Alex Murshteyn, Site Acquisition Consultant
c/o Cellco Partnership d/b/a Verizon Wireless
Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (508) 821-0159
AMurshteyn@centerlinecommunications.com

January 6, 2020

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

RE: Notice of Exempt Modification // Site: Naugatuck West CT (ATC: 283423)
0 (aka 880) Andrew Mountain Road, Naugatuck, CT 06473
N 41.48445 // W -73.08984

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless currently maintains 9 antennas at the 106-foot level on the existing 119-foot monopole tower, located at (880) Andrew Mountain Road, Naugatuck, CT. The Council approved Verizon Wireless use of the tower in 2013. The tower is owned by American Tower. The property is owned by Franklin B. Andrew, Jr. Verizon Wireless now intends to remove 3 of its existing antennas and to update existing equipment as part of its (700/850/1900/2100 MHz) PCS/AWS/LTE upgrade. Additionally, Verizon Wireless will replace all of its remote radio head units (RRUs) with 6 new RRUs, 3 combiners, and remove and upgrade certain cabling; 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 Mayor N. Warren "Pete" Hess III, for the Town and Borough of Naugatuck, to its Land Use Office, including for Planning & Zoning, to American Tower, the tower owner, and to the ground owner, Franklin B. Andrew, Jr.

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 December 24, 2019, structural analysis dated November 19, 2019 and antenna mount analysis dated November 15 and stamped November 19, 2019 by A.T. Engineering

Service, PLLC, as well as radio frequency (RF) analysis table showing worst-case RF emission calculation by Verizon Wireless RF Design Engineering.

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

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

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

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

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

6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis by A.T. Engineering Service, PLLC, dated and stamped November 19, 2019 and mount analysis dated November 15 and stamped November 19, 2019.

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,

Alex Murshteyn, Site Acquisition Consultant
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Centerline Communications, LLC
750 West Center Street, Floor 3
West Bridgewater, MA 02379
Mobile: (508) 821-0159
AMurshteyn@centerlinecommunications.com

Attachments

cc: Pete Hess III, Mayor, Town and Borough of Naugatuck - as elected official
Land Use/Planning/Zoning Employees, Land Use Office - as P&Z official
Franklin B. Andrew, Jr. - as ground owner
American Tower Corporation - as tower owner

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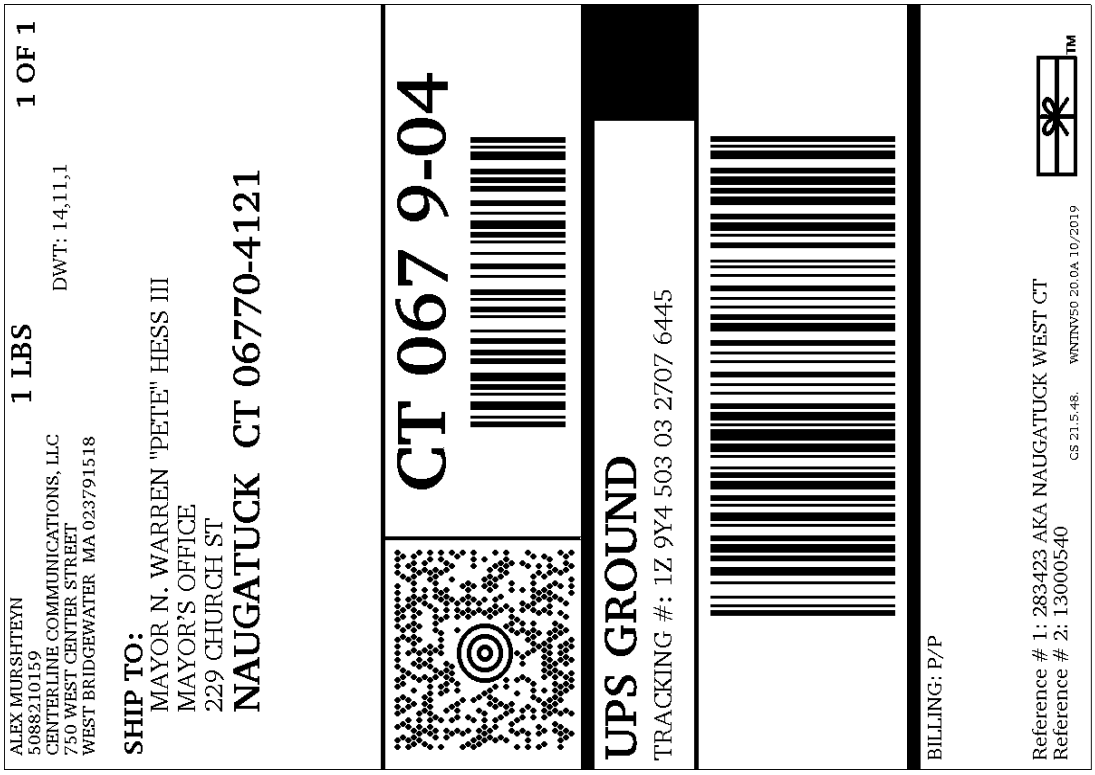

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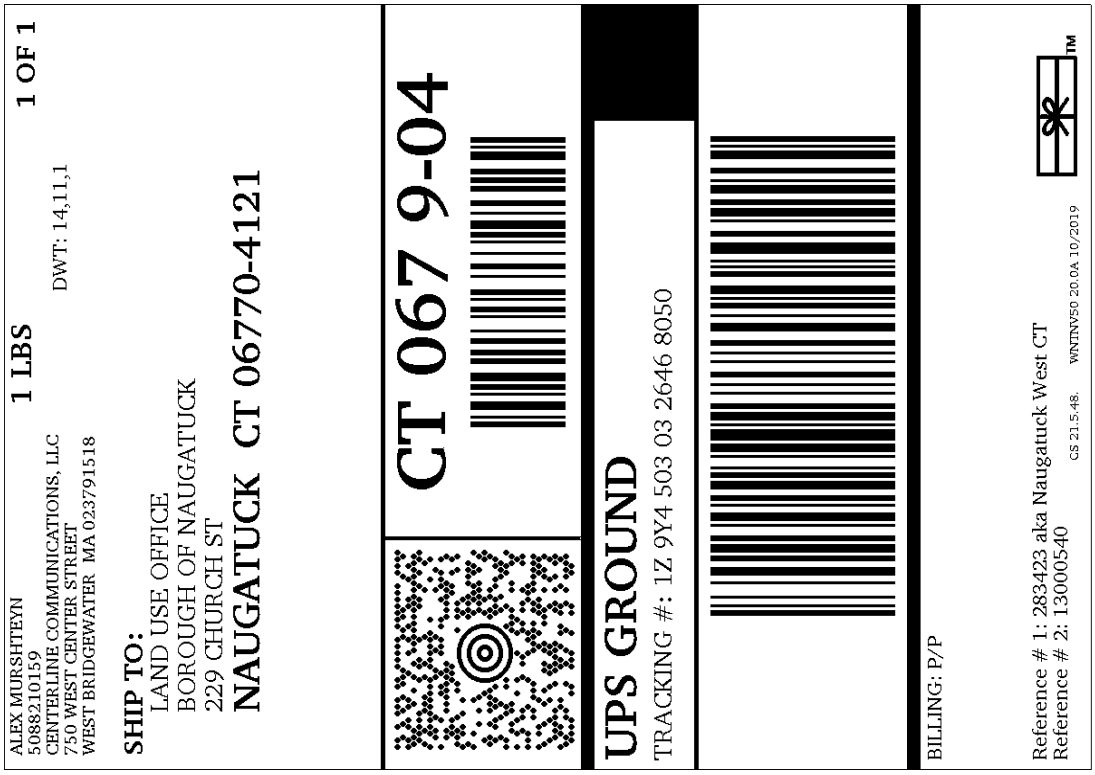

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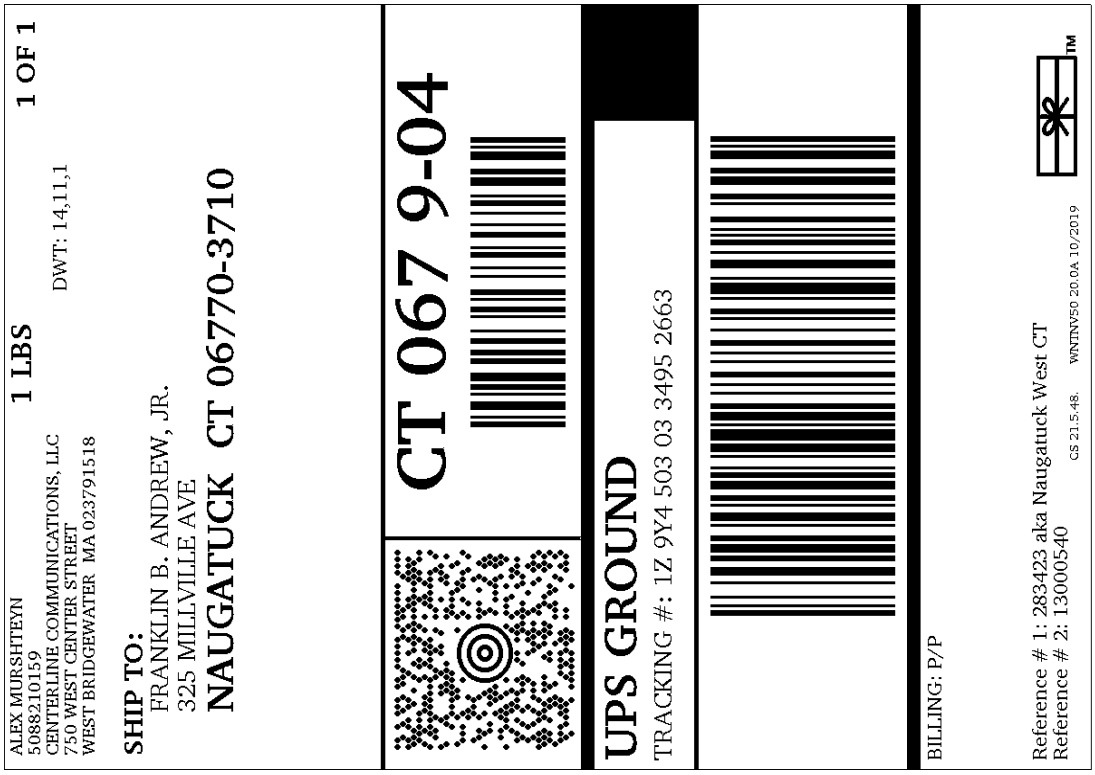

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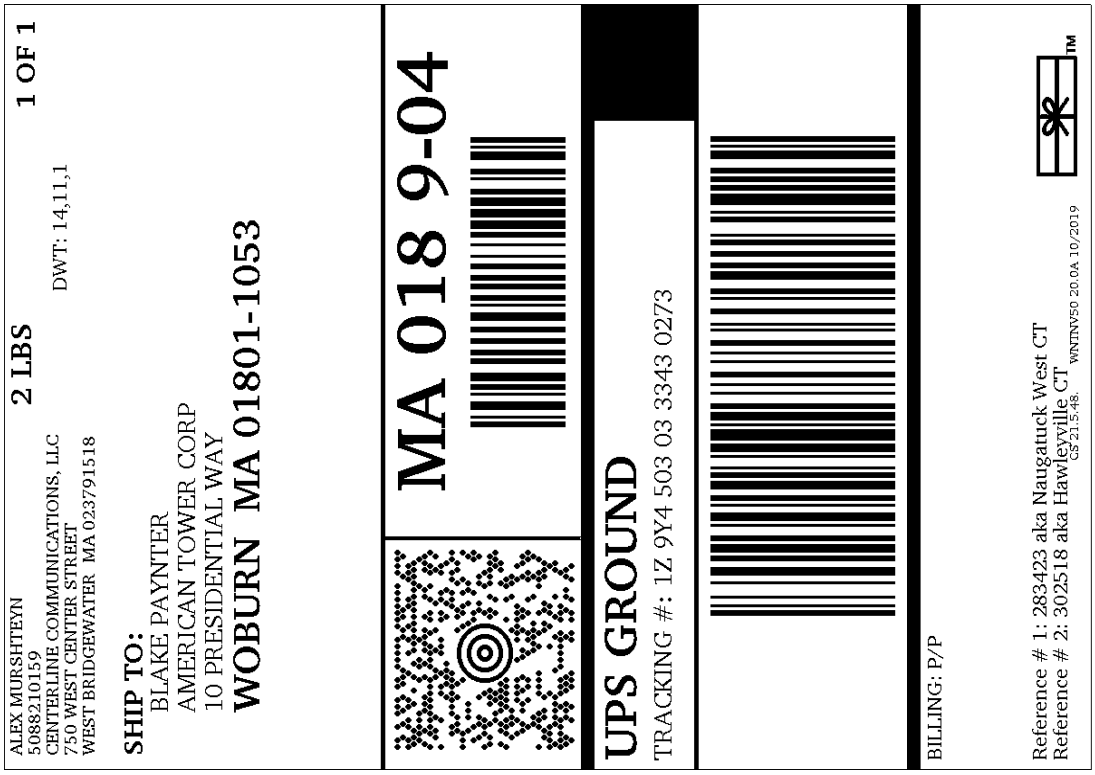

PETITION NO. 973 – North Atlantic Towers, LLC and New Cingular Wireless PCS, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required to replace and expand an existing structure located at 880 Andrew Mountain Road, Naugatuck, Connecticut.	}	Connecticut Siting Council April 28, 2011

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the installation of a telecommunications facility at 880 Andrew Mountain Road in Naugatuck, Connecticut will not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k(a), and hereby declares that the project will not require a Certificate of Environmental Compatibility and Public Need.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of New Cingular Wireless PCS, LLC (AT&T) and other entities, both public and private, but such tower shall not exceed a height of 120 feet above ground level. The height at the top of the AT&T's antennas shall not exceed 120 feet above ground level.

2. The compound associated with the facility shall be constructed within a 50-foot by 50-foot area located as far south as possible within the leased area.

3. The access drive shall be constructed in the originally proposed location approximately 50 feet from the northern property boundary.

4. The Petitioner shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Naugatuck for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping;
    b) potential tower painting or tower material options that would mitigate visual impact to the surrounding area; and
    c) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

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

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

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

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

9. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Petitioner shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Petitioner shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

10. Any request for extension of the time period referred to in Condition 9 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Naugatuck. Any proposed modifications to this Decision and Order shall likewise be so served.

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

12. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.

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

14. The Petitioner shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

15. This declaratory ruling may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Petitioner/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Petitioner/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

16. The Petitioner shall maintain the facility and associated equipment, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.

17. If the Petitioner is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Petitioner within 30 days of the sale and/or transfer.

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

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

The parties and intervenors to this proceeding are:

Petitioner	**Its Representative**
North Atlantic Towers, LLC and New Cingular Wireless PCS LLC	Lucia Chiocchio. Esq. Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th Floor White Plains, NY 10601

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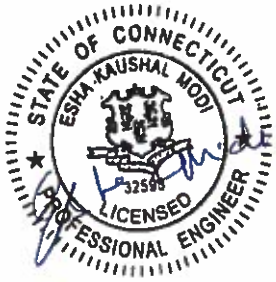
Structural Analysis Report

Structure	:	**119 ft Monopole**
ATC Site Name	:	**NAUGATUCK CT, CT**
ATC Asset Number	:	**283423**
Engineering Number	:	**13000540_C3_03**
Proposed Carrier	:	**VERIZON WIRELESS**
Carrier Site Name	:	**NAUGATUCK WEST CT**
Carrier Site Number	:	**469151**
Site Location	:	**880 Andrew Mountain Road** **Naugatuck, CT 06770-3656** **41.484500,-73.089800**
County	:	**New Haven**
Date	:	**November 19, 2019**
Max Usage	:	**42%**
Result	:	**Pass**



Prepared By:
Hussam Al Tahan, E.I.
Structural Engineer I

Hussam Al Tahan

Reviewed By:

Authorized by "EOR"
Nov 19 2019 5:27 PM cosign

COA: PEC.0001553

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Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 119 ft monopole to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	TransAmerican DaVinci Job #11235-1298, dated June 14, 2011
Foundation Drawing	TransAmerican DaVinci Job #11235-1298, dated June 14, 2011
Geotechnical Report	Terracon Project #J2115128, dated May 10, 2011

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:	97 mph (3-Second Gust, V_{asd}) / 125 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.19, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
119.0	4	Raycap DC6-48-60-18-8F	Platform with Handrails	(4) 0.39" (10mm) Fiber Trunk (2) 0.40" (10.3mm) Fiber (8) 0.78" (19.7mm) 8 AWG 6 (3) 3/8" (0.38"-9.5mm) RET Control Cable	AT&T MOBILITY
	3	Ericsson RRUS 4478 B14 (15")			
	3	Ericsson RRUS 32 (50.8 lbs)			
	3	Ericsson RRUS 32 B66A			
	3	Ericsson RRUS 32 B2			
	9	Ericsson RRUS-11			
	3	Kathrein Scala 80010966			
	9	CCI HPA-65R-BUU-H8			
106.0	4	Commscope JAHH-65B-R3B	Low Profile Platform	(6) 1 5/8" Coax	VERIZON WIRELESS
	2	Commscope JAHH-45B-R3B			

Equipment to be Removed

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
106.0	3	Nokia B5 RRH4x40-850	-	(2) 1 5/8" (1.63"-41.3mm) Fiber	VERIZON WIRELESS
	3	Alcatel-Lucent RRH4x30W-B25			
	3	Antel BXA-70063-6CF-EDIN-X			
	3	Alcatel-Lucent B66 RRH4x45			
	3	Alcatel-Lucent B13 RRH4x30-4R 700U			

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
106.0	3	Commscope CBC78T-DS-43-2X	Low Profile Platform	(1) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung B2/B66A RRH-BR049			
	2	Raycap RCMDC-6627-PF-48			

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

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	40%	Pass
Shaft	41%	Pass
Base Plate	15%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	3,850.0	1,545.2	40%
Shear (Kips)	42.0	17.6	42%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
106.0	Commscope CBC78T-DS-43-2X	VERIZON WIRELESS	0.395	0.410
	Samsung B5/B13 RRH-BR04C			
	Samsung B2/B66A RRH-BR049			
	Raycap RCMDC-6627-PF-48			

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

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Standard Conditions

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

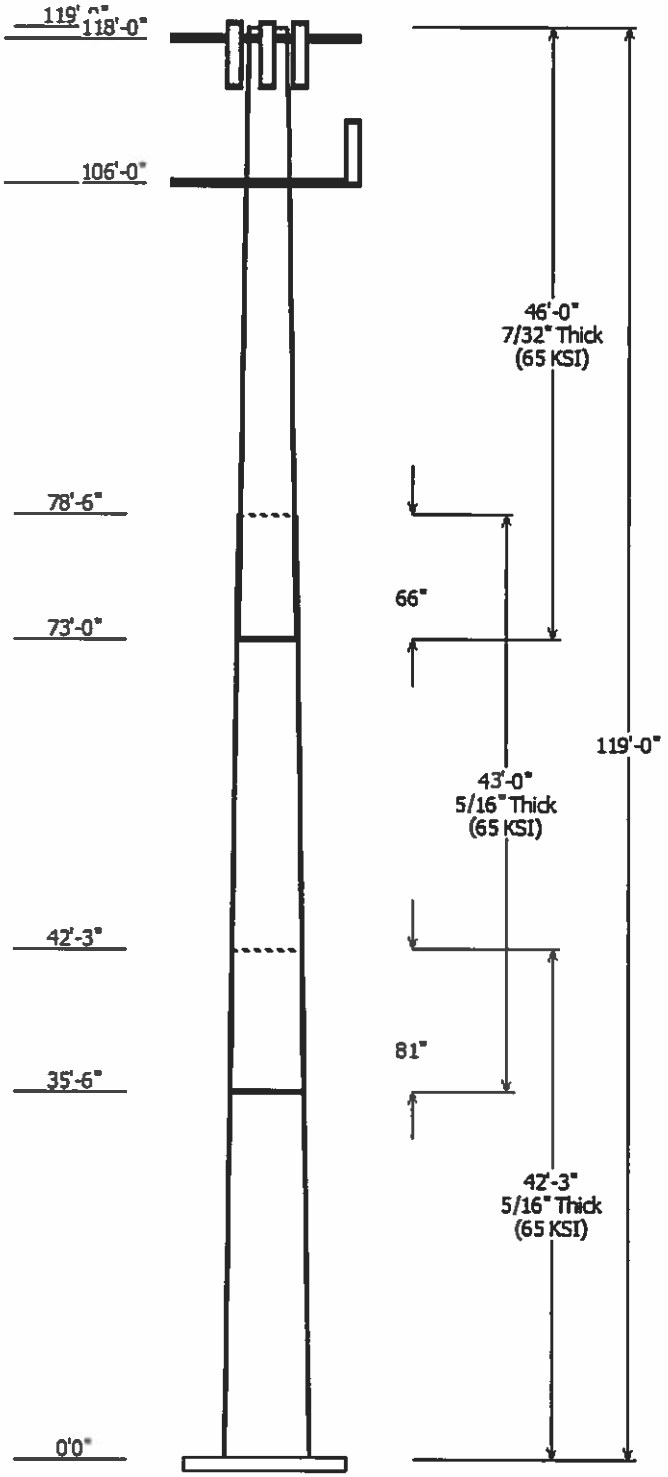
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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

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

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

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



Job Information

Client : VERIZON WIRELESS	
Pole : 283423	Code: ANSI/TIA-222-G
Location : NAUGATUCK CT, CT	
Description :	Struct Class : II
Shape : 18 Sides	Exposure : B
Height : 119.00 (ft)	Topo : 1
Base Elev (ft): 0.00	
Taper: 0.257182 (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	42.250	46.13	57.00	0.313		0.000	18 Sides	65
2	43.000	37.43	48.49	0.313	Slip Joint	81.000	18 Sides	65
3	46.000	27.45	39.28	0.219	Slip Joint	66.000	18 Sides	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
119.000	118.000	3	Kathrein Scala 80010966
119.000	118.000	9	CCI HPA-65R-BUU-H8
119.000	118.000	9	Ericsson RRUS-11
119.000	119.000	3	Ericsson RRUS 32 B2
119.000	119.000	3	Ericsson RRUS 32 B66A
119.000	118.000	3	Ericsson RRUS 32 (50.8 lbs)
119.000	118.000	3	Ericsson RRUS 4478 B14 (15")
119.000	118.000	4	Raycap DC6-48-60-18-8F
118.000	118.000	1	Round Platform w/ Handrails
106.000	106.000	1	Round Low Profile Platform
106.000	108.000	2	Commscope JAHH-45B-R3B
106.000	108.000	4	Commscope JAHH-65B-R3B
106.000	106.000	2	Raycap RCMDC-6627-PF-48
106.000	106.000	3	Samsung B2/B66A RRH-BR049
106.000	106.000	3	Samsung B5/B13 RRH-BR04C
106.000	106.000	3	Commscope CBC78T-DS-43-2X

Linear Appurtenance

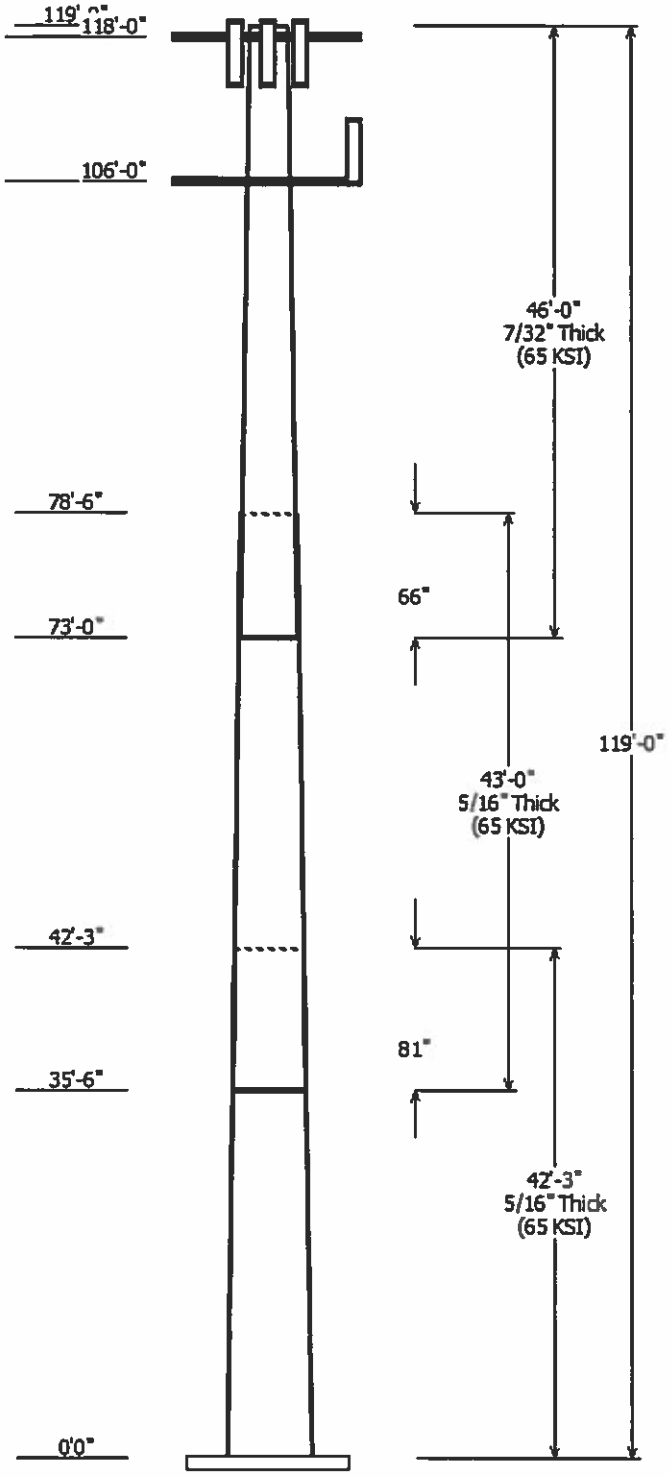
Elev (ft) From	To	Description	Exposed To Wind
0.000	106.0	1 5/8" Coax	No
0.000	106.0	1 5/8" Hybriflex	No
0.000	119.0	0.39" (10mm)	No
0.000	119.0	0.40" (10.3mm)	No
0.000	119.0	0.78" (19.7mm) 8	No
0.000	119.0	3/8" (0.38"-	No

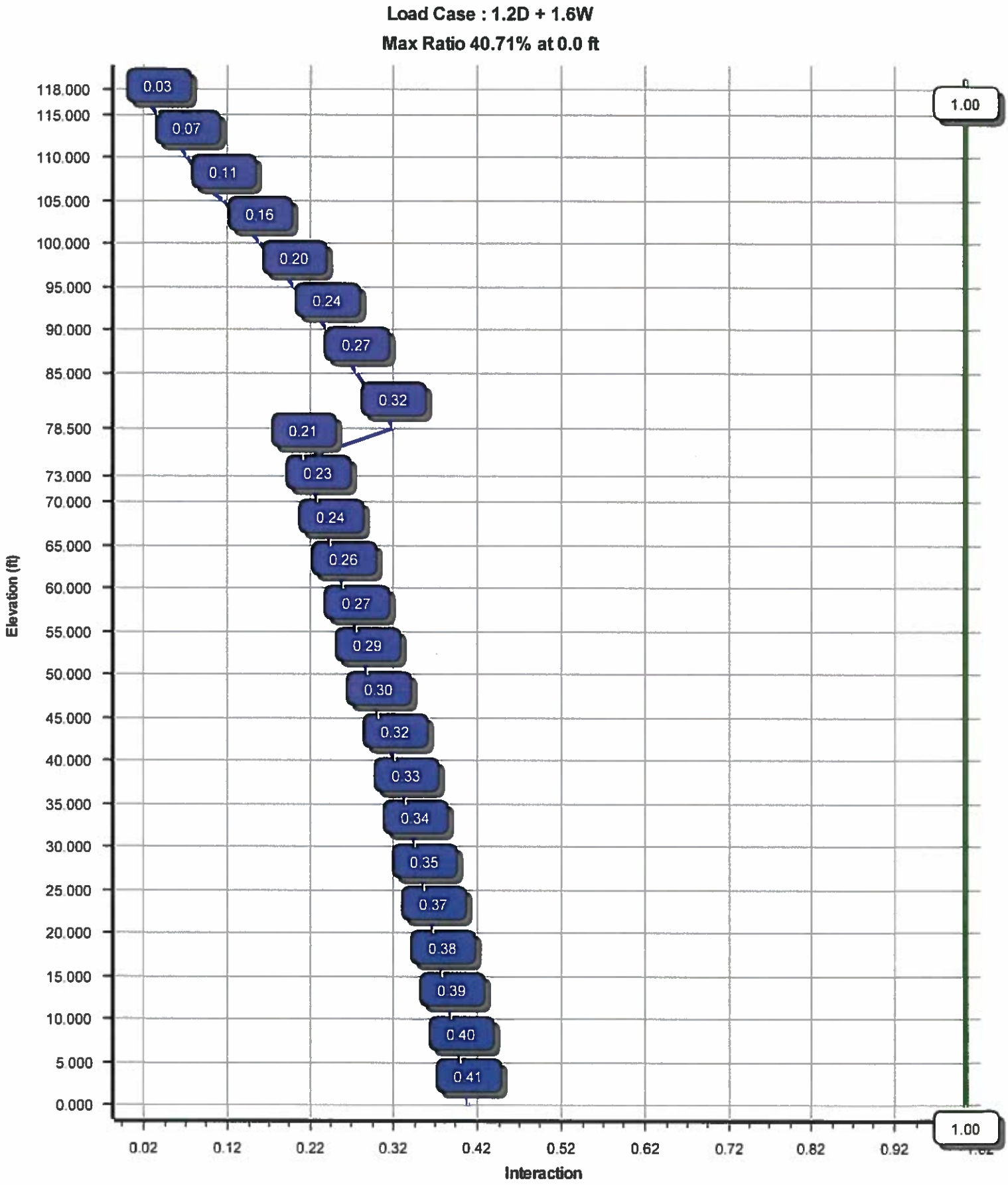
Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 0.75 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	1545.21	17.58	30.14
0.9D + 1.6W	1537.48	17.57	22.60
1.2D + 1.0Di + 1.0Wi	423.06	5.00	46.04
(1.2 + 0.2Sds) * DL + E ELFM	115.44	1.20	29.93
(1.2 + 0.2Sds) * DL + E EMAM	201.20	1.94	29.93
(0.9 - 0.2Sds) * DL + E ELFM	114.74	1.20	20.72
(0.9 - 0.2Sds) * DL + E EMAM	199.90	1.94	20.72
1.0D + 1.0W	329.52	3.76	25.13

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




Load Case : 1.2D + 1.6W
Max Ratio 40.71% at 0.0 ft
Elevation (ft)
118.000
115.000
110.000
105.000
100.000
95.000
90.000
85.000
78.500
73.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.03
0.07
0.11
0.16
0.20
0.24
0.27
0.32
0.21
0.23
0.24
0.26
0.27
0.29
0.30
0.32
0.33
0.34
0.35
0.37
0.38
0.39
0.40
0.41
1.00
1.00
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction

Site Number: 283423	**Code: ANSI/TIA-222-G**	
Site Name: NAUGATUCK CT, CT	**Engineering Number:13000540_C3_03**	**11/19/2019 9:38:25 AM**
Customer: VERIZON WIRELESS		

Analysis Parameters

Location :	**New Haven County, CT**	**Height (ft) :**	**119**
Code :	**ANSI/TIA-222-G**	**Base Diameter (in) :**	**57.00**
Shape :	**18 Sides**	**Top Diameter (in) :**	**27.46**
Pole Type :	**Taper**	**Taper (in/ft) :**	**0.257**
Pole Manfacturer :	**TransAmerican**	**Rotation (deg) :**	**0.00**

Ice & Wind Parameters

Structure Class:	**II**	**Design Wind Speed Without Ice:**	**97 mph**
Exposure Category:	**B**	**Design Wind Speed With Ice:**	**50 mph**
Topographic Category:	**1**	**Operational Wind Speed:**	**60 mph**
Crest Height:	**0 ft**	**Design Ice Thickness:**	**0.75 in**

Seismic Parameters

Analysis Method:	**Equivalent Modal Analysis & Equivalent Lateral Force Methods**				
Site Class:	**D - Stiff Soil**				
Period Based on Rayleigh Method (sec):	**1.43**				
T_L (sec):	**6**	**p:**	**1**	**C_s:**	**0.048**
S_s:	**0.192**	**S_1:**	**0.064**	**C_s Max:**	**0.048**
F_a:	**1.600**	**F_v:**	**2.400**	**C_s Min:**	**0.030**
S_{ds}:	**0.205**	**S_{d1}:**	**0.102**		

Load Cases

1.2D + 1.6W	**97 mph with No Ice**
0.9D + 1.6W	**97 mph with No Ice (Reduced DL)**
1.2D + 1.0Di + 1.0Wi	**50 mph with 0.75 in Radial Ice**
(1.2 + 0.2Sds) * DL + E ELFM	**Seismic Equivalent Lateral Forces Method**
(1.2 + 0.2Sds) * DL + E EMAM	**Seismic Equivalent Modal Analysis Method**
(0.9 - 0.2Sds) * DL + E ELFM	**Seismic (Reduced DL) Equivalent Lateral Forces Method**
(0.9 - 0.2Sds) * DL + E EMAM	**Seismic (Reduced DL) Equivalent Modal Analysis Method**
1.0D + 1.0W	**Serviceability 60 mph**

Site Number: 283423 | Code: ANSI/TIA-222-G |

Site Name: NAUGATUCK CT, CT | Engineering Number:13000540_C3_03 | 11/19/2019 9:38:25 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)
1-18	42.250	0.3125	65		0.00	7,309	57.00	0.00	56.22	22827.4	30.40	182.40	46.13	42.25	45.45	12056.0	24.27	147.63	0.257182
2-18	43.000	0.3125	65	Slip	81.00	6,190	48.49	35.50	47.79	14017.3	25.60	155.18	37.43	78.50	36.82	6411.4	19.36	119.80	0.257182
3-18	46.000	0.2188	65	Slip	66.00	3,604	39.28	73.00	27.13	5232.5	29.90	179.56	27.45	119.00	18.92	1773.3	20.36	125.49	0.257182
				Shaft Weight		17,103													

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
119.00	Raycap DC6-48-60-18-8F	4	0.75	-1.000	20.00	1.260	0.50	71.53	1.904	0.50
119.00	Ericsson RRUS 4478 B14 (15")	3	0.75	-1.000	59.40	1.650	0.50	108.04	2.479	0.50
119.00	Ericsson RRUS 32 (50.8 lbs)	3	0.75	-1.000	50.80	2.690	0.67	120.80	3.820	0.67
119.00	Ericsson RRUS 32 B66A	3	0.75	0.000	50.70	2.720	0.67	122.43	3.859	0.67
119.00	Ericsson RRUS 32 B2	3	0.75	0.000	53.00	2.740	0.67	124.98	3.883	0.67
119.00	Ericsson RRUS-11	9	0.75	-1.000	55.00	3.790	0.61	142.86	5.046	0.61
119.00	CCI HPA-65R-BUU-H8	9	0.75	-1.000	68.00	12.980	0.67	319.48	16.485	0.67
119.00	Kathrein Scala 80010966	3	0.75	-1.000	114.60	17.360	0.63	428.87	20.970	0.63
118.00	Round Platform w/ Handrails	1	1.00	0.000	2,000.00	27.200	1.00	3,266.03	51.083	1.00
106.00	Commscope CBC78T-DS-43-2X	3	0.80	0.000	20.70	0.550	0.50	42.07	1.040	0.50
106.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.880	0.50	125.64	2.756	0.50
106.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.880	0.50	146.12	2.756	0.50
106.00	Raycap RCMDC-6627-PF-48	2	0.80	0.000	32.00	4.060	0.79	154.95	5.382	0.79
106.00	Commscope JAHH-65B-R3B	4	0.80	2.000	60.60	9.110	0.69	256.31	11.793	0.69
106.00	Commscope JAHH-45B-R3B	2	0.80	2.000	83.80	11.400	0.73	304.85	14.097	0.73
106.00	Round Low Profile Platform	1	1.00	0.000	1,500.00	21.700	1.00	2,126.77	40.273	1.00
Totals	Num Loadings:16	56			6,672.70			15,441.69		

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	119.00	4	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	119.00	2	0.40" (10.3mm) Fiber	0.40	0.09	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	119.00	8	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	119.00	3	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	106.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	106.00	1	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS

Segment Properties (Max Len : 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.3125	57.000	56.225	22,827.4	30.40	182.40	65.6	788.8	0.0	0.0
5.00		0.3125	55.714	54.949	21,308.9	29.67	178.29	66.5	753.3	0.0	945.8
10.00		0.3125	54.428	53.674	19,859.3	28.95	174.17	67.4	718.7	0.0	924.1
15.00		0.3125	53.142	52.399	18,477.0	28.22	170.06	68.2	684.8	0.0	902.4
20.00		0.3125	51.856	51.123	17,160.3	27.50	165.94	69.1	651.8	0.0	880.7
25.00		0.3125	50.570	49.848	15,907.8	26.77	161.83	69.9	619.6	0.0	859.0
30.00		0.3125	49.285	48.572	14,717.7	26.05	157.71	70.8	588.2	0.0	837.3
35.00		0.3125	47.999	47.297	13,588.5	25.32	153.60	71.6	557.6	0.0	815.6
35.50	Bot - Section 2	0.3125	47.870	47.169	13,478.9	25.25	153.18	71.7	554.6	0.0	80.4
40.00		0.3125	46.713	46.022	12,518.6	24.59	149.48	72.5	527.8	0.0	1,436.5
42.25	Top - Section 1	0.3125	46.759	46.068	12,556.1	24.62	149.63	72.4	528.9	0.0	705.1
45.00		0.3125	46.052	45.366	11,991.2	24.22	147.37	72.9	512.9	0.0	427.8
50.00		0.3125	44.766	44.091	11,008.0	23.50	143.25	73.8	484.3	0.0	761.0
55.00		0.3125	43.480	42.815	10,080.1	22.77	139.14	74.6	456.6	0.0	739.3
60.00		0.3125	42.194	41.540	9,205.9	22.04	135.02	75.5	429.7	0.0	717.6
65.00		0.3125	40.908	40.264	8,383.7	21.32	130.91	76.3	403.7	0.0	695.9
70.00		0.3125	39.622	38.989	7,612.0	20.59	126.79	77.2	378.4	0.0	674.2
73.00	Bot - Section 3	0.3125	38.851	38.224	7,172.5	20.16	124.32	77.7	363.6	0.0	394.1
75.00		0.3125	38.336	37.714	6,889.1	19.87	122.68	78.0	353.9	0.0	441.8
78.50	Top - Section 2	0.2188	37.874	26.149	4,684.5	28.76	173.10	67.6	243.6	0.0	759.0
80.00		0.2188	37.488	25.882	4,542.0	28.45	171.33	67.9	238.6	0.0	132.8
85.00		0.2188	36.202	24.989	4,087.9	27.41	165.46	69.2	222.4	0.0	432.7
90.00		0.2188	34.916	24.096	3,665.1	26.38	159.58	70.4	206.7	0.0	417.6
95.00		0.2188	33.630	23.203	3,272.5	25.34	153.70	71.6	191.7	0.0	402.4
100.0		0.2188	32.344	22.310	2,909.0	24.30	147.83	72.8	177.1	0.0	387.2
105.0		0.2188	31.059	21.417	2,573.5	23.27	141.95	74.0	163.2	0.0	372.0
106.0		0.2188	30.801	21.238	2,509.6	23.06	140.77	74.3	160.5	0.0	72.6
110.0		0.2188	29.773	20.524	2,264.8	22.23	136.07	75.3	149.8	0.0	284.2
115.0		0.2188	28.487	19.631	1,981.9	21.19	130.20	76.5	137.0	0.0	341.6
118.0		0.2188	27.715	19.095	1,824.0	20.57	126.67	77.2	129.6	0.0	197.7
119.0		0.2188	27.458	18.916	1,773.3	20.36	125.49	77.4	127.2	0.0	64.7
											17,102.5

Site Number: 283423 | Code: ANSI/TIA-222-G |

Site Name: NAUGATUCK CT, CT | Engineering Number:13000540_C3_03 | 11/19/2019 9:38:25 AM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.6W | 97 mph with No Ice | 19 Iterations

Gust Response Factor :1.10 | Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		218.5	0.0					0.0	0.0	218.5	0.0	0.0	0.0
5.00		431.9	1,134.9					0.0	72.3	431.9	1,207.2	0.0	0.0
10.00		422.0	1,108.9					0.0	72.3	422.0	1,181.2	0.0	0.0
15.00		412.0	1,082.8					0.0	72.3	412.0	1,155.1	0.0	0.0
20.00		402.0	1,056.8					0.0	72.3	402.0	1,129.1	0.0	0.0
25.00		392.1	1,030.7					0.0	72.3	392.1	1,103.0	0.0	0.0
30.00		386.6	1,004.7					0.0	72.3	386.6	1,077.0	0.0	0.0
35.00		212.6	978.7					0.0	72.3	212.6	1,051.0	0.0	0.0
35.50	Bot - Section 2	198.1	96.4					0.0	7.2	198.1	103.7	0.0	0.0
40.00		268.6	1,723.8					0.0	65.1	268.6	1,788.8	0.0	0.0
42.25	Top - Section 1	200.1	846.1					0.0	32.5	200.1	878.6	0.0	0.0
45.00		311.1	513.4					0.0	39.8	311.1	553.1	0.0	0.0
50.00		401.8	913.2					0.0	72.3	401.8	985.5	0.0	0.0
55.00		401.0	887.2					0.0	72.3	401.0	959.5	0.0	0.0
60.00		399.0	861.1					0.0	72.3	399.0	933.4	0.0	0.0
65.00		395.8	835.1					0.0	72.3	395.8	907.4	0.0	0.0
70.00		314.0	809.0					0.0	72.3	314.0	881.3	0.0	0.0
73.00	Bot - Section 3	195.5	472.9					0.0	43.4	195.5	516.3	0.0	0.0
75.00		214.5	530.2					0.0	28.9	214.5	559.1	0.0	0.0
78.50	Top - Section 2	194.0	910.8					0.0	50.6	194.0	961.4	0.0	0.0
80.00		248.7	159.3					0.0	21.7	248.7	181.0	0.0	0.0
85.00		378.2	519.3					0.0	72.3	378.2	591.6	0.0	0.0
90.00		370.8	501.1					0.0	72.3	370.8	573.4	0.0	0.0
95.00		362.7	482.8					0.0	72.3	362.7	555.1	0.0	0.0
100.00		353.9	464.6					0.0	72.3	353.9	536.9	0.0	0.0
105.00		209.1	446.4					0.0	72.3	209.1	518.7	0.0	0.0
106.00	Appurtenance(s)	169.9	87.1	2,655.2	0.0	2,720.2	3,000.2	0.0	14.5	2,825.1	3,101.8	0.0	0.0
110.00		300.4	341.1					0.0	28.0	300.4	369.0	0.0	0.0
115.00		261.3	409.9					0.0	35.0	261.3	444.9	0.0	0.0
118.00	Appurtenance(s)	128.1	237.2	1,135.0	0.0	0.0	2,400.0	0.0	21.0	1,263.1	2,658.2	0.0	0.0
119.00	Appurtenance(s)	31.7	77.6	4,797.2	0.0	-4,453.0	2,607.0	0.0	7.0	4,828.9	2,691.6	0.0	0.0
								Totals:		17,773.2	30,153.9	0.00	0.00

Load Case: 1.2D + 1.6W — 97 mph with No Ice — 19 Iterations

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-30.14	-17.58	0.00	-1,545.21	0.00	1,545.21	3,321.87	1,660.94	7,755.70	3,883.62	0.00	0.00	0.407
5.00	-28.90	-17.19	0.00	-1,457.31	0.00	1,457.31	3,288.72	1,644.36	7,503.17	3,757.16	0.05	-0.09	0.397
10.00	-27.70	-16.82	0.00	-1,371.34	0.00	1,371.34	3,253.61	1,626.81	7,249.81	3,630.29	0.20	-0.19	0.386
15.00	-26.52	-16.44	0.00	-1,287.27	0.00	1,287.27	3,216.54	1,608.27	6,995.93	3,503.16	0.45	-0.28	0.376
20.00	-25.36	-16.08	0.00	-1,205.06	0.00	1,205.06	3,177.52	1,588.76	6,741.83	3,375.93	0.80	-0.38	0.365
25.00	-24.24	-15.72	0.00	-1,124.68	0.00	1,124.68	3,136.53	1,568.26	6,487.84	3,248.74	1.25	-0.48	0.354
30.00	-23.14	-15.36	0.00	-1,046.09	0.00	1,046.09	3,093.58	1,546.79	6,234.27	3,121.77	1.80	-0.57	0.343
35.00	-22.07	-15.16	0.00	-969.29	0.00	969.29	3,048.68	1,524.34	5,981.43	2,995.16	2.45	-0.67	0.331
35.50	-21.96	-14.98	0.00	-961.71	0.00	961.71	3,044.08	1,522.04	5,956.20	2,982.53	2.52	-0.68	0.330
40.00	-20.16	-14.71	0.00	-894.32	0.00	894.32	3,001.81	1,500.91	5,729.64	2,869.08	3.21	-0.77	0.319
42.25	-19.27	-14.51	0.00	-861.23	0.00	861.23	3,003.54	1,501.77	5,738.69	2,873.61	3.58	-0.81	0.306
45.00	-18.70	-14.22	0.00	-821.32	0.00	821.32	2,976.96	1,488.48	5,600.73	2,804.53	4.06	-0.87	0.299
50.00	-17.70	-13.83	0.00	-750.23	0.00	750.23	2,927.13	1,463.57	5,351.11	2,679.53	5.02	-0.96	0.286
55.00	-16.73	-13.44	0.00	-681.08	0.00	681.08	2,875.34	1,437.67	5,103.32	2,555.45	6.08	-1.05	0.272
60.00	-15.78	-13.05	0.00	-613.89	0.00	613.89	2,821.60	1,410.80	4,857.67	2,432.44	7.23	-1.14	0.258
65.00	-14.86	-12.65	0.00	-548.66	0.00	548.66	2,765.89	1,382.94	4,614.48	2,310.67	8.48	-1.23	0.243
70.00	-13.97	-12.34	0.00	-485.39	0.00	485.39	2,708.22	1,354.11	4,374.05	2,190.28	9.82	-1.32	0.227
73.00	-13.45	-12.14	0.00	-448.38	0.00	448.38	2,672.68	1,336.34	4,231.26	2,118.77	10.67	-1.37	0.217
75.00	-12.89	-11.92	0.00	-424.09	0.00	424.09	2,648.59	1,324.30	4,136.71	2,071.43	11.25	-1.41	0.210
78.50	-11.92	-11.71	0.00	-382.36	0.00	382.36	1,590.36	795.18	2,465.70	1,234.68	12.31	-1.47	0.317
80.00	-11.74	-11.47	0.00	-364.79	0.00	364.79	1,582.58	791.29	2,428.36	1,215.98	12.78	-1.49	0.308
85.00	-11.13	-11.10	0.00	-307.42	0.00	307.42	1,555.39	777.69	2,303.81	1,153.62	14.40	-1.60	0.274
90.00	-10.55	-10.73	0.00	-251.92	0.00	251.92	1,526.24	763.12	2,179.35	1,091.30	16.12	-1.70	0.238
95.00	-10.00	-10.36	0.00	-198.27	0.00	198.27	1,495.12	747.56	2,055.31	1,029.18	17.95	-1.78	0.200
100.00	-9.46	-10.01	0.00	-146.45	0.00	146.45	1,462.05	731.03	1,931.99	967.43	19.86	-1.86	0.158
105.00	-8.94	-9.78	0.00	-96.42	0.00	96.42	1,427.02	713.51	1,809.71	906.20	21.84	-1.92	0.113
106.00	-5.93	-6.86	0.00	-83.92	0.00	83.92	1,419.78	709.89	1,785.41	894.03	22.24	-1.93	0.098
110.00	-5.57	-6.55	0.00	-56.49	0.00	56.49	1,390.04	695.02	1,688.79	845.65	23.87	-1.96	0.071
115.00	-5.14	-6.27	0.00	-23.74	0.00	23.74	1,351.09	675.54	1,569.52	785.93	25.94	-1.98	0.034
118.00	-2.52	-4.92	0.00	-4.92	0.00	4.92	1,326.78	663.39	1,498.89	750.56	27.19	-1.99	0.009
119.00	0.00	-4.83	0.00	0.00	0.00	0.00	1,318.52	659.26	1,475.52	738.86	27.60	-1.99	0.000

Site Number: 283423 | Code: ANSI/TIA-222-G |

Site Name: NAUGATUCK CT, CT | Engineering Number:13000540_C3_03 | 11/19/2019 9:38:27 AM

Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.6W | 97 mph with No Ice (Reduced DL) | 19 Iterations

Gust Response Factor :1.10 | Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		218.5	0.0					0.0	0.0	218.5	0.0	0.0	0.0
5.00		431.9	851.2					0.0	54.2	431.9	905.4	0.0	0.0
10.00		422.0	831.6					0.0	54.2	422.0	885.9	0.0	0.0
15.00		412.0	812.1					0.0	54.2	412.0	866.3	0.0	0.0
20.00		402.0	792.6					0.0	54.2	402.0	846.8	0.0	0.0
25.00		392.1	773.1					0.0	54.2	392.1	827.3	0.0	0.0
30.00		386.6	753.5					0.0	54.2	386.6	807.8	0.0	0.0
35.00		212.6	734.0					0.0	54.2	212.6	788.2	0.0	0.0
35.50	Bot - Section 2	198.1	72.3					0.0	5.4	198.1	77.7	0.0	0.0
40.00		268.6	1,292.8					0.0	48.8	268.6	1,341.6	0.0	0.0
42.25	Top - Section 1	200.1	634.6					0.0	24.4	200.1	659.0	0.0	0.0
45.00		311.1	385.0					0.0	29.8	311.1	414.8	0.0	0.0
50.00		401.8	684.9					0.0	54.2	401.8	739.1	0.0	0.0
55.00		401.0	665.4					0.0	54.2	401.0	719.6	0.0	0.0
60.00		399.0	645.8					0.0	54.2	399.0	700.1	0.0	0.0
65.00		395.8	626.3					0.0	54.2	395.8	680.5	0.0	0.0
70.00		314.0	606.8					0.0	54.2	314.0	661.0	0.0	0.0
73.00	Bot - Section 3	195.5	354.7					0.0	32.5	195.5	387.2	0.0	0.0
75.00		214.5	397.6					0.0	21.7	214.5	419.3	0.0	0.0
78.50	Top - Section 2	194.0	683.1					0.0	38.0	194.0	721.1	0.0	0.0
80.00		248.7	119.5					0.0	16.3	248.7	135.8	0.0	0.0
85.00		378.2	389.5					0.0	54.2	378.2	443.7	0.0	0.0
90.00		370.8	375.8					0.0	54.2	370.8	430.0	0.0	0.0
95.00		362.7	362.1					0.0	54.2	362.7	416.4	0.0	0.0
100.00		353.9	348.5					0.0	54.2	353.9	402.7	0.0	0.0
105.00		209.1	334.8					0.0	54.2	209.1	389.0	0.0	0.0
106.00	Appurtenance(s)	169.9	65.3	2,655.2	0.0	2,720.2	2,250.2	0.0	10.8	2,825.1	2,326.3	0.0	0.0
110.00		300.4	255.8					0.0	21.0	300.4	276.8	0.0	0.0
115.00		261.3	307.4					0.0	26.2	261.3	333.7	0.0	0.0
118.00	Appurtenance(s)	128.1	177.9	1,135.0	0.0	0.0	1,800.0	0.0	15.7	1,263.1	1,993.6	0.0	0.0
119.00	Appurtenance(s)	31.7	58.2	4,797.2	0.0	-4,453.0	1,955.2	0.0	5.2	4,828.9	2,018.7	0.0	0.0
									Totals:	17,773.2	22,615.4	0.00	0.00

Site Number: 283423 | Code: ANSI/TIA-222-G |

Site Name: NAUGATUCK CT, CT | Engineering Number:13000540_C3_03 | 11/19/2019 9:38:28 AM

Customer: VERIZON WIRELESS

Load Case: 0.9D + 1.6W | 97 mph with No Ice (Reduced DL) | 19 Iterations

Gust Response Factor :1.10 | Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-22.60	-17.57	0.00	-1,537.48	0.00	1,537.48	3,321.87	1,660.94	7,755.70	3,883.62	0.00	0.00	0.403
5.00	-21.67	-17.18	0.00	-1,449.62	0.00	1,449.62	3,288.72	1,644.36	7,503.17	3,757.16	0.05	-0.09	0.393
10.00	-20.76	-16.79	0.00	-1,363.74	0.00	1,363.74	3,253.61	1,626.81	7,249.81	3,630.29	0.20	-0.19	0.382
15.00	-19.86	-16.40	0.00	-1,279.81	0.00	1,279.81	3,216.54	1,608.27	6,995.93	3,503.16	0.45	-0.28	0.372
20.00	-18.99	-16.03	0.00	-1,197.80	0.00	1,197.80	3,177.52	1,588.76	6,741.83	3,375.93	0.79	-0.38	0.361
25.00	-18.14	-15.66	0.00	-1,117.66	0.00	1,117.66	3,136.53	1,568.26	6,487.84	3,248.74	1.24	-0.47	0.350
30.00	-17.31	-15.30	0.00	-1,039.36	0.00	1,039.36	3,093.58	1,546.79	6,234.27	3,121.77	1.79	-0.57	0.339
35.00	-16.51	-15.09	0.00	-962.88	0.00	962.88	3,048.68	1,524.34	5,981.43	2,995.16	2.44	-0.67	0.327
35.50	-16.42	-14.90	0.00	-955.33	0.00	955.33	3,044.08	1,522.04	5,956.20	2,982.53	2.51	-0.68	0.326
40.00	-15.07	-14.64	0.00	-888.26	0.00	888.26	3,001.81	1,500.91	5,729.64	2,869.08	3.19	-0.76	0.315
42.25	-14.40	-14.44	0.00	-855.33	0.00	855.33	3,003.54	1,501.77	5,738.69	2,873.61	3.56	-0.81	0.303
45.00	-13.97	-14.14	0.00	-815.62	0.00	815.62	2,976.96	1,488.48	5,600.73	2,804.53	4.04	-0.86	0.296
50.00	-13.22	-13.75	0.00	-744.92	0.00	744.92	2,927.13	1,463.57	5,351.11	2,679.53	4.99	-0.96	0.283
55.00	-12.48	-13.36	0.00	-676.17	0.00	676.17	2,875.34	1,437.67	5,103.32	2,555.45	6.04	-1.05	0.269
60.00	-11.77	-12.96	0.00	-609.40	0.00	609.40	2,821.60	1,410.80	4,857.67	2,432.44	7.19	-1.14	0.255
65.00	-11.08	-12.57	0.00	-544.59	0.00	544.59	2,765.89	1,382.94	4,614.48	2,310.67	8.43	-1.23	0.240
70.00	-10.41	-12.25	0.00	-481.75	0.00	481.75	2,708.22	1,354.11	4,374.05	2,190.28	9.76	-1.31	0.224
73.00	-10.02	-12.06	0.00	-444.99	0.00	444.99	2,672.68	1,336.34	4,231.26	2,118.77	10.61	-1.37	0.214
75.00	-9.60	-11.84	0.00	-420.88	0.00	420.88	2,648.59	1,324.30	4,136.71	2,071.43	11.19	-1.40	0.207
78.50	-8.87	-11.63	0.00	-379.44	0.00	379.44	1,590.36	795.18	2,465.70	1,234.68	12.23	-1.46	0.313
80.00	-8.73	-11.39	0.00	-361.99	0.00	361.99	1,582.58	791.29	2,428.36	1,215.98	12.70	-1.48	0.303
85.00	-8.28	-11.02	0.00	-305.04	0.00	305.04	1,555.39	777.69	2,303.81	1,153.62	14.31	-1.59	0.270
90.00	-7.84	-10.65	0.00	-249.96	0.00	249.96	1,526.24	763.12	2,179.35	1,091.30	16.02	-1.68	0.234
95.00	-7.42	-10.28	0.00	-196.73	0.00	196.73	1,495.12	747.56	2,055.31	1,029.18	17.83	-1.77	0.196
100.00	-7.02	-9.92	0.00	-145.33	0.00	145.33	1,462.05	731.03	1,931.99	967.43	19.73	-1.84	0.155
105.00	-6.63	-9.70	0.00	-95.71	0.00	95.71	1,427.02	713.51	1,809.71	906.20	21.70	-1.90	0.110
106.00	-4.40	-6.81	0.00	-83.29	0.00	83.29	1,419.78	709.89	1,785.41	894.03	22.10	-1.91	0.096
110.00	-4.13	-6.50	0.00	-56.07	0.00	56.07	1,390.04	695.02	1,688.79	845.65	23.72	-1.95	0.069
115.00	-3.80	-6.23	0.00	-23.58	0.00	23.58	1,351.09	675.54	1,569.52	785.93	25.77	-1.97	0.033
118.00	-1.85	-4.90	0.00	-4.90	0.00	4.90	1,326.78	663.39	1,498.89	750.56	27.01	-1.98	0.008
119.00	0.00	-4.83	0.00	0.00	0.00	0.00	1,318.52	659.26	1,475.52	738.86	27.42	-1.98	0.000

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph with 0.75 in Radial Ice — 18 Iterations

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

Applied Segment Forces Summary

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		69.7	0.0					0.0	0.0	69.7	0.0	0.0	0.0
5.00		138.2	1,547.8					0.0	72.3	138.2	1,620.1	0.0	0.0
10.00		135.6	1,560.4					0.0	72.3	135.6	1,632.7	0.0	0.0
15.00		132.8	1,547.6					0.0	72.3	132.8	1,619.9	0.0	0.0
20.00		129.9	1,526.5					0.0	72.3	129.9	1,598.8	0.0	0.0
25.00		127.0	1,501.1					0.0	72.3	127.0	1,573.4	0.0	0.0
30.00		125.6	1,473.0					0.0	72.3	125.6	1,545.3	0.0	0.0
35.00		69.1	1,443.0					0.0	72.3	69.1	1,515.3	0.0	0.0
35.50	Bot - Section 2	64.5	143.1					0.0	7.2	64.5	150.4	0.0	0.0
40.00		87.5	2,142.5					0.0	65.1	87.5	2,207.6	0.0	0.0
42.25	Top - Section 1	65.3	1,054.8					0.0	32.5	65.3	1,087.3	0.0	0.0
45.00		101.7	766.3					0.0	39.8	101.7	806.0	0.0	0.0
50.00		131.6	1,364.5					0.0	72.3	131.6	1,436.8	0.0	0.0
55.00		131.7	1,330.5					0.0	72.3	131.7	1,402.8	0.0	0.0
60.00		131.4	1,295.9					0.0	72.3	131.4	1,368.2	0.0	0.0
65.00		130.7	1,260.8					0.0	72.3	130.7	1,333.1	0.0	0.0
70.00		103.9	1,225.1					0.0	72.3	103.9	1,297.4	0.0	0.0
73.00	Bot - Section 3	64.8	719.4					0.0	43.4	64.8	762.8	0.0	0.0
75.00		71.2	694.8					0.0	28.9	71.2	723.7	0.0	0.0
78.50	Top - Section 2	64.5	1,193.5					0.0	50.6	64.5	1,244.1	0.0	0.0
80.00		82.9	279.7					0.0	21.7	82.9	301.4	0.0	0.0
85.00		126.3	908.9					0.0	72.3	126.3	981.2	0.0	0.0
90.00		124.3	879.8					0.0	72.3	124.3	952.1	0.0	0.0
95.00		122.0	850.3					0.0	72.3	122.0	922.6	0.0	0.0
100.00		119.6	820.7					0.0	72.3	119.6	893.0	0.0	0.0
105.00		70.8	790.8					0.0	72.3	70.8	863.1	0.0	0.0
106.00	Appurtenance(s)	57.8	155.6	656.4	0.0	574.3	4,653.3	0.0	14.5	714.1	4,823.4	0.0	0.0
110.00		102.5	607.2					0.0	28.0	102.5	635.2	0.0	0.0
115.00		89.4	730.4					0.0	35.0	89.4	765.3	0.0	0.0
118.00	Appurtenance(s)	44.0	425.2	354.0	0.0	0.0	3,266.0	0.0	21.0	397.9	3,712.3	0.0	0.0
119.00	Appurtenance(s)	10.9	139.9	1,026.6	0.0	-945.6	6,117.3	0.0	7.0	1,037.5	6,264.1	0.0	0.0
								Totals:		5,064.57	46,039.3	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph with 0.75 in Radial Ice 18 Iterations

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-46.04	-5.00	0.00	-423.06	0.00	423.06	3,321.87	1,660.94	7,755.70	3,883.62	0.00	0.00	0.123
5.00	-44.42	-4.89	0.00	-398.04	0.00	398.04	3,288.72	1,644.36	7,503.17	3,757.16	0.01	-0.03	0.119
10.00	-42.78	-4.77	0.00	-373.61	0.00	373.61	3,253.61	1,626.81	7,249.81	3,630.29	0.05	-0.05	0.116
15.00	-41.16	-4.65	0.00	-349.77	0.00	349.77	3,216.54	1,608.27	6,995.93	3,503.16	0.12	-0.08	0.113
20.00	-39.56	-4.54	0.00	-326.51	0.00	326.51	3,177.52	1,588.76	6,741.83	3,375.93	0.22	-0.10	0.109
25.00	-37.98	-4.43	0.00	-303.82	0.00	303.82	3,136.53	1,568.26	6,487.84	3,248.74	0.34	-0.13	0.106
30.00	-36.44	-4.31	0.00	-281.69	0.00	281.69	3,093.58	1,546.79	6,234.27	3,121.77	0.49	-0.16	0.102
35.00	-34.92	-4.25	0.00	-260.13	0.00	260.13	3,048.68	1,524.34	5,981.43	2,995.16	0.67	-0.18	0.098
35.50	-34.77	-4.19	0.00	-258.01	0.00	258.01	3,044.08	1,522.04	5,956.20	2,982.53	0.69	-0.18	0.098
40.00	-32.56	-4.11	0.00	-239.15	0.00	239.15	3,001.81	1,500.91	5,729.64	2,869.08	0.87	-0.21	0.094
42.25	-31.47	-4.04	0.00	-229.91	0.00	229.91	3,003.54	1,501.77	5,738.69	2,873.61	0.97	-0.22	0.090
45.00	-30.67	-3.95	0.00	-218.79	0.00	218.79	2,976.96	1,488.48	5,600.73	2,804.53	1.10	-0.23	0.088
50.00	-29.23	-3.82	0.00	-199.05	0.00	199.05	2,927.13	1,463.57	5,351.11	2,679.53	1.36	-0.26	0.084
55.00	-27.82	-3.70	0.00	-179.93	0.00	179.93	2,875.34	1,437.67	5,103.32	2,555.45	1.65	-0.28	0.080
60.00	-26.46	-3.57	0.00	-161.44	0.00	161.44	2,821.60	1,410.80	4,857.67	2,432.44	1.96	-0.31	0.076
65.00	-25.12	-3.44	0.00	-143.59	0.00	143.59	2,765.89	1,382.94	4,614.48	2,310.67	2.29	-0.33	0.071
70.00	-23.82	-3.34	0.00	-126.38	0.00	126.38	2,708.22	1,354.11	4,374.05	2,190.28	2.65	-0.35	0.067
73.00	-23.06	-3.27	0.00	-116.37	0.00	116.37	2,672.68	1,336.34	4,231.26	2,118.77	2.88	-0.37	0.064
75.00	-22.34	-3.20	0.00	-109.82	0.00	109.82	2,648.59	1,324.30	4,136.71	2,071.43	3.04	-0.38	0.061
78.50	-21.09	-3.13	0.00	-98.62	0.00	98.62	1,590.36	795.18	2,465.70	1,234.68	3.32	-0.39	0.093
80.00	-20.79	-3.05	0.00	-93.92	0.00	93.92	1,582.58	791.29	2,428.36	1,215.98	3.44	-0.40	0.090
85.00	-19.81	-2.93	0.00	-78.65	0.00	78.65	1,555.39	777.69	2,303.81	1,153.62	3.88	-0.43	0.081
90.00	-18.86	-2.81	0.00	-64.00	0.00	64.00	1,526.24	763.12	2,179.35	1,091.30	4.34	-0.45	0.071
95.00	-17.93	-2.68	0.00	-49.97	0.00	49.97	1,495.12	747.56	2,055.31	1,029.18	4.82	-0.47	0.061
100.00	-17.04	-2.56	0.00	-36.56	0.00	36.56	1,462.05	731.03	1,931.99	967.43	5.33	-0.49	0.049
105.00	-16.18	-2.48	0.00	-23.76	0.00	23.76	1,427.02	713.51	1,809.71	906.20	5.85	-0.51	0.038
106.00	-11.36	-1.73	0.00	-20.70	0.00	20.70	1,419.78	709.89	1,785.41	894.03	5.96	-0.51	0.031
110.00	-10.73	-1.62	0.00	-13.78	0.00	13.78	1,390.04	695.02	1,688.79	845.65	6.38	-0.52	0.024
115.00	-9.96	-1.53	0.00	-5.67	0.00	5.67	1,351.09	675.54	1,569.52	785.93	6.93	-0.52	0.015
118.00	-6.25	-1.09	0.00	-1.09	0.00	1.09	1,326.78	663.39	1,498.89	750.56	7.26	-0.52	0.006
119.00	0.00	-1.04	0.00	0.00	0.00	0.00	1,318.52	659.26	1,475.52	738.86	7.37	-0.52	0.000

Load Case: 1.0D + 1.0W | Serviceability 60 mph | 18 Iterations

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

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		46.7	0.0					0.0	0.0	46.7	0.0	0.0	0.0
5.00		92.4	945.8					0.0	60.2	92.4	1,006.0	0.0	0.0
10.00		90.3	924.1					0.0	60.2	90.3	984.3	0.0	0.0
15.00		88.2	902.4					0.0	60.2	88.2	962.6	0.0	0.0
20.00		86.0	880.7					0.0	60.2	86.0	940.9	0.0	0.0
25.00		83.9	859.0					0.0	60.2	83.9	919.2	0.0	0.0
30.00		82.7	837.3					0.0	60.2	82.7	897.5	0.0	0.0
35.00		45.5	815.6					0.0	60.2	45.5	875.8	0.0	0.0
35.50	Bot - Section 2	42.4	80.4					0.0	6.0	42.4	86.4	0.0	0.0
40.00		57.5	1,436.5					0.0	54.2	57.5	1,490.7	0.0	0.0
42.25	Top - Section 1	42.8	705.1					0.0	27.1	42.8	732.2	0.0	0.0
45.00		66.6	427.8					0.0	33.1	66.6	460.9	0.0	0.0
50.00		86.0	761.0					0.0	60.2	86.0	821.3	0.0	0.0
55.00		85.8	739.3					0.0	60.2	85.8	799.6	0.0	0.0
60.00		85.4	717.6					0.0	60.2	85.4	777.9	0.0	0.0
65.00		84.7	695.9					0.0	60.2	84.7	756.2	0.0	0.0
70.00		67.2	674.2					0.0	60.2	67.2	734.5	0.0	0.0
73.00	Bot - Section 3	41.8	394.1					0.0	36.1	41.8	430.3	0.0	0.0
75.00		45.9	441.8					0.0	24.1	45.9	465.9	0.0	0.0
78.50	Top - Section 2	41.5	759.0					0.0	42.2	41.5	801.2	0.0	0.0
80.00		53.2	132.8					0.0	18.1	53.2	150.9	0.0	0.0
85.00		80.9	432.7					0.0	60.2	80.9	493.0	0.0	0.0
90.00		79.3	417.6					0.0	60.2	79.3	477.8	0.0	0.0
95.00		77.6	402.4					0.0	60.2	77.6	462.6	0.0	0.0
100.00		75.7	387.2					0.0	60.2	75.7	447.4	0.0	0.0
105.00		44.7	372.0					0.0	60.2	44.7	432.2	0.0	0.0
106.00	Appurtenance(s)	36.4	72.6	568.1	0.0	582.0	2,500.2	0.0	12.0	604.5	2,584.8	0.0	0.0
110.00		64.3	284.2					0.0	23.3	64.3	307.5	0.0	0.0
115.00		55.9	341.6					0.0	29.1	55.9	370.7	0.0	0.0
118.00	Appurtenance(s)	27.4	197.7	242.8	0.0	0.0	2,000.0	0.0	17.5	270.2	2,215.2	0.0	0.0
119.00	Appurtenance(s)	6.8	64.7	1,026.4	0.0	-952.8	2,172.5	0.0	5.8	1,033.2	2,243.0	0.0	0.0
								Totals:		3,802.79	25,128.3	0.00	0.00

Site Number: 283423 | Code: ANSI/TIA-222-G |

Site Name: NAUGATUCK CT, CT | Engineering Number:13000540_C3_03 | 11/19/2019 9:38:31 AM

Customer: VERIZON WIRELESS

Load Case: 1.0D + 1.0W | Serviceability 60 mph | 18 Iterations

Gust Response Factor :1.10 | Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-25.13	-3.76	0.00	-329.52	0.00	329.52	3,321.87	1,660.94	7,755.70	3,883.62	0.00	0.00	0.092
5.00	-24.12	-3.68	0.00	-310.72	0.00	310.72	3,288.72	1,644.36	7,503.17	3,757.16	0.01	-0.02	0.090
10.00	-23.13	-3.59	0.00	-292.34	0.00	292.34	3,253.61	1,626.81	7,249.81	3,630.29	0.04	-0.04	0.088
15.00	-22.17	-3.51	0.00	-274.38	0.00	274.38	3,216.54	1,608.27	6,995.93	3,503.16	0.10	-0.06	0.085
20.00	-21.23	-3.43	0.00	-256.82	0.00	256.82	3,177.52	1,588.76	6,741.83	3,375.93	0.17	-0.08	0.083
25.00	-20.31	-3.35	0.00	-239.66	0.00	239.66	3,136.53	1,568.26	6,487.84	3,248.74	0.27	-0.10	0.080
30.00	-19.41	-3.28	0.00	-222.89	0.00	222.89	3,093.58	1,546.79	6,234.27	3,121.77	0.38	-0.12	0.078
35.00	-18.53	-3.23	0.00	-206.50	0.00	206.50	3,048.68	1,524.34	5,981.43	2,995.16	0.52	-0.14	0.075
35.50	-18.45	-3.19	0.00	-204.89	0.00	204.89	3,044.08	1,522.04	5,956.20	2,982.53	0.54	-0.14	0.075
40.00	-16.96	-3.14	0.00	-190.51	0.00	190.51	3,001.81	1,500.91	5,729.64	2,869.08	0.68	-0.16	0.072
42.25	-16.22	-3.09	0.00	-183.46	0.00	183.46	3,003.54	1,501.77	5,738.69	2,873.61	0.76	-0.17	0.069
45.00	-15.76	-3.03	0.00	-174.95	0.00	174.95	2,976.96	1,488.48	5,600.73	2,804.53	0.87	-0.18	0.068
50.00	-14.94	-2.95	0.00	-159.79	0.00	159.79	2,927.13	1,463.57	5,351.11	2,679.53	1.07	-0.20	0.065
55.00	-14.14	-2.86	0.00	-145.06	0.00	145.06	2,875.34	1,437.67	5,103.32	2,555.45	1.30	-0.22	0.062
60.00	-13.36	-2.78	0.00	-130.74	0.00	130.74	2,821.60	1,410.80	4,857.67	2,432.44	1.54	-0.24	0.058
65.00	-12.60	-2.70	0.00	-116.84	0.00	116.84	2,765.89	1,382.94	4,614.48	2,310.67	1.81	-0.26	0.055
70.00	-11.87	-2.63	0.00	-103.36	0.00	103.36	2,708.22	1,354.11	4,374.05	2,190.28	2.09	-0.28	0.052
73.00	-11.44	-2.59	0.00	-95.48	0.00	95.48	2,672.68	1,336.34	4,231.26	2,118.77	2.27	-0.29	0.049
75.00	-10.97	-2.54	0.00	-90.31	0.00	90.31	2,648.59	1,324.30	4,136.71	2,071.43	2.40	-0.30	0.048
78.50	-10.17	-2.50	0.00	-81.42	0.00	81.42	1,590.36	795.18	2,465.70	1,234.68	2.62	-0.31	0.072
80.00	-10.02	-2.44	0.00	-77.68	0.00	77.68	1,582.58	791.29	2,428.36	1,215.98	2.72	-0.32	0.070
85.00	-9.53	-2.36	0.00	-65.46	0.00	65.46	1,555.39	777.69	2,303.81	1,153.62	3.07	-0.34	0.063
90.00	-9.05	-2.28	0.00	-53.64	0.00	53.64	1,526.24	763.12	2,179.35	1,091.30	3.44	-0.36	0.055
95.00	-8.59	-2.21	0.00	-42.22	0.00	42.22	1,495.12	747.56	2,055.31	1,029.18	3.82	-0.38	0.047
100.00	-8.14	-2.13	0.00	-31.19	0.00	31.19	1,462.05	731.03	1,931.99	967.43	4.23	-0.40	0.038
105.00	-7.71	-2.08	0.00	-20.54	0.00	20.54	1,427.02	713.51	1,809.71	906.20	4.65	-0.41	0.028
106.00	-5.13	-1.46	0.00	-17.87	0.00	17.87	1,419.78	709.89	1,785.41	894.03	4.74	-0.41	0.024
110.00	-4.82	-1.39	0.00	-12.03	0.00	12.03	1,390.04	695.02	1,688.79	845.65	5.09	-0.42	0.018
115.00	-4.45	-1.34	0.00	-5.06	0.00	5.06	1,351.09	675.54	1,569.52	785.93	5.53	-0.42	0.010
118.00	-2.24	-1.05	0.00	-1.05	0.00	1.05	1,326.78	663.39	1,498.89	750.56	5.79	-0.42	0.003
119.00	0.00	-1.03	0.00	0.00	0.00	0.00	1,318.52	659.26	1,475.52	738.86	5.88	-0.42	0.000

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.19
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}):	0.20
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.05
Upper Limit C_s	0.05
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.43
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.46
Total Unfactored Dead Load:	25.13 k
Seismic Base Shear (E):	1.20 k

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
30	118.50	71	77	0.006	7	87
29	116.50	215	229	0.017	21	267
28	112.50	371	375	0.028	34	460
27	108.00	308	293	0.022	27	382
26	105.50	85	78	0.006	7	105
25	102.50	432	381	0.029	35	536
24	97.50	447	367	0.028	33	555
23	92.50	463	351	0.027	32	574
22	87.50	478	334	0.025	30	593
21	82.50	493	317	0.024	29	612
20	79.25	151	91	0.007	8	187
19	76.75	801	463	0.035	42	994
18	74.00	466	255	0.019	23	578
17	71.50	430	224	0.017	20	534
16	67.50	734	351	0.027	32	911
15	62.50	756	323	0.024	29	938
14	57.50	778	294	0.022	27	965
13	52.50	800	265	0.020	24	992
12	47.50	821	235	0.018	21	1,019
11	43.63	461	116	0.009	11	572
10	41.13	732	170	0.013	15	909
9	37.75	1,491	304	0.023	28	1,850
8	35.25	86	16	0.001	1	107

7	32.50	876	144	0.011	13	1,087
6	27.50	898	115	0.009	10	1,114
5	22.50	919	88	0.007	8	1,141
4	17.50	941	62	0.005	6	1,168
3	12.50	963	39	0.003	4	1,195
2	7.50	984	19	0.001	2	1,221
1	2.50	1,006	4	0.000	0	1,248
Raycap DC6-48-60-18-	119.00	80	88	0.007	8	99
Ericsson RRUS 4478 B	119.00	178	196	0.015	18	221
Ericsson RRUS 32 (50	119.00	152	167	0.013	15	189
Ericsson RRUS 32 B66	119.00	152	167	0.013	15	189
Ericsson RRUS 32 B2	119.00	159	175	0.013	16	197
Ericsson RRUS-11	119.00	495	544	0.041	49	614
CCI HPA-65R-BUU-H8	119.00	612	672	0.051	61	759
Kathrein Scala 80010	119.00	344	378	0.028	34	427
Round Platform w/ Ha	118.00	2,000	2,169	0.164	196	2,482
Commscope CBC78T-DS-	106.00	62	58	0.004	5	77
Samsung B5/B13 RRH-B	106.00	211	195	0.015	18	262
Samsung B2/B66A RRH-	106.00	253	235	0.018	21	314
Raycap RCMDC-6627-PF	106.00	64	59	0.004	5	79
Commscope JAHH-65B-R	106.00	242	225	0.017	20	301
Commscope JAHH-45B-R	106.00	168	155	0.012	14	208
Round Low Profile Pl	106.00	1,500	1,390	0.105	126	1,861
		25,128	13,254	1.000	1,200	31,183

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

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
30	118.50	71	77	0.006	7	61
29	116.50	215	229	0.017	21	185
28	112.50	371	375	0.028	34	318
27	108.00	308	293	0.022	27	264
26	105.50	85	78	0.006	7	73
25	102.50	432	381	0.029	35	371
24	97.50	447	367	0.028	33	384
23	92.50	463	351	0.027	32	397
22	87.50	478	334	0.025	30	410
21	82.50	493	317	0.024	29	424
20	79.25	151	91	0.007	8	130
19	76.75	801	463	0.035	42	688
18	74.00	466	255	0.019	23	400
17	71.50	430	224	0.017	20	370
16	67.50	734	351	0.027	32	631
15	62.50	756	323	0.024	29	650
14	57.50	778	294	0.022	27	668
13	52.50	800	265	0.020	24	687
12	47.50	821	235	0.018	21	705
11	43.63	461	116	0.009	11	396
10	41.13	732	170	0.013	15	629
9	37.75	1,491	304	0.023	28	1,281
8	35.25	86	16	0.001	1	74
7	32.50	876	144	0.011	13	752
6	27.50	898	115	0.009	10	771
5	22.50	919	88	0.007	8	790
4	17.50	941	62	0.005	6	808
3	12.50	963	39	0.003	4	827
2	7.50	984	19	0.001	2	846
1	2.50	1,006	4	0.000	0	864
Raycap DC6-48-60-18-	119.00	80	88	0.007	8	69

Ericsson RRUS 4478 B	119.00	178	196	0.015	18	153
Ericsson RRUS 32 (50	119.00	152	167	0.013	15	131
Ericsson RRUS 32 B66	119.00	152	167	0.013	15	131
Ericsson RRUS 32 B2	119.00	159	175	0.013	16	137
Ericsson RRUS-11	119.00	495	544	0.041	49	425
CCI HPA-65R-BUU-H8	119.00	612	672	0.051	61	526
Kathrein Scala 80010	119.00	344	378	0.028	34	295
Round Platform w/ Ha	118.00	2,000	2,169	0.164	196	1,718
Commscope CBC78T-DS-	106.00	62	58	0.004	5	53
Samsung B5/B13 RRH-B	106.00	211	195	0.015	18	181
Samsung B2/B66A RRH-	106.00	253	235	0.018	21	218
Raycap RCMDC-6627-PF	106.00	64	59	0.004	5	55
Commscope JAHH-65B-R	106.00	242	225	0.017	20	208
Commscope JAHH-45B-R	106.00	168	155	0.012	14	144
Round Low Profile Pl	106.00	1,500	1,390	0.105	126	1,289
		25,128	13,254	1.000	1,200	21,586

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-29.93	-1.20	0.00	-115.44	0.00	115.44	3,321.87	1,660.94	7,755.70	3,883.62	0.00	0.00	0.039
5.00	-28.71	-1.20	0.00	-109.44	0.00	109.44	3,288.72	1,644.36	7,503.17	3,757.16	0.00	-0.01	0.038
10.00	-27.52	-1.20	0.00	-103.43	0.00	103.43	3,253.61	1,626.81	7,249.81	3,630.29	0.01	-0.01	0.037
15.00	-26.35	-1.20	0.00	-97.42	0.00	97.42	3,216.54	1,608.27	6,995.93	3,503.16	0.03	-0.02	0.036
20.00	-25.21	-1.19	0.00	-91.43	0.00	91.43	3,177.52	1,588.76	6,741.83	3,375.93	0.06	-0.03	0.035
25.00	-24.10	-1.19	0.00	-85.46	0.00	85.46	3,136.53	1,568.26	6,487.84	3,248.74	0.09	-0.04	0.034
30.00	-23.01	-1.17	0.00	-79.53	0.00	79.53	3,093.58	1,546.79	6,234.27	3,121.77	0.14	-0.04	0.033
35.00	-22.90	-1.18	0.00	-73.65	0.00	73.65	3,048.68	1,524.34	5,981.43	2,995.16	0.18	-0.05	0.032
35.50	-21.05	-1.15	0.00	-73.07	0.00	73.07	3,044.08	1,522.04	5,956.20	2,982.53	0.19	-0.05	0.031
40.00	-20.14	-1.13	0.00	-67.90	0.00	67.90	3,001.81	1,500.91	5,729.64	2,869.08	0.24	-0.06	0.030
42.25	-19.57	-1.12	0.00	-65.35	0.00	65.35	3,003.54	1,501.77	5,738.69	2,873.61	0.27	-0.06	0.029
45.00	-18.55	-1.10	0.00	-62.27	0.00	62.27	2,976.96	1,488.48	5,600.73	2,804.53	0.31	-0.07	0.028
50.00	-17.56	-1.08	0.00	-56.75	0.00	56.75	2,927.13	1,463.57	5,351.11	2,679.53	0.38	-0.07	0.027
55.00	-16.59	-1.05	0.00	-51.36	0.00	51.36	2,875.34	1,437.67	5,103.32	2,555.45	0.46	-0.08	0.026
60.00	-15.66	-1.02	0.00	-46.09	0.00	46.09	2,821.60	1,410.80	4,857.67	2,432.44	0.55	-0.09	0.024
65.00	-14.74	-0.99	0.00	-40.97	0.00	40.97	2,765.89	1,382.94	4,614.48	2,310.67	0.64	-0.09	0.023
70.00	-14.21	-0.97	0.00	-36.00	0.00	36.00	2,708.22	1,354.11	4,374.05	2,190.28	0.74	-0.10	0.022
73.00	-13.63	-0.95	0.00	-33.08	0.00	33.08	2,672.68	1,336.34	4,231.26	2,118.77	0.81	-0.10	0.021
75.00	-12.64	-0.91	0.00	-31.18	0.00	31.18	2,648.59	1,324.30	4,136.71	2,071.43	0.85	-0.11	0.020
78.50	-12.45	-0.90	0.00	-28.00	0.00	28.00	1,590.36	795.18	2,465.70	1,234.68	0.93	-0.11	0.031
80.00	-11.84	-0.87	0.00	-26.65	0.00	26.65	1,582.58	791.29	2,428.36	1,215.98	0.97	-0.11	0.029
85.00	-11.25	-0.84	0.00	-22.30	0.00	22.30	1,555.39	777.69	2,303.81	1,153.62	1.09	-0.12	0.027
90.00	-10.67	-0.81	0.00	-18.10	0.00	18.10	1,526.24	763.12	2,179.35	1,091.30	1.22	-0.13	0.024
95.00	-10.12	-0.78	0.00	-14.06	0.00	14.06	1,495.12	747.56	2,055.31	1,029.18	1.35	-0.13	0.020
100.00	-9.58	-0.74	0.00	-10.18	0.00	10.18	1,462.05	731.03	1,931.99	967.43	1.50	-0.14	0.017
105.00	-9.47	-0.73	0.00	-6.48	0.00	6.48	1,427.02	713.51	1,809.71	906.20	1.64	-0.14	0.014
106.00	-5.99	-0.49	0.00	-5.74	0.00	5.74	1,419.78	709.89	1,785.41	894.03	1.67	-0.14	0.011
110.00	-5.53	-0.45	0.00	-3.79	0.00	3.79	1,390.04	695.02	1,688.79	845.65	1.79	-0.15	0.008
115.00	-5.26	-0.43	0.00	-1.52	0.00	1.52	1,351.09	675.54	1,569.52	785.93	1.95	-0.15	0.006
118.00	-2.70	-0.22	0.00	-0.22	0.00	0.22	1,326.78	663.39	1,498.89	750.56	2.04	-0.15	0.002
119.00	0.00	-0.22	0.00	0.00	0.00	0.00	1,318.52	659.26	1,475.52	738.86	2.07	-0.15	0.000

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-20.72	-1.20	0.00	-114.74	0.00	114.74	3,321.87	1,660.94	7,755.70	3,883.62	0.00	0.00	0.036
5.00	-19.88	-1.20	0.00	-108.74	0.00	108.74	3,288.72	1,644.36	7,503.17	3,757.16	0.00	-0.01	0.035
10.00	-19.05	-1.20	0.00	-102.74	0.00	102.74	3,253.61	1,626.81	7,249.81	3,630.29	0.01	-0.01	0.034
15.00	-18.24	-1.20	0.00	-96.75	0.00	96.75	3,216.54	1,608.27	6,995.93	3,503.16	0.03	-0.02	0.033
20.00	-17.45	-1.19	0.00	-90.77	0.00	90.77	3,177.52	1,588.76	6,741.83	3,375.93	0.06	-0.03	0.032
25.00	-16.68	-1.18	0.00	-84.82	0.00	84.82	3,136.53	1,568.26	6,487.84	3,248.74	0.09	-0.04	0.031
30.00	-15.93	-1.17	0.00	-78.92	0.00	78.92	3,093.58	1,546.79	6,234.27	3,121.77	0.13	-0.04	0.030
35.00	-15.85	-1.17	0.00	-73.07	0.00	73.07	3,048.68	1,524.34	5,981.43	2,995.16	0.18	-0.05	0.030
35.50	-14.57	-1.14	0.00	-72.49	0.00	72.49	3,044.08	1,522.04	5,956.20	2,982.53	0.19	-0.05	0.029
40.00	-13.94	-1.13	0.00	-67.36	0.00	67.36	3,001.81	1,500.91	5,729.64	2,869.08	0.24	-0.06	0.028
42.25	-13.55	-1.12	0.00	-64.82	0.00	64.82	3,003.54	1,501.77	5,738.69	2,873.61	0.27	-0.06	0.027
45.00	-12.84	-1.10	0.00	-61.75	0.00	61.75	2,976.96	1,488.48	5,600.73	2,804.53	0.30	-0.07	0.026
50.00	-12.15	-1.07	0.00	-56.27	0.00	56.27	2,927.13	1,463.57	5,351.11	2,679.53	0.38	-0.07	0.025
55.00	-11.49	-1.05	0.00	-50.91	0.00	50.91	2,875.34	1,437.67	5,103.32	2,555.45	0.46	-0.08	0.024
60.00	-10.84	-1.02	0.00	-45.68	0.00	45.68	2,821.60	1,410.80	4,857.67	2,432.44	0.54	-0.09	0.023
65.00	-10.21	-0.99	0.00	-40.60	0.00	40.60	2,765.89	1,382.94	4,614.48	2,310.67	0.64	-0.09	0.021
70.00	-9.84	-0.97	0.00	-35.67	0.00	35.67	2,708.22	1,354.11	4,374.05	2,190.28	0.74	-0.10	0.020
73.00	-9.44	-0.94	0.00	-32.77	0.00	32.77	2,672.68	1,336.34	4,231.26	2,118.77	0.80	-0.10	0.019
75.00	-8.75	-0.90	0.00	-30.89	0.00	30.89	2,648.59	1,324.30	4,136.71	2,071.43	0.84	-0.11	0.018
78.50	-8.62	-0.89	0.00	-27.74	0.00	27.74	1,590.36	795.18	2,465.70	1,234.68	0.92	-0.11	0.028
80.00	-8.19	-0.86	0.00	-26.40	0.00	26.40	1,582.58	791.29	2,428.36	1,215.98	0.96	-0.11	0.027
85.00	-7.78	-0.83	0.00	-22.09	0.00	22.09	1,555.39	777.69	2,303.81	1,153.62	1.08	-0.12	0.024
90.00	-7.39	-0.80	0.00	-17.92	0.00	17.92	1,526.24	763.12	2,179.35	1,091.30	1.21	-0.13	0.021
95.00	-7.00	-0.77	0.00	-13.92	0.00	13.92	1,495.12	747.56	2,055.31	1,029.18	1.34	-0.13	0.018
100.00	-6.63	-0.73	0.00	-10.08	0.00	10.08	1,462.05	731.03	1,931.99	967.43	1.48	-0.14	0.015
105.00	-6.56	-0.73	0.00	-6.42	0.00	6.42	1,427.02	713.51	1,809.71	906.20	1.63	-0.14	0.012
106.00	-4.15	-0.48	0.00	-5.69	0.00	5.69	1,419.78	709.89	1,785.41	894.03	1.66	-0.14	0.009
110.00	-3.83	-0.45	0.00	-3.75	0.00	3.75	1,390.04	695.02	1,688.79	845.65	1.78	-0.14	0.007
115.00	-3.64	-0.43	0.00	-1.51	0.00	1.51	1,351.09	675.54	1,569.52	785.93	1.93	-0.15	0.005
118.00	-1.87	-0.22	0.00	-0.22	0.00	0.22	1,326.78	663.39	1,498.89	750.56	2.03	-0.15	0.002
119.00	0.00	-0.22	0.00	0.00	0.00	0.00	1,318.52	659.26	1,475.52	738.86	2.06	-0.15	0.000

Equivalent Modal Analysis Method

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

Spectral Response Acceleration for Short Period (S_s):	0.19
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.20
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	1.43
Redundancy Factor (p):	1.00

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

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
30	118.50	71	1.874	1.897	1.110	0.392	18	87
29	116.50	215	1.811	1.591	0.997	0.351	50	267
28	112.50	371	1.689	1.082	0.798	0.275	68	460
27	108.00	308	1.557	0.651	0.613	0.201	41	382
26	105.50	85	1.486	0.466	0.526	0.165	9	105
25	102.50	432	1.402	0.288	0.434	0.126	36	536
24	97.50	447	1.269	0.080	0.309	0.073	22	555
23	92.50	463	1.142	-0.043	0.214	0.034	11	574
22	87.50	478	1.022	-0.104	0.142	0.008	3	593
21	82.50	493	0.908	-0.122	0.091	-0.005	-2	612
20	79.25	151	0.838	-0.118	0.065	-0.007	-1	187
19	76.75	801	0.786	-0.109	0.050	-0.006	-3	994
18	74.00	466	0.731	-0.096	0.036	-0.003	-1	578
17	71.50	430	0.682	-0.081	0.027	0.001	0	534
16	67.50	734	0.608	-0.056	0.015	0.010	5	911
15	62.50	756	0.521	-0.024	0.008	0.023	11	938
14	57.50	778	0.441	0.005	0.006	0.033	17	965
13	52.50	800	0.368	0.028	0.008	0.041	22	992
12	47.50	821	0.301	0.045	0.012	0.046	25	1,019
11	43.63	461	0.254	0.055	0.017	0.047	14	572
10	41.13	732	0.226	0.059	0.020	0.047	23	909
9	37.75	1,491	0.190	0.064	0.024	0.047	46	1,850
8	35.25	86	0.166	0.067	0.028	0.046	3	107
7	32.50	876	0.141	0.069	0.031	0.045	26	1,087
6	27.50	898	0.101	0.071	0.037	0.043	26	1,114
5	22.50	919	0.068	0.072	0.041	0.041	25	1,141
4	17.50	941	0.041	0.070	0.042	0.038	24	1,168
3	12.50	963	0.021	0.065	0.038	0.034	22	1,195
2	7.50	984	0.008	0.051	0.029	0.027	18	1,221
1	2.50	1,006	0.001	0.022	0.012	0.013	8	1,248
Raycap DC6-48-60-18-	119.00	80	1.890	1.980	1.140	0.403	21	99
Ericsson RRUS 4478 B	119.00	178	1.890	1.980	1.140	0.403	48	221
Ericsson RRUS 32 (50	119.00	152	1.890	1.980	1.140	0.403	41	189
Ericsson RRUS 32 B66	119.00	152	1.890	1.980	1.140	0.403	41	189

Ericsson RRUS 32 B2	119.00	159	1.890	1.980	1.140	0.403	43	197
Ericsson RRUS-11	119.00	495	1.890	1.980	1.140	0.403	133	614
CCI HPA-65R-BUU-H8	119.00	612	1.890	1.980	1.140	0.403	164	759
Kathrein Scala 80010	119.00	344	1.890	1.980	1.140	0.403	92	427
Round Platform w/ Ha	118.00	2,000	1.858	1.817	1.081	0.382	509	2,482
Commscope CBC78T-	106.00	62	1.500	0.500	0.542	0.172	7	77
Samsung B5/B13 RRH-B	106.00	211	1.500	0.500	0.542	0.172	24	262
Samsung B2/B66A RRH-	106.00	253	1.500	0.500	0.542	0.172	29	314
Raycap RCMDC-6627-PF	106.00	64	1.500	0.500	0.542	0.172	7	79
Commscope JAHH-65B-	106.00	242	1.500	0.500	0.542	0.172	28	301
Commscope JAHH-45B-	106.00	168	1.500	0.500	0.542	0.172	19	208
Round Low Profile Pl	106.00	1,500	1.500	0.500	0.542	0.172	172	1,861
		25,128	48.128	27.200	19.778	6.993	1,947	31,183

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

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
30	118.50	71	1.874	1.897	1.110	0.392	18	61
29	116.50	215	1.811	1.591	0.997	0.351	50	185
28	112.50	371	1.689	1.082	0.798	0.275	68	318
27	108.00	308	1.557	0.651	0.613	0.201	41	264
26	105.50	85	1.486	0.466	0.526	0.165	9	73
25	102.50	432	1.402	0.288	0.434	0.126	36	371
24	97.50	447	1.269	0.080	0.309	0.073	22	384
23	92.50	463	1.142	-0.043	0.214	0.034	11	397
22	87.50	478	1.022	-0.104	0.142	0.008	3	410
21	82.50	493	0.908	-0.122	0.091	-0.005	-2	424
20	79.25	151	0.838	-0.118	0.065	-0.007	-1	130
19	76.75	801	0.786	-0.109	0.050	-0.006	-3	688
18	74.00	466	0.731	-0.096	0.036	-0.003	-1	400
17	71.50	430	0.682	-0.081	0.027	0.001	0	370
16	67.50	734	0.608	-0.056	0.015	0.010	5	631
15	62.50	756	0.521	-0.024	0.008	0.023	11	650
14	57.50	778	0.441	0.005	0.006	0.033	17	668
13	52.50	800	0.368	0.028	0.008	0.041	22	687
12	47.50	821	0.301	0.045	0.012	0.046	25	705
11	43.63	461	0.254	0.055	0.017	0.047	14	396
10	41.13	732	0.226	0.059	0.020	0.047	23	629
9	37.75	1,491	0.190	0.064	0.024	0.047	46	1,281
8	35.25	86	0.166	0.067	0.028	0.046	3	74
7	32.50	876	0.141	0.069	0.031	0.045	26	752
6	27.50	898	0.101	0.071	0.037	0.043	26	771
5	22.50	919	0.068	0.072	0.041	0.041	25	790
4	17.50	941	0.041	0.070	0.042	0.038	24	808
3	12.50	963	0.021	0.065	0.038	0.034	22	827
2	7.50	984	0.008	0.051	0.029	0.027	18	846
1	2.50	1,006	0.001	0.022	0.012	0.013	8	864
Raycap DC6-48-60-18-	119.00	80	1.890	1.980	1.140	0.403	21	69
Ericsson RRUS 4478 B	119.00	178	1.890	1.980	1.140	0.403	48	153
Ericsson RRUS 32 (50	119.00	152	1.890	1.980	1.140	0.403	41	131
Ericsson RRUS 32 B66	119.00	152	1.890	1.980	1.140	0.403	41	131
Ericsson RRUS 32 B2	119.00	159	1.890	1.980	1.140	0.403	43	137
Ericsson RRUS-11	119.00	495	1.890	1.980	1.140	0.403	133	425
CCI HPA-65R-BUU-H8	119.00	612	1.890	1.980	1.140	0.403	164	526
Kathrein Scala 80010	119.00	344	1.890	1.980	1.140	0.403	92	295
Round Platform w/ Ha	118.00	2,000	1.858	1.817	1.081	0.382	509	1,718
Commscope CBC78T-	106.00	62	1.500	0.500	0.542	0.172	7	53
Samsung B5/B13 RRH-B	106.00	211	1.500	0.500	0.542	0.172	24	181

Samsung B2/B66A RRH-	106.00	253	1.500	0.500	0.542	0.172	29	218
Raycap RCMDC-6627-PF	106.00	64	1.500	0.500	0.542	0.172	7	55
Commscope JAHH-65B-	106.00	242	1.500	0.500	0.542	0.172	28	208
Commscope JAHH-45B-	106.00	168	1.500	0.500	0.542	0.172	19	144
Round Low Profile Pl	106.00	1,500	1.500	0.500	0.542	0.172	172	1,289
		25,128	48.128	27.200	19.778	6.993	1,947	21,586

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-29.93	-1.94	0.00	-201.20	0.00	201.20	3,321.87	1,660.94	7,755.70	3,883.62	0.00	0.00	0.061
5.00	-28.71	-1.93	0.00	-191.50	0.00	191.50	3,288.72	1,644.36	7,503.17	3,757.16	0.01	-0.01	0.060
10.00	-27.52	-1.91	0.00	-181.85	0.00	181.85	3,253.61	1,626.81	7,249.81	3,630.29	0.03	-0.02	0.059
15.00	-26.35	-1.89	0.00	-172.28	0.00	172.28	3,216.54	1,608.27	6,995.93	3,503.16	0.06	-0.04	0.057
20.00	-25.21	-1.87	0.00	-162.81	0.00	162.81	3,177.52	1,588.76	6,741.83	3,375.93	0.10	-0.05	0.056
25.00	-24.09	-1.85	0.00	-153.44	0.00	153.44	3,136.53	1,568.26	6,487.84	3,248.74	0.16	-0.06	0.055
30.00	-23.01	-1.83	0.00	-144.17	0.00	144.17	3,093.58	1,546.79	6,234.27	3,121.77	0.24	-0.08	0.054
35.00	-22.90	-1.83	0.00	-135.01	0.00	135.01	3,048.68	1,524.34	5,981.43	2,995.16	0.33	-0.09	0.053
35.50	-21.05	-1.78	0.00	-134.09	0.00	134.09	3,044.08	1,522.04	5,956.20	2,982.53	0.34	-0.09	0.052
40.00	-20.14	-1.76	0.00	-126.06	0.00	126.06	3,001.81	1,500.91	5,729.64	2,869.08	0.43	-0.10	0.051
42.25	-19.57	-1.75	0.00	-122.09	0.00	122.09	3,003.54	1,501.77	5,738.69	2,873.61	0.48	-0.11	0.049
45.00	-18.55	-1.73	0.00	-117.28	0.00	117.28	2,976.96	1,488.48	5,600.73	2,804.53	0.54	-0.12	0.048
50.00	-17.56	-1.71	0.00	-108.65	0.00	108.65	2,927.13	1,463.57	5,351.11	2,679.53	0.68	-0.13	0.047
55.00	-16.59	-1.69	0.00	-100.11	0.00	100.11	2,875.34	1,437.67	5,103.32	2,555.45	0.82	-0.14	0.045
60.00	-15.65	-1.68	0.00	-91.66	0.00	91.66	2,821.60	1,410.80	4,857.67	2,432.44	0.98	-0.16	0.043
65.00	-14.74	-1.68	0.00	-83.25	0.00	83.25	2,765.89	1,382.94	4,614.48	2,310.67	1.15	-0.17	0.041
70.00	-14.21	-1.68	0.00	-74.87	0.00	74.87	2,708.22	1,354.11	4,374.05	2,190.28	1.34	-0.19	0.039
73.00	-13.63	-1.68	0.00	-69.84	0.00	69.84	2,672.68	1,336.34	4,231.26	2,118.77	1.46	-0.19	0.038
75.00	-12.63	-1.68	0.00	-66.48	0.00	66.48	2,648.59	1,324.30	4,136.71	2,071.43	1.54	-0.20	0.037
78.50	-12.45	-1.68	0.00	-60.60	0.00	60.60	1,590.36	795.18	2,465.70	1,234.68	1.69	-0.21	0.057
80.00	-11.83	-1.68	0.00	-58.08	0.00	58.08	1,582.58	791.29	2,428.36	1,215.98	1.76	-0.21	0.055
85.00	-11.24	-1.68	0.00	-49.67	0.00	49.67	1,555.39	777.69	2,303.81	1,153.62	1.99	-0.23	0.050
90.00	-10.67	-1.67	0.00	-41.26	0.00	41.26	1,526.24	763.12	2,179.35	1,091.30	2.24	-0.24	0.045
95.00	-10.11	-1.65	0.00	-32.91	0.00	32.91	1,495.12	747.56	2,055.31	1,029.18	2.50	-0.26	0.039
100.00	-9.57	-1.61	0.00	-24.66	0.00	24.66	1,462.05	731.03	1,931.99	967.43	2.78	-0.27	0.032
105.00	-9.47	-1.60	0.00	-16.60	0.00	16.60	1,427.02	713.51	1,809.71	906.20	3.07	-0.28	0.025
106.00	-5.99	-1.26	0.00	-15.00	0.00	15.00	1,419.78	709.89	1,785.41	894.03	3.13	-0.28	0.021
110.00	-5.53	-1.19	0.00	-9.96	0.00	9.96	1,390.04	695.02	1,688.79	845.65	3.37	-0.29	0.016
115.00	-5.26	-1.14	0.00	-4.01	0.00	4.01	1,351.09	675.54	1,569.52	785.93	3.68	-0.29	0.009
118.00	-2.69	-0.60	0.00	-0.60	0.00	0.60	1,326.78	663.39	1,498.89	750.56	3.86	-0.29	0.003
119.00	0.00	-0.58	0.00	0.00	0.00	0.00	1,318.52	659.26	1,475.52	738.86	3.92	-0.29	0.000

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-20.72	-1.94	0.00	-199.90	0.00	199.90	3,321.87	1,660.94	7,755.70	3,883.62	0.00	0.00	0.058
5.00	-19.88	-1.93	0.00	-190.20	0.00	190.20	3,288.72	1,644.36	7,503.17	3,757.16	0.01	-0.01	0.057
10.00	-19.05	-1.91	0.00	-180.56	0.00	180.56	3,253.61	1,626.81	7,249.81	3,630.29	0.03	-0.02	0.056
15.00	-18.24	-1.89	0.00	-171.02	0.00	171.02	3,216.54	1,608.27	6,995.93	3,503.16	0.06	-0.04	0.054
20.00	-17.45	-1.87	0.00	-161.58	0.00	161.58	3,177.52	1,588.76	6,741.83	3,375.93	0.10	-0.05	0.053
25.00	-16.68	-1.84	0.00	-152.25	0.00	152.25	3,136.53	1,568.26	6,487.84	3,248.74	0.16	-0.06	0.052
30.00	-15.93	-1.82	0.00	-143.02	0.00	143.02	3,093.58	1,546.79	6,234.27	3,121.77	0.24	-0.08	0.051
35.00	-15.85	-1.82	0.00	-133.92	0.00	133.92	3,048.68	1,524.34	5,981.43	2,995.16	0.32	-0.09	0.050
35.50	-14.57	-1.77	0.00	-133.01	0.00	133.01	3,044.08	1,522.04	5,956.20	2,982.53	0.33	-0.09	0.049
40.00	-13.94	-1.75	0.00	-125.03	0.00	125.03	3,001.81	1,500.91	5,729.64	2,869.08	0.42	-0.10	0.048
42.25	-13.55	-1.74	0.00	-121.09	0.00	121.09	3,003.54	1,501.77	5,738.69	2,873.61	0.47	-0.11	0.047
45.00	-12.84	-1.71	0.00	-116.31	0.00	116.31	2,976.96	1,488.48	5,600.73	2,804.53	0.54	-0.12	0.046
50.00	-12.15	-1.69	0.00	-107.73	0.00	107.73	2,927.13	1,463.57	5,351.11	2,679.53	0.67	-0.13	0.044
55.00	-11.48	-1.68	0.00	-99.27	0.00	99.27	2,875.34	1,437.67	5,103.32	2,555.45	0.81	-0.14	0.043
60.00	-10.83	-1.67	0.00	-90.88	0.00	90.88	2,821.60	1,410.80	4,857.67	2,432.44	0.97	-0.16	0.041
65.00	-10.20	-1.66	0.00	-82.55	0.00	82.55	2,765.89	1,382.94	4,614.48	2,310.67	1.14	-0.17	0.039
70.00	-9.83	-1.66	0.00	-74.24	0.00	74.24	2,708.22	1,354.11	4,374.05	2,190.28	1.33	-0.18	0.038
73.00	-9.43	-1.66	0.00	-69.25	0.00	69.25	2,672.68	1,336.34	4,231.26	2,118.77	1.45	-0.19	0.036
75.00	-8.74	-1.67	0.00	-65.92	0.00	65.92	2,648.59	1,324.30	4,136.71	2,071.43	1.53	-0.20	0.035
78.50	-8.61	-1.67	0.00	-60.09	0.00	60.09	1,590.36	795.18	2,465.70	1,234.68	1.68	-0.21	0.054
80.00	-8.19	-1.67	0.00	-57.59	0.00	57.59	1,582.58	791.29	2,428.36	1,215.98	1.74	-0.21	0.053
85.00	-7.78	-1.67	0.00	-49.25	0.00	49.25	1,555.39	777.69	2,303.81	1,153.62	1.97	-0.23	0.048
90.00	-7.38	-1.66	0.00	-40.92	0.00	40.92	1,526.24	763.12	2,179.35	1,091.30	2.22	-0.24	0.042
95.00	-7.00	-1.63	0.00	-32.63	0.00	32.63	1,495.12	747.56	2,055.31	1,029.18	2.48	-0.26	0.036
100.00	-6.63	-1.60	0.00	-24.46	0.00	24.46	1,462.05	731.03	1,931.99	967.43	2.76	-0.27	0.030
105.00	-6.55	-1.59	0.00	-16.47	0.00	16.47	1,427.02	713.51	1,809.71	906.20	3.05	-0.28	0.023
106.00	-4.14	-1.25	0.00	-14.88	0.00	14.88	1,419.78	709.89	1,785.41	894.03	3.10	-0.28	0.020
110.00	-3.82	-1.18	0.00	-9.89	0.00	9.89	1,390.04	695.02	1,688.79	845.65	3.34	-0.29	0.014
115.00	-3.64	-1.13	0.00	-3.98	0.00	3.98	1,351.09	675.54	1,569.52	785.93	3.65	-0.29	0.008
118.00	-1.86	-0.59	0.00	-0.59	0.00	0.59	1,326.78	663.39	1,498.89	750.56	3.83	-0.29	0.002
119.00	0.00	-0.58	0.00	0.00	0.00	0.00	1,318.52	659.26	1,475.52	738.86	3.89	-0.29	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	17.58	0.00	30.14	0.00	0.00	1545.21	0.00	0.41
0.9D + 1.6W	17.57	0.00	22.60	0.00	0.00	1537.48	0.00	0.40
1.2D + 1.0Di + 1.0Wi	5.00	0.00	46.04	0.00	0.00	423.06	0.00	0.12
(1.2 + 0.2Sds) * DL + E ELFM	1.20	0.00	29.93	0.00	0.00	115.44	0.00	0.04
(1.2 + 0.2Sds) * DL + E EMAM	1.94	0.00	29.93	0.00	0.00	201.20	0.00	0.06
(0.9 - 0.2Sds) * DL + E ELFM	1.20	0.00	20.72	0.00	0.00	114.74	0.00	0.04
(0.9 - 0.2Sds) * DL + E EMAM	1.94	0.00	20.72	0.00	0.00	199.90	0.00	0.06
1.0D + 1.0W	3.76	0.00	25.13	0.00	0.00	329.52	0.00	0.09

Base Plate & Anchor Rod Analysis

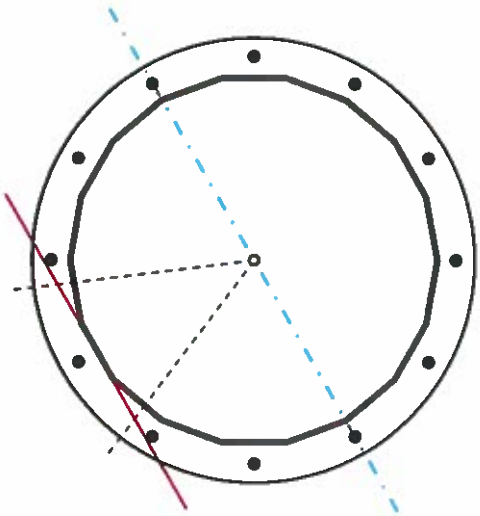
Pole Dimensions		
Number of Sides	18	-
Diameter	57	in
Thickness	0.3125	in
Orientation Offset		°

Base Reactions		
Moment, Mu	1545.2	k-ft
Axial, Pu	30.1	k
Shear, Vu	17.6	k
Neutral Axis	120	°

Report Capacities		
Component	Capacity	Result
Base Plate	15%	Pass
Anchor Rods	40%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ø	70	in
Thickness	2	in
Grade	A572-60	
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Clip	N/A	in
Orientation Offset		°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	224.8	k
Bending Stress, ϕMn	1517.2	k

Original Anchor Rods		
Arrangement	Radial	-
Quantity	12	-
Diameter, ø	2 1/4	in
Bolt Circle	64	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	16.8	in
Orientation Offset		°
Applied Force, Pu	102.8	k
Anchor Rods, ϕPn	259.8	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	17.6	1545.2	1.00
Anchor Rod Forces	17.6	1545.2	1.00
Additional Bolt (Grp1) Forces			
Additional Bolt (Grp2) Forces			
Dywidag Forces			
Stiffener Forces			

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in^2	in^2	in^4	#	in^4
Pole	55.3707	3.0762	0.1004		22243.34
Bolt	3.9761	3.2477	0.8393	4.5	18510.41
Bolt1					
Bolt2					
Dywidag					
Stiffener					

Base Plate		
Shape	Round	-
Diameter, D	70	in
Thickness, t	2	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	75	ksi
Base Plate Chord	40.632	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	12	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	64	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	102.8	k
Applied Shear, Vu	1.2	k
Compressive Capacity, ϕPn	259.8	k
Tensile Capacity, ϕRnt	0.395	OK
Interaction Capacity	0.405	OK

External Base Plate		
Chord Length AA	33.833	in
Additional AA	4.000	in
Section Modulus, Z	37.833	in^3
Applied Moment, Mu	224.8	k-ft
Bending Capacity, ϕMn	2043.0	k-ft
Capacity, Mu/ϕMn	0.110	OK
Chord Length AB	32.292	in
Additional AB	4.000	in
Section Modulus, Z	36.292	in^3
Applied Moment, Mu	179.4	k-ft
Bending Capacity, ϕMn	1959.8	k-ft
Capacity, Mu/ϕMn	0.092	OK
Bend Line Length	28.096	in
Additional Bend Line	0.000	in
Section Modulus, Z	28.096	in^3
Applied Moment, Mu	224.8	k-ft
Bending Capacity, ϕMn	1517.2	k-ft
Capacity, Mu/ϕMn	0.148	OK

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

AMERICAN TOWER®
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Antenna Mount Analysis Report

ATC Site Name	:	**NAUGATUCK CT**
ATC Site Number	:	**283423**
Engineering Number	:	**13000540_C8_01**
Mount Elevation	:	**104 ft**
Carrier	:	**Verizon Wireless**
Carrier Site Name	:	**NAUGATUCK WEST CT**
Carrier Site Number	:	**469151**
Site Location	:	**880 Andrew Mountain Road** **Naugatuck, CT 06770-3656** **41.484453 , -73.089844**
County	:	**New Haven**
Date	:	**November 15, 2019**
Max Usage	:	**102%**
Result	:	**Pass**

Prepared By:
Steven McGinnis
Structural Engineer II

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32598
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
Nov 19 2019 8:06 AM cosign

COA: PEC.0001553

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Table of Contents

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Verizon Wireless at 104 ft.

Analysis

Basic Wind Speed:	96.82 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Codes:	ANSI/TIA-222-G / 2015 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.192, S_1 = 0.064
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

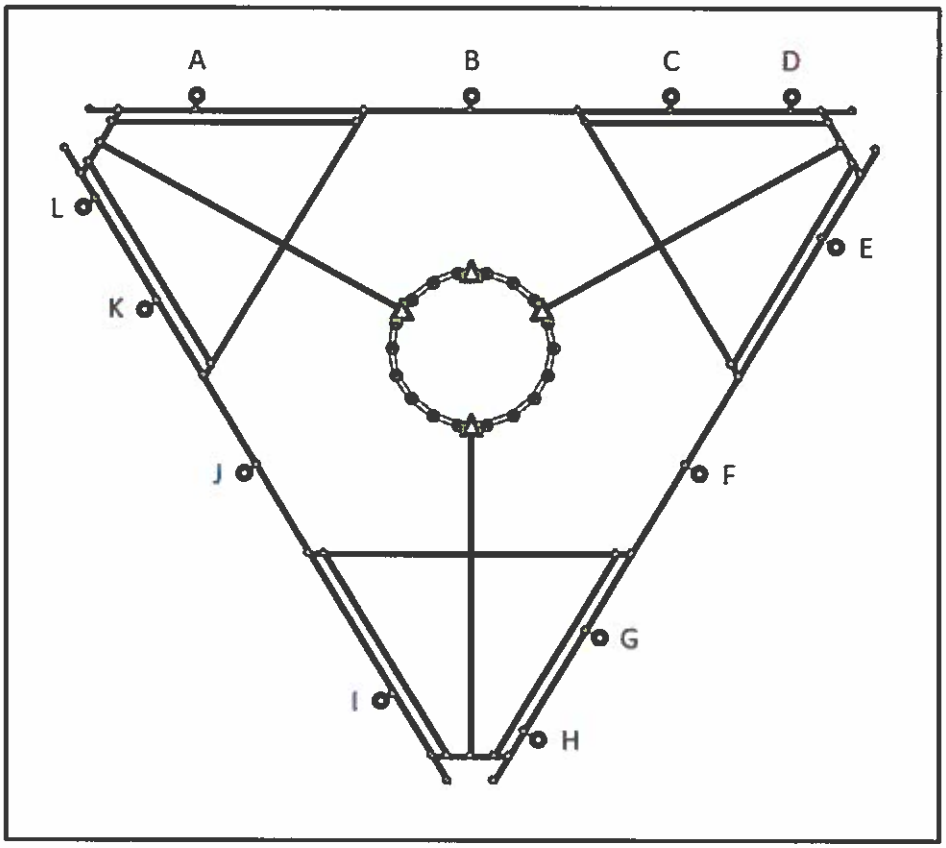
Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report.

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.

Application Loading

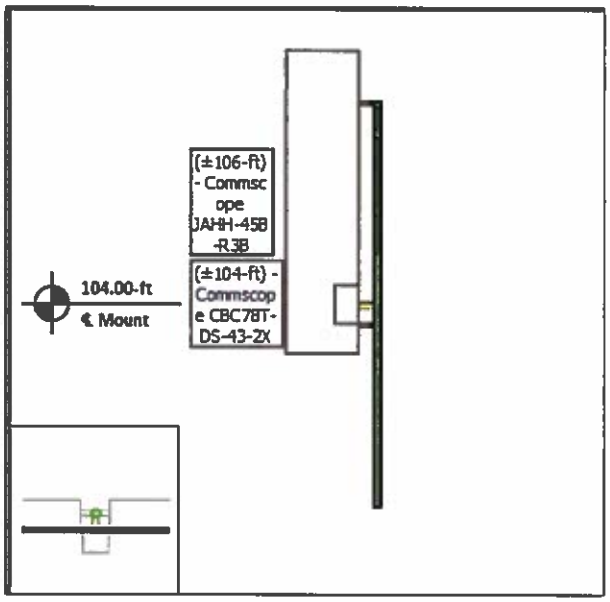
Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
104.0	106.0	4	Commscope JAHH-65B-R3B
		2	Commscope JAHH-45B-R3B
		3	Commscope CBC78T-DS-43-2X
		2	Raycap RCMDC-6627-PF-48
		3	Samsung B5/B13 RRH-BR04C
		3	Samsung B2/B66A RRH-BR049

Mount Layout

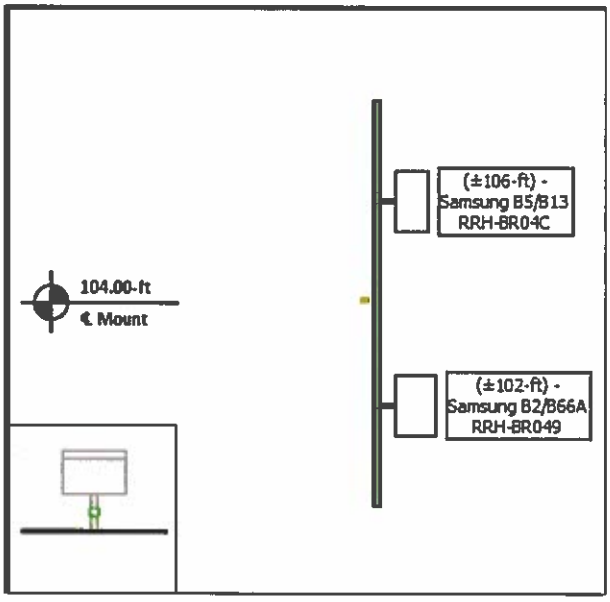


Equipment Layout

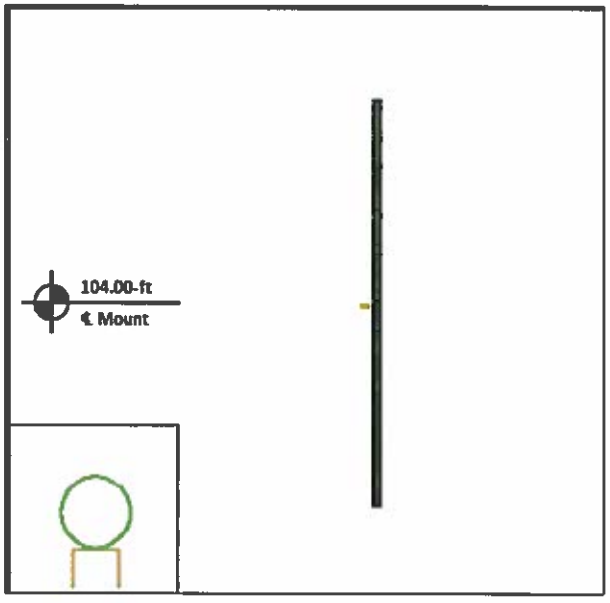
Mount Pipe A



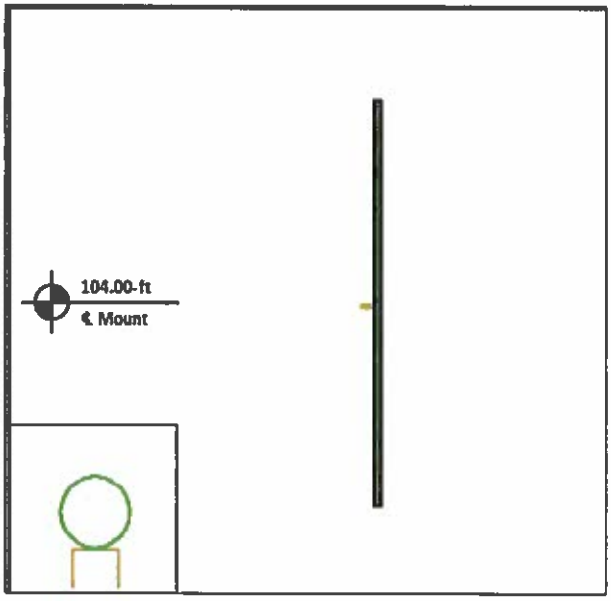
Mount Pipe B



Mount Pipe C

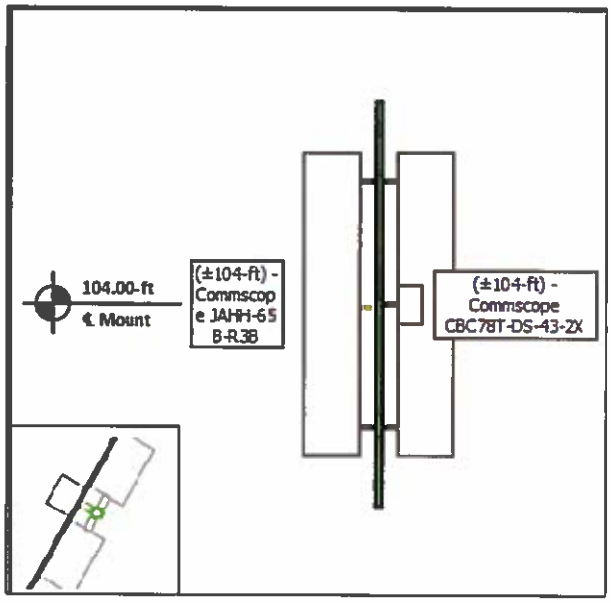


Mount Pipe D

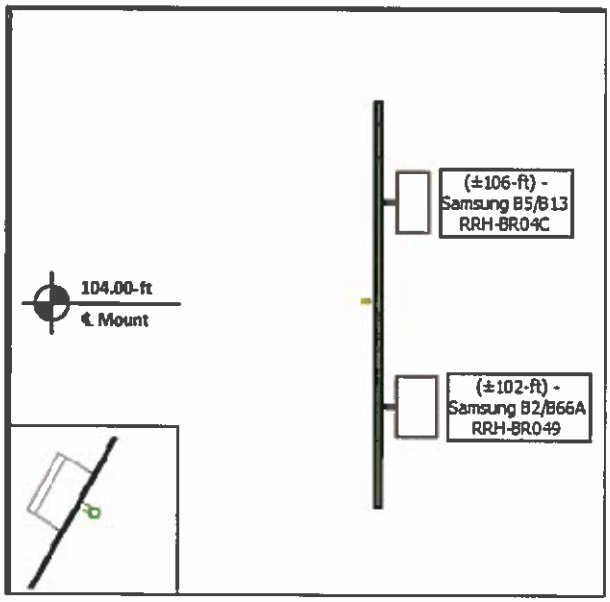


Equipment Layout Cont'd.

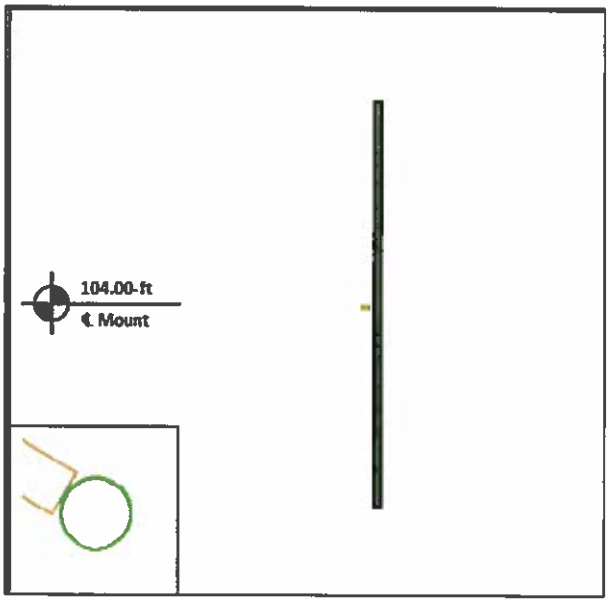
Mount Pipe E



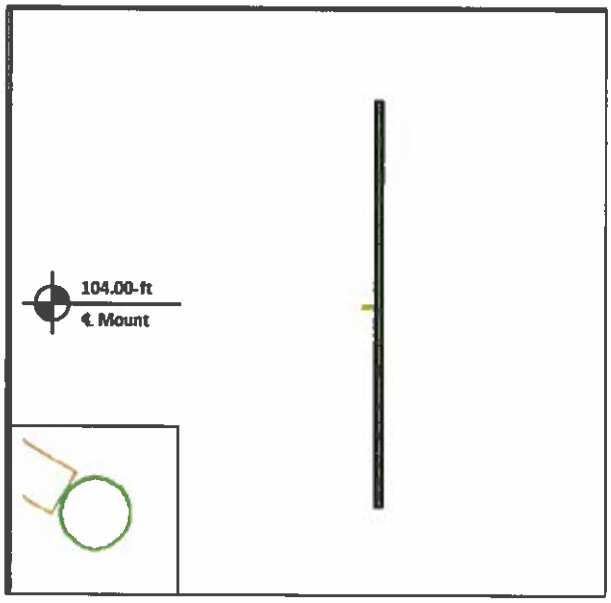
Mount Pipe F



Mount Pipe G

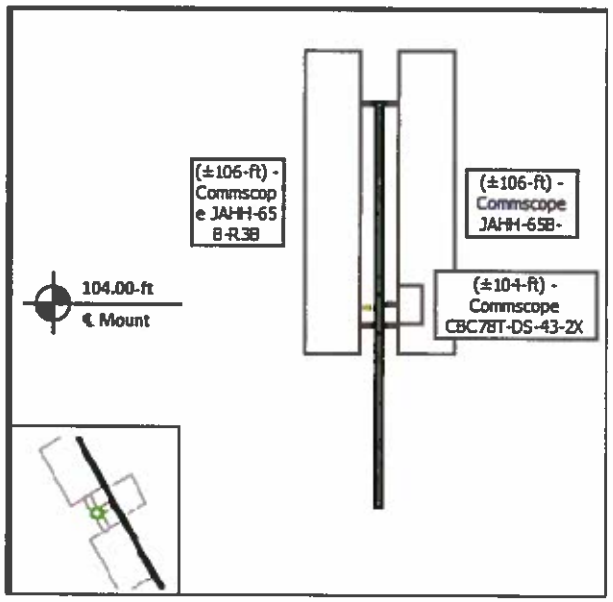


Mount Pipe H

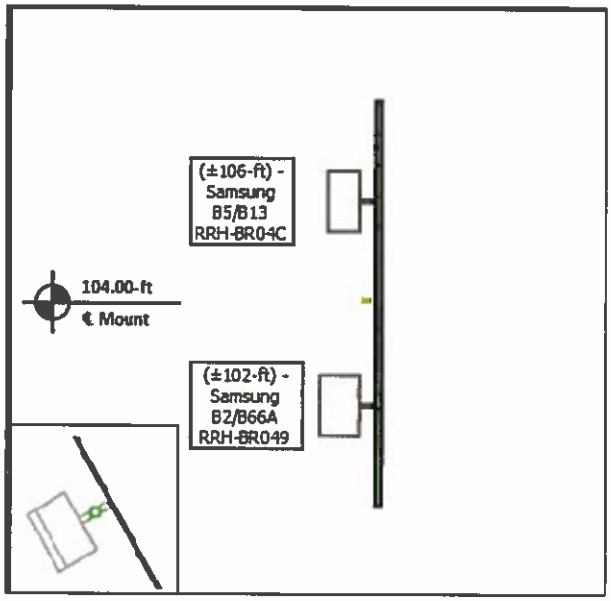


Equipment Layout Cont'd.

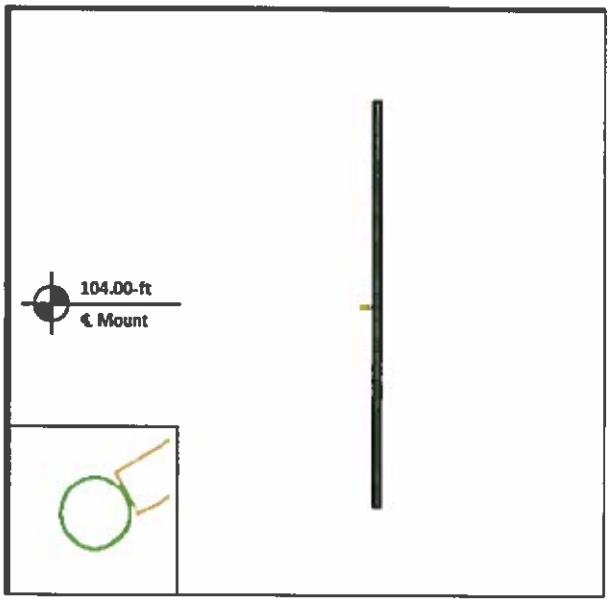
Mount Pipe I



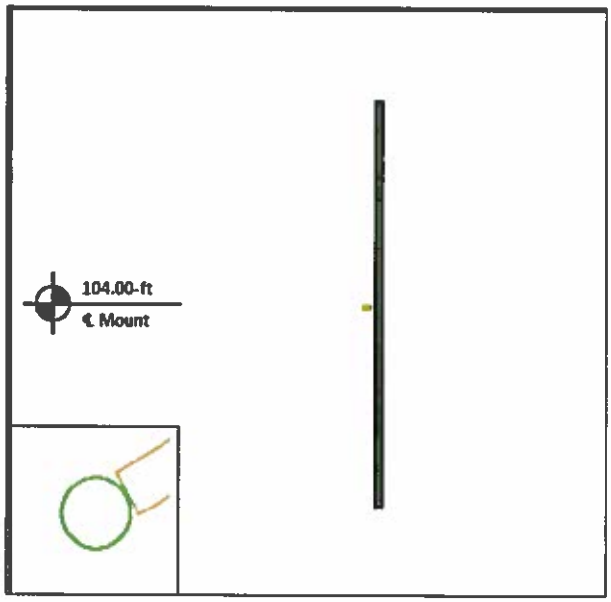
Mount Pipe J



Mount Pipe K



Mount Pipe L



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

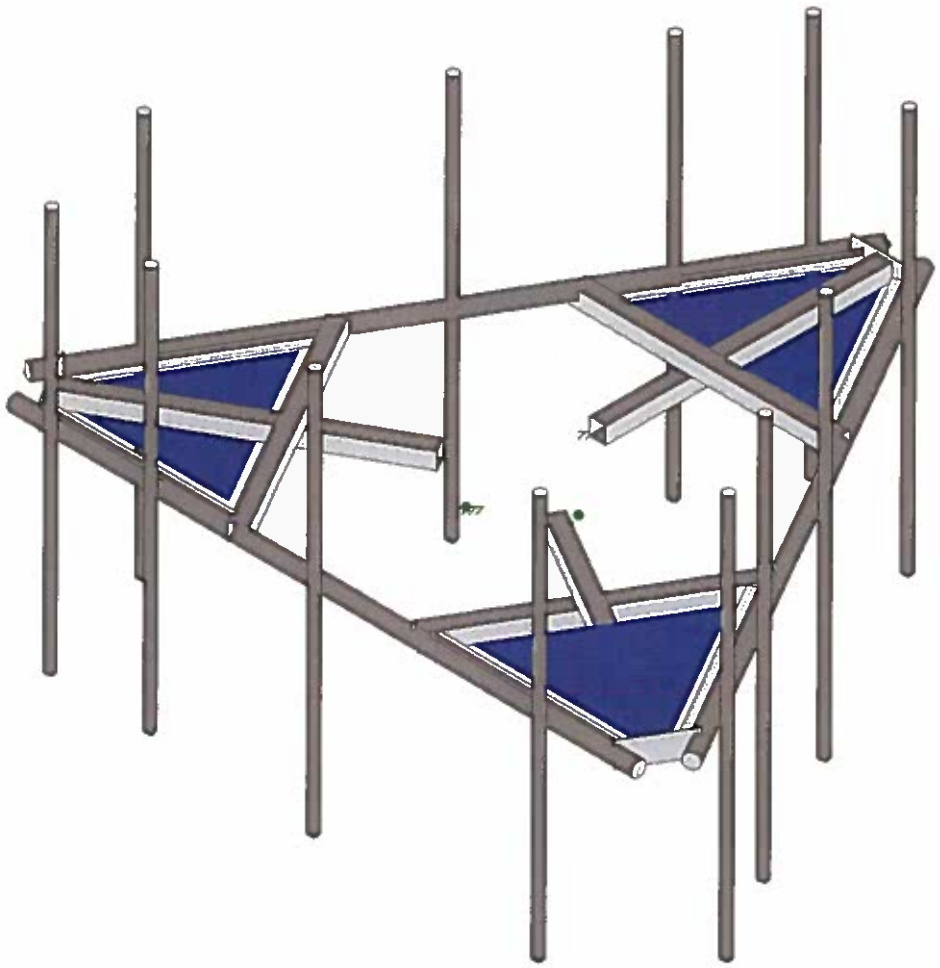
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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.

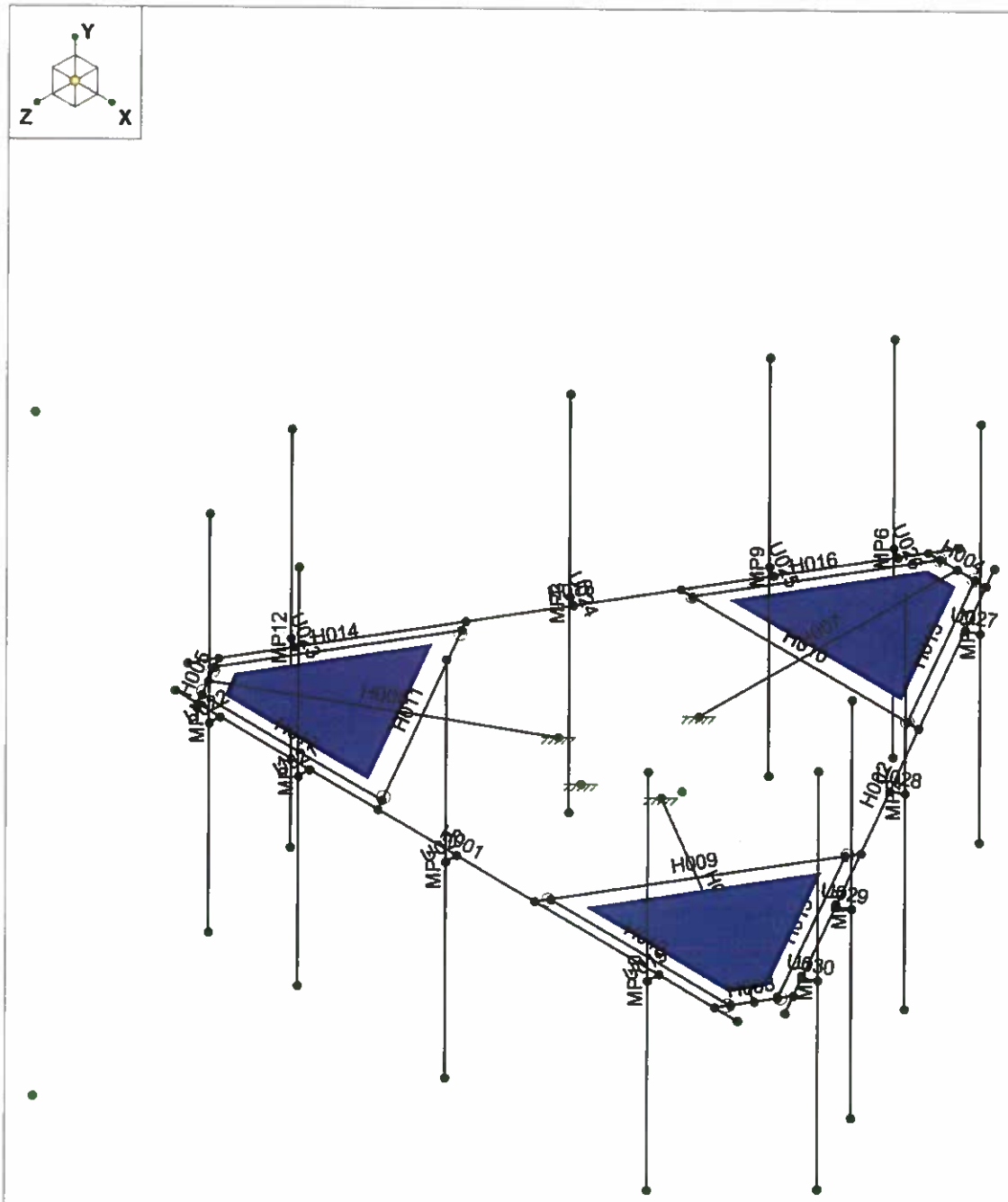
All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

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.

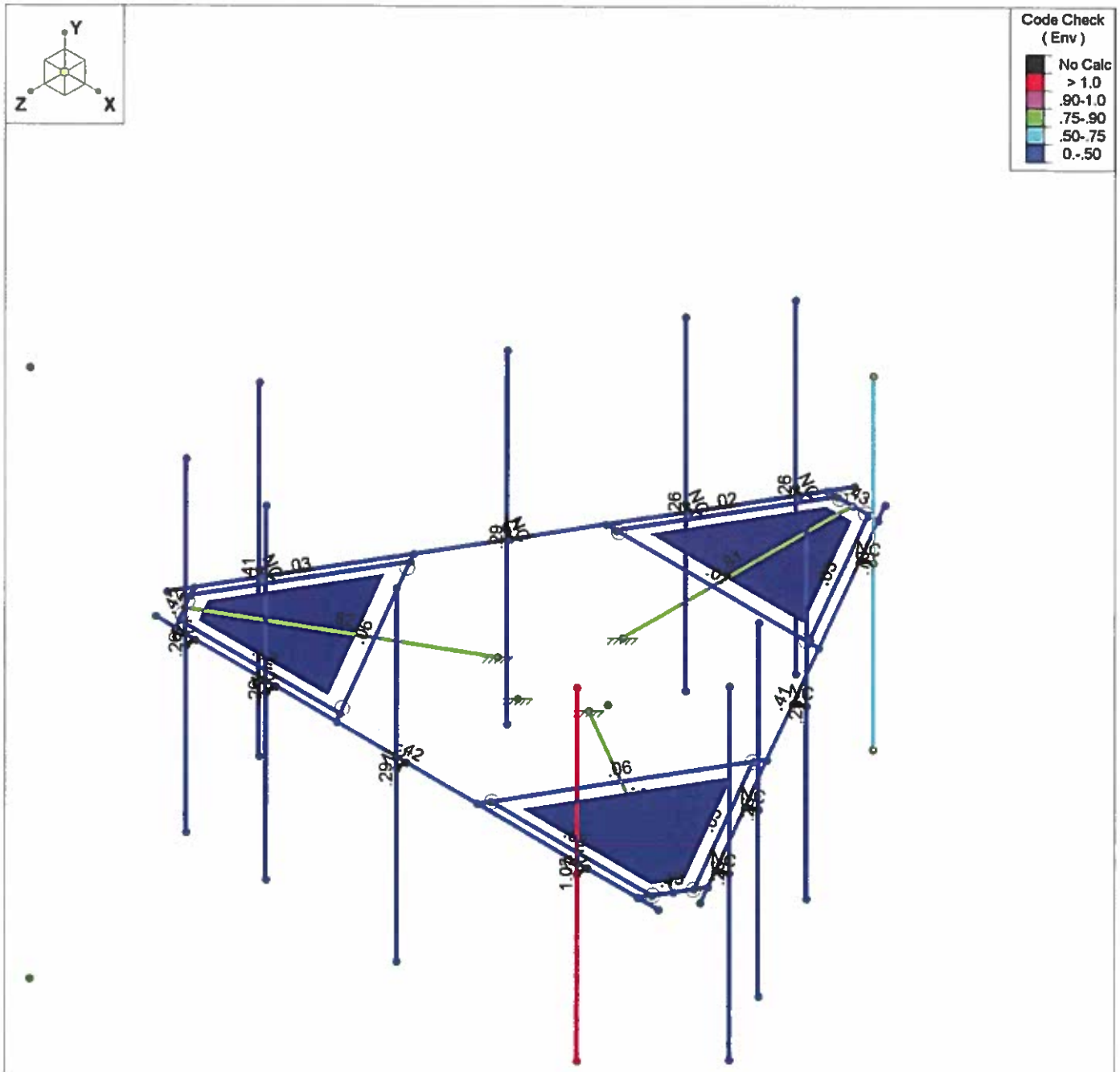
All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



American Tower Corp.		SK - 1
Steven.McGinnis	283423, NAUGATUCK CT	Nov 15, 2019 at 6:03 PM
13000540_C8_01	3D Rendering	R3D. VERIZON WIRELESS @ 283...

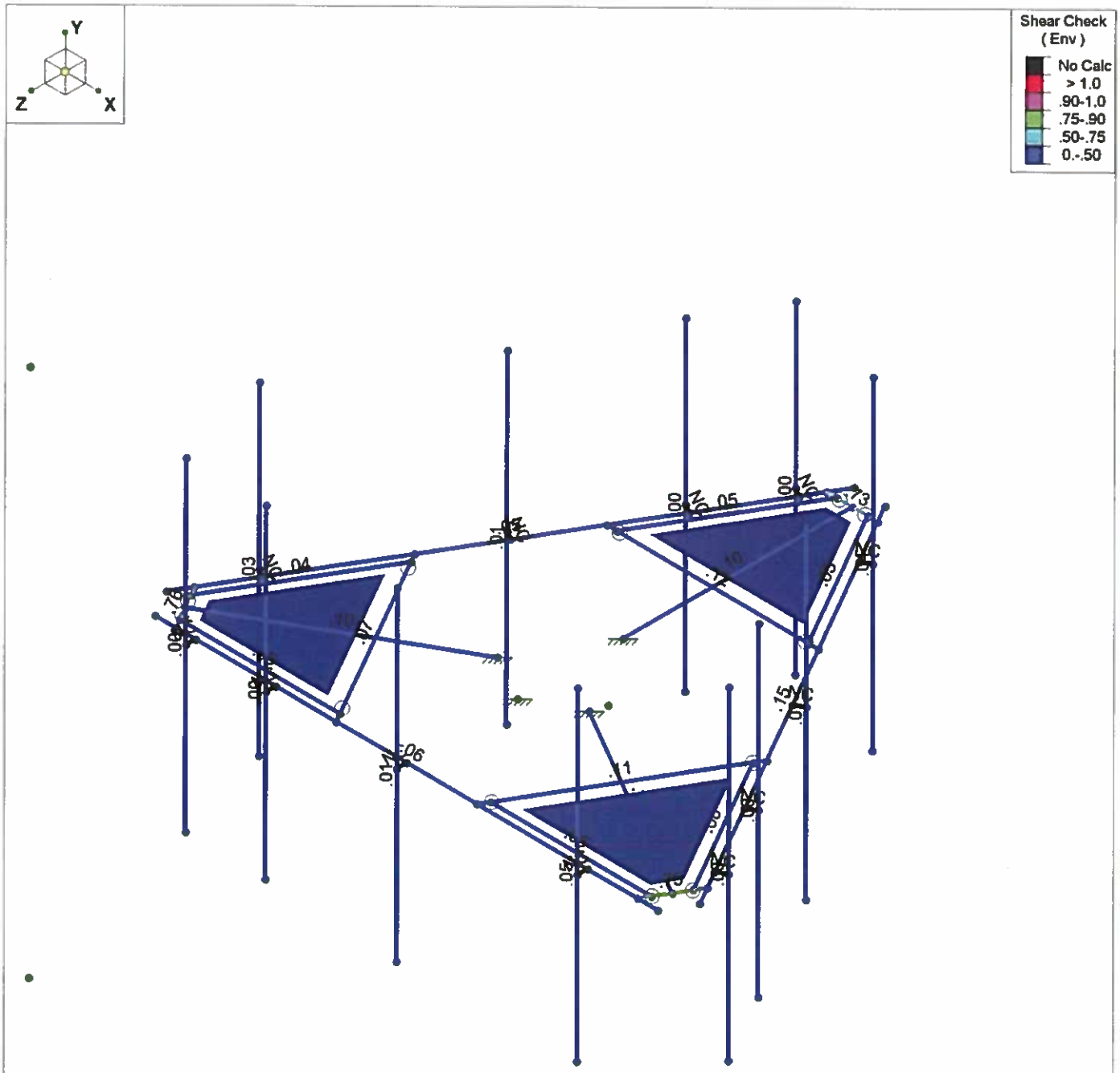


American Tower Corp.		SK - 2
Steven.McGinnis	283423, NAUGATUCK CT	Nov 15, 2019 at 6:03 PM
13000540_C8_01	Member Labels	R3D. VERIZON WIRELESS @ 283...



Member Code Checks Displayed (Enveloped)
Results for LC 2, 1.2D + 1.6Wo [0°]

American Tower Corp.		SK - 3
Steven.McGinnis	283423, NAUGATUCK CT	Nov 15, 2019 at 6:03 PM
13000540_C8_01	Unity Bending Check	R3D. VERIZON WIRELESS @ 283...



Member Shear Checks Displayed (Enveloped)
Results for LC 2, 1.2D + 1.6Wo [0°]

American Tower Corp.		SK - 4
Steven.McGinnis	283423, NAUGATUCK CT	Nov 15, 2019 at 6:04 PM
13000540_C8_01	Shear Check	R3D. VERIZON WIRELESS @ 283...

Hot Rolled Steel Properties

	Label	E [psi]	G [psi]	Nu	Therm (/1E..	Density[lb/f...	Yield[psi]	Ry	Fu[psi]	Rt
1	A36	2.9e+7	1.115e+7	.3	.65	490	36000	1.5	58000	1.2
2	A572-50	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
3	A500 Gr. B [RND]	2.9e+7	1.115e+7	.3	.65	527	42000	1.4	58000	1.3
4	A500 Gr. B [SQR]	2.9e+7	1.115e+7	.3	.65	527	46000	1.4	58000	1.3
5	A1085	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
6	A53 Gr. B	2.9e+7	1.115e+7	.3	.65	490	35000	1.6	60000	1.2
7	A992	2.9e+7	1.115e+7	.3	.65	490	50000	1.1	65000	1.1
8	SAE J429 Gr. 2	2.9e+7	1.115e+7	.3	.65	490	57000	1.1	74000	1.1

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	H001	N002	N003			PIPE_3.0X	Beam	None	A53 Gr. B	Typical
2	H002	N004	N006			PIPE_3.0X	Beam	None	A53 Gr. B	Typical
3	H003	N012	N008			PL6x0.375	Beam	None	A572-50	Typical
4	H004	N013	N009			PL6x0.375	Beam	None	A572-50	Typical
5	H005	N011	N010			PL6x0.375	Beam	None	A572-50	Typical
6	H006	N016	N017			HSS4x4x3	Beam	None	A500 Gr. ...	Typical
7	H007	N014	N018			HSS4x4x3	Beam	None	A500 Gr. ...	Typical
8	H008	N015	N019			HSS4x4x3	Beam	None	A500 Gr. ...	Typical
9	H009	N024	N020			HSS4x4x3	Beam	None	A500 Gr. ...	Typical
10	H010	N025	N021			HSS4x4x3	Beam	None	A500 Gr. ...	Typical
11	H011	N023	N022			HSS4x4x3	Beam	None	A500 Gr. ...	Typical
12	H012	N026	N029		270	L 2.5x1.5x6	Beam	None	A36	Typical
13	H013	N027	N030		270	L 2.5x1.5x6	Beam	None	A36	Typical
14	H014	N028	N031		270	L 2.5x1.5x6	Beam	None	A36	Typical
15	H015	N032	N035		270	L 2.5x1.5x6	Beam	None	A36	Typical
16	H016	N033	N036		270	L 2.5x1.5x6	Beam	None	A36	Typical
17	H017	N034	N037		270	L 2.5x1.5x6	Beam	None	A36	Typical
18	H018	N005	N007			PIPE_3.0X	Beam	None	A53 Gr. B	Typical
19	U019	N047	N050			(2) 1/2 U-Bolts	Beam	None	A36	Typical
20	U020	N038	N051			(2) 1/2 U-Bolts	Beam	None	A36	Typical
21	U021	N044	N052			(2) 1/2 U-Bolts	Beam	None	A36	Typical
22	U022	N041	N053			(2) 1/2 U-Bolts	Beam	None	A36	Typical
23	U023	N049	N054			(2) 1/2 U-Bolts	Beam	None	A36	Typical
24	U024	N040	N055			(2) 1/2 U-Bolts	Beam	None	A36	Typical
25	U025	N046	N056			(2) 1/2 U-Bolts	Beam	None	A36	Typical
26	U026	N043	N057			(2) 1/2 U-Bolts	Beam	None	A36	Typical
27	U027	N048	N058			(2) 1/2 U-Bolts	Beam	None	A36	Typical
28	U028	N039	N059			(2) 1/2 U-Bolts	Beam	None	A36	Typical
29	U029	N045	N060			(2) 1/2 U-Bolts	Beam	None	A36	Typical
30	U030	N042	N061			(2) 1/2 U-Bolts	Beam	None	A36	Typical
31	MP1	MP1t	MP1b			PIPE_2.0	Column	None	A53 Gr. B	Typical
32	MP2	MP2t	MP2b			PIPE_2.0	Column	None	A53 Gr. B	Typical
33	MP3	MP3t	MP3b			PIPE_2.0	Column	None	A53 Gr. B	Typical
34	MP4	MP4t	MP4b			PIPE_2.0	Column	None	A53 Gr. B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
35	MP5	MP5t	MP5b			PIPE_2.0	Column	None	A53 Gr. B	Typical
36	MP6	MP6t	MP6b			PIPE_2.0	Column	None	A53 Gr. B	Typical
37	MP7	MP7t	MP7b			PIPE_2.0	Column	None	A53 Gr. B	Typical
38	MP8	MP8t	MP8b			PIPE_2.0	Column	None	A53 Gr. B	Typical
39	MP9	MP9t	MP9b			PIPE_2.0	Column	None	A53 Gr. B	Typical
40	MP10	MP10t	MP10b			PIPE_2.0	VBrace	None	A53 Gr. B	Typical
41	MP11	MP11t	MP11b			PIPE_2.0	VBrace	None	A53 Gr. B	Typical
42	MP12	MP12t	MP12b			PIPE_2.0	VBrace	None	A53 Gr. B	Typical

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(...
1	Dead	DL		-1			21			
2	Ice	IL					21	30		3
3	Wind -Z	WLZ					21	3	1	
4	Wind -X	WLX					21	3	1	
5	Wind -Z (Ice)	WL-Z					21	30	1	
6	Wind -X (Ice)	WL-X					21	30	1	
7	Wind -Z (Working)	WLZP1					21		1	
8	Wind -X (Working)	WLXP1					21		1	
9	Ev -Y (Seismic)	ELY						30		
10	Eh -Z (Seismic)	ELZ						30		
11	Eh -X (Seismic)	ELX						30		
12	Lm (1)	LL				1				
13	Lm (2)	LL				1				
14	Lm (3)	LL				1				
15	Lm (4)	LL				1				
16	Lm (5)	LL				1				
17	Lm (6)	LL				1				
18	Lm (7)	LL				1				
19	Lm (8)	LL				1				
20	Lm (9)	LL				1				
21	Lm (10)	LL				1				
22	Lm (11)	LL				1				
23	Lm (12)	LL				1				
24	BLC 3 Transient Area Loads	None						28		
25	BLC 4 Transient Area Loads	None						30		
26	BLC 5 Transient Area Loads	None						28		
27	BLC 6 Transient Area Loads	None						30		
28	BLC 7 Transient Area Loads	None						28		
29	BLC 8 Transient Area Loads	None						30		

Load Combinations

	Description	So...	P...	S...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...	BLCFac...
1	1.4D	Yes	Y		DL	1.4									
2	1.2D + 1.6Wo [0°]	Yes	Y		DL	1.2	W...	.001	W...	1.6					
3	1.2D + 1.6Wo [30°]	Yes	Y		DL	1.2	W...	.8	W...	1.3...					
4	1.2D + 1.6Wo [60°]	Yes	Y		DL	1.2	W...	1.3...	W...	.8					
5	1.2D + 1.6Wo [90°]	Yes	Y		DL	1.2	W...	1.6	W...	.001					
6	1.2D + 1.6Wo [120°]	Yes	Y		DL	1.2	W...	1.3...	W...	-.8					

Load Combinations (Continued)

	Description	So..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
7	1.2D + 1.6Wo [150°]	Yes	Y		DL	1.2	W...	.8	W...	-1.3...												
8	1.2D + 1.6Wo [180°]	Yes	Y		DL	1.2	W...	.001	W...	-1.6												
9	1.2D + 1.6Wo [210°]	Yes	Y		DL	1.2	W...	-.8	W...	-1.3...												
10	1.2D + 1.6Wo [240°]	Yes	Y		DL	1.2	W...	-1.3...	W...	-.8												
11	1.2D + 1.6Wo [270°]	Yes	Y		DL	1.2	W...	-1.6	W...	.001												
12	1.2D + 1.6Wo [300°]	Yes	Y		DL	1.2	W...	-1.3...	W...	.8												
13	1.2D + 1.6Wo [330°]	Yes	Y		DL	1.2	W...	-.8	W...	1.3...												
14	0.9D + 1.6Wo [0°]	Yes	Y		DL	.9	W...	.001	W...	1.6												
15	0.9D + 1.6Wo [30°]	Yes	Y		DL	.9	W...	.8	W...	1.3...												
16	0.9D + 1.6Wo [60°]	Yes	Y		DL	.9	W...	1.3...	W...	.8												
17	0.9D + 1.6Wo [90°]	Yes	Y		DL	.9	W...	1.6	W...	.001												
18	0.9D + 1.6Wo [120°]	Yes	Y		DL	.9	W...	1.3...	W...	-.8												
19	0.9D + 1.6Wo [150°]	Yes	Y		DL	.9	W...	.8	W...	-1.3...												
20	0.9D + 1.6Wo [180°]	Yes	Y		DL	.9	W...	.001	W...	-1.6												
21	0.9D + 1.6Wo [210°]	Yes	Y		DL	.9	W...	-.8	W...	-1.3...												
22	0.9D + 1.6Wo [240°]	Yes	Y		DL	.9	W...	-1.3...	W...	-.8												
23	0.9D + 1.6Wo [270°]	Yes	Y		DL	.9	W...	-1.6	W...	.001												
24	0.9D + 1.6Wo [300°]	Yes	Y		DL	.9	W...	-1.3...	W...	.8												
25	0.9D + 1.6Wo [330°]	Yes	Y		DL	.9	W...	-.8	W...	1.3...												
26	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	.001	W...	1										
27	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	.5	W...	.866										
28	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	.866	W...	.5										
29	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	1	W...	.001										
30	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	.866	W...	-.5										
31	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	.5	W...	-.866										
32	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	.001	W...	-1										
33	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	-.5	W...	-.866										
34	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	-.866	W...	-.5										
35	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	-1	W...	.001										
36	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	-.866	W...	.5										
37	1.2D + 1.0Di + 1.0W...	Yes	Y		DL	1.2	IL	1	W...	-.5	W...	.866										
38	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	1	ELX	.001										
39	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	.866	ELX	.5										
40	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	.5	ELX	.866										
41	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	.001	ELX	1										
42	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	-.5	ELX	.866										
43	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	-.866	ELX	.5										
44	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	-1	ELX	.001										
45	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	-.866	ELX	-.5										
46	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	-.5	ELX	-.866										
47	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	.001	ELX	-1										
48	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	.5	ELX	-.866										
49	1.2D + 1.0Ev + 1.0E...	Yes	Y		DL	1.2	ELY	1	ELZ	.866	ELX	-.5										
50	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	1	ELX	.001										
51	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	.866	ELX	.5										
52	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	.5	ELX	.866										
53	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	.001	ELX	1										
54	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	-.5	ELX	.866										
55	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	-.866	ELX	.5										
56	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	-1	ELX	.001										
57	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	-.866	ELX	-.5										
58	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL	.9	ELY	1	ELZ	-.5	ELX	-.866										

Load Combinations (Continued)

	Description	So..	P..	S..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..
59	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL .9	ELY 1	ELZ .001	ELX -1						
60	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL .9	ELY 1	ELZ .5	ELX -.866						
61	0.9D + 1.0Ev + 1.0E...	Yes	Y		DL .9	ELY 1	ELZ .866	ELX -.5						
62	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... .001	W... 1						
63	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... .5	W... .866						
64	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... .866	W... .5						
65	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... 1	W... .001						
66	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... .866	W... -.5						
67	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... .5	W... -.866						
68	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... .001	W... -.5						
69	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... -.5	W... -.866						
70	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... -.866	W... -.5						
71	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... -1	W... .001						
72	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... -.866	W... .5						
73	1.2D + 1.5Lm(1) + 1...	Yes	Y		DL 1.2	12 1.5	W... -.5	W... .866						
74	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... .001	W... 1						
75	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... .5	W... .866						
76	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... .866	W... .5						
77	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... 1	W... .001						
78	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... .866	W... -.5						
79	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... .5	W... -.866						
80	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... .001	W... -.5						
81	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... -.5	W... -.866						
82	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... -.866	W... -.5						
83	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... -1	W... .001						
84	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... -.866	W... .5						
85	1.2D + 1.5Lm(2) + 1...	Yes	Y		DL 1.2	13 1.5	W... -.5	W... .866						
86	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... .001	W... 1						
87	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... .5	W... .866						
88	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... .866	W... .5						
89	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... 1	W... .001						
90	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... .866	W... -.5						
91	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... .5	W... -.866						
92	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... .001	W... -.5						
93	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... -.5	W... -.866						
94	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... -.866	W... -.5						
95	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... -1	W... .001						
96	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... -.866	W... .5						
97	1.2D + 1.5Lm(3) + 1...	Yes	Y		DL 1.2	14 1.5	W... -.5	W... .866						
98	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... .001	W... 1						
99	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... .5	W... .866						
100	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... .866	W... .5						
101	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... 1	W... .001						
102	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... .866	W... -.5						
103	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... .5	W... -.866						
104	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... .001	W... -.5						
105	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... -.5	W... -.866						
106	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... -.866	W... -.5						
107	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... -1	W... .001						
108	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... -.866	W... .5						
109	1.2D + 1.5Lm(4) + 1...	Yes	Y		DL 1.2	15 1.5	W... -.5	W... .866						
110	1.2D + 1.5Lm(5) + 1...	Yes	Y		DL 1.2	16 1.5	W... .001	W... 1						

Load Combinations (Continued)

	Description	So..	P..	S..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..	BLCFac..
111	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... .5	W... .866						
112	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... .866	W... .5						
113	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... 1	W... .001						
114	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... .866	W... -.5						
115	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... .5	W... -.866						
116	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... .001	W... -.5						
117	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... -.5	W... -.866						
118	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... -.866	W... -.5						
119	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... -1	W... .001						
120	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... -.866	W... .5						
121	1.2D + 1.5Lm(5) + 1....	Yes	Y		DL 1.2	16 1.5	W... -.5	W... .866						
122	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... .001	W... 1						
123	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... .5	W... .866						
124	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... .866	W... .5						
125	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... 1	W... .001						
126	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... .866	W... -.5						
127	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... .5	W... -.866						
128	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... .001	W... -.5						
129	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... -.5	W... -.866						
130	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... -.866	W... -.5						
131	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... -1	W... .001						
132	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... -.866	W... .5						
133	1.2D + 1.5Lm(6) + 1....	Yes	Y		DL 1.2	17 1.5	W... -.5	W... .866						
134	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... .001	W... 1						
135	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... .5	W... .866						
136	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... .866	W... .5						
137	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... 1	W... .001						
138	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... .866	W... -.5						
139	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... .5	W... -.866						
140	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... .001	W... -.5						
141	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... -.5	W... -.866						
142	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... -.866	W... -.5						
143	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... -1	W... .001						
144	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... -.866	W... .5						
145	1.2D + 1.5Lm(7) + 1....	Yes	Y		DL 1.2	18 1.5	W... -.5	W... .866						
146	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... .001	W... 1						
147	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... .5	W... .866						
148	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... .866	W... .5						
149	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... 1	W... .001						
150	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... .866	W... -.5						
151	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... .5	W... -.866						
152	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... .001	W... -.5						
153	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... -.5	W... -.866						
154	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... -.866	W... -.5						
155	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... -1	W... .001						
156	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... -.866	W... .5						
157	1.2D + 1.5Lm(8) + 1....	Yes	Y		DL 1.2	19 1.5	W... -.5	W... .866						
158	1.2D + 1.5Lm(9) + 1....	Yes	Y		DL 1.2	20 1.5	W... .001	W... 1						
159	1.2D + 1.5Lm(9) + 1....	Yes	Y		DL 1.2	20 1.5	W... .5	W... .866						
160	1.2D + 1.5Lm(9) + 1....	Yes	Y		DL 1.2	20 1.5	W... .866	W... .5						
161	1.2D + 1.5Lm(9) + 1....	Yes	Y		DL 1.2	20 1.5	W... 1	W... .001						
162	1.2D + 1.5Lm(9) + 1....	Yes	Y		DL 1.2	20 1.5	W... .866	W... -.5						

Load Combinations (Continued)

	Description	So..	P...	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..
163	1.2D + 1.5Lm(9) + 1...	Yes	Y		DL	1.2	20	1.5	W...	.5	W...	-.866												
164	1.2D + 1.5Lm(9) + 1...	Yes	Y		DL	1.2	20	1.5	W...	.001	W...	-.5												
165	1.2D + 1.5Lm(9) + 1...	Yes	Y		DL	1.2	20	1.5	W...	-.5	W...	-.866												
166	1.2D + 1.5Lm(9) + 1...	Yes	Y		DL	1.2	20	1.5	W...	-.866	W...	-.5												
167	1.2D + 1.5Lm(9) + 1...	Yes	Y		DL	1.2	20	1.5	W...	-1	W...	.001												
168	1.2D + 1.5Lm(9) + 1...	Yes	Y		DL	1.2	20	1.5	W...	-.866	W...	.5												
169	1.2D + 1.5Lm(9) + 1...	Yes	Y		DL	1.2	20	1.5	W...	-.5	W...	.866												
170	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	.001	W...	1												
171	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	.5	W...	.866												
172	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	.866	W...	.5												
173	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	1	W...	.001												
174	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	.866	W...	-.5												
175	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	.5	W...	-.866												
176	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	.001	W...	-.5												
177	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	-.5	W...	-.866												
178	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	-.866	W...	-.5												
179	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	-1	W...	.001												
180	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	-.866	W...	.5												
181	1.2D + 1.5Lm(10) + ...	Yes	Y		DL	1.2	21	1.5	W...	-.5	W...	.866												
182	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	.001	W...	1												
183	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	.5	W...	.866												
184	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	.866	W...	.5												
185	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	1	W...	.001												
186	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	.866	W...	-.5												
187	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	.5	W...	-.866												
188	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	.001	W...	-.5												
189	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	-.5	W...	-.866												
190	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	-.866	W...	-.5												
191	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	-1	W...	.001												
192	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	-.866	W...	.5												
193	1.2D + 1.5Lm(11) + ...	Yes	Y		DL	1.2	22	1.5	W...	-.5	W...	.866												
194	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	.001	W...	1												
195	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	.5	W...	.866												
196	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	.866	W...	.5												
197	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	1	W...	.001												
198	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	.866	W...	-.5												
199	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	.5	W...	-.866												
200	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	.001	W...	-.5												
201	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	-.5	W...	-.866												
202	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	-.866	W...	-.5												
203	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	-1	W...	.001												
204	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	-.866	W...	.5												
205	1.2D + 1.5Lm(12) + ...	Yes	Y		DL	1.2	23	1.5	W...	-.5	W...	.866												

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N001	max	0	205	0	205	0	205	0	205	0	205	0	205
2		min	0	1	0	1	0	1	0	1	0	1	0	1
3	N014	max	161.089	6	2005.058	26	2579.518	2	10012.544	26	578.964	25	475.814	193
4		min	-162.234	12	501.547	20	-1573.005	20	2426.611	20	-583.917	7	-375.743	127

Envelope Joint Reactions (Continued)

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
5	N015	max	2087.983	6	2036.04	30	683.702	24	-993.368	24	1003.647	3	-1977.133	24
6		min	-1217.172	24	419.259	24	-1184.869	6	-4871.233	30	-1000.133	21	-8889.362	30
7	N016	max	1764.064	16	2127.116	34	962.911	16	-1099.195	17	350.243	17	9080.776	35
8		min	-2639.029	10	447.766	16	-1464.522	10	-5598.061	35	-350.411	11	1775.723	17
9	Totals:	max	3623.377	17	6051.265	37	3100.656	14						
10		min	-3623.377	11	1946.497	14	-3100.656	8						

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

	Member	Shape	Code Ch...	Loc[in]	LC	Shear Che...	Loc[in]	Dir	LC	phi*Pnc [l...	phi*Pnt [lb]	phi*Mn y-y [...	phi*Mn z-z [...	Cb	Eqn
1	MP10	PIPE_2.0	1.025	48	5	.051	48		5	3485.189	32130	1871.625	1871.625	1.556	H1-1b
2	H006	HSS4x4x3	.855	0	35	.101	0	y	179	93791.947	106812	12661.5	12661.5	1.775	H1-1b
3	H008	HSS4x4x3	.819	0	28	.095	0	y	203	93791.947	106812	12661.5	12661.5	1.787	H1-1b
4	H007	HSS4x4x3	.812	0	37	.096	0	y	193	93791.947	106812	12661.5	12661.5	1.78	H1-1b
5	MP11	PIPE_2.0	.701	48	2	.036	48		2	3485.189	32130	1871.625	1871.625	1.418	H1-1b
6	H003	PL6x0.375	.433	7.615	10	.752	7.615	y	29	25681.767	101250	791.016	12656.25	1.263	H1-1b
7	H004	PL6x0.375	.433	7.615	13	.732	7.615	y	28	25681.767	101250	791.016	12656.25	1.266	H1-1b
8	H001	PIPE_3.0X	.421	75	66	.061	53.125		8	36945.66	89145	7638.75	7638.75	1.381	H1-1b
9	H005	PL6x0.375	.417	7.615	5	.756	7.615	y	29	25681.767	101250	791.016	12656.25	1.274	H1-1b
10	H002	PIPE_3.0X	.413	75	83	.149	53.125		12	36945.66	89145	7638.75	7638.75	1.392	H1-1b
11	MP12	PIPE_2.0	.412	48	2	.033	48		2	3485.189	32130	1871.625	1871.625	1.4	H1-1b
12	H018	PIPE_3.0X	.409	75	89	.053	53.125		196	36945.66	89145	7638.75	7638.75	1.391	H1-1b
13	MP2	PIPE_2.0	.291	46	84	.012	47		11	3485.189	32130	1871.625	1871.625	2.583	H1-1a
14	MP1	PIPE_2.0	.288	46	69	.009	47		8	3485.189	32130	1871.625	1871.625	1.788	H1-1a
15	MP3	PIPE_2.0	.287	46	88	.012	47		5	3485.189	32130	1871.625	1871.625	2.564	H1-1a
16	MP8	PIPE_2.0	.261	48	156	.004	48		12	3485.189	32130	1871.625	1871.625	1.56	H1-1a
17	MP7	PIPE_2.0	.260	48	141	.004	48		9	3485.189	32130	1871.625	1871.625	1.56	H1-1a
18	MP5	PIPE_2.0	.259	48	120	.004	48		12	3485.189	32130	1871.625	1871.625	1.56	H1-1a
19	MP4	PIPE_2.0	.258	48	105	.004	48		9	3485.189	32130	1871.625	1871.625	1.56	H1-1a
20	MP9	PIPE_2.0	.257	48	159	.004	48		7	3485.189	32130	1871.625	1871.625	1.56	H1-1a
21	MP6	PIPE_2.0	.255	48	123	.004	48		7	3485.189	32130	1871.625	1871.625	1.56	H1-1a
22	H010	HSS4x4x3	.066	59.936	35	.122	60.595	z	12	95520.261	106812	12661.5	12661.5	1.195	H1-1b
23	H009	HSS4x4x3	.064	3.293	36	.112	2.635	z	12	95520.261	106812	12661.5	12661.5	1.197	H1-1b
24	H011	HSS4x4x3	.063	59.936	35	.066	60.595	z	12	95520.261	106812	12661.5	12661.5	1.192	H1-1b
25	H012	L 2.5x1.5...	.032	0	16	.047	48	z	65	18634.495	44226	387.193	2344.676	2.029	H2-1*
26	H014	L 2.5x1.5...	.030	0	23	.045	48	z	96	18634.495	44226	387.193	2316.888	1.574	H2-1*
27	H013	L 2.5x1.5...	.028	0	19	.049	48	z	11	18634.495	44226	387.193	2354.552	2.277	H2-1*
28	H015	L 2.5x1.5...	.028	0	17	.056	0	z	11	18634.495	44226	387.193	2354.552	2.24	H2-1*
29	H016	L 2.5x1.5...	.024	0	21	.047	0	z	97	18634.495	44226	387.193	2298.963	1.496	H2-1*
30	H017	L 2.5x1.5...	.022	0	25	.049	0	z	69	18634.495	44226	387.193	2270.207	1.643	H2-1*

Site Name: Naugatuck West CT
Cumulative Power Density

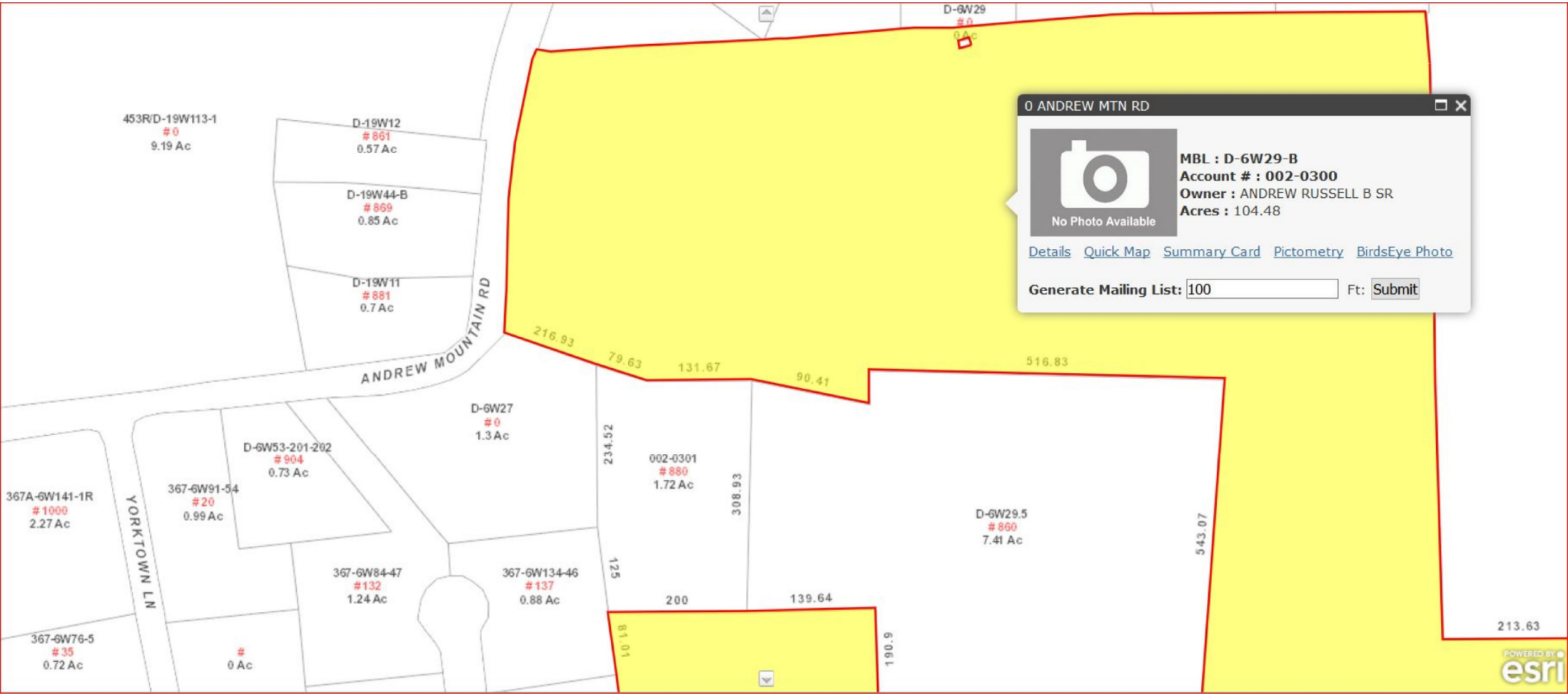
Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW 700	746	4	962	3846.44	106	0.1231	0.497333333	24.75%
VZW Cellular	880	4	457	1828.32	106	0.0585	0.586666667	9.97%
VZW PCS	1970	4	2201	8803.56	106	0.2818	1.0	28.18%
VZW AWS	2145	4	2576	10302.88	106	0.3298	1.0	32.98%
Total Percentage of Maximum Permissible Exposure								95.88%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

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

Absolute worst case maximum values used, including the following assumptions:
1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period; and,
3. all RF energy is assumed to be directed solely to the base of the pole.

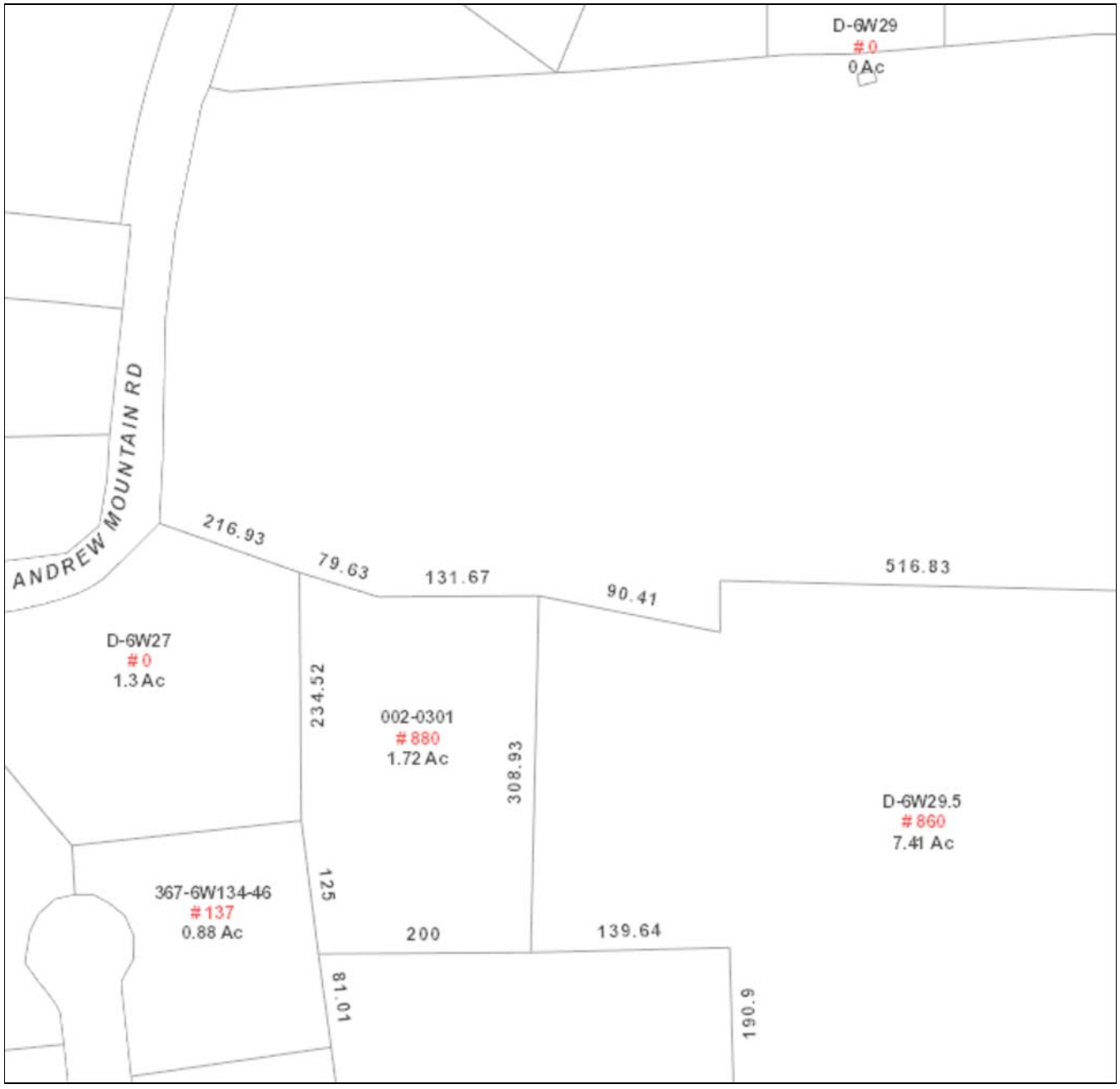

0 ANDREW MTN RD
No Photo Available
MBL : D-6W29-B
Account # : 002-0300
Owner : ANDREW RUSSELL B SR
Acres : 104.48
Details Quick Map Summary Card Pictometry BirdsEye Photo
Generate Mailing List: 100 Ft: Submit
ANDREW MOUNTAIN RD
YORKTOWN LN
DORMAN DR
D-6W27
1.3 Ac
esri


0 ANDREW MTN RD
No Photo Available
MBL : D-6W29-B
Account # : 002-0300
Owner : ANDREW RUSSELL B SR
Acres : 104.48
Details Quick Map Summary Card Pictometry BirdsEye Photo
Generate Mailing List: 100 Ft: Submit
D-6W29
0
0 Ac
453R/D-19W113-1
0
9.19 Ac
D-19W12
861
0.57 Ac
D-19W44-B
869
0.85 Ac
D-19W11
881
0.7 Ac
ANDREW MOUNTAIN RD
216.93
79.63
131.67
90.41
516.83
D-6W27
0
1.3 Ac
234.52
002-0301
880
1.72 Ac
308.93
D-6W29.5
860
7.41 Ac
543.07
D-6W53-201-202
904
0.73 Ac
367A-6W141-1R
1000
2.27 Ac
YORKTOWN LN
367-6W91-54
20
0.99 Ac
367-6W84-47
132
1.24 Ac
367-6W134-46
137
0.88 Ac
125
200
139.64
81.01
190.9
213.63
367-6W76-5
35
0.72 Ac
#
0 Ac
esri

The Borough of Naugatuck

Geographic Information System (GIS)

Date Printed: 12/14/2017



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 Borough of Naugatuck and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 150 feet

0 150 Feet

N W E S

Borough of Naugatuck, CT

Property Listing Report

Map Block Lot D-6W29-B

Account 002-0300

Property Information

Property Location	0 ANDREW MTN RD
Owner	ANDREW RUSSELL B SR
Co-Owner	
Mailing Address	861 ANDREW MTN RD NAUGATUCK CT 06770
Land Use	6100 Forest 490
Land Class	S
Zoning Code	
Census Tract	
Sub Lot	

Neighborhood	7
Acreage	104.48
Utilities	
Lot Setting/Desc	
Survey Map	
Additional Info	

Photo

Sketch

Primary Construction Details

Year Built		Bedrooms		Exterior Walls	
Stories		Full Bathrooms		Interior Walls	
Building Style		Half Bathrooms		Heating Type	
Building Use		Bath Style		Heating Fuel	
Building Condition		Kitchen Style		AC Type	
Floors		Roof Style		Gross Bldg Area	
Total Rooms		Roof Cover		Total Living Area	

Report Created On 12/14/2017

Borough of Naugatuck, CT

Property Listing Report | **Map Block Lot** D-6W29-B | **Account** 002-0300

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings		
Extras		
Outbuildings		
Land		
Total		

Outbuilding and Extra Items

Type	Description
CANOPY-AVE	800 S.F.
Fireplace 1 STY	1 UNITS
Shed	224 S.F.
Shed	224 S.F.
CELL TOWER	120 HEIGHT

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area		0

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
ANDREW RUSSELL B SR	954/ 260	12/17/2014	0
ANDREW FRANKLIN B JR + PIERCE MARJORIE	954/ 258	12/17/2014	0
ANDREW FRANKLIN B JR	954/ 256	12/17/2014	0
ANDREW FRANKLIN BROOKS EST	932/ 275	8/8/2013	
ANDREW FRANKLIN B	684/ 440	10/28/2004	
ANDREW FRANKLIN B	467/ 103	6/29/1998	0
ANDREW FRANKLIN B	339/ 202	12/27/1989	0
ANDREW FRANKLIN B	134/ 531	6/24/1965	0

Report Created On 12/14/2017

Borough of Naugatuck, CT

Property Listing Report

Map Block Lot 002-0301 Account 002-0301

Property Information

Property Location	880 ANDREW MTN RD
Owner	PIERCE MARJORIE
Co-Owner	
Mailing Address	111 BIRCH LA NAUGATUCK CT 06770
Land Use	1010 Single Fam
Land Class	R
Zoning Code	
Census Tract	
Sub Lot	

Neighborhood	7
Acreage	1.72
Utilities	
Lot Setting/Desc	
Survey Map	
Additional Info	

Photo

Sketch

Primary Construction Details

Year Built	2000
Stories	1
Building Style	Ranch
Building Use	Residential
Building Condition	C
Floors	Hardwood
Total Rooms	3

Bedrooms	2 Bedrooms
Full Bathrooms	1
Half Bathrooms	
Bath Style	Average
Kitchen Style	Average
Roof Style	Gable
Roof Cover	Asphalt

Exterior Walls	Logs
Interior Walls	Drywall
Heating Type	Hot Water
Heating Fuel	Oil
AC Type	None
Gross Bldg Area	2424
Total Living Area	792

Report Created On 12/14/2017

Borough of Naugatuck, CT

Property Listing Report | **Map Block Lot** 002-0301 | **Account** 002-0301

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	91710	64200
Extras	2330	1630
Outbuildings	0	0
Land	96330	67430
Total	0	

Outbuilding and Extra Items

Type	Description
Fireplace	1 UNITS

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Garage	576	0
First Floor	792	792
Basement, Unfinished	792	0
Porch, Open	264	0
Total Area	2424	792

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
PIERCE MARJORIE	954/ 258	12/17/2014	0
ANDREW FRANKLIN BROOKS EST	932/ 275	8/8/2013	0

Report Created On 12/14/2017

Town of Naugatuck, CT

Property Listing Report

Map Block Lot	002-0302	Building #	1	PID	129167	Account	002-0302

Property Information

Property Location	0 ANDREW MOUNTAIN RD
Owner	ANDREW FRANKLIN B JR
Co-Owner	
Mailing Address	325 MILLVILLE AVE NAUGATUCK CT 06770
Land Use	3920 VACANT UNB
Land Class	C
Zoning Code	
Census Tract	

Photo

Sketch

Neighborhood	7
Acreage	14.91
Utilities	
Lot Setting/Desc	
Book / Page	0954/0256
Additional Info	

Primary Construction Details

Year Built	0
Building Desc.	VACANT UNB
Building Style	UNKNOWN
Building Grade	
Stories	
Occupancy	
Exterior Walls	
Exterior Walls 2	NA
Roof Style	
Roof Cover	
Interior Walls	
Interior Walls 2	NA
Interior Floors 1	
Interior Floors 2	

Heating Fuel	
Heating Type	
AC Type	
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	NA
Fin Bsmt Area	
Fin Bsmt Quality	
Bsmt Gar	0
Fireplaces	0

(*Industrial / Commercial Details)

Building Use	Vacant
Building Condition	
Sprinkler %	NA
Heat / AC	NA
Frame Type	NA
Baths / Plumbing	NA
Ceiling / Wall	NA
Rooms / Prtns	NA
Wall Height	NA
First Floor Use	NA
Foundation	NA

Report Created On 1/3/2020

Town of Naugatuck, CT

Property Listing Report | Map Block Lot **002-0302** | Building # **1** | PID **129167** | Account **002-0302**

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Improvements		
Outbuildings	105750	74030
Land	217940	90580
Total	323690	164610

Outbuilding and Extra Features

Type	Description
Shed	224 S.F.
Shed	224 S.F.
CELL TOWER	120 HEIGHT
Shed	224 S.F.
Shed	224 S.F.
Shed	224 S.F.
Shed	224 S.F.
CELL TOWER	120 HEIGHT

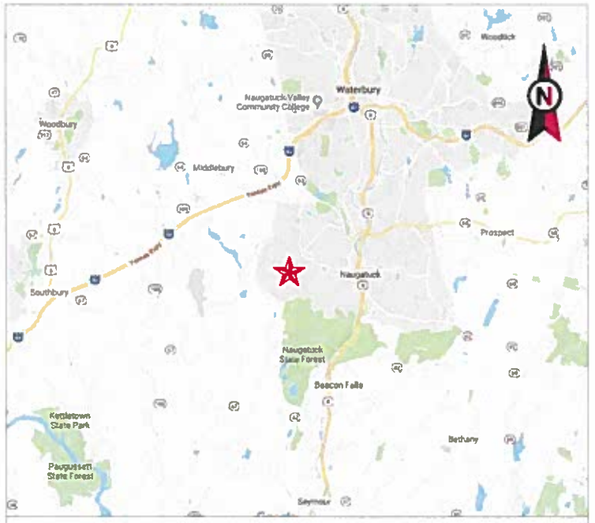
Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	0	0

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
ANDREW FRANKLIN B JR	0954/0256	2014-12-17	0
ANDREW FRANKLIN BROOKS EST	0932/0275	2013-08-08	0

Report Created On **1/3/2020**



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: NAUGATUCK CT
ATC SITE NUMBER: 283423
VERIZON SITE NAME: NAUGATUCK WEST CT
VERIZON SITE NUMBER:469151
SITE ADDRESS: 880 ANDREW MOUNTAIN RD NAUGATUCK, CT 06770

LOCATION MAP

VERIZON WIRELESS
ANTENNA MODIFICATION 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: (800) 376-6843

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

PROJECT SUMMARY

SITE ADDRESS:
880 ANDREW MOUNTAIN RD
NAUGATUCK, CT 06770
COUNTY: NEW HAVEN

GEOGRAPHIC COORDINATES:
LATITUDE: 41.484453
LONGITUDE: -73.089844
GROUND ELEVATION: 855' AMSL

PROJECT TEAM

TOWER OWNER:
AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

ENGINEER:
ATC TOWER SERVICES, LLC
3500 REGENCY PKWY STE 100
CARY, NC 27518

PROPERTY OWNER:
FRANKLIN B ANDREW JR
325 MILLVILLE AVE
NAUGATUCK, CT 06770

APPLICANT:
VERIZON WIRELESS
20 ALEXANDER DRIVE, 2ND FLOOR
WALLINGFORD, CT 06492

PROJECT DESCRIPTION

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

REMOVE (3) PANELS, (12) RRUs

INSTALL (6) RRUs, (3) COMBINERS

EXISTING (6) PANELS, (6) 1-5/8" COAX CABLES, (1) 1-5/8" HYBRID CABLE, AND (2) OVPs 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.

PROJECT LOCATION DIRECTIONS

FROM DOWNTOWN NEW HAVEN CT START OUT GOING NORTHEAST ON CHURCH ST TOWARD WALL ST. TURN LEFT ONTO GROVE ST. GROVE ST BECOMES TOWER PKWY. TOWER PKWY BECOMES WHALLEY AVE. TURN SLIGHT LEFT ONTO AMITY RD/CT-63. CONTINUE TO FOLLOW CT-63. TURN LEFT TO STAY ON CT-63. TURN LEFT ONTO SCOTT ST. TAKE THE 3RD LEFT ONTO ANDREW AVE. TURN RIGHT ONTO ANDREW MOUNTAIN RD. 946 ANDREW MOUNTAIN RD, NAUGATUCK, CT 06770-3643, 946 ANDREW MOUNTAIN RD IS ON THE LEFT.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	COVER SHEET	0	12/24/19	MR
G-002	GENERAL NOTES	0	12/24/19	MR
C-101	DETAILED SITE PLAN	0	12/24/19	MR
C-102	TOWER ELEVATION	0	12/24/19	MR
C-501	RF SCHEDULE AND ANTENNA INSTALLATION	0	12/24/19	MR
C-502	CONSTRUCTION DETAILS	0	12/24/19	MR
R-601	SUPPLEMENTAL			

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MR	12/24/19

ATC SITE NUMBER:
283423

ATC SITE NAME:
NAUGATUCK CT

SITE ADDRESS:
880 ANDREW MOUNTAIN RD
NAUGATUCK, CT 06770

SEAL:

Authorized by "EOR"
Design

DRAWN BY:	MR
APPROVED BY:	PPB
DATE DRAWN:	12/24/19
ATC JOB NO:	13000540
CUSTOMER ID:	NAUGATUCK WEST CT
CUSTOMER #:	469151

COVER SHEET

SHEET NUMBER:	REVISION:
G-001	0

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. 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.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON WIRELESS REP PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON WIRELESS REP IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. 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.
25. CONTRACTOR SHALL NOTIFY VERIZON WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. 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.
27. 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.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON WIRELESS REP. ANY WORK FOUND BY THE VERIZON WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. 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.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
   A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
   B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
   C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
   D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
   E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
   A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
   B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
   C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
   D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
   E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
   F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
   G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

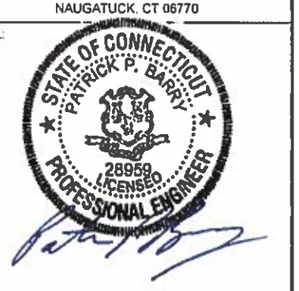
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MR	12/24/19

ATC SITE NUMBER:
283423

ATC SITE NAME:
NAUGATUCK CT

SITE ADDRESS:
880 ANDREW MOUNTAIN RD
NAUGATUCK, CT 06770

SEAL:



Authorized by "EOR"
Design

DRAWN BY:	MR
APPROVED BY:	PPB
DATE DRAWN:	12/24/19
ATC JOB NO:	13000540
CUSTOMER ID:	NAUGATUCK WEST CT
CUSTOMER #:	469151

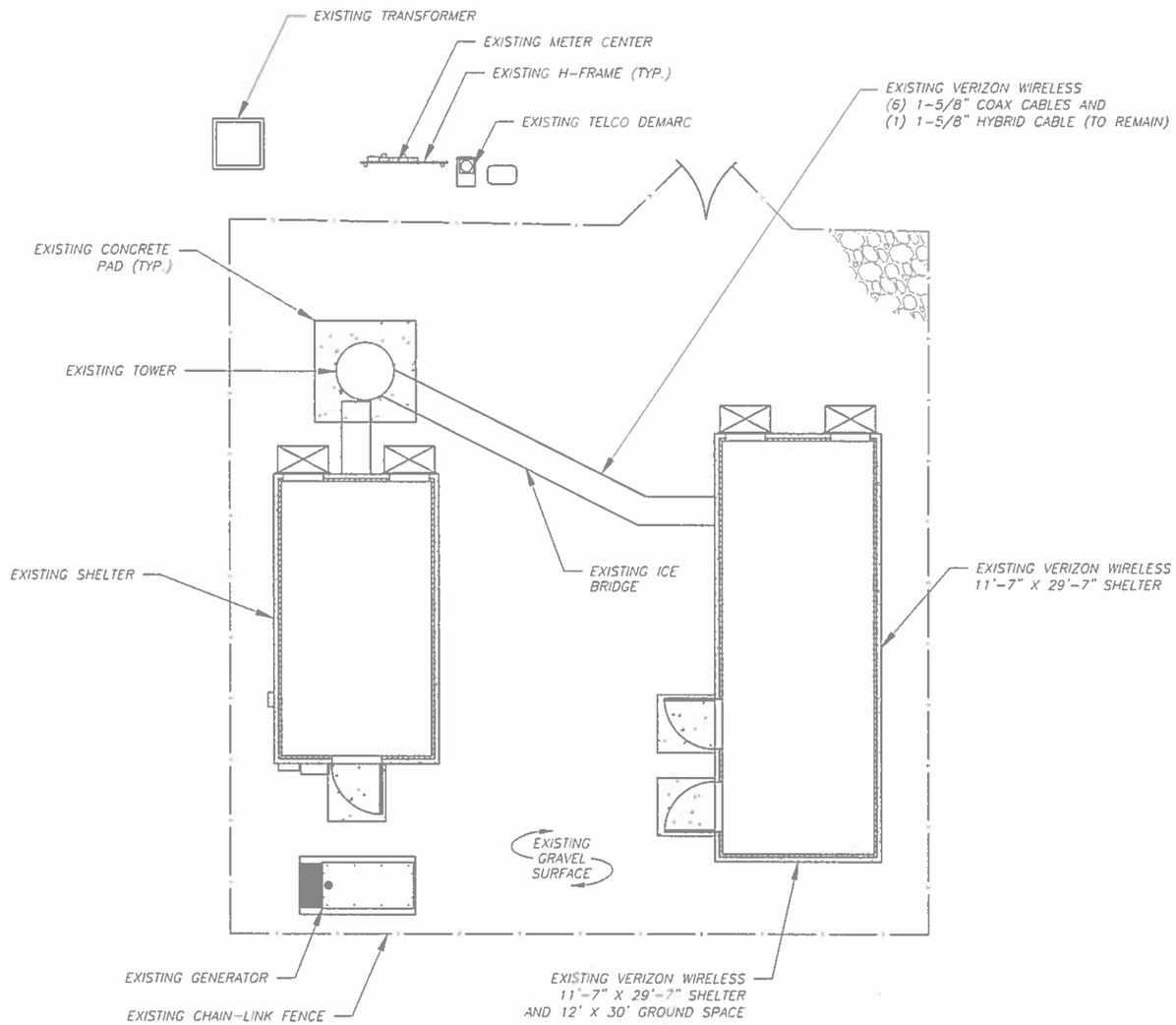
GENERAL NOTES

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



1 DETAILED SITE PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MR	12/24/19

ATC SITE NUMBER:
283423

ATC SITE NAME:
NAUGATUCK CT

SITE ADDRESS:
880 ANDREW MOUNTAIN RD
NAUGATUCK, CT 06770

SEAL:

STATE OF CONNECTICUT
PATRICK P. BARRY
28959
LICENSED
PROFESSIONAL ENGINEER

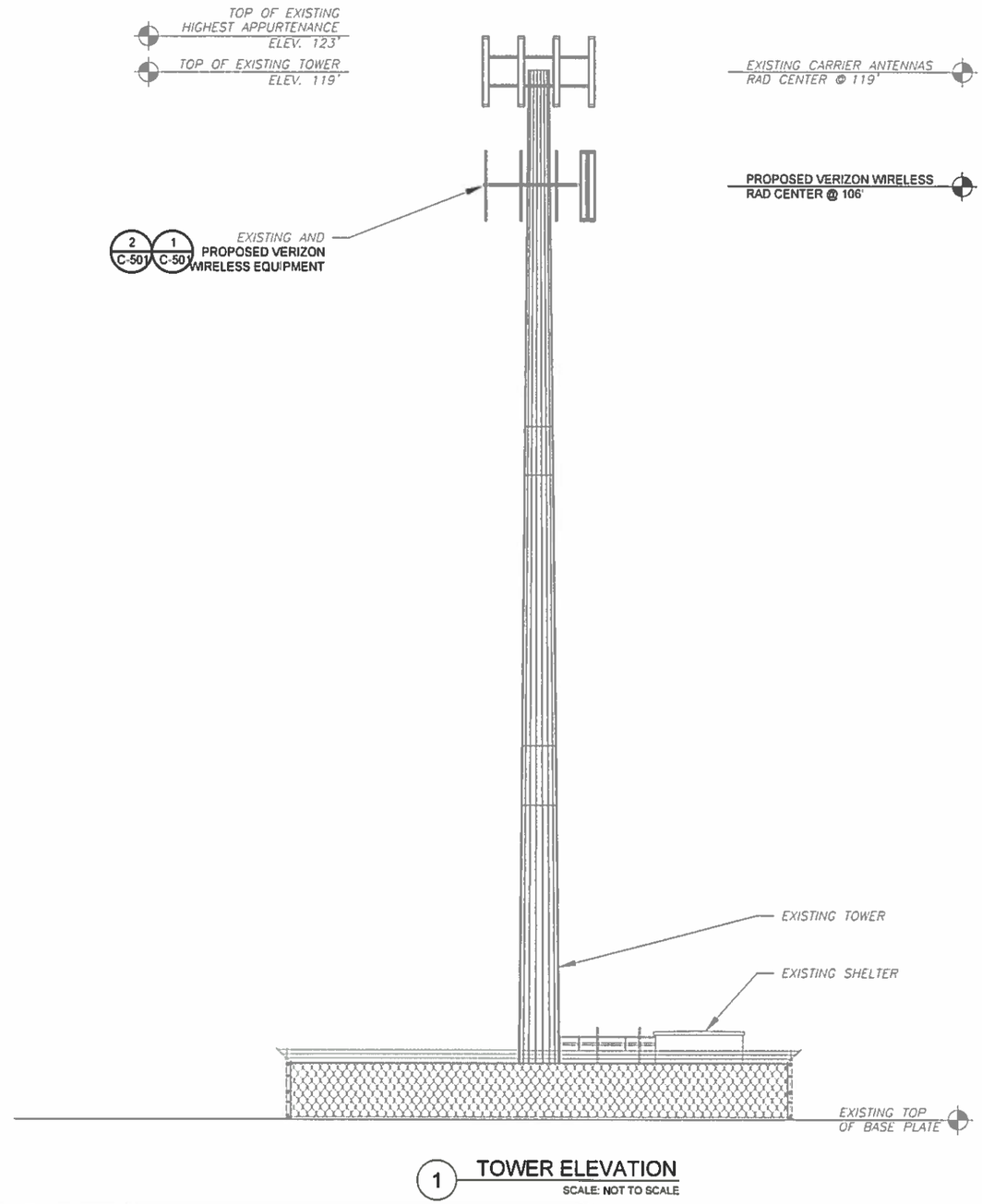
Authorized by "EOR"
Design

DRAWN BY:	MR
APPROVED BY:	PPB
DATE DRAWN:	12/24/19
ATC JOB NO:	13000540
CUSTOMER ID:	NAUGATUCK WEST CT
CUSTOMER #:	469151

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER, DATED 11/19/19, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING



1 TOWER ELEVATION
SCALE: NOT TO SCALE

TOWER NOTE:
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION 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. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS AND MOUNT CONFIGURATIONS.
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.)

ANTENNA NOTES:
1. ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT FOR EACH ANTENNA WITH VERIZON RF ENGINEER.
2. ANTENNA CENTERLINE HEIGHT IS ABOVE GROUND LEVEL (AGL).
3. CONTRACTOR SHALL VERIFY ANTENNA TYPE, AZIMUTH, DOWNTILT, AND ANTENNA NUMBER PER SECTOR WITH CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
4. ALL PERSONNEL WORKING ON THE TOWER MUST COMPLY WITH VERIZON'S RF EMISSIONS GUIDELINE POLICY.
5. CHECK WITH RF ENGINEER FOR LATEST ANTENNA TYPE AND AZIMUTH.
6. CONTRACTOR SHALL NOT INSTALL SHRINK WRAP UNTIL AFTER CABLES HAVE BEEN SWEPT.
7. THE USE OF ALTERNATE GROUNDING MEANS (SUCH AS LYNCOLE XIT) SHALL COMPLY WITH O.C E.I. CONSTRUCTION SPECIFICATIONS AND BUILDING PRACTICES.

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CARY, NC 27518
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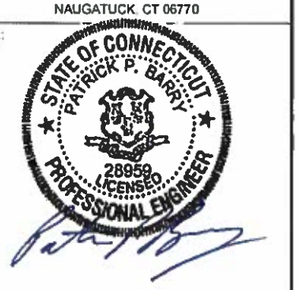
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MR	12/24/19

ATC SITE NUMBER:
283423

ATC SITE NAME:
NAUGATUCK CT

SITE ADDRESS:
880 ANDREW MOUNTAIN RD
NAUGATUCK, CT 06770

SEAL:



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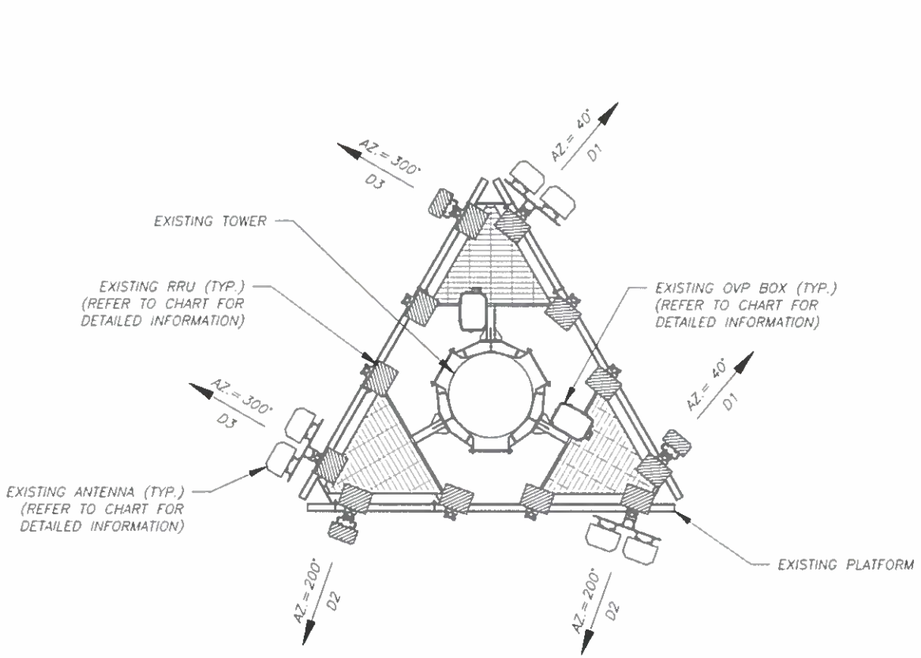
DRAWN BY:	MR
APPROVED BY:	PPB
DATE DRAWN:	12/24/19
ATC JOB NO:	13000540
CUSTOMER ID:	NAUGATUCK WEST CT
CUSTOMER #:	469151

TOWER ELEVATION

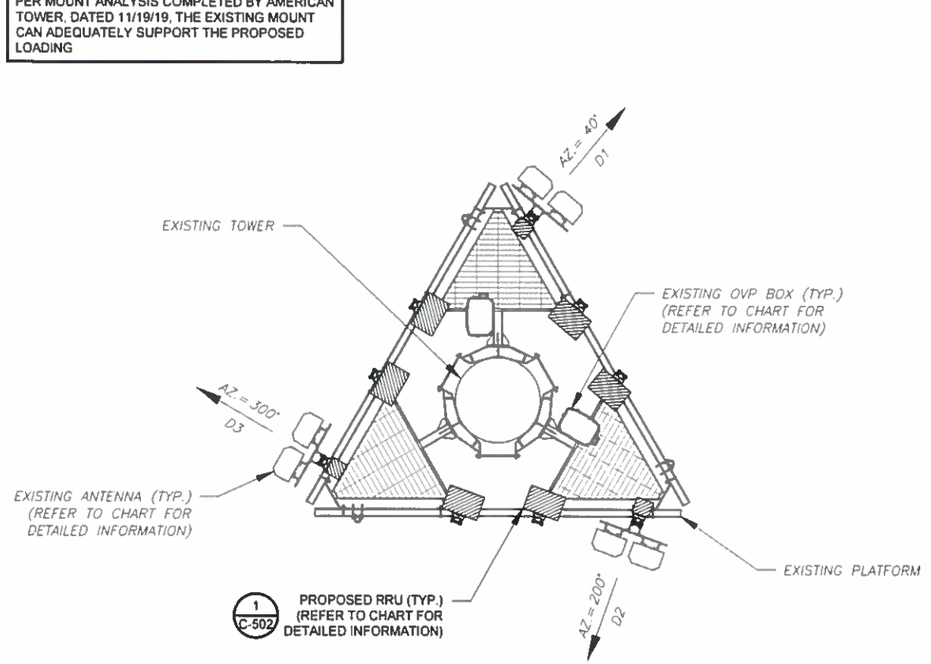
SHEET NUMBER: C-102

REVISION: 0



1 CURRENT ANTENNA PLAN

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER, DATED 11/19/19, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING



2 FINAL ANTENNA PLAN

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
D1	106'	40°	A1	(2) JAHH-45B-R3B	700/850/1900/2100 LTE	RMN	B66 RRH4X45	RMV
			A2	-	-	-	RRH4X30W-B25	RMV
			A3	-	-	-	B5 RRH4X40-850	RMV
			A4	BXA-70063-6CF-EDIN-X	-	RMV	B13 RRH4x30-4R 700U	RMV
D2	106'	200°	B1	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	B66 RRH4X45	RMV
			B2	-	-	-	RRH4X30W-B25	RMV
			B3	-	-	-	B5 RRH4X40-850	RMV
			B4	BXA-70063-6CF-EDIN-X	-	RMV	B13 RRH4x30-4R 700U	RMV
D3	106'	300°	C1	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	B66 RRH4X45	RMV
			C2	-	-	-	RRH4X30W-B25	RMV
			C3	-	-	-	B5 RRH4X40-850	RMV
			C4	BXA-70063-6CF-EDIN-X	-	RMV	B13 RRH4x30-4R 700U	RMV

NOTES

1. BASED ON APPROVED ATC APPLICATION 13000540, DATED 11/08/19. CONFIRM WITH VERIZON WIRELESS REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIG OR MOUNT CONFIG. CONTRACTOR TO VERIFY MOUNT CONFIG HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (EQUIP) (I.E. CLEARANCES, MOUNT PIPE, SUFFICIENT LENGTH, ETC.)
3. ALL PROPOSED EQUIP INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH ATC'S CM.
4. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
5. POSITIONS START WITH FIRST PIPE ON THE LEFT SIDE (AS VIEWED FROM BEHIND THE MOUNT).

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
D1	106'	40°	A1	(2) JAHH-45B-R3B	700/850/1900/2100 LTE	RMN	CBC78T-DS-43-2X	ADD
			A2	-	-	-	B5/B13 RRH-BR04C	ADD
			A3	-	-	-	B2/B66A RRH-BR049	ADD
			A4	-	-	-	-	-
D2	106'	200°	B1	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	CBC78T-DS-43-2X	ADD
			B2	-	-	-	B5/B13 RRH-BR04C	ADD
			B3	-	-	-	B2/B66A RRH-BR049	ADD
			B4	-	-	-	-	-
D3	106'	300°	C1	(2) JAHH-65B-R3B	700/850/1900/2100 LTE	RMN	CBC78T-DS-43-2X	ADD
			C2	-	-	-	B5/B13 RRH-BR04C	ADD
			C3	-	-	-	B2/B66A RRH-BR049	ADD
			C4	-	-	-	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RCMDC-6627-PF-48	RMN	(6) 1-5/8"	(1) 1-5/8"	RMN
-	-	-	-	-

STATUS ABBREVIATIONS
RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
DSC: TO BE DISCONNECTED & REMAIN
ADD: TO BE ADDED

3 EQUIPMENT SCHEDULES

CABLE LENGTHS FOR JUMPERS
FIBER DISTRIBUTION/OVP TO RRU: 15'
RRU TO COMBINER: 10'
COMBINER TO ANTENNA: 10'

FINAL FIBER DISTRIBUTION/OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RCMDC-6627-PF-48	RMN	(6) 1-5/8"	(1) 1-5/8"	RMN
-	-	-	-	-

AMERICAN TOWER®
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SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

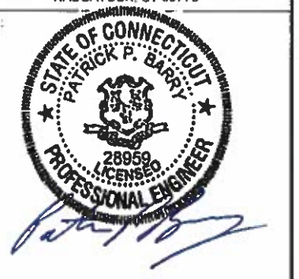
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MR	12/24/19

ATC SITE NUMBER:
283423

ATC SITE NAME:
NAUGATUCK CT

SITE ADDRESS:
880 ANDREW MOUNTAIN RD
NAUGATUCK, CT 06770

SEAL:



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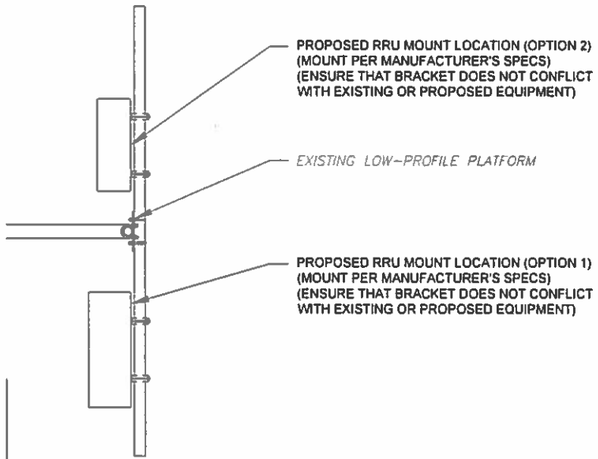
DRAWN BY:	MR
APPROVED BY:	PPB
DATE DRAWN:	12/24/19
ATC JOB NO:	13000540
CUSTOMER ID:	NAUGATUCK WEST CT
CUSTOMER #:	469151

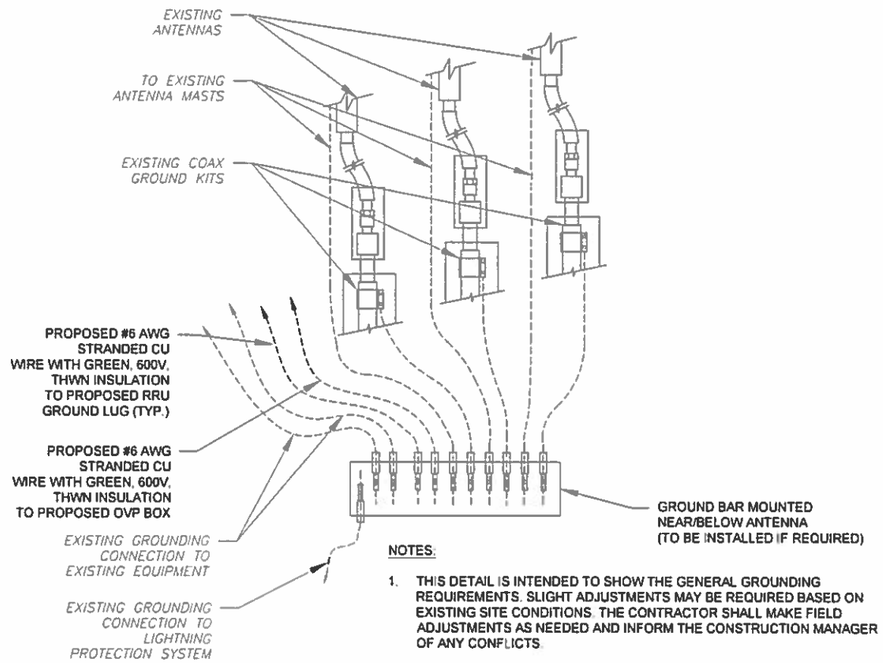
RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER:	REVISION:
C-501	0



1 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: NOT TO SCALE



NOTES:

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

2 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: NOT TO SCALE

AMERICAN TOWER®
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3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
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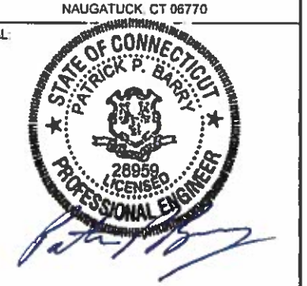
REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	MR	12/24/19

ATC SITE NUMBER:
283423

ATC SITE NAME:
NAUGATUCK CT

SITE ADDRESS:
880 ANDREW MOUNTAIN RD
NAUGATUCK, CT 06770

SEAL:



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Design

DRAWN BY:	MR
APPROVED BY:	PPB
DATE DRAWN:	12/24/19
ATC JOB NO:	13000540
CUSTOMER ID:	NAUGATUCK WEST CT
CUSTOMER #:	469151

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-502	0

AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	NAUGATUCK CT
ATC Site Number	:	283423
Engineering Number	:	13000540_C8_01
Mount Elevation	:	104 ft
Carrier	:	Verizon Wireless
Carrier Site Name	:	NAUGATUCK WEST CT
Carrier Site Number	:	469151
Site Location	:	880 Andrew Mountain Road Naugatuck, CT 06770-3656 41.484453 , -73.089844
County	:	New Haven
Date	:	November 15, 2019
Max Usage	:	102%
Result	:	Pass

Prepared By:
Steven McGinnis
Structural Engineer II

Reviewed By:

STATE OF CONNECTICUT
EMMA KAUSHAL MODI
25589
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
Nov 19 2019 8:06 AM cosign

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for Verizon Wireless at 104 ft.

Analysis

Basic Wind Speed:	96.82 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Codes:	ANSI/TIA-222-G / 2015 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.192$, $S_1 = 0.064$
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount 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.

A.T. Engineering Service, PLLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

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:	REVISION:
R-601	0