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

September 17, 2021

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

RE: Notice of Exempt Modification // Site: STONEYBROOK RD CT (ATC: 283420)
23 Stonybrook Rd, Stratford, CT 06614
N 41.2032 // W 73.1486

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains 9 antennas at the 77-ft level on the existing 119ft Monopole tower, located at 23 Stonybrook Rd, Stratford, CT. The tower is owned by American Tower. The property is also owned by John D. Miranda. This tower facility was originally approved by the Connecticut Siting Council in Docket No. 385 on February 25, 2010. The proposed modification complies with the approval. Verizon Wireless now intends to remove 9 antennas and install 9 new antennas on 3 Dual Mounting Brackets per Mount Analysis for the LTE (3700 MHz) replacements for its 5G upgrade. Additionally, Verizon Wireless will also remove 6 Remote Radio Heads (RRH) and install 6 new RRUs, remove 1 OVP and replace with 1 new OVP, remove (12) 1-5/8" Coax Cables and install (2) new ones, and remove (1) 6x12 Hybrid Cables; 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 Laura R. Hoydick, Mayor of Stratford, its Zoning Enforcement Officer, Danielle Brennan, and American Tower, the tower owner, and the property owner, Stoneybrook Management LLC.

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 18, 2021, by Engineered Tower Solutions, PLLC., a structural analysis dated July 13, 2021, by A.T. Engineering Service, PLLC., and a structural mount analysis by

Maser Consulting Connecticut date June 30, 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 Engineered Tower Solutions, PLLC., dated July 13, 2021, and a structural mount analysis by Maser Consulting Connecticut, dated June 30, 2021, pursuant to certain conditions defined therein. Design and engineering is fully illustrated within final construction drawings, signed and stamped dated August 18, 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

_____

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

Attachments
cc: Mayor Laura R. Hoydick, Town of Stratford – Chief Elected Official
Danielle Brennan, Zoning Enforcement Officer - as P&Z official
American Tower Corporation - as tower owner
Stoneybrook Management LLC - as ground owner

UPS CampusShip: View/Print Label

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   Your driver will pickup your shipment(s) as usual.

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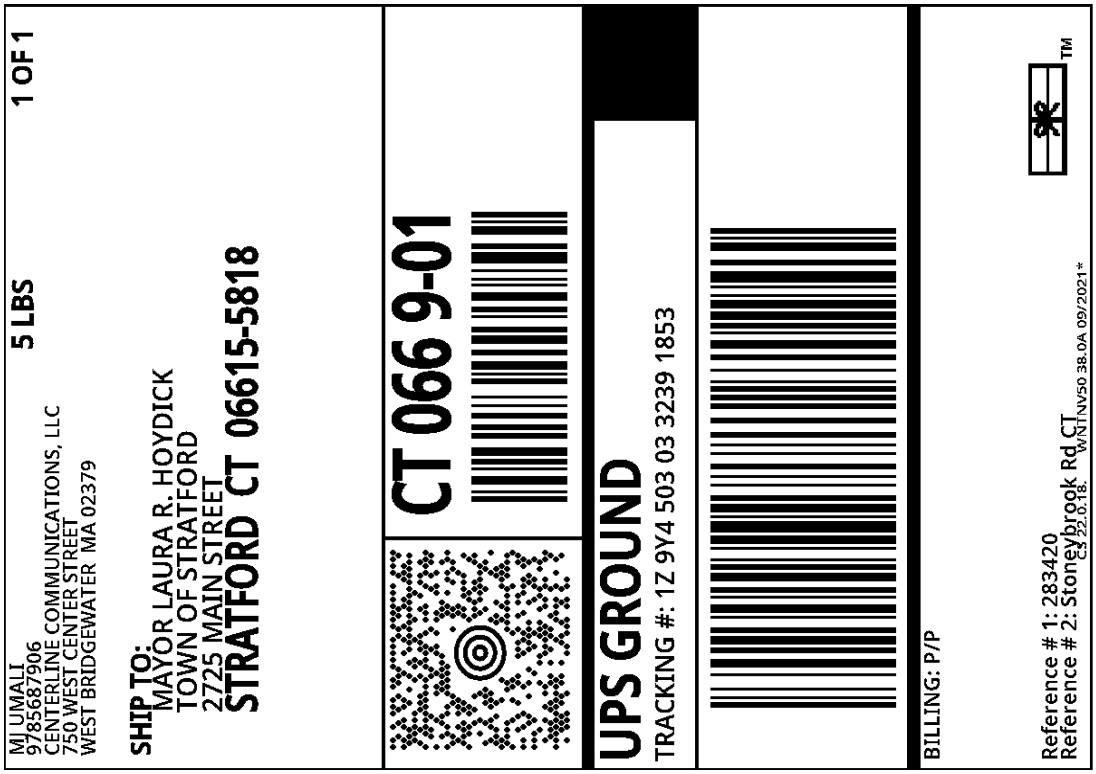

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number
1Z9Y45030332391853

Weight
5.00 LBS

Service

UPS Ground

Shipped / Billed On
09/20/2021

Delivered On

09/24/2021 11:48 A.M.

Delivered To
2725 MAIN ST
205
STRATFORD, CT, 06615, US

Received By

WILLIAMS

Left At
Inside Delivery

Reference Number(s)
STONEYBROOK RD CT, 283420

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Sincerely,

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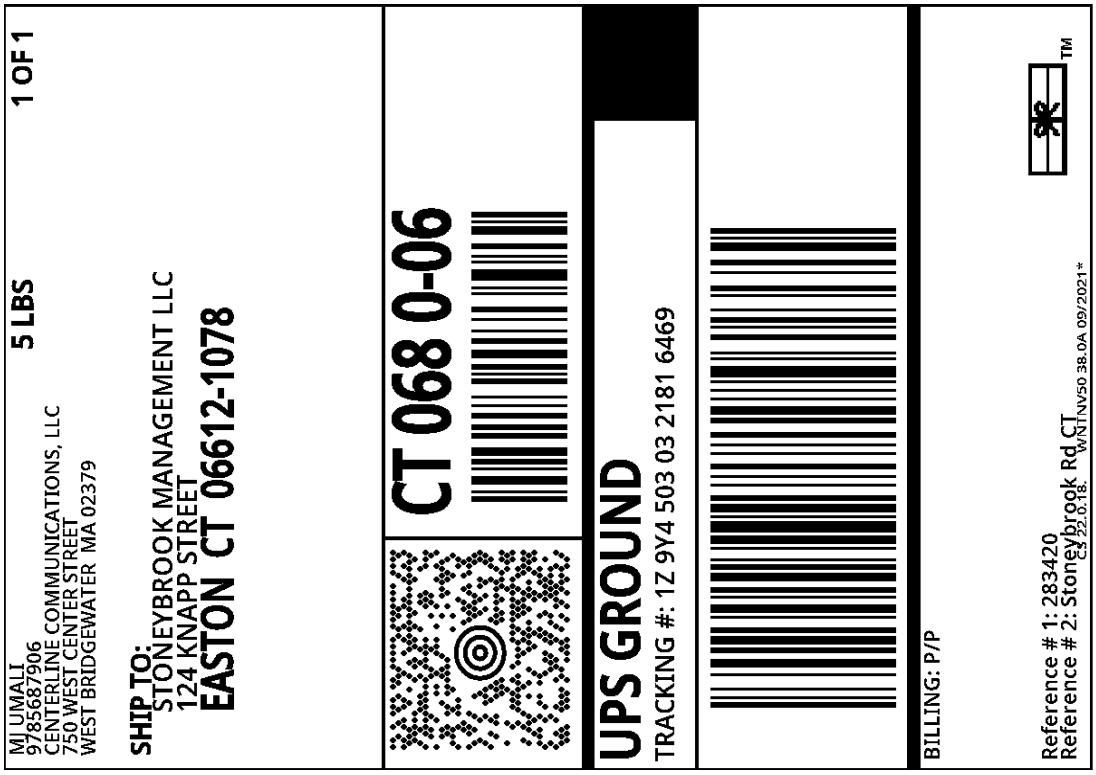

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number
1Z9Y45030321816469

Weight
5.00 LBS

Service

UPS Ground

Shipped / Billed On
09/20/2021

Delivered On

09/24/2021 4:20 P.M.

Delivered To
STONEYBROOK MANAGEMENT LL
124 KNAPP ST
EASTON, CT, 06612, US

Received By

DRIVER RELEASE

Left At
Front Door

Reference Number(s)
STONEYBROOK RD CT, 283420

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

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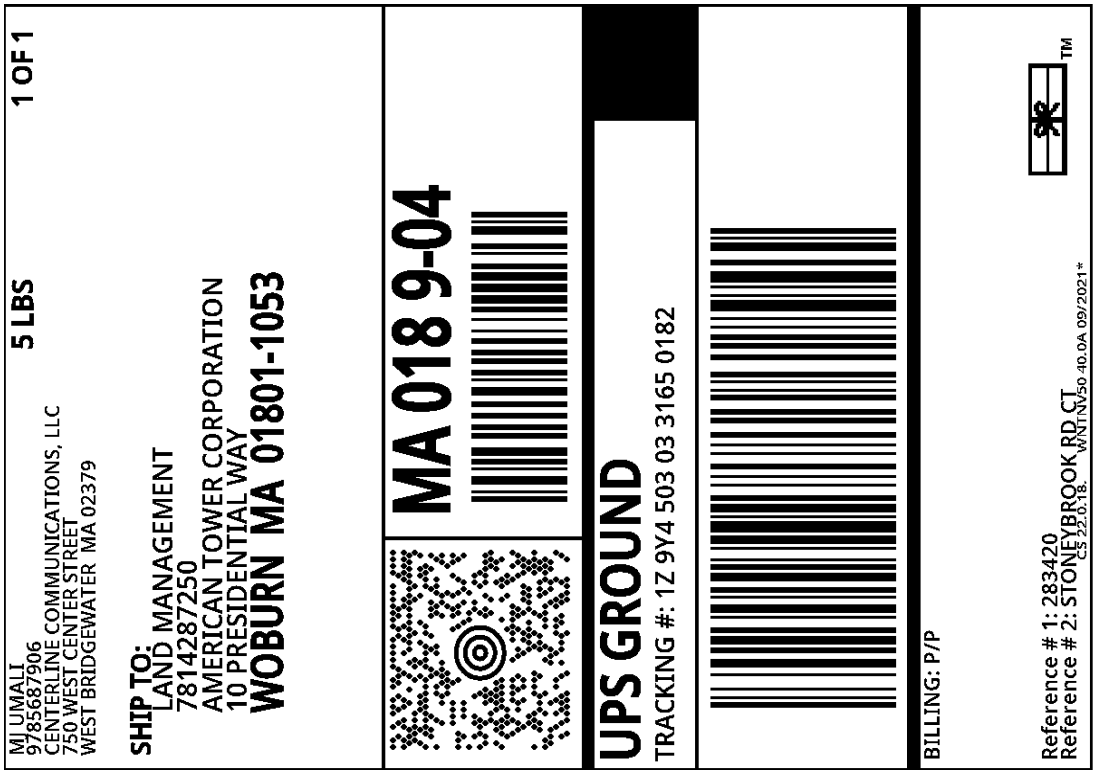

DOCKET NO. 385 – T-Mobile Northeast LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and management of a telecommunications facility located at 23 Stonybrook Road, Stratford, Connecticut.	}	Connecticut Siting Council February 25, 2010

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and management of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to T-Mobile Northeast LLC, hereinafter referred to as the Certificate Holder, for a telecommunications facility at 23 Stonybrook Road, Stratford, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of T-Mobile Northeast LLC and other entities, both public and private, but such tower shall not exceed a height of 100 feet above ground level. Panel antennas shall be installed in an exterior, flush mount configuration and such panel antennas shall not exceed a height of 100 feet above ground level.

2. The tower compound shall be re-located in an east-west orientation along the south property line. The tower shall be re-located appropriately to increase the distance from the tower to the west property line.

3. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Stratford for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and
    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
    c) details for the installation of architecturally-treated fencing around the compound and the installation of evergreen plantings along the west property boundary, where necessary to provide visual screening to the adjacent residences.

4. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

5. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

6. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

7. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Stratford public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

8. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.

9. At least one wireless telecommunications carrier shall install their equipment and shall become operational not later than 120 days after the tower is erected. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

10. Any request for extension of the time period referred to in Condition 8 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Stratford. Any proposed modifications to this Decision and Order shall likewise be so served.

10. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

11. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

12. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Connecticut Post.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
T-Mobile Northeast LLC	Julie D. Kohler, Esq. Monte E. Frank, Esq. Jesse A. Langer, Esq. Cohen and Wolf, P.C. 1115 Broad Street Bridgeport, CT 06604

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Structural Analysis Report

Structure	:	**119 ft Monopole**
ATC Site Name	:	**STONEYBROOK RD CT, CT**
ATC Asset Number	:	**283420**
Engineering Number	:	**13698731_C3_01**
Proposed Carrier	:	**VERIZON WIRELESS**
Carrier Site Name	:	**STRATFORD WEST**
Carrier Site Number	:	**467946**
Site Location	:	**23 Stonybrook Road** **Stratford, CT 06614-3715** **41.203300,-73.148600**
County	:	**Fairfield**
Date	:	**July 13, 2021**
Max Usage	:	**65%**
Result	:	**Pass**

Prepared By:
Claire Collett
Structural Engineer I
Claire Collett

Reviewed By:

Authorized by "EOR"
23 Jul 2021 03:50:52 cosign

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 119 ft monopole to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	Valmont Order #20380-10, dated July 30, 2010
Foundation Drawing	Valmont Order #20380-60, dated June 11, 2010
Geotechnical Report	Terracon Project #J2105132, dated April 2, 2010
Modifications	TES Job #13142, dated November 12, 2014

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:	119 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	Ss = 0.21, 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	Equipment	Mount Type	Lines	Carrier
117.0	1	Commscope WCS-IMFQ-AMT	T-Arm	(2) 0.39" (10mm) Fiber Trunk (4) 0.82" (20.8mm) 8 AWG 6 (1) 0.92" (23.4mm) Cable (3) 2 1/2" conduit (2) 3" conduit	AT&T MOBILITY
	1	Raycap DC6-48-60-18-8F(32.8 lbs)			
	3	Kathrein Scala 80010965			
	3	CCI TPA65R-BU6D			
	1	Raycap DC9-48-60-24-8C-EV			
	3	Ericsson RRUS-32 B30 (77 lbs)			
	3	Ericsson RRUS 32 B2			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4426 B66			
	3	Ericsson RRUS 4478 B14			
97.0	3	Ericsson AIR32 B66Aa/B2a	Triangular Platform with Handrails	(1) 1 1/4" (1.25"-31.8mm) Fiber (2) 1 5/8" Hybriflex (6) 7/8" Coax	T-MOBILE
	3	Ericsson Air6449 B41			
	3	Ericsson RRUS 4415 B25			
	3	Ericsson Radio 4449 B71 B85A			
	3	RFS APXVAARR24_43-U-NA20			
96.9	3	Ericsson RRUS 01 B2 w/ Solar Shield	Stand-Off		

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
77.0	3	Alcatel-Lucent 9442 RRH2x40-AWS	T-Arm	(12) 1 5/8" Coax	VERIZON WIRELESS
	6	Amphenol Antel BXA-70063-6CF-6			
	6	Amphenol Antel BXA-171063-12CF			
	3	Alcatel-Lucent 9442 RRH 2x40 700U			

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
77.0	3	Samsung B2/B66A RRH-BR049	T-Arm	(1) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Samsung B5/B13 RRH-BR04C			
	1	RFS DB-C1-12C-24AB-0Z			
	3	Samsung MT6407-77A			
	6	Quintel QS6656-5D			

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

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	43%	Pass
Shaft	62%	Pass
Base Plate	26%	Pass
Reinforcement	65%	Pass
Flanges	46%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	1,164.1	32%
Axial (Kips)	35.9	5%
Shear (Kips)	13.6	17%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
77.0	Samsung B2/B66A RRH-BR049	VERIZON WIRELESS	0.491	0.731
	Samsung B5/B13 RRH-BR04C			
	RFS DB-C1-12C-24AB-0Z			
	Samsung MT6407-77A			
	Quintel QS6656-5D			

***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:

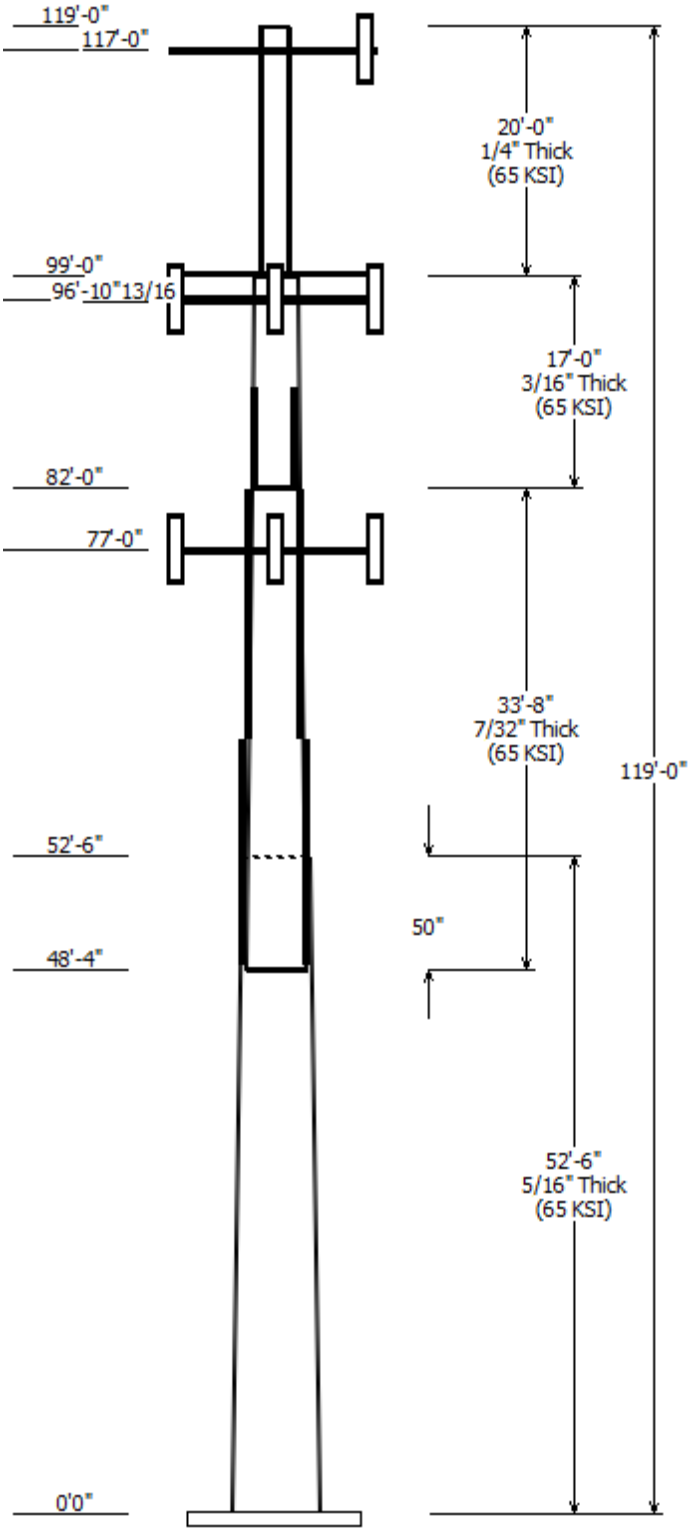
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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 :	283420	Code:	ANSI/TIA-222-H
Location :	STONEYBROOK RD CT, CT		
Description :	119' Valmont Monopole	Risk Category :	II
Shape :	18 Sides	Exposure :	B
Height :	119.00 (ft)	Topo Method :	Method 1
Base Elev (ft):	0.00	Topographic Category :	1
Taper:	0.300000 (in/ft)		

Sections Properties

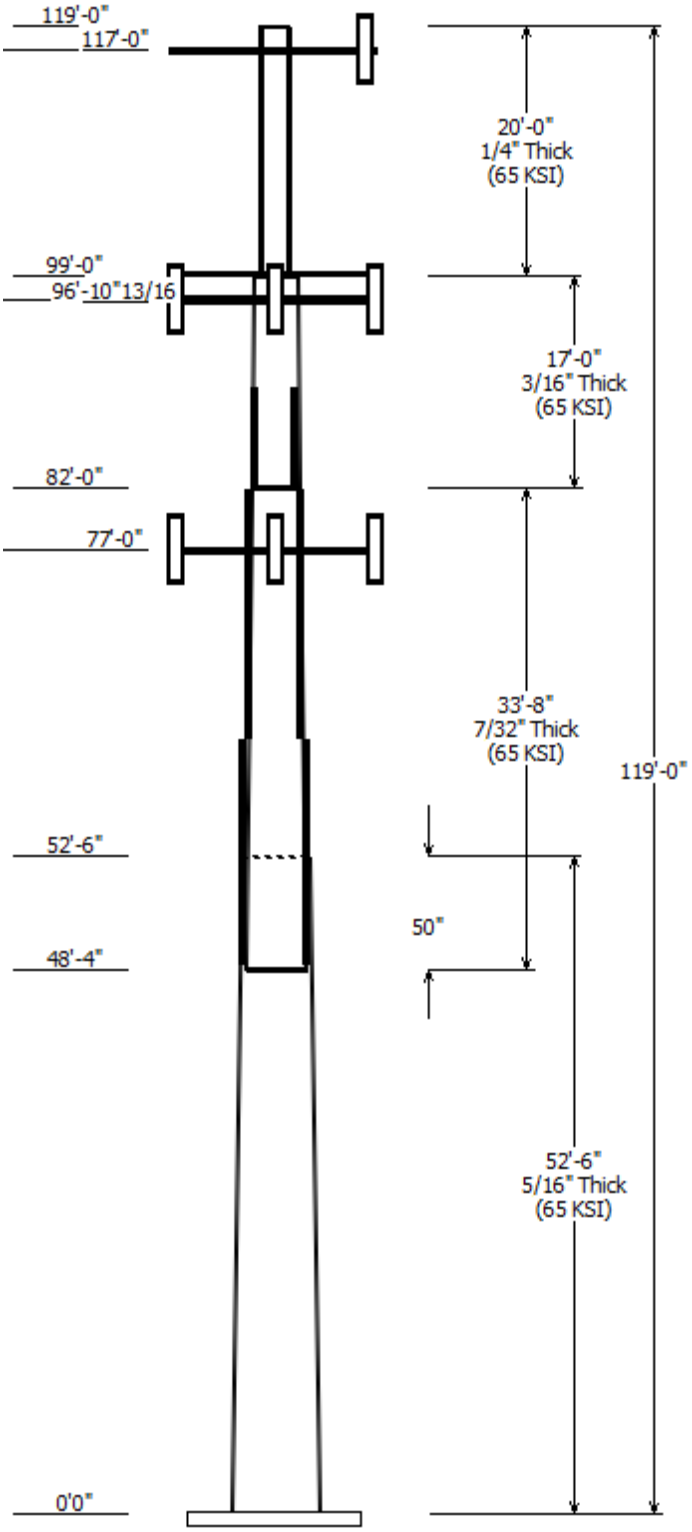
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Shape	Steel Grade (ksi)
1	52.500	26.25	42.00	0.313		0.000	18 Sides	65
2	33.667	17.83	27.93	0.219	Slip Joint	50.000	18 Sides	65
3	17.000	12.73	17.83	0.188	Butt Joint	0.000	18 Sides	65
4	20.000	12.56	12.56	0.250	Butt Joint	0.000	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
117.000	117.000	3	Generic Round T-Arm
117.000	117.000	3	Kathrein Scala 80010965
117.000	117.000	3	CCI TPA65R-BU6D
117.000	117.000	1	Raycap DC9-48-60-24-8C-EV
117.000	117.000	3	Ericsson RRUS-32 B30 (77 lbs)
117.000	118.000	3	Ericsson RRUS 32 B2
117.000	117.000	3	Ericsson RRUS 4449 B5, B12
117.000	117.000	3	Ericsson RRUS 4478 B14
117.000	117.000	3	Ericsson RRUS 4426 B66
117.000	118.000	1	Raycap DC6-48-60-18-8F(32.8 lb
117.000	117.000	1	Commscope WCS-IMFQ-AMT
97.000	97.000	1	Generic Round Platform with
97.000	97.000	3	RFS APXVAARR24_43-U-NA20
97.000	97.000	3	Ericsson Air6449 B41
97.000	97.000	3	Ericsson RRUS 4415 B25
97.000	97.000	3	Ericsson Radio 4449 B71 B85A
97.000	97.000	3	Ericsson AIR32 B66Aa/B2a
96.900	96.900	3	Ericsson RRUS 01 B2 w/ Solar S
77.000	77.000	3	Round T-Arm
77.000	77.000	6	Quintel QS6656-5D
77.000	77.000	3	Samsung MT6407-77A
77.000	77.000	1	RFS DB-C1-12C-24AB-0Z
77.000	77.000	3	Samsung B5/B13 RRH-BR04C
77.000	77.000	3	Samsung B2/B66A RRH-BR049

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
42.000	92.000	1" Flat Plate	Yes
42.000	92.000	1" Flat Plate	Yes
42.000	92.000	1" Flat Plate	Yes
0.000	97.000	1 1/4" (1.25"-	No
0.000	97.000	1 5/8" Hybriflex	No
0.000	97.000	7/8" Coax	No
0.000	117.0	0.39" (10mm)	No
0.000	117.0	0.82" (20.8mm) 8	No
0.000	117.0	0.92" (23.4mm)	No
0.000	117.0	2 1/2" conduit	No
0.000	117.0	3" conduit	No
0.000	77.000	1 5/8" Hybriflex	No



0.000	87.000	7/8" Coax	No

Load Cases

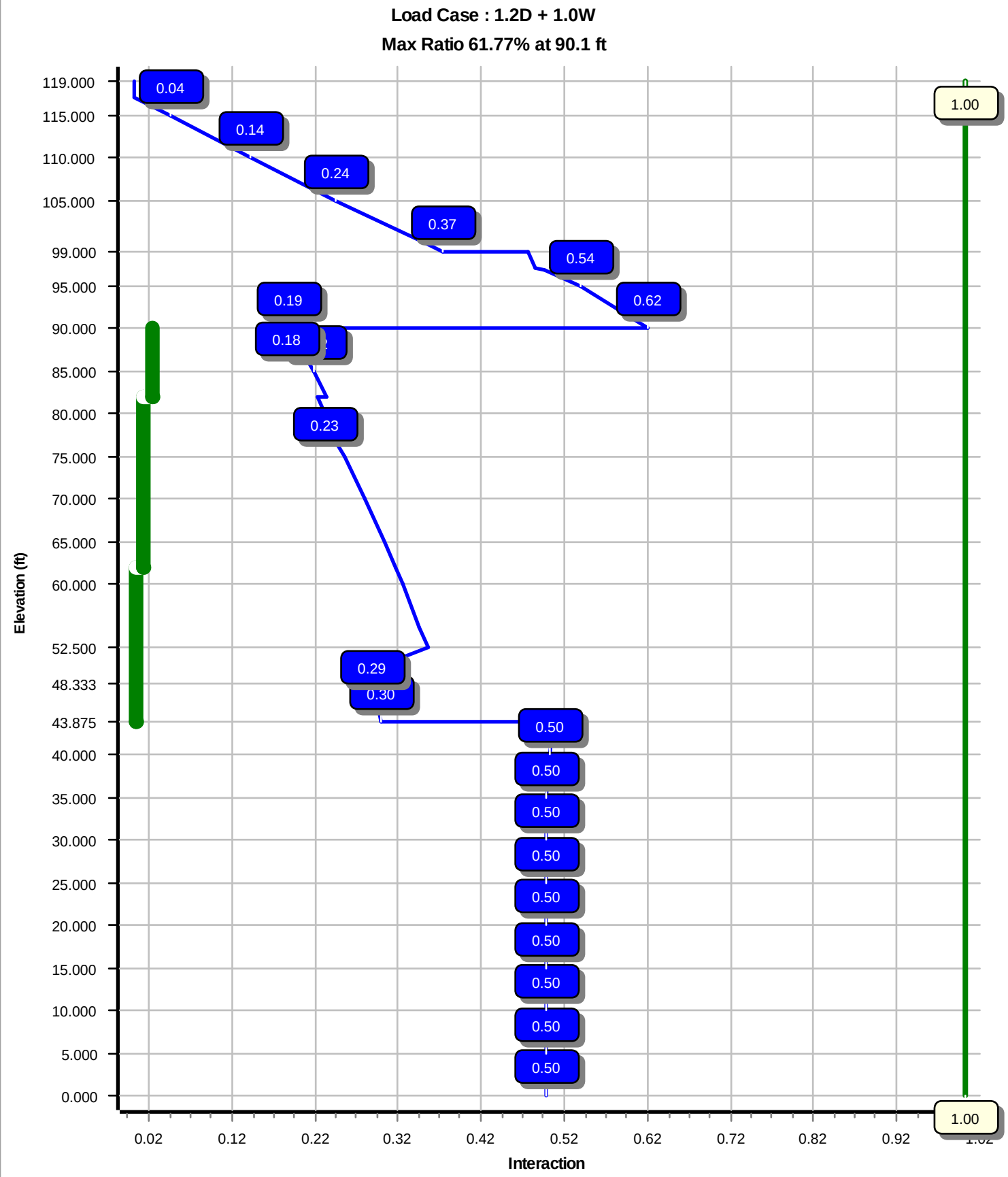
1.2D + 1.0W	119 mph with No Ice
0.9D + 1.0W	119 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	1164.13	13.57	35.93
0.9D + 1.0W	1144.43	13.55	26.94
1.2D + 1.0Di + 1.0Wi	299.55	3.56	44.99
1.2D + 1.0Ev + 1.0Eh	85.40	0.90	36.13
0.9D - 1.0Ev + 1.0Eh	83.63	0.90	24.85
1.0D + 1.0W	264.83	3.11	29.96

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 61.77% at 90.1 ft
Elevation (ft)
119.000
115.000
110.000
105.000
99.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
60.000
52.500
48.333
43.875
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.04
0.14
0.24
0.37
0.54
0.62
0.19
0.18
0.23
0.29
0.30
0.50
0.50
0.50
0.50
0.50
0.50
0.50
0.50
1.00
1.00
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 283420 **Code: ANSI/TIA-222-H**

Site Name: STONEYBROOK RD CT, CT **Engineering Number:13698731_C3_01** **7/23/2021 9:52:12 AM**

Customer: VERIZON WIRELESS

Analysis Parameters

Location :	**Fairfield County, CT**	**Height (ft) :**	**119**
Code :	**ANSI/TIA-222-H**	**Base Diameter (in) :**	**42.00**
Shape :	**18 Sides**	**Top Diameter (in) :**	**12.56**
Pole Type :	**Custom**	**Taper (in/ft) :**	**0.300**
Pole Manfacturer :	**Valmont**	**Rotation (deg) :**	**0.00**
Kd (non-service) :	**0.95**	**Ke :**	**1.00**

Ice & Wind Parameters

Exposure Category:	**B**	**Design Wind Speed Without Ice:**	**119 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:**	**1.00 in**
Crest Height:	**0 ft**	**HMSL:**	**77.00 ft**

Seismic Parameters

Analysis Method:	**Equivalent Lateral Force Method**				
Site Class:	**D - Stiff Soil**				
Period Based on Rayleigh Method (sec):	**2.41**				
T_L (sec):	**6**	**p:**	**1**	**C_s:**	**0.030**
S_s:	**0.207**	**S_1:**	**0.054**	**C_s Max:**	**0.030**
F_a:	**1.600**	**F_v:**	**2.400**	**C_s Min:**	**0.030**
S_{ds}:	**0.221**	**S_{d1}:**	**0.086**		

Load Cases

1.2D + 1.0W	**119 mph with No Ice**
0.9D + 1.0W	**119 mph with No Ice (Reduced DL)**
1.2D + 1.0Di + 1.0Wi	**50 mph with 1.00 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	52.500	0.3125	65		0.00	5,991	42.00	0.00	41.35	9078.5	21.94	134.40	26.25	52.50	25.73	2186.6	13.05	84.00	0.300000
2-18	33.667	0.2188	65	Slip	50.00	1,803	27.93	48.33	19.24	1868.2	20.76	127.71	17.83	82.00	12.23	479.8	12.61	81.54	0.300000
3-18	17.000	0.1875	65	Butt	0.00	520	17.83	82.00	10.50	413.4	15.01	95.13	12.73	99.00	7.47	148.6	10.22	67.93	0.300000
4-18	20.000	0.2500	65	Butt	0.00	665	12.56	99.00	9.77	187.1	7.10	50.25	12.56	119.00	9.77	187.1	7.10	50.25	0.000000
				Shaft Weight		8,979													

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
117.00	Commscope WCS-IMFQ-AMT	1	0.80	0.000	29.50	0.989	1.00	51.43	1.420	1.00
117.00	Raycap DC6-48-60-18-8F(32.8	1	0.80	1.000	32.80	1.470	1.00	72.97	1.925	1.00
117.00	Ericsson RRUS 4426 B66	3	0.80	0.000	48.40	1.650	0.50	77.47	2.203	0.50
117.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.90	1.842	0.50	95.90	2.426	0.50
117.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	112.96	2.576	0.50
117.00	Ericsson RRUS 32 B2	3	0.80	1.000	53.00	2.743	0.67	100.89	3.504	0.67
117.00	Ericsson RRUS-32 B30 (77 lbs)	3	0.80	0.000	77.00	3.314	0.71	140.32	4.150	0.71
117.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	1.00	100.05	5.746	1.00
117.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.67	482.59	15.068	0.67
117.00	CCI TPA65R-BU6D	3	0.80	0.000	67.50	12.871	0.63	237.67	14.692	0.63
117.00	Kathrein Scala 80010965	3	0.80	0.000	97.60	13.814	0.62	271.18	15.800	0.62
97.00	Ericsson Radio 4449 B71 B85A	3	0.75	0.000	75.00	1.650	0.50	113.46	2.193	0.50
97.00	Ericsson RRUS 4415 B25	3	0.75	0.000	46.00	1.842	0.50	77.36	2.416	0.50
97.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	191.15	6.697	0.63
97.00	Ericsson AIR32 B66Aa/B2a	3	0.75	0.000	132.20	6.510	0.71	234.27	7.911	0.71
97.00	RFS APXVAARR24_43-U-NA20	3	0.75	0.000	127.90	20.243	0.63	378.96	22.615	0.63
97.00	Generic Round Platform with	1	1.00	0.000	2,500.00	27.200	1.00	3,535.82	42.832	1.00
96.90	Ericsson RRUS 01 B2 w/ Solar	3	1.00	0.000	44.00	3.146	0.63	93.94	3.908	0.63
77.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	124.22	2.438	0.50
77.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	106.00	2.438	0.50
77.00	RFS DB-C1-12C-24AB-0Z	1	0.80	0.000	32.00	4.056	1.00	111.32	4.908	1.00
77.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	145.22	5.657	0.61
77.00	Quintel QS6656-5D	6	0.80	0.000	88.00	8.133	0.74	212.35	9.873	0.74
77.00	Round T-Arm	3	0.75	0.000	250.00	9.700	0.67	380.44	14.845	0.67
Totals	Num Loadings:24	65			8,545.20			15,237.66		

Linear Appurtenance Properties

Load Case Azimuth (deg) : 0

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
0.00	117.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	117.00	4	0.82" (20.8mm) 8 AWG	0.82	0.62	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	117.00	1	0.92" (23.4mm) Cable	0.92	0.89	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	117.00	3	2 1/2" conduit	2.88	5.79	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	117.00	2	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	97.00	1	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	97.00	2	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	97.00	6	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	T-MOBILE
42.00	92.00	1	1" Flat Plate	1.00	30.45	Y	1	0.00	0.00	90	0.00	Y	
42.00	92.00	1	1" Flat Plate	1.00	30.45	Y	1	0.00	0.00	210	0.00	Y	
42.00	92.00	1	1" Flat Plate	1.00	30.45	Y	1	0.00	0.00	330	0.00	Y	

0.00	87.00	6	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	77.00	1	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description		Fy (ksi)	Offset (in)	Intermediate Connections: Description	Spacing (in)	Len (in)	Connectors	Continuation?
43.88	62.00	3	PL	PL 6" x 1"	65	0.00	5/8" Hollo Bolt	24.0	3.00	5/8" Hollo Bolt	Yes
62.00	82.00	3	PL	PL 6" x 1"	65	0.00	5/8" Hollo Bolt	24.0	3.00	5/8" Hollo Bolt	Yes
82.00	90.13	3	PL	PL 6" x 1"	65	0.00	5/8" Hollo Bolt	24.0	3.00	5/8" Hollo Bolt	Yes

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)	Additional Reinforcing Area (in^2)	Additional Reinforcing Ix (in^4)	Additional Reinforcing Weight (lb)
0.00		0.3125	42.000	41.347	9,078.5	21.94	134.40	75.6	425.7	0.0	0.0			
5.00		0.3125	40.500	39.860	8,133.3	21.09	129.60	76.6	395.5	0.0	690.8			
10.00		0.3125	39.000	38.372	7,256.2	20.24	124.80	77.6	366.5	0.0	665.5			
15.00		0.3125	37.500	36.884	6,444.4	19.40	120.00	78.6	338.5	0.0	640.2			
20.00		0.3125	36.000	35.396	5,695.6	18.55	115.20	79.6	311.6	0.0	614.9			
25.00		0.3125	34.500	33.909	5,007.2	17.70	110.40	80.6	285.9	0.0	589.6			
30.00		0.3125	33.000	32.421	4,376.6	16.86	105.60	81.6	261.2	0.0	564.3			
35.00		0.3125	31.500	30.933	3,801.3	16.01	100.80	82.6	237.7	0.0	538.9			
40.00		0.3125	30.000	29.445	3,278.8	15.16	96.00	82.6	215.3	0.0	513.6			
43.88	Reinf Bottom	0.3125	28.838	28.292	2,908.5	14.51	92.28	82.6	198.7	0.0	380.7			
45.00		0.3125	28.500	27.957	2,806.5	14.32	91.20	82.6	194.0	0.0	107.7	18.00	1,985	68.9
48.33	Bot - Section 2	0.3125	27.500	26.966	2,518.3	13.75	88.00	82.6	180.4	0.0	311.5	18.00	1,855	204.2
50.00		0.3125	27.000	26.470	2,381.9	13.47	86.40	82.6	173.8	0.0	259.7	18.00	1,847	102.1
52.50	Top - Section 1	0.2188	26.688	18.377	1,626.6	19.75	122.00	78.2	120.1	0.0	380.6	18.00	1,752	153.1
55.00		0.2188	25.938	17.856	1,492.3	19.14	118.57	78.9	113.3	0.0	154.1	18.00	1,660	153.1
60.00		0.2188	24.438	16.815	1,246.1	17.93	111.71	80.3	100.4	0.0	294.9	18.00	1,483	306.3
62.00	Reinf. Top Reinf	0.2188	23.837	16.398	1,155.7	17.45	108.97	80.9	95.5	0.0	113.0	18.00	1,415	122.5
65.00		0.2188	22.938	15.773	1,028.6	16.73	104.86	81.7	88.3	0.0	164.2	18.00	1,317	183.8
70.00		0.2188	21.438	14.732	838.0	15.52	98.00	82.6	77.0	0.0	259.5	18.00	1,160	306.3
75.00		0.2188	19.938	13.690	672.6	14.31	91.14	82.6	66.4	0.0	241.8	18.00	1,014	306.3
77.00		0.2188	19.337	13.274	613.0	13.82	88.40	82.6	62.4	0.0	91.8	18.00	958.4	122.5
80.00		0.2188	18.438	12.649	530.5	13.10	84.29	82.6	56.7	0.0	132.3	18.00	877.9	183.8
82.00	Top - Section 2	0.2188	17.837	12.232	479.8	12.61	81.54	82.6	53.0	0.0	84.7	18.00	826.2	122.5
82.00	Bot - Section 3	0.1875	17.837	10.504	413.4	15.01	95.13	82.6	45.6	0.0		18.00	826.2	
85.00		0.1875	16.938	9.968	353.3	14.16	90.33	82.6	41.1	0.0	104.5	18.00	751.7	183.8
90.00		0.1875	15.438	9.075	266.7	12.75	82.33	82.6	34.0	0.0	162.0	18.00	635.7	306.3
90.13	Reinf. Top	0.1875	15.400	9.053	264.7	12.72	82.13	82.6	33.9	0.0	3.9	18.00	633.0	7.7
95.00		0.1875	13.938	8.183	195.5	11.34	74.33	82.6	27.6	0.0	143.0			
96.90		0.1875	13.367	7.843	172.1	10.81	71.29	82.6	25.4	0.0	51.8			
97.00		0.1875	13.337	7.826	171.0	10.78	71.13	82.6	25.2	0.0	2.7			
99.00	Top - Section 3	0.1875	12.738	7.469	148.6	10.22	67.93	82.6	23.0	0.0	52.0			
99.00	Bot - Section 4	0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0				
100.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	33.2			
105.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	166.2			
110.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	166.2			
115.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	166.2			
117.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	66.5			
119.0		0.2500	12.563	9.770	187.1	7.10	50.25	82.6	29.3	0.0	66.5			
											8,978.9			2,832.9

Load Case: 1.2D + 1.0W — 119 mph with No Ice — 25 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		168.5	0.0					0.0	0.0	168.5	0.0	0.0	0.0
5.00		330.8	829.0					0.0	269.6	330.8	1,098.6	0.0	0.0
10.00		318.5	798.6					0.0	269.6	318.5	1,068.2	0.0	0.0
15.00		306.3	768.2					0.0	269.6	306.3	1,037.8	0.0	0.0
20.00		294.0	737.9					0.0	269.6	294.0	1,007.4	0.0	0.0
25.00		281.8	707.5					0.0	269.6	281.8	977.1	0.0	0.0
30.00		272.7	677.1					0.0	269.6	272.7	946.7	0.0	0.0
35.00		268.8	646.7					0.0	269.6	268.8	916.3	0.0	0.0
40.00		236.5	616.4					0.0	269.6	236.5	885.9	0.0	0.0
43.88	Reinf Bottom	132.0	456.8					0.0	414.5	132.0	871.2	0.0	0.0
45.00		116.1	129.2					0.0	266.7	116.1	395.9	0.0	0.0
48.33	Bot - Section 2	130.0	373.8					0.0	790.1	130.0	1,163.9	0.0	0.0
50.00		107.9	311.6					0.0	395.1	107.9	706.7	0.0	0.0
52.50	Top - Section 1	128.0	456.7					0.0	592.6	128.0	1,049.3	0.0	0.0
55.00		187.5	184.9					0.0	592.6	187.5	777.5	0.0	0.0
60.00		172.3	353.9					0.0	1,185.2	172.3	1,539.1	0.0	0.0
62.00	Reinf. Top Reinf	119.4	135.6					0.0	474.1	119.4	609.7	0.0	0.0
65.00		185.4	197.1					0.0	711.1	185.4	908.2	0.0	0.0
70.00		223.1	311.4					0.0	1,185.2	223.1	1,496.6	0.0	0.0
75.00		150.7	290.1					0.0	1,185.2	150.7	1,475.3	0.0	0.0
77.00	Appurtenance(s)	102.8	110.1	2,014.7	0.0	0.0	2,422.7	0.0	474.1	2,117.6	3,006.9	0.0	0.0
80.00		100.4	158.8					0.0	706.4	100.4	865.2	0.0	0.0
82.00	Top - Section 2	96.5	101.6					0.0	471.0	96.5	572.6	0.0	0.0
85.00		147.0	125.4					0.0	706.4	147.0	831.8	0.0	0.0
90.00		92.0	194.4					0.0	1,170.3	92.0	1,364.7	0.0	0.0
90.13	Reinf. Top	82.8	4.6					0.0	29.1	82.8	33.8	0.0	0.0
95.00		110.2	171.5					0.0	449.2	110.2	620.7	0.0	0.0
96.90		31.1	62.2					0.0	95.0	31.1	157.1	0.0	0.0
97.00	Appurtenance(s)	31.4	3.2	2,897.0	0.0	0.0	4,746.4	0.0	5.0	2,928.4	4,754.6	0.0	0.0
99.00	Top - Section 3	44.4	62.5					0.0	86.4	44.4	148.9	0.0	0.0
100.00		87.4	39.9					0.0	43.2	87.4	83.1	0.0	0.0
105.00		146.9	199.5					0.0	216.1	146.9	415.6	0.0	0.0
110.00		148.8	199.5					0.0	216.1	148.8	415.6	0.0	0.0
115.00		105.1	199.5					0.0	216.1	105.1	415.6	0.0	0.0
117.00	Appurtenance(s)	56.4	79.8	3,009.0	0.0	218.7	2,926.8	0.0	86.4	3,065.4	3,093.0	0.0	0.0
119.00		26.2	79.8					0.0	0.0	26.2	79.8	0.0	0.0
								Totals:		13,460.4	35,790.3	0.00	0.00

Load Case: 1.2D + 1.0W — 119 mph with No Ice — 25 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	-35.93	-13.57	0.00	-1,164.13	0.00	1,164.13	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.495
5.00	-34.79	-13.35	0.00	-1,096.29	0.00	1,096.29	2,747.79	699.53	2,539.19	2,272.29	0.10	-0.18	0.495
10.00	-33.68	-13.13	0.00	-1,029.57	0.00	1,029.57	2,679.61	673.42	2,353.20	2,132.56	0.38	-0.36	0.496
15.00	-32.60	-12.93	0.00	-963.90	0.00	963.90	2,608.76	647.31	2,174.28	1,995.03	0.87	-0.56	0.496
20.00	-31.55	-12.74	0.00	-899.23	0.00	899.23	2,535.24	621.20	2,002.44	1,859.96	1.56	-0.76	0.496
25.00	-30.52	-12.57	0.00	-835.51	0.00	835.51	2,459.06	595.09	1,837.67	1,727.58	2.48	-0.98	0.496
30.00	-29.53	-12.40	0.00	-772.68	0.00	772.68	2,380.22	568.98	1,679.97	1,598.16	3.63	-1.21	0.496
35.00	-28.57	-12.23	0.00	-710.70	0.00	710.70	2,298.17	542.87	1,529.34	1,471.58	5.02	-1.45	0.496
40.00	-27.64	-12.08	0.00	-649.54	0.00	649.54	2,187.63	516.76	1,385.79	1,332.77	6.68	-1.70	0.501
43.88	-26.75	-11.99	0.00	-602.73	0.00	602.73	2,101.97	496.53	1,279.40	1,229.91	8.15	-1.92	0.503
45.00	-26.34	-11.90	0.00	-589.24	0.00	589.24	2,077.10	490.65	1,249.31	1,200.82	8.61	-1.98	0.296
48.33	-25.16	-11.76	0.00	-549.58	0.00	549.58	2,003.41	473.25	1,162.26	1,116.68	10.03	-2.09	0.292
50.00	-24.44	-11.66	0.00	-529.98	0.00	529.98	1,966.57	464.54	1,119.91	1,075.76	10.77	-2.15	0.285
52.50	-23.38	-11.53	0.00	-500.82	0.00	500.82	1,292.92	322.51	771.05	703.85	11.92	-2.24	0.353
55.00	-22.58	-11.37	0.00	-472.00	0.00	472.00	1,267.71	313.38	727.98	670.42	13.12	-2.33	0.343
60.00	-21.03	-11.18	0.00	-415.16	0.00	415.16	1,215.29	295.10	645.55	604.90	15.66	-2.53	0.323
62.00	-20.40	-11.07	0.00	-392.80	0.00	392.80	1,193.58	287.79	613.97	579.24	16.74	-2.61	0.314
62.00	-20.40	-11.07	0.00	-392.80	0.00	392.80	1,193.58	287.79	613.97	579.24	16.74	-2.61	0.314
65.00	-19.47	-10.90	0.00	-359.58	0.00	359.58	1,160.21	276.82	568.07	541.39	18.42	-2.74	0.301
70.00	-17.95	-10.67	0.00	-305.07	0.00	305.07	1,094.51	258.55	495.55	476.69	21.40	-2.94	0.277
75.00	-16.46	-10.48	0.00	-251.73	0.00	251.73	1,017.13	240.27	427.97	411.36	24.58	-3.14	0.253
77.00	-13.56	-8.22	0.00	-230.77	0.00	230.77	986.19	232.96	402.33	386.57	25.91	-3.22	0.240
80.00	-12.69	-8.09	0.00	-206.11	0.00	206.11	939.76	221.99	365.35	350.84	27.97	-3.34	0.228
82.00	-12.11	-7.98	0.00	-189.92	0.00	189.92	908.81	214.68	341.68	327.98	29.39	-3.42	0.220
82.00	-12.11	-7.98	0.00	-189.92	0.00	189.92	780.36	184.34	293.89	282.62	29.39	-3.42	0.000
85.00	-11.27	-7.82	0.00	-165.97	0.00	165.97	740.57	174.94	264.69	254.39	31.57	-3.53	0.216
90.00	-9.90	-7.66	0.00	-126.88	0.00	126.88	674.25	159.27	219.41	210.64	35.37	-3.72	0.185
90.13	-9.86	-7.59	0.00	-125.92	0.00	125.92	672.59	158.88	218.34	209.60	35.47	-3.73	0.184
90.13	-9.86	-7.59	0.00	-125.92	0.00	125.92	672.59	158.88	218.34	209.60	35.47	-3.73	0.618
95.00	-9.22	-7.47	0.00	-88.94	0.00	88.94	607.93	143.61	178.38	171.01	39.36	-3.89	0.538
96.90	-8.91	-7.21	0.00	-74.75	0.00	74.75	582.73	137.65	163.90	157.04	40.96	-4.12	0.494
97.00	-4.37	-3.96	0.00	-74.03	0.00	74.03	581.40	137.34	163.16	156.32	41.04	-4.13	0.482
99.00	-4.21	-3.92	0.00	-66.12	0.00	66.12	554.88	131.07	148.61	142.28	42.82	-4.36	0.473
99.00	-4.21	-3.92	0.00	-66.12	0.00	66.12	725.83	171.46	190.75	181.64	42.82	-4.36	0.370
100.00	-4.12	-3.84	0.00	-62.20	0.00	62.20	725.83	171.46	190.75	181.64	43.75	-4.49	0.349
105.00	-3.70	-3.68	0.00	-42.99	0.00	42.99	725.83	171.46	190.75	181.64	48.66	-4.89	0.242
110.00	-3.28	-3.51	0.00	-24.57	0.00	24.57	725.83	171.46	190.75	181.64	53.92	-5.14	0.140
115.00	-2.88	-3.37	0.00	-7.03	0.00	7.03	725.83	171.46	190.75	181.64	59.38	-5.26	0.043
117.00	-0.08	-0.03	0.00	-0.07	0.00	0.07	725.83	171.46	190.75	181.64	61.58	-5.27	0.000
119.00	0.00	-0.03	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	63.79	-5.27	0.000

Load Case: 0.9D + 1.0W — 119 mph with No Ice (Reduced DL) — 25 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
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		168.5	0.0					0.0	0.0	168.5	0.0	0.0	0.0
5.00		330.8	621.7					0.0	202.2	330.8	823.9	0.0	0.0
10.00		318.5	599.0					0.0	202.2	318.5	801.1	0.0	0.0
15.00		306.3	576.2					0.0	202.2	306.3	778.4	0.0	0.0
20.00		294.0	553.4					0.0	202.2	294.0	755.6	0.0	0.0
25.00		281.8	530.6					0.0	202.2	281.8	732.8	0.0	0.0
30.00		272.7	507.8					0.0	202.2	272.7	710.0	0.0	0.0
35.00		268.8	485.1					0.0	202.2	268.8	687.2	0.0	0.0
40.00		236.5	462.3					0.0	202.2	236.5	664.5	0.0	0.0
43.88	Reinf Bottom	132.0	342.6					0.0	310.8	132.0	653.4	0.0	0.0
45.00		116.1	96.9					0.0	200.0	116.1	296.9	0.0	0.0
48.33	Bot - Section 2	130.0	280.3					0.0	592.6	130.0	872.9	0.0	0.0
50.00		107.9	233.7					0.0	296.3	107.9	530.0	0.0	0.0
52.50	Top - Section 1	128.0	342.5					0.0	444.4	128.0	786.9	0.0	0.0
55.00		187.5	138.7					0.0	444.4	187.5	583.1	0.0	0.0
60.00		172.3	265.4					0.0	888.9	172.3	1,154.3	0.0	0.0
62.00	Reinf. Top Reinf	119.4	101.7					0.0	355.6	119.4	457.3	0.0	0.0
65.00		185.4	147.8					0.0	533.3	185.4	681.1	0.0	0.0
70.00		223.1	233.6					0.0	888.9	223.1	1,122.4	0.0	0.0
75.00		150.7	217.6					0.0	888.9	150.7	1,106.5	0.0	0.0
77.00	Appurtenance(s)	102.8	82.6	2,014.7	0.0	0.0	1,817.0	0.0	355.6	2,117.6	2,255.1	0.0	0.0
80.00		100.4	119.1					0.0	529.8	100.4	648.9	0.0	0.0
82.00	Top - Section 2	96.5	76.2					0.0	353.2	96.5	429.4	0.0	0.0
85.00		147.0	94.0					0.0	529.8	147.0	623.9	0.0	0.0
90.00		92.0	145.8					0.0	877.7	92.0	1,023.5	0.0	0.0
90.13	Reinf. Top	82.8	3.5					0.0	21.9	82.8	25.3	0.0	0.0
95.00		110.2	128.7					0.0	336.9	110.2	465.6	0.0	0.0
96.90		31.1	46.6					0.0	71.2	31.1	117.8	0.0	0.0
97.00	Appurtenance(s)	31.4	2.4	2,897.0	0.0	0.0	3,559.8	0.0	3.7	2,928.4	3,565.9	0.0	0.0
99.00	Top - Section 3	44.4	46.8					0.0	64.8	44.4	111.7	0.0	0.0
100.00		87.4	29.9					0.0	32.4	87.4	62.3	0.0	0.0
105.00		146.9	149.6					0.0	162.1	146.9	311.7	0.0	0.0
110.00		148.8	149.6					0.0	162.1	148.8	311.7	0.0	0.0
115.00		105.1	149.6					0.0	162.1	105.1	311.7	0.0	0.0
117.00	Appurtenance(s)	56.4	59.8	3,009.0	0.0	218.7	2,195.1	0.0	64.8	3,065.4	2,319.8	0.0	0.0
119.00		26.2	59.8					0.0	0.0	26.2	59.8	0.0	0.0
								Totals:		13,460.4	26,842.7	0.00	0.00

Load Case: 0.9D + 1.0W — 119 mph with No Ice (Reduced DL) — 25 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	-26.94	-13.55	0.00	-1,144.43	0.00	1,144.43	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.484
5.00	-26.08	-13.30	0.00	-1,076.67	0.00	1,076.67	2,747.79	699.53	2,539.19	2,272.29	0.09	-0.17	0.484
10.00	-25.23	-13.06	0.00	-1,010.16	0.00	1,010.16	2,679.61	673.42	2,353.20	2,132.56	0.37	-0.36	0.483
15.00	-24.41	-12.83	0.00	-944.85	0.00	944.85	2,608.76	647.31	2,174.28	1,995.03	0.85	-0.55	0.483
20.00	-23.62	-12.62	0.00	-880.68	0.00	880.68	2,535.24	621.20	2,002.44	1,859.96	1.53	-0.75	0.483
25.00	-22.84	-12.41	0.00	-817.60	0.00	817.60	2,459.06	595.09	1,837.67	1,727.58	2.43	-0.96	0.483
30.00	-22.09	-12.21	0.00	-755.55	0.00	755.55	2,380.22	568.98	1,679.97	1,598.16	3.56	-1.19	0.483
35.00	-21.36	-12.02	0.00	-694.48	0.00	694.48	2,298.17	542.87	1,529.34	1,471.58	4.93	-1.42	0.482
40.00	-20.65	-11.85	0.00	-634.38	0.00	634.38	2,187.63	516.76	1,385.79	1,332.77	6.55	-1.67	0.486
43.88	-19.97	-11.74	0.00	-588.48	0.00	588.48	2,101.97	496.53	1,279.40	1,229.91	7.99	-1.88	0.489
45.00	-19.66	-11.65	0.00	-575.27	0.00	575.27	2,077.10	490.65	1,249.31	1,200.82	8.44	-1.94	0.287
48.33	-18.78	-11.51	0.00	-536.45	0.00	536.45	2,003.41	473.25	1,162.26	1,116.68	9.83	-2.05	0.283
50.00	-18.24	-11.41	0.00	-517.26	0.00	517.26	1,966.57	464.54	1,119.91	1,075.76	10.56	-2.11	0.277
52.50	-17.44	-11.28	0.00	-488.74	0.00	488.74	1,292.92	322.51	771.05	703.85	11.68	-2.19	0.342
55.00	-16.84	-11.11	0.00	-460.55	0.00	460.55	1,267.71	313.38	727.98	670.42	12.85	-2.28	0.333
60.00	-15.67	-10.93	0.00	-405.01	0.00	405.01	1,215.29	295.10	645.55	604.90	15.34	-2.47	0.313
62.00	-15.19	-10.81	0.00	-383.16	0.00	383.16	1,193.58	287.79	613.97	579.24	16.40	-2.55	0.305
62.00	-15.19	-10.81	0.00	-383.16	0.00	383.16	1,193.58	287.79	613.97	579.24	16.40	-2.55	0.305
65.00	-14.49	-10.64	0.00	-350.71	0.00	350.71	1,160.21	276.82	568.07	541.39	18.04	-2.68	0.291
70.00	-13.35	-10.41	0.00	-297.52	0.00	297.52	1,094.51	258.55	495.55	476.69	20.95	-2.87	0.269
75.00	-12.23	-10.23	0.00	-245.49	0.00	245.49	1,017.13	240.27	427.97	411.36	24.06	-3.07	0.245
77.00	-10.08	-8.01	0.00	-225.03	0.00	225.03	986.19	232.96	402.33	386.57	25.36	-3.14	0.233
80.00	-9.42	-7.89	0.00	-201.01	0.00	201.01	939.76	221.99	365.35	350.84	27.38	-3.26	0.221
82.00	-8.98	-7.78	0.00	-185.24	0.00	185.24	908.81	214.68	341.68	327.98	28.76	-3.34	0.213
82.00	-8.98	-7.78	0.00	-185.24	0.00	185.24	780.36	184.34	293.89	282.62	28.76	-3.34	0.000
85.00	-8.35	-7.62	0.00	-161.89	0.00	161.89	740.57	174.94	264.69	254.39	30.90	-3.45	0.209
90.00	-7.32	-7.48	0.00	-123.79	0.00	123.79	674.25	159.27	219.41	210.64	34.61	-3.64	0.180
90.13	-7.29	-7.40	0.00	-122.86	0.00	122.86	672.59	158.88	218.34	209.60	34.71	-3.64	0.179
90.13	-7.29	-7.40	0.00	-122.86	0.00	122.86	672.59	158.88	218.34	209.60	34.71	-3.64	0.599
95.00	-6.81	-7.29	0.00	-86.77	0.00	86.77	607.93	143.61	178.38	171.01	38.51	-3.80	0.521
96.90	-6.58	-7.03	0.00	-72.92	0.00	72.92	582.73	137.65	163.90	157.04	40.07	-4.02	0.478
97.00	-3.22	-3.87	0.00	-72.22	0.00	72.22	581.40	137.34	163.16	156.32	40.15	-4.04	0.468
99.00	-3.10	-3.82	0.00	-64.49	0.00	64.49	554.88	131.07	148.61	142.28	41.89	-4.26	0.460
99.00	-3.10	-3.82	0.00	-64.49	0.00	64.49	725.83	171.46	190.75	181.64	41.89	-4.26	0.360
100.00	-3.02	-3.75	0.00	-60.66	0.00	60.66	725.83	171.46	190.75	181.64	42.80	-4.38	0.339
105.00	-2.71	-3.59	0.00	-41.93	0.00	41.93	725.83	171.46	190.75	181.64	47.60	-4.77	0.235
110.00	-2.40	-3.42	0.00	-23.98	0.00	23.98	725.83	171.46	190.75	181.64	52.74	-5.02	0.136
115.00	-2.09	-3.29	0.00	-6.87	0.00	6.87	725.83	171.46	190.75	181.64	58.06	-5.14	0.041
117.00	-0.06	-0.03	0.00	-0.06	0.00	0.06	725.83	171.46	190.75	181.64	60.22	-5.15	0.000
119.00	0.00	-0.03	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	62.37	-5.15	0.000

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 1.00 in Radial Ice — 24 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		50.7	0.0					0.0	0.0	50.7	0.0	0.0	0.0
5.00		99.8	1,028.8					0.0	269.6	99.8	1,298.3	0.0	0.0
10.00		96.6	1,013.9					0.0	269.6	96.6	1,283.5	0.0	0.0
15.00		93.2	986.6					0.0	269.6	93.2	1,256.2	0.0	0.0
20.00		89.8	955.0					0.0	269.6	89.8	1,224.6	0.0	0.0
25.00		86.3	921.3					0.0	269.6	86.3	1,190.9	0.0	0.0
30.00		83.8	886.1					0.0	269.6	83.8	1,155.7	0.0	0.0
35.00		82.9	850.0					0.0	269.6	82.9	1,119.6	0.0	0.0
40.00		73.2	813.1					0.0	269.6	73.2	1,082.7	0.0	0.0
43.88	Reinf Bottom	41.0	605.3					0.0	419.8	41.0	1,025.0	0.0	0.0
45.00		36.1	172.1					0.0	269.9	36.1	442.0	0.0	0.0
48.33	Bot - Section 2	40.5	497.1					0.0	799.7	40.5	1,296.9	0.0	0.0
50.00		33.7	373.5					0.0	399.9	33.7	773.4	0.0	0.0
52.50	Top - Section 1	40.0	547.4					0.0	599.9	40.0	1,147.3	0.0	0.0
55.00		58.8	273.7					0.0	599.9	58.8	873.6	0.0	0.0
60.00		54.2	522.7					0.0	1,200.0	54.2	1,722.7	0.0	0.0
62.00	Reinf. Top Reinf	37.7	201.9					0.0	480.0	37.7	682.0	0.0	0.0
65.00		58.8	293.4					0.0	720.1	58.8	1,013.5	0.0	0.0
70.00		71.2	462.8					0.0	1,200.3	71.2	1,663.2	0.0	0.0
75.00		48.3	432.5					0.0	1,200.5	48.3	1,633.0	0.0	0.0
77.00	Appurtenance(s)	33.2	165.7	461.9	0.0	0.0	3,579.0	0.0	480.2	495.0	4,224.9	0.0	0.0
80.00		32.5	238.8					0.0	715.7	32.5	954.5	0.0	0.0
82.00	Top - Section 2	31.4	153.5					0.0	477.2	31.4	630.6	0.0	0.0
85.00		48.2	199.7					0.0	715.8	48.2	915.5	0.0	0.0
90.00		30.3	308.6					0.0	1,185.9	30.3	1,494.5	0.0	0.0
90.13	Reinf. Top	27.6	7.5					0.0	29.5	27.6	37.0	0.0	0.0
95.00		36.8	273.4					0.0	455.1	36.8	728.5	0.0	0.0
96.90		10.5	100.5					0.0	95.0	10.5	195.5	0.0	0.0
97.00	Appurtenance(s)	10.7	5.2	667.8	0.0	0.0	6,736.5	0.0	5.0	678.4	6,746.7	0.0	0.0
99.00	Top - Section 3	15.1	101.1					0.0	86.4	15.1	187.6	0.0	0.0
100.00		29.8	59.0					0.0	43.2	29.8	102.2	0.0	0.0
105.00		50.1	295.4					0.0	216.1	50.1	511.5	0.0	0.0
110.00		50.8	295.9					0.0	216.1	50.8	512.0	0.0	0.0
115.00		35.9	296.3					0.0	216.1	35.9	512.5	0.0	0.0
117.00	Appurtenance(s)	19.9	118.7	669.2	0.0	49.6	4,752.8	0.0	86.4	689.1	4,957.9	0.0	0.0
119.00		9.5	118.7					0.0	0.0	9.5	118.7	0.0	0.0
								Totals:		3,547.74	44,713.9	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 1.00 in Radial Ice 24 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	-44.99	-3.56	0.00	-299.55	0.00	299.55	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.140
5.00	-43.69	-3.50	0.00	-281.74	0.00	281.74	2,747.79	699.53	2,539.19	2,272.29	0.02	-0.05	0.140
10.00	-42.40	-3.44	0.00	-264.25	0.00	264.25	2,679.61	673.42	2,353.20	2,132.56	0.10	-0.09	0.140
15.00	-41.14	-3.38	0.00	-247.07	0.00	247.07	2,608.76	647.31	2,174.28	1,995.03	0.22	-0.14	0.140
20.00	-39.91	-3.32	0.00	-230.18	0.00	230.18	2,535.24	621.20	2,002.44	1,859.96	0.40	-0.20	0.140
25.00	-38.72	-3.27	0.00	-213.57	0.00	213.57	2,459.06	595.09	1,837.67	1,727.58	0.64	-0.25	0.139
30.00	-37.56	-3.22	0.00	-197.23	0.00	197.23	2,380.22	568.98	1,679.97	1,598.16	0.93	-0.31	0.139
35.00	-36.44	-3.17	0.00	-181.14	0.00	181.14	2,298.17	542.87	1,529.34	1,471.58	1.29	-0.37	0.139
40.00	-35.35	-3.13	0.00	-165.29	0.00	165.29	2,187.63	516.76	1,385.79	1,332.77	1.71	-0.44	0.140
43.88	-34.33	-3.10	0.00	-153.18	0.00	153.18	2,101.97	496.53	1,279.40	1,229.91	2.09	-0.49	0.141
45.00	-33.88	-3.07	0.00	-149.70	0.00	149.70	2,077.10	490.65	1,249.31	1,200.82	2.21	-0.51	0.083
48.33	-32.59	-3.03	0.00	-139.46	0.00	139.46	2,003.41	473.25	1,162.26	1,116.68	2.57	-0.53	0.082
50.00	-31.81	-3.00	0.00	-134.41	0.00	134.41	1,966.57	464.54	1,119.91	1,075.76	2.76	-0.55	0.080
52.50	-30.66	-2.96	0.00	-126.92	0.00	126.92	1,292.92	322.51	771.05	703.85	3.05	-0.57	0.099
55.00	-29.79	-2.91	0.00	-119.52	0.00	119.52	1,267.71	313.38	727.98	670.42	3.36	-0.59	0.096
60.00	-28.07	-2.86	0.00	-104.96	0.00	104.96	1,215.29	295.10	645.55	604.90	4.01	-0.64	0.090
62.00	-27.38	-2.82	0.00	-99.25	0.00	99.25	1,193.58	287.79	613.97	579.24	4.28	-0.67	0.088
62.00	-27.38	-2.82	0.00	-99.25	0.00	99.25	1,193.58	287.79	613.97	579.24	4.28	-0.67	0.088
65.00	-26.37	-2.77	0.00	-90.78	0.00	90.78	1,160.21	276.82	568.07	541.39	4.71	-0.70	0.084
70.00	-24.70	-2.70	0.00	-76.92	0.00	76.92	1,094.51	258.55	495.55	476.69	5.47	-0.75	0.078
75.00	-23.07	-2.64	0.00	-63.41	0.00	63.41	1,017.13	240.27	427.97	411.36	6.28	-0.80	0.071
77.00	-18.85	-2.10	0.00	-58.12	0.00	58.12	986.19	232.96	402.33	386.57	6.62	-0.82	0.067
80.00	-17.90	-2.06	0.00	-51.83	0.00	51.83	939.76	221.99	365.35	350.84	7.15	-0.85	0.064
82.00	-17.27	-2.03	0.00	-47.71	0.00	47.71	908.81	214.68	341.68	327.98	7.51	-0.87	0.061
82.00	-17.27	-2.03	0.00	-47.71	0.00	47.71	780.36	184.34	293.89	282.62	7.51	-0.87	0.000
85.00	-16.35	-1.98	0.00	-41.63	0.00	41.63	740.57	174.94	264.69	254.39	8.06	-0.90	0.060
90.00	-14.85	-1.93	0.00	-31.75	0.00	31.75	674.25	159.27	219.41	210.64	9.03	-0.95	0.052
90.13	-14.82	-1.90	0.00	-31.51	0.00	31.51	672.59	158.88	218.34	209.60	9.05	-0.95	0.052
90.13	-14.82	-1.90	0.00	-31.51	0.00	31.51	672.59	158.88	218.34	209.60	9.05	-0.95	0.173
95.00	-14.09	-1.87	0.00	-22.22	0.00	22.22	607.93	143.61	178.38	171.01	10.04	-0.99	0.153
96.90	-13.62	-1.81	0.00	-18.68	0.00	18.68	582.73	137.65	163.90	157.04	10.45	-1.04	0.142
97.00	-6.88	-1.01	0.00	-18.50	0.00	18.50	581.40	137.34	163.16	156.32	10.47	-1.05	0.130
99.00	-6.70	-1.00	0.00	-16.48	0.00	16.48	554.88	131.07	148.61	142.28	10.92	-1.11	0.128
99.00	-6.70	-1.00	0.00	-16.48	0.00	16.48	725.83	171.46	190.75	181.64	10.92	-1.11	0.100
100.00	-6.59	-0.97	0.00	-15.48	0.00	15.48	725.83	171.46	190.75	181.64	11.16	-1.14	0.094
105.00	-6.08	-0.92	0.00	-10.62	0.00	10.62	725.83	171.46	190.75	181.64	12.40	-1.24	0.067
110.00	-5.57	-0.86	0.00	-6.02	0.00	6.02	725.83	171.46	190.75	181.64	13.73	-1.30	0.041
115.00	-5.06	-0.82	0.00	-1.71	0.00	1.71	725.83	171.46	190.75	181.64	15.11	-1.33	0.016
117.00	-0.12	-0.01	0.00	-0.02	0.00	0.02	725.83	171.46	190.75	181.64	15.67	-1.33	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	16.22	-1.33	0.000

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

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

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		38.3	0.0					0.0	0.0	38.3	0.0	0.0	0.0
5.00		75.2	690.8					0.0	224.7	75.2	915.5	0.0	0.0
10.00		72.5	665.5					0.0	224.7	72.5	890.2	0.0	0.0
15.00		69.7	640.2					0.0	224.7	69.7	864.8	0.0	0.0
20.00		66.9	614.9					0.0	224.7	66.9	839.5	0.0	0.0
25.00		64.1	589.6					0.0	224.7	64.1	814.2	0.0	0.0
30.00		62.0	564.3					0.0	224.7	62.0	788.9	0.0	0.0
35.00		61.1	538.9					0.0	224.7	61.1	763.6	0.0	0.0
40.00		53.8	513.6					0.0	224.7	53.8	738.3	0.0	0.0
43.88	Reinf Bottom	30.0	380.7					0.0	345.4	30.0	726.0	0.0	0.0
45.00		26.4	107.7					0.0	222.2	26.4	329.9	0.0	0.0
48.33	Bot - Section 2	29.6	311.5					0.0	658.4	29.6	969.9	0.0	0.0
50.00		24.5	259.7					0.0	329.2	24.5	588.9	0.0	0.0
52.50	Top - Section 1	29.1	380.6					0.0	493.8	29.1	874.4	0.0	0.0
55.00		42.6	154.1					0.0	493.8	42.6	647.9	0.0	0.0
60.00		39.2	294.9					0.0	987.7	39.2	1,282.6	0.0	0.0
62.00	Reinf. Top Reinf	27.2	113.0					0.0	395.1	27.2	508.1	0.0	0.0
65.00		42.2	164.2					0.0	592.6	42.2	756.8	0.0	0.0
70.00		50.8	259.5					0.0	987.7	50.8	1,247.2	0.0	0.0
75.00		34.3	241.8					0.0	987.7	34.3	1,229.4	0.0	0.0
77.00	Appurtenance(s)	23.4	91.8	458.3	0.0	0.0	2,018.9	0.0	395.1	481.7	2,505.7	0.0	0.0
80.00		22.8	132.3					0.0	588.7	22.8	721.0	0.0	0.0
82.00	Top - Section 2	22.0	84.7					0.0	392.5	22.0	477.1	0.0	0.0
85.00		33.4	104.5					0.0	588.7	33.4	693.2	0.0	0.0
90.00		20.9	162.0					0.0	975.2	20.9	1,137.2	0.0	0.0
90.13	Reinf. Top	19.7	3.9					0.0	24.3	19.7	28.1	0.0	0.0
95.00		26.6	143.0					0.0	374.3	26.6	517.3	0.0	0.0
96.90		7.8	51.8					0.0	79.1	7.8	130.9	0.0	0.0
97.00	Appurtenance(s)	8.1	2.7	659.0	0.0	0.0	3,955.3	0.0	4.2	667.1	3,962.1	0.0	0.0
99.00	Top - Section 3	11.5	52.0					0.0	72.0	11.5	124.1	0.0	0.0
100.00		23.0	33.2					0.0	36.0	23.0	69.3	0.0	0.0
105.00		38.6	166.2					0.0	180.1	38.6	346.3	0.0	0.0
110.00		38.9	166.2					0.0	180.1	38.9	346.3	0.0	0.0
115.00		27.4	166.2					0.0	180.1	27.4	346.3	0.0	0.0
117.00	Appurtenance(s)	14.8	66.5	684.4	0.0	49.7	2,439.0	0.0	72.0	699.2	2,577.5	0.0	0.0
119.00		6.9	66.5					0.0	0.0	6.9	66.5	0.0	0.0
								Totals:		3,087.10	29,825.2	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 24 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	-29.96	-3.11	0.00	-264.83	0.00	264.83	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.120
5.00	-29.04	-3.05	0.00	-249.29	0.00	249.29	2,747.79	699.53	2,539.19	2,272.29	0.02	-0.04	0.120
10.00	-28.15	-3.00	0.00	-234.02	0.00	234.02	2,679.61	673.42	2,353.20	2,132.56	0.09	-0.08	0.120
15.00	-27.28	-2.95	0.00	-219.01	0.00	219.01	2,608.76	647.31	2,174.28	1,995.03	0.20	-0.13	0.120
20.00	-26.44	-2.91	0.00	-204.24	0.00	204.24	2,535.24	621.20	2,002.44	1,859.96	0.35	-0.17	0.120
25.00	-25.62	-2.86	0.00	-189.71	0.00	189.71	2,459.06	595.09	1,837.67	1,727.58	0.56	-0.22	0.120
30.00	-24.83	-2.82	0.00	-175.41	0.00	175.41	2,380.22	568.98	1,679.97	1,598.16	0.82	-0.27	0.120
35.00	-24.06	-2.78	0.00	-161.31	0.00	161.31	2,298.17	542.87	1,529.34	1,471.58	1.14	-0.33	0.120
40.00	-23.32	-2.74	0.00	-147.43	0.00	147.43	2,187.63	516.76	1,385.79	1,332.77	1.52	-0.39	0.121
43.88	-22.60	-2.72	0.00	-136.81	0.00	136.81	2,101.97	496.53	1,279.40	1,229.91	1.85	-0.43	0.122
45.00	-22.27	-2.70	0.00	-133.75	0.00	133.75	2,077.10	490.65	1,249.31	1,200.82	1.96	-0.45	0.072
48.33	-21.29	-2.67	0.00	-124.76	0.00	124.76	2,003.41	473.25	1,162.26	1,116.68	2.28	-0.48	0.071
50.00	-20.71	-2.64	0.00	-120.32	0.00	120.32	1,966.57	464.54	1,119.91	1,075.76	2.45	-0.49	0.069
52.50	-19.83	-2.61	0.00	-113.71	0.00	113.71	1,292.92	322.51	771.05	703.85	2.71	-0.51	0.086
55.00	-19.18	-2.58	0.00	-107.18	0.00	107.18	1,267.71	313.38	727.98	670.42	2.98	-0.53	0.083
60.00	-17.90	-2.53	0.00	-94.30	0.00	94.30	1,215.29	295.10	645.55	604.90	3.56	-0.57	0.078
62.00	-17.39	-2.51	0.00	-89.23	0.00	89.23	1,193.58	287.79	613.97	579.24	3.80	-0.59	0.076
62.00	-17.39	-2.51	0.00	-89.23	0.00	89.23	1,193.58	287.79	613.97	579.24	3.80	-0.59	0.076
65.00	-16.63	-2.47	0.00	-81.71	0.00	81.71	1,160.21	276.82	568.07	541.39	4.19	-0.62	0.073
70.00	-15.38	-2.42	0.00	-69.36	0.00	69.36	1,094.51	258.55	495.55	476.69	4.86	-0.67	0.067
75.00	-14.15	-2.38	0.00	-57.27	0.00	57.27	1,017.13	240.27	427.97	411.36	5.59	-0.71	0.062
77.00	-11.65	-1.87	0.00	-52.52	0.00	52.52	986.19	232.96	402.33	386.57	5.89	-0.73	0.058
80.00	-10.93	-1.84	0.00	-46.92	0.00	46.92	939.76	221.99	365.35	350.84	6.36	-0.76	0.055
82.00	-10.45	-1.82	0.00	-43.24	0.00	43.24	908.81	214.68	341.68	327.98	6.68	-0.78	0.053
82.00	-10.45	-1.82	0.00	-43.24	0.00	43.24	780.36	184.34	293.89	282.62	6.68	-0.78	0.000
85.00	-9.76	-1.78	0.00	-37.79	0.00	37.79	740.57	174.94	264.69	254.39	7.17	-0.80	0.052
90.00	-8.62	-1.74	0.00	-28.90	0.00	28.90	674.25	159.27	219.41	210.64	8.04	-0.85	0.045
90.13	-8.59	-1.73	0.00	-28.69	0.00	28.69	672.59	158.88	218.34	209.60	8.06	-0.85	0.045
90.13	-8.59	-1.73	0.00	-28.69	0.00	28.69	672.59	158.88	218.34	209.60	8.06	-0.85	0.150
95.00	-8.08	-1.70	0.00	-20.27	0.00	20.27	607.93	143.61	178.38	171.01	8.95	-0.88	0.132
96.90	-7.81	-1.64	0.00	-17.04	0.00	17.04	582.73	137.65	163.90	157.04	9.31	-0.94	0.122
97.00	-3.86	-0.91	0.00	-16.88	0.00	16.88	581.40	137.34	163.16	156.32	9.33	-0.94	0.115
99.00	-3.74	-0.90	0.00	-15.05	0.00	15.05	554.88	131.07	148.61	142.28	9.73	-0.99	0.113
99.00	-3.74	-0.90	0.00	-15.05	0.00	15.05	725.83	171.46	190.75	181.64	9.73	-0.99	0.088
100.00	-3.67	-0.88	0.00	-14.15	0.00	14.15	725.83	171.46	190.75	181.64	9.94	-1.02	0.083
105.00	-3.32	-0.84	0.00	-9.76	0.00	9.76	725.83	171.46	190.75	181.64	11.06	-1.11	0.058
110.00	-2.97	-0.80	0.00	-5.56	0.00	5.56	725.83	171.46	190.75	181.64	12.26	-1.17	0.035
115.00	-2.63	-0.76	0.00	-1.59	0.00	1.59	725.83	171.46	190.75	181.64	13.50	-1.20	0.012
117.00	-0.07	-0.01	0.00	-0.02	0.00	0.02	725.83	171.46	190.75	181.64	14.00	-1.20	0.000
119.00	0.00	-0.01	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	14.50	-1.20	0.000

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_S):	0.21
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}):	0.22
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	2.41
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.96
Total Unfactored Dead Load:	29.96 k
Seismic Base Shear (E):	0.90 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)
35	118.00	66	753	0.006	5	83
34	116.00	139	1,518	0.011	10	172
33	112.50	346	3,574	0.026	24	431
32	107.50	346	3,270	0.024	22	431
31	102.50	346	2,979	0.022	20	431
30	99.50	69	562	0.004	4	86
29	98.00	124	977	0.007	6	154
28	96.95	7	53	0.000	0	8
27	95.95	131	990	0.007	7	163
26	92.56	517	3,644	0.027	24	644
25	90.06	28	188	0.001	1	35
24	87.50	1,137	7,177	0.053	48	1,415
23	83.50	693	3,992	0.029	26	862
22	81.00	477	2,589	0.019	17	594
21	78.50	721	3,680	0.027	24	897
20	76.00	487	2,332	0.017	15	606
19	72.50	1,229	5,370	0.040	36	1,530
18	67.50	1,247	4,737	0.035	31	1,552
17	63.50	757	2,550	0.019	17	942
16	61.00	508	1,583	0.012	10	632
15	57.50	1,283	3,559	0.026	24	1,596
14	53.75	648	1,576	0.012	10	806
13	51.25	874	1,937	0.014	13	1,088
12	49.17	589	1,203	0.009	8	733
11	46.67	970	1,789	0.013	12	1,207

10	44.44	330	553	0.004	4	410
9	41.94	726	1,087	0.008	7	903
8	37.50	738	888	0.007	6	919
7	32.50	764	694	0.005	5	950
6	27.50	789	517	0.004	3	982
5	22.50	814	360	0.003	2	1,013
4	17.50	840	227	0.002	2	1,045
3	12.50	865	121	0.001	1	1,076
2	7.50	890	46	0.000	0	1,108
1	2.50	915	5	0.000	0	1,139
Commscope WCS-IMFQ-A	117.00	30	329	0.002	2	37
Raycap DC6-48-60-18-	117.00	33	365	0.003	2	41
Ericsson RRUS 4426 B	117.00	145	1,618	0.012	11	181
Ericsson RRUS 4478 B	117.00	180	2,002	0.015	13	224
Ericsson RRUS 4449 B	117.00	213	2,373	0.017	16	265
Ericsson RRUS 32 B2	117.00	159	1,772	0.013	12	198
Ericsson RRUS-32 B30	117.00	231	2,574	0.019	17	287
Raycap DC9-48-60-24-	117.00	16	178	0.001	1	20
Generic Round T-Arm	117.00	938	10,446	0.077	69	1,166
CCI TPA65R-BU6D	117.00	203	2,256	0.017	15	252
Kathrein Scala 80010	117.00	293	3,263	0.024	22	364
Ericsson Radio 4449	97.00	225	1,737	0.013	12	280
Ericsson RRUS 4415 B	97.00	138	1,066	0.008	7	172
Ericsson Air6449 B41	97.00	312	2,409	0.018	16	388
Ericsson AIR32 B66Aa	97.00	397	3,062	0.023	20	493
RFS APXVAARR24_43-U-	97.00	384	2,963	0.022	20	477
Generic Round Platfo	97.00	2,500	19,303	0.142	128	3,110
Ericsson RRUS 01 B2	96.90	132	1,017	0.007	7	164
Samsung B2/B66A RRH-	77.00	253	1,244	0.009	8	315
Samsung B5/B13 RRH-B	77.00	211	1,036	0.008	7	262
RFS DB-C1-12C-24AB-0	77.00	32	157	0.001	1	40
Samsung MT6407-77A	77.00	245	1,203	0.009	8	305
Quintel QS6656-5D	77.00	528	2,595	0.019	17	657
Round T-Arm	77.00	750	3,686	0.027	24	933
		29,957	135,735	1.000	899	37,272

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)
35	118.00	66	753	0.006	5	57
34	116.00	139	1,518	0.011	10	119
33	112.50	346	3,574	0.026	24	296
32	107.50	346	3,270	0.024	22	296
31	102.50	346	2,979	0.022	20	296
30	99.50	69	562	0.004	4	59
29	98.00	124	977	0.007	6	106
28	96.95	7	53	0.000	0	6
27	95.95	131	990	0.007	7	112
26	92.56	517	3,644	0.027	24	443
25	90.06	28	188	0.001	1	24
24	87.50	1,137	7,177	0.053	48	973
23	83.50	693	3,992	0.029	26	593
22	81.00	477	2,589	0.019	17	408
21	78.50	721	3,680	0.027	24	617
20	76.00	487	2,332	0.017	15	417
19	72.50	1,229	5,370	0.040	36	1,052
18	67.50	1,247	4,737	0.035	31	1,067
17	63.50	757	2,550	0.019	17	648
16	61.00	508	1,583	0.012	10	435
15	57.50	1,283	3,559	0.026	24	1,098

14	53.75	648	1,576	0.012	10	555
13	51.25	874	1,937	0.014	13	748
12	49.17	589	1,203	0.009	8	504
11	46.67	970	1,789	0.013	12	830
10	44.44	330	553	0.004	4	282
9	41.94	726	1,087	0.008	7	621
8	37.50	738	888	0.007	6	632
7	32.50	764	694	0.005	5	654
6	27.50	789	517	0.004	3	675
5	22.50	814	360	0.003	2	697
4	17.50	840	227	0.002	2	719
3	12.50	865	121	0.001	1	740
2	7.50	890	46	0.000	0	762
1	2.50	915	5	0.000	0	783
Commscope WCS-IMFQ-A	117.00	30	329	0.002	2	25
Raycap DC6-48-60-18-	117.00	33	365	0.003	2	28
Ericsson RRUS 4426 B	117.00	145	1,618	0.012	11	124
Ericsson RRUS 4478 B	117.00	180	2,002	0.015	13	154
Ericsson RRUS 4449 B	117.00	213	2,373	0.017	16	182
Ericsson RRUS 32 B2	117.00	159	1,772	0.013	12	136
Ericsson RRUS-32 B30	117.00	231	2,574	0.019	17	198
Raycap DC9-48-60-24-	117.00	16	178	0.001	1	14
Generic Round T-Arm	117.00	938	10,446	0.077	69	802
CCI TPA65R-BU6D	117.00	203	2,256	0.017	15	173
Kathrein Scala 80010	117.00	293	3,263	0.024	22	251
Ericsson Radio 4449	97.00	225	1,737	0.013	12	193
Ericsson RRUS 4415 B	97.00	138	1,066	0.008	7	118
Ericsson Air6449 B41	97.00	312	2,409	0.018	16	267
Ericsson AIR32 B66Aa	97.00	397	3,062	0.023	20	339
RFS APXVAARR24_43-U-	97.00	384	2,963	0.022	20	328
Generic Round Platfo	97.00	2,500	19,303	0.142	128	2,140
Ericsson RRUS 01 B2	96.90	132	1,017	0.007	7	113
Samsung B2/B66A RRH-	77.00	253	1,244	0.009	8	217
Samsung B5/B13 RRH-B	77.00	211	1,036	0.008	7	180
RFS DB-C1-12C-24AB-0	77.00	32	157	0.001	1	27
Samsung MT6407-77A	77.00	245	1,203	0.009	8	210
Quintel QS6656-5D	77.00	528	2,595	0.019	17	452
Round T-Arm	77.00	750	3,686	0.027	24	642
		29,957	135,735	1.000	899	25,639

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	-36.13	-0.90	0.00	-85.40	0.00	85.40	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.048
5.00	-35.02	-0.91	0.00	-80.89	0.00	80.89	2,747.79	699.53	2,539.19	2,272.29	0.01	-0.01	0.048
10.00	-33.95	-0.92	0.00	-76.34	0.00	76.34	2,679.61	673.42	2,353.20	2,132.56	0.03	-0.03	0.048
15.00	-32.90	-0.92	0.00	-71.75	0.00	71.75	2,608.76	647.31	2,174.28	1,995.03	0.06	-0.04	0.049
20.00	-31.89	-0.93	0.00	-67.13	0.00	67.13	2,535.24	621.20	2,002.44	1,859.96	0.12	-0.06	0.049
25.00	-30.91	-0.93	0.00	-62.49	0.00	62.49	2,459.06	595.09	1,837.67	1,727.58	0.18	-0.07	0.049
30.00	-29.96	-0.94	0.00	-57.82	0.00	57.82	2,380.22	568.98	1,679.97	1,598.16	0.27	-0.09	0.049
35.00	-29.04	-0.94	0.00	-53.14	0.00	53.14	2,298.17	542.87	1,529.34	1,471.58	0.37	-0.11	0.049
40.00	-28.14	-0.94	0.00	-48.44	0.00	48.44	2,187.63	516.76	1,385.79	1,332.77	0.50	-0.13	0.049
43.88	-27.73	-0.94	0.00	-44.81	0.00	44.81	2,101.97	496.53	1,279.40	1,229.91	0.61	-0.14	0.050
45.00	-26.52	-0.93	0.00	-43.75	0.00	43.75	2,077.10	490.65	1,249.31	1,200.82	0.64	-0.15	0.029
48.33	-25.79	-0.92	0.00	-40.66	0.00	40.66	2,003.41	473.25	1,162.26	1,116.68	0.75	-0.16	0.029
50.00	-24.70	-0.91	0.00	-39.13	0.00	39.13	1,966.57	464.54	1,119.91	1,075.76	0.80	-0.16	0.028
52.50	-23.89	-0.90	0.00	-36.86	0.00	36.86	1,292.92	322.51	771.05	703.85	0.89	-0.17	0.035
55.00	-22.30	-0.87	0.00	-34.62	0.00	34.62	1,267.71	313.38	727.98	670.42	0.98	-0.17	0.033
60.00	-21.66	-0.86	0.00	-30.26	0.00	30.26	1,215.29	295.10	645.55	604.90	1.16	-0.19	0.031
62.00	-20.72	-0.85	0.00	-28.54	0.00	28.54	1,193.58	287.79	613.97	579.24	1.24	-0.19	0.030
62.00	-20.72	-0.85	0.00	-28.54	0.00	28.54	1,193.58	287.79	613.97	579.24	1.24	-0.19	0.030
65.00	-19.17	-0.81	0.00	-26.00	0.00	26.00	1,160.21	276.82	568.07	541.39	1.37	-0.20	0.029
70.00	-17.64	-0.78	0.00	-21.93	0.00	21.93	1,094.51	258.55	495.55	476.69	1.59	-0.22	0.027
75.00	-17.03	-0.76	0.00	-18.05	0.00	18.05	1,017.13	240.27	427.97	411.36	1.83	-0.23	0.025
77.00	-13.63	-0.66	0.00	-16.52	0.00	16.52	986.19	232.96	402.33	386.57	1.92	-0.24	0.023
80.00	-13.03	-0.64	0.00	-14.55	0.00	14.55	939.76	221.99	365.35	350.84	2.08	-0.25	0.021
82.00	-12.17	-0.61	0.00	-13.26	0.00	13.26	908.81	214.68	341.68	327.98	2.18	-0.25	0.020
82.00	-12.17	-0.61	0.00	-13.26	0.00	13.26	780.36	184.34	293.89	282.62	2.18	-0.25	0.000
85.00	-10.76	-0.56	0.00	-11.42	0.00	11.42	740.57	174.94	264.69	254.39	2.34	-0.26	0.020
90.00	-10.72	-0.56	0.00	-8.62	0.00	8.62	674.25	159.27	219.41	210.64	2.62	-0.27	0.017
90.13	-10.08	-0.53	0.00	-8.55	0.00	8.55	672.59	158.88	218.34	209.60	2.63	-0.27	0.017
90.13	-10.08	-0.53	0.00	-8.55	0.00	8.55	672.59	158.88	218.34	209.60	2.63	-0.27	0.056
95.00	-9.91	-0.53	0.00	-5.94	0.00	5.94	607.93	143.61	178.38	171.01	2.91	-0.28	0.051
96.90	-9.74	-0.52	0.00	-4.94	0.00	4.94	582.73	137.65	163.90	157.04	3.03	-0.30	0.048
97.00	-4.67	-0.29	0.00	-4.88	0.00	4.88	581.40	137.34	163.16	156.32	3.03	-0.30	0.039
99.00	-4.58	-0.29	0.00	-4.31	0.00	4.31	554.88	131.07	148.61	142.28	3.16	-0.32	0.039
99.00	-4.58	-0.29	0.00	-4.31	0.00	4.31	725.83	171.46	190.75	181.64	3.16	-0.32	0.030
100.00	-4.15	-0.26	0.00	-4.02	0.00	4.02	725.83	171.46	190.75	181.64	3.23	-0.32	0.028
105.00	-3.72	-0.24	0.00	-2.70	0.00	2.70	725.83	171.46	190.75	181.64	3.58	-0.35	0.020
110.00	-3.29	-0.22	0.00	-1.49	0.00	1.49	725.83	171.46	190.75	181.64	3.96	-0.36	0.013
115.00	-3.12	-0.21	0.00	-0.41	0.00	0.41	725.83	171.46	190.75	181.64	4.34	-0.37	0.007
117.00	0.00	0.00	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	4.50	-0.37	0.000
119.00	0.00	0.00	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	4.66	-0.37	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	-24.85	-0.90	0.00	-83.63	0.00	83.63	2,813.31	725.65	2,732.26	2,413.98	0.00	0.00	0.043
5.00	-24.09	-0.91	0.00	-79.13	0.00	79.13	2,747.79	699.53	2,539.19	2,272.29	0.01	-0.01	0.044
10.00	-23.35	-0.91	0.00	-74.60	0.00	74.60	2,679.61	673.42	2,353.20	2,132.56	0.03	-0.03	0.044
15.00	-22.63	-0.91	0.00	-70.04	0.00	70.04	2,608.76	647.31	2,174.28	1,995.03	0.06	-0.04	0.044
20.00	-21.94	-0.92	0.00	-65.47	0.00	65.47	2,535.24	621.20	2,002.44	1,859.96	0.11	-0.06	0.044
25.00	-21.26	-0.92	0.00	-60.89	0.00	60.89	2,459.06	595.09	1,837.67	1,727.58	0.18	-0.07	0.044
30.00	-20.61	-0.92	0.00	-56.29	0.00	56.29	2,380.22	568.98	1,679.97	1,598.16	0.26	-0.09	0.044
35.00	-19.98	-0.92	0.00	-51.69	0.00	51.69	2,298.17	542.87	1,529.34	1,471.58	0.36	-0.11	0.044
40.00	-19.35	-0.92	0.00	-47.09	0.00	47.09	2,187.63	516.76	1,385.79	1,332.77	0.48	-0.12	0.044
43.88	-19.07	-0.92	0.00	-43.54	0.00	43.54	2,101.97	496.53	1,279.40	1,229.91	0.59	-0.14	0.044
45.00	-18.24	-0.90	0.00	-42.51	0.00	42.51	2,077.10	490.65	1,249.31	1,200.82	0.62	-0.14	0.026
48.33	-17.74	-0.90	0.00	-39.50	0.00	39.50	2,003.41	473.25	1,162.26	1,116.68	0.73	-0.15	0.026
50.00	-16.99	-0.88	0.00	-38.01	0.00	38.01	1,966.57	464.54	1,119.91	1,075.76	0.78	-0.16	0.025
52.50	-16.43	-0.87	0.00	-35.80	0.00	35.80	1,292.92	322.51	771.05	703.85	0.86	-0.16	0.031
55.00	-15.34	-0.85	0.00	-33.62	0.00	33.62	1,267.71	313.38	727.98	670.42	0.95	-0.17	0.030
60.00	-14.90	-0.84	0.00	-29.37	0.00	29.37	1,215.29	295.10	645.55	604.90	1.14	-0.18	0.028
62.00	-14.25	-0.82	0.00	-27.69	0.00	27.69	1,193.58	287.79	613.97	579.24	1.21	-0.19	0.027
62.00	-14.25	-0.82	0.00	-27.69	0.00	27.69	1,193.58	287.79	613.97	579.24	1.21	-0.19	0.027
65.00	-13.19	-0.79	0.00	-25.23	0.00	25.23	1,160.21	276.82	568.07	541.39	1.34	-0.20	0.026
70.00	-12.13	-0.75	0.00	-21.27	0.00	21.27	1,094.51	258.55	495.55	476.69	1.55	-0.21	0.024
75.00	-11.72	-0.74	0.00	-17.50	0.00	17.50	1,017.13	240.27	427.97	411.36	1.78	-0.23	0.022
77.00	-9.37	-0.64	0.00	-16.03	0.00	16.03	986.19	232.96	402.33	386.57	1.87	-0.23	0.020
80.00	-8.96	-0.62	0.00	-14.11	0.00	14.11	939.76	221.99	365.35	350.84	2.02	-0.24	0.019
82.00	-8.37	-0.59	0.00	-12.86	0.00	12.86	908.81	214.68	341.68	327.98	2.12	-0.24	0.018
82.00	-8.37	-0.59	0.00	-12.86	0.00	12.86	780.36	184.34	293.89	282.62	2.12	-0.24	0.000
85.00	-7.40	-0.54	0.00	-11.07	0.00	11.07	740.57	174.94	264.69	254.39	2.28	-0.25	0.017
90.00	-7.37	-0.54	0.00	-8.35	0.00	8.35	674.25	159.27	219.41	210.64	2.55	-0.26	0.015
90.13	-6.93	-0.52	0.00	-8.28	0.00	8.28	672.59	158.88	218.34	209.60	2.56	-0.27	0.015
90.13	-6.93	-0.52	0.00	-8.28	0.00	8.28	672.59	158.88	218.34	209.60	2.56	-0.27	0.050
95.00	-6.82	-0.51	0.00	-5.76	0.00	5.76	607.93	143.61	178.38	171.01	2.84	-0.28	0.045
96.90	-6.70	-0.51	0.00	-4.78	0.00	4.78	582.73	137.65	163.90	157.04	2.95	-0.29	0.042
97.00	-3.21	-0.28	0.00	-4.73	0.00	4.73	581.40	137.34	163.16	156.32	2.95	-0.29	0.036
99.00	-3.15	-0.28	0.00	-4.17	0.00	4.17	554.88	131.07	148.61	142.28	3.08	-0.31	0.035
99.00	-3.15	-0.28	0.00	-4.17	0.00	4.17	725.83	171.46	190.75	181.64	3.08	-0.31	0.027
100.00	-2.85	-0.26	0.00	-3.89	0.00	3.89	725.83	171.46	190.75	181.64	3.15	-0.31	0.025
105.00	-2.56	-0.23	0.00	-2.61	0.00	2.61	725.83	171.46	190.75	181.64	3.49	-0.34	0.018
110.00	-2.26	-0.21	0.00	-1.44	0.00	1.44	725.83	171.46	190.75	181.64	3.85	-0.35	0.011
115.00	-2.14	-0.20	0.00	-0.40	0.00	0.40	725.83	171.46	190.75	181.64	4.23	-0.36	0.005
117.00	0.00	0.00	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	4.38	-0.36	0.000
119.00	0.00	0.00	0.00	0.00	0.00	0.00	725.83	171.46	190.75	181.64	4.53	-0.36	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	13.57	0.00	35.93	0.00	0.00	1164.13	90.13	0.62
0.9D + 1.0W	13.55	0.00	26.94	0.00	0.00	1144.43	90.13	0.60
1.2D + 1.0Di + 1.0Wi	3.56	0.00	44.99	0.00	0.00	299.55	90.13	0.17
1.2D + 1.0Ev + 1.0Eh	0.90	0.00	36.13	0.00	0.00	85.40	90.13	0.06
0.9D - 1.0Ev + 1.0Eh	0.90	0.00	24.85	0.00	0.00	83.63	90.13	0.05
1.0D + 1.0W	3.11	0.00	29.96	0.00	0.00	264.83	90.13	0.15

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors VQ/I (lb/in)	Intermediate Connectors Shear Applied (kips)	Intermediate Connectors Shear phiVn (kips)	Intermediate Connectors Ratio	Max Member Pu (kip)	Max Member phiPn (kip)	Max Member Ratio
43.88	62.00	(3) PL-PL 6" x 1"	320.9	7.7	25.3	0.305	149.0	300.9	0.495
62.00	82.00	(3) PL-PL 6" x 1"	390.2	9.4	25.3	0.371	140.1	300.9	0.466
82.00	90.13	(3) PL-PL 6" x 1"	418.4	10.0	25.3	0.397	101.0	300.9	0.336

Elev From (ft)	Elev To (ft)	Member	Upper Termination Connectors MQ/I (kips)	Upper Termination Connectors phiVn (kips)	Upper Termination Connectors Num Reqd	Upper Termination Connectors Num Actual	Upper Termination Connectors Ratio	Lower Termination Connectors MQ/I (kips)	Lower Termination Connectors phiVn (kips)	Lower Termination Connectors Num Reqd	Lower Termination Connectors Num Actual	Lower Termination Connectors Ratio
43.88	62.00	(3) PL-PL 6" x 1"	0.0	25.3	0	0	0.000	131.1	25.3	6	8	0.648
62.00	82.00	(3) PL-PL 6" x 1"	0.0	25.3	0	0	0.000	0.0	25.3	0	0	0.000
82.00	90.13	(3) PL-PL 6" x 1"	82.8	25.3	4	8	0.410	0.0	25.3	0	0	0.000

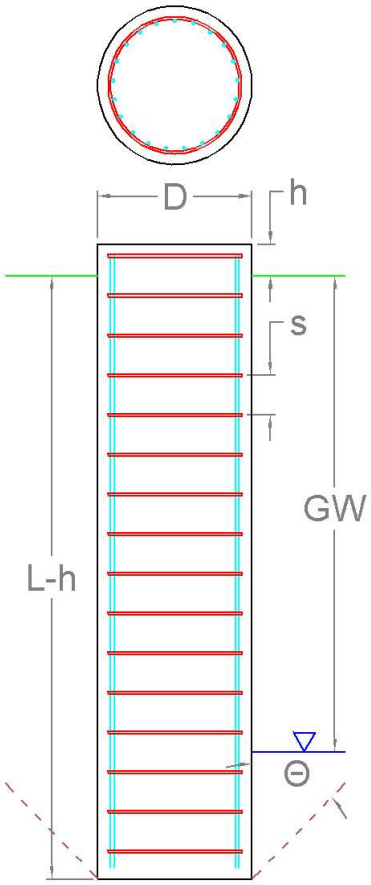
Pier Foundation Analysis (ANSI/TIA-222-H)

Foundation Analysis Parameters			
Pier Diameter	*D*	6.50	ft
Pier Embedment	*L-h*	31.0	ft
Pier Height above Ground	*H*	0.50	ft
Water Table Depth [BGL]	*GW*	7	ft
Pullout Angle	Θ	30	°
Unit Weight of Concrete		150	pcf
Uplift Skin Friction Factor		0.860	

Reactions		
Moment, M_u	1,164.1	k-ft
Shear, V_u	13.6	k
Axial, P_u	35.9	k
Uplift, T_u	0.0	k

Soil Properties

Layer Depth (ft)		Unit Weight	Cohesion	Friction Angle	Ultimate Skin Friction	Ultimate Bearing Pressure
TOP	BTM	pcf	psf	°	psf	psf
0.0	4.0	105	0	0	0	0
4.0	7.0	123	0	32	691	0
7.0	10.0	127	0	37	1,051	0
10.0	15.0	122	0	34	1,258	0
15.0	20.0	121	0	33	1,420	0
20.0	25.0	118	0	32	1,544	0
25.0	30.0	114	0	30	1,149	0
30.0	35.0	127	0	34	1,706	44,220



Soil Strength Capacities		
Volume of Concrete	1,045.3	ft^3
Weight of Concrete [Buoyancy Considered]	107.1	k
Average Soil Unit Weight	70.1	pcf
Skin Friction Resistance	689.9	k
Compressive Bearing Resistance	1,467.4	k
Pullout Weight [Minus Concrete Weight]	1,126.8	k
Compressive Force, P_u	74.9	k
Nominal Compressive Capacity, $\phi_s P_n$	1,618.0	k
$P_u / \phi_s P_n$	4.6%	
Total Lateral Resistance	2,110.2	k
Inflection Point [BGL]	20.3	ft
Moment at Inflection Point, M_D	1,446.9	k-ft
Nominal Moment Capacity, $\phi_s M_n$	10,024.0	k-ft
$M_D / \phi_s M_n$	14.4%	

Pier Strength Capacities			
Concrete Compressive Strength, f'_c		4,000	psi
Rebar Size #		9	
Rebar Area (Single)		1.00	in^2
Rebar Quantity		24	
Rebar Yield Strength, F_y		60	ksi
Vertical Rebar Clear Cover		3	in
Tie Rebar Size #		4	
Tie Rebar Area (Single)		0.20	in^2
Tie Rebar Spacing	*s*	12.0	in
Tie Rebar Yield Strength, F_y		60	ksi
Rebar Cage Diameter		69.87	in
Strength Bending/Tension Reduction Factor, ϕ_B		0.90	
Strength Shear Reduction Factor, ϕ_V		0.75	
Strength Compression Reduction Factor, ϕ_C		0.65	
Steel Elastic Modulus		29,000	ksi
Design Moment, M_u		1,171.5	k-ft
Moment Capacity, $\phi_B M_n$		3,695.1	k-ft
$M_u / \phi_B M_n$		31.7%	
Design Shear, V_u		92.2	k
Shear Capacity, $\phi_V V_n$		548.6	k
$V_u / \phi_V V_n$		16.8%	
Design Compression, P_u		74.9	k
Compression Capacity, $\phi_P P_n$		9,154.5	k
$P_u / \phi_P P_n$		0.8%	
Bending Reinforcement Ratio		0.005	

Base Plate & Anchor Rod Analysis

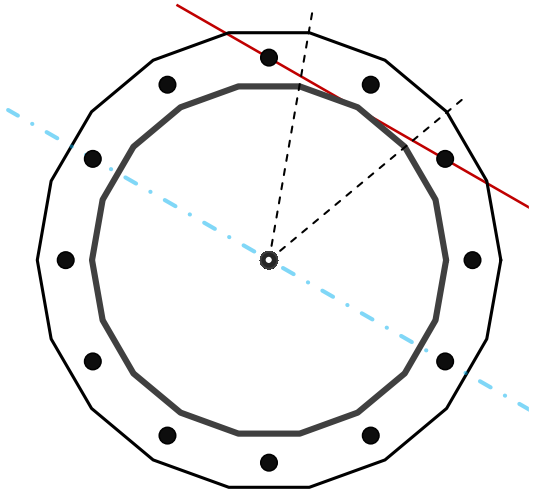
Pole Dimensions		
Number of Sides	18	-
Diameter	42	in
Thickness	5/16	in
Orientation Offset		°

Base Reactions		
Moment, Mu	1,164.1	k-ft
Axial, Pu	35.9	k
Shear, Vu	13.6	k
Neutral Axis	330	°

Report Capacities		
Component	Capacity	Result
Base Plate	26%	Pass
Anchor Rods	43%	Pass
Dwyidag	-	-

Base Plate		
Number of Sides	18	-
Diameter, ø	55.15	in
Thickness	2	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 1/2	in
Applied Moment, Mu	238.2	k
Bending Stress, ϕMn	901.1	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	12	-
Diameter, ø	2 1/4	in
Bolt Circle	49.15	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	12.9	in
Orientation Offset		°
Applied Force, Pu	102.5	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	13.6	1164.1	1.00
Anchor Rod Forces	13.6	1164.1	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	40.7191	2.2622	0.0739		8846.79
Bolt	3.9761	3.2477	0.8393	4.5	10668.51
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	18	-
Width, W	55.15	in
Thickness, t	2	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	35.742	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3.5	-

Anchor Rods		
Anchor Rod Quantity, N	12	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	49.15	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	102.5	k
Applied Shear, Vu	0.9	k
Compressive Capacity, ϕPn	243.6	k
Tensile Capacity, ϕRnt	0.421	OK
Interaction Capacity	0.428	OK

External Base Plate		
Chord Length AA	35.869	in
Additional AA	4.000	in
Section Modulus, Z	39.869	in^3
Applied Moment, Mu	238.2	k-ft
Bending Capacity, ϕMn	1794.1	k-ft
Capacity, Mu/ϕMn	0.133	OK
Chord Length AB	35.219	in
Additional AB	4.000	in
Section Modulus, Z	39.219	in^3
Applied Moment, Mu	204.9	k-ft
Bending Capacity, ϕMn	1764.9	k-ft
Capacity, Mu/ϕMn	0.116	OK
Bend Line Length	20.024	in
Additional Bend Line	0.000	in
Section Modulus, Z	20.024	in^3
Applied Moment, Mu	238.2	k-ft
Bending Capacity, ϕMn	901.1	k-ft
Capacity, Mu/ϕMn	0.264	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		

Code Rev.	H	Date	7/13/2021
		Engineer	Claire Collett
		Site #	283420
Moment	189.9 k-ft	Carrier	VERIZON WIRELESS
Axial	12.1 k		

Base/Flange Plate	Plate Type	*Flange*	*@ 82.0 ft*
	Pole Diameter	17.8375	in
	Pole Thickness	0.1875	in
	Plate Diameter	24.2	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.1875	in
	ϕ_s Resistance	6527.34	k-in
	Applied	-13.34	k-in
Stiffeners	#	*6*	*Show*
	Thickness	1	in
	Length	8	in
	Height	12	in
	Chamfer	0	in
	Offset Angle	30	°
	Fy	65	ksi

Bolts	#	*3*	
	Bolt Circle	21.7	in
	(R)adial / (S)quare	R	
	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	4.04	k
Bypass	#	*6*	
	DYW. Circle	28.25	in
	Offset Angle		°
	Type	Other	
	Diameter	2.2567	in
	Fu	50	ksi
	ϕ_s Resistance	159.99	k
	Applied	43.11	k
Flat Plate O	#	*3*	
	Bolt Circle	19	in
	(R)adial / (S)quare	R	
	Offset Angle		°
	Diameter	2.76395	in
	Type	Other	
	Fy	50	ksi
	Fu	65	ksi
	ϕ_s Resistance	243.22	k
	Applied	24.74	k

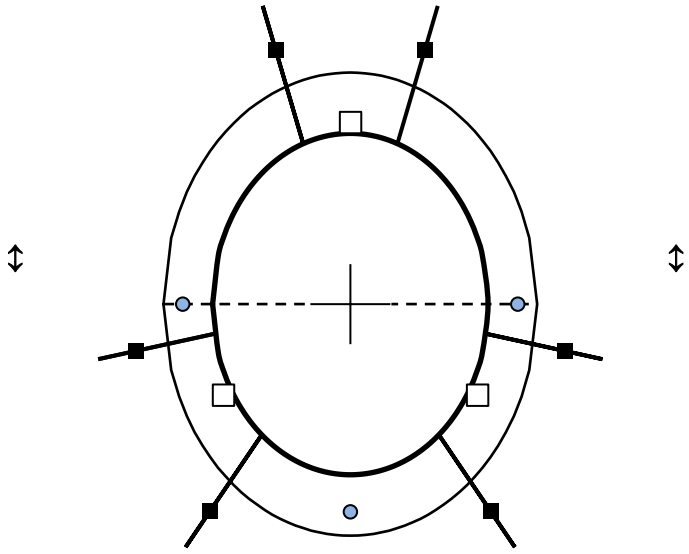


Plate Stress Ratio:
0.00 (Pass)

Bolt Stress Ratio:
0.07 (Pass)

Flat Plate Stress Ratio:
0.10 (Pass)

Bypass Stress Ratio:
0.27 (Pass)

Flange Plate Analysis

Flange Plate			
	Plate Type	***Flange***	***@ 99 ft***
	Pole Diameter	12.5625	in
	Pole Thickness	0.25	in
	Plate Diameter	18	in
	Plate Thickness	1 1/4	in
	Plate Fy	50	ksi
	Weld Length	1/4	in
	f_s Resistance	74.21	k-in
	Applied	16.42	k-in

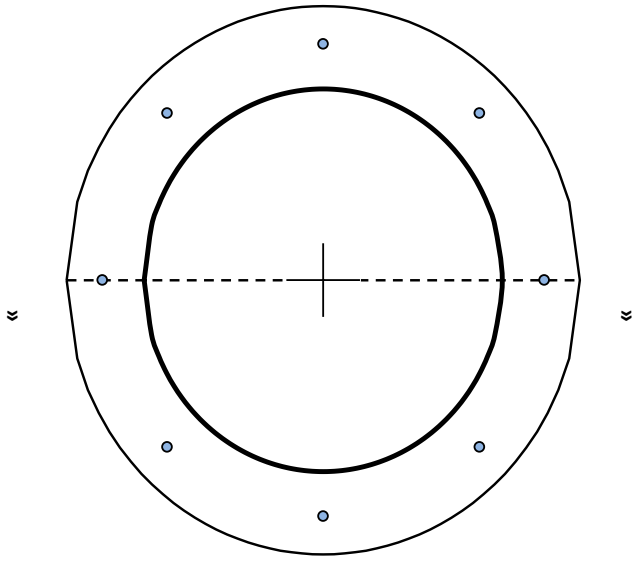
Code Rev.	***H***
Moment	66.1 k-ft
Axial	4.2 k

Date	7/13/2021
Engineer	Claire Collett
Site #	283420
Carrier	VERIZON WIRELESS

Required Flange Thickness:
0.59 in OK

Stiffeners			
	#		

Bolts			
	#	***8***	
	Bolt Circle	15.5	in
	(R)adial / (S)quare	R	
	Diameter	1	in
	Hole Diameter	1 1/8	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	f_s Resistance	54.52	k
	Applied	25.03	k



Reinforcement			
	#		

Plate Stress Ratio:
22% Pass

Bolt Stress Ratio:
46% Pass

Extra Bolts O			
	#		

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Mt. Laurel, NJ 08054
(856) 797-0412
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Antenna Mount Analysis Report and PMI Requirements

Mount Analysis

SMART Tool Project #: 10050679
Maser Consulting Connecticut Project #: 21777586A

June 30, 2021

Site Information	*Site ID:*	*467946-VZW / STRATFORD W CT*
	Site Name:	*STRATFORD W CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*23 Stonybrook Road* *Stratford, Connecticut 06614* *Fairfield County*
	Latitude:	*41.203278°*
	Longitude:	*-73.148625°*
Structure Information	*Tower Type:*	*125-Ft Monopole*
	Mount Type:	*4.00-Ft T-Arm*

FUZE ID # 16231921

Analysis Results

T-Arm: **31.1% 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: Carol Luengas

STATE OF CONNECTICUT · ERIC T. ANDERSON · No. 32224 · LICENSED PROFESSIONAL ENGINEER

Eric Anderson

Digitally signed by Eric Anderson
DN: E=eric.anderson@colliersengineering.com, CN=Eric Anderson, OU=Remote, OU=Users by Office, DC=maserconsulting, DC=com
Reason: I have reviewed this document
Date: 2021.07.02 10:14:01-04'00'

Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

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: 1703825, dated April 8, 2021*
Mount Mapping	*Structural Components Site Name: Stratford W CT, dated March 31, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	119 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	B
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	1.000
Seismic Parameters:	S_S:	0.207
	S_1:	0.054
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
77.00	77.00	6	Quintel	QS6656-5D	Added
		3	Samsung	MT6407-77A	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		1	RFS	DB-C1-12C-24AB-0Z	

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mount(s).

The recent mount mapping did not report existing OVP units. However, 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.

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
Antenna Pipe	19.9	Pass
Face Horizontal	31.1	Pass
Standoff Arm	13.1	Pass
Mount Connection	28.0	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**31.1%**

Recommendation:

The existing mounts are **SUFFICIENT** for the final loading configuration and do not require modifications.

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

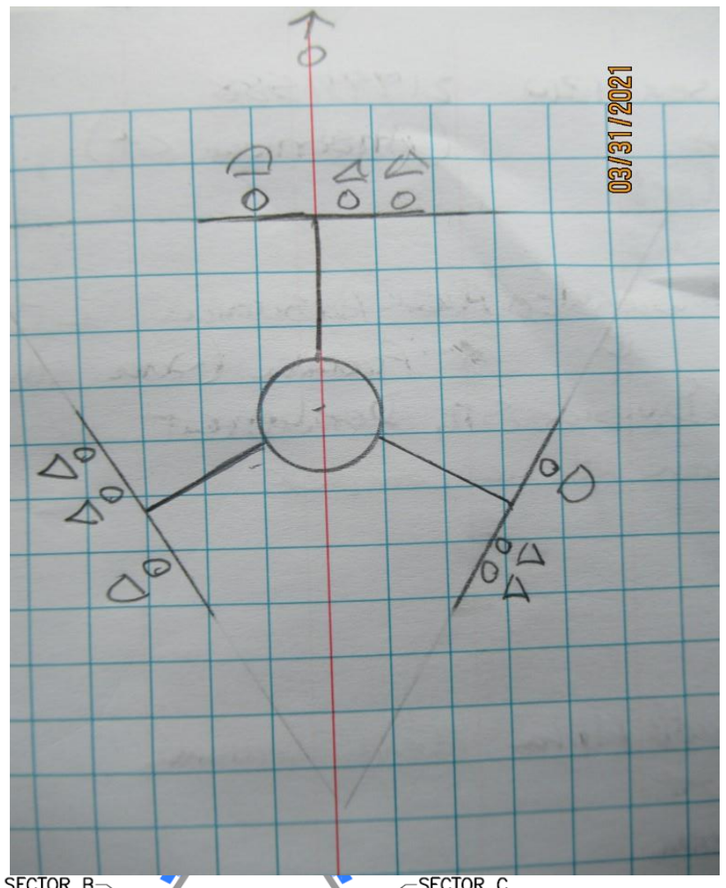

03/31/2021

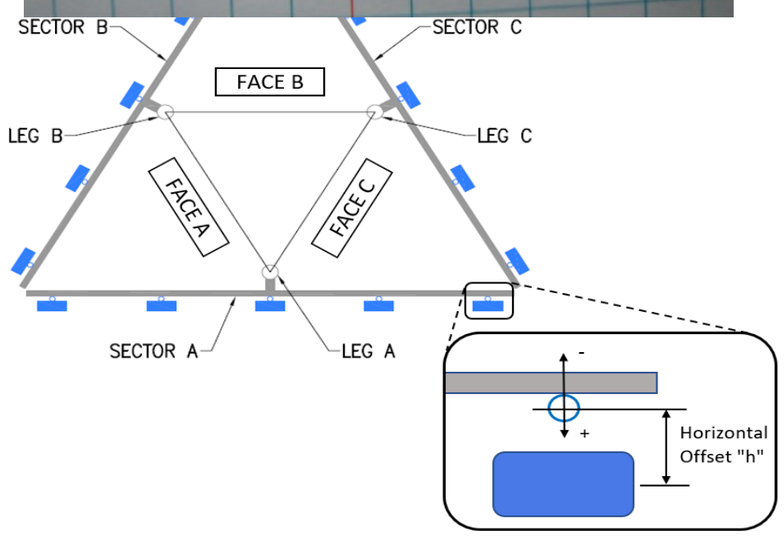
V3.0 Updated on 8-31-2020

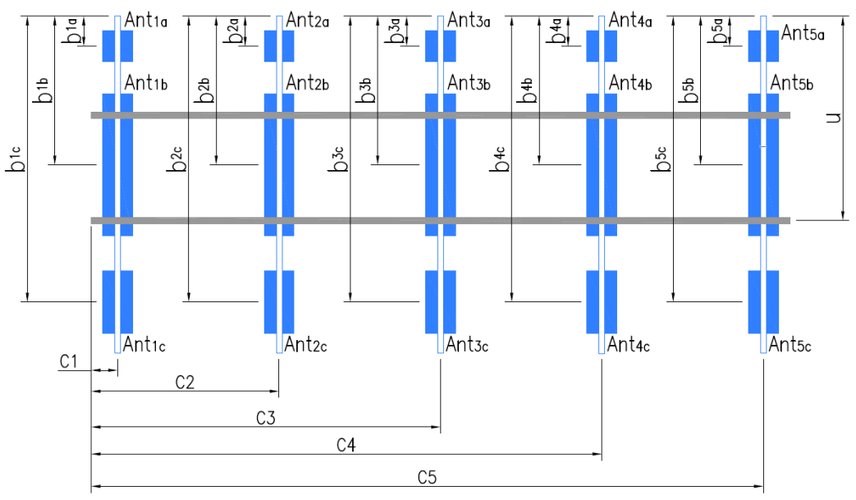
Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	ATC	**Mapping Date:**	3/31/2021
Site Name:	Stratford W CT	**Tower Type:**	Monopole
Site Number or ID:		**Tower Height (Ft.):**	125
Mapping Contractor:	Structural Components	**Mount Elevation (Ft.):**	75







Antenna Layout (Looking Out From Tower)

Mount Pipe Configuration and Geometries [Unit = Inches]

Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2-3/8 x 0.154 x 84	40.00	4.50	C1	2-3/8 x 0.154 x 84	39.00	4.50
A2	2-3/8 x 0.154 x 84	39.00	29.50	C2	2-3/8 x 0.154 x 84	41.00	31.00
A3	2-3/8 x 0.154 x 84	39.50	44.50	C3	2-3/8 x 0.154 x 84	39.00	44.50
A4				C4			
A5				C5			
A6				C6			
B1	2-3/8 x 0.154 x 84	39.00	4.50	D1			
B2	2-3/8 x 0.154 x 84	39.00	30.50	D2			
B3	2-3/8 x 0.154 x 84	38.00	44.50	D3			
B4				D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	90
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

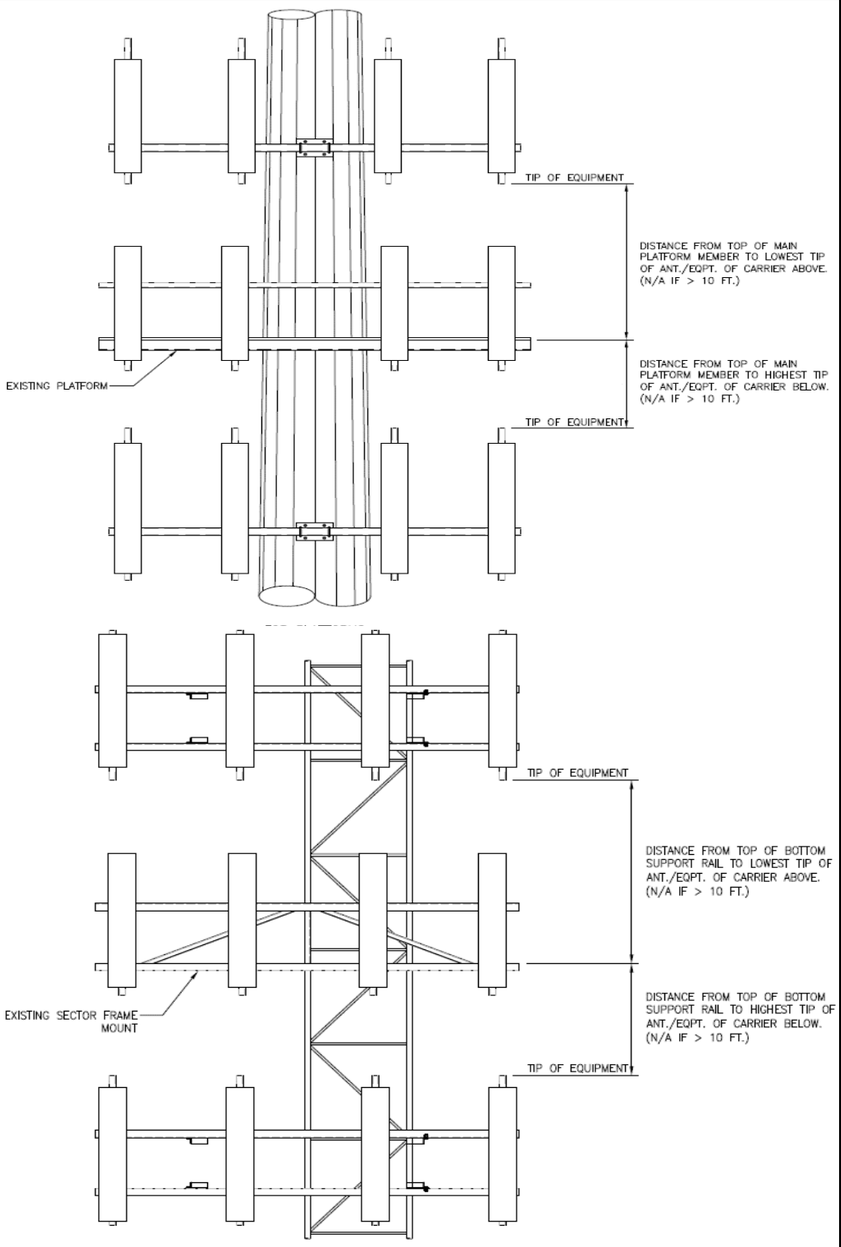
Please enter additional infomation or comments below.

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	17

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	ANTVXA-171063-12CI	11.00	6.00	72.00	(2)1-5/8 tx	74.6667	44.00	11.00	0.00	8, 48
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	ANT BXA-70063-6CF-I	6.00	4.00	72.00	Dead	74.625	43.50	7.50	0.00	8, 48
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	ANT BXA-70063-6CF-I	6.00	4.00	72.00	(2)1-5/8 tx	74.6667	43.50	7.50	0.00	8, 48
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	0.00	Deg	Leg A:		Deg
Sector B:	120.00	Deg	Leg B:		Deg
Sector C:	240.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	60.00	Deg	N/A
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was obstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}										
Ant_{1b}	ANTVXA-171063-12CI	11.00	6.00	72.00	(2)1-5/8 tx	74.9167	40.00	9.00	120.00	34, 49
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	ANT BXA-70063-6CF-I	6.00	4.00	72.00	Dead	74.8333	41.00	7.00	120.00	34, 49
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	ANT BXA-70063-6CF-I	6.00	4.00	72.00	(2)1-5/8 tx	74.8333	40.00	7.00	120.00	34, 49
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	ANTVXA-171063-12CI	11.00	6.00	72.00	(2)1-5/8 tx	74.75	42.00	10.00	240.00	19, 50
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	ANT BXA-70063-6CF-I	6.00	4.00	72.00	Dead	74.6667	45.00	7.50	240.00	19, 50
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	ANT BXA-70063-6CF-I	6.00	4.00	72.00	(2)1-5/8 tx	74.7917	41.50	7.50	240.00	19, 50
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

1		
2		
3		
4		
5		
6		
7		
8		

Mapping Notes
1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

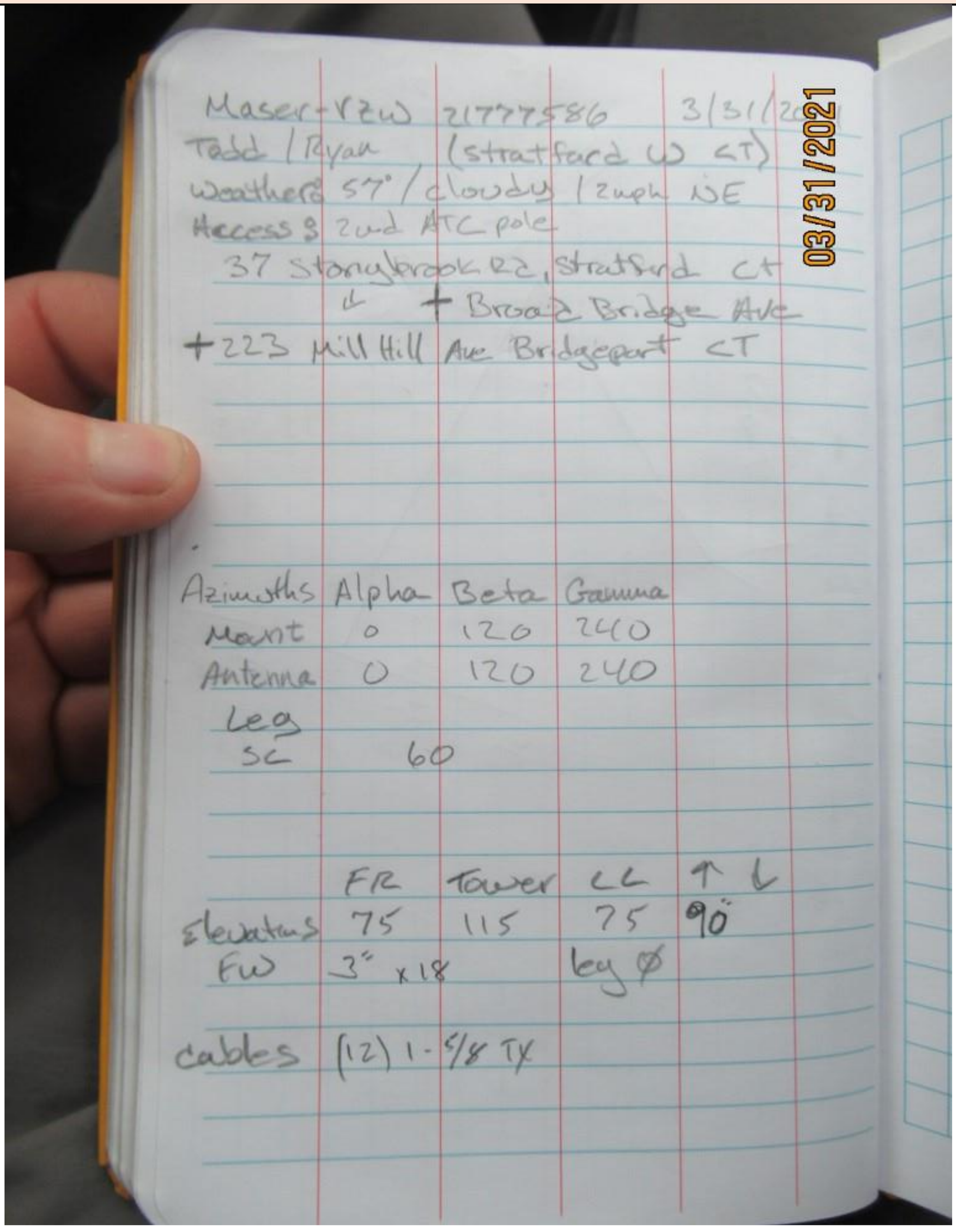
V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

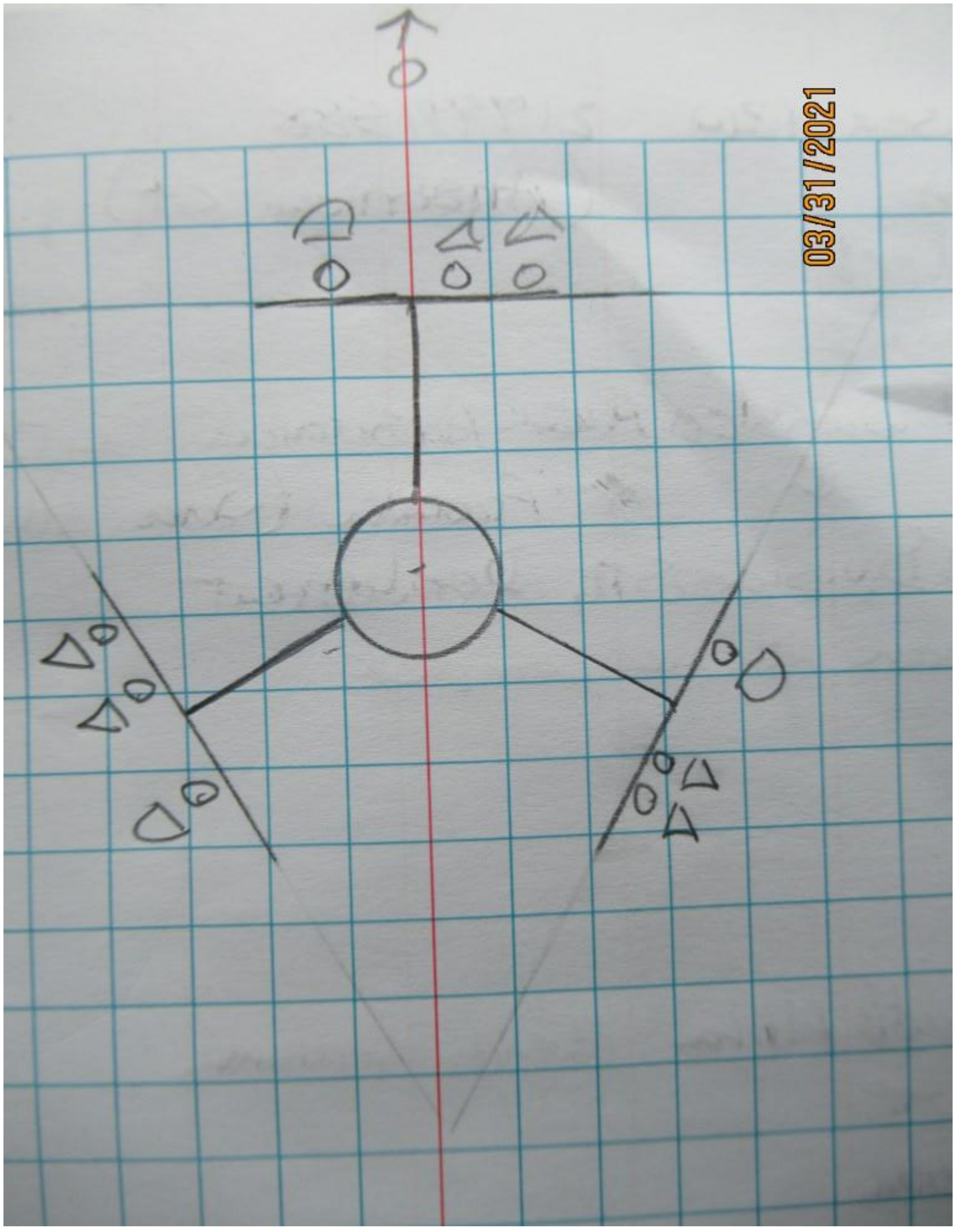
FCC #

Tower Owner:	ATC	**Mapping Date:**	3/31/2021
Site Name:	Stratford W CT	**Tower Type:**	Monopole
Site Number or ID:		**Tower Height (Ft.):**	125
Mapping Contractor:	Structural Components	**Mount Elevation (Ft.):**	75

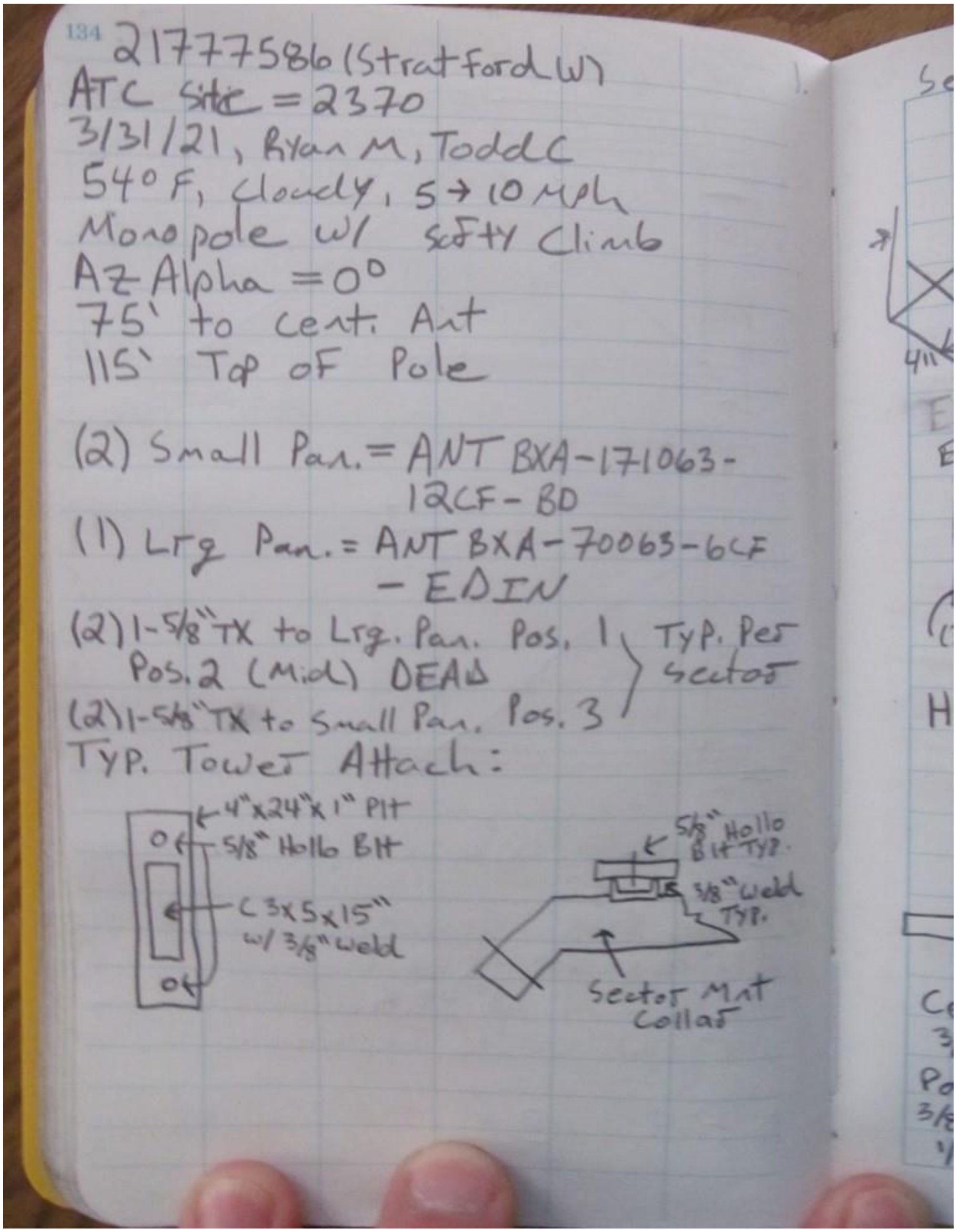
Please Insert Sketches of the Antenna Mount



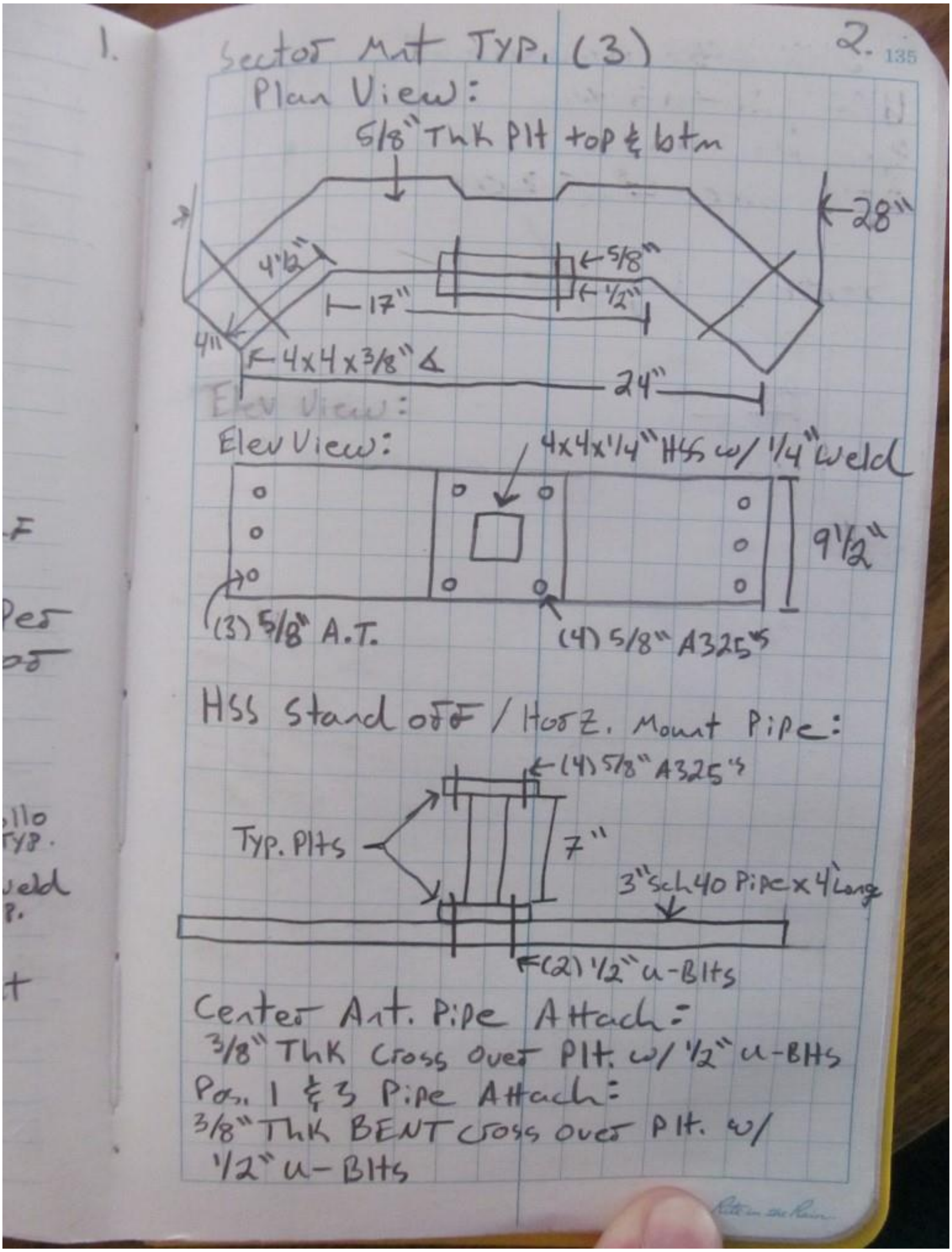
Please Insert Sketches of the Antenna Mount, cont'd

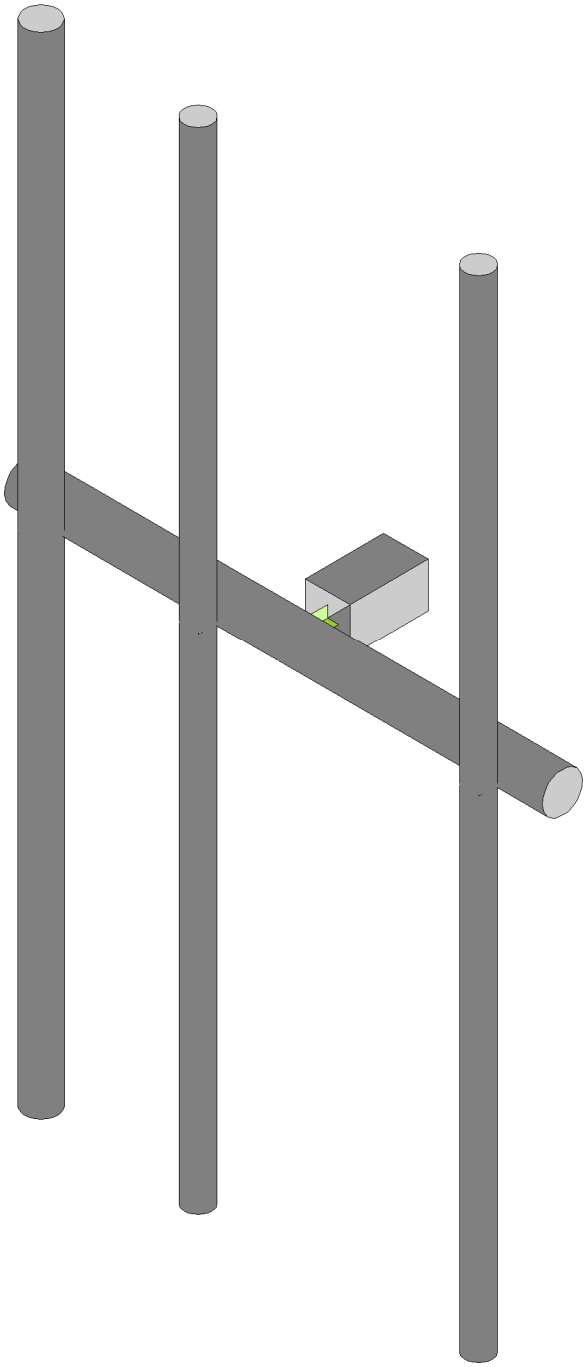


Please Insert Sketches of the Antenna Mount, cont'd



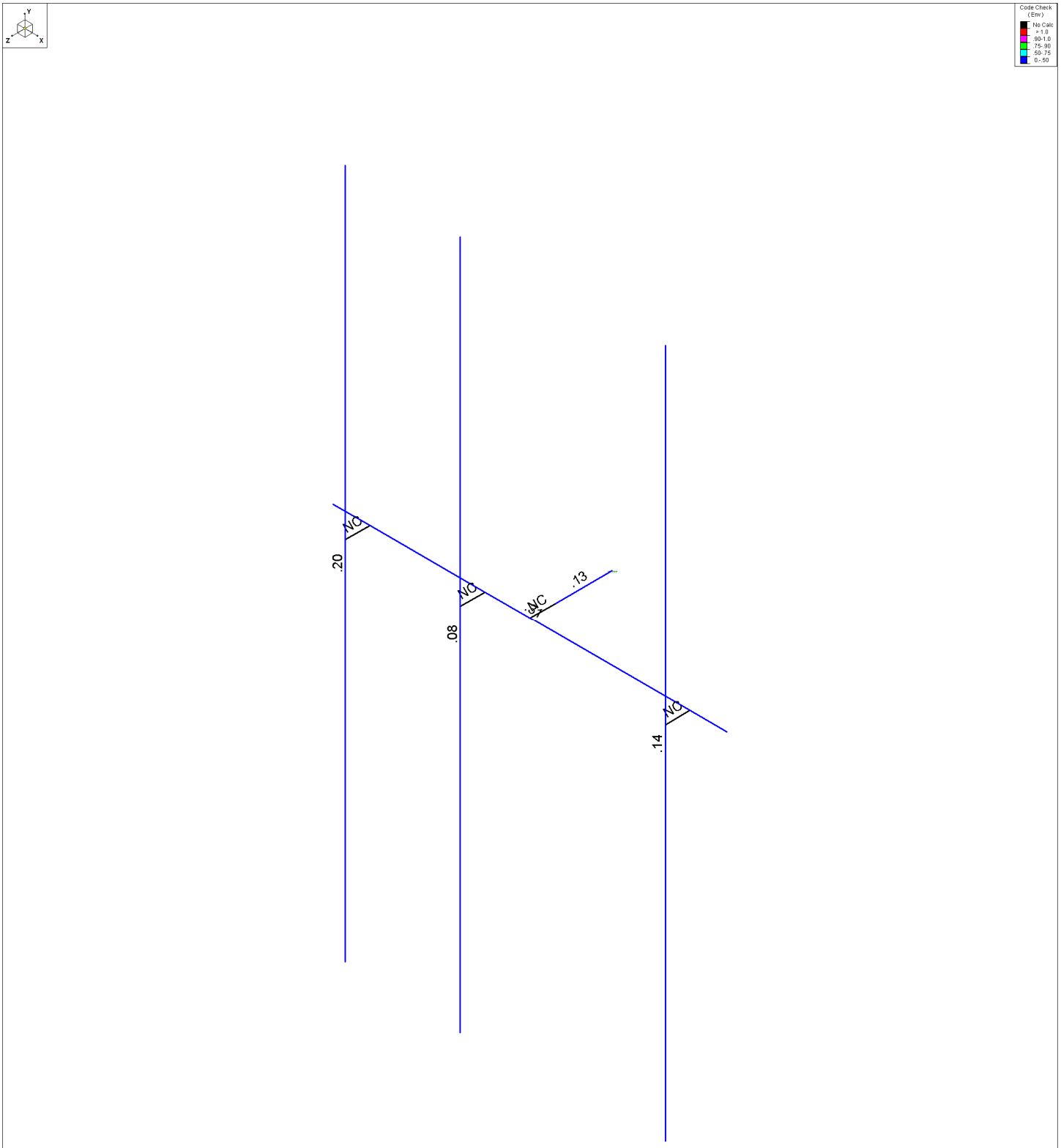
Please Insert Sketches of the Antenna Mount, cont'd





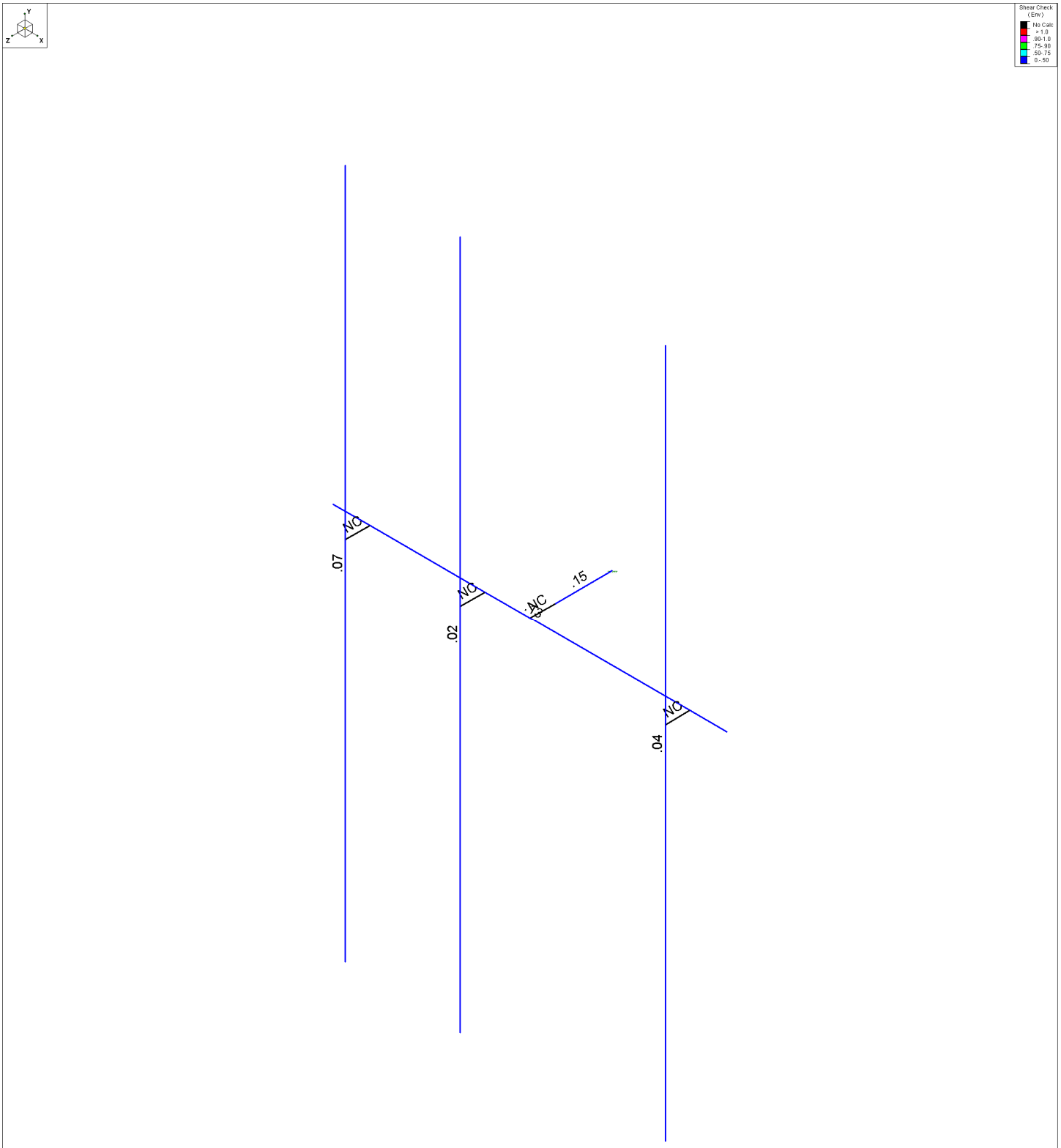
Envelope Only Solution

		SK - 1
		June 30, 2021 at 9:54 AM
		467946-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 2
		June 30, 2021 at 9:54 AM
		467946-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

		SK - 3
		June 30, 2021 at 9:54 AM
		467946-VZW_MT_LOT_A_H.r3d

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
54	Structure Wi (30 Deg)	None						10		
55	Structure Wi (60 Deg)	None						10		
56	Structure Wi (90 Deg)	None						10		
57	Structure Wi (120 Deg)	None						10		
58	Structure Wi (150 Deg)	None						10		
59	Structure Wi (180 Deg)	None						10		
60	Structure Wi (210 Deg)	None						10		
61	Structure Wi (240 Deg)	None						10		
62	Structure Wi (270 Deg)	None						10		
63	Structure Wi (300 Deg)	None						10		
64	Structure Wi (330 Deg)	None						10		
65	Structure Wm (0 Deg)	None						10		
66	Structure Wm (30 Deg)	None						10		
67	Structure Wm (60 Deg)	None						10		
68	Structure Wm (90 Deg)	None						10		
69	Structure Wm (120 Deg)	None						10		
70	Structure Wm (150 Deg)	None						10		
71	Structure Wm (180 Deg)	None						10		
72	Structure Wm (210 Deg)	None						10		
73	Structure Wm (240 Deg)	None						10		
74	Structure Wm (270 Deg)	None						10		
75	Structure Wm (300 Deg)	None						10		
76	Structure Wm (330 Deg)	None						10		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	Sol..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
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 (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1						
14	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1						
15	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1						
16	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1						
17	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1						
18	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1						
19	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1						
20	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1						
21	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1						
22	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1						
23	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1						
24	1.2D + 1.0Di + 1.0Wi (...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1						
25	1.2D + 1.5Lm1 + 1.0W...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1								

Load Combinations (Continued)

	Description	Sol..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
26	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0W..	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0W..	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0W..	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																
52	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + 1.0Eh (...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866										

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N25	0.000002	0	1.916667	0	
2	N2	0.000002	0	2.5	0	
3	N5	0.000002	0	2.75	0	
4	N6	2.000002	0	2.75	0	
5	N7	-1.999998	0	2.75	0	
6	N9	-1.624998	0	2.75	0	
7	N10	1.625002	0	2.75	0	
8	N13	-1.624998	0	3	0	
9	N14	1.625002	0	3	0	
10	N17	-1.624998	3.291667	3	0	
11	N18	1.625002	3.333333	3	0	
12	N21	-1.624998	-3.708333	3	0	
13	N22	1.625002	-3.666667	3	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
14	N14A	-0.458331	0	2.75	0	
15	N15	-0.458331	0	3	0	
16	N16	-0.458331	3.25	3	0	
17	N17A	-0.458331	-3.75	3	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE_3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
3	Standoff Arm	HSS4X4X4	Column	Pipe	A500 Gr. B 46	Typical	3.37	7.8	7.8	12.8
4	Proposed 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 (/...	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A53 Gr. B	29000	11154	.3	.65	.49	35	1.5	60	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
5	A500 Gr. B 42	29000	11154	.3	.65	.49	42	1.4	58	1.3
6	A500 Gr. B 46	29000	11154	.3	.65	.49	46	1.4	58	1.3

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	M1	N7	N6			Face Horizontal	Column	Pipe	A53 Gr. B	Typical
2	M2	N25	N2			Standoff Arm	Column	Pipe	A500 Gr. ...	Typical
3	M4	N5	N2			RIGID	None	None	RIGID	Typical
4	MP1A	N18	N22			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
5	MP3A	N17	N21			Proposed Pipe	Column	Pipe	A53 Gr. B	Typical
6	M10	N9	N13			RIGID	None	None	RIGID	Typical
7	M11	N10	N14			RIGID	None	None	RIGID	Typical
8	MP2A	N16	N17A			Antenna Pipe	Column	Pipe	A53 Gr. B	Typical
9	M9	N14A	N15			RIGID	None	None	RIGID	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	M1						Yes	** NA **			None
2	M2						Yes	** NA **			None
3	M4						Yes	** NA **			None
4	MP1A						Yes	** NA **			None
5	MP3A						Yes	** NA **			None
6	M10						Yes	** NA **			None
7	M11						Yes	** NA **			None
8	MP2A						Yes	** NA **			None
9	M9						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-32.5	.75
2	MP3A	My	-.027	.75

Member Point Loads (BLC 1 : Antenna D) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP3A	Mz	.016	.75
4	MP3A	Y	-32.5	5.75
5	MP3A	My	-.027	5.75
6	MP3A	Mz	.016	5.75
7	MP3A	Y	-32.5	.75
8	MP3A	My	-.027	.75
9	MP3A	Mz	-.016	.75
10	MP3A	Y	-32.5	5.75
11	MP3A	My	-.027	5.75
12	MP3A	Mz	-.016	5.75
13	MP1A	Y	-43.55	2.5
14	MP1A	My	-.029	2.5
15	MP1A	Mz	0	2.5
16	MP1A	Y	-43.55	4
17	MP1A	My	-.029	4
18	MP1A	Mz	0	4
19	MP3A	Y	-84.4	2
20	MP3A	My	.049	2
21	MP3A	Mz	0	2
22	MP2A	Y	-70.3	2
23	MP2A	My	.041	2
24	MP2A	Mz	0	2
25	MP1A	Y	-32	2
26	MP1A	My	.019	2
27	MP1A	Mz	0	2

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-64.652	.75
2	MP3A	My	-.054	.75
3	MP3A	Mz	.032	.75
4	MP3A	Y	-64.652	5.75
5	MP3A	My	-.054	5.75
6	MP3A	Mz	.032	5.75
7	MP3A	Y	-64.652	.75
8	MP3A	My	-.054	.75
9	MP3A	Mz	-.032	.75
10	MP3A	Y	-64.652	5.75
11	MP3A	My	-.054	5.75
12	MP3A	Mz	-.032	5.75
13	MP1A	Y	-33.373	2.5
14	MP1A	My	-.022	2.5
15	MP1A	Mz	0	2.5
16	MP1A	Y	-33.373	4
17	MP1A	My	-.022	4
18	MP1A	Mz	0	4
19	MP3A	Y	-42.036	2
20	MP3A	My	.025	2
21	MP3A	Mz	0	2
22	MP2A	Y	-37.786	2
23	MP2A	My	.022	2
24	MP2A	Mz	0	2
25	MP1A	Y	-82.47	2
26	MP1A	My	.048	2
27	MP1A	Mz	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	-115.555	.75
3	MP3A	Mx	-.058	.75
4	MP3A	X	0	5.75
5	MP3A	Z	-115.555	5.75
6	MP3A	Mx	-.058	5.75
7	MP3A	X	0	.75
8	MP3A	Z	-115.555	.75
9	MP3A	Mx	.058	.75
10	MP3A	X	0	5.75
11	MP3A	Z	-115.555	5.75
12	MP3A	Mx	.058	5.75
13	MP1A	X	0	2.5
14	MP1A	Z	-66.803	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	-66.803	4
18	MP1A	Mx	0	4
19	MP3A	X	0	2
20	MP3A	Z	-53.158	2
21	MP3A	Mx	0	2
22	MP2A	X	0	2
23	MP2A	Z	-53.158	2
24	MP2A	Mx	0	2
25	MP1A	X	0	2
26	MP1A	Z	-115.413	2
27	MP1A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	55.414	.75
2	MP3A	Z	-95.981	.75
3	MP3A	Mx	-.094	.75
4	MP3A	X	55.414	5.75
5	MP3A	Z	-95.981	5.75
6	MP3A	Mx	-.094	5.75
7	MP3A	X	55.414	.75
8	MP3A	Z	-95.981	.75
9	MP3A	Mx	.002	.75
10	MP3A	X	55.414	5.75
11	MP3A	Z	-95.981	5.75
12	MP3A	Mx	.002	5.75
13	MP1A	X	28.32	2.5
14	MP1A	Z	-49.052	2.5
15	MP1A	Mx	-.019	2.5
16	MP1A	X	28.32	4
17	MP1A	Z	-49.052	4
18	MP1A	Mx	-.019	4
19	MP3A	X	24.376	2
20	MP3A	Z	-42.22	2
21	MP3A	Mx	.014	2
22	MP2A	X	23.532	2
23	MP2A	Z	-40.759	2
24	MP2A	Mx	.014	2
25	MP1A	X	54.286	2
26	MP1A	Z	-94.027	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP1A	Mx	.032	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	87.795	.75
2	MP3A	Z	-50.688	.75
3	MP3A	Mx	-.099	.75
4	MP3A	X	87.795	5.75
5	MP3A	Z	-50.688	5.75
6	MP3A	Mx	-.099	5.75
7	MP3A	X	87.795	.75
8	MP3A	Z	-50.688	.75
9	MP3A	Mx	-.048	.75
10	MP3A	X	87.795	5.75
11	MP3A	Z	-50.688	5.75
12	MP3A	Mx	-.048	5.75
13	MP1A	X	31.45	2.5
14	MP1A	Z	-18.158	2.5
15	MP1A	Mx	-.021	2.5
16	MP1A	X	31.45	4
17	MP1A	Z	-18.158	4
18	MP1A	Mx	-.021	4
19	MP3A	X	34.589	2
20	MP3A	Z	-19.97	2
21	MP3A	Mx	.02	2
22	MP2A	X	30.204	2
23	MP2A	Z	-17.438	2
24	MP2A	Mx	.018	2
25	MP1A	X	82.179	2
26	MP1A	Z	-47.446	2
27	MP1A	Mx	.048	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	96.651	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	-.081	.75
4	MP3A	X	96.651	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	-.081	5.75
7	MP3A	X	96.651	.75
8	MP3A	Z	0	.75
9	MP3A	Mx	-.081	.75
10	MP3A	X	96.651	5.75
11	MP3A	Z	0	5.75
12	MP3A	Mx	-.081	5.75
13	MP1A	X	26.153	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.017	2.5
16	MP1A	X	26.153	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.017	4
19	MP3A	X	35.533	2
20	MP3A	Z	0	2
21	MP3A	Mx	.021	2
22	MP2A	X	28.782	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	0	2
24	MP2A	Mx	.017	2
25	MP1A	X	88.052	2
26	MP1A	Z	0	2
27	MP1A	Mx	.051	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	87.795	.75
2	MP3A	Z	50.688	.75
3	MP3A	Mx	-.048	.75
4	MP3A	X	87.795	5.75
5	MP3A	Z	50.688	5.75
6	MP3A	Mx	-.048	5.75
7	MP3A	X	87.795	.75
8	MP3A	Z	50.688	.75
9	MP3A	Mx	-.099	.75
10	MP3A	X	87.795	5.75
11	MP3A	Z	50.688	5.75
12	MP3A	Mx	-.099	5.75
13	MP1A	X	31.45	2.5
14	MP1A	Z	18.158	2.5
15	MP1A	Mx	-.021	2.5
16	MP1A	X	31.45	4
17	MP1A	Z	18.158	4
18	MP1A	Mx	-.021	4
19	MP3A	X	34.589	2
20	MP3A	Z	19.97	2
21	MP3A	Mx	.02	2
22	MP2A	X	30.204	2
23	MP2A	Z	17.438	2
24	MP2A	Mx	.018	2
25	MP1A	X	82.179	2
26	MP1A	Z	47.446	2
27	MP1A	Mx	.048	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	55.414	.75
2	MP3A	Z	95.981	.75
3	MP3A	Mx	.002	.75
4	MP3A	X	55.414	5.75
5	MP3A	Z	95.981	5.75
6	MP3A	Mx	.002	5.75
7	MP3A	X	55.414	.75
8	MP3A	Z	95.981	.75
9	MP3A	Mx	-.094	.75
10	MP3A	X	55.414	5.75
11	MP3A	Z	95.981	5.75
12	MP3A	Mx	-.094	5.75
13	MP1A	X	28.32	2.5
14	MP1A	Z	49.052	2.5
15	MP1A	Mx	-.019	2.5
16	MP1A	X	28.32	4
17	MP1A	Z	49.052	4
18	MP1A	Mx	-.019	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	24.376	2
20	MP3A	Z	42.22	2
21	MP3A	Mx	.014	2
22	MP2A	X	23.532	2
23	MP2A	Z	40.759	2
24	MP2A	Mx	.014	2
25	MP1A	X	54.286	2
26	MP1A	Z	94.027	2
27	MP1A	Mx	.032	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	115.555	.75
3	MP3A	Mx	.058	.75
4	MP3A	X	0	5.75
5	MP3A	Z	115.555	5.75
6	MP3A	Mx	.058	5.75
7	MP3A	X	0	.75
8	MP3A	Z	115.555	.75
9	MP3A	Mx	-.058	.75
10	MP3A	X	0	5.75
11	MP3A	Z	115.555	5.75
12	MP3A	Mx	-.058	5.75
13	MP1A	X	0	2.5
14	MP1A	Z	66.803	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	66.803	4
18	MP1A	Mx	0	4
19	MP3A	X	0	2
20	MP3A	Z	53.158	2
21	MP3A	Mx	0	2
22	MP2A	X	0	2
23	MP2A	Z	53.158	2
24	MP2A	Mx	0	2
25	MP1A	X	0	2
26	MP1A	Z	115.413	2
27	MP1A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-55.414	.75
2	MP3A	Z	95.981	.75
3	MP3A	Mx	.094	.75
4	MP3A	X	-55.414	5.75
5	MP3A	Z	95.981	5.75
6	MP3A	Mx	.094	5.75
7	MP3A	X	-55.414	.75
8	MP3A	Z	95.981	.75
9	MP3A	Mx	-.002	.75
10	MP3A	X	-55.414	5.75
11	MP3A	Z	95.981	5.75
12	MP3A	Mx	-.002	5.75
13	MP1A	X	-28.32	2.5
14	MP1A	Z	49.052	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP1A	Mx	.019	2.5
16	MP1A	X	-28.32	4
17	MP1A	Z	49.052	4
18	MP1A	Mx	.019	4
19	MP3A	X	-24.376	2
20	MP3A	Z	42.22	2
21	MP3A	Mx	-.014	2
22	MP2A	X	-23.532	2
23	MP2A	Z	40.759	2
24	MP2A	Mx	-.014	2
25	MP1A	X	-54.286	2
26	MP1A	Z	94.027	2
27	MP1A	Mx	-.032	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-87.795	.75
2	MP3A	Z	50.688	.75
3	MP3A	Mx	.099	.75
4	MP3A	X	-87.795	5.75
5	MP3A	Z	50.688	5.75
6	MP3A	Mx	.099	5.75
7	MP3A	X	-87.795	.75
8	MP3A	Z	50.688	.75
9	MP3A	Mx	.048	.75
10	MP3A	X	-87.795	5.75
11	MP3A	Z	50.688	5.75
12	MP3A	Mx	.048	5.75
13	MP1A	X	-31.45	2.5
14	MP1A	Z	18.158	2.5
15	MP1A	Mx	.021	2.5
16	MP1A	X	-31.45	4
17	MP1A	Z	18.158	4
18	MP1A	Mx	.021	4
19	MP3A	X	-34.589	2
20	MP3A	Z	19.97	2
21	MP3A	Mx	-.02	2
22	MP2A	X	-30.204	2
23	MP2A	Z	17.438	2
24	MP2A	Mx	-.018	2
25	MP1A	X	-82.179	2
26	MP1A	Z	47.446	2
27	MP1A	Mx	-.048	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-96.651	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	.081	.75
4	MP3A	X	-96.651	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	.081	5.75
7	MP3A	X	-96.651	.75
8	MP3A	Z	0	.75
9	MP3A	Mx	.081	.75
10	MP3A	X	-96.651	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP3A	Z	0	5.75
12	MP3A	Mx	.081	5.75
13	MP1A	X	-26.153	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	.017	2.5
16	MP1A	X	-26.153	4
17	MP1A	Z	0	4
18	MP1A	Mx	.017	4
19	MP3A	X	-35.533	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.021	2
22	MP2A	X	-28.782	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.017	2
25	MP1A	X	-88.052	2
26	MP1A	Z	0	2
27	MP1A	Mx	-.051	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-87.795	.75
2	MP3A	Z	-50.688	.75
3	MP3A	Mx	.048	.75
4	MP3A	X	-87.795	5.75
5	MP3A	Z	-50.688	5.75
6	MP3A	Mx	.048	5.75
7	MP3A	X	-87.795	.75
8	MP3A	Z	-50.688	.75
9	MP3A	Mx	.099	.75
10	MP3A	X	-87.795	5.75
11	MP3A	Z	-50.688	5.75
12	MP3A	Mx	.099	5.75
13	MP1A	X	-31.45	2.5
14	MP1A	Z	-18.158	2.5
15	MP1A	Mx	.021	2.5
16	MP1A	X	-31.45	4
17	MP1A	Z	-18.158	4
18	MP1A	Mx	.021	4
19	MP3A	X	-34.589	2
20	MP3A	Z	-19.97	2
21	MP3A	Mx	-.02	2
22	MP2A	X	-30.204	2
23	MP2A	Z	-17.438	2
24	MP2A	Mx	-.018	2
25	MP1A	X	-82.179	2
26	MP1A	Z	-47.446	2
27	MP1A	Mx	-.048	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-55.414	.75
2	MP3A	Z	-95.981	.75
3	MP3A	Mx	-.002	.75
4	MP3A	X	-55.414	5.75
5	MP3A	Z	-95.981	5.75
6	MP3A	Mx	-.002	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP3A	X	-55.414	.75
8	MP3A	Z	-95.981	.75
9	MP3A	Mx	.094	.75
10	MP3A	X	-55.414	5.75
11	MP3A	Z	-95.981	5.75
12	MP3A	Mx	.094	5.75
13	MP1A	X	-28.32	2.5
14	MP1A	Z	-49.052	2.5
15	MP1A	Mx	.019	2.5
16	MP1A	X	-28.32	4
17	MP1A	Z	-49.052	4
18	MP1A	Mx	.019	4
19	MP3A	X	-24.376	2
20	MP3A	Z	-42.22	2
21	MP3A	Mx	-.014	2
22	MP2A	X	-23.532	2
23	MP2A	Z	-40.759	2
24	MP2A	Mx	-.014	2
25	MP1A	X	-54.286	2
26	MP1A	Z	-94.027	2
27	MP1A	Mx	-.032	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	-22.382	.75
3	MP3A	Mx	-.011	.75
4	MP3A	X	0	5.75
5	MP3A	Z	-22.382	5.75
6	MP3A	Mx	-.011	5.75
7	MP3A	X	0	.75
8	MP3A	Z	-22.382	.75
9	MP3A	Mx	.011	.75
10	MP3A	X	0	5.75
11	MP3A	Z	-22.382	5.75
12	MP3A	Mx	.011	5.75
13	MP1A	X	0	2.5
14	MP1A	Z	-13.234	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	-13.234	4
18	MP1A	Mx	0	4
19	MP3A	X	0	2
20	MP3A	Z	-11.118	2
21	MP3A	Mx	0	2
22	MP2A	X	0	2
23	MP2A	Z	-11.118	2
24	MP2A	Mx	0	2
25	MP1A	X	0	2
26	MP1A	Z	-22.915	2
27	MP1A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	10.765	.75
2	MP3A	Z	-18.646	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP3A	Mx	-.018	.75
4	MP3A	X	10.765	5.75
5	MP3A	Z	-18.646	5.75
6	MP3A	Mx	-.018	5.75
7	MP3A	X	10.765	.75
8	MP3A	Z	-18.646	.75
9	MP3A	Mx	.000352	.75
10	MP3A	X	10.765	5.75
11	MP3A	Z	-18.646	5.75
12	MP3A	Mx	.000352	5.75
13	MP1A	X	5.664	2.5
14	MP1A	Z	-9.81	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	5.664	4
17	MP1A	Z	-9.81	4
18	MP1A	Mx	-.004	4
19	MP3A	X	5.134	2
20	MP3A	Z	-8.892	2
21	MP3A	Mx	.003	2
22	MP2A	X	4.972	2
23	MP2A	Z	-8.612	2
24	MP2A	Mx	.003	2
25	MP1A	X	10.83	2
26	MP1A	Z	-18.758	2
27	MP1A	Mx	.006	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	17.173	.75
2	MP3A	Z	-9.915	.75
3	MP3A	Mx	-.019	.75
4	MP3A	X	17.173	5.75
5	MP3A	Z	-9.915	5.75
6	MP3A	Mx	-.019	5.75
7	MP3A	X	17.173	.75
8	MP3A	Z	-9.915	.75
9	MP3A	Mx	-.009	.75
10	MP3A	X	17.173	5.75
11	MP3A	Z	-9.915	5.75
12	MP3A	Mx	-.009	5.75
13	MP1A	X	6.509	2.5
14	MP1A	Z	-3.758	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	6.509	4
17	MP1A	Z	-3.758	4
18	MP1A	Mx	-.004	4
19	MP3A	X	7.419	2
20	MP3A	Z	-4.283	2
21	MP3A	Mx	.004	2
22	MP2A	X	6.579	2
23	MP2A	Z	-3.799	2
24	MP2A	Mx	.004	2
25	MP1A	X	16.585	2
26	MP1A	Z	-9.575	2
27	MP1A	Mx	.01	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	18.979	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	-.016	.75
4	MP3A	X	18.979	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	-.016	5.75
7	MP3A	X	18.979	.75
8	MP3A	Z	0	.75
9	MP3A	Mx	-.016	.75
10	MP3A	X	18.979	5.75
11	MP3A	Z	0	5.75
12	MP3A	Mx	-.016	5.75
13	MP1A	X	5.61	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	5.61	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.004	4
19	MP3A	X	7.716	2
20	MP3A	Z	0	2
21	MP3A	Mx	.005	2
22	MP2A	X	6.424	2
23	MP2A	Z	0	2
24	MP2A	Mx	.004	2
25	MP1A	X	17.896	2
26	MP1A	Z	0	2
27	MP1A	Mx	.01	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	17.173	.75
2	MP3A	Z	9.915	.75
3	MP3A	Mx	-.009	.75
4	MP3A	X	17.173	5.75
5	MP3A	Z	9.915	5.75
6	MP3A	Mx	-.009	5.75
7	MP3A	X	17.173	.75
8	MP3A	Z	9.915	.75
9	MP3A	Mx	-.019	.75
10	MP3A	X	17.173	5.75
11	MP3A	Z	9.915	5.75
12	MP3A	Mx	-.019	5.75
13	MP1A	X	6.509	2.5
14	MP1A	Z	3.758	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	6.509	4
17	MP1A	Z	3.758	4
18	MP1A	Mx	-.004	4
19	MP3A	X	7.419	2
20	MP3A	Z	4.283	2
21	MP3A	Mx	.004	2
22	MP2A	X	6.579	2
23	MP2A	Z	3.799	2
24	MP2A	Mx	.004	2
25	MP1A	X	16.585	2
26	MP1A	Z	9.575	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP1A	Mx	.01	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	10.765	.75
2	MP3A	Z	18.646	.75
3	MP3A	Mx	.000352	.75
4	MP3A	X	10.765	5.75
5	MP3A	Z	18.646	5.75
6	MP3A	Mx	.000352	5.75
7	MP3A	X	10.765	.75
8	MP3A	Z	18.646	.75
9	MP3A	Mx	-.018	.75
10	MP3A	X	10.765	5.75
11	MP3A	Z	18.646	5.75
12	MP3A	Mx	-.018	5.75
13	MP1A	X	5.664	2.5
14	MP1A	Z	9.81	2.5
15	MP1A	Mx	-.004	2.5
16	MP1A	X	5.664	4
17	MP1A	Z	9.81	4
18	MP1A	Mx	-.004	4
19	MP3A	X	5.134	2
20	MP3A	Z	8.892	2
21	MP3A	Mx	.003	2
22	MP2A	X	4.972	2
23	MP2A	Z	8.612	2
24	MP2A	Mx	.003	2
25	MP1A	X	10.83	2
26	MP1A	Z	18.758	2
27	MP1A	Mx	.006	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	22.382	.75
3	MP3A	Mx	.011	.75
4	MP3A	X	0	5.75
5	MP3A	Z	22.382	5.75
6	MP3A	Mx	.011	5.75
7	MP3A	X	0	.75
8	MP3A	Z	22.382	.75
9	MP3A	Mx	-.011	.75
10	MP3A	X	0	5.75
11	MP3A	Z	22.382	5.75
12	MP3A	Mx	-.011	5.75
13	MP1A	X	0	2.5
14	MP1A	Z	13.234	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	13.234	4
18	MP1A	Mx	0	4
19	MP3A	X	0	2
20	MP3A	Z	11.118	2
21	MP3A	Mx	0	2
22	MP2A	X	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	11.118	2
24	MP2A	Mx	0	2
25	MP1A	X	0	2
26	MP1A	Z	22.915	2
27	MP1A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-10.765	.75
2	MP3A	Z	18.646	.75
3	MP3A	Mx	.018	.75
4	MP3A	X	-10.765	5.75
5	MP3A	Z	18.646	5.75
6	MP3A	Mx	.018	5.75
7	MP3A	X	-10.765	.75
8	MP3A	Z	18.646	.75
9	MP3A	Mx	-.000352	.75
10	MP3A	X	-10.765	5.75
11	MP3A	Z	18.646	5.75
12	MP3A	Mx	-.000352	5.75
13	MP1A	X	-5.664	2.5
14	MP1A	Z	9.81	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-5.664	4
17	MP1A	Z	9.81	4
18	MP1A	Mx	.004	4
19	MP3A	X	-5.134	2
20	MP3A	Z	8.892	2
21	MP3A	Mx	-.003	2
22	MP2A	X	-4.972	2
23	MP2A	Z	8.612	2
24	MP2A	Mx	-.003	2
25	MP1A	X	-10.83	2
26	MP1A	Z	18.758	2
27	MP1A	Mx	-.006	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-17.173	.75
2	MP3A	Z	9.915	.75
3	MP3A	Mx	.019	.75
4	MP3A	X	-17.173	5.75
5	MP3A	Z	9.915	5.75
6	MP3A	Mx	.019	5.75
7	MP3A	X	-17.173	.75
8	MP3A	Z	9.915	.75
9	MP3A	Mx	.009	.75
10	MP3A	X	-17.173	5.75
11	MP3A	Z	9.915	5.75
12	MP3A	Mx	.009	5.75
13	MP1A	X	-6.509	2.5
14	MP1A	Z	3.758	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-6.509	4
17	MP1A	Z	3.758	4
18	MP1A	Mx	.004	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	-7.419	2
20	MP3A	Z	4.283	2
21	MP3A	Mx	-.004	2
22	MP2A	X	-6.579	2
23	MP2A	Z	3.799	2
24	MP2A	Mx	-.004	2
25	MP1A	X	-16.585	2
26	MP1A	Z	9.575	2
27	MP1A	Mx	-.01	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-18.979	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	.016	.75
4	MP3A	X	-18.979	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	.016	5.75
7	MP3A	X	-18.979	.75
8	MP3A	Z	0	.75
9	MP3A	Mx	.016	.75
10	MP3A	X	-18.979	5.75
11	MP3A	Z	0	5.75
12	MP3A	Mx	.016	5.75
13	MP1A	X	-5.61	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-5.61	4
17	MP1A	Z	0	4
18	MP1A	Mx	.004	4
19	MP3A	X	-7.716	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.005	2
22	MP2A	X	-6.424	2
23	MP2A	Z	0	2
24	MP2A	Mx	-.004	2
25	MP1A	X	-17.896	2
26	MP1A	Z	0	2
27	MP1A	Mx	-.01	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-17.173	.75
2	MP3A	Z	-9.915	.75
3	MP3A	Mx	.009	.75
4	MP3A	X	-17.173	5.75
5	MP3A	Z	-9.915	5.75
6	MP3A	Mx	.009	5.75
7	MP3A	X	-17.173	.75
8	MP3A	Z	-9.915	.75
9	MP3A	Mx	.019	.75
10	MP3A	X	-17.173	5.75
11	MP3A	Z	-9.915	5.75
12	MP3A	Mx	.019	5.75
13	MP1A	X	-6.509	2.5
14	MP1A	Z	-3.758	2.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP1A	Mx	.004	2.5
16	MP1A	X	-6.509	4
17	MP1A	Z	-3.758	4
18	MP1A	Mx	.004	4
19	MP3A	X	-7.419	2
20	MP3A	Z	-4.283	2
21	MP3A	Mx	-.004	2
22	MP2A	X	-6.579	2
23	MP2A	Z	-3.799	2
24	MP2A	Mx	-.004	2
25	MP1A	X	-16.585	2
26	MP1A	Z	-9.575	2
27	MP1A	Mx	-.01	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-10.765	.75
2	MP3A	Z	-18.646	.75
3	MP3A	Mx	-.000352	.75
4	MP3A	X	-10.765	5.75
5	MP3A	Z	-18.646	5.75
6	MP3A	Mx	-.000352	5.75
7	MP3A	X	-10.765	.75
8	MP3A	Z	-18.646	.75
9	MP3A	Mx	.018	.75
10	MP3A	X	-10.765	5.75
11	MP3A	Z	-18.646	5.75
12	MP3A	Mx	.018	5.75
13	MP1A	X	-5.664	2.5
14	MP1A	Z	-9.81	2.5
15	MP1A	Mx	.004	2.5
16	MP1A	X	-5.664	4
17	MP1A	Z	-9.81	4
18	MP1A	Mx	.004	4
19	MP3A	X	-5.134	2
20	MP3A	Z	-8.892	2
21	MP3A	Mx	-.003	2
22	MP2A	X	-4.972	2
23	MP2A	Z	-8.612	2
24	MP2A	Mx	-.003	2
25	MP1A	X	-10.83	2
26	MP1A	Z	-18.758	2
27	MP1A	Mx	-.006	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	-7.344	.75
3	MP3A	Mx	-.004	.75
4	MP3A	X	0	5.75
5	MP3A	Z	-7.344	5.75
6	MP3A	Mx	-.004	5.75
7	MP3A	X	0	.75
8	MP3A	Z	-7.344	.75
9	MP3A	Mx	.004	.75
10	MP3A	X	0	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
11	MP3A	Z	-7.344	5.75
12	MP3A	Mx	.004	5.75
13	MP1A	X	0	2.5
14	MP1A	Z	-4.246	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	-4.246	4
18	MP1A	Mx	0	4
19	MP3A	X	0	2
20	MP3A	Z	-3.378	2
21	MP3A	Mx	0	2
22	MP2A	X	0	2
23	MP2A	Z	-3.378	2
24	MP2A	Mx	0	2
25	MP1A	X	0	2
26	MP1A	Z	-7.335	2
27	MP1A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	3.522	.75
2	MP3A	Z	-6.1	.75
3	MP3A	Mx	-.006	.75
4	MP3A	X	3.522	5.75
5	MP3A	Z	-6.1	5.75
6	MP3A	Mx	-.006	5.75
7	MP3A	X	3.522	.75
8	MP3A	Z	-6.1	.75
9	MP3A	Mx	.000115	.75
10	MP3A	X	3.522	5.75
11	MP3A	Z	-6.1	5.75
12	MP3A	Mx	.000115	5.75
13	MP1A	X	1.8	2.5
14	MP1A	Z	-3.117	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	1.8	4
17	MP1A	Z	-3.117	4
18	MP1A	Mx	-.001	4
19	MP3A	X	1.549	2
20	MP3A	Z	-2.683	2
21	MP3A	Mx	.000904	2
22	MP2A	X	1.496	2
23	MP2A	Z	-2.59	2
24	MP2A	Mx	.000873	2
25	MP1A	X	3.45	2
26	MP1A	Z	-5.976	2
27	MP1A	Mx	.002	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	5.58	.75
2	MP3A	Z	-3.221	.75
3	MP3A	Mx	-.006	.75
4	MP3A	X	5.58	5.75
5	MP3A	Z	-3.221	5.75
6	MP3A	Mx	-.006	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP3A	X	5.58	.75
8	MP3A	Z	-3.221	.75
9	MP3A	Mx	-.003	.75
10	MP3A	X	5.58	5.75
11	MP3A	Z	-3.221	5.75
12	MP3A	Mx	-.003	5.75
13	MP1A	X	1.999	2.5
14	MP1A	Z	-1.154	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	1.999	4
17	MP1A	Z	-1.154	4
18	MP1A	Mx	-.001	4
19	MP3A	X	2.198	2
20	MP3A	Z	-1.269	2
21	MP3A	Mx	.001	2
22	MP2A	X	1.92	2
23	MP2A	Z	-1.108	2
24	MP2A	Mx	.001	2
25	MP1A	X	5.223	2
26	MP1A	Z	-3.015	2
27	MP1A	Mx	.003	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	6.143	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	-.005	.75
4	MP3A	X	6.143	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	-.005	5.75
7	MP3A	X	6.143	.75
8	MP3A	Z	0	.75
9	MP3A	Mx	-.005	.75
10	MP3A	X	6.143	5.75
11	MP3A	Z	0	5.75
12	MP3A	Mx	-.005	5.75
13	MP1A	X	1.662	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	1.662	4
17	MP1A	Z	0	4
18	MP1A	Mx	-.001	4
19	MP3A	X	2.258	2
20	MP3A	Z	0	2
21	MP3A	Mx	.001	2
22	MP2A	X	1.829	2
23	MP2A	Z	0	2
24	MP2A	Mx	.001	2
25	MP1A	X	5.596	2
26	MP1A	Z	0	2
27	MP1A	Mx	.003	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	5.58	.75
2	MP3A	Z	3.221	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP3A	Mx	-.003	.75
4	MP3A	X	5.58	5.75
5	MP3A	Z	3.221	5.75
6	MP3A	Mx	-.003	5.75
7	MP3A	X	5.58	.75
8	MP3A	Z	3.221	.75
9	MP3A	Mx	-.006	.75
10	MP3A	X	5.58	5.75
11	MP3A	Z	3.221	5.75
12	MP3A	Mx	-.006	5.75
13	MP1A	X	1.999	2.5
14	MP1A	Z	1.154	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	1.999	4
17	MP1A	Z	1.154	4
18	MP1A	Mx	-.001	4
19	MP3A	X	2.198	2
20	MP3A	Z	1.269	2
21	MP3A	Mx	.001	2
22	MP2A	X	1.92	2
23	MP2A	Z	1.108	2
24	MP2A	Mx	.001	2
25	MP1A	X	5.223	2
26	MP1A	Z	3.015	2
27	MP1A	Mx	.003	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	3.522	.75
2	MP3A	Z	6.1	.75
3	MP3A	Mx	.000115	.75
4	MP3A	X	3.522	5.75
5	MP3A	Z	6.1	5.75
6	MP3A	Mx	.000115	5.75
7	MP3A	X	3.522	.75
8	MP3A	Z	6.1	.75
9	MP3A	Mx	-.006	.75
10	MP3A	X	3.522	5.75
11	MP3A	Z	6.1	5.75
12	MP3A	Mx	-.006	5.75
13	MP1A	X	1.8	2.5
14	MP1A	Z	3.117	2.5
15	MP1A	Mx	-.001	2.5
16	MP1A	X	1.8	4
17	MP1A	Z	3.117	4
18	MP1A	Mx	-.001	4
19	MP3A	X	1.549	2
20	MP3A	Z	2.683	2
21	MP3A	Mx	.000904	2
22	MP2A	X	1.496	2
23	MP2A	Z	2.59	2
24	MP2A	Mx	.000873	2
25	MP1A	X	3.45	2
26	MP1A	Z	5.976	2
27	MP1A	Mx	.002	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	7.344	.75
3	MP3A	Mx	.004	.75
4	MP3A	X	0	5.75
5	MP3A	Z	7.344	5.75
6	MP3A	Mx	.004	5.75
7	MP3A	X	0	.75
8	MP3A	Z	7.344	.75
9	MP3A	Mx	-.004	.75
10	MP3A	X	0	5.75
11	MP3A	Z	7.344	5.75
12	MP3A	Mx	-.004	5.75
13	MP1A	X	0	2.5
14	MP1A	Z	4.246	2.5
15	MP1A	Mx	0	2.5
16	MP1A	X	0	4
17	MP1A	Z	4.246	4
18	MP1A	Mx	0	4
19	MP3A	X	0	2
20	MP3A	Z	3.378	2
21	MP3A	Mx	0	2
22	MP2A	X	0	2
23	MP2A	Z	3.378	2
24	MP2A	Mx	0	2
25	MP1A	X	0	2
26	MP1A	Z	7.335	2
27	MP1A	Mx	0	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-3.522	.75
2	MP3A	Z	6.1	.75
3	MP3A	Mx	.006	.75
4	MP3A	X	-3.522	5.75
5	MP3A	Z	6.1	5.75
6	MP3A	Mx	.006	5.75
7	MP3A	X	-3.522	.75
8	MP3A	Z	6.1	.75
9	MP3A	Mx	-.000115	.75
10	MP3A	X	-3.522	5.75
11	MP3A	Z	6.1	5.75
12	MP3A	Mx	-.000115	5.75
13	MP1A	X	-1.8	2.5
14	MP1A	Z	3.117	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-1.8	4
17	MP1A	Z	3.117	4
18	MP1A	Mx	.001	4
19	MP3A	X	-1.549	2
20	MP3A	Z	2.683	2
21	MP3A	Mx	-.000904	2
22	MP2A	X	-1.496	2
23	MP2A	Z	2.59	2
24	MP2A	Mx	-.000873	2
25	MP1A	X	-3.45	2
26	MP1A	Z	5.976	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
27	MP1A	Mx	-.002	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-5.58	.75
2	MP3A	Z	3.221	.75
3	MP3A	Mx	.006	.75
4	MP3A	X	-5.58	5.75
5	MP3A	Z	3.221	5.75
6	MP3A	Mx	.006	5.75
7	MP3A	X	-5.58	.75
8	MP3A	Z	3.221	.75
9	MP3A	Mx	.003	.75
10	MP3A	X	-5.58	5.75
11	MP3A	Z	3.221	5.75
12	MP3A	Mx	.003	5.75
13	MP1A	X	-1.999	2.5
14	MP1A	Z	1.154	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-1.999	4
17	MP1A	Z	1.154	4
18	MP1A	Mx	.001	4
19	MP3A	X	-2.198	2
20	MP3A	Z	1.269	2
21	MP3A	Mx	-.001	2
22	MP2A	X	-1.92	2
23	MP2A	Z	1.108	2
24	MP2A	Mx	-.001	2
25	MP1A	X	-5.223	2
26	MP1A	Z	3.015	2
27	MP1A	Mx	-.003	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-6.143	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	.005	.75
4	MP3A	X	-6.143	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	.005	5.75
7	MP3A	X	-6.143	.75
8	MP3A	Z	0	.75
9	MP3A	Mx	.005	.75
10	MP3A	X	-6.143	5.75
11	MP3A	Z	0	5.75
12	MP3A	Mx	.005	5.75
13	MP1A	X	-1.662	2.5
14	MP1A	Z	0	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-1.662	4
17	MP1A	Z	0	4
18	MP1A	Mx	.001	4
19	MP3A	X	-2.258	2
20	MP3A	Z	0	2
21	MP3A	Mx	-.001	2
22	MP2A	X	-1.829	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP2A	Z	0	2
24	MP2A	Mx	-.001	2
25	MP1A	X	-5.596	2
26	MP1A	Z	0	2
27	MP1A	Mx	-.003	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-5.58	.75
2	MP3A	Z	-3.221	.75
3	MP3A	Mx	.003	.75
4	MP3A	X	-5.58	5.75
5	MP3A	Z	-3.221	5.75
6	MP3A	Mx	.003	5.75
7	MP3A	X	-5.58	.75
8	MP3A	Z	-3.221	.75
9	MP3A	Mx	.006	.75
10	MP3A	X	-5.58	5.75
11	MP3A	Z	-3.221	5.75
12	MP3A	Mx	.006	5.75
13	MP1A	X	-1.999	2.5
14	MP1A	Z	-1.154	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-1.999	4
17	MP1A	Z	-1.154	4
18	MP1A	Mx	.001	4
19	MP3A	X	-2.198	2
20	MP3A	Z	-1.269	2
21	MP3A	Mx	-.001	2
22	MP2A	X	-1.92	2
23	MP2A	Z	-1.108	2
24	MP2A	Mx	-.001	2
25	MP1A	X	-5.223	2
26	MP1A	Z	-3.015	2
27	MP1A	Mx	-.003	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-3.522	.75
2	MP3A	Z	-6.1	.75
3	MP3A	Mx	-.000115	.75
4	MP3A	X	-3.522	5.75
5	MP3A	Z	-6.1	5.75
6	MP3A	Mx	-.000115	5.75
7	MP3A	X	-3.522	.75
8	MP3A	Z	-6.1	.75
9	MP3A	Mx	.006	.75
10	MP3A	X	-3.522	5.75
11	MP3A	Z	-6.1	5.75
12	MP3A	Mx	.006	5.75
13	MP1A	X	-1.8	2.5
14	MP1A	Z	-3.117	2.5
15	MP1A	Mx	.001	2.5
16	MP1A	X	-1.8	4
17	MP1A	Z	-3.117	4
18	MP1A	Mx	.001	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	-1.549	2
20	MP3A	Z	-2.683	2
21	MP3A	Mx	-.000904	2
22	MP2A	X	-1.496	2
23	MP2A	Z	-2.59	2
24	MP2A	Mx	-.000873	2
25	MP1A	X	-3.45	2
26	MP1A	Z	-5.976	2
27	MP1A	Mx	-.002	2

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M10	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M11	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	0

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-6.101	-6.101	0	%100
2	M2	Y	-8.97	-8.97	0	%100
3	MP1A	Y	-4.606	-4.606	0	%100
4	MP3A	Y	-5.27	-5.27	0	%100
5	MP2A	Y	-4.606	-4.606	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-7.87	-7.87	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-6.751	-6.751	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	-8.173	-8.173	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-6.751	-6.751	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.951	2.951	0	%100
2	M1	Z	-5.112	-5.112	0	%100
3	M2	X	1.007	1.007	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
4	M2	Z	-1.744	-1.744	0	%100
5	MP1A	X	3.376	3.376	0	%100
6	MP1A	Z	-5.847	-5.847	0	%100
7	MP3A	X	4.086	4.086	0	%100
8	MP3A	Z	-7.078	-7.078	0	%100
9	MP2A	X	3.376	3.376	0	%100
10	MP2A	Z	-5.847	-5.847	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.704	1.704	0	%100
2	M1	Z	-.984	-.984	0	%100
3	M2	X	5.231	5.231	0	%100
4	M2	Z	-3.02	-3.02	0	%100
5	MP1A	X	5.847	5.847	0	%100
6	MP1A	Z	-3.376	-3.376	0	%100
7	MP3A	X	7.078	7.078	0	%100
8	MP3A	Z	-4.086	-4.086	0	%100
9	MP2A	X	5.847	5.847	0	%100
10	MP2A	Z	-3.376	-3.376	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	8.054	8.054	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	6.751	6.751	0	%100
6	MP1A	Z	0	0	0	%100
7	MP3A	X	8.173	8.173	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	6.751	6.751	0	%100
10	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.704	1.704	0	%100
2	M1	Z	.984	.984	0	%100
3	M2	X	5.231	5.231	0	%100
4	M2	Z	3.02	3.02	0	%100
5	MP1A	X	5.847	5.847	0	%100
6	MP1A	Z	3.376	3.376	0	%100
7	MP3A	X	7.078	7.078	0	%100
8	MP3A	Z	4.086	4.086	0	%100
9	MP2A	X	5.847	5.847	0	%100
10	MP2A	Z	3.376	3.376	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.951	2.951	0	%100
2	M1	Z	5.112	5.112	0	%100
3	M2	X	1.007	1.007	0	%100
4	M2	Z	1.744	1.744	0	%100
5	MP1A	X	3.376	3.376	0	%100
6	MP1A	Z	5.847	5.847	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
7	MP3A	X	4.086	4.086	0	%100
8	MP3A	Z	7.078	7.078	0	%100
9	MP2A	X	3.376	3.376	0	%100
10	MP2A	Z	5.847	5.847	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	7.87	7.87	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	6.751	6.751	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	8.173	8.173	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	6.751	6.751	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.951	-2.951	0	%100
2	M1	Z	5.112	5.112	0	%100
3	M2	X	-1.007	-1.007	0	%100
4	M2	Z	1.744	1.744	0	%100
5	MP1A	X	-3.376	-3.376	0	%100
6	MP1A	Z	5.847	5.847	0	%100
7	MP3A	X	-4.086	-4.086	0	%100
8	MP3A	Z	7.078	7.078	0	%100
9	MP2A	X	-3.376	-3.376	0	%100
10	MP2A	Z	5.847	5.847	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.704	-1.704	0	%100
2	M1	Z	.984	.984	0	%100
3	M2	X	-5.231	-5.231	0	%100
4	M2	Z	3.02	3.02	0	%100
5	MP1A	X	-5.847	-5.847	0	%100
6	MP1A	Z	3.376	3.376	0	%100
7	MP3A	X	-7.078	-7.078	0	%100
8	MP3A	Z	4.086	4.086	0	%100
9	MP2A	X	-5.847	-5.847	0	%100
10	MP2A	Z	3.376	3.376	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-8.054	-8.054	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	-6.751	-6.751	0	%100
6	MP1A	Z	0	0	0	%100
7	MP3A	X	-8.173	-8.173	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	-6.751	-6.751	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
10	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.704	-1.704	0	%100
2	M1	Z	-.984	-.984	0	%100
3	M2	X	-5.231	-5.231	0	%100
4	M2	Z	-3.02	-3.02	0	%100
5	MP1A	X	-5.847	-5.847	0	%100
6	MP1A	Z	-3.376	-3.376	0	%100
7	MP3A	X	-7.078	-7.078	0	%100
8	MP3A	Z	-4.086	-4.086	0	%100
9	MP2A	X	-5.847	-5.847	0	%100
10	MP2A	Z	-3.376	-3.376	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.951	-2.951	0	%100
2	M1	Z	-5.112	-5.112	0	%100
3	M2	X	-1.007	-1.007	0	%100
4	M2	Z	-1.744	-1.744	0	%100
5	MP1A	X	-3.376	-3.376	0	%100
6	MP1A	Z	-5.847	-5.847	0	%100
7	MP3A	X	-4.086	-4.086	0	%100
8	MP3A	Z	-7.078	-7.078	0	%100
9	MP2A	X	-3.376	-3.376	0	%100
10	MP2A	Z	-5.847	-5.847	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-2.422	-2.422	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-2.284	-2.284	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	-2.535	-2.535	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-2.284	-2.284	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.908	.908	0	%100
2	M1	Z	-1.573	-1.573	0	%100
3	M2	X	.259	.259	0	%100
4	M2	Z	-.449	-.449	0	%100
5	MP1A	X	1.142	1.142	0	%100
6	MP1A	Z	-1.978	-1.978	0	%100
7	MP3A	X	1.268	1.268	0	%100
8	MP3A	Z	-2.196	-2.196	0	%100
9	MP2A	X	1.142	1.142	0	%100
10	MP2A	Z	-1.978	-1.978	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.524	.524	0	%100
2	M1	Z	-.303	-.303	0	%100
3	M2	X	1.347	1.347	0	%100
4	M2	Z	-.778	-.778	0	%100
5	MP1A	X	1.978	1.978	0	%100
6	MP1A	Z	-1.142	-1.142	0	%100
7	MP3A	X	2.196	2.196	0	%100
8	MP3A	Z	-1.268	-1.268	0	%100
9	MP2A	X	1.978	1.978	0	%100
10	MP2A	Z	-1.142	-1.142	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	2.074	2.074	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	2.284	2.284	0	%100
6	MP1A	Z	0	0	0	%100
7	MP3A	X	2.535	2.535	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	2.284	2.284	0	%100
10	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.524	.524	0	%100
2	M1	Z	.303	.303	0	%100
3	M2	X	1.347	1.347	0	%100
4	M2	Z	.778	.778	0	%100
5	MP1A	X	1.978	1.978	0	%100
6	MP1A	Z	1.142	1.142	0	%100
7	MP3A	X	2.196	2.196	0	%100
8	MP3A	Z	1.268	1.268	0	%100
9	MP2A	X	1.978	1.978	0	%100
10	MP2A	Z	1.142	1.142	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.908	.908	0	%100
2	M1	Z	1.573	1.573	0	%100
3	M2	X	.259	.259	0	%100
4	M2	Z	.449	.449	0	%100
5	MP1A	X	1.142	1.142	0	%100
6	MP1A	Z	1.978	1.978	0	%100
7	MP3A	X	1.268	1.268	0	%100
8	MP3A	Z	2.196	2.196	0	%100
9	MP2A	X	1.142	1.142	0	%100
10	MP2A	Z	1.978	1.978	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	2.422	2.422	0	%100
3	M2	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
4	M2	Z	0	0	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	2.284	2.284	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	2.535	2.535	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	2.284	2.284	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.908	-.908	0	%100
2	M1	Z	1.573	1.573	0	%100
3	M2	X	-.259	-.259	0	%100
4	M2	Z	.449	.449	0	%100
5	MP1A	X	-1.142	-1.142	0	%100
6	MP1A	Z	1.978	1.978	0	%100
7	MP3A	X	-1.268	-1.268	0	%100
8	MP3A	Z	2.196	2.196	0	%100
9	MP2A	X	-1.142	-1.142	0	%100
10	MP2A	Z	1.978	1.978	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.524	-.524	0	%100
2	M1	Z	.303	.303	0	%100
3	M2	X	-1.347	-1.347	0	%100
4	M2	Z	.778	.778	0	%100
5	MP1A	X	-1.978	-1.978	0	%100
6	MP1A	Z	1.142	1.142	0	%100
7	MP3A	X	-2.196	-2.196	0	%100
8	MP3A	Z	1.268	1.268	0	%100
9	MP2A	X	-1.978	-1.978	0	%100
10	MP2A	Z	1.142	1.142	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-2.074	-2.074	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	-2.284	-2.284	0	%100
6	MP1A	Z	0	0	0	%100
7	MP3A	X	-2.535	-2.535	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	-2.284	-2.284	0	%100
10	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.524	-.524	0	%100
2	M1	Z	-.303	-.303	0	%100
3	M2	X	-1.347	-1.347	0	%100
4	M2	Z	-.778	-.778	0	%100
5	MP1A	X	-1.978	-1.978	0	%100
6	MP1A	Z	-1.142	-1.142	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
7	MP3A	X	-2.196	-2.196	0	%100
8	MP3A	Z	-1.268	-1.268	0	%100
9	MP2A	X	-1.978	-1.978	0	%100
10	MP2A	Z	-1.142	-1.142	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.908	-.908	0	%100
2	M1	Z	-1.573	-1.573	0	%100
3	M2	X	-.259	-.259	0	%100
4	M2	Z	-.449	-.449	0	%100
5	MP1A	X	-1.142	-1.142	0	%100
6	MP1A	Z	-1.978	-1.978	0	%100
7	MP3A	X	-1.268	-1.268	0	%100
8	MP3A	Z	-2.196	-2.196	0	%100
9	MP2A	X	-1.142	-1.142	0	%100
10	MP2A	Z	-1.978	-1.978	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-.5	-.5	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-.429	-.429	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	-.519	-.519	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-.429	-.429	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.188	.188	0	%100
2	M1	Z	-.325	-.325	0	%100
3	M2	X	.064	.064	0	%100
4	M2	Z	-.111	-.111	0	%100
5	MP1A	X	.215	.215	0	%100
6	MP1A	Z	-.372	-.372	0	%100
7	MP3A	X	.26	.26	0	%100
8	MP3A	Z	-.45	-.45	0	%100
9	MP2A	X	.215	.215	0	%100
10	MP2A	Z	-.372	-.372	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.108	.108	0	%100
2	M1	Z	-.063	-.063	0	%100
3	M2	X	.332	.332	0	%100
4	M2	Z	-.192	-.192	0	%100
5	MP1A	X	.372	.372	0	%100
6	MP1A	Z	-.215	-.215	0	%100
7	MP3A	X	.45	.45	0	%100
8	MP3A	Z	-.26	-.26	0	%100
9	MP2A	X	.372	.372	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
10	MP2A	Z	-.215	-.215	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	.512	.512	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	.429	.429	0	%100
6	MP1A	Z	0	0	0	%100
7	MP3A	X	.519	.519	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	.429	.429	0	%100
10	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.108	.108	0	%100
2	M1	Z	.063	.063	0	%100
3	M2	X	.332	.332	0	%100
4	M2	Z	.192	.192	0	%100
5	MP1A	X	.372	.372	0	%100
6	MP1A	Z	.215	.215	0	%100
7	MP3A	X	.45	.45	0	%100
8	MP3A	Z	.26	.26	0	%100
9	MP2A	X	.372	.372	0	%100
10	MP2A	Z	.215	.215	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.188	.188	0	%100
2	M1	Z	.325	.325	0	%100
3	M2	X	.064	.064	0	%100
4	M2	Z	.111	.111	0	%100
5	MP1A	X	.215	.215	0	%100
6	MP1A	Z	.372	.372	0	%100
7	MP3A	X	.26	.26	0	%100
8	MP3A	Z	.45	.45	0	%100
9	MP2A	X	.215	.215	0	%100
10	MP2A	Z	.372	.372	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	.5	.5	0	%100
3	M2	X	0	0	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	.429	.429	0	%100
7	MP3A	X	0	0	0	%100
8	MP3A	Z	.519	.519	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	.429	.429	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.188	-.188	0	%100
2	M1	Z	.325	.325	0	%100
3	M2	X	-.064	-.064	0	%100
4	M2	Z	.111	.111	0	%100
5	MP1A	X	-.215	-.215	0	%100
6	MP1A	Z	.372	.372	0	%100
7	MP3A	X	-.26	-.26	0	%100
8	MP3A	Z	.45	.45	0	%100
9	MP2A	X	-.215	-.215	0	%100
10	MP2A	Z	.372	.372	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.108	-.108	0	%100
2	M1	Z	.063	.063	0	%100
3	M2	X	-.332	-.332	0	%100
4	M2	Z	.192	.192	0	%100
5	MP1A	X	-.372	-.372	0	%100
6	MP1A	Z	.215	.215	0	%100
7	MP3A	X	-.45	-.45	0	%100
8	MP3A	Z	.26	.26	0	%100
9	MP2A	X	-.372	-.372	0	%100
10	MP2A	Z	.215	.215	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M2	X	-.512	-.512	0	%100
4	M2	Z	0	0	0	%100
5	MP1A	X	-.429	-.429	0	%100
6	MP1A	Z	0	0	0	%100
7	MP3A	X	-.519	-.519	0	%100
8	MP3A	Z	0	0	0	%100
9	MP2A	X	-.429	-.429	0	%100
10	MP2A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.108	-.108	0	%100
2	M1	Z	-.063	-.063	0	%100
3	M2	X	-.332	-.332	0	%100
4	M2	Z	-.192	-.192	0	%100
5	MP1A	X	-.372	-.372	0	%100
6	MP1A	Z	-.215	-.215	0	%100
7	MP3A	X	-.45	-.45	0	%100
8	MP3A	Z	-.26	-.26	0	%100
9	MP2A	X	-.372	-.372	0	%100
10	MP2A	Z	-.215	-.215	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.188	-.188	0	%100
2	M1	Z	-.325	-.325	0	%100
3	M2	X	-.064	-.064	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitu...	Start Location[ft,%]	End Location[ft,%]
4	M2	Z	-.111	-.111	0	%100
5	MP1A	X	-.215	-.215	0	%100
6	MP1A	Z	-.372	-.372	0	%100
7	MP3A	X	-.26	-.26	0	%100
8	MP3A	Z	-.45	-.45	0	%100
9	MP2A	X	-.215	-.215	0	%100
10	MP2A	Z	-.372	-.372	0	%100

Member Area Loads

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

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

	Member	Shape	Code Check	Loc[ft]	LC	Sh..	Loc[ft]	...	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
1	M1	PIPE_...	.311	2	35	.129	1.542		19	5985..	65205	5.749	5.749	...	H1-...
2	M2	HSS4X...	.131	0	5	.145	0	y	34	1393..	1395..	16.1...	16.1...	...	H1-...
3	MP1A	PIPE_...	.136	3.281	7	.042	2.479		4	1785..	32130	1.872	1.872	...	H1-...
4	MP3A	PIPE_...	.199	3.281	7	.066	3.354		10	3396..	50715	3.596	3.596	...	H1-...
5	MP2A	PIPE_...	.082	3.208	1	.016	3.208		11	1785..	32130	1.872	1.872	...	H1-...

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	N25	max	747.703	10	1380.727	34	1000.762	1	-.448	1	1.257	11	.966	40
2		min	-747.703	4	630.726	4	-1000.762	7	-1.618	19	-1.259	5	-1.497	34
3	Totals:	max	747.703	10	1380.727	34	1000.762	1						
4		min	-747.703	4	630.726	4	-1000.762	7						

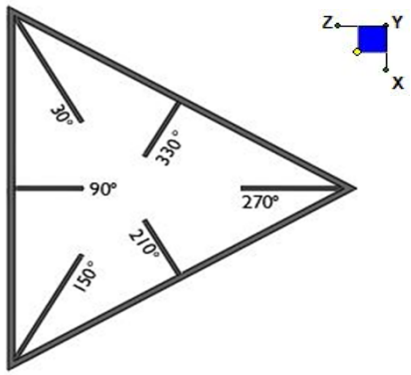
Client:	Verizon	Date:	6/30/2021
Site Name:	STRATFORD W CT		
Project No.	21777586A		
Title:	Antenna Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

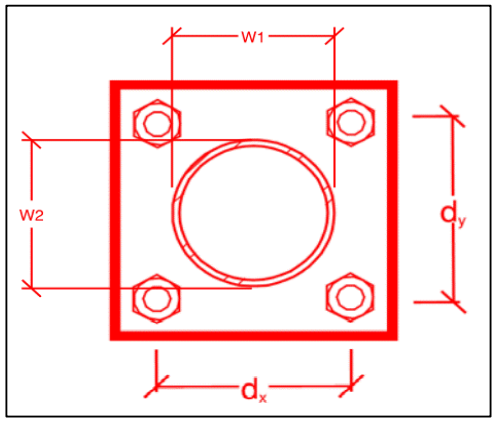
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N25	90



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)* :	6
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	6
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	6.7
Required Shear Strength (kips):	7.4
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**8.1%***
Shear Capacity Overall:	**14.8%**



**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
Plate Height (in):	8
W1 (in):	4
W2 (in):	4
Fy (ksi, plate):	36
t_{Plate} (in):	0.5
Weld Size (1/16 in):	4
Phi*Rn (kip/in):	5.57
Required Weld Strength (kip/in):	1.02
Plate Bending Capacity:	**28.0%**
Weld Capacity:	**18.3%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	2.1
$Phi*Mn_{xx}$ *(kip-in)* :	16.2
Mu_{yy} *(kip-in)* :	2.4
$Phi*Mn_{yy}$ *(kip-in)* :	16.2

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

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 installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed 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 equipment 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 equipment.

- 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
- 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.

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 any other information the contractor deems necessary to share that was identified:

Issue:

Contractor shall replace existing mount pipe in position 3 on all sectors (position 1 being on the left side when looking from behind) with new 84" long P2.5 STD mount pipes. Connect new mount pipe to existing face horizontal using crossover plates (VZWSMART-MSK2).

Contractor shall install new safety climb wire clip standoff on to the existing mount collar threaded rods such that the existing wire rope does not make contact with existing mount members.

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

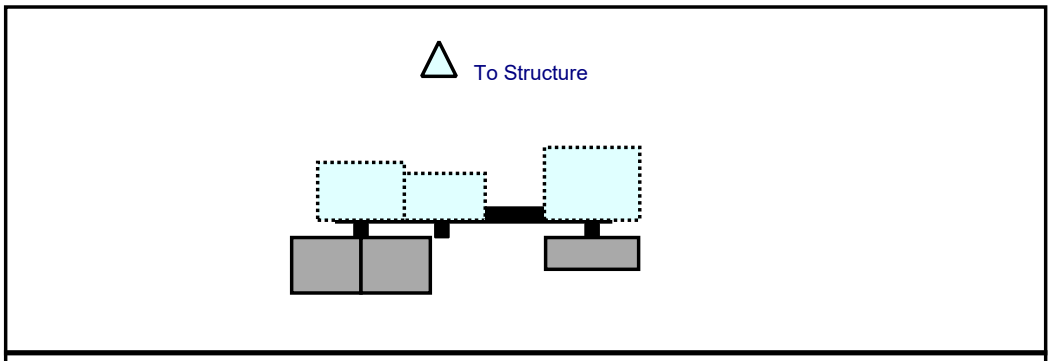
Structure: 6 9 6-VZW - STRATFORD W CT

Sector: **A** 6/30/2021

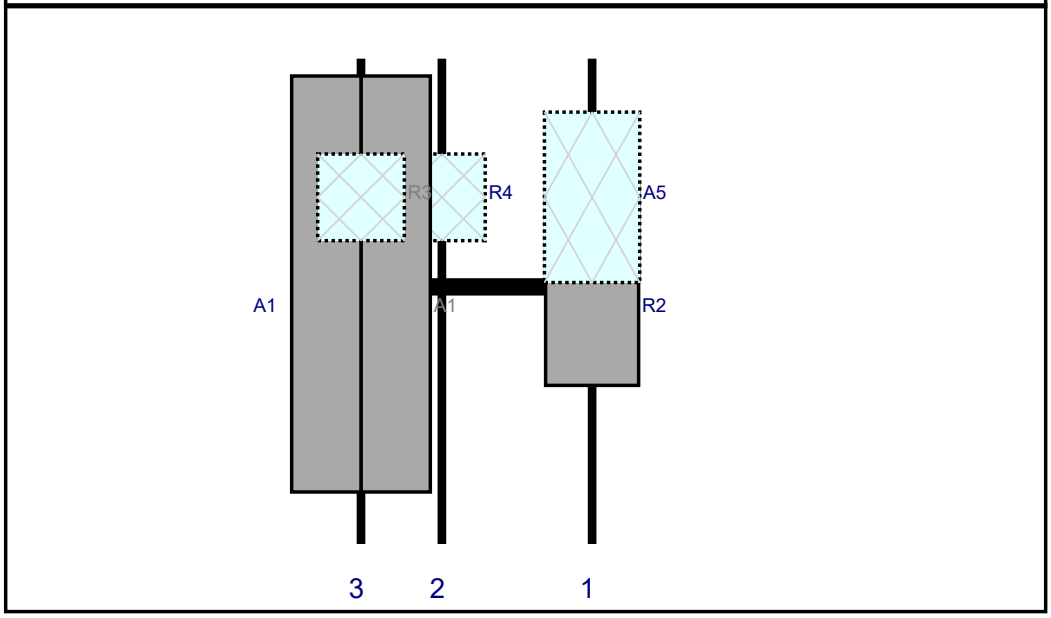
Structure Type: Monopole 10050679

Mount Elev: 77.00 Page: 1

Plan View



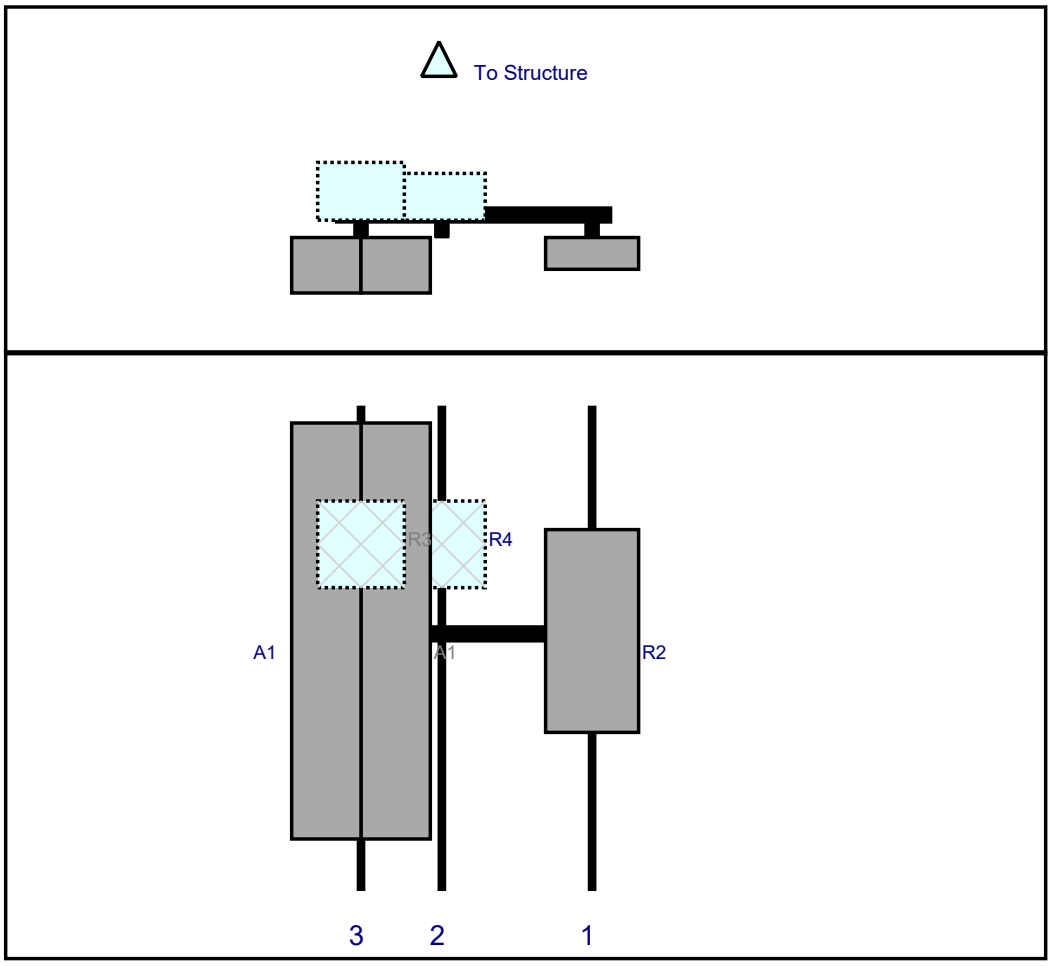
Front View
Looking at Structure



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
R4	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	18.5	2	a	Behind	24	0	Added	
A1	QS6656-5D	72	12	4.5	3	a	Front	39	6	Added	
A1	QS6656-5D	72	12	4.5	3	b	Front	39	-6	Added	
R3	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	4.5	3	a	Behind	24	0	Added	
R2	MT6407-77A	35.1	16.1	44.5	1	a	Front	39	0	Added	
A5	DB-C1-12C-24AB-0Z	29.5	16.5	44.5	1	a	Behind	24	0	Added	

Plan View

Front View
Looking at Structure



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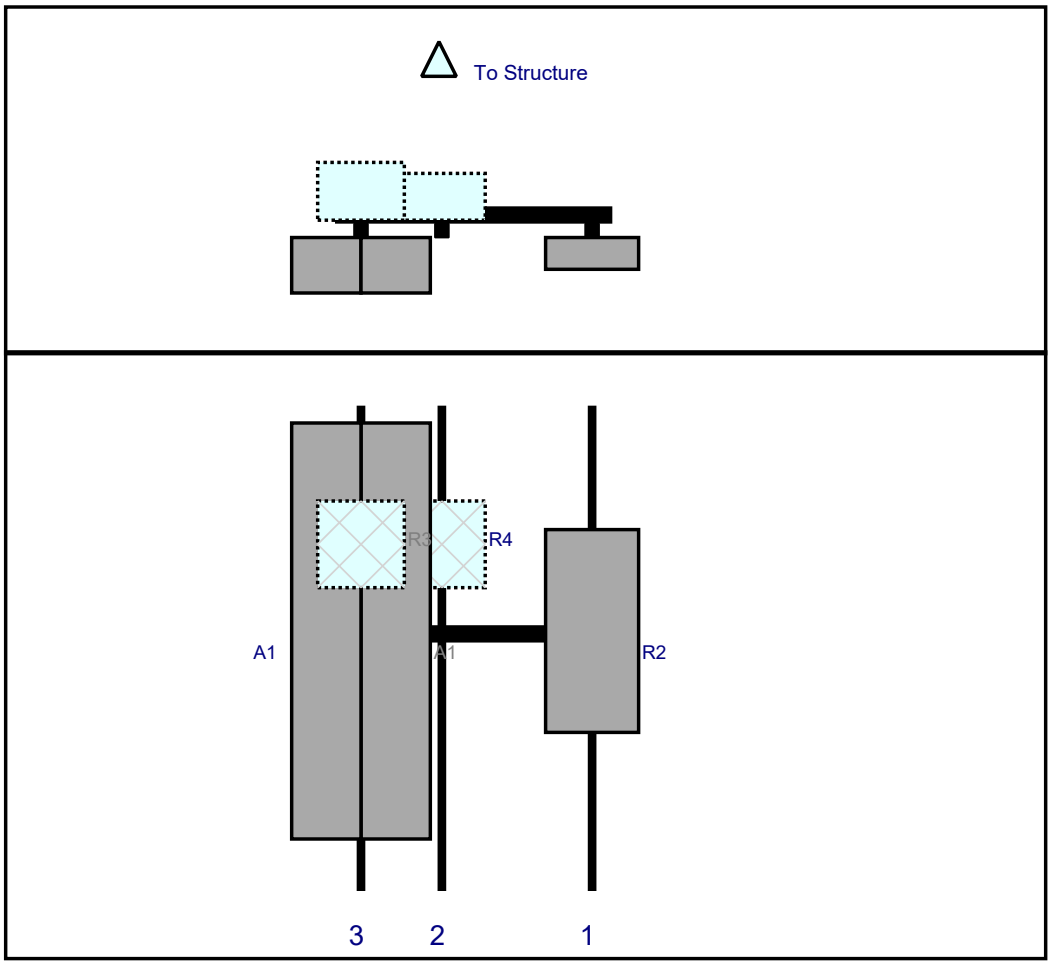
A1	QS6656-5D	72	12	4.5	3	a	Front	39	6	Added	
A1	QS6656-5D	72	12	4.5	3	b	Front	39	-6	Added	
R3	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	4.5	3	a	Behind	24	0	Added	

Plan View

Front View
Looking at Structure



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R3	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	4.5	3	a	Behind	24	0	Added	

Maser Consulting Connecticut

Subject	TIA-222-H Usage
Site Information	Site ID: 467946-VZW Site Name: STRATFORD CT Carrier Name: Verizon Wireless Address: 23 Stonybrook Road Stratford, CT 06614 Fairfield County Latitude: 41.203278° Longitude: -73.148625°
Structure Information	Tower Type: 125-Ft Monopole Mount Type: 4.00-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. The 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 tower site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

Eric Anderson, PE
Technical Specialist

Site Name: ***STRATFORD W 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	507	2027	77	0.0123	0.5007	2.46%
VZW Cellular	874	4	507	2027	77	0.0123	0.5827	2.11%
VZW PCS	1980	4	1891	7566	77	0.0459	1.0000	4.59%
VZW AWS	2120	4	1891	7566	77	0.0459	1.0000	4.59%
VZW CBAND	3730.08	4	6531	26125	77	0.1585	1.0000	15.85%

Total Percentage of Maximum Permissible Exposure 29.59%

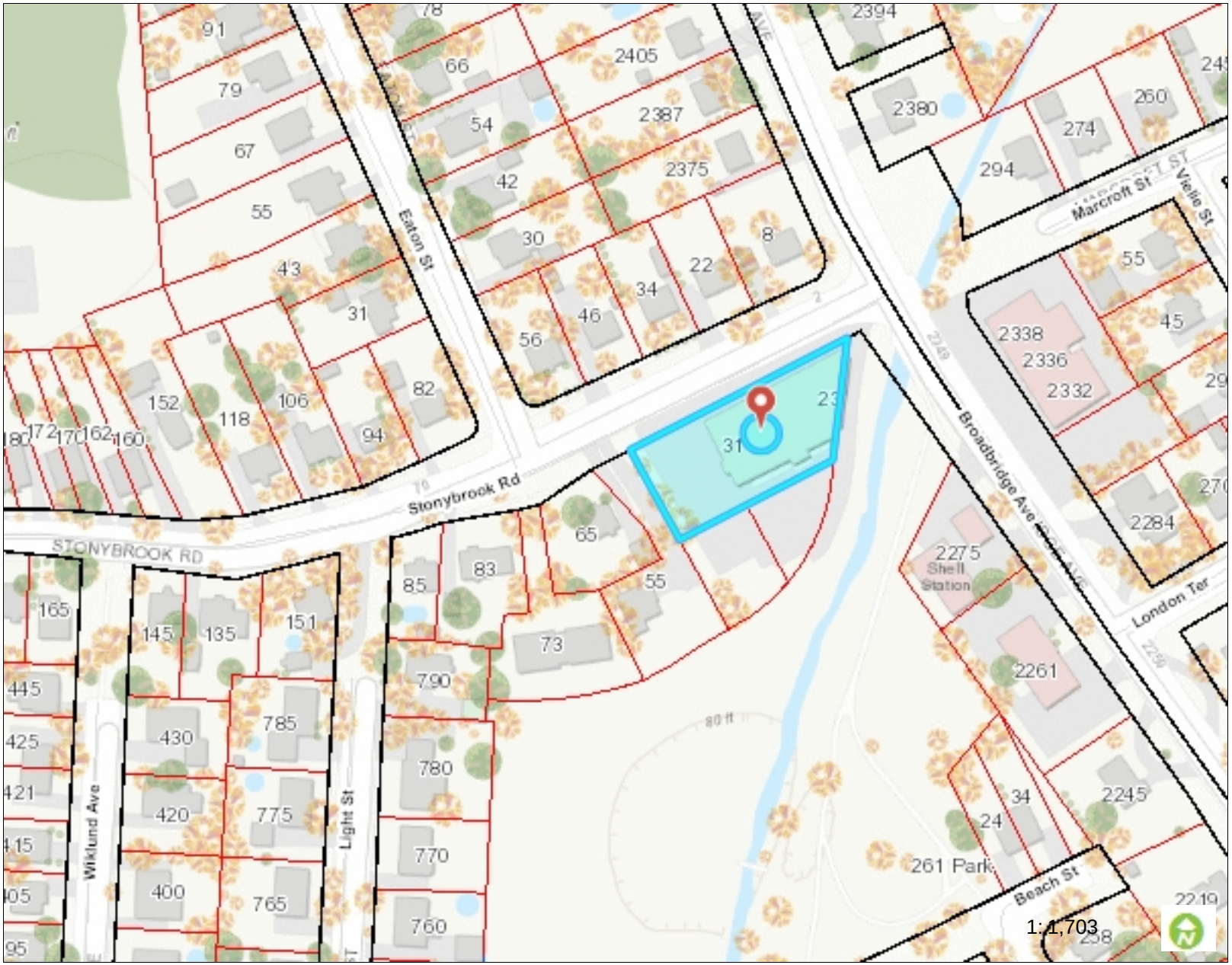
*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992
**Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council's November 10, 2015 Memorandum for Exempt Modification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

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

Absolute worst case maximum values used.

Town of Stratford

Map Title



Legend

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

283.9 0 141.95 283.9 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere
Created by Greater Bridgeport Regional Council

METROCOG
Connecticut Metropolitan Council of Governments

23 STONYBROOK RD

Location	23 STONYBROOK RD	**Mblu**	30/11 10/ 16/ /
Acct#	1626900	**Owner**	STONYBROOK MANAGEMENT LLC
PBN		**Assessment**	$673,750
Appraisal	$962,500	**PID**	17088
Building Count	1		

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$740,700	$221,800	$962,500
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$518,490	$155,260	$673,750

Owner of Record

Owner	STONYBROOK MANAGEMENT LLC	**Sale Price**	$900,000
Co-Owner		**Certificate**	
Address	124 KNAPP ST EASTON , CT 06612	**Book**	2604
		Page	0275
		Sale Date	03/24/2005
		Instrument	00

Ownership History

Ownership History						
Owner	**Sale Price**	**Certificate**	**Instrument**	**Sale Date**	**Book**	**Page**
STONYBROOK MANAGEMENT LLC	$900,000		00	03/24/2005	2604	0275
STONYBROOK CENTER INC THE	$90,000		UNKQ	08/13/1969	0451	0378

Building Information

Building 1 : Section 1

Year Built: 1969

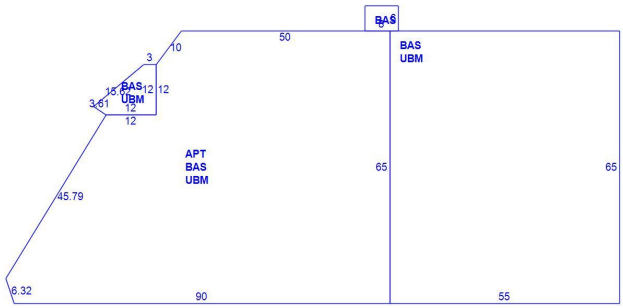
Building Photo

Living Area: 13,264
Building Percent Good: 65

Building Attributes	
Field	**Description**
STYLE	Retail/Apt
MODEL	Commercial
Stories:	2 Stories
Occupancy	8.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Built Up
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	Partial
Struct Class	
Bldg Use	Nbhd Ctr
Usrfld 215	
Usrfld 216	
Usrfld 217	
Usrfld 218	
Usrfld 219	
1st Floor Use:	323
Heat/AC	Heat/AC Split
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	Ceil & Walls
Rooms/Prtns	Average
Wall Height	9.00
% Comm Wall	

(http://images.vgsi.com/photos/StratfordCTPhotos/\00\07\19\50.jpg)

Building Layout



(ParcelSketch.ashx?pid=17088&bid=17088)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	8,502	8,502
APT	Apartment	4,762	4,762
UBM	Unfinished Basement	8,454	0
		21,718	13,264

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
A/C	Air Condition	5679.60 S.F.	$9,500	1
SPR1	Sprinklers - Wet	3000.00 S.F.	$3,900	1

Land

Land

Land Use

Use Code	323
Description	Nbhd Ctr
Zone	
Neighborhood	1
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0.46
Frontage	0
Depth	0
Assessed Value	$155,260
Appraised Value	$221,800

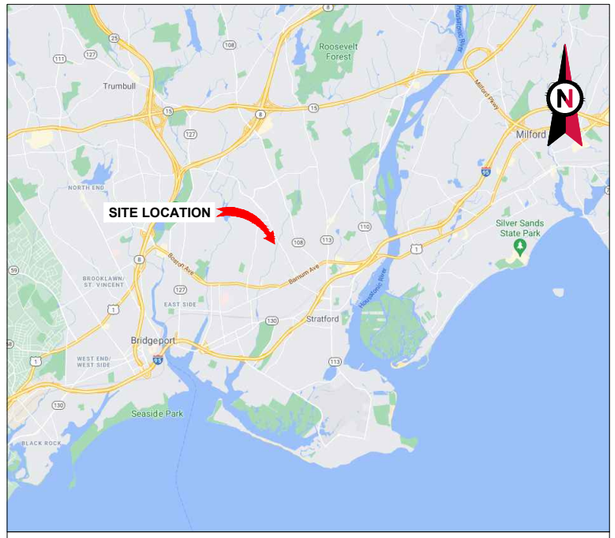
Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV	Paving	AS	Asphalt	16000.00 S.F.	$13,200	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$740,700	$221,800	$962,500
2019	$740,700	$221,800	$962,500
2018	$726,500	$212,800	$939,300

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$518,490	$155,260	$673,750
2019	$518,490	$155,260	$673,750
2018	$508,550	$148,960	$657,510



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: STONEYBROOK RD CT
ATC SITE NUMBER: 283420
VERIZON SITE NAME: STRATFORD W CT
VERIZON SITE NUMBER:467946
SITE ADDRESS: 23 STONYBROOK ROAD
STRATFORD, CT 06614

LOCATION MAP

VERIZON
ANTENNA AMENDMENT DRAWINGS

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

UTILITY COMPANIES

POWER COMPANY: UNITED ILLUMINATING
PHONE: (800) 722-5584

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (800) 376-6843

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

PROJECT SUMMARY

SITE ADDRESS:

23 STONYBROOK ROAD

STRATFORD, CT 06614

COUNTY: FAIRFIELD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.20327777

LONGITUDE: -73.148625

GROUND ELEVATION: 77' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:

ENGINEERED TOWER SOLUTIONS, PLLC
3227 WELLINGTON COURT
RALEIGH, NC 27615

PROPERTY OWNER:

JOHN D MIRANDA
23 STONYBROOK ROAD
STRATFORD, CT 06614

APPLICANT:

VERIZON WIRELESS

PROJECT DESCRIPTION

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

REMOVE (9) ANTENNA(s), (6) RRU(s), (1) OVP, (12) 1-5/8" COAX CABLE(s), AND (1) 6X12 HYBRID CABLE

INSTALL (1) RRU RING MOUNT, (3) DUAL MOUNTING BRACKETS, (9) ANTENNA(s), (6) RRU(s), (1) OVP, AND (2) 1-5/8" HYBRID CABLE(s)

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 ENTITLED 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 A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

FROM DOWNTOWN NEW HAVEN START OUT GOING NORTHEAST ON CHURCH ST TOWARD WALL ST. CHURCH ST BECOMES WHITNEY AVE. TURN RIGHT ONTO TRUMBULL ST. TURN SLIGHT LEFT TO TAKE THE I-91 S/I-91 N RAMP. MERGE ONTO I-91 S TOWARD I-95/NEW LONDON/N.Y.CITY. MERGE ONTO I-95 S VIA THE EXIT ON THE LEFT TOWARD N Y CITY. TAKE EXIT 32 TOWARD W BROAD ST/STRATFORD. MERGE ONTO LINDEN AVE. TAKE THE 1ST RIGHT ONTO W BROAD ST. TAKE THE 1ST RIGHT ONTO W BROAD ST. TURN RIGHT ONTO BARNUM AVE/US-1 N. TAKE THE 2ND LEFT ONTO BROADBRIDGE AVE. TURN LEFT ONTO STONYBROOK RD.SITE IS ON THE LEFT.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	08/19/21	CR
G-002	GENERAL NOTES	0	08/19/21	CR
C-101	DETAILED SITE PLAN	0	08/19/21	CR
C-201	TOWER ELEVATION	0	08/19/21	CR
C-401	ANTENNA INFORMATION & SCHEDULE	0	08/19/21	CR
C-501	CONSTRUCTION DETAILS	0	08/19/21	CR
E-501	GROUNDING DETAILS	0	08/19/21	CR
R-601-MA	SUPPLEMENTAL: MOUNT ANALYSIS	-	-	-

AMERICAN TOWER®

ETS ENGINEERED TOWER SOLUTIONS, PLLC

3227 WELLINGTON COURT
RALEIGH, NC 27615
o: 919-782-2710, f: 919-435-0631
www.engineeredtowersolutions.com

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CR	08/19/21

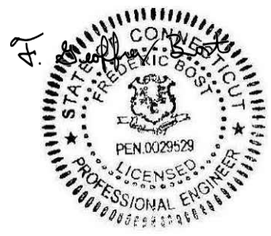
ATC SITE NUMBER:
283420

ATC SITE NAME:
STONEYBROOK RD CT

VERIZON SITE NAME:
STRATFORD W CT

SITE ADDRESS:
23 STONYBROOK ROAD
STRATFORD, CT 06614

SEAL:



08/19/21

verizon

DATE DRAWN:	08/19/21
ATC JOB NO:	13698731_D1
CUSTOMER ID:	STRATFORD W CT
CUSTOMER #:	467946

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "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 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 REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON 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 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 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 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 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 REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON 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 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 REP. ANY WORK FOUND BY THE VERIZON 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 FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON 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 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 OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON 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 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.

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CR	08/19/21

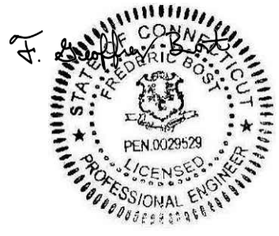
ATC SITE NUMBER:
283420

ATC SITE NAME:
STONEYBROOK RD CT

VERIZON SITE NAME:
STRATFORD W CT

SITE ADDRESS:
23 STONYBROOK ROAD
STRATFORD, CT 06614

SEAL:



08/19/21

verizon

DATE DRAWN:	08/19/21
ATC JOB NO:	13698731_D1
CUSTOMER ID:	STRATFORD W CT
CUSTOMER #:	467946

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

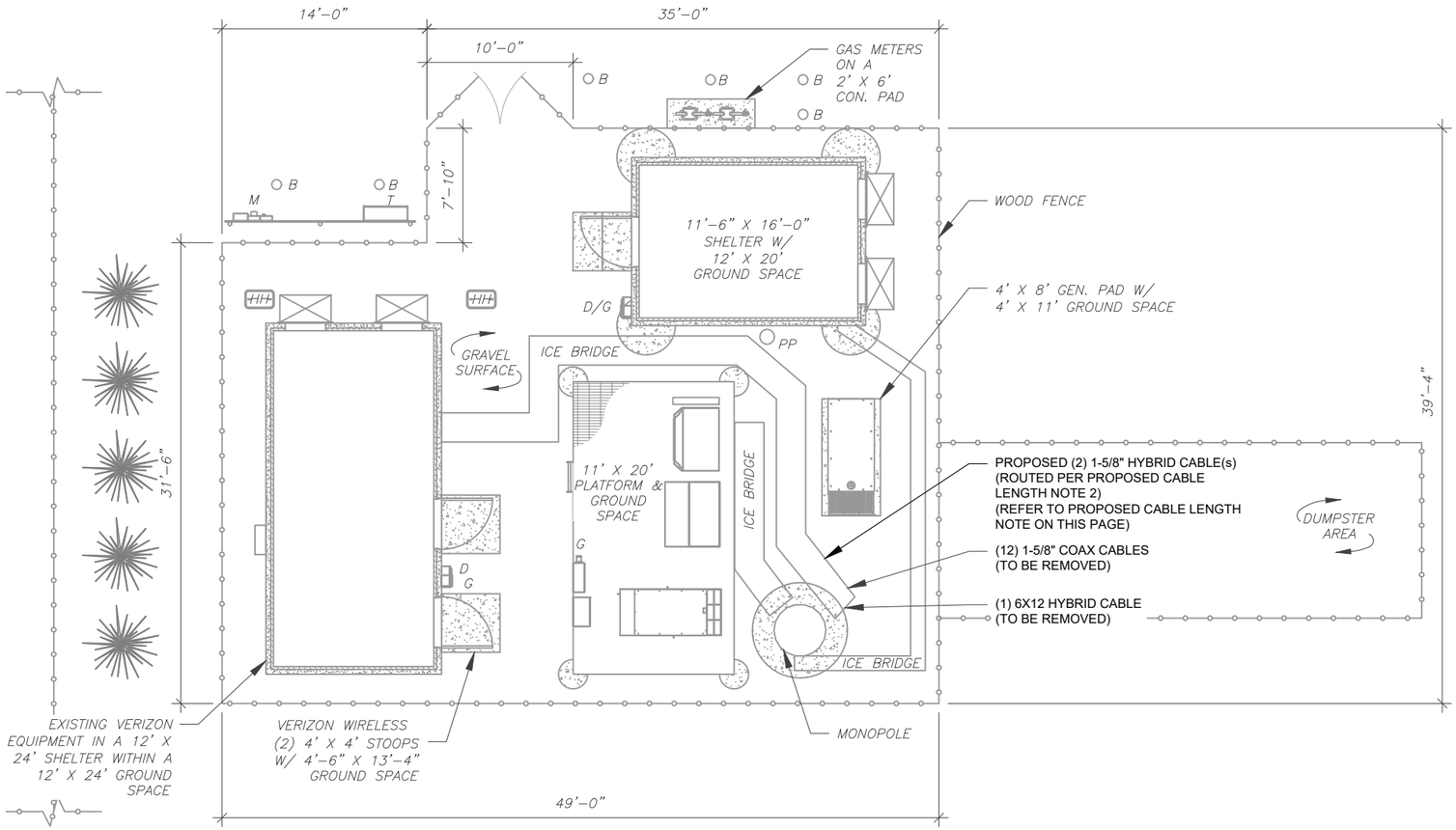
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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



PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **141'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.

1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

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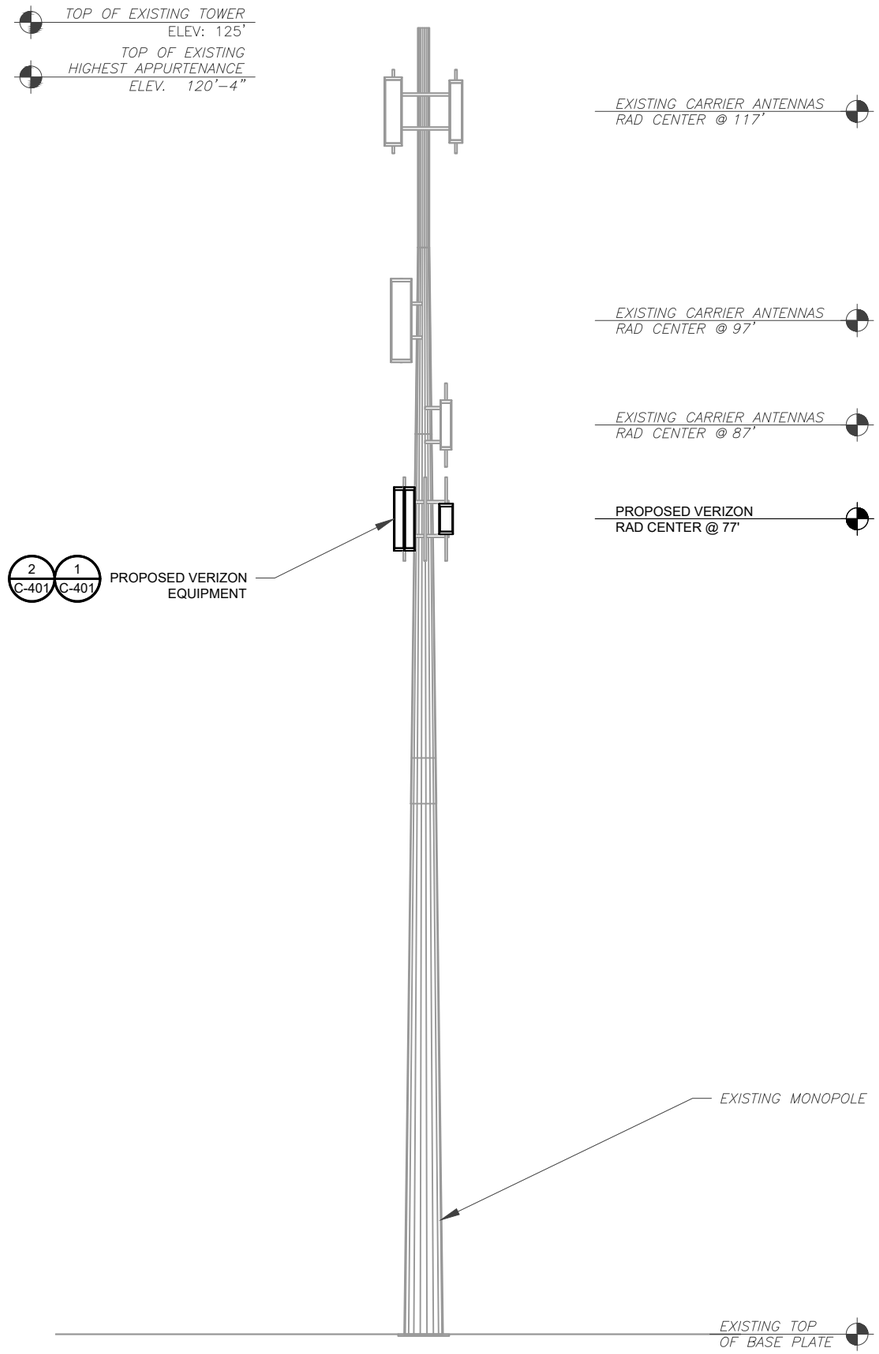
CUSTOMER #:	467946

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 JUNE 30, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

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. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
4. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)
5. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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SEAL:

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verizon

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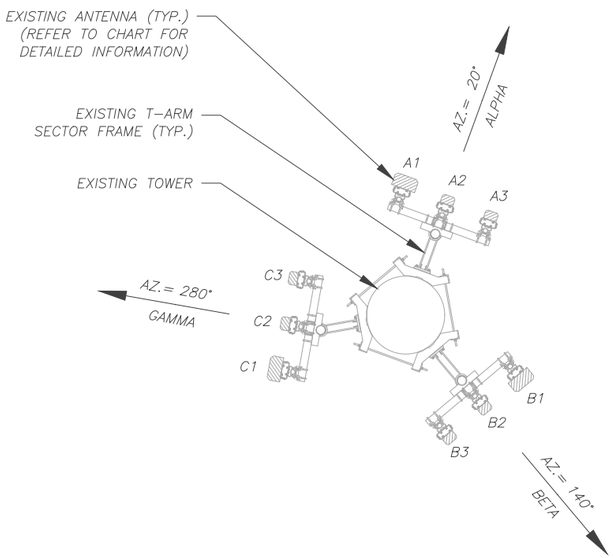
CUSTOMER ID:	STRATFORD W CT
CUSTOMER #:	467946

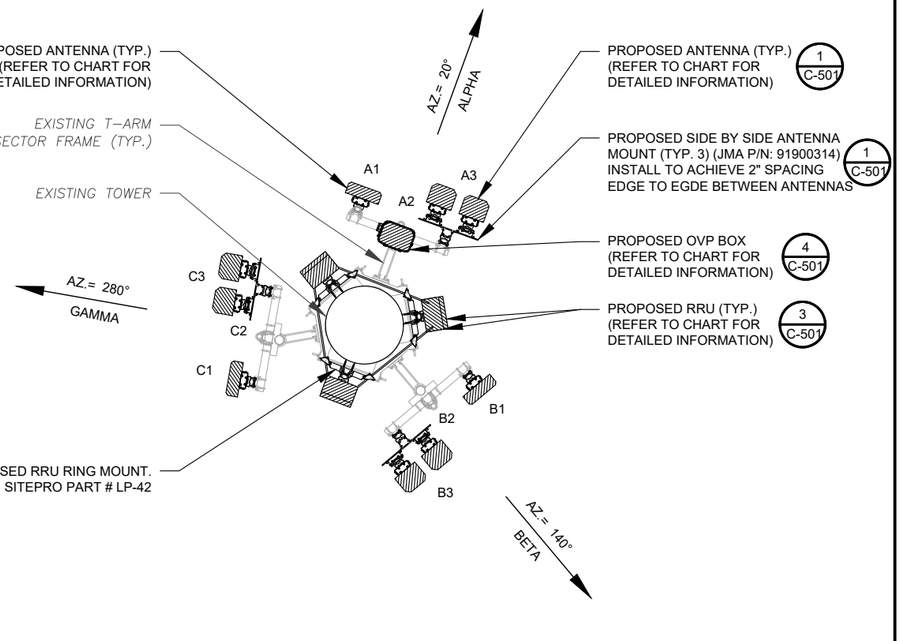
TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY MASER CONSULTING CONNECTICUT, DATED JUNE 30, 2021, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

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	77'	20°	A1	BXA-70063-6CF-2	LTE-700	0/2	RMV	–	–
			A2	BXA-171063-12CF-EDIN-2	LTE-AWS	0/2	RMV	–	–
			A3	BXA-171063-12CF-EDIN-2	LTE-AWS	0/2	RMV	–	–
BETA	77'	140°	B1	BXA-70063-6CF-2	LTE-700	2/2	RMV	–	–
			B2	BXA-171063-12CF-EDIN-2	LTE-AWS	0/2	RMV	–	–
			B3	BXA-171063-12CF-EDIN-2	LTE-AWS	0/2	RMV	–	–
GAMMA	77'	280°	C1	BXA-70063-6CF-2	LTE-700	2/2	RMV	–	–
			C2	BXA-171063-12CF-EDIN-2	LTE-AWS	0/2	RMV	–	–
			C3	BXA-171063-12CF-EDIN-2	LTE-AWS	0/2	RMV	–	–

NOTES

1. CONFIRM WITH VERIZON 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	77'	20°	A1	MT6407-77A	5G-SUB6	0/3	ADD	-	-
			A2	-	-	-	-	-	-
			A3	QS6656-5D	LTE-700/850/1900/AWS	0/2	ADD	(1) B5/B13 RRH-BR04C (RFV01U-D2A)	ADD
				QS6656-5D	LTE-700/850/1900/AWS	0/2	ADD	(1) B2/B66A RRH-BR049 (RFV01U-D1A)	ADD
BETA	77'	140°	B1	MT6407-77A	5G-SUB6	0/3	ADD	-	-
			B2	-	-	-	-	-	-
			B3	QS6656-5D	LTE-700/850/1900/AWS	0/2 2/2	ADD	(1) B5/B13 RRH-BR04C (RFV01U-D2A)	ADD
				QS6656-5D	LTE-700/850/1900/AWS	0/2 2/2	ADD	(1) B2/B66A RRH-BR049 (RFV01U-D1A)	ADD
GAMMA	77'	280°	C1	MT6407-77A	5G-SUB6	0/3	ADD	-	-
			C2	-	-	-	-	-	-
			C3	QS6656-5D	LTE-700/850/1900/AWS	0/2 2/2	ADD	(1) B5/B13 RRH-BR04C (RFV01U-D2A)	ADD
				QS6656-5D	LTE-700/850/1900/AWS	0/2 2/2	ADD	(1) B2/B66A RRH-BR049 (RFV01U-D1A)	ADD

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
–	–	(12) 1-5/8"	(1) 6X12	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(1) DB-C112C-24AB-0Z	ADD	----	(2) 1-5/8"	ADD

3 EQUIPMENT SCHEDULES

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STRATFORD, CT 06614

SEAL:

08/19/21

verizon

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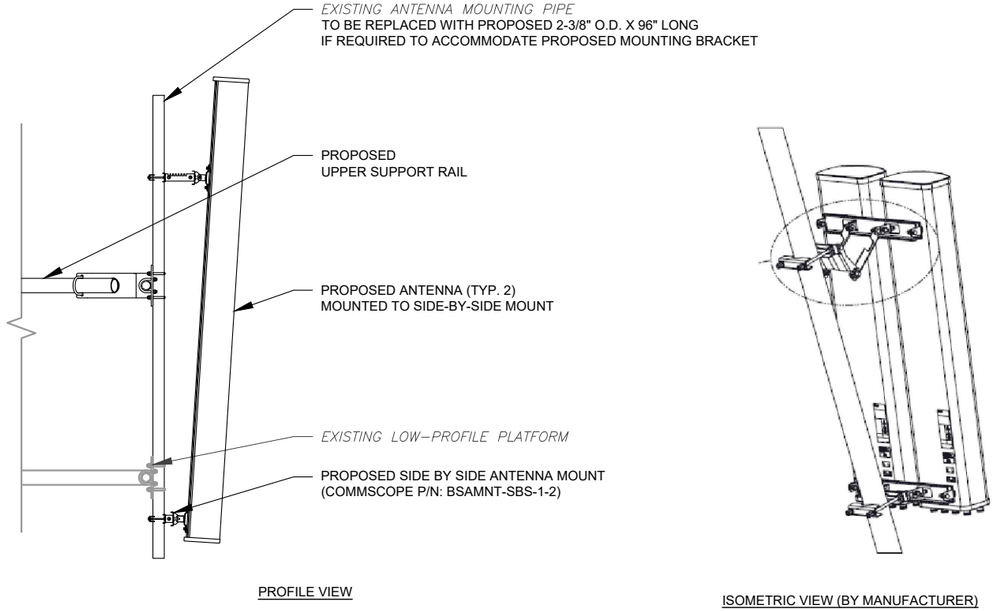
CUSTOMER ID:	STRATFORD W CT
CUSTOMER #:	467946

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0

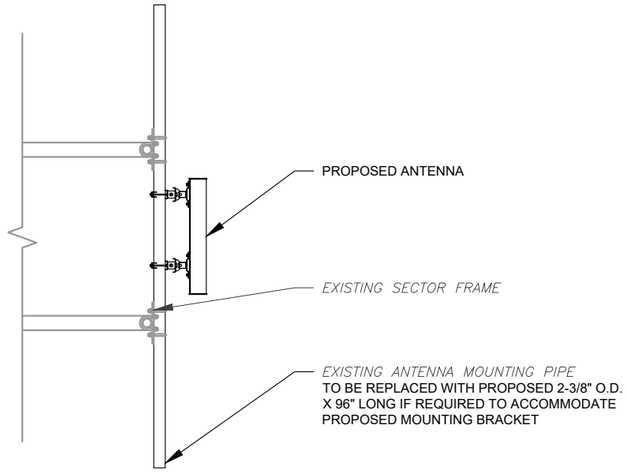


PROFILE VIEW

ISOMETRIC VIEW (BY MANUFACTURER)

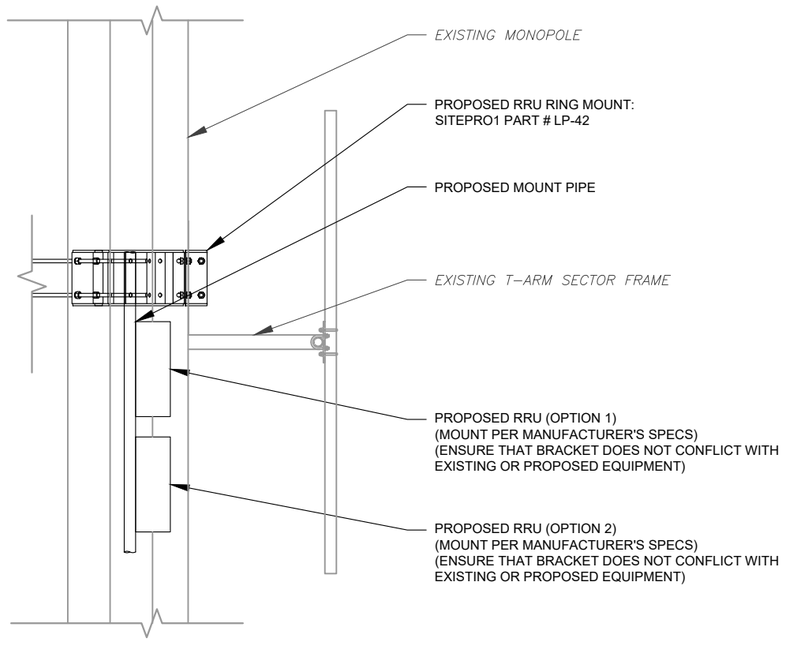
1 PROPOSED SIDE-BY-SIDE MOUNT

SCALE: NOT TO SCALE



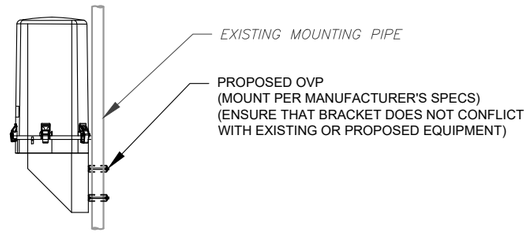
2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



4 PROPOSED OVP MOUNTING

SCALE: N.T.S.

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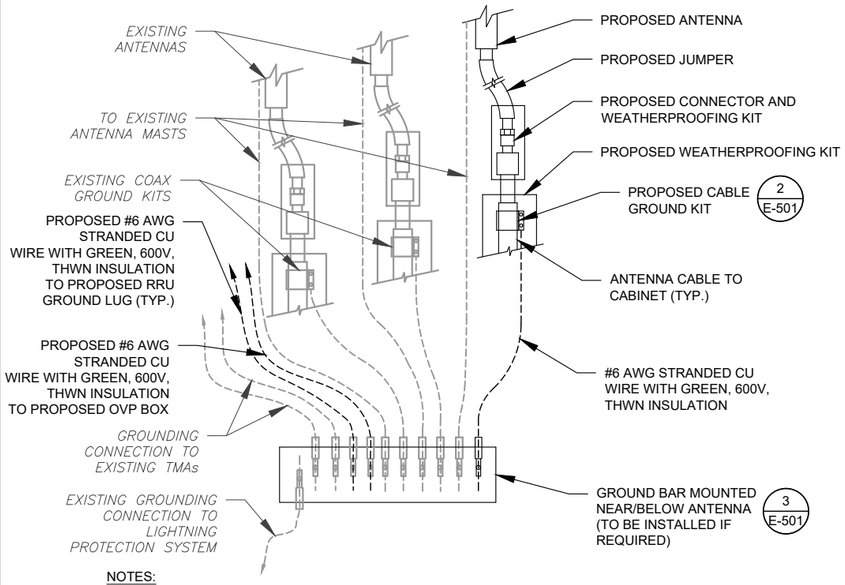
CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

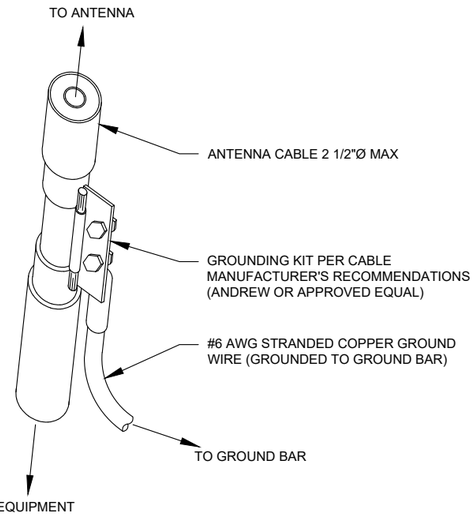


NOTES:

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 GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON 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.

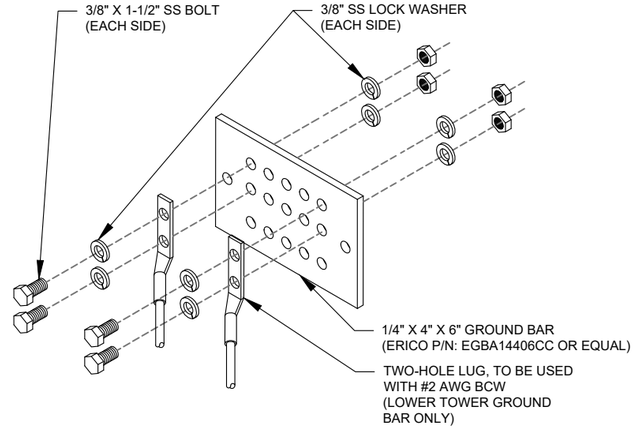


GROUND KIT NOTES:

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.

AMERICAN TOWER®

ETS
ENGINEERED TOWER SOLUTIONS, PLLC

3227 WELLINGTON COURT
RALEIGH, NC 27615
o: 919-782-2710, f: 919-435-0631
www.engineeredtowersolutions.com

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CR	08/19/21

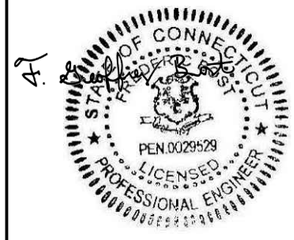
ATC SITE NUMBER:
283420

ATC SITE NAME:
STONEYBROOK RD CT

VERIZON SITE NAME:
STRATFORD W CT

SITE ADDRESS:
23 STONYBROOK ROAD
STRATFORD, CT 06614

SEAL:



08/19/21

verizon

DATE DRAWN:	08/19/21
ATC JOB NO:	13698731_D1
CUSTOMER ID:	STRATFORD W CT
CUSTOMER #:	467946

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

Antenna Mount Analysis Report and PMI Requirements

Mount Analysis

SMART Tool Project #: 10050679
Maser Consulting Connecticut Project #: 21777586A

June 30, 2021

Site Information

Site ID:	467946-VZW / STRATFORD W CT
Site Name:	STRATFORD W CT
Carrier Name:	Verizon Wireless
Address:	23 Stonybrook Road Stratford, Connecticut 06614 Fairfield County
Latitude:	41.203278°
Longitude:	-73.148625°

Structure Information

Tower Type:	125-Ft Monopole
Mount Type:	4.00-Ft T-Arm

FUZE ID # 16231921

Analysis Results

T-Arm: 31.1% 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: Carol Luengas

STATE OF CONNECTICUT
ERIC T. ANDERSON
No. 32224
LICENSED
PROFESSIONAL ENGINEER

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:

o Channel, Solid Round, Angle, Plate	ASTM A36 (Gr. 36)
o HSS (Rectangular)	ASTM 500 (Gr. B-46)
o Pipe	ASTM A53 (Gr. B-35)
o Threaded Rod	F1554 (Gr. 36)
o 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
Antenna Pipe	19.9	Pass
Face Horizontal	31.1	Pass
Standoff Arm	13.1	Pass
Mount Connection	28.0	Pass

Structure Rating – (Controlling Utilization of all Components)	31.1%

Recommendation:

The existing mounts are SUFFICIENT for the final loading configuration and do not require modifications.

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. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required Post Installation Inspection (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:
MOUNT ANALYSIS

SHEET NUMBER:	REVISION:
R-601-MA	-