	49	1														
10	1.2D+1.0Wo (270 Deg)	Yes	Y		1	1.2	39	1.2	12	1	50	1														
11	1.2D+1.0Wo (300 Deg)	Yes	Y		1	1.2	39	1.2	13	1	51	1														
12	1.2D+1.0Wo (330 Deg)	Yes	Y		1	1.2	39	1.2	14	1	52	1														
13	1.2D + 1.0Di + 1.0Wi (0 ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + 1.0Wi (3...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										
15	1.2D + 1.0Di + 1.0Wi (6...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1										

Load Combinations (Continued)

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
16	1.2D + 1.0Di + 1.0Wi (9...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0Wi (1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0Wi (1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0Wi (1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0Wi (2...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi (2...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi (2...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi (3...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi (3...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0Wm...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N3	-2.654335	3.25	-3.097664	0	
2	N4	6.845665	3.25	-3.097664	0	
3	N6	2.095665	3.25	-3.097664	0	
4	N32	2.095665	3.25	-3.347664	0	
5	N52	6.595665	3.25	-3.097664	0	
6	N55A	6.595665	3.25	-2.847664	0	
7	N56A	6.595665	7.25	-2.847664	0	
8	N57A	6.595665	2	-2.847664	0	
9	N23	2.095665	3.25	-4.847664	0	
10	N14	4.345665	3.25	-3.097664	0	
11	N15	4.345665	3.25	-2.847664	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
12	N16	4.345665	7.25	-2.847664	0	
13	N17	4.345665	-.75	-2.847664	0	
14	N23A	2.095665	3.25	-2.847664	0	
15	N24	2.095665	7.25	-2.847664	0	
16	N25	2.095665	2	-2.847664	0	
17	N21A	0.762332	3.25	-3.097664	0	
18	N30	0.762332	3.25	-2.847664	0	
19	N31	0.762332	7.25	-2.847664	0	
20	N32A	0.762332	2	-2.847664	0	
21	N37	-2.404335	3.25	-3.097664	0	
22	N38	-2.404335	3.25	-2.847664	0	
23	N39	-2.404335	7.25	-2.847664	0	
24	N40	-2.404335	2	-2.847664	0	
25	N25A	2.095665	4	-3.347664	0	
26	N26	2.095665	2.5	-3.347664	0	
27	N27	5.470665	3.25	-3.097664	0	
28	N28	-1.529335	3.25	-3.097664	0	
29	N29	5.899823	8.155301	-2.229423	0	
30	N30A	-1.958493	8.155301	-2.229423	0	
31	N31A	-2.654335	5	-3.097664	0	
32	N32B	6.845665	5	-3.097664	0	
33	N33	2.095665	5	-3.097664	0	
34	N34	6.595665	5	-3.097664	0	
35	N35	6.595665	5	-2.847664	0	
36	N36	4.345665	5	-3.097664	0	
37	N37A	4.345665	5	-2.847664	0	
38	N38A	2.095665	5	-2.847664	0	
39	N39A	0.762332	5	-3.097664	0	
40	N40A	0.762332	5	-2.847664	0	
41	N41	-2.404335	5	-3.097664	0	
42	N42	-2.404335	5	-2.847664	0	
43	N43	2.095665	5	-4.847664	0	
44	N44	2.845665	5	-3.097664	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	HSS3.5X3.5X4	Beam	Tube	A500 Gr.B Rect	Typical	2.91	5.04	5.04	8.35
3	Standoff	HSS3.5X3.5X4	Beam	Tube	A500 Gr.B Rect	Typical	2.91	5.04	5.04	8.35
4	Mast Pipe	PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical	2.96	6.82	6.82	13.6
5	Branches	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
6	New Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
7	New Standoff	HSS3X3X4	Beam	Tube	A500 Gr.B Rect	Typical	2.44	3.02	3.02	5.08
8	P2.5 Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M2	N3	N4			Face Horizontal	Beam	Tube	A500 Gr.B...	Typical
2	M15	N6	N32			RIGID	None	None	RIGID	Typical
3	M30A	N52	N55A			RIGID	None	None	RIGID	Typical
4	MP1A	N56A	N57A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
5	M12	N32	N23			Standoff	Beam	Tube	A500 Gr.B...	Typical
6	M8	N14	N15			RIGID	None	None	RIGID	Typical
7	MP2A	N16	N17			P2.5 Mount Pipe	Column	Pipe	A53 Gr.B	Typical
8	M12A	N6	N23A			RIGID	None	None	RIGID	Typical
9	MP3A	N24	N25			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
10	M20	N21A	N30			RIGID	None	None	RIGID	Typical
11	MP4A	N31	N32A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
12	M36	N37	N38			RIGID	None	None	RIGID	Typical
13	MP5A	N39	N40			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
14	M14	N25A	N26			Mast Pipe	Beam	Pipe	A53 Gr.B	Typical
15	M15A	N30A	N28			Branches	Beam	Pipe	A53 Gr.B	Typical
16	M16	N29	N27			Branches	Beam	Pipe	A53 Gr.B	Typical
17	M17	N31A	N32B			New Face Hori...	Beam	Pipe	A53 Gr.B	Typical
18	M18	N34	N35			RIGID	None	None	RIGID	Typical
19	M19	N36	N37A			RIGID	None	None	RIGID	Typical
20	M20A	N33	N38A			RIGID	None	None	RIGID	Typical
21	M21	N39A	N40A			RIGID	None	None	RIGID	Typical
22	M22	N41	N42			RIGID	None	None	RIGID	Typical
23	M23	N44	N43			New Standoff	Beam	Tube	A500 Gr.B...	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M2						Yes				None
2	M15		OOOOOO				Yes	** NA **			None
3	M30A						Yes	** NA **			None
4	MP1A						Yes	** NA **			None
5	M12						Yes				None
6	M8						Yes	** NA **			None
7	MP2A						Yes	** NA **			None
8	M12A						Yes	** NA **			None
9	MP3A						Yes	** NA **			None
10	M20						Yes	** NA **			None
11	MP4A						Yes	** NA **			None
12	M36						Yes	** NA **			None
13	MP5A						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
14	M14						Yes				None
15	M15A						Yes				None
16	M16						Yes				None
17	M17						Yes	Default			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20A						Yes	** NA **			None
21	M21						Yes	** NA **			None
22	M22						Yes	** NA **			None
23	M23						Yes	Default			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-43.55	1
2	MP4A	My	-.022	1
3	MP4A	Mz	0	1
4	MP4A	Y	-43.55	3
5	MP4A	My	-.022	3
6	MP4A	Mz	0	3
7	MP2A	Y	-84.4	2
8	MP2A	My	.042	2
9	MP2A	Mz	0	2
10	MP3A	Y	-70.3	2
11	MP3A	My	.035	2
12	MP3A	Mz	0	2
13	MP2A	Y	-20	.5
14	MP2A	My	-.01	.5
15	MP2A	Mz	.012	.5
16	MP2A	Y	-20	3.5
17	MP2A	My	-.01	3.5
18	MP2A	Mz	.012	3.5
19	MP2A	Y	-20	.5
20	MP2A	My	-.01	.5
21	MP2A	Mz	-.012	.5
22	MP2A	Y	-20	3.5
23	MP2A	My	-.01	3.5
24	MP2A	Mz	-.012	3.5
25	MP1A	Y	-10	1
26	MP1A	My	-.005	1
27	MP1A	Mz	0	1
28	MP1A	Y	-10	3
29	MP1A	My	-.005	3
30	MP1A	Mz	0	3
31	MP5A	Y	-10	1
32	MP5A	My	-.005	1
33	MP5A	Mz	0	1
34	MP5A	Y	-10	3
35	MP5A	My	-.005	3
36	MP5A	Mz	0	3

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	Y	-54.9	1
2	MP4A	My	-.027	1
3	MP4A	Mz	0	1
4	MP4A	Y	-54.9	3
5	MP4A	My	-.027	3
6	MP4A	Mz	0	3
7	MP2A	Y	-69.735	2
8	MP2A	My	.035	2
9	MP2A	Mz	0	2
10	MP3A	Y	-62.945	2
11	MP3A	My	.031	2
12	MP3A	Mz	0	2
13	MP2A	Y	-93.745	.5
14	MP2A	My	-.047	.5
15	MP2A	Mz	.055	.5
16	MP2A	Y	-93.745	3.5
17	MP2A	My	-.047	3.5
18	MP2A	Mz	.055	3.5
19	MP2A	Y	-93.745	.5
20	MP2A	My	-.047	.5
21	MP2A	Mz	-.055	.5
22	MP2A	Y	-93.745	3.5
23	MP2A	My	-.047	3.5
24	MP2A	Mz	-.055	3.5
25	MP1A	Y	-95.989	1
26	MP1A	My	-.048	1
27	MP1A	Mz	0	1
28	MP1A	Y	-95.989	3
29	MP1A	My	-.048	3
30	MP1A	Mz	0	3
31	MP5A	Y	-95.989	1
32	MP5A	My	-.048	1
33	MP5A	Mz	0	1
34	MP5A	Y	-95.989	3
35	MP5A	My	-.048	3
36	MP5A	Mz	0	3

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	-89.972	1
3	MP4A	Mx	0	1
4	MP4A	X	0	3
5	MP4A	Z	-89.972	3
6	MP4A	Mx	0	3
7	MP2A	X	0	2
8	MP2A	Z	-71.595	2
9	MP2A	Mx	0	2
10	MP3A	X	0	2
11	MP3A	Z	-71.595	2
12	MP3A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	0	.5
14	MP2A	Z	-156.207	.5
15	MP2A	Mx	-.091	.5
16	MP2A	X	0	3.5
17	MP2A	Z	-156.207	3.5
18	MP2A	Mx	-.091	3.5
19	MP2A	X	0	.5
20	MP2A	Z	-156.207	.5
21	MP2A	Mx	.091	.5
22	MP2A	X	0	3.5
23	MP2A	Z	-156.207	3.5
24	MP2A	Mx	.091	3.5
25	MP1A	X	0	1
26	MP1A	Z	-117.73	1
27	MP1A	Mx	0	1
28	MP1A	X	0	3
29	MP1A	Z	-117.73	3
30	MP1A	Mx	0	3
31	MP5A	X	0	1
32	MP5A	Z	-117.73	1
33	MP5A	Mx	0	1
34	MP5A	X	0	3
35	MP5A	Z	-117.73	3
36	MP5A	Mx	0	3

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	38.143	1
2	MP4A	Z	-66.065	1
3	MP4A	Mx	-.019	1
4	MP4A	X	38.143	3
5	MP4A	Z	-66.065	3
6	MP4A	Mx	-.019	3
7	MP2A	X	32.83	2
8	MP2A	Z	-56.864	2
9	MP2A	Mx	.016	2
10	MP3A	X	31.694	2
11	MP3A	Z	-54.895	2
12	MP3A	Mx	.016	2
13	MP2A	X	71.49	.5
14	MP2A	Z	-123.825	.5
15	MP2A	Mx	-.108	.5
16	MP2A	X	71.49	3.5
17	MP2A	Z	-123.825	3.5
18	MP2A	Mx	-.108	3.5
19	MP2A	X	71.49	.5
20	MP2A	Z	-123.825	.5
21	MP2A	Mx	.036	.5
22	MP2A	X	71.49	3.5
23	MP2A	Z	-123.825	3.5
24	MP2A	Mx	.036	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	57.129	1
26	MP1A	Z	-98.951	1
27	MP1A	Mx	-.029	1
28	MP1A	X	57.129	3
29	MP1A	Z	-98.951	3
30	MP1A	Mx	-.029	3
31	MP5A	X	57.129	1
32	MP5A	Z	-98.951	1
33	MP5A	Mx	-.029	1
34	MP5A	X	57.129	3
35	MP5A	Z	-98.951	3
36	MP5A	Mx	-.029	3

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	42.358	1
2	MP4A	Z	-24.456	1
3	MP4A	Mx	-.021	1
4	MP4A	X	42.358	3
5	MP4A	Z	-24.456	3
6	MP4A	Mx	-.021	3
7	MP2A	X	46.585	2
8	MP2A	Z	-26.896	2
9	MP2A	Mx	.023	2
10	MP3A	X	40.679	2
11	MP3A	Z	-23.486	2
12	MP3A	Mx	.02	2
13	MP2A	X	100.916	.5
14	MP2A	Z	-58.264	.5
15	MP2A	Mx	-.084	.5
16	MP2A	X	100.916	3.5
17	MP2A	Z	-58.264	3.5
18	MP2A	Mx	-.084	3.5
19	MP2A	X	100.916	.5
20	MP2A	Z	-58.264	.5
21	MP2A	Mx	-.016	.5
22	MP2A	X	100.916	3.5
23	MP2A	Z	-58.264	3.5
24	MP2A	Mx	-.016	3.5
25	MP1A	X	92.938	1
26	MP1A	Z	-53.658	1
27	MP1A	Mx	-.046	1
28	MP1A	X	92.938	3
29	MP1A	Z	-53.658	3
30	MP1A	Mx	-.046	3
31	MP5A	X	92.938	1
32	MP5A	Z	-53.658	1
33	MP5A	Mx	-.046	1
34	MP5A	X	92.938	3
35	MP5A	Z	-53.658	3
36	MP5A	Mx	-.046	3

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	35.224	1
2	MP4A	Z	0	1
3	MP4A	Mx	-.018	1
4	MP4A	X	35.224	3
5	MP4A	Z	0	3
6	MP4A	Mx	-.018	3
7	MP2A	X	47.858	2
8	MP2A	Z	0	2
9	MP2A	Mx	.024	2
10	MP3A	X	38.765	2
11	MP3A	Z	0	2
12	MP3A	Mx	.019	2
13	MP2A	X	103.301	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	-.052	.5
16	MP2A	X	103.301	3.5
17	MP2A	Z	0	3.5
18	MP2A	Mx	-.052	3.5
19	MP2A	X	103.301	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	-.052	.5
22	MP2A	X	103.301	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	-.052	3.5
25	MP1A	X	103.845	1
26	MP1A	Z	0	1
27	MP1A	Mx	-.052	1
28	MP1A	X	103.845	3
29	MP1A	Z	0	3
30	MP1A	Mx	-.052	3
31	MP5A	X	103.845	1
32	MP5A	Z	0	1
33	MP5A	Mx	-.052	1
34	MP5A	X	103.845	3
35	MP5A	Z	0	3
36	MP5A	Mx	-.052	3

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	42.358	1
2	MP4A	Z	24.456	1
3	MP4A	Mx	-.021	1
4	MP4A	X	42.358	3
5	MP4A	Z	24.456	3
6	MP4A	Mx	-.021	3
7	MP2A	X	46.585	2
8	MP2A	Z	26.896	2
9	MP2A	Mx	.023	2
10	MP3A	X	40.679	2
11	MP3A	Z	23.486	2
12	MP3A	Mx	.02	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	100.916	.5
14	MP2A	Z	58.264	.5
15	MP2A	Mx	-.016	.5
16	MP2A	X	100.916	3.5
17	MP2A	Z	58.264	3.5
18	MP2A	Mx	-.016	3.5
19	MP2A	X	100.916	.5
20	MP2A	Z	58.264	.5
21	MP2A	Mx	-.084	.5
22	MP2A	X	100.916	3.5
23	MP2A	Z	58.264	3.5
24	MP2A	Mx	-.084	3.5
25	MP1A	X	92.938	1
26	MP1A	Z	53.658	1
27	MP1A	Mx	-.046	1
28	MP1A	X	92.938	3
29	MP1A	Z	53.658	3
30	MP1A	Mx	-.046	3
31	MP5A	X	92.938	1
32	MP5A	Z	53.658	1
33	MP5A	Mx	-.046	1
34	MP5A	X	92.938	3
35	MP5A	Z	53.658	3
36	MP5A	Mx	-.046	3

Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	38.143	1
2	MP4A	Z	66.065	1
3	MP4A	Mx	-.019	1
4	MP4A	X	38.143	3
5	MP4A	Z	66.065	3
6	MP4A	Mx	-.019	3
7	MP2A	X	32.83	2
8	MP2A	Z	56.864	2
9	MP2A	Mx	.016	2
10	MP3A	X	31.694	2
11	MP3A	Z	54.895	2
12	MP3A	Mx	.016	2
13	MP2A	X	71.49	.5
14	MP2A	Z	123.825	.5
15	MP2A	Mx	.036	.5
16	MP2A	X	71.49	3.5
17	MP2A	Z	123.825	3.5
18	MP2A	Mx	.036	3.5
19	MP2A	X	71.49	.5
20	MP2A	Z	123.825	.5
21	MP2A	Mx	-.108	.5
22	MP2A	X	71.49	3.5
23	MP2A	Z	123.825	3.5
24	MP2A	Mx	-.108	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	57.129	1
26	MP1A	Z	98.951	1
27	MP1A	Mx	-.029	1
28	MP1A	X	57.129	3
29	MP1A	Z	98.951	3
30	MP1A	Mx	-.029	3
31	MP5A	X	57.129	1
32	MP5A	Z	98.951	1
33	MP5A	Mx	-.029	1
34	MP5A	X	57.129	3
35	MP5A	Z	98.951	3
36	MP5A	Mx	-.029	3

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	89.972	1
3	MP4A	Mx	0	1
4	MP4A	X	0	3
5	MP4A	Z	89.972	3
6	MP4A	Mx	0	3
7	MP2A	X	0	2
8	MP2A	Z	71.595	2
9	MP2A	Mx	0	2
10	MP3A	X	0	2
11	MP3A	Z	71.595	2
12	MP3A	Mx	0	2
13	MP2A	X	0	.5
14	MP2A	Z	156.207	.5
15	MP2A	Mx	.091	.5
16	MP2A	X	0	3.5
17	MP2A	Z	156.207	3.5
18	MP2A	Mx	.091	3.5
19	MP2A	X	0	.5
20	MP2A	Z	156.207	.5
21	MP2A	Mx	-.091	.5
22	MP2A	X	0	3.5
23	MP2A	Z	156.207	3.5
24	MP2A	Mx	-.091	3.5
25	MP1A	X	0	1
26	MP1A	Z	117.73	1
27	MP1A	Mx	0	1
28	MP1A	X	0	3
29	MP1A	Z	117.73	3
30	MP1A	Mx	0	3
31	MP5A	X	0	1
32	MP5A	Z	117.73	1
33	MP5A	Mx	0	1
34	MP5A	X	0	3
35	MP5A	Z	117.73	3
36	MP5A	Mx	0	3

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-38.143	1
2	MP4A	Z	66.065	1
3	MP4A	Mx	.019	1
4	MP4A	X	-38.143	3
5	MP4A	Z	66.065	3
6	MP4A	Mx	.019	3
7	MP2A	X	-32.83	2
8	MP2A	Z	56.864	2
9	MP2A	Mx	-.016	2
10	MP3A	X	-31.694	2
11	MP3A	Z	54.895	2
12	MP3A	Mx	-.016	2
13	MP2A	X	-71.49	.5
14	MP2A	Z	123.825	.5
15	MP2A	Mx	.108	.5
16	MP2A	X	-71.49	3.5
17	MP2A	Z	123.825	3.5
18	MP2A	Mx	.108	3.5
19	MP2A	X	-71.49	.5
20	MP2A	Z	123.825	.5
21	MP2A	Mx	-.036	.5
22	MP2A	X	-71.49	3.5
23	MP2A	Z	123.825	3.5
24	MP2A	Mx	-.036	3.5
25	MP1A	X	-57.129	1
26	MP1A	Z	98.951	1
27	MP1A	Mx	.029	1
28	MP1A	X	-57.129	3
29	MP1A	Z	98.951	3
30	MP1A	Mx	.029	3
31	MP5A	X	-57.129	1
32	MP5A	Z	98.951	1
33	MP5A	Mx	.029	1
34	MP5A	X	-57.129	3
35	MP5A	Z	98.951	3
36	MP5A	Mx	.029	3

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-42.358	1
2	MP4A	Z	24.456	1
3	MP4A	Mx	.021	1
4	MP4A	X	-42.358	3
5	MP4A	Z	24.456	3
6	MP4A	Mx	.021	3
7	MP2A	X	-46.585	2
8	MP2A	Z	26.896	2
9	MP2A	Mx	-.023	2
10	MP3A	X	-40.679	2
11	MP3A	Z	23.486	2
12	MP3A	Mx	-.02	2

Member Point Loads (BLC 11 : Antenna Wo (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	-100.916	.5
14	MP2A	Z	58.264	.5
15	MP2A	Mx	.084	.5
16	MP2A	X	-100.916	3.5
17	MP2A	Z	58.264	3.5
18	MP2A	Mx	.084	3.5
19	MP2A	X	-100.916	.5
20	MP2A	Z	58.264	.5
21	MP2A	Mx	.016	.5
22	MP2A	X	-100.916	3.5
23	MP2A	Z	58.264	3.5
24	MP2A	Mx	.016	3.5
25	MP1A	X	-92.938	1
26	MP1A	Z	53.658	1
27	MP1A	Mx	.046	1
28	MP1A	X	-92.938	3
29	MP1A	Z	53.658	3
30	MP1A	Mx	.046	3
31	MP5A	X	-92.938	1
32	MP5A	Z	53.658	1
33	MP5A	Mx	.046	1
34	MP5A	X	-92.938	3
35	MP5A	Z	53.658	3
36	MP5A	Mx	.046	3

Member Point Loads (BLC 12 : Antenna Wo (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-35.224	1
2	MP4A	Z	0	1
3	MP4A	Mx	.018	1
4	MP4A	X	-35.224	3
5	MP4A	Z	0	3
6	MP4A	Mx	.018	3
7	MP2A	X	-47.858	2
8	MP2A	Z	0	2
9	MP2A	Mx	-.024	2
10	MP3A	X	-38.765	2
11	MP3A	Z	0	2
12	MP3A	Mx	-.019	2
13	MP2A	X	-103.301	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	.052	.5
16	MP2A	X	-103.301	3.5
17	MP2A	Z	0	3.5
18	MP2A	Mx	.052	3.5
19	MP2A	X	-103.301	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	.052	.5
22	MP2A	X	-103.301	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	.052	3.5

Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	-103.845	1
26	MP1A	Z	0	1
27	MP1A	Mx	.052	1
28	MP1A	X	-103.845	3
29	MP1A	Z	0	3
30	MP1A	Mx	.052	3
31	MP5A	X	-103.845	1
32	MP5A	Z	0	1
33	MP5A	Mx	.052	1
34	MP5A	X	-103.845	3
35	MP5A	Z	0	3
36	MP5A	Mx	.052	3

Member Point Loads (BLC 13 : Antenna Wo (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-42.358	1
2	MP4A	Z	-24.456	1
3	MP4A	Mx	.021	1
4	MP4A	X	-42.358	3
5	MP4A	Z	-24.456	3
6	MP4A	Mx	.021	3
7	MP2A	X	-46.585	2
8	MP2A	Z	-26.896	2
9	MP2A	Mx	-.023	2
10	MP3A	X	-40.679	2
11	MP3A	Z	-23.486	2
12	MP3A	Mx	-.02	2
13	MP2A	X	-100.916	.5
14	MP2A	Z	-58.264	.5
15	MP2A	Mx	.016	.5
16	MP2A	X	-100.916	3.5
17	MP2A	Z	-58.264	3.5
18	MP2A	Mx	.016	3.5
19	MP2A	X	-100.916	.5
20	MP2A	Z	-58.264	.5
21	MP2A	Mx	.084	.5
22	MP2A	X	-100.916	3.5
23	MP2A	Z	-58.264	3.5
24	MP2A	Mx	.084	3.5
25	MP1A	X	-92.938	1
26	MP1A	Z	-53.658	1
27	MP1A	Mx	.046	1
28	MP1A	X	-92.938	3
29	MP1A	Z	-53.658	3
30	MP1A	Mx	.046	3
31	MP5A	X	-92.938	1
32	MP5A	Z	-53.658	1
33	MP5A	Mx	.046	1
34	MP5A	X	-92.938	3
35	MP5A	Z	-53.658	3
36	MP5A	Mx	.046	3

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-38.143	1
2	MP4A	Z	-66.065	1
3	MP4A	Mx	.019	1
4	MP4A	X	-38.143	3
5	MP4A	Z	-66.065	3
6	MP4A	Mx	.019	3
7	MP2A	X	-32.83	2
8	MP2A	Z	-56.864	2
9	MP2A	Mx	-.016	2
10	MP3A	X	-31.694	2
11	MP3A	Z	-54.895	2
12	MP3A	Mx	-.016	2
13	MP2A	X	-71.49	.5
14	MP2A	Z	-123.825	.5
15	MP2A	Mx	-.036	.5
16	MP2A	X	-71.49	3.5
17	MP2A	Z	-123.825	3.5
18	MP2A	Mx	-.036	3.5
19	MP2A	X	-71.49	.5
20	MP2A	Z	-123.825	.5
21	MP2A	Mx	.108	.5
22	MP2A	X	-71.49	3.5
23	MP2A	Z	-123.825	3.5
24	MP2A	Mx	.108	3.5
25	MP1A	X	-57.129	1
26	MP1A	Z	-98.951	1
27	MP1A	Mx	.029	1
28	MP1A	X	-57.129	3
29	MP1A	Z	-98.951	3
30	MP1A	Mx	.029	3
31	MP5A	X	-57.129	1
32	MP5A	Z	-98.951	1
33	MP5A	Mx	.029	1
34	MP5A	X	-57.129	3
35	MP5A	Z	-98.951	3
36	MP5A	Mx	.029	3

Member Point Loads (BLC 15 : Antenna Wi (0 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	-19.597	1
3	MP4A	Mx	0	1
4	MP4A	X	0	3
5	MP4A	Z	-19.597	3
6	MP4A	Mx	0	3
7	MP2A	X	0	2
8	MP2A	Z	-16.942	2
9	MP2A	Mx	0	2
10	MP3A	X	0	2
11	MP3A	Z	-16.942	2
12	MP3A	Mx	0	2

Member Point Loads (BLC 15 : Antenna Wi (0 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	0	.5
14	MP2A	Z	-32.916	.5
15	MP2A	Mx	-.019	.5
16	MP2A	X	0	3.5
17	MP2A	Z	-32.916	3.5
18	MP2A	Mx	-.019	3.5
19	MP2A	X	0	.5
20	MP2A	Z	-32.916	.5
21	MP2A	Mx	.019	.5
22	MP2A	X	0	3.5
23	MP2A	Z	-32.916	3.5
24	MP2A	Mx	.019	3.5
25	MP1A	X	0	1
26	MP1A	Z	-24.987	1
27	MP1A	Mx	0	1
28	MP1A	X	0	3
29	MP1A	Z	-24.987	3
30	MP1A	Mx	0	3
31	MP5A	X	0	1
32	MP5A	Z	-24.987	1
33	MP5A	Mx	0	1
34	MP5A	X	0	3
35	MP5A	Z	-24.987	3
36	MP5A	Mx	0	3

Member Point Loads (BLC 16 : Antenna Wi (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	8.433	1
2	MP4A	Z	-14.607	1
3	MP4A	Mx	-.004	1
4	MP4A	X	8.433	3
5	MP4A	Z	-14.607	3
6	MP4A	Mx	-.004	3
7	MP2A	X	7.853	2
8	MP2A	Z	-13.602	2
9	MP2A	Mx	.004	2
10	MP3A	X	7.618	2
11	MP3A	Z	-13.195	2
12	MP3A	Mx	.004	2
13	MP2A	X	15.233	.5
14	MP2A	Z	-26.384	.5
15	MP2A	Mx	-.023	.5
16	MP2A	X	15.233	3.5
17	MP2A	Z	-26.384	3.5
18	MP2A	Mx	-.023	3.5
19	MP2A	X	15.233	.5
20	MP2A	Z	-26.384	.5
21	MP2A	Mx	.008	.5
22	MP2A	X	15.233	3.5
23	MP2A	Z	-26.384	3.5
24	MP2A	Mx	.008	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	12.163	1
26	MP1A	Z	-21.068	1
27	MP1A	Mx	-.006	1
28	MP1A	X	12.163	3
29	MP1A	Z	-21.068	3
30	MP1A	Mx	-.006	3
31	MP5A	X	12.163	1
32	MP5A	Z	-21.068	1
33	MP5A	Mx	-.006	1
34	MP5A	X	12.163	3
35	MP5A	Z	-21.068	3
36	MP5A	Mx	-.006	3

Member Point Loads (BLC 17 : Antenna Wi (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	9.879	1
2	MP4A	Z	-5.704	1
3	MP4A	Mx	-.005	1
4	MP4A	X	9.879	3
5	MP4A	Z	-5.704	3
6	MP4A	Mx	-.005	3
7	MP2A	X	11.461	2
8	MP2A	Z	-6.617	2
9	MP2A	Mx	.006	2
10	MP3A	X	10.241	2
11	MP3A	Z	-5.912	2
12	MP3A	Mx	.005	2
13	MP2A	X	22.139	.5
14	MP2A	Z	-12.782	.5
15	MP2A	Mx	-.019	.5
16	MP2A	X	22.139	3.5
17	MP2A	Z	-12.782	3.5
18	MP2A	Mx	-.019	3.5
19	MP2A	X	22.139	.5
20	MP2A	Z	-12.782	.5
21	MP2A	Mx	-.004	.5
22	MP2A	X	22.139	3.5
23	MP2A	Z	-12.782	3.5
24	MP2A	Mx	-.004	3.5
25	MP1A	X	19.924	1
26	MP1A	Z	-11.503	1
27	MP1A	Mx	-.01	1
28	MP1A	X	19.924	3
29	MP1A	Z	-11.503	3
30	MP1A	Mx	-.01	3
31	MP5A	X	19.924	1
32	MP5A	Z	-11.503	1
33	MP5A	Mx	-.01	1
34	MP5A	X	19.924	3
35	MP5A	Z	-11.503	3
36	MP5A	Mx	-.01	3

Member Point Loads (BLC 18 : Antenna Wi (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	8.678	1
2	MP4A	Z	0	1
3	MP4A	Mx	-.004	1
4	MP4A	X	8.678	3
5	MP4A	Z	0	3
6	MP4A	Mx	-.004	3
7	MP2A	X	11.998	2
8	MP2A	Z	0	2
9	MP2A	Mx	.006	2
10	MP3A	X	10.119	2
11	MP3A	Z	0	2
12	MP3A	Mx	.005	2
13	MP2A	X	23.113	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	-.012	.5
16	MP2A	X	23.113	3.5
17	MP2A	Z	0	3.5
18	MP2A	Mx	-.012	3.5
19	MP2A	X	23.113	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	-.012	.5
22	MP2A	X	23.113	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	-.012	3.5
25	MP1A	X	22.347	1
26	MP1A	Z	0	1
27	MP1A	Mx	-.011	1
28	MP1A	X	22.347	3
29	MP1A	Z	0	3
30	MP1A	Mx	-.011	3
31	MP5A	X	22.347	1
32	MP5A	Z	0	1
33	MP5A	Mx	-.011	1
34	MP5A	X	22.347	3
35	MP5A	Z	0	3
36	MP5A	Mx	-.011	3

Member Point Loads (BLC 19 : Antenna Wi (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	9.879	1
2	MP4A	Z	5.704	1
3	MP4A	Mx	-.005	1
4	MP4A	X	9.879	3
5	MP4A	Z	5.704	3
6	MP4A	Mx	-.005	3
7	MP2A	X	11.461	2
8	MP2A	Z	6.617	2
9	MP2A	Mx	.006	2
10	MP3A	X	10.241	2
11	MP3A	Z	5.912	2
12	MP3A	Mx	.005	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	22.139	.5
14	MP2A	Z	12.782	.5
15	MP2A	Mx	-.004	.5
16	MP2A	X	22.139	3.5
17	MP2A	Z	12.782	3.5
18	MP2A	Mx	-.004	3.5
19	MP2A	X	22.139	.5
20	MP2A	Z	12.782	.5
21	MP2A	Mx	-.019	.5
22	MP2A	X	22.139	3.5
23	MP2A	Z	12.782	3.5
24	MP2A	Mx	-.019	3.5
25	MP1A	X	19.924	1
26	MP1A	Z	11.503	1
27	MP1A	Mx	-.01	1
28	MP1A	X	19.924	3
29	MP1A	Z	11.503	3
30	MP1A	Mx	-.01	3
31	MP5A	X	19.924	1
32	MP5A	Z	11.503	1
33	MP5A	Mx	-.01	1
34	MP5A	X	19.924	3
35	MP5A	Z	11.503	3
36	MP5A	Mx	-.01	3

Member Point Loads (BLC 20 : Antenna Wi (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	8.433	1
2	MP4A	Z	14.607	1
3	MP4A	Mx	-.004	1
4	MP4A	X	8.433	3
5	MP4A	Z	14.607	3
6	MP4A	Mx	-.004	3
7	MP2A	X	7.853	2
8	MP2A	Z	13.602	2
9	MP2A	Mx	.004	2
10	MP3A	X	7.618	2
11	MP3A	Z	13.195	2
12	MP3A	Mx	.004	2
13	MP2A	X	15.233	.5
14	MP2A	Z	26.384	.5
15	MP2A	Mx	.008	.5
16	MP2A	X	15.233	3.5
17	MP2A	Z	26.384	3.5
18	MP2A	Mx	.008	3.5
19	MP2A	X	15.233	.5
20	MP2A	Z	26.384	.5
21	MP2A	Mx	-.023	.5
22	MP2A	X	15.233	3.5
23	MP2A	Z	26.384	3.5
24	MP2A	Mx	-.023	3.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	12.163	1
26	MP1A	Z	21.068	1
27	MP1A	Mx	-.006	1
28	MP1A	X	12.163	3
29	MP1A	Z	21.068	3
30	MP1A	Mx	-.006	3
31	MP5A	X	12.163	1
32	MP5A	Z	21.068	1
33	MP5A	Mx	-.006	1
34	MP5A	X	12.163	3
35	MP5A	Z	21.068	3
36	MP5A	Mx	-.006	3

Member Point Loads (BLC 21 : Antenna Wi (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	19.597	1
3	MP4A	Mx	0	1
4	MP4A	X	0	3
5	MP4A	Z	19.597	3
6	MP4A	Mx	0	3
7	MP2A	X	0	2
8	MP2A	Z	16.942	2
9	MP2A	Mx	0	2
10	MP3A	X	0	2
11	MP3A	Z	16.942	2
12	MP3A	Mx	0	2
13	MP2A	X	0	.5
14	MP2A	Z	32.916	.5
15	MP2A	Mx	.019	.5
16	MP2A	X	0	3.5
17	MP2A	Z	32.916	3.5
18	MP2A	Mx	.019	3.5
19	MP2A	X	0	.5
20	MP2A	Z	32.916	.5
21	MP2A	Mx	-.019	.5
22	MP2A	X	0	3.5
23	MP2A	Z	32.916	3.5
24	MP2A	Mx	-.019	3.5
25	MP1A	X	0	1
26	MP1A	Z	24.987	1
27	MP1A	Mx	0	1
28	MP1A	X	0	3
29	MP1A	Z	24.987	3
30	MP1A	Mx	0	3
31	MP5A	X	0	1
32	MP5A	Z	24.987	1
33	MP5A	Mx	0	1
34	MP5A	X	0	3
35	MP5A	Z	24.987	3
36	MP5A	Mx	0	3

Member Point Loads (BLC 22 : Antenna Wi (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-8.433	1
2	MP4A	Z	14.607	1
3	MP4A	Mx	.004	1
4	MP4A	X	-8.433	3
5	MP4A	Z	14.607	3
6	MP4A	Mx	.004	3
7	MP2A	X	-7.853	2
8	MP2A	Z	13.602	2
9	MP2A	Mx	-.004	2
10	MP3A	X	-7.618	2
11	MP3A	Z	13.195	2
12	MP3A	Mx	-.004	2
13	MP2A	X	-15.233	.5
14	MP2A	Z	26.384	.5
15	MP2A	Mx	.023	.5
16	MP2A	X	-15.233	3.5
17	MP2A	Z	26.384	3.5
18	MP2A	Mx	.023	3.5
19	MP2A	X	-15.233	.5
20	MP2A	Z	26.384	.5
21	MP2A	Mx	-.008	.5
22	MP2A	X	-15.233	3.5
23	MP2A	Z	26.384	3.5
24	MP2A	Mx	-.008	3.5
25	MP1A	X	-12.163	1
26	MP1A	Z	21.068	1
27	MP1A	Mx	.006	1
28	MP1A	X	-12.163	3
29	MP1A	Z	21.068	3
30	MP1A	Mx	.006	3
31	MP5A	X	-12.163	1
32	MP5A	Z	21.068	1
33	MP5A	Mx	.006	1
34	MP5A	X	-12.163	3
35	MP5A	Z	21.068	3
36	MP5A	Mx	.006	3

Member Point Loads (BLC 23 : Antenna Wi (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-9.879	1
2	MP4A	Z	5.704	1
3	MP4A	Mx	.005	1
4	MP4A	X	-9.879	3
5	MP4A	Z	5.704	3
6	MP4A	Mx	.005	3
7	MP2A	X	-11.461	2
8	MP2A	Z	6.617	2
9	MP2A	Mx	-.006	2
10	MP3A	X	-10.241	2
11	MP3A	Z	5.912	2
12	MP3A	Mx	-.005	2

Member Point Loads (BLC 23 : Antenna Wi (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	-22.139	.5
14	MP2A	Z	12.782	.5
15	MP2A	Mx	.019	.5
16	MP2A	X	-22.139	3.5
17	MP2A	Z	12.782	3.5
18	MP2A	Mx	.019	3.5
19	MP2A	X	-22.139	.5
20	MP2A	Z	12.782	.5
21	MP2A	Mx	.004	.5
22	MP2A	X	-22.139	3.5
23	MP2A	Z	12.782	3.5
24	MP2A	Mx	.004	3.5
25	MP1A	X	-19.924	1
26	MP1A	Z	11.503	1
27	MP1A	Mx	.01	1
28	MP1A	X	-19.924	3
29	MP1A	Z	11.503	3
30	MP1A	Mx	.01	3
31	MP5A	X	-19.924	1
32	MP5A	Z	11.503	1
33	MP5A	Mx	.01	1
34	MP5A	X	-19.924	3
35	MP5A	Z	11.503	3
36	MP5A	Mx	.01	3

Member Point Loads (BLC 24 : Antenna Wi (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-8.678	1
2	MP4A	Z	0	1
3	MP4A	Mx	.004	1
4	MP4A	X	-8.678	3
5	MP4A	Z	0	3
6	MP4A	Mx	.004	3
7	MP2A	X	-11.998	2
8	MP2A	Z	0	2
9	MP2A	Mx	-.006	2
10	MP3A	X	-10.119	2
11	MP3A	Z	0	2
12	MP3A	Mx	-.005	2
13	MP2A	X	-23.113	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	.012	.5
16	MP2A	X	-23.113	3.5
17	MP2A	Z	0	3.5
18	MP2A	Mx	.012	3.5
19	MP2A	X	-23.113	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	.012	.5
22	MP2A	X	-23.113	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	.012	3.5

Member Point Loads (BLC 24 : Antenna Wi (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	-22.347	1
26	MP1A	Z	0	1
27	MP1A	Mx	.011	1
28	MP1A	X	-22.347	3
29	MP1A	Z	0	3
30	MP1A	Mx	.011	3
31	MP5A	X	-22.347	1
32	MP5A	Z	0	1
33	MP5A	Mx	.011	1
34	MP5A	X	-22.347	3
35	MP5A	Z	0	3
36	MP5A	Mx	.011	3

Member Point Loads (BLC 25 : Antenna Wi (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-9.879	1
2	MP4A	Z	-5.704	1
3	MP4A	Mx	.005	1
4	MP4A	X	-9.879	3
5	MP4A	Z	-5.704	3
6	MP4A	Mx	.005	3
7	MP2A	X	-11.461	2
8	MP2A	Z	-6.617	2
9	MP2A	Mx	-.006	2
10	MP3A	X	-10.241	2
11	MP3A	Z	-5.912	2
12	MP3A	Mx	-.005	2
13	MP2A	X	-22.139	.5
14	MP2A	Z	-12.782	.5
15	MP2A	Mx	.004	.5
16	MP2A	X	-22.139	3.5
17	MP2A	Z	-12.782	3.5
18	MP2A	Mx	.004	3.5
19	MP2A	X	-22.139	.5
20	MP2A	Z	-12.782	.5
21	MP2A	Mx	.019	.5
22	MP2A	X	-22.139	3.5
23	MP2A	Z	-12.782	3.5
24	MP2A	Mx	.019	3.5
25	MP1A	X	-19.924	1
26	MP1A	Z	-11.503	1
27	MP1A	Mx	.01	1
28	MP1A	X	-19.924	3
29	MP1A	Z	-11.503	3
30	MP1A	Mx	.01	3
31	MP5A	X	-19.924	1
32	MP5A	Z	-11.503	1
33	MP5A	Mx	.01	1
34	MP5A	X	-19.924	3
35	MP5A	Z	-11.503	3
36	MP5A	Mx	.01	3

Member Point Loads (BLC 26 : Antenna Wi (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-8.433	1
2	MP4A	Z	-14.607	1
3	MP4A	Mx	.004	1
4	MP4A	X	-8.433	3
5	MP4A	Z	-14.607	3
6	MP4A	Mx	.004	3
7	MP2A	X	-7.853	2
8	MP2A	Z	-13.602	2
9	MP2A	Mx	-.004	2
10	MP3A	X	-7.618	2
11	MP3A	Z	-13.195	2
12	MP3A	Mx	-.004	2
13	MP2A	X	-15.233	.5
14	MP2A	Z	-26.384	.5
15	MP2A	Mx	-.008	.5
16	MP2A	X	-15.233	3.5
17	MP2A	Z	-26.384	3.5
18	MP2A	Mx	-.008	3.5
19	MP2A	X	-15.233	.5
20	MP2A	Z	-26.384	.5
21	MP2A	Mx	.023	.5
22	MP2A	X	-15.233	3.5
23	MP2A	Z	-26.384	3.5
24	MP2A	Mx	.023	3.5
25	MP1A	X	-12.163	1
26	MP1A	Z	-21.068	1
27	MP1A	Mx	.006	1
28	MP1A	X	-12.163	3
29	MP1A	Z	-21.068	3
30	MP1A	Mx	.006	3
31	MP5A	X	-12.163	1
32	MP5A	Z	-21.068	1
33	MP5A	Mx	.006	1
34	MP5A	X	-12.163	3
35	MP5A	Z	-21.068	3
36	MP5A	Mx	.006	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	-5.915	1
3	MP4A	Mx	0	1
4	MP4A	X	0	3
5	MP4A	Z	-5.915	3
6	MP4A	Mx	0	3
7	MP2A	X	0	2
8	MP2A	Z	-4.707	2
9	MP2A	Mx	0	2
10	MP3A	X	0	2
11	MP3A	Z	-4.707	2
12	MP3A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	0	.5
14	MP2A	Z	-10.27	.5
15	MP2A	Mx	-.006	.5
16	MP2A	X	0	3.5
17	MP2A	Z	-10.27	3.5
18	MP2A	Mx	-.006	3.5
19	MP2A	X	0	.5
20	MP2A	Z	-10.27	.5
21	MP2A	Mx	.006	.5
22	MP2A	X	0	3.5
23	MP2A	Z	-10.27	3.5
24	MP2A	Mx	.006	3.5
25	MP1A	X	0	1
26	MP1A	Z	-7.74	1
27	MP1A	Mx	0	1
28	MP1A	X	0	3
29	MP1A	Z	-7.74	3
30	MP1A	Mx	0	3
31	MP5A	X	0	1
32	MP5A	Z	-7.74	1
33	MP5A	Mx	0	1
34	MP5A	X	0	3
35	MP5A	Z	-7.74	3
36	MP5A	Mx	0	3

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	2.508	1
2	MP4A	Z	-4.344	1
3	MP4A	Mx	-.001	1
4	MP4A	X	2.508	3
5	MP4A	Z	-4.344	3
6	MP4A	Mx	-.001	3
7	MP2A	X	2.158	2
8	MP2A	Z	-3.739	2
9	MP2A	Mx	.001	2
10	MP3A	X	2.084	2
11	MP3A	Z	-3.609	2
12	MP3A	Mx	.001	2
13	MP2A	X	4.7	.5
14	MP2A	Z	-8.141	.5
15	MP2A	Mx	-.007	.5
16	MP2A	X	4.7	3.5
17	MP2A	Z	-8.141	3.5
18	MP2A	Mx	-.007	3.5
19	MP2A	X	4.7	.5
20	MP2A	Z	-8.141	.5
21	MP2A	Mx	.002	.5
22	MP2A	X	4.7	3.5
23	MP2A	Z	-8.141	3.5
24	MP2A	Mx	.002	3.5

Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	3.756	1
26	MP1A	Z	-6.506	1
27	MP1A	Mx	-.002	1
28	MP1A	X	3.756	3
29	MP1A	Z	-6.506	3
30	MP1A	Mx	-.002	3
31	MP5A	X	3.756	1
32	MP5A	Z	-6.506	1
33	MP5A	Mx	-.002	1
34	MP5A	X	3.756	3
35	MP5A	Z	-6.506	3
36	MP5A	Mx	-.002	3

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	2.785	1
2	MP4A	Z	-1.608	1
3	MP4A	Mx	-.001	1
4	MP4A	X	2.785	3
5	MP4A	Z	-1.608	3
6	MP4A	Mx	-.001	3
7	MP2A	X	3.063	2
8	MP2A	Z	-1.768	2
9	MP2A	Mx	.002	2
10	MP3A	X	2.675	2
11	MP3A	Z	-1.544	2
12	MP3A	Mx	.001	2
13	MP2A	X	6.635	.5
14	MP2A	Z	-3.831	.5
15	MP2A	Mx	-.006	.5
16	MP2A	X	6.635	3.5
17	MP2A	Z	-3.831	3.5
18	MP2A	Mx	-.006	3.5
19	MP2A	X	6.635	.5
20	MP2A	Z	-3.831	.5
21	MP2A	Mx	-.001	.5
22	MP2A	X	6.635	3.5
23	MP2A	Z	-3.831	3.5
24	MP2A	Mx	-.001	3.5
25	MP1A	X	6.11	1
26	MP1A	Z	-3.528	1
27	MP1A	Mx	-.003	1
28	MP1A	X	6.11	3
29	MP1A	Z	-3.528	3
30	MP1A	Mx	-.003	3
31	MP5A	X	6.11	1
32	MP5A	Z	-3.528	1
33	MP5A	Mx	-.003	1
34	MP5A	X	6.11	3
35	MP5A	Z	-3.528	3
36	MP5A	Mx	-.003	3

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	2.316	1
2	MP4A	Z	0	1
3	MP4A	Mx	-.001	1
4	MP4A	X	2.316	3
5	MP4A	Z	0	3
6	MP4A	Mx	-.001	3
7	MP2A	X	3.146	2
8	MP2A	Z	0	2
9	MP2A	Mx	.002	2
10	MP3A	X	2.549	2
11	MP3A	Z	0	2
12	MP3A	Mx	.001	2
13	MP2A	X	6.792	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	-.003	.5
16	MP2A	X	6.792	3.5
17	MP2A	Z	0	3.5
18	MP2A	Mx	-.003	3.5
19	MP2A	X	6.792	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	-.003	.5
22	MP2A	X	6.792	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	-.003	3.5
25	MP1A	X	6.827	1
26	MP1A	Z	0	1
27	MP1A	Mx	-.003	1
28	MP1A	X	6.827	3
29	MP1A	Z	0	3
30	MP1A	Mx	-.003	3
31	MP5A	X	6.827	1
32	MP5A	Z	0	1
33	MP5A	Mx	-.003	1
34	MP5A	X	6.827	3
35	MP5A	Z	0	3
36	MP5A	Mx	-.003	3

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	2.785	1
2	MP4A	Z	1.608	1
3	MP4A	Mx	-.001	1
4	MP4A	X	2.785	3
5	MP4A	Z	1.608	3
6	MP4A	Mx	-.001	3
7	MP2A	X	3.063	2
8	MP2A	Z	1.768	2
9	MP2A	Mx	.002	2
10	MP3A	X	2.675	2
11	MP3A	Z	1.544	2
12	MP3A	Mx	.001	2

Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	6.635	.5
14	MP2A	Z	3.831	.5
15	MP2A	Mx	-.001	.5
16	MP2A	X	6.635	3.5
17	MP2A	Z	3.831	3.5
18	MP2A	Mx	-.001	3.5
19	MP2A	X	6.635	.5
20	MP2A	Z	3.831	.5
21	MP2A	Mx	-.006	.5
22	MP2A	X	6.635	3.5
23	MP2A	Z	3.831	3.5
24	MP2A	Mx	-.006	3.5
25	MP1A	X	6.11	1
26	MP1A	Z	3.528	1
27	MP1A	Mx	-.003	1
28	MP1A	X	6.11	3
29	MP1A	Z	3.528	3
30	MP1A	Mx	-.003	3
31	MP5A	X	6.11	1
32	MP5A	Z	3.528	1
33	MP5A	Mx	-.003	1
34	MP5A	X	6.11	3
35	MP5A	Z	3.528	3
36	MP5A	Mx	-.003	3

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	2.508	1
2	MP4A	Z	4.344	1
3	MP4A	Mx	-.001	1
4	MP4A	X	2.508	3
5	MP4A	Z	4.344	3
6	MP4A	Mx	-.001	3
7	MP2A	X	2.158	2
8	MP2A	Z	3.739	2
9	MP2A	Mx	.001	2
10	MP3A	X	2.084	2
11	MP3A	Z	3.609	2
12	MP3A	Mx	.001	2
13	MP2A	X	4.7	.5
14	MP2A	Z	8.141	.5
15	MP2A	Mx	.002	.5
16	MP2A	X	4.7	3.5
17	MP2A	Z	8.141	3.5
18	MP2A	Mx	.002	3.5
19	MP2A	X	4.7	.5
20	MP2A	Z	8.141	.5
21	MP2A	Mx	-.007	.5
22	MP2A	X	4.7	3.5
23	MP2A	Z	8.141	3.5
24	MP2A	Mx	-.007	3.5

Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	3.756	1
26	MP1A	Z	6.506	1
27	MP1A	Mx	-.002	1
28	MP1A	X	3.756	3
29	MP1A	Z	6.506	3
30	MP1A	Mx	-.002	3
31	MP5A	X	3.756	1
32	MP5A	Z	6.506	1
33	MP5A	Mx	-.002	1
34	MP5A	X	3.756	3
35	MP5A	Z	6.506	3
36	MP5A	Mx	-.002	3

Member Point Loads (BLC 33 : Antenna Wm (180 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	0	1
2	MP4A	Z	5.915	1
3	MP4A	Mx	0	1
4	MP4A	X	0	3
5	MP4A	Z	5.915	3
6	MP4A	Mx	0	3
7	MP2A	X	0	2
8	MP2A	Z	4.707	2
9	MP2A	Mx	0	2
10	MP3A	X	0	2
11	MP3A	Z	4.707	2
12	MP3A	Mx	0	2
13	MP2A	X	0	.5
14	MP2A	Z	10.27	.5
15	MP2A	Mx	.006	.5
16	MP2A	X	0	3.5
17	MP2A	Z	10.27	3.5
18	MP2A	Mx	.006	3.5
19	MP2A	X	0	.5
20	MP2A	Z	10.27	.5
21	MP2A	Mx	-.006	.5
22	MP2A	X	0	3.5
23	MP2A	Z	10.27	3.5
24	MP2A	Mx	-.006	3.5
25	MP1A	X	0	1
26	MP1A	Z	7.74	1
27	MP1A	Mx	0	1
28	MP1A	X	0	3
29	MP1A	Z	7.74	3
30	MP1A	Mx	0	3
31	MP5A	X	0	1
32	MP5A	Z	7.74	1
33	MP5A	Mx	0	1
34	MP5A	X	0	3
35	MP5A	Z	7.74	3
36	MP5A	Mx	0	3

Member Point Loads (BLC 34 : Antenna Wm (210 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-2.508	1
2	MP4A	Z	4.344	1
3	MP4A	Mx	.001	1
4	MP4A	X	-2.508	3
5	MP4A	Z	4.344	3
6	MP4A	Mx	.001	3
7	MP2A	X	-2.158	2
8	MP2A	Z	3.739	2
9	MP2A	Mx	-.001	2
10	MP3A	X	-2.084	2
11	MP3A	Z	3.609	2
12	MP3A	Mx	-.001	2
13	MP2A	X	-4.7	.5
14	MP2A	Z	8.141	.5
15	MP2A	Mx	.007	.5
16	MP2A	X	-4.7	3.5
17	MP2A	Z	8.141	3.5
18	MP2A	Mx	.007	3.5
19	MP2A	X	-4.7	.5
20	MP2A	Z	8.141	.5
21	MP2A	Mx	-.002	.5
22	MP2A	X	-4.7	3.5
23	MP2A	Z	8.141	3.5
24	MP2A	Mx	-.002	3.5
25	MP1A	X	-3.756	1
26	MP1A	Z	6.506	1
27	MP1A	Mx	.002	1
28	MP1A	X	-3.756	3
29	MP1A	Z	6.506	3
30	MP1A	Mx	.002	3
31	MP5A	X	-3.756	1
32	MP5A	Z	6.506	1
33	MP5A	Mx	.002	1
34	MP5A	X	-3.756	3
35	MP5A	Z	6.506	3
36	MP5A	Mx	.002	3

Member Point Loads (BLC 35 : Antenna Wm (240 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-2.785	1
2	MP4A	Z	1.608	1
3	MP4A	Mx	.001	1
4	MP4A	X	-2.785	3
5	MP4A	Z	1.608	3
6	MP4A	Mx	.001	3
7	MP2A	X	-3.063	2
8	MP2A	Z	1.768	2
9	MP2A	Mx	-.002	2
10	MP3A	X	-2.675	2
11	MP3A	Z	1.544	2
12	MP3A	Mx	-.001	2

Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP2A	X	-6.635	.5
14	MP2A	Z	3.831	.5
15	MP2A	Mx	.006	.5
16	MP2A	X	-6.635	3.5
17	MP2A	Z	3.831	3.5
18	MP2A	Mx	.006	3.5
19	MP2A	X	-6.635	.5
20	MP2A	Z	3.831	.5
21	MP2A	Mx	.001	.5
22	MP2A	X	-6.635	3.5
23	MP2A	Z	3.831	3.5
24	MP2A	Mx	.001	3.5
25	MP1A	X	-6.11	1
26	MP1A	Z	3.528	1
27	MP1A	Mx	.003	1
28	MP1A	X	-6.11	3
29	MP1A	Z	3.528	3
30	MP1A	Mx	.003	3
31	MP5A	X	-6.11	1
32	MP5A	Z	3.528	1
33	MP5A	Mx	.003	1
34	MP5A	X	-6.11	3
35	MP5A	Z	3.528	3
36	MP5A	Mx	.003	3

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-2.316	1
2	MP4A	Z	0	1
3	MP4A	Mx	.001	1
4	MP4A	X	-2.316	3
5	MP4A	Z	0	3
6	MP4A	Mx	.001	3
7	MP2A	X	-3.146	2
8	MP2A	Z	0	2
9	MP2A	Mx	-.002	2
10	MP3A	X	-2.549	2
11	MP3A	Z	0	2
12	MP3A	Mx	-.001	2
13	MP2A	X	-6.792	.5
14	MP2A	Z	0	.5
15	MP2A	Mx	.003	.5
16	MP2A	X	-6.792	3.5
17	MP2A	Z	0	3.5
18	MP2A	Mx	.003	3.5
19	MP2A	X	-6.792	.5
20	MP2A	Z	0	.5
21	MP2A	Mx	.003	.5
22	MP2A	X	-6.792	3.5
23	MP2A	Z	0	3.5
24	MP2A	Mx	.003	3.5

Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP1A	X	-6.827	1
26	MP1A	Z	0	1
27	MP1A	Mx	.003	1
28	MP1A	X	-6.827	3
29	MP1A	Z	0	3
30	MP1A	Mx	.003	3
31	MP5A	X	-6.827	1
32	MP5A	Z	0	1
33	MP5A	Mx	.003	1
34	MP5A	X	-6.827	3
35	MP5A	Z	0	3
36	MP5A	Mx	.003	3

Member Point Loads (BLC 37 : Antenna Wm (300 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-2.785	1
2	MP4A	Z	-1.608	1
3	MP4A	Mx	.001	1
4	MP4A	X	-2.785	3
5	MP4A	Z	-1.608	3
6	MP4A	Mx	.001	3
7	MP2A	X	-3.063	2
8	MP2A	Z	-1.768	2
9	MP2A	Mx	-.002	2
10	MP3A	X	-2.675	2
11	MP3A	Z	-1.544	2
12	MP3A	Mx	-.001	2
13	MP2A	X	-6.635	.5
14	MP2A	Z	-3.831	.5
15	MP2A	Mx	.001	.5
16	MP2A	X	-6.635	3.5
17	MP2A	Z	-3.831	3.5
18	MP2A	Mx	.001	3.5
19	MP2A	X	-6.635	.5
20	MP2A	Z	-3.831	.5
21	MP2A	Mx	.006	.5
22	MP2A	X	-6.635	3.5
23	MP2A	Z	-3.831	3.5
24	MP2A	Mx	.006	3.5
25	MP1A	X	-6.11	1
26	MP1A	Z	-3.528	1
27	MP1A	Mx	.003	1
28	MP1A	X	-6.11	3
29	MP1A	Z	-3.528	3
30	MP1A	Mx	.003	3
31	MP5A	X	-6.11	1
32	MP5A	Z	-3.528	1
33	MP5A	Mx	.003	1
34	MP5A	X	-6.11	3
35	MP5A	Z	-3.528	3
36	MP5A	Mx	.003	3

Member Point Loads (BLC 38 : Antenna Wm (330 Deg))

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP4A	X	-2.508	1
2	MP4A	Z	-4.344	1
3	MP4A	Mx	.001	1
4	MP4A	X	-2.508	3
5	MP4A	Z	-4.344	3
6	MP4A	Mx	.001	3
7	MP2A	X	-2.158	2
8	MP2A	Z	-3.739	2
9	MP2A	Mx	-.001	2
10	MP3A	X	-2.084	2
11	MP3A	Z	-3.609	2
12	MP3A	Mx	-.001	2
13	MP2A	X	-4.7	.5
14	MP2A	Z	-8.141	.5
15	MP2A	Mx	-.002	.5
16	MP2A	X	-4.7	3.5
17	MP2A	Z	-8.141	3.5
18	MP2A	Mx	-.002	3.5
19	MP2A	X	-4.7	.5
20	MP2A	Z	-8.141	.5
21	MP2A	Mx	.007	.5
22	MP2A	X	-4.7	3.5
23	MP2A	Z	-8.141	3.5
24	MP2A	Mx	.007	3.5
25	MP1A	X	-3.756	1
26	MP1A	Z	-6.506	1
27	MP1A	Mx	.002	1
28	MP1A	X	-3.756	3
29	MP1A	Z	-6.506	3
30	MP1A	Mx	.002	3
31	MP5A	X	-3.756	1
32	MP5A	Z	-6.506	1
33	MP5A	Mx	.002	1
34	MP5A	X	-3.756	3
35	MP5A	Z	-6.506	3
36	MP5A	Mx	.002	3

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M8	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M20	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-250	%100

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	Y	-13.697	-13.697	0	%100
2	MP1A	Y	-8.385	-8.385	0	%100
3	M12	Y	-13.697	-13.697	0	%100
4	MP2A	Y	-9.416	-9.416	0	%100
5	MP3A	Y	-8.385	-8.385	0	%100
6	MP4A	Y	-8.385	-8.385	0	%100
7	MP5A	Y	-8.385	-8.385	0	%100
8	M14	Y	-12.769	-12.769	0	%100
9	M15A	Y	-10.706	-10.706	0	%100
10	M16	Y	-10.706	-10.706	0	%100
11	M17	Y	-10.706	-10.706	0	%100
12	M23	Y	-12.238	-12.238	0	%100

Member Distributed Loads (BLC 41 : Structure Wo (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-13.958	-13.958	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-9.093	-9.093	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	-11.007	-11.007	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-9.093	-9.093	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-9.093	-9.093	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	-9.093	-9.093	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	-9.432	-9.432	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	-11.105	-11.105	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-11.105	-11.105	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	-13.4	-13.4	0	%100
23	M23	X	0	0	0	%100
24	M23	Z	-1.354	-1.354	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	5.234	5.234	0	%100
2	M2	Z	-9.066	-9.066	0	%100
3	MP1A	X	4.546	4.546	0	%100

Member Distributed Loads (BLC 42 : Structure Wo (30 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
4	MP1A	Z	-7.875	-7.875	0	%100
5	M12	X	1.227	1.227	0	%100
6	M12	Z	-2.126	-2.126	0	%100
7	MP2A	X	5.504	5.504	0	%100
8	MP2A	Z	-9.533	-9.533	0	%100
9	MP3A	X	4.546	4.546	0	%100
10	MP3A	Z	-7.875	-7.875	0	%100
11	MP4A	X	4.546	4.546	0	%100
12	MP4A	Z	-7.875	-7.875	0	%100
13	MP5A	X	4.546	4.546	0	%100
14	MP5A	Z	-7.875	-7.875	0	%100
15	M14	X	4.716	4.716	0	%100
16	M14	Z	-8.168	-8.168	0	%100
17	M15A	X	5.511	5.511	0	%100
18	M15A	Z	-9.546	-9.546	0	%100
19	M16	X	5.659	5.659	0	%100
20	M16	Z	-9.802	-9.802	0	%100
21	M17	X	5.025	5.025	0	%100
22	M17	Z	-8.704	-8.704	0	%100
23	M23	X	2.798	2.798	0	%100
24	M23	Z	-4.847	-4.847	0	%100

Member Distributed Loads (BLC 43 : Structure Wo (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	3.022	3.022	0	%100
2	M2	Z	-1.745	-1.745	0	%100
3	MP1A	X	7.875	7.875	0	%100
4	MP1A	Z	-4.546	-4.546	0	%100
5	M12	X	6.378	6.378	0	%100
6	M12	Z	-3.682	-3.682	0	%100
7	MP2A	X	9.533	9.533	0	%100
8	MP2A	Z	-5.504	-5.504	0	%100
9	MP3A	X	7.875	7.875	0	%100
10	MP3A	Z	-4.546	-4.546	0	%100
11	MP4A	X	7.875	7.875	0	%100
12	MP4A	Z	-4.546	-4.546	0	%100
13	MP5A	X	7.875	7.875	0	%100
14	MP5A	Z	-4.546	-4.546	0	%100
15	M14	X	8.168	8.168	0	%100
16	M14	Z	-4.716	-4.716	0	%100
17	M15A	X	9.659	9.659	0	%100
18	M15A	Z	-5.576	-5.576	0	%100
19	M16	X	9.915	9.915	0	%100
20	M16	Z	-5.724	-5.724	0	%100
21	M17	X	2.901	2.901	0	%100
22	M17	Z	-1.675	-1.675	0	%100
23	M23	X	7.453	7.453	0	%100
24	M23	Z	-4.303	-4.303	0	%100

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]

Member Distributed Loads (BLC 44 : Structure Wo (90 Deg)) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	9.093	9.093	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	9.82	9.82	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	11.007	11.007	0	%100
8	MP2A	Z	0	0	0	%100
9	MP3A	X	9.093	9.093	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	9.093	9.093	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	9.093	9.093	0	%100
14	MP5A	Z	0	0	0	%100
15	M14	X	9.432	9.432	0	%100
16	M14	Z	0	0	0	%100
17	M15A	X	11.366	11.366	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	11.366	11.366	0	%100
20	M16	Z	0	0	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	0	0	0	%100
23	M23	X	7.374	7.374	0	%100
24	M23	Z	0	0	0	%100

Member Distributed Loads (BLC 45 : Structure Wo (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	3.022	3.022	0	%100
2	M2	Z	1.745	1.745	0	%100
3	MP1A	X	7.875	7.875	0	%100
4	MP1A	Z	4.546	4.546	0	%100
5	M12	X	6.378	6.378	0	%100
6	M12	Z	3.682	3.682	0	%100
7	MP2A	X	9.533	9.533	0	%100
8	MP2A	Z	5.504	5.504	0	%100
9	MP3A	X	7.875	7.875	0	%100
10	MP3A	Z	4.546	4.546	0	%100
11	MP4A	X	7.875	7.875	0	%100
12	MP4A	Z	4.546	4.546	0	%100
13	MP5A	X	7.875	7.875	0	%100
14	MP5A	Z	4.546	4.546	0	%100
15	M14	X	8.168	8.168	0	%100
16	M14	Z	4.716	4.716	0	%100
17	M15A	X	9.915	9.915	0	%100
18	M15A	Z	5.724	5.724	0	%100
19	M16	X	9.659	9.659	0	%100
20	M16	Z	5.576	5.576	0	%100
21	M17	X	2.901	2.901	0	%100
22	M17	Z	1.675	1.675	0	%100
23	M23	X	2.713	2.713	0	%100
24	M23	Z	1.566	1.566	0	%100

Member Distributed Loads (BLC 46 : Structure Wo (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	5.234	5.234	0	%100
2	M2	Z	9.066	9.066	0	%100
3	MP1A	X	4.546	4.546	0	%100
4	MP1A	Z	7.875	7.875	0	%100
5	M12	X	1.227	1.227	0	%100
6	M12	Z	2.126	2.126	0	%100
7	MP2A	X	5.504	5.504	0	%100
8	MP2A	Z	9.533	9.533	0	%100
9	MP3A	X	4.546	4.546	0	%100
10	MP3A	Z	7.875	7.875	0	%100
11	MP4A	X	4.546	4.546	0	%100
12	MP4A	Z	7.875	7.875	0	%100
13	MP5A	X	4.546	4.546	0	%100
14	MP5A	Z	7.875	7.875	0	%100
15	M14	X	4.716	4.716	0	%100
16	M14	Z	8.168	8.168	0	%100
17	M15A	X	5.659	5.659	0	%100
18	M15A	Z	9.802	9.802	0	%100
19	M16	X	5.511	5.511	0	%100
20	M16	Z	9.546	9.546	0	%100
21	M17	X	5.025	5.025	0	%100
22	M17	Z	8.704	8.704	0	%100
23	M23	X	.061	.061	0	%100
24	M23	Z	.106	.106	0	%100

Member Distributed Loads (BLC 47 : Structure Wo (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	13.958	13.958	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	9.093	9.093	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	11.007	11.007	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	9.093	9.093	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	9.093	9.093	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	9.093	9.093	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	9.432	9.432	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	11.105	11.105	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	11.105	11.105	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	13.4	13.4	0	%100
23	M23	X	0	0	0	%100
24	M23	Z	1.354	1.354	0	%100

Member Distributed Loads (BLC 48 : Structure Wo (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-5.234	-5.234	0	%100
2	M2	Z	9.066	9.066	0	%100
3	MP1A	X	-4.546	-4.546	0	%100
4	MP1A	Z	7.875	7.875	0	%100
5	M12	X	-1.227	-1.227	0	%100
6	M12	Z	2.126	2.126	0	%100
7	MP2A	X	-5.504	-5.504	0	%100
8	MP2A	Z	9.533	9.533	0	%100
9	MP3A	X	-4.546	-4.546	0	%100
10	MP3A	Z	7.875	7.875	0	%100
11	MP4A	X	-4.546	-4.546	0	%100
12	MP4A	Z	7.875	7.875	0	%100
13	MP5A	X	-4.546	-4.546	0	%100
14	MP5A	Z	7.875	7.875	0	%100
15	M14	X	-4.716	-4.716	0	%100
16	M14	Z	8.168	8.168	0	%100
17	M15A	X	-5.511	-5.511	0	%100
18	M15A	Z	9.546	9.546	0	%100
19	M16	X	-5.659	-5.659	0	%100
20	M16	Z	9.802	9.802	0	%100
21	M17	X	-5.025	-5.025	0	%100
22	M17	Z	8.704	8.704	0	%100
23	M23	X	-2.798	-2.798	0	%100
24	M23	Z	4.847	4.847	0	%100

Member Distributed Loads (BLC 49 : Structure Wo (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-3.022	-3.022	0	%100
2	M2	Z	1.745	1.745	0	%100
3	MP1A	X	-7.875	-7.875	0	%100
4	MP1A	Z	4.546	4.546	0	%100
5	M12	X	-6.378	-6.378	0	%100
6	M12	Z	3.682	3.682	0	%100
7	MP2A	X	-9.533	-9.533	0	%100
8	MP2A	Z	5.504	5.504	0	%100
9	MP3A	X	-7.875	-7.875	0	%100
10	MP3A	Z	4.546	4.546	0	%100
11	MP4A	X	-7.875	-7.875	0	%100
12	MP4A	Z	4.546	4.546	0	%100
13	MP5A	X	-7.875	-7.875	0	%100
14	MP5A	Z	4.546	4.546	0	%100
15	M14	X	-8.168	-8.168	0	%100
16	M14	Z	4.716	4.716	0	%100
17	M15A	X	-9.659	-9.659	0	%100
18	M15A	Z	5.576	5.576	0	%100
19	M16	X	-9.915	-9.915	0	%100
20	M16	Z	5.724	5.724	0	%100
21	M17	X	-2.901	-2.901	0	%100
22	M17	Z	1.675	1.675	0	%100
23	M23	X	-7.453	-7.453	0	%100
24	M23	Z	4.303	4.303	0	%100

Member Distributed Loads (BLC 50 : Structure Wo (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	-9.093	-9.093	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	-9.82	-9.82	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	-11.007	-11.007	0	%100
8	MP2A	Z	0	0	0	%100
9	MP3A	X	-9.093	-9.093	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	-9.093	-9.093	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	-9.093	-9.093	0	%100
14	MP5A	Z	0	0	0	%100
15	M14	X	-9.432	-9.432	0	%100
16	M14	Z	0	0	0	%100
17	M15A	X	-11.366	-11.366	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	-11.366	-11.366	0	%100
20	M16	Z	0	0	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	0	0	0	%100
23	M23	X	-7.374	-7.374	0	%100
24	M23	Z	0	0	0	%100

Member Distributed Loads (BLC 51 : Structure Wo (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-3.022	-3.022	0	%100
2	M2	Z	-1.745	-1.745	0	%100
3	MP1A	X	-7.875	-7.875	0	%100
4	MP1A	Z	-4.546	-4.546	0	%100
5	M12	X	-6.378	-6.378	0	%100
6	M12	Z	-3.682	-3.682	0	%100
7	MP2A	X	-9.533	-9.533	0	%100
8	MP2A	Z	-5.504	-5.504	0	%100
9	MP3A	X	-7.875	-7.875	0	%100
10	MP3A	Z	-4.546	-4.546	0	%100
11	MP4A	X	-7.875	-7.875	0	%100
12	MP4A	Z	-4.546	-4.546	0	%100
13	MP5A	X	-7.875	-7.875	0	%100
14	MP5A	Z	-4.546	-4.546	0	%100
15	M14	X	-8.168	-8.168	0	%100
16	M14	Z	-4.716	-4.716	0	%100
17	M15A	X	-9.915	-9.915	0	%100
18	M15A	Z	-5.724	-5.724	0	%100
19	M16	X	-9.659	-9.659	0	%100
20	M16	Z	-5.576	-5.576	0	%100
21	M17	X	-2.901	-2.901	0	%100
22	M17	Z	-1.675	-1.675	0	%100
23	M23	X	-2.713	-2.713	0	%100
24	M23	Z	-1.566	-1.566	0	%100

Member Distributed Loads (BLC 52 : Structure Wo (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-5.234	-5.234	0	%100
2	M2	Z	-9.066	-9.066	0	%100
3	MP1A	X	-4.546	-4.546	0	%100
4	MP1A	Z	-7.875	-7.875	0	%100
5	M12	X	-1.227	-1.227	0	%100
6	M12	Z	-2.126	-2.126	0	%100
7	MP2A	X	-5.504	-5.504	0	%100
8	MP2A	Z	-9.533	-9.533	0	%100
9	MP3A	X	-4.546	-4.546	0	%100
10	MP3A	Z	-7.875	-7.875	0	%100
11	MP4A	X	-4.546	-4.546	0	%100
12	MP4A	Z	-7.875	-7.875	0	%100
13	MP5A	X	-4.546	-4.546	0	%100
14	MP5A	Z	-7.875	-7.875	0	%100
15	M14	X	-4.716	-4.716	0	%100
16	M14	Z	-8.168	-8.168	0	%100
17	M15A	X	-5.659	-5.659	0	%100
18	M15A	Z	-9.802	-9.802	0	%100
19	M16	X	-5.511	-5.511	0	%100
20	M16	Z	-9.546	-9.546	0	%100
21	M17	X	-5.025	-5.025	0	%100
22	M17	Z	-8.704	-8.704	0	%100
23	M23	X	-.061	-.061	0	%100
24	M23	Z	-.106	-.106	0	%100

Member Distributed Loads (BLC 53 : Structure Wi (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-4.911	-4.911	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-4.022	-4.022	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	-4.372	-4.372	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-4.022	-4.022	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-4.022	-4.022	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	-4.022	-4.022	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	-3.424	-3.424	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	-4.012	-4.012	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-4.012	-4.012	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	-4.809	-4.809	0	%100
23	M23	X	0	0	0	%100
24	M23	Z	-.49	-.49	0	%100

Member Distributed Loads (BLC 54 : Structure Wi (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	1.842	1.842	0	%100
2	M2	Z	-3.19	-3.19	0	%100
3	MP1A	X	2.011	2.011	0	%100
4	MP1A	Z	-3.483	-3.483	0	%100
5	M12	X	.412	.412	0	%100
6	M12	Z	-.713	-.713	0	%100
7	MP2A	X	2.186	2.186	0	%100
8	MP2A	Z	-3.786	-3.786	0	%100
9	MP3A	X	2.011	2.011	0	%100
10	MP3A	Z	-3.483	-3.483	0	%100
11	MP4A	X	2.011	2.011	0	%100
12	MP4A	Z	-3.483	-3.483	0	%100
13	MP5A	X	2.011	2.011	0	%100
14	MP5A	Z	-3.483	-3.483	0	%100
15	M14	X	1.712	1.712	0	%100
16	M14	Z	-2.965	-2.965	0	%100
17	M15A	X	1.991	1.991	0	%100
18	M15A	Z	-3.448	-3.448	0	%100
19	M16	X	2.044	2.044	0	%100
20	M16	Z	-3.541	-3.541	0	%100
21	M17	X	1.803	1.803	0	%100
22	M17	Z	-3.123	-3.123	0	%100
23	M23	X	1.012	1.012	0	%100
24	M23	Z	-1.754	-1.754	0	%100

Member Distributed Loads (BLC 55 : Structure Wi (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	1.063	1.063	0	%100
2	M2	Z	-.614	-.614	0	%100
3	MP1A	X	3.483	3.483	0	%100
4	MP1A	Z	-2.011	-2.011	0	%100
5	M12	X	2.14	2.14	0	%100
6	M12	Z	-1.236	-1.236	0	%100
7	MP2A	X	3.786	3.786	0	%100
8	MP2A	Z	-2.186	-2.186	0	%100
9	MP3A	X	3.483	3.483	0	%100
10	MP3A	Z	-2.011	-2.011	0	%100
11	MP4A	X	3.483	3.483	0	%100
12	MP4A	Z	-2.011	-2.011	0	%100
13	MP5A	X	3.483	3.483	0	%100
14	MP5A	Z	-2.011	-2.011	0	%100
15	M14	X	2.965	2.965	0	%100
16	M14	Z	-1.712	-1.712	0	%100
17	M15A	X	3.489	3.489	0	%100
18	M15A	Z	-2.014	-2.014	0	%100
19	M16	X	3.582	3.582	0	%100
20	M16	Z	-2.068	-2.068	0	%100
21	M17	X	1.041	1.041	0	%100
22	M17	Z	-.601	-.601	0	%100
23	M23	X	2.697	2.697	0	%100
24	M23	Z	-1.557	-1.557	0	%100

Member Distributed Loads (BLC 56 : Structure Wi (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	4.022	4.022	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	3.295	3.295	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	4.372	4.372	0	%100
8	MP2A	Z	0	0	0	%100
9	MP3A	X	4.022	4.022	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	4.022	4.022	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	4.022	4.022	0	%100
14	MP5A	Z	0	0	0	%100
15	M14	X	3.424	3.424	0	%100
16	M14	Z	0	0	0	%100
17	M15A	X	4.106	4.106	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	4.106	4.106	0	%100
20	M16	Z	0	0	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	0	0	0	%100
23	M23	X	2.668	2.668	0	%100
24	M23	Z	0	0	0	%100

Member Distributed Loads (BLC 57 : Structure Wi (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	1.063	1.063	0	%100
2	M2	Z	.614	.614	0	%100
3	MP1A	X	3.483	3.483	0	%100
4	MP1A	Z	2.011	2.011	0	%100
5	M12	X	2.14	2.14	0	%100
6	M12	Z	1.236	1.236	0	%100
7	MP2A	X	3.786	3.786	0	%100
8	MP2A	Z	2.186	2.186	0	%100
9	MP3A	X	3.483	3.483	0	%100
10	MP3A	Z	2.011	2.011	0	%100
11	MP4A	X	3.483	3.483	0	%100
12	MP4A	Z	2.011	2.011	0	%100
13	MP5A	X	3.483	3.483	0	%100
14	MP5A	Z	2.011	2.011	0	%100
15	M14	X	2.965	2.965	0	%100
16	M14	Z	1.712	1.712	0	%100
17	M15A	X	3.582	3.582	0	%100
18	M15A	Z	2.068	2.068	0	%100
19	M16	X	3.489	3.489	0	%100
20	M16	Z	2.014	2.014	0	%100
21	M17	X	1.041	1.041	0	%100
22	M17	Z	.601	.601	0	%100
23	M23	X	.982	.982	0	%100
24	M23	Z	.567	.567	0	%100

Member Distributed Loads (BLC 58 : Structure Wi (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	1.842	1.842	0	%100
2	M2	Z	3.19	3.19	0	%100
3	MP1A	X	2.011	2.011	0	%100
4	MP1A	Z	3.483	3.483	0	%100
5	M12	X	.412	.412	0	%100
6	M12	Z	.713	.713	0	%100
7	MP2A	X	2.186	2.186	0	%100
8	MP2A	Z	3.786	3.786	0	%100
9	MP3A	X	2.011	2.011	0	%100
10	MP3A	Z	3.483	3.483	0	%100
11	MP4A	X	2.011	2.011	0	%100
12	MP4A	Z	3.483	3.483	0	%100
13	MP5A	X	2.011	2.011	0	%100
14	MP5A	Z	3.483	3.483	0	%100
15	M14	X	1.712	1.712	0	%100
16	M14	Z	2.965	2.965	0	%100
17	M15A	X	2.044	2.044	0	%100
18	M15A	Z	3.541	3.541	0	%100
19	M16	X	1.991	1.991	0	%100
20	M16	Z	3.448	3.448	0	%100
21	M17	X	1.803	1.803	0	%100
22	M17	Z	3.123	3.123	0	%100
23	M23	X	.022	.022	0	%100
24	M23	Z	.038	.038	0	%100

Member Distributed Loads (BLC 59 : Structure Wi (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	4.911	4.911	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	4.022	4.022	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	4.372	4.372	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	4.022	4.022	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	4.022	4.022	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	4.022	4.022	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	3.424	3.424	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	4.012	4.012	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	4.012	4.012	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	4.809	4.809	0	%100
23	M23	X	0	0	0	%100
24	M23	Z	.49	.49	0	%100

Member Distributed Loads (BLC 60 : Structure Wi (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-1.842	-1.842	0	%100
2	M2	Z	3.19	3.19	0	%100
3	MP1A	X	-2.011	-2.011	0	%100
4	MP1A	Z	3.483	3.483	0	%100
5	M12	X	-.412	-.412	0	%100
6	M12	Z	.713	.713	0	%100
7	MP2A	X	-2.186	-2.186	0	%100
8	MP2A	Z	3.786	3.786	0	%100
9	MP3A	X	-2.011	-2.011	0	%100
10	MP3A	Z	3.483	3.483	0	%100
11	MP4A	X	-2.011	-2.011	0	%100
12	MP4A	Z	3.483	3.483	0	%100
13	MP5A	X	-2.011	-2.011	0	%100
14	MP5A	Z	3.483	3.483	0	%100
15	M14	X	-1.712	-1.712	0	%100
16	M14	Z	2.965	2.965	0	%100
17	M15A	X	-1.991	-1.991	0	%100
18	M15A	Z	3.448	3.448	0	%100
19	M16	X	-2.044	-2.044	0	%100
20	M16	Z	3.541	3.541	0	%100
21	M17	X	-1.803	-1.803	0	%100
22	M17	Z	3.123	3.123	0	%100
23	M23	X	-1.012	-1.012	0	%100
24	M23	Z	1.754	1.754	0	%100

Member Distributed Loads (BLC 61 : Structure Wi (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-1.063	-1.063	0	%100
2	M2	Z	.614	.614	0	%100
3	MP1A	X	-3.483	-3.483	0	%100
4	MP1A	Z	2.011	2.011	0	%100
5	M12	X	-2.14	-2.14	0	%100
6	M12	Z	1.236	1.236	0	%100
7	MP2A	X	-3.786	-3.786	0	%100
8	MP2A	Z	2.186	2.186	0	%100
9	MP3A	X	-3.483	-3.483	0	%100
10	MP3A	Z	2.011	2.011	0	%100
11	MP4A	X	-3.483	-3.483	0	%100
12	MP4A	Z	2.011	2.011	0	%100
13	MP5A	X	-3.483	-3.483	0	%100
14	MP5A	Z	2.011	2.011	0	%100
15	M14	X	-2.965	-2.965	0	%100
16	M14	Z	1.712	1.712	0	%100
17	M15A	X	-3.489	-3.489	0	%100
18	M15A	Z	2.014	2.014	0	%100
19	M16	X	-3.582	-3.582	0	%100
20	M16	Z	2.068	2.068	0	%100
21	M17	X	-1.041	-1.041	0	%100
22	M17	Z	.601	.601	0	%100
23	M23	X	-2.697	-2.697	0	%100
24	M23	Z	1.557	1.557	0	%100

Member Distributed Loads (BLC 62 : Structure Wi (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	-4.022	-4.022	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	-3.295	-3.295	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	-4.372	-4.372	0	%100
8	MP2A	Z	0	0	0	%100
9	MP3A	X	-4.022	-4.022	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	-4.022	-4.022	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	-4.022	-4.022	0	%100
14	MP5A	Z	0	0	0	%100
15	M14	X	-3.424	-3.424	0	%100
16	M14	Z	0	0	0	%100
17	M15A	X	-4.106	-4.106	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	-4.106	-4.106	0	%100
20	M16	Z	0	0	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	0	0	0	%100
23	M23	X	-2.668	-2.668	0	%100
24	M23	Z	0	0	0	%100

Member Distributed Loads (BLC 63 : Structure Wi (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-1.063	-1.063	0	%100
2	M2	Z	-.614	-.614	0	%100
3	MP1A	X	-3.483	-3.483	0	%100
4	MP1A	Z	-2.011	-2.011	0	%100
5	M12	X	-2.14	-2.14	0	%100
6	M12	Z	-1.236	-1.236	0	%100
7	MP2A	X	-3.786	-3.786	0	%100
8	MP2A	Z	-2.186	-2.186	0	%100
9	MP3A	X	-3.483	-3.483	0	%100
10	MP3A	Z	-2.011	-2.011	0	%100
11	MP4A	X	-3.483	-3.483	0	%100
12	MP4A	Z	-2.011	-2.011	0	%100
13	MP5A	X	-3.483	-3.483	0	%100
14	MP5A	Z	-2.011	-2.011	0	%100
15	M14	X	-2.965	-2.965	0	%100
16	M14	Z	-1.712	-1.712	0	%100
17	M15A	X	-3.582	-3.582	0	%100
18	M15A	Z	-2.068	-2.068	0	%100
19	M16	X	-3.489	-3.489	0	%100
20	M16	Z	-2.014	-2.014	0	%100
21	M17	X	-1.041	-1.041	0	%100
22	M17	Z	-.601	-.601	0	%100
23	M23	X	-.982	-.982	0	%100
24	M23	Z	-.567	-.567	0	%100

Member Distributed Loads (BLC 64 : Structure Wi (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-1.842	-1.842	0	%100
2	M2	Z	-3.19	-3.19	0	%100
3	MP1A	X	-2.011	-2.011	0	%100
4	MP1A	Z	-3.483	-3.483	0	%100
5	M12	X	-.412	-.412	0	%100
6	M12	Z	-.713	-.713	0	%100
7	MP2A	X	-2.186	-2.186	0	%100
8	MP2A	Z	-3.786	-3.786	0	%100
9	MP3A	X	-2.011	-2.011	0	%100
10	MP3A	Z	-3.483	-3.483	0	%100
11	MP4A	X	-2.011	-2.011	0	%100
12	MP4A	Z	-3.483	-3.483	0	%100
13	MP5A	X	-2.011	-2.011	0	%100
14	MP5A	Z	-3.483	-3.483	0	%100
15	M14	X	-1.712	-1.712	0	%100
16	M14	Z	-2.965	-2.965	0	%100
17	M15A	X	-2.044	-2.044	0	%100
18	M15A	Z	-3.541	-3.541	0	%100
19	M16	X	-1.991	-1.991	0	%100
20	M16	Z	-3.448	-3.448	0	%100
21	M17	X	-1.803	-1.803	0	%100
22	M17	Z	-3.123	-3.123	0	%100
23	M23	X	-.022	-.022	0	%100
24	M23	Z	-.038	-.038	0	%100

Member Distributed Loads (BLC 65 : Structure Wm (0 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-.918	-.918	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	-.598	-.598	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	-.724	-.724	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-.598	-.598	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-.598	-.598	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	-.598	-.598	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	-.62	-.62	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	-.73	-.73	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-.73	-.73	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	-.881	-.881	0	%100
23	M23	X	0	0	0	%100
24	M23	Z	-.089	-.089	0	%100

Member Distributed Loads (BLC 66 : Structure Wm (30 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	.344	.344	0	%100
2	M2	Z	-.596	-.596	0	%100
3	MP1A	X	.299	.299	0	%100
4	MP1A	Z	-.518	-.518	0	%100
5	M12	X	.081	.081	0	%100
6	M12	Z	-.14	-.14	0	%100
7	MP2A	X	.362	.362	0	%100
8	MP2A	Z	-.627	-.627	0	%100
9	MP3A	X	.299	.299	0	%100
10	MP3A	Z	-.518	-.518	0	%100
11	MP4A	X	.299	.299	0	%100
12	MP4A	Z	-.518	-.518	0	%100
13	MP5A	X	.299	.299	0	%100
14	MP5A	Z	-.518	-.518	0	%100
15	M14	X	.31	.31	0	%100
16	M14	Z	-.537	-.537	0	%100
17	M15A	X	.362	.362	0	%100
18	M15A	Z	-.628	-.628	0	%100
19	M16	X	.372	.372	0	%100
20	M16	Z	-.644	-.644	0	%100
21	M17	X	.33	.33	0	%100
22	M17	Z	-.572	-.572	0	%100
23	M23	X	.184	.184	0	%100
24	M23	Z	-.319	-.319	0	%100

Member Distributed Loads (BLC 67 : Structure Wm (60 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	.199	.199	0	%100
2	M2	Z	-.115	-.115	0	%100
3	MP1A	X	.518	.518	0	%100
4	MP1A	Z	-.299	-.299	0	%100
5	M12	X	.419	.419	0	%100
6	M12	Z	-.242	-.242	0	%100
7	MP2A	X	.627	.627	0	%100
8	MP2A	Z	-.362	-.362	0	%100
9	MP3A	X	.518	.518	0	%100
10	MP3A	Z	-.299	-.299	0	%100
11	MP4A	X	.518	.518	0	%100
12	MP4A	Z	-.299	-.299	0	%100
13	MP5A	X	.518	.518	0	%100
14	MP5A	Z	-.299	-.299	0	%100
15	M14	X	.537	.537	0	%100
16	M14	Z	-.31	-.31	0	%100
17	M15A	X	.635	.635	0	%100
18	M15A	Z	-.367	-.367	0	%100
19	M16	X	.652	.652	0	%100
20	M16	Z	-.376	-.376	0	%100
21	M17	X	.191	.191	0	%100
22	M17	Z	-.11	-.11	0	%100
23	M23	X	.49	.49	0	%100
24	M23	Z	-.283	-.283	0	%100

Member Distributed Loads (BLC 68 : Structure Wm (90 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	.598	.598	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	.646	.646	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	.724	.724	0	%100
8	MP2A	Z	0	0	0	%100
9	MP3A	X	.598	.598	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	.598	.598	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	.598	.598	0	%100
14	MP5A	Z	0	0	0	%100
15	M14	X	.62	.62	0	%100
16	M14	Z	0	0	0	%100
17	M15A	X	.747	.747	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	.747	.747	0	%100
20	M16	Z	0	0	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	0	0	0	%100
23	M23	X	.485	.485	0	%100
24	M23	Z	0	0	0	%100

Member Distributed Loads (BLC 69 : Structure Wm (120 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	.199	.199	0	%100
2	M2	Z	.115	.115	0	%100
3	MP1A	X	.518	.518	0	%100
4	MP1A	Z	.299	.299	0	%100
5	M12	X	.419	.419	0	%100
6	M12	Z	.242	.242	0	%100
7	MP2A	X	.627	.627	0	%100
8	MP2A	Z	.362	.362	0	%100
9	MP3A	X	.518	.518	0	%100
10	MP3A	Z	.299	.299	0	%100
11	MP4A	X	.518	.518	0	%100
12	MP4A	Z	.299	.299	0	%100
13	MP5A	X	.518	.518	0	%100
14	MP5A	Z	.299	.299	0	%100
15	M14	X	.537	.537	0	%100
16	M14	Z	.31	.31	0	%100
17	M15A	X	.652	.652	0	%100
18	M15A	Z	.376	.376	0	%100
19	M16	X	.635	.635	0	%100
20	M16	Z	.367	.367	0	%100
21	M17	X	.191	.191	0	%100
22	M17	Z	.11	.11	0	%100
23	M23	X	.178	.178	0	%100
24	M23	Z	.103	.103	0	%100

Member Distributed Loads (BLC 70 : Structure Wm (150 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	.344	.344	0	%100
2	M2	Z	.596	.596	0	%100
3	MP1A	X	.299	.299	0	%100
4	MP1A	Z	.518	.518	0	%100
5	M12	X	.081	.081	0	%100
6	M12	Z	.14	.14	0	%100
7	MP2A	X	.362	.362	0	%100
8	MP2A	Z	.627	.627	0	%100
9	MP3A	X	.299	.299	0	%100
10	MP3A	Z	.518	.518	0	%100
11	MP4A	X	.299	.299	0	%100
12	MP4A	Z	.518	.518	0	%100
13	MP5A	X	.299	.299	0	%100
14	MP5A	Z	.518	.518	0	%100
15	M14	X	.31	.31	0	%100
16	M14	Z	.537	.537	0	%100
17	M15A	X	.372	.372	0	%100
18	M15A	Z	.644	.644	0	%100
19	M16	X	.362	.362	0	%100
20	M16	Z	.628	.628	0	%100
21	M17	X	.33	.33	0	%100
22	M17	Z	.572	.572	0	%100
23	M23	X	.004	.004	0	%100
24	M23	Z	.007	.007	0	%100

Member Distributed Loads (BLC 71 : Structure Wm (180 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	.918	.918	0	%100
3	MP1A	X	0	0	0	%100
4	MP1A	Z	.598	.598	0	%100
5	M12	X	0	0	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	0	0	0	%100
8	MP2A	Z	.724	.724	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	.598	.598	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	.598	.598	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	.598	.598	0	%100
15	M14	X	0	0	0	%100
16	M14	Z	.62	.62	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	.73	.73	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	.73	.73	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	.881	.881	0	%100
23	M23	X	0	0	0	%100
24	M23	Z	.089	.089	0	%100

Member Distributed Loads (BLC 72 : Structure Wm (210 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-.344	-.344	0	%100
2	M2	Z	.596	.596	0	%100
3	MP1A	X	-.299	-.299	0	%100
4	MP1A	Z	.518	.518	0	%100
5	M12	X	-.081	-.081	0	%100
6	M12	Z	.14	.14	0	%100
7	MP2A	X	-.362	-.362	0	%100
8	MP2A	Z	.627	.627	0	%100
9	MP3A	X	-.299	-.299	0	%100
10	MP3A	Z	.518	.518	0	%100
11	MP4A	X	-.299	-.299	0	%100
12	MP4A	Z	.518	.518	0	%100
13	MP5A	X	-.299	-.299	0	%100
14	MP5A	Z	.518	.518	0	%100
15	M14	X	-.31	-.31	0	%100
16	M14	Z	.537	.537	0	%100
17	M15A	X	-.362	-.362	0	%100
18	M15A	Z	.628	.628	0	%100
19	M16	X	-.372	-.372	0	%100
20	M16	Z	.644	.644	0	%100
21	M17	X	-.33	-.33	0	%100
22	M17	Z	.572	.572	0	%100
23	M23	X	-.184	-.184	0	%100
24	M23	Z	.319	.319	0	%100

Member Distributed Loads (BLC 73 : Structure Wm (240 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-.199	-.199	0	%100
2	M2	Z	.115	.115	0	%100
3	MP1A	X	-.518	-.518	0	%100
4	MP1A	Z	.299	.299	0	%100
5	M12	X	-.419	-.419	0	%100
6	M12	Z	.242	.242	0	%100
7	MP2A	X	-.627	-.627	0	%100
8	MP2A	Z	.362	.362	0	%100
9	MP3A	X	-.518	-.518	0	%100
10	MP3A	Z	.299	.299	0	%100
11	MP4A	X	-.518	-.518	0	%100
12	MP4A	Z	.299	.299	0	%100
13	MP5A	X	-.518	-.518	0	%100
14	MP5A	Z	.299	.299	0	%100
15	M14	X	-.537	-.537	0	%100
16	M14	Z	.31	.31	0	%100
17	M15A	X	-.635	-.635	0	%100
18	M15A	Z	.367	.367	0	%100
19	M16	X	-.652	-.652	0	%100
20	M16	Z	.376	.376	0	%100
21	M17	X	-.191	-.191	0	%100
22	M17	Z	.11	.11	0	%100
23	M23	X	-.49	-.49	0	%100
24	M23	Z	.283	.283	0	%100

Member Distributed Loads (BLC 74 : Structure Wm (270 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	MP1A	X	-.598	-.598	0	%100
4	MP1A	Z	0	0	0	%100
5	M12	X	-.646	-.646	0	%100
6	M12	Z	0	0	0	%100
7	MP2A	X	-.724	-.724	0	%100
8	MP2A	Z	0	0	0	%100
9	MP3A	X	-.598	-.598	0	%100
10	MP3A	Z	0	0	0	%100
11	MP4A	X	-.598	-.598	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	-.598	-.598	0	%100
14	MP5A	Z	0	0	0	%100
15	M14	X	-.62	-.62	0	%100
16	M14	Z	0	0	0	%100
17	M15A	X	-.747	-.747	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	-.747	-.747	0	%100
20	M16	Z	0	0	0	%100
21	M17	X	0	0	0	%100
22	M17	Z	0	0	0	%100
23	M23	X	-.485	-.485	0	%100
24	M23	Z	0	0	0	%100

Member Distributed Loads (BLC 75 : Structure Wm (300 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-.199	-.199	0	%100
2	M2	Z	-.115	-.115	0	%100
3	MP1A	X	-.518	-.518	0	%100
4	MP1A	Z	-.299	-.299	0	%100
5	M12	X	-.419	-.419	0	%100
6	M12	Z	-.242	-.242	0	%100
7	MP2A	X	-.627	-.627	0	%100
8	MP2A	Z	-.362	-.362	0	%100
9	MP3A	X	-.518	-.518	0	%100
10	MP3A	Z	-.299	-.299	0	%100
11	MP4A	X	-.518	-.518	0	%100
12	MP4A	Z	-.299	-.299	0	%100
13	MP5A	X	-.518	-.518	0	%100
14	MP5A	Z	-.299	-.299	0	%100
15	M14	X	-.537	-.537	0	%100
16	M14	Z	-.31	-.31	0	%100
17	M15A	X	-.652	-.652	0	%100
18	M15A	Z	-.376	-.376	0	%100
19	M16	X	-.635	-.635	0	%100
20	M16	Z	-.367	-.367	0	%100
21	M17	X	-.191	-.191	0	%100
22	M17	Z	-.11	-.11	0	%100
23	M23	X	-.178	-.178	0	%100
24	M23	Z	-.103	-.103	0	%100

Member Distributed Loads (BLC 76 : Structure Wm (330 Deg))

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[l...	Start Location[ft,...	End Location[ft,%]
1	M2	X	-.344	-.344	0	%100
2	M2	Z	-.596	-.596	0	%100
3	MP1A	X	-.299	-.299	0	%100
4	MP1A	Z	-.518	-.518	0	%100
5	M12	X	-.081	-.081	0	%100
6	M12	Z	-.14	-.14	0	%100
7	MP2A	X	-.362	-.362	0	%100
8	MP2A	Z	-.627	-.627	0	%100
9	MP3A	X	-.299	-.299	0	%100
10	MP3A	Z	-.518	-.518	0	%100
11	MP4A	X	-.299	-.299	0	%100
12	MP4A	Z	-.518	-.518	0	%100
13	MP5A	X	-.299	-.299	0	%100
14	MP5A	Z	-.518	-.518	0	%100
15	M14	X	-.31	-.31	0	%100
16	M14	Z	-.537	-.537	0	%100
17	M15A	X	-.372	-.372	0	%100
18	M15A	Z	-.644	-.644	0	%100
19	M16	X	-.362	-.362	0	%100
20	M16	Z	-.628	-.628	0	%100
21	M17	X	-.33	-.33	0	%100
22	M17	Z	-.572	-.572	0	%100
23	M23	X	-.004	-.004	0	%100
24	M23	Z	-.007	-.007	0	%100

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N23	max	732.02	9	1607.717	20	1095.631	24	-.292	12	1.091	9	.814	3
2		min	-615.211	3	354.507	2	-127.993	6	-2.418	18	-.916	3	-.688	9
3	N43	max	865.729	11	1057.713	14	1499.489	1	-.137	10	2.61	9	.792	15
4		min	-983.449	5	172.242	8	-2090.221	7	-1.485	16	-2.782	3	-.228	9
5	Totals:	max	1421.246	10	2572.878	19	2085.526	1						
6		min	-1421.247	4	918.153	1	-2085.555	7						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*...	phi*...	phi*...	...	Eqn
1	M2	HSS3....	.157	4.75	13	.041	4.75	y	37	72724.603	1204..	12.0...	12.0...	...	H1-...
2	MP1A	PIPE_...	.143	3.992	50	.061	3.992		8	23088.171	32130	1.872	1.872	...	H1-...
3	M12	HSS3....	.249	1.5	20	.098	1.5	z	3	118967.466	1204..	12.0...	12.0...	...	H1-...
4	MP2A	PIPE_...	.205	2.25	19	.103	3.583		8	30038.461	50715	3.596	3.596	...	H1-...
5	MP3A	PIPE_...	.225	3.992	20	.084	2.297		8	23088.171	32130	1.872	1.872	...	H1-...
6	MP4A	PIPE_...	.210	3.992	17	.074	2.297		20	23088.171	32130	1.872	1.872	...	H1-...
7	MP5A	PIPE_...	.174	3.992	23	.053	3.992		12	23088.171	32130	1.872	1.872	...	H1-...

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*...	phi*...	phi*...	...	Eqn
8	M14	PIPE_...	.000	.75	5	.000	.75		5	92571.332	93240	10.6...	10.6...	...	H1-...
9	M15A	PIPE_...	.027	5	8	.003	5		8	57037.472	65205	5.749	5.749	...	H1-...
10	M16	PIPE_...	.027	5	6	.003	5		6	57037.472	65205	5.749	5.749	...	H1-...
11	M17	PIPE_...	.293	5.542	2	.114	5.443		20	40222.164	65205	5.749	5.749	...	H1-...
12	M23	HSS3...	.444	1.904	3	.078	1.904	z	3	98190.434	1010...	8.556	8.556	...	H1-...

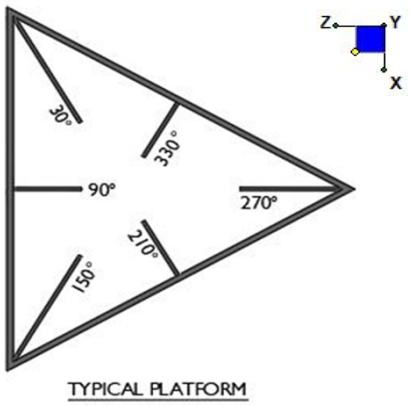
Client:	Verizon Wireless	Date:	7/22/2021
Site Name:	FARMINGTON N 2 CT		
Project No.	21777814A		
Title:	Antenna Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check: Existing Connection

RISA Model Data

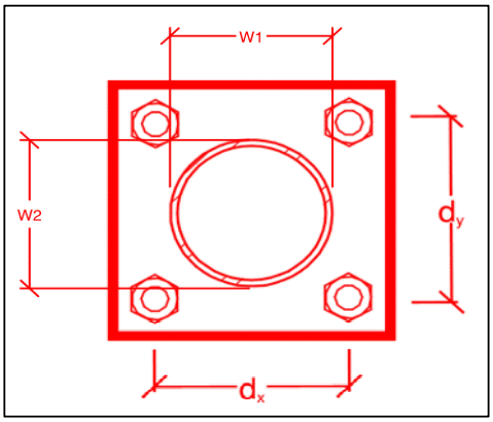
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N23	90



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	4.5
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	6.5
Bolt Type:	A325N
Bolt Diameter (in):	0.5
Required Tensile Strength (kips):	10.2
Required Shear Strength (kips):	5.1
Tensile Strength / bolt (kips):	13.3
Shear Strength / bolt (kips):	8.0
Tensile Capacity Overall:	**19.2%***
Shear Capacity Overall:	**16.0%**



**Note: Tension reduction not required if tension or shear capacity < 30%*

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:	Rect
Plate Width (in):	6
Plate Height (in):	8
W1 (in):	3
W2 (in):	3
Fy (ksi, plate):	36
t_{Plate} (in):	0.5
Weld Size (1/16 in):	3
Phi*Rn (kip/in):	4.18
Required Weld Strength (kip/in):	2.53
Plate Bending Capacity:	**75.7%**
Weld Capacity:	**60.6%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	8.2
Phi*Mn_{xx} *(kip-in)* :	12.2
Mu_{yy} *(kip-in)* :	1.3
Phi*Mn_{yy} *(kip-in)* :	16.2

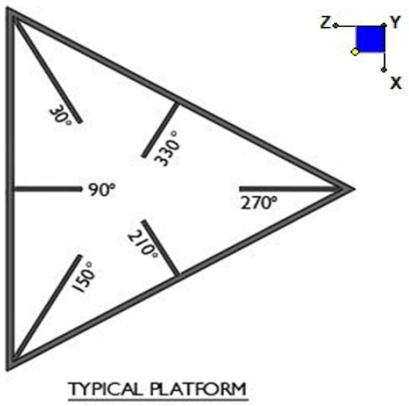
Client:	Verizon Wireless	Date:	7/22/2021
Site Name:	FARMINGTON N 2 CT		
Project No.	21777814A		
Title:	Antenna Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

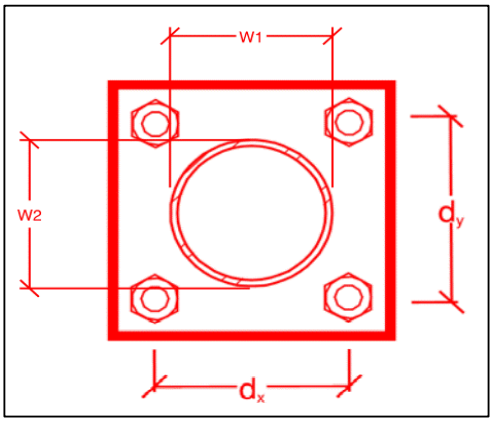
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N43	120



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	6
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	6
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	12.1
Required Shear Strength (kips):	2.4
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**14.6%***
Shear Capacity Overall:	**4.9%**



**Note: Tension reduction not required if tension or shear capacity < 30%*

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:	Rect
Plate Width (in):	8.25
Plate Height (in):	8.25
W1 (in):	3
W2 (in):	3
Fy (ksi, plate):	50
t_{Plate} (in):	0.75
Weld Size (1/16 in):	5
Phi*Rn (kip/in):	6.96
Required Weld Strength (kip/in):	2.99
Plate Bending Capacity:	**22.2%**
Weld Capacity:	**43.0%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	3.1
Phi*Mn_{xx} *(kip-in)* :	52.2
Mu_{yy} *(kip-in)* :	8.5
Phi*Mn_{yy} *(kip-in)* :	52.2

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Purpose – to provide Maser Consulting Connecticut the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the drawings
- Provide "as built drawings" showing contractor's name, preparer's signature, and date. Any deviations from the drawings (proposed modification) must be shown.
- Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.
- Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact Maser Consulting Connecticut immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to **https://pmi.vzwsmart.com** as depicted on the drawings

Photo Requirements:

- *Base and "During Installation Photos"*
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - "During Installation Photos if provided - must be placed only in this folder
- *Photos taken at ground level*
  - Overall tower structure before and after installation of the modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- *Photos taken at Mount Elevation*
    - Photos showing each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
        - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
    - Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
    - Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
    - Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
    - Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, a tape drop measurement shall be provided before the elevation change
    - Photos showing the safety climb wire rope above and below the mount prior to modification.
    - Photos showing the climbing facility and safety climb if present.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by Maser Consulting Connecticut.
    - If the drawings are as specified on the drawings
        - The contractor should provide the packing list or the materials utilized to perform the mount modification
    - If an equivalent is utilized
        - It is required that the Maser Consulting Connecticut certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.
- The contractor must certify that the materials meet these specifications by one of these methods.

☐ The Material utilized was as specified on the Maser Consulting Connecticut Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials

☐ The material utilized was an "equivalent" and included as part of the contractor submission is the Maser Consulting Connecticut certification, invoices, or specifications validating accepted status

Certifying Individual: Company _____

Name _____

Signature _____

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

Contractor shall relocate/ remove any existing monopine branches as needed to prevent interference with the installation of the proposed modifications. Contractor shall verify all dimensions and member sizes shown in the mount geometry verification requirements section of the mount modification drawings referenced in this report. Contact EOR if these documents are not available to the general contractor. Contractor to install safety climb cable guide (Site Pro 1, Part #: 120-203-317 or EOR approved equivalent) in locations where wire rope is rubbing against mount to tower attachments. Contractor to provided photos of safety climb cable guide installation.

Response:

Schedule A – Photo & Document File Structure

- VzW Site Number / Name
  - Base & “During Installation” Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb – If Present
  - Certifications – Submission of this document including certifications
  - Specific Required Additional Photos

Structure: 467261-VZW - FARMINGTON N 2 CT

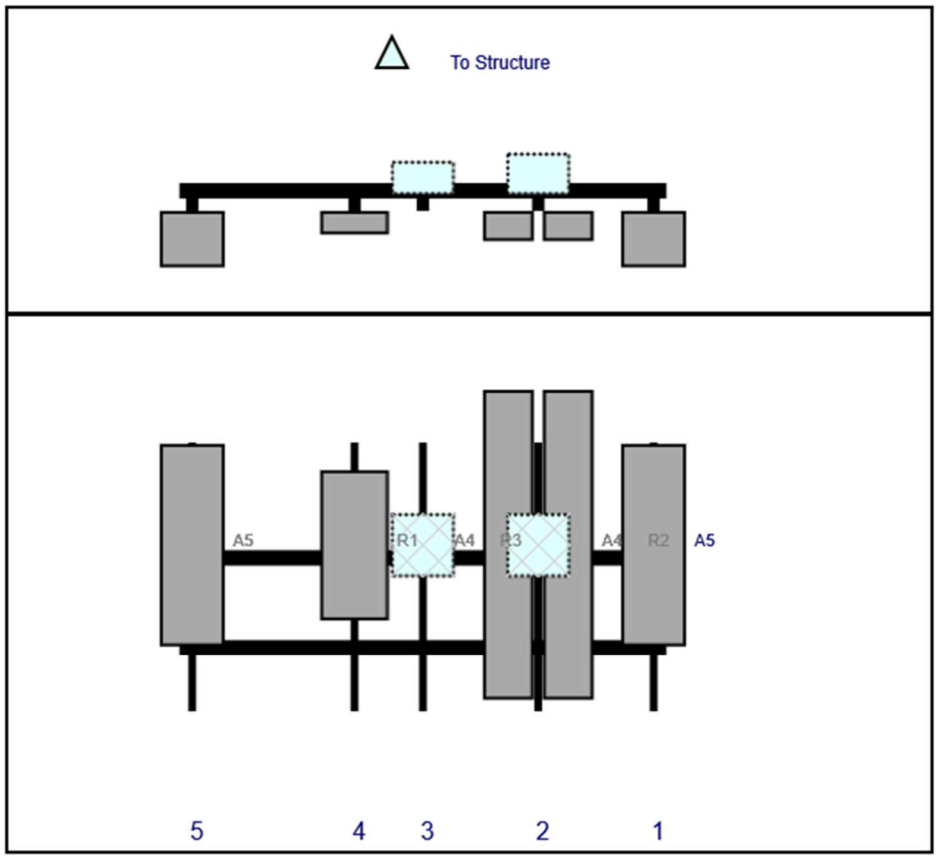
Sector: **A** 7/19/2021

Structure Type: Monopole 10059060

Mount Elev: 108.00 Page: 1

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A5	LPA-80063/4CF	47.4	15.2	111	1	a	Front	24	0	Retained	
A4	SBNHH-1D65B	72.6	11.9	84	2	a	Front	24	7	Retained	04/22/2019
A4	SBNHH-1D65B	72.6	11.9	84	2	b	Front	24	-7	Retained	04/22/2019
R2	B2/B66A RRH-BR049	15	15	84	2	a	Behind	24	0	Added	
R3	B5/B13 RRH-BR04C	15	15	57	3	a	Behind	24	0	Added	
R1	MT6407-77A	35.1	16.1	41	4	a	Front	24	0	Added	
A5	LPA-80063/4CF	47.4	15.2	3	5	a	Front	24	0	Retained	

Structure: 467261-VZW - FARMINGTON N 2 CT

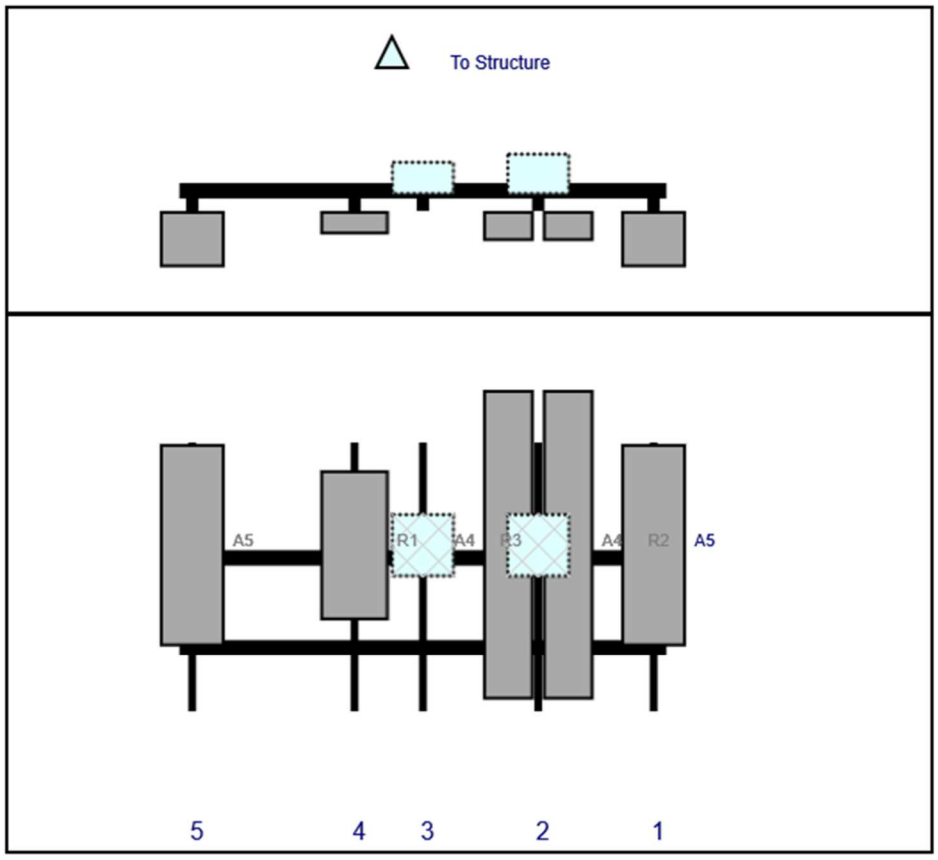
Sector: **B** 7/19/2021

Structure Type: Monopole 10059060

Mount Elev: 108.00

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A5	LPA-80063/4CF	47.4	15.2	111	1	a	Front	24	0	Retained	
A4	SBNHH-1D65B	72.6	11.9	84	2	a	Front	24	7	Retained	04/22/2019
A4	SBNHH-1D65B	72.6	11.9	84	2	b	Front	24	-7	Retained	04/22/2019
R2	B2/B66A RRH-BR049	15	15	84	2	a	Behind	24	0	Added	
R3	B5/B13 RRH-BR04C	15	15	57	3	a	Behind	24	0	Added	
R1	MT6407-77A	35.1	16.1	41	4	a	Front	24	0	Added	
A5	LPA-80063/4CF	47.4	15.2	3	5	a	Front	24	0	Retained	

Structure: 467261-VZW - FARMINGTON N 2 CT

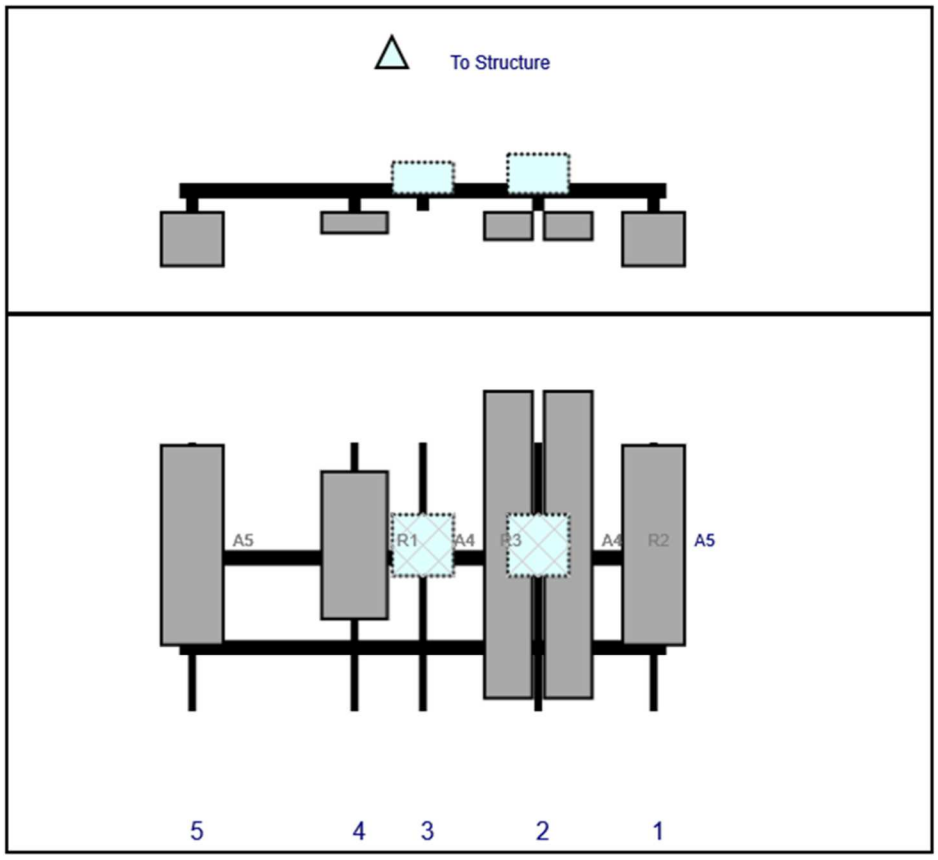
Sector: **C** 7/19/2021

Structure Type: Monopole 10059060

Mount Elev: 108.00

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A5	LPA-80063/4CF	47.4	15.2	111	1	a	Front	24	0	Retained	
A4	SBNHH-1D65B	72.6	11.9	84	2	a	Front	24	7	Retained	04/22/2019
A4	SBNHH-1D65B	72.6	11.9	84	2	b	Front	24	-7	Retained	04/22/2019
R2	B2/B66A RRH-BR049	15	15	84	2	a	Behind	24	0	Added	
R3	B5/B13 RRH-BR04C	15	15	57	3	a	Behind	24	0	Added	
R1	MT6407-77A	35.1	16.1	41	4	a	Front	24	0	Added	
A5	LPA-80063/4CF	47.4	15.2	3	5	a	Front	24	0	Retained	

Maser Consulting Connecticut

Subject	*TIA-222-H Usage*	
Site Information	*Site ID:*	*467261-VZW / FARMINGTON N 2 CT*
	Site Name:	*FARMINGTON N 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*199 Town Farm Road* *Farmmington, Connecticut 06032* *Hartford County*
	Latitude:	*41.757775°*
	Longitude:	*-72.829931°*
Structure Information	*Tower Type:*	*111-Ft Monopole*
	Mount Type:	*9.50-Ft T-Arm*

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H Standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Eric Anderson, PE
Technical Specialist

verizon✓

MOUNT MODIFICATION DRAWINGS
EXISTING 9.50' T-ARM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 411258

CARRIER SITE NAME: FARMINGTON N 2 CT
CARRIER SITE NUMBER: 467261
FUZE ID: 16244117

199 TOWN FARM ROAD
FARMINGTON, CT 06032
HARTFORD COUNTY

LATITUDE: 41.757775° N
LONGITUDE: 72.829931° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 117 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 182.95'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.50 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .185
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY:	VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY:	VERIZON WIRELESS
ADDRESS:	118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP:	WESTBOROUGH, MA 01581
CONTACT:	ANDREW CANDIELLO
EMAIL:	ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY:	MASER CONSULTING CONNECTICUT
CONTACT:	PETER ALBANO
PHONE:	856-797-0412
E-MAIL:	PETER.ALBANO@COLLIERSENGINEERING.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10086840
VZW LOCATION CODE (PSLC):	467261
ANALYSIS DATE:	7/23/2021

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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SCALE :	JOB NUMBER :
AS SHOWN	21777814A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
0	7/23/2021	ISSUED FOR CONSTRUCTION	MSG	DX

MASER CONSULTING
With GeomVerification
C.O.A. #: JPC.0000131

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:

FARMINGTON N 2 CT
467261

199 TOWN FARM ROAD
FARMINGTON, CT 06032
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :
TITLE SHEET

SHEET NUMBER :
ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT	WEIGHT
3	VZWSMART	VZWSMART-SFK4	T-ARM KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).	106	318
1		VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150
15		VZWSMART-MSK2	CROSSOVER PLATE		15	225

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT	WEIGHT
3	-	-	114" LONG, P3.0 STD	GALVANIZED; RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).	171	513
3	-	-	96" LONG, P2.5 STD	GALVANIZED; CONNECT TO EXISTING FACE HORIZONTAL WITH NEW WITH CROSSOVER PLATE (PERFECT VISION PART #: PV-XP-35ST25, OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING CONNECTICUT FOR APPROVAL OF SUBSTITUTION)	106	318
3	-	-	96" LONG, P2.0 STD	GALVANIZED; CONNECT TO EXISTING FACE HORIZONTAL WITH EXISTING HARDWARE	70	210
3	PERFECT VISION	PV-XP-35ST25	SQUARE TUBE CROSSOVER PLATE	OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING FOR APPROVAL OF SUBSTITUTION	10	30
					TOTAL:	1764

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

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JOB NUMBER : 21777814A

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SITE NAME:

FARMINGTON N 2 CT
467261

199 TOWN FARM ROAD
FARMINGTON, CT 06032
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE : BILL OF MATERIALS

SHEET NUMBER : SBOM-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

GENERAL NOTES

1. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
4. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
6. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
8. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
9. ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-322.
10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOFABRIC, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
11. CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, CHECKED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
12. DO NOT SCALE DRAWINGS.
13. DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
14. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
15. THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

STRUCTURAL STEEL

1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO

      PETER.ALBANO@COLLIERSENGINEERING.COM

   b. PROVIDE MASER CONSULTING CONNECTICUT PROJECT # AND MASER CONSULTING CONNECTICUT PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

WELDING NOTES

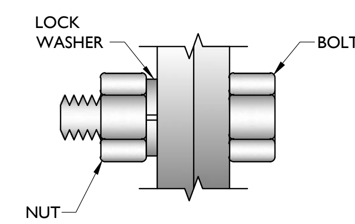
1. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTION (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE, DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A THIRD PARTY CERTIFIED WELD INSPECTOR (CWI) THROUGHOUT THE ENTIRETY OF THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
3. THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CWI REPORT, THAT ALL WELDING OPERATIONS PRE, DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF ALL WELDING. ALL CWI WELD INSPECTION DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.
4. IN CASES WHERE A WELD IS SPECIFIED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT-UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.
5. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
6. CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.

BOLT SCHEDULE (IN.)

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

WORKABLE GAGES (IN.)

LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8

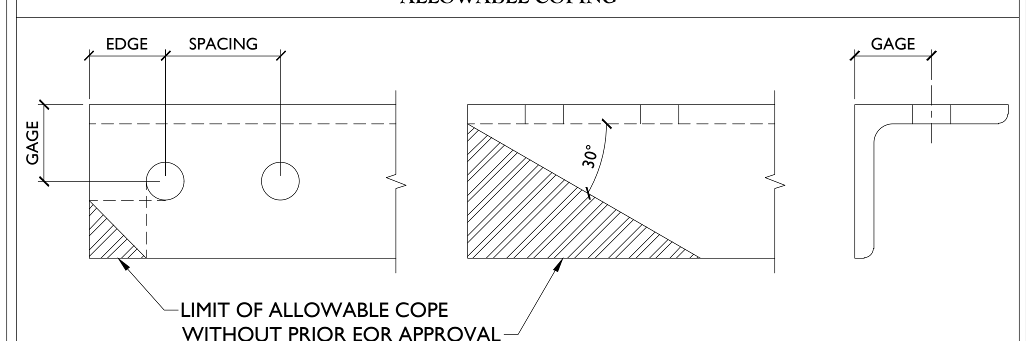


TYP. BOLT ASSEMBLY

NOTES:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

ALLOWABLE COPING



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FARMINGTON N 2 CT
467261

199 TOWN FARM ROAD
FARMINGTON, CT 06032
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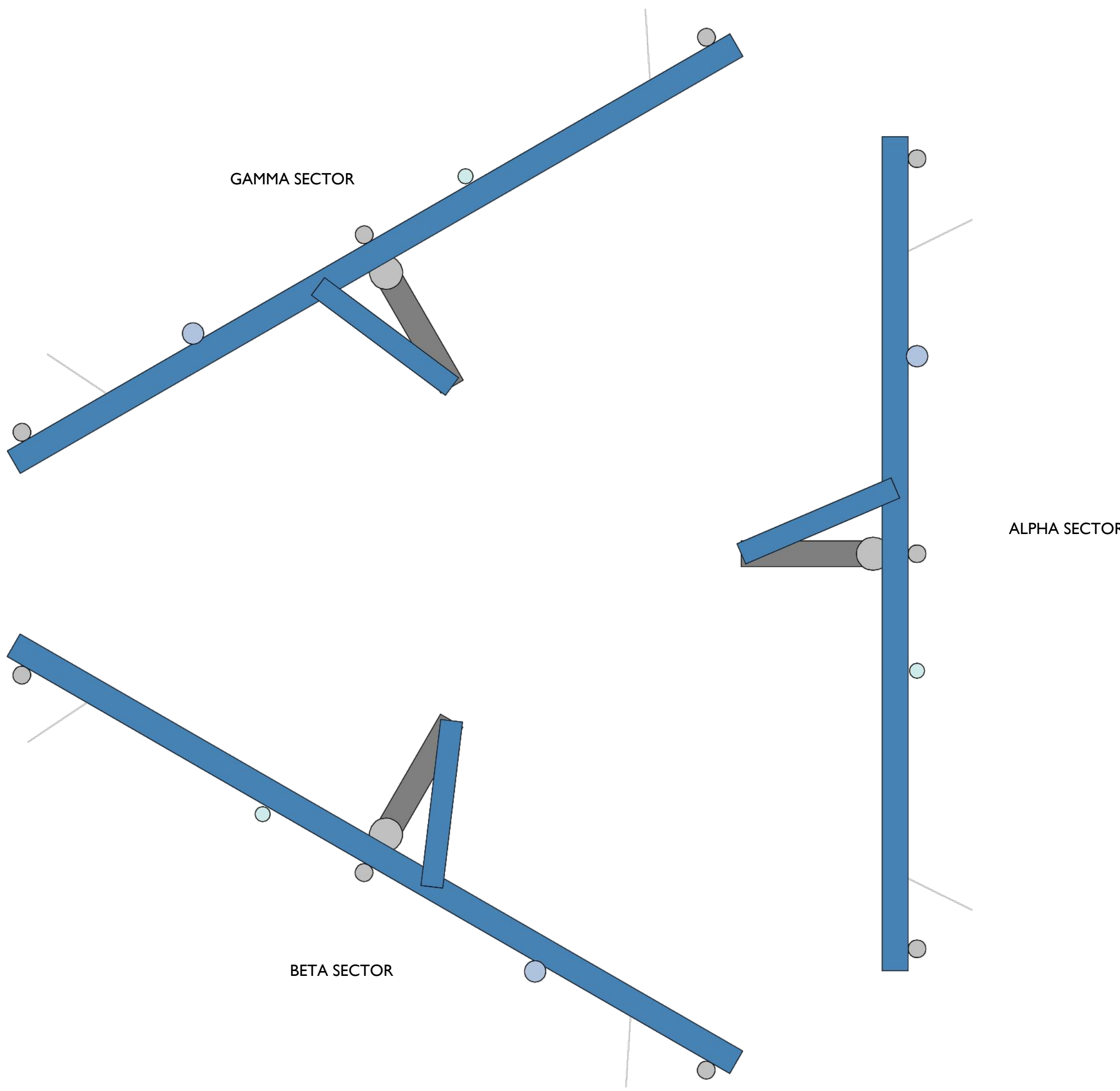
MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE : MODIFICATION NOTES

SHEET NUMBER : SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.

STRUCTURAL NOTES:

1. CONTRACTOR TO INSPECT CLIMBING FACILITIES AT SITE AND ENSURE THAT THE SAFETY CLIMB IS IN GOOD CONDITION AND THAT THE WIRE ROPE DOES NOT OR WILL NOT INTERFERE WITH THE EXISTING OR PROPOSED MOUNT CONNECTIONS. CONTRACTOR SHALL INSTALL SAFETY CLIMB WIRE ROPE GUIDED AROUND MOUNT CONNECTIONS AS NEEDED.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

NOTES:

NO PHOTO OF THE EXISTING CLIMBING FACILITY IS AVAILABLE, AS ONLY A DESKTOP MAPPING WAS COMPLETED.

CLIMBING FACILITY PHOTO

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HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :
CLIMBING FACILITY DETAIL

SHEET NUMBER :
SCF-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:

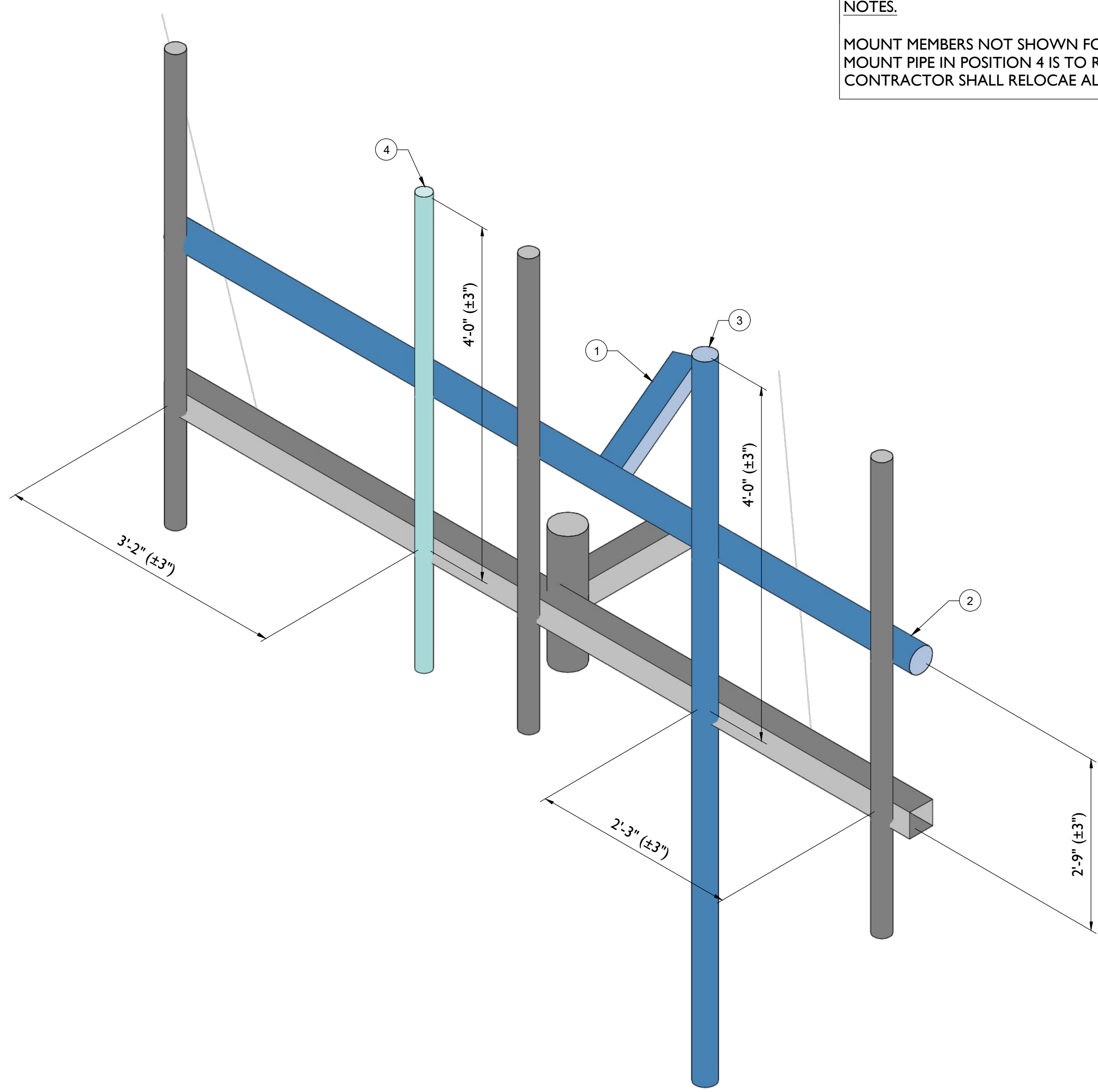
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1		3	PROPOSED T-ARM KIT (PART #: VZWSMART-SFK4)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
2		3	114" LONG, P3.0 STD FACE HORIZONTAL	GALVANIZED; RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
3		3	96" LONG, P2.5 STD MOUNT PIPE	GALVANIZED; CONNECT TO EXISTING FACE HORIZONTAL WITH NEW WITH CROSSOVER PLATE (PERFECT VISION PART #: PV-XP-35ST25, OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING CONNECTICUT FOR APPROVAL OF SUBSTITUTION)
4		3	96" LONG, P2.0 STD MOUNT PIPE	GALVANIZED; TO BE RELOCATED FURTHER FROM POSITION 5 DUE TO THE HEAT CLEARANCE FOR THE PROPOSED 5G ANTENNAS.
5				
6				
7				
8				
9				
10				

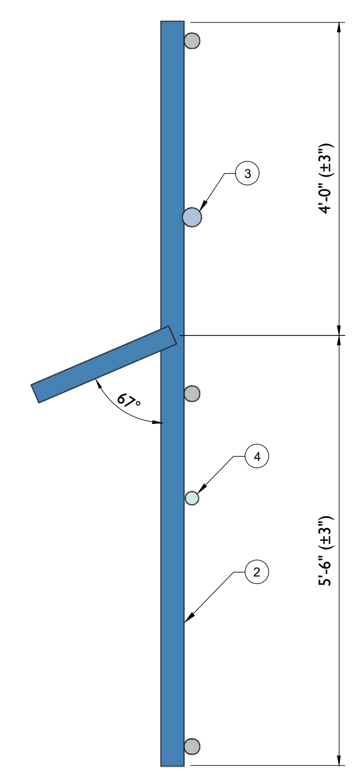
NOTES.

MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
MOUNT PIPE IN POSITION 4 IS TO RELOCATED FUTHER FORM POSITION 5 DUE TO HEAT CLEARANCE FOR 5G ANTENNA
CONTRACTOR SHALL RELOCAE ALL MONOPINE BRANCHES AS NEEDED TO PREVENT INTERFERENCE WITH MOD INSTALLATION.



1 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED PLAN VIEW (TYP. ALL SECTORS)

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SCALE : AS SHOWN | JOB NUMBER : 21777814A

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0	7/23/2021	ISSUED FOR CONSTRUCTION	MSG	DX

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With GeomVerification
C.O.A. #: JPC.0000131

SITE NAME:

FARMINGTON N 2 CT
467261

199 TOWN FARM ROAD
FARMINGTON, CT 06032
HARTFORD COUNTY

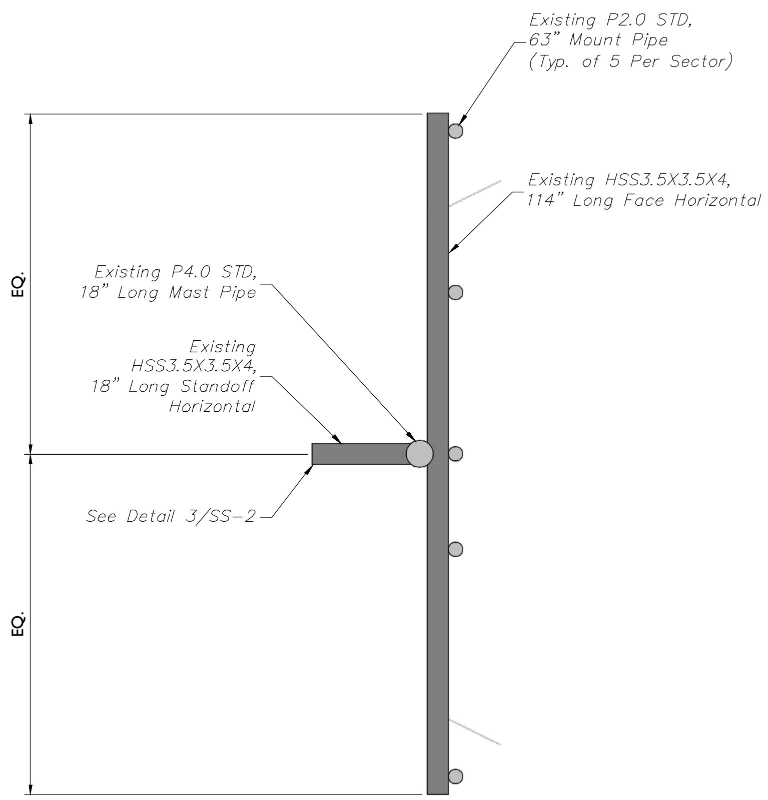
MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE : MODIFICATION DETAILS

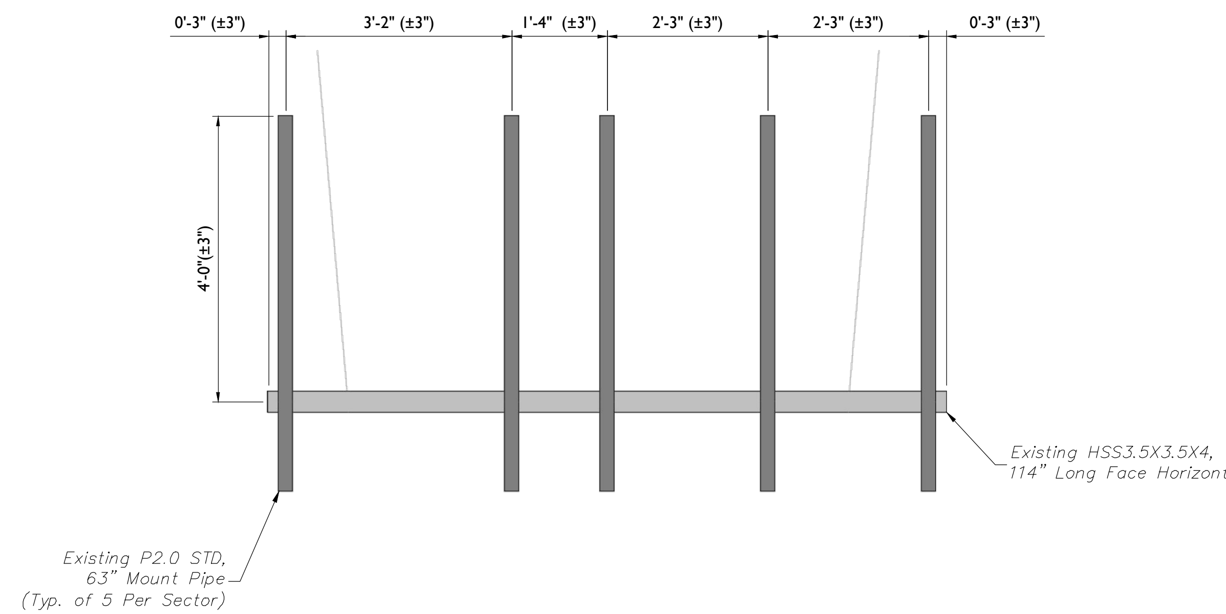
SHEET NUMBER : SS-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



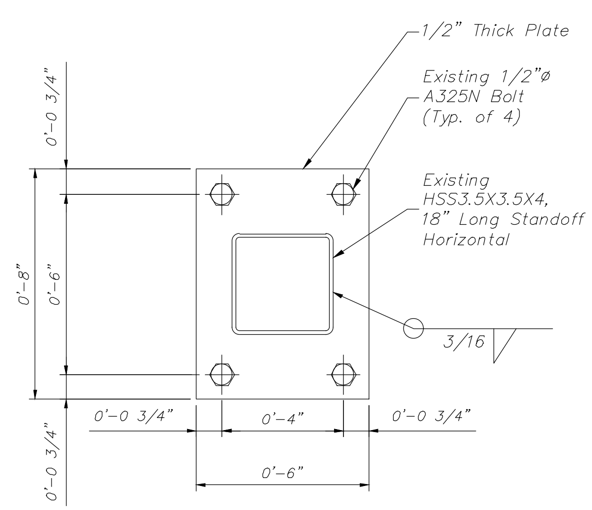
1 EXISTING MOUNT GEOMETRY VERIFICATION PLAN VIEW

SCALE : N.T.S.



2 EXISTING MOUNT GEOMETRY VERIFICATION FRONT ELEVATION VIEW

SCALE : N.T.S.



3 MOUNT CONNECTION DETAIL

SCALE : N.T.S.

STANDARD PIPE DIMENSIONS

PIPE SIZE	O.D. (IN.)	THICKNESS (IN.)		
		STD	XSTR	XXSTR
P1 1/2	1.900	0.145	0.200	0.400
P2	2.375	0.154	0.218	0.436
P2 1/2	2.875	0.203	0.276	0.552
P3	3.500	0.216	0.300	0.600
P3 1/2	4.000	0.226	0.318	0.636
P4	4.500	0.237	0.337	0.674
P4 1/2	5.000	0.247	0.355	0.710
P5	5.563	0.258	0.375	0.750
P6	6.625	0.280	0.432	0.864

NOTE:

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND MEMBER SIZES SHOWN IN THIS SKETCH. DOCUMENT ALL VARIATIONS OR DEVIATIONS VIA PHOTOS AND SKETCHES AND PROVIDE TO THE EOR FOR EVALUATION. THE CONTRACTOR SHALL STOP CONSTRUCTION IF ANY VARIATIONS OR DEVIATIONS ARE FOUND AND OBTIAN APPROVAL TO PROCEED FROM EOR.

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- MARYLAND
- GEORGIA
- TEXAS
- TENNESSEE
- COLORADO

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SCALE :	JOB NUMBER :
AS SHOWN	21777814A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
0	7/23/2021	ISSUED FOR CONSTRUCTION	MSG	DX

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SITE NAME:

FARMINGTON N 2 CT
467261

199 TOWN FARM ROAD
FARMINGTON, CT 06032
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

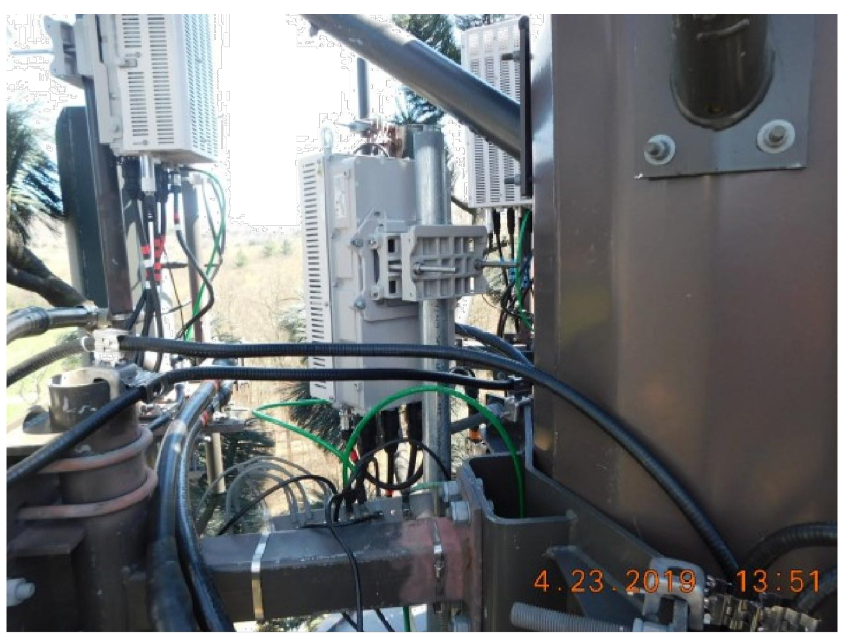
SHEET TITLE :
GEOMETRY VERIFICATION SKETCHES

SHEET NUMBER :
SS-2

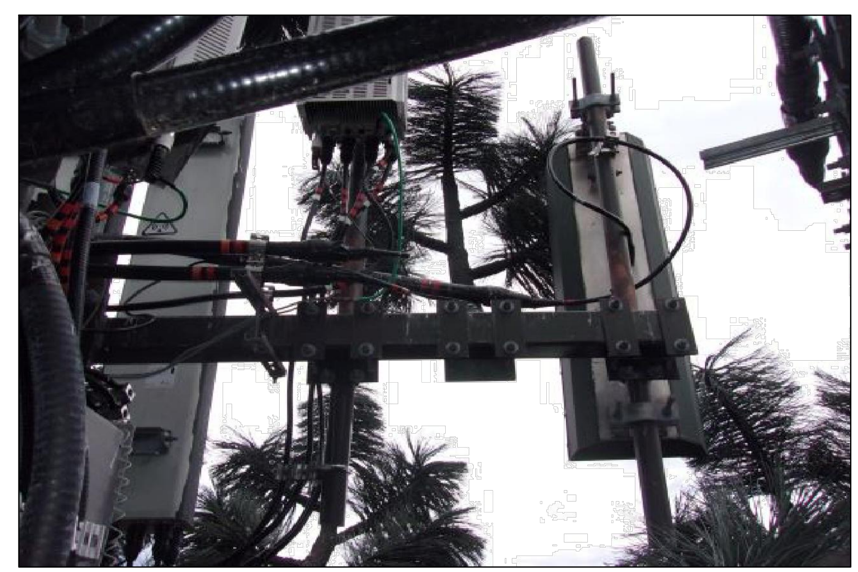
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MOUNT PHOTO 1

MOUNT PHOTO 2



MOUNT PHOTO 3



MOUNT PHOTO 4

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SCALE :	JOB NUMBER :
AS SHOWN	21777814A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
0	7/23/2021	ISSUED FOR CONSTRUCTION	MSG	DX

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With GeomVerification
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Fax: 856.722.1120

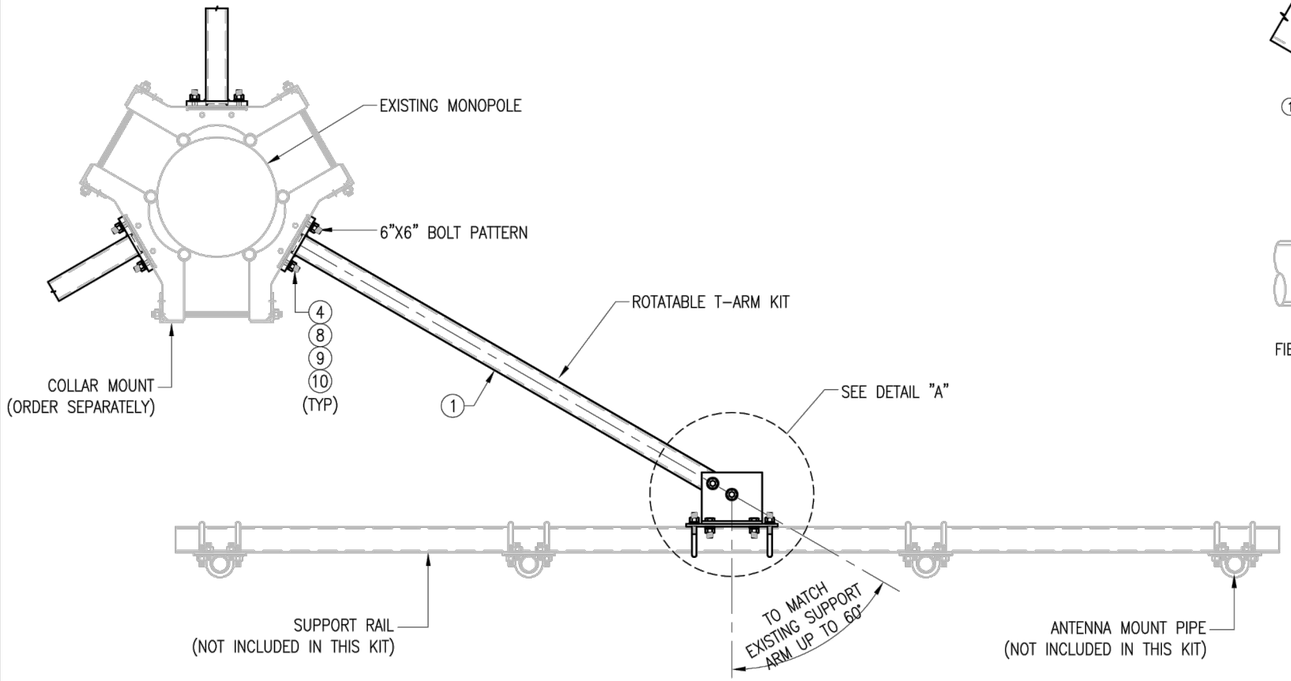
SHEET TITLE :

MOUNT PHOTOS

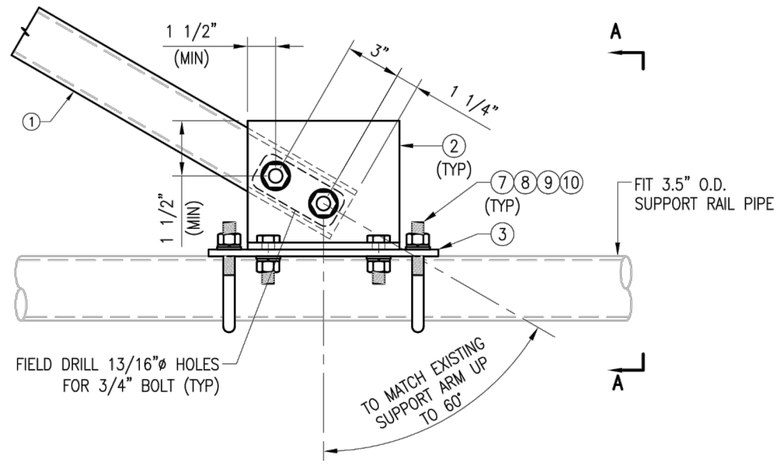
SHEET NUMBER :

SS-3

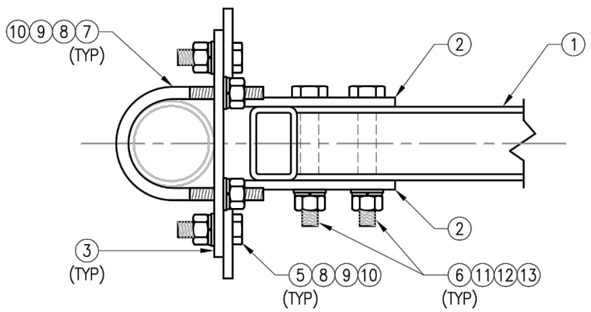
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



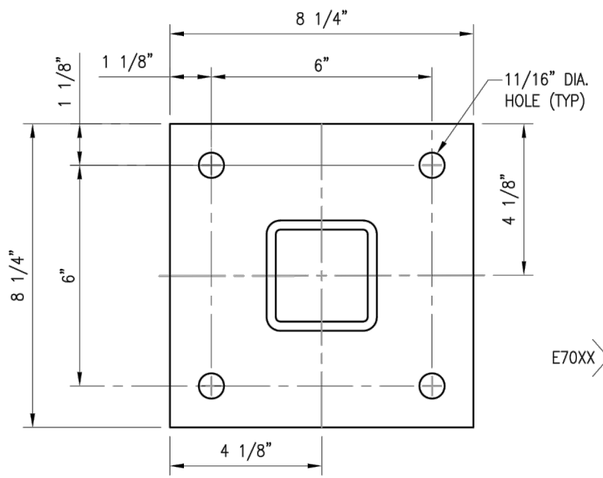
PLAN VIEW
T-ARM KIT



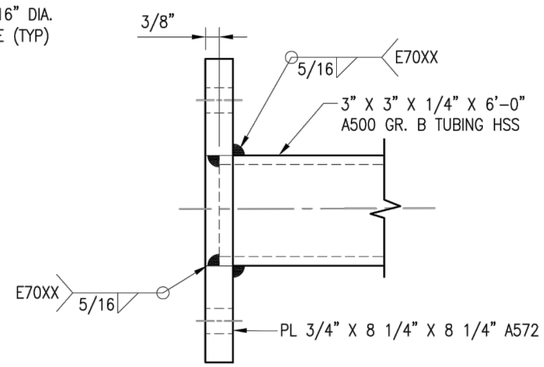
DETAIL "A"



SECTION "A-A"



FRONT VIEW



SIDE VIEW

RO-TAW-6 WELDMENT

VZWSMART-SFK4 (T-ARM KIT)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	RO-TAW-6	T-ARM WELDMENT	SFK4-F1	71
2	2	BP825-94375	PL 3/8" X 8 1/4" X 9 7/16" A36 BEND PLATE	SFK4-F2	17
3	1	PL375-92512025	PL 3/8" X 9 1/4" X 1'-0 1/2" A36	SFK4-F3	12
4	4	---	BOLT 5/8" X 2 1/4" A325	---	0
5	4	---	BOLT 5/8" X 2" A325	---	0
6	2	---	BOLT 3/4" X 5 1/4" A325	---	0
7	2	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
8	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
9	12	LW-625	5/8" HDG LOCK WASHER	---	0
10	12	NUT-625	5/8" HDG HEX NUT	---	1
11	2	FW-75	3/4" HDG USS FLAT WASHER	---	0
12	2	LW-75	3/4" HDG LOCK WASHER	---	0
13	2	NUT-75	3/4" HDG HEX NUT	---	0
				GALVANIZED WT	106

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VzW SMART Tool© Vendor

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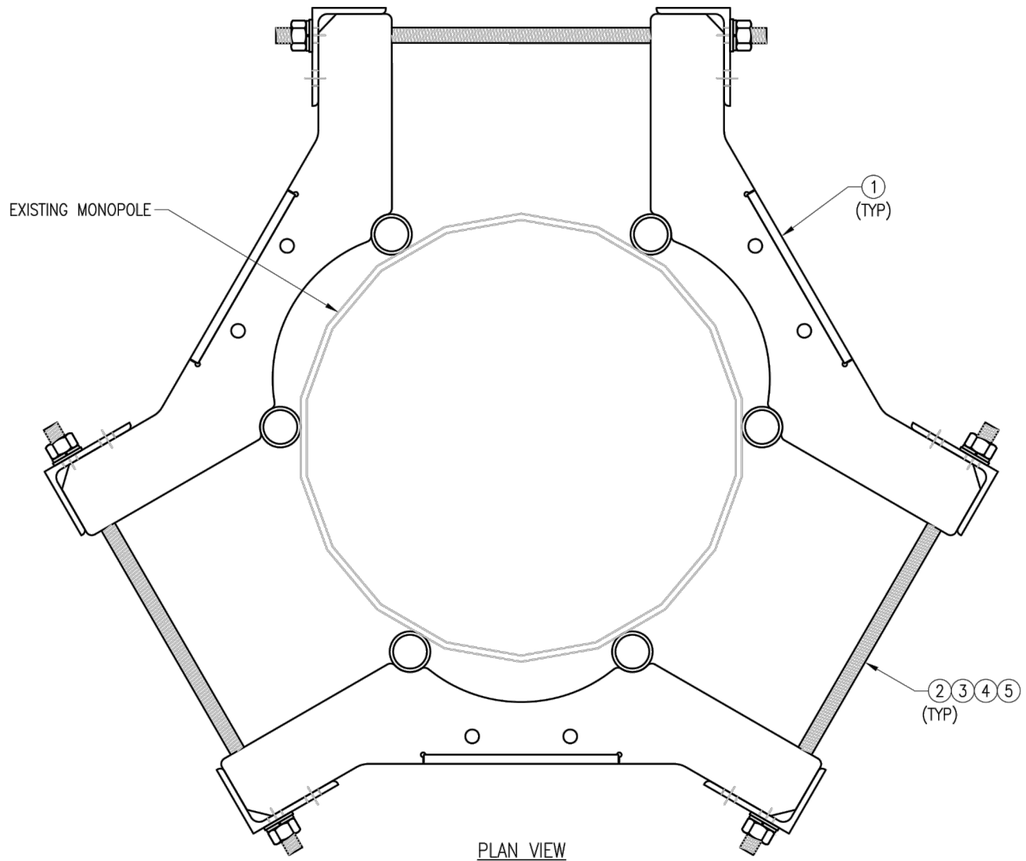
DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20

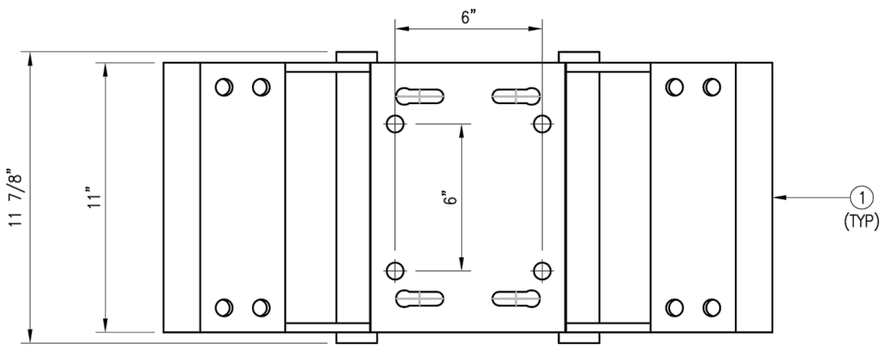
SHEET TITLE:
VZWSMART-SFK4
T-ARM KIT

SHEET NUMBER: VZWSMART-SFK4

REV #: 0



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	150

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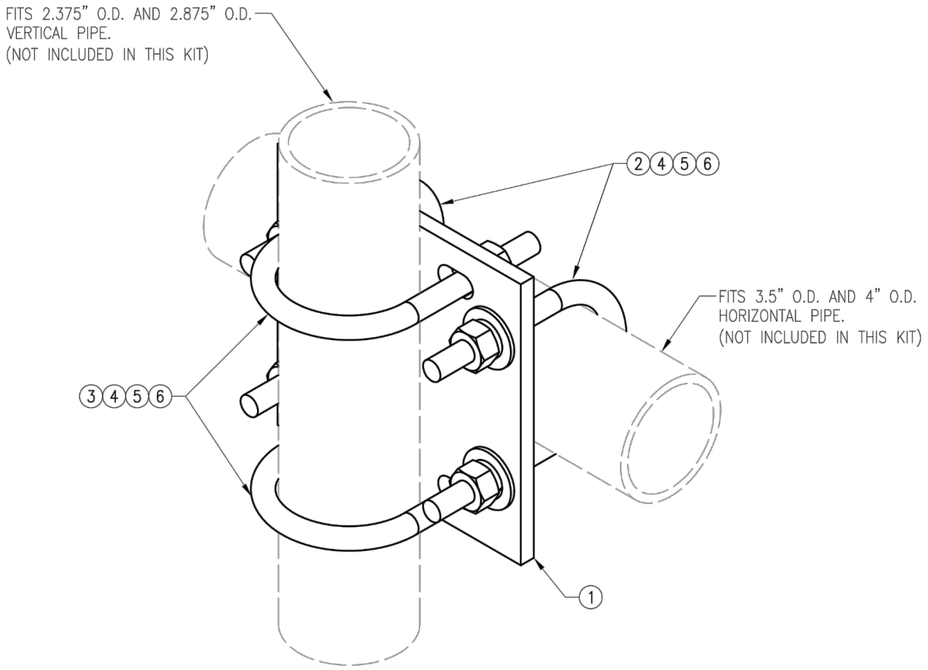
DRAWN BY: BT | CHECKED BY: HMA/KW

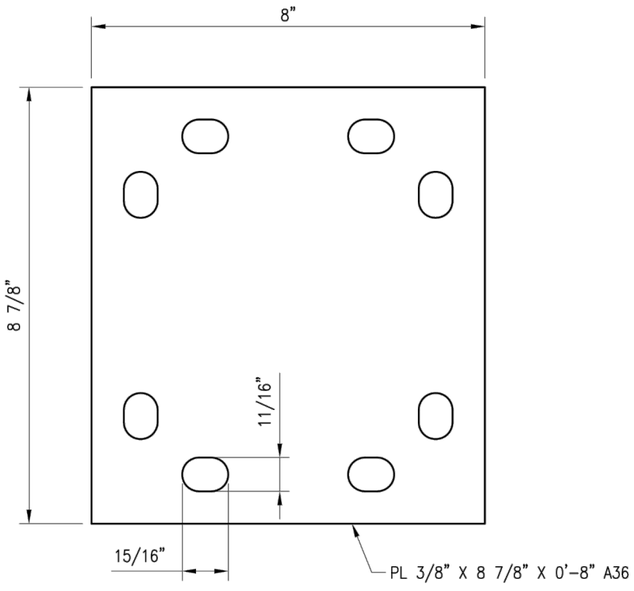
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/11/20

SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7

REV #: 0





PL375-88758

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-MSK2 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	15

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DRAWN BY: H.R | CHECKED BY: HMA

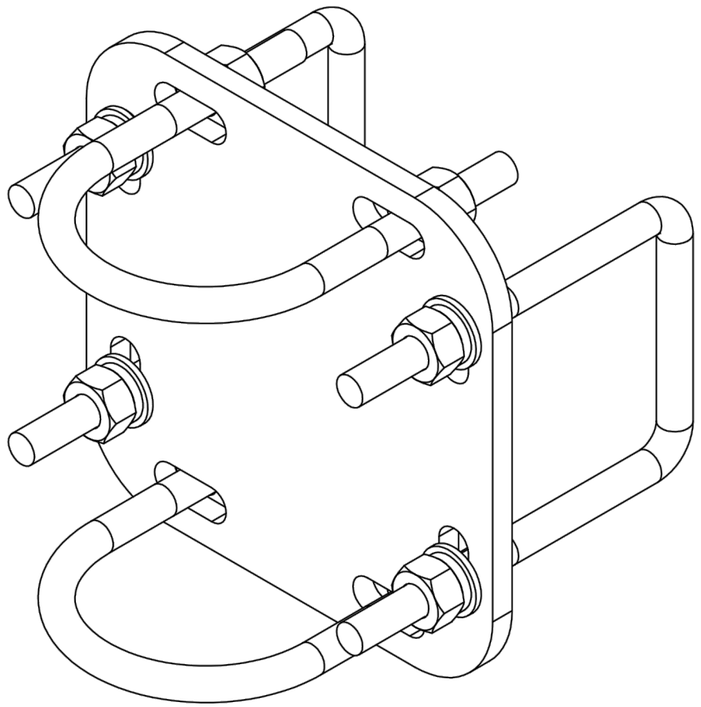
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

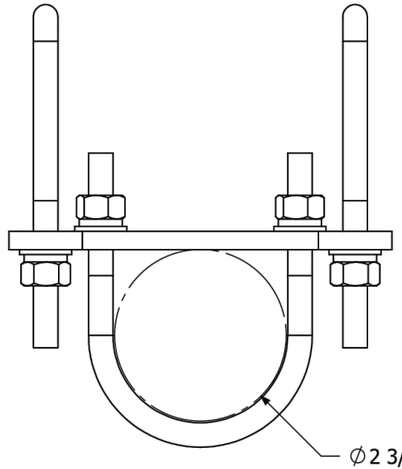
SHEET TITLE:
VZWSMART-MSK2
CROSSOVER PLATE

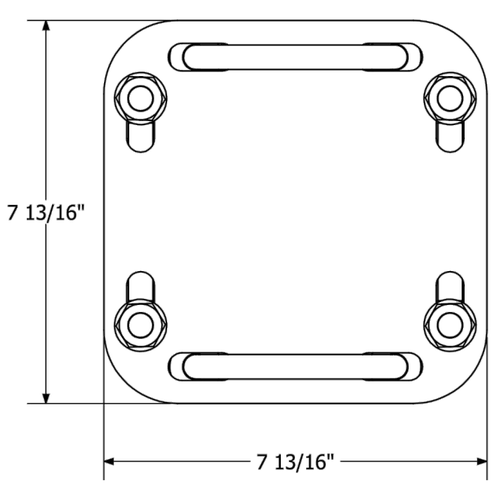
SHEET NUMBER: VZWSMART-MSK2

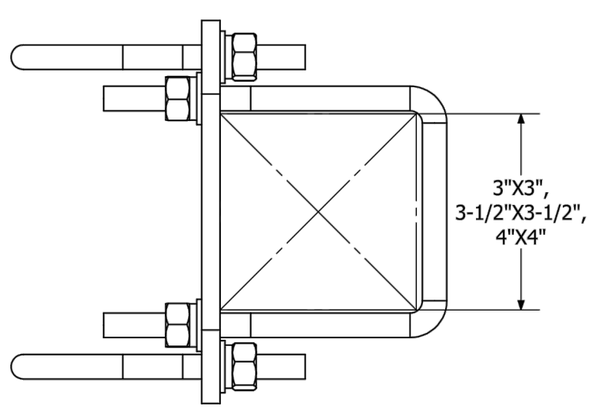
REV #: 0

PV-XP-ST
SQUARE TUBE TO ROUND PIPE CROSSOVER









PV-XP-ST
SQUARE TUBE TO ROUND PIPE CROSSOVER
WEIGHT: SEE TABLE 1

Table 1: Crossover Configurations			
Part Number	Square Tube	Round Pipe	Weight (lbs)
PV-XP-30ST20	3"	NPS 2 (2-3/8" OD)	10
PV-XP-30ST25	3"	NPS 2-1/2 (2-7/8" OD)	10
PV-XP-30ST30	3"	NPS 3 (3-1/2" OD)	10
PV-XP-35ST20	3-1/2"	NPS 2 (2-3/8" OD)	10
PV-XP-35ST25	3-1/2"	NPS 2-1/2 (2-7/8" OD)	10
PV-XP-35ST30	3-1/2"	NPS 3 (3-1/2" OD)	10
PV-XP-40ST20	4"	NPS 2 (2-3/8" OD)	10
PV-XP-40ST25	4"	NPS 2-1/2 (2-7/8" OD)	10
PV-XP-40ST30	4"	NPS 3 (3-1/2" OD)	10

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Little Rock, AR 72223
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REVISIONS:

NO.	DATE	DESCRIPTION	BY	CHK	APD
0	9/27/16	INITIAL RELEASE	DJN	AM	SS
1					
2					
3					
4					
5					

SITE INFORMATION:

DESIGN TYPE:
SQUARE TUBE CROSSOVER PLATE

SHEET TITLE:
ENGINEERING DETAIL

SHEET TITLE: E-1

REVISION: 0

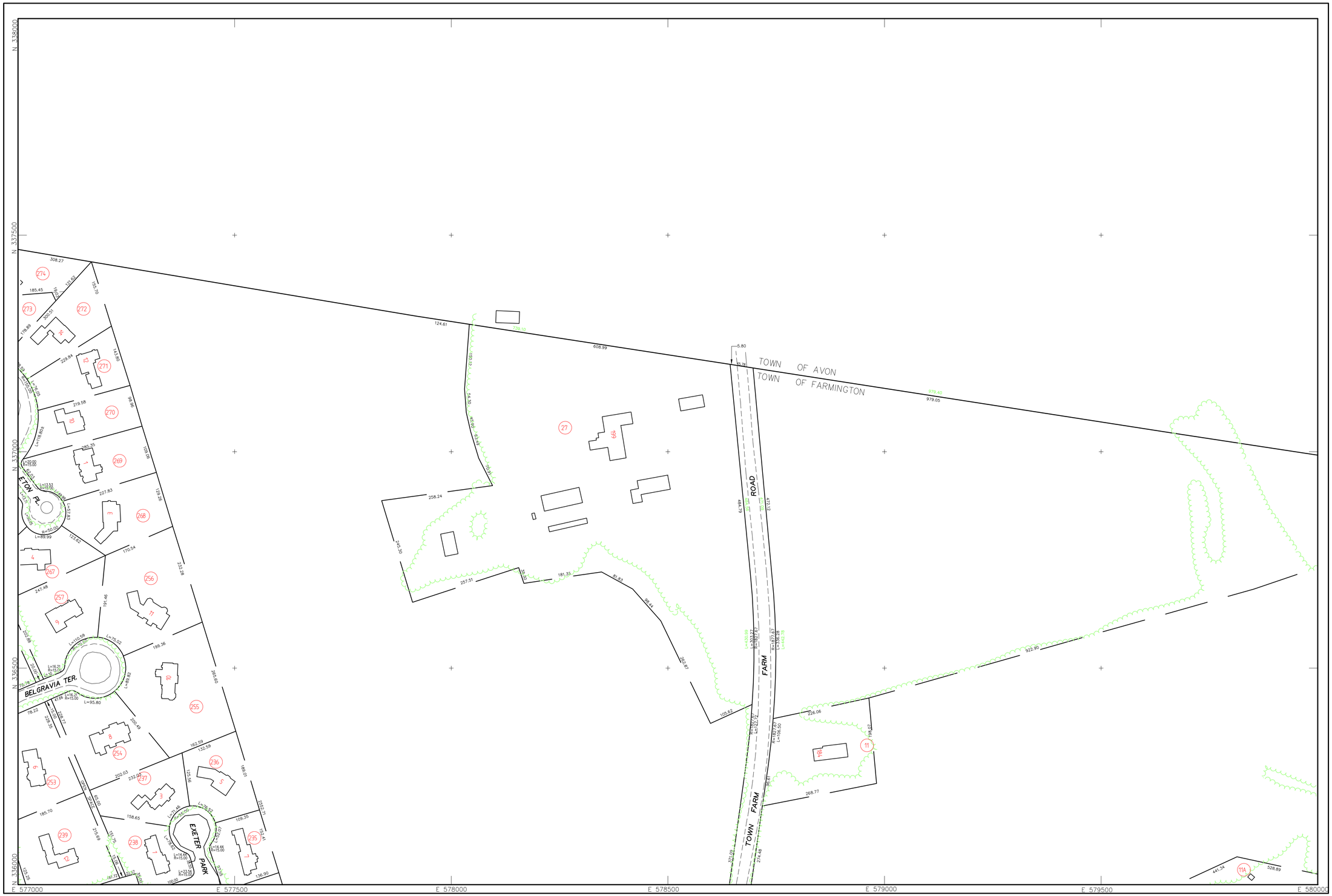
Site Name: ***FARMINGTON N 2 CT***
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW 700	751	4	689	2756	110	0.0082	0.5007	1.64%
VZW CDMA	869	2	401	802	110	0.0024	0.5793	0.41%
VZW Cellular	869	4	819	3276	110	0.0097	0.5793	1.68%
VZW PCS	1970	4	1581	6324	110	0.0188	1.0000	1.88%
VZW AWS	2110	4	1580	6320	110	0.0188	1.0000	1.88%
VZW CBAND	3730	4	6531	26124	110	0.0776	1.0000	7.76%
Total Percentage of Maximum Permissible Exposure								15.25%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992
**Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council's November 10, 2015 Memorandum for Exempt Modification filings

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used.



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THE 500 FOOT GRID IS BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM (N.A. DATUM OF 1927)

NATIONAL GEODETIC DATUM OF 1929

MAPPING CONFORMS TO NATIONAL MAP ACCURACY STANDARDS

DIGITAL PHOTOGRAMMATIC MAPPING BY: QUINN ASSOCIATES, HORSHAM, PA. DATE OF PHOTOGRAPHY MARCH 19,1990. CONTOUR INTERVALS ARE 2 FEET.

LEGEND

- (8) – ASSESSOR NUMBER
- × 385.6 SPOT ELEV.
- LEDGE
- TRAFFIC SIGNAL
- IRON PIN
- VALVE
- CATCH BASIN
- FP FLAG POLE
- HYDRANT
- MON
- BENCHMARK
- HAND HOLE
- MANHOLE
- POST
- WELL
- FLOW ARROW
- R.R. SWITCH
- LIGHT POLE
- POLE
- SWAMP
- SHRUB
- CTREE
- DTREE
- CULVERT
- LIGHT PEDESTAL
- R.R. CATENARY SUPPORT
- EDGE OF PAVEMENT
- DRIVEWAY
- SIDEWALK
- GUARD RAIL
- FENCE
- RETAINING WALL
- RAILROAD
- WATERCOURSE
- TREE LINE
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- DEPRESSION CONTOUR
- 300 CONTOUR LABEL
- WETLAND

KEY MAP

TOWN OF FARMINGTON

ASSESSOR'S OFFICE

1 MONTEITH DRIVE, FARMINGTON, CONNECTICUT 06032
PHONE: (860) 675-2370 FAX: (860) 675-2376

100 0 100 200 300 400
SCALE 1"=100'

MAP PREPARED AND MAINTAINED BY:
DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION

ASSESSOR'S MAP

OF THE
TOWN OF FARMINGTON
HARTFORD COUNTY, CONNECTICUT

SHEET NO:

017 OF 162

DATE PRINTED: FEBRUARY 2020

Town of Farmington, CT

Property Listing Report

Map Block Lot	017 27	Building #	1	Unique Identifier	19200199

Property Information

Property Location	199 TOWN FARM RD
Mailing Address	199 TOWN FARM RD FARMINGTON CT 06032
Land Use	Residential
Zoning Code	R40
Neighborhood	10

Owner	FARMINGTON TOWN OF
Co-Owner	C/O RODGER PHILLIPS
Book / Page	0690/0666
Land Class	Residential
Census Tract	4602
Acreage	9.94

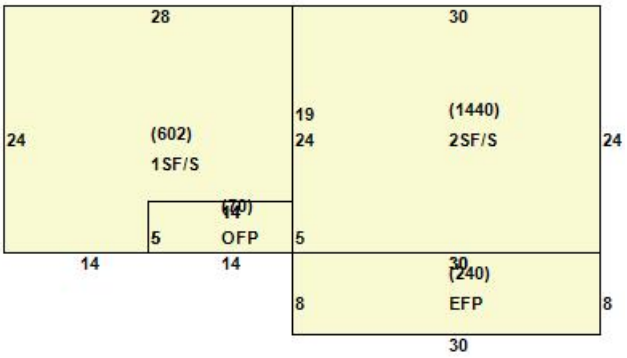
Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	144092	100860
Outbuildings	127364	89150
Land	218561	153000
Total	490017	343010

Utility Information

Electric	No
Gas	No
Sewer	No
Public Water	No
Well	No



Primary Construction Details

Year Built	1956
Building Desc.	Residential
Building Style	Colonial
Stories	2
Exterior Walls	Alum/Vinyl Siding
Exterior Walls 2	
Interior Walls	
Interior Walls 2	
Interior Floors 1	
Interior Floors 2	

Heating Fuel	Oil
Heating Type	Hot Water
AC Type	
Bedrooms	4
Full Bathrooms	3
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	9
Bath Style	NA
Kitchen Style	
Occupancy	1

Building Use	Single Family
Building Condition	Average
Frame Type	Wood Frame
Fireplaces	0
Bsmt Gar	0
Fin Bsmt Area	
Fin Bsmt Quality	
Building Grade	0
Roof Style	Gable
Roof Cover	Asphalt

Report Created On 8/27/2021

Town of Farmington, CT

Property Listing Report | Map Block Lot **017 27** | Building # **1** | Unique Identifier **19200199**

Detached Outbuildings

Type	Description	Area (sq ft)	Condition	Year Built
Barn	Flat	1944	Average	1991
Barn	Pole Frame Building	6000	Average	1995
Barn	Dairy/Horse Barn	450	Good	1950
Barn	Flat	4225	Average	2007
Gazebo	Gazebo	100	Average	2001
Barn	Pole Frame Building	3150	Average	1980
Shed	Frame	120	Average	2001
Barn	Flat	2160	Good	1999
Shed	Frame	216	Average	2001
Barn	Dairy/Horse Barn	540	Good	1940

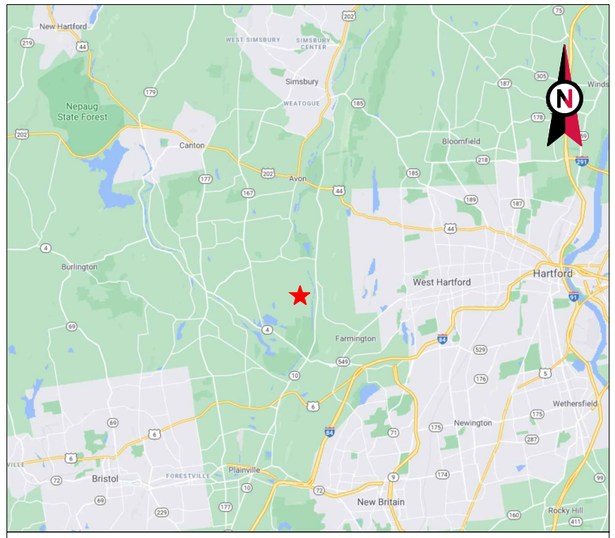
Attached Extra Features

Type	Description	Area (sq ft)	Condition	Year Built
Porch	Open Frame	70	Average	1956
Porch	Enclosed	240	Average	1956

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
FARMINGTON TOWN OF	0690_0666	2/20/2002	0
FISHER FAMILY PROPERTIES	0654_0589	5/22/2001	0
FISHER FAMILY PROPERTIES	0252_0008	1/3/1977	0
FISHER FAMILY PROPERTIES	0166_0545	1/1/1900	0

Report Created On **8/27/2021**



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: FARMINGTON NORTH 2 CT
ATC SITE NUMBER: 411258
VERIZON WIRELESS SITE NAME: FARMINGTON N 2 CT
VERIZON WIRELESS SITE NUMBER: 467261
SITE ADDRESS: 199 TOWN FARM ROAD
FARMINGTON, CT 06032

LOCATION MAP

VERIZON WIRELESS
ANTENNA AMENDMENT PLAN

COMPLIANCE CODE

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

1. 2018 INTERNATIONAL BUILDING CODE (IBC)
2. 2017 NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: N/A
PHONE: N/A

TELEPHONE COMPANY: N/A
PHONE: N/A

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

199 TOWN FARM ROAD

FARMINGTON, CT 06032

COUNTY: HARTFORD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.757775

LONGITUDE: -72.829931

GROUND ELEVATION: 190' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS
20 ALEXANDER DR, 2ND FLOOR
WALLINGFORD, CT 06492

ENGINEER:

POWER OF DESIGN GROUP
11490 BLUEGRASS PARKWAY
LOUISVILLE, KY 40299

PROPERTY OWNER:

UNKNOWN

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

REMOVE (9) RRH(s)

INSTALL (3) ANTENNA(s), (6) RRH(s), AND MOUNT MODIFICATIONS PER MOUNT MODIFICATIONS DRAWINGS COMPLETED BY MASER CONSULTING CONNECTICUT DATED JULY 23, 2021

EXISTING (12) ANTENNA(s), (2) OVP(s), (6) COAX CABLE(s), AND (2) HYBRID CABLE(s) TO REMAIN

THE PROPOSED PROJECT DOES NOT INCLUDE ELECTRICAL SCOPE

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLES TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION REMOVAL AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

FROM THE ROBERTSON AIRPORT:

1. Head north
2. Turn left onto Johnson Ave
3. Turn right at the 1st cross street onto Perron Rd
4. Turn right onto Northwest Dr
5. Turn left onto CT-10
6. Turn left onto CT-4 W
7. Turn right onto Town Farm Rd

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	08/09/21	WMN
G-002	GENERAL NOTES	0	08/09/21	WMN
C-101	DETAILED SITE PLAN	0	08/09/21	WMN
C-201	TOWER ELEVATION	0	08/09/21	WMN
C-401	ANTENNA INFORMATION & SCHEDULE	0	08/09/21	WMN
C-501	CONSTRUCTION DETAILS	0	08/09/21	WMN
E-501	GROUNDING DETAILS	0	08/09/21	WMN
R-601	SUPPLEMENTAL			
	MOUNT MODIFICATION SHEETS			

AMERICAN TOWER®

POD
POWER OF DESIGN
11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299
502-437-5252

REV.	DESCRIPTION	BY	DATE
A	PRELIM	WMN	05/11/21
0	CONSTRUCTION	WMN	08/09/21

ATC SITE NUMBER:
411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

VERIZON WIRELESS SITE NAME:
FARMINGTON N 2 CT

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

08/10/2021

verizon

DATE DRAWN:	05/11/21
ATC JOB NO:	13668715
CUSTOMER ID:	FARMINGTON N 2 CT
CUSTOMER #:	467261

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON WIRELESS "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
   - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   - B. AC/TELCO INTERFACE BOX (PPC)
   - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   - D. TOWERS, MONOPOLES
   - E. TOWER LIGHTING
   - F. GENERATORS & LIQUID PROPANE TANK
   - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   - H. ANTENNAS (INSTALLED BY OTHERS)
   - I. TRANSMISSION LINE
   - J. TRANSMISSION LINE JUMPERS
   - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   - L. TRANSMISSION LINE GROUND KITS
   - M. HANGERS
   - N. HOISTING GRIPS
   - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON WIRELESS TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON WIRELESS REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON WIRELESS REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON WIRELESS AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON WIRELESS REP. ANY WORK FOUND BY THE VERIZON WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. VERIZON WIRELESS FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WIRELESS WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. VERIZON WIRELESS OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON WIRELESS OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON WIRELESS UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OD COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
   - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND VERIZON WIRELESS SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

AMERICAN TOWER®

POD
POWER OF DESIGN
11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299
502-437-5252

REV.	DESCRIPTION	BY	DATE
A	PRELIM	WMN	05/11/21
0	CONSTRUCTION	WMN	08/09/21

ATC SITE NUMBER:
411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

VERIZON WIRELESS SITE NAME:
FARMINGTON N 2 CT

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

08/10/2021

verizon

DATE DRAWN:	05/11/21
ATC JOB NO:	13668715
CUSTOMER ID:	FARMINGTON N 2 CT
CUSTOMER #:	467261

TITLE SHEET

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

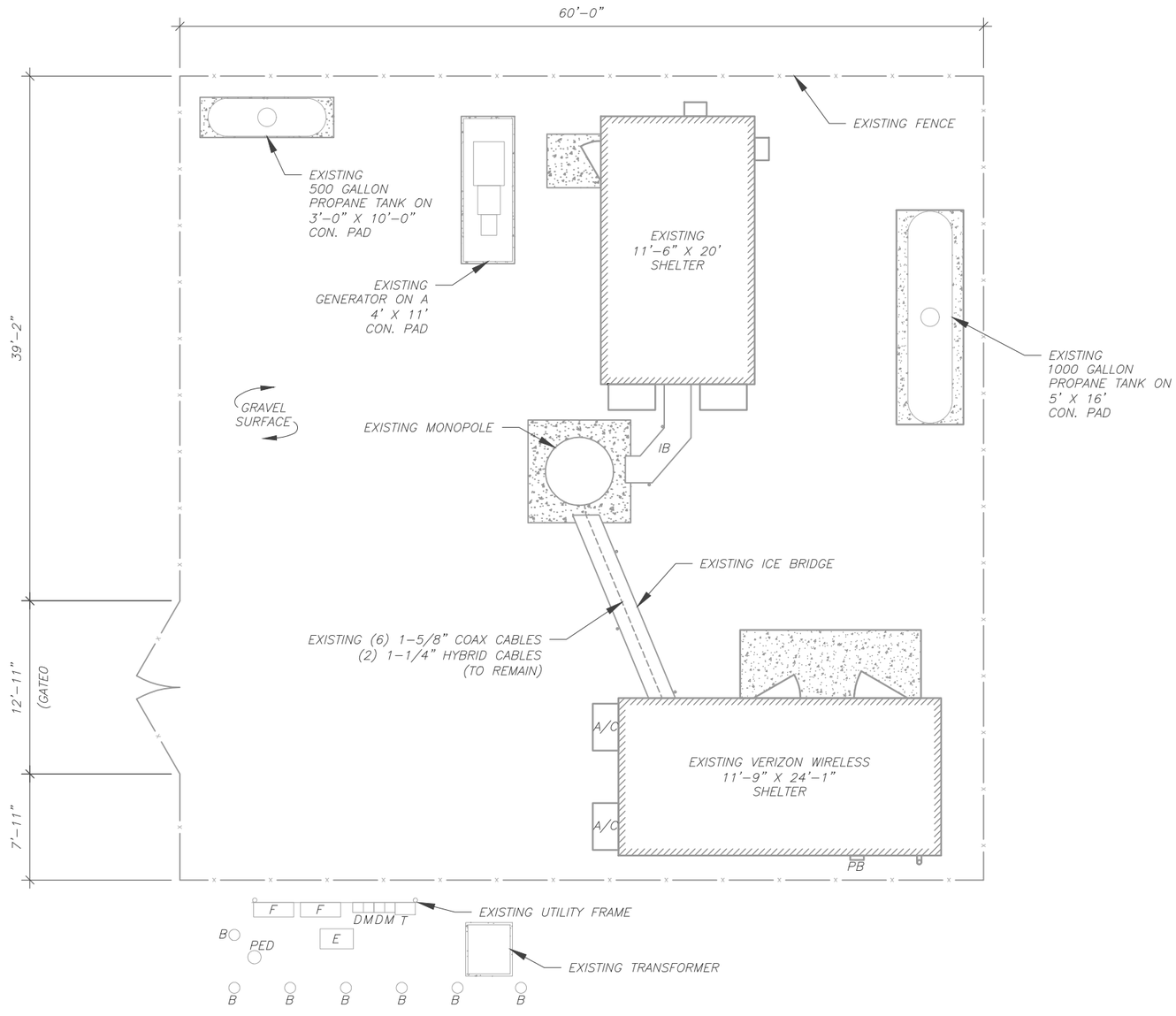
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
——x——	CHAINLINK FENCE



1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

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FARMINGTON N 2 CT

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

STATE OF CONNECTICUT
MARK W. PARMENTER
No. 31284
LICENSED PROFESSIONAL ENGINEER

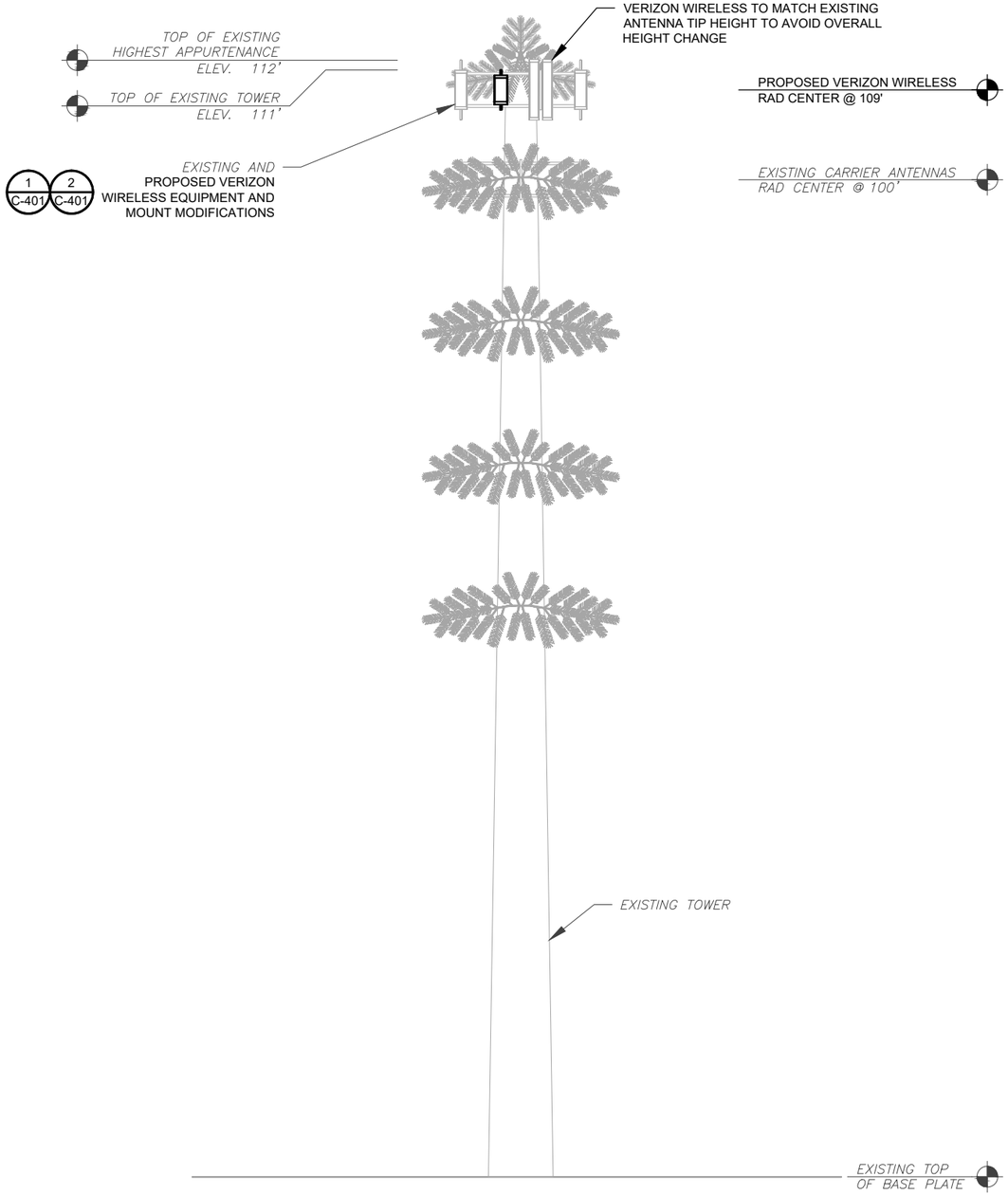
08/10/2021

verizon

DATE DRAWN:	05/11/21
ATC JOB NO:	13668715
CUSTOMER ID:	FARMINGTON N 2 CT
CUSTOMER #:	467261

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0



1 TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY MASER CONSULTING CONNECTICUT, DATED JULY 23, 2021, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT

TOWER NOTE:
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

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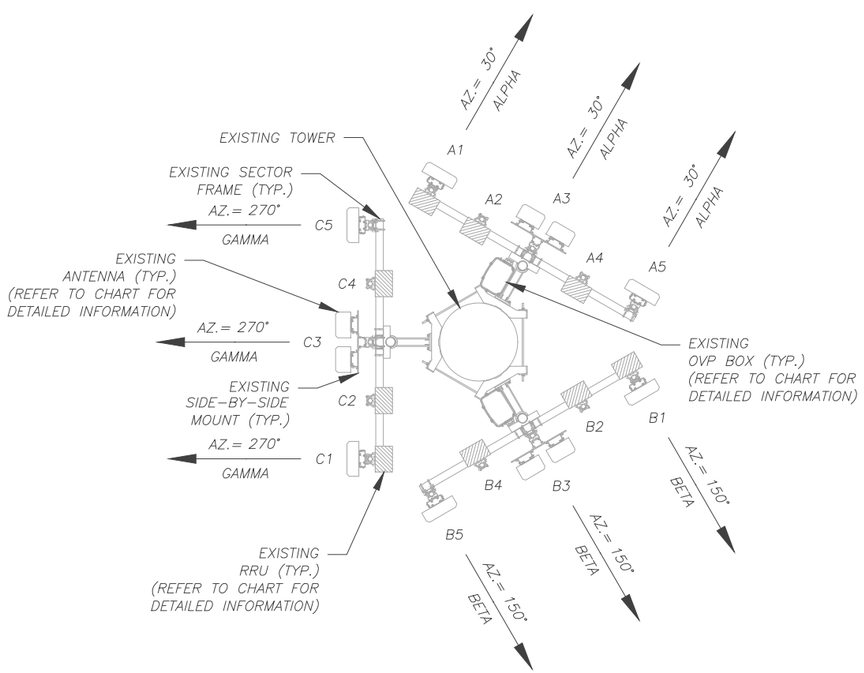
CUSTOMER #:	467261

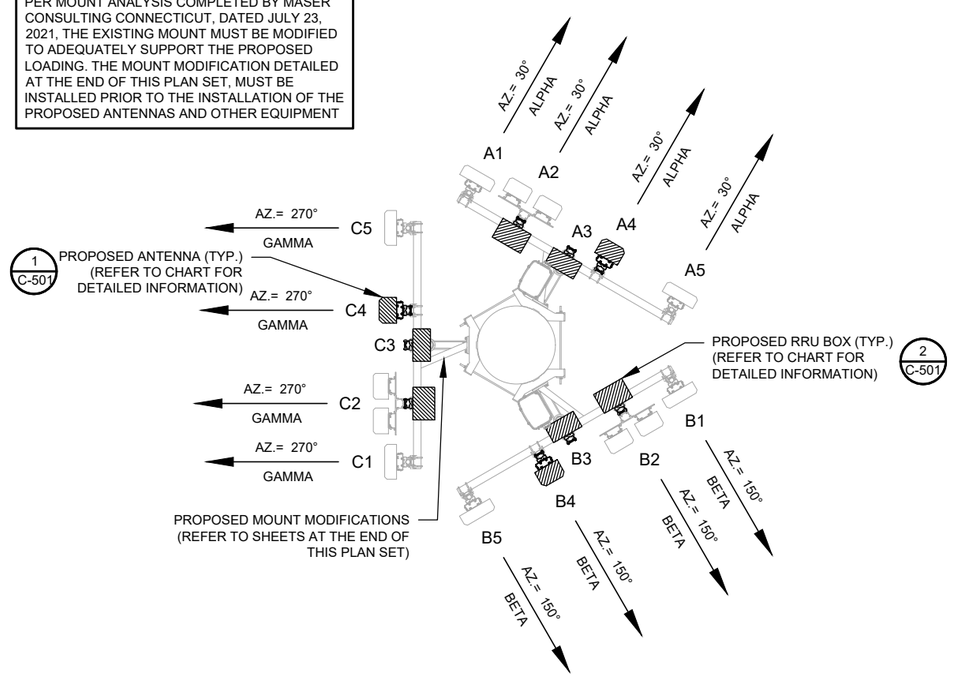
TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY MASER CONSULTING CONNECTICUT, DATED JULY 23, 2021, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION DETAILED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	109'	30°	A1	LPA-80063/4CF	CDMA 850	–	RMN	UHIE B66A RRH 4X45	RMV
			A2	–	–	–	–	UHBA B13 RRH 4X30	RMV
			A3	SBNHH-1D65B SBNHH-1D65B	LTE 700/1900/AWS 5G 850	–	RMN RMN	–	–
			A4	–	–	–	–	UHFA B25 RRH 4X30	RMV
			A5	LPA-80063/4CF	CDMA 850	–	RMN	–	–
BETA	109'	150°	B1	LPA-80063/4CF	CDMA 850	–	RMN	UHIE B66A RRH 4X45	RMV
			B2	–	–	–	–	UHBA B13 RRH 4X30	RMV
			B3	SBNHH-1D65B SBNHH-1D65B	LTE 700/1900/AWS 5G 850	–	RMN RMN	–	–
			B4	–	–	–	–	UHFA B25 RRH 4X30	RMV
			B5	LPA-80063/4CF	CDMA 850	–	RMN	–	–
GAMMA	109'	270°	C1	LPA-80063/4CF	CDMA 850	–	RMN	UHIE B66A RRH 4X45	RMV
			C2	–	–	–	–	UHBA B13 RRH 4X30	RMV
			C3	SBNHH-1D65B SBNHH-1D65B	LTE 700/1900/AWS 5G 850	–	RMN RMN	–	–
			C4	–	–	–	–	UHFA B25 RRH 4X30	RMV
			C5	LPA-80063/4CF	CDMA 850	–	RMN	–	–

NOTES

1. CONFIRM WITH VERIZON WIRELESS REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	109'	30°	A1	LPA-80063/4CF	CDMA 850	–	RMN	-	-
			A2	SBNHH-1D65B SBNHH-1D65B	LTE 700/1900/AWS 5G 850	–	RMN RMN	B5/B13 RRH-BR04C	ADD
			A3	–	–	–	–	B2/B66A RRH-BR049	ADD
			A4	MT6407-77A	5G L-SUB6	-	ADD	-	-
			A5	LPA-80063/4CF	CDMA 850	–	RMN	-	-
BETA	109'	150°	B1	LPA-80063/4CF	CDMA 850	–	RMN	-	-
			B2	SBNHH-1D65B SBNHH-1D65B	LTE 700/1900/AWS 5G 850	–	RMN RMN	B5/B13 RRH-BR04C	ADD
			B3	–	–	–	–	B2/B66A RRH-BR049	ADD
			B4	MT6407-77A	5G L-SUB6	-	ADD	-	-
			B5	LPA-80063/4CF	CDMA 850	–	RMN	-	-
GAMMA	109'	270°	C1	LPA-80063/4CF	CDMA 850	–	RMN	-	-
			C2	SBNHH-1D65B SBNHH-1D65B	LTE 700/1900/AWS 5G 850	–	RMN RMN	B5/B13 RRH-BR04C	ADD
			C3	–	–	–	–	B2/B66A RRH-BR049	ADD
			C4	MT6407-77A	5G L-SUB6	-	ADD	-	-
			C4	LPA-80063/4CF	CDMA 850	–	RMN	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RC2DC-3315-PF-48	RMN	(6) 1-5/8"	(2) 1-1/4"	RMN
–	–	–	–	–

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RC2DC-3315-PF-48	RMN	(6) 1-5/8"	(2) 1-1/4"	RMN
-	-	-	-	-

3 EQUIPMENT SCHEDULES

AMERICAN TOWER®

POD
POWER OF DESIGN
11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299
502-437-5252

REV.	DESCRIPTION	BY	DATE
A	PRELIM	WMN	05/11/21
0	CONSTRUCTION	WMN	08/09/21

ATC SITE NUMBER:
411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

VERIZON WIRELESS SITE NAME:
FARMINGTON N 2 CT

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

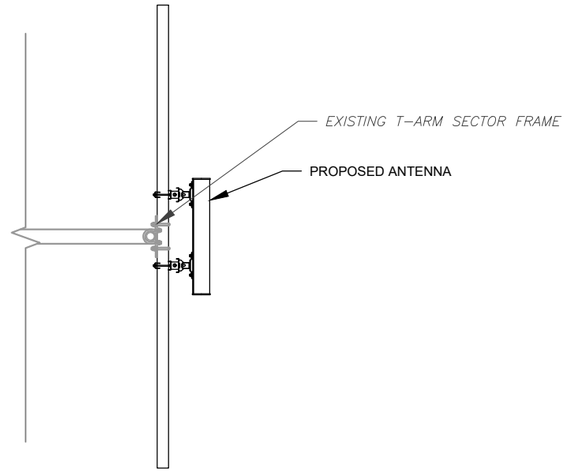
08/10/2021

verizon

DATE DRAWN:	05/11/21
ATC JOB NO:	13668715
CUSTOMER ID:	FARMINGTON N 2 CT
CUSTOMER #:	467261

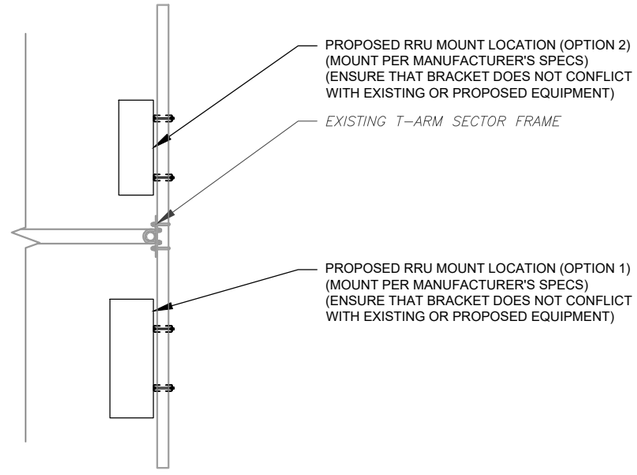
RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER:	REVISION:
C-401	0



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

AMERICAN TOWER®

POD
POWER OF DESIGN
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LOUISVILLE, KY 40299
502-437-5252

REV.	DESCRIPTION	BY	DATE
A	PRELIM	WMN	05/11/21
0	CONSTRUCTION	WMN	08/09/21

ATC SITE NUMBER:
411258

ATC SITE NAME:
FARMINGTON NORTH 2 CT

VERIZON WIRELESS SITE NAME:
FARMINGTON N 2 CT

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

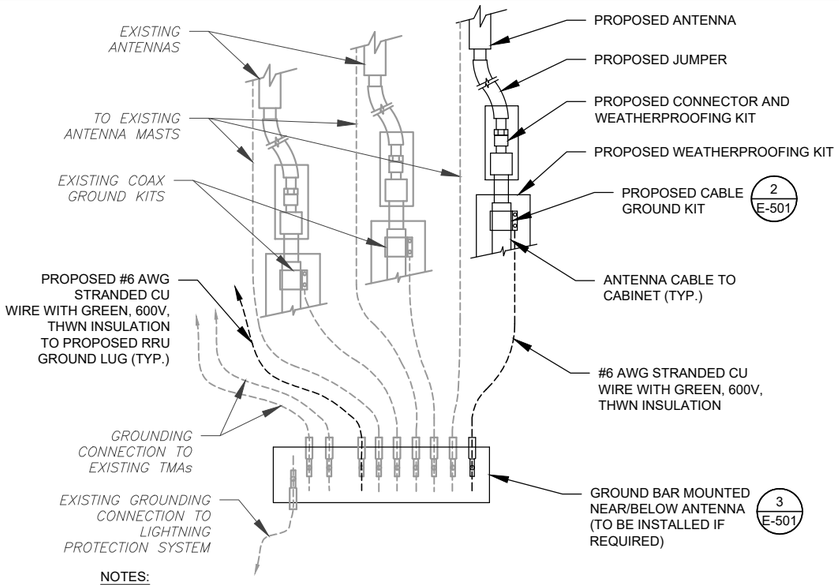
08/10/2021

verizon

DATE DRAWN:	05/11/21
ATC JOB NO:	13668715
CUSTOMER ID:	FARMINGTON N 2 CT
CUSTOMER #:	467261

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

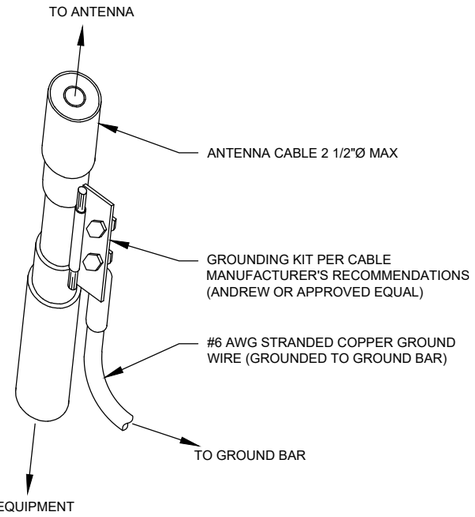


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH VERIZON WIRELESS GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON WIRELESS GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

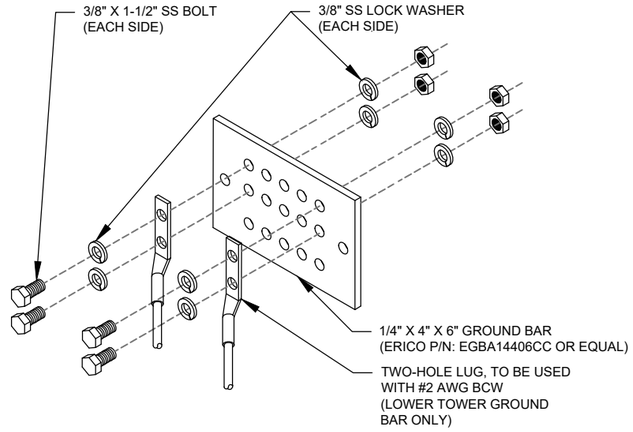


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

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POWER OF DESIGN
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502-437-5252

REV.	DESCRIPTION	BY	DATE
A	PRELIM	WMN	05/11/21
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ATC SITE NUMBER:
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ATC SITE NAME:
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VERIZON WIRELESS SITE NAME:
FARMINGTON N 2 CT

SITE ADDRESS:
199 TOWN FARM ROAD
FARMINGTON, CT 06032

SEAL:

08/10/2021

verizon

DATE DRAWN:	05/11/21
ATC JOB NO:	13668715
CUSTOMER ID:	FARMINGTON N 2 CT
CUSTOMER #:	467261

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
856.797.0412
peter.albano@colliersengineering.com

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10086840
Maser Consulting Connecticut Project #: 21777814A

July 22, 2021

Site Information

Site ID:	*467261-VZW / FARMINGTON N 2 CT*
Site Name:	*FARMINGTON N 2 CT*
Carrier Name:	*Verizon Wireless*
Address:	*199 Town Farm Road* *Farmington, Connecticut 06032* *Hartford County*
Latitude:	*41.757775°*
Longitude:	*-72.829931°*

Structure Information

Tower Type:	*111-Ft Monopole*
Mount Type:	*9.50-Ft T-Arm*

FUZE ID # 16244117

Analysis Results

T-Arm: **75.7% Pass**

******Contractor PMI Requirements:***
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared By: Cody Sherman

Digitally signed by Eric Anderson
Date: 2021.07.29 17:24:16-04'00'

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Proposed Face Horizontal	29.0%	Pass
Proposed Standoff Horizontal	44.0%	Pass
Face Horizontal	16.0%	Pass
Mount Pipe	22.0%	Pass
Standoff	25.0%	Pass
Mount Connection	75.7%	Pass

Structure Rating – ***(Controlling Utilization of all Components)***	**75.7%**

Recommendation:

The existing mounts will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. Mount Photos
2. Desktop Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption and Wind Speed Usage Letter

1 MOUNT ANALYSIS

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONTRUCTION.

SUPPLEMENTAL

SHEET NUMBER: R-601

REVISION: 0

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 9.50' T-ARM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 411258

CARRIER SITE NAME: FARMINGTON N 2 CT
CARRIER SITE NUMBER: 467261
FUZE ID: 16244117

199 TOWN FARM ROAD
FARMINGTON, CT 06032
HARTFORD COUNTY

LATITUDE: 41.757775° N
LONGITUDE: 72.829931° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 117 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 182.95'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.50 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .185
LONG TERM MCER GROUND MOTION, S_1 = .055

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS
ADDRESS: 118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP: WESTBOROUGH, MA 01581
CONTACT: ANDREW CANDIELLO
EMAIL: ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY: MASER CONSULTING CONNECTICUT
CONTACT: PETER ALBANO
PHONE: 856-797-0412
E-MAIL: PETER.ALBANO@COLLIERSENGINEERING.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10086840
VZW LOCATION CODE (PSLC): 467261
ANALYSIS DATE: 7/23/2021

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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STATE OF CONNECTICUT ERIC T. ANDERSON 32224 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Eric Anderson
Date: 2021.07.23 17:04:49-04'00'

MASER CONSULTING
With GeomVerification
C.O.A. #: JPC0000131

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SITE NAME:

FARMINGTON N 2 CT
467261

199 TOWN FARM ROAD
FARMINGTON, CT 06032
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: TITLE SHEET

SHEET NUMBER: ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT	WEIGHT
3	VZWSMART	VZWSMART-SFK4	T-ARM KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).	106	318
1		VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150
15		VZWSMART-MSK2	CROSSOVER PLATE		15	225

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT	WEIGHT
3	-	-	114" LONG, P3.0 STD	GALVANIZED; RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).	171	513
3	-	-	96" LONG, P2.5 STD	GALVANIZED; CONNECT TO EXISTING FACE HORIZONTAL WITH NEW WITH CROSSOVER PLATE (PERFECT VISION PART #: PV-XP-35ST25, OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING CONNECTICUT FOR APPROVAL OF SUBSTITUTION)	106	318
3	-	-	96" LONG, P2.0 STD	GALVANIZED; CONNECT TO EXISTING FACE HORIZONTAL WITH EXISTING HARDWARE	70	210
3	PERFECT VISION	PV-XP-35ST25	SQUARE TUBE CROSSOVER PLATE	OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING FOR APPROVAL OF SUBSTITUTION	10	30
					TOTAL:	1764

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.
2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

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-	-	-	-	-
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0	7/23/2021	ISSUED FOR CONSTRUCTION	MSG	DX

STATE OF CONNECTICUT ERIC T. ANDERSON 32224 LICENSED PROFESSIONAL ENGINEER
Digitally signed by Eric Anderson
Date: 2021.07.23 17:05:08-04'00'
MASER CONSULTING
With GeoVerification
C.O.A. #: PEC0000131

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SITE NAME:
FARMINGTON N 2 CT
467261
199 TOWN FARM ROAD
FARMINGTON, CT 06032
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: BILL OF MATERIALS

SHEET NUMBER: SBOM-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

GENERAL NOTES

1. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
4. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
6. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSI/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
8. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
9. ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSI/TIA-322.
10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOFABRIC, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
11. CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
12. DO NOT SCALE DRAWINGS.
13. DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
14. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
15. THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

STRUCTURAL STEEL

1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
   a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
   b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
   c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE

3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
   a. SUBMIT SHOP DRAWINGS TO
      PETER.ALBANO@COLLIERSENGINEERING.COM
   b. PROVIDE MASER CONSULTING CONNECTICUT PROJECT # AND MASER CONSULTING CONNECTICUT PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

WELDING NOTES

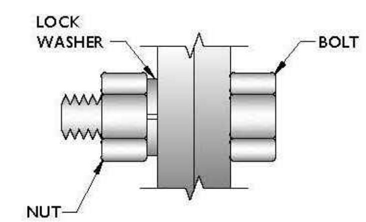
1. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTION (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE, DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A THIRD PARTY CERTIFIED WELD INSPECTOR (CWI) THROUGHOUT THE ENTIRETY OF THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
3. THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CWI REPORT, THAT ALL WELDING OPERATIONS PRE, DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF ALL WELDING. ALL CWI WELD INSPECTION DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.
4. IN CASES WHERE A WELD IS SPECIFIED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT-UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.
5. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
6. CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.

BOLT SCHEDULE (IN.)

BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

WORKABLE GAGES (IN.)

LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8

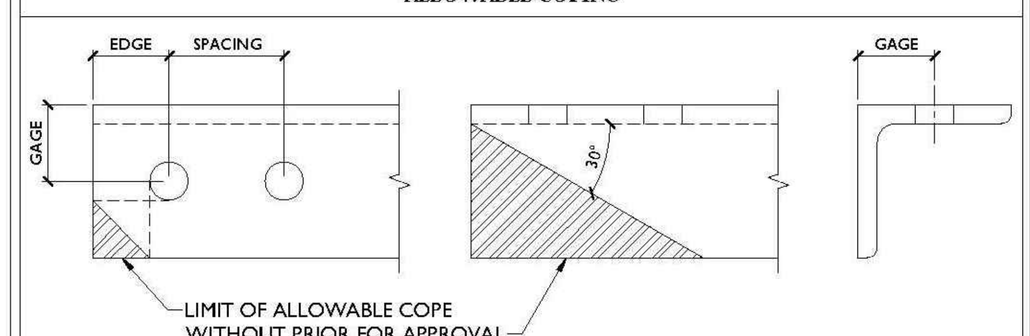


TYP. BOLT ASSEMBLY

NOTES:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

ALLOWABLE COPING



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467261
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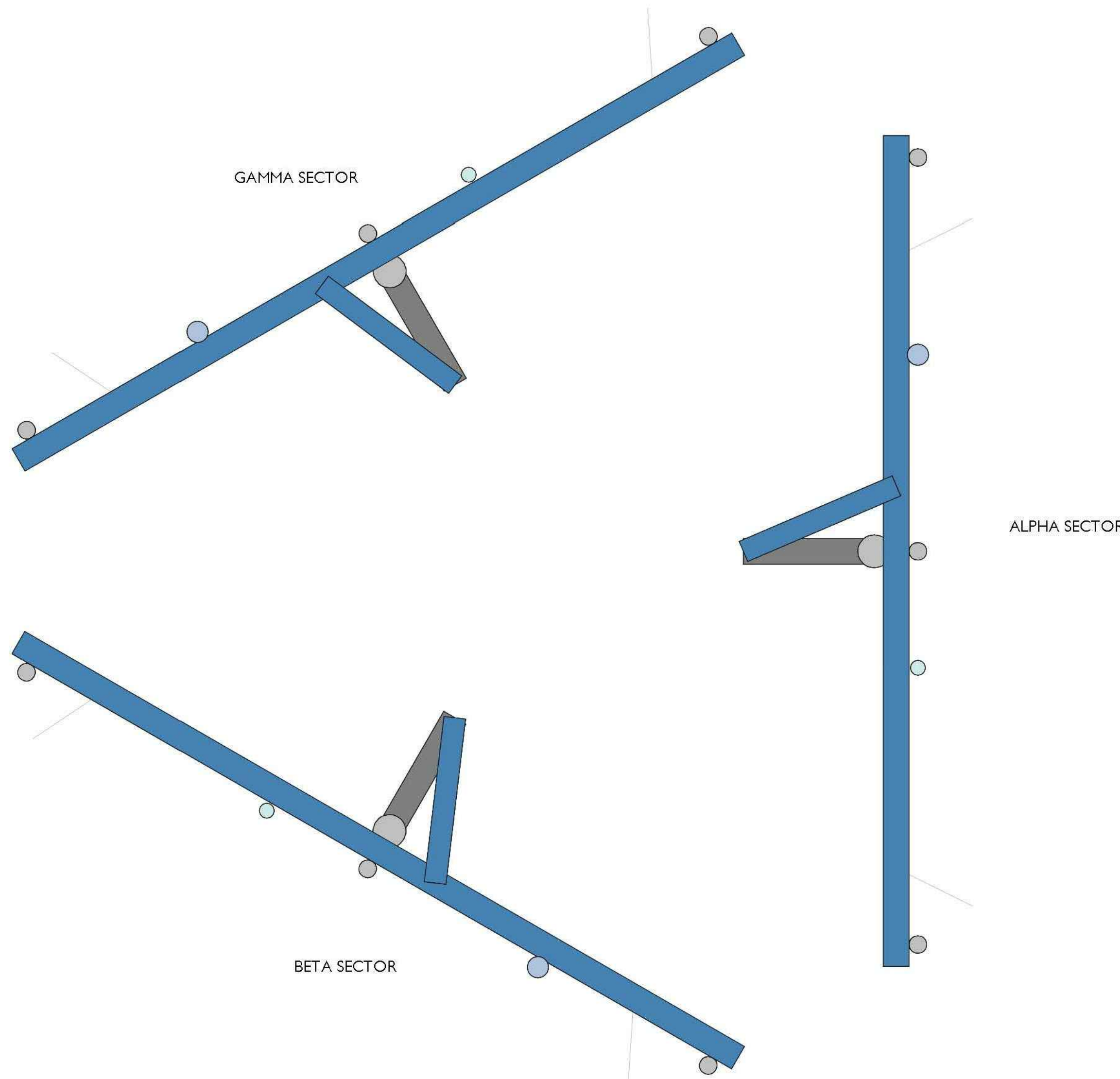
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: MODIFICATION NOTES

SHEET NUMBER: SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.

STRUCTURAL NOTES:

1. CONTRACTOR TO INSPECT CLIMBING FACILITIES AT SITE AND ENSURE THAT THE SAFETY CLIMB IS IN GOOD CONDITION AND THAT THE WIRE ROPE DOES NOT OR WILL NOT INTERFERE WITH THE EXISTING OR PROPOSED MOUNT CONNECTIONS. CONTRACTOR SHALL INSTALL SAFETY CLIMB WIRE ROPE GUIDED AROUND MOUNT CONNECTIONS AS NEEDED.

2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

NOTES:

NO PHOTO OF THE EXISTING CLIMBING FACILITY IS AVAILABLE, AS ONLY A DESKTOP MAPPING WAS COMPLETED.

CLIMBING FACILITY PHOTO

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ERIC T. ANDERSON
32224
LICENSED PROFESSIONAL ENGINEER

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HARTFORD COUNTY

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2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :

CLIMBING FACILITY DETAIL

SHEET NUMBER :

SCF-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:

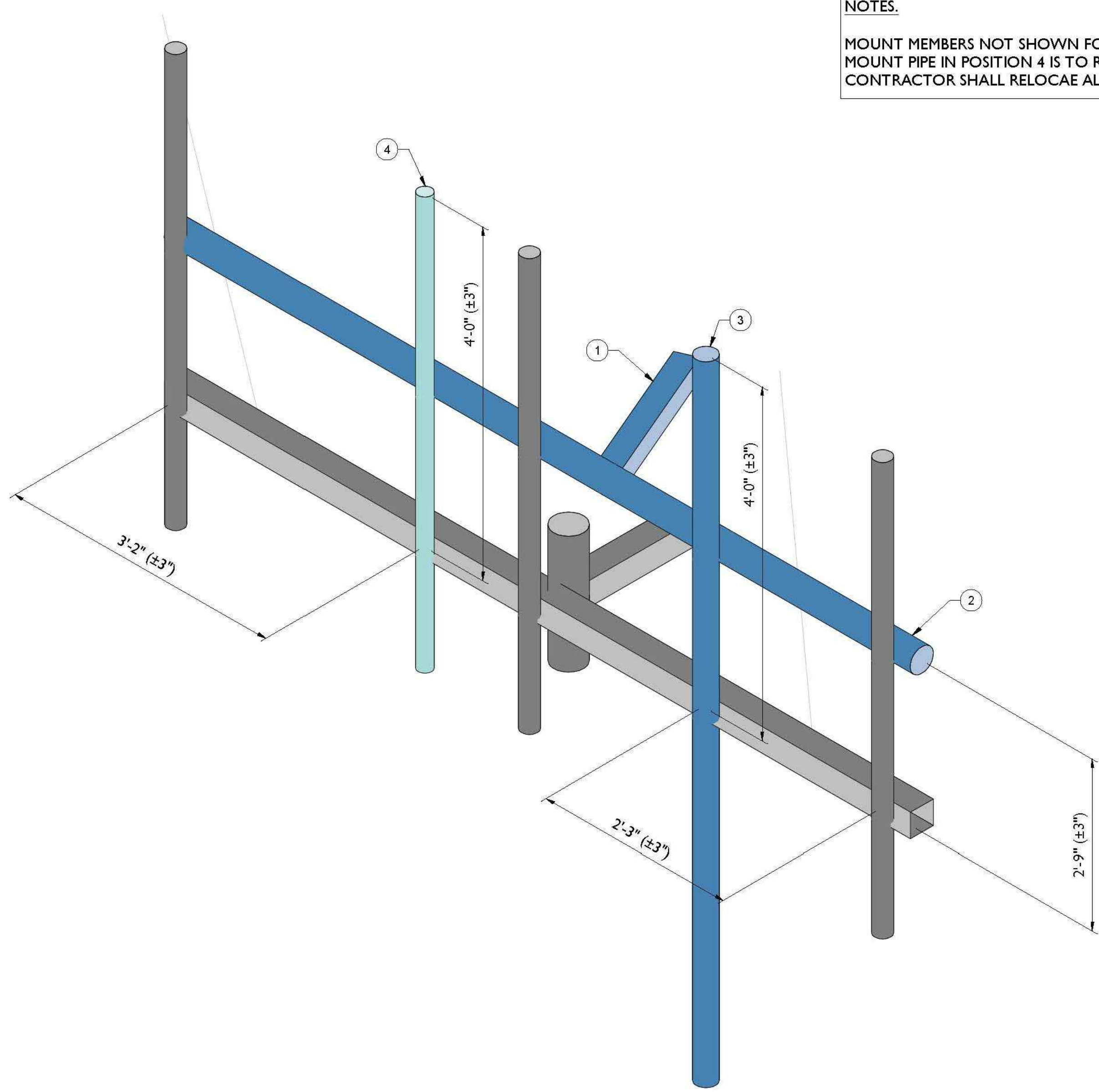
- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1		3	PROPOSED T-ARM KIT (PART #: VZWSMART-SFK4)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
2		3	114" LONG, P3.0 STD FACE HORIZONTAL	GALVANIZED; RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
3		3	96" LONG, P2.5 STD MOUNT PIPE	GALVANIZED; CONNECT TO EXISTING FACE HORIZONTAL WITH NEW WITH CROSSOVER PLATE (PERFECT VISION PART #: PV-XP-35ST25, OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING CONNECTICUT FOR APPROVAL OF SUBSTITUTION)
4		3	96" LONG, P2.0 STD MOUNT PIPE	GALVANIZED; TO BE RELOCATED FURTHER FROM POSITION 5 DUE TO THE HEAT CLEARANCE FOR THE PROPOSED 5G ANTENNAS.
5				
6				
7				
8				
9				
10				

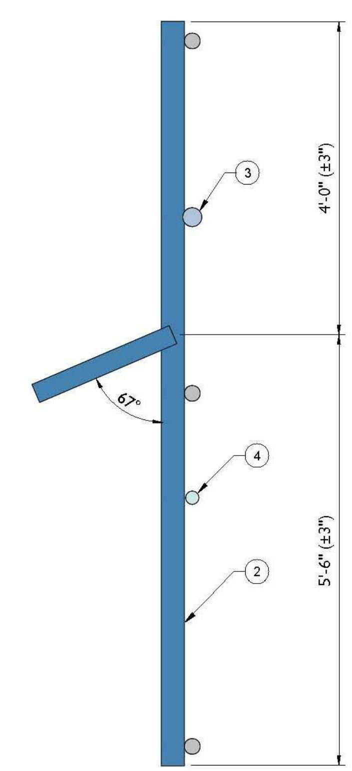
NOTES:

MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
MOUNT PIPE IN POSITION 4 IS TO RELOCATED FUTHER FORM POSITION 5 DUE TO HEAT CLEARANCE FOR 5G ANTENNA
CONTRACTOR SHALL RELOCAE ALL MONOPINE BRANCHES AS NEEDED TO PREVENT INTERFERENCE WITH MOD INSTALLATION.



1 PROPOSED ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED PLAN VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

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SHEET TITLE: MODIFICATION DETAILS

SHEET NUMBER: SS-1

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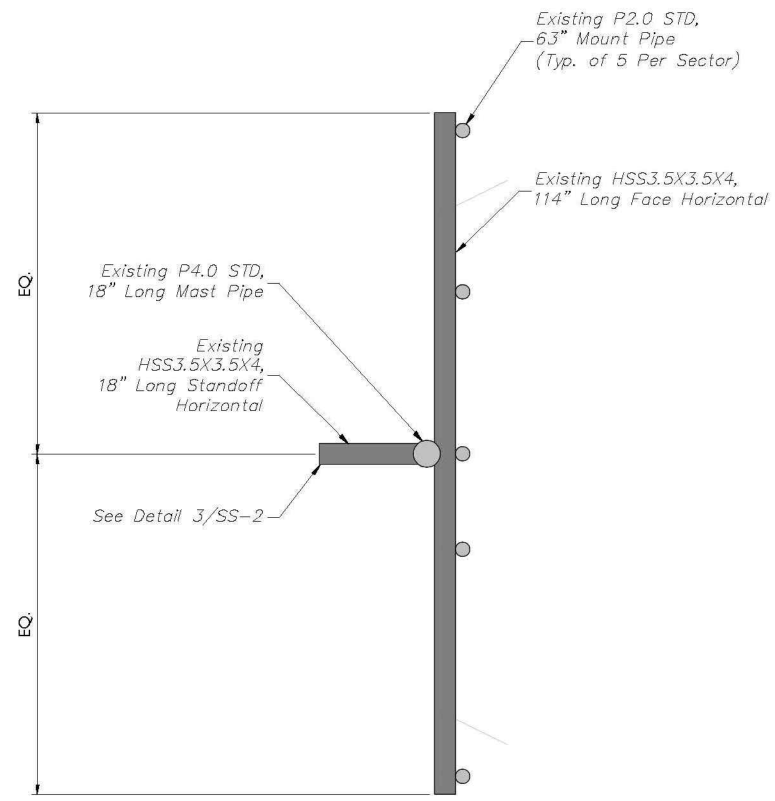

1 EXISTING MOUNT GEOMETRY VERIFICATION PLAN VIEW

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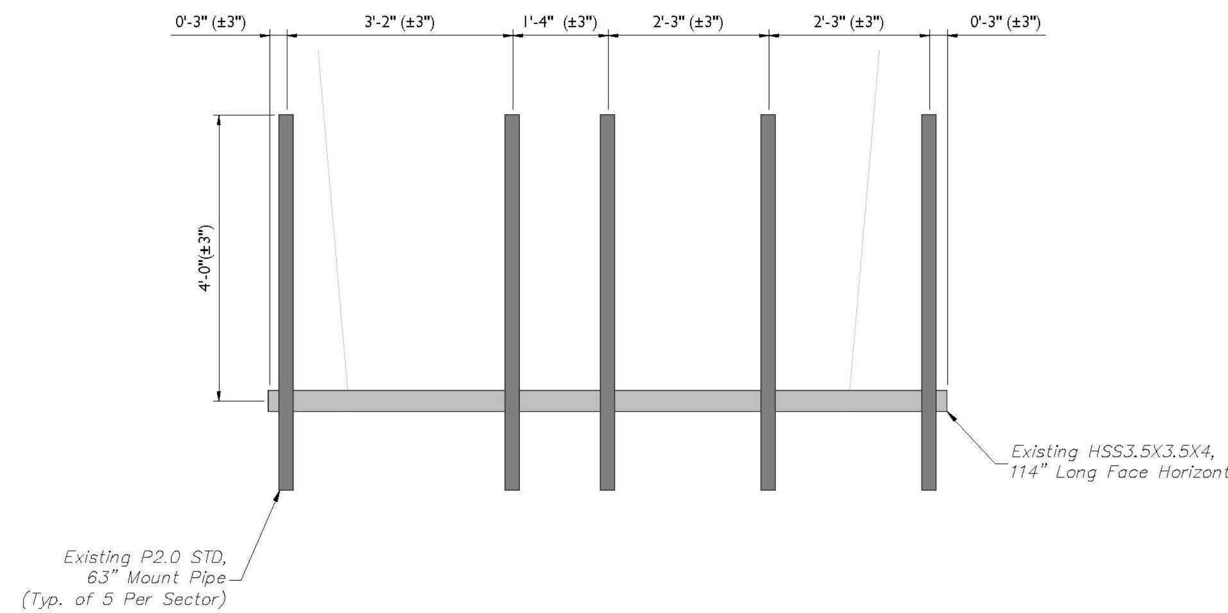

2 EXISTING MOUNT GEOMETRY VERIFICATION FRONT ELEVATION VIEW

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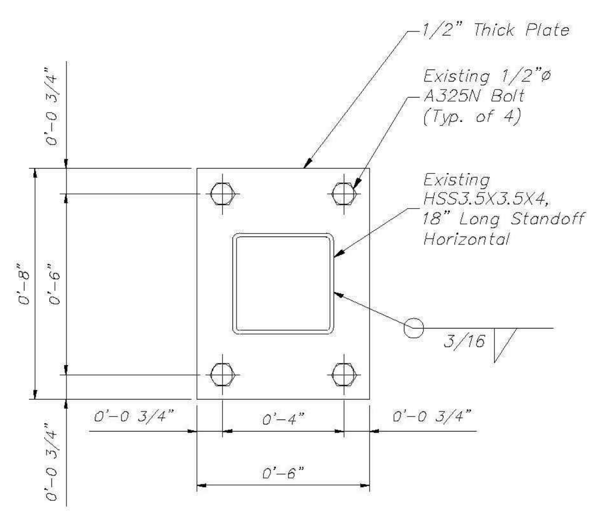

3 MOUNT CONNECTION DETAIL

SCALE : N.T.S.

STANDARD PIPE DIMENSIONS				
		THICKNESS (IN.)		
PIPE SIZE	O.D. (IN.)	STD	XSTR	XXSTR
P1 1/2	1.900	0.145	0.200	0.400
P2	2.375	0.154	0.218	0.436
P2 1/2	2.875	0.203	0.276	0.552
P3	3.500	0.216	0.300	0.600
P3 1/2	4.000	0.226	0.318	0.636
P4	4.500	0.237	0.337	0.674
P4 1/2	5.000	0.247	0.355	0.710
P5	5.563	0.258	0.375	0.750
P6	6.625	0.280	0.432	0.864

NOTE:

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND MEMBER SIZES SHOWN IN THIS SKETCH. DOCUMENT ALL VARIATIONS OR DEVIATIONS VIA PHOTOS AND SKETCHES AND PROVIDE TO THE EOR FOR EVALUATION. THE CONTRACTOR SHALL STOP CONSTRUCTION IF ANY VARIATIONS OR DEVIATIONS ARE FOUND AND OBTIAN APPROVAL TO PROCEED FROM EOR.

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SHEET TITLE: GEOMETRY VERIFICATION SKETCHES

SHEET NUMBER: SS-2

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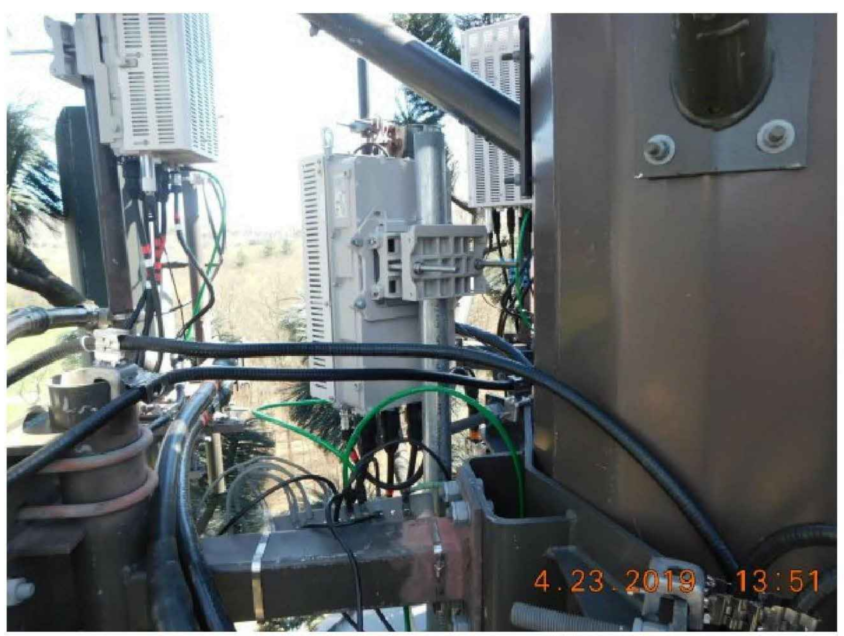
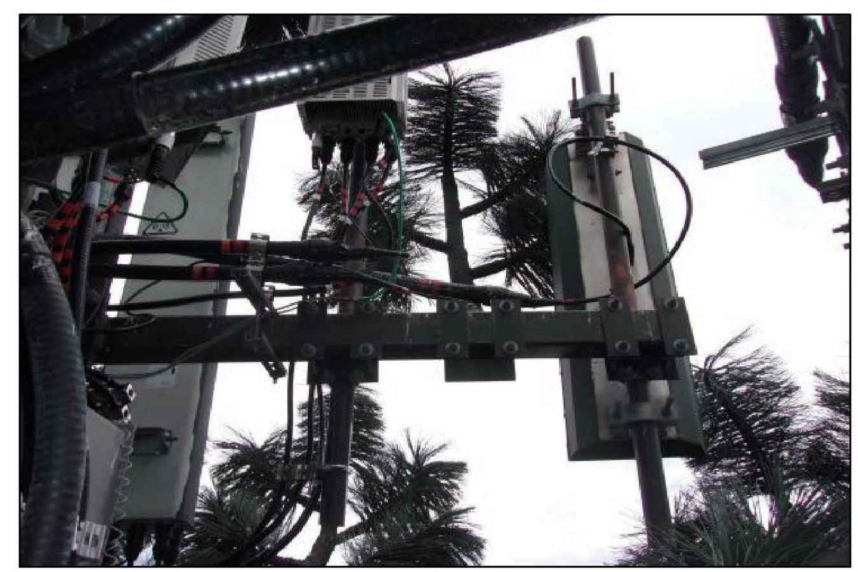
MOUNT PHOTO 1

MOUNT PHOTO 2



MOUNT PHOTO 3



MOUNT PHOTO 4

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STATE OF CONNECTICUT
ERIC T. ANDERSON
32224
LICENSED PROFESSIONAL ENGINEER

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Suite 100
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Phone: 856.797.0412
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SHEET TITLE :
MOUNT PHOTOS

SHEET NUMBER :
SS-3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.