John Coleman, Project Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (240) 615 -7389
JColeman@clinellc.com

November 19, 2021

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

RE: Notice of Exempt Modification // Site: BRANFORD CT 6 (ATC: 302484)
405 Brushy Plain Rd., Branford, CT 06405
N 41.31680556 // W 72.8197

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless currently maintains 12 antennas at the 113-ft level on the existing 150-foot monopole tower, located at 405 Brushy Plain Rd., Branford, CT. The tower is owned by American Tower. The tower was originally approved by the Council in 1984. Verizon Wireless now intends to install Six (6) new antenna for the LTE (3700 MHz) replacements for its 5G upgrade. Additionally, Verizon Wireless will remove Twelve (12) RRH's and associated cabling. Verizon Wireless intends to add Twelve (12) Remote Radio Head (RRHs), Three (3) Diplexers and associated 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 James Cosgrove, First Selectman, Building Officer, Anthony Cinicola, and Edward & Kristin Jaconette, the Property owner.

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 November 5, 2021 by Hudson Design Group LLC, a structural analysis dated June 29, 2021 by Tower Engineering Professionals, and a structural mount analysis by Maser Consulting Connecticut date September 3, 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 Tower Engineering Professionals, dated June 29, 2021 and a structural mount analysis by Maser Consulting Connecticut, dated September 3, 2021, pursuant to certain conditions defined therein. Design and engineering is fully illustrated within final construction drawings, signed and stamped dated November 5, 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,

John Coleman

_____

John Coleman, Project Manager
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (240) 615 -7389
JColeman@clinellc.com

Attachments

cc: James Cosgrove, First Selectman - as chief elected official
Anthony Cinicola, Building Officer - as P&Z official
Edward & Kristin Jaconette - as Property owner

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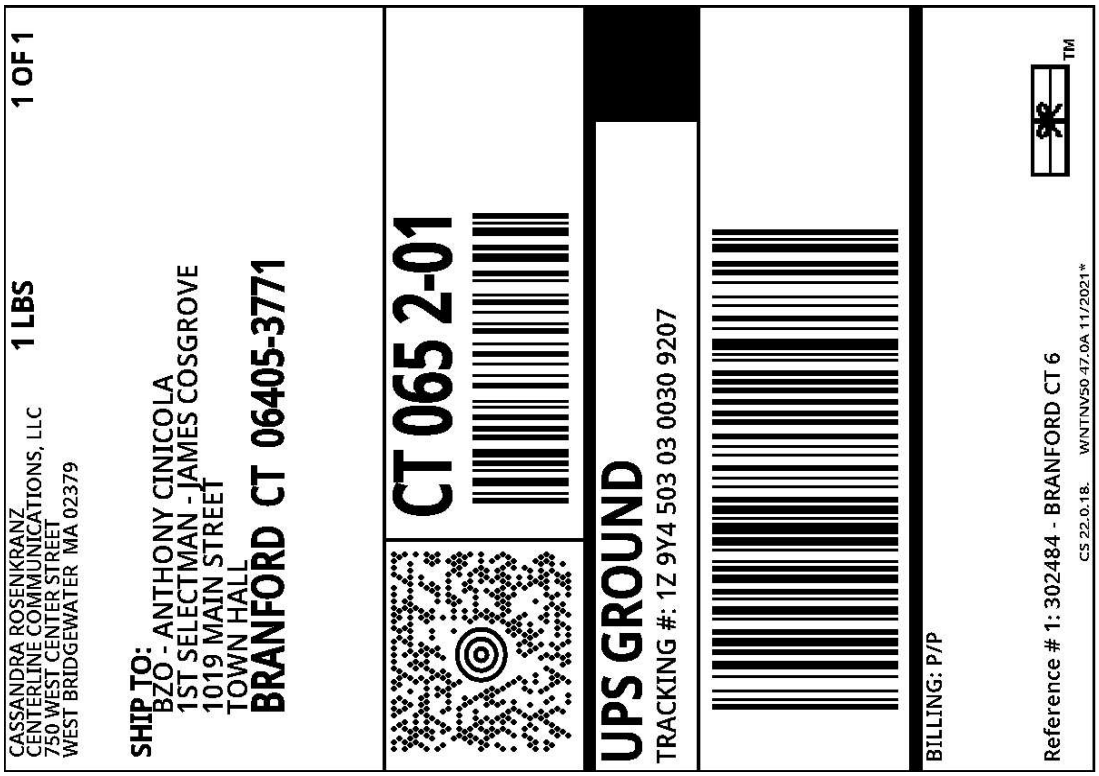

From: UPS
To: John Coleman
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030300309207
Date: Monday, November 29, 2021 1:18:24 PM

Hello, your package has been delivered.

Delivery Date: Monday, 11/29/2021

Delivery Time: 1:16 PM

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030300309207
Ship To:	1ST SELECTMAN - JAMES COSGROVE TOWN HALL 1019 MAIN STREET BRANFORD, CT 064053771 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	302484 - BRANFORD CT 6

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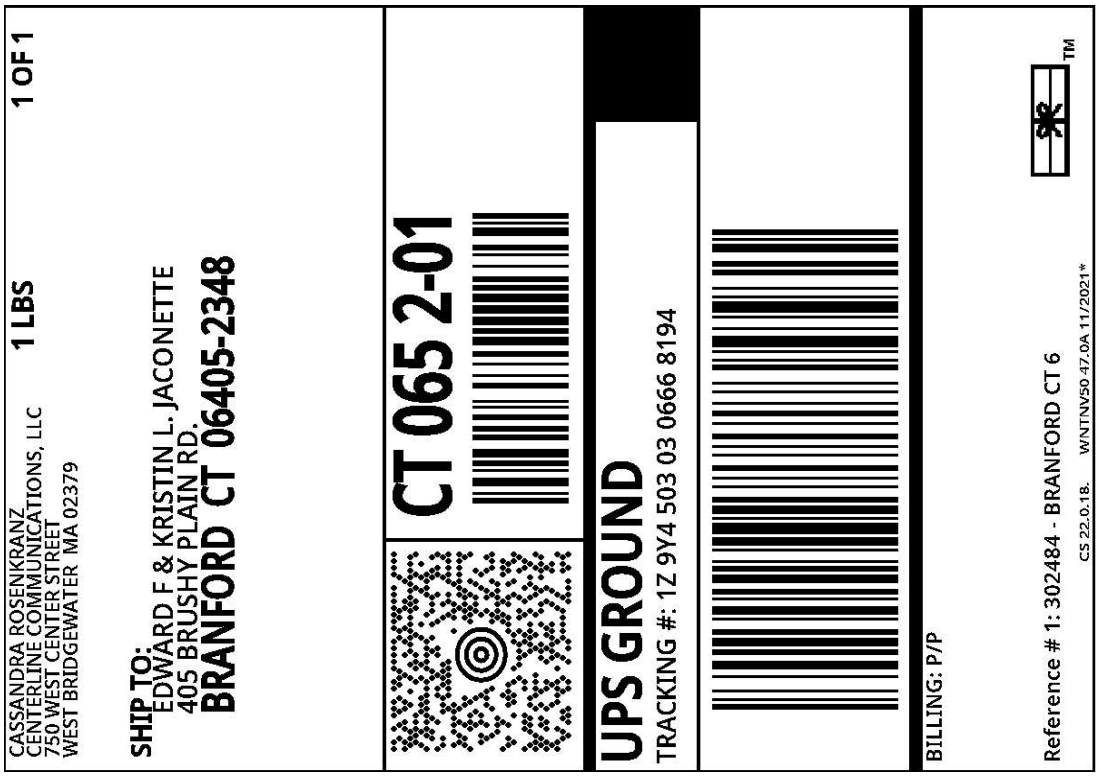

From: UPS
To: John Coleman
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030306668194
Date: Friday, November 26, 2021 1:46:01 PM

Hello, your package has been delivered.

Delivery Date: Friday, 11/26/2021
Delivery Time: 1:45 PM
Left At: FRONT DOOR

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CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030306668194
Ship To:	EDWARD F & KRISTIN L. JACONETTE 405 BRUSHY PLAIN RD. BRANFORD, CT 064052348 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	302484 - BRANFORD CT 6

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DOCKET NO. 44

AN APPLICATION SUBMITTED BY THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF FACILITIES TO PROVIDE CELLULAR SERVICE IN NEW HAVEN COUNTY	:	CONNECTICUT SITING COUNCIL
	:	July 24, 1984

D E C I S I O N A N D O R D E R

Pursuant to the foregoing opinion, the Council hereby directs that a certificate of environmental compatibility and public need as required by section 16-50k of the General Statutes of Connecticut, revisions of 1958, revised to 1983, as amended, be issued to the Southern New England Telephone Company for the construction, operation, and maintenance of a telecommunications tower and associated equipment to provide cellular service at each of the following sites:

Jasudowich tract, Brushy Plain Road, Branford, Connecticut;
Town of Guilford tract, Tanner Marsh Road, Guilford, Connecticut;
Bridgeport Avenue, Milford, Connecticut;
Quagliaro tract, Farmdale Drive, Waterbury, Connecticut;
Pease Road, Woodbridge, Connecticut; and
Dwight Street, North Haven, Connecticut.

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

1. The towers including antennas shall be no taller than necessary to provide the proposed service and in no event shall exceed

   a) 167' at the Branford site,
   b) 167' at the Guilford site,
   c) 117' at the Milford site,
   d) 167' at the Waterbury site,
   e) 167' at the Woodbridge site,
   f) 167' at the North Haven site;

2. A fence not lower than eight feet shall surround each tower and its associated equipment;

3. The applicant or its successor shall notify the Council if and when directional antennas or any other equipment is added to any of these facilities;
4. The applicant or its successor shall permit, in accordance with representations made by it during the proceeding, public or private entities to share space on the facilities, for due consideration received, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing;
5. Unless necessary to comply with condition number six, below, no lights shall be installed on any of these towers;
6. The facilities shall be constructed in accordance with all applicable federal, state, and municipal laws and regulations;
7. The applicant shall submit a development and management plan (D&M) for the Branford, Milford, Woodbridge, and North Haven sites pursuant to sections 16-50j-85 through 16-50j-87 of the regulations of state agencies, except that irrelevant items in section 16-50j-86 need only be identified as such. The D&M plans shall include appropriate evergreen screening of the sites, erosion control measures, reseeding plans, and tree removal plans. The applicant shall comply with the reporting requirements of section 16-50j-87 for all sites;
8. Construction activities shall take place during daylight working hours;
9. This decision and order shall be void and the towers and associated equipment approved herein shall be dismantled and removed, or reapplication for any new use shall be made to the Connecticut

Siting Council before any such new use is made, if the towers do not provide or permanently cease to provide cellular service following completion of construction;

10. This decision and order shall be void if all construction authorized is not completed within three years of the issuance of this decision.

Pursuant to section 16-50p of the General Statutes, we hereby direct that a copy of the opinion and decision and order be served on each person listed below. A notice of the issuance shall be published in the Hartford Courant, New Haven Register, and the Waterbury Republican.

The parties to this proceeding are

The Southern New England Telephone Company
Room 314
227 Church Street
New Haven, Connecticut 06506

(Applicant)

ATTENTION: Mr. Peter J. Tyrrell
Senior Attorney

(its attorney)

Town of Hamden
Peter F. Villano, Mayor
Shirley Gonzales, Town Planner

represented by:

Mr. Hugh Manke, Esquire
Office of the Town Attorney
Memorial Town Hall
2372 Whitney Avenue
Hamden, Connecticut 06518

Inland Wetlands Agency
Town of Woodbridge

represented by:

Robert J. Klancko
Chairman
Town Hall
11 Meeting House Lane
Woodbridge, Connecticut 06525

Town Plan and Zoning Commission Town of Woodbridge	represented by: Norman Fineberg Chairman Town Hall 11 Meeting House Lane Woodbridge, Connecticut 06525
The Honorable Peter M. Lerner State Representative State of Connecticut House of Representatives State Capitol Hartford, Connecticut 06115	
John Menta Felicia Tencza	represented by: Ms. Felicia Tencza 580 Gaylord Mountain Road Hamden, Connecticut 06518
Ms. Renee Robinson 265 Blue Trail Hamden, Connecticut 06518	(service waived)
Irene L. Wong Edson H. Mount Dr. & Mrs. H.M. Fiskio Dr. & Mrs. Alexander Gottschalk	represented by: Dr. & Mrs. Alexander Gottschalk 230 Six Rod Highway Hamden, Connecticut 06518
The Sleeping Giant Park Association	represented by: Mr. Dag Pfeiffer President Box 14 Quinnipiac College Hamden, Connecticut 06518
West Rock Ridge Park Association	represented by: Mr. William L. Dohney, Jr., D.D.S. President 220 Mountain Road Hamden, Connecticut 06514
Sierra Club	represented by: Ms. M. Kim Yanoshick Executive Director Hartford Chapter 118 Oak Street Hartford, Connecticut 06106

Quinnipiac College	represented by: Mr. Richard A. Terry President Hamden, Connecticut 06518
Guilford Conservation Commission	represented by: Ms. Carolyn K. Evans Chairman Town Hall Park Street Guilford, Connecticut 06437
Mrs. Barbara R. Peterson Mary & Phil Faust Anita L. & Richard M. Sullivan	represented by: Anita L. & Richard M. Sullivan 315 Chestnut Lane Hamden, Connecticut 06518
Mrs. Pauline H. Hoff	represented by: Herbert L. Emanuelson, Jr. Emanuelson and Wynne 205 Church Street New Haven, Connecticut 06510
Hamden League of Women Voters	represented by: Mrs. Sherrill Zoller 605 West Woods Road Hamden, Connecticut 06518 (service waived)
Joan Rosenberg 230 Ridewood Avenue Hamden, Connecticut 06517	
Mr. & Mrs. Richard Sykes 110 Blue Trail Hamden, Connecticut 06518	
Thomas & Claudia Sullivan, Jr. 100 Blue Trail Hamden, Connecticut 06518	
Mr. William N. Pantalone 27 Pease Road Woodbridge, Connecticut 06525	(service waived)

INTERVENORS

Metromedia TeleCommunications
Nutmeg Telecommunications, Inc.
CSI of New Haven
CSI of Stamford
Cellular Communications, Inc.
LIN Cellular Corp.
Cellular Mobile Services
Maxcell TeleCommunications, Inc.
Mobile Cellular Telephone, Inc.
Cellular Dynamics
Connecticut Corridor Cellular
Chase/Post Cellular

represented by:

Dwight A. Johnson
Murtha, Cullina, Richter
and Pinney
101 Pearl Street
P.O. Box 3197
Hartford, Connecticut 06103-0197

C E R T I F I C A T I O N

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut, this 24th day of July, 1984.

Council Members	Vote Cast
_____) Gloria Dibble Pond Chairperson	Absent
_____) Commissioner John Downey Designee: Commissioner Peter G. Boucher	Absent
Brian Emerick _____) Commissioner Stanley Pac Designee: Brian Emerick	~~Yes~~ ~~Absent~~ Abstain
Owen L. Clark _____) Owen L. Clark	Yes
Fred J. Doocy _____) Fred J. Doocy	Yes
Mortimer A. Gelston _____) Mortimer A. Gelston	Yes
James G. Horsfall _____) James G. Horsfall	Yes
_____) Janet Sitty	Absent
Colin C. Tait _____) Colin C. Tait Acting Chairperson	Yes

STATE OF CONNECTICUT)
: ss. New Britain, July 24, 1984
COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the decision and order issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:

Christopher S. Wood, Executive Director
Connecticut Siting Council

AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

TOWER ENGINEERING PROFESSIONALS

Structural Analysis Report

Structure	:	**150 ft Monopole**
ATC Site Name	:	**Branford CT 6, CT**
ATC Asset Number	:	**302484**
Engineering Number	:	**13685617_C3_02**
Proposed Carrier	:	**VERIZON WIRELESS**
Carrier Site Name	:	**BRANFORD 2**
Carrier Site Number	:	**467297**
Site Location	:	**405 Brushy Plain Rd** **Branford, CT 06405-2308** **41.316800,-72.819700**
County	:	**New Haven**
Date	:	**June 29, 2021**
Max Usage	:	**95%**
Result	:	**Pass**

Prepared By:
Ayoub Sabor
TEP

Reviewed By:

STATE OF CONNECTICUT
AARON THOMAS RUCKER
32608
LICENSED PROFESSIONAL ENGINEER

06/29/2021

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 150 ft monopole to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	PJF Job # 29297-629, dated October 2, 1997 SpectraSite Drawing #CT-0020/15, dated December 13, 2000
Foundation Drawing	Mapped by ATC Tower ID #302484, dated February 13, 2009
Geotechnical Report	Clarence Welti Geotechnical Engineering ID #CT-0020, dated October 8, 1996
Modifications	SpectraSite Drawing CT-0020 M1, dated March 26, 2004 ATC Job # 26487334, dated September 15, 2006 ATC Job # 53055832, dated June 2, 2013

Analysis

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

Basic Wind Speed:	117.94 mph (3-Second Gust)**
Basic Wind Speed w/ Ice:	48.73 mph (3-Second Gust) w/ 0.85" 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
Spectral Response:	Ss = 0.18, S_1 = 0.06
Site Class:	D - Stiff Soil

****Wind load and Ice thickness have been reduced by applicable existing structure load modification factors in accordance with TIA-222-H, Annex S.**

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
160.0	1	11' Dipole	Platform with Handrails	(3) 7/8" Coax (1) 1 5/8" Coax	OTHER
159.0	1	4' Omni			
153.0	6	Powerwave Allgon LGP21401		(2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax (3) 3" conduit (1) 3/8" (0.38"-9.5mm) RET Control Cable	AT&T MOBILITY
	1	Raycap DC6-48-60-18-8F ("Squid")			
	3	Ericsson RRUS 8843 B2, B66A			
	3	Kathrein Scala 782-10250			
	6	Powerwave Allgon 7020.00 Dual Band RET			
	3	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC6-48-60-18-8C			
	3	Ericsson RRUS 32 B30 (53 lbs)			
	1	Raycap DC6-48-60-18-8C-EV			
	3	Powerwave Allgon 7770.00			
	3	CCI HPA65R-BU6A			
	3	Commscope SBNHH-1D65B			
	3	Kathrein Scala 80010965			
150.0	1	GPS	Flush	(1) 1/2" Coax	VERIZON WIRELESS
140.0	3	Ericsson KRY 112 144/1	Platform with Handrails	(1) 1 1/4" (1.25"-31.8mm) Fiber (3) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	T-MOBILE
	3	RFS APXVAARR24_43-U-NA20			
	3	Ericsson AIR 21, 1.3M, B4A B2P			
	3	Ericsson AIR 21, 1.3 M, B2A B4P			
	3	Ericsson Radio 4449 B12,B71			
132.0	1	12" x 12" Junction Box	Side Arms	(4) 1/2" Coax (2) 2" conduit (6) 5/16" (0.31"-7.9mm) Coax	CLEARWIRE CORPORATION
130.0	2	DragonWave Horizon Compact			
	1	DragonWave A-ANT-23G-1-C			
	3	NextNet BTS-2500			
	3	Argus LLPX310R			
	1	DragonWave A-ANT-18G-2.5-C			
122.0	1	SWR FMEC/1	Flush	(3) 1/2" Coax	ALMA RADIO INC.
113.0	4	RFS APL868013-12T0	T-Arm	(6) 1 1/4" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
	6	Commscope JAHH-65B-R3B			
	2	RFS DB-T1-6Z-8AB-0Z			
	2	RFS APL866513-12T0-00			
103.0	1	Dish Reserve	-	-	DISH
70.0	1	4' Std. Dish	Flush	(1) 0.28" (7mm) RG-6	OTHER

Equipment to be Removed

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
113.0	3	Alcatel-Lucent RRH2x40-07-L	-	-	VERIZON WIRELESS
	3	Nokia B66a RRH4x45 (UHIE)			
	3	Alcatel-Lucent RRH2x60 700			
	3	Alcatel-Lucent RRH 2X60-1900			

Proposed Equipment

Elev.[1] (ft)	Qty	Equipment	Mount Type	Lines	Carrier
113.0	3	Commscope CBC78-DS-43	T-Arms	-	VERIZON WIRELESS
	3	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna			
	3	Samsung RT4401-48A			
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung MT6407-77A			

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

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	84%	Pass
Shaft	92%	Pass
Base Plate	56%	Pass
Flange	21%	Pass
Reinforcement	95%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	3,125.7	55%
Axial (Kips)	59.6	7%

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) (°)
130.0	DragonWave A-ANT-23G-1-C	CLEARWIRE CORPORATION	1.707	1.628
	DragonWave A-ANT-18G-2.5-C			
113.0	Commscope CBC78-DS-43	VERIZON WIRELESS	1.282	1.306
	Samsung Outdoor CBRS 20W RRH –Clip-on Antenna			
	Samsung RT4401-48A			
	Samsung B2/B66A RRH-BR049			
	Samsung B5/B13 RRH-BR04C			
	Samsung MT6407-77A			
70.0	4' Std. Dish	OTHER	0.000	0.000

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

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:

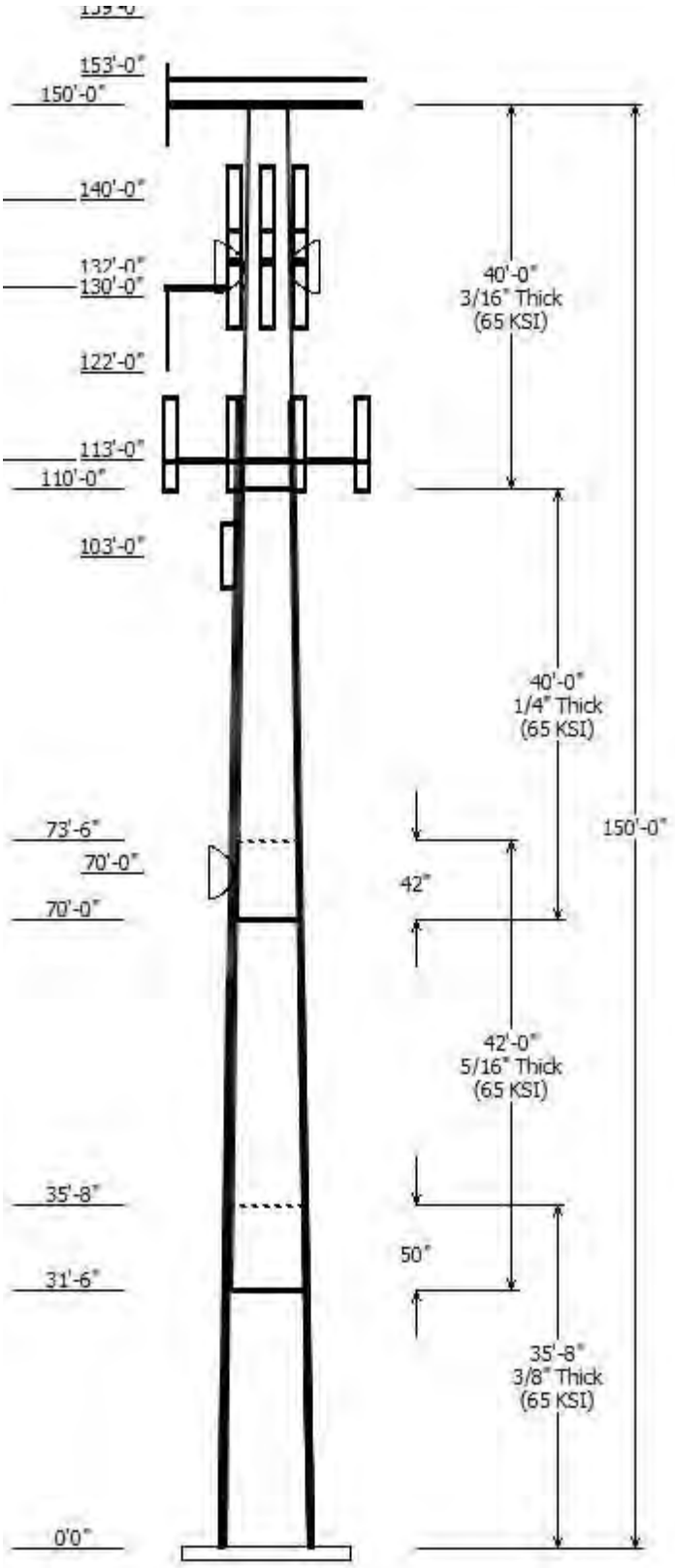
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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

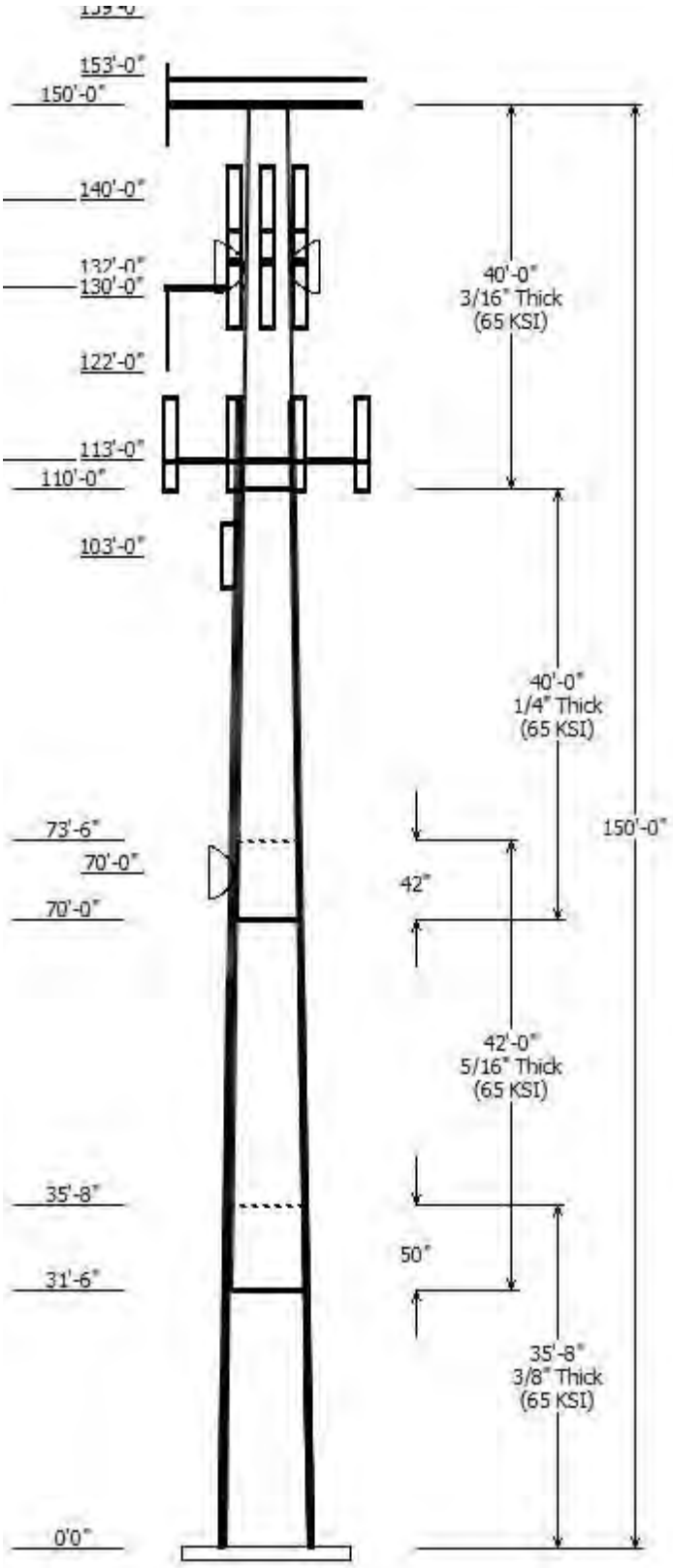
Client :	VERIZON WIRELESS		
Pole :	302484	Code:	ANSI/TIA-222-H
Location :	Branford CT 6, CT		
Description :	150 ft. ITT Meyer - Model Verified 10/25/11	Risk Category :	II
Shape :	12 Sides	Exposure :	B
Height :	150.00 (ft)	Topo Method :	Method 1
Base Elev (ft):	0.00	Topographic Category :	1
Taper:	0.156700 (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	35.667	31.79	37.38	0.375		0.000	12 Sides	65
2	42.000	26.48	33.07	0.313	Slip Joint	50.000	12 Sides	65
3	40.000	21.26	27.53	0.250	Slip Joint	42.000	12 Sides	65
4	40.000	15.00	21.26	0.188	Butt Joint	0.000	12 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
160.000	160.000	1	Generic 11' Dipole
159.000	159.000	1	Generic 4' Omni
153.000	153.000	3	Kathrein Scala 80010965
153.000	153.000	3	Commscope SBNHH-1D65B
153.000	153.000	3	CCI HPA65R-BU6A
153.000	151.000	3	Powerwave Allgon 7770.00
153.000	153.000	1	Raycap DC6-48-60-18-8C-EV
153.000	153.000	3	Ericsson RRUS 32 B30 (53 lbs)
153.000	153.000	1	Raycap DC6-48-60-18-8C
153.000	153.000	3	Ericsson RRUS 4449 B5, B12
153.000	153.000	3	Ericsson RRUS 8843 B2, B66A
153.000	151.000	1	Raycap DC6-48-60-18-8F
153.000	151.000	6	Powerwave Allgon LGP21401
153.000	153.000	3	Kathrein Scala 782-10250
153.000	151.000	6	Powerwave Allgon 7020.00
150.000	150.000	1	Round Platform w/ Handrails
150.000	150.000	1	Generic GPS
140.000	140.000	1	PerfectVision PV-RP14M-9-96
140.000	140.000	3	RFS APXVAARR24_43-U-NA20
140.000	136.000	3	Ericsson AIR 21, 1.3M, B4A B2P
140.000	136.000	3	Ericsson AIR 21, 1.3 M, B2A B4
140.000	140.000	3	Ericsson Radio 4449 B12,B71
140.000	136.000	3	Ericsson KRY 112 144/1
132.000	132.000	1	Generic 12" x 12" Junction Box
131.000	131.000	1	Side Arms
130.000	132.000	1	DragonWave A-ANT-18G-2.5-C
130.000	130.000	3	Argus LLPX310R
130.000	130.000	3	NextNet BTS-2500
130.000	132.000	1	DragonWave A-ANT-23G-1-C
130.000	132.000	2	DragonWave Horizon Compact
122.000	123.000	1	SWR FMEC/1
113.000	113.000	3	Round T-Arm
113.000	115.000	6	Commscope JAHH-65B-R3B
113.000	115.000	2	RFS DB-T1-6Z-8AB-0Z
113.000	113.000	3	Samsung MT6407-77A
113.000	115.000	2	RFS APL866513-12T0-00
113.000	115.000	4	RFS APL868013-12T0
113.000	113.000	3	Samsung B5/B13 RRH-BR04C
113.000	113.000	3	Samsung B2/B66A RRH-BR049
113.000	113.000	3	Samsung RT4401-48A
113.000	113.000	3	Samsung Outdoor CBRS 20W
113.000	113.000	3	Commscope CBC78-DS-43
103.000	103.000	1	Generic Dish Reserve
70.000	70.000	1	Generic 4' Std. Dish



Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
128.0	143.0	#18 w/ Angle	Yes
128.0	143.0	#18 w/ Angle	Yes
128.0	143.0	#18 w/ Angle	Yes
115.5	133.0	#18 w/ Angle	Yes
115.5	133.0	#18 w/ Angle	Yes
115.5	133.0	#18 w/ Angle	Yes
0.000	140.0	1 1/4" (1.25"-	No
0.000	140.0	1 5/8" (1.63"-	No
0.000	140.0	1 5/8" Coax	Yes
0.000	150.0	1/2" Coax	No
0.000	153.0	0.39" (10mm)	No
0.000	153.0	0.78" (19.7mm) 8	No
0.000	153.0	1 5/8" Coax	No
0.000	153.0	3" conduit	No
0.000	153.0	3/8" (0.38"-	No
0.000	159.0	1 5/8" Coax	No
0.000	160.0	7/8" Coax	No
0.000	20.000	1" Thick Flat Plate	Yes
0.000	20.000	1" Thick Flat Plate	Yes
0.000	20.000	1" Thick Flat Plate	Yes
0.000	20.000	1" Thick Flat Plate	Yes
0.000	65.500	#18 w/ Angle	Yes
0.000	65.500	#18 w/ Angle	Yes
0.000	65.500	#18 w/ Angle	Yes
0.000	65.500	#18 w/ Angle	Yes
0.000	70.000	0.28" (7mm) RG-6	No
0.000	113.0	1 1/4" Coax	No
0.000	113.0	1 5/8" Hybriflex	No
0.000	122.0	1/2" Coax	No
0.000	123.2	#18 w/ W Bracket	Yes
0.000	123.2	#18 w/ W Bracket	Yes
0.000	123.2	#18 w/ W Bracket	Yes
0.000	123.2	#18 w/ W Bracket	Yes
0.000	123.2	W5 Brackets for	Yes
0.000	123.2	W5 Brackets for	Yes
0.000	123.2	W5 Brackets for	Yes
0.000	123.2	W5 Brackets for	Yes
0.000	130.0	1/2" Coax	Yes
0.000	130.0	5/16" (0.31"-	Yes
0.000	132.0	1/2" Coax	Yes
0.000	132.0	2" conduit	Yes

Load Cases

1.2D + 1.0W	118 mph with No Ice
0.9D + 1.0W	118 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	49 mph with 0.85 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

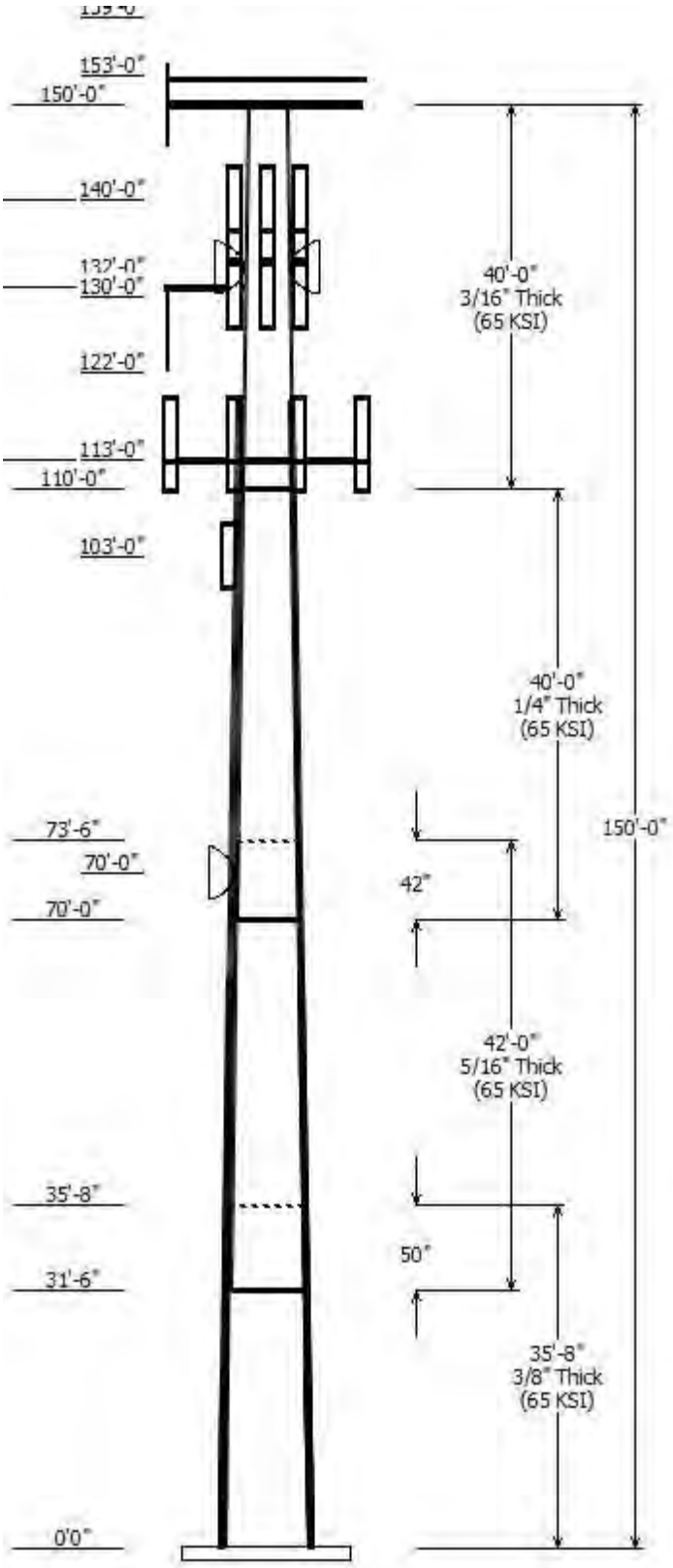
Reactions

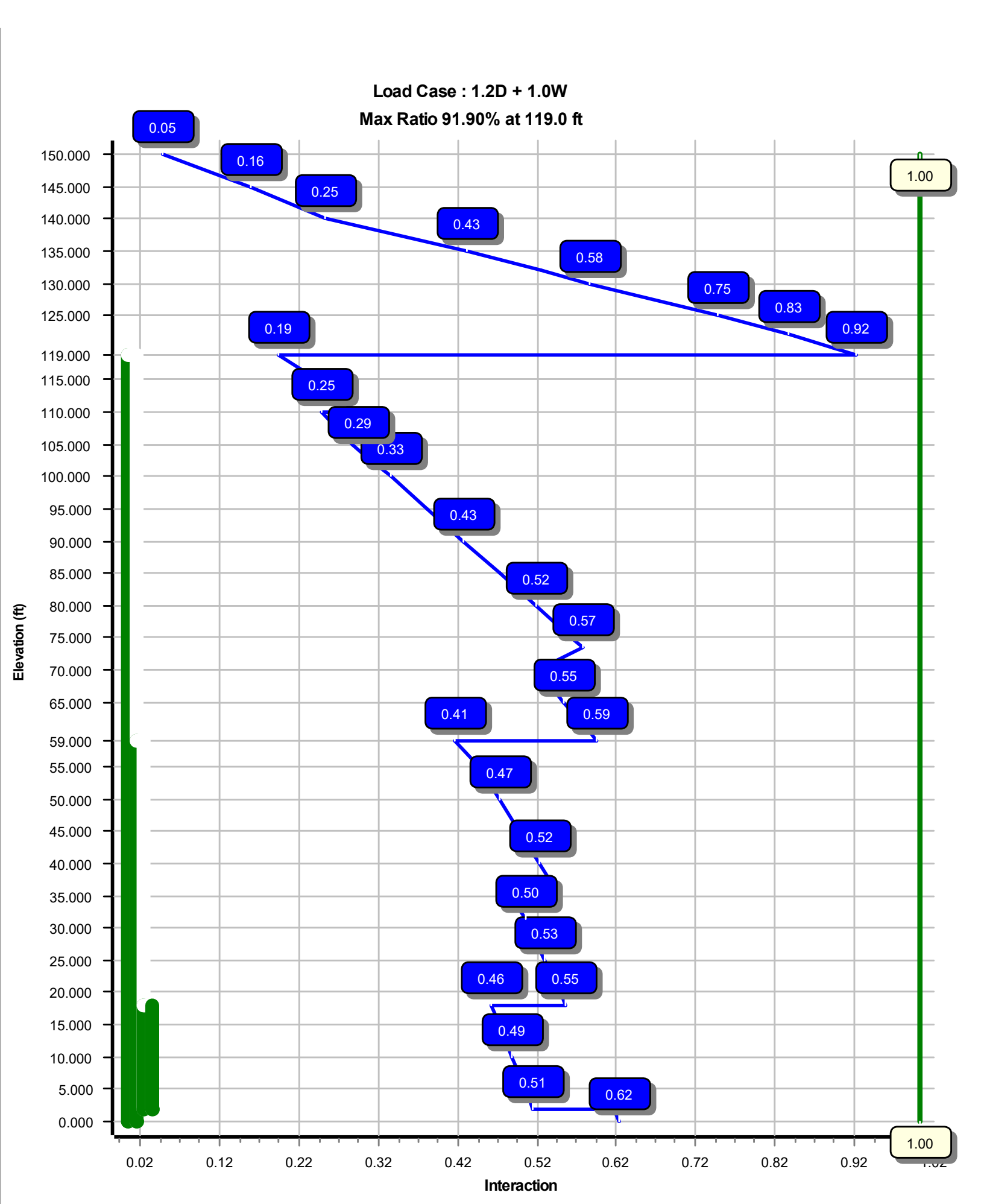
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	3125.68	29.79	59.64
0.9D + 1.0W	3067.99	29.77	44.72
1.2D + 1.0Di + 1.0Wi	862.87	7.71	80.97

1.2D + 1.0Ev + 1.0Eh	191.38	1.49	60.69
0.9D - 1.0Ev + 1.0Eh	186.88	1.49	42.22
1.0D + 1.0W	718.80	6.91	49.72

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	70.00	5.653	0.804
1.0D + 1.0W	130.00	20.490	1.628
1.0D + 1.0W	130.00	20.490	1.628




Load Case : 1.2D + 1.0W
Max Ratio 91.90% at 119.0 ft
0.05
0.16
0.25
0.43
0.58
0.75
0.83
0.92
0.19
0.25
0.29
0.33
0.43
0.52
0.57
0.55
0.41
0.59
0.47
0.52
0.50
0.53
0.46
0.55
0.49
0.51
0.62
1.00
1.00
150.000
145.000
140.000
135.000
130.000
125.000
119.000
115.000
110.000
105.000
100.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
59.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
Elevation (ft)
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 302484 | Code: ANSI/TIA-222-H |

Site Name: Branford CT 6, CT | Engineering Number:13685617_C3_02 | 6/29/2021 10:09:18 AM

Customer: VERIZON WIRELESS

Analysis Parameters

Location :	New Haven County, CT	Height (ft) :	150
Code :	ANSI/TIA-222-H	Base Diameter (in) :	37.38
Shape :	12 Sides	Top Diameter (in) :	15.00
Pole Type :	Taper	Taper (in/ft) :	0.157
Pole Manfacturer :	ITT Meyer	Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	0.99

Ice & Wind Parameters

Exposure Category:	B	Design Wind Speed Without Ice:	118 mph
Risk Category:	II	Design Wind Speed With Ice:	49 mph
Topographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	0.85 in
Crest Height:	0 ft	HMSL:	240.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	2.96				
T_L (sec):	6	p:	1	C_s:	0.030
S_s:	0.180	S_1:	0.061	C_s Max:	0.030
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.192	S_{d1}:	0.098		

Load Cases

1.2D + 1.0W	118 mph with No Ice
0.9D + 1.0W	118 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	49 mph with 0.85 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

Site Number: 302484 Code: ANSI/TIA-222-H

Site Name: Branford CT 6, CT Engineering Number:13685617_C3_02 6/29/2021 10:09:18 AM

Customer: VERIZON WIRELESS

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (in²)	Bottom Ix (in⁴)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (in²)	Top Ix (in⁴)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-12	35.667	0.3750	65		0.00	5,014	37.38	0.00	44.68	7810.1	24.03	99.68	31.79	35.67	37.93	4778.9	20.04	84.78	0.156700
2-12	42.000	0.3130	65	Slip	50.00	4,244	33.07	31.50	33.01	4521.6	25.63	105.65	26.48	73.50	26.38	2307.1	20.00	84.63	0.156700
3-12	40.000	0.2500	65	Slip	42.00	2,646	27.53	70.00	21.97	2087.6	26.83	110.15	21.26	110.00	16.92	954.2	20.12	85.08	0.156700
4-12	40.000	0.1880	65	Butt	0.00	1,479	21.26	110.00	12.76	723.9	27.63	113.13	15.00	150.00	8.97	251.1	18.70	79.79	0.156700
				Shaft Weight		13,383													

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
160.00	Generic 11' Dipole	1	1.00	0.000	40.00	3.580	1.00	110.33	8.410	1.00
159.00	Generic 4' Omni	1	1.00	0.000	10.00	1.000	1.00	27.69	1.489	1.00
153.00	Powerwave Allgon 7020.00 Dual	6	0.75	-2.000	2.20	0.339	0.50	7.99	0.571	0.50
153.00	Kathrein Scala 782-10250	3	0.75	0.000	6.40	0.449	0.50	13.63	0.727	0.50
153.00	Powerwave Allgon LGP21401	6	0.75	-2.000	14.10	1.104	0.50	28.24	1.509	0.50
153.00	Raycap DC6-48-60-18-8F	1	0.75	-2.000	31.80	1.470	0.50	66.78	1.866	0.50
153.00	Ericsson RRUS 8843 B2, B66A	3	0.75	0.000	72.00	1.639	0.50	106.75	2.118	0.50
153.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.969	0.50	107.54	2.498	0.50
153.00	Raycap DC6-48-60-18-8C	1	0.75	0.000	16.00	2.030	0.50	49.00	2.461	0.50
153.00	Ericsson RRUS 32 B30 (53 lbs)	3	0.75	0.000	53.00	2.743	0.50	94.69	3.406	0.50
153.00	Raycap DC6-48-60-18-8C-EV	1	0.75	0.000	16.00	4.788	0.50	89.20	5.622	0.50
153.00	Powerwave Allgon 7770.00	3	0.75	-2.000	35.00	5.508	0.65	104.05	6.086	0.65
153.00	CCI HPA65R-BU6A	3	0.75	0.000	41.90	7.864	0.70	141.25	9.429	0.70
153.00	Commscope SBNHH-1D65B	3	0.75	0.000	50.70	8.173	0.69	150.19	9.777	0.69
153.00	Kathrein Scala 80010965	3	0.75	0.000	97.60	13.814	0.62	248.73	15.543	0.62
150.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	26.59	1.263	1.00
150.00	Round Platform w/ Handrails	1	1.00	0.000	2,000.00	27.200	1.00	2,734.55	41.057	1.00
140.00	Ericsson KRY 112 144/1	3	0.75	-4.000	11.00	0.351	0.50	17.06	0.579	0.50
140.00	Ericsson Radio 4449 B12,B71	3	0.75	0.000	74.00	1.639	0.50	105.52	2.114	0.50
140.00	Ericsson AIR 21, 1.3 M, B2A B4P	3	0.75	-4.000	83.00	6.049	0.71	165.15	7.266	0.71
140.00	Ericsson AIR 21, 1.3M, B4A B2P	3	0.75	-4.000	81.50	6.092	0.70	163.35	7.310	0.70
140.00	RFS APXVAARR24_43-U-NA20	3	0.75	0.000	127.90	20.243	0.63	348.89	22.331	0.63
140.00	PerfectVision PV-RP14M-9-96	1	1.00	0.000	2,972.00	36.600	1.00	4,137.48	50.953	1.00
132.00	Generic 12" x 12" Junction Box	1	0.80	0.000	10.00	1.200	0.50	33.34	1.607	0.50
131.00	Side Arms	1	1.00	0.000	560.00	8.500	1.00	822.15	12.479	1.00
130.00	DragonWave Horizon Compact	2	0.80	2.000	10.60	0.721	0.50	23.16	1.039	0.50
130.00	DragonWave A-ANT-23G-1-C	1	0.80	2.000	15.00	1.610	0.68	34.74	2.033	0.68
130.00	NextNet BTS-2500	3	0.80	0.000	35.00	1.817	0.50	60.91	2.329	0.50
130.00	Argus LLPX310R	3	0.80	0.000	28.60	4.292	0.63	78.95	5.216	0.63
130.00	DragonWave A-ANT-18G-2.5-C	1	0.80	2.000	47.60	8.430	0.76	143.84	9.381	0.76
122.00	SWR FMEC/1	1	1.00	1.000	15.00	2.500	1.00	60.51	4.707	1.00
113.00	Commscope CBC78-DS-43	3	0.80	0.000	6.00	0.368	0.50	12.22	0.597	0.50
113.00	Samsung Outdoor CBRS 20W	3	0.80	0.000	4.40	0.892	0.50	14.32	1.244	0.50
113.00	Samsung RT4401-48A	3	0.80	0.000	18.60	0.996	0.50	33.49	1.373	0.50
113.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	119.57	2.373	0.50
113.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	101.83	2.373	0.50
113.00	RFS APL868013-12T0	4	0.80	2.000	6.30	3.615	0.50	54.87	4.645	0.50
113.00	RFS APL866513-12T0-00	2	0.80	2.000	15.70	4.050	0.82	75.77	5.075	0.82
113.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	137.79	5.546	0.61
113.00	RFS DB-T1-6Z-8AB-0Z	2	0.80	2.000	44.00	4.800	0.50	113.38	5.583	0.50
113.00	Commscope JAHH-65B-R3B	6	0.80	2.000	60.60	9.113	0.69	172.12	10.642	0.69
113.00	Round T-Arm	3	0.75	0.000	250.00	9.700	0.67	365.21	14.245	0.67
103.00	Generic Dish Reserve	1	0.80	0.000	1,835.00	70.000	1.00	6,512.19	163.205	1.00
70.00	Generic 4' Std. Dish	1	1.00	0.000	188.00	20.910	0.76	299.58	22.521	0.76
Totals	Num Loadings:44	109			12,545.30			25,115.41		

Linear Appurtenance Properties

Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Flat	Max Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	160.00	3	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	OTHER
0.00	159.00	1	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	OTHER
0.00	153.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	3	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	1	3/8" (0.38"- 9.5mm)	0.38	0.23	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	150.00	1	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
128.00	143.00	1	#18 w/ Angle Bracket	4.55	7.88	N	1	0.00	0.00	0	0.00	Y	
128.00	143.00	1	#18 w/ Angle Bracket	4.55	7.88	N	1	0.00	0.00	120	0.00	Y	
128.00	143.00	1	#18 w/ Angle Bracket	4.55	7.88	N	1	0.00	0.00	240	0.00	Y	
0.00	140.00	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	140.00	3	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	140.00	6	1 5/8" Coax	1.98	0.82	N	2	1.00	1.00	90	1.00	Y	T-MOBILE
115.50	133.00	1	#18 w/ Angle Bracket	4.55	7.88	N	1	0.00	0.00	335	0.00	Y	
115.50	133.00	1	#18 w/ Angle Bracket	4.55	7.88	N	1	0.00	0.00	90	0.00	Y	
115.50	133.00	1	#18 w/ Angle Bracket	4.55	7.88	N	1	0.00	0.00	210	0.00	Y	
0.00	132.00	2	1/2" Coax	0.63	0.15	N	2	1.00	1.00	200	1.00	Y	CLEARWIRE
0.00	132.00	2	2" conduit	2.38	3.65	N	2	1.00	1.00	190	1.00	Y	CLEARWIRE
0.00	130.00	2	1/2" Coax	0.63	0.15	N	2	1.00	1.00	200	1.00	Y	CLEARWIRE
0.00	130.00	6	5/16" (0.31"-7.9mm)	0.31	0.05	N	6	1.00	1.00	205	1.00	Y	CLEARWIRE
0.00	123.20	1	#18 w/ W Bracket	2.25	0.00	N	1	0.00	0.00	45	5.15	Y	
0.00	123.20	1	#18 w/ W Bracket	2.25	0.00	N	1	0.00	0.00	135	5.15	Y	
0.00	123.20	1	#18 w/ W Bracket	2.25	0.00	N	1	0.00	0.00	225	5.15	Y	
0.00	123.20	1	#18 w/ W Bracket	2.25	0.00	N	1	0.00	0.00	315	5.15	Y	
0.00	123.20	1	W5 Brackets for #18	1.55	5.70	Y	1	0.00	0.00	315	1.80	Y	
0.00	123.20	1	W5 Brackets for #18	1.55	5.70	Y	1	0.00	0.00	135	1.80	Y	
0.00	123.20	1	W5 Brackets for #18	1.55	5.70	Y	1	0.00	0.00	225	1.80	Y	
0.00	123.20	1	W5 Brackets for #18	1.55	5.70	Y	1	0.00	0.00	45	1.80	Y	
0.00	122.00	3	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	ALMA RADIO INC.
0.00	113.00	6	1 1/4" Coax	1.55	0.63	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	113.00	2	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	70.00	1	0.28" (7mm) RG-6	0.28	0.03	N	0	0.00	0.00	0	0.00	N	OTHER
0.00	65.50	1	#18 w/ Angle Brackets	3.75	4.68	N	1	0.00	0.00	270	0.00	Y	
0.00	65.50	1	#18 w/ Angle Brackets	3.75	4.68	N	1	0.00	0.00	0	0.00	Y	
0.00	65.50	1	#18 w/ Angle Brackets	3.75	4.68	N	1	0.00	0.00	90	0.00	Y	
0.00	65.50	1	#18 w/ Angle Brackets	3.75	4.68	N	1	0.00	0.00	180	0.00	Y	
0.00	20.00	1	1" Thick Flat Plate	1.00	0.00	Y	1	0.00	0.00	15	0.00	Y	
0.00	20.00	1	1" Thick Flat Plate	1.00	0.00	Y	1	0.00	0.00	285	0.00	Y	
0.00	20.00	1	1" Thick Flat Plate	1.00	0.00	Y	1	0.00	0.00	195	0.00	Y	
0.00	20.00	1	1" Thick Flat Plate	1.00	0.00	Y	1	0.00	0.00	105	0.00	Y	

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Intermediate Connections Description	Spacing (in)	Len (in)	Connectors	Continuation?
0.00	119.0	4	SOL #18 All Thread	75	5.15	6" T Bracket	30.0	3.50	5/8" A36 U-Bolt	No
0.00	59.00	4	SOL #18 All Thread	75	2.22	6" Angle Bracket	30.0	3.50	5/8" A36 U-Bolt	No
2.00	18.00	2	PL PL 4" x 1"	50	0.00	5/8" Hollo Bolt	12.0	3.00	5/8" Hollo Bolt	No
2.00	18.00	2	PL PL 5" x 1"	50	0.00	5/8" Hollo Bolt	12.0	3.00	5/8" Hollo Bolt	No

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		0.3750	37.380	44.684	7,810.1	24.03	99.68	78.5	403.6	0.0	0.0	32.00	9,070	0.0
2.00	Reinf Bottom Reinf	0.3750	37.067	44.305	7,613.3	23.81	98.84	78.8	396.8	0.0	302.8	32.00	8,950	217.6
5.00		0.3750	36.597	43.737	7,324.4	23.47	97.59	79.1	386.6	0.0	449.4	50.00	11,96	510.1
10.00		0.3750	35.813	42.791	6,859.3	22.91	95.50	79.7	370.0	0.0	736.1	50.00	11,54	850.2
15.00		0.3750	35.030	41.845	6,414.3	22.35	93.41	80.3	353.7	0.0	720.0	50.00	11,12	850.2
18.00	Reinf. Top Reinf.	0.3750	34.559	41.278	6,156.8	22.01	92.16	80.7	344.2	0.0	424.3	50.00	10,87	510.1
20.00		0.3750	34.246	40.899	5,989.0	21.79	91.32	80.9	337.8	0.0	279.6	32.00	7,900	217.6
25.00		0.3750	33.463	39.953	5,583.0	21.23	89.23	81.6	322.3	0.0	687.8	32.00	7,620	544.0
30.00		0.3750	32.679	39.007	5,195.7	20.67	87.14	81.9	307.1	0.0	671.7	32.00	7,345	544.0
31.50	Bot - Section 2	0.3750	32.444	38.723	5,083.1	20.50	86.52	81.9	302.7	0.0	198.4	32.00	7,263	163.2
35.00		0.3750	31.896	38.061	4,826.7	20.11	85.05	81.9	292.3	0.0	847.1	32.00	7,290	380.8
35.67	Top - Section 1	0.3130	32.417	32.356	4,256.6	25.07	103.57	77.4	253.7	0.0	159.7	32.00	7,254	72.5
40.00		0.3130	31.738	31.672	3,992.2	24.49	101.40	78.0	243.0	0.0	472.1	32.00	7,022	471.5
45.00		0.3130	30.954	30.882	3,701.0	23.82	98.90	78.7	231.0	0.0	532.1	32.00	6,758	544.0
50.00		0.3130	30.171	30.093	3,424.3	23.15	96.39	79.5	219.3	0.0	518.7	32.00	6,499	544.0
55.00		0.3130	29.387	29.303	3,161.7	22.48	93.89	80.2	207.8	0.0	505.3	32.00	6,246	544.0
59.00	Reinf. Top	0.3130	28.761	28.671	2,961.6	21.94	91.89	80.8	198.9	0.0	394.5	32.00	6,261	489.6
60.00		0.3130	28.604	28.513	2,912.9	21.81	91.39	80.9	196.7	0.0	97.3	16.00	3,423	54.4
65.00		0.3130	27.820	27.724	2,677.6	21.14	88.88	81.7	185.9	0.0	478.4	16.00	3,295	272.0
70.00	Bot - Section 3	0.3130	27.037	26.934	2,455.2	20.47	86.38	81.9	175.4	0.0	465.0	16.00	3,169	272.0
73.50	Top - Section 2	0.2500	26.989	21.525	1,964.2	26.25	107.95	76.1	140.6	0.0	576.5	16.00	3,161	190.4
75.00		0.2500	26.753	21.335	1,912.9	25.99	107.01	76.4	138.1	0.0	109.4	16.00	3,124	81.6
80.00		0.2500	25.970	20.705	1,748.2	25.16	103.88	77.3	130.0	0.0	357.6	16.00	3,001	272.0
85.00		0.2500	25.186	20.074	1,593.3	24.32	100.75	78.2	122.2	0.0	346.9	16.00	2,881	272.0
90.00		0.2500	24.403	19.443	1,447.8	23.48	97.61	79.1	114.6	0.0	336.2	16.00	2,763	272.0
95.00		0.2500	23.619	18.812	1,311.4	22.64	94.48	80.0	107.3	0.0	325.4	16.00	2,648	272.0
100.0		0.2500	22.836	18.182	1,183.9	21.80	91.34	80.9	100.2	0.0	314.7	16.00	2,536	272.0
103.0		0.2500	22.366	17.803	1,111.5	21.29	89.46	81.5	96.0	0.0	183.7	16.00	2,469	163.2
105.0		0.2500	22.052	17.551	1,064.9	20.96	88.21	81.9	93.3	0.0	120.3	16.00	2,425	108.8
110.0	Top - Section 3	0.2500	21.269	16.920	954.2	20.12	85.08	81.9	86.7	0.0	293.2	16.00	2,318	272.0
110.0	Bot - Section 4	0.1880	21.269	12.762	723.9	27.63	113.13	74.6	65.8	0.0		16.00	2,318	
113.0		0.1880	20.799	12.477	676.5	26.96	110.63	75.3	62.8	0.0	128.8	16.00	2,254	163.2
115.0		0.1880	20.486	12.287	646.1	26.52	108.97	75.8	60.9	0.0	84.3	16.00	2,212	108.8
119.0	Reinf. Top	0.1880	19.859	11.908	588.1	25.62	105.63	76.8	57.2	0.0	164.7	16.00	2,318	272.0
120.0		0.1880	19.702	11.813	574.2	25.40	104.80	77.0	56.3	0.0	40.4			
122.0		0.1880	19.389	11.623	546.9	24.95	103.13	77.5	54.5	0.0	79.7			
125.0		0.1880	18.919	11.339	507.7	24.28	100.63	78.2	51.8	0.0	117.2			
130.0		0.1880	18.135	10.864	446.7	23.17	96.46	79.4	47.6	0.0	188.9			
131.0		0.1880	17.978	10.770	435.1	22.94	95.63	79.7	46.7	0.0	36.8			
132.0		0.1880	17.822	10.675	423.7	22.72	94.80	79.9	45.9	0.0	36.5			
135.0		0.1880	17.352	10.390	390.7	22.05	92.30	80.7	43.5	0.0	107.5			
140.0		0.1880	16.568	9.916	339.6	20.93	88.13	81.9	39.6	0.0	172.7			
145.0		0.1880	15.785	9.441	293.1	19.82	83.96	81.9	35.9	0.0	164.7			
150.0		0.1880	15.001	8.967	251.1	18.70	79.79	81.9	32.3	0.0	156.6			
											13,383.0			10,771.

Load Case: 1.2D + 1.0W — 118 mph with No Ice — 26 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		99.5	0.0					0.0	0.0	99.5	0.0	0.0	0.0
2.00	Reinf Bottom	247.2	363.4					60.3	500.4	307.5	863.8	0.0	0.0
5.00		389.6	539.3					90.5	971.1	480.1	1,510.4	0.0	0.0
10.00		478.7	883.3					150.3	1,618.5	629.0	2,501.8	0.0	0.0
15.00		376.2	864.0					149.4	1,618.5	525.6	2,482.5	0.0	0.0
18.00	Reinf. Top Reinf.	231.5	509.1					89.2	971.1	320.7	1,480.2	0.0	0.0
20.00		318.2	335.6					59.3	500.4	377.5	836.0	0.0	0.0
25.00		447.3	825.4					148.0	1,251.1	595.2	2,076.4	0.0	0.0
30.00		286.8	806.1					122.4	1,251.1	409.2	2,057.1	0.0	0.0
31.50	Bot - Section 2	223.9	238.0					37.0	375.3	260.9	613.4	0.0	0.0
35.00		188.5	1,016.6					88.3	875.7	276.8	1,892.3	0.0	0.0
35.67	Top - Section 1	229.0	191.7					17.1	166.8	246.1	358.5	0.0	0.0
40.00		430.3	566.5					113.4	1,084.3	543.7	1,650.7	0.0	0.0
45.00		464.7	638.6					135.3	1,251.1	600.0	1,889.6	0.0	0.0
50.00		466.8	622.5					139.7	1,251.1	606.5	1,873.5	0.0	0.0
55.00		420.6	606.3					143.7	1,251.1	564.3	1,857.4	0.0	0.0
59.00	Reinf. Top	233.5	473.5					117.7	1,066.1	351.3	1,539.6	0.0	0.0
60.00		279.4	116.8					29.8	184.9	309.2	301.7	0.0	0.0
65.00		464.0	574.1					151.1	924.7	615.1	1,498.7	0.0	0.0
70.00	Bot - Section 3	412.9	558.0					154.4	823.6	567.4	1,381.5	0.0	0.0
73.50	Top - Section 2	259.5	691.8					13.5	568.5	273.0	1,260.3	0.0	0.0
75.00		328.8	131.3					5.8	243.6	334.6	374.9	0.0	0.0
80.00		483.7	429.2					20.0	812.2	503.6	1,241.3	0.0	0.0
85.00		437.8	416.3					20.8	812.2	458.7	1,228.4	0.0	0.0
90.00		404.2	403.4					21.7	812.2	425.9	1,215.6	0.0	0.0
95.00		391.8	390.5					22.5	812.2	414.3	1,202.7	0.0	0.0
100.00		305.1	377.6					23.4	812.2	328.4	1,189.8	0.0	0.0
103.00	Appurtenance(s)	185.9	220.4	2,058.7	0.0	0.0	2,202.0	14.4	487.3	2,259.0	2,909.7	0.0	0.0
105.00		252.2	144.4					9.8	324.9	261.9	469.2	0.0	0.0
110.00	Top - Section 3	282.3	351.9					25.0	812.2	307.2	1,164.1	0.0	0.0
113.00	Appurtenance(s)	171.1	154.6	2,796.1	0.0	3,423.5	2,464.9	15.4	487.3	2,982.5	3,106.8	0.0	0.0
115.00		274.5	101.1					10.4	309.6	284.9	410.7	0.0	0.0
119.00	Reinf. Top	258.1	197.6					95.5	783.7	353.6	981.3	0.0	0.0
120.00		152.3	48.4					24.0	117.9	176.3	166.3	0.0	0.0
122.00	Appurtenance(s)	251.0	95.7	96.7	0.0	96.7	18.0	48.2	235.7	395.8	349.4	0.0	0.0
125.00		337.1	140.6					48.5	302.7	385.6	443.4	0.0	0.0
130.00	Appurtenance(s)	224.1	226.7	600.2	0.0	519.2	329.5	130.6	506.6	955.0	1,062.7	0.0	0.0
131.00	Appurtenance(s)	73.3	44.2	334.7	0.0	0.0	672.0	26.3	117.6	434.3	833.8	0.0	0.0
132.00	Appurtenance(s)	144.6	43.8	18.9	0.0	0.0	12.0	26.4	117.6	190.0	173.4	0.0	0.0
135.00		283.4	129.0					79.7	268.7	363.1	397.8	0.0	0.0
140.00	Appurtenance(s)	344.1	207.3	3,476.6	0.0	-3,128.8	4,925.0	109.4	400.6	3,930.1	5,532.9	0.0	0.0
145.00		297.3	197.6					105.5	279.1	402.9	476.7	0.0	0.0
150.00	Appurtenance(s)	128.5	187.9	1,150.1	0.0	0.0	2,412.0	0.0	194.0	1,278.6	2,793.9	0.0	0.0
									Totals:	26,385.1	57,650.2	0.00	0.00

Site Number: 302484 Code: ANSI/TIA-222-H

Site Name: Branford CT 6, CT Engineering Number:13685617_C3_02 6/29/2021 10:09:29 AM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0W 118 mph with No Ice 26 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	-59.64	-29.79	0.00	-3,125.68	0.00	3,125.68	3,157.17	784.20	2,737.77	2,376.61	0.00	0.00	0.621
2.00	-58.71	-29.61	0.00	-3,066.11	0.00	3,066.11	3,140.17	777.55	2,691.61	2,343.59	0.02	-0.10	0.614
5.00	-57.11	-29.31	0.00	-2,977.27	0.00	2,977.27	3,114.35	767.59	2,623.11	2,294.24	0.14	-0.26	0.503
10.00	-54.50	-28.87	0.00	-2,830.71	0.00	2,830.71	3,070.50	750.99	2,510.89	2,212.51	0.53	-0.47	0.487
15.00	-51.94	-28.48	0.00	-2,686.35	0.00	2,686.35	3,025.61	734.39	2,401.13	2,131.46	1.14	-0.69	0.470
18.00	-50.41	-28.23	0.00	-2,600.93	0.00	2,600.93	2,998.18	724.42	2,336.45	2,083.18	1.61	-0.82	0.460
18.00	-50.41	-28.23	0.00	-2,600.93	0.00	2,600.93	2,998.18	724.42	2,336.45	2,083.18	1.61	-0.82	0.553
20.00	-49.50	-27.99	0.00	-2,544.47	0.00	2,544.47	2,979.68	717.78	2,293.82	2,051.14	1.97	-0.90	0.546
25.00	-47.31	-27.56	0.00	-2,404.54	0.00	2,404.54	2,932.71	701.18	2,188.97	1,971.59	3.06	-1.16	0.526
30.00	-45.19	-27.24	0.00	-2,266.73	0.00	2,266.73	2,875.21	684.57	2,086.57	1,886.65	4.40	-1.41	0.508
31.50	-44.52	-27.06	0.00	-2,225.87	0.00	2,225.87	2,854.29	679.59	2,056.33	1,859.14	4.86	-1.48	0.503
35.00	-42.59	-26.81	0.00	-2,131.17	0.00	2,131.17	2,805.48	667.97	1,986.62	1,795.73	6.01	-1.66	0.483
35.67	-42.18	-26.64	0.00	-2,113.30	0.00	2,113.30	2,253.08	567.85	1,719.88	1,471.98	6.25	-1.69	0.542
40.00	-40.44	-26.21	0.00	-1,997.85	0.00	1,997.85	2,223.50	555.84	1,647.92	1,421.63	7.88	-1.90	0.521
45.00	-38.46	-25.71	0.00	-1,866.81	0.00	1,866.81	2,188.39	541.99	1,566.79	1,363.95	10.01	-2.15	0.495
50.00	-36.51	-25.18	0.00	-1,738.27	0.00	1,738.27	2,152.25	528.13	1,487.72	1,306.78	12.40	-2.40	0.469
55.00	-34.59	-24.67	0.00	-1,612.36	0.00	1,612.36	2,115.06	514.27	1,410.69	1,250.16	15.04	-2.64	0.444
59.00	-33.02	-24.31	0.00	-1,513.69	0.00	1,513.69	2,084.57	503.18	1,350.55	1,205.28	17.33	-2.83	0.413
59.00	-33.02	-24.31	0.00	-1,513.69	0.00	1,513.69	2,084.57	503.18	1,350.55	1,205.28	17.33	-2.83	0.593
60.00	-32.65	-24.09	0.00	-1,489.38	0.00	1,489.38	2,076.84	500.41	1,335.71	1,194.13	17.93	-2.87	0.586
65.00	-31.06	-23.57	0.00	-1,368.92	0.00	1,368.92	2,037.58	486.55	1,262.78	1,138.75	21.11	-3.19	0.551
70.00	-29.42	-22.52	0.00	-1,251.07	0.00	1,251.07	1,985.31	472.69	1,191.90	1,077.58	24.62	-3.51	0.518
73.50	-28.12	-22.24	0.00	-1,172.24	0.00	1,172.24	1,474.00	377.76	952.88	802.36	27.27	-3.72	0.574
75.00	-27.69	-21.98	0.00	-1,138.88	0.00	1,138.88	1,466.32	374.43	936.20	791.10	28.45	-3.81	0.561
80.00	-26.37	-21.53	0.00	-1,028.96	0.00	1,028.96	1,440.03	363.37	881.69	753.74	32.61	-4.12	0.516
85.00	-25.08	-21.11	0.00	-921.30	0.00	921.30	1,412.71	352.30	828.81	716.70	37.07	-4.41	0.471
90.00	-23.80	-20.70	0.00	-815.75	0.00	815.75	1,384.35	341.23	777.56	680.02	41.84	-4.69	0.425
95.00	-22.55	-20.28	0.00	-712.26	0.00	712.26	1,354.95	330.16	727.95	643.77	46.88	-4.94	0.379
100.00	-21.33	-19.92	0.00	-610.84	0.00	610.84	1,324.51	319.09	679.97	607.99	52.18	-5.18	0.332
103.00	-18.61	-17.44	0.00	-551.09	0.00	551.09	1,305.75	312.45	651.97	586.76	55.48	-5.31	0.302
105.00	-18.12	-17.18	0.00	-516.21	0.00	516.21	1,293.03	308.02	633.63	572.72	57.72	-5.40	0.285
110.00	-16.95	-16.81	0.00	-430.32	0.00	430.32	1,247.19	296.95	588.93	532.34	63.47	-5.59	0.246
110.00	-16.95	-16.81	0.00	-430.32	0.00	430.32	856.53	223.97	445.40	367.75	63.47	-5.59	0.293
113.00	-14.13	-13.55	0.00	-376.48	0.00	376.48	845.63	218.97	425.76	354.91	67.02	-5.70	0.256
115.00	-13.73	-13.25	0.00	-349.37	0.00	349.37	838.16	215.64	412.92	346.37	69.42	-5.77	0.239
119.00	-12.77	-12.82	0.00	-296.36	0.00	296.36	822.72	208.98	387.82	329.40	74.30	-5.90	0.192
119.00	-12.77	-12.82	0.00	-296.36	0.00	296.36	822.72	208.98	387.82	329.40	74.30	-5.90	0.919
120.00	-12.59	-12.66	0.00	-283.54	0.00	283.54	818.76	207.32	381.66	325.17	75.53	-5.92	0.891
122.00	-12.22	-12.30	0.00	-258.13	0.00	258.13	810.71	203.99	369.51	316.76	78.07	-6.19	0.834
125.00	-11.72	-11.96	0.00	-221.24	0.00	221.24	798.31	198.99	351.64	304.20	82.08	-6.57	0.746
130.00	-10.72	-10.94	0.00	-160.92	0.00	160.92	776.83	190.67	322.85	283.51	89.24	-7.10	0.585
131.00	-9.93	-10.42	0.00	-149.98	0.00	149.98	772.41	189.01	317.24	279.41	90.73	-7.20	0.553
132.00	-9.75	-10.24	0.00	-139.55	0.00	139.55	767.94	187.34	311.67	275.32	92.25	-7.30	0.523

Load Case: 1.2D + 1.0W — 118 mph with No Ice — 26 Iterations

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

135.00	-9.35	-9.88	0.00	-108.82	0.00	108.82	754.30	182.35	295.28	263.15	96.90	-7.55	0.429
140.00	-4.38	-5.26	0.00	-59.42	0.00	59.42	730.89	174.02	268.95	243.21	104.96	-7.85	0.251
145.00	-3.95	-4.81	0.00	-33.12	0.00	33.12	695.93	165.70	243.85	220.38	113.27	-8.05	0.157
150.00	0.00	-4.20	0.00	-9.09	0.00	9.09	660.97	157.37	219.97	198.67	121.74	-8.15	0.046

Load Case: 0.9D + 1.0W — 118 mph with No Ice (Reduced DL) — 26 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		99.5	0.0					0.0	0.0	99.5	0.0	0.0	0.0
2.00	Reinf Bottom	247.2	272.5					60.3	375.3	307.5	647.8	0.0	0.0
5.00		389.6	404.4					90.5	728.3	480.1	1,132.8	0.0	0.0
10.00		478.7	662.5					150.3	1,213.9	629.0	1,876.4	0.0	0.0
15.00		376.2	648.0					149.4	1,213.9	525.6	1,861.9	0.0	0.0
18.00	Reinf. Top Reinf.	231.5	381.8					89.2	728.3	320.7	1,110.2	0.0	0.0
20.00		318.2	251.7					59.3	375.3	377.5	627.0	0.0	0.0
25.00		447.3	619.0					148.0	938.3	595.2	1,557.3	0.0	0.0
30.00		286.8	604.5					122.4	938.3	409.2	1,542.8	0.0	0.0
31.50	Bot - Section 2	223.9	178.5					37.0	281.5	260.9	460.0	0.0	0.0
35.00		188.5	762.4					88.3	656.8	276.8	1,419.2	0.0	0.0
35.67	Top - Section 1	229.0	143.7					17.1	125.1	246.1	268.9	0.0	0.0
40.00		430.3	424.9					113.4	813.2	543.7	1,238.0	0.0	0.0
45.00		464.7	478.9					135.3	938.3	600.0	1,417.2	0.0	0.0
50.00		466.8	466.8					139.7	938.3	606.5	1,405.1	0.0	0.0
55.00		420.6	454.7					143.7	938.3	564.3	1,393.0	0.0	0.0
59.00	Reinf. Top	233.5	355.1					117.7	799.6	351.3	1,154.7	0.0	0.0
60.00		279.4	87.6					29.8	138.7	309.2	226.3	0.0	0.0
65.00		464.0	430.6					151.1	693.5	615.1	1,124.1	0.0	0.0
70.00	Bot - Section 3	412.9	418.5					154.4	617.7	567.4	1,036.2	0.0	0.0
73.50	Top - Section 2	259.5	518.8					13.5	426.4	273.0	945.2	0.0	0.0
75.00		328.8	98.4					5.8	182.7	334.6	281.2	0.0	0.0
80.00		483.7	321.9					20.0	609.1	503.6	931.0	0.0	0.0
85.00		437.8	312.2					20.8	609.1	458.7	921.3	0.0	0.0
90.00		404.2	302.6					21.7	609.1	425.9	911.7	0.0	0.0
95.00		391.8	292.9					22.5	609.1	414.3	902.0	0.0	0.0
100.00		305.1	283.2					23.4	609.1	328.4	892.4	0.0	0.0
103.00	Appurtenance(s)	185.9	165.3	2,058.7	0.0	0.0	1,651.5	14.4	365.5	2,259.0	2,182.3	0.0	0.0
105.00		252.2	108.3					9.8	243.6	261.9	351.9	0.0	0.0
110.00	Top - Section 3	282.3	263.9					25.0	609.1	307.2	873.0	0.0	0.0
113.00	Appurtenance(s)	171.1	115.9	2,796.1	0.0	3,423.5	1,848.7	15.4	365.5	2,982.5	2,330.1	0.0	0.0
115.00		274.5	75.8					10.4	232.2	284.9	308.0	0.0	0.0
119.00	Reinf. Top	258.1	148.2					95.5	587.8	353.6	735.9	0.0	0.0
120.00		152.3	36.3					24.0	88.4	176.3	124.7	0.0	0.0
122.00	Appurtenance(s)	251.0	71.8	96.7	0.0	96.7	13.5	48.2	176.8	395.8	262.1	0.0	0.0
125.00		337.1	105.5					48.5	227.0	385.6	332.5	0.0	0.0
130.00	Appurtenance(s)	224.1	170.0	600.2	0.0	519.2	247.1	130.6	379.9	955.0	797.0	0.0	0.0
131.00	Appurtenance(s)	73.3	33.1	334.7	0.0	0.0	504.0	26.3	88.2	434.3	625.3	0.0	0.0
132.00	Appurtenance(s)	144.6	32.8	18.9	0.0	0.0	9.0	26.4	88.2	190.0	130.0	0.0	0.0
135.00		283.4	96.8					79.7	201.6	363.1	298.3	0.0	0.0
140.00	Appurtenance(s)	344.1	155.5	3,476.6	0.0	-3,128.8	3,693.8	109.4	300.5	3,930.1	4,149.7	0.0	0.0
145.00		297.3	148.2					105.5	209.3	402.9	357.5	0.0	0.0
150.00	Appurtenance(s)	128.5	140.9	1,150.1	0.0	0.0	1,809.0	0.0	145.5	1,278.6	2,095.4	0.0	0.0
									Totals:	26,385.1	43,237.6	0.00	0.00

Site Number: 302484 | Code: ANSI/TIA-222-H |

Site Name: Branford CT 6, CT | Engineering Number:13685617_C3_02 | 6/29/2021 10:09:41 AM

Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.0W — 118 mph with No Ice (Reduced DL) — 26 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	-44.72	-29.77	0.00	-3,067.99	0.00	3,067.99	3,157.17	784.20	2,737.77	2,376.61	0.00	0.00	0.607
2.00	-44.01	-29.56	0.00	-3,008.45	0.00	3,008.45	3,140.17	777.55	2,691.61	2,343.59	0.02	-0.10	0.600
5.00	-42.79	-29.22	0.00	-2,919.76	0.00	2,919.76	3,114.35	767.59	2,623.11	2,294.24	0.14	-0.26	0.491
10.00	-40.81	-28.72	0.00	-2,773.69	0.00	2,773.69	3,070.50	750.99	2,510.89	2,212.51	0.52	-0.47	0.475
15.00	-38.87	-28.29	0.00	-2,630.07	0.00	2,630.07	3,025.61	734.39	2,401.13	2,131.46	1.12	-0.67	0.459
18.00	-37.71	-28.03	0.00	-2,545.19	0.00	2,545.19	2,998.18	724.42	2,336.45	2,083.18	1.58	-0.80	0.449
18.00	-37.71	-28.03	0.00	-2,545.19	0.00	2,545.19	2,998.18	724.42	2,336.45	2,083.18	1.58	-0.80	0.539
20.00	-37.01	-27.75	0.00	-2,489.14	0.00	2,489.14	2,979.68	717.78	2,293.82	2,051.14	1.94	-0.88	0.532
25.00	-35.35	-27.28	0.00	-2,350.40	0.00	2,350.40	2,932.71	701.18	2,188.97	1,971.59	3.00	-1.13	0.512
30.00	-33.74	-26.93	0.00	-2,214.01	0.00	2,214.01	2,875.21	684.57	2,086.57	1,886.65	4.31	-1.38	0.494
31.50	-33.23	-26.73	0.00	-2,173.62	0.00	2,173.62	2,854.29	679.59	2,056.33	1,859.14	4.76	-1.45	0.489
35.00	-31.77	-26.47	0.00	-2,080.07	0.00	2,080.07	2,805.48	667.97	1,986.62	1,795.73	5.89	-1.62	0.469
35.67	-31.45	-26.28	0.00	-2,062.42	0.00	2,062.42	2,253.08	567.85	1,719.88	1,471.98	6.12	-1.66	0.527
40.00	-30.13	-25.82	0.00	-1,948.53	0.00	1,948.53	2,223.50	555.84	1,647.92	1,421.63	7.72	-1.86	0.506
45.00	-28.63	-25.29	0.00	-1,819.44	0.00	1,819.44	2,188.39	541.99	1,566.79	1,363.95	9.80	-2.11	0.481
50.00	-27.15	-24.74	0.00	-1,692.99	0.00	1,692.99	2,152.25	528.13	1,487.72	1,306.78	12.13	-2.34	0.455
55.00	-25.69	-24.21	0.00	-1,569.27	0.00	1,569.27	2,115.06	514.27	1,410.69	1,250.16	14.71	-2.58	0.430
59.00	-24.51	-23.86	0.00	-1,472.42	0.00	1,472.42	2,084.57	503.18	1,350.55	1,205.28	16.95	-2.76	0.400
59.00	-24.51	-23.86	0.00	-1,472.42	0.00	1,472.42	2,084.57	503.18	1,350.55	1,205.28	16.95	-2.76	0.574
60.00	-24.22	-23.61	0.00	-1,448.57	0.00	1,448.57	2,076.84	500.41	1,335.71	1,194.13	17.54	-2.81	0.567
65.00	-23.01	-23.06	0.00	-1,330.51	0.00	1,330.51	2,037.58	486.55	1,262.78	1,138.75	20.64	-3.12	0.533
70.00	-21.77	-22.00	0.00	-1,215.18	0.00	1,215.18	1,985.31	472.69	1,191.90	1,077.58	24.07	-3.42	0.501
73.50	-20.79	-21.73	0.00	-1,138.17	0.00	1,138.17	1,474.00	377.76	952.88	802.36	26.66	-3.63	0.555
75.00	-20.46	-21.44	0.00	-1,105.58	0.00	1,105.58	1,466.32	374.43	936.20	791.10	27.81	-3.72	0.542
80.00	-19.45	-20.98	0.00	-998.36	0.00	998.36	1,440.03	363.37	881.69	753.74	31.87	-4.01	0.498
85.00	-18.47	-20.54	0.00	-893.48	0.00	893.48	1,412.71	352.30	828.81	716.70	36.22	-4.30	0.455
90.00	-17.50	-20.13	0.00	-790.76	0.00	790.76	1,384.35	341.23	777.56	680.02	40.86	-4.57	0.410
95.00	-16.56	-19.71	0.00	-690.13	0.00	690.13	1,354.95	330.16	727.95	643.77	45.78	-4.82	0.365
100.00	-15.64	-19.35	0.00	-591.58	0.00	591.58	1,324.51	319.09	679.97	607.99	50.94	-5.05	0.320
103.00	-13.63	-16.93	0.00	-533.52	0.00	533.52	1,305.75	312.45	651.97	586.76	54.15	-5.18	0.291
105.00	-13.27	-16.67	0.00	-499.65	0.00	499.65	1,293.03	308.02	633.63	572.72	56.34	-5.26	0.274
110.00	-12.38	-16.32	0.00	-416.29	0.00	416.29	1,247.19	296.95	588.93	532.34	61.94	-5.44	0.236
110.00	-12.38	-16.32	0.00	-416.29	0.00	416.29	856.53	223.97	445.40	367.75	61.94	-5.44	0.281
113.00	-10.33	-13.14	0.00	-363.91	0.00	363.91	845.63	218.97	425.76	354.91	65.39	-5.55	0.246
115.00	-10.03	-12.84	0.00	-337.63	0.00	337.63	838.16	215.64	412.92	346.37	67.72	-5.61	0.229
119.00	-9.32	-12.43	0.00	-286.26	0.00	286.26	822.72	208.98	387.82	329.40	72.48	-5.74	0.184
119.00	-9.32	-12.43	0.00	-286.26	0.00	286.26	822.72	208.98	387.82	329.40	72.48	-5.74	0.884
120.00	-9.18	-12.27	0.00	-273.83	0.00	273.83	818.76	207.32	381.66	325.17	73.68	-5.77	0.857
122.00	-8.90	-11.89	0.00	-249.20	0.00	249.20	810.71	203.99	369.51	316.76	76.15	-6.03	0.801
125.00	-8.52	-11.54	0.00	-213.51	0.00	213.51	798.31	198.99	351.64	304.20	80.04	-6.39	0.716
130.00	-7.78	-10.54	0.00	-155.28	0.00	155.28	776.83	190.67	322.85	283.51	87.01	-6.90	0.561
131.00	-7.20	-10.05	0.00	-144.74	0.00	144.74	772.41	189.01	317.24	279.41	88.46	-7.00	0.530
132.00	-7.06	-9.86	0.00	-134.70	0.00	134.70	767.94	187.34	311.67	275.32	89.93	-7.09	0.501

Load Case: 0.9D + 1.0W — 118 mph with No Ice (Reduced DL) — 26 Iterations

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

135.00	-6.77	-9.50	0.00	-105.11	0.00	105.11	754.30	182.35	295.28	263.15	94.46	-7.33	0.411
140.00	-3.14	-5.07	0.00	-57.62	0.00	57.62	730.89	174.02	268.95	243.21	102.28	-7.63	0.242
145.00	-2.83	-4.63	0.00	-32.25	0.00	32.25	695.93	165.70	243.85	220.38	110.36	-7.82	0.151
150.00	0.00	-4.20	0.00	-9.09	0.00	9.09	660.97	157.37	219.97	198.67	118.58	-7.92	0.046

Site Number: 302484 | Code: ANSI/TIA-222-H |

Site Name: Branford CT 6, CT | Engineering Number:13685617_C3_02 | 6/29/2021 10:09:41 AM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi | 49 mph with 0.85 in Radial Ice | 25 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

		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		18.7	0.0					0.0	0.0	18.7	0.0	0.0	0.0
2.00	Reinf Bottom	46.5	421.9					6.9	592.1	53.5	1,013.9	0.0	0.0
5.00		73.7	637.7					12.5	1,125.1	86.2	1,762.7	0.0	0.0
10.00		90.9	1,056.8					23.9	1,894.1	114.8	2,951.0	0.0	0.0
15.00		71.7	1,042.9					26.6	1,908.0	98.3	2,950.9	0.0	0.0
18.00	Reinf. Top Reinf.	44.2	618.1					17.0	1,149.6	61.2	1,767.7	0.0	0.0
20.00		60.9	408.6					11.7	621.1	72.6	1,029.7	0.0	0.0
25.00		86.0	1,007.0					30.3	1,543.7	116.3	2,550.7	0.0	0.0
30.00		55.4	987.2					31.7	1,549.5	87.1	2,536.7	0.0	0.0
31.50	Bot - Section 2	43.5	292.6					9.8	465.8	53.3	758.5	0.0	0.0
35.00		36.7	1,145.3					23.8	1,088.6	60.5	2,233.9	0.0	0.0
35.67	Top - Section 1	44.7	216.3					4.7	207.6	49.3	423.8	0.0	0.0
40.00		84.2	724.1					30.8	1,351.2	115.0	2,075.3	0.0	0.0
45.00		91.7	818.3					37.6	1,562.7	129.3	2,380.9	0.0	0.0
50.00		93.0	799.7					39.5	1,566.2	132.5	2,365.9	0.0	0.0
55.00		84.5	780.9					53.6	1,569.3	138.1	2,350.2	0.0	0.0
59.00	Reinf. Top	47.2	611.4					44.4	1,322.9	91.6	1,934.3	0.0	0.0
60.00		56.8	151.2					11.3	243.0	68.1	394.2	0.0	0.0
65.00		94.6	742.6					57.8	1,216.4	152.5	1,959.0	0.0	0.0
70.00	Bot - Section 3	77.1	723.2					59.9	1,075.3	137.0	1,798.5	0.0	0.0
73.50	Top - Section 2	42.5	808.0					43.1	742.4	85.6	1,550.4	0.0	0.0
75.00		54.9	180.8					18.6	318.4	73.5	499.2	0.0	0.0
80.00		83.9	590.4					63.4	1,062.4	147.3	1,652.8	0.0	0.0
85.00		83.0	573.8					65.3	1,063.9	148.3	1,637.7	0.0	0.0
90.00		82.0	557.1					67.2	1,065.3	149.1	1,622.4	0.0	0.0
95.00		80.8	540.3					69.0	1,066.6	149.8	1,607.0	0.0	0.0
100.00		63.8	523.5					70.8	1,067.9	134.6	1,591.4	0.0	0.0
103.00	Appurtenance(s)	39.4	306.5	819.6	0.0	0.0	5,649.7	43.4	641.3	902.4	6,597.6	0.0	0.0
105.00		54.3	201.2					29.3	427.8	83.6	629.0	0.0	0.0
110.00	Top - Section 3	61.5	489.5					74.4	1,070.3	135.9	1,559.8	0.0	0.0
113.00	Appurtenance(s)	37.9	235.7	600.9	0.0	697.1	3,892.1	45.5	642.7	684.2	4,770.5	0.0	0.0
115.00		44.8	154.5					45.5	413.4	90.3	567.9	0.0	0.0
119.00	Reinf. Top	37.0	301.6					119.7	1,023.0	156.7	1,324.6	0.0	0.0
120.00		21.9	74.3					31.8	178.9	53.7	253.2	0.0	0.0
122.00	Appurtenance(s)	36.2	146.7	31.1	0.0	31.1	51.8	64.7	358.0	132.0	556.5	0.0	0.0
125.00		62.0	215.5					72.2	450.4	134.2	665.9	0.0	0.0
130.00	Appurtenance(s)	48.4	347.0	123.1	0.0	103.0	604.4	108.2	731.0	279.8	1,682.3	0.0	0.0
131.00	Appurtenance(s)	15.9	68.1	83.9	0.0	0.0	867.0	27.0	161.4	126.8	1,096.4	0.0	0.0
132.00	Appurtenance(s)	31.5	67.5	4.3	0.0	0.0	29.4	27.1	161.4	63.0	258.3	0.0	0.0
135.00		60.8	198.6					48.5	355.2	109.3	553.8	0.0	0.0
140.00	Appurtenance(s)	73.3	318.6	743.9	0.0	-646.3	6,737.8	70.2	530.0	887.4	7,586.4	0.0	0.0
145.00		67.2	304.3					26.4	306.4	93.6	610.7	0.0	0.0
150.00	Appurtenance(s)	31.1	290.0	295.8	0.0	0.0	2,758.9	0.0	194.0	326.9	3,242.9	0.0	0.0
								Totals:		6,983.75	77,354.4	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 49 mph with 0.85 in Radial Ice 25 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	-80.97	-7.71	0.00	-862.87	0.00	862.87	3,157.17	784.20	2,737.77	2,376.61	0.00	0.00	0.183
2.00	-79.95	-7.70	0.00	-847.46	0.00	847.46	3,140.17	777.55	2,691.61	2,343.59	0.01	-0.03	0.181
5.00	-78.19	-7.69	0.00	-824.35	0.00	824.35	3,114.35	767.59	2,623.11	2,294.24	0.04	-0.07	0.148
10.00	-75.23	-7.64	0.00	-785.92	0.00	785.92	3,070.50	750.99	2,510.89	2,212.51	0.15	-0.13	0.144
15.00	-72.27	-7.60	0.00	-747.71	0.00	747.71	3,025.61	734.39	2,401.13	2,131.46	0.32	-0.19	0.139
18.00	-70.50	-7.57	0.00	-724.92	0.00	724.92	2,998.18	724.42	2,336.45	2,083.18	0.45	-0.23	0.137
18.00	-70.50	-7.57	0.00	-724.92	0.00	724.92	2,998.18	724.42	2,336.45	2,083.18	0.45	-0.23	0.165
20.00	-69.46	-7.55	0.00	-709.79	0.00	709.79	2,979.68	717.78	2,293.82	2,051.14	0.55	-0.25	0.162
25.00	-66.90	-7.50	0.00	-672.06	0.00	672.06	2,932.71	701.18	2,188.97	1,971.59	0.85	-0.32	0.157
30.00	-64.36	-7.45	0.00	-634.56	0.00	634.56	2,875.21	684.57	2,086.57	1,886.65	1.22	-0.39	0.152
31.50	-63.60	-7.43	0.00	-623.39	0.00	623.39	2,854.29	679.59	2,056.33	1,859.14	1.35	-0.41	0.150
35.00	-61.36	-7.38	0.00	-597.39	0.00	597.39	2,805.48	667.97	1,986.62	1,795.73	1.67	-0.46	0.145
35.67	-60.93	-7.37	0.00	-592.47	0.00	592.47	2,253.08	567.85	1,719.88	1,471.98	1.73	-0.47	0.163
40.00	-58.85	-7.30	0.00	-560.55	0.00	560.55	2,223.50	555.84	1,647.92	1,421.63	2.19	-0.53	0.156
45.00	-56.46	-7.22	0.00	-524.05	0.00	524.05	2,188.39	541.99	1,566.79	1,363.95	2.78	-0.60	0.149
50.00	-54.09	-7.12	0.00	-487.97	0.00	487.97	2,152.25	528.13	1,487.72	1,306.78	3.45	-0.67	0.141
55.00	-51.73	-7.01	0.00	-452.37	0.00	452.37	2,115.06	514.27	1,410.69	1,250.16	4.19	-0.74	0.133
59.00	-49.80	-6.92	0.00	-424.34	0.00	424.34	2,084.57	503.18	1,350.55	1,205.28	4.83	-0.79	0.125
59.00	-49.80	-6.92	0.00	-424.34	0.00	424.34	2,084.57	503.18	1,350.55	1,205.28	4.83	-0.79	0.178
60.00	-49.40	-6.89	0.00	-417.42	0.00	417.42	2,076.84	500.41	1,335.71	1,194.13	5.00	-0.80	0.176
65.00	-47.43	-6.78	0.00	-382.97	0.00	382.97	2,037.58	486.55	1,262.78	1,138.75	5.88	-0.89	0.166
70.00	-45.32	-6.57	0.00	-349.06	0.00	349.06	1,985.31	472.69	1,191.90	1,077.58	6.87	-0.98	0.156
73.50	-43.77	-6.49	0.00	-326.06	0.00	326.06	1,474.00	377.76	952.88	802.36	7.61	-1.04	0.173
75.00	-43.26	-6.45	0.00	-316.32	0.00	316.32	1,466.32	374.43	936.20	791.10	7.94	-1.06	0.169
80.00	-41.61	-6.33	0.00	-284.06	0.00	284.06	1,440.03	363.37	881.69	753.74	9.10	-1.15	0.155
85.00	-39.96	-6.20	0.00	-252.40	0.00	252.40	1,412.71	352.30	828.81	716.70	10.35	-1.23	0.141
90.00	-38.34	-6.07	0.00	-221.39	0.00	221.39	1,384.35	341.23	777.56	680.02	11.68	-1.31	0.127
95.00	-36.73	-5.92	0.00	-191.05	0.00	191.05	1,354.95	330.16	727.95	643.77	13.08	-1.37	0.113
100.00	-35.13	-5.78	0.00	-161.44	0.00	161.44	1,324.51	319.09	679.97	607.99	14.56	-1.44	0.099
103.00	-28.56	-4.72	0.00	-144.10	0.00	144.10	1,305.75	312.45	651.97	586.76	15.47	-1.47	0.088
105.00	-27.93	-4.64	0.00	-134.65	0.00	134.65	1,293.03	308.02	633.63	572.72	16.09	-1.50	0.083
110.00	-26.37	-4.48	0.00	-111.45	0.00	111.45	1,247.19	296.95	588.93	532.34	17.69	-1.55	0.072
110.00	-26.37	-4.48	0.00	-111.45	0.00	111.45	856.53	223.97	445.40	367.75	17.69	-1.55	0.086
113.00	-21.62	-3.68	0.00	-97.31	0.00	97.31	845.63	218.97	425.76	354.91	18.67	-1.57	0.075
115.00	-21.05	-3.58	0.00	-89.95	0.00	89.95	838.16	215.64	412.92	346.37	19.33	-1.59	0.070
119.00	-19.73	-3.39	0.00	-75.63	0.00	75.63	822.72	208.98	387.82	329.40	20.68	-1.62	0.057
119.00	-19.73	-3.39	0.00	-75.63	0.00	75.63	822.72	208.98	387.82	329.40	20.68	-1.62	0.254
120.00	-19.48	-3.35	0.00	-72.24	0.00	72.24	818.76	207.32	381.66	325.17	21.02	-1.63	0.246
122.00	-18.92	-3.22	0.00	-65.52	0.00	65.52	810.71	203.99	369.51	316.76	21.72	-1.70	0.230
125.00	-18.25	-3.11	0.00	-55.85	0.00	55.85	798.31	198.99	351.64	304.20	22.82	-1.79	0.207
130.00	-16.58	-2.79	0.00	-40.21	0.00	40.21	776.83	190.67	322.85	283.51	24.77	-1.93	0.163
131.00	-15.49	-2.64	0.00	-37.42	0.00	37.42	772.41	189.01	317.24	279.41	25.18	-1.95	0.154
132.00	-15.23	-2.58	0.00	-34.78	0.00	34.78	767.94	187.34	311.67	275.32	25.59	-1.98	0.146

Load Case: 1.2D + 1.0Di + 1.0Wi — 49 mph with 0.85 in Radial Ice — 25 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

135.00	-14.67	-2.47	0.00	-27.05	0.00	27.05	754.30	182.35	295.28	263.15	26.85	-2.04	0.122
140.00	-7.12	-1.31	0.00	-14.72	0.00	14.72	730.89	174.02	268.95	243.21	29.03	-2.12	0.070
145.00	-6.52	-1.20	0.00	-8.16	0.00	8.16	695.93	165.70	243.85	220.38	31.27	-2.16	0.046
150.00	0.00	-0.95	0.00	-2.16	0.00	2.16	660.97	157.37	219.97	198.67	33.55	-2.19	0.011

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		23.0	0.0					0.0	0.0	23.0	0.0	0.0	0.0
2.00	Reinf Bottom	57.2	302.8					14.0	417.0	71.2	719.8	0.0	0.0
5.00		90.2	449.4					21.0	809.3	111.2	1,258.6	0.0	0.0
10.00		110.9	736.1					34.8	1,348.8	145.7	2,084.9	0.0	0.0
15.00		87.1	720.0					34.6	1,348.8	121.7	2,068.8	0.0	0.0
18.00	Reinf. Top Reinf.	53.6	424.3					20.7	809.3	74.3	1,233.5	0.0	0.0
20.00		73.7	279.6					13.7	417.0	87.4	696.6	0.0	0.0
25.00		103.6	687.8					34.3	1,042.5	137.8	1,730.4	0.0	0.0
30.00		66.4	671.7					28.3	1,042.5	94.8	1,714.3	0.0	0.0
31.50	Bot - Section 2	51.9	198.4					8.6	312.8	60.4	511.1	0.0	0.0
35.00		43.6	847.1					20.4	729.8	64.1	1,576.9	0.0	0.0
35.67	Top - Section 1	53.0	159.7					4.0	139.0	57.0	298.7	0.0	0.0
40.00		99.6	472.1					26.3	903.5	125.9	1,375.6	0.0	0.0
45.00		107.6	532.1					31.3	1,042.5	139.0	1,574.7	0.0	0.0
50.00		108.1	518.7					32.3	1,042.5	140.5	1,561.3	0.0	0.0
55.00		97.4	505.3					33.3	1,042.5	130.7	1,547.8	0.0	0.0
59.00	Reinf. Top	54.1	394.5					27.3	888.4	81.3	1,283.0	0.0	0.0
60.00		64.7	97.3					6.9	154.1	71.6	251.4	0.0	0.0
65.00		107.5	478.4					35.0	770.5	142.4	1,249.0	0.0	0.0
70.00	Bot - Section 3	95.6	465.0					35.8	686.3	131.4	1,151.3	0.0	0.0
73.50	Top - Section 2	60.1	576.5					3.1	473.8	63.2	1,050.2	0.0	0.0
75.00		76.1	109.4					1.3	203.0	77.5	312.4	0.0	0.0
80.00		112.0	357.6					4.6	676.8	116.6	1,034.4	0.0	0.0
85.00		101.4	346.9					4.8	676.8	106.2	1,023.7	0.0	0.0
90.00		93.6	336.2					5.0	676.8	98.6	1,013.0	0.0	0.0
95.00		90.7	325.4					5.2	676.8	95.9	1,002.2	0.0	0.0
100.00		70.6	314.7					5.4	676.8	76.1	991.5	0.0	0.0
103.00	Appurtenance(s)	43.0	183.7	476.8	0.0	0.0	1,835.0	3.3	406.1	523.1	2,424.8	0.0	0.0
105.00		58.4	120.3					2.3	270.7	60.7	391.0	0.0	0.0
110.00	Top - Section 3	65.4	293.2					5.8	676.8	71.1	970.0	0.0	0.0
113.00	Appurtenance(s)	39.6	128.8	647.5	0.0	792.8	2,054.1	3.6	406.1	690.7	2,589.0	0.0	0.0
115.00		63.6	84.3					2.4	258.0	66.0	342.2	0.0	0.0
119.00	Reinf. Top	59.8	164.7					23.1	653.1	82.8	817.7	0.0	0.0
120.00		35.3	40.4					5.8	98.2	41.1	138.6	0.0	0.0
122.00	Appurtenance(s)	58.1	79.7	22.4	0.0	22.4	15.0	11.6	196.4	92.2	291.2	0.0	0.0
125.00		78.1	117.2					12.2	252.3	90.3	369.5	0.0	0.0
130.00	Appurtenance(s)	51.9	188.9	139.0	0.0	120.2	274.6	34.0	422.1	224.9	885.6	0.0	0.0
131.00	Appurtenance(s)	17.0	36.8	77.5	0.0	0.0	560.0	6.9	98.0	101.4	694.8	0.0	0.0
132.00	Appurtenance(s)	33.5	36.5	4.4	0.0	0.0	10.0	6.9	98.0	44.8	144.5	0.0	0.0
135.00		65.6	107.5					20.8	223.9	86.5	331.5	0.0	0.0
140.00	Appurtenance(s)	79.7	172.7	805.1	0.0	-724.6	4,104.2	28.4	333.9	913.2	4,610.8	0.0	0.0
145.00		68.9	164.7					29.2	232.6	98.0	397.2	0.0	0.0
150.00	Appurtenance(s)	29.8	156.6	266.4	0.0	0.0	2,010.0	0.0	161.6	296.1	2,328.3	0.0	0.0
									Totals:	6,128.42	48,041.8	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	-49.72	-6.91	0.00	-718.80	0.00	718.80	3,157.17	784.20	2,737.77	2,376.61	0.00	0.00	0.149
2.00	-49.00	-6.87	0.00	-704.97	0.00	704.97	3,140.17	777.55	2,691.61	2,343.59	0.01	-0.02	0.147
5.00	-47.74	-6.79	0.00	-684.37	0.00	684.37	3,114.35	767.59	2,623.11	2,294.24	0.03	-0.06	0.120
10.00	-45.65	-6.68	0.00	-650.42	0.00	650.42	3,070.50	750.99	2,510.89	2,212.51	0.12	-0.11	0.117
15.00	-43.57	-6.58	0.00	-617.01	0.00	617.01	3,025.61	734.39	2,401.13	2,131.46	0.26	-0.16	0.113
18.00	-42.34	-6.52	0.00	-597.26	0.00	597.26	2,998.18	724.42	2,336.45	2,083.18	0.37	-0.19	0.110
18.00	-42.34	-6.52	0.00	-597.26	0.00	597.26	2,998.18	724.42	2,336.45	2,083.18	0.37	-0.19	0.133
20.00	-41.64	-6.46	0.00	-584.21	0.00	584.21	2,979.68	717.78	2,293.82	2,051.14	0.45	-0.21	0.131
25.00	-39.90	-6.36	0.00	-551.89	0.00	551.89	2,932.71	701.18	2,188.97	1,971.59	0.70	-0.27	0.126
30.00	-38.18	-6.28	0.00	-520.10	0.00	520.10	2,875.21	684.57	2,086.57	1,886.65	1.01	-0.32	0.122
31.50	-37.67	-6.24	0.00	-510.68	0.00	510.68	2,854.29	679.59	2,056.33	1,859.14	1.12	-0.34	0.120
35.00	-36.09	-6.18	0.00	-488.86	0.00	488.86	2,805.48	667.97	1,986.62	1,795.73	1.38	-0.38	0.116
35.67	-35.79	-6.14	0.00	-484.74	0.00	484.74	2,253.08	567.85	1,719.88	1,471.98	1.44	-0.39	0.130
40.00	-34.41	-6.03	0.00	-458.15	0.00	458.15	2,223.50	555.84	1,647.92	1,421.63	1.81	-0.44	0.125
45.00	-32.83	-5.91	0.00	-428.00	0.00	428.00	2,188.39	541.99	1,566.79	1,363.95	2.30	-0.49	0.119
50.00	-31.26	-5.79	0.00	-398.44	0.00	398.44	2,152.25	528.13	1,487.72	1,306.78	2.85	-0.55	0.112
55.00	-29.71	-5.67	0.00	-369.50	0.00	369.50	2,115.06	514.27	1,410.69	1,250.16	3.45	-0.61	0.106
59.00	-28.43	-5.58	0.00	-346.83	0.00	346.83	2,084.57	503.18	1,350.55	1,205.28	3.98	-0.65	0.099
59.00	-28.43	-5.58	0.00	-346.83	0.00	346.83	2,084.57	503.18	1,350.55	1,205.28	3.98	-0.65	0.142
60.00	-28.17	-5.53	0.00	-341.25	0.00	341.25	2,076.84	500.41	1,335.71	1,194.13	4.12	-0.66	0.140
65.00	-26.92	-5.41	0.00	-313.59	0.00	313.59	2,037.58	486.55	1,262.78	1,138.75	4.85	-0.73	0.132
70.00	-25.58	-5.16	0.00	-286.56	0.00	286.56	1,985.31	472.69	1,191.90	1,077.58	5.65	-0.80	0.124
73.50	-24.52	-5.10	0.00	-268.48	0.00	268.48	1,474.00	377.76	952.88	802.36	6.26	-0.85	0.138
75.00	-24.21	-5.04	0.00	-260.83	0.00	260.83	1,466.32	374.43	936.20	791.10	6.53	-0.87	0.135
80.00	-23.17	-4.93	0.00	-235.65	0.00	235.65	1,440.03	363.37	881.69	753.74	7.49	-0.94	0.124
85.00	-22.14	-4.83	0.00	-210.99	0.00	210.99	1,412.71	352.30	828.81	716.70	8.51	-1.01	0.114
90.00	-21.13	-4.74	0.00	-186.82	0.00	186.82	1,384.35	341.23	777.56	680.02	9.61	-1.07	0.103
95.00	-20.12	-4.64	0.00	-163.12	0.00	163.12	1,354.95	330.16	727.95	643.77	10.76	-1.13	0.092
100.00	-19.13	-4.56	0.00	-139.90	0.00	139.90	1,324.51	319.09	679.97	607.99	11.98	-1.19	0.081
103.00	-16.71	-4.00	0.00	-126.22	0.00	126.22	1,305.75	312.45	651.97	586.76	12.74	-1.22	0.074
105.00	-16.32	-3.94	0.00	-118.23	0.00	118.23	1,293.03	308.02	633.63	572.72	13.25	-1.24	0.070
110.00	-15.35	-3.85	0.00	-98.55	0.00	98.55	1,247.19	296.95	588.93	532.34	14.57	-1.28	0.060
110.00	-15.35	-3.85	0.00	-98.55	0.00	98.55	856.53	223.97	445.40	367.75	14.57	-1.28	0.072
113.00	-12.78	-3.11	0.00	-86.20	0.00	86.20	845.63	218.97	425.76	354.91	15.39	-1.31	0.063
115.00	-12.44	-3.04	0.00	-79.99	0.00	79.99	838.16	215.64	412.92	346.37	15.94	-1.32	0.059
119.00	-11.62	-2.94	0.00	-67.83	0.00	67.83	822.72	208.98	387.82	329.40	17.06	-1.35	0.048
119.00	-11.62	-2.94	0.00	-67.83	0.00	67.83	822.72	208.98	387.82	329.40	17.06	-1.35	0.220
120.00	-11.48	-2.90	0.00	-64.89	0.00	64.89	818.76	207.32	381.66	325.17	17.34	-1.36	0.214
122.00	-11.19	-2.82	0.00	-59.06	0.00	59.06	810.71	203.99	369.51	316.76	17.92	-1.42	0.200
125.00	-10.82	-2.74	0.00	-50.61	0.00	50.61	798.31	198.99	351.64	304.20	18.85	-1.51	0.180
130.00	-9.93	-2.50	0.00	-36.80	0.00	36.80	776.83	190.67	322.85	283.51	20.49	-1.63	0.143
131.00	-9.24	-2.38	0.00	-34.30	0.00	34.30	772.41	189.01	317.24	279.41	20.83	-1.65	0.135
132.00	-9.10	-2.34	0.00	-31.91	0.00	31.91	767.94	187.34	311.67	275.32	21.18	-1.67	0.128

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

135.00	-8.77	-2.26	0.00	-24.89	0.00	24.89	754.30	182.35	295.28	263.15	22.25	-1.73	0.106
140.00	-4.18	-1.20	0.00	-13.61	0.00	13.61	730.89	174.02	268.95	243.21	24.10	-1.80	0.062
145.00	-3.79	-1.10	0.00	-7.59	0.00	7.59	695.93	165.70	243.85	220.38	26.01	-1.84	0.040
150.00	0.00	-0.97	0.00	-2.10	0.00	2.10	660.97	157.37	219.97	198.67	27.96	-1.87	0.011

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_S):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coeffiecient F_v:	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{dS}):	0.19
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	2.96
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	49.72 k
Seismic Base Shear (E):	1.49 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)
42	147.50	318	6,924	0.017	26	394
41	142.50	397	8,066	0.020	30	492
40	137.50	507	9,578	0.024	36	627
39	133.50	331	5,908	0.015	22	410
38	131.50	134	2,326	0.006	9	167
37	130.50	135	2,296	0.006	9	167
36	127.50	611	9,933	0.025	37	757
35	123.50	369	5,635	0.014	21	458
34	121.00	276	4,044	0.010	15	342
33	119.50	139	1,979	0.005	7	172
32	117.00	818	11,194	0.028	42	1,013
31	114.00	342	4,448	0.011	17	424
30	111.50	535	6,650	0.017	25	662
29	107.50	970	11,210	0.028	42	1,201
28	104.00	391	4,229	0.011	16	484
27	101.50	590	6,076	0.015	23	730
26	97.50	992	9,426	0.024	35	1,228
25	92.50	1,002	8,575	0.021	32	1,241
24	87.50	1,013	7,756	0.019	29	1,254
23	82.50	1,024	6,968	0.017	26	1,268
22	77.50	1,034	6,213	0.016	23	1,281
21	74.25	312	1,722	0.004	6	387
20	71.75	1,050	5,407	0.013	20	1,301
19	67.50	1,151	5,246	0.013	20	1,426
18	62.50	1,249	4,879	0.012	18	1,547

17	59.50	251	890	0.002	3	311
16	57.00	1,283	4,168	0.010	16	1,589
15	52.50	1,548	4,266	0.011	16	1,917
14	47.50	1,561	3,523	0.009	13	1,933
13	42.50	1,575	2,844	0.007	11	1,950
12	37.83	1,376	1,969	0.005	7	1,704
11	35.33	299	373	0.001	1	370
10	33.25	1,577	1,743	0.004	6	1,953
9	30.75	511	483	0.001	2	633
8	27.50	1,714	1,296	0.003	5	2,123
7	22.50	1,730	876	0.002	3	2,143
6	19.00	697	251	0.001	1	863
5	16.50	1,234	336	0.001	1	1,528
4	12.50	2,069	323	0.001	1	2,562
3	7.50	2,085	117	0.000	0	2,582
2	3.50	1,259	15	0.000	0	1,559
1	1.00	720	1	0.000	0	891
Generic 11' Dipole	150.00	40	900	0.002	3	50
Generic 4' Omni	150.00	10	225	0.001	1	12
Powerwave Allgon 702	150.00	13	297	0.001	1	16
Kathrein Scala 782-1	150.00	19	432	0.001	2	24
Powerwave Allgon LGP	150.00	85	1,904	0.005	7	105
Raycap DC6-48-60-18-	150.00	32	715	0.002	3	39
Ericsson RRUS 8843 B	150.00	216	4,860	0.012	18	267
Ericsson RRUS 4449 B	150.00	213	4,793	0.012	18	264
Raycap DC6-48-60-18-	150.00	16	360	0.001	1	20
Ericsson RRUS 32 B30	150.00	159	3,577	0.009	13	197
Raycap DC6-48-60-18-	150.00	16	360	0.001	1	20
Powerwave Allgon 777	150.00	105	2,363	0.006	9	130
CCI HPA65R-BU6A	150.00	126	2,828	0.007	11	156
Commscope SBNHH-1D65	150.00	152	3,422	0.009	13	188
Kathrein Scala 80010	150.00	293	6,588	0.016	25	363
Generic GPS	150.00	10	225	0.001	1	12
Round Platform w/ Ha	150.00	2,000	45,000	0.112	168	2,477
Ericsson KRY 112 144	140.00	33	647	0.002	2	41
Ericsson Radio 4449	140.00	222	4,351	0.011	16	275
Ericsson AIR 21, 1.3	140.00	249	4,880	0.012	18	308
Ericsson AIR 21, 1.3	140.00	244	4,792	0.012	18	303
RFS APXVAARR24_43-U-	140.00	384	7,521	0.019	28	475
PerfectVision PV-RP1	140.00	2,972	58,251	0.145	217	3,681
Generic 12" x 12" Ju	132.00	10	174	0.000	1	12
Side Arms	131.00	560	9,610	0.024	36	694
DragonWave Horizon C	130.00	21	358	0.001	1	26
DragonWave A-ANT-23G	130.00	15	254	0.001	1	19
NextNet BTS-2500	130.00	105	1,775	0.004	7	130
Argus LLPX310R	130.00	86	1,450	0.004	5	106
DragonWave A-ANT-18G	130.00	48	804	0.002	3	59
SWR FMEC/1	122.00	15	223	0.001	1	19
Commscope CBC78-DS-4	113.00	18	230	0.001	1	22
Samsung Outdoor CBRS	113.00	13	169	0.000	1	16
Samsung RT4401-48A	113.00	56	713	0.002	3	69
Samsung B2/B66A RRH-	113.00	253	3,233	0.008	12	314
Samsung B5/B13 RRH-B	113.00	211	2,693	0.007	10	261
RFS APL868013-12T0	113.00	25	322	0.001	1	31
RFS APL866513-12T0-0	113.00	31	401	0.001	1	39
Samsung MT6407-77A	113.00	245	3,126	0.008	12	303
RFS DB-T1-6Z-8AB-0Z	113.00	88	1,124	0.003	4	109
Commscope JAHH-65B-R	113.00	364	4,643	0.012	17	450
Round T-Arm	113.00	750	9,577	0.024	36	929
Generic Dish Reserve	103.00	1,835	19,468	0.049	72	2,272
Generic 4' Std. Dish	70.00	188	921	0.002	3	233
		49,724	400,719	1.000	1,492	61,579

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)
42	147.50	318	6,924	0.017	26	274
41	142.50	397	8,066	0.020	30	342
40	137.50	507	9,578	0.024	36	436
39	133.50	331	5,908	0.015	22	286
38	131.50	134	2,326	0.006	9	116
37	130.50	135	2,296	0.006	9	116
36	127.50	611	9,933	0.025	37	526
35	123.50	369	5,635	0.014	21	318
34	121.00	276	4,044	0.010	15	238
33	119.50	139	1,979	0.005	7	119
32	117.00	818	11,194	0.028	42	705
31	114.00	342	4,448	0.011	17	295
30	111.50	535	6,650	0.017	25	461
29	107.50	970	11,210	0.028	42	836
28	104.00	391	4,229	0.011	16	337
27	101.50	590	6,076	0.015	23	508
26	97.50	992	9,426	0.024	35	854
25	92.50	1,002	8,575	0.021	32	864
24	87.50	1,013	7,756	0.019	29	873
23	82.50	1,024	6,968	0.017	26	882
22	77.50	1,034	6,213	0.016	23	891
21	74.25	312	1,722	0.004	6	269
20	71.75	1,050	5,407	0.013	20	905
19	67.50	1,151	5,246	0.013	20	992
18	62.50	1,249	4,879	0.012	18	1,076
17	59.50	251	890	0.002	3	217
16	57.00	1,283	4,168	0.010	16	1,105
15	52.50	1,548	4,266	0.011	16	1,334
14	47.50	1,561	3,523	0.009	13	1,345
13	42.50	1,575	2,844	0.007	11	1,357
12	37.83	1,376	1,969	0.005	7	1,185
11	35.33	299	373	0.001	1	257
10	33.25	1,577	1,743	0.004	6	1,359
9	30.75	511	483	0.001	2	440
8	27.50	1,714	1,296	0.003	5	1,477
7	22.50	1,730	876	0.002	3	1,491
6	19.00	697	251	0.001	1	600
5	16.50	1,234	336	0.001	1	1,063
4	12.50	2,069	323	0.001	1	1,782
3	7.50	2,085	117	0.000	0	1,796
2	3.50	1,259	15	0.000	0	1,084
1	1.00	720	1	0.000	0	620
Generic 11' Dipole	150.00	40	900	0.002	3	34
Generic 4' Omni	150.00	10	225	0.001	1	9
Powerwave Allgon 702	150.00	13	297	0.001	1	11
Kathrein Scala 782-1	150.00	19	432	0.001	2	17
Powerwave Allgon LGP	150.00	85	1,904	0.005	7	73
Raycap DC6-48-60-18-	150.00	32	715	0.002	3	27
Ericsson RRUS 8843 B	150.00	216	4,860	0.012	18	186
Ericsson RRUS 4449 B	150.00	213	4,793	0.012	18	184
Raycap DC6-48-60-18-	150.00	16	360	0.001	1	14
Ericsson RRUS 32 B30	150.00	159	3,577	0.009	13	137
Raycap DC6-48-60-18-	150.00	16	360	0.001	1	14
Powerwave Allgon 777	150.00	105	2,363	0.006	9	90
CCI HPA65R-BU6A	150.00	126	2,828	0.007	11	108
Commscope SBNHH-1D65	150.00	152	3,422	0.009	13	131
Kathrein Scala 80010	150.00	293	6,588	0.016	25	252

Generic GPS	150.00	10	225	0.001	1	9
Round Platform w/ Ha	150.00	2,000	45,000	0.112	168	1,723
Ericsson KRY 112 144	140.00	33	647	0.002	2	28
Ericsson Radio 4449	140.00	222	4,351	0.011	16	191
Ericsson AIR 21, 1.3	140.00	249	4,880	0.012	18	215
Ericsson AIR 21, 1.3	140.00	244	4,792	0.012	18	211
RFS APXVAARR24_43-U-	140.00	384	7,521	0.019	28	331
PerfectVision PV-RP1	140.00	2,972	58,251	0.145	217	2,561
Generic 12" x 12" Ju	132.00	10	174	0.000	1	9
Side Arms	131.00	560	9,610	0.024	36	482
DragonWave Horizon C	130.00	21	358	0.001	1	18
DragonWave A-ANT-23G	130.00	15	254	0.001	1	13
NextNet BTS-2500	130.00	105	1,775	0.004	7	90
Argus LLPX310R	130.00	86	1,450	0.004	5	74
DragonWave A-ANT-18G	130.00	48	804	0.002	3	41
SWR FMEC/1	122.00	15	223	0.001	1	13
Commscope CBC78-DS-4	113.00	18	230	0.001	1	16
Samsung Outdoor CBRS	113.00	13	169	0.000	1	11
Samsung RT4401-48A	113.00	56	713	0.002	3	48
Samsung B2/B66A RRH-	113.00	253	3,233	0.008	12	218
Samsung B5/B13 RRH-B	113.00	211	2,693	0.007	10	182
RFS APL868013-12T0	113.00	25	322	0.001	1	22
RFS APL866513-12T0-0	113.00	31	401	0.001	1	27
Samsung MT6407-77A	113.00	245	3,126	0.008	12	211
RFS DB-T1-6Z-8AB-0Z	113.00	88	1,124	0.003	4	76
Commscope JAHH-65B-R	113.00	364	4,643	0.012	17	313
Round T-Arm	113.00	750	9,577	0.024	36	646
Generic Dish Reserve	103.00	1,835	19,468	0.049	72	1,581
Generic 4' Std. Dish	70.00	188	921	0.002	3	162
		49,724	400,719	1.000	1,492	42,842

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	-60.69	-1.49	0.00	-191.38	0.00	191.38	3,157.17	784.20	2,737.77	2,376.61	0.00	0.00	0.048
2.00	-59.13	-1.50	0.00	-188.39	0.00	188.39	3,140.17	777.55	2,691.61	2,343.59	0.00	-0.01	0.048
5.00	-56.55	-1.51	0.00	-183.88	0.00	183.88	3,114.35	767.59	2,623.11	2,294.24	0.01	-0.02	0.039
10.00	-53.98	-1.52	0.00	-176.32	0.00	176.32	3,070.50	750.99	2,510.89	2,212.51	0.03	-0.03	0.038
15.00	-52.46	-1.53	0.00	-168.70	0.00	168.70	3,025.61	734.39	2,401.13	2,131.46	0.07	-0.04	0.037
18.00	-51.59	-1.54	0.00	-164.11	0.00	164.11	2,998.18	724.42	2,336.45	2,083.18	0.10	-0.05	0.036
18.00	-51.59	-1.54	0.00	-164.11	0.00	164.11	2,998.18	724.42	2,336.45	2,083.18	0.10	-0.05	0.044
20.00	-49.45	-1.54	0.00	-161.04	0.00	161.04	2,979.68	717.78	2,293.82	2,051.14	0.12	-0.06	0.043
25.00	-47.33	-1.55	0.00	-153.34	0.00	153.34	2,932.71	701.18	2,188.97	1,971.59	0.19	-0.07	0.042
30.00	-46.69	-1.55	0.00	-145.61	0.00	145.61	2,875.21	684.57	2,086.57	1,886.65	0.27	-0.09	0.041
31.50	-44.74	-1.55	0.00	-143.29	0.00	143.29	2,854.29	679.59	2,056.33	1,859.14	0.30	-0.09	0.040
35.00	-44.37	-1.55	0.00	-137.87	0.00	137.87	2,805.48	667.97	1,986.62	1,795.73	0.38	-0.10	0.039
35.67	-42.67	-1.55	0.00	-136.84	0.00	136.84	2,253.08	567.85	1,719.88	1,471.98	0.39	-0.11	0.044
40.00	-40.72	-1.54	0.00	-130.13	0.00	130.13	2,223.50	555.84	1,647.92	1,421.63	0.49	-0.12	0.042
45.00	-38.78	-1.54	0.00	-122.42	0.00	122.42	2,188.39	541.99	1,566.79	1,363.95	0.63	-0.14	0.040
50.00	-36.86	-1.53	0.00	-114.74	0.00	114.74	2,152.25	528.13	1,487.72	1,306.78	0.78	-0.15	0.039
55.00	-35.28	-1.51	0.00	-107.11	0.00	107.11	2,115.06	514.27	1,410.69	1,250.16	0.95	-0.17	0.037
59.00	-34.96	-1.52	0.00	-101.05	0.00	101.05	2,084.57	503.18	1,350.55	1,205.28	1.10	-0.18	0.035
59.00	-34.96	-1.52	0.00	-101.05	0.00	101.05	2,084.57	503.18	1,350.55	1,205.28	1.10	-0.18	0.050
60.00	-33.42	-1.50	0.00	-99.53	0.00	99.53	2,076.84	500.41	1,335.71	1,194.13	1.13	-0.18	0.049
65.00	-31.99	-1.49	0.00	-92.04	0.00	92.04	2,037.58	486.55	1,262.78	1,138.75	1.34	-0.21	0.046
70.00	-30.46	-1.47	0.00	-84.60	0.00	84.60	1,985.31	472.69	1,191.90	1,077.58	1.57	-0.23	0.044
73.50	-30.07	-1.46	0.00	-79.47	0.00	79.47	1,474.00	377.76	952.88	802.36	1.74	-0.24	0.050
75.00	-28.79	-1.44	0.00	-77.27	0.00	77.27	1,466.32	374.43	936.20	791.10	1.81	-0.25	0.048
80.00	-27.52	-1.42	0.00	-70.06	0.00	70.06	1,440.03	363.37	881.69	753.74	2.09	-0.27	0.045
85.00	-26.27	-1.39	0.00	-62.96	0.00	62.96	1,412.71	352.30	828.81	716.70	2.38	-0.29	0.042
90.00	-25.02	-1.36	0.00	-55.98	0.00	55.98	1,384.35	341.23	777.56	680.02	2.69	-0.31	0.038
95.00	-23.80	-1.33	0.00	-49.16	0.00	49.16	1,354.95	330.16	727.95	643.77	3.02	-0.33	0.035
100.00	-23.07	-1.31	0.00	-42.51	0.00	42.51	1,324.51	319.09	679.97	607.99	3.37	-0.34	0.032
103.00	-20.31	-1.21	0.00	-38.59	0.00	38.59	1,305.75	312.45	651.97	586.76	3.59	-0.35	0.029
105.00	-19.11	-1.16	0.00	-36.18	0.00	36.18	1,293.03	308.02	633.63	572.72	3.74	-0.36	0.027
110.00	-18.45	-1.13	0.00	-30.38	0.00	30.38	1,247.19	296.95	588.93	532.34	4.12	-0.37	0.024
110.00	-18.45	-1.13	0.00	-30.38	0.00	30.38	856.53	223.97	445.40	367.75	4.12	-0.37	0.029
113.00	-15.48	-1.00	0.00	-26.98	0.00	26.98	845.63	218.97	425.76	354.91	4.35	-0.38	0.026
115.00	-14.47	-0.96	0.00	-24.97	0.00	24.97	838.16	215.64	412.92	346.37	4.51	-0.38	0.024
119.00	-14.29	-0.95	0.00	-21.15	0.00	21.15	822.72	208.98	387.82	329.40	4.84	-0.39	0.020
119.00	-14.29	-0.95	0.00	-21.15	0.00	21.15	822.72	208.98	387.82	329.40	4.84	-0.39	0.082
120.00	-13.95	-0.93	0.00	-20.20	0.00	20.20	818.76	207.32	381.66	325.17	4.92	-0.39	0.079
122.00	-13.48	-0.91	0.00	-18.33	0.00	18.33	810.71	203.99	369.51	316.76	5.09	-0.41	0.075
125.00	-12.72	-0.88	0.00	-15.59	0.00	15.59	798.31	198.99	351.64	304.20	5.36	-0.44	0.067
130.00	-12.21	-0.85	0.00	-11.19	0.00	11.19	776.83	190.67	322.85	283.51	5.84	-0.48	0.055
131.00	-11.35	-0.80	0.00	-10.34	0.00	10.34	772.41	189.01	317.24	279.41	5.94	-0.48	0.052
132.00	-10.93	-0.78	0.00	-9.54	0.00	9.54	767.94	187.34	311.67	275.32	6.04	-0.49	0.049
135.00	-10.30	-0.74	0.00	-7.20	0.00	7.20	754.30	182.35	295.28	263.15	6.35	-0.51	0.041
140.00	-4.73	-0.36	0.00	-3.49	0.00	3.49	730.89	174.02	268.95	243.21	6.90	-0.53	0.021
145.00	-4.34	-0.33	0.00	-1.67	0.00	1.67	695.93	165.70	243.85	220.38	7.46	-0.54	0.014
150.00	0.00	-0.29	0.00	0.00	0.00	0.00	660.97	157.37	219.97	198.67	8.02	-0.54	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	-42.22	-1.49	0.00	-186.88	0.00	186.88	3,157.17	784.20	2,737.77	2,376.61	0.00	0.00	0.044
2.00	-41.14	-1.50	0.00	-183.89	0.00	183.89	3,140.17	777.55	2,691.61	2,343.59	0.00	-0.01	0.044
5.00	-39.34	-1.51	0.00	-179.40	0.00	179.40	3,114.35	767.59	2,623.11	2,294.24	0.01	-0.02	0.036
10.00	-37.56	-1.51	0.00	-171.87	0.00	171.87	3,070.50	750.99	2,510.89	2,212.51	0.03	-0.03	0.035
15.00	-36.50	-1.52	0.00	-164.31	0.00	164.31	3,025.61	734.39	2,401.13	2,131.46	0.07	-0.04	0.034
18.00	-35.89	-1.52	0.00	-159.75	0.00	159.75	2,998.18	724.42	2,336.45	2,083.18	0.10	-0.05	0.033
18.00	-35.89	-1.52	0.00	-159.75	0.00	159.75	2,998.18	724.42	2,336.45	2,083.18	0.10	-0.05	0.040
20.00	-34.40	-1.52	0.00	-156.72	0.00	156.72	2,979.68	717.78	2,293.82	2,051.14	0.12	-0.05	0.039
25.00	-32.93	-1.52	0.00	-149.11	0.00	149.11	2,932.71	701.18	2,188.97	1,971.59	0.18	-0.07	0.038
30.00	-32.49	-1.53	0.00	-141.49	0.00	141.49	2,875.21	684.57	2,086.57	1,886.65	0.27	-0.09	0.037
31.50	-31.13	-1.52	0.00	-139.20	0.00	139.20	2,854.29	679.59	2,056.33	1,859.14	0.29	-0.09	0.037
35.00	-30.87	-1.52	0.00	-133.87	0.00	133.87	2,805.48	667.97	1,986.62	1,795.73	0.37	-0.10	0.036
35.67	-29.68	-1.52	0.00	-132.85	0.00	132.85	2,253.08	567.85	1,719.88	1,471.98	0.38	-0.10	0.040
40.00	-28.33	-1.51	0.00	-126.27	0.00	126.27	2,223.50	555.84	1,647.92	1,421.63	0.48	-0.12	0.039
45.00	-26.98	-1.50	0.00	-118.70	0.00	118.70	2,188.39	541.99	1,566.79	1,363.95	0.61	-0.13	0.037
50.00	-25.65	-1.49	0.00	-111.17	0.00	111.17	2,152.25	528.13	1,487.72	1,306.78	0.76	-0.15	0.035
55.00	-24.54	-1.48	0.00	-103.71	0.00	103.71	2,115.06	514.27	1,410.69	1,250.16	0.92	-0.16	0.033
59.00	-24.32	-1.48	0.00	-97.79	0.00	97.79	2,084.57	503.18	1,350.55	1,205.28	1.07	-0.18	0.032
59.00	-24.32	-1.48	0.00	-97.79	0.00	97.79	2,084.57	503.18	1,350.55	1,205.28	1.07	-0.18	0.045
60.00	-23.25	-1.46	0.00	-96.31	0.00	96.31	2,076.84	500.41	1,335.71	1,194.13	1.10	-0.18	0.044
65.00	-22.26	-1.45	0.00	-89.00	0.00	89.00	2,037.58	486.55	1,262.78	1,138.75	1.30	-0.20	0.042
70.00	-21.19	-1.43	0.00	-81.76	0.00	81.76	1,985.31	472.69	1,191.90	1,077.58	1.52	-0.22	0.040
73.50	-20.92	-1.42	0.00	-76.77	0.00	76.77	1,474.00	377.76	952.88	802.36	1.69	-0.23	0.045
75.00	-20.03	-1.40	0.00	-74.64	0.00	74.64	1,466.32	374.43	936.20	791.10	1.76	-0.24	0.044
80.00	-19.15	-1.38	0.00	-67.63	0.00	67.63	1,440.03	363.37	881.69	753.74	2.03	-0.26	0.041
85.00	-18.27	-1.35	0.00	-60.75	0.00	60.75	1,412.71	352.30	828.81	716.70	2.31	-0.28	0.037
90.00	-17.41	-1.32	0.00	-53.99	0.00	53.99	1,384.35	341.23	777.56	680.02	2.61	-0.30	0.034
95.00	-16.55	-1.28	0.00	-47.40	0.00	47.40	1,354.95	330.16	727.95	643.77	2.93	-0.31	0.031
100.00	-16.05	-1.26	0.00	-40.98	0.00	40.98	1,324.51	319.09	679.97	607.99	3.27	-0.33	0.028
103.00	-14.13	-1.16	0.00	-37.19	0.00	37.19	1,305.75	312.45	651.97	586.76	3.48	-0.34	0.025
105.00	-13.29	-1.12	0.00	-34.86	0.00	34.86	1,293.03	308.02	633.63	572.72	3.63	-0.35	0.024
110.00	-12.83	-1.10	0.00	-29.26	0.00	29.26	1,247.19	296.95	588.93	532.34	4.00	-0.36	0.021
110.00	-12.83	-1.10	0.00	-29.26	0.00	29.26	856.53	223.97	445.40	367.75	4.00	-0.36	0.026
113.00	-10.77	-0.97	0.00	-25.97	0.00	25.97	845.63	218.97	425.76	354.91	4.22	-0.37	0.022
115.00	-10.06	-0.92	0.00	-24.03	0.00	24.03	838.16	215.64	412.92	346.37	4.38	-0.37	0.021
119.00	-9.94	-0.92	0.00	-20.34	0.00	20.34	822.72	208.98	387.82	329.40	4.69	-0.38	0.018
119.00	-9.94	-0.92	0.00	-20.34	0.00	20.34	822.72	208.98	387.82	329.40	4.69	-0.38	0.074
120.00	-9.71	-0.90	0.00	-19.42	0.00	19.42	818.76	207.32	381.66	325.17	4.77	-0.38	0.072
122.00	-9.37	-0.88	0.00	-17.62	0.00	17.62	810.71	203.99	369.51	316.76	4.94	-0.40	0.067
125.00	-8.85	-0.85	0.00	-14.97	0.00	14.97	798.31	198.99	351.64	304.20	5.20	-0.43	0.060
130.00	-8.49	-0.82	0.00	-10.74	0.00	10.74	776.83	190.67	322.85	283.51	5.66	-0.46	0.049
131.00	-7.90	-0.77	0.00	-9.92	0.00	9.92	772.41	189.01	317.24	279.41	5.76	-0.47	0.046
132.00	-7.60	-0.75	0.00	-9.15	0.00	9.15	767.94	187.34	311.67	275.32	5.86	-0.47	0.043
135.00	-7.17	-0.71	0.00	-6.91	0.00	6.91	754.30	182.35	295.28	263.15	6.16	-0.49	0.036
140.00	-3.29	-0.35	0.00	-3.35	0.00	3.35	730.89	174.02	268.95	243.21	6.69	-0.51	0.018
145.00	-3.02	-0.32	0.00	-1.60	0.00	1.60	695.93	165.70	243.85	220.38	7.23	-0.52	0.012
150.00	0.00	-0.29	0.00	0.00	0.00	0.00	660.97	157.37	219.97	198.67	7.77	-0.52	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	29.79	0.00	59.64	0.00	0.00	3125.68	119.00	0.92
0.9D + 1.0W	29.77	0.00	44.72	0.00	0.00	3067.99	119.00	0.88
1.2D + 1.0Di + 1.0Wi	7.71	0.00	80.97	0.00	0.00	862.87	119.00	0.25
1.2D + 1.0Ev + 1.0Eh	1.49	0.00	60.69	0.00	0.00	191.38	119.00	0.08
0.9D - 1.0Ev + 1.0Eh	1.49	0.00	42.22	0.00	0.00	186.88	119.00	0.07
1.0D + 1.0W	6.91	0.00	49.72	0.00	0.00	718.80	119.00	0.22

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	Ratio	Max Member Pu (kip)	phiPn (kip)	Ratio
0.00	119.00	(4) SOL-#18 All Thread Bar	381.0	11.4	16.8	0.680	238.1	249.8	0.953
0.00	59.00	(4) SOL-#18 All Thread Bar	197.5	5.9	16.8	0.352	202.8	249.8	0.812
2.00	18.00	(2) PL-PL 4" x 1"	117.9	1.4	25.3	0.056	143.7	174.4	0.824
2.00	18.00	(2) PL-PL 5" x 1"	147.3	1.8	25.3	0.070	179.6	218.0	0.824

Elev From (ft)	Elev To (ft)	Member	Upper Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio	Lower Termination Connectors MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio
0.00	119.00	(4) SOL-#18 All Thread Bar	83.2	12.0	7	10	0.694	0.0	12.0	0	0	0.000
0.00	59.00	(4) SOL-#18 All Thread Bar	147.6	12.0	13	18	0.683	0.0	12.0	0	0	0.000
2.00	18.00	(2) PL-PL 4" x 1"	130.3	25.3	6	8	0.645	141.2	25.3	6	8	0.698
2.00	18.00	(2) PL-PL 5" x 1"	162.9	25.3	7	8	0.806	176.5	25.3	7	8	0.873

Base Plate & Anchor Rod Analysis

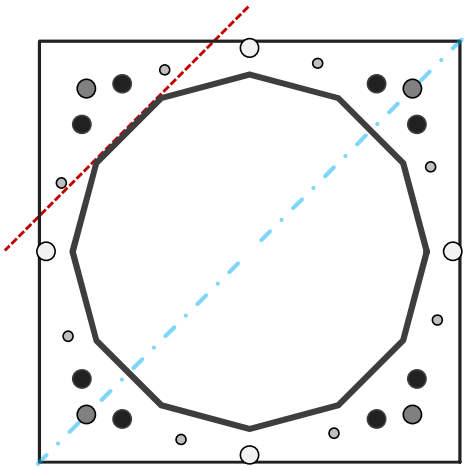
Pole Dimensions		
Number of Sides	12	-
Diameter	35.67	in
Thickness	3/8	in
Orientation Offset		°

Base Reactions		
Moment, Mu	3,125.7	k-ft
Axial, Pu	59.6	k
Shear, Vu	29.8	k
Neutral Axis	45	°

Report Capacities		
Component	Capacity	Result
Base Plate	56%	Pass
Anchor Rods	84%	Pass
Dwyidag	53%	Pass

Base Plate		
Shape	Square	-
Width	44	in
Thickness	2 1/2	in
Grade	A633 Gr. E	
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	80	ksi
Clip	0	in
Orientation Offset		°
Anchor Rod Detail	c	η=0.55
Clear Distance	N/A	in
Applied Moment, Mu	1254.2	k
Bending Stress, ϕMn	2230.1	k

Original Anchor Rods		
Arrangement	Cluster	-
Quantity	8	-
Diameter, ø	2 1/4	in
Bolt Circle	44	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset	0	°
Applied Force, Pu	146.6	k
Anchor Rods, ϕPn	243.6	k



Dywidag Reinforcement		
Quantity	4	-
Bar Size	#18	in
Diameter, ø	2.25	in
Bracket Type	Angle	-
Circle	42.55	in
Orientation Offset	0	°
Applied Force, Pu	157.0	k
Dywidag Bar, ϕPn	298.2	k

Additional Anchor Rods		
Quantity	8	-
Diameter, ø	1 1/4	in
Bolt Circle	41.875	in
Grade	A325	
Yield Strength, Fy	92	ksi
Tensile Strength, Fu	120	ksi
Bypass Base?	No	
Orientation Offset	25	°
Applied Force, Pu	39.5	k
Additional Rod, ϕPn	87.2	k

Additional Dywidag Reinforcement		
Quantity	4	-
Diameter, ø	2 1/4	in
Bolt Circle	48.22	in
Grade	Other	
Yield Strength, Fy	70	ksi
Tensile Strength, Fu	100	ksi
Bypass Base?	Yes (Dywidag)	
Orientation Offset	45	°
Applied Force, Pu	250.4	k
Additional Rod, ϕPn	298.2	k

Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	29.8	1367.5	0.44
Anchor Rod Forces	26.3	1076.7	0.34
Additional Bolt (Grp1) Forces	3.5	290.8	0.09
Additional Bolt (Grp2) Forces	0.0	988.3	0.32
Dywidag Forces	0.0	769.8	0.25
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	41.1076	3.4256	0.1614		6403.09
Bolt	3.9761	3.2477	0.8393	4.5	6294.24
Bolt1	1.2272	0.9691	0.0747	7	1699.95
Bolt2	3.9761	3.9761	1.2581	4.5	4627.56
Dywidag	3.9761	3.9761	1.2581		3604.38
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Square	-
Width, W	44	in
Thickness, t	2.5	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	80	ksi
Base Plate Chord	25.761	in
Detail Type	c	-
Detail Factor	0.55	-
Clear Distance	N/A	-

External Base Plate		
Chord Length AA	26.430	in
Additional AA	0.000	in
Section Modulus, Z	41.297	in^3
Applied Moment, Mu	1254.2	k-ft
Bending Capacity, ϕMn	2230.1	k-ft
Capacity, Mu/ϕMn	0.562	OK
Chord Length AB	25.168	in
Additional AB	0.000	in
Section Modulus, Z	39.325	in^3
Applied Moment, Mu	1020.1	k-ft
Bending Capacity, ϕMn	2123.5	k-ft
Capacity, Mu/ϕMn	0.480	OK
Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in^3
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕMn	0.0	k-ft
Capacity, Mu/ϕMn		

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

Anchor Rods		
Anchor Rod Quantity, N	8	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	44	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	146.6	k
Applied Shear, Vu	0.8	k
Compressive Capacity, ϕPn	243.6	k
Tensile Capacity, ϕRnt	0.602	OK
Interaction Capacity	0.608	OK

Additional Bolt Group 1		
Bolt Quantity, N	8	-
Bolt Diameter, d	1.25	in
Bolt Circle, BC	41.875	in
Yield Strength, Fy	92	ksi
Tensile Strength, Fu	120	ksi
Applied Axial, Pu	39.5	k
Applied Shear, Vu	0.5	k
Compressive Capacity, ϕPn	87.2	k
Compressive Capacity, ϕPn	0.453	OK
Interaction Capacity	0.464	OK

Additional Bolt Group 2		
Bolt Quantity, N	4	-
Bolt Diameter, d	2.25	in
Bolt Circle, BC	48.22	in
Yield Strength, Fy	70	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	250.4	k
Applied Shear, Vu	0.0	k
Compressive Capacity, ϕPn	298.2	k
Compressive Capacity, ϕPn	0.840	OK
Interaction Capacity	0.840	OK

Dywidag Reinforcement		
Dywidag Quantity, N	4	-
Dywidag Diameter, d	2.25	in
Bolt Circle, BC	42.55	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	157.0	k
Compressive Capacity, ϕPn	298.2	k
Capacity, Pu/ϕPn	0.526	OK

Flange Plate Analysis

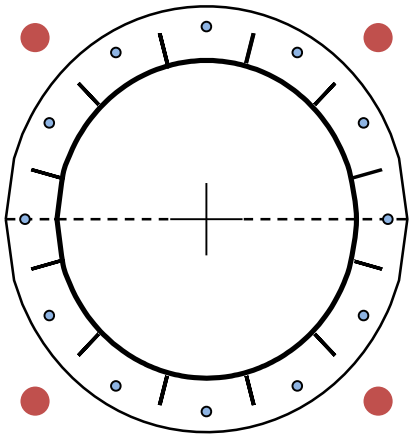
Flange Plate			
	Plate Type	***Flange***	***@ 110 ft***
	Pole Diameter	21.25	in
	Pole Thickness	0.1875	in
	Plate Diameter	28.5	in
	Plate Thickness	1	in
	Plate Fy	60	ksi
	Weld Length	0.1875	in
	f_s Resistance	125.73	k-in
	Applied	17.02	k-in

Code Rev.	***G***		
Moment	430.3 k-ft		
Axial	17.0 k		

Date	6/29/2021
Engineer	AS
Site #	302484
Carrier	VERIZON WIRELESS

Stiffeners			
	#	***12***	***Show***
	Thickness	0.5	in
	Length	3	in
	Height	3	in
	Chamfer	0.5	in
	Offset Angle	0	°
	Fy	36	ksi

Bolts			
	#	***12***	
	Bolt Circle	25.75	in
	(R)adial / (S)quare	R	
•	Diameter	1	in
	Hole Diameter	1.125	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	f_s Resistance	54.52	k
	Applied	11.35	k



Reinforcement			
	#	***4***	
•	DYW. Circle	34.41	in
	Offset Angle	45	°
	Type	#18	
	Diameter	2.5	in
	Fu	100	ksi
	f_s Resistance	392.70	k
	Applied	85.62	k

Extra Bolts O		
#		

Plate Stress Ratio:

14%	Pass

Bolt Stress Ratio:

21%	Pass

Reinforcement Stress Ratio:

22%	Pass

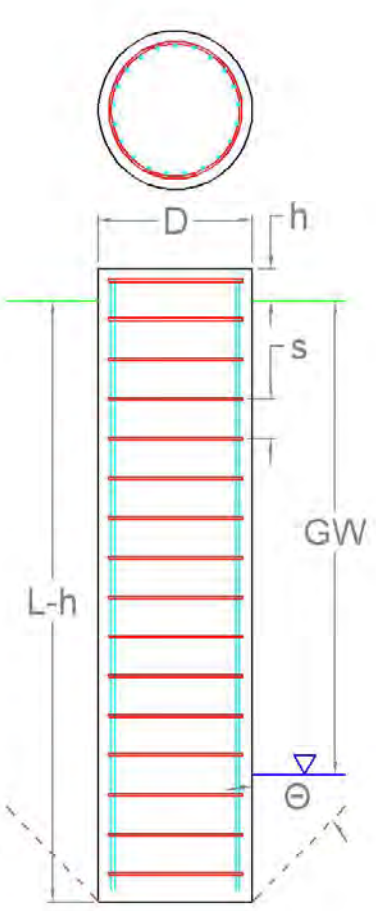
Pier Foundation Analysis (ANSI/TIA-222-H)

Foundation Analysis Parameters			
Pier Diameter	*D*	5.00	ft
Pier Embedment	*L-h*	22.2	ft
Pier Height above Ground	*H*	0.50	ft
Water Table Depth [BGL]	*GW*	5	ft
Pullout Angle	Θ	30	°
Unit Weight of Concrete		150	pcf
Uplift Skin Friction Factor		0.870	

Reactions		
Moment, M_u	3,125.7	k-ft
Shear, V_u	29.8	k
Axial, P_u	59.6	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	1.0	116	0	0	0	0
1.0	3.0	115	0	30	0	0
3.0	4.5	106	0	29	0	0
4.5	7.0	117	0	31	731	0
7.0	8.0	126	0	34	788	0
8.0	10.0	126	0	34	892	0
10.0	23.3	135	5,112	0	2,300	46,007



Soil Strength Capacities		
Volume of Concrete	446.7	ft^3
Weight of Concrete [Buoyancy Considered]	45.9	k
Average Soil Unit Weight	78.8	pcf
Skin Friction Resistance	511.7	k
Compressive Bearing Resistance	903.4	k
Pullout Weight [Minus Concrete Weight]	479.8	k
Compressive Force, P_u	71.6	k
Nominal Compressive Capacity, $\phi_s P_n$	1,061.3	k
$P_u / \phi_s P_n$	**6.7%**	
Total Lateral Resistance	2,496.9	k
Inflection Point [BGL]	15.6	ft
Moment at Inflection Point, M_D	3,603.8	k-ft
Nominal Moment Capacity, $\phi_s M_n$	6,566.4	k-ft
$M_D / \phi_s M_n$	**54.9%**	

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

Mount Fix

SMART Tool Project #: 10099130
Maser Consulting Connecticut Project #: 21777824A

September 3, 2021

Site Information	*Site ID:*	*467297-VZW / BRANFORD 2 CT*
	Site Name:	*BRANFORD 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*405 Brushy Plain Rd.* *Branford, Connecticut 06405* *New Haven County*
	Latitude:	*41.31679167°*
	Longitude:	*-72.81969167°*
Structure Information	*Tower Type:*	*150-Ft Monopole*
	Mount Type:	*13.50-Ft T-Arm*

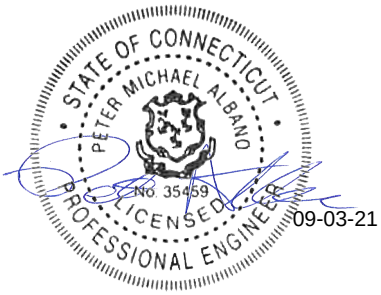
FUZE ID # 15904381

Analysis Results

T-Arm: **58.7% Pass**

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

Report Prepared By: Selene Chen



Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, Site ID: 467269, dated March 18, 2021*
Mount Mapping Report	*Hudson Design Group, Site ID: 467297, dated August 9, 2021*
Mount Analysis Report	*Maser Consulting Connecticut, Project #: 21777824A, dated August 25, 2021*
Mount Modification Drawings	*Maser Consulting Connecticut, Project #: 21777824A, dated September 3, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	121 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.991
Seismic Parameters:	S_S:	0.203
	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
112.00	114.50	3	Samsung	MT6407-77A	Added
	113.00	3	Commscope	CBC78-DS-43-2X	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		2	RFS	APL866513	Retained
		4	RFS	APL868013	
		6	Commscope	JAHH-65B-R3B	
		2	-	OVP	
	112.50	3	Samsung	XXDWMM-12.5-65-8T	Added

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

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

Standard Conditions:

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

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

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

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

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

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

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

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

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

8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

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
Connection Check	58.7%	Pass
Standoff	35.7%	Pass
Face Horizontal	43.7%	Pass
Mod Horizontal	68.7%	Pass
Mod Standoff	53.5%	Pass
Mount Pipe	42.2%	Pass

Structure Rating – *(Controlling Utilization of all Components)*	**58.7%**

Recommendation:

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

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

Attachments:

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


10/31/2018 16:11

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	ATCH	**Mapping Date:**	8/9/2021
Site Name:	BRANFORD 2 CT	**Tower Type:**	
Site Number or ID:	467297	**Tower Height (Ft.):**	
Mapping Contractor:	HUDSON DESIGN GROUP	**Mount Elevation (Ft.):**	

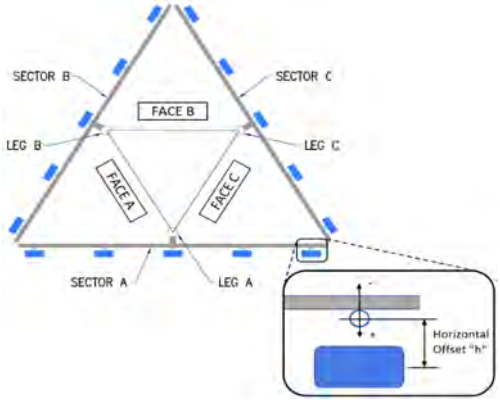
Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.

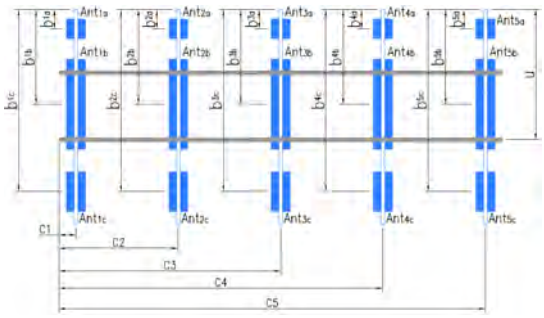
Mount Pipe Configuration and Geometries [Unit = Inches]

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	UNKNOWN			C1	UNKNOWN		
A2	UNKNOWN			C2	UNKNOWN		
A3	UNKNOWN			C3	UNKNOWN		
A4	UNKNOWN			C4	UNKNOWN		
A5	UNKNOWN			C5	UNKNOWN		
A6				C6			
B1	UNKNOWN			D1			
B2	UNKNOWN			D2			
B3	UNKNOWN			D3			
B4	UNKNOWN			D4			
B5	UNKNOWN			D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
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.):	
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			





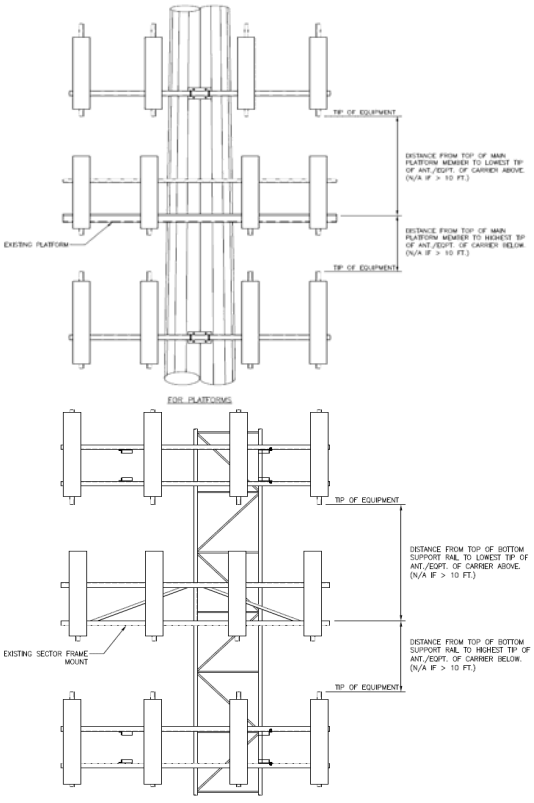
Antenna Layout (Looking Out From Tower)

	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	UNKNOWN					0			45.00	44
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	EMPTY					0				44
Ant_{2c}										
Ant_{3a}	UNKNOWN					0				
Ant_{3b}										44
Ant_{3c}										
Ant_{4a}	UNKNOWN					0				44
Ant_{4b}	(2)UNKNOWN					0			45.00	44
Ant_{4c}										
Ant_{5a}	UNKNOWN					0				44
Ant_{5b}	UNKNOWN					0			45.00	44
Ant_{5c}	UNKNOWN					0				44
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

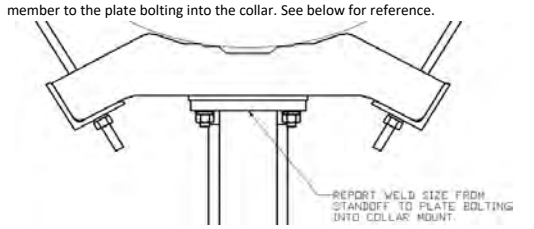
Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:		Deg	Leg A:		Deg
Sector B:		Deg	Leg B:		Deg
Sector C:		Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

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

Please insert a photo of the mount centerline measurement here.



For T-Arms/Platforms on monopoles, record the weld size from the main standoff member to the plate bolting into the collar. See below for reference.



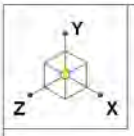
Sector B										
Ant_{1a}										
Ant_{1b}	UNKNOWN					0			170.00	36
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	EMPTY					0				
Ant_{2c}										
Ant_{3a}	UNKNOWN					0				33
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	UNKNOWN					0				
Ant_{4b}	(2) UNKNOWN					0			170.00	37
Ant_{4c}										
Ant_{5a}	UNKNOWN					0				33
Ant_{5b}	UNKNOWN					0			170.00	33
Ant_{5c}	UNKNOWN					0				33
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	UNKNOWN					0			290.00	22
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	EMPTY					0				22
Ant_{2c}										
Ant_{3a}	UNKNOWN					0				23
Ant_{3b}										
Ant_{3c}										
Ant_{4a}	UNKNOWN					0				24
Ant_{4b}	(2) UNKNOWN					0			290.00	24
Ant_{4c}										
Ant_{5a}	UNKNOWN					0				28
Ant_{5b}	(2) UNKNOWN					0			290.00	28
Ant_{5c}	UNKNOWN					0				35
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	safety climb installed on top of tower modification	18
2		
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System					
If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.					Photo #
Description of Obstruction:					
Type of Light:		Photo #		Additional Comments:	
Lighting Technology:		Photo #			
Elevation (AGL) at base of light (Ft.):		Photo #			
Is a service loop available?		Photo #			
Is beacon installed on an extension?		Photo #			

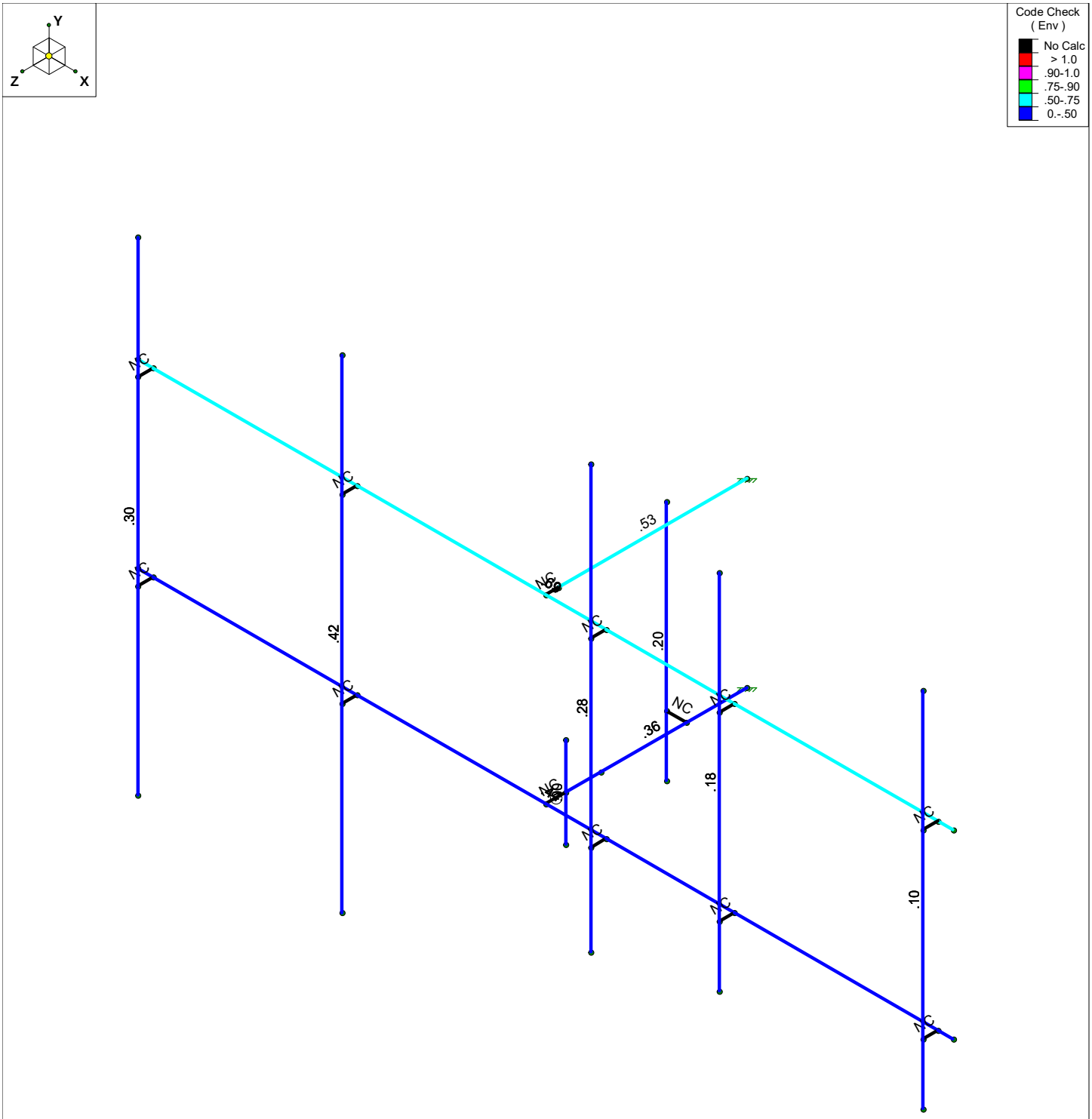
Mapping Notes
1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use 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.



Envelope Only Solution

Maser Consulting	467297-VZW_MT_LOT_SectorA_H	SK - 1
AJH		Sept 1, 2021 at 4:22 PM
		467297-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	467297-VZW_MT_LOT_SectorA_H	SK - 2
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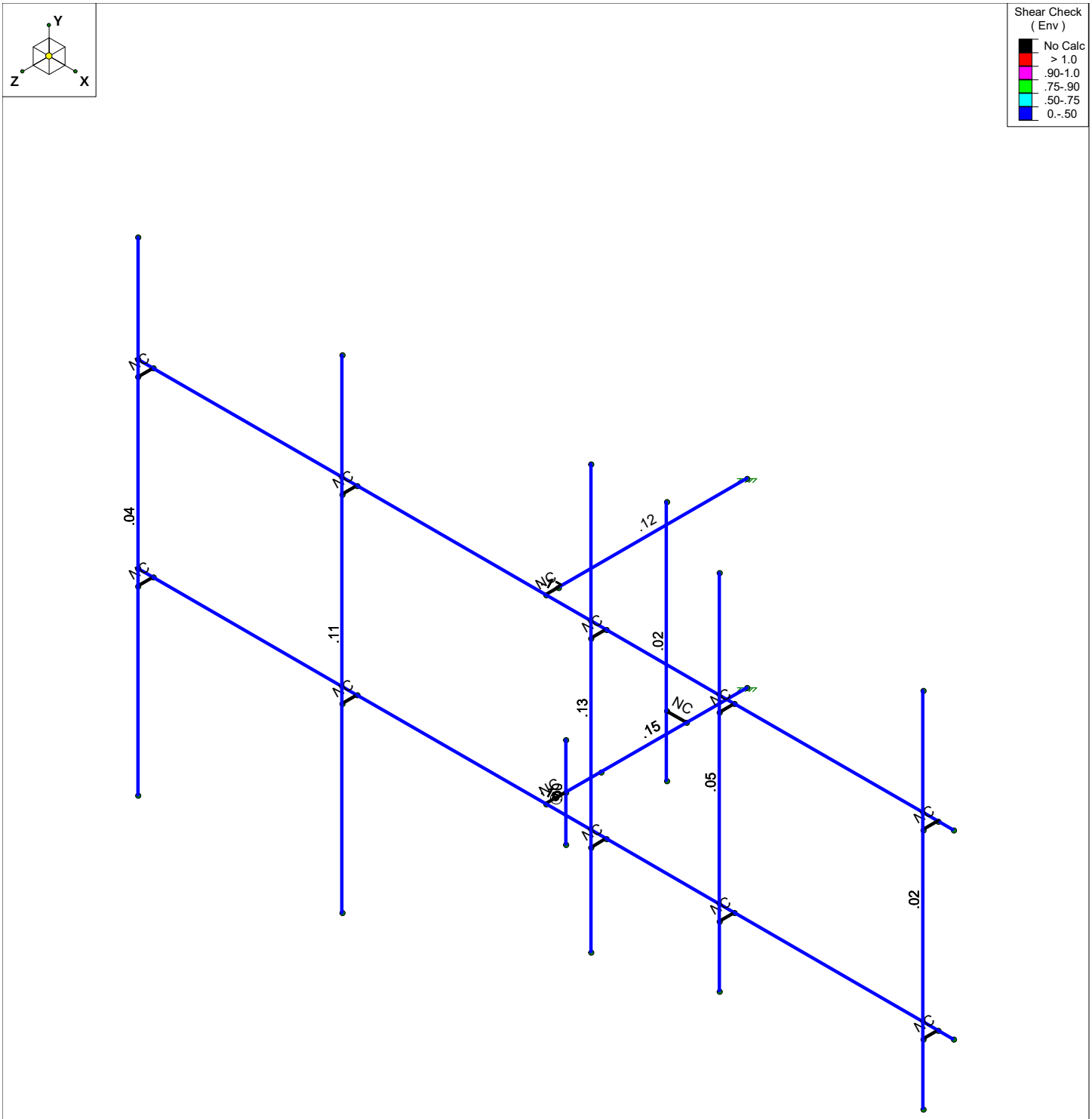

Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

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		467297-VZW_MT_LOT_A_H.r3d

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
52	Structure Wo (330 D...	None						22		
53	Structure Wi (0 Deg)	None						22		
54	Structure Wi (30 Deg)	None						22		
55	Structure Wi (60 Deg)	None						22		
56	Structure Wi (90 Deg)	None						22		
57	Structure Wi (120 De...	None						22		
58	Structure Wi (150 De...	None						22		
59	Structure Wi (180 De...	None						22		
60	Structure Wi (210 De...	None						22		
61	Structure Wi (240 De...	None						22		
62	Structure Wi (270 De...	None						22		
63	Structure Wi (300 De...	None						22		
64	Structure Wi (330 De...	None						22		
65	Structure Wm (0 Deg)	None						22		
66	Structure Wm (30 D...	None						22		
67	Structure Wm (60 D...	None						22		
68	Structure Wm (90 D...	None						22		
69	Structure Wm (120 ...	None						22		
70	Structure Wm (150 ...	None						22		
71	Structure Wm (180 ...	None						22		
72	Structure Wm (210 ...	None						22		
73	Structure Wm (240 ...	None						22		
74	Structure Wm (270 ...	None						22		
75	Structure Wm (300 ...	None						22		
76	Structure Wm (330 ...	None						22		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	Solve	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.0Wo (0...	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (6...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (9...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								

Load Combinations (Continued)

	Description	Solve	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
19	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 ...	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 + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + ...		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	N1	-1.166667	.76	-3.083333	0	
2	N2	-1.166667	.76	-0.083333	0	
3	N3	-1.166667	.76	0.25	0	
4	N4	5.583333	.76	0.25	0	
5	N5	-7.916667	.76	0.25	0	
6	N6	-7.666667	.76	0.25	0	
7	N7	-7.666667	.76	0.5	0	
8	N8	-7.666667	-2.24	0.5	0	
9	N9	-7.666667	5.76	0.5	0	
10	N10	-4.291667	.76	0.25	0	
11	N11	-4.291667	.76	0.5	0	
12	N12	-4.291667	-2.24	0.5	0	
13	N13	-4.291667	5.76	0.5	0	
14	N15	-0.166667	-.74	0.5	0	
15	N16	-0.166667	6.26	0.5	0	
16	N17	5.333333	.76	0.25	0	
17	N18	5.333333	.76	0.5	0	
18	N19	5.333333	-.24	0.5	0	
19	N20	5.333333	5.76	0.5	0	
20	N21	1.958333	.76	0.25	0	
21	N22	1.958333	.76	0.5	0	
22	N23	1.958333	-.24	0.5	0	
23	N24	1.958333	5.76	0.5	0	
24	N25	-1.166667	.76	-2.083333	0	
25	N26	-1.5	.76	-2.083333	0	
26	N27	-1.5	-.24	-2.083333	0	
27	N28	-1.5	3.76	-2.083333	0	
28	N29	-1.166667	.76	-0.666666	0	
29	N31	-1.166667	.01	-0.083333	0	
30	N32	-1.166667	1.51	-0.083333	0	
31	N32A	5.583333	3.76	0.25	0	
32	N33	-7.916667	3.76	0.25	0	
33	N34	-1.166667	3.76	-3.083333	0	
34	N35	-1.166667	3.76	0.041667	0	
35	N37	-1.166667	3.76	0.25	0	
36	N38	-7.666667	3.76	0.25	0	
37	N39	-7.666667	3.76	0.5	0	
38	N40	-4.291667	3.76	0.25	0	
39	N41	-4.291667	3.76	0.5	0	
40	N43	5.333333	3.76	0.25	0	
41	N44	5.333333	3.76	0.5	0	
42	N45	1.958333	3.76	0.25	0	
43	N46	1.958333	3.76	0.5	0	
44	N46A	-0.166667	.76	0.25	0	
45	N47	-0.166667	.76	0.5	0	
46	N48	-0.166667	3.76	0.25	0	
47	N49	-0.166667	3.76	0.5	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Ru...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
3	Standoff Horizontal	HSS4X4X4	Beam	Tube	A500 Gr. B...	Typical	3.37	7.8	7.8	12.8
4	Mast Pipe	PIPE_3.0	Column	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
5	MOD Face	PIPE_3.0	Beam	Pipe	A53 Gr. B	Typical	2.07	2.85	2.85	5.69
6	MOD Standoff	HSS3X3X4	Beam	Tube	A500 Gr. B...	Typical	2.44	3.02	3.02	5.08

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	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
7	A500 Gr C Round	29000	11154	.3	.65	.49	46	1.5	62	1.2
8	A529 gr50	29000	11154	.3	.65	.49	50	1.5	65	1.2

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Standoff Horiz...	Beam	Tube	A500 Gr. ...	Typical
2	M2	N2	N3			RIGID	None	None	RIGID	Typical
3	M3	N5	N4			Face Horizontal	Beam	Pipe	A53 Gr. B	Typical
4	M4	N6	N7			RIGID	None	None	RIGID	Typical
5	MP5A	N9	N8			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
6	M6	N10	N11			RIGID	None	None	RIGID	Typical
7	MP4A	N13	N12			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
8	MP3A	N16	N15			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
9	M10	N17	N18			RIGID	None	None	RIGID	Typical
10	MP1A	N20	N19			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
11	M12	N21	N22			RIGID	None	None	RIGID	Typical
12	MP2A	N24	N23			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
13	M14	N25	N26			RIGID	None	None	RIGID	Typical
14	M15	N28	N27			Mount Pipe	Column	Pipe	A53 Gr. B	Typical
15	M16	N32	N31			Mast Pipe	Column	Pipe	A53 Gr. B	Typical
16	M17	N33	N32A			MOD Face	Beam	Pipe	A53 Gr. B	Typical
17	M18	N34	N35			MOD Standoff	Beam	Tube	A500 Gr. ...	Typical
18	M19	N35	N37			RIGID	None	None	RIGID	Typical
19	M20	N38	N39			RIGID	None	None	RIGID	Typical
20	M21	N40	N41			RIGID	None	None	RIGID	Typical
21	M23	N43	N44			RIGID	None	None	RIGID	Typical
22	M24	N45	N46			RIGID	None	None	RIGID	Typical
23	M25	N46A	N47			RIGID	None	None	RIGID	Typical
24	M26	N48	N49			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				None
2	M2	OOOOXO					Yes	** NA **			None
3	M3						Yes	Default			None
4	M4						Yes	** NA **			None
5	MP5A						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	MP4A						Yes	** NA **			None
8	MP3A						Yes	** NA **			None
9	M10						Yes	** NA **			None
10	MP1A						Yes	** NA **			None
11	M12						Yes	** NA **			None
12	MP2A						Yes	** NA **			None
13	M14						Yes	** NA **			None
14	M15						Yes	** NA **			None
15	M16						Yes	** NA **			None
16	M17						Yes	Default			None
17	M18						Yes				None
18	M19						Yes	** NA **			None
19	M20						Yes	** NA **			None
20	M21						Yes	** NA **			None
21	M23						Yes	** NA **			None
22	M24						Yes	** NA **			None
23	M25						Yes	** NA **			None
24	M26						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-4.4	4
2	MP2A	My	-.002	4
3	MP2A	Mz	-.000382	4
4	MP3A	Y	-43.55	1
5	MP3A	My	-.021	1
6	MP3A	Mz	-.004	1
7	MP3A	Y	-43.55	3
8	MP3A	My	-.021	3
9	MP3A	Mz	-.004	3
10	MP4A	Y	-10.4	1
11	MP4A	My	.005	1
12	MP4A	Mz	.000903	1
13	MP5A	Y	-84.4	3
14	MP5A	My	.042	3
15	MP5A	Mz	.007	3
16	MP4A	Y	-70.3	3
17	MP4A	My	.035	3
18	MP4A	Mz	.006	3
19	MP1A	Y	-7.85	2
20	MP1A	My	-.004	2
21	MP1A	Mz	-.000682	2
22	MP1A	Y	-7.85	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
23	MP1A	My	-.004	5
24	MP1A	Mz	-.000682	5
25	MP5A	Y	-7.85	2
26	MP5A	My	-.004	2
27	MP5A	Mz	-.000682	2
28	MP5A	Y	-7.85	5
29	MP5A	My	-.004	5
30	MP5A	Mz	-.000682	5
31	MP4A	Y	-31.65	1
32	MP4A	My	-.019	1
33	MP4A	Mz	.015	1
34	MP4A	Y	-31.65	6
35	MP4A	My	-.019	6
36	MP4A	Mz	.015	6
37	MP4A	Y	-31.65	1
38	MP4A	My	-.012	1
39	MP4A	Mz	-.021	1
40	MP4A	Y	-31.65	6
41	MP4A	My	-.012	6
42	MP4A	Mz	-.021	6
43	M15	Y	-32	1
44	M15	My	0	1
45	M15	Mz	0	1

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-13.098	4
2	MP2A	My	-.006	4
3	MP2A	Mz	-.001	4
4	MP3A	Y	-34.79	1
5	MP3A	My	-.017	1
6	MP3A	Mz	-.003	1
7	MP3A	Y	-34.79	3
8	MP3A	My	-.017	3
9	MP3A	Mz	-.003	3
10	MP4A	Y	-10.459	1
11	MP4A	My	.005	1
12	MP4A	Mz	.000908	1
13	MP5A	Y	-43.846	3
14	MP5A	My	.022	3
15	MP5A	Mz	.004	3
16	MP4A	Y	-39.425	3
17	MP4A	My	.019	3
18	MP4A	Mz	.003	3
19	MP1A	Y	-37.264	2
20	MP1A	My	-.018	2
21	MP1A	Mz	-.003	2
22	MP1A	Y	-37.264	5
23	MP1A	My	-.018	5
24	MP1A	Mz	-.003	5
25	MP5A	Y	-37.264	2

Member Point Loads (BLC 2 : Antenna Di) (Continued)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
26	MP5A	My	-.018	2
27	MP5A	Mz	-.003	2
28	MP5A	Y	-37.264	5
29	MP5A	My	-.018	5
30	MP5A	Mz	-.003	5
31	MP4A	Y	-68.357	1
32	MP4A	My	-.041	1
33	MP4A	Mz	.033	1
34	MP4A	Y	-68.357	6
35	MP4A	My	-.041	6
36	MP4A	Mz	.033	6
37	MP4A	Y	-68.357	1
38	MP4A	My	-.027	1
39	MP4A	Mz	-.045	1
40	MP4A	Y	-68.357	6
41	MP4A	My	-.027	6
42	MP4A	Mz	-.045	6
43	M15	Y	-85.913	1
44	M15	My	0	1
45	M15	Mz	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	4
2	MP2A	Z	-35.764	4
3	MP2A	Mx	.003	4
4	MP3A	X	0	1
5	MP3A	Z	-95.005	1
6	MP3A	Mx	.008	1
7	MP3A	X	0	3
8	MP3A	Z	-95.005	3
9	MP3A	Mx	.008	3
10	MP4A	X	0	1
11	MP4A	Z	-15.096	1
12	MP4A	Mx	-.001	1
13	MP5A	X	0	3
14	MP5A	Z	-76.242	3
15	MP5A	Mx	-.007	3
16	MP4A	X	0	3
17	MP4A	Z	-75.948	3
18	MP4A	Mx	-.007	3
19	MP1A	X	0	2
20	MP1A	Z	-83.126	2
21	MP1A	Mx	.007	2
22	MP1A	X	0	5
23	MP1A	Z	-83.126	5
24	MP1A	Mx	.007	5
25	MP5A	X	0	2
26	MP5A	Z	-83.126	2
27	MP5A	Mx	.007	2
28	MP5A	X	0	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP5A	Z	-83.126	5
30	MP5A	Mx	.007	5
31	MP4A	X	0	1
32	MP4A	Z	-185.648	1
33	MP4A	Mx	-.091	1
34	MP4A	X	0	6
35	MP4A	Z	-185.648	6
36	MP4A	Mx	-.091	6
37	MP4A	X	0	1
38	MP4A	Z	-185.648	1
39	MP4A	Mx	.123	1
40	MP4A	X	0	6
41	MP4A	Z	-185.648	6
42	MP4A	Mx	.123	6
43	M15	X	0	1
44	M15	Z	-162.567	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	16.603	4
2	MP2A	Z	-28.757	4
3	MP2A	Mx	-.006	4
4	MP3A	X	44.946	1
5	MP3A	Z	-77.848	1
6	MP3A	Mx	-.015	1
7	MP3A	X	44.946	3
8	MP3A	Z	-77.848	3
9	MP3A	Mx	-.015	3
10	MP4A	X	7.344	1
11	MP4A	Z	-12.721	1
12	MP4A	Mx	.003	1
13	MP5A	X	37.013	3
14	MP5A	Z	-64.108	3
15	MP5A	Mx	.013	3
16	MP4A	X	36.441	3
17	MP4A	Z	-63.117	3
18	MP4A	Mx	.012	3
19	MP1A	X	41.174	2
20	MP1A	Z	-71.315	2
21	MP1A	Mx	-.014	2
22	MP1A	X	41.174	5
23	MP1A	Z	-71.315	5
24	MP1A	Mx	-.014	5
25	MP5A	X	41.174	2
26	MP5A	Z	-71.315	2
27	MP5A	Mx	-.014	2
28	MP5A	X	41.174	5
29	MP5A	Z	-71.315	5
30	MP5A	Mx	-.014	5
31	MP4A	X	90.029	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP4A	Z	-155.935	1
33	MP4A	Mx	-.129	1
34	MP4A	X	90.029	6
35	MP4A	Z	-155.935	6
36	MP4A	Mx	-.129	6
37	MP4A	X	90.029	1
38	MP4A	Z	-155.935	1
39	MP4A	Mx	.068	1
40	MP4A	X	90.029	6
41	MP4A	Z	-155.935	6
42	MP4A	Mx	.068	6
43	M15	X	71.971	1
44	M15	Z	-124.658	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	16.768	4
2	MP2A	Z	-9.681	4
3	MP2A	Mx	-.007	4
4	MP3A	X	53.886	1
5	MP3A	Z	-31.111	1
6	MP3A	Mx	-.024	1
7	MP3A	X	53.886	3
8	MP3A	Z	-31.111	3
9	MP3A	Mx	-.024	3
10	MP4A	X	10.81	1
11	MP4A	Z	-6.241	1
12	MP4A	Mx	.005	1
13	MP5A	X	53.718	3
14	MP5A	Z	-31.014	3
15	MP5A	Mx	.024	3
16	MP4A	X	48.748	3
17	MP4A	Z	-28.145	3
18	MP4A	Mx	.022	3
19	MP1A	X	67.669	2
20	MP1A	Z	-39.069	2
21	MP1A	Mx	-.03	2
22	MP1A	X	67.669	5
23	MP1A	Z	-39.069	5
24	MP1A	Mx	-.03	5
25	MP5A	X	67.669	2
26	MP5A	Z	-39.069	2
27	MP5A	Mx	-.03	2
28	MP5A	X	67.669	5
29	MP5A	Z	-39.069	5
30	MP5A	Mx	-.03	5
31	MP4A	X	129.737	1
32	MP4A	Z	-74.904	1
33	MP4A	Mx	-.114	1
34	MP4A	X	129.737	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
35	MP4A	Z	-74.904	6
36	MP4A	Mx	-.114	6
37	MP4A	X	129.737	1
38	MP4A	Z	-74.904	1
39	MP4A	Mx	-.001	1
40	MP4A	X	129.737	6
41	MP4A	Z	-74.904	6
42	MP4A	Mx	-.001	6
43	M15	X	111.509	1
44	M15	Z	-64.38	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	8.076	4
2	MP2A	Z	0	4
3	MP2A	Mx	-.004	4
4	MP3A	X	39.665	1
5	MP3A	Z	0	1
6	MP3A	Mx	-.02	1
7	MP3A	X	39.665	3
8	MP3A	Z	0	3
9	MP3A	Mx	-.02	3
10	MP4A	X	10.684	1
11	MP4A	Z	0	1
12	MP4A	Mx	.005	1
13	MP5A	X	52.249	3
14	MP5A	Z	0	3
15	MP5A	Mx	.026	3
16	MP4A	X	42.763	3
17	MP4A	Z	0	3
18	MP4A	Mx	.021	3
19	MP1A	X	74.705	2
20	MP1A	Z	0	2
21	MP1A	Mx	-.037	2
22	MP1A	X	74.705	5
23	MP1A	Z	0	5
24	MP1A	Mx	-.037	5
25	MP5A	X	74.705	2
26	MP5A	Z	0	2
27	MP5A	Mx	-.037	2
28	MP5A	X	74.705	5
29	MP5A	Z	0	5
30	MP5A	Mx	-.037	5
31	MP4A	X	125.148	1
32	MP4A	Z	0	1
33	MP4A	Mx	-.074	1
34	MP4A	X	125.148	6
35	MP4A	Z	0	6
36	MP4A	Mx	-.074	6
37	MP4A	X	125.148	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
38	MP4A	Z	0	1
39	MP4A	Mx	-.049	1
40	MP4A	X	125.148	6
41	MP4A	Z	0	6
42	MP4A	Mx	-.049	6
43	M15	X	132.202	1
44	M15	Z	0	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	9.21	4
2	MP2A	Z	5.317	4
3	MP2A	Mx	-.005	4
4	MP3A	X	38.779	1
5	MP3A	Z	22.389	1
6	MP3A	Mx	-.021	1
7	MP3A	X	38.779	3
8	MP3A	Z	22.389	3
9	MP3A	Mx	-.021	3
10	MP4A	X	9.606	1
11	MP4A	Z	5.546	1
12	MP4A	Mx	.005	1
13	MP5A	X	47.169	3
14	MP5A	Z	27.233	3
15	MP5A	Mx	.026	3
16	MP4A	X	39.689	3
17	MP4A	Z	22.914	3
18	MP4A	Mx	.022	3
19	MP1A	X	65.37	2
20	MP1A	Z	37.741	2
21	MP1A	Mx	-.035	2
22	MP1A	X	65.37	5
23	MP1A	Z	37.741	5
24	MP1A	Mx	-.035	5
25	MP5A	X	65.37	2
26	MP5A	Z	37.741	2
27	MP5A	Mx	-.035	2
28	MP5A	X	65.37	5
29	MP5A	Z	37.741	5
30	MP5A	Mx	-.035	5
31	MP4A	X	113.222	1
32	MP4A	Z	65.369	1
33	MP4A	Mx	-.035	1
34	MP4A	X	113.222	6
35	MP4A	Z	65.369	6
36	MP4A	Mx	-.035	6
37	MP4A	X	113.222	1
38	MP4A	Z	65.369	1
39	MP4A	Mx	-.088	1
40	MP4A	X	113.222	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
41	MP4A	Z	65.369	6
42	MP4A	Mx	-.088	6
43	M15	X	130.619	1
44	M15	Z	75.413	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	12.239	4
2	MP2A	Z	21.199	4
3	MP2A	Mx	-.008	4
4	MP3A	X	36.224	1
5	MP3A	Z	62.742	1
6	MP3A	Mx	-.023	1
7	MP3A	X	36.224	3
8	MP3A	Z	62.742	3
9	MP3A	Mx	-.023	3
10	MP4A	X	6.649	1
11	MP4A	Z	11.516	1
12	MP4A	Mx	.004	1
13	MP5A	X	33.231	3
14	MP5A	Z	57.558	3
15	MP5A	Mx	.021	3
16	MP4A	X	31.211	3
17	MP4A	Z	54.058	3
18	MP4A	Mx	.02	3
19	MP1A	X	39.847	2
20	MP1A	Z	69.016	2
21	MP1A	Mx	-.026	2
22	MP1A	X	39.847	5
23	MP1A	Z	69.016	5
24	MP1A	Mx	-.026	5
25	MP5A	X	39.847	2
26	MP5A	Z	69.016	2
27	MP5A	Mx	-.026	2
28	MP5A	X	39.847	5
29	MP5A	Z	69.016	5
30	MP5A	Mx	-.026	5
31	MP4A	X	80.494	1
32	MP4A	Z	139.419	1
33	MP4A	Mx	.02	1
34	MP4A	X	80.494	6
35	MP4A	Z	139.419	6
36	MP4A	Mx	.02	6
37	MP4A	X	80.494	1
38	MP4A	Z	139.419	1
39	MP4A	Mx	-.124	1
40	MP4A	X	80.494	6
41	MP4A	Z	139.419	6
42	MP4A	Mx	-.124	6
43	M15	X	83.004	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
44	M15	Z	143.767	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	4
2	MP2A	Z	35.764	4
3	MP2A	Mx	-.003	4
4	MP3A	X	0	1
5	MP3A	Z	95.005	1
6	MP3A	Mx	-.008	1
7	MP3A	X	0	3
8	MP3A	Z	95.005	3
9	MP3A	Mx	-.008	3
10	MP4A	X	0	1
11	MP4A	Z	15.096	1
12	MP4A	Mx	.001	1
13	MP5A	X	0	3
14	MP5A	Z	76.242	3
15	MP5A	Mx	.007	3
16	MP4A	X	0	3
17	MP4A	Z	75.948	3
18	MP4A	Mx	.007	3
19	MP1A	X	0	2
20	MP1A	Z	83.126	2
21	MP1A	Mx	-.007	2
22	MP1A	X	0	5
23	MP1A	Z	83.126	5
24	MP1A	Mx	-.007	5
25	MP5A	X	0	2
26	MP5A	Z	83.126	2
27	MP5A	Mx	-.007	2
28	MP5A	X	0	5
29	MP5A	Z	83.126	5
30	MP5A	Mx	-.007	5
31	MP4A	X	0	1
32	MP4A	Z	185.648	1
33	MP4A	Mx	.091	1
34	MP4A	X	0	6
35	MP4A	Z	185.648	6
36	MP4A	Mx	.091	6
37	MP4A	X	0	1
38	MP4A	Z	185.648	1
39	MP4A	Mx	-.123	1
40	MP4A	X	0	6
41	MP4A	Z	185.648	6
42	MP4A	Mx	-.123	6
43	M15	X	0	1
44	M15	Z	162.567	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-16.603	4
2	MP2A	Z	28.757	4
3	MP2A	Mx	.006	4
4	MP3A	X	-44.946	1
5	MP3A	Z	77.848	1
6	MP3A	Mx	.015	1
7	MP3A	X	-44.946	3
8	MP3A	Z	77.848	3
9	MP3A	Mx	.015	3
10	MP4A	X	-7.344	1
11	MP4A	Z	12.721	1
12	MP4A	Mx	-.003	1
13	MP5A	X	-37.013	3
14	MP5A	Z	64.108	3
15	MP5A	Mx	-.013	3
16	MP4A	X	-36.441	3
17	MP4A	Z	63.117	3
18	MP4A	Mx	-.012	3
19	MP1A	X	-41.174	2
20	MP1A	Z	71.315	2
21	MP1A	Mx	.014	2
22	MP1A	X	-41.174	5
23	MP1A	Z	71.315	5
24	MP1A	Mx	.014	5
25	MP5A	X	-41.174	2
26	MP5A	Z	71.315	2
27	MP5A	Mx	.014	2
28	MP5A	X	-41.174	5
29	MP5A	Z	71.315	5
30	MP5A	Mx	.014	5
31	MP4A	X	-90.029	1
32	MP4A	Z	155.935	1
33	MP4A	Mx	.129	1
34	MP4A	X	-90.029	6
35	MP4A	Z	155.935	6
36	MP4A	Mx	.129	6
37	MP4A	X	-90.029	1
38	MP4A	Z	155.935	1
39	MP4A	Mx	-.068	1
40	MP4A	X	-90.029	6
41	MP4A	Z	155.935	6
42	MP4A	Mx	-.068	6
43	M15	X	-71.971	1
44	M15	Z	124.658	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-16.768	4
2	MP2A	Z	9.681	4
3	MP2A	Mx	.007	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP3A	X	-53.886	1
5	MP3A	Z	31.111	1
6	MP3A	Mx	.024	1
7	MP3A	X	-53.886	3
8	MP3A	Z	31.111	3
9	MP3A	Mx	.024	3
10	MP4A	X	-10.81	1
11	MP4A	Z	6.241	1
12	MP4A	Mx	-.005	1
13	MP5A	X	-53.718	3
14	MP5A	Z	31.014	3
15	MP5A	Mx	-.024	3
16	MP4A	X	-48.748	3
17	MP4A	Z	28.145	3
18	MP4A	Mx	-.022	3
19	MP1A	X	-67.669	2
20	MP1A	Z	39.069	2
21	MP1A	Mx	.03	2
22	MP1A	X	-67.669	5
23	MP1A	Z	39.069	5
24	MP1A	Mx	.03	5
25	MP5A	X	-67.669	2
26	MP5A	Z	39.069	2
27	MP5A	Mx	.03	2
28	MP5A	X	-67.669	5
29	MP5A	Z	39.069	5
30	MP5A	Mx	.03	5
31	MP4A	X	-129.737	1
32	MP4A	Z	74.904	1
33	MP4A	Mx	.114	1
34	MP4A	X	-129.737	6
35	MP4A	Z	74.904	6
36	MP4A	Mx	.114	6
37	MP4A	X	-129.737	1
38	MP4A	Z	74.904	1
39	MP4A	Mx	.001	1
40	MP4A	X	-129.737	6
41	MP4A	Z	74.904	6
42	MP4A	Mx	.001	6
43	M15	X	-111.509	1
44	M15	Z	64.38	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-8.076	4
2	MP2A	Z	0	4
3	MP2A	Mx	.004	4
4	MP3A	X	-39.665	1
5	MP3A	Z	0	1
6	MP3A	Mx	.02	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP3A	X	-39.665	3
8	MP3A	Z	0	3
9	MP3A	Mx	.02	3
10	MP4A	X	-10.684	1
11	MP4A	Z	0	1
12	MP4A	Mx	-.005	1
13	MP5A	X	-52.249	3
14	MP5A	Z	0	3
15	MP5A	Mx	-.026	3
16	MP4A	X	-42.763	3
17	MP4A	Z	0	3
18	MP4A	Mx	-.021	3
19	MP1A	X	-74.705	2
20	MP1A	Z	0	2
21	MP1A	Mx	.037	2
22	MP1A	X	-74.705	5
23	MP1A	Z	0	5
24	MP1A	Mx	.037	5
25	MP5A	X	-74.705	2
26	MP5A	Z	0	2
27	MP5A	Mx	.037	2
28	MP5A	X	-74.705	5
29	MP5A	Z	0	5
30	MP5A	Mx	.037	5
31	MP4A	X	-125.148	1
32	MP4A	Z	0	1
33	MP4A	Mx	.074	1
34	MP4A	X	-125.148	6
35	MP4A	Z	0	6
36	MP4A	Mx	.074	6
37	MP4A	X	-125.148	1
38	MP4A	Z	0	1
39	MP4A	Mx	.049	1
40	MP4A	X	-125.148	6
41	MP4A	Z	0	6
42	MP4A	Mx	.049	6
43	M15	X	-132.202	1
44	M15	Z	0	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-9.21	4
2	MP2A	Z	-5.317	4
3	MP2A	Mx	.005	4
4	MP3A	X	-38.779	1
5	MP3A	Z	-22.389	1
6	MP3A	Mx	.021	1
7	MP3A	X	-38.779	3
8	MP3A	Z	-22.389	3
9	MP3A	Mx	.021	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP4A	X	-9.606	1
11	MP4A	Z	-5.546	1
12	MP4A	Mx	-.005	1
13	MP5A	X	-47.169	3
14	MP5A	Z	-27.233	3
15	MP5A	Mx	-.026	3
16	MP4A	X	-39.689	3
17	MP4A	Z	-22.914	3
18	MP4A	Mx	-.022	3
19	MP1A	X	-65.37	2
20	MP1A	Z	-37.741	2
21	MP1A	Mx	.035	2
22	MP1A	X	-65.37	5
23	MP1A	Z	-37.741	5
24	MP1A	Mx	.035	5
25	MP5A	X	-65.37	2
26	MP5A	Z	-37.741	2
27	MP5A	Mx	.035	2
28	MP5A	X	-65.37	5
29	MP5A	Z	-37.741	5
30	MP5A	Mx	.035	5
31	MP4A	X	-113.222	1
32	MP4A	Z	-65.369	1
33	MP4A	Mx	.035	1
34	MP4A	X	-113.222	6
35	MP4A	Z	-65.369	6
36	MP4A	Mx	.035	6
37	MP4A	X	-113.222	1
38	MP4A	Z	-65.369	1
39	MP4A	Mx	.088	1
40	MP4A	X	-113.222	6
41	MP4A	Z	-65.369	6
42	MP4A	Mx	.088	6
43	M15	X	-130.619	1
44	M15	Z	-75.413	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-12.239	4
2	MP2A	Z	-21.199	4
3	MP2A	Mx	.008	4
4	MP3A	X	-36.224	1
5	MP3A	Z	-62.742	1
6	MP3A	Mx	.023	1
7	MP3A	X	-36.224	3
8	MP3A	Z	-62.742	3
9	MP3A	Mx	.023	3
10	MP4A	X	-6.649	1
11	MP4A	Z	-11.516	1
12	MP4A	Mx	-.004	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP5A	X	-33.231	3
14	MP5A	Z	-57.558	3
15	MP5A	Mx	-.021	3
16	MP4A	X	-31.211	3
17	MP4A	Z	-54.058	3
18	MP4A	Mx	-.02	3
19	MP1A	X	-39.847	2
20	MP1A	Z	-69.016	2
21	MP1A	Mx	.026	2
22	MP1A	X	-39.847	5
23	MP1A	Z	-69.016	5
24	MP1A	Mx	.026	5
25	MP5A	X	-39.847	2
26	MP5A	Z	-69.016	2
27	MP5A	Mx	.026	2
28	MP5A	X	-39.847	5
29	MP5A	Z	-69.016	5
30	MP5A	Mx	.026	5
31	MP4A	X	-80.494	1
32	MP4A	Z	-139.419	1
33	MP4A	Mx	-.02	1
34	MP4A	X	-80.494	6
35	MP4A	Z	-139.419	6
36	MP4A	Mx	-.02	6
37	MP4A	X	-80.494	1
38	MP4A	Z	-139.419	1
39	MP4A	Mx	.124	1
40	MP4A	X	-80.494	6
41	MP4A	Z	-139.419	6
42	MP4A	Mx	.124	6
43	M15	X	-83.004	1
44	M15	Z	-143.767	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	4
2	MP2A	Z	-7.896	4
3	MP2A	Mx	.000686	4
4	MP3A	X	0	1
5	MP3A	Z	-18.3	1
6	MP3A	Mx	.002	1
7	MP3A	X	0	3
8	MP3A	Z	-18.3	3
9	MP3A	Mx	.002	3
10	MP4A	X	0	1
11	MP4A	Z	-3.761	1
12	MP4A	Mx	-.000327	1
13	MP5A	X	0	3
14	MP5A	Z	-15.533	3
15	MP5A	Mx	-.001	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP4A	X	0	3
17	MP4A	Z	-15.479	3
18	MP4A	Mx	-.001	3
19	MP1A	X	0	2
20	MP1A	Z	-16.229	2
21	MP1A	Mx	.001	2
22	MP1A	X	0	5
23	MP1A	Z	-16.229	5
24	MP1A	Mx	.001	5
25	MP5A	X	0	2
26	MP5A	Z	-16.229	2
27	MP5A	Mx	.001	2
28	MP5A	X	0	5
29	MP5A	Z	-16.229	5
30	MP5A	Mx	.001	5
31	MP4A	X	0	1
32	MP4A	Z	-34.698	1
33	MP4A	Mx	-.017	1
34	MP4A	X	0	6
35	MP4A	Z	-34.698	6
36	MP4A	Mx	-.017	6
37	MP4A	X	0	1
38	MP4A	Z	-34.698	1
39	MP4A	Mx	.023	1
40	MP4A	X	0	6
41	MP4A	Z	-34.698	6
42	MP4A	Mx	.023	6
43	M15	X	0	1
44	M15	Z	-31.429	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	3.7	4
2	MP2A	Z	-6.408	4
3	MP2A	Mx	-.001	4
4	MP3A	X	8.685	1
5	MP3A	Z	-15.044	1
6	MP3A	Mx	-.003	1
7	MP3A	X	8.685	3
8	MP3A	Z	-15.044	3
9	MP3A	Mx	-.003	3
10	MP4A	X	1.839	1
11	MP4A	Z	-3.186	1
12	MP4A	Mx	.000629	1
13	MP5A	X	7.559	3
14	MP5A	Z	-13.093	3
15	MP5A	Mx	.003	3
16	MP4A	X	7.453	3
17	MP4A	Z	-12.909	3
18	MP4A	Mx	.003	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP1A	X	8.045	2
20	MP1A	Z	-13.934	2
21	MP1A	Mx	-.003	2
22	MP1A	X	8.045	5
23	MP1A	Z	-13.934	5
24	MP1A	Mx	-.003	5
25	MP5A	X	8.045	2
26	MP5A	Z	-13.934	2
27	MP5A	Mx	-.003	2
28	MP5A	X	8.045	5
29	MP5A	Z	-13.934	5
30	MP5A	Mx	-.003	5
31	MP4A	X	16.865	1
32	MP4A	Z	-29.211	1
33	MP4A	Mx	-.024	1
34	MP4A	X	16.865	6
35	MP4A	Z	-29.211	6
36	MP4A	Mx	-.024	6
37	MP4A	X	16.865	1
38	MP4A	Z	-29.211	1
39	MP4A	Mx	.013	1
40	MP4A	X	16.865	6
41	MP4A	Z	-29.211	6
42	MP4A	Mx	.013	6
43	M15	X	14.06	1
44	M15	Z	-24.352	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	4.084	4
2	MP2A	Z	-2.358	4
3	MP2A	Mx	-.002	4
4	MP3A	X	10.688	1
5	MP3A	Z	-6.171	1
6	MP3A	Mx	-.005	1
7	MP3A	X	10.688	3
8	MP3A	Z	-6.171	3
9	MP3A	Mx	-.005	3
10	MP4A	X	2.799	1
11	MP4A	Z	-1.616	1
12	MP4A	Mx	.001	1
13	MP5A	X	11.147	3
14	MP5A	Z	-6.436	3
15	MP5A	Mx	.005	3
16	MP4A	X	10.224	3
17	MP4A	Z	-5.903	3
18	MP4A	Mx	.005	3
19	MP1A	X	13.281	2
20	MP1A	Z	-7.668	2
21	MP1A	Mx	-.006	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP1A	X	13.281	5
23	MP1A	Z	-7.668	5
24	MP1A	Mx	-.006	5
25	MP5A	X	13.281	2
26	MP5A	Z	-7.668	2
27	MP5A	Mx	-.006	2
28	MP5A	X	13.281	5
29	MP5A	Z	-7.668	5
30	MP5A	Mx	-.006	5
31	MP4A	X	24.672	1
32	MP4A	Z	-14.244	1
33	MP4A	Mx	-.022	1
34	MP4A	X	24.672	6
35	MP4A	Z	-14.244	6
36	MP4A	Mx	-.022	6
37	MP4A	X	24.672	1
38	MP4A	Z	-14.244	1
39	MP4A	Mx	-.00023	1
40	MP4A	X	24.672	6
41	MP4A	Z	-14.244	6
42	MP4A	Mx	-.00023	6
43	M15	X	22.016	1
44	M15	Z	-12.711	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.527	4
2	MP2A	Z	0	4
3	MP2A	Mx	-.001	4
4	MP3A	X	8.241	1
5	MP3A	Z	0	1
6	MP3A	Mx	-.004	1
7	MP3A	X	8.241	3
8	MP3A	Z	0	3
9	MP3A	Mx	-.004	3
10	MP4A	X	2.869	1
11	MP4A	Z	0	1
12	MP4A	Mx	.001	1
13	MP5A	X	11.04	3
14	MP5A	Z	0	3
15	MP5A	Mx	.005	3
16	MP4A	X	9.278	3
17	MP4A	Z	0	3
18	MP4A	Mx	.005	3
19	MP1A	X	14.721	2
20	MP1A	Z	0	2
21	MP1A	Mx	-.007	2
22	MP1A	X	14.721	5
23	MP1A	Z	0	5
24	MP1A	Mx	-.007	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP5A	X	14.721	2
26	MP5A	Z	0	2
27	MP5A	Mx	-.007	2
28	MP5A	X	14.721	5
29	MP5A	Z	0	5
30	MP5A	Mx	-.007	5
31	MP4A	X	24.217	1
32	MP4A	Z	0	1
33	MP4A	Mx	-.014	1
34	MP4A	X	24.217	6
35	MP4A	Z	0	6
36	MP4A	Mx	-.014	6
37	MP4A	X	24.217	1
38	MP4A	Z	0	1
39	MP4A	Mx	-.009	1
40	MP4A	X	24.217	6
41	MP4A	Z	0	6
42	MP4A	Mx	-.009	6
43	M15	X	26.033	1
44	M15	Z	0	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.618	4
2	MP2A	Z	1.512	4
3	MP2A	Mx	-.001	4
4	MP3A	X	7.942	1
5	MP3A	Z	4.585	1
6	MP3A	Mx	-.004	1
7	MP3A	X	7.942	3
8	MP3A	Z	4.585	3
9	MP3A	Mx	-.004	3
10	MP4A	X	2.556	1
11	MP4A	Z	1.476	1
12	MP4A	Mx	.001	1
13	MP5A	X	9.921	3
14	MP5A	Z	5.728	3
15	MP5A	Mx	.005	3
16	MP4A	X	8.531	3
17	MP4A	Z	4.926	3
18	MP4A	Mx	.005	3
19	MP1A	X	12.87	2
20	MP1A	Z	7.43	2
21	MP1A	Mx	-.007	2
22	MP1A	X	12.87	5
23	MP1A	Z	7.43	5
24	MP1A	Mx	-.007	5
25	MP5A	X	12.87	2
26	MP5A	Z	7.43	2
27	MP5A	Mx	-.007	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP5A	X	12.87	5
29	MP5A	Z	7.43	5
30	MP5A	Mx	-.007	5
31	MP4A	X	21.811	1
32	MP4A	Z	12.593	1
33	MP4A	Mx	-.007	1
34	MP4A	X	21.811	6
35	MP4A	Z	12.593	6
36	MP4A	Mx	-.007	6
37	MP4A	X	21.811	1
38	MP4A	Z	12.593	1
39	MP4A	Mx	-.017	1
40	MP4A	X	21.811	6
41	MP4A	Z	12.593	6
42	MP4A	Mx	-.017	6
43	M15	X	25.411	1
44	M15	Z	14.671	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.854	4
2	MP2A	Z	4.943	4
3	MP2A	Mx	-.002	4
4	MP3A	X	7.1	1
5	MP3A	Z	12.298	1
6	MP3A	Mx	-.005	1
7	MP3A	X	7.1	3
8	MP3A	Z	12.298	3
9	MP3A	Mx	-.005	3
10	MP4A	X	1.699	1
11	MP4A	Z	2.942	1
12	MP4A	Mx	.001	1
13	MP5A	X	6.851	3
14	MP5A	Z	11.866	3
15	MP5A	Mx	.004	3
16	MP4A	X	6.476	3
17	MP4A	Z	11.216	3
18	MP4A	Mx	.004	3
19	MP1A	X	7.807	2
20	MP1A	Z	13.522	2
21	MP1A	Mx	-.005	2
22	MP1A	X	7.807	5
23	MP1A	Z	13.522	5
24	MP1A	Mx	-.005	5
25	MP5A	X	7.807	2
26	MP5A	Z	13.522	2
27	MP5A	Mx	-.005	2
28	MP5A	X	7.807	5
29	MP5A	Z	13.522	5
30	MP5A	Mx	-.005	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP4A	X	15.213	1
32	MP4A	Z	26.349	1
33	MP4A	Mx	.004	1
34	MP4A	X	15.213	6
35	MP4A	Z	26.349	6
36	MP4A	Mx	.004	6
37	MP4A	X	15.213	1
38	MP4A	Z	26.349	1
39	MP4A	Mx	-.023	1
40	MP4A	X	15.213	6
41	MP4A	Z	26.349	6
42	MP4A	Mx	-.023	6
43	M15	X	16.02	1
44	M15	Z	27.748	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	4
2	MP2A	Z	7.896	4
3	MP2A	Mx	-.000686	4
4	MP3A	X	0	1
5	MP3A	Z	18.3	1
6	MP3A	Mx	-.002	1
7	MP3A	X	0	3
8	MP3A	Z	18.3	3
9	MP3A	Mx	-.002	3
10	MP4A	X	0	1
11	MP4A	Z	3.761	1
12	MP4A	Mx	.000327	1
13	MP5A	X	0	3
14	MP5A	Z	15.533	3
15	MP5A	Mx	.001	3
16	MP4A	X	0	3
17	MP4A	Z	15.479	3
18	MP4A	Mx	.001	3
19	MP1A	X	0	2
20	MP1A	Z	16.229	2
21	MP1A	Mx	-.001	2
22	MP1A	X	0	5
23	MP1A	Z	16.229	5
24	MP1A	Mx	-.001	5
25	MP5A	X	0	2
26	MP5A	Z	16.229	2
27	MP5A	Mx	-.001	2
28	MP5A	X	0	5
29	MP5A	Z	16.229	5
30	MP5A	Mx	-.001	5
31	MP4A	X	0	1
32	MP4A	Z	34.698	1
33	MP4A	Mx	.017	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP4A	X	0	6
35	MP4A	Z	34.698	6
36	MP4A	Mx	.017	6
37	MP4A	X	0	1
38	MP4A	Z	34.698	1
39	MP4A	Mx	-.023	1
40	MP4A	X	0	6
41	MP4A	Z	34.698	6
42	MP4A	Mx	-.023	6
43	M15	X	0	1
44	M15	Z	31.429	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-3.7	4
2	MP2A	Z	6.408	4
3	MP2A	Mx	.001	4
4	MP3A	X	-8.685	1
5	MP3A	Z	15.044	1
6	MP3A	Mx	.003	1
7	MP3A	X	-8.685	3
8	MP3A	Z	15.044	3
9	MP3A	Mx	.003	3
10	MP4A	X	-1.839	1
11	MP4A	Z	3.186	1
12	MP4A	Mx	-.000629	1
13	MP5A	X	-7.559	3
14	MP5A	Z	13.093	3
15	MP5A	Mx	-.003	3
16	MP4A	X	-7.453	3
17	MP4A	Z	12.909	3
18	MP4A	Mx	-.003	3
19	MP1A	X	-8.045	2
20	MP1A	Z	13.934	2
21	MP1A	Mx	.003	2
22	MP1A	X	-8.045	5
23	MP1A	Z	13.934	5
24	MP1A	Mx	.003	5
25	MP5A	X	-8.045	2
26	MP5A	Z	13.934	2
27	MP5A	Mx	.003	2
28	MP5A	X	-8.045	5
29	MP5A	Z	13.934	5
30	MP5A	Mx	.003	5
31	MP4A	X	-16.865	1
32	MP4A	Z	29.211	1
33	MP4A	Mx	.024	1
34	MP4A	X	-16.865	6
35	MP4A	Z	29.211	6
36	MP4A	Mx	.024	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP4A	X	-16.865	1
38	MP4A	Z	29.211	1
39	MP4A	Mx	-.013	1
40	MP4A	X	-16.865	6
41	MP4A	Z	29.211	6
42	MP4A	Mx	-.013	6
43	M15	X	-14.06	1
44	M15	Z	24.352	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-4.084	4
2	MP2A	Z	2.358	4
3	MP2A	Mx	.002	4
4	MP3A	X	-10.688	1
5	MP3A	Z	6.171	1
6	MP3A	Mx	.005	1
7	MP3A	X	-10.688	3
8	MP3A	Z	6.171	3
9	MP3A	Mx	.005	3
10	MP4A	X	-2.799	1
11	MP4A	Z	1.616	1
12	MP4A	Mx	-.001	1
13	MP5A	X	-11.147	3
14	MP5A	Z	6.436	3
15	MP5A	Mx	-.005	3
16	MP4A	X	-10.224	3
17	MP4A	Z	5.903	3
18	MP4A	Mx	-.005	3
19	MP1A	X	-13.281	2
20	MP1A	Z	7.668	2
21	MP1A	Mx	.006	2
22	MP1A	X	-13.281	5
23	MP1A	Z	7.668	5
24	MP1A	Mx	.006	5
25	MP5A	X	-13.281	2
26	MP5A	Z	7.668	2
27	MP5A	Mx	.006	2
28	MP5A	X	-13.281	5
29	MP5A	Z	7.668	5
30	MP5A	Mx	.006	5
31	MP4A	X	-24.672	1
32	MP4A	Z	14.244	1
33	MP4A	Mx	.022	1
34	MP4A	X	-24.672	6
35	MP4A	Z	14.244	6
36	MP4A	Mx	.022	6
37	MP4A	X	-24.672	1
38	MP4A	Z	14.244	1
39	MP4A	Mx	.00023	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
40	MP4A	X	-24.672	6
41	MP4A	Z	14.244	6
42	MP4A	Mx	.00023	6
43	M15	X	-22.016	1
44	M15	Z	12.711	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.527	4
2	MP2A	Z	0	4
3	MP2A	Mx	.001	4
4	MP3A	X	-8.241	1
5	MP3A	Z	0	1
6	MP3A	Mx	.004	1
7	MP3A	X	-8.241	3
8	MP3A	Z	0	3
9	MP3A	Mx	.004	3
10	MP4A	X	-2.869	1
11	MP4A	Z	0	1
12	MP4A	Mx	-.001	1
13	MP5A	X	-11.04	3
14	MP5A	Z	0	3
15	MP5A	Mx	-.005	3
16	MP4A	X	-9.278	3
17	MP4A	Z	0	3
18	MP4A	Mx	-.005	3
19	MP1A	X	-14.721	2
20	MP1A	Z	0	2
21	MP1A	Mx	.007	2
22	MP1A	X	-14.721	5
23	MP1A	Z	0	5
24	MP1A	Mx	.007	5
25	MP5A	X	-14.721	2
26	MP5A	Z	0	2
27	MP5A	Mx	.007	2
28	MP5A	X	-14.721	5
29	MP5A	Z	0	5
30	MP5A	Mx	.007	5
31	MP4A	X	-24.217	1
32	MP4A	Z	0	1
33	MP4A	Mx	.014	1
34	MP4A	X	-24.217	6
35	MP4A	Z	0	6
36	MP4A	Mx	.014	6
37	MP4A	X	-24.217	1
38	MP4A	Z	0	1
39	MP4A	Mx	.009	1
40	MP4A	X	-24.217	6
41	MP4A	Z	0	6
42	MP4A	Mx	.009	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	M15	X	-26.033	1
44	M15	Z	0	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.618	4
2	MP2A	Z	-1.512	4
3	MP2A	Mx	.001	4
4	MP3A	X	-7.942	1
5	MP3A	Z	-4.585	1
6	MP3A	Mx	.004	1
7	MP3A	X	-7.942	3
8	MP3A	Z	-4.585	3
9	MP3A	Mx	.004	3
10	MP4A	X	-2.556	1
11	MP4A	Z	-1.476	1
12	MP4A	Mx	-.001	1
13	MP5A	X	-9.921	3
14	MP5A	Z	-5.728	3
15	MP5A	Mx	-.005	3
16	MP4A	X	-8.531	3
17	MP4A	Z	-4.926	3
18	MP4A	Mx	-.005	3
19	MP1A	X	-12.87	2
20	MP1A	Z	-7.43	2
21	MP1A	Mx	.007	2
22	MP1A	X	-12.87	5
23	MP1A	Z	-7.43	5
24	MP1A	Mx	.007	5
25	MP5A	X	-12.87	2
26	MP5A	Z	-7.43	2
27	MP5A	Mx	.007	2
28	MP5A	X	-12.87	5
29	MP5A	Z	-7.43	5
30	MP5A	Mx	.007	5
31	MP4A	X	-21.811	1
32	MP4A	Z	-12.593	1
33	MP4A	Mx	.007	1
34	MP4A	X	-21.811	6
35	MP4A	Z	-12.593	6
36	MP4A	Mx	.007	6
37	MP4A	X	-21.811	1
38	MP4A	Z	-12.593	1
39	MP4A	Mx	.017	1
40	MP4A	X	-21.811	6
41	MP4A	Z	-12.593	6
42	MP4A	Mx	.017	6
43	M15	X	-25.411	1
44	M15	Z	-14.671	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.854	4
2	MP2A	Z	-4.943	4
3	MP2A	Mx	.002	4
4	MP3A	X	-7.1	1
5	MP3A	Z	-12.298	1
6	MP3A	Mx	.005	1
7	MP3A	X	-7.1	3
8	MP3A	Z	-12.298	3
9	MP3A	Mx	.005	3
10	MP4A	X	-1.699	1
11	MP4A	Z	-2.942	1
12	MP4A	Mx	-.001	1
13	MP5A	X	-6.851	3
14	MP5A	Z	-11.866	3
15	MP5A	Mx	-.004	3
16	MP4A	X	-6.476	3
17	MP4A	Z	-11.216	3
18	MP4A	Mx	-.004	3
19	MP1A	X	-7.807	2
20	MP1A	Z	-13.522	2
21	MP1A	Mx	.005	2
22	MP1A	X	-7.807	5
23	MP1A	Z	-13.522	5
24	MP1A	Mx	.005	5
25	MP5A	X	-7.807	2
26	MP5A	Z	-13.522	2
27	MP5A	Mx	.005	2
28	MP5A	X	-7.807	5
29	MP5A	Z	-13.522	5
30	MP5A	Mx	.005	5
31	MP4A	X	-15.213	1
32	MP4A	Z	-26.349	1
33	MP4A	Mx	-.004	1
34	MP4A	X	-15.213	6
35	MP4A	Z	-26.349	6
36	MP4A	Mx	-.004	6
37	MP4A	X	-15.213	1
38	MP4A	Z	-26.349	1
39	MP4A	Mx	.023	1
40	MP4A	X	-15.213	6
41	MP4A	Z	-26.349	6
42	MP4A	Mx	.023	6
43	M15	X	-16.02	1
44	M15	Z	-27.748	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	4
2	MP2A	Z	-2.198	4
3	MP2A	Mx	.000191	4

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP3A	X	0	1
5	MP3A	Z	-5.84	1
6	MP3A	Mx	.000507	1
7	MP3A	X	0	3
8	MP3A	Z	-5.84	3
9	MP3A	Mx	.000507	3
10	MP4A	X	0	1
11	MP4A	Z	-.928	1
12	MP4A	Mx	-8.1e-5	1
13	MP5A	X	0	3
14	MP5A	Z	-4.687	3
15	MP5A	Mx	-.000407	3
16	MP4A	X	0	3
17	MP4A	Z	-4.669	3
18	MP4A	Mx	-.000405	3
19	MP1A	X	0	2
20	MP1A	Z	-5.11	2
21	MP1A	Mx	.000444	2
22	MP1A	X	0	5
23	MP1A	Z	-5.11	5
24	MP1A	Mx	.000444	5
25	MP5A	X	0	2
26	MP5A	Z	-5.11	2
27	MP5A	Mx	.000444	2
28	MP5A	X	0	5
29	MP5A	Z	-5.11	5
30	MP5A	Mx	.000444	5
31	MP4A	X	0	1
32	MP4A	Z	-11.412	1
33	MP4A	Mx	-.006	1
34	MP4A	X	0	6
35	MP4A	Z	-11.412	6
36	MP4A	Mx	-.006	6
37	MP4A	X	0	1
38	MP4A	Z	-11.412	1
39	MP4A	Mx	.008	1
40	MP4A	X	0	6
41	MP4A	Z	-11.412	6
42	MP4A	Mx	.008	6
43	M15	X	0	1
44	M15	Z	-9.993	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	1.021	4
2	MP2A	Z	-1.768	4
3	MP2A	Mx	-.000349	4
4	MP3A	X	2.763	1
5	MP3A	Z	-4.785	1
6	MP3A	Mx	-.000945	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
7	MP3A	X	2.763	3
8	MP3A	Z	-4.785	3
9	MP3A	Mx	-.000945	3
10	MP4A	X	.451	1
11	MP4A	Z	-.782	1
12	MP4A	Mx	.000154	1
13	MP5A	X	2.275	3
14	MP5A	Z	-3.941	3
15	MP5A	Mx	.000778	3
16	MP4A	X	2.24	3
17	MP4A	Z	-3.88	3
18	MP4A	Mx	.000766	3
19	MP1A	X	2.531	2
20	MP1A	Z	-4.384	2
21	MP1A	Mx	-.000866	2
22	MP1A	X	2.531	5
23	MP1A	Z	-4.384	5
24	MP1A	Mx	-.000866	5
25	MP5A	X	2.531	2
26	MP5A	Z	-4.384	2
27	MP5A	Mx	-.000866	2
28	MP5A	X	2.531	5
29	MP5A	Z	-4.384	5
30	MP5A	Mx	-.000866	5
31	MP4A	X	5.534	1
32	MP4A	Z	-9.585	1
33	MP4A	Mx	-.008	1
34	MP4A	X	5.534	6
35	MP4A	Z	-9.585	6
36	MP4A	Mx	-.008	6
37	MP4A	X	5.534	1
38	MP4A	Z	-9.585	1
39	MP4A	Mx	.004	1
40	MP4A	X	5.534	6
41	MP4A	Z	-9.585	6
42	MP4A	Mx	.004	6
43	M15	X	4.424	1
44	M15	Z	-7.663	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	1.031	4
2	MP2A	Z	-.595	4
3	MP2A	Mx	-.000456	4
4	MP3A	X	3.312	1
5	MP3A	Z	-1.912	1
6	MP3A	Mx	-.001	1
7	MP3A	X	3.312	3
8	MP3A	Z	-1.912	3
9	MP3A	Mx	-.001	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP4A	X	.665	1
11	MP4A	Z	-.384	1
12	MP4A	Mx	.000294	1
13	MP5A	X	3.302	3
14	MP5A	Z	-1.906	3
15	MP5A	Mx	.001	3
16	MP4A	X	2.997	3
17	MP4A	Z	-1.73	3
18	MP4A	Mx	.001	3
19	MP1A	X	4.16	2
20	MP1A	Z	-2.402	2
21	MP1A	Mx	-.002	2
22	MP1A	X	4.16	5
23	MP1A	Z	-2.402	5
24	MP1A	Mx	-.002	5
25	MP5A	X	4.16	2
26	MP5A	Z	-2.402	2
27	MP5A	Mx	-.002	2
28	MP5A	X	4.16	5
29	MP5A	Z	-2.402	5
30	MP5A	Mx	-.002	5
31	MP4A	X	7.975	1
32	MP4A	Z	-4.604	1
33	MP4A	Mx	-.007	1
34	MP4A	X	7.975	6
35	MP4A	Z	-4.604	6
36	MP4A	Mx	-.007	6
37	MP4A	X	7.975	1
38	MP4A	Z	-4.604	1
39	MP4A	Mx	-7.4e-5	1
40	MP4A	X	7.975	6
41	MP4A	Z	-4.604	6
42	MP4A	Mx	-7.4e-5	6
43	M15	X	6.855	1
44	M15	Z	-3.958	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	.496	4
2	MP2A	Z	0	4
3	MP2A	Mx	-.000244	4
4	MP3A	X	2.438	1
5	MP3A	Z	0	1
6	MP3A	Mx	-.001	1
7	MP3A	X	2.438	3
8	MP3A	Z	0	3
9	MP3A	Mx	-.001	3
10	MP4A	X	.657	1
11	MP4A	Z	0	1
12	MP4A	Mx	.000324	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP5A	X	3.212	3
14	MP5A	Z	0	3
15	MP5A	Mx	.002	3
16	MP4A	X	2.629	3
17	MP4A	Z	0	3
18	MP4A	Mx	.001	3
19	MP1A	X	4.592	2
20	MP1A	Z	0	2
21	MP1A	Mx	-.002	2
22	MP1A	X	4.592	5
23	MP1A	Z	0	5
24	MP1A	Mx	-.002	5
25	MP5A	X	4.592	2
26	MP5A	Z	0	2
27	MP5A	Mx	-.002	2
28	MP5A	X	4.592	5
29	MP5A	Z	0	5
30	MP5A	Mx	-.002	5
31	MP4A	X	7.693	1
32	MP4A	Z	0	1
33	MP4A	Mx	-.005	1
34	MP4A	X	7.693	6
35	MP4A	Z	0	6
36	MP4A	Mx	-.005	6
37	MP4A	X	7.693	1
38	MP4A	Z	0	1
39	MP4A	Mx	-.003	1
40	MP4A	X	7.693	6
41	MP4A	Z	0	6
42	MP4A	Mx	-.003	6
43	M15	X	8.127	1
44	M15	Z	0	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	.566	4
2	MP2A	Z	.327	4
3	MP2A	Mx	-.000307	4
4	MP3A	X	2.384	1
5	MP3A	Z	1.376	1
6	MP3A	Mx	-.001	1
7	MP3A	X	2.384	3
8	MP3A	Z	1.376	3
9	MP3A	Mx	-.001	3
10	MP4A	X	.59	1
11	MP4A	Z	.341	1
12	MP4A	Mx	.00032	1
13	MP5A	X	2.9	3
14	MP5A	Z	1.674	3
15	MP5A	Mx	.002	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP4A	X	2.44	3
17	MP4A	Z	1.409	3
18	MP4A	Mx	.001	3
19	MP1A	X	4.018	2
20	MP1A	Z	2.32	2
21	MP1A	Mx	-.002	2
22	MP1A	X	4.018	5
23	MP1A	Z	2.32	5
24	MP1A	Mx	-.002	5
25	MP5A	X	4.018	2
26	MP5A	Z	2.32	2
27	MP5A	Mx	-.002	2
28	MP5A	X	4.018	5
29	MP5A	Z	2.32	5
30	MP5A	Mx	-.002	5
31	MP4A	X	6.96	1
32	MP4A	Z	4.018	1
33	MP4A	Mx	-.002	1
34	MP4A	X	6.96	6
35	MP4A	Z	4.018	6
36	MP4A	Mx	-.002	6
37	MP4A	X	6.96	1
38	MP4A	Z	4.018	1
39	MP4A	Mx	-.005	1
40	MP4A	X	6.96	6
41	MP4A	Z	4.018	6
42	MP4A	Mx	-.005	6
43	M15	X	8.029	1
44	M15	Z	4.636	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	.752	4
2	MP2A	Z	1.303	4
3	MP2A	Mx	-.000483	4
4	MP3A	X	2.227	1
5	MP3A	Z	3.857	1
6	MP3A	Mx	-.001	1
7	MP3A	X	2.227	3
8	MP3A	Z	3.857	3
9	MP3A	Mx	-.001	3
10	MP4A	X	.409	1
11	MP4A	Z	.708	1
12	MP4A	Mx	.000263	1
13	MP5A	X	2.043	3
14	MP5A	Z	3.538	3
15	MP5A	Mx	.001	3
16	MP4A	X	1.919	3
17	MP4A	Z	3.323	3
18	MP4A	Mx	.001	3

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP1A	X	2.449	2
20	MP1A	Z	4.243	2
21	MP1A	Mx	-.002	2
22	MP1A	X	2.449	5
23	MP1A	Z	4.243	5
24	MP1A	Mx	-.002	5
25	MP5A	X	2.449	2
26	MP5A	Z	4.243	2
27	MP5A	Mx	-.002	2
28	MP5A	X	2.449	5
29	MP5A	Z	4.243	5
30	MP5A	Mx	-.002	5
31	MP4A	X	4.948	1
32	MP4A	Z	8.57	1
33	MP4A	Mx	.001	1
34	MP4A	X	4.948	6
35	MP4A	Z	8.57	6
36	MP4A	Mx	.001	6
37	MP4A	X	4.948	1
38	MP4A	Z	8.57	1
39	MP4A	Mx	-.008	1
40	MP4A	X	4.948	6
41	MP4A	Z	8.57	6
42	MP4A	Mx	-.008	6
43	M15	X	5.102	1
44	M15	Z	8.838	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	4
2	MP2A	Z	2.198	4
3	MP2A	Mx	-.000191	4
4	MP3A	X	0	1
5	MP3A	Z	5.84	1
6	MP3A	Mx	-.000507	1
7	MP3A	X	0	3
8	MP3A	Z	5.84	3
9	MP3A	Mx	-.000507	3
10	MP4A	X	0	1
11	MP4A	Z	.928	1
12	MP4A	Mx	8.1e-5	1
13	MP5A	X	0	3
14	MP5A	Z	4.687	3
15	MP5A	Mx	.000407	3
16	MP4A	X	0	3
17	MP4A	Z	4.669	3
18	MP4A	Mx	.000405	3
19	MP1A	X	0	2
20	MP1A	Z	5.11	2
21	MP1A	Mx	-.000444	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
22	MP1A	X	0	5
23	MP1A	Z	5.11	5
24	MP1A	Mx	-.000444	5
25	MP5A	X	0	2
26	MP5A	Z	5.11	2
27	MP5A	Mx	-.000444	2
28	MP5A	X	0	5
29	MP5A	Z	5.11	5
30	MP5A	Mx	-.000444	5
31	MP4A	X	0	1
32	MP4A	Z	11.412	1
33	MP4A	Mx	.006	1
34	MP4A	X	0	6
35	MP4A	Z	11.412	6
36	MP4A	Mx	.006	6
37	MP4A	X	0	1
38	MP4A	Z	11.412	1
39	MP4A	Mx	-.008	1
40	MP4A	X	0	6
41	MP4A	Z	11.412	6
42	MP4A	Mx	-.008	6
43	M15	X	0	1
44	M15	Z	9.993	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-1.021	4
2	MP2A	Z	1.768	4
3	MP2A	Mx	.000349	4
4	MP3A	X	-2.763	1
5	MP3A	Z	4.785	1
6	MP3A	Mx	.000945	1
7	MP3A	X	-2.763	3
8	MP3A	Z	4.785	3
9	MP3A	Mx	.000945	3
10	MP4A	X	-.451	1
11	MP4A	Z	.782	1
12	MP4A	Mx	-.000154	1
13	MP5A	X	-2.275	3
14	MP5A	Z	3.941	3
15	MP5A	Mx	-.000778	3
16	MP4A	X	-2.24	3
17	MP4A	Z	3.88	3
18	MP4A	Mx	-.000766	3
19	MP1A	X	-2.531	2
20	MP1A	Z	4.384	2
21	MP1A	Mx	.000866	2
22	MP1A	X	-2.531	5
23	MP1A	Z	4.384	5
24	MP1A	Mx	.000866	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP5A	X	-2.531	2
26	MP5A	Z	4.384	2
27	MP5A	Mx	.000866	2
28	MP5A	X	-2.531	5
29	MP5A	Z	4.384	5
30	MP5A	Mx	.000866	5
31	MP4A	X	-5.534	1
32	MP4A	Z	9.585	1
33	MP4A	Mx	.008	1
34	MP4A	X	-5.534	6
35	MP4A	Z	9.585	6
36	MP4A	Mx	.008	6
37	MP4A	X	-5.534	1
38	MP4A	Z	9.585	1
39	MP4A	Mx	-.004	1
40	MP4A	X	-5.534	6
41	MP4A	Z	9.585	6
42	MP4A	Mx	-.004	6
43	M15	X	-4.424	1
44	M15	Z	7.663	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-1.031	4
2	MP2A	Z	.595	4
3	MP2A	Mx	.000456	4
4	MP3A	X	-3.312	1
5	MP3A	Z	1.912	1
6	MP3A	Mx	.001	1
7	MP3A	X	-3.312	3
8	MP3A	Z	1.912	3
9	MP3A	Mx	.001	3
10	MP4A	X	-.665	1
11	MP4A	Z	.384	1
12	MP4A	Mx	-.000294	1
13	MP5A	X	-3.302	3
14	MP5A	Z	1.906	3
15	MP5A	Mx	-.001	3
16	MP4A	X	-2.997	3
17	MP4A	Z	1.73	3
18	MP4A	Mx	-.001	3
19	MP1A	X	-4.16	2
20	MP1A	Z	2.402	2
21	MP1A	Mx	.002	2
22	MP1A	X	-4.16	5
23	MP1A	Z	2.402	5
24	MP1A	Mx	.002	5
25	MP5A	X	-4.16	2
26	MP5A	Z	2.402	2
27	MP5A	Mx	.002	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
28	MP5A	X	-4.16	5
29	MP5A	Z	2.402	5
30	MP5A	Mx	.002	5
31	MP4A	X	-7.975	1
32	MP4A	Z	4.604	1
33	MP4A	Mx	.007	1
34	MP4A	X	-7.975	6
35	MP4A	Z	4.604	6
36	MP4A	Mx	.007	6
37	MP4A	X	-7.975	1
38	MP4A	Z	4.604	1
39	MP4A	Mx	7.4e-5	1
40	MP4A	X	-7.975	6
41	MP4A	Z	4.604	6
42	MP4A	Mx	7.4e-5	6
43	M15	X	-6.855	1
44	M15	Z	3.958	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-.496	4
2	MP2A	Z	0	4
3	MP2A	Mx	.000244	4
4	MP3A	X	-2.438	1
5	MP3A	Z	0	1
6	MP3A	Mx	.001	1
7	MP3A	X	-2.438	3
8	MP3A	Z	0	3
9	MP3A	Mx	.001	3
10	MP4A	X	-.657	1
11	MP4A	Z	0	1
12	MP4A	Mx	-.000324	1
13	MP5A	X	-3.212	3
14	MP5A	Z	0	3
15	MP5A	Mx	-.002	3
16	MP4A	X	-2.629	3
17	MP4A	Z	0	3
18	MP4A	Mx	-.001	3
19	MP1A	X	-4.592	2
20	MP1A	Z	0	2
21	MP1A	Mx	.002	2
22	MP1A	X	-4.592	5
23	MP1A	Z	0	5
24	MP1A	Mx	.002	5
25	MP5A	X	-4.592	2
26	MP5A	Z	0	2
27	MP5A	Mx	.002	2
28	MP5A	X	-4.592	5
29	MP5A	Z	0	5
30	MP5A	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP4A	X	-7.693	1
32	MP4A	Z	0	1
33	MP4A	Mx	.005	1
34	MP4A	X	-7.693	6
35	MP4A	Z	0	6
36	MP4A	Mx	.005	6
37	MP4A	X	-7.693	1
38	MP4A	Z	0	1
39	MP4A	Mx	.003	1
40	MP4A	X	-7.693	6
41	MP4A	Z	0	6
42	MP4A	Mx	.003	6
43	M15	X	-8.127	1
44	M15	Z	0	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-.566	4
2	MP2A	Z	-.327	4
3	MP2A	Mx	.000307	4
4	MP3A	X	-2.384	1
5	MP3A	Z	-1.376	1
6	MP3A	Mx	.001	1
7	MP3A	X	-2.384	3
8	MP3A	Z	-1.376	3
9	MP3A	Mx	.001	3
10	MP4A	X	-.59	1
11	MP4A	Z	-.341	1
12	MP4A	Mx	-.00032	1
13	MP5A	X	-2.9	3
14	MP5A	Z	-1.674	3
15	MP5A	Mx	-.002	3
16	MP4A	X	-2.44	3
17	MP4A	Z	-1.409	3
18	MP4A	Mx	-.001	3
19	MP1A	X	-4.018	2
20	MP1A	Z	-2.32	2
21	MP1A	Mx	.002	2
22	MP1A	X	-4.018	5
23	MP1A	Z	-2.32	5
24	MP1A	Mx	.002	5
25	MP5A	X	-4.018	2
26	MP5A	Z	-2.32	2
27	MP5A	Mx	.002	2
28	MP5A	X	-4.018	5
29	MP5A	Z	-2.32	5
30	MP5A	Mx	.002	5
31	MP4A	X	-6.96	1
32	MP4A	Z	-4.018	1
33	MP4A	Mx	.002	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP4A	X	-6.96	6
35	MP4A	Z	-4.018	6
36	MP4A	Mx	.002	6
37	MP4A	X	-6.96	1
38	MP4A	Z	-4.018	1
39	MP4A	Mx	.005	1
40	MP4A	X	-6.96	6
41	MP4A	Z	-4.018	6
42	MP4A	Mx	.005	6
43	M15	X	-8.029	1
44	M15	Z	-4.636	1
45	M15	Mx	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-.752	4
2	MP2A	Z	-1.303	4
3	MP2A	Mx	.000483	4
4	MP3A	X	-2.227	1
5	MP3A	Z	-3.857	1
6	MP3A	Mx	.001	1
7	MP3A	X	-2.227	3
8	MP3A	Z	-3.857	3
9	MP3A	Mx	.001	3
10	MP4A	X	-.409	1
11	MP4A	Z	-.708	1
12	MP4A	Mx	-.000263	1
13	MP5A	X	-2.043	3
14	MP5A	Z	-3.538	3
15	MP5A	Mx	-.001	3
16	MP4A	X	-1.919	3
17	MP4A	Z	-3.323	3
18	MP4A	Mx	-.001	3
19	MP1A	X	-2.449	2
20	MP1A	Z	-4.243	2
21	MP1A	Mx	.002	2
22	MP1A	X	-2.449	5
23	MP1A	Z	-4.243	5
24	MP1A	Mx	.002	5
25	MP5A	X	-2.449	2
26	MP5A	Z	-4.243	2
27	MP5A	Mx	.002	2
28	MP5A	X	-2.449	5
29	MP5A	Z	-4.243	5
30	MP5A	Mx	.002	5
31	MP4A	X	-4.948	1
32	MP4A	Z	-8.57	1
33	MP4A	Mx	-.001	1
34	MP4A	X	-4.948	6
35	MP4A	Z	-8.57	6
36	MP4A	Mx	-.001	6

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
37	MP4A	X	-4.948	1
38	MP4A	Z	-8.57	1
39	MP4A	Mx	.008	1
40	MP4A	X	-4.948	6
41	MP4A	Z	-8.57	6
42	MP4A	Mx	.008	6
43	M15	X	-5.102	1
44	M15	Z	-8.838	1
45	M15	Mx	0	1

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M3	Y	-500	%57.41

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M3	Y	-500	%27

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M3	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M3	Y	-250	%50

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-9.369	-9.369	0	%100
2	M3	Y	-6.392	-6.392	0	%100
3	MP5A	Y	-4.839	-4.839	0	%100
4	MP4A	Y	-4.839	-4.839	0	%100
5	MP3A	Y	-4.839	-4.839	0	%100
6	MP1A	Y	-4.839	-4.839	0	%100
7	MP2A	Y	-4.839	-4.839	0	%100
8	M15	Y	-4.839	-4.839	0	%100
9	M16	Y	-6.392	-6.392	0	%100
10	M17	Y	-6.392	-6.392	0	%100
11	M18	Y	-7.417	-7.417	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-14.051	-14.051	0	%100
5	MP5A	X	0	0	0	%100
6	MP5A	Z	-9.781	-9.781	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	MP4A	X	0	0	0	%100
8	MP4A	Z	-9.781	-9.781	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-9.781	-9.781	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	-9.781	-9.781	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-9.781	-9.781	0	%100
15	M15	X	0	0	0	%100
16	M15	Z	-8.913	-8.913	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	-9.015	-9.015	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	-14.051	-14.051	0	%100
21	M18	X	0	0	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.611	1.611	0	%100
2	M1	Z	-2.791	-2.791	0	%100
3	M3	X	5.269	5.269	0	%100
4	M3	Z	-9.126	-9.126	0	%100
5	MP5A	X	4.89	4.89	0	%100
6	MP5A	Z	-8.471	-8.471	0	%100
7	MP4A	X	4.89	4.89	0	%100
8	MP4A	Z	-8.471	-8.471	0	%100
9	MP3A	X	4.89	4.89	0	%100
10	MP3A	Z	-8.471	-8.471	0	%100
11	MP1A	X	4.89	4.89	0	%100
12	MP1A	Z	-8.471	-8.471	0	%100
13	MP2A	X	4.89	4.89	0	%100
14	MP2A	Z	-8.471	-8.471	0	%100
15	M15	X	4.457	4.457	0	%100
16	M15	Z	-7.719	-7.719	0	%100
17	M16	X	4.507	4.507	0	%100
18	M16	Z	-7.807	-7.807	0	%100
19	M17	X	5.269	5.269	0	%100
20	M17	Z	-9.126	-9.126	0	%100
21	M18	X	1.283	1.283	0	%100
22	M18	Z	-2.223	-2.223	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	8.372	8.372	0	%100
2	M1	Z	-4.833	-4.833	0	%100
3	M3	X	3.042	3.042	0	%100
4	M3	Z	-1.756	-1.756	0	%100
5	MP5A	X	8.471	8.471	0	%100
6	MP5A	Z	-4.89	-4.89	0	%100
7	MP4A	X	8.471	8.471	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
8	MP4A	Z	-4.89	-4.89	0	%100
9	MP3A	X	8.471	8.471	0	%100
10	MP3A	Z	-4.89	-4.89	0	%100
11	MP1A	X	8.471	8.471	0	%100
12	MP1A	Z	-4.89	-4.89	0	%100
13	MP2A	X	8.471	8.471	0	%100
14	MP2A	Z	-4.89	-4.89	0	%100
15	M15	X	7.719	7.719	0	%100
16	M15	Z	-4.457	-4.457	0	%100
17	M16	X	7.807	7.807	0	%100
18	M16	Z	-4.507	-4.507	0	%100
19	M17	X	3.042	3.042	0	%100
20	M17	Z	-1.756	-1.756	0	%100
21	M18	X	6.669	6.669	0	%100
22	M18	Z	-3.85	-3.85	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	12.889	12.889	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	MP5A	X	9.781	9.781	0	%100
6	MP5A	Z	0	0	0	%100
7	MP4A	X	9.781	9.781	0	%100
8	MP4A	Z	0	0	0	%100
9	MP3A	X	9.781	9.781	0	%100
10	MP3A	Z	0	0	0	%100
11	MP1A	X	9.781	9.781	0	%100
12	MP1A	Z	0	0	0	%100
13	MP2A	X	9.781	9.781	0	%100
14	MP2A	Z	0	0	0	%100
15	M15	X	8.913	8.913	0	%100
16	M15	Z	0	0	0	%100
17	M16	X	9.015	9.015	0	%100
18	M16	Z	0	0	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	0	0	0	%100
21	M18	X	10.267	10.267	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	8.372	8.372	0	%100
2	M1	Z	4.833	4.833	0	%100
3	M3	X	3.042	3.042	0	%100
4	M3	Z	1.756	1.756	0	%100
5	MP5A	X	8.471	8.471	0	%100
6	MP5A	Z	4.89	4.89	0	%100
7	MP4A	X	8.471	8.471	0	%100
8	MP4A	Z	4.89	4.89	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
9	MP3A	X	8.471	8.471	0	%100
10	MP3A	Z	4.89	4.89	0	%100
11	MP1A	X	8.471	8.471	0	%100
12	MP1A	Z	4.89	4.89	0	%100
13	MP2A	X	8.471	8.471	0	%100
14	MP2A	Z	4.89	4.89	0	%100
15	M15	X	7.719	7.719	0	%100
16	M15	Z	4.457	4.457	0	%100
17	M16	X	7.807	7.807	0	%100
18	M16	Z	4.507	4.507	0	%100
19	M17	X	3.042	3.042	0	%100
20	M17	Z	1.756	1.756	0	%100
21	M18	X	6.669	6.669	0	%100
22	M18	Z	3.85	3.85	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.611	1.611	0	%100
2	M1	Z	2.791	2.791	0	%100
3	M3	X	5.269	5.269	0	%100
4	M3	Z	9.126	9.126	0	%100
5	MP5A	X	4.89	4.89	0	%100
6	MP5A	Z	8.471	8.471	0	%100
7	MP4A	X	4.89	4.89	0	%100
8	MP4A	Z	8.471	8.471	0	%100
9	MP3A	X	4.89	4.89	0	%100
10	MP3A	Z	8.471	8.471	0	%100
11	MP1A	X	4.89	4.89	0	%100
12	MP1A	Z	8.471	8.471	0	%100
13	MP2A	X	4.89	4.89	0	%100
14	MP2A	Z	8.471	8.471	0	%100
15	M15	X	4.457	4.457	0	%100
16	M15	Z	7.719	7.719	0	%100
17	M16	X	4.507	4.507	0	%100
18	M16	Z	7.807	7.807	0	%100
19	M17	X	5.269	5.269	0	%100
20	M17	Z	9.126	9.126	0	%100
21	M18	X	1.283	1.283	0	%100
22	M18	Z	2.223	2.223	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	14.051	14.051	0	%100
5	MP5A	X	0	0	0	%100
6	MP5A	Z	9.781	9.781	0	%100
7	MP4A	X	0	0	0	%100
8	MP4A	Z	9.781	9.781	0	%100
9	MP3A	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
10	MP3A	Z	9.781	9.781	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	9.781	9.781	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	9.781	9.781	0	%100
15	M15	X	0	0	0	%100
16	M15	Z	8.913	8.913	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	9.015	9.015	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	14.051	14.051	0	%100
21	M18	X	0	0	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.611	-1.611	0	%100
2	M1	Z	2.791	2.791	0	%100
3	M3	X	-5.269	-5.269	0	%100
4	M3	Z	9.126	9.126	0	%100
5	MP5A	X	-4.89	-4.89	0	%100
6	MP5A	Z	8.471	8.471	0	%100
7	MP4A	X	-4.89	-4.89	0	%100
8	MP4A	Z	8.471	8.471	0	%100
9	MP3A	X	-4.89	-4.89	0	%100
10	MP3A	Z	8.471	8.471	0	%100
11	MP1A	X	-4.89	-4.89	0	%100
12	MP1A	Z	8.471	8.471	0	%100
13	MP2A	X	-4.89	-4.89	0	%100
14	MP2A	Z	8.471	8.471	0	%100
15	M15	X	-4.457	-4.457	0	%100
16	M15	Z	7.719	7.719	0	%100
17	M16	X	-4.507	-4.507	0	%100
18	M16	Z	7.807	7.807	0	%100
19	M17	X	-5.269	-5.269	0	%100
20	M17	Z	9.126	9.126	0	%100
21	M18	X	-1.283	-1.283	0	%100
22	M18	Z	2.223	2.223	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-8.372	-8.372	0	%100
2	M1	Z	4.833	4.833	0	%100
3	M3	X	-3.042	-3.042	0	%100
4	M3	Z	1.756	1.756	0	%100
5	MP5A	X	-8.471	-8.471	0	%100
6	MP5A	Z	4.89	4.89	0	%100
7	MP4A	X	-8.471	-8.471	0	%100
8	MP4A	Z	4.89	4.89	0	%100
9	MP3A	X	-8.471	-8.471	0	%100
10	MP3A	Z	4.89	4.89	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
11	MP1A	X	-8.471	-8.471	0	%100
12	MP1A	Z	4.89	4.89	0	%100
13	MP2A	X	-8.471	-8.471	0	%100
14	MP2A	Z	4.89	4.89	0	%100
15	M15	X	-7.719	-7.719	0	%100
16	M15	Z	4.457	4.457	0	%100
17	M16	X	-7.807	-7.807	0	%100
18	M16	Z	4.507	4.507	0	%100
19	M17	X	-3.042	-3.042	0	%100
20	M17	Z	1.756	1.756	0	%100
21	M18	X	-6.669	-6.669	0	%100
22	M18	Z	3.85	3.85	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-12.889	-12.889	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	MP5A	X	-9.781	-9.781	0	%100
6	MP5A	Z	0	0	0	%100
7	MP4A	X	-9.781	-9.781	0	%100
8	MP4A	Z	0	0	0	%100
9	MP3A	X	-9.781	-9.781	0	%100
10	MP3A	Z	0	0	0	%100
11	MP1A	X	-9.781	-9.781	0	%100
12	MP1A	Z	0	0	0	%100
13	MP2A	X	-9.781	-9.781	0	%100
14	MP2A	Z	0	0	0	%100
15	M15	X	-8.913	-8.913	0	%100
16	M15	Z	0	0	0	%100
17	M16	X	-9.015	-9.015	0	%100
18	M16	Z	0	0	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	0	0	0	%100
21	M18	X	-10.267	-10.267	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-8.372	-8.372	0	%100
2	M1	Z	-4.833	-4.833	0	%100
3	M3	X	-3.042	-3.042	0	%100
4	M3	Z	-1.756	-1.756	0	%100
5	MP5A	X	-8.471	-8.471	0	%100
6	MP5A	Z	-4.89	-4.89	0	%100
7	MP4A	X	-8.471	-8.471	0	%100
8	MP4A	Z	-4.89	-4.89	0	%100
9	MP3A	X	-8.471	-8.471	0	%100
10	MP3A	Z	-4.89	-4.89	0	%100
11	MP1A	X	-8.471	-8.471	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
12	MP1A	Z	-4.89	-4.89	0	%100
13	MP2A	X	-8.471	-8.471	0	%100
14	MP2A	Z	-4.89	-4.89	0	%100
15	M15	X	-7.719	-7.719	0	%100
16	M15	Z	-4.457	-4.457	0	%100
17	M16	X	-7.807	-7.807	0	%100
18	M16	Z	-4.507	-4.507	0	%100
19	M17	X	-3.042	-3.042	0	%100
20	M17	Z	-1.756	-1.756	0	%100
21	M18	X	-6.669	-6.669	0	%100
22	M18	Z	-3.85	-3.85	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.611	-1.611	0	%100
2	M1	Z	-2.791	-2.791	0	%100
3	M3	X	-5.269	-5.269	0	%100
4	M3	Z	-9.126	-9.126	0	%100
5	MP5A	X	-4.89	-4.89	0	%100
6	MP5A	Z	-8.471	-8.471	0	%100
7	MP4A	X	-4.89	-4.89	0	%100
8	MP4A	Z	-8.471	-8.471	0	%100
9	MP3A	X	-4.89	-4.89	0	%100
10	MP3A	Z	-8.471	-8.471	0	%100
11	MP1A	X	-4.89	-4.89	0	%100
12	MP1A	Z	-8.471	-8.471	0	%100
13	MP2A	X	-4.89	-4.89	0	%100
14	MP2A	Z	-8.471	-8.471	0	%100
15	M15	X	-4.457	-4.457	0	%100
16	M15	Z	-7.719	-7.719	0	%100
17	M16	X	-4.507	-4.507	0	%100
18	M16	Z	-7.807	-7.807	0	%100
19	M17	X	-5.269	-5.269	0	%100
20	M17	Z	-9.126	-9.126	0	%100
21	M18	X	-1.283	-1.283	0	%100
22	M18	Z	-2.223	-2.223	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-4.05	-4.05	0	%100
5	MP5A	X	0	0	0	%100
6	MP5A	Z	-3.259	-3.259	0	%100
7	MP4A	X	0	0	0	%100
8	MP4A	Z	-3.259	-3.259	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-3.259	-3.259	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	-3.259	-3.259	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-3.259	-3.259	0	%100
15	M15	X	0	0	0	%100
16	M15	Z	-3.001	-3.001	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	-2.644	-2.644	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	-4.05	-4.05	0	%100
21	M18	X	0	0	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.44	.44	0	%100
2	M1	Z	-.763	-.763	0	%100
3	M3	X	1.519	1.519	0	%100
4	M3	Z	-2.631	-2.631	0	%100
5	MP5A	X	1.63	1.63	0	%100
6	MP5A	Z	-2.823	-2.823	0	%100
7	MP4A	X	1.63	1.63	0	%100
8	MP4A	Z	-2.823	-2.823	0	%100
9	MP3A	X	1.63	1.63	0	%100
10	MP3A	Z	-2.823	-2.823	0	%100
11	MP1A	X	1.63	1.63	0	%100
12	MP1A	Z	-2.823	-2.823	0	%100
13	MP2A	X	1.63	1.63	0	%100
14	MP2A	Z	-2.823	-2.823	0	%100
15	M15	X	1.5	1.5	0	%100
16	M15	Z	-2.599	-2.599	0	%100
17	M16	X	1.322	1.322	0	%100
18	M16	Z	-2.29	-2.29	0	%100
19	M17	X	1.519	1.519	0	%100
20	M17	Z	-2.631	-2.631	0	%100
21	M18	X	.384	.384	0	%100
22	M18	Z	-.666	-.666	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.288	2.288	0	%100
2	M1	Z	-1.321	-1.321	0	%100
3	M3	X	.877	.877	0	%100
4	M3	Z	-.506	-.506	0	%100
5	MP5A	X	2.823	2.823	0	%100
6	MP5A	Z	-1.63	-1.63	0	%100
7	MP4A	X	2.823	2.823	0	%100
8	MP4A	Z	-1.63	-1.63	0	%100
9	MP3A	X	2.823	2.823	0	%100
10	MP3A	Z	-1.63	-1.63	0	%100
11	MP1A	X	2.823	2.823	0	%100
12	MP1A	Z	-1.63	-1.63	0	%100
13	MP2A	X	2.823	2.823	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
14	MP2A	Z	-1.63	-1.63	0	%100
15	M15	X	2.599	2.599	0	%100
16	M15	Z	-1.5	-1.5	0	%100
17	M16	X	2.29	2.29	0	%100
18	M16	Z	-1.322	-1.322	0	%100
19	M17	X	.877	.877	0	%100
20	M17	Z	-.506	-.506	0	%100
21	M18	X	1.998	1.998	0	%100
22	M18	Z	-1.153	-1.153	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	3.523	3.523	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	MP5A	X	3.259	3.259	0	%100
6	MP5A	Z	0	0	0	%100
7	MP4A	X	3.259	3.259	0	%100
8	MP4A	Z	0	0	0	%100
9	MP3A	X	3.259	3.259	0	%100
10	MP3A	Z	0	0	0	%100
11	MP1A	X	3.259	3.259	0	%100
12	MP1A	Z	0	0	0	%100
13	MP2A	X	3.259	3.259	0	%100
14	MP2A	Z	0	0	0	%100
15	M15	X	3.001	3.001	0	%100
16	M15	Z	0	0	0	%100
17	M16	X	2.644	2.644	0	%100
18	M16	Z	0	0	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	0	0	0	%100
21	M18	X	3.075	3.075	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	2.288	2.288	0	%100
2	M1	Z	1.321	1.321	0	%100
3	M3	X	.877	.877	0	%100
4	M3	Z	.506	.506	0	%100
5	MP5A	X	2.823	2.823	0	%100
6	MP5A	Z	1.63	1.63	0	%100
7	MP4A	X	2.823	2.823	0	%100
8	MP4A	Z	1.63	1.63	0	%100
9	MP3A	X	2.823	2.823	0	%100
10	MP3A	Z	1.63	1.63	0	%100
11	MP1A	X	2.823	2.823	0	%100
12	MP1A	Z	1.63	1.63	0	%100
13	MP2A	X	2.823	2.823	0	%100
14	MP2A	Z	1.63	1.63	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	M15	X	2.599	2.599	0	%100
16	M15	Z	1.5	1.5	0	%100
17	M16	X	2.29	2.29	0	%100
18	M16	Z	1.322	1.322	0	%100
19	M17	X	.877	.877	0	%100
20	M17	Z	.506	.506	0	%100
21	M18	X	1.998	1.998	0	%100
22	M18	Z	1.153	1.153	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.44	.44	0	%100
2	M1	Z	.763	.763	0	%100
3	M3	X	1.519	1.519	0	%100
4	M3	Z	2.631	2.631	0	%100
5	MP5A	X	1.63	1.63	0	%100
6	MP5A	Z	2.823	2.823	0	%100
7	MP4A	X	1.63	1.63	0	%100
8	MP4A	Z	2.823	2.823	0	%100
9	MP3A	X	1.63	1.63	0	%100
10	MP3A	Z	2.823	2.823	0	%100
11	MP1A	X	1.63	1.63	0	%100
12	MP1A	Z	2.823	2.823	0	%100
13	MP2A	X	1.63	1.63	0	%100
14	MP2A	Z	2.823	2.823	0	%100
15	M15	X	1.5	1.5	0	%100
16	M15	Z	2.599	2.599	0	%100
17	M16	X	1.322	1.322	0	%100
18	M16	Z	2.29	2.29	0	%100
19	M17	X	1.519	1.519	0	%100
20	M17	Z	2.631	2.631	0	%100
21	M18	X	.384	.384	0	%100
22	M18	Z	.666	.666	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	4.05	4.05	0	%100
5	MP5A	X	0	0	0	%100
6	MP5A	Z	3.259	3.259	0	%100
7	MP4A	X	0	0	0	%100
8	MP4A	Z	3.259	3.259	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	3.259	3.259	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	3.259	3.259	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	3.259	3.259	0	%100
15	M15	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
16	M15	Z	3.001	3.001	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	2.644	2.644	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	4.05	4.05	0	%100
21	M18	X	0	0	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.44	-.44	0	%100
2	M1	Z	.763	.763	0	%100
3	M3	X	-1.519	-1.519	0	%100
4	M3	Z	2.631	2.631	0	%100
5	MP5A	X	-1.63	-1.63	0	%100
6	MP5A	Z	2.823	2.823	0	%100
7	MP4A	X	-1.63	-1.63	0	%100
8	MP4A	Z	2.823	2.823	0	%100
9	MP3A	X	-1.63	-1.63	0	%100
10	MP3A	Z	2.823	2.823	0	%100
11	MP1A	X	-1.63	-1.63	0	%100
12	MP1A	Z	2.823	2.823	0	%100
13	MP2A	X	-1.63	-1.63	0	%100
14	MP2A	Z	2.823	2.823	0	%100
15	M15	X	-1.5	-1.5	0	%100
16	M15	Z	2.599	2.599	0	%100
17	M16	X	-1.322	-1.322	0	%100
18	M16	Z	2.29	2.29	0	%100
19	M17	X	-1.519	-1.519	0	%100
20	M17	Z	2.631	2.631	0	%100
21	M18	X	-.384	-.384	0	%100
22	M18	Z	.666	.666	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.288	-2.288	0	%100
2	M1	Z	1.321	1.321	0	%100
3	M3	X	-.877	-.877	0	%100
4	M3	Z	.506	.506	0	%100
5	MP5A	X	-2.823	-2.823	0	%100
6	MP5A	Z	1.63	1.63	0	%100
7	MP4A	X	-2.823	-2.823	0	%100
8	MP4A	Z	1.63	1.63	0	%100
9	MP3A	X	-2.823	-2.823	0	%100
10	MP3A	Z	1.63	1.63	0	%100
11	MP1A	X	-2.823	-2.823	0	%100
12	MP1A	Z	1.63	1.63	0	%100
13	MP2A	X	-2.823	-2.823	0	%100
14	MP2A	Z	1.63	1.63	0	%100
15	M15	X	-2.599	-2.599	0	%100
16	M15	Z	1.5	1.5	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
17	M16	X	-2.29	-2.29	0	%100
18	M16	Z	1.322	1.322	0	%100
19	M17	X	-.877	-.877	0	%100
20	M17	Z	.506	.506	0	%100
21	M18	X	-1.998	-1.998	0	%100
22	M18	Z	1.153	1.153	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-3.523	-3.523	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	MP5A	X	-3.259	-3.259	0	%100
6	MP5A	Z	0	0	0	%100
7	MP4A	X	-3.259	-3.259	0	%100
8	MP4A	Z	0	0	0	%100
9	MP3A	X	-3.259	-3.259	0	%100
10	MP3A	Z	0	0	0	%100
11	MP1A	X	-3.259	-3.259	0	%100
12	MP1A	Z	0	0	0	%100
13	MP2A	X	-3.259	-3.259	0	%100
14	MP2A	Z	0	0	0	%100
15	M15	X	-3.001	-3.001	0	%100
16	M15	Z	0	0	0	%100
17	M16	X	-2.644	-2.644	0	%100
18	M16	Z	0	0	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	0	0	0	%100
21	M18	X	-3.075	-3.075	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-2.288	-2.288	0	%100
2	M1	Z	-1.321	-1.321	0	%100
3	M3	X	-.877	-.877	0	%100
4	M3	Z	-.506	-.506	0	%100
5	MP5A	X	-2.823	-2.823	0	%100
6	MP5A	Z	-1.63	-1.63	0	%100
7	MP4A	X	-2.823	-2.823	0	%100
8	MP4A	Z	-1.63	-1.63	0	%100
9	MP3A	X	-2.823	-2.823	0	%100
10	MP3A	Z	-1.63	-1.63	0	%100
11	MP1A	X	-2.823	-2.823	0	%100
12	MP1A	Z	-1.63	-1.63	0	%100
13	MP2A	X	-2.823	-2.823	0	%100
14	MP2A	Z	-1.63	-1.63	0	%100
15	M15	X	-2.599	-2.599	0	%100
16	M15	Z	-1.5	-1.5	0	%100
17	M16	X	-2.29	-2.29	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
18	M16	Z	-1.322	-1.322	0	%100
19	M17	X	-.877	-.877	0	%100
20	M17	Z	-.506	-.506	0	%100
21	M18	X	-1.998	-1.998	0	%100
22	M18	Z	-1.153	-1.153	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.44	-.44	0	%100
2	M1	Z	-.763	-.763	0	%100
3	M3	X	-1.519	-1.519	0	%100
4	M3	Z	-2.631	-2.631	0	%100
5	MP5A	X	-1.63	-1.63	0	%100
6	MP5A	Z	-2.823	-2.823	0	%100
7	MP4A	X	-1.63	-1.63	0	%100
8	MP4A	Z	-2.823	-2.823	0	%100
9	MP3A	X	-1.63	-1.63	0	%100
10	MP3A	Z	-2.823	-2.823	0	%100
11	MP1A	X	-1.63	-1.63	0	%100
12	MP1A	Z	-2.823	-2.823	0	%100
13	MP2A	X	-1.63	-1.63	0	%100
14	MP2A	Z	-2.823	-2.823	0	%100
15	M15	X	-1.5	-1.5	0	%100
16	M15	Z	-2.599	-2.599	0	%100
17	M16	X	-1.322	-1.322	0	%100
18	M16	Z	-2.29	-2.29	0	%100
19	M17	X	-1.519	-1.519	0	%100
20	M17	Z	-2.631	-2.631	0	%100
21	M18	X	-.384	-.384	0	%100
22	M18	Z	-.666	-.666	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	-.864	-.864	0	%100
5	MP5A	X	0	0	0	%100
6	MP5A	Z	-.601	-.601	0	%100
7	MP4A	X	0	0	0	%100
8	MP4A	Z	-.601	-.601	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	-.601	-.601	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	-.601	-.601	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	-.601	-.601	0	%100
15	M15	X	0	0	0	%100
16	M15	Z	-.548	-.548	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	-.554	-.554	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
19	M17	X	0	0	0	%100
20	M17	Z	-.864	-.864	0	%100
21	M18	X	0	0	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.099	.099	0	%100
2	M1	Z	-.172	-.172	0	%100
3	M3	X	.324	.324	0	%100
4	M3	Z	-.561	-.561	0	%100
5	MP5A	X	.301	.301	0	%100
6	MP5A	Z	-.521	-.521	0	%100
7	MP4A	X	.301	.301	0	%100
8	MP4A	Z	-.521	-.521	0	%100
9	MP3A	X	.301	.301	0	%100
10	MP3A	Z	-.521	-.521	0	%100
11	MP1A	X	.301	.301	0	%100
12	MP1A	Z	-.521	-.521	0	%100
13	MP2A	X	.301	.301	0	%100
14	MP2A	Z	-.521	-.521	0	%100
15	M15	X	.274	.274	0	%100
16	M15	Z	-.475	-.475	0	%100
17	M16	X	.277	.277	0	%100
18	M16	Z	-.48	-.48	0	%100
19	M17	X	.324	.324	0	%100
20	M17	Z	-.561	-.561	0	%100
21	M18	X	.079	.079	0	%100
22	M18	Z	-.137	-.137	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.515	.515	0	%100
2	M1	Z	-.297	-.297	0	%100
3	M3	X	.187	.187	0	%100
4	M3	Z	-.108	-.108	0	%100
5	MP5A	X	.521	.521	0	%100
6	MP5A	Z	-.301	-.301	0	%100
7	MP4A	X	.521	.521	0	%100
8	MP4A	Z	-.301	-.301	0	%100
9	MP3A	X	.521	.521	0	%100
10	MP3A	Z	-.301	-.301	0	%100
11	MP1A	X	.521	.521	0	%100
12	MP1A	Z	-.301	-.301	0	%100
13	MP2A	X	.521	.521	0	%100
14	MP2A	Z	-.301	-.301	0	%100
15	M15	X	.475	.475	0	%100
16	M15	Z	-.274	-.274	0	%100
17	M16	X	.48	.48	0	%100
18	M16	Z	-.277	-.277	0	%100
19	M17	X	.187	.187	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
20	M17	Z	-.108	-.108	0	%100
21	M18	X	.41	.41	0	%100
22	M18	Z	-.237	-.237	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.792	.792	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	MP5A	X	.601	.601	0	%100
6	MP5A	Z	0	0	0	%100
7	MP4A	X	.601	.601	0	%100
8	MP4A	Z	0	0	0	%100
9	MP3A	X	.601	.601	0	%100
10	MP3A	Z	0	0	0	%100
11	MP1A	X	.601	.601	0	%100
12	MP1A	Z	0	0	0	%100
13	MP2A	X	.601	.601	0	%100
14	MP2A	Z	0	0	0	%100
15	M15	X	.548	.548	0	%100
16	M15	Z	0	0	0	%100
17	M16	X	.554	.554	0	%100
18	M16	Z	0	0	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	0	0	0	%100
21	M18	X	.631	.631	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.515	.515	0	%100
2	M1	Z	.297	.297	0	%100
3	M3	X	.187	.187	0	%100
4	M3	Z	.108	.108	0	%100
5	MP5A	X	.521	.521	0	%100
6	MP5A	Z	.301	.301	0	%100
7	MP4A	X	.521	.521	0	%100
8	MP4A	Z	.301	.301	0	%100
9	MP3A	X	.521	.521	0	%100
10	MP3A	Z	.301	.301	0	%100
11	MP1A	X	.521	.521	0	%100
12	MP1A	Z	.301	.301	0	%100
13	MP2A	X	.521	.521	0	%100
14	MP2A	Z	.301	.301	0	%100
15	M15	X	.475	.475	0	%100
16	M15	Z	.274	.274	0	%100
17	M16	X	.48	.48	0	%100
18	M16	Z	.277	.277	0	%100
19	M17	X	.187	.187	0	%100
20	M17	Z	.108	.108	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
21	M18	X	.41	.41	0	%100
22	M18	Z	.237	.237	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.099	.099	0	%100
2	M1	Z	.172	.172	0	%100
3	M3	X	.324	.324	0	%100
4	M3	Z	.561	.561	0	%100
5	MP5A	X	.301	.301	0	%100
6	MP5A	Z	.521	.521	0	%100
7	MP4A	X	.301	.301	0	%100
8	MP4A	Z	.521	.521	0	%100
9	MP3A	X	.301	.301	0	%100
10	MP3A	Z	.521	.521	0	%100
11	MP1A	X	.301	.301	0	%100
12	MP1A	Z	.521	.521	0	%100
13	MP2A	X	.301	.301	0	%100
14	MP2A	Z	.521	.521	0	%100
15	M15	X	.274	.274	0	%100
16	M15	Z	.475	.475	0	%100
17	M16	X	.277	.277	0	%100
18	M16	Z	.48	.48	0	%100
19	M17	X	.324	.324	0	%100
20	M17	Z	.561	.561	0	%100
21	M18	X	.079	.079	0	%100
22	M18	Z	.137	.137	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	.864	.864	0	%100
5	MP5A	X	0	0	0	%100
6	MP5A	Z	.601	.601	0	%100
7	MP4A	X	0	0	0	%100
8	MP4A	Z	.601	.601	0	%100
9	MP3A	X	0	0	0	%100
10	MP3A	Z	.601	.601	0	%100
11	MP1A	X	0	0	0	%100
12	MP1A	Z	.601	.601	0	%100
13	MP2A	X	0	0	0	%100
14	MP2A	Z	.601	.601	0	%100
15	M15	X	0	0	0	%100
16	M15	Z	.548	.548	0	%100
17	M16	X	0	0	0	%100
18	M16	Z	.554	.554	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	.864	.864	0	%100
21	M18	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.099	-.099	0	%100
2	M1	Z	.172	.172	0	%100
3	M3	X	-.324	-.324	0	%100
4	M3	Z	.561	.561	0	%100
5	MP5A	X	-.301	-.301	0	%100
6	MP5A	Z	.521	.521	0	%100
7	MP4A	X	-.301	-.301	0	%100
8	MP4A	Z	.521	.521	0	%100
9	MP3A	X	-.301	-.301	0	%100
10	MP3A	Z	.521	.521	0	%100
11	MP1A	X	-.301	-.301	0	%100
12	MP1A	Z	.521	.521	0	%100
13	MP2A	X	-.301	-.301	0	%100
14	MP2A	Z	.521	.521	0	%100
15	M15	X	-.274	-.274	0	%100
16	M15	Z	.475	.475	0	%100
17	M16	X	-.277	-.277	0	%100
18	M16	Z	.48	.48	0	%100
19	M17	X	-.324	-.324	0	%100
20	M17	Z	.561	.561	0	%100
21	M18	X	-.079	-.079	0	%100
22	M18	Z	.137	.137	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.515	-.515	0	%100
2	M1	Z	.297	.297	0	%100
3	M3	X	-.187	-.187	0	%100
4	M3	Z	.108	.108	0	%100
5	MP5A	X	-.521	-.521	0	%100
6	MP5A	Z	.301	.301	0	%100
7	MP4A	X	-.521	-.521	0	%100
8	MP4A	Z	.301	.301	0	%100
9	MP3A	X	-.521	-.521	0	%100
10	MP3A	Z	.301	.301	0	%100
11	MP1A	X	-.521	-.521	0	%100
12	MP1A	Z	.301	.301	0	%100
13	MP2A	X	-.521	-.521	0	%100
14	MP2A	Z	.301	.301	0	%100
15	M15	X	-.475	-.475	0	%100
16	M15	Z	.274	.274	0	%100
17	M16	X	-.48	-.48	0	%100
18	M16	Z	.277	.277	0	%100
19	M17	X	-.187	-.187	0	%100
20	M17	Z	.108	.108	0	%100
21	M18	X	-.41	-.41	0	%100
22	M18	Z	.237	.237	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.792	-.792	0	%100
2	M1	Z	0	0	0	%100
3	M3	X	0	0	0	%100
4	M3	Z	0	0	0	%100
5	MP5A	X	-.601	-.601	0	%100
6	MP5A	Z	0	0	0	%100
7	MP4A	X	-.601	-.601	0	%100
8	MP4A	Z	0	0	0	%100
9	MP3A	X	-.601	-.601	0	%100
10	MP3A	Z	0	0	0	%100
11	MP1A	X	-.601	-.601	0	%100
12	MP1A	Z	0	0	0	%100
13	MP2A	X	-.601	-.601	0	%100
14	MP2A	Z	0	0	0	%100
15	M15	X	-.548	-.548	0	%100
16	M15	Z	0	0	0	%100
17	M16	X	-.554	-.554	0	%100
18	M16	Z	0	0	0	%100
19	M17	X	0	0	0	%100
20	M17	Z	0	0	0	%100
21	M18	X	-.631	-.631	0	%100
22	M18	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.515	-.515	0	%100
2	M1	Z	-.297	-.297	0	%100
3	M3	X	-.187	-.187	0	%100
4	M3	Z	-.108	-.108	0	%100
5	MP5A	X	-.521	-.521	0	%100
6	MP5A	Z	-.301	-.301	0	%100
7	MP4A	X	-.521	-.521	0	%100
8	MP4A	Z	-.301	-.301	0	%100
9	MP3A	X	-.521	-.521	0	%100
10	MP3A	Z	-.301	-.301	0	%100
11	MP1A	X	-.521	-.521	0	%100
12	MP1A	Z	-.301	-.301	0	%100
13	MP2A	X	-.521	-.521	0	%100
14	MP2A	Z	-.301	-.301	0	%100
15	M15	X	-.475	-.475	0	%100
16	M15	Z	-.274	-.274	0	%100
17	M16	X	-.48	-.48	0	%100
18	M16	Z	-.277	-.277	0	%100
19	M17	X	-.187	-.187	0	%100
20	M17	Z	-.108	-.108	0	%100
21	M18	X	-.41	-.41	0	%100
22	M18	Z	-.237	-.237	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.099	-.099	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
2	M1	Z	-.172	-.172	0	%100
3	M3	X	-.324	-.324	0	%100
4	M3	Z	-.561	-.561	0	%100
5	MP5A	X	-.301	-.301	0	%100
6	MP5A	Z	-.521	-.521	0	%100
7	MP4A	X	-.301	-.301	0	%100
8	MP4A	Z	-.521	-.521	0	%100
9	MP3A	X	-.301	-.301	0	%100
10	MP3A	Z	-.521	-.521	0	%100
11	MP1A	X	-.301	-.301	0	%100
12	MP1A	Z	-.521	-.521	0	%100
13	MP2A	X	-.301	-.301	0	%100
14	MP2A	Z	-.521	-.521	0	%100
15	M15	X	-.274	-.274	0	%100
16	M15	Z	-.475	-.475	0	%100
17	M16	X	-.277	-.277	0	%100
18	M16	Z	-.48	-.48	0	%100
19	M17	X	-.324	-.324	0	%100
20	M17	Z	-.561	-.561	0	%100
21	M18	X	-.079	-.079	0	%100
22	M18	Z	-.137	-.137	0	%100

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	990.392	11	1419.715	19	1467.652	1	-1.162	1	2.646	11	.685	6
2		min	-1386.013	5	567.992	1	-916.857	7	-3.686	19	-3.828	5	-1.783	12
3	N34	max	883.886	8	736.205	13	933.866	1	-.766	8	3.735	12	.231	6
4		min	-507.316	2	258.901	7	-1484.648	7	-1.672	14	-2.577	6	-.74	12
5	Totals:	max	1606.109	9	2118.637	18	2401.517	1						
6		min	-1606.111	3	1011.665	12	-2401.505	7						

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	M1	HSS4X4X4	.357	0	5	.152	0	z	12	134360.6...	139518	16.181	16.181	1....	H1-1b
2	M3	PIPE_3.0	.437	6.75	1	.160	6.75		1	24533.227	65205	5.749	5.749	1....	H1-1b
3	MP5A	PIPE_2.0	.304	2	49	.045	2.917		18	14916.096	32130	1.872	1.872	1....	H1-1b
4	MP4A	PIPE_2.0	.422	5	18	.114	5		5	14916.096	32130	1.872	1.872	1....	H1-1b
5	MP3A	PIPE_2.0	.278	5.469	24	.130	2.552		6	17855.085	32130	1.872	1.872	2....	H1-1b
6	MP1A	PIPE_2.0	.104	5	24	.024	5		23	20866.733	32130	1.872	1.872	2....	H1-1b
7	MP2A	PIPE_2.0	.183	5	12	.046	2		18	20866.733	32130	1.872	1.872	2....	H1-1b
8	M15	PIPE_2.0	.200	3	6	.020	3		6	26521.424	32130	1.872	1.872	1....	H1-1b
9	M16	PIPE_3.0	.000	.75	10	.000	.75		10	64424.35	65205	5.749	5.749	1....	H1-1b
10	M17	PIPE_3.0	.687	6.75	7	.170	6.75		1	24533.227	65205	5.749	5.749	1....	H1-1b

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
11	M18	HSS3X3X4	.535	0	12	.121	0	y	48	93583.192	101016	8.556	8.556	2....	H1-1b

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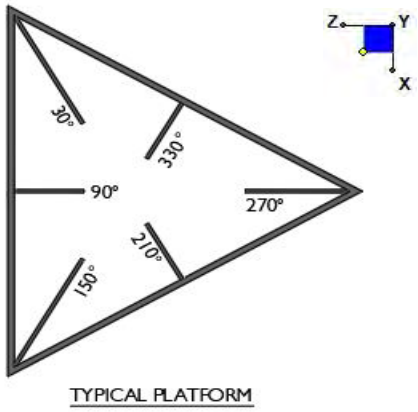
I. Mount-to-Tower Connection Check - Existing

RISA Model Data

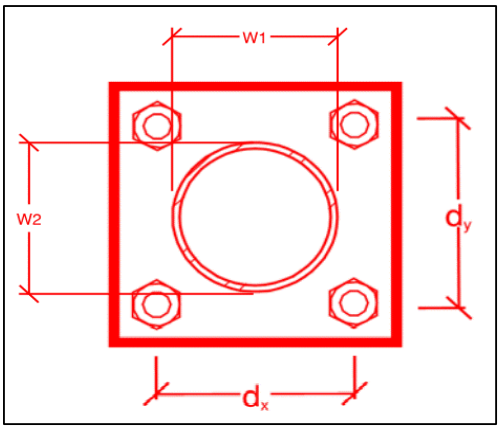
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N1	90



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):	17.4
Required Shear Strength (kips):	8.2
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**21.0%***
Shear Capacity Overall:	**16.4%**



**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):	0.625
Weld Size (1/16 in):	3
Phi*Rn (kip/in):	4.18
Required Weld Strength (kip/in):	2.45
Plate Bending Capacity:	**46.2%**
Weld Capacity:	**58.7%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	4.4
$Phi*Mn_{xx}$ *(kip-in)* :	25.3
Mu_{yy} *(kip-in)* :	7.3
$Phi*Mn_{yy}$ *(kip-in)* :	25.3

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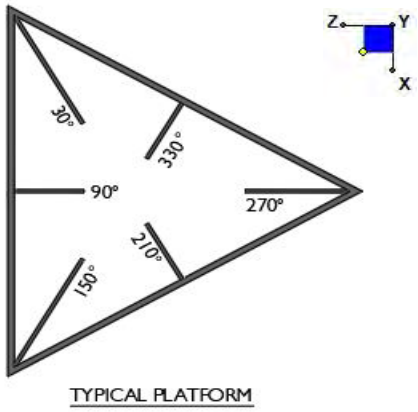
I. Mount-to-Tower Connection Check - Proposed

RISA Model Data

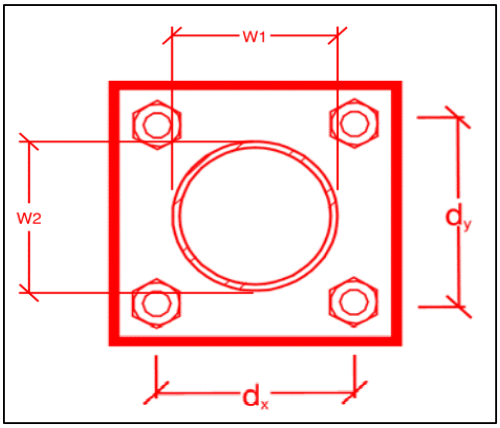
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N34	90



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):	15.9
Required Shear Strength (kips):	3.7
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**19.2%***
Shear Capacity Overall:	**7.4%**



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

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:	Rect
Plate Width (in):	8.25
Plate Height (in):	8.25
W1 (in):	4
W2 (in):	4
Fy (ksi, plate):	36
t_{Plate} (in):	0.75
Weld Size (1/16 in):	5
Phi*Rn (kip/in):	6.96
Required Weld Strength (kip/in):	2.21
Plate Bending Capacity:	**25.0%**
Weld Capacity:	**31.8%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	1.7
Phi*Mn_{xx} *(kip-in)* :	37.6
Mu_{yy} *(kip-in)* :	7.7
Phi*Mn_{yy} *(kip-in)* :	37.6

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

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

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

Base Requirements:

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

Photo Requirements:

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

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

Material Certification:

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

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

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

Certifying Individual: Company _____

Name _____

Signature _____

Antenna & equipment placement and Geometry Confirmation:

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

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

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

Certifying Individual: Company _____

Name _____

Signature _____

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

Issue:

1.Contractor shall verify all dimensions and member sizes shown in the mount geometry verification requirements section of the mount analysis report. Contact EOR if these documents are not available to the general contractor. 2. If present, contractor shall inspect climbing facilities and ensure that the safety climb is in good condition. Contractor shall install safety climb wire rope guide (Part #: Site Pro 1 - 120-203/317 or EOR approved equal) in locations where the wire rope is rubbing against mount to tower attachments. Contractor shall provide photos of safety climb wire rope guide installation.

Response:

Schedule A – Photo & Document File Structure

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

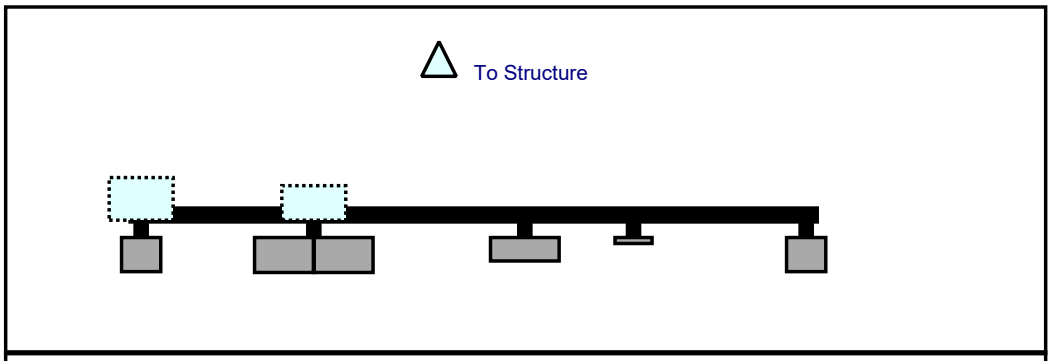
Structure: 467297-VZW - BRANFORD 2 CT

Sector: **A** 9/1/2021

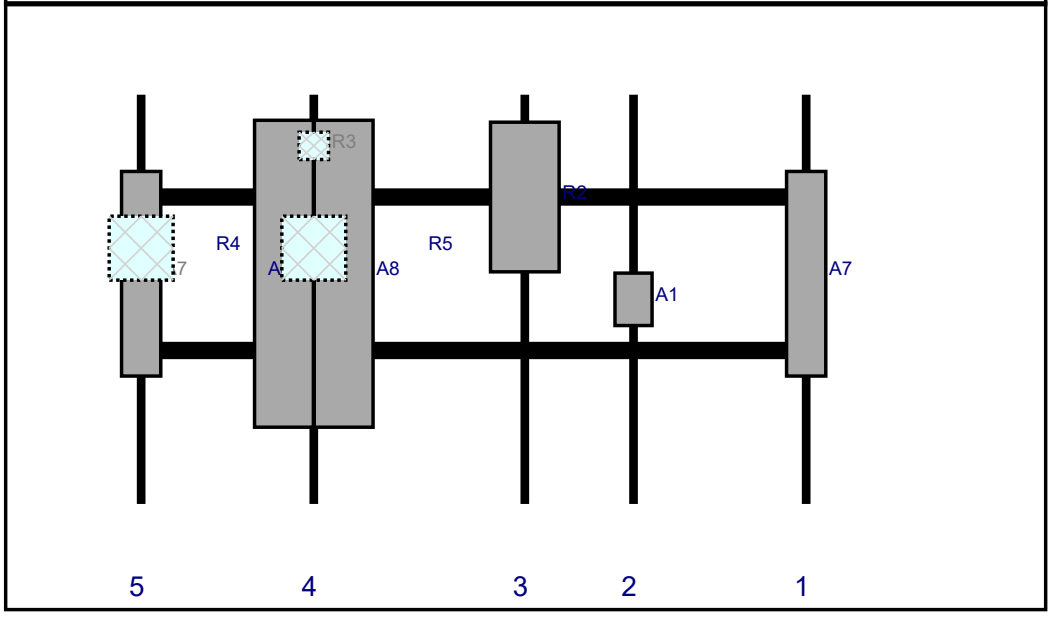
Structure Type: Monopole 10099130

Mount Elev: 112.00 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
A7	APL868013	48	9.2	159	1	a	Front	42	0	Retained	
A1	XXDWMM-12.5-65-8T	12.3	8.7	118.5	2	a	Front	48	0	Added	
R2	MT6407-77A	35.1	16.1	93	3	a	Front	24	0	Added	
A8	JAHH-65B-R3B	72	13.8	43.5	4	a	Front	42	7	Retained	
A8	JAHH-65B-R3B	72	13.8	43.5	4	b	Front	42	-7	Retained	
R3	CBC78-DS-43-2X	6.4	6.9	43.5	4	a	Behind	12	0	Added	
R5	B5/B13 RRH-BR04C	15	15	43.5	4	a	Behind	36	0	Added	
A7	APL868013	48	9.2	3	5	a	Front	42	0	Retained	
R4	B2/B66A RRH-BR049	15	15	3	5	a	Behind	36	0	Added	

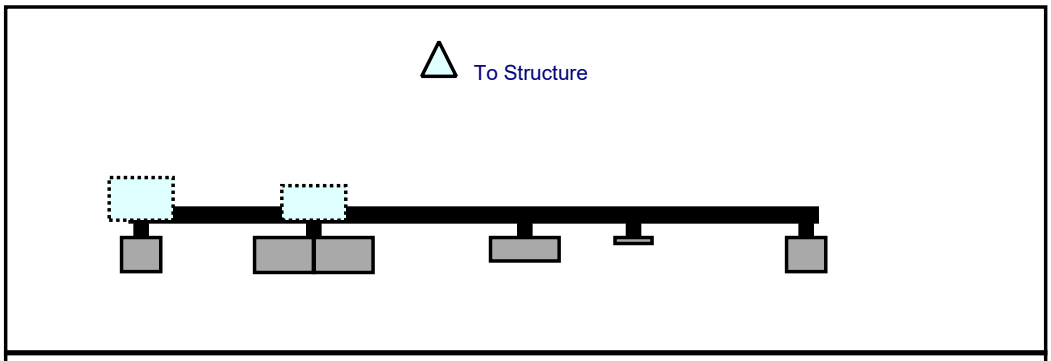
Structure: 467297-VZW - BRANFORD 2 CT

Sector: **B** 9/1/2021

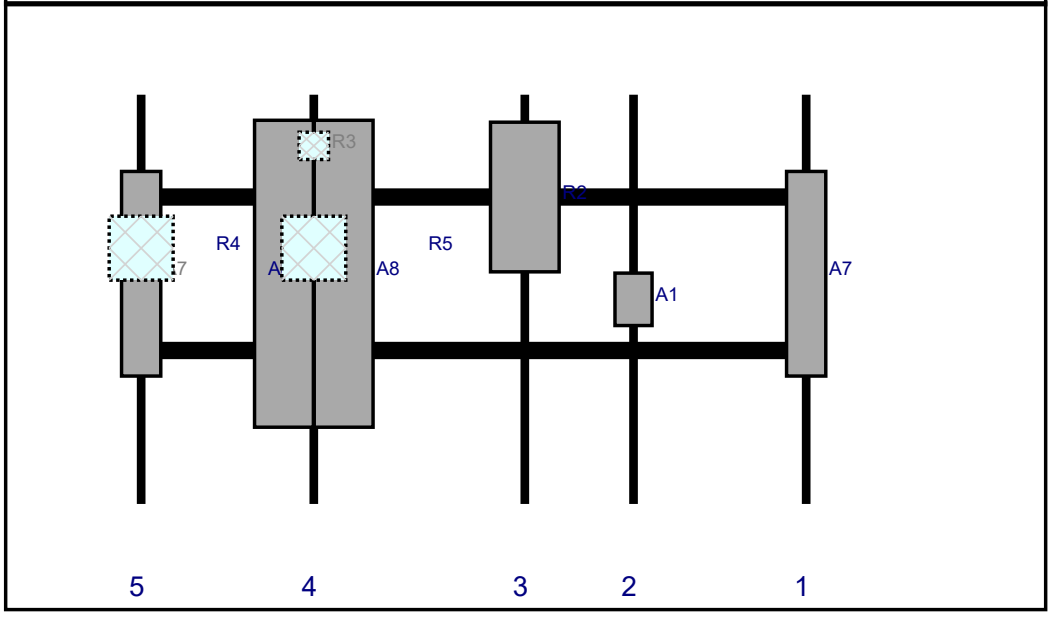
Structure Type: Monopole 10099130

Mount Elev: 112.00 Page: 2

Plan View

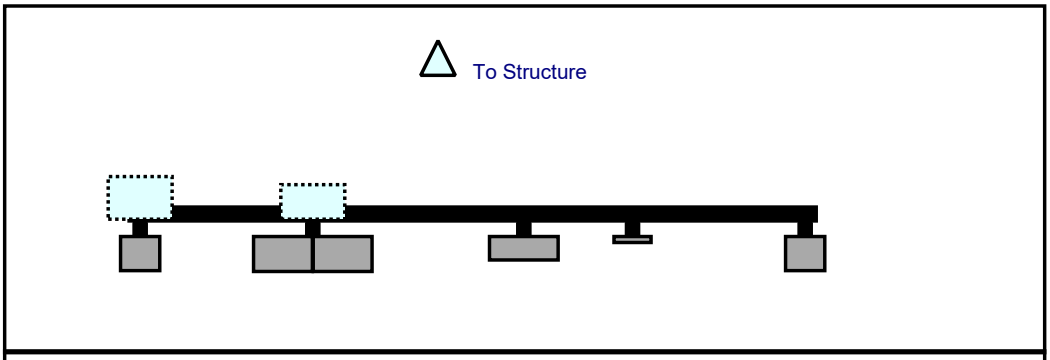


Front View
Looking at Structure

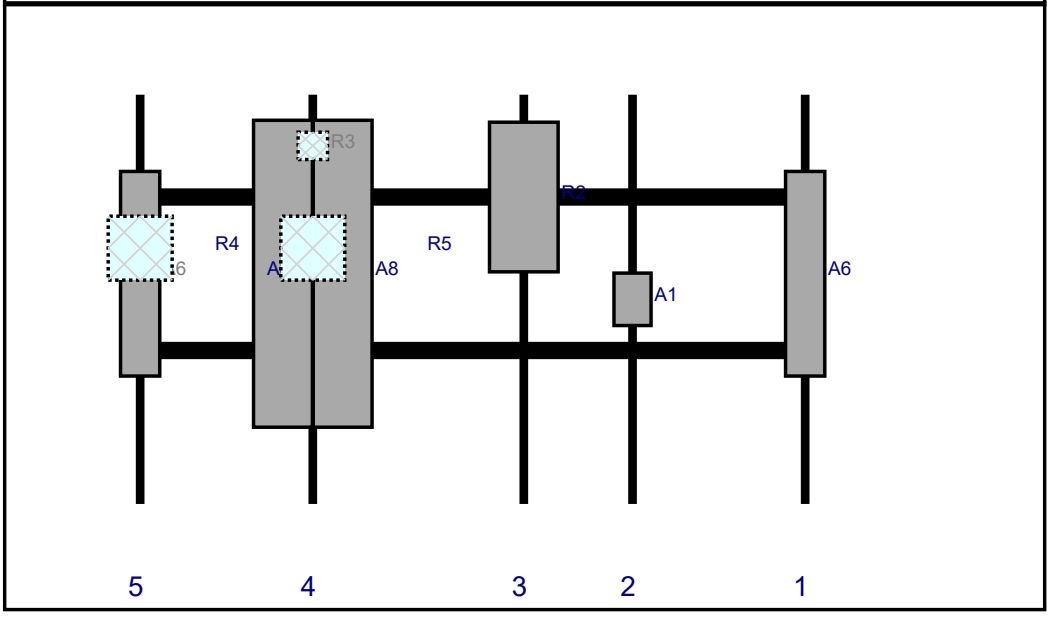


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	93	3	a	Front	24	0	Added	
A7	APL868013	48	9.2	159	1	a	Front	42	0	Retained	
A1	XXDWMM-12.5-65-8T	12.3	8.7	118.5	2	a	Front	48	0	Added	
A8	JAHH-65B-R3B	72	13.8	43.5	4	a	Front	42	7	Retained	
A8	JAHH-65B-R3B	72	13.8	43.5	4	b	Front	42	-7	Retained	
R3	CBC78-DS-43-2X	6.4	6.9	43.5	4	a	Behind	12	0	Added	
R5	B5/B13 RRH-BR04C	15	15	43.5	4	a	Behind	36	0	Added	
A7	APL868013	48	9.2	3	5	a	Front	42	0	Retained	
R4	B2/B66A RRH-BR049	15	15	3	5	a	Behind	36	0	Added	

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
A6	APL866513	48	9.2	159	1	a	Front	42	0	Retained	
A1	XXDWMM-12.5-65-8T	12.3	8.7	118.5	2	a	Front	48	0	Added	
R2	MT6407-77A	35.1	16.1	93	3	a	Front	24	0	Added	
A8	JAHH-65B-R3B	72	13.8	43.5	4	a	Front	42	7	Retained	
A8	JAHH-65B-R3B	72	13.8	43.5	4	b	Front	42	-7	Retained	
R3	CBC78-DS-43-2X	6.4	6.9	43.5	4	a	Behind	12	0	Added	
R5	B5/B13 RRH-BR04C	15	15	43.5	4	a	Behind	36	0	Added	
A6	APL866513	48	9.2	3	5	a	Front	42	0	Retained	
R4	B2/B66A RRH-BR049	15	15	3	5	a	Behind	36	0	Added	

Maser Consulting Connecticut

Subject	TIA-222-H Usage	
Site Information	Site ID:	
Site Information	Site ID:	467297-VZW / BRANFORD 2 CT
	Site Name:	BRANFORD 2 CT
	Carrier Name:	Verizon Wireless
	Address:	405 Brushy Plain Rd. Branford, Connecticut 06405 New Haven County
	Latitude:	41.31679167°
	Longitude:	-72.81969167°
Structure Information	Tower Type:	150-Ft Monopole
	Mount Type:	13.50-Ft T-Arm

To Whom It May Concern,

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

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

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

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

Sincerely,

Peter Albano, PE
Project Manager

Site Name: ***BRANFORD 2 CT***

Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW 700	751	2	648	1297	113	0.0037	0.5007	0.73%
VZW CDMA	877.26	2	442	883	113	0.0025	0.5848	0.43%
VZW Cellular	872.5	4	372	1488	113	0.0042	0.5817	0.72%
VZW PCS	1975	4	1617	6467	113	0.0182	1.0000	1.82%
VZW AWS	2120	4	1618	6474	113	0.0182	1.0000	1.82%
VZW CBRS	3560.3	4	42	168	112.5	0.0005	1.0000	0.05%
VZW CBAND	3730.08	4	6531	26125	114.5	0.0717	1.0000	7.17%
Total Percentage of Maximum Permissible Exposure								12.73%

*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 Branford

Geographic Information System (GIS)

Date Printed: 11/17/2021

MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Branford and its mapping contractors assume no legal responsibility for the information contained herein.

0 100 Feet

N W E S

405 BRUSHY PLAIN RD

Location	405 BRUSHY PLAIN RD	**Mblu**	D02/000 003/ 00001/ /
Acct#	004475	**Owner**	JACONETTE EDWARD F JR &
Assessment	$379,000	**Appraisal**	$541,400
PID	695	**Building Count**	3

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$179,200	$362,200	$541,400
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$125,500	$253,500	$379,000

Owner of Record

Owner	JACONETTE EDWARD F JR &
Co-Owner	JACONETTE KRISTIN L (SUR)
Address	405 BRUSHY PLAIN RD BRANFORD, CT 06405

Sale Price	$0
Certificate	
Book & Page	0788/1038
Sale Date	11/18/2002
Instrument	25

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
JACONETTE EDWARD F JR &	$0		0788/1038	25	11/18/2002
ADAMS MARSHA	$0		442/ 252		12/22/1987
ADAMS MARSHA	$0				12/22/1987

Building Information

Building 1 : Section 1

Year Built:	1992
Living Area:	550
Replacement Cost:	$27,335
Building Percent Good:	80

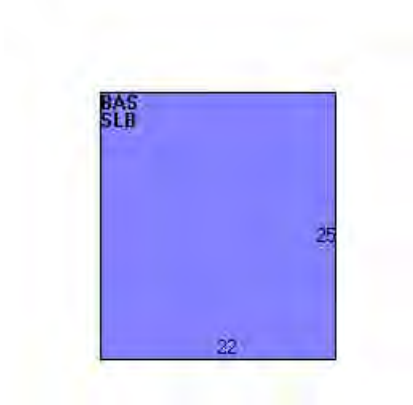
Replacement Cost
Less Depreciation: $21,900

Building Attributes	
Field	**Description**
STYLE	Warehouse
MODEL	Ind/Comm
Grade	C
Stories:	1
Occupancy	1
Exterior Wall 1	Precast Panel
Exterior Wall 2	
Roof Structure	Shed
Roof Cover	T&G/Rubber
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Hot Air-no Duc
AC Type	Heat Pump
Bldg Use	TEL REL TW MDL96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	0431
Heat/AC	HEAT/AC PKGS
Frame Type	MASONRY
Baths/Plumbing	NONE
Ceiling/Wall	CEILING ONLY
Rooms/Prtns	AVERAGE
Wall Height	9
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/BranfordCTPhotos//\00\01\45/84.jpg)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/695_695.jpg)

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	550	550
SLB	Slab	550	0
		1,100	550

Building 2 : Section 1

Year Built: 2001
Living Area: 432
Replacement Cost: $21,470
Building Percent Good: 86
Replacement Cost
Less Depreciation: $18,500

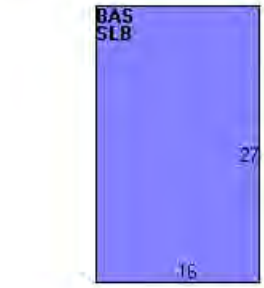
Building Attributes : Bldg 2 of 3	
Field	**Description**
STYLE	Warehouse

MODEL	Ind/Comm
Grade	C
Stories:	1
Occupancy	4
Exterior Wall 1	Precast Panel
Exterior Wall 2	
Roof Structure	Shed
Roof Cover	T&G/Rubber
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Electric
Heating Type	Hot Air-no Duc
AC Type	Heat Pump
Bldg Use	TEL REL TW MDL96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	0431
Heat/AC	HEAT/AC PKGS
Frame Type	MASONRY
Baths/Plumbing	NONE
Ceiling/Wall	CEILING ONLY
Rooms/Prtns	AVERAGE
Wall Height	9
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/BranfordCTPhotos//\00\01\45/85.jpg)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/695_13769.jp

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	432	432
SLB	Slab	432	0
		864	432

Building 3 : Section 1

Year Built: 1975
Living Area: 1,742
Replacement Cost: $195,337
Building Percent Good: 66
Replacement Cost Less Depreciation: $128,900

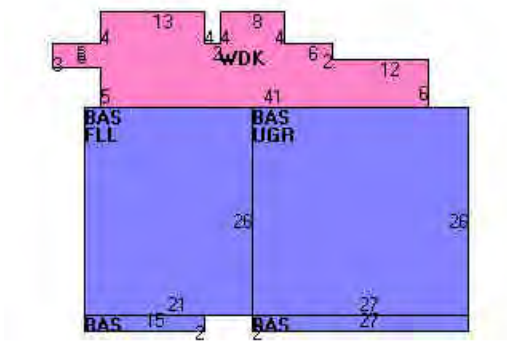
Building Attributes : Bldg 3 of 3	
Field	Description
Style	Raised Ranch
Model	Residential
Grade:	C +

Stories:	1 Story
Occupancy	1
Exterior Wall 1	Wood Shingle
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asphalt
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Carpet
Interior Flr 2	
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	Central
Total Bedrooms:	3 Bedrooms
Total Bthrms:	2
Total Half Baths:	0
Total Xtra Fixtrs:	
Total Rooms:	7 Rooms
Bath Style:	Average
Kitchen Style:	Average
Cottage Cmplx	
Cottage Adj	

Building Photo

(http://images.vgsi.com/photos/BranfordCTPhotos//\00\01\05/61.jpg)

Building Layout



(http://images.vgsi.com/photos/BranfordCTPhotos//Sketches/695_13770.jp

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	1,332	1,332
FLL	Finished Lower Level	546	410
UGR	Garage Under	702	0
WDK	Deck, Wood	406	0
		2,986	1,742

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
FPL2	FIREPLACE 1.5	1 UNITS	$3,300	3
FPO	EXTRA FPL OPEN	1 UNITS	$800	3
GEN2	GEN 15-30KW PRMT BKP	1 UNITS	$4,000	1

Land

Land Use

Use Code	0431
Description	TEL REL TW MDL96
Zone	R-4
Neighborhood	0050
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	4.5
Frontage	
Depth	
Assessed Value	$253,500
Appraised Value	$362,200

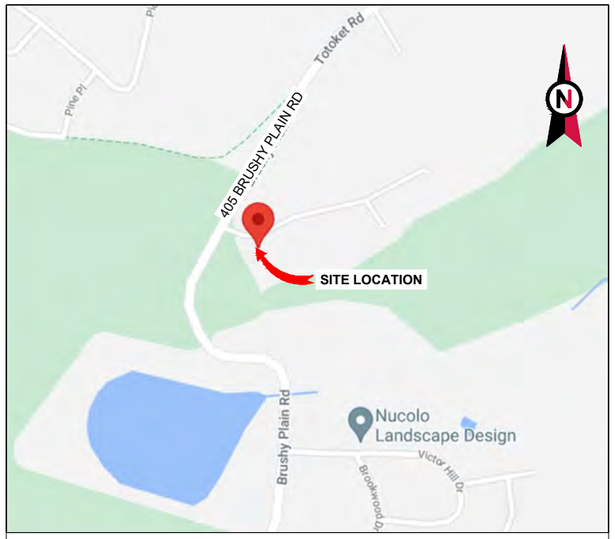
Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FN3	FENCE-6' CHAIN			260 L.F.	$1,300	1
PAV2	PAVING-CONC			137 S.F.	$500	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$179,200	$362,200	$541,400
2019	$179,200	$362,200	$541,400
2018	$173,100	$362,200	$535,300

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$125,500	$253,500	$379,000
2019	$125,500	$253,500	$379,000
2018	$121,200	$253,500	$374,700



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: BRANFORD CT 6
ATC SITE NUMBER: 302484
VERIZON SITE NAME: BRANFORD 2 CT
VERIZON SITE NUMBER:467297
SITE ADDRESS: 405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

APPROVALS

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

	APPROVAL:	SIGNATURE:	DATE:
	PROJECT MANAGER:		
	SITE ACQUISITION:		
	CONSTRUCTION MANAGER:		
	SITE OWNER:		
VERIZON	RF ENGINEER		
VERIZON	DEVELOPMENT MANAGER		
VERIZON	CONSTRUCTION MANAGER		
VERIZON	OPS MANAGER		
VERIZON	PROJECT MANAGER		

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: EVERSOURCE
PHONE: (877) 659-6326

TELEPHONE COMPANY: FRONTIER COMMUNICATIONS
PHONE: (899) 376-6843

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

PROJECT SUMMARY

SITE ADDRESS:

405 BRUSHY PLAIN RD

BRANFORD, CT 06405-2308

COUNTY: NEW HAVEN

GEOGRAPHIC COORDINATES:

LATITUDE: 41.31680556

LONGITUDE: -72.8197

GROUND ELEVATION: 239' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

VERIZON WIRELESS

ENGINEER:

HUDSON DESIGN GROUP, LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845

PROPERTY OWNER:

KRISTEN JACONETTE
405 BRUSHY PLAIN RD
BRANFORD, CT 06405

PROJECT DESCRIPTION

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

REMOVE (12) RRH(s), (2) 1-1/4" HYBRID CABLE(s)

INSTALL MOUNT MODIFICATION(s), (6) ANTENNA(s), (12) RRH(s), (3) DIPLEXER(s)

EXISTING (12) ANTENNA(s), (2) OVP(s), (6) 1-1/4" COAX CABLE(s) AND (2) 1-1/4" HYBRID CABLE(s) TO REMAIN

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 HARTFORD TAKE I-91 SOUTH TO I 95 NORTH. TAKE EXIT 24, TURN LEFT AT END OF RAMP. FOLLOW FOR ABOUT 2 MILES. ROAD WILL WIND UP A HILL AND THE TOWER WILL BE SEEN ON THE RIGHT. TURN RIGHT ONTO HILLTOP ROAD. COMPOUND IS AT CORNER OF BRUSHY PLAIN RD. AND HILLTOP RD. ACCESS SITE FROM HILLTOP ROAD.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	11/05/21	TR
G-002	GENERAL NOTES	0	11/05/21	TR
C-101	DETAILED SITE PLAN	0	11/05/21	TR
C-201	TOWER ELEVATION	0	11/05/21	TR
C-401	ANTENNA INFORMATION & SCHEDULE	0	11/05/21	TR
C-501	CONSTRUCTION DETAILS	0	11/05/21	TR
E-501	GROUNDING DETAILS	0	11/05/21	TR
R-601	SUPPLEMENTAL			
	MOUNT MODIFICATIONS			

AMERICAN TOWER®

HUDSON Design Group LLC

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N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

REV.	DESCRIPTION	BY	DATE
A	PRELIM	EB	06/30/21
0	FINALS	TR	11/05/21

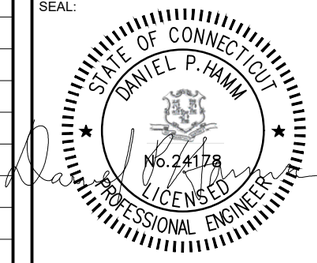
ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6

VERIZON SITE NAME:
BRANFORD 2 CT

SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

SEAL:



verizon

DATE DRAWN:	06/30/21
ATC JOB NO:	13685617_D1
CUSTOMER ID:	BRANFORD 2 CT
CUSTOMER #:	467297

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.

AMERICAN TOWER®

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

REV.	DESCRIPTION	BY	DATE
A	PRELIM	EB	06/30/21
0	FINALS	TR	11/05/21

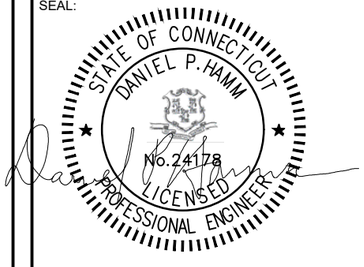
ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6

VERIZON SITE NAME:
BRANFORD 2 CT

SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

SEAL:



verizon

DATE DRAWN:	06/30/21
ATC JOB NO:	13685617_D1
CUSTOMER ID:	BRANFORD 2 CT
CUSTOMER #:	467297

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

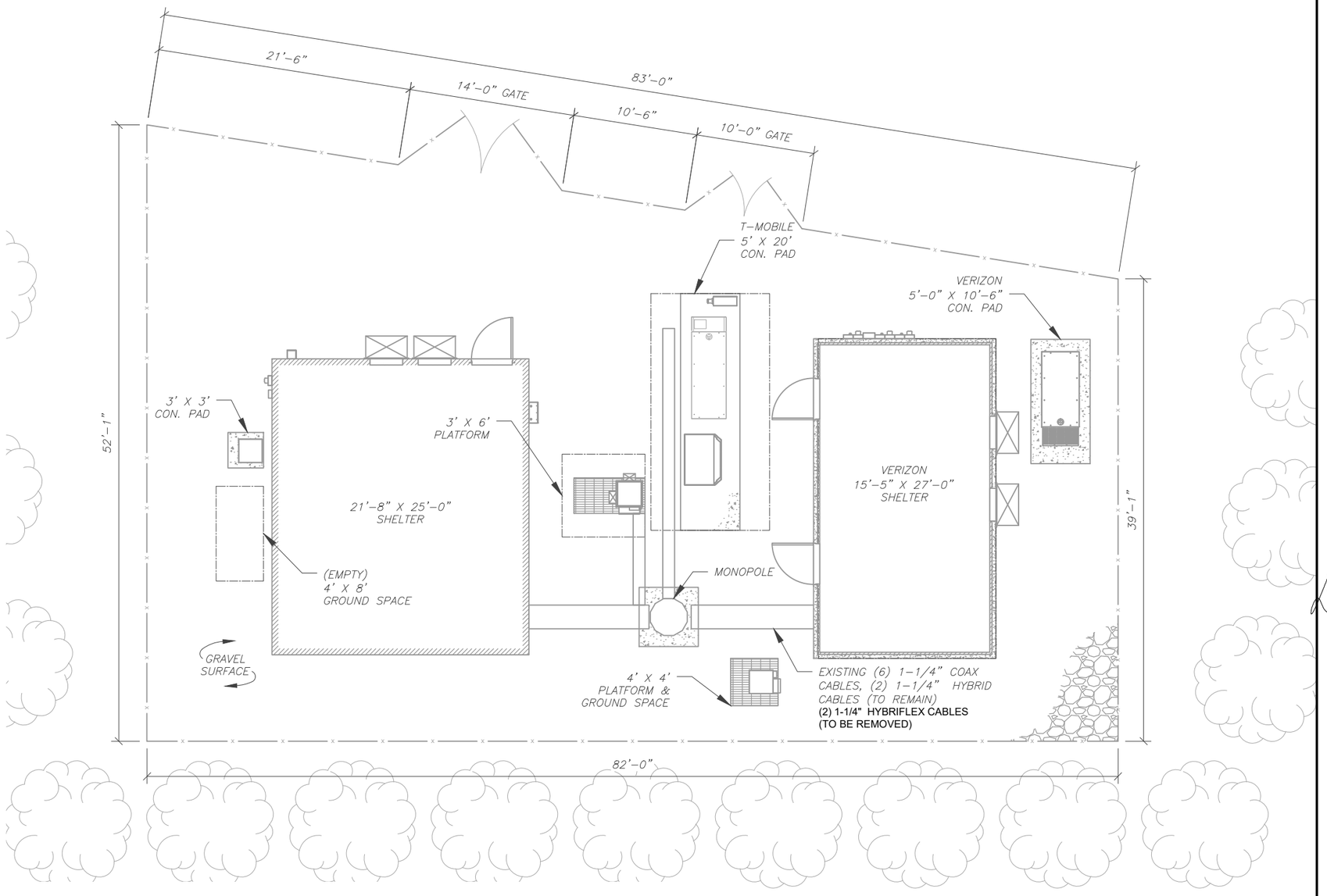
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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



1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

N

AMERICAN TOWER®

HUDSON Design Group LLC

45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5586

REV.	DESCRIPTION	BY	DATE
A	PRELIM	EB	06/30/21
0	FINALS	TR	11/05/21

ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6

VERIZON SITE NAME:
BRANFORD 2 CT

SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

SEAL:

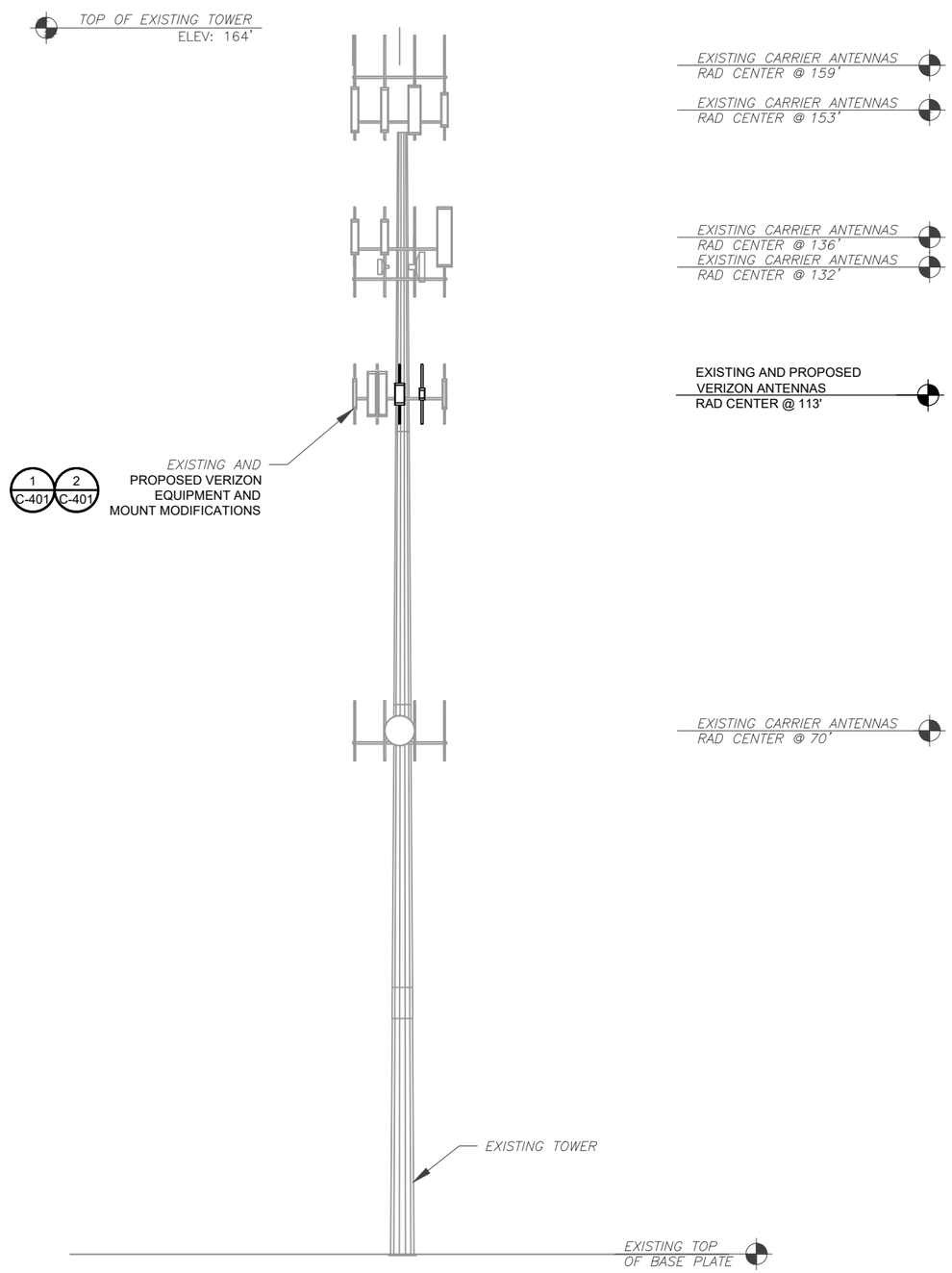
STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED
PROFESSIONAL ENGINEER

verizon

DATE DRAWN:	06/30/21
ATC JOB NO:	13685617_D1
CUSTOMER ID:	BRANFORD 2 CT
CUSTOMER #:	467297

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 09/03/21, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

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

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A	PRELIM	EB	06/30/21
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ATC SITE NUMBER:
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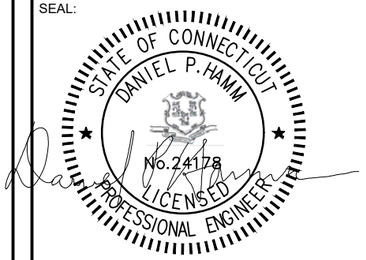
SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

SEAL:

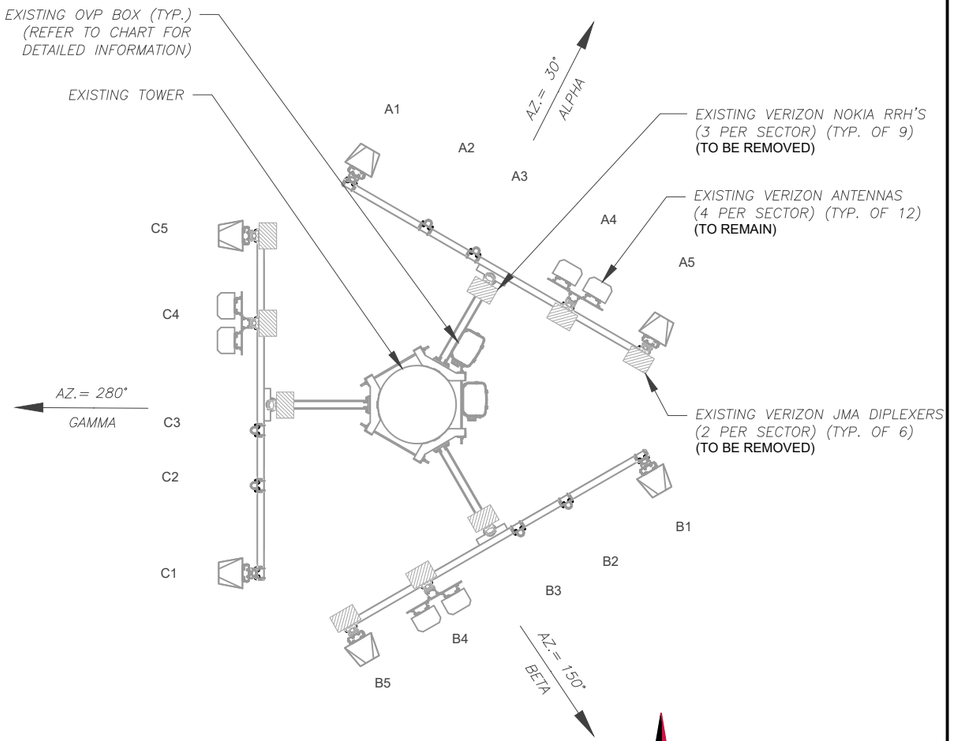


verizon

DATE DRAWN:	06/30/21
ATC JOB NO:	13685617_D1
CUSTOMER ID:	BRANFORD 2 CT
CUSTOMER #:	467297

TOWER ELEVATION

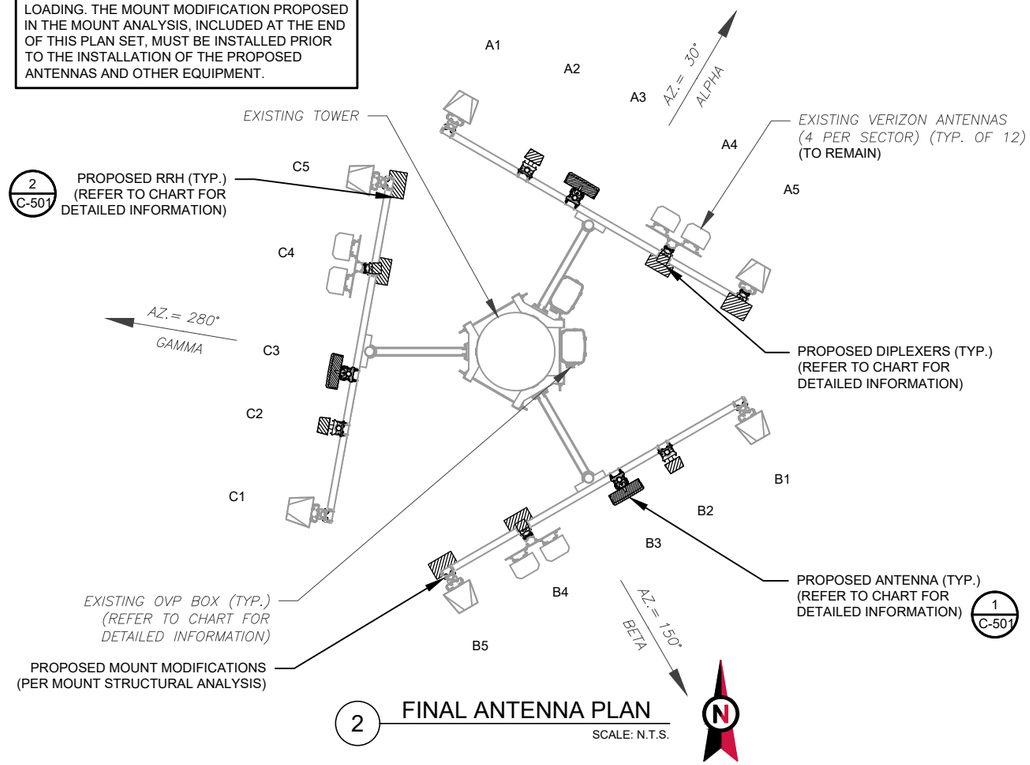
SHEET NUMBER:	REVISION:
C-201	0



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

PER MOUNT ANALYSIS COMPLETED BY MASER CONSULTING CONNECTICUT, DATED 09/03/21, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.

CONTRACTOR SHALL RE-ORIENT ANTENNA MOUNT(s) AS NECESSARY TO ACHIEVE PROPOSED ANTENNA AZIMUTHS



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

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY					NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	113'	30°	A1	APL866513	CDMA	0/0	RMN	–	–
			A2	–	–	–	–	–	–
			A3	–	–	–	–	AHCA AIRSCALE RRH 4T4R B5 160W	RMV
			A4	JAHH-65B-R3B JAHH-65B-R3B	LTE LTE	0/0 0/0	RMN RMN	UHBA B13 RRH 4X30 UHFA B25 RRH 4X30	RMV RMV
			A5	APL868013	CDMA	0/0	RMN	UHIE B66A RRH 4X45	RMV
BETA	113'	150°	B1	APL866513	CDMA	0/0	RMN	–	–
			B2	–	–	–	–	–	–
			B3	–	–	–	–	AHCA AIRSCALE RRH 4T4R B5 160W	RMV
			B4	JAHH-65B-R3B JAHH-65B-R3B	LTE LTE	0/0 0/0	RMN RMN	UHBA B13 RRH 4X30 UHFA B25 RRH 4X30	RMV RMV
			B5	APL868013	CDMA	0/0	RMN	UHIE B66A RRH 4X45	RMV
GAMMA	113'	280°	C1	APL866513	CDMA	0/0	RMN	–	–
			C2	–	–	–	–	–	–
			C3	–	–	–	–	AHCA AIRSCALE RRH 4T4R B5 160W	RMV
			C4	JAHH-65B-R3B JAHH-65B-R3B	LTE LTE	0/0 0/0	RMN RMN	UHBA B13 RRH 4X30 UHFA B25 RRH 4X30	RMV RMV
			C5	APL868013	CDMA	0/0	RMN	UHIE B66A RRH 4X45	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	113'	30°	A1	APL866513	CDMA	0/0	RMN	-	-
			A2	XXDWMM-12.5-65-8T	LTE	0/8	ADD	-	-
			A3	MT6407-77A w/clip on RRH	5G	0/6	ADD	-	-
			A4	JAHH-65B-R3B JAHH-65B-R3B	700/850/1900 700/850/2100	0/2 0/2	RMN RMN	B5/B13 RRH-BR04C CBC78-DS-43-2X	ADD ADD
			A5	APL868013	CDMA	0/0	RMN	B2/B66A RRH-BR049	ADD
BETA	113'	150°	B1	APL866513	CDMA	4/0	RMN	-	-
			B2	XXDWMM-12.5-65-8T	LTE	0/8	ADD	-	-
			B3	MT6407-77A w/clip on RRH	5G	0/6	ADD	-	-
			B4	JAHH-65B-R3B JAHH-65B-R3B	700/850/1900 700/850/2100	0/4 0/4	RMN RMN	B5/B13 RRH-BR04C CBC78-DS-43-2X	ADD ADD
			B5	APL868013	CDMA	0/0	RMN	B2/B66A RRH-BR049	ADD
GAMMA	113'	280°	C1	APL866513	CDMA	4/0	RMN	-	-
			C2	XXDWMM-12.5-65-8T	LTE	0/8	ADD	-	-
			C3	MT6407-77A w/clip on RRH	5G	0/6	ADD	-	-
			C4	JAHH-65B-R3B JAHH-65B-R3B	700/850/1900 700/850/2100	0/3 0/3	RMN RMN	B5/B13 RRH-BR04C CBC78-DS-43-2X	ADD ADD
			C5	APL868013	CDMA	0/0	RMN	B2/B66A RRH-BR049	ADD

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) OVP (DB-T1-6Z-8AB-0Z)	RMN	(6) 1-1/4"	(2) 1-1/4"	RMN
–	–	–	(2) 1-1/4"	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) OVP (DB-T1-6Z-8AB-0Z)	RMN	(6) 1-1/4"	(2) 1-1/4"	RMN
-	-	-	-	ADD

3 EQUIPMENT SCHEDULES

AMERICAN TOWER®

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

REV.	DESCRIPTION	BY	DATE
A	PRELIM	EB	06/30/21
0	FINALS	TR	11/05/21

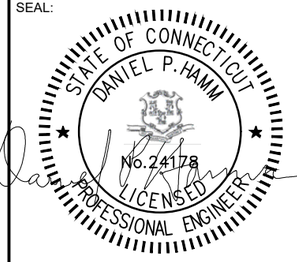
ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6

VERIZON SITE NAME:
BRANFORD 2 CT

SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

SEAL:

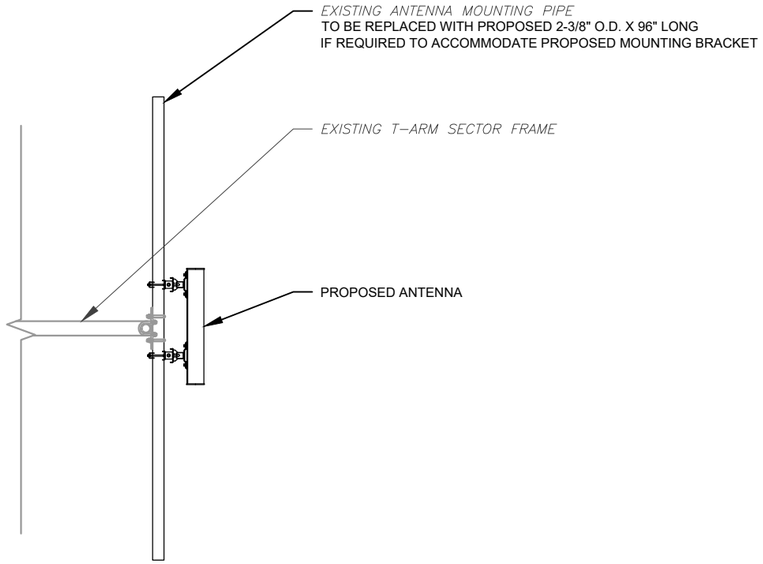


verizon

DATE DRAWN:	06/30/21
ATC JOB NO:	13685617_D1
CUSTOMER ID:	BRANFORD 2 CT
CUSTOMER #:	467297

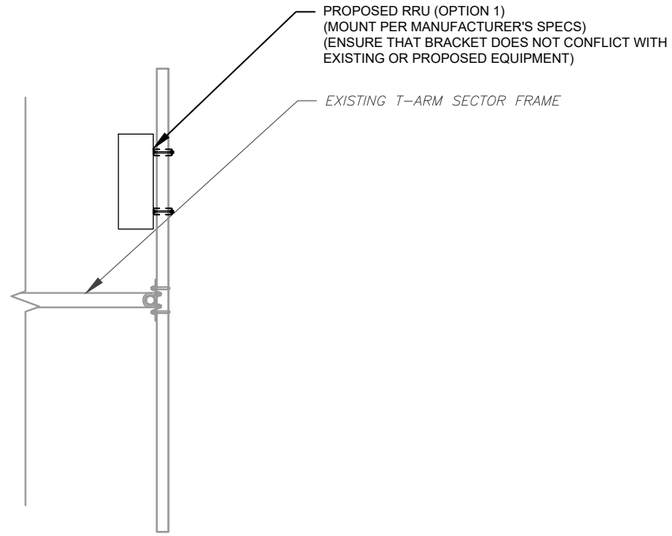
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0



1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

AMERICAN TOWER®

HUDSON Design Group LLC

45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5586

REV.	DESCRIPTION	BY	DATE
A	PRELIM	EB	06/30/21
0	FINALS	TR	11/05/21

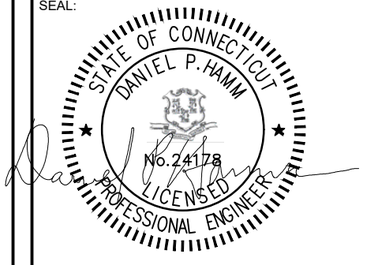
ATC SITE NUMBER:
302484

ATC SITE NAME:
BRANFORD CT 6

VERIZON SITE NAME:
BRANFORD 2 CT

SITE ADDRESS:
405 BRUSHY PLAIN RD
BRANFORD, CT 06405-2308

SEAL:

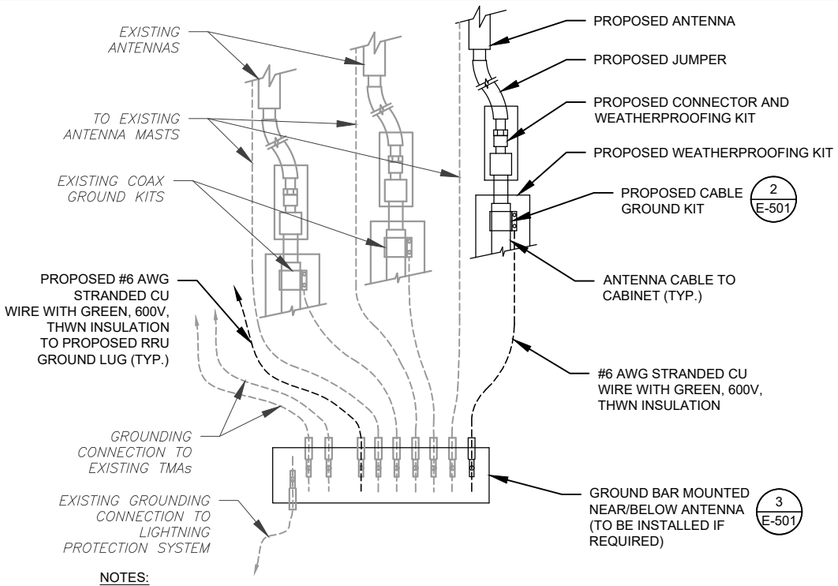


verizon

DATE DRAWN:	06/30/21
ATC JOB NO:	13685617_D1
CUSTOMER ID:	BRANFORD 2 CT
CUSTOMER #:	467297

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

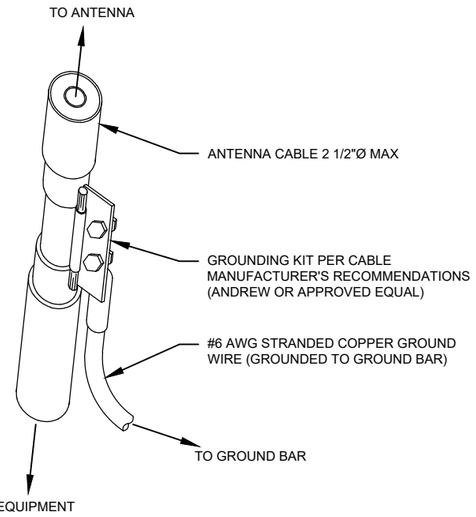


NOTES:

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.

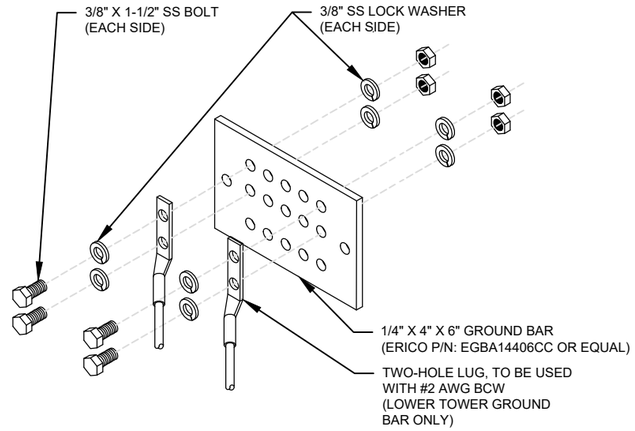


GROUND KIT NOTES:

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®

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

REV.	DESCRIPTION	BY	DATE
A	PRELIM	EB	06/30/21
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302484

ATC SITE NAME:
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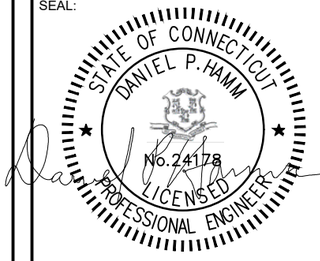
SEAL:



verizon

DATE DRAWN:	06/30/21
ATC JOB NO:	13685617_D1
CUSTOMER ID:	BRANFORD 2 CT
CUSTOMER #:	467297

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
(856) 797-0412
peter.albano@colliersengineering.com

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10099130
Maser Consulting Connecticut Project #: 21777824A

September 3, 2021

Site Information

Site ID:	*467297-VZW / BRANFORD 2 CT*
Site Name:	*BRANFORD 2 CT*
Carrier Name:	*Verizon Wireless*
Address:	*405 Brushy Plain Rd.* *Branford, Connecticut 06405* *New Haven County*
Latitude:	*41.31679167°*
Longitude:	*-72.81969167°*

Structure Information

Tower Type:	*150-Ft Monopole*
Mount Type:	*13.50-Ft T-Arm*

FUZE ID # 15904381

Analysis Results

T-Arm: 58.7% Pass

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

Report Prepared By: Selene Chen

STATE OF CONNECTICUT · PETER MICHAEL ALBANO · No. 35653 · LICENSED PROFESSIONAL ENGINEER · 09-03-21

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

8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

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
Connection Check	58.7%	Pass
Standoff	35.7%	Pass
Face Horizontal	43.7%	Pass
Mod Horizontal	68.7%	Pass
Mod Standoff	53.5%	Pass
Mount Pipe	42.2%	Pass

Structure Rating – *(Controlling Utilization of all Components)*	68.7%

Recommendation:

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

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

Attachments:

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

1 MOUNT ANALYSIS

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

SUPPLEMENTAL

SHEET NUMBER: R-601
REVISION: 0

MOUNT MODIFICATION DRAWINGS
EXISTING 13.50' T-ARM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 302484

CARRIER SITE NAME: BRANFORD 2 CT
CARRIER SITE NUMBER: 467297
FUZE ID: 15904381

405 BRUSHY PLAIN RD
BRANFORD, CT 06405
NEW HAVEN COUNTY

LATITUDE: 41.31679167° N
LONGITUDE: 72.81969167° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 121 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 236.76'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.00 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = 0.203
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

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

PROJECT MANAGER

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

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10099130
VZW LOCATION CODE (PSLC): 467297
ANALYSIS DATE: 9/3/2021

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

SHEET INDEX

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

FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

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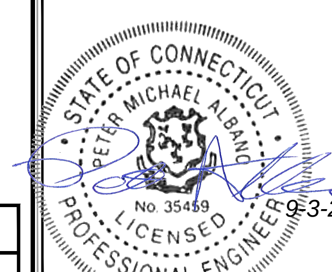
AS SHOWN	21777824A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
0	9/3/2021	ISSUED FOR CONSTRUCTION	FAC	PMA



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SITE NAME:

BRANFORD 2 CT
467297

405 BRUSHY PLAIN RD
BRANFORD, CT 06405
NEW HAVEN COUNTY

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

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE : TITLE SHEET

SHEET NUMBER : ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	VZWSMART	VZWSMART-SFK4	T-ARM KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1	106	318
1		VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150
21		VZWSMART-MSK2	CROSSOVER PLATE		15	270

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	-	-	162" LONG, P3 STD	GALVANIZED	102	306
					TOTAL:	1044

VZWSMART KITS - APPROVED VENDORS

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

NOTES:

1. THE MANUFACTURERS LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THEY ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATIONS.

2. ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR.

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE : AS SHOWN
JOB NUMBER : 21777824A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
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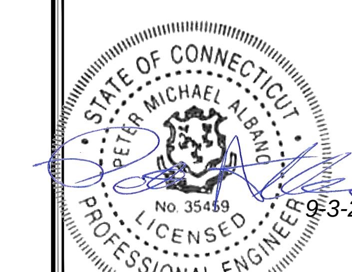
0	9/3/2021	ISSUED FOR CONSTRUCTION	FAC	PMA



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SITE NAME:
BRANFORD 2 CT
467297
405 BRUSHY PLAIN RD
BRANFORD, CT 06405
NEW HAVEN COUNTY

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

SHEET TITLE : BILL OF MATERIALS

SHEET NUMBER : SBOM-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

PROJECT NOTES

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

GENERAL NOTES

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

STRUCTURAL STEEL

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

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

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

      PETER.ALBANO@COLLIERSENGINEERING.COM

   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC COTE).
9. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
10. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
11. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
12. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
13. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

WELDING NOTES

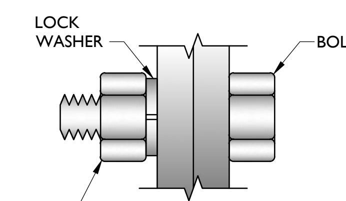
1. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTION (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE, DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING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

BOLT SCHEDULE (IN.)

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

WORKABLE GAGES (IN.)

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

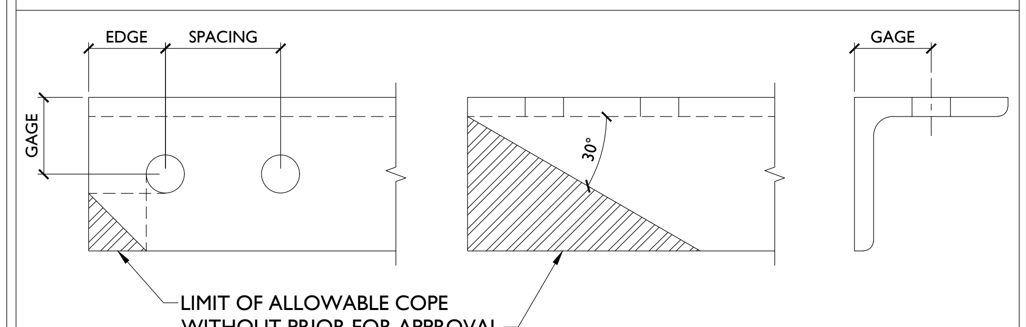


TYP. BOLT ASSEMBLY

NOTES:

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

ALLOWABLE COPING



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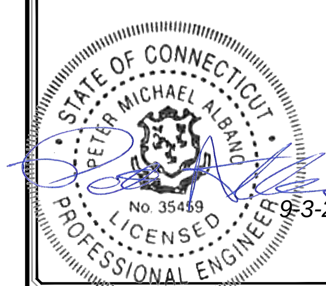

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NEW HAVEN COUNTY

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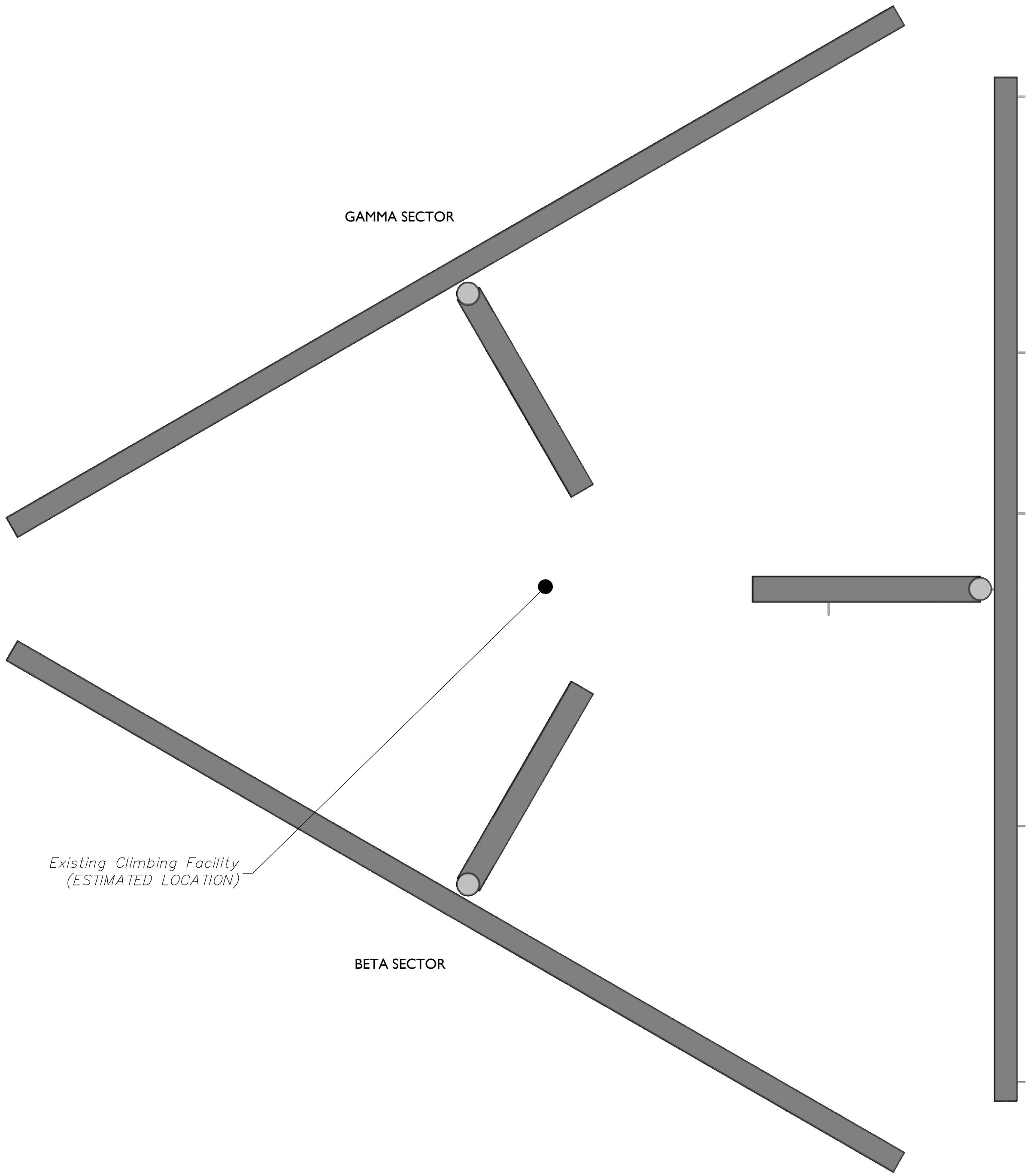
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :
MODIFICATION NOTES

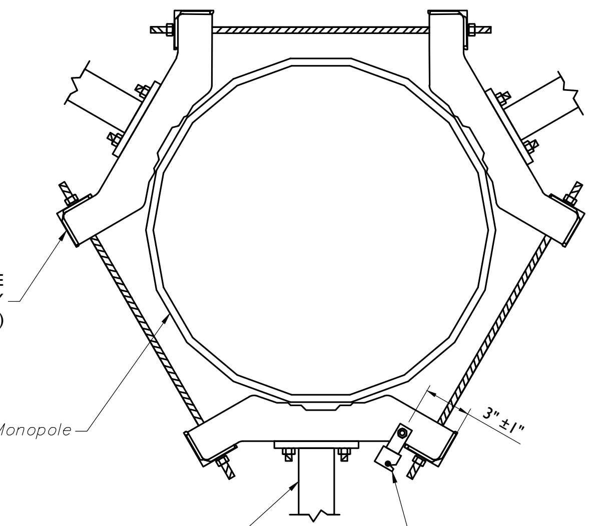
SHEET NUMBER :
SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.

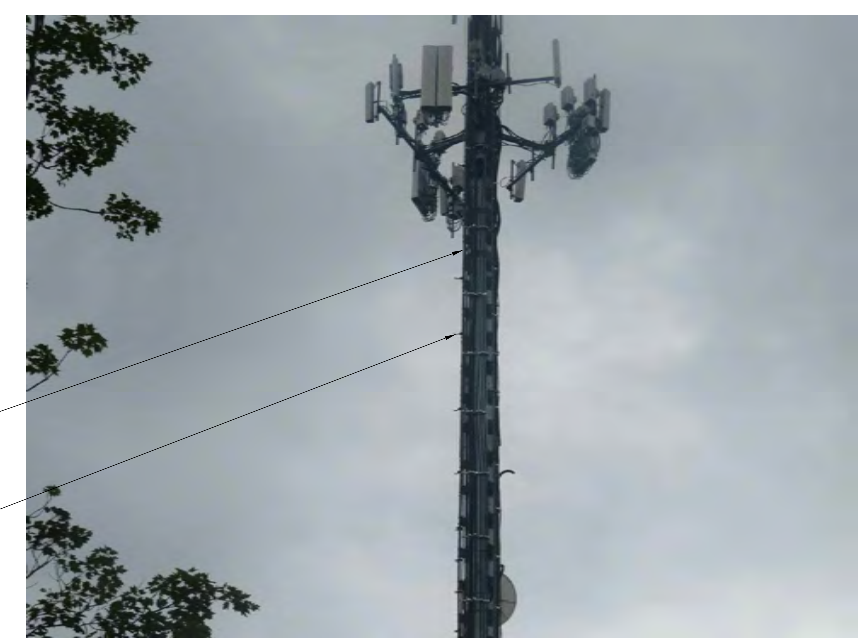


2 PROPOSED (T-ARM) THREADED ROD ATTACHEMENT - PLAN VIEW

SCALE : N.T.S.

Existing Safety Climb

Existing Climbing Facility



CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

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

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

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STATE OF CONNECTICUT
PETER MICHAEL ALBANO
No. 35459
LICENSED
PROFESSIONAL ENGINEER
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Fax: 856.722.1120

SHEET TITLE : CLIMBING FACILITY DETAIL

SHEET NUMBER : SCF-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND:

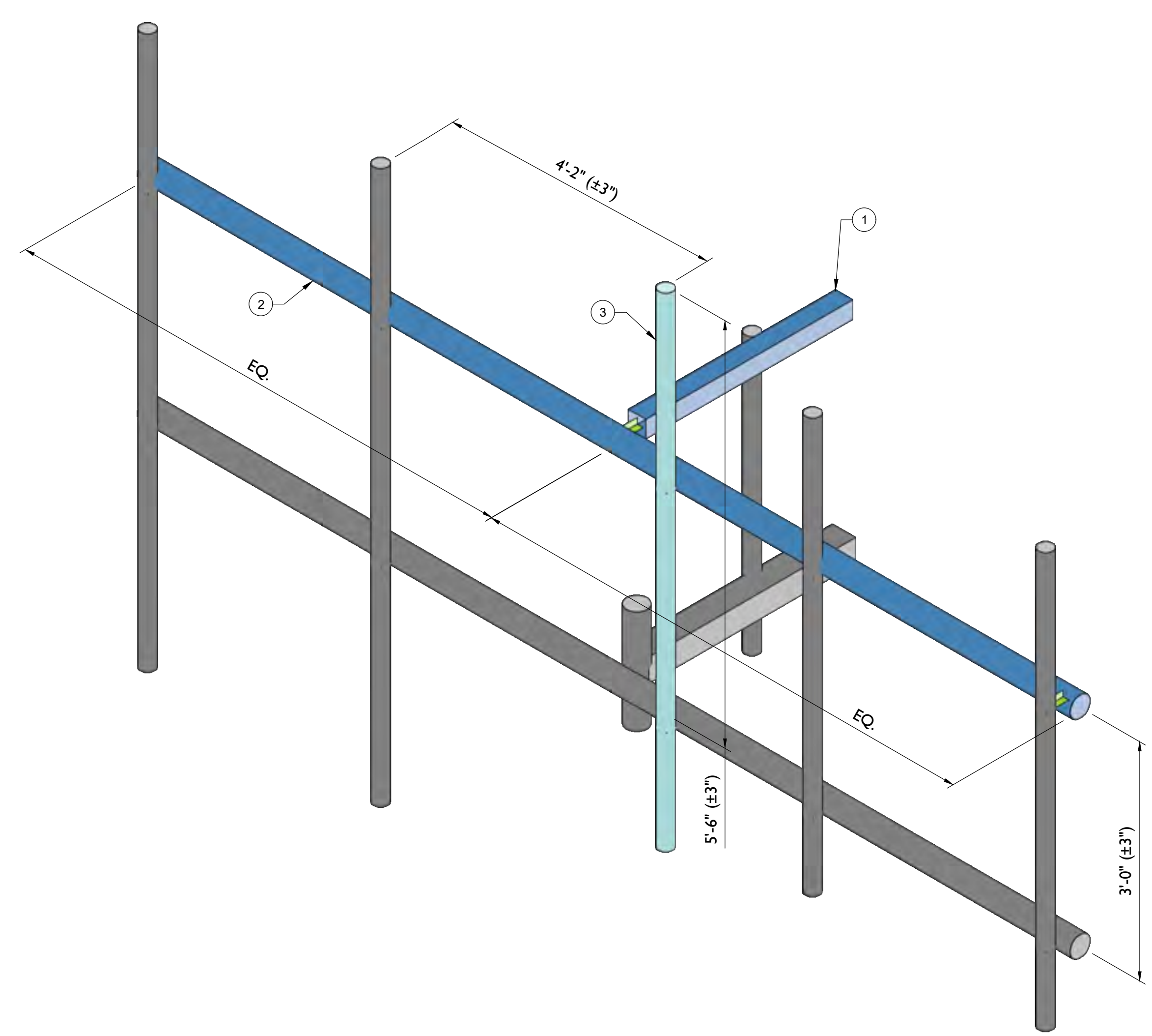
(blue)	PROPOSED
(teal)	RELOCATED
(gray)	EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	112'-0"	3	PROPOSED T-ARM KIT (PART #: VZWSMART-SFK4)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
2		3	162" LONG, P3 STD	GALVANIZED, CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
3		3	RELOCATED MOUNT PIPE	CONNECT RELOCATED MOUNT PIPE TO EXISTING HORIZONTAL WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).

NOTES.

MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.



1 PROPOSED ISOMETRIC VIEW

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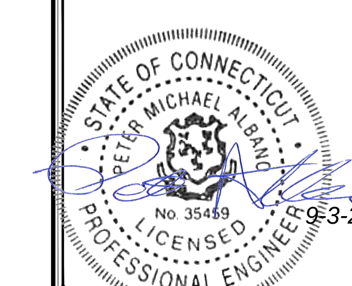

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SHEET TITLE : MODIFICATION DETAILS

SHEET NUMBER : SS-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

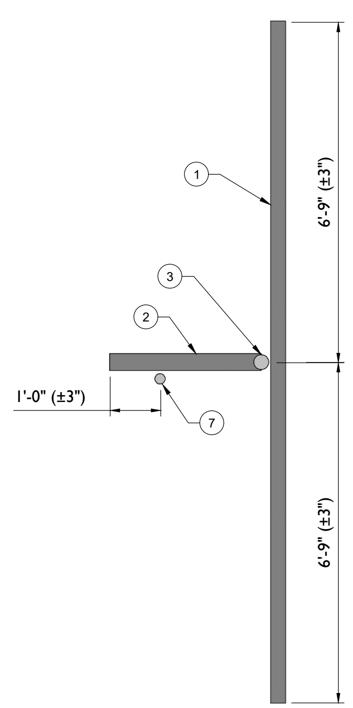
EXISTING MEMBERS				
NO.	DESCRIPTION	SHAPE	NOTES	DEVIATIONS
1	FACE HORIZONTAL	162" LONG, P3 STD	TYP. OF 3, 1 PER SECTOR	± 3"
2	STANDOFF ARM	46" LONG, HSS4x4x1/4	TYP. OF 3, 1 PER SECTOR	± 3"
3	MAST PIPE	18" LONG, P3 STD	TYP. OF 3, 1 PER SECTOR	± 3"
4	MOUNT PIPE 1	96" LONG, P2 STD	TYP OF 6, 2 PER SECTOR	± 3"
5	MOUNT PIPE 2	84" LONG, P2 STD	TYP. OF 3, 1 PER SECTOR	± 3"
6	MOUNT PIPE 3	72" LONG, P2 STD	TYP. OF 6, 2 PER SECTOR	± 3"
7	OVP PIPE	48" LONG, P2 STD	ALPHA & BETA SECTOR	± 3"

NOTE:
LIST ALL MEMBER SIZE DEVIATIONS IN PROVIDED COLUMN. DIMENSION DEVIATIONS SHALL BE DOCUMENTED ON SKETCHES.

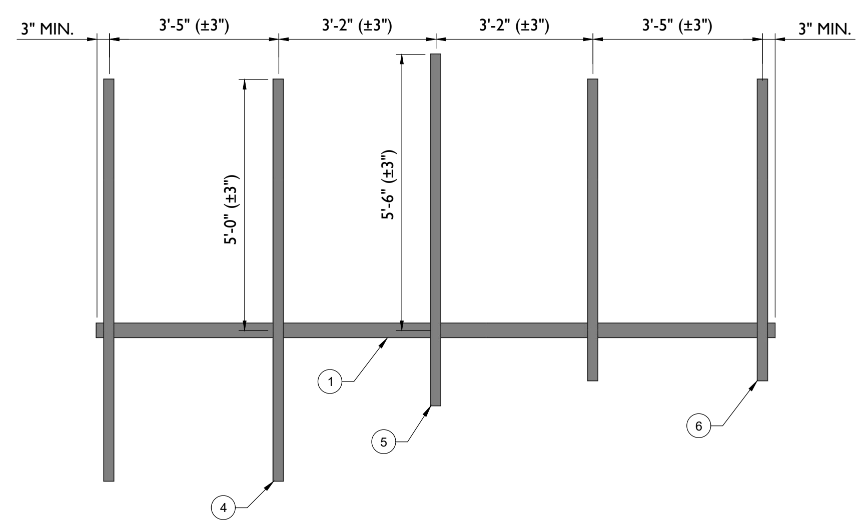
STANDARD PIPE DIMENSIONS				
		THICKNESS (IN.)		
PIPE SIZE	O.D. (IN.)	STD	XSTR	XXSTR
P1 1/2	1.900	0.145	0.200	0.400
P2	2.375	0.154	0.218	0.436
P2 1/2	2.875	0.203	0.276	0.552
P3	3.500	0.216	0.300	0.600
P3 1/2	4.000	0.226	0.318	0.636
P4	4.500	0.237	0.337	0.674
P4 1/2	5.000	0.247	0.355	0.710
P5	5.563	0.258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

NOTE:

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



1 EXISTING MOUNT GEOMETRY VERIFICATION PLAN VIEW
SCALE : N.T.S.



2 EXISTING MOUNT GEOMETRY VERIFICATION FRONT ELEVATION VIEW
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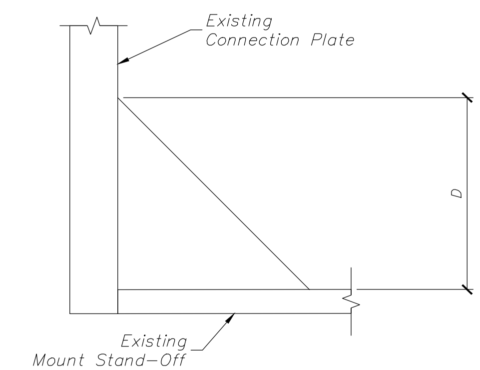
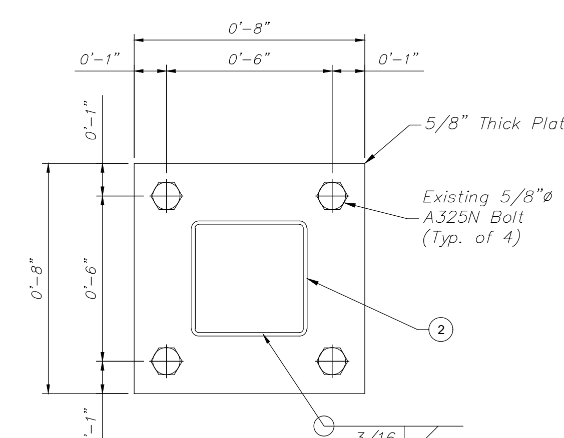


WELD MEASUREMENT NOTE:

CONTRACTOR SHALL MEASURE WELD SIZE 'D' AS SHOWN IN THIS DETAIL.

4 WELD MEASUREMENT DETAIL
SCALE : N.T.S.



NOTE:

REFER TO WELD MEASUREMENT DETAIL FOR DIRECTIONS ON OBTAINING WELD MEASUREMENTS.

3 MOUNT CONNECTION DETAIL
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SCALE : AS SHOWN
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REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
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STATE OF CONNECTICUT
PETER MICHAEL ALBANO
No. 35459
LICENSED PROFESSIONAL ENGINEER
9-3-21

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

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

SHEET TITLE : GEOMETRY VERIFICATION SKETCHES

SHEET NUMBER : SS-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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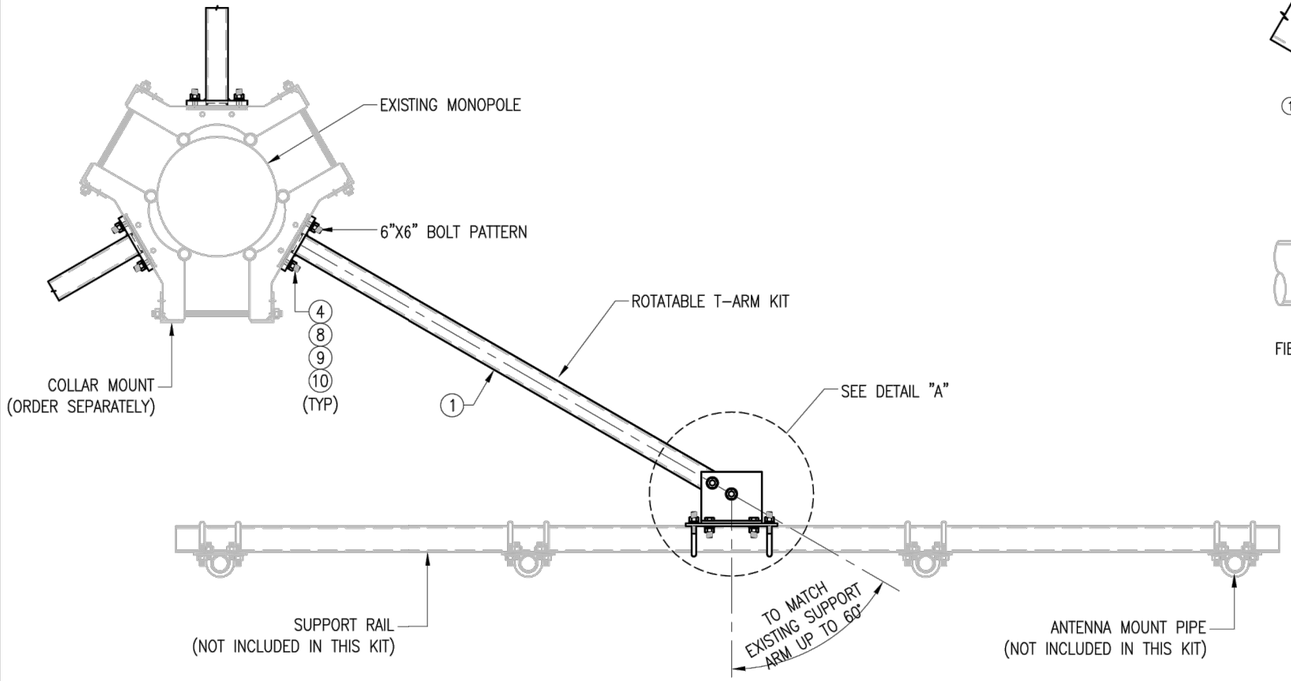
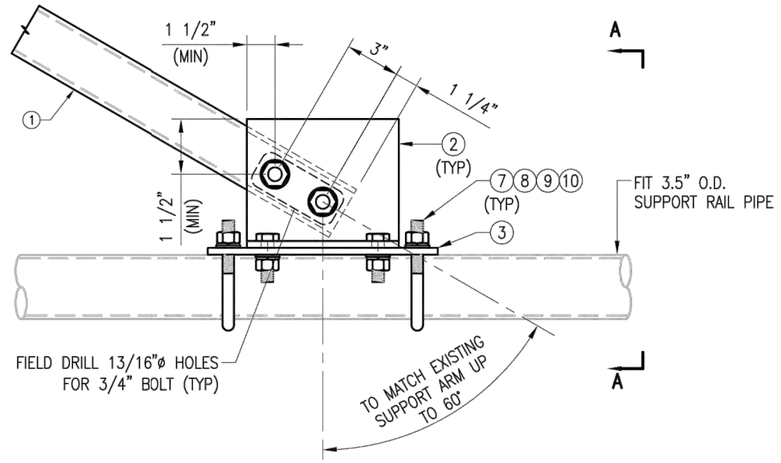
SHEET TITLE :
MOUNT PHOTOS

SHEET NUMBER :
SS-3

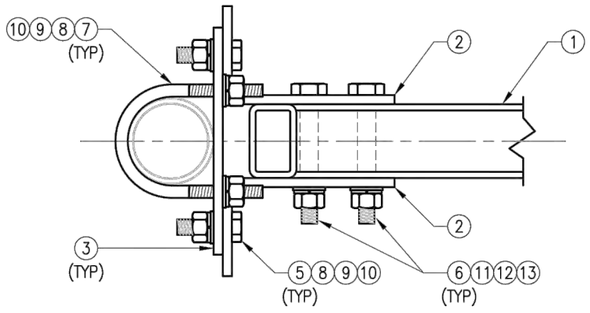
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



PLAN VIEW
T-ARM KIT



DETAIL "A"



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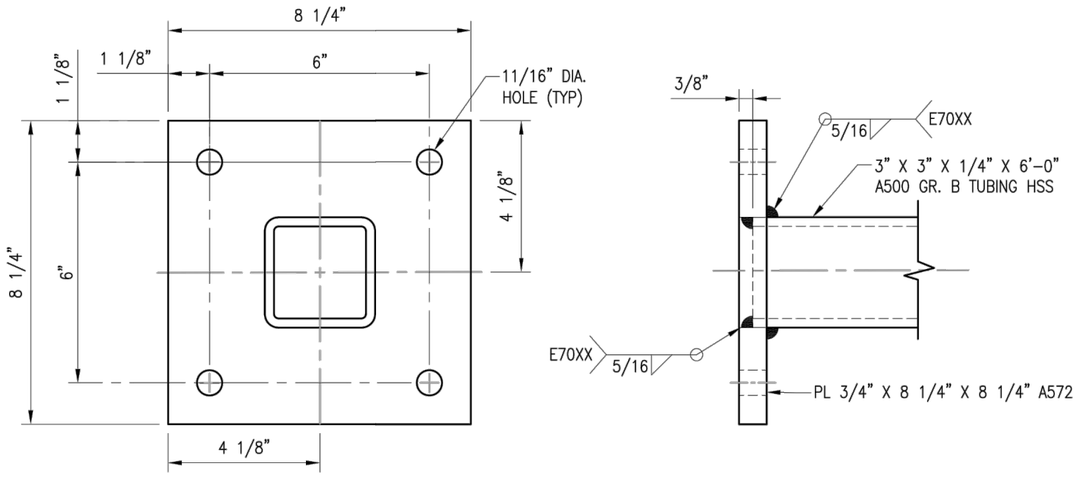

FRONT VIEW

SIDE VIEW

RO-TAW-6 WELDMENT

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

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

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DRAWN BY: BT | CHECKED BY: HMA/KW

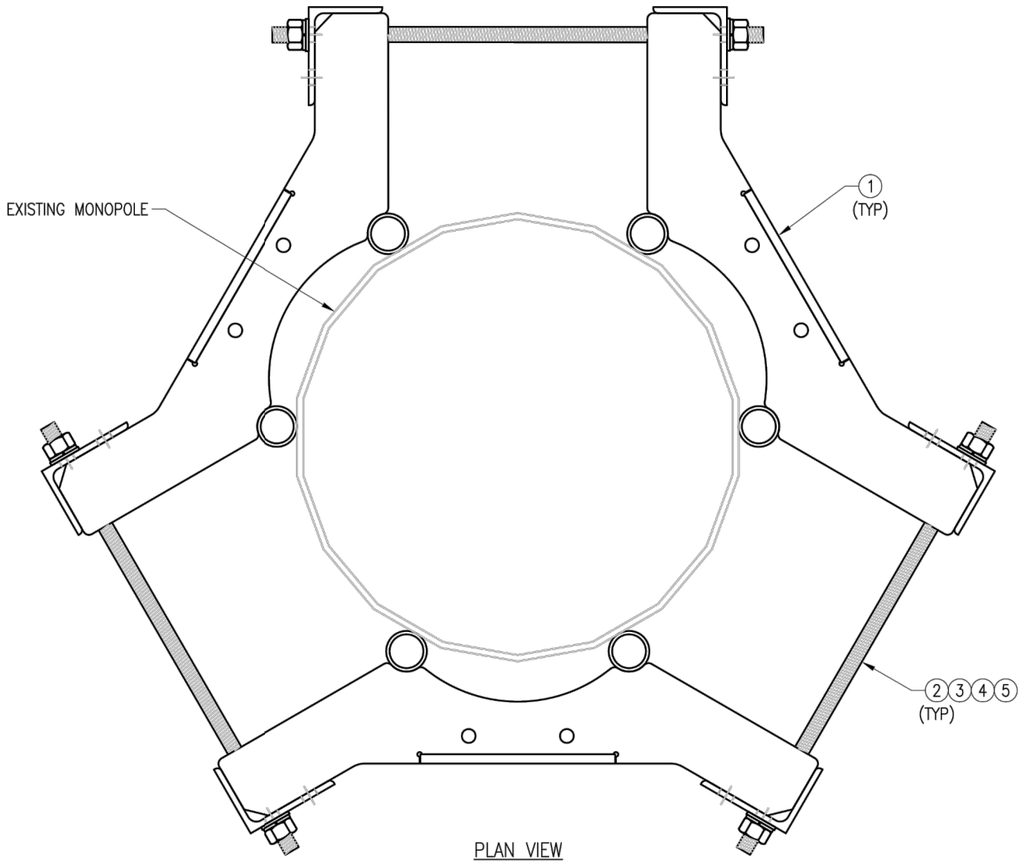
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20

SHEET TITLE:

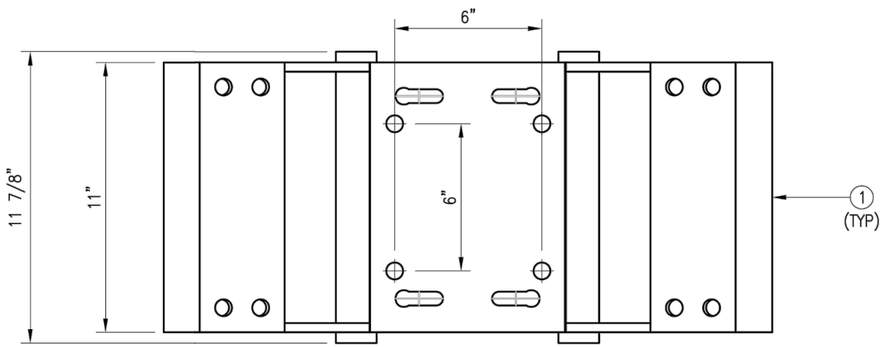
VZWSMART-SFK4
T-ARM KIT

SHEET NUMBER: VZWSMART-SFK4

REV #: 0



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

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

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

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

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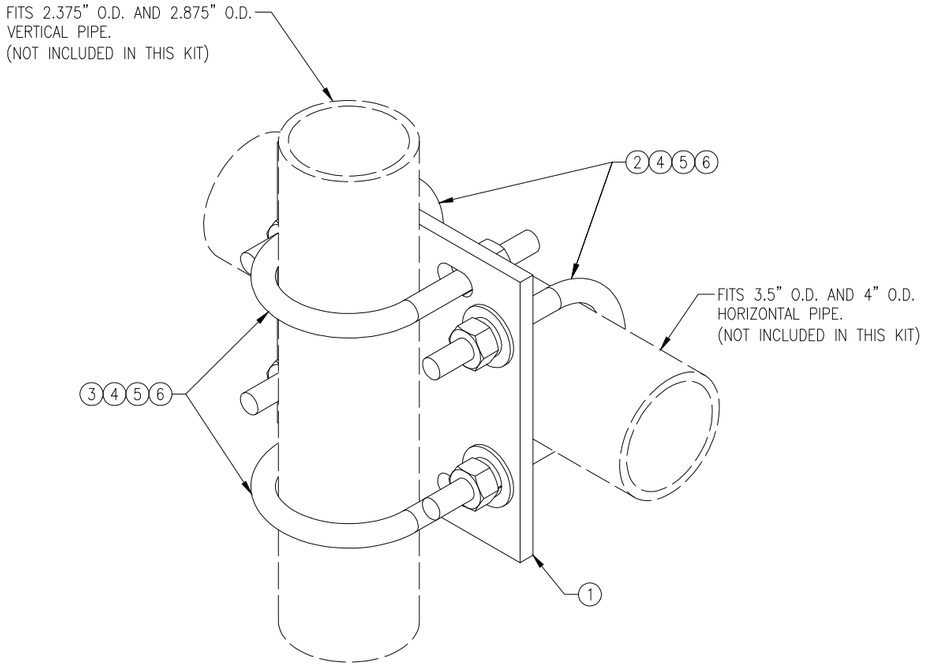
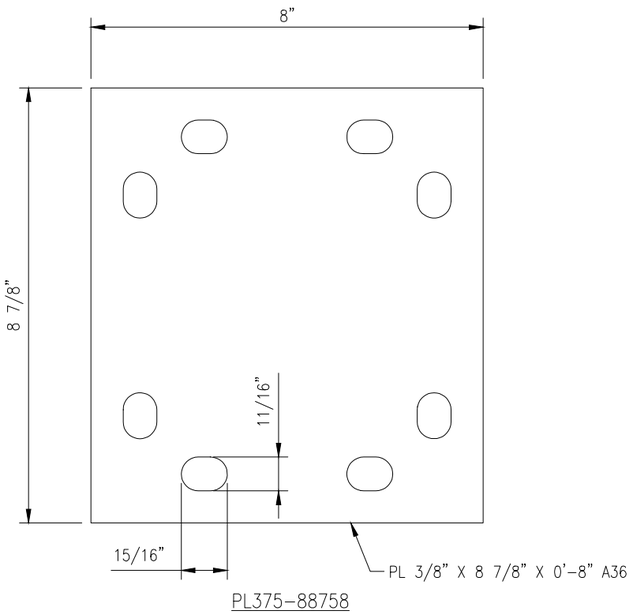
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/11/20

SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7

REV #: 0





PL375-88758

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

VZWSMART-MSK2 (CROSSOVER PLATE)

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

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DRAWN BY: H.R | CHECKED BY: HMA

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

SHEET TITLE:

VZWSMART-MSK2
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK2

REV #: 0